SHARED USE TRAIL DESIGN ENGINEERING & COST ESTIMATE SERVICES FOR

IN MI RIVER VALLEY TRAIL EXTENSION

Submitted to:
Southwest Michigan
Planning Commission

June 15, 2020
P15865

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June 15, 2020

Kris Martin
Southwest Michigan Planning Commission
376 West Main Street, Suite 130
Benton Harbor, MI 49022

RE: SHARED USE TRAIL DESIGN ENGINEERING & COST ESTIMATE SERVICES FOR IN MI RIVER VALLEY TRAIL EXTENSION

Dear Mr. Martin:

Fleis & VandenBrink (F&V) is excited about the opportunity to be a part of this trail project that will bring communities and groups together in the Berrien County area. Trails act to help define the shape and feel of a community, its neighborhoods and the surrounding area, as well as provide an enhance quality of life. These elements are important to the growth and maintenance of a community.
Some benefits we provide include:

WE KNOW TRAILS

F&V has completed over 130 miles of shared use paths across Michigan in the past 10 years. The resulting collaboration between the fields of engineering and landscape architecture brings forth creative yet realistic solutions that no single discipline could achieve. We recently worked to complete the design and construction engineering of the portion of the Mike Levine Lakelands Trails State Park in Ingham County. The proposed extension has many similarities to the section of trail we previously completed.

GRANT EXPERTS

We aggressively pursue grant funding opportunities on our clients' behalf. Our staff is very active in programs that have significant funding opportunities and are in constant contact with grant and loan agencies. Over the last 27 years, we have assisted our clients with grants and low-interest loans for projects totaling in excess of $730 million. We have helped clients receive $8.1 million in MDNR and $14.2 million in MDOT enhancement grants.

WE HAVE A GREAT TRACK RECORD IN OUR PROFESSIONAL DESIGNS

Year after year, F&V has had excellent control of our project construction costs which is accomplished through good and timely communication and internal peer review. Records show that our construction projects have averaged less than a 1% change between as-bid costs and final construction costs, prior to owner requested modifications. This is completed through good communication during design, internal peer review, and timely communication during construction.

DESIGN WITH SUSTAINABILITY IN MIND

F&V is committed to sustainability. Our experience using sustainable technologies, includes but is not limited to the use of LED lights, permeable pavers, minimizing stormwater runoff with the use of rain gardens. Most of our projects are built with sustainability and LEED-elements in mind, with several projects being LEED-certified.

4978 Campus Drive
Kalamazoo, MI 49008
P: 269.385.0011
F: 269.382.6972
www.fveng.com

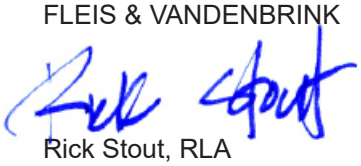
FACE FIRST FIRM COMMUNICATION

We strive to be a “Face First Firm.” Our goal is to meet in person or at least pick up the phone as opposed to conducting our business over email. We want to make communication easy for you to share your thoughts and needs with us at every step of the partnership. Rick is your primary point of contact, and will be responsible for coordinating F&V resources within the firm to meet the specific needs of the Southwest Michigan Planning Commission.

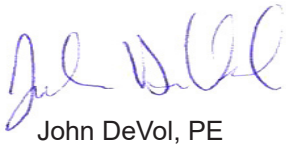
We look forward to working with you to bring your community together and further the development of the IN MI River Valley Trail. Please let us know if you have any questions or need additional information at this time.

Sincerely,

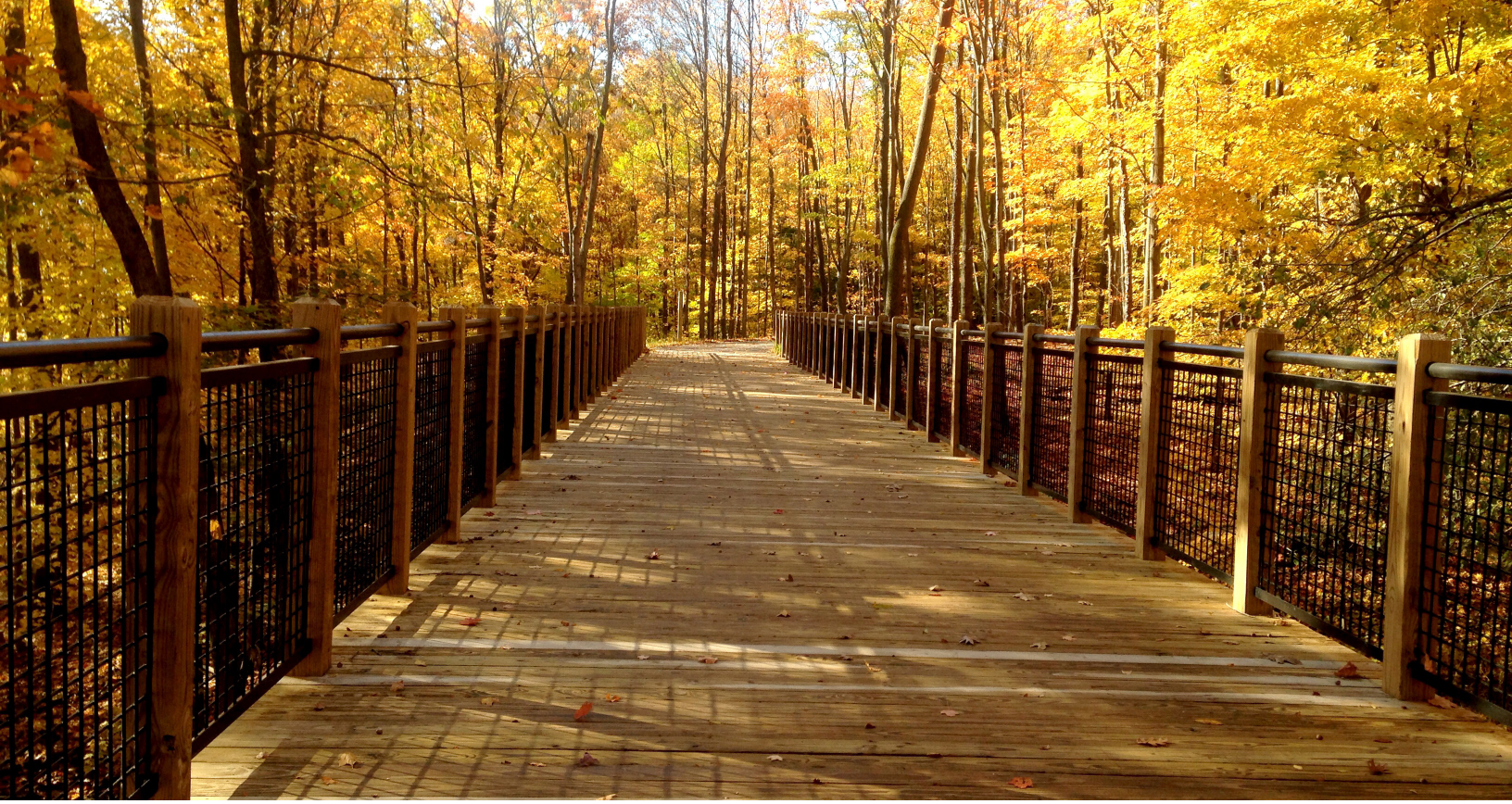
FLEIS & VANDENBRINK



Rick Stout, RLA
Project Manager



John DeVol, PE
Vice President, Principal



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FIRM INTRODUCTION AND PROJECT TEAM

F&V was established in 1993 by two friends and civil engineers – Larry Fleis and Steve Vanden Brink. The firm currently boasts a staff of 225 professionals who carry on the tradition Larry and Steve started of hiring good people, doing good work and having good client relationships.

We build relationships by being good listeners, and hearing your concerns and issues before starting a project. We also try to get a thorough understanding of your goals and critical success factors.

Clients like our technical expertise, responsiveness, and working relationship that puts them at ease. Working together on custom-fit solutions, we help deliver results and award-winning projects as promised – on time and on budget.

Our team is made up of engineers, architects, water resource specialists, landscape architects, geologists, environmental scientists, surveyors, GIS specialists, inspectors, field technicians, construction managers, professional emergency managers, operations specialists, and administrative support.

CORPORATION

Fleis & VandenBrink Engineering, Inc. (F&V) was established in January of 1993 as a firm of Professional Consulting Engineers.

F&V currently operates as a Corporation in the States of Michigan and Indiana.

www.fveng.com | 800.494.5202

CORE PRINCIPLES

Understand our customers' needs and satisfy them…
Employ, value, and empower good people…
Do what we say we are going to do…
Have fun!

FACE FIRST FIRM

At F&V, we strive to be a "Face First Firm," which means we talk to you in person whenever possible or pick up the phone as opposed to conducting business via email. We want to make communication easy at every step of our partnership.

TRUSTWORTHY PARTNER

The F&V team is committed to being a trustworthy partner who performs efficient design and construction services while being a diligent team player.

CAPACITY OF THE TEAM TO DO WORK

F&V has more than adequate capacity to provide added value to the Southwest Regional Planning Committee. Our current workload would guarantee a minimum total available capacity of 80% to maintain schedules.

PROJECT TEAM

Our project team has vast experience in trails and pathways. Staff are based out of our Grand Rapids office, with additional as-needed assistance from Kalamazoo. Resumes for key staff are provided on the following pages.

Rick Stout, RLA, LEED AP BD+C I Project Manager and Landscape Architect
Rick has 34 years of experience in design development. He has served as landscape architect, providing design on dozens of parks & recreation-related projects, such as 5-year parks & recreation master plans and trails. He frequently works with state and local permitting agencies to meet landscape standards within site's jurisdiction. He has a background in green/sustainable design and he excels at facilitating an open and non-threatening process to elicit and capture the sentiments of multiple project stakeholders. He seeks out all sides of the issue and then works to build a level of consensus through the project.

Rick Thorne, PE I Assistant Project Engineer
Rick's expertise lies in design and construction engineering of trails, streets, sidewalks and shared-use path systems. Rick also has experience in design and inspection of MDOT region wide pavement markings, conducting mobility analysis, and reviewing construction work zones

Andrew Filler, I Assistant Project Engineer
Andrew has eight years of experience in the preparation of designs and construction documents for site enhancement projects. He has served as a landscape designer, associate landscape architect on the design of playgrounds, trail systems, community parks and site improvements. He has also served as lead project manager for construction of commercial /residential development projects.

Don DeVries, PE I Principal-in-Charge, QA/QC
Don will provide QA/QC for the project. He has 30 years of civil engineering experience. His experience includes design and project management of site design and development and construction document. He has worked on several community development projects in the western Michigan region.

ADDITIONAL SUPPORT

Resumes of our additional support will be provided upon request. Supporting our key staff includes:

Max George, PS, CFM I Survey Supervision QA/QC
With 30 years of experience, Max leads our survey group and provides assistance with survey data management, research, planning, drafting and fieldwork. He is an expert in a wide range of survey projects and surveying methods. Max will oversee the survey crew providing field survey topo, yet to be identified.

Shane Dressander I Survey Data Processing
Shane's primary role is to quickly process the data collected by field personnel. Shane develops easy to read construction plans for your design professionals. For construction staking projects, Shane is responsible for creating stake out data for the field crews.

Rob LaPlaca I CADD Technician
Rob has experience in civil engineering with a sustainability designation. He has a passion for urban development and systems thinking. He has experience with workflow design and initial application of citywide utility maps, trailway engineering and design and GIS reconciliation.

Mark Frank, PE I Office Technician
Mark provides MDOT office technician duties for a variety of projects. Mark is involved with oversight and reporting of soil borings, foundation and pavement design recommendations, construction testing and inspection of soils, concrete, masonry and bituminous pavement.

Kelly Rice, PWS I Wetlands
Kelly specializes in large-scale project management as well as wetland assessments and delineations, wetland mitigation design, wildlife and protected species surveys and habitat assessments, technical report writing and review, and regulatory compliance and permitting. She manages and performs ecological studies on multiple types of projects and properties including energy and transportation linear corridors, large private tracts proposed for development or restoration, and municipal, state and federal lands.

PROFESSIONAL BIO

Rick has been involved in the design, preparation of plans and specifications, and construction of site development projects for 30+ years. He serves as landscape designer, lead landscape architect and project manager for the study, design and construction of streetscapes, parks trailways, site improvements and residential developments.

Rick has prepared successful grant applications for more than 40 projects involving federal aid. Funding sources include MDOT TEA-21, MEDC CDBG and MDNR MNRTF and LWCF funding programs. Rick also brings the unique insight from serving five terms as city council member in his community as well as two terms on the zoning board of appeals, two past terms on the zoning board and three terms on the park and recreation advisory board.

RICK STOUT, RLA, LEED AP BD+C

Project Manager and Landscape Architect

rstout@fveng.com
616.942.3606

BS Landscape Architecture
Michigan State University

Landscape Architect
Michigan (No. 3901001054)
North Carolina (No. 1561)

FEATURED EXPERIENCE

Mike Levine Lakeland Trails State Park - Stockbridge
Landscape architect providing landscape architecture design engineering for four ADA compliant trail crossings using MDOT Safety Funds. The 2.5 mile long trail offers a scenic and peaceful natural setting for families to enjoy walking, hiking, bicycling, equestrian and other recreational uses.

Oxford Street Trail and Bridge - Grand Rapids
Landscape architect involved in the design and construction engineering services to construct a non-motorized trail on the City's southwest side. Project includes approximately two miles of trail improvements, a new pedestrian bridge, and renovation of an abandoned railroad bridge.

Upper Macatawa Natural Area- Zeeland Township, Ottawa County
Project manager and landscape architect providing grant writing assistance under the Michigan Department of Transportation Enhancement Program in which the County Parks Department received over $675,000 in funding. F&V prepared final design plans for 2.5 miles of paved trailway, six wood pedestrian bridges, and one prefabricated metal pedestrian bridge.

I-96 Trail Connector Loop - Portland
Landscape architect for the development of over 9 miles of pathways that bisect the community providing residents and visitors access along the scenic corridors of the two rivers as well as connecting most of the schools and parks. F&V provided design and construction engineering services for each phase of the community's trailway projects.

42nd Avenue Explorers Trail / Grand River Idema Explorers Trail – Ravines Connector Segment
Ottawa County Parks and Recreation, MILandscape architect for the design of the approximately 3,700 ft of trail from the Idema/Versluis GVSU segment to Grand Ravines County Park.

RICK THORNE, PE
Assistant Project Engineer

PROFESSIONAL BIO
Rick has over 10 years of experience as a project engineer in various civil projects including design and construction engineering of streets, sanitary sewer, storm sewer, water main, sidewalks and shared-use path systems. His experience includes construction inspection and testing services on numerous MDOT projects including freeway lighting construction, DMS replacement and improvements, roadway construction, moisture-density testing, and sewer and water improvements. Rick also has experience in design and inspection of MDOT region wide pavement markings, conducting mobility analysis, and reviewing construction work zones. This combination of field and office experience gives Rick a unique experience of the realities that often occur during construction that can be addressed in the design stage with advance planning and forethought.

rthorne@fveng.com
616.588.1923

BS Civil Engineering
Michigan State University

Professional Engineer
Michigan (No. 6201060595)

FEATURED EXPERIENCE

Safe Routes to School - Centreville
Project engineer for 1.13 miles sidewalk placement utilizing SRTS grant funding as a local agency MDOT project. Included sidewalk alignment development, property owner routing coordination and restoration. Final project construction cost $379,511.

Longbridge Road Shared Use Path Feasibility Study - Pentwater Township
Project engineer responsible for preliminary engineering and a feasibility study for the 2.1-mile long shared use path. The study evaluated the use of bike lanes and a shared use path and looked at several options to cross the Pentwater River given the current bridge and fishing deck that exists in this area.

Engle Trail - Hudson
Project engineer for a local agency MDOT project. Included trail alignment development, Garrison Drain crossing, MDOT right of way/permit coordination at M34 crossing, easement coordination, and utility relocation coordination. Projected construction cost $152,000.

Sunrise Meadows Trail - Hudson
Project engineer for 0.66 mile hot mix asphalt shared use path utilizing CMAQ funding as a local agency MDOT project. Included trail alignment development and easement coordination with the Hudson Area Schools and a local church. Final project construction cost $105,639

Murdock Trail - Hudson
Project engineer for 0.91 mile hot mix asphalt shared use path utilizing CMAQ funding as a local agency MDOT project. Included utilization of abandoned railroad grade, creek crossing, railroad bridge railing, trail alignment development outside of railroad grade, and property acquisition/easements. Final project construction cost $189,870.

PROFESSIONAL BIO

Andrew has 8 years of experience in the preparation of designs and construction documents for site enhancement projects. He has served as a landscape designer, associate landscape architect on the design of playgrounds, trail systems, community parks and site improvements. He has also served as lead project manager for construction of commercial / residential development projects

ANDREW FILLER

Landscape Architect

afiller@fveng.com
616.942.3627

BS Landscape Architecture
Michigan State University

FEATURED EXPERIENCE

Watervliet County Park - Watervliet

Project landscape architect providing design engineering for new non-motorized trail system, kayak launch, restroom building, and new ADA parking layout. The trail system offers scenic settings for people to enjoy as well as fishing and kayak opportunities for the community.

Keppel Forest Park - Holland

Project landscape architect providing design engineering for new non-motorized trail system, site furnishings, and parking layout improvements. The trail system has many loops for people to enjoy different views and levels of difficulty based on terrain.

Jackson Park - Wyoming

Project landscape architect providing design engineering for new splash pad and playground area with surrounding walking trails for community members. This was a brown site project that had contaminated soils and in need of some improvement through a new parking layout, new restroom building, shelters, site furnishings, and site lighting.

LaCrone Park - Kalamazoo

Project landscape architect providing design engineering for new splashpad area with site furnishings, lighting, and parking area layout. This project created a nice large splashpad for the community members to enjoy in the area with a nice walking pathway around the splashpad for pedestrians to enjoy as well.

Ferrand Park - Bryon Center

Project landscape architect providing design engineering for a new playground design that includes a large group shelter, new sidewalks, retaining walls, and site furnishings. This park is a great little park for kids in the area to enjoy and be under the shade of the large trees.

PROFESSIONAL BIO

Don is involved in the study, design and construction engineering of streets, sanitary sewer, storm sewer and water main, sidewalks and bike path systems. He has over 29 years of experience as a Project Engineer/Manager in various civil engineering projects. He has completed many water and sewer feasibility studies, developed Water System Reliability Study and Master Plans for communities and designed many elevated water towers.

He has assisted in the design, permitting, and construction of various site design and infrastructure systems, as well as construction inspection, compaction testing and surveying.

DON DEVRIES, PE

Design Engineer | Senior Associate

ddevries@fveng.com
616.942.3628

BS Civil Engineering
Calvin College

Professional Engineer
Michigan (No. 6201039621)

FEATURED EXPERIENCE

Upper Macatawa Natural Area Non-motorized Pathway - Ottawa County
Project engineer, construction administrator, and quality control reviewer for trail project design under the Michigan Department of Transportation Enhancement Program in which the County Parks Department received over $975,000 in funding for this $1.6 million project. The project included over two miles of HMA non-motorized shared use pathway, prefabricated pedestrian bridge, wood pedestrian bridges, site signage, tree planting, ADA ramps with tactile warning devices, and drainage improvements.

Shared-use Path - Hudsonville
Project manager for the design of 0.33 miles of shared-use path. Design included mobilization, signage, and slope restoration.

Oxford Street Trail and Bridge - Grand Rapids
Project manager for the design engineering services of a two mile-long non-motorized trail. Improvements included a new pedestrian bridge and renovation of an abandoned railroad bridge.

Shamrock Park Expansion - Berrien Springs
Project manager for the development of bidding and construction documents for a new 1,040 square foot restroom building within an existing campground. The various tasks included performing code analysis, coordinating the integration of various building systems, drafting, detailing, and the reviewing of shop drawing submittals.

Hart Commons - Hart
Project engineer, construction administrator and quality control reviewer for the conversion of this one acre lakefront site to a community gathering spot. The City and Hart Main Street have championed this project by bringing together fundraisers, community leaders and citizens to create an active space where the community will gather and thrive. The accessible park includes a performance area, chess tables, seating shelters, observation deck, capping 12 ground water monitoring wells, concrete retaining walls, decorative concrete paving, decorative arch with sign, amphitheatre style seating, public restrooms, wire cable railing and placing overhead electrical underground to create a site that offers a great view of Hart Lake.

SIMILAR PROJECT EXPERIENCE

We have provided project experience sheets on the following projects:

- Mike Levine Trail Improvements - Stockbridge, MI
- Upper Macatawa Natural Area - Zeeland Township, MI
- Flint River trail Design and Construction Engineering - Genesee County, MI
- 42nd Avenue Explorers Trail / Grand River Idema Explorers Trail – Ravines Connector Segment - Ottawa County Parks and Recreation, MI
- Indian River Pathway - Tusacora Township
- Overall Trails and Pathway Experience Matrix

REFERENCES

Ottawa County Parks & Recreation
Curt TerHaar, Parks Coordinator
616.738.4812

City of Portland
S. Tutt Gorman, City Manager
517.647.2931

Village of Grand Blanc
Wendy Jean-Buhrer, City Manager
810.694.1118

Genesee County Parks and Recreation
Barry June, Director
810.736.7100

Village of Stockbridge
Molly Howlett, President
517.290.8245

MIKE LEVINE TRAIL IMPROVEMENTS

Stockbridge, MI

PROJECT INFORMATION

Date Completed: 2019
Project Cost: $875,000

CONTACT

Molly Howlett, President
305 West Elizabeth Street, Stockbridge, MI 492585
517.851.7435

Mike Levine Lakelands Trail State Park is part of the Great Lake-to-Lake Trail that stretches from South Haven to Port Huron. The trail starts at Hall Road in Livingston County and extends to Hawkins Road in Henrietta Township, Jackson County. In June 2018, the trail was renamed in honor of Michigan trails champion Mike Levine. It is one of five linear state parks that were converted from abandoned railroad corridor in the Michigan state park system. The 22-mile trail is popular with walkers, hikers, bicyclists, horseback riders and cross-country skiers.

The Stockbridge section, the project area that F&V assisted on engineering and construction oversight, consists of 1 mile of paved 10’ wide trail with crushed aggregate shoulder and 1.5 miles of crushed aggregate pathway. The crushed aggregate trailway was designed to accommodate equestrian use. Other amenities include a horse trailer parking area, trailhead paved parking area, vault toilet, information kiosk, and bicycle repair station.

The project vision was part of the Five Healthy Towns, whose mission is to cultivate improvements in personal and community wellness. Funding was provided by the Ingham County Trail mileage and two private donors.

UPPER MACATAWA NATURAL AREA

Zeeland Township, MI

PROJECT INFORMATION

Date Completed: 2015
Construction Cost: $1,600,000

REFERENCE

Curt TerHaar, Coordinator
1220 Fillmore Street, West Olive, MI 49460
616.738.4656

The Upper Macatawa Natural Area (UMNA), located in Zeeland Township, includes 576 acres with the potential for up to 700 acres in the future. In addition to recreation, the UMNA is being developed around the principles that recognize the value of the site for water quality improvement, flood water storage and wildlife habitat enhancement.

The Upper Macatawa Greenway Trail will connect the Fred Meijer Kenowa Trail with the Lakeshore Trail along the Lake Michigan Shoreline as well as serve as a primary staging point with such amenities as parking and restroom facilities. Completion of this section of two miles from Byron Road to Adams Street will eventually create a continual connection from the Grand Rapids region to Holland and the lake shore area.

F&V assisted Ottawa County Parks Department in receiving over $675,000 in funding from the Michigan Department of Transportation Enhancement Program. F&V also prepared final design plans for 2.5 miles of paved trailway, six wood pedestrian bridges and one prefabricated metal pedestrian bridge.

FLINT RIVER TRAIL DESIGN AND CONSTRUCTION ENGINEERING

Genesee County, MI

PROJECT INFORMATION

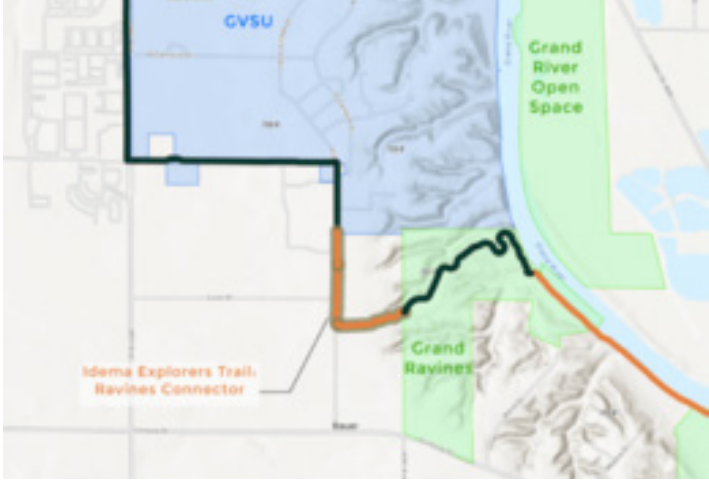
Date Completed: 2015
Construction Cost: $898,000

REFERENCE

June Barry, Director
5045 Stanley Road, Flint, MI 48506
810.736.7100

F&V provided both preliminary and construction engineering services for this important section of the Michigan Iron Belle Trail and the local Flint River Trail network. This project connects an existing pathway at Stepping Stone Falls (near the southerly end of Mott Lake) to an existing pathway near the Bluegill Boat Launch at Coldwater Road and Center Road.

A new 14 foot wide pedestrian bridge adjacent to Stepping Stone Falls provides easy viewing of the picturesque, man-made waterfall. From the falls, this 1.4 mile long trail winds through Genesee County Park property which is enhanced with diverse wetlands, woodlands, and wildlife.



42ND AVENUE EXPLORERS TRAIL / GRAND RIVER IDEMA EXPLORERS TRAIL – RAVINES CONNECTOR SEGMENT

Ottawa County Parks and Recreation, MI

PROJECT INFORMATION

Date Completed: Fall 2019
Construction Cost: $301,000

REFERENCE

Curt TerHaar, Coordinator
1220 Fillmore Street, West Olive, MI 49460
616.738.4656

The communities on the river between Grand Rapids and Grand Haven are among the most rapidly developing in West Michigan and include valuable regional assets. Georgetown Township is the most populous community in Ottawa County while Allendale Township was the fastest growing township in the State in 2015.

West Michigan is poised to become one of the premier metro areas in the Midwest. To remain competitive and to attract residents, healthy ecosystems and iconic recreational experiences are needed. The greenway lands and Idema Explorers Trail will offer this type of experience and improve the quality of life for all those in and around west Michigan.

This investment will create recreational, educational, conservation and historic attractions by protecting some the highest quality land remaining along the river, connecting the greenway properties to each other, and completing the most critical remaining unfinished link in the regional pathway system – a trail, the Idema Explorers Trail, connecting Grand Rapids, Grand Haven, and Grand Valley State University.

F&V provided topographic survey, final design and construction observation for approximately 3,700 lft of trail from the Idema/Versluis GVSU segment to Grand Ravines County Park.

INDIAN RIVER PATHWAY

Tuscarora Township, MI

PROJECT INFORMATION

Date Completed: 2014
Construction Cost: $808,500

REFERENCE

Michael Ridley, Supervisor
3546 South Straits Highway, Indian River, MI 49749
231.238.0970

F&V provided full project support from conceptual design, funding and grant assistance, to design and construction for one mile of trail. F&V worked closely with Tuscarora Township and leveraged three grant programs to develop the most cost-effective project as possible.

The project involved the construction of an HMA pathway along Wilson Road and M-168 to connect business, schools, Burt Lake State Park, and the Mackinaw Rail trail. The project enhanced education, economy, and tourism. The project involved constructing a pathway according to AASHTO, MDOT, and ADA standards along a busy corridor and included a pedestrian bridge over the Sturgeon River.

The project was 86.4% covered by grants.

F&V Shared Use and Non-Motorized Path and Trail Experience

		Length (in miles)	PATHWAY FEATURES:	Road Crossing	Wetlands	Drain Crossings	Trailhead	Bridges	Rails to Trails	Elevated Boardwalk	ADA / Universal Access / Barrier Fre	AASHTO	SERVICES PROVIDED:	Conceptual Planning / Scoping	Design Engineering	Cost Estimates	Specifications	Right-of-Way Acquisition Assistance	Surveying	Testing & Field Investigation	Construction Engineering	Grant Assistance	Permitting	FUNDING SOURCE:	DNR Trust Fund	MI DOT TA
Trailhead & Boat Launch	Saranac						X				X				X				X			X			X	
Fred Meijer Flat River Valley Rail Trail Connector	Belding	0.12		X			X				X	X			X				X		X		X		X	
Grand River Explorers Trail: 42nd Street	Ottawa County	0.70		X							X	X			X			X	X		X		X			
Clio City Park Trailhead	Clio	0.20		X			X				X				X	X		X	X		X		X		X	
Saranac Park Trailhead Staging	Saranac	0.20		X			X				X				X	X		X	X		X		X			
Pentwater-Hart Trail	Pentwater	6.00		X	X	X	X	X	X	X	X	X		X					X			X	X		X	X
Iron Belle Trail	Burton	2.80		X			X				X	X		X		X										
Timber's Trail	Long Lake Township	0.90			X	X	X			X	X	X		X	X	X	X		X	X	X		X		X	
County-wide Bike & Pedestrian Trail Master Plan	Jay County, IN	28.00												X												
Mike Levine Lakeland Trails	Stockbridge	2.50		X					X		X	X			X	X	X	X	X		X		X			X
LAFF Pathway	Agentine Township	2.0		X	X	X	X				X	X		X	X	X	X	X	X			X					X
Turnpike Road Multi-Use Path	Hagerstown, IN	0.3		X					X		X	X		X	X				X		X		X			
Summit Park Trail	Fort Wayne, IN	2.3		X		X		X	X			X			X						X					
Shared Use Path Design Phase I	Hudsonville	0.3		X		X						X			X			X								
Perry Road Pedestrian Bridge	Grand Blanc	0.1				X		X			X	X		X	X	X	X	X	X	X	X	X	X			
Flint River Trail - Iron Belle	Flint	1.4		X	X			X			X	X			X	X	X	X	X	X	X	X	X			
Upper Macatawa Greenway Path	Ottawa County	2.5			X			X		X	X	X			X	X	X	X	X	X	X	X	X			X
Scheid Park Trail Connection	Saranac	0.8			X		X					X			X		X			X	X	X			X	
Kelly Lake Boardwalk	Burton	0.1			X					X				X	X	X	X		X		X	X	X		X	
Coldwater Trail	Quincy	4.7										X			X											
Fred Meijer - CIS Trailway Study	Owosso	3.5		X							X	X		X		X										
Indian River Pathway	Tuscarora Township	1.0		X				X			X	X		X	X	X	X		X	X	X	X			X	X
Findlay Bridge & Murdock Trail	Hudson	0.8				X		X	X						X	X	X		X	X	X		X			
Genesee Valley Trail	Flint Twp	2.7		X		X			X		X	X								X	X					
Murdock Trail	Hudson	0.9							X						X						X				X	
Archbold-Wilson Park Trail	Ossian, IN	1.3					X				X				X				X		X				X	
Lake Street Trail	Benzonia	0.5					X				X				X	X		X	X	X	X					
Black Mountain Trail Relocation	Onaway County	0.3			X										X		X		X		X		X		X	
Silver Lake Road Pathway	Argentine Township	2.0		X	X	X						X		X		X		X				X			X	
Perry Road Pathway	Grand Blanc	0.5				X					X				X		X	X	X		X		X			
McDonalds Pathway Bypass	Flint	0.3		X							X	X		X		X	X		X							
I-96 Trail Completion	Portland	9.0		X					X	X	X				X			X	X	X	X	X	X		X	
Jewett Trail Pathway	Grand Blanc	1.0			X	X					X	X		X	X	X	X	X	X	X	X	X	X			
Oxford Street Trail & Bridge	Grand Rapids	2.0						X	X		X	X			X	X						X				
White Pine Trail	Howard City	0.5		X			X		X		X	X			X	X	X		X	X	X	X				X
Flint River Trail Master Plan	Genesee County	6.5		X				X		X	X	X		X	X	X		X	X		X					
Flint River Trail - Mott Lake Extension	Genesee County	1.4		X	X	X		X			X	X			X	X	X		X	X	X		X			
Shiawassee River Heritage Water Trail	Oakland County	7.0			X						X				X								X			
Grand Traverse Greenway Multi-Use Pathway	Flint	3.1		X			X	X	X						X										X	
Trail Master Plan	Three Rivers	27.0												X					X							
Veterans Park Trail	Stockbridge	0.3									X	X			X						X				X	
Nature Park Trail	Saranac	0.8								X	X	X			X						X				X	
Buell Lake County Park Trail	Genesee County	1.0									X				X								X		X	
East Riverside Park Trail	Belding	0.5								X	X	X			X	X	X		X	X	X	X	X		X	
Bogue Flats Park Trail	Portland	1.0				X	X	X		X		X			X						X				X	
Perry Road Sidewalk (SRTS)	Grand Blanc	0.3		X							X			X	X	X	X	X	X		X	X	X			
Fall Creek Parkway	Indianapolis, IN	2.5													X	X	X				X					
		133.4																								

CONSTRUCTION COST CONTROL AND SCHEDULING

DEFINITIONS OF QC, QA AND QCP

Quality Control (QC)

The review, supervision, and guidance by experienced individuals at various stages of a project conducted to assist and guide the project team in completing the work correctly while meeting the goals and objectives of the client.

Quality Assurance (QA)

the process of continuous updating and improving the firm's standards, guidelines and checklists as they are used by the project team in completing a project to assure that the work and services provided to the client are complete, accurate and useful.

Quality Control Plan (QCP)

A written statement or plan with outlined procedures and guidelines including both QC and QA to be used by the project team in meeting the client's expectations, goals and objectives. The QCP identifies individuals responsible for QC and the specific work plan, budget and schedule to be followed by the project team.

QA/QC PHILOSOPHY

Quality shall always be considered first and foremost. The hiring of staff, workplace and materials provided, management guidance, training, time and effort shall all reflect the requirement that quality is the number one issue at F&V. The ability of F&V to provide a quality product shall be required during the consideration, acquisition, initiation, completion and closing of all projects.

F&V has set five goals with quality based objectives:

- **Goal 1:** Provide "top of the line" engineering services to solve our client's problems while maintaining a work environment that is fun and challenging.
- **Goal 2:** Serve the client as a firm; not as individuals. Internal peer review on project designs, studies and important issues is required. All work shall have consistent presentations from the firm.
- **Goal 3:** Provide value in what we design and in the services rendered. Alternatives shall be properly studied with senior staff being part of the team to evaluate alternatives. Allow creativity yet manage risk. Facilitate the training of staff and allow for ongoing personal and technical growth.
- **Goal 4:** Provide our services on a timely basis. A team effort requires total cooperation and communication from all members of the team. The QA/QC process must help – not hinder our success.
- **Goal 5:** Provide services on a "cost-effective" basis, minimizing re-designs, minimizing risks to our client and to the firm and making a profit. Internal and external communication is critical. Projects must be thought out well and scope of services monitored. Checklists shall be utilized where appropriate.

Responsibility
In order to maintain the quality objectives of this firm, the President, in cooperation with the Vice President, shall be responsible for overseeing QA/QC responsibilities of the firm, QA/QC manager, project manager and staff as outlined in the full F&V QA/QC document.

Quality Statement
A Quality Statement shall be prepared for each project. The QS shall contain:

- All information to properly identify the project, the client, the form of contract, the project locations and scope, the scope of services, the project manager and principal-in-charge, the project team members, the schedule, the budget, and the milestones for QA/QC reviews
- Procedures and standards to be used on the project

Trail Project – Sample QA/QC Plan Outline
The Stockbridge Mike Levine Lakelands Trail Improvement Project was managed by Rick Stout. The project engineer was Don Devries. Survey review was done in accordance with F&V standards with review by Kevin Cleaver. QA reviews were conducted by Craig Shumacker and were scheduled for the following milestones: In-house project startup meeting, Program Analysis at 5%, schematic design 30%, preliminary design 60%, final design/contract manuals at 95-100%.

Organization Chart of QA & QC Managers **Company Quality Assurance Officer** Craig Shumaker, PE, Senior Vice-President					
Discipline	**Engineering Design & Construction**	**Bridge Design & Construction**	**Landscape Architecture**	**Environmental**	**Survey**
Quality Control Responsibility	Project Managers	Project Managers	Project Managers	Project Managers	Project Managers
	Don DeVries Todd Richter Paul Galdes Jon Moxey Steve Bishop Steve Nagy John DeVol	Todd Richter Jon Moxey	Rick Stout Harry Wierenga Steve Czadzeck	Brian Rice Eric Walters	Max George Kevin Cleaver

Constructability Statement
The effectiveness of our quality is demonstrated in the fact that, on the average, our construction costs have averaged to be within 1% of the as-bid amount. With our sister company F&V Construction (FVC), we also have their staff review the project at typical milestones opportunities for Value Engineering and constructability from the contractor's perspective

ENHANCEMENT GRANTS

F&V's experience in grant implementation is extensive, including the Transportation Alternatives Program (TAP) that funds projects such as nonmotorized paths, streetscapes, and historic preservation of transportation facilities. Our knowledge of the TE/TAP program in areas such as SHPO requirements, AASHTO Guidelines for Bicycle facilities and LAP program criteria can aid in your projects implementation. We have helped communities received over $14.2 million in enhancement grants. Communities that we have recently assisted in developing plans include:

LAFF Pathway - Argentine Township	$430,000
Grand Blanc Road Streetscape - Grand Blanc	$584,300
Jewett Trail Pathway - Grand Blanc	$93,000
Shaw Street Water Quality - Howard City	$465,000
M-66 Streetscape - Village of Nasvhille	$450,000
Upper Macatawa Non-Motorized Path - Ottawa County	$975,000
Indian River Pathway - Tuscarora Township	$833,000
Main Street Streetscape - Potterville	$450,000
Edgerton & Ensley Street Streetscape - Howard City	$450,000
Downtown Improvements - Buckley	$216,000
M-44 Corridor Enhancement - Buckley	$875,000
M-42 Streetscape - Manton	$342,000
M-37 Enhancements - Grant	$361,277
Main Street Streetscape and Street Reconstruction - Middleville	$650,000
Main Street Improvements - Caledonia	$294,000
Maple Street Improvements - Portland	$440,000
M-20/M-66 Corridor Enhancement - Remus	$275,000
US-31/33 Streetscape - Berrien Springs	$550,000
Center Street Reconstruction - Douglas	$475,000
White Pine Trail & Trailhead Staging Area - Howard City	$200,000
Murdock Trail - Hudson	$130,560
M-115 Streetscape - Mesick	$550,000
Western Avenue - Muskegon	$1,000,000
M-37 Streetscape - Newaygo	$220,000

RECREATION GRANTS

F&V's experience in grant implementation is extensive, including the MDNR Trust Fund, MDNR Waterways Commission and the MDEQ Coastal Zone Management. Our knowledge of the grant programs and special initiatives and criteria can aid positioning your projects funding request in the most favorable light possible.

We have helped clients receive over $8.1 million in recreational grants! Sample communities that we have assisted recently developing plans for their grant funding include:

Belding - East Riverside	MDNR TF	$211,640
Berrien Springs Shamrock Park Campground	MDNR TF	$306,800
Burton	MDNR TF	$171,000
Coldwater Township	MDNR TF	$263,600
Dalton Township (A)	MDNR TF	$30,000
Golden Township (A)	MDNR TF	$400,000
Hamburg Township	MDNR TF	$247,000
Ionia County Bertha Brock Park	MDNR LWCF	$75,000
Lowell Charter Township	MDNR LWCF	$178,300
Marquette	MDEQ CZ	$25,000
Muir Village	MDNR LWCF	$90,000
Mullett Township	MDNR TF	$280,000
Newaygo County – Sandy Beach County Park	Waterways	$294,875
North Adams Township	MDNR TF	$247,000
North Muskegon	MDNR TF	$47,000
Northport	MDNR TF	$500,000
Village of Saranac River Trail	MDNR TF	$59,500
Scottville	MDNR TF	$284,800
Stockbridge	MDNR LWCF	$75,000
Tuscarora Township	MDNR TF	$393,400
Vicksburg	MDNR TF	$183,000
Yankee Springs Township	MDNR LWCF	$35,000
Worth Township (planning grant)	MDEQ CZ	$6,500

STATEMENT OF UNDERSTANDING, WORK PLAN AND TIMELINE

STATEMENT OF UNDERSTANDING

The Southwest Michigan Planning Commission (SWMPC) is requesting proposals from qualified consultants to provide professional design engineering services for the development of the IN MI River Valley Trail Extension in Berrien County, MI (see map right) Construction for the project will be paid for with a combination of yet to be identified grant programs and sources.

As mentioned in the RFP, the early planning stages of this project were completed in 2018-2019 with a Michigan Department of Health and Human Services (MDHHS) 4x4 Health and Wellness Grant. Activities already completed include the development of a stakeholder group, researching and mapping parcel/property ownership data, alternative route research and mapping, and conducting public engagement activities to gather community input and support for the project.

The stakeholder group includes community leaders from:

- Berrien County Parks
- Indiana-Michigan Power
- City of Niles
- Niles Charter Township
- Oronoko Township
- Berrien Township
- Village of Berrien Springs
- Michigan Department of Transportation
- Berrien County Road Department
- Bike Michiana Coalition.
- Be Healthy Berrien/Berrien County Health Department
- SWMPC

The proposed project will include approximately 9 miles of a 10’ wide HMA paved non-motorized trail, following the old interurban route from Plym Park in Niles, MI to Range Line Park in Berrien Township.

A preliminary route has been determined through parcel ownership and a public input process. The current preliminary route from Niles to Berrien Springs is a corridor owned by the following:

- City of Niles
- MDOT
- Berrien County Road Department
- Niles Township
- IN MI Power/AEP

Within this proposed trailway section, construction and/or rehabilitation a non-motorized bridge will be required in the areas of Spring Valley Drain, the Whalen Extension of the Spring Valley Drain and the Dowagiac River as well as any potential culvert/drainage crossings.

The construction contract for the project will likely be let by the Michigan Department of Transportation (MDOT). Construction is anticipated to be substantially complete and the trail open to traffic no later than the fall of 2022.

We believe the following opportunities and concerns should be investigated to assure your project's success:

- All improvements should strive to meet AASHTO design standards for non-motorized pathways.
- Evaluation of existing infrastructure is key. Doing things right the first time willavoid expensive rework in the future This analysis is critical at the existing bridge and culvert locations.
- Design and specifications developed for this shared use trail shall meet all AASHTO and ADA guidelines for an MDOT Transportation Alternatives Project (TAP) funded project and incorporate environmentally friendly design to meet criteria for MDNR Trust Fund Grants
- Engagement of EGLE and county staff early in the process to determine permitting requirements, for improvements that may impact wetlands, drains and waterways.
- Opportunities for restoration using native plantings need to be explored in environmentally sensitive areas along the proposed pathway
- All improvements should strive for Universal Access. Design principles focusing on Universal access provide equal levels of experiences for all age groups and abilities while delivering on the ADA's promise of equal accessibility opportunities.
- The participation of the SWMPC Staff & stakeholders is key to the overall development of the construction plans especially in the early stages of design development and refinement.

We have evaluated the EGLE wetlands map viewer, Web Soil Survey, and the FEMA mapping for the project area. Based on our preliminary review, there does not appear to be any environmental site factors that would hinder the pathways construction.

OUR EXPERIENCE

F&V recognizes that the value of pathways and trails extends far beyond linking together destinations on a map. They also have the capacity to connect people to the natural environment. By reconnecting people, the process of trail building also becomes a process of community building.

F&V is currently working with other communities on projects similar to the IN MI River Valley Trail with funding agencies such as MDOT TAP (former TEA-21 Enhancement), MEDC and Michigan Natural Resources Trust Fund. We have past experience with trail projects for the City of Kentwood, Village of Saranac, Village of Howard City, the City of Belding, the City of Portland, Yankee Springs Township and the City of Grand Rapids. We also have extensive experience with MDOT Grant Programs and have assisted the following communities from grant submittal through construction:

MDOT TEA-21 & TAP Programs

- City of Newaygo
- City of Potterville
- City of the Village of Douglas
- Village of Berrien Springs
- Village of Spring Lake
- City of Grand Rapids
- Village of Caledonia
- Meridian Township
- Village of Middleville
- City of Muskegon
- Kinross Township
- City of Grayling (MDOT)
- Grayling Township
- City of Belding
- City of Portland – Pending
- Village of Howard City
- City of Pinconning
- Village of Remus
- Village of Homer

F&V specializes in providing full-service engineering design and consultation to over 100 small to medium sized Cities, Villages, and Townships. Where we differ from other purely engineering firms is the ability to draw on the experience of our staff of Engineers and Landscape Architects who, working closely together, have extensive involvement in park and public space planning/design and assisting communities with the application, submittal and administration of grants for trail and recreation projects.

F&V is pre-qualified with the Michigan Department of Transportation in the areas of Landscape Architecture, Roads & Streets, Municipal Utilities, New Bridge Construction Engineering, Bituminous Construction, Inspection and Testing and Right-of-Way Surveying and Construction Layout. Much of the Required Vendor Project Experience for MDOT Pre-qualification will be applicable to your Pathway Projects:

- Experience with AASHTO and MDOT standards, specifications, and procedures
- Geometric design with regard to non-motorized facilities
- Knowledge of plant material
- Trailway experience
- Cost estimating
- Americans with Disabilities Act (ADA) requirements
- Michigan professional registration of key staff members
- Computer-aided drafting (AutoCAD 2018)

Project Area Photos

Old Interurban Route – North of Long Lake Road

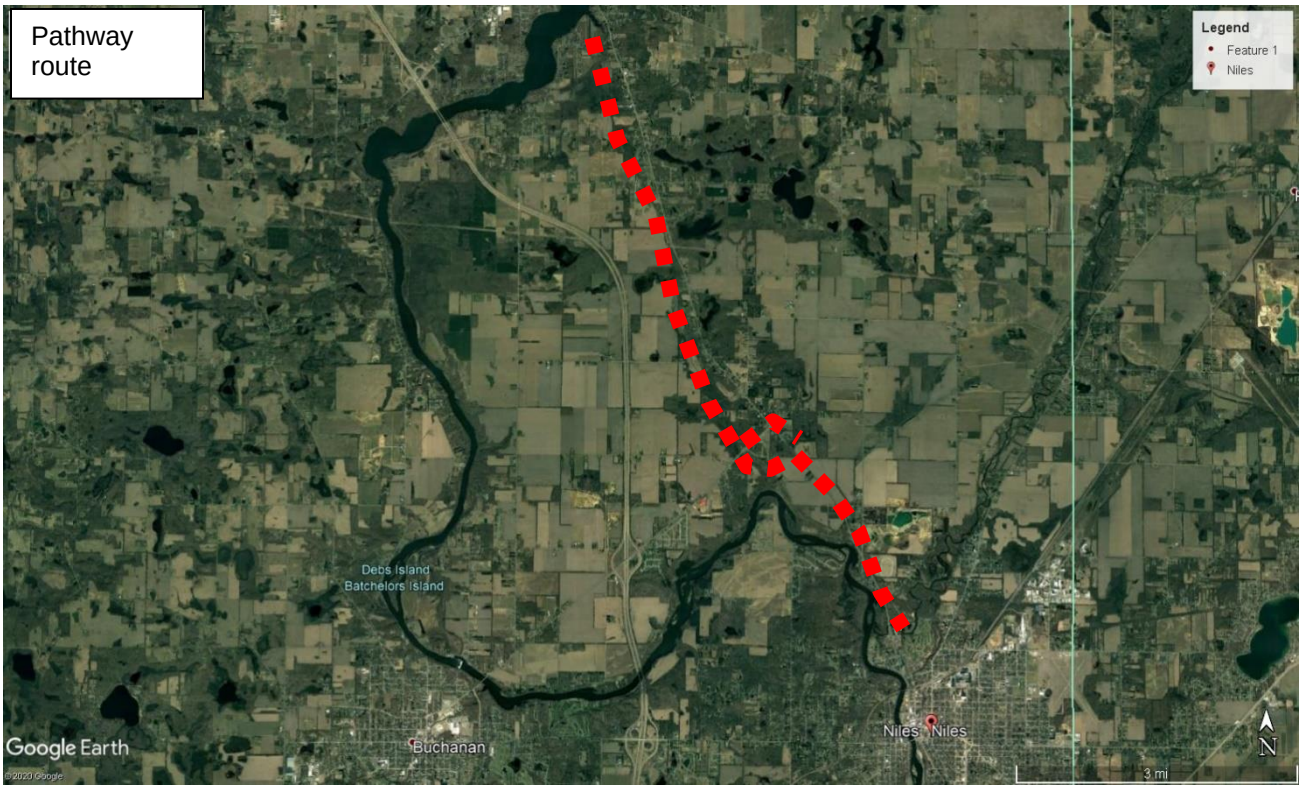
Route along Walton Road

Route along Old US-31/M139

Route Along E. Winn Road

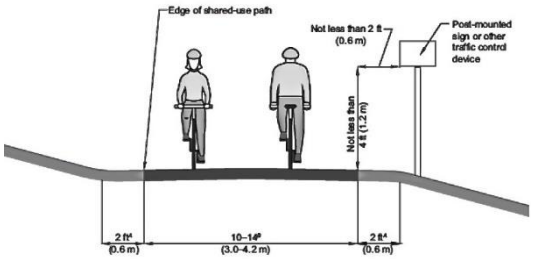
Existing Conditions

- Project area soils appear to be well-drained soils classifications
- Hydric soils are likely present, but wetlands likely limited to area of Spring Valley Drain from visual observation
- Some potential bridge/crossing impacts along adjacent to the Spring Valley Drain, the Whalen Extension of the Spring Valley Drain and the Dowagiac River need to be evaluated

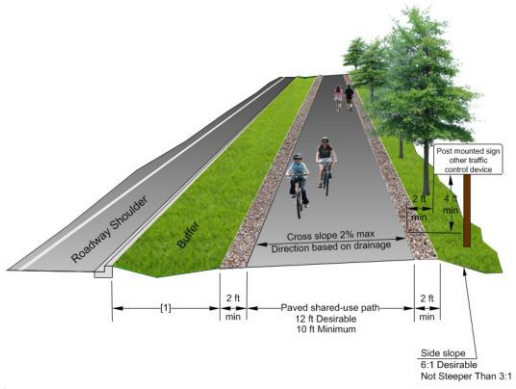


Design Considerations

- AASHTO 2012 Shared Use Path design standards require 10’ wide shared use path minimum and 2’ wide recovery zones on each side of pathway.
- AASHTO 2012 Shared Use Path design standards require 14’ wide bridge structures to accommodate pathway plus recovery zones. Bridges need to be rated for H10 load rating for emerge and maintenance vehicles.
- Existing bridge structures require evaluation for load bearing capabilities, renovation or replacement.
- AASHTO 2012 Shared Use Path design standards recommend horizontal alignment of at least 65’ min radii for all centerline curvature for an 18-mph design speed.
- MDOT design standards limit vertical pathway gradient to 5% or less along the path centerline.
- AASHTO 2012 Shared Use Path design standards requires a 5’ min. greenbelt separation from the edge of pathway to the road edge unless a physical barrier is provided.
- With the potential presence of endangered species habitat such as the Indiana Bat and Northern Long-Eared Bat will impact Progress Schedule in relation to tree clearing between Nov. 15 & March 31.



- Special construction provisions may be necessary due to the presence of the eastern massasauga rattle snake.
- All improvements should strive for Universal Access. The intent of the Americans with Disabilities Act was to give all Americans equal opportunities to participate in public activities, but often the rule falls short of this goal. Design principles focusing on Universal access that provide equal levels of experiences for all age groups and abilities while delivering on the ADA's promise of equal accessibility opportunities is a prime consideration.
- Meetings with the Berrien County Road Department (BCRD), MDOT and Berrien county Drain Commission need to occur early in the design process to resolve right-of-way use and any potential drainage concerns.



Due Diligence Data

IPaC U.S. Fish & Wildlife Service

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Berrien County, Michigan

Local office

Michigan Ecological Services Field Office

(517) 351-2555
(517) 351-1443

2651 Coolidge Road Suite 101
East Lansing, MI 48823-6360

http://www.fws.gov/midwest/endangered/section7/s7process/step1.html

Indiana Bat Myotis sodalis — Endangered
There is **final** critical habitat for this species. Your location is outside the critical habitat.
https://ecos.fws.gov/ecp/species/5949

Northern Long-eared Bat Myotis septentrionalis — Threatened
No critical habitat has been designated for this species.
https://ecos.fws.gov/ecp/species/9045

Birds

NAME	STATUS
Piping Plover Charadrius melodus There is **final** critical habitat for this species. Your location is outside the critical habitat. https://ecos.fws.gov/ecp/species/6039	Endangered
Red Knot Calidris canutus rufa This species only needs to be considered if the following condition applies: • Only actions that occur along coastal areas during the Red Knot migratory window of MAY 1 - SEPTEMBER 30. No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/1864	Threatened
Whooping Crane Grus americana No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/758	EXPN

Reptiles

NAME	STATUS
Eastern Massasauga (=rattlesnake) Sistrurus catenatus This species only needs to be considered if the following condition applies: • All Projects: Project is Within EMR Range No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2202	Threatened

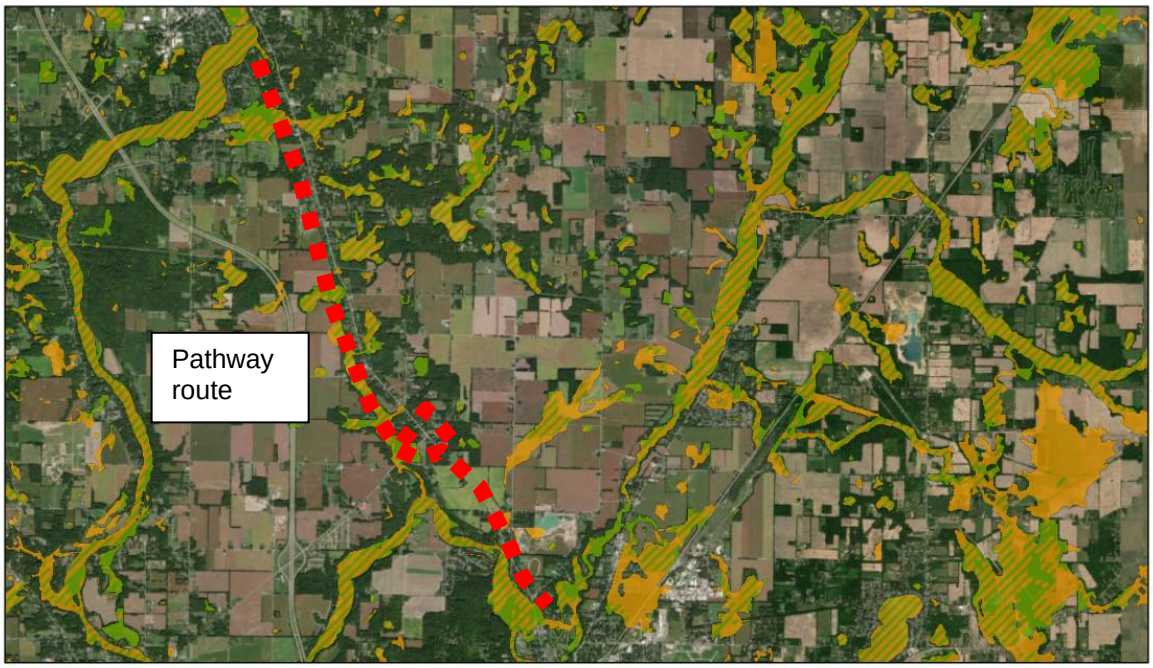
Insects

NAME	STATUS
Mitchell's Satyr Butterfly Neonympha mitchellii mitchellii No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/8062	Endangered

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area. With the potential presence of endangered species habitat such as the Indiana Bat and Northern Long-Eared Bat will impact Progress Schedule in relation to tree clearing between Nov. 15 & March 31.

Critical Habitats
Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves. There does not appear to be any critical habitat along the proposed route.

Wetlands Map Viewer



June 9, 2020

Part 303 Final Wetlands Inventory

- Wetlands as identified on NWI and MIRIS maps
- Soil areas which include wetland soils
- Wetlands as identified on NWI and MIRIS maps and soil areas which include wetland soils

1:76,262

0 0.5 1 2 mi

0 1 2 4 km

Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community, Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS,

Disclaimer: This map is not intended to be used to determine the specific

Wetlands or hydric soils appear to be predominately on west side of interurban.

Soil Map—Berrien County, Michigan

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
2	Cohoctah-Abscota sandy loams	7.6	0.4%
5	Houghton muck, 0 to 1 percent slopes	9.2	0.4%
7	Palms muck, 0 to 1 percent slopes	30.2	1.5%
11B	Oshtemo sandy loam, 0 to 6 percent slopes	70.4	3.4%
11C	Oshtemo sandy loam, 6 to 12 percent slopes	58.5	2.9%
11D	Oshtemo sandy loam, 12 to 18 percent slopes	117.8	5.8%
11E	Oshtemo sandy loam, 18 to 35 percent slopes	72.5	3.6%
12A	Ockley loam, 0 to 2 percent slopes	4.4	0.2%
12B	Ockley loam, 2 to 6 percent slopes	156.9	7.7%
12C	Ockley loam, 6 to 12 percent slopes	28.9	1.4%
12D	Ockley loam, 12 to 18 percent slopes	37.0	1.8%
13B	Spinks loamy fine sand, 0 to 6 percent slopes	231.3	11.3%
13C	Spinks loamy fine sand, 6 to 12 percent slopes	94.5	4.6%
13D	Spinks loamy fine sand, 12 to 18 percent slopes	47.7	2.3%
14B	Riddles loam, 2 to 6 percent slopes	39.8	1.9%
16B	Crosier silt loam, 0 to 4 percent slopes	1.3	0.1%
17	Rensselaer silt loam	2.3	0.1%
19A	Brady sandy loam, 0 to 2 percent slopes	39.1	1.9%
20	Gilford sandy loam, 0 to 1 percent slopes	15.4	0.8%
22A	Monitor loam, 0 to 3 percent slopes	164.7	8.1%
23	Sebewa loam, 0 to 2 percent slopes	75.7	3.7%
29	Cohoctah sandy loam	3.7	0.2%
35	Aquents and Histosols, ponded	39.1	1.9%

Natural Resources Conservation Service | Web Soil Survey National Cooperative Soil Survey | 6/12/2020 Page 3 of 4

Engineer's Opinion of Costs

Project Number: P15865
Estimate Number: 1
Project Type: New Construction
Location: Niles, MI
Berrien County
Description:

Project Engineer: Rick Stout
Date Created: 6/9/2020
Date Edited: 6/9/2020
Fed/State #:
Fed Item:
Control Section:

Line	Pay Item	Description	Quantity	Units	Unit Price	Total
0001	102 051	Project Contingency, 15%	1.000	LSUM	450,000.000	450,000.000
0002	1500001	Mobilization, Max 5%	1.000	LSUM	1 0,000.000	1 0,000.000
0003	2010001	Clearing	20.000	Acre	,000.000	140,000.000
0004	2030002	Culv, Rem, 24 inch to 48 inch	20.000	Ea	1,000.000	20,000.000
0005	2040060	Structures, Rem Ex. bridges	1.000	LSUM	50,000.000	50,000.000
0006	2050016	Excavation, Earth (Shared Use Path)	2,000.000	Cyd	8.000	16,000.000
000	2050041	Subgrade Undercutting, Type II	1,000.000	Cyd	15.000	15,000.000
0008	2080036	Erosion Control, Silt Fence	96,000.000	Ft	2.000	192,000.000
0009	4010140	Culv, Cl A, 60 inch Two County Drain extensions	200.000	Ft	250.000	50,000.000
0010	06 010	Modular Block Retaining Wall (Large Block)	8,000.000	Sft	50.000	400,000.000
0011	09 051	Wood Pedestrian Bridge, Dowagic River	1.000	LSUM	200,000.000	200,000.000
0012	09 051	Wood Pedestrian Bridge, Spring County Drain	1.000	LSUM	100,000.000	100,000.000
0013	8030010	Detectable Warning Surface	300.000	Ft	45.000	13,500.000
0014	8060011	Shared use Path, Aggregate, LM	10,000.000	Cyd	45.000	450,000.000
0015	8060020	Shared use Path, Conc	150.000	Syd	40.000	6,000.000
0016	8060040	Shared use Path, HMA	9,000.000	Ton	100.000	900,000.000
001	806 001	Shared use Path, Grading, Modified	48,000.000	Ft	10.000	480,000.000
0018	806 011	Aggregrate Surface Course, Modified, 4 Inch	150.000	Syd	10.000	1,500.000
0019	808 001	Wood Fence, 42 inch height	500.000	Ft	12.000	6,000.000
0020	8100380	Post, Wood, 4 inch by 6 inch	1,008.000	Ft	13.000	13,104.000
0021	8100404	Sign, Type IIIA	160.000	Sft	15.000	2,400.000
0022	8100405	Sign, Type IIIB	112.000	Sft	12.000	1,344.000

Line	Pay Item	Description	Quantity	Units	Unit Price	Total
0023	81201 0	Minor Traf Devices	1.000	LSUM	50,000.000	50,000.000
0024	8120250	Plastic Drum, High Intensity, Furn	120.000	Ea	30.000	3,600.000
0025	8120251	Plastic Drum, High Intensity, Oper	120.000	Ea	5.000	600.000
0026	815 050	Bench	9.000	Ea	2,500.000	22,500.000
002	815 050	MDNR Category III Sign with Posts	2.000	Ea	300.000	600.000
0028	815 050	Trash Receptacle	9.000	Ea	1,500.000	13,500.000
0029	816 011	Slope Restoration, Modified	54,000.000	Syd	2.000	108,000.000

Estimate Total: $3,875,648.00

WORK PLAN

Based on our review of the RFP, visiting the site, and the documents provided, we propose the following work plan:

TASK A - SCHEMATIC DESIGN PHASE

A1. Orientation

We will meet with representatives from the Southwest Michigan Planning Commission (SWMPC) staff, MDOT Regional staff, Indiana-Michigan Power/AEP, Berrien County Health Department (BCHD), City of Niles, Niles Charter Township, Oronoko Township, Village of Berrien Springs, Berrien County Parks, Berrien County Road Department, Berrien County Drain Commissioner Office, and other advisory groups or boards deemed appropriate by the SWMPC to confirm the desired general project areas and to develop the project schedule. The SWMPC will identify any additional parties that they wish to attend, and coordinate the time and location for this meeting.

A2. Data Collection

The base map for the Schematic Design Phase will be primarily aerial photographical information. The Berrien County GIS department and MDOT will provide all necessary aerial topographical information, as-built construction plans, photographical data, tax maps, aerial survey data and relevant master plans for the project area. We will reference and library all available data and review past reports and study documents provided. Preliminary project maps of 1”=100’ for each ½ mile of the trail will be developed. We will meet with officials to review data and utilize information to develop an existing conditions base map for the project area. We will identify site assets and constraints.

A3. Route Evaluation

We will evaluate the preferred route identified in relation to topography, barrier-free accessibility, and protection of natural features. To aid us in this evaluation, we would examine the trail in distinct S and N segments with Walton Road serving as the boundary between the two zones. We will walk each segment with staff and key people while exploring design constraints and environmentally friendly solutions on-site rather than solely within the confines of an office. We anticipate that one entire field day will be required to complete each of these segment evaluations.

Once the segments tour is complete, we will synthesize data gathered and refine a schematic trail plan. A written summary report evaluation will be provided for review to the SWMPC staff. Several factors such as soil types, topography/slope, physical obstacles such as streams, county drains, wetlands and existing trees will have an effect on cost of project.

A4. Schematic Design Cost Estimate

As part of the summary report, we will prepare a schematic design estimate of probable costs using the MDOT Michigan Engineers’ Resource Library (MERL) system in preparation for any potential grant submittals. This cost estimate will include all potential construction items including site amenities, signage, contingencies, and estimated professional fees for:

- Grant Application Assistance
- Wetlands Delineation
- Environmental Review
- Survey, Preliminary Design and Final Design
- Bidding
- Construction Administration & Testing

A5. Public Engagement

Engineering design will build on the preliminary route work completed to date. F&V will work with key representatives of SWMPC and BCHD and the established community stakeholder group throughout all phases of project development. The BCHD and SWMPC will coordinate and facilitate all stakeholder group and public meetings. F&V will provide visuals (for the meetings and website) and if necessary be present to discuss any issues or questions that arise.

Task A Deliverables – Schematic Design Phase to include the following:

A. Base data mapping
B. Route Evaluation Summary Report
C. Schematic Design Estimate of Probable Construction Costs and Professional Fees
D. Attendance and required graphics for one (1) public engagement meeting

TASK B - NATURAL RESOURCE INVENTORY MAPPING AND TOPOGRAPHICAL SURVEY PHASE

B1. Threatened and Endangered Species Habitat Assessment

a. **Michigan database search:** Request a rare species review from the Michigan Natural Features Inventory (MNFI) on known occurrences of state/federal protected species at or near the project corridor. This data request will include spatial data on known eastern massasauga rattlesnake Tier 1 and Tier 2 habitat along with freshwater mussel stream designations. Research habitat types and other available information on the MNFI-listed species of concern in order to assess known occurrences information. Advise Client regarding next actions as necessary to address any issues. This task does not include species-specific or site-specific surveys.

b. **IPaC database search:** Conduct an IPaC database search through the U.S. Fish and Wildlife Service (USFWS) to obtain a list of any endangered or threatened species, critical habitat, migratory birds or other natural resources that may be impacted by this project. Advise Client regarding measures that may be required to minimize or mitigate any adverse impact to protected species along the project route. A preliminary review of IPaC data has resulted in the identification of Tier 1 and Tier 2 habitat (known/highly likely to be occupied or high potential habitat) for the federally threatened eastern massasauga rattlesnake along the trail.

c. **Preliminary on-site survey:** During the wetland delineation mobilization, Conduct a biological survey and habitat characterization of the project area to address potential USFWS and Michigan Department of Environment, Great Lakes, and Energy (EGLE). concerns with regard to threatened, endangered, and special concern plant and animal species known to occur in the vicinity of the project corridor. The survey will be conducted after database search results are received. Surveys will not be a complete, comprehensive species list but rather a list of dominant species sufficient to assess habitat type and the probability for occurrence of the identified species of concern. Some species are only identifiable at certain times of year, and on-site survey should be conducted at the appropriate time for positive identification. This survey will identify appropriate habitat for species not directly observable at the time of this survey and identify any areas which will require either a later survey or avoidance of potential impacts. If deemed appropriate, lack of habitat necessary for protected species will be documented to rule out occurrence and request clearance.

d. **Mapping and reporting:** Prepare documentation of our findings, including mapping of locations if species are located and confirmed. Note that confirmed locations of federal or state-listed species are required to be provided by us to the State of Michigan per the terms of our MDNR Threatened and Endangered Species Permit (TE029). If appropriate habitat is not present, it will be documented this in the report.

   Once the results of the preliminary ecological investigations are compiled and summarized, work with Client on preliminary trail design concepts. Measures to minimize or mitigate environmental impacts or lessen environmental permitting requirements will be evaluated for their economic and implementation feasibility.

Note: This scope does not include permitting, coordination of mitigation, relocation, or annual monitoring/ reporting. If additional activities such as these are required by the USFWS or MDNR, cost estimates will be provided.

B2. Wetland Delineation and GPS Mapping Services

a. **Wetland and stream delineation with boundary flagging:** Perform an on-site investigation to delineate wetlands and streams along the project corridor, especially focusing on each of the bridge or culvert crossing locations according to criteria defined by the U.S. Army Corps of Engineers (USACE) Regional Supplement to the Corps of Engineers Wetland Delineation Manual (Version 2.0): Northcentral and Northeast Regions (January 2012). This wetland delineation protocol is the method accepted by both the USACE and EGLE. Flag all wetland boundaries.

b. **Global Positioning System (GPS) mapping:** Locate wetland boundaries using Global Positioning System (GPS) technology and provide a wetland map. If GPS mapping is not feasible due to site conditions, other arrangements will be made with approval of the client. GPS mapping is intended to meet USACE and EGLE accuracy requirements but is not intended to represent a legal boundary survey.

c. **Research and analysis of findings/regulatory impact:** In addition to site observations and data collection, research other site-specific reference data available. This includes a regulatory analysis to determine if wetlands present on the property (if any) are regulated by other local, state, or federal law, and a determination as to whether permits are required under the applicable Acts.

d. **Written summary report:** Complete USACE Wetland Data Forms and analyze and compile data in report format to accompany the generated map. Please note that EGLE requires that wetland delineation reports with completed USACE Wetland Data Forms be submitted as part of the permit application package for any projects with proposed wetland impact activities. Submit a copy of final report, map, and data forms to Client.

Topographical Survey

Review alignment for approval by SWMPC staff prior to commencement of field topographical mapping.

a. Survey and prepare detailed topographic maps of limited, critical locations such as street crossings (paved and unpaved) and county drain/creek crossings.

b. Majority of survey information for pathway to be 1-foot interval topographical information at 100 feet on center with 12’ offsets either side of the centerline.

c. Provide survey information for use in our preparation of plan and profile sheets at an appropriate horizontal scale. The location of any existing utilities will be plotted on the drawings.

B3. Soil Borings & Contamination Due-Diligence Evaluation

Schedule and arrange for 10’ deep borings at the bridge locations along the trail route. Review soils information available from United States Department of Agriculture Soil Conservation Service – Soil Survey of Berrien County, Michigan.

a. Perform Due Diligence Evaluation
    i. Review rail line history from information available in any Valuation Plans, Sanborn Insurance Maps, aerial photographs and historic photographs.
    ii. Review the existing federal and state lists of known or suspected disposal sites that may be along trail’s right-of-way.
    iii. Conduct a thorough visual investigation of the trail’s right-of-way.
    iv. Soil discoloration, odors or differences in soil properties
    v. Signs of illegal dumping
    vi. Stressed vegetation or dead zones,
    vii. Signs of water or wind erosion
    viii. Prepare a list of locations that warrant obtaining soil sampling. F&V has budgeted up to a total of 30 soil samples.

ix. If contaminants are identified, prepare cost of remediation that will be included in overall preliminary cost estimate. Techniques could include cut/fill with new material, capping or signage/ fencing to keep trail users isolated from any contaminated sites.

b. This scope of services does not include a full Phase I or Phase II site assessment. If these services are requested by the SWMPC, they can be performed as an additional expense upon receiving an approved change order.

Task B Deliverables – Natural Resource Inventory Mapping & Topographical Survey to include the following:

A. Biological Review and Evaluation of Impacts
B. Wetlands delineation
C. Topographical Survey
D. Soil Borings & Contamination Due-Diligence Evaluation

TASK C - GRANT FUNDING ASSISTANCE PHASE

Upon SWMPC approval, we will begin the preparation and/or assistance on the following grant applications:

C1. TAP Grant Application

We have worked with MDOT on many similar types of enhancement projects. For the application, F&V will format the information to meet current program filing criteria, add supplemental information and prepare final grant application for SWMPC approval prior to submittal. F&V will prepare the following sections:

a. Basic Project Information
b. Rationale for project competitiveness
c. Project Area Photos
d. Preliminary Budgeting of participating and non-participating funds
e. Preliminary Design Plans & Cross-sections– based on MDOT US-31 topographical information, proposed roadway plans and GIS data.
f. A maintenance plan needs to be specific with documentation on municipal line item budgets to handle new construction. (work by F&V & SWMPC)
g. Resolutions of support and letters of approval. Projects must have the support of the local unit of government as displayed by a resolution of support. Letters and other local support can be supported by inclusion of newspaper articles and/or lists of citizen's letters of support, retained in possession of the applicant (work by SWMPC).
h. Project Schedule – with input from MDOT TSC and SWMPC
i. Projects must have letters of support from the transportation agency with jurisdiction over the transportation facility. Projects along or next to state highways (M, US, and I routes) must have a letter of support from the MDOT region office in which the proposed project is found (work by SWMPC and F&V).
j. Document stakeholder input process and document any potential easement acquisitions

C2. MDNR MNRTF Grant Application

We can be of assistance in the preparation of the MNRTF Grant Application to the MDNR for either park land acquisition or development. The application must be submitted by the application deadline of April 1, 2021 with the following:

a. MNRTF Grant Application Form – one copy fully completed by F&V and signed by authorized Berrien County Parks or SWMPC representative.
b. Application narrative prepared by F&V with information and input from community staff.
c. Revise site master plan for IN MI River Valley Trailway extension based on stakeholder comments and labeling proposed elements identified as part of this grant application.
d. Project location map will be prepared by F&V.
e. Boundary map – Provided by community and must delineate the legal boundaries of the property identified for park use. F&V will assist in map delineation.
f. Documentation of Site Control Form (PR1956-1). Completed by community and community's legal counsel.

g. Certified resolution from the governing body committing to the application. This resolution should be adopted at a public hearing with an advertisement 7 days prior to meeting. F&V will provide a sample ad and resolution. County to provide a copy of affidavit from local paper.
h. Documentation of local match sources – letters of commitment for match sources.
i. Prepare elevation and plan view of any proposed structures, if necessary.
j. County will be tasked with gathering any letters of support from local stakeholders and groups.
k. Prepare supplemental information, if necessary, after preliminary application scoring in August 2021.

TASK D - PRELIMINARY DESIGN PHASE - 30% & 60% COMPLETION
Upon SWMPC approval, we will begin the preparation of the following:

D1. Preliminary Design plans and documents. Preparation to include:
a. Review permit and AASHTO code requirements.
b. Prepare 30% design of the proposed trail improvements. Meet with SWMPC staff to review the material selections, material layout concepts, costs and alignment alternatives that were generated as a result of the field observation and findings. Items to be included are aggregate surfacing and placement of other site amenities. We would prepare 1”=40’ scale or larger plans for all staging areas and locations where the trail alignment intersects a street or road. For all remaining trail segments, we will prepare plans at approximately 1”=100’ utilizing survey data gathered and adding aerial information provided by Berrien County GIS.
c. We will provide recommendations for phased construction, based on availability of funding and easement acquisition status.
d. Prepare outline of specifications needed for the improvements.
e. Update Engineers Estimate of Probable Construction Costs.
f. Submit 60% Preliminary Design plans and estimates for SWMPC and Berrien County departmental staff for review and comment.
g. Update project cost estimates.
h. Prepare and submit progress reports to the SWMPC staff on a monthly basis or as otherwise agreed upon the work accomplished during the reporting period, work to be accomplished during the subsequent reporting period, issues that have arisen or may arise and to request approval for any modification from previously agreed upon work plans.

D2. Bridge and Culvert Structural Evaluation
The proper evaluation of existing bridges and culverts will be based on data collected during a field reconnaissance. Collecting relevant data leads to a reliable evaluation, and load rating.
a. For bridges, we will review general geometry and load capacity for compliance with AASHTO design standards. We will also evaluate abutment/foundations for overall condition and possible replacement.
b. Review options for prefabricated or site-built bridges at the three existing bridge locations. Provide structural analysis and alternatives for proposed boardwalk and/or bridge improvements along trails as well as any required stream crossings or wetland boardwalks as necessary for completion of trail.
c. For culverts and county drain crossings, we will observe, and, when possible, measure and obtain all of the following key data:
    iv. The culvert’s length, size, age, height of cover, wheel loading and material type
    v. Type and condition of end treatment, including end sections, headwalls, rip-rap, none, etc.
    vi. Flow condition, such as inlet blockage/debris affecting hydraulic performance
    vii. Inlet and outlet scour condition, including
        - Existing erosion parallel to the culvert
        - Shape geometry of flexible culverts
        - Culvert wall thickness and condition, such as cracking, extent of corrosion, spalling and exposed rebar
        - Infiltration and loss of structural backfill through joints, cracks or inlets
        - Evidence of pathway settlement or repair
        - Request installation records from Berrien County Drain Commission (if any) to obtain backfill requirements or specifications

Task D Deliverables - Preliminary Design to include the following:

A. Plan & Profile design drawings to 30% and 60% review
B. Bridge selected construction preliminary details
C. Preliminary Phasing Plan for Sections of IN MI River Valley Trail Extension
D. Outline/draft of construction Specifications
E. Environmental review agency checklist, letters and summary
F. Updated Engineers Estimate of Probable Construction Costs
G. Monthly Progress Reports

TASK E - FINAL DESIGN/CONTRACT DOCUMENTS PHASE

Upon SWMPC approval and acceptance of Task D, we will begin the preparation Final Design /Contract Documents. Preparation to include:

E1. Final Design Phase

We will utilize input gathered from meetings with the SWMPC, BCRC, BCDC, MDOT and EGLE to incorporate into the final engineering plans for the project area and continue to refine the preliminary cost estimates. These plans will be presented at a final review session prior to submittal to MDOT and shall include:

a. Complete final design and prepare final construction drawings and specifications in accordance with SWMPC review comments.
b. Prepare final copy of specifications/contract manual with technical specifications, list of bid items and final quantities.
c. Prepare updated estimate of probable construction cost and bid quantities.
d. Meet with the SWMPC staff to review final plans and special provisions. Submit plans and special provisions to the County for department (i.e. Road Department, Drain Commission) reviews.
e. Coordinate and attend Grade Inspection meeting with SWMPC and MDOT. Revise plans, specifications and estimates to reflect GI comments.
f. Provide one CD copy of plans and specifications and four paper copies of plans and specifications to SWMPC staff.

E2. Permit Applications

a. All construction permit applications are submitted and purchased through the MDOT Permit Gateway online service. Prepare application for Work in M-139 Right-of-Way and submit required drawings and special provisions.
b. Complete SHPO 106 Review Application and supporting documentation to State Historic Preservation Office per TAP LAP requirements.
c. Prepare NEPA Environmental Assessment (EA) Checklist for Local Agencies- July 2019 and related documentation for MDOT TAP/federal funding requests. Provide Local Agency FONSI and project clearance to SWMPC. Depending on complexity of EA, the MDOT LAP has indicated a timeline of up to six months to complete the NEPA process.
d. All permit fees to be paid by the SWMPC.

E3. EGLE/USACE Permit Application Services (by others)

As part of the schematic design phase, we recommend submitting permit applications, as required, to the USACE, EGLE, and Berrien County Drain Commissioner. No formal permitting with the USFWS or MDNR to address protected species is anticipated at this time. Consultation with the wildlife agencies was included in Tasks B & E, and it is anticipated that any species-specific regulatory conditions will be included within EGLE permits that are issued for the project.

a. USACE - The IN MI River Valley Trail Extension is not located within the jurisdiction of the USACE. No wetland impacts or impacts below the OHWM of any waterbody or watercourse are anticipated at this time. Therefore, no USACE permitting should be required.
b. At various stream crossing, county drain and culvert replacement locations, there may be impacts to wetlands, streams, or floodplains that would be regulated by EGLE. We assume that the culvert replacements will meet EGLE Minor Project 10 conditions (https://www.michigan.gov/documents/deq/wrd-minor-project-categories_555829_7.pdf) and no hydraulic analysis will be required for the permit

application in accordance with EGLE Hydraulic Report Guidelines, dated May 2019. These conditions and authorizations include culverts with less than two square miles of drainage area, culverts spanning the bankfull width, bottomless or buried culverts, or other minor project types.

c. Prepare and submit a permit application to EGLE regarding proposed activities. The application will include a "Feasible and Prudent Alternatives Analysis", GIS-prepared location map, and specific impact area maps. The permit application CAD drawings showing impact locations and construction details will be prepared by Fleis & VandenBrink. Following submittal of the application, the sub-consultant will act as Client's agent and track the application throughout the review process by EGLE and other commenting entities (local, state, or federal government), to the point of initial agency decision. This includes correspondence, telephone discussions, responses to requests for additional information or clarification, etc., and negotiation with the agency on Client's behalf. As necessary, sub-consultant will also coordinate the submittal of additional materials requested in response to the public review, if any, with the project engineer, Client, and others.
d. Coordinate with EGLE and Client as necessary to pursue obtaining the permit(s). Additional meetings and/or any public hearings are not included within this scope and will be provided on a time and materials basis at standard hourly rates plus expenses with Client approval.
e. All permit fees to be paid by SWMPC. This scope does not include EGLE Public Hearing or utilization of EGLE Administrative Hearing Process. Submission of an application cannot be construed as a guarantee of EGLE permit issuance.

E4. Soil Erosion Control & Trailside Stabilization Design/Technical Specifications

F&V will work with toward the development of a planting plan and specifications, as needed, to incorporate native plantings for erosion control in any disturbed areas.

a. Once the final design and contract documents are initiated, work with the SWMPC to integrate construction measures necessary to comply with issued permit conditions and minimize or mitigate environmental impacts. Such measures could include wetland avoidance, seasonal tree clearing restrictions within trail improvement or staging areas, and habitat protection measures such as silt fence installation to isolate and protect known or suitable eastern massasauga rattlesnake habitat. Based on typical USFWS and MDNR requirements, special conditions for environmental monitoring during construction could be required in construction specifications and documents. Up to 24 hours of support will be provided during this phase.
b. F&V will assist in the preparation and submittal of at Soil Erosion and Sedimentation Control Plan (SESC) to the BCDC.

Task E Deliverables– Final Design/Contract Documents to include the following:

A. Final Plan & Profile design drawings to 95-100% completion level
B. Final Specifications/Contract Manual
C. Copies of acquired permits
D. Updated Engineers Estimate of Probable Construction Costs
E. Monthly Progress Reports

TASK F - BIDDING PHASE

Upon SWMPC approval, we will begin the preparation of the following:

F1. MDOT Bidding

a. Assemble contract documents. Provide special provisions, drawings and log sheet to MDOT LAP on behalf of the Berrien County Road Department and SWMPC. Assist County Staff and MDOT LAP during the bidding period by answering questions from bidders and providing supplemental drawings and specifications, if required.
b. Provide information to MDOT Local Agency Program staff for letting through MDOT bidding system.

F2. MDNR MNRTF Bidding

a. Compete prime professional certification requirements per MDNR guidelines.
b. Submit plans and specifications to MiRecGrants for review and approval to bid.
c. Prepare a sample advertisement and the SWMPC can submit to local newspapers. All advertising fees to be paid by SWMPC.

d. Submit advertisement to Kalamazoo, Grand Rapids and Lansing Builders Exchange.
e. Prepare and distribute addenda to plan holders of record, if necessary.
f. Distribute bidding documents to trade organizations, suppliers and potential bidders, when requested. Maintain a record of plan holders.
g. Attend bid opening, prepare tabulation and forward to the SWMPC for review prior to F&V making recommendations for award of bid to the MDNR for approval.
h. Upon award, prepare contract documents and submit to MDNR and SWMPC for final approval

TASK G - CONSTRUCTION SERVICES PHASE

As the Final Design Phase is in process, we will meet with SWMPC staff to discuss further the construction phase services options for the project. Due to the potential phasing of the project, grant program requirements and level of construction observation required, it is more practical at this stage to give a suggested range of fees associated with this phase. Construction phase services typically include:

- Office Administration
- Full or part-time Field Construction Observation
- Material & Density Testing
- Certified Payroll & Wage Rage Interviews
- Construction Staking
- Pay request review and approval
- Progress meetings
- As-built drawings

The exact level of each may vary depending on project complexity and schedule. These can best be refined during the final design phase with SWMPC input.

PROFESSIONAL FEES

Based on our understanding of the projects, we propose the following lump sum fee per various phases and tasks as outlined below:

TASK	ESTIMATED FEE
A - Schematic Design	$13,000 (0.33%**)
B - Natural Resource Inventory Mapping & Survey Report	1.50-2.0%**
C - Grant Application Preparation/Assistance	0.25-0.30%**
D - Preliminary Design	2.5-3.0%**
E1 - Final Design	1.0-1.5%**
E2 - E4 Permitting	0.25-0.30%**
F - Bidding	0.20%**
G - Construction Phase Services	4.0 – 5.5%**
Total Fees Task A-G	**TBD Range of 10.03 – 13.13%***

** Range of total fees varies of project complexity, phasing & grant program requirements*
*** Based on $3,875,000 construction cost*
**** Miscellaneous printing and mileage expenses to be billed as additional cost at rate of 1.1*

If requested by SWMPC as part of grant funding requirements. Both MDOT and MDNR have grant requirements for certifying project engineer or prime professional. We have included percentages for various task/phases in the event that construction costs exceed the estimated construction value and reserve the right to adjust our fees accordingly.

PROJECT SCHEDULE

Based on our understanding of the projects and the RFP, the project schedule, subject to adjustment with SWMPC review, is as outlined below:

Phase	Date
Receipt of Proposals	June 15, 2020
Anticipated Award	July 2020
Anticipated Kickoff	Mid-July 2020
Task A - Complete Schematic Development	Complete by September 2020
Task B - Natural Resource Inventory Mapping & Survey Report	December 2020
Task C - Grant Application Preparation/Assistance	October 2020 - April 1, 2021
Task D - Preliminary Design	April 2021 - June 2021
Task E1 - Final Design	July 2021- September 2021
Task E2 , E3, & E4 - NEPA Application & Permits	September 2021 - February 2022
Task F - Bidding	March 2022 - May 2022
Task G - Construction	June 2022 - December 2022

We have the available staff and resources to meet the above schedules. We are looking forward to working with you on these projects in the coming months.

ADDITIONAL INFORMATION

MDOT LOCAL AGENCY PROGRAM (LAP) EXPERIENCE

F&V has completed numerous LAP projects ranging from very complex MDOT LAP roadway, bridge and enhancement projects to less complicated resurfacing and log type projects. We are familiar with the process and aware of what details and paperwork are necessary to satisfy the LAP standards and provide our client their desired results in a completed project. We recently were under contract with MDOT to review LAP projects that other firms completed.

We have attended or participated in numerous LAP GI's alongside our clients. Our familiarity with these types of projects and using Surface Transportation Funds (STP), along with the FHWA rules and requirements for local agency improvements gives us a perspective on how we can approach certain items with the LAP. Looking out for our client's interest, knowing the procedures for participating and non-participating work and what special provisions and MDOT details apply during the process will assist us in choosing the best fit solutions and repair methods for recommendation while side by side working with the city's Engineering Department.

CAPACITY

With 225+ professionals across nine offices, and over 30 MDOT prequalified staff, F&V is efficiently able to service the City of Jackson's 2020 non-motorized trail engineering project. We can utilize our expansive staff to meet the goals, schedule, budget, and expertise needed by the City.

GREAT TRACK RECORD IN OUR PROFESSIONAL DESIGNS

We are very proud of the fact that our construction costs have averaged less than 1% of the as-bid costs. We feel this demonstrates our quality designs through good communication and professional services. Meeting our client's expectations to minimize change orders in construction focuses on our commitment to a philosophy of providing a service on budget and on time.

GRANT FUNDING

Our staff maintains relationships with several funding agencies and stays abreast of the latest state and federal programs, so no project gets shelved due to lack of funds. Whether you're enhancing your downtown with a decorative streetscape or upgrading your watermain system, we will help you fund your project.

We have experience with EGLE, MDOT, MDNR, MEDC, MSHDA and Rural Development grants. We have assisted clients with grants and low-interest loan financing projects totaling in excess of $730 million.

F&V BY THE NUMBERS

130 miles of non-motorized trail designed in the past 10 years

140 years of experience on your project team

90 communities assisted with SAW

50 projects in 2019 using construction site observation

100 miles of road and utility projects designed every year

100 SESC permits in 2019

60 Part 41 permits in 2019

52 registered PE's in Michigan

55 transportation projects in 2019

1,000 miles of sewers cleaned and televised in the past 5 years

$730,000,000 in grants and loans for our clients in just 27 years

1% change between as-bid costs and final construction cost on average

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