

**2021 TRI-COMMUNITY
NON-MOTORIZED TRAIL COMMITTEE AGENDA
FRIDAY, FEBRUARY 26, 2021 – 2:00 P.M.**

1. CALL TO ORDER

2. ROLL CALL

3. APPROVAL OF AGENDA

4. APPROVE OF MINUTES

A. January 29, 2021

**5. PUBLIC COMMENTS/TODAY'S AGENDA TOPICS
ONLY (LIMIT 3 MINUTES) Use the "raise hand" button
in the participant's screen found in the Zoom interface or
enter *9 if calling in by phone to raise hand.**

6. NEW BUSINESS

**A. PRESENTATION OF ENGINEERING
PROPOSALS BY FOBST
B. DISCUSSION/RANKING**

7. OPEN COMMITTEE DISCUSSION

8. REVIEW NEXT STEPS

**9. PUBLIC COMMENTS (LIMIT 3 MINUTES) Use the "raise hand" button in the
participant's screen found in the Zoom interface or enter *9 if calling in by phone to raise
hand.**

10. COMMUNICATIONS

A. DAN FOX

11. MEMBER CLOSING COMMENTS

NOTICE:

This public meeting will be held using Zoom video/audio conference technology due to the COVID-19 restrictions currently in place.

Join online by visiting: [https://us02web.zoom.us/j/ 2698572603](https://us02web.zoom.us/j/2698572603)

Join by phone by dialing: (312)

626-6799 -or-

(646) 518-9805

Then enter "Meeting ID":

2698572603

Please send questions or comments regarding meeting agenda items prior to meeting to:

ryan@saugatuckcity.com

Tri-Community Trail Committee (TCC)

Minutes: Jan 29, 2021 Meeting

Meeting commenced at 2:00 PM.

Present: Brenda Marcy, Cindy Osman , Jerry Donovan, Kathy Mooradian, Ken Trester, Holly Leo, John Adams, Richard Donovan. Also attending were Joe Frey the new Township Manager, Karen Doyle Hayman, interim City Manager of Saugatuck and Rich Labombard, City Manager of Douglas. Also in attendance was Craig Atwood of Allegan County Road Commission.

Motion to approve minutes made by B. Marcy, seconded by R. Donovan

Motion to approve agenda made by Mooradian, seconded by Trester

Public comments. Dick Waskin spoke of his joy this committee was moving forward. Felt it is way past time. Stated “our community is behind this getting done”.

New Business: Holly Introduced two speakers to discuss what they faced when building their trails. Julie Clark shared her story via a presentation of TART (Traverse Area Rec and Transportation). This included that TART is a nonprofit who fully owns the rail trail of 24 miles and coordinated to connect another 100 miles over many years. She shared their approach, struggles and obstacles, results of a benefits study, funding and more by using the example of the trail called Boardman Lake loop which took 30 years in the end. Brain Lechal was next and spoke via a presentation about trails that have been built and connected around the Saginaw area. The trail he spoke of took 7 years and had a similar group to FOBST that spearheaded it and raised the money. Said there was contention at first but they worked it out and in the end there were more positives by far than negatives.

Holly opened the Committee to ask questions of the two speakers. Six questions were asked by various members. Some points made by the visitors were:

- It is good to have a Landscape Architect in your pick of an engineering firm.
- Get ready for sticker shock on engineering costs
- Trails do create economic growth- it is proven
- Get public input: there are a number of ways to do that
- Good to have the road commission in early; involve safety folks early before design final
- Funding varies by community

Craig Atwood from Allegan Road Commission was asked to give any thoughts from his experience. He clarified what ACT 51 is to all members where some of the dollars that

municipalities get from the state must go to trails. Shoulders are considered trails and most dollars go into them so there is not a lot of money left (basically, don't count on them for money). He offered help in any way he's needed

Open discussion: This largely happened in the Q and A above . Holly did comment that MDOT is really big on communities that connect one trail to another (ie. Holland to Saugatuck) and it was stated that DNR is the same. Easier to get help and dollars when working together for a longer vision.

Next Steps: R. Donovan spoke to what Engineering still needs to be done. It is provided in a list in the committee packet as well. The RFP(request for proposal) that is proposed to be used outlines what is needed from an engineering firm as well. Donovan spoke of the 7 engineering firms that presented their qualifications and shared the reasons they could get it o 4 or 5 as a start. The RFP process is close to this: Agree we need a firm (done), Seek qualifications(done), Get recommendations from others(done) , Do homework on each firm (done), Get out the RFP(note that they are non binding proposals for either side). He suggested a subcommittee of this committee may take on the final reviews of 5 firms . That was tabled for now. Just getting out the bids and we can figure it out from there. All agreed to start sending the RFP to the five firms. Holly asked if there were ideas of other visitors being at our meetings. Some ideas were provided.

Public Comments: Dan Fox spoke of the need for transparency and also connectivity over the bridges south of Douglas. Garnett Lewis spoke positively of this team's ability to get this done.

Member comments: Trester reminded for the RFP that having a Landscape architect be criteria for the engineer selection. Osman reported that Holland actually got a mil increase to support the trails as do other communities. R. Donovan stated the RFPS will go out but they arrive as work plans with rough estimates as they cannot actually bid until a design is final.

Marcy made a motion to adjourn with Trester seconded it. Meeting ended 4:04

Submitted by Kathy Mooradian, Recording secretary, on Jan 30, 2021

Open Discussion: Fobst was thanked for the presentation and great clarity it provided. Adams stated it is best to follow AASHTO Stds due to MDOT and that getting exceptions will lengthen and possibly hurt the grant money coming in. Competitive to get the money so it goes to those who most closely meet standards. Leo pointed out the 2 lane is fully engineered the three lane is not. Fobst budgeted 13K for design and has already spent 28. A representative from law enforcement, Lieutenant ?, shared general concerns from his point of view. "An open roadway is always easier for cops."

Next steps: All agreed that the safety professionals had to review the plans and provide input, educate the committee etc to move forward. Still need to select an engineering firm but need design to begin. Committee is responsible for this not Fobst. All agreed to meet every two weeks on Fridays at 2 PM. Next meeting is January 29, 2021.

Public Communications: John Pordonzik spoke of the piece on lake street in front of Indian Summer but it is not part of the trail project in the end. Barry Johnson had technical questions about the footage, distances etc and shared his worries about traffic congestion. Bob Eder believes there should be a traffic light at Lake street with or without the trail due to safety.

Marcy made a motion to adjourn, R. Donovan seconded.

Minutes submitted 1/20/21 by KMooradian to chair Holly Leo.

TRI-COMMUNITY JOINT STUDY COMMITTEE
FOR THE
BLUE STAR TRAIL (“TCC”)

**REQUEST FOR PROPOSAL FOR ENGINEERING SERVICES
BLUE STAR TRAIL – NORTH SECTION**

I. INTRODUCTION

The TCC was created by joint resolution of Saugatuck Township, the City of Saugatuck, and the City of the Village of Douglas. It is made up of representatives from those three municipalities and the Friends of the Blue Star Trail, a 501(c)(3) corporation (“FOTBST”).

The three municipalities and the FOTBST intend to build three new sections of trail (the “Project”) to connect to existing sections, as shown in the diagram below, which will then constitute the 4.5 mile north section of the Blue Star Trail (“Trail”). The Trail will eventually extend approximately 20 miles from Saugatuck Township in the north, where it will connect to the existing Beeline Trail to Holland, to the Kal-Haven Trail in the south. Further information may be found at www.fotbst.org, including certain digital renderings and preliminary conceptual engineering drawings.

Your firm is invited to submit a proposal to provide professional engineering and related services for the planning, design, and construction of the Project.

It is our present intention to submit an application to MDOT for a TAP grant for the Project by October 2021 and an application to MDNR for a Trust Fund grant by April 2022. Accordingly, we seek to retain an engineering firm as soon as reasonably possible.

TAP and DNR grants are expected to pay for approximately 75% of the Project’s construction costs, with the balance raised from private sources by the FOTBST. Substantial private fundraising has already begun, and the fees for engineering are largely in place. It is expected that the selected firm will contract with the three municipalities jointly or a new trail authority (if one is formed), and that the FOTBST will enter into an escrow arrangement to provide the funds through its fiduciary (Allegan County Community Foundation) to the municipalities or the authority.

This RFP and your response do not constitute a binding agreement, which will only occur upon the due execution of a detailed professional services agreement. The TCC and its members shall have the absolute right to reject any bid or proposal, for any reason or no reason, as the TCC or its members deem to be in their best interest including, without limitation, the failure to reach an agreement with the FOTBST about funding engineering fees in a manner satisfactory to the

three municipalities. Neither the TCC or its members assumes any responsibility or liability for costs incurred by a respondent prior to the execution of a Professional Services Agreement.

II. PROJECT OUTLINE AND PRELIMINARY SCOPE OF WORK

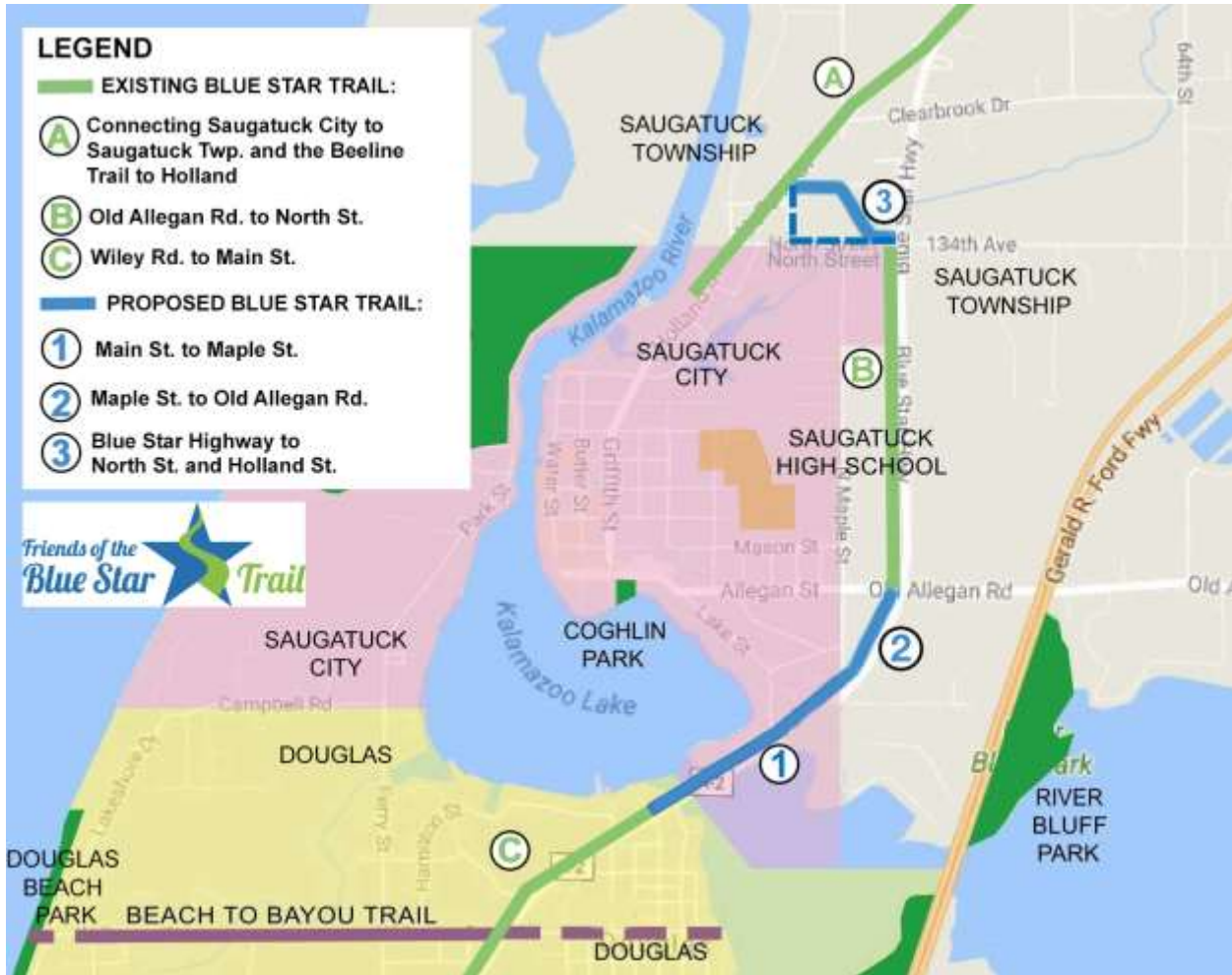
The following describes, very generally, the scope of work and objectives for the Project as the TCC currently envisions them. It is intended to inform respondents about the team's view of the Project. Respondents' past experience and/or understanding of local issues may cause them to suggest other professional service needs or approaches. These suggestions are welcome and the ultimate goal of the selection process is to jointly develop a scope of work and timeline before entering into a contract.

The long-term success of the overall Project hinges to a large extent on positive public perception of this first phase and the development of a process for raising the Project's visibility, engaging the local communities, and sustaining public enthusiasm for completion of the entire trail.

Anticipated areas of expertise needed to make this a successful project are believed to entail at least the following:

- Significant public, community, and governmental input and involvement—planning and communications
- Alternative route/design development and evaluation based on local and regional desirability and feasibility
- Environmental assessment capacity
- Familiarity with state and federal permitting requirements (e.g., MDEQ, MDOT)
- Experience with federal and state grant funding sources and management
- Field surveying
- Trail funding, including coordination with a fiduciary
- Trail design according to federal and state design standards (e.g., AASHTO, NACTO, ADA)
- Ability to provide constructability and construction and maintenance cost estimates
- Trail amenity and economic enhancement planning and design
- Right of way/easement acquisition, if necessary
- Bidding and construction phase engineering and project administration services
- Multi-jurisdictional project coordination, facilitation and execution experience
- Ability to coordinate and execute projects utilizing multiple funding sources (public -local, state, federal and private)
- The ability to deliver contracted services within time and budget constraints
- MDOT prequalification preferred

The following map shows the sections of trail already completed and the three sections that are the basis for this RFP.



In 2018, a TAP grant application was prepared with engineering by Hurley Stewart, for the sections labeled 2 and 3; the grant was not pursued due to concerns of the City of Saugatuck. In 2019, Fleis & VandenBrink prepared conceptual drawings for one option for the section labeled 1, but no decision has been made as to the design for that section.

Specific tasks are expected to include, but are not limited to:

1. Evaluation of engineering and concepts conducted to date.
2. Advising the TCC on conceptual choices for route and design, including a preferred, satisfactory-to-MDOT design for the Trail across the Kalamazoo River Bridge and whether to route the Trail through Alamanchier Park in the Township.
3. Conferring with the Fire and Police Departments about possible concerns and solutions.
4. Primary responsibility for preparation of grant applications.
5. Presentations to the governing bodies of the three municipalities and FOTBST as requested.
6. Preparation of plans, specifications and estimates of construction and maintenance costs for the project, detailed studies on specific items, preparation of reports, land surveying activities, construction inspection and oversight, and construction contract administration.
7. Oversight of construction according to MDOT TAP guidelines, including verifying that all materials provided and work performed are in conformance with the project plans and specifications, and maintenance of all documentation according to industry standards.
8. Coordination with the grant agencies and the Act 51 agency, presumed to be the Allegan County Road Commission.
9. Ongoing communication with the TCC or its successor and FOTBST about the status and future timeline.

III. REQUIREMENTS FOR RESPONSE TO RFP

Please include at least the following in your response:

1. Name, address, and brief history of firm and services provided related to this project. If teaming, a description of the role of each team member and their relationship to each of the other team members.
2. Resumes of key personnel that would be assigned to this project, including the project manager, landscape architect, and traffic engineer.
3. Related trail experience during the last five years.
 - i. How many miles of trail have you designed/built?

ii. Include examples of other projects that are similar in scope to this one. Include a project synopsis and your role in the project

iii. Include examples of project budgeting, cost estimating and results. Include the name of the project, a contact person, and dollar amount for each example.

iv. Indicate whether your firm is prequalified with MDOT for work of this type.

4. Your proposed work plan, including identification of any subcontractors expected to be needed.

5. An estimate or range of the cost of your services, itemized as much as possible. Rest assured that we appreciate the difficulty of comparing estimates and that fee estimates will not be the primary selection criterion. Please also indicate, in your experience with similar projects, how much engineering fees have constituted as a percentage of total construction costs.

6. None of the municipalities or the FOTBST has significant experience with or resources to work on MDOT and DNR grant applications, so please describe how you would take the lead role in doing so, including examples of recent applications in which your firm played a leading role, and the identity and experience of the person(s) who would perform the work.

7. Familiarity with the local area—geography and facilities, prior work with MDOT and Allegan County Road Commission.

8. A description of any instance in which you worked with a Fire or Police Department in the design of a road or trail.

9. Your experience with the use of so-called smart traffic signals that can be remotely controlled.

10. References for your firm and the project manager, from similar projects.

11. A copy of your standard form of contract for projects of this type.

12. You are invited to include a maximum of five pages of additional information if you feel it may be useful and applicable to this project.

IV. SUBMISSION

Any questions should be directed to Richard Donovan (908-337-3490, rdono61@gmail.com) and John Adams (313-320-8900, jaquincy48@gmail.com).

Please email your response to Messrs. Donovan and Adams no later than noon on February 17, 2021. Please copy the Chair of the TCC, Holly Leo, hleo@saugatuckcity.com. No hard copies are necessary.

We expect to meet (virtually) on February 26 between 2:00-4:00, or such other time as the TCC shall determine, with the project manager and team from two finalists. The selected respondents will be given the opportunity to discuss in more detail their qualifications, past experience, proposed work plan and fee proposal. The interview must include the project team members expected to complete a majority of work on the project, but no more than 6 members total. The interview shall consist of a presentation by the Respondent, including the person who will be the project manager, followed by questions and answers. Audiovisual aids may be used during the oral interviews.

Thank you for your interest in the Blue Star Trail.

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- Fire or Police Department Experience
- Smart Traffic Signals

Section V - References

Section VI - Standard Form of Contract

**Engineering Services
for the
Blue Star Trail -
North Section**

Submittal of
Proposal

Due: February 17, 2021

Beckett & Raeder, Inc.
535 W. William, Suite 101
Ann Arbor, MI 48103
Contact: Kristofer Enlow
kenlow@bria2.com

February 17, 2021

Richard Donovan and John Adams
Friends of the Blue Star Trail
P.O. Box 464
Douglas, MI 49406



Regarding: Engineering Services Blue Star Trail – North Section

Dear Mr. Donovan and Mr. Adams,

Attached is our proposal for consideration by the Tri-Community Joint Study Committee for the Blue Start Trail. The Beckett & Raeder Team is excited to be considered in assisting with the North Section of the Blue Star Trail. We will be performing all of the design work, with the exception of surveying and geotechnical investigations, which would be a sub-consulted service.

The authorize negotiator for the Professional Services Agreement will be Kristofer Enlow, P.E.

If you have any questions or need further information, please feel free to contact me directly at 734-239-6610.

Respectfully Submitted,

Kristofer Enlow, PE
Principal

cc: Holly Leo, Chair of the TCC, hleo@saugatuckycity.com
Encl.

Beckett & Raeder, Inc.
535 West William, Suite 101
Ann Arbor, MI 48103

734 663.2622 ph
734 663.6759 fx

Petoskey Office
113 Howard St.
Petoskey, MI 49770

231 347.2523 ph
231 347.2524 fx

Traverse City Office
148 E. Front St., Suite 207
Traverse City, MI 49684

231 933.8400 ph
231 944.1709 fx

Toledo
419.242.3428 ph

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Beckett & Raeder, Inc. - Corporate Background



Beckett & Raeder, Inc. is a Michigan Corporation headquartered in Ann Arbor with additional offices in Petoskey and Traverse City, Michigan. The firm includes landscape architects, planners, civil engineers, LEED accredited professionals, and support staff maintaining registrations in the States of Michigan, Ohio, Indiana, and Illinois and certification at the national level.

HISTORY

Beckett & Raeder, Inc. was established as a Michigan corporation in 1966 with its corporate office in Ann Arbor, Michigan.

SERVICES

Major areas of practice and scope of services include sustainable design, land use programming and analysis, master planning, campus planning, placemaking, site planning and civil engineering, site development, municipal engineering, storm water management, downtown revitalization and redevelopment, community planning and urban design, economic development, public/private development services, and environmental services.

OWNERS, PRINCIPALS AND/OR OFFICERS

Deborah Cooper, President
John Iacoangeli, Executive V.P. & Treasurer
Christy Summers, Secretary
Brian Barrick, Principal
John Beckett, Principal
Kristofer Enlow, Principal
Leah DuMouchel, Principal

PHILOSOPHY

All commissions accepted by the firm are accomplished under the direct supervision of one of the firm's eight principals. Senior Associates, Associates, Project Landscape Architects, Planners, and Engineers are assigned to projects in accordance with their individual expertise and the requirements of the project. In keeping with the philosophy of the office, the project team is involved in all aspects of the work through its entire duration. The firm routinely engages other consultants, as the work plan requires.

LOCATIONS

Ann Arbor
535 W. William,
Suite 101
Ann Arbor, MI 48103
Tel: 734.663.2622
Fax: 734.663.6759

Traverse City
148 E. Front Street,
Suite 207
Traverse City, MI 49684
Tel: 231.933.8400
Fax: 231.944.1709

Petoskey
113 Howard Street
Petoskey, MI 49770
Tel: 231.347.2523
Fax: 231.347.2524

WEBSITE
www.bria2.com

CONTACT:

Kristofer Enlow, P.E.
Principal
734.663.2622 | kenlow@bria2.com

Our Services



*Michigan Recreation and Park Association (mParks), Outstanding Park Design Award, 2018,
Petoskey Downtown Greenway, South Segment, Petoskey, Michigan*

INFRASTRUCTURE

- Storm Water Management
- Water Distribution Systems
- Sanitary Sewer Systems
- Capacity Analysis
- Capital Improvement Program
- Wellhead Design & Protection
- Pavement Evaluation
- Streets and Roads
- Onsite Sewage Treatment
- Utility Marking
- Parking

COMMUNITY PLANNING & ZONING

- Comprehensive Master Plans
- Brownfield Redevelopment
- Zoning Ordinance /Codes
- Specialized Zoning Ordinance Provisions Development Standards and Guidelines Site Plan Review
- Strategic Planning
- Expert Witness Zoning Testimony
- Community Development
- Greenway Planning
- New Urbanism

ENVIRONMENTAL SERVICES

- Site Evaluation & Analysis
- Low Impact, Conservation Design
- Wetland Delineation
- Constructed Wetland Design & Installation
- Wetland Restoration
- Storm Water Management

ANALYSIS & EVALUATION

- Site Analysis
- Feasibility Studies
- Site Selection Studies
- Buildout Analysis
- Market Analysis
- Demographics
- Natural Features Interpretive Studies

PROJECT CONSTRUCTION

- Construction Administration
- Field Inspection
- Storm Water Operator
- Bridge Inspection
- Specification Writing
- Project Cost Estimating
- Construction Drawings

DOWNTOWN & ECONOMIC DEVELOPMENT

- Brownfield Redevelopment
- Grant Writing
- Downtown Management
- Downtown Master Plans
- Special Finance Districts
- Adaptive Reuse Studies
- Retail Market Analysis
- Strategic Planning/Visioning Workshops
- Physical Design Plans
- Streetscape Design & Implementation
- Wayfinding & Signage
- Tax Increment Financing & Development Plans
- DDA Creation

SITE DESIGN

- Planting Design
- Irrigation Design
- Grading Plans
- Utility Plans
- Pavement Design
- Lighting Design
- Site Design Guidelines
- Park Design

URBAN DESIGN

- Corridor Design & Planning
- Streetscape Design
- Waterfront Design

FACILITY DESIGN

- Marina Design
- Playground Design
- Athletic Facility Design
- K-12 Site Development
- Subdivision Design
- Campgrounds
- Parks Design
- Higher Education

MASTER PLANNING

- Campus Planning
- Traditional Neighborhood & Small Town Design
- Community Master Planning
- Watershed Planning
- Recreation Master Planning
- Park Master Planning
- Rural Land Planning Services
- Land Use Planning



Marshbank Park, West Bloomfield Township, Michigan, 2016 Honor Award,

Michigan Chapter, Landscape Architectural Sustainability

Selected Recent Awards



River Raisin Heritage Corridor, Monroe, Michigan

MICHIGAN ASSOCIATION OF PLANNING

Planning Excellence Award for Public Outreach, 2020

Sturgis Community Master Plan
Sturgis, MI

Daniel Burnham Award for a Comprehensive Plan, 2019

Kalamazoo County Master Plan
Kalamazoo, MI

Economic Planning and Development Award, 2018

Project Rising Tide

Urban Design Award, 2018

Jackson Downtown Streetscape
Jackson, MI

Best Practice Award, 2018

Planning for Resiliency in Michigan:
A Comprehensive Handbook

Urban Design Award, 2017

Jackson Blackman Park Expansion
Jackson, MI

Daniel Burnham Award for a Comprehensive Plan, 2016

Jackson Community Master Plan
Jackson, MI

Implementation Award, 2016

Bear River Valley Recreation Area
Petoskey, Michigan

Daniel Burnham Award for a Comprehensive Plan, 2015

Acme Township Master Plan
Acme, MI

Innovation in Economic Planning & Development, 2015

Lakes to Land Regional Initiative: Food and Farm System Assessment

Innovation in Regional Planning, 2014

Lakes to Land Regional Planning Initiative

Daniel Burnham Award for a Comprehensive Plan, 2013

Peshawbestown Master Plan
Grand Traverse Band of Ottawa and Chippewa Indians

Daniel Burnham Award for a Comprehensive Plan, 2010

Onekama Community Master Plan
Onekama, Michigan

AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

Merit Award, Michigan Chapter, 2017, General Design

Chicago Drive Corridor
Grandville, Michigan

Merit Award, Michigan Chapter, 2017, Planning & Analysis

Peshawbestown Community Master Plan
Peshawbestown, Michigan

Merit Award, Michigan Chapter, 2016, Landscape Architectural Design

Jackson Blackman Park Expansion,
Jackson, Michigan

Merit Award, Michigan Chapter, 2016, Landscape Architectural Sustainability

Wall Street East Parking Structure,
Ann Arbor, Michigan

Honor Award, Michigan Chapter, 2016, Landscape Architectural Sustainability

Marshbank Park
West Bloomfield Township, Michigan

Merit Award, Michigan Chapter, 2015, Landscape Architectural Design

Munger Graduate Residences,
University of Michigan
Ann Arbor, Michigan

Selected Recent Awards

Honor Award, Michigan Chapter, 2016, Landscape Architectural Sustainability

Marshbank Park
West Bloomfield Township, Michigan

Merit Award, Michigan Chapter, 2015, Landscape Architectural Design

Munger Graduate Residences,
University of Michigan
Ann Arbor, Michigan

Merit Award, Michigan Chapter, 2014, Historic Significance

Petoskey Bayfront Park
Petoskey, Michigan

Merit Award, Michigan Chapter, 2013, Planning & Analysis

River Raisin Heritage Corridor East Master Plan
Monroe, Michigan

Merit Award, Michigan Chapter, 2010

Outdoor Learning Center
Central Michigan University
Mt. Pleasant, Michigan

MICHIGAN RECREATION & PARK ASSOCIATION

Design Award, Outstanding Facility 2017

Silver Lake State Park
Mears, Michigan

Landscape Design Award, 2014

White Lake Bloomer Park
White Lake Charter Township, Michigan

Outstanding Park Design Award, 2013

Argo Cascades
Ann Arbor, Michigan

Design Award, Landscape Design, 2011

Bear River Valley Recreation Area
City of Petoskey, Michigan

Landscape Design Award, 2011

Marshbank Park
West Bloomfield Township, Michigan

Landscape Design Award, 2010

Outdoor Learning Center
Central Michigan University
Mount Pleasant, Michigan

IMAGIN (Improving Michigan's Access to Geographic Information Networks)

Innovation Award, 2018

Acme Township, Michigan

EDUCATION DESIGN SHOWCASE

Project of Distinction, 2017

Outstanding Design and Architecture

Lasch Family Golf Center, Michigan State University
East Lansing, Michigan

NATIONAL TRUST FOR HISTORIC PRESERVATION

Richard H. Driehaus National Preservation Honor Award, 2014

McGregor Pool
Wayne State University
Detroit, Michigan

MICHIGAN HISTORIC PRESERVATION NETWORK

Government/Institution Award, 2016

River Raisin Heritage Corridor, East Master Plan
Monroe, Michigan

Cultural Landscape Award, 2014

McGregor Memorial Conference Center
Reflecting Pool and Sculpture Garden for Contribution to Historic Preservation in Michigan
Wayne State University
Detroit, Michigan

GREAT LAKES PARK TRAINING INSTITUTE

Great Lakes Park, Facility, & Recreation Program Award, 2013

Marshbank Park
West Bloomfield Township, Michigan

WASHTENAW CONTRACTORS ASSOCIATION

Pyramid Award, 2018

University of Michigan Art & Architecture
A. Alfred Taubman Wing
Ann Arbor, Michigan

OAKLAND COUNTY

Oak Land Award, 2012

Marshbank Park
West Bloomfield Township, Michigan

Professional Affiliations & Organizations



Beckett & Raeder, Inc. is staffed by registered professional engineers, landscape architects, community planners, and environmental and ecological professionals and has specialized training and maintains professional affiliation with the following:

ACCREDITATIONS

U. S. Green Building Council LEED Accredited Professionals
Form Based Code Institute (FBCI)
Congress for the New Urbanism Accreditation (CNU-A)

CERTIFICATIONS

Michigan Economic Development Association Certified Economic Development Professional
Certified Stormwater Operator
Housing Development Finance Professional (HDFP)
Project Management Boot Camp
PASER Road Rating
Planning and Zoning Instructor (MAP)
Certificate of Real Estate
Certified Playground Safety Inspector (CPSI)
American Institute of Certified Planners (AICP)

National Charrette Institute Certification (NCI)

REGISTRATIONS

Professional Registered Engineers

- State of Michigan (PE)
- State of Ohio (PE)

Professional Landscape Architects

- State of Michigan (PLA)
- State of Ohio (PLA)
- State of Illinois (PLA)
- State of Indiana (PLA)
- Council of Landscape Architects Registration Boards

Residential Builder License

- State of Michigan

SPECIALIZED TRAINING

EPA Brownfield Redevelopment
People, Places and Placemaking
Economics of Place
Neighborhoods, Streets and Connections
Form Planning and Regulation
Collaborative Public Involvement
Applied Placemaking
Complete Streets
Geographic Information Systems
FEMA ICS-100, IS-00029, EFS 15
FEMA ICS-200, IS-00700 (NIMS)
Green Roof Design
Charrette System Training (NCI)

Professional Affiliations & Organizations

MEMBERSHIPS

American Planning Association (APA)	American Society of Landscape Architects (ASLA)	American Society of Civil Engineers (ASCE)	American Public Works Association (APWA)	Congress for the New Urbanism	Detroit Association of Planners
Heritage Ohio (Ohio Main Street)	Improving Michigan's Access to Geographic Information Networks (IMAGIN)	Institute of Transportation Engineers (ITE)	Michigan Association of Physical Plant	Administrators (MIAPPA)	Michigan Association of Planning (MAP)
MAP Planners in Private Practice	Michigan Complete Streets	Michigan Downtown Association (MDA)	Michigan Economic Development Association (MEDA)	Michigan Historic Preservation Network	Michigan Municipal League (MML)
Michigan Recreation and Parks Association	Michigan Rural Network	Michigan Society of Professional Engineers	Michigan School Business Officials (MSBO)	National Complete Streets	National Main Street Center
National Society of Professional Engineers	National Trust for Historic Preservation	Preservation Detroit	Society of Marketing Professional Services (SMPS)	Society of College and University Professionals (SCUP)	South Oakland County Municipal Engineers (SOCME)
Southern Michigan Water and Sewer Utilities Association (SMW & SUA)	Toledo Metropolitan Area of Council of Governments (TMACOG)	Urban Land Institute	URISA (Urban and Regional Information Systems Association)		

Kristofer Enlow, P.E.
Principal, Civil Engineer



Kris is a Principal at Beckett & Raeder with over 15 years of experience in public and private site development, contract documents and construction administration. His work experience includes water, sanitary sewer, storm sewer, road design, as well as open space, sidewalk and trails projects.

EDUCATION

Bachelor of Science in Civil and Environmental Engineering
 University of Michigan

Master of Business Administration
 Wayne State University-
 Detroit, Michigan

REGISTRATIONS

Licensed Professional Engineer
 State of Michigan
 License Number: 54060
 State of Ohio
 License Number: 81601

Michigan DEQ Certified Stormwater Operator (Management/Construction Site)

PASER Road Rating

AFFILIATIONS

American Public Works Association

South Oakland County Municipal Engineers (SOCME)
 Board Member 2007-Present

Charter Township of Lyon
 Trustee

SELECTED EXPERIENCE

Pathways, Trails, and Greenways

Cass River Fish Passage Pathway Modifications
 Frankenmuth, MI

Riverine Pathway (0.60 miles)
 Frankenmuth, MI

Allen Creek Crossing – University of Michigan Golf Course
 Ann Arbor, MI

Woodland Correctional & Lemen Road Pathway (2.0 miles)*
 Green Oak Charter Township, MI

Fieldcrest Pathway (2.5 miles)*
 Green Oak Charter Township, MI

Pontiac Trail Bike Pathway (250 feet)*
 Lyon Township, MI

Geddes Road Trail (1.25 miles)*
 Superior Township, MI

2010 Safety Path Project (five small trail segments)*
 Charter Township of Orion, MI

Clark Road Non-Motorized Trail (0.50 miles)*
 Superior Township, MI

Orion Road Path (0.60 miles)*
 Charter Township of Orion, MI

Polly Ann Trail Extension (3.5 miles)*
 Charter Township of Orion, MI

2007 Safety Path Project (five small trail segments)*
 Charter Township of Orion, MI

MacArthur Non-Motorized Trail (0.50 miles)*
 Superior Township, MI

Orion Road Safety Path (phased segments 0.60 miles)*
 Charter Township of Orion, MI

2009 Safety Path Projects (various locations)*
 Charter Township of Orion, MI

Municipal Engineer General Services

Bridgewater Township: 2018-present
 Hartland Township: 2010 – 2014
 Charter Township of Orion: 2008 – 2010
 Groveland Township: 2007-2010
 Green Oak Charter Township: 2012-2014

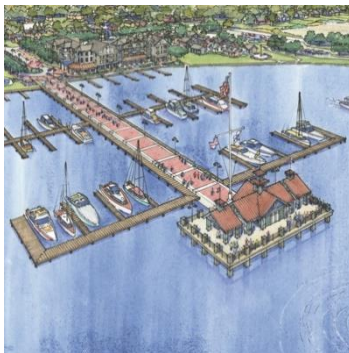
**Work performed outside of Beckett & Raeder, Inc.*



Christy D. Summers, PLA, ASLA, LEED AP
Principal, Landscape Architect



Christy has more than 20 years of landscape architecture, design, and project implementation experience. Christy has been involved in a variety of project types including urban and downtown design, waterfronts, community master planning, corridor study and design, passive and active recreation design, historic site planning, access to recreation, and ADA design, trails and greenways, and campus and corporate projects. As a Principal with the firm, her responsibilities include project management, design, construction document preparation, construction administration, and construction observation for both large and small projects. As a LEED Accredited Professional, Christy seeks opportunities to include sustainable design techniques in all of her projects.



EDUCATION

Bachelor of Landscape Architecture
 Michigan State University
 East Lansing, Michigan

Master of Landscape Architecture
 University of Michigan
 Ann Arbor, Michigan

LICENSES & CERTIFICATES
 Licensed Landscape Architect
 Michigan, Ohio

LEED Accredited Professional

AFFILIATIONS
 American Society of Landscape Architects

Michigan Complete Streets

Michigan Recreation & Parks Association

BOARDS & COMMITTEES
 Michigan ASLA Past President

University of Arkansas Fay Jones School of Architecture Professional Advisory Board, President-Elect

SELECTED EXPERIENCE

River Raisin Heritage Corridor-East Master Plan
 Monroe County Historical Society, National Park Service, City of Monroe
 Monroe, Michigan

Acme Township Placemaking
 Acme, Michigan

Interlochen Physical Design Master Plan
 Green Lake Township, Michigan

Port Sanilac Downtown & Waterfront Plan
 Port Sanilac, Michigan

Adams Downtown Physical Design Plan
 Adams, Wisconsin

Kingsbury Park Redevelopment Plan
 Defiance, Ohio

Blackman Park Expansion
 Jackson, Michigan

Oakland County Parks & Recreation Commission:
 Lyon Oaks County Park
 Addison Oaks County Park
 Groveland Oaks County Park

Sharon Mills County Park
 Washtenaw County Parks & Recreation
 Sharon Township, Michigan

MDNR Recreation Projects:
 Belle Isle Park Strategic Management Plan
 J.W. Wells State Park
 Brighton State Recreation Area
 Rifle River State Recreation Area
 Dodge #4 State Park
 Silver Lake State Park
 Waterloo State Recreation Area
 (MDEQ Permitting on All)

Timothy Knutsen, PLA, ASLA, CPSI
 Senior Associate



Tim is a professional landscape architect and senior associate at Beckett and Raeder, with over 20 years of experience in site design and development. He also heads up our Petoskey, Michigan office working with Northwest Michigan clients on public and private projects. Tim's project experience varies from residential and commercial projects to campus developments for schools and colleges. Project emphasis while working in the Petoskey office has been in park and recreation development and trails projects, some of which have included the Bear River Valley Recreation Area, Petoskey Downtown Greenway, Petoskey Iron Belle Trail Bridge, Acme Connector Non-Motorized Trail, and Petoskey State Park Non-Motorized Trail. Tim received his Bachelor of Landscape Architecture and Associate in Landscape and Nursery Management from Michigan State University and began his career at Beckett & Raeder, Inc. in 1998.



EDUCATION

Bachelor of Landscape Architecture
 Nursery Management
 Michigan State University
 East Lansing, MI

AFFILIATIONS

American Society of Landscape Architects

SELECTED EXPERIENCE

Bear River Recreation Master Plan

Design Award, Michigan Recreation & Park Association - 2016
 Petoskey, Michigan

City of Petoskey Downtown Greenway (MDOT)
 Petoskey, Michigan

Iron Belle Trail Bridge
 Petoskey, Michigan

Acme Connector Trail
 Acme, Michigan

MDNR Petoskey State Park Non-Motorized Trail
 Petoskey, Michigan

Avalanche Park Overlook Improvements
Open Space Park Improvements
 Boyne City, Michigan

Argo Cascades White Water Project
 Ann Arbor, Michigan

MDOT TEA-21
 Streetscape Improvements
 Dexter, Michigan

Dexter Farmers Market
 Dexter, Michigan



Carrie Klingelsmith, CPRP
Project Professional



Carrie brings to Beckett & Raeder, Inc. a diverse background in both the public and private sector. As a Certified Park and Recreation Professional, she is dedicated and passionate about recreation services, programming, and their land uses. Carrie has worked in the public sector for a variety of municipalities, giving her unique insight into the daily operations of local governments, acting as a recreation programmer and park and recreation director. She matches this expertise with private sector experience that spans grant writing, marketing, development, and building partnerships and collaborative efforts. Carrie has successfully raised nearly \$1,000,000 dollars in grant funding for her clients over the years and strives to secure funding for important recreational projects.



EDUCATION

Bachelor of Applied Arts,
 Recreation, Parks and Leisure
 Service Administration
 Central Michigan University
 Mt. Pleasant, Michigan

LICENSES & CERTIFICATES

Certified Park and Recreation
 Professional

Certified Playground Safety
 Inspector

AFFILIATIONS

Michigan Recreation & Park
 Association

Knuckles Knorth Recreation &
 Park Association

BOARDS & COMMITTEES

mParks Past Vice President

Petoskey Chamber of
 Commerce

City of Dearborn Recreation & Parks Plan,
 Dearborn, Michigan - 2021

Eaton County Parks and Recreation Plan
 Grand Ledge, Michigan - 2021

Eveline Township, Parks and Recreation Plan, East
 Jordan, Michigan - 2021

City of Boyne City Parks and Recreation Plan,
 Boyne City, Michigan - 2020

Charlevoix County Recreation Plan,
 Charlevoix, Michigan - 2020

Acme Township Parks and Recreation Plan,
 Acme, Michigan 2019

Bay Township Parks and Recreation Plan,
 Boyne City, Michigan 2019

City of Farmington Hills Park and Recreation Plan,
 Farmington Hills, Michigan 2019

M.C. Smith Associates & Architectural Group, Inc.
 Park and Recreation Strategic Planning and Marketing
 Director*

*Preparation of 5-Year Park and Recreation Plans; park
 system inventories and analysis; finding resources and
 leveraging relationships for potential projects; community
 grant writing that secured nearly \$900,000 dollars in two
 years*

Byron Township

Parks and Recreation Director*

*Planning, designing, marketing, and implementing
 programs; administration of department budget;
 developing partnerships and collaborations; oversight of
 facility operations; acquired \$100,000 dollars in grant
 funding*

Representative Trail & Greenway Experience

Beckett & Raeder, Inc. is an organization comprised of Landscape Architects, Engineers and Planners. We have a broad range of experience in all phases of trail planning and design from regional trail routing studies to local trail connections. The scope of services we provide in the planning components encompasses all aspects of trail development including, master planning, coordinating and implementing public involvement, negotiating with various landowners and stakeholders, as well as determining funding sources and applying for these funds.

Beckett & Raeder, Inc. also has extensive project experience in detail design, contract drawings and specification development. We are adept at construction administration of trail construction. We have overseen the construction of a wide variety of trails from heavily used paved trails to soft surface passive use trails. We have implemented trails in a wide variety of settings including, floodprone areas, steep slope areas, wetlands, and erosion prone environments. The trails we have designed have incorporated bridges, retaining walls, boardwalks, observation decks, and multiple types of trail crossings.

In our wide assortment of trail development, we have incorporated several types of amenities. We have designed trail signage motifs that help define the trails character and educate users about the inherent qualities along the way. We have designed informative centers at trail access points which indicate the trail route, trail length, points of interest, etc. In most designs rest areas comprising of benches, waste receptacles, and bike racks have been incorporated in strategic locations along the trail route. In specific trails we have included lighting, picnic shelters, and rest room facilities.

In addition to our extensive project experience, partners of our firm authored sections on ‘Park Equipment’ and ‘Embankment Stabilization’ for the Seventh edition of Architectural Graphic Standards, a nationally published resource book for designers. The experience of our staff with particularly qualifies us to conduct any scope of trail design. A representative list of our trail experience follows:

Acme Connector Trail
 Acme, Michigan

Canton Greenways
 Canton, Michigan

Airline Trail Extension
 West Bloomfield, Michigan

City of Petoskey Downtown Greenway
 Petoskey, Michigan

Ann Arbor Public Schools
 ADA Compliance Project
 Ann Arbor, Michigan

Dundee Fishing Pier and Riverwalk
 Dundee, Michigan

Ashmun Park and Trails
 Sault St. Marie, Michigan

Dixboro Non-Motorized Trail
 Superior Township, Michigan

Bayfront Park and Lake Michigan Trails
 Petoskey, Michigan

Founders Landing Trail and Pedestrian Bridge
 Marquette, Michigan

Boyne City Boardwalk
 Boyne, Michigan

Grand Blanc Walkbridge and Nature Trail
 Grand Blanc, Michigan

Brighton Recreation Area
 Access to Recreation Loop Trail
 Brighton, Michigan

Hickory Woods Park
 Pittsfield Township, Michigan

Inkster Greenway Trail
 Inkster, Michigan

Iron Belle Trail Bridge,
Petoskey, Michigan

Lakeside Park
Ypsilanti Township, Michigan

Lapeer Linear Park
Lapeer, Michigan

Marshbank Park
West Bloomfield Township, Michigan

Marquette Lower Harbor Non-Motorized Trail
Marquette, Michigan

Muskegon Lakeshore Trail
Muskegon, Michigan

Petoskey State Park Nonmotorized Trail
Petoskey, Michigan

Pinckney Non-Motorized Trail Linkages
Pinckney, Michigan

Platte River Park
Homestead Township, Michigan

Rogers City Linkage Plan & Trail System
Rogers City, Michigan

Rifle River Recreation Area
Access to Recreation - Pintail Pond Northern Fen
Lupton, Michigan

University of Michigan Golf Course – Allen Creek
Crossing
Ann Arbor, Michigan

US-23 Rogers City to P.H. Hoeft State Park Trail
Presque Isle County, Michigan

US-31 Pedestrian Tunnel
Petoskey, Michigan

Waldenburg Park Trail System
Macomb Township, Michigan

Waterford Walkability Study
Waterford, Michigan

Acme Connector Trail Non-Motorized Trail Segment

Acme Township, Michigan

In Spring of 2019, Acme Township retained the services of Beckett & Raeder, Inc. to complete final design and engineering, construction document preparation and bid period assistance for the initial segment of the Acme to Elk Rapids Regional Non-Motorized Trail. A critical third member of the project team is Traverse Area Recreational Trails, a nonprofit organization focused on local and regional nonmotorized trail connectivity. This initial trail segment consists of a combination of separated trail and roadway bicycle lanes connecting TART trail to Traverse City on the southwest end, to the new Acme Town Center development to the east. BRI built on the preliminary design efforts of the Township and TART.

BRI's scope of services began with final design and presentation to an established group of project stakeholders, including property owners from which easements would be required. After securing the approval of stakeholders and property owners, BRI completed final design to establish the final budget used in application to MDNR's Michigan Natural Resources Trust Fund grant. Once the Township and TART secured funding, BRI moved to construction document preparation, and at the time of this writing, is completing bidding documents for a Spring 2021 construction start.

Once complete, the trail will feature 1.5 miles of bicycle connectivity through a combination of bike lanes and separated trails and boardwalk that wind through the Acme Creek floodplain, crossing Acme Creek and passing a model sustainable stormwater management system associated with Acme Town Center. As such, the trail provides important pedestrian links between residential and business districts, but also provides an opportunity to observe the natural environment and measures to protect it.



Top Image: Aerial of Acme Connector Trail

Middle: Proposed Bridge

Bottom: Proposed Outcropping Stone

Bear River Valley Recreation Area

Petoskey, Michigan

2016 Implementation Award - Michigan Association of Planning

The opportunity to move ahead with improvements to the Bear River Valley represented the culmination of years of planning and programming which began in the early 1980's with the Bear River Valley Recreation Area Development Strategy. Future funding potential was identified and put in place with the 1985 Tax Increment Finance District and Plan which included the Petoskey waterfront from Magnus Park to the Arboretum and the Bear River Valley to Riverbend Park.

Programming for improvements and features in the valley was outlined in the Tax Increment Finance Development Plan update of 2004 and was subsequently confirmed as a future project in the 2008 - 2012 Petoskey Parks and Recreation Five Year Master Plan.

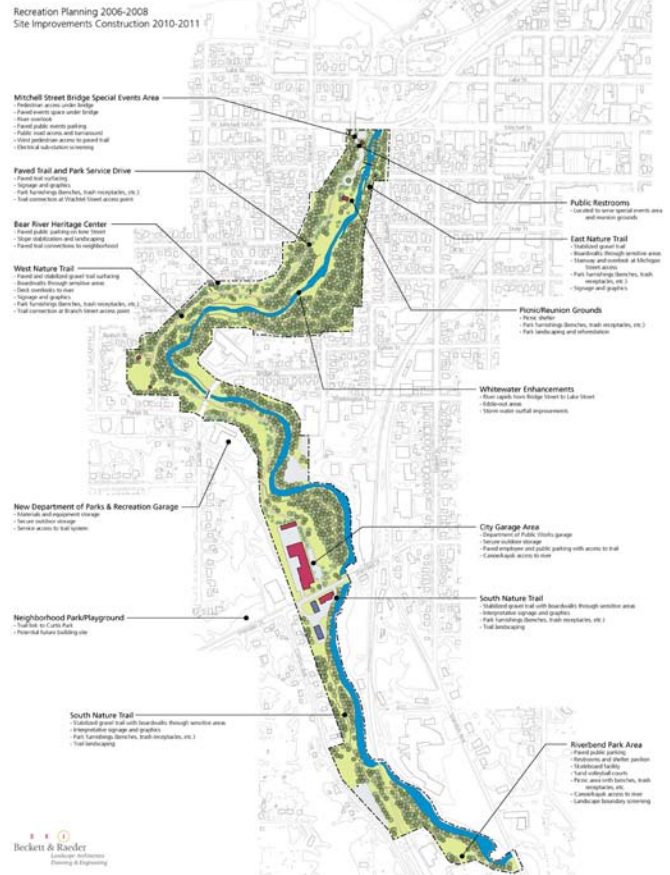
The basic concept was to enhance public opportunities to access the valley through adjacent street improvements, including public parking by creating specific entrance points with stairs and ramps to access the valley floor and its system of trails and recreational features. For the most part, the valley floor including the Bear River was left in its natural state. At selected points, special features such as picnic shelters, river overlooks, wetland boardwalks, etc are provided. Except for minor penetrations and parking at Quaintance Street, Sheridan Street and Riverbend Park, motorized traffic in the valley is restricted to occasional service and maintenance equipment on the main trail. The main trail from Quaintance to Sheridan is a 10' wide, hard surfaced and universally accessible to allow persons with all mobility ranges to experience the full length of the valley floor. Likewise, all facilities in the valley floor are barrier free.

Side trails in other areas of the valley and valley walls consist of shredded bark natural trails, stabilized aggregate trails and hard surfaced trails connecting the main trail to the many valley entrances. Boardwalks were developed where the trails traverse wetland areas. Certain existing trail segments are part of the multi-state North Country Trail and are so designated with signs and markers.

There are several large open grass areas that can accommodate group gatherings. The Reunion Grounds south of the Mitchell Street Bridge is a lower level plain suitable for informal recreation and games. Improvements include a picnic shelter with fireplace and a public restroom facility.



Bear River Valley Recreation Plan & Site Improvements



Iron Belle Trail Bridge

Petoskey, Michigan

At the beginning of 2016, the City of Petoskey began collaborating with the North Country Trail Association and North Central Michigan Community College (NCMC) to plan a pedestrian bridge crossing of the Bear River to serve a proposed North Country Trail and Iron Belle Trail route. The City took the initiative because of the proposed trail's location on City recreational property, and involved NCMC since the other side of the proposed bridge crossing would utilize NCMC recreational trails. Once this team was established, the City of Petoskey contracted with Beckett & Raeder, Inc. for preliminary design and engineering for the bridge crossing for the purposes of application to funding opportunities. BRI worked with the City and College to confirm the bridge crossing location, provide a preliminary opinion of construction cost, and to assist in the funding application.

Once the funding application was approved at the end of 2019, the City contracted with BRI to complete final design and engineering, bid and construction observation services for the project. BRI prepared applications and submitted for the necessary environmental permits, completed the bid documents, received bids and recommended bid award for the project, which is scheduled to begin construction in December 2020.



Top Image: Proposed Bridge

Middle: North Country Trail Route

Bottom: Aerial of North Central Michigan Community College

Dixboro Road Multi-Use Trail

University of Michigan & Superior Township
Ann Arbor, Michigan

This 2.1 mile multi-use trail connects the Parker Mill County Park to the University of Michigan Mathaei Botanical Gardens. The subject properties contains highly sensitive environmental areas which were a primary concern for the respective land owner. BRI carefully analyzed trail routing opportunities and guided a steering committee through selection of the least impactful route through use of GIS data, topographic survey data, environmental inventories, and on-site staking. The end result is a functional and beautiful multi-use trail that avoids impacts to the most sensitive environmental areas adjacent to Fleming Creek, and allows users views and interpretive learning opportunities without disturbance to wildlife or vegetation.

The trail incorporates boardwalks, footbridges, bituminous pavement, bioswales, vegetative filtration buffers, signage, mileage markers, trailheads, rest areas and a lookout station to create an informative tranquil route along the Fleming Creek watershed. The landscape has a wide variety of settings including heavily wooded areas, restored prairie open spaces, dense wetland vegetation, flatlands and heavily rolling terrain.

The entire trail is situated on University of Michigan property and was designed to respect adjacent University land uses which include a golf course, the botanical gardens, and a team-building ropes course. The project also worked with a number of private residences located near portions of the trail to develop mutually beneficial trail routing and landscape buffering.

With approximately half of the trail situated on an existing sanitary sewer easement, BRI facilitated negotiations between the University and Superior Township in establishing the trails' alignment. BRI was also integral in acquiring funding for the project through a combination of private donations, a MDNR Trust Fund Grant, and the MDOT Transportation Alternatives Program.



Prequalified Service Vendors

Vendor names containing: beckett

As of February 15, 2021

Service Prequalification Classification	Vendor	State	Phone	Status	DBE Certified
Design - Roadway	BECKETT & RAEDER, INC	MI	734-663-2622	Approved	No
Design - Utilities: Municipal	BECKETT & RAEDER, INC	MI	734-663-2622	Approved	No
Design: Landscape Architecture	BECKETT & RAEDER, INC	MI	734-663-2622	Approved	No

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PROPOSED WORK PLAN

Blue Star Trail – North Section

Beckett & Raeder, Inc. Proposal for Professional Design Services

TASK 1: EVALUATION OF ENGINEERING CONCEPT PLANS

TASK 1: EVALUATION OF ENGINEERING CONCEPT PLANS

This task will serve to set the design process in motion by establishing an on-going communication procedure between Beckett & Raeder and the Stakeholders. All data and information necessary to guide a preliminary design will be gathered. Accordingly, this task will involve the following:

1.1 MEETING #1: KICKOFF MEETING

Beckett & Raeder, Inc. (BRI) will coordinate and administer the initial meeting with the Stakeholders to discuss specific details relative to the project, review of the previous concept plans and estimates, direction on the final work plan and special considerations in the design process. The initial meeting will serve to establish basic attitudes and priorities relative to the plan development, identify data required to complete the design, identify review agencies, and confirm/finalize design schedule.

1.2 SITE VISIT

A socially distanced site visit with appropriate decision makers will be beneficial to better understand the overall goals of the project. We would couple this site visit with our design team kickoff meeting.

1.3 CONCEPT PLANS AND COST ESTIMATE

We will review the previous cost estimate and concept plans and prepare, if necessary, a revised itemized preliminary opinion of probable construction costs for all items of construction based on our review of the existing documents and our site visit.

TASK 2: ADVISING ON ROUTE AND DESIGN

TASK 2: ADVISING ON ROUTE AND DESIGN

This task involves evaluating options for the route and the preliminary design.

2.1 CONCEPTUAL OPTIONS

We will review specific conceptual options as presented in the RFP. This includes a preliminary meeting with MDOT to discuss the design across the Kalamazoo River Bridge and a preliminary meeting with Saugatuck Township regarding a potential route through Alamanchier Park. Based on those meetings, options can be narrowed down for the final preferred route.

2.2 NARROWING ROUTE CHOICES

Based on the above mentioned meetings, options can be narrowed down for one or two final preferred routes.

TASK 3: FIRE AND POLICE DEPARTMENT COORDINATION

TASK 3: FIRE AND POLICE DEPARTMENT COORDINATION

This task involves presenting the final one or two options to local fire and police stakeholders for review and comment.

3.1 FIRE AND POLICE MEETINGS

We will review the one or two final options with appropriate fire and police personnel for input on the design. Input would be used to tweak the final one or two design options.

3.2 REVISING THE ROUTING

We anticipate that some minor route revisions may be necessary based on input from police and fire. These revisions will be reviewed and coordinated with the Stakeholders.

TASK 4: GRANT APPLICATION

TASK 4: GRANT APPLICATION

This task involves opening discussions for the grant application process – not the formal submittal.

4.1 GRANT APPLICATION

We will open up discussions on grant applications with the appropriate agencies. We assume that one or two routes will be on the table for design, thus we would look to confirm that either option would be acceptable to the grant agencies. Assuming that both are feasible, we would proceed. Any issues with the routes would be resolved as part of this task.

4.2 ROUTE CHOICE

Based on all of the previous meetings with the Stakeholders, a final route will be chosen and endorsed by the Tri-Community Joint Study Committee.

TASK 5: PRESENTATIONS TO GOVERNING BODIES AND FOTBST

TASK 5: PRESENTATION TO GOVERNING BODIES AND FOTBST

This task involves presenting the final option to the local governing bodies (City of Saugatuck, Saugatuck Township, and City of the Village of Douglas). We would also present to the Friends of the Blue Star Trail, if requested.

5.1 PRESENTATIONS

We would attend official open meetings for the following groups:

- City of Saugatuck
- Saugatuck Township
- City of the Village of Douglas
- Friends of the Blue Star Trail

TASK 6: PREPARATION OF PLANS, SPECIFICATIONS, AND ESTIMATES

TASK 6: PREPARATION OF PLANS, SPECIFICATIONS, AND ESTIMATES

This part shall include the main design process with the goal of plans and specifications for bids. This is detailed as follows:

6.1 SITE TOPOGRAPHIC SURVEY AND GEOTECHNICAL INVESTIGATIONS

Based on the scope of work, we have anticipated that a fully topographic survey will be necessary. A geotechnical investigation will be necessary, with specific interest in the crossing of the Kalamazoo River. Once a final route is chosen, details of the extents of these services will be evaluated. It is noted that both the topographic survey and the geotechnical investigation will be completed by sub-consultants under our contract. We will work with the Stakeholders on whether specific firms are requested or whether BRI will solicit bids from firms we have previous working relationships.

6.2 PRELIMINARY DESIGN COST ESTIMATE

Based on topographic survey and geotechnical investigations, the BRI Team will confirm our Opinion of Probable Construction Costs to the Stakeholders for discussion.

6.3 DESIGN DRAWINGS

Based on the previous tasks, we will proceed to develop final plans and specifications. These are anticipated to include:

- Existing Conditions
- Demolition Plan
- Soil Erosions and Sedimentation Control Plan
- Traffic Control Plan
- Layout and Materials Plan
- Grading Plan
- Construction Details

6.4 JURISDICTIONAL COORDINATION / PERMIT SUBMITTALS / GRANT APPLICATIONS

Coordination with jurisdictions and grant agencies will be on-going, with formal permits and applications being submitted for review and approval when the design is roughly 80% completed. BRI's proposal includes one (1) round of reviews, responses, and revision resulting from these reviews.

6.5 FINAL COST ESTIMATE

We will prepare an itemized final opinion of probable construction costs for all items of construction and, if necessary, reconcile to project budget prior to bidding

6.6 ON-GOING DESIGN MEETINGS

As necessary, either formally or informally, BRI will continue to be in communication with Stakeholders to keep everyone involved in the design process. Prior to bidding, we will present and guide discussion of the construction documents as a final verification of project design prior to going out for bids. Final changes to the document package will be made.

TASK 7: CONSTRUCTION ADMINISTRATION

TASK 7: CONSTRUCTION ADMINISTRATION

This includes tasks involved during construction. Note that construction layout (surveying) will generally be a bid item for the contractor, as they would dictate the frequency of the layout activities. We find that this is more cost effective for construction projects.

7.1 CONTRACT ADMINISTRATION

Beckett & Raeder will perform Construction Administration duties during the period of the construction contract. These services include bi-weekly visits to the site to observe all stages of the work and to ensure that the contractor fulfills the intent of the Contract Documents. After the work is in progress, the frequency and type of observations will be in accordance with prudent professional practice. BRI will prepare meeting minutes reflecting the discussions of the pre-bid and progress meetings.

Beckett & Raeder will prepare bi-weekly payment estimates with input from the construction contractor to facilitate contractor payment.

Beckett & Raeder will prepare bulletins and change orders and make recommendations related to the contractor's bulletin and change order responses. The team will facilitate the execution of bulletins and change orders in order that they ultimately become attachments to the contract.

Beckett & Raeder will prepare a punch list of items to be corrected prior to final approval. Subsequently, we will make a final site inspection and recommendation relative to acceptance of the work.

7.2 CONSTRUCTION OBSERVATION

BRI will provide a Resident Project Representative (RPR) for observation of construction activities on-site up to a full time (40 hours per week) during construction activities. Note that depending on the project's budget, this can be reduced to only have representation during key times of construction. This will generally comply with MDOT TAP guidelines.

The RPR will attend bi-weekly payment progress meetings at the project site.

The RPR will assure that the construction work conforms to the requirements of the plans and specifications and reject work that does not conform.

7.3 MATERIAL TESTING

Beckett & Raeder can utilize a sub-consultant for material testing. We anticipate the need for density testing of aggregates, material testing of asphalt, and material testing of concrete. The services are generally based on the contractor's pace for construction.

TASK 8: COORDINATION WITH AGENCIES

TASK 8: COORDINATION WITH AGENCIES

As mentioned during Task 6, the BRI Team will coordinate the design with the appropriate agencies, which are anticipated to be the Allegan County Road Commission, MDOT TAP, and the local municipalities.

8.1 JURISDICTIONAL COORDINATION / PERMIT SUBMITTALS

The BRI Team will obtain permit approval for the bidding documents. Actual permits will be pulled by the Contractor who wins the bid. During construction BRI will coordinate that the conditions of the permits have been fulfilled.

8.2 GRANT COORDINATION

We will submit grant applications with the appropriate agencies, including through the MDOT TAP. We will keep Stakeholders informed of the progress/process and perform the necessary design work related to grant requirements.

TASK 9: COMMUNICATION


TASK 9: COMMUNICATION

As mentioned during Task 6, the BRI Team will be in communication with all Stakeholders throughout the design process. This communication will extend into the construction process.

9.1 ON-GOING COMMUNICATION

The BRI Team will continue to be in communication with Stakeholders to keep everyone involved through the design and construction process.

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Tri-Community Joint Study Committee for the Blue Star Trail														
Blue Star Trail - North Section														
							Kristofer	Christy	Tim	Carrie	Survey	Geotech		
							Enlow, P.E.	Summers, PLA	Knutsen, PLA	Klingel Smith	Sub	Sub		
							Principal - Eng	Principal - LA	Senior Associate	Project Prof.	Consultant	Consultant	Totals	
Tasks														
1.1	Kickoff Meeting						4	4						8
1.2	Site Visit						4	4						8
1.3	Concept Plans and Cost Estimate						4		4					8
2.1	Conceptual Options						4	2	4					10
2.2	Narrowing Route Choices						4	4						8
3.1	Fire and Police Meetings						4	4						8
3.2	Revising the Routing						2	2	8					12
4.1	Grant Application								4	8				12
4.2	Route Choice						4	4						8
5.1	Presentations						16	16	8					40
6.1	Site Topographic Survey and Geotechnical Investigations						4		4		80	40		128
6.2	Preliminary Design Cost Estimate						8	2						10
6.3	Design Drawings						20	16	80					116
6.4	Jurisdictional Coordination/Permit Submittals/Grant Applications						2		8	16				26
6.5	Final Cost Estimate						4		2					6
6.6	On-Going Design Meetings						16							16
7.1	Contract Administration						16	16						32
7.2	Construction Observation						40							40
7.3	Material Testing											30		30
8.1	Jurisdictional/Permit Submittals						2		8					10
8.2	Grant Coordination									16				16
9.1	On-Going Communication						16							16
	<i>Total Hours</i>						<i>174</i>	<i>74</i>	<i>130</i>	<i>40</i>	<i>80</i>	<i>70</i>		<i>568</i>
	<i>Hourly Rate (includes overhead factor)</i>						<i>\$ 145.00</i>	<i>\$ 145.00</i>	<i>\$ 135.00</i>	<i>\$ 100.00</i>	<i>\$ 165.00</i>	<i>\$ 200.00</i>		
	<i>Total Fee</i>						<i>\$ 25,230.00</i>	<i>\$ 10,730.00</i>	<i>\$ 17,550.00</i>	<i>\$ 4,000.00</i>	<i>\$ 13,200.00</i>	<i>\$ 14,000.00</i>		<i>\$ 84,710.00</i>

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DNR and MDOT Grant Experience

Beckett & Raeder, Inc. has provided a wide range of professional services relating to grant writing and acquisition for Michigan municipalities. We would take the lead role in applying for these grants, as noted in our Work Plan, by having constant communication throughout the design process. Representative experience with MDOT and DNR grants are as follows:

MDNRTF Grants

Garfield Township, Kalkaska County
 Park & Recreation Plan
 Successful Grant Application

West Bloomfield Township
 West Bloomfield Airline Trail Extension
 Successful Grant Submission

City of Lapeer
 Linear Park
 Grant Implementation

White Lake Township
 Bloomer Park
 Successful Grant Submission and Implementation

Onekama Township
 Langland Park
 Grant Implementation

Ypsilanti Township
 Lakeside Park Improvements
 Successful Grant Submission & Implementation

Village of Onekama
 Village Park
 Grant Implementation

MDNR Access to Recreation Projects

J. W. Wells State Park Accessibility Improvements

City of Petoskey
 Iron Belle Trail Bridge – Bear River Crossing
 Successful Grant Submission & Implementation

Rifle River State Recreation Area Accessibility Improvements

City of Petoskey
 Greenway: Phase 1 and 2
 Successful Grant Submission & Implementation

Brighton State Recreation Area Accessibility Improvements

Pittsfield Township
 Hickory Woods Park Improvements
 Successful Grant Submission and Implementation

Pinckney State Recreation Area Fishing Pier and Picnic Area

City of Pleasant Ridge
 Gainsboro Park
 Successful Grant Submission and Implementation

Coastal Zone Management Grant Administration

City of Monroe
 City of Petoskey
 City of Muskegon

City of Rogers City
 Non-motorized Pathway
 Successful Grant Submission and Implementation

City of Muskegon
 Lakeshore Trail
 Grant Implementation

Superior Township
 Dixboro Non-Motorized Trail
 Successful Grant Submission and Implementation

Roger City
 Non-motorized Pathway System
 Successful Grant Submission and Implementation

Washtenaw County
 Rolling Hills Accessibility Improvements

Platte River Park
 Lake Township

MDOT TAP and Downtown Development

M-14

Plymouth Road Corridor Improvement Project
Livonia, Michigan

M-52

Main And Maumee Street Enhancement Project
Adrian, Michigan

M-1

Woodward Avenue (M-1) Streetscape Phase II Project
Pleasant Ridge, Michigan

M-50

Tecumseh Streetscape Improvement Project
Dundee, Michigan

M-54

Beautification And Reconstruction Project
Hudson, Michigan

M-153

Ford Road Landscape Improvements Project
Canton Township, Michigan

M-153

Downtown Strategic Plan
Canton Township, Michigan

M-39

Southfield Road (M-39) Median Beautification
Allen Park, Michigan

M-53

Main Street Streetscape Enhancement Project
Marlette, Michigan

US-12

Michigan Avenue Enhancement Improvements
Wayne, Michigan

M-34

Bean Creek Pedestrian Bridge And Linear Park Project
Hudson, Michigan

US - 31

City of Petoskey Pedestrian Tunnel
Petoskey, Michigan

US-12

Streetscape Improvement Project
Ypsilanti, Michigan

M-153

Ford and Wayne Road Corridor Istea Project
Westland, Michigan

US-12

Michigan Avenue Median Beautification
Inkster, Michigan

US-12

Michigan Avenue Streetscape
Clinton, Michigan

US-23

Non-Motorized Pathway
Presque Isle County and MDOT Alpena TSC

M-50

Chicago Boulevard Streetscape Project
Tecumseh, Michigan

US-23 / M-68

Non-Motorized Pathway System
Rogers City, Michigan

US-23

Downtown Strategic Plan
Alpena, Michigan

US-223

Village of Blissfield Design Plan
Blissfield, Michigan

M-125 / M-50

Monroe Downtown Physical Plan and Streetscape
Monroe, Michigan

Familiarity with the Local Area

The Beckett & Raeder Team has experience working across the State of Michigan on non-motorized trail design. We have familiarity with local conditions and an understanding of the specific needs of the project due to our prior experience with non-motorized trail design. We have completed two rather substantial projects in Allegan County:

Allegan DDA Physical Design Plan

Following the completion of the Allegan Downtown Strategic Plan, BRI was retained to prepare a design plan for the downtown district. We worked with the Allegan Downtown Development Authority to assess, design, and develop the downtown area, including street conversions from one-way to two-way traffic patterns, incorporating on street parking, streetscape improvements, parking edge improvements, and a new sign and wayfinding system.

Streetscape and park improvement recommendations included the selection of new street furniture, paving materials, street trees, lighting, and other elements to improve the visual setting of the downtown. Parking lot reconfigurations were suggested to improve the physical appearance and efficiency of these areas.

Gun Lake Tribe – Match-E-Be-Nash-She-Wish Band of Pottawatomis Indians

Beckett & Raeder, Inc. provided land development planning for the Gun Lake Tribe properties in Allegan County. These services included conceptual layouts of future facilities include road layouts, commercial/retail, residential, and recreational development opportunities. Various concepts were created and discussed with the client. These options were evaluated in connection with the existing facilities on-site.

The overall land development plan options are internally being phased as appropriate given the economy and pandemic situation. Phasing of the development plans are on-going and are dependent on market conditions.

Fire or Police Department Involvement

The Beckett & Raeder Team has experience working with local fire and police departments through a design process. These generally involve the 2015 International Fire Code and life-safety planning. For roadway designs, design criteria must be met such that both departments can maintain access during construction and once the project is completed. Consideration for hydrant spacing, fire lanes, and emergency vehicle access are part of roadway designs. For non-motorized trail design, coordination with these departments is necessary to plan out rescue plans for non-motorized users who may need assistance along the trail. Considerations for access points for emergency vehicles to drive on the trail, but other motorized vehicles to not drive on the trail, are discussed. These elements can be removable bollards, break-away gates, etc.

One particular project that had considerable involvement with fire and police was the Dixboro Non-Motorized Trail, also known as the Matthaei Botanical Garden Trail, is located within the Matthaei Botanical Gardens at the University of Michigan. The Matthaei Botanical Gardens Trail is a paved hiking and biking path that connects the gardens with a network of trail systems throughout the area. The trail provided a safer travel route that parallels, but avoids, Dixboro Road, a busy Washtenaw County artery with a narrow shoulder. Because the trail was in a less visible area, our design team had several meetings with University of Michigan Campus Safety personnel regarding different options to assist, such as trail lighting, removable bollards for vehicular access, and the installation of emergency phones. With all things considered, the ultimate implementation was to allow access for small utility emergency vehicles.

Smart Traffic Signals

The Beckett & Raeder Team has some experience with signalized crossings for non-motorized trail with vehicular roadways. These crossing and signals have evolved over the years:

Non-Signalized Crossing

The MMUTCD allows for a series of four signs with pavement markings for a non-signalized trail crossing of a roadway. These tend to be common in low traffic areas.



Pedestrian Push-Button Signal

These occur at vehicular intersections, either as an added item or as part of a new traffic signal. These are actuated by the non-motorized user to allow for additional time for a crossing.



Rectangular Rapid Flashing Beacon (RRFB)

This is a user activated signal designed to alert motorist that a non-motorized trail user is crossing the road. It does not require the motorist to stop for the trail user.



High Intensity Activated Crosswalk (HAWK)

This is a user activated signal designed to alert motorist that a non-motorized trail user is crossing the road. It requires a motorist to stop for the solid red lights, which allows the non-motorized trail users to cross – similar to a normal traffic signal.



v

References – Non-Motorized Trails

Acme Connector Trail

Client: Acme Township
Address: Acme Township Hall
6042 Acme Road
Williamsburg, MI 49690
Contact: Lindsey Wolf, Planning & Zoning Administrator, 231.938.1350
Service Provided: Non-motorized trail design and engineering, bid document preparation

Petoskey State Park Non-motorized Trail

Client: MDNR
Address: MDNR Cheboygan Regional Field Office
120 W. A Street
Cheboygan, MI 49721
Contact: Keith Cheli, AICP, Regional Field Planner, 989.370.1907
Service Provided: Non-motorized trail design and engineering, bid document preparation

City of Petoskey Downtown Greenway Phase 1 & Phase 2

Client: City of Petoskey
Address: 101 E. Lake Street
Petoskey, MI 49770
Contact: Kendall Klingelsmith, Director, Department of Parks and Recreation,
231.347.2500
Service Provided: Phase 1: Non-motorized trail design and engineering, MDNR MNRTF grant application, bid document preparation, grant award administration
Phase 2: Non-motorized trail design and engineering, assistance with MDNR MNRTF grant application, bid document preparation, grant award administration

City of Petoskey Iron Belle Trail Bridge

Client: City of Petoskey
Address: 101 E. Lake Street
Petoskey, MI 49770
Contact: Kendall Klingelsmith, Director, Department of Parks and Recreation,
231.347.2500
Service Provided: Design, engineering, M-EGLE/USACE permitting, MDNR MNRTF grant application assistance and construction document preparation, grant award administration

Dixboro Non-Motorized Trail (The Matthaei Botanical Gardens Trail)

Client: University of Michigan - Matthaei Botanical Gardens
Address: 1800 N. Dixboro Road
Ann Arbor, MI 48105
Contact: Bob Grese, Director, 734.647.7600

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SERVICE AGREEMENT

Project Title

Project #: 99999

Firm: Beckett & Raeder, Inc.
535 West William, Suite 101
Ann Arbor, MI 48103
734.663.2622

Client: **Client Name**
Client Address
Client City / State/ Zip
999.999.9999

This Service Agreement ("Agreement") is between the Firm and Client and is effective on the date last signed by both parties. Client desires to retain Firm as an independent contractor to provide certain services and/or deliverables under the conditions set forth in this Agreement, and Firm desires to provide those services and/or deliverables.

For each project under this Agreement ("Project"), Firm and Client shall agree on a written Scope of Work ("Scope") that shall contain a description of one or more of the following, as applicable:

1. any and all documents, renderings, photographs, drawings, summaries, reports, analysis, studies or other written materials to be created and/or delivered by Firm ("Written Materials");
2. the services to be provided by Firm ("Services");
3. milestone and completion dates for each Written Material and Service;
4. the amount and timing of fees and expenses to be paid by Client to Firm for each Written Material and Service; and
5. all information and materials to be provided by Client as necessary for Firm to complete each Written Material and Service.

Written Materials and Services are collectively referred to as "Deliverables." Each Scope shall be attached to this Agreement and subject to the terms and conditions of this Agreement.

This Agreement is comprised of this cover page, the Terms and Conditions attached to this cover page and each Scope executed by the parties. Client's signature is required below and its initials are required at the end of the Terms and Conditions.

Prepared by:

(printed name and title)

**AGREED AND ACCEPTED:
BECKETT & RAEDER, INC. / BRI, INC.**

(Client's Full Legal Name)

By: _____
(signature)

By: _____
(signature)

Name: _____
(printed)

Name: _____
(printed)

Title: _____

Title: _____

Date: _____

Date: _____

TERMS AND CONDITIONS

Warranties and Disclaimer.

Firm warrants that (a) all Deliverables provided to Client shall be Firm's original work, or that Firm will have acquired all rights necessary to fulfill its obligations under this Agreement and each Scope; (b) all Deliverables shall be provided in a diligent, prompt, and professional manner by individuals with the necessary knowledge and training to provide such Deliverables; and (c) all Deliverables will be provided in accordance with the milestones agreed to in the applicable Scope; provided that Client timely, accurately and completely performs all of its obligations under this Agreement and the Scope. The warranties described in this Section are the only warranties Firm makes under this Agreement. FIRM DISCLAIMS, AND CLIENT HEREBY WAIVES, ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION ALL WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR USE.

Insurance.

Upon request, Firm will furnish the Client with a written description of insurance coverages being maintained by Firm, which may be related to Firm's provision of Deliverables. No oral representations regarding insurances shall be binding upon Firm.

Termination.

This Agreement may be terminated by either party with or without cause upon thirty (30) days prior written notice to the other party. In the event of termination, Firm shall be paid all amounts due and owing from Client for Firm's performance up to the effective date of termination. Upon payment of all such amounts, Firm shall deliver to Client all Written Materials under each Scope, whether in final form or as works in process; provided that Firm assumes no liability for the use of any Written Materials that are a work in process upon delivery to Client, unless specifically agreed to in writing by Firm. All provisions of this Agreement relating to ownership, indemnification and limitations of liability shall survive termination of this Agreement.

Payment.

Firm shall bill for Deliverables, and reimbursable costs incurred, on a periodic basis as set forth in the Scope. Each invoice shall be due and payable within thirty (30) days of receipt by Client. If an invoice is not paid within this time period Firm may, upon seven (7) days written notice to Client, suspend provision of Deliverables under the applicable Scope until all past due amounts are paid. In addition, invoices over sixty (60) days past due may be charged monthly interest at the rate of eighteen percent (18%) per annum on the unpaid balance or the highest lawful rate, whichever is less.

Cost Estimates.

Since Firm has no control over the cost of labor and materials or over competitive bidding and/or market conditions, any estimates of equipment, construction or operating costs will be made on the basis of Firm's experience, but Firm does not warrant the accuracy of such estimates as compared to contractors' bids or actual costs incurred.

Client Responsibilities - Generally.

Client shall provide Firm with all access to Client's personnel, facilities, computers, materials and all other equipment reasonably necessary for Firm to provide the Deliverables as specified in the applicable Scope. Client will obtain any consent required from a third party to permit Firm to access and use that third party's hardware, software or other proprietary material under Client's possession and control in order for Firm to provide the Deliverables under the applicable Scope. Client warrants that it shall timely, accurately and completely perform those obligations and assume those responsibilities specified in this Agreement and in each applicable Scope, including, but not limited to, the timely rendering of all required decisions and approvals. Should Client fail to comply with this warranty, Firm shall receive an appropriate extension of time to provide the Deliverables under the applicable Scope, and Client shall reimburse Firm for all additional direct costs or expenses incurred by Firm as a result of Client's noncompliance.

Site Access and Security.

Client shall obtain authorization for entry and use of land as necessary for Firm to timely perform its obligations under this Agreement. Client shall be solely responsible for any claims arising from the disturbance of surface or subsurface lands or waters caused by the performance of any of Firm's obligations under this Agreement, except for such damage as caused by the sole negligence of Firm.

Site Conditions.

Client recognizes that the presence of hazardous materials or pollution on or beneath the surface of a site may create risks and liabilities. Firm has neither created nor contributed to the presence of any hazardous materials or pollution. Consequently, Client recognizes and hereby acknowledges that this Agreement accordingly limits Firm's liability.

Federal / Local Right to Know Compliance.

In compliance with the Federal Hazard Communication Standards and applicable local laws or ordinances, Client shall provide Firm with a list of hazardous substances in the work place to which Firm employees or subcontractors may be exposed in performance of its obligations under this Agreement and each Scope. Client shall also provide a listing of protective measures in case exposure to said hazardous substances occurs.

Shop Drawings.

If shop drawing review is provided under a Scope, Firm will check and review samples, catalog data, schedules, shop drawings laboratory, shop and mill tests and materials and equipment, and all other data which the contractor is required to submit, only for conformance with the design concept of the project and compliance with the information given by the construction Contract Documents.

Construction Phase Services.

When authorized to provide construction observation or construction management services, Firm's liability with regard to the compliance of construction to Construction Documents prepared by Firm shall be only as expressly described in the Scope.

Ownership and Use of Deliverables.

Unless otherwise expressly provided in a Scope, Firm will own all rights, title and interests, including intellectual property rights, in and to all Deliverables and other materials created in connection with or pursuant to this Agreement. No Deliverables will be considered "works made for hire" as that term is used in association with the U.S. Copyright Act. Nothing herein shall be construed to restrict, or constitute an assignment of, any of Firm's rights or proprietary interests in its methodologies, techniques, technology or products. Upon the payment of all amounts owed to Firm under the applicable Scope, Client will own its copies of all Deliverables provided to Client by Firm, and may copy, use, modify, adapt, translate and distribute all such Deliverables within its organization without restriction. The Deliverables may be used only for Client's business purposes as described in the applicable Scope. Any reuse or other use of any Deliverables after they have left the custody of Firm shall be at Client's sole risk without liability to, or cause of action against, Firm.

Limitation of Liability.

In recognition of the relative risks, rewards and benefits of the Projects to both the Client and the Firm, the risks have been allocated such that the Client agrees that, regardless of the form of action or theory of recovery, in no event shall Firm be liable to Client in connection with this Agreement and/or Deliverables for any (a) indirect, special, exemplary, consequential, incidental or punitive damages, even if Firm has been advised of the possibility of such damages; (b) lost profits, lost revenue, lost business expectancy, business interruption losses or benefit of the bargain damages; (c) act or omission of any third party, except for Firm's authorized subcontractors; and/or (d) direct damages in an amount in excess of all amounts received by Firm under the Scope under which the claim arose or \$100,000, whichever is less. These limitations apply to, without limitation, Firm's negligence, errors, omissions, strict liability, and breach of contract.

Dispute Resolution.

Any dispute between the parties arising out of or related to this Agreement and/or the Deliverables shall be initially submitted to non-binding mediation and in such event each party shall be equally responsible for the expense of the neutral mediator. If mediation is unsuccessful or is not commenced within thirty (30) days of written notice to the other party of a dispute, the dispute shall be resolved by arbitration. These dispute resolution procedures shall be conducted in accordance with the Construction Industry Rules of the American Arbitration Association and the arbitrator(s) shall have the power to award legal and equitable remedies. Judgment upon the award may be entered in any court having jurisdiction thereof. Nothing herein shall prevent either party from seeking injunctive or other equitable relief from a court of competent jurisdiction pending the conduct and outcome of arbitration.

No Employee Solicitation.

During the term of this Agreement and for a period of one (1) year after its termination, Client shall not hire, solicit for hire, use, and/or contract with any individual(s) who was or is a Firm employee during the term of this Agreement. Client stipulates to the reasonableness of this provision to protect Firm's legitimate business interests in its workforce.

No Third Party Rights.

This Agreement does not create any rights or benefits to parties other than the Client and Firm.

Independent Contractor Status

Firm is an independent contractor and not an employee, agent, joint-venturer or partner of Client. Firm has no authority to create any obligations for Client, is not entitled to any benefits of Client employees, and is responsible for its own costs and legal responsibilities of doing business, including insurance, taxes, workers compensation, equal opportunity compliance, immigration requirements, and employment benefits.

Subcontractors.

Unless expressly prohibited in a Scope, Firm may use subcontractors to provide Deliverables for Client.

Assignment.

Customer may not assign this Agreement, or any Scope, in whole or in part, without Firm's prior express written consent, which shall not be unreasonably withheld or delayed. Any attempted assignment without such written consent shall be void. Subject to the foregoing, this Agreement will be binding upon and will inure to the benefit of the parties and their respective successors and assigns.

Force Majeure.

Firm shall not be responsible or liable for any delays, errors or increased costs in the provision of Deliverables that are due to causes not within its reasonable control or are caused by the acts or omissions of third parties including, but not limited to, weather conditions, fire, theft, vandalism, strikes or labor disputes, war, disasters, acts of god, material shortages, supplier price increases, fuel shortages, or similar occurrences.

Notices.

All notices required to be given in writing shall be delivered by mail, courier, hand-delivery, facsimile, or email, and shall be effective upon receipt; provided that the sender shall have the duty of demonstrating receipt.

Waiver.

Any waiver of a party's right or remedy related to this Agreement must be in writing, signed by that party to be effective and no waiver shall be implied from a failure of either party to exercise a right or remedy.

Governing Law.

This Agreement shall be deemed to have been made in the State in which the Deliverables are provided and shall be governed by, and construed in accordance with, the laws of that State.

Severability.

If any provision of this Agreement is held by a court of competent jurisdiction to be invalid or unenforceable, such provision will be enforced to the fullest extent that it is valid and enforceable under applicable law. All other provisions of this Agreement shall remain in full force and effect.

Entire Agreement - Amendment / Modification.

This Agreement, which includes these Terms and Conditions and all Scopes, is the sole understanding of the parties with respect to the stated subject matter and may be amended only by a written agreement signed by both parties. No terms or conditions of either party's invoice, purchase order or other administrative document shall modify the terms and conditions of this Agreement, regardless of the other party's failure to object to such form.

Initial here: _____ (Firm)

_____ (Client)

ATTACHMENTS

The following attachments are incorporated as part of this Agreement.

- Scope of Work
- Project Schedule, Gantt Chart, Milestone Chart, Etc.
- Professional Fees and Reimbursables
- Other:
- Other:



Beckett & Raeder, Inc.

535 West William
Suite 101
Ann Arbor, MI 48103

734 663.2622 ph
734 663.6759 fx

www.bria2.com

Petoskey, MI
231.347.2523

Traverse City
231.933.8400

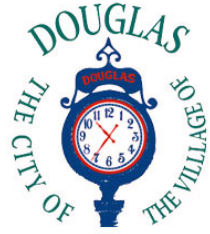
Toledo, OH
419.242.3428



SAUGATUCK TOWNSHIP
Allegan County, Michigan



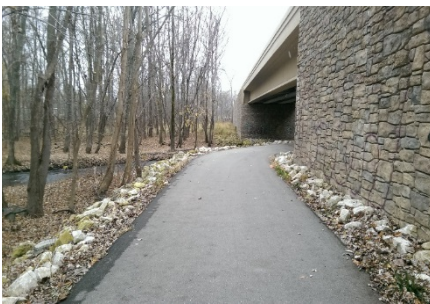
Tri-Community Joint Study Committee



PROPOSAL

Blue Star Highway Trail – North Section

February 17, 2021



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

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Cover Letter

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- 10** References from Similar Projects
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Moore+Bruggink
Consulting Engineers

February 17, 2021

*Proposal – Blue Star Highway Trail –
North Section*

Messrs. Richard Donovan & John Adams
Friends of the Blue Star Trail
PO Box 464
Douglas, Michigan 49406

Dear Messrs. Donovan & Adams,

Moore+Bruggink is pleased to provide you with our engineering services proposal for the **Blue Star Highway Trail – North Section** project. Our proposal is based upon our review of the RFP, reviews of the trail route, and research into the previous alignment studies and details provided on your website. Let me thank you again for the recent phone conversations about the trail options on the Blue Star Bridge over the Kalamazoo River.

There are wonderful renderings and details on your website that will provide an excellent start to our work. As we discussed, one of the critical elements will be the river crossing. The three lane bridge option (11-10-11-10) is very interesting. There are numerous AASHTO and MDOT design details to be addressed, but it seems this option would be both cost effective and aesthetically pleasing.

We have submitted an estimate of our fees under section five. We typically invoice for time and materials and are proposing a **not-to-exceed** cost for this contract. We always budget conservatively and have estimated a total project (construction + engineering) cost around \$1.25 million. Given the involvement of the three communities, along with the regional trail connections, you will likely be eligible for a sizeable grant from MDOT.

We operate under the tag line “Creating Community.” This is a project that will accomplish just that. It will bring together folks from the three communities as well as MDOT and the Allegan County Road Commission, along with numerous visitors to the area.

We trust that you will be impressed with our proposal, and we hope that you will decide to let **Moore+Bruggink** help assist with the development and construction of the Blue Star Trail.

If you have any questions about the information contained herein, please give me a call.

Sincerely,

Steven C. Groenenboom, P.E.
Project Manager

Attachments

cc: Holly Leo, TCC Chair

1. FIRM IDENTIFICATION

Moore+Bruggink, Inc. Consulting Engineers, is a Michigan Corporation established in 1956. Our offices are in Grand Rapids, Michigan.

Moore+Bruggink, Inc.
Consulting Engineers
2020 Monroe Avenue NW
Grand Rapids, Michigan 49505
(616) 363-9801
(616) 363-2480 (fax)
mailbox@mbce.com
Website: www.mbce.com

The principal contact persons authorized to commit the corporation are:

Alan Pennington, P.E.
President
Brian J. Hannon, P.E.
Vice-President
Justin F. Longstreth, P.E.
Secretary-Treasurer

Moore+Bruggink, Inc. (M+B), has the experience and capacity to provide complete professional services on this project. A qualified sub-consultant – **Soils & Structures, Inc.** – will be used for offsite lab work and testing. Our long-term relationship with Soils & Structure allows them to be a seamless extension of our staff. **Moore+Bruggink** has the experience and capacity to provide complete engineering services on all remaining work. If any traffic engineering is required, we will utilize the service of Mr. Peter LaMourie, P.E., from **Progressive AE**.

Moore+Bruggink was founded in 1956 by two former Grand Rapids City Engineers. The experience of **M+B** for these last 65 years has been exclusively in providing complete civil engineering and municipal consulting services to state, city, county, village, township, and private clients in Michigan. Since its founding, **Moore+Bruggink** has never been purchased by another firm, has never changed its name, and has never been in any financial difficulty. This is a testament to the quality and loyalty of both our clients and our employees.

Since our beginning, the firm has been in private ownership of West Michigan individuals, all of whom are working staff engineers. The employees of **Moore+Bruggink, Inc.**, own all of the stock through an Employee Stock Option Plan.

Moore+Bruggink, Inc., is a full service civil engineering firm with 45 employees, including 17 engineers, 7 surveyors, and 11 inspectors, plus computer aided design (CAD) technicians, a GIS analyst, a landscape designer, and administrative and support personnel.



Moore+Bruggink, Inc. provides a full range of professional engineering services for all phases of non-motorized recreational pathway development, design, construction, and maintenance.

We have nearly six decades of experience in all types of non-motorized trail development and have engineered hundreds of miles of trailways, including construction and maintenance. We are able to deliver all facets of bringing a pathway to

fruition. We have the capability of taking a trail concept from a feasibility study through planning and funding to design, construction, and successful project completion.

Moore+Bruggink is able to deliver all pathway projects no matter the size or complexity.

In addition to non-motorized trails, **M+B** is experienced in the entire spectrum of civil engineering works. We provide planning, surveying, design, and construction engineering services for streets, highways, storm sewer, drainage, flood control, sanitary sewer collection and treatment, combined sewer rehabilitation, water treatment, storage and distribution, sidewalks, bridges, land development, downtown renovation, parks, waterfronts, recreation, and landscaping. We have extensive experience in wastewater treatment plants and water supply and treatment.

Moore+Bruggink is also one of the major surveying firms in West Michigan. Our surveying includes ALTA/NSPS Land Title Surveys, boundary surveys, topographic surveys, and construction staking. We employ two professional registered surveyors and four survey crews. Each of the survey chiefs has a minimum of ten years' experience.

Our construction engineering services include field staking, inspection, testing, video recording, authorizations for payment, public relations and contract dispute resolutions, and as-built plans. We provide these services on all **M+B** projects, as well as providing inspection services for our municipal clients on development projects designed by others.

We are experienced in preparing public information material and press releases and conducting public hearings and informational sessions, and have testified on behalf of municipal clients in courts of law.

2. RESUMES & QUALIFICATIONS OF PERSONNEL

Moore+Bruggink was founded in 1956 by two former Grand Rapids City Engineers – Millard Moore and Ray Bruggink. Millard and Ray started with a handful of clients and a simple business model – to provide good and honest engineering advice. Millard and Ray’s business model worked, and now 65 years later, our customer base has grown to include hundreds of clients from small villages and clients to large international corporations. We have designed everything from local streets to highway systems, sanitary sewer systems, water towers, parks, bike paths, and multi-million dollar waste treatment systems.

M+B will provide a simple and straightforward team to ensure that communication flows freely between TCC, Engineer, and Subconsultants.

Steven C. Groenenboom, P.E., will be the Project Manager for the Blue Star Trail – North Section. He will ensure that proper staffing is assigned to meet schedules and provide quality control of the Blue Star Trail. Steve has 33 years’ experience and has worked on trail/pathway projects in various West Michigan communities.

Joshua DeYoung, P.E., will serve as the designated Project Engineer on the team. Mr. DeYoung has experience working with MDOT on numerous local agency projects, and he is currently working as a project engineer on non-motorized trails in Ada and Grand Rapids Townships. Mr. DeYoung is very familiar with MDOT, AASHTO, and Road Commission funding and design requirements for pathways.

Mr. Groenenboom and Mr. DeYoung will be assisted by staff engineers who will lend their additional areas of expertise and will ensure timely completion of the project.

We have also included **Timothy J. Hoffert, P.E.**, on our team. Mr. Hoffert is experienced in all types of grant-funded (TAP/TE, DNR Trust Fund, CDBG) projects. Mr. Hoffert will be responsible for ensuring funding requirements and grant compliance.

Jennifer L. Dougherty, P.E., from Cogent Civil Engineering will serve on the team for all design options relating to the bridge geometric features. Jenn is well versed in all areas of MDOT and AASHTO bridge requirements.

Greg White, Landscape Designer and Right-of-way Agent, will assist with any required landscape design or hardscape features required. He will also lend his right-of-way acquisition experience, as required, for successful project completion. He has been a member of the **M+B** Project Team on many trail projects and has acquired hundreds of permanent and temporary easements required for those projects.



Steve Green, P.S., Moore+Bruggink's Chief Surveyor, will oversee all required survey and easement description work.

Scott Knapp, M.S., Moore+Bruggink's Chief Inspector, will oversee all inspection and testing work during the construction phase of the project.

Resumes of all key personnel are included in this section.



Steven C. Groenenboom, P.E.

PROJECT ENGINEER

Mr. Groenenboom has been involved with a variety of municipal engineering projects since he began with **Moore+Bruggink** in 1988. He is familiar with highway, major, and local street design standards and has managed various downtown beautification projects. He has designed numerous non-motorized trail and recreational facilities. He has wide-ranging experience with sanitary sewer, lift station, and water main projects. He has prepared utility feasibility studies, and budget and rate reviews and recommendations. He has conducted numerous public hearings and is familiar with project estimating, budgeting, and financing, including grants, bonds, and special assessments.

On a consultant basis he serves as Township Engineer for Ada Township and as City Engineer for the City of Ferrysburg. In these roles, he is responsible for master planning of public works projects, cost estimating and budgeting, water and sewer rate structure reviews and recommendations, and site plan and private development review and impact determination.

Mr. Groenenboom has served on the school boards for Ada Christian and Sylvan Christian schools. He volunteers as a Science Olympiad coach, and is active in his church, having served as a deacon in the past, and currently serving on the fellowship and building and grounds committees.

YEARS OF EXPERIENCE

32 with Moore+Bruggink
1 with another firm

EDUCATION

M.S.E. Structural Design,
University of Michigan – 1987
B.S. Civil Engineering,
University of Michigan – 1986
Engineering Program,
Calvin College – 1984

REGISTRATIONS

MI Registration #36751

PROFESSIONAL ORGANIZATIONS

Michigan Society of
Professional Engineers
National Society of Professional
Engineers
American Society of Civil
Engineers

RELEVANT PROJECT EXPERIENCE

Ada Township Trail System, Ada Township

Project Manager from early funding stages and conceptual design to project completion of this \$7 million, 18 mile-long trail network. Responsible for public hearings/presentations through completion of construction.

Calvin College

Project Manager/Engineer for east campus expansion, East Beltline Pedestrian Overpass, and various campus roads and railway projects.

City of Kentwood

Project Manager for projects including Roger B. Chaffee Reconstruction (2020), 52nd Street Reconstruction (2020), Montebello Street and water main, Walnut Hills Trail, Home Acres Park Street Repair/Resurfacing projects, Sanitary Sewer Repairs, Stanaback Park, Eastern Avenue Reconstruction, Bailey's Grove, and East/West Non-Motorized Trail.

City of Fremont/Sheridan Township

Preparation of Feasibility Study for Recreational and Non-Motorized Trails, including budget and millage analysis, Fremont Lake sanitary sewer preliminary design, public hearings, and assessment review.

City of Portage

South Westnedge Avenue, East Milham, and West Milham Avenue, Oakland Drive, and Bicentennial Park Trail Overpass – awarded project of the year by APWA in 2001.

City of East Jordan

Downtown streetscaping and utility reconstruction of Main Street; non-motorized trail system, water/sanitary sewer rate study and recommendations.





Joshua S. DeYoung, P.E.

PROJECT ENGINEER

Mr. DeYoung began working for **Moore+Bruggink** in May of 2015 during the summer as an inspector and engineer technician. He graduated in May of 2016 from Calvin College and officially joined the **M+B** engineering team.

Mr. DeYoung has been responsible for the design and construction engineering phases of several sidewalk, water main, and road construction projects across West Michigan since joining **Moore+Bruggink**. His focus has been in providing outstanding service to those he works with and for.

YEARS OF EXPERIENCE

4 with Moore & Bruggink

EDUCATION

B.S. Civil/Environmental Engineering, Calvin College (2016)

REGISTRATIONS

MI Registration #6201309286

RELEVANT PROJECT EXPERIENCE

Ada Township Trail Construction and Repairs

Design and Construction Engineer for this \$445,000 project consisting of trail repairs throughout Ada Township.

Holland State Park, Lake Macatawa Campground, Michigan DTMB

Design and Construction Engineer for this \$700,000 project consisting of redesigning the sanitation station layout for more efficient passage of recreational vehicles, upgrading several campsites to meet ADA accessibility guidelines, and repaving all campground streets and walking trails.

52nd Street and Roger B Chaffee Reconstruction, City of Kentwood

Project engineer on the \$1.1 million reconstruction of Roger B Chaffee and 52nd Street. Project challenges included redesigning various options for a cul-de-sac and deep sanitary sewer construction.

Sunset Hills Resurfacing, City of Walker

Design Engineer for 3100 feet of full-depth pavement removal and replacement. The project was designed and constructed in accordance with the MDOT Local Agency Program requirements.

Northridge Drive, City of Walker

Design and Construction Engineer for this \$1.15 million job that consisted of building 1500 feet of new road, storm sewer, sanitary sewer, and water main through an operational apple orchard. During the design process, the project involved close coordination between the City of Walker, the City of Grand Rapids, and the apple orchard owner.

Envision Ada – Ada Drive, Ada Township

Construction Engineer for this \$13 million project of street and utility construction. The reconstruction of Ada Drive represents the second phase of construction. This section of Ada Drive is the main business corridor and serves as the sole access point for most businesses. Extensive construction phasing and maintaining traffic provisions were required to maintain uninterrupted access to all businesses.





Timothy J. Hoffert, P.E.

PROJECT ENGINEER

Mr. Hoffert joined **Moore+Bruggink** in April 2001. After graduating from Michigan State University and prior to joining **Moore+Bruggink**, Mr. Hoffert was employed by Engineering & Environmental Services Group, Inc., as a Staff Engineer. As part of his work, Mr. Hoffert was assigned as Project Manager for the M-10 reconstruction project in Southfield. His responsibilities included many aspects of the project including some on-site surveying, grade calculations, checking for plan errors, and extensive contact with the contractor and inspectors. His duties also included supervising and coordinating field crews, training new crew chiefs, and aiding field crews in problem solving.

With **Moore+Bruggink**, Mr. Hoffert specializes in municipal engineering. As Project Manager for infrastructure projects, including underground utilities, public roads, non-motorized pathways, and streetscapes, he is responsible for all aspects of the work – from project planning through design, bidding, and construction. These projects typically involve multiple local and state/federal funding sources, with many administered through the MDOT Local Agency Program. In addition to his role as Project Manager, Mr. Hoffert is the company Safety Officer, and currently serves as Township Engineer for Grand Rapids Township and City Engineer for the City of Grandville's transportation and water systems.

YEARS OF EXPERIENCE

19 with Moore+Bruggink
1 with another firm

EDUCATION

B.S. Biosystems Engineering
Michigan State University

REGISTRATIONS

MI Registration #52898

PROFESSIONAL ORGANIZATIONS

Vice President, Michigan Society of Professional Engineers, Western Chapter
Michigan Society of Professional Engineers
National Society of Professional Engineers
American Society of Civil Engineers

RELEVANT PROJECT EXPERIENCE

Holland State Park, Lake Macatawa Campground, Michigan DTMB

Project Manager for this \$700,000 project consisting of redesigning the sanitation station layout for more efficient passage of recreational vehicles, upgrading several campsites to meet ADA accessibility guidelines, and repave all campground streets and walking trails.

3 Mile Road and East Beltline Avenue Trail, City of Grand Rapids

Project Manager for design and construction engineering for a non-motorized trail along 3 Mile Road and East Beltline Avenue in Grand Rapids Township, Kent County, Michigan. The HMA trail is 1.2 miles long, 10 feet wide, and required construction of 2,200 square feet of modular block retaining walls in three separate locations. The project was funded with a combination of local funds, a TAP grant through MDOT, and private funds.

Ada Drive Forcemain Replacement, Ada Township

Project Engineer for design and construction of this \$1.65 million project consisting of replacement of approximately 2.5 miles of 16" sanitary sewer forcemain and reconstruction of the non-motorized trail under which the forcemain was placed. The project involved study of the existing forcemain condition, evaluation and recommendation of method and pipe material, route study, and easement acquisition. This forcemain could not be shut down for periods longer than 15 minutes, and, as such, the project involved an extensive pump and haul operation during the connection phase that required coordination and permitting with the Kent County Road Commission and MDOT.

Silver Lake Corridor Improvements, Oceana County Road Commission, Michigan (MDOT STE 64125-105569A, EDDF 64555-76809A, STL 64127-83685A, STH 64609-105041A)

Project Engineer for this \$1.8 million project that includes a roundabout, realignment of two intersections, construction of 1.5 miles of non-motorized trail, and crushing and shaping and repaving of 2 miles of roadway. The project was funded by the Oceana County Road Commission, Golden Township, Special Assessment Funds, a MDOT Safety Grant, a MDOT Transportation Enhancement Grant, and MDOT STP and Fed D funds.



Jennifer L. Dougherty, P.E.

General Qualifications

Ms. Dougherty has twenty four years of construction and design experience. Bridge design, bridge rehabilitation, road reconstruction and hydraulic analysis are Ms. Dougherty's primary focus. Her experience also includes grant application preparation, historical bridge rehabilitation, bridge inspections, structural evaluations and storm sewer design.

Education

*B.S. Civil Engineering, 1996,
Michigan State University, East
Lansing, MI*

Professional Registration

*Michigan Professional Engineer
47408 (2001)*

Certifications & Training

*NHI Load and Resistance Factor
Design (LRFD) for Highway
Bridge Superstructures*

*NHI Load and Resistance Factor
Design (LRFD) for Highway
Bridge Substructures and Earth
Retaining Structures*

*NHI Safety Inspection of In-
Service Bridges*

*National Steel Bridge Alliance
- AASHTO LRF Design
Specifications & High
Performance Steel*

*Michigan's Local Technical
Assistance Program
- Hec-Ras 3.0 Basic Training
- Evaluating Scour at Bridges*

*Portland Cement Association
- AASHTO LRF Design
Specifications for Concrete
Bridge Design*

*Steel Structures Technology
Center
- Structural Welding: Design and
Specification*

Professional Affiliations

*American Society of Civil
Engineers*

cogent
civil engineering llc

Bridge Design

Project: Lumberjack Road over Pine River

Agency: Gratiot County Road Commission

Completion Date: October 2019

Work Description: Designed a prestressed concrete bulb-tee beam bridge with a concrete deck. The design included steel sheet piling and road reconstruction.

As Bid Construction Cost: \$1,415,000

Bridge Rehabilitation

Project: Lumberjack Road over Pine River

Agency: Gratiot County Road Commission

Completion Date: September 2013

Work Description: Designed and detailed repairs including abutment reinforcement, abutment and pier repairs, scour protection, concrete I beam replacement, deck replacement and approach work.

As Bid Construction Cost: \$566,000

Hydraulic Analysis

Project: River Street over Kalamazoo River

Agency: Kalamazoo County Road Commission

Completion Date: 2012

Work Description: Completed a Level II Scour Analysis for an existing bridge and prepared hydraulic analysis for proposed new bridge.

Road Reconstruction

Project: Lawrence Road

Agency: Barry County Road Commission

Completion Date: 2017

Work Description: Designed a 2.43 mile road rehabilitation including pavement replacement, culvert replacement and drainage correction.

As Bid Construction Cost: \$1,550,000

Bridge Preventative Maintenance

Project: Allegan County Bridges

Agency: Allegan County Road Commission

Completion Date: 2021

Work Description: Designed preventative maintenance repairs for thirteen bridges including railing replacement, approach guardrail, joint replacement, deck waterproofing and new HMA.

As Bid Construction Cost: \$1,722,000



Gregory P. White

LANDSCAPE DESIGNER, RIGHT-OF-WAY AGENT, INSPECTOR

Mr. White is a Landscape Designer that has developed a wide range of landscaping designs, and as well as having landscape contracting experience. He has been involved in landscaping parks, commercial projects, apartment complexes, and MDOT projects, as well as residential homes. Since joining **Moore+Bruggink**, Mr. White has been involved in landscape design, drafting, inspection, and project management. Mr. White also serves as **M+B's** Right-of-Way Agent, and has negotiated numerous easements for various clients. His landscaping knowledge serves him well in this role.

Mr. White is active in men's ministries at his church and in discipleship training of young men. He has completed the Master Gardener Program, and enjoys gardening with his wife, as well as participating in numerous outdoor activities.

YEARS OF EXPERIENCE

27 with Moore & Bruggink
15 with other firms

EDUCATION

A.A.S. in Landscape Architecture, Lansing Community College
Associates in Liberal Arts, Lansing Community College
Right-of-Way Certification, International Right-of-Way Association 2012

CERTIFICATES

MDEQ Storm Water Operator – C-03833, 7/1/2023
MDEQ SESC Plan Review & Design – SE/C 02558, 7/1/2023

REGISTRATIONS

Notary Public

RELEVANT PROJECT EXPERIENCE

Dunnigan Water Main, Grand Rapids Charter Township

Right-of-Way Agent responsible for negotiating easements for water main utilities and trail easements.

Ada Non-Motorized Trails, Ada Township

Landscape Designer responsible for laying out bike path and coordinating landscape improvements with property owners. Also responsible for negotiating more than 60 easements over 12 miles of path frontage.

Fredrick Meijer Kenowa Trail, Ottawa County, Michigan

Right-of-way agent responsible for negotiating more than 50 easements over 10 miles of path frontage on this MDOT project through Zeeland and Jamestown Townships.

Landscape Designer for Grand Rapids Township Park

Landscape Designer for this \$1 million park project in Grand Rapids Township that was funded in part by an MDNR Clean Michigan Initiative Grant.

State of Michigan Department of Natural Resources and Department of Technology, Management and Budget, Wayne County, Michigan – Maybury State Park Trail Improvements

Landscape Designer for design and construction engineering along with inspection for a \$617,435.93 trail improvements project that included 1.5 miles of existing trail rehabilitation and 0.6 miles of new trail construction, as well as a new kiosk entryway. The project was designed to MDOT and AASHTO trail design standards.

Fredrick Meijer Standale Trail, City of Walker, Michigan

Right-of-way agent responsible for negotiating easements on an 11-foot wide bituminous trail on this MDOT project that connected Harmon Park on Sunset Hills Avenue with the Standale business district on Lake Michigan Drive. The project included the bituminous trail, a stream crossing, and an elevated boardwalk through wetlands.





Steven J. Green, P.S.

SURVEY SUPERVISOR

Mr. Green began working with **Moore+Bruggink** in 1992. During that time, he has served in all capacities of the Survey Department, from field crew member to his present position. His responsibilities include the supervision of crew assignments, scheduling, and the review of project requirements with crew chiefs and staff engineers. He is also responsible for the review and checking of all completed survey work, checking building stakeouts, roadway construction staking, and checking engineering drawings for completeness and stakeability. Mr. Green also is involved in the preparation of legal descriptions, easements, office review of various surveys performed – including ALTA/NSPS Land Title Surveys – preparation

of amended and proprietary plats, mortgage loan, boundary, and topographic surveys, preparation of project cost estimates, and survey calculations. Mr. Green is knowledgeable about AASHTO and MDOT standards and procedures. Prior to being employed by **Moore+Bruggink**, Mr. Green was employed as a surveyor by the United States Government Bureau of Land Management.

Mr. Green is also involved with Muskegon County Remonumentation Program for the perpetuation of original Government Land Corners.

YEARS OF EXPERIENCE

28 with Moore & Bruggink
3 with other firms

EDUCATION

B.S. Surveying, Ferris State University

CERTIFICATIONS

Professional Surveyor –
MI #43055

PROFESSIONAL ORGANIZATIONS

National Society of Professional Surveyors
Michigan Society of Professional Surveyors

RELEVANT PROJECT EXPERIENCE

Holland State Park, Lake Macatawa Campground, Michigan DTMB

Survey Supervisor for this \$700,000 project consisting of redesigning the sanitation station layout for more efficient passage of recreational vehicles, upgrading several campsites to meet ADA accessibility guidelines, and repave all campground streets and walking trails.

Fred Meijer Standale Trail, City of Walker

Survey Project Manager for topographical survey and construction staking of 0.75 mile of HMA paved trail along Consumers Energy property with 300 feet of boardwalk and county drain crossing. Funded by an entitlement grant from the United States Department of Housing and Urban Development.

Silver Lake Business Area, Oceana County (MDOT 64555-76809)

Survey Project Manager for construction staking for this \$2.1 million project that includes a roundabout, realignment of two intersections, construction of 1.5 miles of non-motorized trail, and crushing, shaping, and repaving of two miles of roadway. The project is funded by the Oceana County Road Commission, Golden Township, Special Assessment Funds, an MDOT Safety Grant, an MDOT Transportation Enhancement Grant, and MDOT STP and Federal D funds.

Funicular, Treehouse, and Access Drive, John Ball Zoo, City of Grand Rapids

Survey Project Manager for a topographical survey and construction staking for an access drive and utility extensions to the Bissel Treehouse site, in addition to aiding in planning and layout of funicular, and supervising survey of the funicular and treehouse. Project consisted of 1,200' of roadway through a heavily wooded area with very steep grades, water main, and sewer extension. The project also included construction of a new conference and event building, and a first of its kind funicular (inclined elevation) attraction.

River Street Bridge over Kalamazoo River (MDOT 39005-109284A)

Survey Project Manager for topographical survey and construction staking of bridge replacement on River Street over the Kalamazoo River. The roadway approach, water main design, and construction engineering were done by **Moore+Bruggink**. The project is located in Comstock Township, Kalamazoo County.





Scott M. Knapp

CHIEF INSPECTOR

Mr. Knapp's duties as a construction inspector included inspection of bridges, roads, sanitary sewer, and water main systems, and soil density tests using nuclear testing equipment. Mr. Knapp has been certified for Nuclear Density Testing. He is also certified with the Michigan Concrete Association for Testing and Sampling of Concrete. Mr. Knapp has ten years' experience using MDOT's FieldManager recordkeeping system.

Mr. Knapp is also involved in the preparation of daily reports of contractor activities, progress reports, and as-built plans.

Prior to beginning employment with **Moore+Bruggink** in 1993, Mr. Knapp was employed by the Michigan Department of Transportation in the Lansing Materials and Technology lab, where he performed various tests on aggregates and metals, as well as mechanical analysis on sand and gravel. He also worked through the Muskegon Construction Project Office on a survey crew. Mr. Knapp's duties on the survey crew included measuring distances for staking and setting elevations for grading.

YEARS OF EXPERIENCE

27 with Moore & Bruggink

EDUCATION

A.A.S. Civil Technology,
Lansing Community College

A.A.S. Commercial Art,
Ferris State University

B.S. Business/Advertising,
Ferris State University

CERTIFICATIONS

Density Control Radiation
Safety Officer – Certified
3/13/2015

MDEQ Certified Stormwater
Operator – C-#03831, 7/2022

MDEQ Soil Erosion and
Sedimentation Control –
#SE/C 01711, 7/1/2021

MDOT Computerized Office
Technician, 2/8/2021

Certified ACI Concrete Field
Testing Technician, Level I –
#00972264, 1/24/2021

MCA Concrete Technician,
Level I, 4/15/2022

Certified HMA Paving
Operations Technician,
3/31/2022

Safety and Usage of Nuclear
Density Gauges – #10082-
0125, 1/31/2025

Nuclear Moisture Density
Gauge HAZMAT Certification –
1/3/2021

Aggregate Sampling Certified
Aggregate Technician –
#102412-0422, 4/30/2022

PACP/MACP
Lateral/Manhole/Pipeline
#U-114-06020173, 3/10/2023

RELEVANT PROJECT EXPERIENCE

Holland State Park, Lake Macatawa Campground, Michigan DTMB

Chief Inspector for this \$700,000 project consisting of redesigning the sanitation station layout for more efficient passage or recreational vehicles, upgrading several campsites to meet ADA accessibility guidelines, and repave all campground streets and walking trails.

Wilson Pedestrian Refuge Island, City of Grandville (MDOT TAU 41481-119417A)

Chief Inspector for the \$225,000 project, which included widening the roadway and constructing a refuge island in the center. The island allows the pedestrians to cross when only one direction is clear, and safely wait on the island until the other direction clears, significantly shortening wait times and increasing pedestrian safety. This project was funded with transportation enhancement funds and administered through the MDOT Local Agency Program.

Knapp Street Trail Connector, Grand Rapids Charter Township (MDOT TAU 41481-119757A)

Chief Inspector for this large project which was constructed under two separate construction contracts. The project included installation of 11,300' of transmission water main, connection of an existing residential water main that was previously served by a well to the municipal system, and cross-country construction of an additional 800' of water main to complete a system loop, realignment and widening of an intersection of two county roads, and 6500' of asphalt bicycle trail construction. Project funding was provided through several different sources, including Forest Hills Public Schools, Kent County Road Commission, City of Grand Rapids, a condominium association, a private developer, and a new bank which was served by the new water main, and MDOT Transportation Enhancement Grant, and Grand Rapids Township.

Additional Trail Projects

Ada Trails, Phases 1, 2, 3 – Ada Township

Standale South Trail, Office Technician, City of Walker

Reeds Lake Trail, Phases 1, 2

Forest Hills/Crahen Bike Path – Grand Rapids Township



[616] 363 9801
mbce.com

3. RELATED TRAIL EXPERIENCE

We have included a matrix of trails that shows length, dollar value, and a variety of funding sources. We have included case histories and references of the highlighted trails. The trails designed and constructed over the past five years are indicated with asterisk in the matrix.

1. **M+B** has competed 18 miles of trail over the past five years and well over 100 miles over the past 20 years.
2. We have included case histories of other projects similar in scope.
3. The budgeting, cost estimating, and results are indicated on most of the case histories. Contact persons are included in the case histories, and we have also included a list of references following the case histories.
4. **M+B** is prequalified by MDOT for Local Agency Design Projects.

TRAIL & SIDEWALK PROJECT EXPERIENCE MATRIX

Project Name	Project Cost	Length (miles)	TE Grant	MDNR Grant	Multi-Agency	MDOT EDC	CDBG	Pedestrian Signals	Easement	MDOT Trunkline	City	Twp	Road Comm.	School System	Other Grants	Private Partners
Ada's Village Trail	\$8,000,000	19.0	x		x				x			x	x	x		x
Alpine Avenue Sidewalks*	\$250,000	0.5					x			x	x					
3 Mile Rd./East Beltline Trail*	\$500,000	1.2	x									x	x			x
Casnovia Village Walks	\$75,000	0.2					x				x					
Central Lake Downtown	\$1,400,000	1.4	x		x				x	x		x	x			
East West Pathway – Kentwood	\$500,000	1.0			x		x	x	x		x					x
Division Street Reconstruction*	\$1,000,000	0.6									x					
Dogwood Trail Connector*	\$100,000	0.5									x					
Donegal Bay Trail	\$200,000	0.8	x		x							x				
East Jordan Lake Street Path	\$240,000	0.5	x								x					
East Milham Avenue Overpass	\$1,000,000	0.2			x											
Ferysburg North Shore Road Trail*	\$750,000	1.5	x		x						x					
Forest Hill/Crahen Trail*	\$900,000	3.0	x		x			x				x	x	x		x
Fred Meijer Kenowa Trail	\$3,200,000	10.5	x		x				x			x	x			
Fred Meijer Standale Trail	\$1,500,000	4.0	x		x						x					
Fremont Lake Path Phase I	\$300,000	2.0			x						x	x	x	x	x	x
Fremont Lake Path	\$4,000,000	18.5		x	x						x	x	x	x	x	x
Grand Rapids Township Trail - I	\$400,000	1.5	x	x	x							x				x
Grand Rapids Township Trail - II	\$500,000	0.7		x	x							x				
Grandville Kent Trails Connector - I	\$800,000	3.8		x	x						x					
Grandville Kent Trails Connector - II	\$150,000	0.4		x							x					
Huizenga Park Boardwalk	\$50,000	0.1									x					x
Huizenga Street Reconstruction	\$2,200,000	1.3							x		x					
Knapp Street Connector*	\$475,000	0.9	x		x							x	x			
Knapp Street Trail	\$200,000	1.4	x		x			x	x		x	x	x	x		
Leonard Street Trail	\$250,000	0.8			x							x		x		x
M-11, Division to Kalamazoo	\$3,300,000	1.9			x			x		x	x					
Maybury State Park*	\$500,000	2.5			x							x			x	
Meridian Street Improvements	\$400,000	0.4									x					
Montebello Street Reconstruction	\$600,000	0.5							x		x					
Parkwood Drive Improvements	\$500,000	3.4			x				x		x					
Paw Paw Path/Bridge	\$200,000	0.1									x					x
Reeds Lake Trail - I	\$500,000	0.6	x		x				x		x	x				x
Reeds Lake Trail - II	\$650,000	0.9						x			x	x				
Roosevelt Avenue Sidewalks	\$200,000	1.0									x					
Seward Avenue Extension	\$3,300,000	0.7				x		x	x		x					
Silver Lake Corridor	\$570,000	1.3	x		x				x			x	x			x
South Standale Trail	\$240,000	0.8			x		x		x		x					
Sparta Martindale Path	\$200,000	0.7									x					
Stanaback Park Trail	\$400,000	0.5		x	x		x									
Thornapple River Dr. Path	\$200,000	0.5	x		x							x	x			
Tri-Cities Trail Connector	\$3,900,000	1.0	x		x			x	x	x	x		x			
Walker City Recreation Center	\$3,200,000	1.0									x					
Walker Millennium Connector	\$3,200,000	3.0						x	x							
Wealthy Street Extension	\$2,500,000	0.5				x		x	x							
White Pine Trail Connector	\$270,000	0.5	x		x				x		x					
Wilson Ave. Pedestrian Island	\$185,000	0.1	x								x					
Zeeland Eastside Pathway	\$540,000	1.4	x		x			x	x		x	x			x	
Zeeland Northside Pathway	\$300,000	0.9			x						x					x
Totals	\$54,795,000	100.5														

Case Histories Attached

*Constructed in the last five years

Ada's Village Trail

Owner: Ada Township

Contact Person:
George Haga, Supervisor, (616) 676-9191

Location of Project:
Ada Township, Kent County, Michigan

Completion Date:
Phase 1 (4.5 mi) October 2007
Phase 2 (4.3 mi) October 2008
Phase 3 (3.1 mi) October 2009
Phase 4 (2.3 mi) October 2010
Phase 5 (.8 mi) November 2013

Construction Cost: \$7,000,000

Project Team:

Steve C. Groenenboom, P.E., Project Manager
Tim Hoffert, P.E., Project Engineer
Ryan Arends, P.E., Project Engineer
Alan Pennington, P.E., Boardwalk/Bridge Design
Greg White, Right of Way/Easements/Inspector
Steve Green, P.S., Chief Surveyor
Roy Laisure, Chief Inspector
King & MacGregor, Wetlands Consultant
Materials Testing Consultants, Soils/Underground

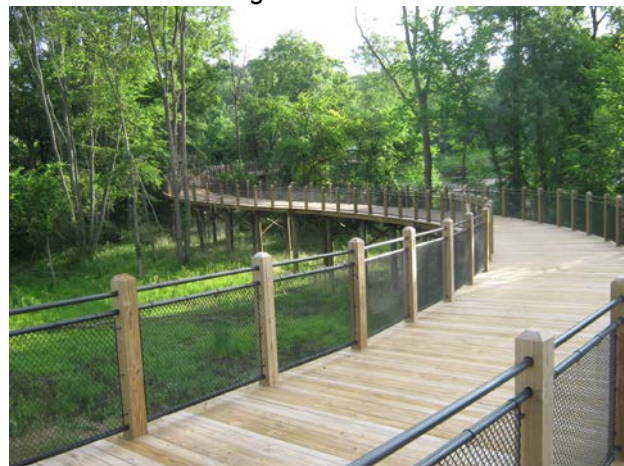
Project Description:

This 15 mile non-motorized trail system begins in the downtown business district and loops through the township, passing through farmlands, residential areas, schools, parks, wetlands, and wooded areas. It passes over various streams and creeks, and will eventually cross the Grand River in two locations. The final connection back into the business district involves crossing the Grand River near Amway World Headquarters. This 600-foot long crossing was coordinated with the M-21 Grand River Bridge replacement and was completed in the fall of 2013.

The project included two miles of non-motorized trail constructed along Bailey Drive, a designated "Natural Beauty" road. This designation prohibited most construction activities within the road right-of-way. This designation was suspended to allow construction of the trail, and it was then reinstated following construction. **Moore+Bruggink**, Inc. provided complete design and construction engineering services from project master planning and conception through final completion of construction. This included preliminary and final route studies, feasibility and cost analysis, bond and millage assistance, public meetings/hearings, complete easement/right-of-way acquisition, contract bidding, and implementation of construction.



Covered Bridge on Grand River Drive



Final Boardwalk



Retaining Wall on Grand River Drive



Moore+Bruggink
Consulting Engineers
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Ada's Village Trail Tunnel

Owner: Ada Township

Contact Person:
George Haga, Township Supervisor,
(616) 676-9191

Completion: Tunnel – November 29, 2003;
Final Paving – May 1, 2004

Dollar Value: \$219,955.29

Project Team:
Steven C. Groenenboom, P.E, Project Manager
Alan Pennington, P.E., Project Engineer
Ralph Den Hartigh, P.E., Structural Engineer
Deborah Poeder, Railroad Agreements

Challenges:
Train shipping schedule required a design that could be constructed over the four-day Thanksgiving Weekend.

Project Description:

Moore+Bruggink investigated several options to allow a safe crossing of Ada's Village at the RailAmerica Railroad. The options included a signalized surface crossing, reconstruction of the existing railroad bridge with a wider span, or tunneling under the railroad. It was determined the tunneling option would provide the safest crossing. Since the train traffic could not be detoured or even delayed, the railroad required all construction to be complete over the four-day Thanksgiving weekend. The contractor began work following the last train on Wednesday, and completed the tunnel and placed new railroad tracks by Saturday afternoon – two days ahead of the first train that arrived on schedule on Monday morning.



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Consulting Engineers
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3 Mile Road and East Beltline Avenue Trail

Owner: City of Grand Rapids

Contact Persons:

Michael DeVries, Supervisor, Grand Rapids Township, (616) 361-7391
Wayne Harrall, P.E., Engineer, Kent County Road Commission, (616) 242-6901

Location of Project:

Grand Rapids Township, Michigan

Completion Date: August 2014

Dollar Value: \$480,000

Project Team:

Robert Bruggink, P.E., Principal in Charge
Timothy J. Hoffert, P.E., Project Manager
Steve Green, P.S., Chief Surveyor
Roy Laisure, Chief Inspector
Chuck Bartholomew, CAD Technician

Project Description:

Design Engineering and Construction Engineering for a non-motorized trail along 3 Mile Road and East Beltline Avenue in Grand Rapids Township, Kent County, Michigan. The HMA trail is 1.2 miles long, 10 feet wide, and required construction of 2,200 square feet of modular block retaining walls in three separate locations. In addition to local funds, the project included funding from a Transportation Alternatives Program (TAP) grant through MDOT as well as private funding from Spectrum Health. The project was designed, bid, and constructed through the MDOT LAP process. The project involved coordination between Grand Rapids Township and the Kent County Road Commission, which served as the Act 51 grant eligible agency. Construction permits from the Kent County Drain Commissioner and MDOT were required for this project.



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

East West Pathway

Owner: City of Kentwood

Contact Person:
Timothy Bradshaw, P.E., City Engineer,
(616) 698-9610

Location of Project:
City of Kentwood, Kent County, Michigan

Completion Date: October 2007

Actual Construction Cost: \$375,000

Project Team:
Steven C. Groenenboom P.E., Project Manager
Tim Hoffert, P.E., Project Engineer
Steve Green, P.S., Survey Manager
Matt Kozak, CAD

Project Description:
This project included design and construction engineering for one mile of non-motorized trail following a Consumers Energy transmission corridor in the City of Kentwood between Eastern and Kalamazoo Avenue just north of 52nd Street.

Moore+Bruggink was responsible for all aspects of the project, including review and permitting by the METC and Consumers Energy, along with coordination with a DTE Energy natural pipeline upgrade. **M+B** was also responsible for preparing DEQ (now EGLE) permit applications for three prefabricated creek bridge crossings in the corridor.

M+B conducted several information meetings during the design to address residents' concerns with this project that was "going through their backyards." After numerous meetings with Consumers Energy, the METC, DTE Energy, and various property owners, we were able to secure a path alignment that remained close to the aerial support towers and far away from residential property lines. The path is currently being used by a variety of walkers, bikers, and joggers.



East-West Pathway near Kimball Avenue



Bridge & Stream Crossing near Aerial Towers



Bridge near Fuller Avenue



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

East Milham Avenue and Pedestrian Overpass

Owner: City of Portage

Contact Person:
Chris Barnes, City Engineer, (269) 324-9256

Location of Project:
City of Portage, Kalamazoo County, Michigan

Date of Completion: June 2000

Dollar Value: \$2,300,000

Project Team:

Gary C. Voogt, P.E., Principal in Charge
Steve Groenenboom, P.E., Project Manager
Alan Pennington, P.E., Project Engineer
Mark DeVries, ASLA, Landscape Architect
Mike Bruggink, ASLA, Landscape Architect

Description of Project:

Moore+Bruggink was responsible for the design and construction engineering of one mile of street reconstruction of East Milham Avenue between South Westnedge and Lovers Lane. The project also included the design of a covered pedestrian bridge over East Milham Avenue along the Portage Creek Bicentennial Trail. The covered pedestrian bridge features segmental block retaining walls, hundreds of landscape plantings, walkway lights, and a video security system. The overpass provides a safe crossing over the 20,000 vehicles that travel East Milham Avenue every day.



*This pedestrian bridge was awarded
"Project of the Year for Structures less than
\$2 million" in 2001 by the
American Public Works Association.*



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North Shore Road and Non-Motorized Trail

Owner: City of Ferrysburg

Contact Person:
Craig Bessinger, City Manager, (616) 842-5803

Location of Project:
City of Ferrysburg, Ottawa County, Michigan

Completion Date: July 2015

Construction Bid Amount: \$2,474,037.10
Final Construction Cost: \$2,401,646.00

Project Team:
Steve Groenenboom, P.E., Project Manager
Ryan Arends, P.E., Project Engineer
Dan Baker, Lead MDOT Inspector
Steve Green, P.S., Chief Surveyor
Soils & Structures, Retaining Wall

Project Description:
Design and construction engineering for reconstruction of 1.7 miles of North Shore Road. Project passes through residential areas as well as critical dunes. Design challenges included construction of a soldier pile retaining wall in steep dune areas along with significant traffic issues as the road is the only link from Ferrysburg to over 450 residences along the lakeshore. Heavy summer traffic required the bulk of construction to be completed after Labor Day (2014) and prior to Memorial Day (2015). Unique road design utilized rubblized concrete pavement which minimized disruption to traffic and maximized cost savings.

This project also included completion of a non-motorized trail which passes through residential areas as well as critical dunes as well. The trail features boardwalks and segmental block and soldier pile retaining walls. The trail provides a vital connection to Lake Michigan and is being enjoyed by numerous joggers, bikers, and walkers.



North Shore Road – June 2015



Soldier Pile Retaining Wall – Spring 2015



Rubblized Concrete – September 2014



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

Crahen Valley Park Pathway

Owner: Grand Rapids Township

Contact Person:
Michael DeVries, Supervisor Grand Rapids
Township, (616) 361-7391

Location of Project:
Grand Rapids Township, Kent County, Michigan

Completion Date: June 2014

Actual Construction Cost: \$73,000

Project Team:
Robert Bruggink, P.E., Principal in Charge
Timothy J. Hoffert, P.E., Project Manager
Steve Green, P.S., Chief Surveyor
Greg White, Construction Inspector
Matt Kozak, CAD Technician
Fen View Design LLC, Landscape Architect

Project Description:

Moore+Bruggink completed design and construction engineering, inspection, and survey. This project included construction of a 12' wide, 700' long non-motorized trail that leads to a bluff top seating area consisting of modular retaining wall blocks, landscaping, and benches. Selective tree trimming near the seating area opened up majestic views spanning over five miles and several townships. This project was the first phase of a much larger park development project planned for the future that will provide ADA access to the 200-acre site. The township worked with a shop class at a local high school to construct the five benches placed throughout the project. This project was funded with local funds and funds from the CDBG program.



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

Fred Meijer Kenowa Trail

Owner: Zeeland Township & Jamestown Township
MDOT 70139-111854A

Contacts:

Glenn Nykamp, Zeeland Township Supervisor,
(616) 772-6701

James Miedema, Jamestown Supervisor,
(616) 896-8376

Sharon Nunnelee, Executive Director, West
Michigan Trails & Greenways Coalition,
(616) 485-7805

Location of Project:

Zeeland & Jamestown Townships, Ottawa County,
Michigan

Completion Date: June 2012

Source of Funding:

MDOT (TE Grant) \$1,480,086

WMTGC (Meijer Foundation): \$630,000

Ottawa County Parks: \$200,000

Local Agencies: \$216,997

Construction Estimate: \$3,213,000

Final Construction Cost: \$2,527,100

Project Team:

Joseph Camp, P.E., Project Manager

Ryan Arends, P.E., Project Engineer

Zach Voogt, P.E., Project Engineer

Greg White, Right of Way/ Easements

Steve Green, P.S., Surveyor Supervisor

Roy Laisure, Chief Inspector

King & MacGregor, Inc., Wetlands Consultant

Materials Testing Consultants, Soils Consultant

Project Description:

Design and Construction Engineering and Inspection for 10.5 miles of non-motorized trail consisting of 10' asphalt-paved trail, 5' paved shoulders along 48th Avenue, 14' wide boardwalks and prefabricated bridges in environmentally sensitive areas, and 5' sidewalks in the residential section of downtown Jamestown. **Moore+Bruggink** provided the grant writing for successfully securing an MDOT Transportation Enhancement Grant for this project to augment the Meijer Foundation Grant. **M+B's** project responsibilities included neighborhood meetings, design, pavement design, maintaining traffic plans, bidding assistance, project budget determination, preconstruction activities, obtaining necessary Ottawa County SESC permits and MDEQ (now EGLE) Environmental permits, construction engineering and administration, project oversight, construction staking, construction inspection, asphalt testing, soils testing, concrete testing, and density checks.



Moore+Bruggink
Consulting Engineers
mbce.com 616.363.9801

Fred Meijer Standale Non-Motorized Trail

Owner: City of Walker

Contact Persons:

Scott Conners, P.E., City Engineer (616) 791-6792
Sharon Nunnelee, Executive Director, West Michigan Trails & Greenways Coalition, (616) 485-7805

Location of Project:

City of Walker, Kent County, Michigan

Completion Date:

Phase 1 – 8/2004
Phase 2 – 11/2010

Actual Construction Cost:

Phase 1 – \$237,331
Phase 2 – \$1,507,000

Project Team:

Robert E. Bruggink, P.E., Project Manager
Alan Pennington, P.E., Project Engineer
Steve Green, P.S., Survey Chief
Roy Laisure, Inspection Chief
Tom Roesly, Aggregate Sampling Technician,
Concrete Testing Technician, Density Technician, &HMA Pavement Inspector

Project Description:

Three-quarters of a mile of HMA-paved trail along Consumers Energy property with 300 feet of boardwalk and county drain crossing. Funded by an entitlement grant from the United States Department of Housing and Urban Development.

Four miles of HMA-paved trail along Consumers Energy property and within public road rights-of-way. Over 2,000 feet of timber boardwalks, roadside drainage improvements, and modular block retaining walls. Funded by Transportation Enhancement Funds and local matching funds contributed by local trusts through the West Michigan Trails and Greenways Coalition.



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Consulting Engineers
mbce.com 616.363.9801

Grandville Bike Trail

Owner: City of Grandville

Contact Person:
Mr. Ken Krombeen, Manager, (616) 530-4983

Location of Project:
City of Grandville, Kent County, Michigan

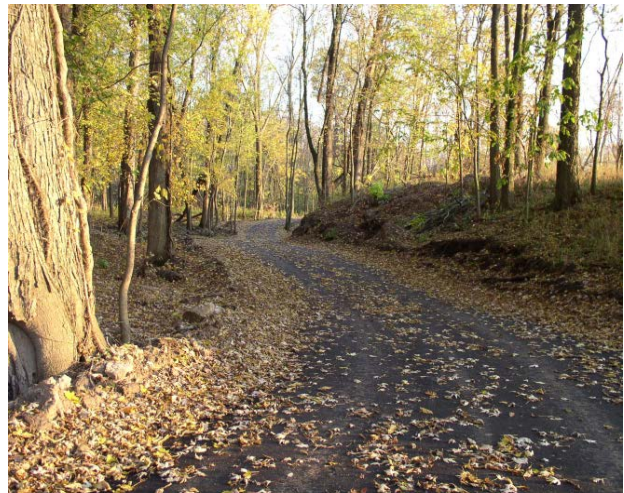
Completion Date: September 2004

Dollar Value: \$686,000.00

Project Team:
Robert E. Bruggink, P.E., Project Manager
Timothy B. Athy, P.E., Project Engineer

Project Description:

This multi-faceted project provided a major extension to the Kent Trails system along the Grand River and Buck Creek in Grandville. It included overlay of 2.4 miles of existing roadway being converted to trail, the addition of 1.4 miles of new 12-foot bituminous trail, two 30-foot long concrete boardwalk bridges, and a 75-foot long prefabricated galvanized steel bridge. Two paved parking lot staging areas and amenities such as benches and picnic tables rounded out this project funded by an MDNR Trust Fund grant. Engineering challenges included designing a prefabricated bridge to allow its complete submergence during high Grand River stages and placing that bridge in a limited access area. The project's proximity to extensive wetland areas also posed MDEQ (now EGLE) environmental permitting issues that were met to provide a successful completion to this new recreational asset in the Greater Grand Rapids area.



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Reeds Lake Trail, Phase 1

Owner: East Grand Rapids and Grand Rapids Charter Township

Contact Persons:

Mr. Brian Donovan, Manager, City of East Grand Rapids, (616) 949-2110

Mr. Mike DeVries, Supervisor, Grand Rapids Charter Township, (616) 361-7391

Location of Project:

East Grand Rapids and Grand Rapids Charter Township, Kent County, Michigan

Completion Date: September 2004

Pre-bid Construction Estimate: \$499,638

Actual Construction Cost: \$438,200

Project Team:

Joseph D. Camp, P.E., Project Manager

Dave Groenleer, P.E., Project Engineer

Mark DeVries, ALSA, Landscape Architect

Project Description:

Phase I of this trail in East Grand Rapids and Grand Rapids Township is an extension of an existing path around a portion of Reeds Lake. This project was a result of a **Moore+Bruggink** feasibility study used to obtain an MDOT grant to provide 0.6 miles of bituminous path and concrete, helical pile-supported



boardwalk. Meeting challenging wetlands conditions, permitting, and right-of-way issues allowed an on-time completion for this long-awaited project that enhances the safety as well as the recreational opportunities for the community.



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Consulting Engineers
mbce.com 616.363.9801

Reeds Lake Trail, Phase 2

Owner: East Grand Rapids and Grand Rapids Charter Township

Contact Persons:

Mr. Brian Donovan, Manager, City of East Grand Rapids, (616) 949-2110

Mr. Mike DeVries, Supervisor, Grand Rapids Charter Township, (616) 361-7391

Location of Project:

East Grand Rapids and Grand Rapids Charter Township, Kent County, Michigan

Completion Date: October 2010

Pre-bid Construction Estimate: \$667,215

Actual Construction Cost: \$649,523

Project Team:

Joseph D. Camp, P.E., Project Manager

Roy Laisure, Chief Inspector

Ken Wiley, Inspector

Project Description:

Phase 2 of this trail in East Grand Rapids and Grand Rapids Township is an extension of an existing path around Reeds Lake. This project was funded by the East Grand Rapids Community Foundation, West Michigan Trails, and Greenways Coalition, and City and Township funds. It provides 0.8 miles of bituminous path and helical pile-supported timber boardwalk. Successful completion of this project required meeting challenging wetlands and soil conditions, permitting, and right-of-way issues. This project completes a trail of paved trail and sidewalks around Reeds Lake that enhances the safety as well as the recreational opportunities for the community.



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mbce.com 616.363.9801

Standale South Non-Motorized Trail

Owner: City of Walker

Contact Persons:

Scott C. Conners, P.E., City Engineer,
(616) 791-6792
Mr. Thomas Tilma, AICP, Administrator, Kent
County Community Development, (616) 632-7400

Location of Project:

City of Walker, Michigan

Completion Date: August 2004

Dollar Value: \$237,331.58

Project Team:

Robert E. Bruggink, P.E., Principal in Charge
Alan Pennington, P.E., Project Engineer

Project Description:

Design and construction engineering of 4,000 feet of a paved, non-motorized trail along right-of-way owned by Consumers Energy Company. The trail crosses a county drain and approximately 300 feet of wetlands. The drain crossing was accomplished with the installation of a 60-foot culvert and the wetland was crossed by constructing an elevated wooden boardwalk supported on helical screw piers. The trail was funded by an entitlement grant from the United States Department of Housing and Urban Development, Community Development Block Grant Program.



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Tri-Cities Pedestrian/Bike Path Connector

Owner: Cities of Grand Haven and Ferrysburg,
Village of Spring Lake, MDOT: 70014-50886

Contact Person:
Ryan Cotton, Village Manager, (616) 842-1393

Location of Project:
Cities of Grand Haven & Ferrysburg, Village of
Spring Lake, Ottawa County, Michigan

Completion Date: November 2001

As-bid Construction of Path Cost: \$1,688,000
Actual Construction of Path Cost: \$1,695,000

Project Team:
Gary Voogt, P.E., Project Manager
Joseph D. Camp, P.E., Project Engineer
Mark DeVries, ASLA, Landscape Architect

Project Description:

Moore+Bruggink, Inc., was the design and construction engineer for the \$1,700,000 Pedestrian/Bike Path Connector project, and the construction manager for the combined projects that also included the \$2,200,000 MDOT Bridge Improvement project. These projects provide almost one mile of pathway for the final, critical connection of paths in the three communities through the dangerous, high-traffic volume intersection of US-31 and M-104. Project elements included bituminous pathway, timber boardwalks, a prefabricated skybridge, modular concrete retaining walls, guardrail, lighting, landscaping, signage, and CDBG grant administration. Close coordination of permitting, MDOT, the US Army Corps of Engineers, contractor, owners, very tight schedules, and a limited budget resulted in a project delivered ahead of schedule and on budget.



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Consulting Engineers
mbce.com 616.363.9801

4. PROPOSED WORK PLAN

TCC desires professional engineering services from a qualified firm for Design and Construction Engineering for the development of a non-motorized paved pathway.

Professional services will include design development and cost estimating, required permitting, construction document preparation, and construction administration, inspection, testing, and staking as detailed herein. All work design and construction engineering will be done in accordance with MDOT design and construction standards.

PHASE 1 – DESIGN DEVELOPMENT AND COST ESTIMATING

Moore+Bruggink’s approach to the Blue Star Trail – North Section Pathway will follow the general work plan below:

- Review potential trail alignments on existing topographic plan.
- Walk the pathway route and identify obstructions such as roadside ditches, trees, culverts, and utilities. Establish where the “Best Fit” location will be for the pathway. Based on our review of the conceptual plan, much of this work has been accomplished.
- Identify permits, rights-of-way, and utility relocations for the pathway.
- Confirm pathway alignment and any permitting issues/approvals that will be required from the Allegan County Road Commission.
- Obtain soil borings along the trail route to determine existing soil conditions.
- We will determine the limits of any wetlands and floodplain areas and confirm EGLE wetlands/floodplain permitting issues.
- We will determine options for safely crossing the Kalamazoo River. We have discussed two of the options with Richard Donovan already.
- From the conceptual plan, we will develop preliminary plans for the trail alignment and prepare an updated cost estimate.
- Review the preliminary plan and estimate with TCC as well as the Allegan County Road Commission.

Drainage

Pathway designs always generate a fair amount of storm runoff. We will review the entire corridor to ensure existing drainage pathways are maintained and that the additional runoff can be accommodated.

Specifically, the following tasks will be followed to successfully complete the project:

Communication

1. Establish clear communication between **Moore+Bruggink** and TCC personnel. It is critical that this happen at the beginning of the project to avoid inefficiencies. We would also need to understand the history of the project and all of the details that go along with it. This step will involve a kickoff meeting with TCC staff to discuss the project and any necessary project requirements or nuances. It would be at this time that any additional available as-builts, drainage maps, existing topographic mapping, plat maps, master plans, and any relevant record information would be obtained from TCC staff and reviewed. We also will need to communicate with the Allegan County Road Commission. While this pathway will be designed, constructed, and owned by TCC, it will require plan approval by the County Road Commission, and we will also keep the ACRC involved in the design and review process.

Engineering Site Evaluation

2. Project engineers out on the site effectively establish project limits for site investigation work and establish focus areas to be addressed during the engineering site evaluation process.
 - a. **Site Engineering Evaluation:**

Onsite route alignment review with photographic documentation. Inspect culvert conditions and drainage patterns. Preliminary scoping of the likely geotechnical investigation and survey areas.
 - b. **Survey:**

We understand the site survey is complete. We will review the existing survey information and will add any supplemental information that may be required. Spot surveying work may be required to confirm conditions.
 - c. **Geotechnical Investigation:**

Materials Testing Consultants will obtain five borings, and they will make recommendations for the bridge and boardwalk footing.
 - d. **Environmental Investigation:**

Three important environmental aspects of the investigation will be performed during Phase 1 site evaluation of the proposed alignment.
 - i. Wetland Identification – Verify wetlands limits that will be impacted by the proposed pathway.
 - ii. Habitat Evaluation – An onsite evaluation would be conducted along the proposed alignment, with any unique habitats flagged and approaches developed to avoid or reduce impacts to the identified areas.

- iii. Threatened & Endangered Species Evaluation – A list request from the Michigan Natural Features Inventory will be made to determine any known threatened or endangered species near the project site. A preliminary survey along the proposed alignment will be made of any identified species and/or potential onsite habitat, and will be flagged to be added to the base mapping.

Preliminary Alignment and Review Meeting

3. This segment of the work plan will involve a preliminary review of data gathered during the engineering site evaluation segment of our work and the proposed alternative pathway alignments. This session with TCC staff will be utilized to gain constructive feedback and confirmation of the alignment selection.

Design Development Documents and Cost Estimate

4. This segment of our work will involve collating feedback from the preliminary review meeting and development of the proposed pathway alignment, pathway cross-sections, boardwalk, and bridge details.

60% Review Meeting

5. This progress meeting will enable the **M+B** Design Team to present preliminary Design Development documents and the updated cost estimate. Three day advance sets will be forwarded for preliminary review by TCC staff prior to the review meeting.

Design Development Documents and Cost Estimate

6. This effort will involve finalizing all recommendations and incorporating feedback received in the 60% review. This portion of our work plan will include making any revisions to the Design Development documents and cost estimate and delivering the documents in the formats and quantities to MDOT Local Agency Program staff for review. A Grade Inspection meeting will be conducted to discuss the plans, special provisions, and estimate to ensure they are in compliance with MDOT and requirements.

Final Design and Submittal to MDOT

7. Plans, Special Provisions, and Estimates will be prepared in final form and submitted to TCC for final review. After TCC approval and any minor revisions, the construction package will be submitted to MDOT for bidding.

Quality Control

8. As standard policy on all **M+B** projects, designs are subject to internal peer reviews for constructability and quality control. **Moore+Bruggink** has a Company Quality Control Program, a copy of which is available upon request, that provides checklists and review procedures to ensure the best possible product is submitted to our clients.

This standard review and quality control procedure will be followed for all deliverables, including Preliminary and Final plan sets, as well as associated calculations, specifications, and estimates.

PHASE 2 – CONSTRUCTION PHASE

Construction Inspection

We will maintain a full-time construction inspector on the project. During this period, our inspector will be responsible for daily oversight to ensure all materials and workmanship are in accordance with the construction plans and MDOT procedures. Our inspector will prepare the IDRs for the project, and he will also be responsible for maintaining the MDOT record keeping system. He will coordinate and/or perform all necessary materials testing, so the project remains eligible for funding through MDOT.

Construction Staking

Our survey crew will provide construction staking of the pathway elevation and location with stakes placed every 50 feet. We will also provide construction stakes for boardwalk abutments and bridge footings.

Construction Engineering

In addition to our construction inspector, Joshua DeYoung, P.E., will stop by the site several times a week to verify the project is progressing and being constructed in accordance with the approved trail design. We will also coordinate construction progress meetings, respond to property owners' concerns, prepare construction pay estimates, and prepare as-built plans following completion of construction.

Post Construction Phase

Following construction, we will meet with the contractor, TCC, ACRC, and MDOT to walk through the entire project and prepare a punch list of outstanding items that will be completed prior to project acceptance. We will prepare the final project pay recommendation and will meet with the contractor to verify his concurrence with the final pay amounts.

5. ESTIMATE OF COST OF SERVICES

Based upon our review of the project and the RFP, we are anticipating the trail route to be about 1.25 miles in length. We recommend the TCC budget around \$1 million per mile, so for this project, we recommend a total budget (engineering + construction) budget of \$1.25 million.

Based on this overall project budget, we estimate our fees as follows. Our fees typically represent between 14% and 18% of the construction cost for MDOT funded projects.

Design Phase Services (budget 900 hours)	\$80,000 T&M, NTE
Bidding Phase Services (100 hours)	\$50,000 T&M, NTE
Construction Phase Services (800 hours)	\$72,000 T&M, NTE
MDOT Coordination, Testing, Record Keeping misc.)	\$30,000 T&M, NTE
Total	\$187,000 T&M, NTE

We have included a schedule of our fees following this section

Moore+Bruggink will invoice for our professional engineering team services on an hourly basis only for time actually spent on the project up to the Not-To-Exceed fee amounts shown.



RATE SCHEDULE – CONFIDENTIAL FEBRUARY 2021

Professional Discipline/Position	Billed Rate per Hour
Engineering:	
Principal in Charge	\$183.00
Senior Engineer	\$137.00
Engineer III	\$128.00
Engineer II	\$105.00
Engineer I	\$90.00
CAD/Drafter:	
CAD III	\$100.00
CAD II	\$86.00
CAD I	\$67.00
GIS Analyst:	\$108.00
Landscape Designer:	\$89.00
Inspectors:	
Chief Inspector	\$120.00
Inspector III	\$99.00
Inspector II	\$86.00
Inspector I	\$82.00
Surveyors:	
Chief Surveyor	\$127.00
Survey Technician	\$69.00
Crew Chief	\$96.00
Instrument Person	\$75.00
Field Crew:	
One Man	\$86.00
Two Man	\$160.00
Clerical:	\$72.00
Mileage:	\$0.55/Mile

Out of Pocket Expenses and Sub-Consultant Fees will be charged at 1.1 times actual cost.

Rate increases are typically 3% to 5% and are given on an annual basis.

6. EXPERIENCE WITH MDOT & DNR GRANT APPLICATIONS

As shown on the trail matrix, we have wide-ranging experience with a number of MDOT, EGLE, and other grants, and grant-funded trailway systems.

We reference the Ada Township trailway system as an example where we led the effort to construct over 15 miles of pathway looping through Ada Township. This system is 15 miles long and required \$7 million in funds that were provided by a trail millage and various MDOT grants. The project included coordination with hundreds of property owners and required numerous alignment studies and public informational meetings. The trail network was constructed over a five-year period.

Ada Township recently passed an additional trail millage, and we have just started design and alignment analysis for various additional pathway routes in the Township.



7. FAMILIARITY WITH LOCAL AREA

We are based in Grand Rapids and do a majority of our work in the West Michigan area primarily from Kalamazoo up to Traverse City and from the Lake Michigan lakeshore to Lansing. We are familiar with lakeshore communities, having worked in East Jordan, Central Lake, Silver Lake, Pentwater, Ferrysburg, Grand Haven, Holland, and South Haven.

We have not had the opportunity to work with any of the TCC entities and believe this will allow us to give a fresh perspective of the trail design and alignment options.



8. EXPERIENCE WORKING WITH FIRE/ POLICE DEPARTMENT IN DESIGN OF ROAD/TRAIL

We have worked with the City of Ferrysburg Fire Department on the design/construction of the North Shore Road trail that passes across their fire station property. We have also worked with the Village of Spring Lake to coordinate emergency traffic signal operations along M-104. This work was also coordinated with and approved by MDOT.



9. EXPERIENCE WITH SMART TRAFFIC SIGNALS

As noted in Section 8, we have experience with smart traffic signals in the Village of Spring Lake. We will utilize Mr. Pete LaMourie, P.E., from Progressive AE for any traffic signal work if the traffic signal option is the desired option. Mr. LaMourie has over 35 years of experience and has designed hundreds of traffic signals.

10. REFERENCES FROM SIMILAR PROJECTS

The following people are familiar with **Moore+Bruggink's** capabilities.

City Managers

Kenneth Krombeen, City of Grandville, (616) 530-4980, krombeenk@cityofgrandville.com
Keith Van Beek, City of Holland, (616) 355-1310, hcmanger@cityofholland.com
Darrel Schmalzel, City of Walker, (616) 791-6859, Darrel.schmalzel@ci.walker.mi.us
Craig Bessinger, Manager, City of Ferrysburg, (616) 842-5803, cbessinger@ferrysburg.org
Tim Klunder, City of Zeeland, (616) 772-6400, citymgr@cityofzeeland.com
Christine Burns, Village of Spring Lake, (616) 788-8945, christine@springlakevillage.org

Mayors

Steve Maas, City of Grandville, (616) 530-4983, maass@cityofgrandville.com
Kevin Klynstra, City of Zeeland, (616) 772-9426, kklynstra@ci.zeeland.mi.us

Township Supervisors/Managers

Toby VanEss, Tallmadge Township, (616) 677-1248, tvaness@tallmadge.com
Michael DeVries, Grand Rapids Township, (616) 361-7391, mdevries@grandrapdstwp.org
Ross A. Leisman, Ada Township, Kent Co. (616) 676-9191, rleisman@mikameyers.com
Julius Suchy, Ada Township, Kent Co. (616) 676-9191, jsuchy@adatownshipmi.com
Kevin Green, Algoma Township, (616) 433-1426, supervisor@algotatwp.org
Bill Haggard, St. James Township, (231) 448-2834, billhaggard.beaverisland@gmail.com

Public Works Officials

Scott Conners, City of Walker, (616) 791-6792, scott.conners@ci.walker.mi.us
Mikel Levandoski, Zeeland BPW, (616) 772-6212, mlevandoski@zeelandbpw.com
Breese Stam, City of Grand Rapids, (616) 456-3078, bstam@grcity.us
Charlie Sundblad, City of Grandville, (616) 457-0720, sundbladc@cityofgrandville.com
Joellen Thompson, City of Grand Rapids, (616) 456-4238, joellen.thompson@grcity.us
Joel Davenport, Holland BPW, (616) 355-1252, jdavenport@hollandbpw.com
Andy Kenyon, City of Holland Parks Department, (616) 928-2450, a.kenyon@cityofholland.com
Doug Engelsman, City of Zeeland CWP, (616) 772-0873, DEngelsman@cityofzeeland.com

Others

Phil Leerar, P.E., Amway Corporation (616) 450-5126, philip.leerar@amway.com
Steve Dertz, P.E., Amway Corporation (616) 787-4305, Steve.Dertz@amway.com
Wayne Harrall, Kent County Road Commission (616) 242-6914, wharrall@kentcountyroads.net
Brett Laughlin, Ottawa County Road Commission (616) 850-7221, balaughlin@ottawacorc.com
Tanya Pawlukiewicz, MDOT, (616) 464-1783, pawlukiewicz@michigan.gov



11. COPY OF STANDARD CONTRACT



CONFIDENTIAL

Client Name: [client name] ("Client")
Client Address: [client address]

Date: [date]

AUTHORIZATION FOR PROFESSIONAL SERVICES

Moore & Bruggink, Inc. ("M&B"), appreciates the opportunity to provide you with professional engineering and consulting services. It is our policy to receive this Authorization for Professional Services, with acknowledgment of the terms and conditions contained herein and in the attached Proposal (Exhibit A) prior to commencing services. We propose services to be performed for you for the project known as [project name] ("Project") located in [city], [state]. The attached proposal is dated [date of proposal letter].

NATURE OF ENGAGEMENT

Moore & Bruggink, Inc. (M&B) will provide all work as stated in the attached proposal at the fee quoted therein. There may be additional work to be performed either through change orders or unforeseen circumstances for which M&B will be compensated on an hourly basis.

TERMS AND CONDITIONS

Client Responsibility. The Client shall furnish all existing data pertinent to the Project and shall furnish any additional information when requested.

Hourly Billing Rates. Unless stipulated otherwise, CLIENT shall compensate M&B at hourly billing rates in effect when services are provided by M&B employees of various classifications. Rates are revised annually and you will be notified of the changes.

Reimbursable Expenses. Unless stipulated otherwise, Client shall compensate M&B for Reimbursable Expenses defined as those costs incurred on or directly for Client Project, including, but not limited to, government fees, necessary transportation costs (including mileage at M&B current rate for service vehicles and automobiles), meals and lodging, laboratory tests and analyses, computer services, special equipment services, postage and delivery charges, telephone and telefax charges, copying, printing and binding charges, and outside technical or professional services. Reimbursement for these expenses shall be on the basis of actual charges plus ten percent (10%) when furnished by outside sources and on the basis of usual commercial charges or separate rate schedules when furnished by M&B.

Cost Estimates. Cost estimates of other contractors' work will be on a basis of experience and judgment, but since it has no control over market condition or bidding procedures, M&B cannot warrant that bids or ultimate construction costs will not vary from these cost estimates.

Professional Standards. M&B shall be responsible to the generally-accepted standards of ordinary and reasonable skill and care usually exercised by other practicing professional engineers and surveyors at the time and location such services are rendered. No warranty, express or implied, is included or intended in its proposals, contracts, or reports.

Termination. Either Client or M&B may terminate this Authorization by giving ten (10) days' written notice to the other party. In such event, Client shall pay M&B in full for all work previously authorized and performed prior to the effective date of termination, plus (at the discretion of M&B) a termination charge to cover finalization of work necessary to bring ongoing work to a logical conclusion. Such charge shall not exceed thirty-three percent (33%) of all charges previously incurred. Upon receipt of such payment, M&B will return to Client all documents and information which are the property of Client.

Subcontractor. M&B may, in its sole discretion, engage subcontractors on behalf of Client to perform any portion of the services to be provided by M&B hereunder, and Client agrees that M&B shall not be responsible for, or in any manner guarantee, the performance of such subcontractors, nor shall M&B be liable for any negligent acts, errors, or omissions of any such subcontractor.

Payment to M&B. Invoices will be issued on a monthly basis or upon completion of the work product, whichever occurs sooner, payable upon receipt unless otherwise agreed. Interest of one-and-one-half percent (1.5%) per month (but not exceeding the maximum rate allowed by law) will be payable on all amounts not paid within thirty (30) days from date of invoices, payment thereafter to be applied first to accrued interest and then to the principal unpaid amount. Any attorney's fees or other costs incurred in collecting any delinquent amount shall be paid by Client.

Client agrees to pay on a current basis, in addition to any proposal or contract fee understandings, all taxes including, but not limited to, sales taxes on services or related expenses which may be imposed on M&B by any government entity.

In addition to any other remedies M&B may have, M&B shall have the absolute right to cease performing any basic or additional services in the event payment has not been made on a current basis.

Hazardous Waste. M&B has neither created nor contributed to the creation or existence of any hazardous, radioactive, toxic irritant, pollutant, or otherwise dangerous substance or condition at any site, and its compensation hereunder is in no way commensurate with the potential risk of injury or loss that may be caused by exposure to such substances or conditions. M&B shall not be responsible for any alleged contamination, whether such contamination occurred in the past, is occurring presently, or will occur in the future, and the performance of engineering or surveying services hereunder does not imply risk-sharing on the part of M&B.

Limitation of Liability. To the fullest extent permitted by law, M&B's total liability to Client or Client's contractors for any cause or combination of causes, whether arising out of claims based upon contract, warranty, negligence, strict liability, or otherwise is, in the aggregate, limited to an amount no greater than the fee earned under this authorization. A higher limit of liability may be considered upon Client's written request, prior to commencement of services, and agreement to pay an additional fee.

Indemnification. Client agrees to defend, indemnify, and hold M&B harmless from any claim, liability, or defense cost for injury or loss sustained by any part from exposures allegedly caused by M&B's performance of services hereunder, except for injury or loss caused solely by the negligence or willful misconduct of M&B.

Legal Expenses. In the event of a claim by Client against M&B, at law or otherwise, for any alleged error, omission, or other act arising out of the performance of its services, and to the extent Client fails to prove such claim, then Client shall pay all costs, including attorney's fees, incurred by M&B in defending itself against the claim.

Ownership of Work Product. M&B shall remain the owner of all drawings and reports, and Client shall be authorized to use the copies provided by M&B only in connection with the Project. Any use or reuse by Client or others for any purpose other than as outlined herein and in the attached Proposal shall be at Client's risk and full legal responsibility, without liability to M&B.

MOORE & BRUGGINK, INC.

Date: _____

By: _____

Its: _____

Acceptance of Proposal and Authorization for Professional Services
[CLIENT NAME]

Date: _____

By: _____

Its: _____

PROPOSAL FOR ENGINEERING SERVICES

TRI-COMMUNITY JOINT STUDY COMMITTEE FOR THE BLUE STAR TRAIL

Blue Star Trail - North Section

FEBRUARY 17, 2021



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February 17, 2021



Tri-Community Joint Study Committee for the Blue Star Trail (TCC)
P.O. Box 464
Douglas, MI 49406

Re: REQUEST FOR PROPOSAL FOR ENGINEERING SERVICES BLUE STAR TRAIL – NORTH SECTION

Dear Committee Members,

C2AE is pleased to provide the Tri-Community Joint Study Committee for the Blue Star Trail with our proposal for professional services for your upcoming trail project. We are proud to have played a significant role in the development of similar non-motorized trails across Michigan over the past two decades. We are eager to share our insights and valuable knowledge on multiple funding sources, and authority development, and to assist the organization in carrying out its vision for Blue Star Trail.

It is our understanding that the Committee, with members from Saugatuck Township, City of Saugatuck, City of the Village of Douglas, and the Friends, will be the entity to lead the completion of a 4.5-mile section of Trail from Douglas over the bridge through City of Saugatuck and Saugatuck TWP. The three remaining sections of trail to complete the northern portion have been studied and evaluated over the past couple of years. We intend to incorporate the existing preliminary design work in the early evaluation phase to gain consensus of the stakeholders for the selected route and crossing over the Kalamazoo River.

To further demonstrate C2AE's desire and ability to assist the Committee in making this project successful, we offer:

- A driven team of C2AE staff and specialty subconsultants with strong qualifications and experience in planning, designing, building, and using many miles of trails throughout Michigan.
- Proven success with coordinating and helping to guide stakeholders, landowners, and governmental jurisdictions and agencies on collaborative multi-phase planning, design, and construction projects.
- Our established ability to estimate construction and maintenance costs with accuracy and manage construction projects within budget.
- Trusted relationships with and comprehensive understanding of multiple funding agencies and sources.

We encourage you to contact the project references provided to gain a deeper understanding of the quality of services we have consistently provided to clients across Michigan. Feel free to contact us with any questions.

Sincerely,
C2AE

A handwritten signature in blue ink that reads 'Larry Fox'.

Larry Fox, PE
Project Manager
larry.fox@c2ae.com

A handwritten signature in blue ink that reads 'Cory Davis'.

Cory Davis, PE
Assistant Project Manager
cory.davis@c2ae.com

FIRM INFORMATION

HISTORY

C2AE is a Michigan-based engineering and architecture design firm founded in 1966. Our decades of experience includes work on premiere Michigan trails, such as the Iron Belle Trail, the Nakwema Trail, and the Lansing River Trail.

WHAT SETS US APART

Our team of more than 100 people is truly full service. With professionals at every step of the design process, we bring enterprise thinking to each opportunity. We create architecture that empowers our clients and their communities, and enable it with innovative, technically-sound engineering design through intentional collaboration.



“The commissioners and all of the project partners are thrilled with how the trail turned out. It is very rewarding to see how much it is already being used! We are very appreciative of all who have been involved and assisted in this endeavor — it has truly been a group effort.”

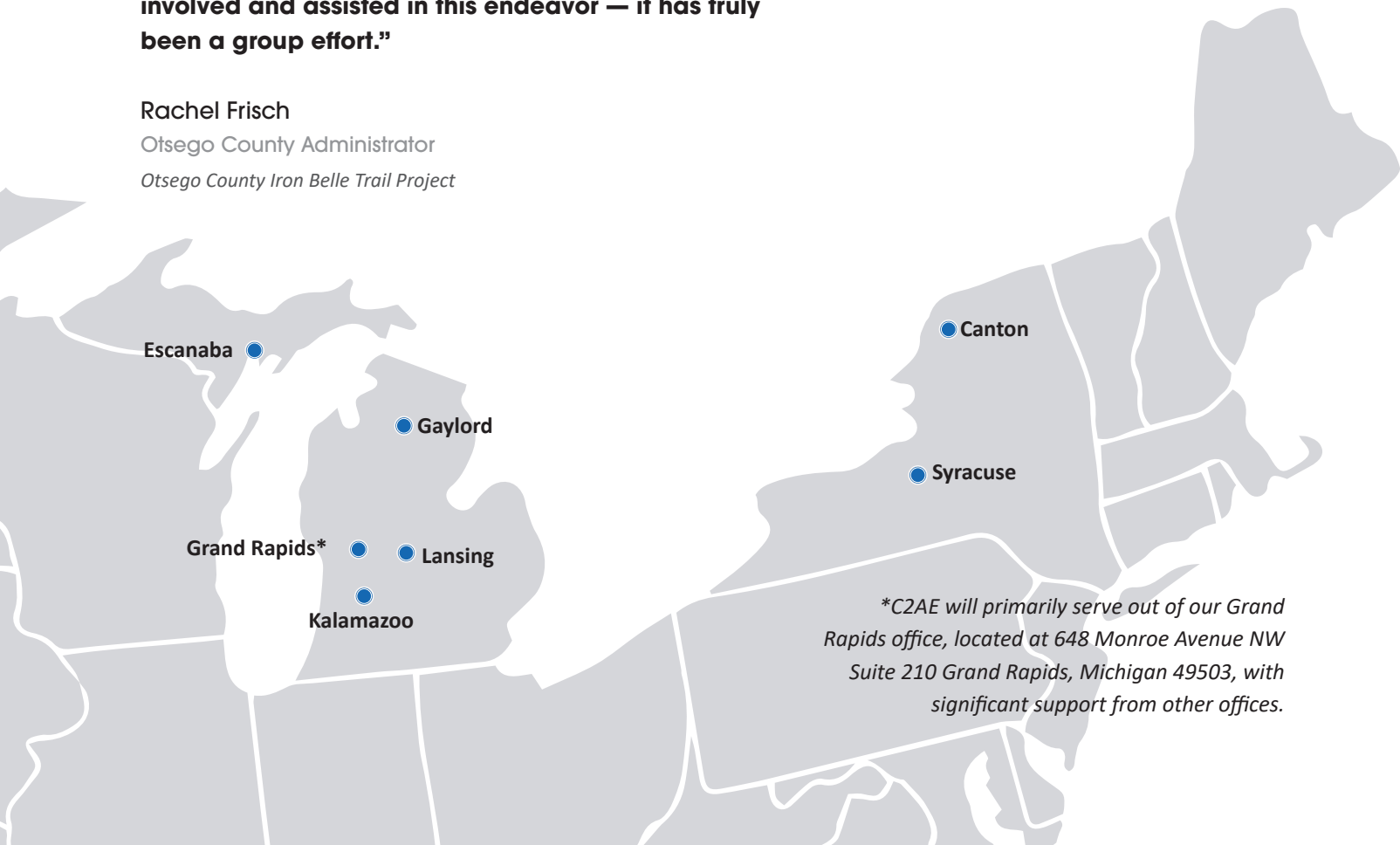
Rachel Frisch

Otsego County Administrator











Otsego County Iron Belle Trail Project

EXPERIENCE

- 300+** Miles of Trails
- 900** Miles of Sanitary Sewer
- 250** Miles of Storm Water
- 800** Miles of Water Main
- 40** Water Treatment Plants
- 70** Wastewater Treatment Plants
- 1,000** Miles of Highways & Roads
- 100** State, County & Local Parks
- 40** Libraries
- 15** Assisted Living Facilities
- 1.5 M** SF of Medical Facilities
- 125** Schools and Universities
- 20** Industrial Parks
- 2.5 M** SF of Manufacturing Facilities



SERVICES

-  Architecture
-  Civil Engineering
-  Construction Admin.
-  Electrical Engineering
-  Interior Design
-  Landscape Architecture
-  Mechanical Engineering
-  Structural Engineering
-  Transportation
-  Water/Wastewater

TEAMING PARTNERS

MEYERSON CONSULTING is a Petoskey-based trail and funding consulting firm. Owner Emily Meyerson has worked on Michigan trails for 20 years and with C2AE on multiple occasions.

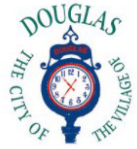
CARDNO is a global environmental engineering company powered by a talented 4,000-strong workforce. C2AE and Cardno have teamed on several projects, including the Iron Belle Trail.

DRIEENGA (D&A), providing land survey and soils engineering, has operated in Michigan since 1995. C2AE and D&A most recently teamed on the addition of a Miracle Playfield at The Dome Sports Center in Schoolcraft, Michigan.

CARTER & ASSOCIATES is a Michigan-based, minority-owned business with experience in traffic signal design. Most recently, C2AE and Carter & Associates worked together on an extension of Coleman Road in Lansing.



RESUMES



SAUGATUCK TOWNSHIP
Allegan County, Michigan

TRI-COMMUNITY JOINT STUDY COMMITTEE

Roger Marks, PE
QA/QC (Trails)

Scott Cook
QA/QC (Roads)

Al Kaltenthaler, PE
QA/QC (Bridges)



Larry Fox, PE
Project Manager



Cory Davis, PE
Assistant Project Manager



Tony Grinnel, PE
Transportation
Engineer



Tyler Ruel, PE
Transportation
Engineer



Mark Adams, PE
Transportation
Engineer



Cory Davis, PE
Construction
Engineer



Kelly Green
Construction
Inspector



Rusti Owens,
RLA, ASLA
Landscape Architect



Erik Cronk,
PLA, LEED AP
Landscape Architect



Jamie McArdle
Landscape
Architect



Liz Westrate, PE
Structural
Engineer



Mandy Marsh, PE,
LEED AP BD+C
Structural Engineer



Matt Jarvi, PE
Electrical
Engineer

Cardno
Environmental
Engineering

Driesenga
Land Surveying,
Easement Acquisition,
Soils Engineering

**Carter &
Associates**
Traffic Signals

Meyerson Consulting
Funding/Trail Design
Consulting



LARRY FOX, PE

Project Manager

Larry has provided advising, design, and project management for a variety of projects. He has accumulated decades of expertise in trail projects for MDOT and for municipalities throughout Michigan. Larry has personally worked on over 40 miles of trail in the last five years.

YEARS OF EXPERIENCE

40

EDUCATION

MTU Bachelor of Science, Civil
Engineering: Michigan
Technological University, 1980

REGISTRATIONS

Professional Engineer: MI

PROFESSIONAL AFFILIATIONS

National Society of Professional Engineers (NSPE)

Michigan Society of Professional Engineers (MSPE)

Water Environment Federation (WEF)

HIGHLIGHTED EXPERIENCE

[Networks Northwest Traverse City to Charlevoix Trail](#)

Project manager for a new 46-mile trail to extend from Traverse City to Charlevoix along northern lower Michigan's scenic coastline. The combined shared-use paths, shared roadways, bike lanes, and boardwalks will be coordinated across multiple municipalities. This work is designed to attract more tourism to the region. Portions of this trail currently underway include the Acme to Elk Rapids 11-mile stretch.

[Otsego County Gaylord Gateway Trailhead](#)

Project manager for the design of a new trailhead facility on the Iron Belle Trail in downtown Gaylord. The trailhead will include a courtyard with an outdoor fire feature, a pavilion building, and year-round restrooms.

[Otsego County Iron Belle Trail New Segment](#)

Civil engineer for the schematic design, cost estimating, design, and construction engineering of this 13-mile trail through Otsego County. The trail connects to the existing North Central State Trail. This project was designed within the right of way of an active rail corridor. Funding comes from a MDOT TAP grant, two MNRTF grants, a RTP grant, an IBT grant, and local share contributions by two townships and the County.

[Michigan DTMB Higgins Lake State Park Pathways](#)

Project manager for the planning, design, and construction of the connector trails. C2AE coordinated with the DNR and DTMB to prepare trail routing alternatives, cost estimates, and a narrative report for use in funding applications. The trail is three miles of paved pathway. The trail forms a portion of the Iron Belle Trail.

[Burt Township Trail Committee New Burt Lake Non-Motorized Path](#)

Project manager for a concept plan for a non-motorized trail around Burt Lake. The trail was divided into segments and prioritized for funding applications. The trail includes sections of paved road shoulders and wooden boardwalks, but the majority of the trail consists of a 6-inch thick crushed aggregate surface.

[City of West Branch New North River Trail](#)

Project leader for the continued development of the River Trail, designing the north portion. The trail includes an elevated boardwalk and a paved 10 ft. wide non-motorized trail along the south edge of the Ogemaw Creek. The trail has an overlook deck with seating, site lighting, and a crossing of M-55 to connect to the trailhead for the South River Trail.



CORY DAVIS, PE

Assistant Project Manager,
Construction Engineer

Cory has performed contract administration, construction material testing, site observation, and inspection. He frequently spearheads design and construction phases of projects—both government-funded and private development.

YEARS OF EXPERIENCE

18

EDUCATION

UM Master of Business
Administration: University of
Michigan, 2010

WMU Bachelor of Construction
Engineering: Western Michigan
University, 2003

REGISTRATIONS

Professional Engineer: MI

PROFESSIONAL AFFILIATIONS

ACEC Emerging Leaders Program

MDOT Office Technician

MDOT Field Manager

ACEC Materials Acceptance
Process Training

Troxler Nuclear Gauge Safety

Troxler Radiation Safety Officer

MDOT Prevailing Wage Training

HIGHLIGHTED EXPERIENCE

DeWitt Charter Township Old US-27 Non-Motorized Trail

Construction engineer for the Old US-27 pathway and sidewalk from Sheridan to Northcrest, totaling nearly two miles. The project included HMA surface path on the east side of the road and concrete sidewalk on the west side. MDOT TAP funding.

City of Durand West Parking Lot and Pathway Improvements

Project manager for utilities improvements, green infrastructure, storm water management, streets and streetscape beautification, and sidewalks to connect to the pathway to link the downtown area with City Hall, U.S. Post Office, and Riverside Market. MEDC/CDBG DIG funding.

Delhi Township New Non-Motorized Path

Civil engineering services for the construction of a hot mix asphalt non-motorized path complete with concrete curb, gutter, sidewalk, and ramps as well as aggregate base and grading.

Kent County Youth Agricultural Association Fairgrounds Relocation

Project manager for the development of a master plan outlining the relocation of the fairgrounds. Input meetings informed elements of the new design, such as the number and size of facilities, the emphasis on grounds' show arena, the number of parking spaces, and avenues for future expansion.

Clinton County Road Commission Coleman Road Extension

Project manager for the extension of Coleman Road from West Road to Wood Street passing under US 127, a TIP-funded STP project. Bike lanes, sidewalks, and a shared use path create new access for non-motorized traffic. New traffic signals were placed at Wood and West. The sanitary sewer and storm sewer were extended.

City of Otsego South Farmer Street Reconstruction

Construction engineer for the reconstruction of South Farmer Street, between Hammond Street and Allegan Street, including 0.21 miles of HMA resurfacing, concrete curb, gutter, sidewalks and ramps, storm and sanitary sewers, and water main. MDOT LAP.

City of Eaton Rapids Safe Routes to Schools

Project manager for new sidewalks, crosswalk improvements, ADA compliant sidewalk ramps, and pavement markings planning and design. MDOT LAP funding.

City of St. Johns Scott Road Improvements and Path

Project manager for the design and construction of road improvements on Scott Road from Sturgis Street to Gibbs Street, the addition of one mile of shared-use path from Astwood Mews Lane to the Fred Meijer Heartland Trail, and minor accompanying drainage improvements.



ROGER MARKS, PE

Trail QA/QC

Roger is a skilled communicator. His experience facilitating conversation between team members with different ideas has led to truly cohesive projects that adhere to schedule and budget.

YEARS OF EXPERIENCE

28

EDUCATION

MSU Bachelor of Science, Civil Engineering: Michigan State University, 1992

REGISTRATIONS

Professional Engineer: MI

National Association of Sewer Service Companies (NASSCO) Pipe Assessment Certification Program and Manhole Assessment Certification Program (expired)

MDEQ Storm Water Operator, Construction Site

PROFESSIONAL AFFILIATIONS

ACEC Transportation Committee Chair, Past

American Society of Civil Engineers (ASCE)

American Council of Engineering Consultants (ACEC)

HIGHLIGHTED EXPERIENCE

Clinton County Road Commission, City of DeWitt, and DeWitt Charter Township Clark and Herbison Roads Rehabilitation and Non-motorized Paths

Project manager for the reconstruction of Herbison and Clark Roads and the construction of corresponding non-motorized pathways as part of a larger network of pathway projects coordinated between DeWitt Charter Township, the City of DeWitt, and Clinton County.

DeWitt Charter Township, City of DeWitt, and Clinton County Road Commission Schavey Road Reconstruction and Path

Project manager for the design of the Schavey Road reconstruction and off-road shared use path. Funded in part by an MDOT CMAQ grant and Urban STP. Williamston Community Schools Safe Routes to Schools QA/QC for new sidewalks, crosswalk improvements, landscaping, lighting, and pavement marking.

City of Eaton Rapids Safe Routes to Schools

Civil engineer for the design and construction of sidewalks, ADA compliant sidewalk ramps, crosswalk improvements, and pavement markings. MDOT LAP

City of South Haven Phoenix Street Trail

Project manager for the design and construction of approximately 1,000 feet of HMA non-motorized trail along the north side of Phoenix Street, from Blue Star Highway, to connect to the pending MDOT trail near I-196.

DeWitt Township Old US-27 Corridor Study and Non-Motorized Trail

Project manager for the design and construction of the Old US-27 pathway and sidewalk from Sheridan to Northcrest, totaling nearly two miles. The project included HMA surface path on the east side of the road and concrete sidewalk on the west side, and was funded in part by an MDOT Transportation Alternates Program grant.

Michigan DNR White Pine Trail Drainage Corrections

Drainage review and budget development services for improvements to the existing path failed in areas of steep side slope in a major storm event. Work included planning the repairs and correcting drainage treatment to avoid future damage.



SCOTT COOK

Road QA/QC

Scott has worked extensively in quality control, design, and project management capacities for streets, highways, roads, and utilities projects for the Michigan Department of Transportation and numerous municipal clients across the state.

YEARS OF EXPERIENCE

29

EDUCATION

MTU Bachelor of Science, Civil
Engineering: Michigan
Technological University, 1992

HIGHLIGHTED EXPERIENCE

[City of Lansing New Eastside Connector Trail](#)

Lead designer for the construction of a non-motorized path between Pennsylvania and Saginaw going through the Lansing School District Property. The trail length was 1.2 miles and required new traffic signals at the Marshall Street crossing. Both design and construction projects were closely coordinated with the school district.

[City of Corunna Streetscape and Non-Motorized Path Enhancement](#)

Project manager for non-motorized path and streetscape and lighting enhancements on M-71 from Hastings to McCurdy Park.

[Michigan Department of Transportation I-69 Non-Motorized Path](#)

Project manager for the new 8 ft. concrete pathway totaling nearly 1.5 miles. The path was designed to connect pedestrian and cyclists to five neighborhoods and several schools using federal, state, and city funds. Other improvements included modular block retaining walls, guardrail upgrades, non-freeway signing, drainage, and pavement marking.

[Michigan Department of Transportation M-43 Oshtemo Township Non-Motorized Path](#)

Project manager for non-motorized pathway on M-34 from 2nd St. to the west city limits of Kalamazoo. The project included ADA ramp design, non-freeway signing, and an elevated boardwalk.

[City of Lansing Waverly Road Non-Motorized Path](#)

Design engineer for non-motorized pathway on Waverly Road, from north of Jolly Road to Cooley Street. Project included 1.5 miles of non-motorized pathway with concrete curb and gutter replacement, HMA, concrete sidewalk ramp replacement, and pavement markings.

[City of Lansing Major Streets FY2019](#)

Project manager for improvements to Kalamazoo St., American Rd., and Miller Rd. Work includes milling and resurfacing with necessary base repairs.

[City of DeWitt 2016 Local Streets](#)

Project manager for a local streets contract consisting of milling and resurfacing residential streets. Work included removal and replacement of sanitary sewer and sewer leads within the ROW. In addition, work included the design of ADA compliant sidewalk ramps at existing sidewalks. In total, the project spanned a mile and a half of roadway.

[Michigan Department of Transportation M-11 and Clyde Park Intersection Improvements](#)

Project manager for the full-depth reconstruction of the intersection of M-11 and Clyde Park Avenue in Wyoming, Michigan, involving geometric and safety upgrades, municipal utility relocations, and replacements or improvements to traffic signals, drainage, commercial driveways, signage, permanent pavement markings, and sidewalk and ADA ramps.



AL KALTENTHALER, PE, SE

Bridge QA/QC

Al is best known for his trail-blazing approach to street and bridge design. From west Michigan's first diverging diamond interchange to MDOT projects state wide, Al has built his reputation on lasting, innovative, and successful solutions.

YEARS OF EXPERIENCE

37

EDUCATION

UA

Bachelor of Science, Civil Engineering: University of Akron, 1983

REGISTRATIONS

Professional Engineer: MI, IL

Professional Structural Engineer: IL

PROFESSIONAL AFFILIATIONS

American Consulting Engineers Council (Michigan), Transportation Committee Member, Workforce Development/Training Committee

American Society of Civil Engineers (ASCE)

ASCE Michigan Scholarship Committee

Structural Engineering Association of Illinois

**Project completed before joining C2AE*

HIGHLIGHTED EXPERIENCE

[City of Lansing River Trail Bridge Rehabilitation and Replacement](#)

Project manager for the rehabilitation of five trail bridges and the replacement of a sixth. The effort will enhance the city's already robust trail network. For each bridge, the team is completing permit applications, investigating the existing structures, providing designs, and preparing bid documents. The team will then provide construction engineering and administration, testing, and inspection. Environmental concerns include endangered species investigations for mussels and bald eagles.

[Eaton Rapids GAR Island Park and River Trail Bridge](#)

Civil engineer for the design and construction of a new pedestrian boardwalk along the West bank of the Grand River from City Parking Lot 7 South to Hamlin Street. Repair or replacement of the concrete retaining wall around the GAR Island, amenity improvements on the island, and replacement of the pedestrian bridge on the east side of the island.

[Michigan Department of Transportation 2020 Bridge QA Services](#)

Project manager for quality assurance review of any projects assigned by MDOT over the course of a year-long as-needed contract. Services will adhere to applicable OSHA and MIOSHA safety standards.

Documents for review may include bridge and approach roadway plans, special provisions, MOT special provisions and staging plans, estimates/quantities, schedules, and proposals.

[Michigan Department of Transportation 2019 Bridge QA Services](#)

Project manager for a seven-month as-needed contract to provide quality assurance services for bridge projects of all sizes and scopes. Services include reviewing construction document packages for bridge rehabilitation, replacement, and new construction projects throughout the State of Michigan.

[Clinton County Road Commission Coleman Road Extension](#)

QA/QC services for the extension of Coleman Road from West Road to Wood Street passing under US 127, a TIP-funded STP project. Bike lanes, sidewalks, and a shared use path create new access for non-motorized traffic. New traffic signals were placed at Wood and West. The sanitary sewer and storm sewer were extended.

[Davenport University Boardwalk Structure Designs Routes*](#)

Lead engineer and QA/QC for the design of four timber boardwalks at Davenport University. Constructed from available timbers, erected on helical pile-supported piers, and cast in place with concrete spread footing abutments, the resulting boardwalks were connected by an HMA non-motorized trail.



TONY GRINNELL, PE

Civil Engineer

Tony's role as a civil engineer is to ensure a safe, clean environment. He provides designs for road and sewer rehabilitation projects as well as water and sewer system projects. He is proficient in current versions of MicroStation, GEOPAK, and AutoCAD Civil 3D.

YEARS OF EXPERIENCE

22

EDUCATION

MSU Bachelor of Science, Civil Engineering: Michigan State University, 1998

REGISTRATIONS

Professional Engineer: MI

HIGHLIGHTED EXPERIENCE

City of Lansing River Trail Bridge Rehabilitation and Replacement

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DeWitt Charter Township Herbison Road and Non-Motorized Path

Lead designer for road improvements to Herbison Road as well as a new shared use path parallel to the roadway from the DeWitt Township offices to Old US-27. Urban STP funding.

Clinton County Road Commission Clark Road Improvements and Non-Motorized Path

Lead designer for improvements to Clark Road along with the construction of a new non-motorized path as part of a larger network of projects coordinated between the road commission, the City of DeWitt, and DeWitt Charter Township.

City of Lansing Waverly Road Non-Motorized Path

Civil engineer for non-motorized pathway on Waverly Road, from north of Jolly Road to Cooley Street. Project included 1.5 miles of non-motorized pathway with concrete curb and gutter replacement, HMA, concrete sidewalk ramp replacement and pavement markings.

City of Lansing Forest and Collins Road Non-Motorized Path

Civil engineer for a 3,200 lf non-motorized path along the south side of Forest Road from just east of US-127—connecting to Bear Lake Path—then northeast of Candlewood Suites East Drive to the east side of Harrison Road. Efforts will include grading and drainage design, a sidewalk connection from the non-motorized path on the south side of Forest Road to the Michigan State University Foundation's parking lot on the facility's north side.

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MDOT I-69 Non-Motorized Path

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TYLER RUEL, PE

Civil Engineer

Tyler has gained valuable experience in both civil/transportation engineering and construction oversight working with C2AE and in his previous role at the Michigan Department of Transportation.

YEARS OF EXPERIENCE

8

EDUCATION

MSU Bachelor of Science, Civil Engineering: Michigan State University, 2011

REGISTRATIONS

Professional Engineer: MI

HIGHLIGHTED EXPERIENCE

[Networks Northwest Traverse City to Charlevoix Trail](#)

Civil engineer for a new 46-mile trail to extend from Traverse City to Charlevoix along northern lower Michigan’s scenic coastline.

The combined shared-use paths, shared roadways, bike lanes, and boardwalks will be coordinated across multiple municipalities. This work is designed to attract more tourism to the region. Portions of this trail currently underway include the Acme to Elk Rapids 11-mile stretch.

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[DeWitt Charter Township Herbison Road and Non-Motorized Path](#)

Civil engineer for road improvements to Herbison Road as well as a new shared use path parallel to the roadway from the DeWitt Township offices to Old US-27. Urban STP funding.



MARK ADAMS, PE

Civil Engineer

Mark's experience includes project management, project engineering, right-of-way engineering, and construction inspection for a variety of municipal and state transportation projects. His high-level thinking is matched by technical skill.

YEARS OF EXPERIENCE

36

EDUCATION

LTU Bachelor of Science, Construction Engineering: Lawrence Technological University, 1984

REGISTRATIONS

Professional Engineer: MI

PROFESSIONAL AFFILIATIONS

American Society of Civil Engineers (ASCE)

CERTIFICATIONS

MDOT Office Technician

Certified Storm Water Operator

HIGHLIGHTED EXPERIENCE

City of South Haven Phoenix Street Trail

Civil engineer for the design and construction of 1,000 ft. of HMA non-motorized trail along the north side of Phoenix Street, from Blue Star Highway, to connect to the pending MDOT trail near I-196.

City of Otsego River Trail Extension

Civil engineer for the design of the City's 2,500 LF non-motorized River Trail extension to Northside Park.

Delhi Charter Township North Connector Trail

Civil engineer involved in the preliminary layout and design of the trail extension from Jolly Road to Willoughby Road. Project included 3.4 miles of HMA non-motorized path, grading, aggregate base, timber walls, boardwalk, timber piles, helicals, three prefabricated steel bridges, concrete curb and gutter, sidewalk ramps, signing and pavement markings.

MDOT I-69 Non-Motorized Path

Civil engineer for the new 8 ft. concrete pathway totaling nearly 1.5 miles. The path was designed to connect pedestrian and cyclists to five neighborhoods and several schools using federal, state, and city funds. Other improvements included modular block retaining walls, guardrail upgrades, non-freeway signing, drainage, and pavement marking.

City of Lansing River Trail Bridge Rehabilitation and Replacement

Civil engineer for the rehabilitation of five trail bridges and the replacement of a sixth. The effort will enhance the city's already robust trail network. For each bridge, the team is completing permit applications, investigating the existing structures, providing designs, and preparing bid documents. The team will then provide construction engineering and administration, testing, and inspection. Environmental concerns include endangered species investigations for mussels and bald eagles.

Kent County Youth Agricultural Association Fairgrounds Relocation

Civil engineer for the development of a master plan outlining the relocation of the fairgrounds. Input meetings informed elements of the new design, such as the number and size of facilities, the emphasis on grounds' show arena, the number of parking spaces, and avenues for future expansion.

Otsego Downtown Development Authority Riverfront Master Plan

Civil engineer for the City of Otsego's new Riverfront Development Master Plan, outlining the implementation of pedestrian-friendly areas, increased parking, a boat launch, the design and placement of an open air structure, the relocation of select buildings, the enhancement of an existing river trail, and several other recommendations.



KELLY GREEN

Construction Inspector

Kelly has been immersed in the construction industry since high school. He is experienced in materials testing and has a particular interest in site/civil construction projects.

YEARS OF EXPERIENCE

34

EDUCATION

FSU

Ferris State University
Construction Management
Program Training

CERTIFICATION

Michigan Level 1 Concrete Technician,
MCA/ACI

Density Technology Certified

Aggregate Sampling Certified

Field Book Certified

**Project completed before joining C2AE*

HIGHLIGHTED EXPERIENCE

City of Eaton Rapids State Street and Sidewalk Improvements

Construction engineer for the reconstruction of approximately 4,500 feet of State Street, keeping the existing curb and gutter where in good condition and replacing sidewalk ramps to meet ADA standards. The project also replaced the existing four-inch water main between East Street and Raeburn Street.

City of Leslie Mill Street Reconstruction and Bridge Rehabilitation

Construction engineer for the rehabilitation of roadway, which included the replacement of the existing 4 in. water main with a new 12 in. water main, and the complete removal and replacement of an 83 ft. precast box culvert with precast wingwalls.

Bekum America Corporation Master Plan

Construction engineer for the development of a master plan for a 20,000 SF expansion to an existing industrial plant. The team was later retained to complete the project design.

Michigan Department of Transportation*

Lead construction inspector for MDOT projects and material testing of concrete, soils and asphalt. Provided oversight of contractors and coordination with engineers, tracked quantities for progress payments, and completed final project as-builts.

Michigan Department of Transportation*

Lead construction inspector for MDOT projects and material testing of concrete, soils, and asphalt.

Michigan Department of Transportation*

Lead construction inspector for MDOT projects and material testing of concrete, soils, and asphalt.



RUSTI OWENS, PLA, ASLA

Landscape Architect

A skilled illustrator, Rusti can provide clients with beautiful, detailed sketches to convey design intent and turn ideas into real plans.

YEARS OF EXPERIENCE

44

EDUCATION

BSU

Bachelor of Landscape Architecture: Ball State University, 1986

BSU

Bachelor of Science, Environmental Design: Ball State University, 1985

REGISTRATIONS

Professional Landscape Architect: MI

PROFESSIONAL AFFILIATIONS

American Planning Association, Division of Transportation Planning (APA)

Michigan Society of Planning Officials (MSPO)

HIGHLIGHTED EXPERIENCE

[Networks Northwest Traverse City to Charlevoix Trail](#)

Landscape architect for a new 46-mile trail to extend from Traverse City to Charlevoix along northern lower Michigan's scenic coastline. The combined shared-use paths, shared roadways, bike lanes, and boardwalks will be coordinated across multiple municipalities. This work is designed to attract more tourism to the region.

[Delhi Charter Township North Connector Trail](#)

Landscape architect for a trail extension from Jolly Road to Willoughby Road. Project included 3.4 miles of HMA non-motorized path, grading, aggregate base, timber walls, boardwalk, timber piles, helicals, three prefabricated steel bridges, concrete curb and gutter, sidewalk ramps, signing and pavement markings.

[Bath Charter Township Non-Motorized Trail](#)

Coordination and preparation of materials for two public information meetings for the development of pedestrian and bicycle circulation throughout the Township. Study was intended to improve the circulation routes for the residents, provide direction in improving routes of access to schools, churches, and business districts, and make connections to neighboring bicycle and pedestrian corridors from the region.

[City of Lansing Rivertrail South](#)

Landscape architect for the design and construction of just under two miles of non-motorized public recreation trail, which connects three distinct city parks and extends an existing trail system. Working with MDOT and the MDNR, the team helped develop of a 4-acre section of wetland.

[City of Williamston Volunteers Park Master Plan](#)

Project manager for a master plan outlining improvements to Volunteers Community Park. The plan features new Miracle playground equipment, which accommodates kids of all abilities with low access points, spacious play areas, and sensory appeal. The plan also includes new parking, fence alterations, improved stormwater management, a pavilion, landscape buffers, signage, and bike racks.

[Village of Kalkaska Maple Street Reconstruction](#)

Lead designer for the reconstruction of 1,800 ft. of Maple Street from Elm Street to Laurel Street, and Elm and Oak Streets between Maple Street and Cedar Street, including HMA surface removal, earthwork and grading, concrete curb and gutter, concrete sidewalk, HMA paving and restoration. This project is part of an effort to improve the Kalkaska downtown square.



ERIK CRONK, PLA, LEED AP

Landscape Architect

As a graduate student with groundbreaking ideas about sustainability, Erik changed the future of green roofs. Today, he strives to blend structure and nature in his work. He has delivered keynote speeches and won awards for his designs.

YEARS OF EXPERIENCE

13

EDUCATION

MSU Master of Science, Environmental Design: Michigan State University, 2010

MSU Bachelor of Science, Landscape Architecture: Michigan State University, 2008

REGISTRATIONS

Professional Landscape Architect: MI - 2016
USGBC LEED® Accredited Professional
Certified Storm Water Operator

AWARDS/PRESENTATIONS

2016 CELA Conference Featured Speaker
“7 Years of Green Roof Research in the Making”

2011 EPA P3 Sustainable Design Expo
Honorable Mention Award
“Green Roofs for Residential Design”

2010 GRHC Conference Featured Poster
“Hydrology of Sloped Green Roofs”

2009 ASLA Conference Featured Speaker
“Dynamics of Steep Sloped Green Roofs”

HIGHLIGHTED EXPERIENCE

[City of Lansing River Trail Bridges Rehabilitation](#)

Landscape architect for the rehabilitation of five trail bridges and the replacement of a sixth. The effort will enhance the city’s already robust trail network. For each bridge, the team is completing permit applications, investigating the existing structures, providing designs, and preparing bid documents. The team will then provide construction engineering and administration, testing, and inspection. Environmental concerns include endangered species investigations for mussels and bald eagles.

[Delhi Charter Township North Connector Trail](#)

Landscape architect for a trail extension from Jolly Road to Willoughby Road. Project included 3.4 miles of HMA non-motorized path, grading, aggregate base, timber walls, boardwalk, timber piles, helicals, three prefabricated steel bridges, concrete curb and gutter, sidewalk ramps, signing and pavement markings.

[Otsego County Gateway Trailhead](#)

Landscape architecture design services for a new trailhead facility to be located on the Iron Belle Trail in downtown Gaylord. The trailhead will include a courtyard with an outdoor fire feature, a pavilion building and year-round restrooms. 1.75 miles of new trailway are also included in the project.

[Eaton Rapids GAR Island Park and River Trail Bridge](#)

Landscape architecture for the design and construction of a new pedestrian boardwalk along the West bank of the Grand River from City Parking Lot 7 South to Hamlin Street. Repair or replacement of the concrete retaining wall around the GAR Island, amenity improvements on the island, and replacement of the pedestrian bridge on the east side of the island.

[Lansing Lions Club Potter Park Zoo Sensory Garden](#)

Conceptual design services for an approximately .25-acre sensory garden designed to stimulate sensory perceptions and be universally accessible. The garden includes a meandering walking path, a raised planting bed and seating wall, sensory plantings, seating areas, sculptures, interactive sensory play amenities, handicap accessible planter boxes, and a gazebo.

[Michigan Department of Natural Resources Iron Belle Trail*](#)

Landscape architecture design services for the longest trail in Michigan. Provided conceptual trail layout and routing as well as developed a trailhead that includes parking, a plaza with gateway features, a pavilion, restrooms and picnic areas. This section of the trail runs through the City of Gaylord (approximately 2 miles) along an existing railroad corridor and includes crossings of M-32 and the railroad itself.



JAMIE MCARDLE

Landscape Designer

Jamie's dual passions for landscape architecture and social work converge when it comes to the impact of the natural and built environment on the human experience.

YEARS OF EXPERIENCE

5

EDUCATION

WSU Bachelor of Social Work: Wayne State University, 2010

UM Master of Science, Landscape Architecture: University of Michigan, 2017

UM Master of Science, Behavior, Education & Communication: University of Michigan, 2017

**Project completed before joining C2AE*

HIGHLIGHTED EXPERIENCE

[Johnson County Big Bull Creek Trail*](#)

Landscape designer providing landscape and site layout design concepts and cost estimates for this Kansas trail development.

[Jekyll Island State Park Authority Recreational Trail*](#)

Landscape designer providing the development of concepts and design documents for a three-mile recreational trail to connect existing trails and improve island circulation at the Georgia state park.

[Jekyll Island State Park Authority Reforestation Program Update*](#)

Landscape designer providing updates to the existing reforestation program in response to the loss of over 1,000 trees following Hurricane Irma in Jekyll Island, Georgia.

[Jekyll Island State Park Authority Captain Wylly Road Master Plan Development*](#)

Landscape designer for the development of concepts and design documents for improvements to the Georgia island's amenities, habitats, and historical areas as part of the creation of a master plan for the beautification and reforestation of a one-mile corridor. The project involved updating landscape policies and educating the public on work.

[City of Lenexa Multiple Projects*](#)

Landscape designer for the production of landscape plans for various City Center and Ridgeview Road Corridor improvement projects.

[Creekside Residential and Commercial Development Planning*](#)

Landscape designer providing landscape and site layout design concepts for this Missouri residential and commercial land developer.

[English Gardens Landscape Company*](#)

Landscape design intern assisting in the production of renderings and plant information sheets for client review. Tasks included taking measurements and drawing base maps of project sites, compiling work packets for the installation of projects, and assisting in the development of cost estimates.

[Walt Disney World Parks and Resorts Horticulture Maintenance*](#)

Horticulture intern providing landscape services for the parks and resorts, including maintenance and installation of plant material.



LIZ WESTRATE, PE

Structural Engineer

Experienced in roadway and structural design services for a range of municipal projects, Liz has expertly navigated even the strictest of standards and procedures at the local, state, and federal levels.

YEARS OF EXPERIENCE

20

EDUCATION

UM Bachelor of Science, Civil Engineering: University of Michigan, 1998

REGISTRATIONS

Professional Engineer: MI, KS, IA

CERTIFICATIONS

Certified Document Technician

MDOT Qualified Team Leader for Bridge Inspections

**Project completed before joining C2AE*

HIGHLIGHTED EXPERIENCE

City of Grand Rapids Broadway Avenue Indian Mill Creek Pedestrian Bridge*

Structural engineer for the design and development of final plans and special provisions for rehabilitation of a single-span, spread box beam structure as part of the city's pedestrian trail improvements. Rehabilitation included concrete repairs, concrete surface coating, and expansion joint cover plate retrofit.

Grand Rapids and Indiana Railroad Grand River Pedestrian Bridge*

Structural engineer for the design and development of final plans and special provisions for rehabilitation of a Grand Rapids and Indiana Railroad five -span steel truss structure. Rehabilitation included minor concrete and expansion joint repairs, railing repairs, lighting upgrades, and cleaning and coating steel.

Michigan Department of Transportation Georgina Pedestrian Bridge over I-94*

Structural engineer for the preparation of final plans and special provisions for the reconstruction of a two-span, adjacent box beam bridge structure with CIP concrete slab ramps in accordance with MDOT standards. Design included layout of the new structure in accordance with ADA requirements during the preliminary phase and design of reinforced concrete piers on spread footings.

City of Grand Rapids Hall Street over Norfolk Southern Railroad and Steele Avenue*

Structural engineer for the design and development of final plans and special provisions for rehabilitation of a 306-foot, 5 span, steel beam structure. Work included deck replacement, pin and hanger replacements, substructure repairs, and approach work for this project in accordance with MDOT local agency standards.

City of Ludington Washington Street Bayou of Pere Marquette Lake Bridge*

Structural engineer for the design and development of final plans and special provisions for complete bridge replacement. The new bridge is a three-span, 215-foot, prestressed spread box beam superstructure on pile-supported substructure units in accordance with MDOT local agency standards.

Pigeon River Intercounty Drain Beadle Island Bridge Over Cut off Channel*

Structural engineer for the design and development of final plans and special provisions for a single, 80-foot, prefabricated vehicular truss superstructure on pile-supported abutments for Huron, Tuscola, and Sanilac Counties in accordance with MDOT local agency standards.



AMANDA MARSH, PE, LEED AP

Structural Engineer

Mandy has worked on buildings and structural systems for government, education, healthcare, and manufacturing clients. This array of experience makes her a valuable team resource for different structural systems design strategies.

YEARS OF EXPERIENCE

18

EDUCATION

UM Bachelor of Science, Civil Engineering: University of Michigan, 2002

REGISTRATIONS

Professional Engineer: MI, SC, NY
LEED® Accredited Professional w/ Specialty, U.S. Green Building Council (USGBC)

PROFESSIONAL AFFILIATIONS

American Institute of Steel Construction (AISC)

HIGHLIGHTED EXPERIENCE

[City of Lansing River Trail Bridges Rehabilitation](#)

Structural engineer for the rehabilitation of five trail bridges and the replacement of a sixth. The effort will enhance the city's already robust trail network. For each bridge, the team is completing permit applications, investigating the existing structures, providing designs, and preparing bid documents. The team will then provide construction engineering and administration, testing, and inspection. Environmental concerns include endangered species investigations for mussels and bald eagles.

[City of Lansing River Trail South Extension](#)

Structural engineer for design and construction services for a 3.2-mile extension to the river trail. The completed trail passes along the edge of Mt. Hope Cemetery, the Sycamore Golf facility, through Scott Woods nature area, and the Sycamore Creek.

[Networks Northwest Traverse City to Charlevoix Trail](#)

Structural engineer for the design of a new 46 mile trail to extend from Traverse City to Charlevoix along northern lower Michigan's scenic coastline. The combined shared-use paths, shared roadways, bike lanes, bridges, and boardwalks will be coordinated across multiple municipalities.

[Delhi Charter Township North Connector Trail](#)

Trail extension from Jolly Road to Willoughby Road. Project included 3.4 miles of HMA non-motorized path, grading, aggregate base, timber walls, boardwalk, timber piles, helicals, three prefabricated steel bridges, concrete curb and gutter, sidewalk ramps, signing and pavement markings.

[Emmet County Road Commission Petoskey to Alanson Trail](#)

Structural engineer for a new 7-mile trail segment that includes hot mix asphalt surfaces interspersed with boardwalks through wetland areas. The corridor runs through rural, undeveloped/environmentally sensitive, residential, and commercial areas.

[Michigan DTMB North Central State Trail](#)

Structural engineer for a 61-mile, non-motorized public recreational trail between the City of Gaylord and the Village of Mackinaw City. This crushed limestone surfaced trail forms a portion of the Iron Belle Trail. Construction followed the Transportation Enhancement Program process.

[Otsego County Iron Belle Trail New Segment](#)

Structural engineer for an 11.5-mile trail extension through the county that connects to the existing North Central State Trail. This trail was designed within the right-of-way of an active rail corridor.



MATHEW JARVI, PE

Electrical Engineer

Matt designs and administrates the construction of medium and low voltage electrical distribution systems. For both new and renovated facilities, he has designed everything from indoor and outdoor lighting to systems for process control, fire alarms, emergency power, communication, and security.

YEARS OF EXPERIENCE

41

EDUCATION

EMU Master of Business Administration: Eastern Michigan University, 1992

UM Bachelor of Science, Electrical Engineering: University of Michigan, 1978

REGISTRATIONS

Professional Engineer: MI, IN, KY, MS, NV, OH, SC, TN, WI

PROFESSIONAL AFFILIATIONS

Institute of Electrical and Electronics Engineers (IEEE)

International Society of Automation (ISA)

National Fire Protection Association (NFPA)

**Project completed before joining C2AE*

HIGHLIGHTED EXPERIENCE

[City of Durand West Parking Lot and Pathway Improvements](#)

Electrical engineer for utilities improvements, green infrastructure, storm water management, streets and streetscape beautification, and sidewalks to connect to the pathway to link the downtown area with City Hall, U.S. Post Office, and Riverside Market. MEDC/CDBG DIG funding.

[Clinton County Fairground Master Planning and Improvements](#)

Electrical engineer for the development of a master plan for redevelopment of the County Fairgrounds complex. Services included conducting a comprehensive property topographic survey that was to serve as base plans for future construction documents of the site improvements. The team was later retained for the design and construction of road and utility infrastructure improvements as outlined in the plan.

[Michigan DTMB Bewabic State Park Electrical Upgrades](#)

Electrical engineer for upgrades the underground electrical distribution in the campsites located in Loop A and about half of the campsites located in Loop B at Bewabic State Park, 46 campsite pedestals in total.

[Michigan DTMB Fayette Historic State Park Toilet/Shower Building](#)

Electrical engineer for the design of a new toilet/shower building, sanitation dump station, and wastewater treatment/disposal system serving the Fayette Historic State Park campground and harbor area.

[Village of Kalkaska Railroad Square Development](#)

QA/QC electrical engineer for the transformation of Kalkaska Railroad Square. The space will see a new plaza with a clock tower, an open-air pavilion with a kitchen and restrooms, a central event lawn with bench seating and landscaping, a designated farmer's market and food truck area, a pedestrian trail, and a plant buffer to guard the existing rail line.

[City of Corunna Streetscape Lighting](#)

QA/QC electrical engineer for non-motorized path and streetscape enhancement application and design on M-71, from Hastings to Woodworth and McCurdy Park.

[Midwest Region National Park Service Visitor's Center*](#)

Electrical power distribution, lighting, fire alarm and communication system design for a new Visitor's Center at Perry's Memorial in Put-In-Bay, Ohio.

[Lansing School District Eastern High School New Athletic Fields](#)

Structural engineer for Eastern High School's new athletic fields as part of the school's relocation. The project includes a soccer, football, and track stadium along with tennis courts and a baseball field. Stadium seating, support facilities, concessions, home and visitor grand stands, and a new parking area complete the design.

Emily Meyerson, AICP

Professional Experience

2003-present

Meyerson Consulting

Petoskey, MI

Community Planner

- Serve as Iron Belle Trail Facilitator for Northeast Michigan helping to plan, fund, develop, sign and market the state trail throughout the region.
- Serve as the Emmet County Housing Ready Program Coordinator, building awareness, advocacy and capacity for local housing solutions.
- Work with communities to complete master plans, recreation and non-motorized transportation plans, trail feasibility studies, water trail plans and trail town action plans.
- Facilitate public visioning sessions and public input meetings for various planning purposes.
- Coordinate event planning and management including tour director, Lake to Lake Bike Tour.
- Conduct educational sessions on various transportation, recreation, and economic issues.
- Complete zoning ordinance audits, zoning amendments and unique research studies.
- Served as the Trailways Coordinator for the Top of Michigan Trails Council (2003-2015):
 - Facilitated the development of over 280 miles of inter-connected multi-use trail system.
 - Provided communication, leadership, and project results for trail facility planning, management, development, and maintenance.
 - Facilitated discussions between DNR and various user groups to solve conflict.
 - Researched and provided expertise on property ownership, deeds, easements, environmental and transportation issues, trail design and alignment.
 - Created unique partnerships to develop trails, trailheads, amenities, and connections.
 - Wrote grants and worked with volunteer groups to raise funds for projects.
 - Created promotional materials such as press releases, website text and brochures.

2015-2018

Michigan Dept of Natural Resources

Lansing, MI

Northern Lower Peninsula Trail Coordinator

- Coordinated the State Trails Program for Northern Lower Michigan.
- Planned new trails and trail programs; wrote and managed implementation grants; set policies and procedures; coordinated maintenance and operations; developed marketing materials.
- Facilitated, presented, and organized public meetings, presentations, and partnerships.
- Developed standards for best practices, creating guides and manuals.
- Worked remotely and managed three remote staff throughout the region.
- Interfaced with the public regarding trail use, land management and program implementation.

1999-2003

Bear Creek Township

Petoskey, MI

Township Planner / Zoning Administrator

- Facilitated various public forums on zoning ordinance language.
- Provided analysis through written reports and presentations of proposed projects to the Planning Commission, Zoning Board of Appeals, and Township Board.
- Administered zoning activities including zoning permits, site plan reviews, zoning changes, special use permits, variances, and enforcement.
- Initiated new projects and partnerships to encourage smart development.
- Created maps and completed analysis using a GIS system.
- Created and staffed intergovernmental committees to coordinate regional planning activities.
- Managed park development through grant writing, plan development, and construction.
- Worked with various agencies to connect communities by a non-motorized trail.

1995-1999

Emmet County

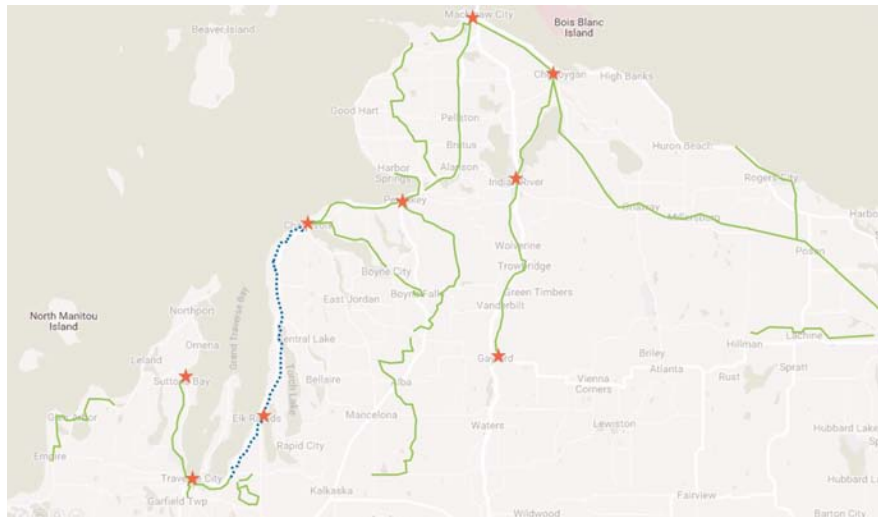
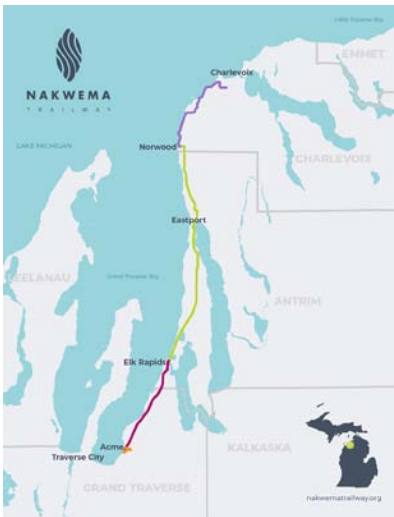
Petoskey, MI

Administrative Planner

- Responded to inquiries from developers, real estate salespersons and landowners.
- Wrote zoning ordinance amendment language.
- Initiated highway corridor studies to coordinate development between landowners.
- Completed reviews and analysis of site plans and special use permits requests.
- Developed educational sessions on emerging issues such as farmland protection programs.



TRAIL EXPERIENCE





Networks Northwest Nakwema Trailway

Size	46 Mile Segment
Completed	In Progress
Cost	Confidential
Contact	Elizabeth Calcutt Former Planner 231.929.5000
Services	Civil Engineering Landscape Architecture

Bringing connectivity across 46 miles of scenic beachfront and other iconic sites along the western edge of Northern Lower Michigan.

The Traverse City to Charlevoix extension of the Networks Northwest Trail will combine shared-use paths, shared roadways, bike lanes, and boardwalks to promote the physical and economic health of the three counties, seven townships, two cities, and the Village of Elk Rapids.

Because the new infrastructure will be owned and maintained by local government agencies, C2AE is coordinating all work with several stakeholders along with the project team, including Networks Northwest, TART Trails, Top of Michigan Trails Council, the MDNR, and MDOT.

Construction on this multi-phase contract is scheduled to take place over five years. For the Acme to Elk Rapids segment, for which survey and design are complete, C2AE's fee is 5% of estimated construction cost. For the Norwood to Bells Bay segment, for which schematic design is complete, C2AE's fee is 1.5% of estimated construction cost.

TRAIL EXPERIENCE





Otsego County Iron Belle Trail

Size	13-Mile Segment
Completed	2019
Cost	\$2.9 M (Construction)
Contact	Rachel Frisch County Administrator 989.731.7520
Services	Civil Engineering Landscape Architecture

C2AE designed a 13-mile segment of Iron Belle Trail through Otsego County. The trail leg runs along an active rail corridor, the first such trail in the state.

Once finished, Iron Belle Trail will cross Michigan from its northwest corner down to Detroit. C2AE provided a study and review of various trail segment routing options with their associated cost estimates, coordinating with the Michigan DNR and with the railroad owners, MDOT, and Lake State Railroad. Also in this phase, C2AE evaluated trail surface types (asphalt vs. crushed limestone) and the use of boardwalks and retaining walls in wetlands or slope-challenged areas.

Additionally, C2AE performed community outreach, holding public information meetings and working with the local units of government to secure funding. By teaming with the MDNR on the funding applications, C2AE helped the project receive a total of \$2.33 million in grant funding through the MDOT TAP, MNRTF, RTP, and IBT programs. C2AE's fee was 23% of final construction cost due to good bids and a lower-than-estimated construction cost.

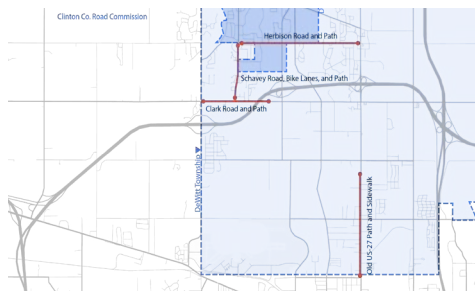
TRAIL EXPERIENCE





Clinton County Road
Commission
Roads & Paths

Completed	2018
Cost	\$1.6 M (Construction)
Contact	Dan Armentrout, PE Dir. of Engineering 989.224.3274
Services	Civil Engineering Construction Admin. Survey



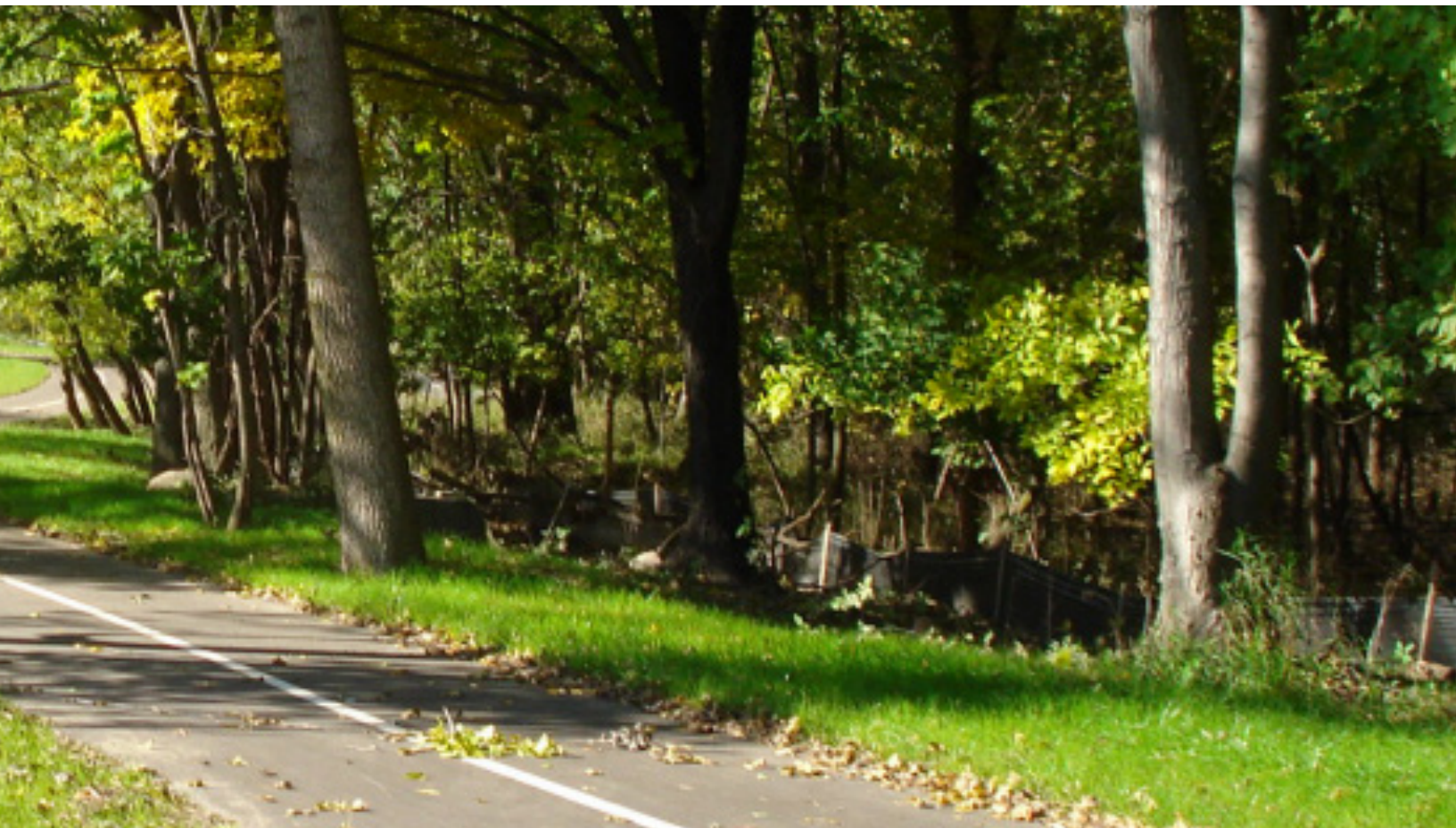
A committee of DeWitt Charter Township citizens first envisioned 71 miles of non-motorized transportation infrastructure in a fully interconnected web of paths and sidewalks in 2013.

This plan proved to be pivotal not only for DeWitt Charter Township, but also for the City of DeWitt, which exists inside township lines. Moreover, because DeWitt Township is not an Act 51 Agency, it was not eligible to apply for funding to implement the intended projects; however, Clinton County Road Commission was. As a result, all three municipalities began to collaborate.

The township brought C2AE into discussions early in planning. Four projects around the county began to take shape on four different roads: Old US-27, Herbison Road, Clark Road, and Schavey Road. Although the projects crossed municipal borders, each of the three local entities agreed that a collaborative approach was the most efficient and cost-effective way to fix the roads and connect pathways around their various communities. The plan bloomed into a network of countywide projects financed by seven different funding sources over multiple years.

TRAIL EXPERIENCE





City of Lansing River Trail Extensions and Bridge Work

Funding	Natural Resources Trust Fund, MDOT & MDNR Grants
Completed	Fall 2021
Cost	\$2 M (Construction)
Contact	Mitch Whisler Assistant City Engineer 517.483.4249
Services	Structural Engineering Civil Engineering Construction Admin.

In the last decade, the City of Lansing has contracted C2AE for several projects along the Lansing River Trail. In 2019, Lansing named C2AE its designer for the rehabilitation of five trail bridges and replacement of a sixth.

Funding for this \$2 million project comes from an Ingham County Trails and Parks Millage. For each of the six bridges, the design team will complete permit applications, investigate and evaluate the existing structures, provide designs for rehabilitation details and the replacement bridge, and prepare bid documents.

The C2AE team is providing construction engineering and administration, testing, and inspection. Environmental concerns include endangered species investigations for both mussels and bald eagles. Due to delays in construction related to COVID-19, work will be constructed during the 2020 and 2021 seasons.

TRAIL EXPERIENCE





Michigan DNR North and South Higgins Lake State Park

Size	3 Miles
Completed	2008-2016
Cost	\$635,000 (Construction)
Contact	Amy Swainston Rec. Trails Specialist 989.275.5151 ext. 2044
Services	Civil Engineering Structural Engineering Construction Admin. Survey

C2AE assisted the Michigan Department of Natural Resources (DNR) with planning, design, and construction services for three miles of non-motorized trail through both the North and South Higgins Lake State Parks.

The team used a previously completed Higgins Lake Trailway Plan as the basis for obtaining funding for these projects.

Project planning began with the evaluation of several routing options, cost estimating, and public outreach. The design brought about a 10-foot-wide asphalt paved trail that traverses through the parks and provides connection points to existing or future trail continuations. A portion of the North Higgins Lake State Park Trail is also a part of the Iron Belle Trail, from Forest Avenue to the Higgins Lake Nursery parking area. Because of the public lands available for these trails, the design allowed for a separated, off-road trail that opens up a scenic and peaceful atmosphere. The trail design required wetlands permitting for a portion as well as coordination with both county road commissions.

TRAIL EXPERIENCE

In our 54 year history as a firm we have designed over 300 miles of trail.

These trail projects involve multi-faceted components of varying complexity. A selection of these are highlighted in the table below. Projects above the solid black line have been completed in the last five years or are in progress; these projects total approximately 80 miles.

	Significant Public Input	Alternate Route Development	Environmental Assessment	Permitting	Surveying & Easement / ROW Acquisition	Constructability and Cost Estimates	Amenity Planning / Design	Bidding & Construction Phase Services	Multi-Jurisdictional Project	Multiple Funding Sources	Multi-Phase / Multi-Year	Length (miles)
Networks Northwest Nakwema Trailway	•	•	•	•	•	•	•	•	•	•	•	46
City of Lansing - Forest & Collins Rd Trail/Path		•		•	•	•	•	•	•	•	•	2.5
Lansing River Trail - Bridges			•	•	•	•		•		•	•	.5
Clinton CRC - Coleman Road Extension			•	•	•	•		•	•		•	1
Otsego County Gaylord Gateway Trailhead	•		•	•		•	•		•	•		1
St. Johns Non-motorized Path				•	•	•		•		•		1.0
Otsego County Iron Belle Trail	•	•	•	•	•	•	•	•	•	•	•	13.2
Moran Twp Pte. LaBarbe Voyageur Trail	•	•	•		•	•	•		•	•	•	3.2
DeWitt Twp Clark Rd South			•	•	•	•		•	•	•	•	1.5
DeWitt Twp/DeWitt Herbison Rd Non-motorized Path	•	•		•	•	•		•	•	•	•	0.8
Gaylord Downtown Infrastructure	•			•		•	•	•	•	•		.35
DeWitt Twp/DeWitt Schavey Rd Trail/Path	•	•	•	•	•	•	•	•	•	•	•	2.2
N. & S. Higgins Lake State Park Iron Belle Trail		•	•	•		•		•	•	•	•	4
DeWitt Twp/DeWitt Old US 27 Non-motorized Path	•	•		•	•	•		•	•	•	•	1.6
Delhi Township Non-Motorized Trail	•	•	•	•		•	•	•	•	•		3.4
West Branch River Trail - Multiple Segments		•	•	•	•	•	•	•	•	•	•	3
Petoskey to Alanson Trail			•	•	•	•	•		•			7.3
Burt Lake Non-Motorized Trail	•	•	•	•	•	•	•	•	•	•	•	4.8
City of Otsego Non-Motorized Trail		•	•		•	•	•		•	•	•	5
MDOT Non-Motorized Trail I-69 BL				•	•	•			•	•		1.5
North Central State Trail - Gaylord to Mackinaw City			•	•	•	•		•		•		62
Lansing River Trail - South Extension	•	•	•	•	•	•	•	•	•	•	•	2.2
City of Corunna Non-Motorized Trail		•			•	•			•	•		0.8
Lansing River Trail - Moores Park												0.4
MDOT Non-Motorized Trail M-43		•		•	•	•			•	•		2.5
Lansing River Trail - East Extension												3.2
Gaylord Aspen Park Trails		•			•	•	•	•		•		3.5
Lansing River Trail - North Extension												6
Gaylord Fairview / N. Center Trail					•	•		•				1.5



**C2AE has designed
over 300 miles
of trailway.**

TRAIL EXPERIENCE

MDOT PREQUALIFICATIONS

C2AE has designed hundreds of Michigan Department of Transportation (MDOT) roadway projects in all regions dating back to 1988.

We currently hold or are in the process of renewing the following 25 MDOT prequalifications for a variety of design and construction services. We have consistently received high project scores for quality work, effective communication, and responsiveness from the project managers within MDOT.

Our in-depth understanding of MDOT processes and solid working relationship with the Grand Region staff will provide added-value to the Tri-Community Joint Study Committee on the northern trail segment.

Construction Inspection: HMA Pavement
Design - Bridges
Design - Buildings
Design - Hydraulics I
Design - Hydraulics II
Design - Roadway
Design - Roadway: Complex
Design - Roadway: Intermediate
Design - Traffic: Pavement Markings
Design - Traffic: Signing - Freeway
Design - Traffic: Signing - Non-Freeway
Design - Traffic: Work Zone Maintenance of Traffic
Design - Utilities: Municipal
Design - Utilities: Pump Stations
Design - Utilities: Roadway Lighting
Design: Landscape Architecture
Design: Project Development Studies

To be submitted in March 2021:
Construction Engineering: Assistance
Construction Engineering: Roadway
Construction Engineering: Roadway - LAP
Construction Inspection: Roadway
Construction Services: Office Technician
Construction Testing: Aggregates
Construction Testing: Concrete
Construction Testing: Density

WORK PLAN

The Tri-Community Joint Study Committee (TCC), consisting of members from Saugatuck Township, the City of Saugatuck, the City of the Village of Douglas, and the Friend of the Blue Star Trail (FOBST), desires to submit funding applications to the Michigan Department of Transportation – Transportation Alternatives Program (TAP) and the Michigan Natural Resources Trust Fund (MNRTF).

The current project will include the planning, design, and construction of three new sections of trail to complete the 4.5-mile north section of the Blue Star Trail. The TAP application is anticipated to be submitted in October, 2021 and the MNRTF application in April of 2022. The desire is for construction to take place in 2023.

Previous preliminary planning and routing analysis work has been completed for these sections of trail, which we plan to utilize in the early phases of planning and design. The trail crossing design over the Kalamazoo River will be a key component to gain consensus and buy-in early in the project from the multiple stakeholders.

Our initial review of the past trail crossing configuration alternatives on the bridge revealed the following aspects that need further evaluation during the schematic design phase:

- Storm water drainage and potential ponding (spread) in the 1-foot buffer areas; scupper capacities
- Impact to existing bridge expansion joints from modifications to incorporate the trail
- Consideration of other options that include widening the existing sidewalk on the west side to a 14-foot trail; possible cantilevering on the outside of the bridge to gain more width
- Staging of construction to minimize impact for emergency vehicles and the motoring public

Our firm implemented a similar bridge modification project for the City of Lansing on Aurelius Road that converted a 4-lane bridge to a 3-lane section to incorporate a 10-foot non-motorized path/trail.

Based on C2AE’s understanding of the project, we propose the following general work plan, which can be modified and adjusted as needed throughout the project.

A PLANNING

C2AE will develop and implement an action plan for planning and design engineering of the currently defined trail corridor. The plan will identify an overall project timeline, communication engagement strategy or strategies, funding sources, roles and responsibilities, and a phasing plan with estimated timelines and costs for design, construction, and trail maintenance. We recognize that the keys dates currently identified by the committee include the October 2021 TAP Grant application and the April 2022 MNRTF Application. We have included examples of the action planning components are in the additional information section.

1 Timeline

C2AE will create a project timeline at the outset of the project for use in tracking and monitoring the project progress. Timeline dates will be updated on a monthly basis as part of our progress reporting process. Monthly progress reports will be provided by C2AE to provide updates for all current project activities.

Timeline will include, but not be limited to, the following key milestone dates:

- Project team meetings
- Local units of government/public meetings
- Duration of schematic design phase with deliverable dates (funding applications)
- Duration of final design phase with deliverable dates

and other supporting documentation as needed. Private fundraising activities will be conducted by the project team and supported by C2AE.

4 Roles and Responsibilities

At the kickoff meeting, we will document the roles and responsibilities of each stakeholder or entity involved in the project. Throughout the project, C2AE will coordinate and track the progress of key assignments to ensure the overall project, as well as each trail segment, remains clearly assigned and on schedule. This effort will include monitoring the assignments of the subconsultant firms involved. We will communicate consistently and clearly with the committee or assigned project/community stakeholder teams regarding the project status and commitments.

5 Trail Maintenance Plan

C2AE will use our extensive experience with trail projects and the trail calculators already created to estimate costs associated with trail maintenance, operations, and replacement. We will also assist in the identification of solutions for trail maintenance approaches along the corridor, which can vary from simple cooperation between units of government to a formal establishment of a recreational authority. Maintenance will play a key role in achieving the expected service life of the trail system and

ensure viability for generations to come.

B DESIGN & CONSTRUCTION

C2AE proposes the following general scope of services for each trail segment that will meet AASHTO Guidelines, Americans with Disabilities Act and Accessibility Guidelines (ADAAG), and other current federal, state, and local codes and guidelines. MDOT Local Agency guidelines will also be met when state funding is involved.

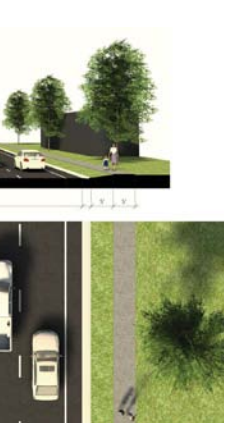
1 Schematic Design

a. Initial Scoping Meeting

C2AE and the committee/project team are accountable for the proper stewardship of funds and time allocated to this project. C2AE's project management plan (PMP) document is designed to assist in this task by providing the detail needed to implement the contract requirements.

C2AE will convene a meeting of the project team personnel responsible for proper project administration (TCC). The meeting's purpose is to review and confirm everyone's expectations regarding the project process.

Second to listening to the voices of the users, communities, and local agencies, schematic design based



WORK PLAN (CONT.)

on sound comprehensive data is next most important to providing feasible and constructible alternatives.

b. Gather Existing Data

C2AE will collect available relevant secondary source information including, but not necessarily limited to:

- Existing schematic trail routes and alternatives
- Preliminary design alternatives for the Kalamazoo River crossing
- GIS and Lidar data, such as parcel mapping, topography, utilities, soil types, natural features, and other environmental conditions
- Federal, state, and local guidelines and requirements for trail development
- Local zoning or planning ordinances
- Historical features, such as protected archaeological sites, significant structures, etc.
- Habitats for endangered or threatened species of flora or fauna
- Planned utility work (broadband, sewer, etc.)

Using available secondary source information—such as aerial or USGS topographic mapping, community mapping, plat maps, and existing planning maps—together with information obtained during the initial scoping meeting, C2AE will develop base plans for use during development of the site/constraints inventory analysis and alternative trail alignment options.

c. Conduct an Initial Visual Site Assessment

The C2AE team (including the project team as they desire) will conduct an initial site assessment of each segment to visually review and document any unique features of the proposed routing corridor(s) and define the envisioned limits and locations for programmed improvements.

At this time, we will collectively identify and confirm any known potential impacts to development as well as identify and address safety and security provisions as necessary. During the assessment we will also identify any

visible potential environmental concerns and/or areas that may require detailed supplemental investigations.

d. Perform Site Analysis

We will add the existing available information and other insights gained from the site assessment. The enhanced drawing will be a backdrop for preparing a graphic site analysis of existing built and natural conditions that could have either a positive or negative impact on the project. Existing conditions will include at a minimum:

- Soils, topography, and vegetation
- Hydrology and drainage patterns, channels, and washes
- Unique biological characteristics
- Outstanding natural features
- Cultural and historic features
- Adjacent land uses
- Negative site features or hazards
- Directions, speed limits, and traffic flow volumes
- Emergency vehicle accessibility
- Logical points of site ingress and egress
- Existing structure locations or development

We will evaluate the trail crossing of the Goshorn Creek just north of 134th Avenue to determine permitting requirements and possible crossing locations. It is our understanding that multiple routes have been conceptually developed through Amalanchier Park or along 134th Avenue to connect the Blue Star Highway trail to the Beeline trail on Holland Street. Previous information will be utilized during our analysis to select the final trail location.

e. TCC Committee Meetings

C2AE will conduct two or three meetings with the TCC to review and discuss the opportunities and constraints associated with each alignment and a preliminary cost for development. During these meetings, the TCC and C2AE will select alignments determined to represent the most feasible and prudent options to present and carry forward for further development as practical alternatives. Following

the initial TCC review meeting, we will refine each illustrative alternative, if necessary, based on comments obtained during the meeting. Since that initial meeting will essentially be more of a work session, further work will be required to refine each alternative into a final presentation format. Additional meetings with the TCC will refine alternatives into a final recommended plan for adoption by the member local units of government.

f. Gather Emergency Responder Input

During the review of alternatives (especially for the Blue Star Highway crossing of the Kalamazoo River), we plan to include local emergency responders to gain their perspective on the alternatives. This could happen as a part of one of the TCC meetings mentioned above. Support of the selected alternative by the local fire departments, police departments, and highway maintenance entity will be important in moving the plan forward.

g. MDOT LAP Review

As a local funding source, MDOT Local Agency Programs will be provided the opportunity for review and input on the alternatives under consideration.

h. Public Information Meeting

C2AE will plan, organize, coordinate, and conduct the final project public information meeting/public hearings through each local unit of government to review the final rendered preferred alternative, opportunities, and constraints, opinions of probable construction cost, trail phasing/segments, and associated planning elements. This information will form the basis for the funding applications.

i. Funding Applications

With the assistance of the TCC, C2AE will develop and prepare the MDOT TAP and MNRTF Funding applications for review and submittal by the applicable local agency.

2 Final Design (Future)

A detailed scope of services will be developed as part of the engineering services agreement. The Design Phase Services will generally include the following elements:

1. Topographic survey
2. Program application and other funding information (NEPA)
3. State Historic Preservation Office (SHPO)
4. Utility coordination
5. Soil borings
6. Easements
7. Preliminary plans
8. Preliminary quantities and opinion of probable Construction Cost
9. Preliminary Special Provisions
10. Grade Inspection/Review Meeting
11. Permits
12. Final Plans and Special Provisions
13. Final Engineer's Opinion of Probable Construction Cost
14. Grant Administration Assistance

3 Bidding

It is understood that the contract with the construction contractor may be held by a Local Unit of Government (LUG) depending on the funding involved. The exact scope of services may be adjusted based on the funding agency(ies).

4 Construction

1. Construction Administration (exact scope of services may be adjusted based on the funding agencies)
2. Construction Observation and Testing

FEE

As noted in the Request for Proposals, it is difficult to provide fee estimates for projects where all aspects of the project are not yet determined. Therefore, we are providing a detailed fee estimate for the Conceptual Design/Funding Application phase of the project. For future phases of the project, we have typically used percentage of construction estimates for fee determination for planning purposes, and have successfully integrated this fee planning concept into contracts for multi-phase/multi-year projects. We suggest the following fee breakdown for planning purposes, and unless it is a highly complicated project, our final fees are anticipated to be within the percentage ranges provided.

CONCEPTUAL DESIGN & GRANT APPLICATIONS

For this phase of the project, C2AE proposes to complete the work a time and material basis, with a total not-to-exceed amount. Our detailed fee breakdown is as follows:

Task 1 – Research and Analysis (includes 1 meeting with TCC)	\$9,400
Task 2 – Alternatives Development (includes 3 meetings with TCC/stakeholders)	\$17,200
Task 3 – Final Plan and Presentations (inc. meeting w/ each local unit of government)	\$7,800
Task 4 – MDOT TAP and MNRTF Grant Applications	\$5,000
Total Not to Exceed Fee	\$39,400

FUTURE PROJECT PHASES

Final Design Engineering	4% to 6% of the estimated construction cost
Construction Engineering	8 to 10% of the estimated construction cost

GRANT APPLICATIONS

At C2AE, assisting our clients with funding opportunities is a major part of what we do. In our 54 years, we have assisted our clients in receiving over \$700 million in grants and loans.

C2AE is well versed in grant applications/funding assistance for trail projects. We have several project managers who have assisted with the successful application and administration of trail funded projects.

C2AE has been successful with numerous **Michigan Natural Resources Trust Fund** applications and **MDOT Transportation Alternatives Program** applications. We are also familiar with other funding sources, such as the **DNR Recreation Passport grant** and **Iron Belle Trail grant**. Where trails can be located on state land, we have worked with clients to successfully use the **DNR Recreational Trails Program grant**. Where the trail is part of the Iron Belle Trail network, that funding has also been successfully utilized.

The level of grant writing assistance varies with each project and client. We understand that with this project, C2AE would be the lead entity in the grant application

preparation process. As witnessed from the enclosed profiles of previous projects (the Otsego County Trail is a good example), C2AE understands that often times multiple funding sources are required to allow a project to move forward. And the proper management of those various funding sources within one project is critical to the success of that project. We have the expertise and experience to assist in the identification of multiple funding sources as they may apply to various projects.

Funding identification and application leadership for this project will be provided by Larry Fox, project manager, and by Emily Meyerson of Meyerson Consulting.

The below video (click to follow YouTube link) summarizes how our funding experts look at the big picture to take a project from concept through completion.



Funding: The Economic Development Catalyst

LOCAL FAMILIARITY

C2AE has had a presence in west and southwest Michigan with offices in Grand Rapids and Kalamazoo that date back as far as 1966.

We have provided engineering and architectural consulting services in this region for a variety of state, county, and local governments, educational facilities, and private businesses over the past 55 years. More specifically, we have worked with the following clients/projects within Allegan County or nearby:

- [Saugatuck-Douglass District Library](#)
- [Holland State Park Improvements](#)
- [MDOT US-131 resurfacing from Dorr to Wayland](#)
- [Allegan County Medical Care Community](#)
- [Dorr Township](#)
- [City of Otsego](#)
- [Plainwell Paper Mill](#)
- [City of Kalamazoo](#)
- [Van Buren Intermediate School District](#)
- [City of South Haven](#)
- [Bangor Public Schools](#)

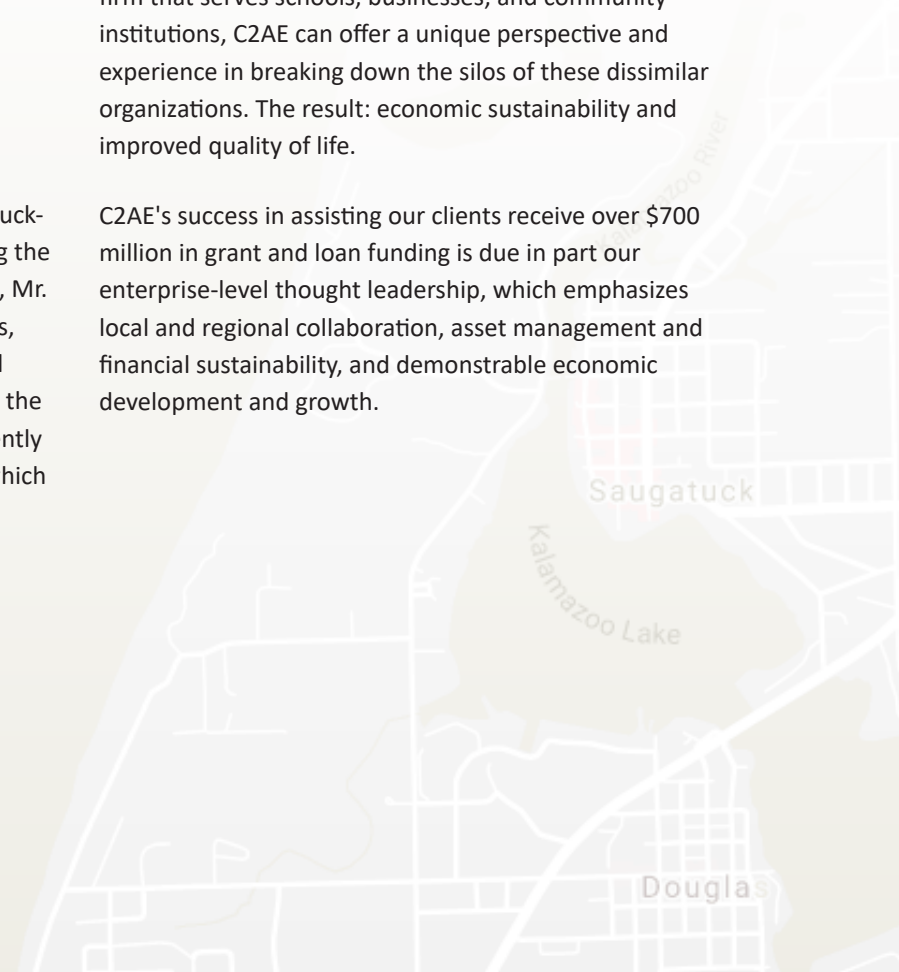
Saugatuck-Douglas Fire Department

Understanding the needs and concerns of the Saugatuck-Douglas Fire Department will be a high priority during the early stages of the trail design. One of C2AE's owners, Mr. Steve Jurczuk, has been a fire fighter for over 15 years, and has worked closely with Fire Chief Greg Janik and Deputy Chief Chris Mantels during his involvement in the Allegan County Fire Chief's Association. Steve is currently the Captain at the Dorr Township Fire Department, which provides our team with the working knowledge and insights of fire department operations.

Familiarity with the Role that Trails on Play in the Economic Cycle of a Region

C2AE has been implementing projects for 50+ years that support the economic cycle: **place needs business, business needs talent, and talent wants place.** When individuals, families, schools, businesses, community institutions, associations, and organizations collectively agree upon goals for regional parks and recreational goals and decide how to reach them, every group benefits and the region benefits. High local quality of life is an attribute business leaders crave when facing the challenge of attracting talent. High quality of life also supports business retention, expansion, and relocation. As a full-service architectural, engineering, and infrastructure design firm that serves schools, businesses, and community institutions, C2AE can offer a unique perspective and experience in breaking down the silos of these dissimilar organizations. The result: economic sustainability and improved quality of life.

C2AE's success in assisting our clients receive over \$700 million in grant and loan funding is due in part our enterprise-level thought leadership, which emphasizes local and regional collaboration, asset management and financial sustainability, and demonstrable economic development and growth.



Familiarity with Lakeshore Communities and Tourist-driven Economies

C2AE has worked on trails, sewer, water, road, and major infrastructure projects for several lakeside and resort communities across West Michigan, Northern Lower Michigan, and the Upper Peninsula, including Sault Ste. Marie, St. Ignace, Mackinac Island, Mackinaw City, Higgins Lake, Gaylord, Grayling, Cadillac, Traverse City, Petoskey, Village of Elk Rapids, Central Lake, Charlevoix, Boyne City, East Jordan, and Pentwater. Our team’s understanding of how to implement projects that minimize the adverse economic impacts of construction during peak summer

months will be a valuable asset to the region on your trail projects.

Since C2AE is not currently working with the three communities involved in the Blue Star Trail project, we believe our non-biased approach will be most beneficial in finding common ground and best alternatives for the challenges have slowed the trail development over the past several years. We look forward to developing relationships with all the communities along the Blue Star Trail during the successful implementation of this important regional project.



Saugatuck-Douglas Library Rendering



Holland State Park \$4M Day Use and Campground Renovation

FIRE/POLICE DEPT. INTERACTION



POLICE DEPARTMENTS

Interaction of the local/regional police departments is a typical aspect of the majority of transportation projects managed by C2AE, especially those utilizing MDOT TAP funding.

The police department is normally involved in the project planning/schematic design process to help identify potential problem areas and accident histories. The police departments are also included in the design process, where applicable, including route and intersection reviews as well as review of detour routes and road closures.

During construction, coordination with local fire and police departments is imperative for construction activity impacts and maintaining access for emergency vehicles.

FIRE DEPARTMENTS



C2AE is adept at developing rapport with public safety entities and has done so for many building and infrastructure projects. In fact, C2AE architect Steve Jurczuk serves as captain-firefighter at the Dorr Fire Department.

One recent example of our coordination efforts was on C2AE's bond program services for Bath Community Schools. Improvements at Bath Middle School required close collaboration with the local fire department to provide the department with emergency access around Bath Middle School. C2AE ensured that the design incorporated a turning radius that matched up to the fire department equipment.

Another example of this collaboration is C2AE's work for the City of Lansing. The firm needed to coordinate with the fire marshal for the replacement of the legacy city water main. C2AE collaborated with the local fire and water departments to ensure the solution balanced the cost with performance.

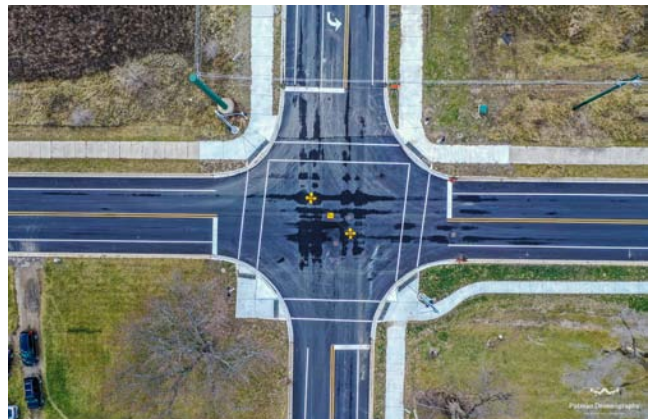
SMART TRAFFIC SIGNALS

Smart traffic signals use a combination of traditional and innovative technology to direct vehicles and pedestrians. When it comes to trail, path, and road design, it is important to consider the possible meeting points between these two types of traffic—and how to facilitate safe passage for both.

Pavement markings and signs at midblock crosswalks are not always effective at capturing drivers' attention and getting them to yield. Rectangular Rapid Flashing Beacons (RRFBs) are a type of traffic signal that emits a flashing light that stands out day or night to capture drivers' attention and warn them of a pedestrian crossing the road. RRFBs are one of the best and easiest ways to increase walkability in a community without significant infrastructure changes.

These signals improve driver yield rates over paint markings alone, are less disruptive to traffic flow than full overhead traffic lights, and can be solar powered, making them much easier and faster to install. C2AE has used this type of signal with great success on two occasions for Clinton County Road Commission: once on Herbison Road and another more recently at the new Coleman Road extension.

C2AE will also be using this type of signal for the City of Lansing East Side Connector non-motorized path. This project will introduce a 1.2-mile path going through Lansing School District property, with new signals at the crossing of Marshall Street (south of Saginaw Street and M-43).



REFERENCES

Elizabeth Calcutt

Project Manager
TART Trails (formerly Networks Northwest)
802.338.2176

Julie Clark

Executive Director
TART Trails
231.941.4300

Brent Bolin

Executive Director
Top of Michigan Trails Council
231.348.8280

Gregory Kinser

Northern Lower Peninsula Regional Trails Coordinator
Michigan Department of Natural Resources
989.390.0431

Thad Beard

City Manager
City of Rockford
(former City Manager in Otsego for 15+ years)
616.866.1537

Rick Galardi

Supervisor
DeWitt Township
517.668.0270

Dave Kurdwa, PE

Community Development Director
City of St. Johns
517.224.8944 x 231

STANDARD CONTRACT

C2AE contracts typically consist of our proposal that contains detailed description of our scope, schedule and fee accompanied by Standard Contract Provisions. However, we routinely utilize industry standard contracts, such as EJCDC documents or other forms to meet funding agency requirements. The following is a copy of our Standard Contract Provisions for Design and Construction Services for reference.

The parties to this agreement, Capital Consultants, Inc., a Michigan Corporation doing business as C2AE in the State of Michigan, hereinafter called the A|E CONSULTANT and the Tri-Community Joint Study Committee hereinafter called the OWNER, hereby agree to the following conditions:

- A. Limit of Scope: The services provided by the A|E CONSULTANT shall be limited to those described in the Scope of Services.
- B. Changed Conditions: If, during the term of this Agreement, circumstances or conditions that were not originally contemplated by or known to the A|E CONSULTANT are revealed, to the extent that they affect the scope of services, compensation, schedule, allocation of risks or other material terms of this Agreement, the A|E CONSULTANT may call for renegotiation of appropriate portions of this Agreement. The A|E CONSULTANT shall notify the OWNER of the changed conditions necessitating renegotiation, and the A|E CONSULTANT and the OWNER shall promptly and in good faith enter into renegotiation of this Agreement to address the changed conditions. If terms cannot be agreed to, the parties agree that either party has the absolute right to terminate this Agreement.
- C. Additional Services: Additional services not specifically identified in the Scope of Services shall be paid for by the OWNER in addition to the fees previously stated, provided the OWNER authorizes such services in writing. Additional services will be billed monthly as work progresses and invoices are due upon receipt.
- D. Standard of Care: In providing services under this Agreement, the A|E CONSULTANT will endeavor to perform in a manner consistent with that degree of care and skill ordinarily exercised by members of the same profession currently practicing under similar circumstances. Upon notice to the A|E CONSULTANT and by mutual agreement between the parties, the A|E CONSULTANT will without additional compensation, correct those services not meeting such a standard.
- E. ADA Compliance: The Americans with Disabilities Act (ADA) provides that alterations to a facility must be made in such a manner that, to the maximum extent feasible, the altered portions of the facility are readily accessible to persons with disabilities. The OWNER acknowledges that the requirement of the ADA will be subject to various and possibly contradictory interpretations. The A|E CONSULTANT, therefore, will use its reasonable professional efforts and judgment to interpret applicable ADA requirements and other federal, state and local laws, rules, codes, ordinances and regulations as they apply to the project. The A|E CONSULTANT, however, cannot and does not warrant or guarantee that the OWNER's project will comply with all interpretations of the ADA requirements and/or the requirements of other federal, state and local laws, rules, codes, ordinances and regulations as they apply to the project.
- F. Code Compliance: The A|E CONSULTANT shall put forth reasonable professional efforts to comply with applicable laws, codes and regulations in effect as of the date of submission to building authorities. Design changes made necessary by newly enacted laws, codes and regulations after this date shall entitle the A|E CONSULTANT to a reasonable adjustment in the schedule and additional compensation in accordance with the Additional Services provision of this Agreement.
- G. Permits and Approvals: The A|E CONSULTANT shall assist the OWNER in applying for those permits and approvals normally required by law for projects similar to the one for which the A|E CONSULTANT's services are being engaged. This assistance shall consist of completing and submitting forms to the appropriate regulatory agencies having jurisdiction over the construction documents, and other services normally provided by the A|E CONSULTANT and included in the scope of Basic Services of this Agreement.
- H. Opinions of Probable Construction Cost: In providing opinions of probable construction cost, the OWNER understands that the A|E CONSULTANT has no control over the cost or availability of labor, equipment or materials, or over market conditions or the Contractor's method of pricing, and that the A|E CONSULTANT's opinions of probable construction costs are made on the basis of the A|E CONSULTANT's professional judgment and experience. The A|E CONSULTANT makes no warranty, express or implied, that the bids or the negotiated cost of the work will not vary from the A|E CONSULTANT's opinion of probable construction cost.
- I. Schedule for Rendering Services: The A|E CONSULTANT shall prepare and submit for OWNER approval a schedule for the performance of the A|E CONSULTANT's services. This schedule shall include reasonable allowances for review and approval times required by the OWNER, performance of services by the OWNER's consultants, and review and approval times required by public authorities having jurisdiction over the project. This schedule shall be equitably adjusted as the project progresses,

allowing for changes in scope, character or size of the project requested by the OWNER, or for delays or other causes beyond the A|E CONSULTANT's reasonable control.

- J. **Ownership of Reports, Drawings and Other Materials:** The OWNER agrees that all reports, drawings, letters, work sheets, plans, preliminary material tables, supportive data, documents and other materials produced by the A|E CONSULTANT in the course of and for the purpose of meeting this contract are the property of the A|E CONSULTANT, and shall remain in the possession of the A|E CONSULTANT. The OWNER shall have access to the above named material during normal business hours of the A|E CONSULTANT during and after completion of this contract. The OWNER may obtain copies of any of the above named material. Copies of electronic media may be obtained by the OWNER. (See Alteration and Reuse of CAD Information provision of this Agreement.)
- K. **Alteration and Reuse of CAD Information:** Because computer aided design/drafting (CAD) information stored in electronic form can be modified by other parties, intentionally or otherwise, without notice or indication of said modifications, the A|E CONSULTANT reserves the right to remove all indications of its ownership and/or involvement in the material from each electronic medium not held in its possession. The OWNER may retain copies of the work performed by the A|E CONSULTANT in CAD form. Copies shall be for information and used by the OWNER for the specific purpose for which the A|E CONSULTANT was engaged. Said material shall not be used by the OWNER, or transferred to any other party, for use in other projects, additions to the current project, or any other purpose for which the material was not strictly intended without the A|E CONSULTANT's express written permission. Any unauthorized modification or reuse of the materials shall be at the OWNER's sole risk, and the OWNER agrees to defend, indemnify, and hold the A|E CONSULTANT harmless, from all claims, injuries, damages, losses, expenses, and attorneys fees arising out of the unauthorized modification of these materials.
- L. **Record Documents:** Upon completion of the work, the A|E CONSULTANT shall compile for and deliver to the OWNER a reproducible set of Record Documents based upon the marked-up record drawings, addenda, change orders and other data furnished by the Contractor. These Record Documents will show significant changes made during construction. Because these Record Documents are based on unverified information provided by other parties, which the A|E CONSULTANT shall assume will be reliable, the A|E CONSULTANT cannot and does not warrant their accuracy.
- M. **Optional – Delete if not applicable (suggest requiring retainer for new, non-municipal clients) Retainer:** *The OWNER shall make an initial payment of _____ dollars (\$_____) as a retainer, upon execution of this Agreement. Upon receipt of this retainer payment, the A|E CONSULTANT shall commence services as provided for under this Agreement. The retainer shall be held by the A|E CONSULTANT and shall be applied against the final invoice. In the event the amount of the retainer exceeds the final invoice, the A|E CONSULTANT shall refund the balance with the final invoice. If the final invoice exceeds the retainer, the OWNER shall promptly remit the amount due. As services are performed, invoices will be submitted monthly by the A|E CONSULTANT to the OWNER, and are payable on receipt.*
- N. **Payment Terms:** Invoices will be submitted by the A|E CONSULTANT monthly, are due upon receipt and shall be considered past due if not paid within thirty (30) calendar days of the due date. *(suggest leaving in both options for new or recently established clients) Optional: If payment in full is not received by the A|E CONSULTANT within forty-five (45) calendar days of the due date, invoices shall bear interest at one-and-one-half (1.5) percent (or the maximum rate allowable by law, whichever is less) of the Past Due amount per month, which shall be calculated from the invoice due date. Payment thereafter shall first be applied to accrued interest and then to the unpaid principal.*
- Optional: If the OWNER fails to make payments when due or otherwise is in breach of this Agreement, the A|E CONSULTANT may suspend performance of services upon five (5) calendar days' notice to the OWNER. The A|E CONSULTANT shall have no liability whatsoever to the OWNER for any costs or damages as a result of such suspension caused by any breach of this Agreement by the OWNER. Upon payment in full by the OWNER, the A|E CONSULTANT shall resume services under this Agreement, and the time schedule and compensation shall be equitably adjusted to compensate for the period of suspension plus any other reasonable time and expense necessary for the A|E CONSULTANT to resume performance.*
- O. **Disputed Invoices:** If the OWNER objects to any portion of an invoice, the OWNER shall so notify the A|E CONSULTANT in writing within ten (10) calendar days of receipt of the invoice. The OWNER shall identify in writing the specific cause of the disagreement and the amount in dispute and shall pay that portion of the invoice not in dispute in accordance with other

payment terms of this Agreement. Any dispute over invoiced amounts due which cannot be resolved within ten (10) calendar days after receipt of invoice by direct negotiation between the parties shall be resolved within thirty (30) calendar days in accordance with the Dispute Resolution provision of this Agreement. Interest at one-and-one-half (1.5) percent (or the maximum rate allowable by law, whichever is less) shall be paid by the OWNER on all disputed invoice amounts that are subsequently resolved in the A|E CONSULTANT's favor and shall be calculated on the unpaid balance from the due date of the invoice.

- P. **Abandonment of Work:** If any work is abandoned or suspended, the A|E CONSULTANT shall be paid for services performed prior to receipt of written notice from the OWNER of abandonment or suspension.
- Q. **Errors and Omissions Insurance:** The A|E CONSULTANT maintains an errors and omissions insurance policy as part of normal business practice. The OWNER agrees to limit the A|E CONSULTANT's liability to the OWNER and to all Construction Contractors and Subcontractors on the project due to the A|E CONSULTANT's negligent acts, errors, or omissions, such that the total aggregate liability of the A|E CONSULTANT to all those named shall not exceed \$_____ (**a. equal to C2AE fee; b. equal to construction cost; c. C2AE limits of insurance coverage**).
- R. **Betterment:** If, due to the A|E CONSULTANT's negligence, a required item or component of the project is omitted from the A|E CONSULTANT's construction documents, the A|E CONSULTANT shall not be responsible for paying the cost required to add such item or component to the extent that such item or component would have been required and included in the original construction documents. In no event will the A|E CONSULTANT be responsible for any cost or expense that provides betterment or upgrades or enhances the value of the project.
- S. **Indemnification:** The A|E CONSULTANT agrees, to the fullest extent permitted by law, to indemnify and hold harmless the OWNER, its officers, directors and employees (collectively, OWNER) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the A|E CONSULTANT's negligent performance of professional services under this Agreement and that of its subconsultants or anyone for whom the A|E CONSULTANT is legally liable.

The OWNER agrees, to the fullest extent permitted by law, to indemnify and hold harmless the A|E CONSULTANT, its officers, directors, employees and subconsultants (collectively, A|E CONSULTANT) against all damages, liabilities or costs, including reasonable attorneys' fees and defense costs, to the extent caused by the OWNER's negligent acts in connection with the project and the acts of its contractors, subcontractors or consultants or anyone for whom the OWNER is legally liable.

Neither the OWNER nor the A|E CONSULTANT shall be obligated to indemnify the other party in any manner whatsoever for the other party's own negligence.

Or (use first option unless the Owner's attorney objects)

- T. **Indemnification:** The A|E CONSULTANT agrees, to the fullest extent permitted by law, to indemnify and hold harmless the OWNER against damages, liabilities and costs arising from the negligent acts of the A|E CONSULTANT in the performance of professional services under this Agreement, to the extent that the A|E CONSULTANT is responsible for such damages, liabilities and costs on a comparative basis of fault and responsibility between the A|E CONSULTANT and the OWNER. The A|E CONSULTANT shall not be obligated to indemnify the OWNER for the OWNER's own negligence.
- U. **Consequential Damages:** Notwithstanding any other provision of this Agreement, and to the fullest extent permitted by law, neither the OWNER nor the A|E CONSULTANT, their respective officers, directors, partners, employees, contractors or subconsultants shall be liable to the other or shall make any claim for any incidental, indirect or consequential damages arising out of or connected in any way to the project or to this Agreement. This mutual waiver of consequential damages shall include, but is not limited to, loss of use, loss of profit, loss of business, loss of income, loss of reputation or any other consequential damages that either party may have incurred from any cause of action including negligence, strict liability, breach of contract and breach of strict or implied warranty. Both the OWNER and the A|E CONSULTANT shall require similar waivers of consequential damages protecting all the entities or persons named herein in all contracts and subcontracts with others involved in this project.

Section U and V. Choose either Full-Time or Part-Time

- V. Full-Time Construction Observation: The A|E CONSULTANT will provide full-time project representation in order to observe the progress and quality of the work completed by the Contractor. Such observation is not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather is to allow the A|E CONSULTANT, as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the Contract Documents.

The A|E CONSULTANT shall keep the OWNER informed about the progress of the work and shall endeavor to guard the OWNER against deficiencies in the work.

The A|E CONSULTANT shall not supervise, direct or have control over the Contractor's work nor have any responsibility for the construction means, methods, techniques, sequences or procedures selected by the Contractor nor for the Contractor's safety precautions or programs in connection with the Work. These rights and responsibilities are solely those of the Contractor in accordance with the Contract Documents.

The A|E CONSULTANT shall not be responsible for any acts or omissions of the Contractor, subcontractor, any entity performing any portions of the work, or any agents or employees of any of them. The A|E CONSULTANT does not guarantee the performance of the Contractor and shall not be responsible for the Contractor's failure to perform its work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

- W. Part-Time Construction Observation: The A|E CONSULTANT shall visit the site at intervals appropriate to the stage of construction, or as otherwise agreed to in writing by the OWNER and the A|E CONSULTANT, in order to observe the progress and quality of the work completed by the Contractor. Such visits and observation are not intended to be an exhaustive check or a detailed inspection of the Contractor's work but rather are to allow the A|E CONSULTANT, as an experienced professional, to become generally familiar with the work in progress and to determine, in general, if the work is proceeding in accordance with the Contract Documents.

Based on this general observation, the A|E CONSULTANT shall keep the OWNER informed about the progress of the work and shall endeavor to guard the OWNER against deficiencies in the work.

The A|E CONSULTANT shall not supervise, direct or have control over the Contractor's work nor have any responsibility for the construction means, methods, techniques, sequences or procedures selected by the Contractor nor for the Contractor's safety precautions or programs in connection with the Work. These rights and responsibilities are solely those of the Contractor in accordance with the Contract Documents.

The A|E CONSULTANT shall not be responsible for any acts or omissions of the Contractor, subcontractor, any entity performing any portions of the work, or any agents or employees of any of them. The A|E CONSULTANT does not guarantee the performance of the Contractor and shall not be responsible for the Contractor's failure to perform its work in accordance with the Contract Documents or any applicable laws, codes, rules or regulations.

- X. Jobsite Safety: Neither the professional activities of the A|E CONSULTANT, nor the presence of the A|E CONSULTANT or its employees and subconsultants at a construction/project site, shall relieve the General Contractor of its obligations, duties and responsibilities including, but not limited to, construction means, methods, sequence, techniques or procedures necessary for performing, superintending and coordinating the work in accordance with the Contract Documents and any health or safety precautions required by any regulatory agencies. The A|E CONSULTANT and its personnel have no authority to exercise any control over any construction contractor or its employees in connection with their work or any health or safety programs or procedures. The OWNER agrees that the General Contractor shall be solely responsible for jobsite safety, and warrants that this intent shall be carried out in the OWNER's contract with the General Contractor. The OWNER also agrees that the OWNER, the A|E CONSULTANT and the A|E CONSULTANT's subconsultants shall be indemnified by the General Contractor and shall be made additional insureds under the General Contractor's policies of general liability insurance.

- Y. Hazardous Materials: As used in this Agreement, the term *hazardous materials* shall mean any substances, including but not limited to asbestos, toxic or hazardous waste, PCBs, combustible gases and materials, petroleum or radioactive materials (as

each of these is defined in applicable federal statutes) or any other substances under any conditions and in such quantities as would pose a substantial danger to persons or property exposed to such substances at or near the project site.

Both parties acknowledge that the A|E CONSULTANT's Scope of Services does not include any services related to the presence of any hazardous or toxic materials. In the event the A|E CONSULTANT or any other party encounters any hazardous or toxic materials, or should it become known to the A|E CONSULTANT that such materials may be present on or about the jobsite or any adjacent areas that may affect the performance of the A|E CONSULTANT's services, the A|E CONSULTANT may, at its option and without liability for consequential or any other damages, suspend performance of its services under this Agreement until the OWNER retains appropriate consultants or contractors to identify and abate or remove the hazardous or toxic materials and warrants that the jobsite is in full compliance with all applicable laws and regulations.

The OWNER agrees, notwithstanding any other provision of this Agreement, to the fullest extent permitted by law, to indemnify and hold harmless the A|E CONSULTANT, its officers, partners, employees and consultants (collectively, A|E CONSULTANT) from and against any and all claims, suits, demands, liabilities, losses, damages or costs, including reasonable attorneys' fees and defense costs arising out of or in any way connected with the detection, presence, handling, removal, abatement, or disposal of any asbestos or hazardous or toxic substances, products or materials that exist on, about or adjacent to the project site, whether liability arises under breach of contract or warranty, tort, including negligence, strict liability or statutory liability or any other cause of action, except for the sole negligence or willful misconduct of the A|E CONSULTANT.

- Z. Change Orders/Stop Work Orders: The A|E CONSULTANT and the OWNER agree that any construction contract change orders or stop work orders must be approved in writing by the OWNER.
- AA. Agreement Not to Claim for Cost of Certain Change Orders: The OWNER recognizes and expects that certain Change Orders may be required to be issued as the result in whole or part of imprecision, incompleteness, errors, omissions, ambiguities, or inconsistencies in the Drawings, Specifications and other design documentation furnished by the A|E CONSULTANT or in the other professional services performed or furnished by the A|E CONSULTANT under this Agreement whether caused by professional negligence or by imperfections that are within professional standards ("Covered Change Orders"). Accordingly, the OWNER agrees not to sue and otherwise to make no claim directly or indirectly against the A|E CONSULTANT on the basis of professional negligence, breach of contract or otherwise with respect to the costs of approved Covered Change Orders unless the costs of such approved Covered Change Orders exceed 5% of Construction Cost, and then only for an amount in excess of such percentage. Any responsibility of the A|E CONSULTANT for the costs of Covered Change Orders in excess of such percentage will be determined on the basis of applicable contractual obligations and professional liability standards. For purposes of this paragraph, the cost of Covered Change Orders will not include any costs that the OWNER would have incurred if the Covered Change Order work had been included originally in the Contract Documents without any imprecision, incompleteness, error, omission, ambiguity, or inconsistency in the Drawings, Specifications and other design documents furnished by the A|E CONSULTANT or in the A|E CONSULTANT's other professional services related thereto. Nothing in this provision creates a presumption that, or changes the professional liability standard for determining if, the A|E CONSULTANT is liable for the cost of Covered Change Orders in excess of the percentage of Construction Cost stated above or for any other Change Order.
- BB. Dispute Resolution: The OWNER agrees that all claims, disputes, and other matters in question between the parties arising out of or relating to this Agreement or breach thereof first shall be submitted for nonbinding mediation to any one of the following, as agreed to by the parties: American Arbitration Association, American Intermediation Service, Americord, Dispute Resolution, Inc., Endispute, or Judicate. Any party hereto may initiate mediation within the time allowed for filing per State law and the parties hereto agree to fully cooperate and participate in good faith to resolve the dispute(s). The cost of mediation shall be shared equally by the parties hereto.

If mediation fails to resolve the claim or dispute, the matter shall be submitted to a court of competent jurisdiction.

ADDITIONAL INFORMATION

C2AE has developed various documents, like those included in this section, that will be valuable in assisting the Committee and municipal governments in tracking the project timelines, funding source processes, and communication aspects of this multi-faceted project.

TRAIL FUNDING OPPORTUNITIES

Source	Match Required	Maximum	Trail Development	Bike Routes / Bike Lanes	Parking for trails	Trailhead facilities and parking	Trailside Amenities (overlooks, benches, interpretive Signs)	Land Acquisition for trails and facilities
MDOT - TAP	20		X	X	X			
DNR – MNRTF	25	300,000 (no cap for acquisition)	X			X	X	X
DNR - Land and Water Conservation Fund	50	300,000	X			X	X	
DNR – Rec Passport	25	\$150,000	X			X	X	
IBT Foundation			X	X		X	X	X
Foundations & Organizations			X	X		X	X	X
DNR Recreation Trails Program**			X	X		X	X	X
DNR Recreation Improvement Fund**			X	X		X	X	
DNR State Park Improvement Fund***			X	X		X	X	

**Must be partnered with the DNR Parks and Recreation Department as it is an internal funding source

***Internal funding source for capital improvements in State Parks

Other funding ideas:

1. When Road Agencies redo a road and you add a facility, some of their work could be the match
2. For acquisition when a property owner will reduce the cost of acquisition by the required match amount, called a bargain sale, it will suffice as match for MNRTF
3. If the Local Tribes have the trail on their transportation plan it could qualify for Tribal Transportation funds.

Foundations and Organizations:

1. Rotary Charities
2. Local Community Foundations
3. Oleson Foundation
4. Consumer's Energy Foundation
5. DALMAC Foundation

(This is just a start. . .)

FUNDING/CONSTRUCTION SCHEDULE EXAMPLE

Nakwema Trailway

Overall Plan Construction	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Acme Connector											
Elk Rapids Bike Route			or								
Acme to Elk Rapids Phase 1											
Acme to Elk Rapids Phase 2											
Acme to Elk Rapids Phase 3											
Norwood to Charlevoix Phase 1											
Norwood to Charlevoix Phase 2											
Elk Rapids to Norwood (Phases TBD)											If Needed
Acme Connector	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Grant Approval											
Final Construction Plans											
Construction											
Village of Elk Rapids Bike Route	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Route Approval											
Fundraising if needed											
Final Construction Plans											
Sign/Route Implementation			or								
Acme to Elk Rapids Phase 1	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Design											
Maintenance Plan Complete											
Funding Needs Assessment											
Public Engagement											
Property Acquisition/control											
Fundraising/Grant Writing											
Grant Approval											
Final Construction Plans											
Construction											
Acme to Elk Rapids Phase 2	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Public Engagement											
Property Acquisition/control											
Fundraising/Grant Writing											
Grant Approval											
Final Construction Plans											
Construction											
Norwood to Charlevoix	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Concept Design											
Concept Approval											
Funding Needs Assessment											
Public Engagement											
Design Complete											
Maintenance Plan Complete											
Property Acquisition/control											
Fundraising/Grant Writing											
Grant Approval											
Final Construction Plans											
Construction											
If a Phase 2 is needed	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Public Engagement											
Property Acquisition/control											
Fundraising/Grant Writing											
Grant Approval											
Final Construction Plans											
Construction											

PUBLIC INVOLVEMENT PROGRAM OUTLINE EXAMPLE

Nakwema Trailway

ITEM	PURPOSE	PARTICIPANTS	FORMAT	LOCATION
A	<ul style="list-style-type: none"> introduce the project provide a project update resolve conflict build consensus improve community relations identify project issues evaluate project alternatives develop alternative solutions 	<ul style="list-style-type: none"> advisory committee advisory staff C2AE individuals (ONE-ON-ONE) 	<p>One-on-One Meeting</p> <ul style="list-style-type: none"> general to specific agenda space for exhibits neutral location 	<ul style="list-style-type: none"> government offices commission chambers homes
B	<ul style="list-style-type: none"> introduce the project provide a project update improve community relations identify project issues 	<ul style="list-style-type: none"> special interest groups agency representatives elected/appointed officials individuals (ONE-ON-ONE) 	<p>Small Group Meeting</p> <ul style="list-style-type: none"> general agenda space for exhibits facilitator 	<ul style="list-style-type: none"> community centers libraries government offices churches
C	<ul style="list-style-type: none"> introduce the project provide a project update improve community relations identify project issues 	<ul style="list-style-type: none"> general public specific stakeholders 	<p>Open House/Transportation Fair</p> <ul style="list-style-type: none"> no agenda large open space greeting/comment table 	<ul style="list-style-type: none"> community centers libraries government offices neighborhood events church socials
D	<ul style="list-style-type: none"> build consensus evaluate project alternatives develop alternative solutions 	<ul style="list-style-type: none"> special interest groups agency representatives elected/appointed officials 	<p>Working Session</p> <ul style="list-style-type: none"> specific agenda seating around a table space for exhibits facilitator 	<ul style="list-style-type: none"> community centers libraries schools churches government offices
E	<ul style="list-style-type: none"> brainstorm project ideas 	<ul style="list-style-type: none"> special interest groups elected/appointed officials 	<p>Charrette</p> <ul style="list-style-type: none"> layout space facilitator 	<ul style="list-style-type: none"> community centers government offices
F	<ul style="list-style-type: none"> resolve conflict build consensus evaluate project alternatives develop alternative solutions 	<ul style="list-style-type: none"> general public individuals (ONE-ON-ONE) 	<p>Open Meeting</p> <ul style="list-style-type: none"> specific agenda break-out sessions greeting/comment table space for exhibits facilitator 	<ul style="list-style-type: none"> community centers libraries schools churches government offices
G	<ul style="list-style-type: none"> present preferred program/plan/project alternative(s) satisfy legal mandates for public involvement 	<ul style="list-style-type: none"> general public special interest groups agency representatives elected/appointed officials individuals (ONE-ON-ONE) 	<p>Public Hearing</p> <ul style="list-style-type: none"> formal agenda formal seating greeting/comment table microphone space for displays 	<ul style="list-style-type: none"> community centers schools township Office commission chambers

Meeting Don'ts:

- Hold meetings on Wednesday evenings, Sundays, around major holidays, or long weekends.
- Allow meetings to be too long. (*recommend 1 - 2 1/2 hour meeting between 7:00 and 9:30 PM*)
- Allow meetings to be too short.
- Contact the community solely through mail-outs and newspaper advertising.
- Assign outgoing roles to introverted staff.
- Let local issues override the goals of the meeting.
- Wait until the last minute to meet production deadlines.

Meeting Do's

- Provide ample meeting notification.
- Stick to the agenda.
- Document all comments and decisions.
- Ensure that enough background information has been provided.
- Initiate the evaluation process for meeting effectiveness (lessons learned).
- Establish community contacts.
- Plan, prepare and evaluate.
- Provide name tags for the participants.
- Maintain contact with the community between meeting dates.
- Encourage creative thinking, interest and participation in the project.

MARKETING AND CREATIVE SERVICES

C2AE Team



Lynette Van Heukelum *Graphic Designer*
 Formerly a mechanical engineer, Lynette has shifted her focus from technical design to artistry. She is interested in creating content that compels its audience to keep scrolling, clicking, or turning the page.



Erin Tanis *Creative Writer*
 Erin is an award-winning writer and editor with experience managing website and social media content, writing press releases, and composing grant applications.



Gretchen Foley *Marketing Coordinator*
 Gretchen has been in sales and marketing for over a decade. She specializes in managing marketing campaigns from first point of contact to campaign launch.

C2AE Project Examples

Elk Rapids: C2AE is planning upgrades for the Village of Elk Rapids along a 6,200 LF downtown thoroughfare to make the area more inviting for businesses and tourists.

C2AE developed multiple online public input questionnaires for residents and business owners. This allowed the village to continue the project through COVID, which made traditional town hall meetings difficult. The results of the questionnaire were viewable in real-time and quickly analyzed. QR codes were posted on flyers around town which directed residents to the survey.

Kalkaska: C2AE is working closely with the Village of Kalkaska to develop a grant application to fund the construction of a larger, modernized library building. To supplement this application, C2AE's marketing team interviewed several members of the community—such as business owners, students, elders, remote workers, and library employees—on the value this new facility could bring to the community. The final document will go to several possible funding sources.



Scan this QR code to view interactive survey results:



AMES DISTRICT IMPROVEMENTS

SECOND OPPORTUNITY FOR PUBLIC INPUT

The Village of Elk Rapids is seeking public input on options for much needed safety and functional improvements to the Ames Street District, from East of US-31 to the easterly Village Limits.

Schematic alternatives have been developed based on the initial public survey conducted in spring of 2020. This is our community and your voice is needed, so please review the street scape drawings and complete your feedback survey before Friday, October 2. The schematic drawings and response survey can be viewed and completed as follows:

Online: bit.ly/2ENAbcK
 or scan the QR code:



Hard Copy:
 Available for review at:
 Village Government Center
 315 Bridge St, Elk Rapids, MI 49629

Manually completed survey forms should be dropped off or mailed to the Village Government Center.

All public input surveys must be submitted by Friday, October 2.

Open House:

For those not able to access the surveys, or for those seeking additional information, an Open House will be held at the Government Center from 5 pm to 7 pm on Wednesday, September 30. Representatives of C2AE, the engineering firm, will be available to answer questions. All COVID 19 requirements will be strictly enforced.



(left) section view, Schematic Alternative 1

Larry Fox, PE
larry.fox@c2ae.com
www.c2ae.com

Cory Davis, PE
cory.davis@c2ae.com
www.c2ae.com



it's all about people. | **JANUARY 21, 2021**

TRI-COMMUNITY JOINT STUDY
COMMITTEE

**Planning, Design, and
Construction of
Blue Star Trail -
North Section**



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February 17, 2021

Friends of the Blue Star Trail
PO Box 464
Douglas, MI 49406

Attention: Mr. Richard Donovan

RE: BLUE STAR TRAIL DESIGN; DOUGLAS, SAUGATUCK, AND SAUGATUCK TOWNSHIP

Dear Richard:

Thank you for reaching out earlier this week. It was a pleasure talking with you about your plans for the extension of the Blue Star Trail. Wightman is a full-service consulting firm that exists to serve people and the communities we live in. Our dynamic team of over 140 professionals works to analyze, advise, design, and deliver successful projects in partnership with governments, businesses, and institutions in our communities. Becoming trusted advisors and true partners guides our actions.

We understand the Friends of the Blue Star Trail is seeing proposals for the design of 1.5 miles of addition to the North Section of the Blue Star Trail. This will connect Douglas, over the bridge to Saugatuck, and then through Saugatuck Township, to connect into the Beeline Trail. We propose to offer planning services, grant assistance for MDOT TAP (Transportation Alternatives Program) this fall and MNRTF (Michigan Natural Resources Trust Fund) next spring. We would then conduct the construction document phase, permitting, bidding and construction phases of the project.

Wightman’s multi-disciplined team of trail experts have worked throughout the region to assist communities with trail planning, design and construction. For all the trail projects, a state or federal funding source was utilized to leverage local dollars. We are very familiar with MDOT Local Agency Projects (LAP) and Michigan Natural Resources Trust Fund (MNRTF), both trail and roadway, We are typically involved in seven to ten MDOT LAP and four to five Michigan Department of Natural Resources MNRTF projects each year.

Thank you again for the opportunity to submit this proposal to the Friends of the Blue Star Trail and we look forward to working with you on this project.

If you have any questions, please feel free to contact me.

Very truly yours,

BEN BAKER

Ben Baker, PLA, ASLA, LEED AP
269.487.9611
bbaker@gowightman.com

ALLEGAN

- ▲ 1670 LINCOLN RD. (M-40)
ALLEGAN, MI 49010
- 269.673.8465

BENTON HARBOR

- ▲ 2303 PIPESTONE RD.
BENTON HARBOR, MI 49022
- 269.927.0100

KALAMAZOO

- ▲ 433 E. RANSOM ST.
KALAMAZOO, MI 49007
- 269.327.3532

ROYAL OAK

- ▲ 306 S. WASHINGTON AVE., SUITE 200
ROYAL OAK, MI 48067
- 248.791.1371

FIRM INFORMATION

STRUCTURE:

Sub-S Corporation (Michigan). Firm is licensed to do business in the State of Michigan.
Federal Tax ID#: 38-1962190. Duns & Bradstreet #: 05-603-5306.

BOARD OF DIRECTORS:

Steve C. Carlisle, P.E., Chairman (scarlisle@gowightman.com)
Mickey E. Bittner, P.E., Treasurer (mbittner@gowightman.com)
Brian Lieberg, P.S., Secretary (blieberg@gowightman.com)
Greg Monberg, AIA, Trustee (gmonberg@gowightman.com)
Mary Nykamp, P.E., Trustee (mnykamp@gowightman.com)



OFFICE LOCATIONS:

1670 Lincoln Road Allegan, MI 49010 (269) 673-8465 Fax: (269) 927-1300	2303 Pipestone Road Benton Harbor, MI 49022 (269) 927-0100 Fax: (269) 927-1300	433 E. Ransom Street Kalamazoo, MI 49007 (269) 327-3532 Fax: (269) 927-1300	306 S. Washington Avenue, Suite 200 Royal Oak, MI 48067 (248) 791-1371 Fax: (269) 927-1300
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BACKGROUND:

Wightman has spent over 73 years providing the level of services that has earned the trust of our clients and helped us to become one of the most prominent engineering, surveying and architectural firms in the Midwest. Our employee-owned company provides practical solutions based on common sense for all levels of civil engineering, surveying, and architectural projects.

STAFF:

Wightman employs a continuously expanding team of professionals licensed to provide services in several states. Technical, surveying, inspection, and support staff are trained to provide varying levels of expertise from the smallest daily survey tasks to the design and inspection of the largest municipal or private projects. Continuing education, varied project exposure, and diverse professional backgrounds ensure that our clients will have a large pool of experts from which to draw.

HISTORY:

Our firm was established in 1946 by G. L. Wightman, civil engineer and surveyor. In 1971, our company became Wightman. We are an employee-owned company with more than 140 employees, including twenty-one licensed engineers, six licensed architects, six licensed surveyors, five licensed environmental specialists, and twenty other licensed professionals.

Wightman has served as a consultant to all forms of public and private entities, including county, city, township, village, tribal governments, private developers, and industrial and commercial clients. Wightman has gained a reputation for high quality, effective, and economical consulting services and has a proven track record for development and implementation of real and usable projects. This is evidenced by the many long-term relationships with municipalities that we value, many of which are in excess of 20, 30 or even 40 years. These relationships are perpetuated with a primary client liaison who maintains open communication regarding funding opportunities, status of projects, and proactive planning recommendations.



ARCHITECTURE: CREATIVITY AND INSIGHT IN EVERY ASPECT

Design

- ◆ Cultural
- ◆ Urban Design
- ◆ Commercial
- ◆ Office
- ◆ Banking & Financial
- ◆ Civic
- ◆ Athletic & Recreation
- ◆ Multi-Family
- ◆ Residential
- ◆ Site Master Plans
- ◆ Interior Design
- ◆ Industrial
- ◆ Sustainable Design
- ◆ Landscape
- ◆ Streetscape
- ◆ Religious
- ◆ Healthcare
- ◆ Entertainment
- ◆ Casino
- ◆ Mixed-Use
- ◆ Hospitality
- ◆ Municipal Water and Wastewater Treatment Facilities

Planning & Management

- ◆ Zoning Ordinances
- ◆ Recreational Plans
- ◆ Cost Estimating
- ◆ Town Planning
- ◆ Downtown Redevelopment
- ◆ Bid Management
- ◆ Sustainable Development
- ◆ Contract Administration
- ◆ MDEQ/Army Corps of Engineers Joint Permit Application



ENGINEERING: BROAD RANGE OF EXPERIENCE

Areas of Expertise

- ◆ Bridges and Dams
- ◆ Transportation Systems
- ◆ Wastewater Systems
- ◆ Water Systems
- ◆ Water & Sewage Treatment
- ◆ GIS
- ◆ Land Development
- ◆ Stormwater Management
- ◆ Watershed and Lakes
- ◆ Hydrogeologic
- ◆ Parks and Recreation
- ◆ Sustainable Development

Summary of Services

- ◆ Civil Engineering
- ◆ Structural Engineering
- ◆ Right-of-Way Acquisition
- ◆ Traffic Engineering
- ◆ Landscape Architecture
- ◆ Feasibility Studies
- ◆ Master & Land Use Planning
- ◆ Rate Studies
- ◆ Capital Improvement Plans
- ◆ Grant & Funding Administration
- ◆ Materials Testing
- ◆ Construction Related Services
- ◆ Environmental Services



SURVEYING: EXTENSIVE TRAINING TO MEET ANY REQUIREMENT

Design

- ◆ P.A. 132 Surveys
- ◆ Parcel Divisions
- ◆ ALTA/ACSM Land Title
- ◆ Boundary
- ◆ Topographic
- ◆ Site Design
- ◆ GPS

Construction

- ◆ Construction Staking
- ◆ Road Design Surveys
- ◆ Bridge Surveys
- ◆ Right-of-Way Surveys

Development

- ◆ Subdivisions
- ◆ Condominiums
- ◆ Photogrammetric Control
- ◆ Commercial
- ◆ Residential
- ◆ Land Development & Planning

Additional Services

- ◆ High Definition Laser Scanning
- ◆ Elevation Certificates
- ◆ Mortgage Inspections
- ◆ Accident
- ◆ Forensic
- ◆ Land & Easement Descriptions
- ◆ Drone Photogrammetry



ENVIRONMENTAL: EXTENSIVE EXPERTISE

Industrial Hygiene

- ◆ Asbestos Surveys and Third Party Oversight
- ◆ Lead Surveys & Risk Assessments
- ◆ Mold Survey
- ◆ Radon Testing
- ◆ Indoor Air Quality (Testing/Permitting)
- ◆ Hazardous Waste Surveys

Soil Assessments

- ◆ Dredging Permitting & Sampling
- ◆ Geotechnical Investigations

Brownfield

- ◆ Due Diligence
- ◆ Project Facilitation & Management
- ◆ Grant & Funding Support

Natural Resources

- ◆ Soil Erosion and Sediment Control
- ◆ Wetland Delineation
- ◆ Species at Risk – Surveys and Habitat Assessments
- ◆ Permitting
- ◆ Outdoor Air Quality (Testing and Permitting)

Environmental Management

- ◆ ISO 14001 System Development & Audits
- ◆ Inspection, Permitting and Reporting
- ◆ General Consulting

Due Diligence

- ◆ Baseline, Phase I, & Phase II Environmental Site Assessments
- ◆ Due Care Compliance & Analysis
- ◆ Hydrogeological Investigations
- ◆ Underground Storage Tank Sites and Leaking USTS Characterization
- ◆ Spill Prevention, Control, and Countermeasure Plans (SPCC)
- ◆ Pollution Incident Prevention Plans (PIPP)
- ◆ Facility Wide Compliance Inventory
- ◆ Stormwater Compliance Plans
- ◆ Solid Waste Permitting

MICKEY E. BITTNER, P.E.

PRINCIPAL-IN-CHARGE

Mr. Bittner serves as a QC/QA Engineer with responsibility for analysis, design, and construction management for both municipal and private engineering projects. His experience includes municipal roadway, multi-purpose trails, water main and sewer designs, water and wastewater, as well as assisting communities in obtaining grants and loans and preparing feasibility studies. He also assists communities with public engagement, consensus building, and scope determination.



Expertise

- Roads (MDOT LAP)
- Traffic Signs and Signals
- Water Systems
- Wastewater Systems
- Storm Sewers
- Culverts
- Hydraulic Analysis
- Construction Administration
- Feasibility and Rate Studies

Professional Registrations

- Professional Engineer
Michigan #6201047386
- Construction Site Certified
Stormwater Operator
Michigan #C-03676
- Risk Assessment Methodology
for Water Utilities Certified

Professional Affiliations

- Michigan Water
Environment Association
- American Society of
Civil Engineers
- National Society of
Professional Engineers
- Michigan Society of
Professional Engineers
- Technical Committee
of Kalamazoo Area
Transportation Study

Professional Positions

- Wightman.
2012 – Present
- Wightman Jones, Inc.
2004 – 2012
- Wightman & Associates, Inc.
1996 – 2004

Education

- B.S. Civil Engineering,
Michigan Technological
University, 1996

Project Experience

Hanlon Court, City of Wayland, MI

Project Manager for the reconstruction of an existing residential roadway, including sidewalks, ADA ramps, storm sewer improvements, water main replacement, new concrete curb and gutter, aggregate base, HMA surfacing, and permanent signing.

West Sycamore/Commerce Street Resurfacing, City of Wayland, MI

Project Manager for the resurfacing of two urban streets, including ADA sidewalk ramps, misc water service replacements, drainage improvements, HMA cold milling, and HMA surfacing. Project was funded using MDOT PRIP funds.

Andrew Street Improvements Project, City of Kentwood, MI

Principal for 0.6 miles of roadway reconstruction including water main replacement, sidewalk construction on both sides of the street, concrete curb and gutter, and HMA surfacing.

Lovers Lane Improvements, City of Portage, MI

Project Manager for one mile of complete road reconstruction and enhancement, which included coordination with MDOT who was widening and relocating the Lovers Lane bridge over I-94. The two-lane road was re-aligned and widened to provide four lanes and bike lanes with a 12'-20' wide boulevard. An 8" sanitary sewer was replaced with a new 15" sanitary sewer and the signalization was modernized. Right-of-way acquisition services were provided to obtain sidewalk easements and grading permits.

Irwin Avenue, City of Albion, MI

Project Manager for a 1.2-mile complete roadway reconstruction of Irwin Ave. to S. Superior St. in the City of Albion. Work included machine grading, new HMA surface, aggregate base, drainage structure replacements, a new 12" water main, curb and gutter replacement, sidewalk and ADA ramp replacements, slope restoration, permanent signing and pavement markings. The project was funded utilizing a CDBG grant and local funds.

Forest Drive Improvements Project, City of Portage, MI

Project Manager for the design of 0.77 miles of roadway improvements including HMA base crushing and shaping, 12" water main replacement, HMA surfacing, pavement markings, and restoration. Due to the proximity of West Lake, an infiltration system was designed to eliminate roadway runoff into the lake and preserve water quality. The dense residential population made communication a critical key contributing to the success of this MDOT LAP project.

Portage Street Resurfacing, Kalamazoo, MI

Project Manager for 1.2 miles of hot mix asphalt cold milling and resurfacing, concrete curb and gutter, concrete sidewalk, sewer, drainage, pavement markings, permanent signs, and pedestrian enhancements on Portage St. from Sheridan Dr. to Stockbridge Ave. in Kalamazoo County. The project also included non-motorized improvements, hydrant replacements, new water services, and signal updates. This project was funded with STP funds and local funds.

BEN BAKER, PLA, ASLA, LEED AP

LANDSCAPE ARCHITECT

Mr. Baker is a talented registered Landscape Architect with over 15 years' experience in the field. He is highly organized with the ability to manage multiple projects, meet deadlines and stay within budget. He has a strong reputation as a clear and effective communicator. Mr. Baker has an affinity for park and recreation projects including trail design, playgrounds, and parks.



Expertise

- Landscape Architecture
- Trails
- Planning
- Design

Certifications

- MDOT Training Wheels: On Road Bicycle Facility Training

Professional Affiliations

- LEED Accredited Professional
- President, Michigan Chapter of the American Society of Landscape Architect, 2015-2020s
- Moody on the Market 40 Under 40 for 2018

Professional Registrations

- Licensed Landscape Architect
Michigan - 3901001536
Illinois - 157.001228
Indiana - LA21000135

Professional Positions

- Wightman
2013 - Present
- Planning Commissioner, St. Joseph Charter Township, Berrien County, MI
2012-Present
- Abonmarche Consultants, Inc.
2010-2013
- Wolff Landscape Architecture, Inc.
2004-2010

Education

- Bachelor of Landscape Architecture with High Honors, Michigan State University

Project Experience

Placemaking and Urban Design

Ben has worked on numerous projects relating to outdoor spaces. The relation of people to their outdoor environment is the key aspect of Landscape Architecture. Ben has extensive experience working in urban environments of all sizes, and knows how to design outdoor spaces that are functional and comfortable for the user. Ben is also very in tune with the Michigan Municipal League, and the Governor's Placemaking initiative – knowing that the quality of places, is important to a community's vitality.

Indiana-Michigan River Valley Trail, Niles Charter Township, MI

Project designer for the layout of the 3.3 mile phase of the design running from the Indiana state line to the Brandywine Creek Nature Park in Niles Charter Township. The overall trail, when completed, will connect Niles, MI to Mishawaka, IN and travels 34 miles. This trail is a paved, off-street multi-use trail, utilized by walkers, runners, rollerbladers and bicyclists. Wightman was recently hired by the township to begin development of the next 1.8 mile segment that will complete the Michigan portion of the trail.

Middle Crossing Pathway, City of Dowagiac, MI

Project designer for a nearly ½ mile off-street multi-use trail in the City of Dowagiac. This trail connects the City sidewalk network to Russom Field sports complex on the outskirts of town, where safe pedestrian access previously did not exist.

KL Avenue Trail, Oshtemo Township, MI

Project designer for a mile-long section of trail adjacent to KL Avenue in Oshtemo Township. This project includes coordination between the Township, Road Commission of Kalamazoo County, and MDOT and the replacement of a bridge on US 131. The project design is expected to conclude in early 2018 and then will seek grant funding.

The following projects are experience of Mr. Baker while working at a previous firm.

Chicago Trails Plan, Chicago, IL

Project team member in creating a Master Plan for potential off-street shared use trails throughout Chicago. The secondary goal of this plan was to develop a "Chicago Trail Loop" path to allow users to traverse the City with limited street crossings. This document included over 300 pages discussing and prioritizing 36 potential trails. Each trail was described, including ROW availability, Engineering feasibility, land use compatibility, Cost and use estimates, and any potential fatal flaws. Many of the trails in this plan have been completed, including the highly publicized Bloomingdale (606) Line.

Gary Green Link, Gary, IN

Team member in the development of an award winning ecological and recreational master plan for the Gary area. The plan proposed a thirty-mile loop trail within Gary that will link people to natural areas and other regional trails. This plan emphasized the regions natural resources and their potential for local recreation and eco-tourism. The City started implementing the plan in 2005 and have built a number of trail segments to date.

AARON J. NEITLING, P.E. SENIOR CIVIL ENGINEER, TRAFFIC REVIEW, MDOT SPECIALIST

Mr. Neitling serves as a Project Manager involved with the design of a wide range of civil engineering consisting of design, contract administration, and construction engineering for both municipal and private engineering projects. His strengths include design and preparation of roadway plans, pavement design, storm sewer design, sanitary sewer design, water main design, preparation of project specifications, and performing contract administration. He also has knowledge in field surveying, construction inspection and materials testing.



Expertise

- Road Design
- Trail Work
- Storm Sewers
- Culverts
- Construction Administration
- Water Systems
- Wastewater Systems
- Site Design

Professional Affiliations

- American Society of Civil Engineers
- Institute of Transportation Engineers

Professional Registrations

- Professional Engineer Michigan #50508
- Construction Site Certified Stormwater Operator Michigan #C09536

Professional Positions

- Wightman 2013- Present
- Driesenga & Associates, Inc. 1999 - 2013

Education

- B.S. Civil Engineering Michigan Technological University, Houghton, 1998

Project Experience

Allegan County Road Commission, MI - This work typically involved the complete roadway reconstruction and working within existing R.O.W. limits as much as possible including culvert replacements and roadside ditch improvements. A summary of projects performed for the Road Commission follows: Monroe Road, 30th Street, 142nd Avenue Safety, 16th Street/120th Avenue Safety, Division Street/142nd Avenue Intersection, Division Street, 146th Avenue Culvert, 1st Street Culvert, 128th Avenue Culvert, 63rd Street/127th Avenue Culvert, 121st Avenue, 25th Street, 32nd Street, 110th Avenue, 104th Avenue, 135th Avenue, 144th Avenue, 28th Street, 138th Avenue, 43rd Street, 127th Avenue, 18th Street, 114th Avenue culvert, 139th Avenue, 144th Avenue, 22nd Street, 10th Street culvert, and Monroe Road Safety.

City of Holland, MI - Mr. Neitling has worked on numerous projects, both public and private. The type of projects performed for the City included both complete roadway reconstruction as well as hot mix asphalt cold milling and resurfacing. Most road projects were completed in conjunction with the Holland BPW which replaced their sanitary sewer and water mains. Other work included storm sewer and storm water management ponds, MDEQ permitting, sidewalk replacements, and retaining walls. The following list of projects required Design and/ or Contract Administration needs: E. 48th Street, Country Club Road, 8th Street, Fairbanks Avenue, 14th Street, 15th Street, 17th Street, W. 40th Street, W. 32nd Street, 5th Street Extension, Windmill Island Streambank Stabilization, Citywide Creek Bed Sewer Repairs, Washington Avenue Tunnel Wall Repair, East End Drive Channel Repair, Holland Heights/No. 24 Drain Improvements, Challenge Manufacturing, Bank of Holland, Hope College Music Hall, Central Avenue CRC, STM Manufacturing, 6th Street, and various other site plans and residential site condominiums.

City of Albion, MI - Mr. Neitling has worked on several infrastructure projects in the City of Albion since 2014. The types of projects completed for the City consist of roadway reconstruction and roadway rehabilitation projects, including storm sewer improvements and water main replacements and extensions. These projects also included close coordination with MDOT and the Calhoun County Road Department for working within the right-of-way and completion of joint projects. A list of projects that have been completed include: Irwin Avenue, 1st Street, 2nd Street, 3rd Street, Wild Street, Hartwell Street, W. Erie Street, 2020 Utility Extension, North Street, and S. Hannah Street.

Medbery Bike Path, City of Montage, MI

This was project was for the design of a 0.8 miles non-motorized facility. This work included grading, HMA paving, and slope restoration. This project was a project funded with DOT Enhancement money through the Local Agency Programming. Mr. Neitling was responsible for the design of the path to meet the design requirements of MDOT, AASHTO, MMUTCD and the Muskegon County Road Commission. Mr. Neitling was also responsible for the contract administration for this project through completion.

Superior Street / Main Street Signal Improvements - City of Wayland, MI

Lead Design Engineer for signal modernization project at the intersection of Superior Street and Main Street in the City of Wayland. Project includes installation of new mast arms, pedestrian signals, and upgrading the sidewalk ramps. The project was funded with MDOT CMAQ funds.



SUZANNAH M. DENEAU

TRAIL DESIGNER

Ms. Deneau has more than 17 years' engineering experience. She provides structural engineering services for Wightman in both engineering and architectural capacities. Ms. Deneau is familiar with all aspects of grant funding opportunities as well as AASHTO Guide for the Design of Bicycle Facilities. Ms. Deneau's role as structural engineer taps into her strength as a problem solver. Her engineering abilities on trail designs along with her leadership of the planning process ensure a quality end product for Wightman's clients.



Expertise

- Trail Projects
- Structural Engineering
- Structural Evaluation
- Waterway & Bluff Restoration
- Concrete Design
- Steel Design
- Bridge Design
- Bridge Inspection

Professional Affiliations

- National Association of Women in Construction
- Precast/Prestressed Concrete Institute

Professional Training

- NHI Safety Inspection of In-Service Bridges
- ASCE HEC-RAS

Professional Registrations

- Construction Site Certified Stormwater Operator Michigan #C-13204
- Soil Erosion & Sedimentation Control Certification #06-0576

Professional Positions

- Wightman & Associates, Inc. 2006 – Present
- Byce & Associates, Inc. 2004 – 2005
- Wightman & Associates, Inc. 1999 – 2001

Education

- B.S. Architectural Engineering Milwaukee School of Engineering, 2001

Project Experience

Indiana Michigan River Valley Trail Project- Niles Charter Township Phase I and II – Planning and Project Engineer for Phase I and II of the Niles Charter Township portion of the project. Project called for trails to be constructed from the Indiana state line to Brandywine Creek Nature Park (just north of US12) and is continuing north to the intersection of Fort and 3rd Streets. This project includes up to 5.1 miles of trails from the state line to the existing City of Niles' trail with additional spurs and possible alternate routes.

Antwerp Township Trail Project – Planning and Project Engineer for an east-west trail from the Village of Paw Paw to the Village of Mattawan through Antwerp Township. The project is in the planning stages, working with MDOT for access within 194 right-of-way and with MDOT and MDNR for funding of Phase I. The trail will be an off-road paved multi-use trail. Construction of Phase I is anticipated to begin in Spring, 2018.

Interurban Trail – Project engineer for the planning of the 42-mile trail connecting the Kalamazoo River Valley Trail in Kalamazoo County through Allegan County to the M-6 trail in Kent County. The planning includes the investigation of three routes: US-131, A45, and the old Interurban rail line now owned by Consumers Energy. Also included as part of the planning project are stakeholder meetings, public outreach, GIS mapping, and a master plan documents.

City of Wayland Interurban Trail Project – Planning and project Engineer for seeking MDOT Transportation Alternatives Program and MDNR Michigan Natural Resources Trust Fund grant for the 1.2 mile section of Interurban Trail through the City limits. Coordination with Consumers Power has been successful, a long-term lease was secured, and engineer cost estimates were prepared. The project proposed additional parking and a restroom facility for trail and park users.

Glassman Park, New Buffalo Township – Project Engineer for securing a MDNR Land and Water Conservation Grant from the MDNR for development of the Township's twenty year old park. The park is bordered by the Galien River and a new canoe launch was designed as part of the project along with nature trails and site amenities.

Oselka Park, New Buffalo Township – Project Engineer for securing a MDNR Michigan Natural Resources Trust Fund grant for the acquisition of a parcel of property downstream of Glassman Park along the Galien River for the Township. The project will provide additional access to the river for kayakers, canoeists, fishermen, and nature enthusiasts.

PAUL HARVEY, EIT JUNIOR CIVIL ENGINEER

Mr. Harvey is an Engineer in Training for Wightman and has experience in multiple projects in both the Design and Construction phases. He has a vast knowledge for the construction process which aids in trouble shooting, problem solving, and minimizing potential issues that may arise.



Expertise

- Bridge Design
- Culvert Design
- Stormwater Management
- Hydraulic Analysis
- Construction Inspection
- Roadway Design

Professional Registrations

- Soil Erosion and Sedimentation Control, #19354

Professional Affiliations

- Tau Beta Phi

Professional Positions

- Wightman
2016 - Present

Education

- B.S. Civil Engineering
Western Michigan
University, 2017

Project Experience

Preventative Maintenance on Four Bridges in Kalamazoo County, MI - Project Engineer for the preventative maintenance of four bridges within Kalamazoo County. This project involves guardrail improvements, epoxy overlays, joint cleaning, concrete surface coating, and railing improvements.

Preventative Maintenance on Two Bridges in Berrien County, MI - Project Engineer for the preventative maintenance of two bridges within Berrien County over the St. Joseph River. This project involves joint improvements, epoxy overlay, deck patching, steel cleaning and coating, concrete surface coating, and railing improvements.

Lake Pleasant Road Bridge Replacement over Beebe Creek, Hillsdale County, MI - Project Engineer on the bridge replacement project on Lake Pleasant Road over Beebe Creek in Hillsdale County. The project includes removing the existing timber structure and replacing it with a 40 foot span concrete spread box beam bridge. In addition, the project involves constructing a 34 foot wide roadway section at the bridge approaches, hydraulic analysis, guardrail design, slope restoration, and necessary permitting.

R Avenue Culvert Replacements, Kalamazoo County, MI - Project Engineer on the R Avenue Culvert Replacement projects in Kalamazoo County which included the removal of the existing culverts and two different waterway crossings on R Avenue and replacing them with sufficient structures. This project involves hydraulic analysis, the reconstruction of the existing roadway approaching the culverts, guardrail design, slope restoration, and necessary permitting.

32nd Street Culvert Replacement over Asher Drain, Kalamazoo County, MI - Project Engineer on the 32nd Street Culvert Replacement project in Kalamazoo County which included the removal and replacement of an existing culvert. This project involves hydraulic analysis, the reconstruction of the existing roadway approaching the culverts, guardrail design, slope restoration, and necessary permitting.

Vine Street Improvements, Kalamazoo, MI - On-site construction inspector for the Vine Street Improvements project in the summer of 2017. This project included 1.5 miles of HMA milling and resurfacing, curb and gutter replacement, ADA sidewalk ramps, water service replacement, and street signal improvements. The project required coordination between the City of Kalamazoo along with the MDOT.

Andrew Street Reconstruction, Kentwood, MI - Assisted with on-site construction inspection throughout the duration of the project. This project involved the complete reconstruct of multiple neighborhood roads including new curb and gutter, new concrete sidewalks, replacing existing driveway aprons, new HMA service, new water main and services, and a new storm sewer system.

JEFFREY V. BRADFORD, P.S.

PROJECT SURVEYOR

Mr. Bradford has more than 30 years of surveying experience including field work such as construction layout for road design, bridge design and associated ramp and earthwork. He has worked on numerous projects involving layout of right-of-way, pavement, curb and gutter, sidewalks, storm sewer, culverts, guard rail and guard rail flair. Also, slope staking for open drainage, bridge substructure, pour elevations, bridge beam control, haunch, rail and bulkhead control, cross sections, superelevations and superelevation transitions, horizontal and vertical controls, PLSS corner locations, data collection of planimetric features and points to create DTM.



Expertise

- Road Design Surveys
- Subdivision Plats
- Boundary Surveys
- ALTA Surveys
- P.A. 132 Surveys
- Topographic Surveys
- Construction Staking

Professional Registrations

- Professional Surveyor
Michigan #44290

Professional Registrations

- Michigan Society of
Professional Surveyors

Professional Positions

- Wightman & Associates, Inc
1986 - Present

Education

- B.S. Surveying Engineering
Ferris State University 1993

Project Experience

Interstate Highway 94 – MDOT Project 11015-202013

Survey Manager in charge of 6.98 miles of hot mix asphalt cold milling and resurfacing and pavement markings on I-94 from south of Three Oaks Road to Red Arrow Highway, Berrien County. Staking included yield stakes for paving operations, detour routes, temporary and permanent signage and quantity calculations.

US-12/Old M-205/Five Points Road Intersection, Cass County, MI MDOT Project 14041-125133

Survey Manager in charge of 0.38 of a mile of concrete intersection improvements and construction of roundabout, drainage improvements, traffic signal removal, signing, lighting and landscaping. Staking items included drainage structures, slope staking for ditching activities, roadway curb and gutter and asphalt locations, detour route, permanent and temporary signage and quantity calculations.

M-86 over Prairie River and Crystal Springs Street over Dowagiac River, Van Buren and Cass Counties, MDOT Project 78061-113259

Survey Project Manager in charge of two separate bridge reconstruction project calculations and coordination of layout of curb and gutter, asphalt widening, piles, abutments, beams, wing walls, dowel pins, slope staking, approach slabs, bridge fascia and guardrail.

Sidewalk ADA Ramp Upgrades, US-12 from Chicago St to Bronson St, New Buffalo, MI, MDOT Job#11011-113015

Survey Project Manager in charge of calculations and coordination of layout of proposed approach and ADA ramp upgrades for 10 intersections on US-12.

Commercial/Division Street Project, Dowagiac, MI- Survey Project Manager of award-winning project which included a road diet that reduced the design speed by widening sidewalks, changing street paving materials with asphalt, brick, and concrete, incorporating on-street parking, providing streetscape elements such as landscaping and lighting, and creating new pedestrian resources like benches, parks, and artwork.

Main Street (BL-I94) Reconstruction, Benton Harbor, MI, MDOT Project 11013-86206

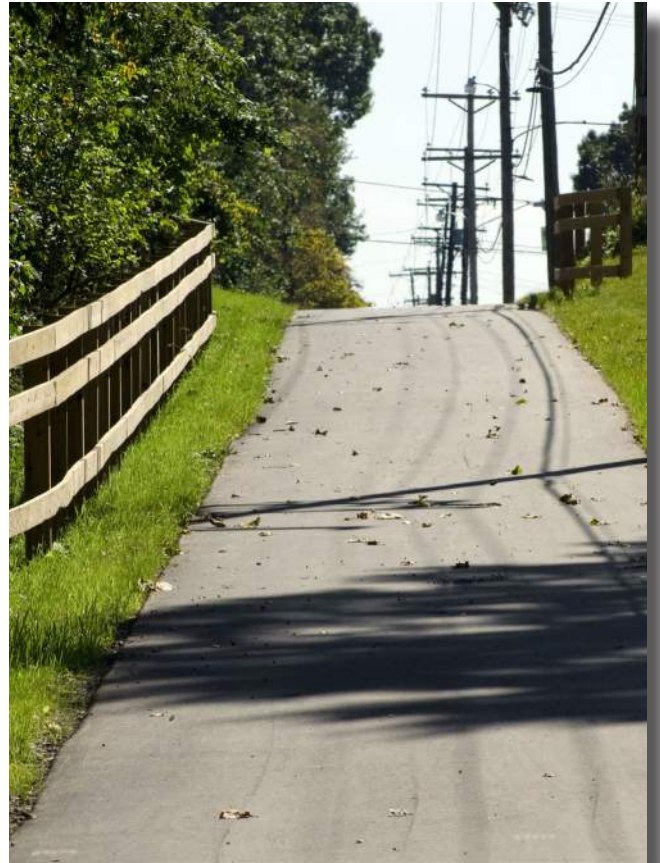
Survey Project Manager in charge of calculations and coordination of layout of hot mix asphalt, roundabouts, concrete curb and gutter, storm, sanitary, watermain, electric, traffic signal polls, hand holes, sidewalk ADA ramps and retention walls for 1.78 miles of roadway on I-94 BL (Main Street) from River Street to M-139 (North Fair Avenue) in Benton Harbor.

TRAIL EXPERIENCE: REFERENCES

Trails have become a substantial feature of Michigan's recreation amenities, landscape and focus. And for good reason, trails provide excellent recreational opportunities for local residents, and regional trails can drive an economic benefit. The recent pandemic has shown tremendous demand for the growth of trail networks. Our team are not only experts in trail design, we are also trail users in the community. Wightman's team of professionals have partnered with communities throughout Michigan to envision, plan, fund and construct trails and other non-motorized facilities.

WIGHTMAN TRAIL COMMUNITIES

Niles Charter Township
Village of Edwardsburg
Ontwa Township
Oronoko Township
Village of Berrien Springs
Cass County Road Commission
City of Dowagiac
Berrien County Road Department
Chikaming Township
New Buffalo Township
Village of Eau Claire
City of Portage
Royalton Township
Village of Cassopolis
Antwerp Township
City of Albion
Village of Paw Paw
Cooper Township
City of Plainwell
Gun Plain Township
Village of Martin
Dorr Township
Leighton Township
Martin Township
Wayland Township
City of Wayland
Byron Township
Village of Vicksburg
Village of Homer
Berrien Township
St. Joseph Charter Township



REFERENCES

Niles Charter Township
Ms. Jill Delucia, Dir. of Parks Comm.
(574) 850-4785
jdelucia@nilestwpmi.gov

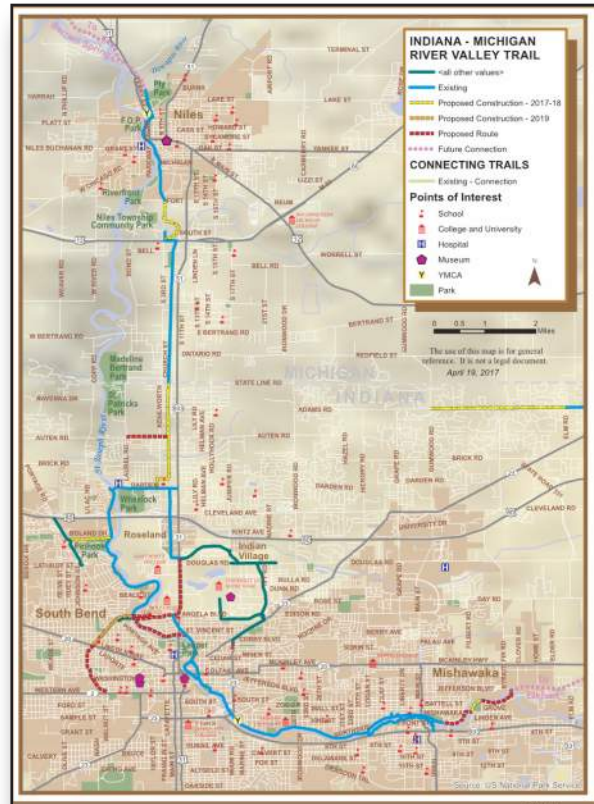
Berrien County Road Dept.
Kevin Stack, Eng. Supervisor
(269) 925-1196 x 4421
kstack@bcroad.org

City of Dowagiac
Kevin Anderson, City Manager
(269) 782-2195
citymanager@dowagiac.org

INDIANA-MICHIGAN RIVER VALLEY TRAIL - PHASE 1



NILES CHARTER TOWNSHIP, MI



Client Reference:
 Niles Charter Township
 Ms. Jill Delucia
 Director of the Parks Commission
 (574) 850-4785

Project Date: 2012-2014

Project Cost: \$842,000

Services Provided:

- ◆ Trail Planning
- ◆ Construction Engineering
- ◆ Preliminary Engineering
- ◆ Surveying
- ◆ Design Engineering
- ◆ Construction Staking
- ◆ Grant Assistance
- ◆ Wetland/Floodplain Delineation

Staff Involved:

- ◆ Steve Carlisle, PE
- ◆ Ben Baker, PLA, LEED AP
- ◆ Suzannah Deneau

The Indiana-Michigan River Valley Trail is a 34-mile trail connecting Niles, MI to Mishawaka, IN. Wightman provided design engineering, construction administration, and staking to assist Niles Charter Township with Phase I of their portion of the project from the Indiana state line to the Brandywine Creek Nature Park (just north of US12).

This 3.3 mile section of non-motorized trail is parallel to a commercial, retail corridor in Niles Charter Township. This phase completes nearly 10% of the 34 mile IN-MI River Valley Trail and travels from the Indiana-Michigan state line to the Brandywine Creek Nature Park. The trail is 10' wide with 2' shoulders through a wooded passageway that can now be utilized by pedestrian travelers and recreational enthusiasts. Wightman provided design engineering, construction administration, and staking to assist Niles Charter Township with Phase I of their portion of the project from the Indiana state line to the Brandywine Creek Nature Park (just north of US12).

Wightman worked with the project partners including Niles Township, Southwest Michigan Planning Commission, Michigan Department of Transportation, Michigan Department of Natural Resources, Berrien County Road Department, and American Electric Power.



INDIANA-MICHIGAN RIVER VALLEY TRAIL - PHASE 2



NILES CHARTER TOWNSHIP, MI



Client Reference:
 Niles Charter Township
 Ms. Jill Delucia
 Director of the Parks Commission
 (574) 850-4785

Project Date: 2012-Present

Project Cost: \$1,215,000

Services Provided:

- ◆ Trail Planning
- ◆ Construction Engineering
- ◆ Preliminary Engineering
- ◆ Surveying
- ◆ Design Engineering
- ◆ Construction Staking
- ◆ Grant Assistance
- ◆ Wetland/Floodplain Delineation

Staff Involved:

- ◆ Steve Carlisle, PE
- ◆ Ben Baker, PLA, LEED AP
- ◆ Suzannah Deneau
- ◆ Sarah Proceviat, MSC

This 1.1 mile section of non-motorized trail takes advantage of beautifully wooded properties owned by Michigan Department of Natural Resources and Niles Charter Township located just off of two major roads. This phase links the finished Michigan trail sections with the many miles of trail in Indiana. The trail is 10' wide with 2' shoulders through over Brandywine Creek to be utilized by pedestrian travelers and recreational enthusiasts. The pathway connects another Township park – Community Park with walkers and bikers.

Wightman provided assistance for grant funding, design engineering, permitting, construction administration, and topographic survey and construction staking to Niles Charter Township for Phase II of their portion of the project to connect to the City of Niles trail.



RIVER TO RIVER TRAIL PLANNING



KALAMAZOO, ALLEGAN, & KENT COUNTIES, MI



Client Reference:
West Michigan Transit Greenways
Mr. John Morrison
Executive Director
(616) 485-7805

Project Date: 2016-Present

Project Cost: \$56,000

Services Provided:

- ♦ Trail Planning
- ♦ Stakeholder Engagement
- ♦ Grant Assistance
- ♦ Preliminary Engineering

Staff Involved:

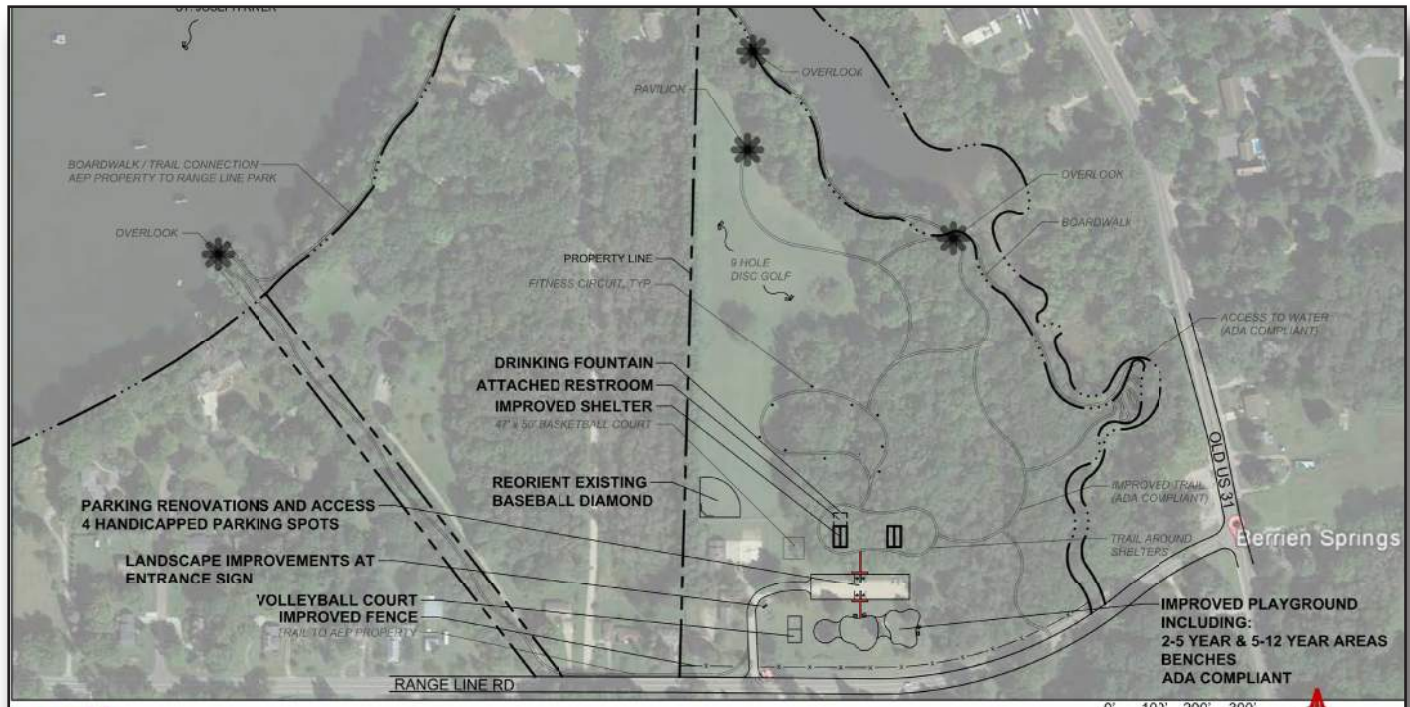
- ♦ Mickey Bittner, PE
- ♦ Steve Carlisle, PE
- ♦ Ben Baker, PLA, LEED AP
- ♦ Laura Fredrickson, PLA
- ♦ Suzannah Deneau
- ♦ Ryan Miller, GISP
- ♦ April Kibby

The River to River Trail is a 40-mile trail that will connect the Kalamazoo River Valley Trail with the Kent County Trail system and eventually to the Grand River Greenway Trail following the previously known Interurban Railroad line mostly owned by Consumers Energy. Thirteen communities have a stake in the Interurban Trail: Kalamazoo, Allegan, and Kent Counties; Cooper, Gun Plain, Martin, Wayland, Leighton, Dorr, and Byron Townships; the Cities of Plainwell and Wayland; and the Village of Martin. This is the fourth trail in the state to propose an alignment within MDOT interstate highway right of way.

This project is currently in the planning stages and we will be engaging stakeholders and partners to gather information regarding the proposed trails and routes. As a result of the planning process, an Interurban Trail Master Plan document will be developed for trail stakeholders and public outreach. This document will include maps, goals, stakeholders and partners, funding guidance, meeting minutes, and implementation. The second deliverable will be an online accessible database with the proposed trail route and amenities located near the trail including downtowns, parks, schools, etc.

RANGE LINE PARK

BERRIEN TOWNSHIP, MI



Client Reference:
 Berrien Township
 Mr. Brian Bixby
 Township Supervisor
 (269) 461-6925

Project Date: 2017-Ongoing

Project Cost: \$300,000

Services Provided:

- ◆ Landscape Architecture
- ◆ Grant Assistance
- ◆ Civil Engineering

Staff Involved:

- ◆ Ben Baker, PLA, LEED AP
- ◆ Suzannah Deneau
- ◆ Laura Fredrickson, PLA

Wightman was contacted by Berrien Township to assist in preliminary park planning and cost estimating for Range Line Park. Wightman worked with the Southwest Michigan Planning Commission and the Township to submit a Michigan Natural Resources Trust Fund through the Michigan Department of Natural Resources for improvements at the park.

The proposed improvements include updated accessible playground, updated picnic shelters with restrooms, accessible trails through the woods with overlooks over the Lake Champlain/ St. Joseph River. This park will also serve as regional trailhead for the extension of the Indiana Michigan River Valley Trail.

The project recently received a Michigan Natural Resources Trust Fund Grant and design documents are underway with an anticipated completion in 2021.

EDWARDSBURG SPORTS COMPLEX



EDWARDSBURG, MI

Client:

Ed Patzer
(866) 223-0082

Project Date: 2018 - 2019

Services Provided:

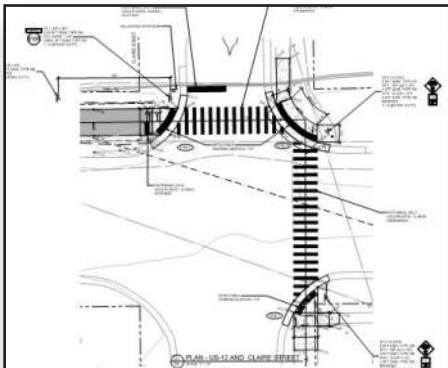
- ◆ Design Engineering
- ◆ Surveying

Staff Involved:

- ◆ Steve Carlisle, PE
- ◆ Suzannah Deneau
- ◆ Ben Baker, PLA, LEED AP

Wightman provided design engineering services for the 0.48 miles of concrete shared-use path, curb, gutter, sidewalk and ramps, hot mix asphalt approach, trail guardrail and signing. The project is located on the north side of US-12 from the Edwardsburg Sports Complex east to Claire Street, Cass County. The 10 ft wide non-motorized pathway was constructed to connect the new Edwardsburg Sports Complex to the existing school compound and the Village sidewalk system.

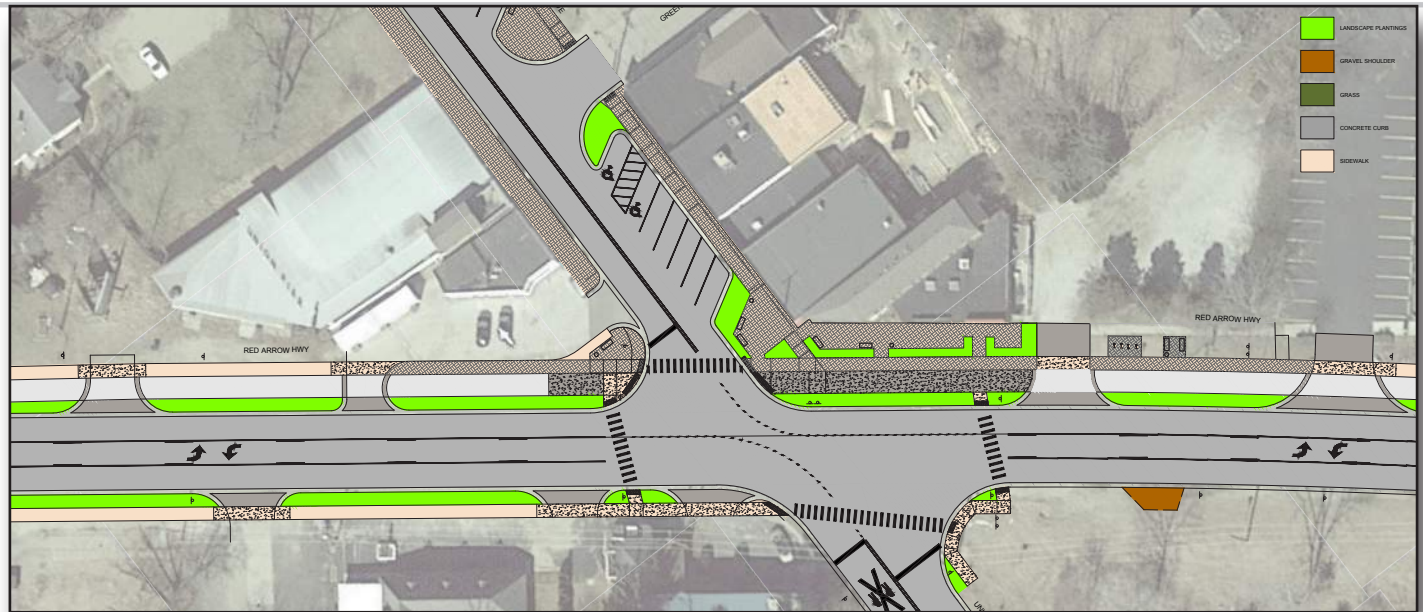
Easement descriptions were prepared to acquire additional property outside of the existing right-of-way so that the non-motorized pathway could be located further away from the roadway for safety and comfort. This project was funded with Michigan Department of Transportation CMAQ funding of \$161,440 and Michigan Department of Natural Resources MNRTF grant of \$40,000. The project was bid through the MDOT Local Agency Programs and the pathway was designed in accordance with AASHTO design standards.



UNION PIER STREETSCAPE



UNION PIER, MI



Proposed Layout

Client Reference:

Berrien County Road Department
 Kevin Stack, PE
 Engineering Supervisor
 269-925-1196 x 4421

Design Start Date: 2019
Construction Start Date: 2020

Project Cost: \$3,800,000

Services Provided:

- ◇ Conceptual design
- ◇ Placemaking
- ◇ Civil Engineering
- ◇ Landscape Architecture
- ◇ Survey
- ◇ Architecture
- ◇ Environmental

Staff Involved:

- ◇ Steve Carlisle, PE
- ◇ Melanie Stange, PE
- ◇ Chris Cowgill, PE
- ◇ Ben Baker, PLA, LEED AP
- ◇ Jeff Bradford, PS

The Berrien County Road Department, in conjunction with Chikaming Township and New Buffalo Township, desired to increase safety, provide multi mobile transportation routes, and beautify the Red Arrow Highway corridor through Union Pier. This includes a road diet to reduce Red Arrow Highway from four lanes to three, a separated non-motorized path, and streetscape elements, which will include landscaping, rain gardens, decorative lighting, site furnishings, and decorative paving.

This road diet is the first phase of reducing Red Arrow Highway to three lanes and will reduce speed and increase safety by providing a dedicated center turn lane.

The project involves multiple funding sources, including federal aid, and is being delivered through the MDOT Local Agency Program. Additional funding sources include grants from the Pokagon Fund, township dollars, and the County local match.

A critical piece of this project is public outreach and communication, as there are various businesses located along the route that will be impacted during peak tourist season. Meetings and open houses were held to help provide information and answer questions. As peak season for businesses and the construction time frame inevitably overlap, a full detour was not feasible, and a phased maintenance of traffic plan was required to allow access to commercial businesses during the project.

MIDDLE CROSSING ROAD PATHWAY

DOWAGIAC, MI



Client Reference:
City of Dowagiac
Mr. Kevin Anderson
(269) 782-2195

Project Date: 2014

Project Cost: \$100,159

Services Provided:

- ◆ Design Engineering
- ◆ Full LAP Construction Engineering
- ◆ Surveying
- ◆ Construction Staking
- ◆ CMAQ Grant Assistance
- ◆ Right-of-way Acquisition

Staff Involved:

- ◆ Steve Carlisle, PE
- ◆ Ben Baker, PLA, LEED AP
- ◆ Suzannah Deneau
- ◆ Jimmy Kahl

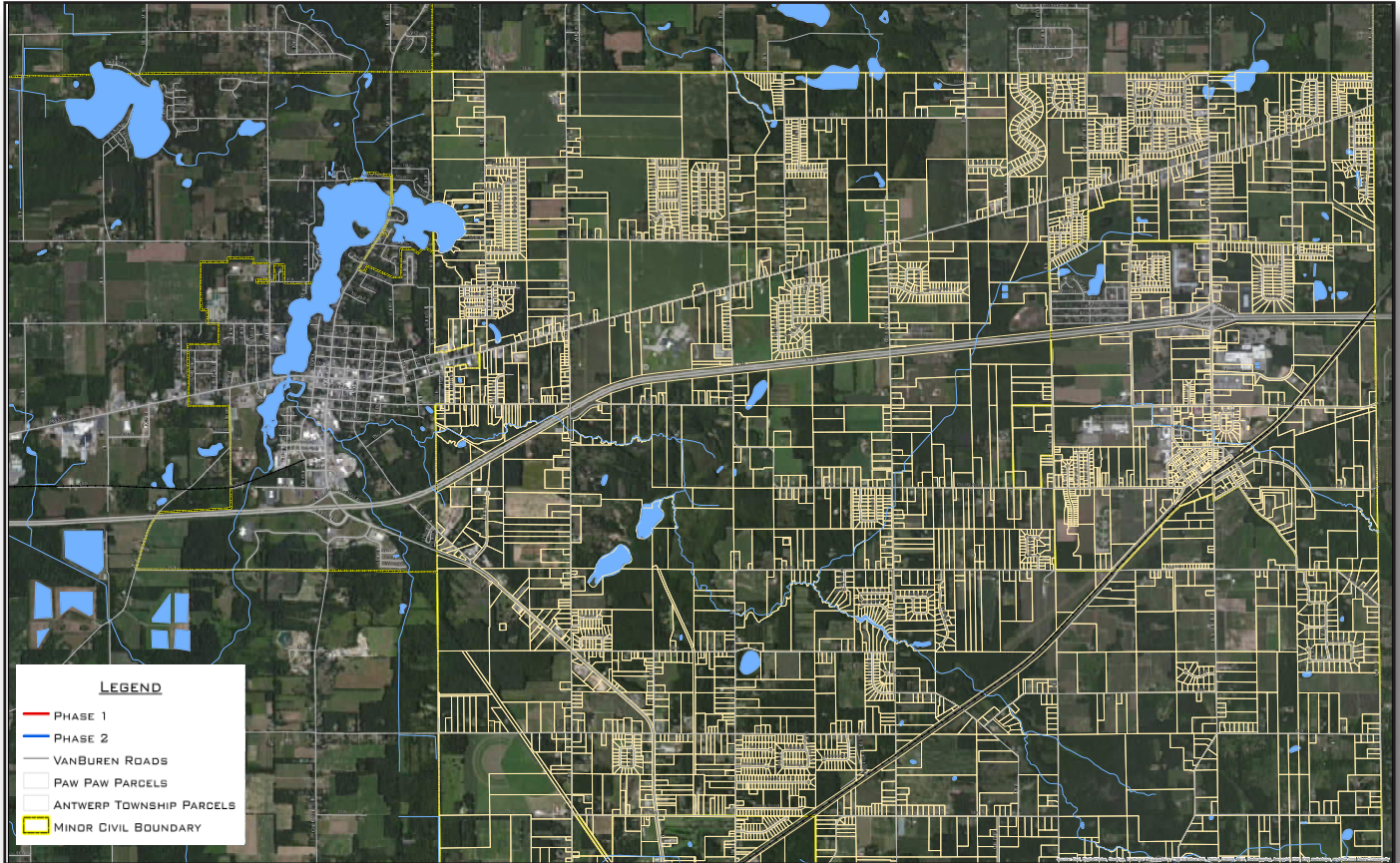
Wightman was contacted by the City of Dowagiac to assist with applying and administering the CMAQ funding for a pathway along Middle Crossing Road in the City of Dowagiac. The path was developed to link the residential area of the downtown to Russom Park, which consists of several baseball, softball, and future soccer fields. The pathway starts at Prairie Ronde Avenue, and continues north to Russom Park a distance of approximately 0.5 miles. The pathway was constructed using aggregate base and a 3" HMA surface, with a width of 10', plus 2' shoulders on either side to satisfy the FHWA trail standards for this type of use. The project was funded through CMAQ and City match monies, and was administered following the MDOT Local Agency Programs requirements.



ANTWERP TOWNSHIP TRAIL PROJECT



ANTWERP TOWNSHIP, MI



Client Reference:
Antwerp Township
Mr. Dan Ruzick
Supervisor
(269) 668-2615

Project Date: 2015- Present

Project Cost: \$2,600,000 (est.)

Services Provided:

- ◆ Trail Planning
- ◆ Stakeholder Engagement
- ◆ Grant Assistance
- ◆ Preliminary Engineering

Staff Involved:

- ◆ Suzannah Deneau
- ◆ Sam Leach, PE

The Antwerp Township Trail Project is intended to connect the Villages of Mattawan and Paw Paw, then connect the Fruitbelt Trail with the Texas Township trail system and is approximately six miles long. The project is currently in the planning stages and we are engaging stakeholders including Antwerp Township; the Village of Mattawan, the Village of Paw Paw, MDOT, MDNR, Paw Paw Conservation Group, local Boy Scout troops, and many others.

This project is the third trail in the state to propose an alignment within an MDOT Interstate Highway right of way. We have had numerous discussions with MDOT about this and they have been on-board with this concept to date.

We continue to work with the stakeholders on this project for submission for grants for design and construction as we prepare for construction of Phase I.

PROJECT EXPERIENCE

We understand that the Tri-Community Joint Study Committee for the Blue Star Trail (TCC) is seeking proposals for engineering services for the Blue Star Trail – North Section. The TCC is made up of representatives from Saugatuck Township, the City of Saugatuck, the Village of Douglas, and the Friends of the Blue Star Trail. TCC intends to build three new sections of trail as part of this project totaling approximately 1.5 miles, to connect existing segments, and ultimately constitute the 4.5 mile north section of the Blue Star Trail. Eventually the Blue Star Trail span approximately 20 miles and will connect the Kal-Haven Trail in South Haven to the Beeline Trail north of Saugatuck.

Wightman has been involved with the planning or design of over 60 miles of trails in the last 5 years. Many of those trails are very similar to this phase of the Blue Star Trail. We have worked with local public safety, police, fire, and ambulance services on many road and trail projects. It's important that public safety officers are able to patrol the trail but also respond to emergencies along the trail. Having a review with the Public Safety departments along this project will be included in our scope of work. On the Indiana and Michigan River Valley Trail a portion of the trail was within the power company's right of way. They did not want unauthorized vehicles to be able to travel down the trail. Foldable bollards were chosen and a master key was given to the power company and first responders. In addition to the key, the folding pin was specified so that an emergency vehicle slowly running into the bollard would also collapse the bollard for access. Regarding safety, we have worked with multiple styles of crossing systems for trails, including smart crossings which can be activated by the push of a button or by detecting a trail user to alert vehicles to a pedestrian's presence at an intersection. We have also designed signage to alert pedestrians of certain dangers, such as a fire station or other emergency vehicle crossing, or bridge or rail crossings.



PROJECT UNDERSTANDING

We understand that the Tri-Community Joint Study Committee for the Blue Star Trail (TCC) is seeking proposals for engineering services for the Blue Star Trail – North Section. The TCC is made up of representatives from Saugatuck Township, the City of Saugatuck, the Village of Douglas, and the Friends of the Blue Star Trail. TCC intends to build three new sections of trail as part of this project, to connect existing segments, and ultimately constitute the 4.5 mile north section of the Blue Star Trail. Eventually the Blue Star Trail span approximately 20 miles and will connect the Kal-Haven Trail in South Haven to the Beeline Trail north of Saugatuck.

This RFP is searching for an engineering firm to provide professional services for the planning, design and construction of this project. The planning phase of work will build upon a 2018 TAP grant draft, as well as 2019 conceptual drawings for section 1 of the project. A preliminary route has been developed and needs to be finalized. The trail will be developed to meet the AASHTO Guide for the Development of Bicycle Facilities, NACTO guidelines, MDOT standards, as well as ADA. It is anticipated that the project will seek funding through MDOT Transportation Alternatives Program (TAP) as well as Michigan Department of Natural Resources Trust Fund (MNRTF). The project will be designed to meet the criteria for both of these programs as well.

Public input is important to the project and the overall success of the Blue Star Trail in general. Positive public perception of the project starts at the planning meetings and continues through construction and beyond. Keeping the public informed on the project and timeline is important, as well as a smooth construction phase with limited disruptions to traffic and businesses. A good design and implementation are just as important so that the user experience, both the trail users and the motorists adjacent to the trail have a positive experience. Our planning process, construction phase services and design philosophy will ensure these key components are met.

PROPOSED WORK PLAN

The scope of work will be broken into the following phases:

PRELIMINARY DESIGN PHASE:

This phase will include refining the preliminary route map; development of typical trail cross sections; review of environmental, historic, or physical constraints; preliminary right of way and property review; as well as preliminary cost estimates for construction. This design will take into account the different trail designs that will be needed for this route which will include at grade trail, bridges/culverts, and boardwalks as necessary.



We believe that this phase has three major goals for the stakeholders:

1) Preparation of the necessary supporting documents to seek state and federal grant funding. 2) Creation of visuals and proposed costs for local match fundraising. And 3) Establishment of major environmental, historic, or physical hurdles for the project early in the preliminary design phase allowing enough time to address them.

Our environmental team will review wetland databases and other information to determine potential areas of concern. Included in this phase is an early onsite review meeting with regulatory and funding agencies including MDOT, EGLE, MDNR, Allegan County Road Commission, and Local Municipalities for coordination and alliance regarding potential environmental conflicts. We propose to meet onsite following the first stakeholder group meeting. We also plan to meet with the Allegan County Road Commission during this preliminary phase as they control the majority of the right of way for the trail route, whether that be along Blue Star Highway or roadways within the Township, with the possibility of passing through Amalanchier Park. The crossing of the bridge over the Kalamazoo River will be a key component of this project.

After these meetings are complete and a conceptual route or routes are identified it would be a good time to conduct the environmental assessment of the routes to have a clear understanding of any wetland or other environmental features that will need to be taken into consideration with the design and construction of the project. Conducting the assessment at this time will allow our team to fully understand what opportunities or constraints may be associated with the proposed routes and we can design and estimate accordingly.

When the conceptual design and cost estimate are completed, Wightman will present our findings to the TCC stakeholder group for review. There are two meetings during this phase: one with the stakeholder group and one for the public to present this information. We are also able to present to three municipalities as well as FOTBST. We will incorporate approved feedback into the plan and estimate. Once the meetings have been complete, applications for grant funding will be submitted to MDOT for TAP funding in October of 2021 and MDNR for MNRTF funding in early 2022. Wightman has worked extensively with these two programs for trail funding in the past and can work to lead this effort. We typically are involved with 3-5 MDNR grants per year and 7-10 TAP, CMAQ or other federally funded MDOT Local Agency Projects per year. We also suggest engaging the West Michigan Regional Planning Commission in assisting with these grants to show how the trail network will benefit the region. It is anticipated that the Allegan County Road Commission will be the Local Agency for the TAP Grant. It will be important during the Preliminary Design Phase to determine which, or all, of the Municipalities will submit for the MNRTF grant(s).



CONSTRUCTION DOCUMENTS – GRADE INSPECTION PLANS:

At this point in time, funding has been secured, the route has been finalized and the environmental, historic or physical hurdles have been defined. This phase will include construction documents through the MDOT

Grade Inspection (GI) phase which is approximately 80% complete; surveying; geotechnical investigation; and the continuation of permit submittals that are required for the proposed work. These plans will meet all of the MDOT requirements and the project will be designed to all applicable standards in accordance with the AASHTO Guide for the Development of Bicycle Facilities and Guide for the Development of Pedestrian Facilities, the FHWA Designing Sidewalks and Trails for Access, the MDOT Standard Specifications for Construction, and the Michigan Manual on Uniform Traffic Control Devices, including horizontal alignment and clearances, vertical alignment, and permanent signs. Trailhead, bike rack, and bench locations will be coordinated with the stakeholder group utilizing the original layouts on the aerial trail map. Signage at the intersection(s) will include stop ahead, stop, intersection, no motor vehicles, and street signs on the trail; and include bike trail and bike crossing warning signs on the roadways.



Included in this phase, is verification of property ownership and property lines. Although it is expected that ownership will be finalized prior to this process.

In addition to meetings with key property owners during this phase, a public meeting is also a good way to share the proposed design with the public.

Project estimating is crucial throughout the entire project, from the preliminary design so that an accurate project budget can be established, through construction. Our attached project sheets show the project costs for many of our recent jobs. We like to estimate conservatively in the early phases of a project where there are many unknowns and refine our project estimates as we gather more information. We just finished the preliminary planning phase of the Indiana Michigan River Valley Trail Phase 3 which covers 8 miles from Niles to Berrien Springs Michigan. At this early stage of design there is a large area of wetlands that may be impacted by the project. Our preliminary estimate included boardwalk for this entire area. As we move forward and delineate the wetlands and work with the regulatory agencies we may be able to install a portion of that section as at-grade trail which would be significantly less expensive, however we want to make sure we are prepared for the worst case scenario. The Indiana Michigan River Valley Trail Phase 2 project bids came in within a few percentage points of the project estimate when they were bid. We were able to find savings during the construction and the project came in under the estimate when it was completed.

FINAL CONSTRUCTION DOCUMENTS:

This phase of work will take any comments from the GI phase drawings and incorporate them into the project set to finalize the documents. We will also work to finalize any permit applications. The construction documents and specifications will be prepared assuming this will be bid through MDOT based on anticipated TAP funding. The plans will also be sent to MDNR for final review, although their review is typically secondary to MDOT.

BID PHASE:

Since it is assumed TAP funding will be utilized for this project bidding will be handled through the MDOT letting process. We will assist with the bid and answer questions as required.



CONSTRUCTION PHASE:

We will work with the Road Commission and MDOT to administer the contract using Field Manager and our qualified Office Tech and provide testing and inspection services. We can provide full-time or part-time inspection based on the requirements for the project. We will also include; shop drawing and submittal review; construction inspection and progress meetings; contractor pay estimates; punch list and review; project closeout; and grant closeout data.

PROPOSED WORK PLAN

EASEMENT SERVICES:

If easements are required, we have worked extensively with Michiana Land Services in the past to secure permanent or construction easements, and we would engage their services.

TIMELINE:

Preliminary Design Phase will begin after the consultant is selected, likely March of 2021 with the application of a TAP grant in October 2021. In addition, an MDNR Trust Fund Grant will be submitted by April 1, 2022.

Construction Documents (GI): it is assumed that this phase will begin once funding is acquired. With the understanding that the project will be seeking TAP funding and MNRTF funding it is anticipated that the earliest this phase might begin is February, 2023. However, we are able to begin work earlier if other funding is secured. We anticipate this phase of work will take 7 months with a GI scheduled in September, 2023.

Final Construction Documents: after the comments are received from the GI it is anticipated that the final construction documents will be submitted back to MDOT within 2 months for bid and letting scheduled for January 2024.

Construction: With tree removals, we anticipate construction starting February 2024 and continuing through Summer for Substantial Completion, and Final Completion by the end of 2024.

The cost for the Preliminary Engineering Phase is anticipated to range from \$24,000 to \$28,000, depending on whether the wetland delineation is completed in this phase or the GI Submittal Phase.

The Cost for the Design of the Project, GI Submittal phase; Final Submittal; and Bidding typically range around 7-8% of the construction cost. Based on our previous projects we anticipate this project construction cost to be somewhere from \$800,000-\$1,500,000 depending on what route is chosen. With the construction scheduled for 2024 or later, standard construction inflation of 2-4 percent per year, as well as current price increases on certain materials due the pandemic, it is difficult to predict market trends for pricing. This would put the design engineering fees in the range of \$60,000-\$115,000.

Construction phase services will vary depending on whether full-time or part-time inspection is required, but typically are approximately 10% of construction cost, which could range from \$80,000-\$150,000.



Standard Terms and Conditions

Updated 4/1/2019

1. Agreement. Wightman & Associates, Inc. (hereinafter "Consultant") shall provide to the Client the scope of services described in Consultant's Proposal attached hereto. These Standard Terms and Conditions are incorporated into Consultant's Proposal, and together may be referred to as the "Agreement" and shall reflect the professional services (or "Project") for which Consultant is responsible. This Agreement shall be the full extent of the Consultant's obligations. The Consultant shall not be responsible for any obligations or costs except as contained in the Agreement.
2. Authorization. Client shall provide Consultant written authorization to proceed, provided that this signed Agreement by Client shall give the Consultant the right to proceed with the Project.
3. Standard of Care. The Consultant's Standard of Care for the purposes of this Agreement shall be that consistent with the level of care and skill ordinarily exercised by members of its profession currently practicing under similar conditions in similar locations.
4. Terms of Payment/Late Payment Actions/Fees. Payment is due upon presentation of invoice and is past due thirty (30) days from invoice date. Client agrees to pay a finance charge of one and one-half percent (1 ½ %) per month, or the maximum rate allowed by law, whichever is less, on past due accounts.
5. Scope of Services/Additional Services/Changes. If the services covered by this Agreement have not been completed within twelve (12) months of the date of this Agreement (unless otherwise stipulated in the proposal), through no fault of Consultant, extension of Consultant's services beyond that time shall be compensated as "Additional Services." All Additional Services shall be billed separately and the scope of the services and compensation shall be mutually agreed between the parties, but in any case, not less than Consultant's Hourly Rate, and all of Consultant's Reimbursable Expenses shall also be paid by Client to Consultant, in the amounts set forth below.
6. Hidden Conditions. Consultant is not responsible for latent deficiencies or hidden or concealed conditions not discovered by Consultant within the scope of its services. If Consultant has reason to believe that such a condition may exist, it will advise Client as to the nature of the suspected condition and its significance. Client will be responsible for all risks associated with this condition and for undertaking, at its sole cost and expense, additional investigation and corrective work, if required. If Consultant repairs or corrects any such deficiencies or conditions, Consultant shall be compensated for the same, as Additional Services.
7. Betterment. If, due to Consultant's negligence, a required item or component of the project is omitted from Consultant's construction documents, Consultant shall not be responsible for paying the cost required to add such item or component to the extent that such item or component should have been included in the original construction documents. Consultant shall not be responsible or liable for any cost or expense that provides betterment or upgrades or enhances the value of the Project.
8. Opinions of Cost. Consultant's opinions or estimates of probable construction cost are prepared on the basis of Consultant's experience and qualifications and represent Consultant's judgment as a professional generally familiar with the industry. However, since Consultant has no control over the cost of labor, materials, equipment, or services furnished by others, other contractor's methods of determining prices, or over competitive bidding or market conditions, Consultant cannot and does not guarantee that proposals, bids, or actual construction costs will not vary from Client's budget or from Consultant's opinions or estimates of probable construction cost.
9. Code Interpretations. The Client acknowledges that the requirements of the Americans with Disabilities Act, as amended ("ADA") (as well as all state and local laws, codes, or ordinances), will be subject to various and possibly contradictory interpretations. Consultant will endeavor to use reasonable professional efforts to interpret applicable ADA and other building code requirements as they may apply to Consultant's services. Consultant cannot and does not promise, warrant, or guarantee that its services will comply with interpretations of building code requirements as they apply currently or in the future and unless the Consultant is negligent, the Client shall pay for any additional costs or expenses which are necessary to keep the Project in compliance with the ADA and all other laws, codes, or ordinances. Any changes made by Consultant shall be billed as Additional Services.
10. Use of Drawings, Specifications, and Other Documents. The drawings, specifications and other documents prepared by Consultant for this project are instruments of Consultant's services for use solely with respect to this Project and, unless otherwise provided, Consultant shall be deemed the author of these documents and shall retain all common law, statutory, and other reserved rights, including the copyright.
11. Retaining Records. Consultant will retain pertinent records relating to the services performed for a period of five years following submission of the report, during which period the records will be made available to Client at reasonable times.
12. Insurance Coverage. Consultant shall maintain the following types of insurance: (a) Professional Liability; (b) Commercial General Liability; (c) Workers' Compensation; (d) Employers' Liability; (e) Hired and non-owned automobiles. Client shall be responsible for purchasing and maintaining its own commercial liability and property insurance, including an all-risk policy covering all damages or casualty which occurred to the Project in an amount not less than the then full replacement cost of the Project. The Client's commercial liability insurance policy shall be written for an amount of not less than \$1 million, single-limit coverage. The Client's commercial liability and property insurance policy shall not be



cancelled or modified without Consultant having received not less than thirty (30) days prior written notice. Consultant shall be named an additional insured on the Client's insurance policies. Client and Consultant waive rights against each other for loss, damage and/or liability to the extent covered by the insurance policies required to be maintained hereunder and each insurance policy hereunder shall contain a waiver of the insurer's rights of subrogation.

13. Limitations/Exclusions. Client agrees that Consultant's total, aggregate liability to Client and any third parties arising from Consultant's professional acts, errors or omissions, shall not exceed Consultant's total fee received for the Project.
14. The Law/Suspension/Termination/Non-Severability. All obligations arising prior to termination of this Agreement shall survive the completion of the services and termination of this Agreement. This Agreement shall be governed in all respects by the laws of the State of Michigan.
15. Indemnity. Except for the limitations set forth herein, Consultant agrees to indemnify and hold the Client harmless from all damage, liability or cost (including reasonable attorney fees and costs of defense) to the extent caused by Consultant's negligent acts, errors, or omissions in the performance of professional services under this Agreement and those of its subconsultants or anyone for whom the Consultant is legally liable. The Client agrees to indemnify and hold Consultant harmless, from all damage, liability or cost (including reasonable attorney fees and costs of defense) to the extent caused by the Client's negligent acts, errors or omissions and by those for whom the Client is legally liable.
16. Certificate of Merit Requirement. Client shall make no claim for professional negligence, either directly or by way of a cross complaint against Consultant, unless Client has first provided Consultant with a written certification executed by an independent consultant currently practicing in the same discipline as Consultant and licensed in the state where the Project issue is located. This certification shall: (a) contain the name and license number of the certifier; (b) specify the acts or omissions that the certifier contends are not in conformance with the Standard of Care for a consultant performing professional services under similar circumstances; and (c) state in detail the basis for the certifier's opinion that such acts or omissions do not conform to the Standard of Care. This certificate shall be provided to Consultant not less than thirty (30) calendar days prior to the filing of any claim. This Certificate of Merit clause will take precedence over any existing state law in force at the time of any claim.
17. Jurisdiction and Venue. Notwithstanding anything in this Agreement to the contrary, Client agrees that any suit related to any dispute related to this Agreement shall be heard in the appropriate Court in the county of the Project. Client agrees that the appropriate County court shall have the subject matter jurisdiction and will be the appropriate venue for any interpretation or dispute related to this Agreement.
18. Termination. Consultant may terminate this Agreement for convenience by written notice to Client and in such event, the Consultant shall be paid only for all work under this Agreement that Consultant has completed to the date of

termination on a prorated, equitable basis as reasonably determined by Consultant and which shall include Consultant's prorated profits, general conditions, and overhead.

19. Billing Rates.

Principal	\$210.00/hour
Senior Licensed Staff.....	\$175.00/hour
Licensed Staff III.....	\$140.00/hour
Licensed Staff II.....	\$130.00/hour
Licensed Staff I.....	\$115.00/hour
Professional Staff V.....	\$140.00/hour
Professional Staff IV.....	\$125.00/hour
Professional Staff III.....	\$105.00/hour
Professional Staff II.....	\$95.00/hour
Professional Staff I.....	\$85.00/hour
Technician IV.....	\$90.00/hour
Technician III.....	\$85.00/hour
Technician II.....	\$75.00/hour
Technician I.....	\$70.00/hour
Administrative.....	\$70.00/hour
3 Man Survey Crew.....	\$185.00/hour
2 Man Survey Crew.....	\$150.00/hour
1 Man Survey Crew.....	\$100.00/hour
3 Man Survey Crew (Construction Staking).....	\$210.00/hour
2 Man Survey Crew (Construction Staking).....	\$175.00/hour
1 Man Survey Crew (Construction Staking).....	\$130.00/hour
High Definition Laser Scanning Technician.....	\$150.00/hour
Expert Witness/Testimony.....	\$400.00/hour
High Definition Laser Scanner Fee.....	\$150.00/hour

Reimbursable Expenses. Compensation for reimbursable expenses shall be computed as a multiple of 1.1 times the expense incurred for the following: Outside Consultants, Travel, Lodging, Postage, UPS, FedEx, Messenger, and Outside Reproduction. Compensation for mileage expenses shall be computed as a multiple of 1.1 times the Federal Rate. In-House Prints/Copies/Plots shall be charged as follows:

- Black & White Prints/Copies
 - 8 ½ x 11 \$0.19/sheet
 - 8 ½ x 14 \$0.19/sheet
 - 11 x 17 \$0.19/sheet
- Color Prints/Copies
 - 8 ½ x 11 \$0.85/sheet
 - 8 ½ x 14 \$0.85/sheet
 - 11 x 17 \$1.25/sheet
- Black & White Plots
 - 12 x 18 \$1.50/sheet
 - 18 x 24 \$2.75/sheet
 - 24 x 36 \$5.00/sheet
 - 30 x 42+ \$7.50/sheet
- Color Plots
 - 12 x 18 \$9.00/sheet
 - 18 x 24 \$18.00/sheet
 - 24 x 36 \$30.00/sheet
 - 30 x 42+ \$42.00/sheet

ENGINEERING SERVICES

W+

WIGHTMAN

it's all about people



TRANSPORTATION

Includes planning and design, budget and funding assistance, right-of-way acquisition, construction engineering, traffic engineering, construction related services including inspection and testing, and construction staking.



SITE DEVELOPMENT

Includes the development of a set of plans showing the use and structures proposed for a property. Plans include existing site characteristics, demolition, grading, utilities, soil erosion control, lighting, and landscaping. Plans also include review of government ordinances and analysis of how they apply to the site—parking requirements, drainage, traffic flow, fences, signs, and more.



SPECIALTY DESIGN PROJECTS

Include streetscape design, roundabout design, drain projects, sustainable development, and more.



BRIDGE & DAMS

Includes structural engineering work, design, inspection, and more.



PARKS & RECREATION

Includes trail planning and design, park planning and design, playground design assistance, trailhead design, pavilion design, and more.



GRANT & FUNDING ADMINISTRATION

Includes review of available grant sources, identification of those for which you are eligible, and guidance in cutting through red tape to get projects funded.



STUDIES

Include feasibility studies, rate studies, capital improvement plans, master and land use planning, water reliability studies, drainage studies, funding applications, and preliminary engineering reports.

www.gowightman.com | 269.927.0100



ENGINEERING SERVICES



PERMITTING

From the simplest single permit to complex multi-permit projects, our team can help navigate the course of federal, state, and local regulatory agencies for utilities (water, sanitary sewer, storm sewer), drainage, erosion control, transportation, land uses and right-of-way encroachments.



COMMUNITY-WIDE ASSET MANAGEMENT PLANS

An asset management plan is a tactical plan for managing an organization's infrastructure and other assets to deliver an agreed upon standard of service. Typically, an asset management plan will cover more than a single asset, taking a systematic approach—especially where a number of assets are co-dependent and work together to deliver an agreed upon standard of service.



MATERIALS TESTING

Includes the testing of concrete and soils, bituminous asphalt content, as well as moisture and density of aggregate for construction projects.



WATER

Includes water supply and/or treatment design, water transmission design and analysis, water distribution design (pressure reducing, pressure sustaining and metering stations), and water storage design. Also includes watershed, lakes as well as shoreline services.



WASTEWATER

Includes the study, analysis, and design of wastewater treatment systems, wastewater collection systems (conventional gravity sewers, low pressure systems, septic tank effluent pump (STEP) systems, vacuum systems, and a combination of all), lift stations, and force mains. Also includes assistance with permitting and compliance issues.



STORMWATER MANAGEMENT

Generally focuses on channeling, conveying, controlling storing, and/or infiltrating rain water to protect developed properties. This is typically a large part of the approval process for any site development project. Can include catch basins, piping, ponds, storage basins, and pump stations where topography is an issue.



HYDROGEOLOGIC

A branch of engineering concerned with groundwater movement and the design of wells, pumps, and drains. The main concerns in groundwater engineering include groundwater contamination, conservation of supplies, and water quality.

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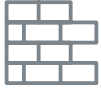


LANDSCAPE ARCHITECTURE SERVICES

W+

WIGHTMAN

it's all about people



LANDSCAPE PLANS

Design of landscape plans for commercial and municipal development including zoning/landscape ordinance compliant plantings.



PARKS & RECREATION

Includes the development of recreation plans used in DNR grant applications, park design, trail system master planning and development, trail design, grant applications (MNRTF), outdoor sports and athletic facilities, playgrounds and splash pads, water features, fountains, and more.



STREETSCAPE DESIGN

Includes planning and design of streetscapes and downtown beautification through the use of hardscapes and softscapes.



GREEN INFRASTRUCTURE

Includes the design and planning of rain gardens, water harvesting, and green roofs through implementation of stormwater management best practises.



SITE ANALYSIS

Site layout such as siting the building and other programming on the site based on topography, water, wind and sun exposure, circulation, and more.



HISTORICAL PRESERVATION PLANS

Includes landscapes, courtyards, hardscapes, connectivity, and more.



SPECIALTY AREAS

Include native plantings design plans, memorial design, and corporate campuses.

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WIGHTMAN COMMUNITY ENGAGEMENT

*It's all about engaging our community, clients, and stakeholders.....*The success of our public engagement strategy is teamwork: from you as the client, to our consultants, and within our internal team, we rely on clear communication and poignant questions to bring us together to discover the right decisions. Our approach can be scaled to match the goals of the group we are engaging, but our preferred strategy is three-tiered.

We start with a Steering Committee that acts as our client group. These are the individuals that will ultimately make final decisions about design and implementation. We also task this group with identifying key individuals to be involved with the next tier of engagement: stakeholders.



Stakeholders are individuals or organizations either directly impacted by decisions that will be made or are influential members of the community that can help us implement parts of the project. This not only gives us the establishes community buy-in, but it gives us insight to opportunities that could be missed before we even begin design.

Our third tier of engagement is the Public; we typically engage the public through workshops or surveys, enabling us to ask broad questions that will provide insight to the greater context projects will impact.



To our team at Wightman, the engagement process is integral to the success of a project. Parks and buildings and infrastructure serve our citizens and region and if we neglect to understand their needs and dreams we will miss out on great opportunities.



IT'S ALL ABOUT CELEBRATING SUCCESS!

Wightman recognizes that achieving major milestones - from the start of construction to the grand opening - of any project is a cause for excitement and celebration for our clients, the community, and even our own staff.

Celebrating the successful completion of a project is a simple way to recognize the hard work accomplished by stakeholders, respectfully honor project donors' gifts, and show appreciation to community members who anxiously awaited the unveiling.



Wightman truly appreciates the time, energy, and efforts of each and every person involved in a project. By partnering, the satisfaction of a job well done and a journey successfully completed can be shared by everyone.

Please don't hesitate to ask how we can help you with a groundbreaking, project milestone, media, or ribbon-cutting event.

THANK YOU



IT'S ALL ABOUT PEOPLE.

ALLEGAN

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BENTON HARBOR

2303 PIPESTONE ROAD
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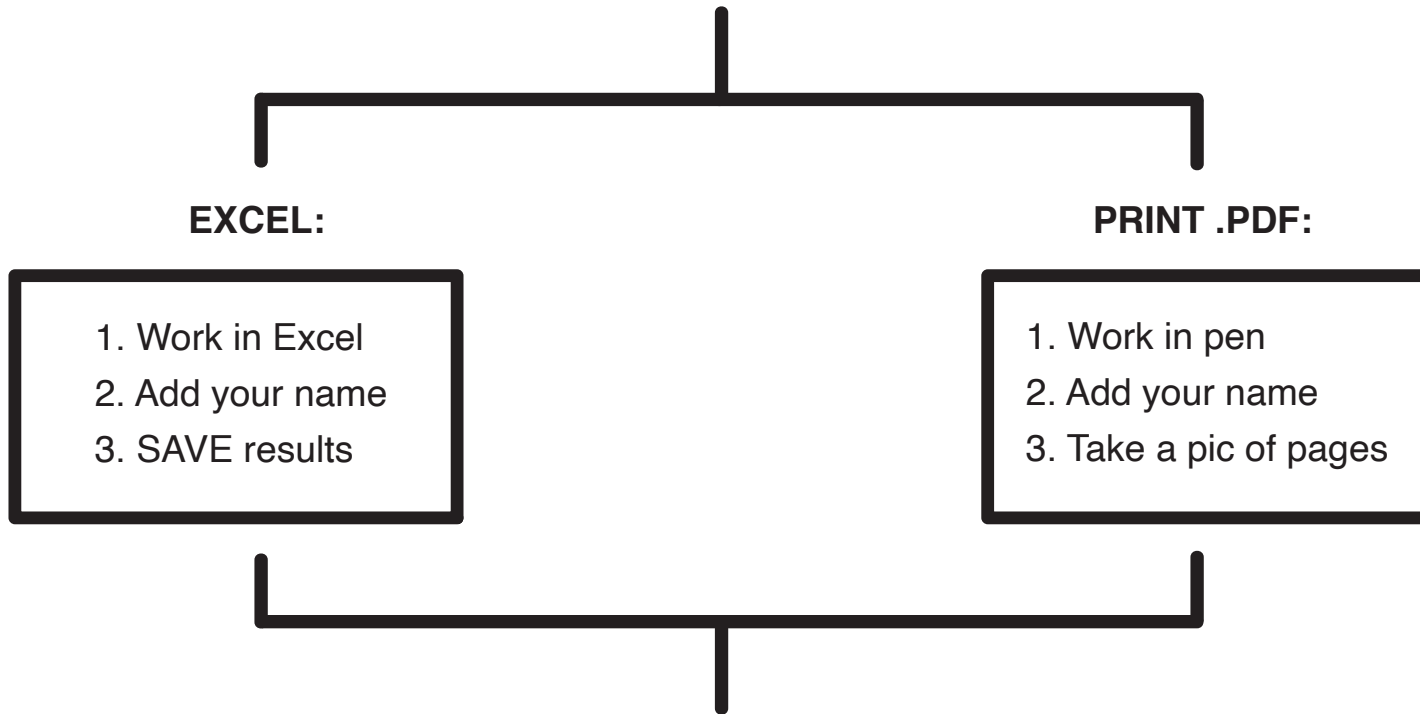
W+

WIGHTMAN



TRI-COMM NON-MOTORIZED TRAIL COMMITTEE 2/26

Instructions to Committee for Ranking Form Spreadsheet:



Return completed .xls or pics to to hleo@saugatuckcity.com
for compilation

2/22/21 pm

**TRI-COMMUNITY COMMITTEE – BLUE STAR TRAIL
COMPARISON OF ENGINEERING PROPOSALS**

	C2AE	BECKETT RAEDER	MOORE BRUGGINK	WIGHTMAN
# Employees	+100	25-40	45	+140
Main office + others	GR, K'zoo, Lansing + 4	Ann Arbor + 2	GR	Benton Harbor + 3
Miles trails last 5 yrs	80 (300 in 54 yrs)		18 (100 in 20 yrs)	60
Fee estimates	\$39,400 thru grant apps, then see below	\$84,710 total (568 hours, breakdown at p. 29)	Design \$80,000 Bidding \$50,000 Construction \$72,000 <u>MDOT \$30,000</u> Total \$187,000 (1800 hours) Estimate \$1.25M for construction + engineering	Prelim Eng \$24-28,000 Design Eng. \$60-115,000 <u>Construction \$80-150,000</u> Total \$164-293,000
Eng fees as % of construction cost	Final design (4-6%), construction (8-10%) [\$165,000 if constr=\$1.1M]		14-18%	Design/Bidding 7-8% Construction 10%
Featured trail projects	Nakwema (Networks NW)(present); Iron Belle (2019); Higgins Lake (DNR)(2008-16); Aurelius Rd., Lansing (bridge)	Acme Twp. Connector (2019) (1.5 mi.); Dixboro Rd. (2.1)(U of M)	Ada's Village (2007-13); 3 Mile Rd in GR (2014); Kentwood Pathway (2007); Ferrysburg (2015)	Indiana-MI River Valley (2012-14, 2012-present)
Multi-community	Dewitt Twp, City, Networks NW, others (see p. 34)		Kenowa (Zeeland-Jamestown)(2012); Grand Haven-Ferrysburg-Spring Lake	River to River Trail (2016-present); Antwerp Twp. Trail (2015-present)

Project Mgr.	Larry Fox	Kristofer Enslow	Steve Groenenboom	Baker w/ Bittner
PM's trail experience	40 miles trails, incl. Nakwema, Iron Belle, etc.		Ada Twp., Kentwood Path	Baker: Chicago Trails
Recent MDOT Experience	Ass't PM is former MDOT; numerous MDOT TAP apps		TBD	Antwerp Twp.? 7-10 MDOT projects/year
Landscape Architect	3	2	G. White	Ben Baker (took MDOT bicycle facility course)
Others	Bridge engineer			Trail Designer (Deneau), grant leader (Hoffert, PE)
Work Plan Notes	Separate planning and design/construction; Monthly timeline; includes maintenance plan			
Traffic Engr. (course or accreditation)	Carter & Assoc.		Progressive AE (Traffic engineer)	Internal: Neitling = member, Inst. Transportation Engrs.
MDOT pre-qualified	yes	yes	yes	yes
Subs/consultants	Emily Meyerson (former DNR)- funding, public engagement (included in fee estimate); Carter – traffic signals		Progressive AE (Traffic engineer)	
Comments	Co-Owner is fireman, works with Janik; work on SD Library expansion; familiar with tourist-driven communities; large team; several worked at MDOT; included sample schedule forms (p.55-56)	Firm has Landscape Architect focus (not civil engineering); Allegan DDA; Cost estimate out of line	Likes 3-lane bridge option; worked in Holland and South Haven	7-10 MDOT, 4-5 DNR projects/year; has projects with AC Road Comm.; expects BST construction in 2024; visuals and costs imp. for fundraising
Questions	Have capacity for BST? Describe recent dealings with MDOT.		Who would handle grant apps? What trail projects w/in last 5 years?	Baker just starting design phase for Indiana River project? Why LA as PM rather than engineer?

			Describe recent dealings with MDOT.	Describe recent dealings with MDOT.
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NAME:
 BLUE STAR TRAIL-NORTH SECTION
 EVALUATION OF ENGINEERING FIRM PROPOSALS TO SELECT TWO FINALISTS

CONFIDENTIAL

2/23/2021

Rank order 1-4 each Bidder against each criteria (1 is top rank).

Criteria Categories

Technical - attributes or features of a product/service/provider based on customer's needs

If equal, use same score; e.g. all equal score 1, 1, 1, 1; three are equal, 1, 2, 1, 1, etc.

Weighted Score

	Weight	CZAE	Beckett Raeder	Moore Bruggink	Wightman	CZAE	Beckett Raeder	Moore Bruggink	Wightman	Notes/Questions
1 Firm Experience in designing, building, and managing bike trails and/or other projects similar in scope (focus = last 5 years)	10.0%					0.00	0.00	0.00	0.00	
2 Project leader experience in designing, building, and managing bike trails and/or other projects similar in scope (focus = last 5 years)	20.0%					0.00	0.00	0.00	0.00	
3 Landscape Architect experience in designing, building, and managing bike trails and/or other projects similar in scope (focus = last 5 years)	10.0%					0.00	0.00	0.00	0.00	
4 Experience with Grant Writing and working with MDOT and DNR in particular in obtaining grants.	20.0%					0.00	0.00	0.00	0.00	
5 Experience with multi-jurisdiction projects	5.0%					0.00	0.00	0.00	0.00	
6 Traffic Engineer Experience	5.0%					0.00	0.00	0.00	0.00	
7 Experience in working with a Fire or Police Department in the design of a road or trail	5.0%					0.00	0.00	0.00	0.00	
Technical Weighting	75.0%					0.000	0.000	0.000	0.000	

Management - features or qualities of bidder as an organization (e.g., management approach, capacity to deliver, interest, financial capacity, business size & type, proprietary rights, references of past performance)

Weight

8 Workplan (is it comprehensive including project planning, design/construction, inspection/quality control, sub-contractor management, grant writing/management, project reporting with TCC, communications plan (key stakeholders), change management, etc.)	20.0%					0.00	0.00	0.00	0.00	
9 Familiarity and experience in project work in proximity to S-D, including working with MDOT and Allegan County Road Commission	5.0%					0.00	0.00	0.00	0.00	
Management Weighting	25.0%					0.000	0.000	0.000	0.000	
TOTAL SCORE	100.0%					0.000	0.000	0.000	0.000	

Correspondence from Dan Fox:

To the Non-Motorized Trail Committee of the Saugatuck City Council:

As planning for the Blue Star Trail begins to heat up (after the study-committee chair unaccountably failed to schedule meetings and things were at a standstill last year), an idea has surfaced that could dramatically speed progress getting the non-motorized trail across the Blue Star Highway bridge. It's simple, inexpensive, and most of all, because it retains the necessary emergency-vehicle, three-lane bridge configuration, it's safe.

Recognizing the behavioral distinction between two types of bicyclists is key to this Blue Star bridge opportunity. As every driver can attest, a great many serious cyclists refuse to ride on bike trails preferring the automobile lanes on the open road. Even when a bike trail parallels a highway, they choose the highway to maintain speed and avoid slower trail pedestrians. This is their right.

Cyclists who, on the other hand, choose a bike trail are more willing to exchange speed for safety. They willingly accommodate slower-moving pedestrian traffic, including children, on the trail. Taking this into account, the existing raised sidewalk (itself already a "non-motorized trail") on the bridge could be widened by a few feet and a center stripe added to segregate trail traffic in two directions. Adding another safety measure, signage could be installed advising trail users to "walk your bike" across the bridge. This is a reasonable request in the same way automobile drivers adjust their vehicle speed and steer past cyclists on the highway.

This approach could also eliminate a second, arguably greater local Blue Star trail obstacle: the bridge over Interstate 196 south of Douglas. Its road and shoulder dimensions are dictated by the federal government, and are unlikely to be altered. Maybe best of all, "walk your bike" over both bridges could allow the trail to be completed through Saugatuck and Douglas in a matter of months, and at a fraction of the cost



Dan Fox
Saugatuck