


SEALED BIDS
For
RFP Building Use Study
Wednesday, July 13, 2022 at 10:30 a.m.
Commissioners Conference Room

Alpena County has the right to accept or reject any and all bids.

Commissioners present: Bill Peterson
 Others present: Kim MacArthur, Mary Catherine Hannah, Wes Wilder, Phil Heimrel

Business Name	Amount of Bid
Plante Moran	\$115,000
C2ae	\$61,800

 7/13/22
 Bill Peterson, Finance Chair
 Alpena County Board of Commissioners


 Kim MacArthur, Board Assistant
 Alpena County Board of Commissioners



Proposal for County Facilities Audit & Building Use Study

Presented to **The County of Alpena**

July 12, 2022

Mary Catherine Hannah
County Administrator
720 W. Chisholm Street Suite 7
Alpena, MI 49707-2453

Administrator Hannah,

Thank you for allowing Plante Moran Cresa (PMC) the opportunity to submit our proposal for the Facilities Audit & Building Use Study to the County of Alpena. Our goal is to provide a suite of services that will work in harmony with the County, and to be your trusted advisor for this important engagement. We believe PMC can provide the County of Alpena with the most comprehensive and experienced team to conduct this process. Teaming with our firm offers the following benefits to the County:

Relevant Public Sector Experience: In the past five years, PMC has successfully planned and completed more than \$3 billion worth of capital projects for the public and municipal sectors (i.e., police stations, city halls, courthouses, K-12 school buildings, libraries, fire stations, etc.). We are the capital planner “of choice” for public organizations throughout the State of Michigan

We understand counties & municipalities: We specialize in working with mission-driven, consensus decision-making bodies. Our experience working on public projects means we understand the challenges and opportunities these types of projects present.

We are local: We have 12 offices in Michigan, including our headquarter office, in Southfield, MI, as well as our branch offices in Flint, MI and Traverse City, MI.

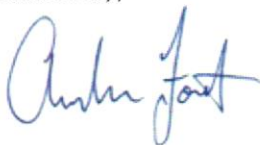
Independence: Plante Moran is one of the most trusted accounting and consulting firms in the nation, providing public entities with full-service solutions for more than 70 years. As a Plante Moran entity, we bring the County of Alpena the confidence that this process will be conducted thoroughly and ethically. We will solely represent and advocate on behalf of your County, which allows us to provide unbiased recommendations throughout the process as your independent advocate.

Custom Solutions: Our team resources are robust; however, our approach is truly unique in that we offer customized solutions to your County’s needs.

We look forward to the opportunity to work with County of Alpena to ensure the goals and objectives of this engagement are met. Again, thank you for the opportunity to present this proposal. We look forward to discussing it in more detail with you.

Note: Our firm has the following exclusions: ADA compliance and any physical design/construction-related activity.

Sincerely,



Andy Fountain
Senior Vice President, Plante Moran Cresa
Andy.Fountain@plantemoran.com
(248) 603-5088



Paul Wills, AIA, LEED AP
Partner, Plante Moran Cresa
Paul.Wills@plantemoran.com
(248) 223-3316



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Section 1

Firm Overview

Firm overview

Plante Moran Cresa introduction

Plante Moran Cresa is a comprehensive, full-service real estate consulting and program management/owner's representative firm delivering successful capital projects concept through completion.

We are affiliated with Plante Moran, one of the nation's largest public accounting and business advisory firms, and we are a member of the Cresa global network of corporate real estate service providers.

We have served as an independent owner's representative for more than 25 years, working on an average of \$3 billion per year in program management across a variety of industries. Plante Moran Cresa is built on a foundation of integrity and independence. We advocate solely for our clients at all times. As your unbiased advisor, we bring dedicated resources, proven processes, and deep experience to guide you in making the right strategic, financial, and mission-driven decisions.

We bring a team of true industry experts

Our team of professionals brings a broad background of experience and skills. We serve as an extension of an organization by creating a customized team dedicated to addressing your evolving needs. Our team members have previous experience as:

- | | | |
|--|--|---|
| <input checked="" type="checkbox"/> Accountants/CPAs | <input checked="" type="checkbox"/> Development Specialists | <input checked="" type="checkbox"/> LEED-Accredited Professionals |
| <input checked="" type="checkbox"/> Architects | <input checked="" type="checkbox"/> Engineers | <input checked="" type="checkbox"/> Project Managers |
| <input checked="" type="checkbox"/> Attorneys | <input checked="" type="checkbox"/> Financial Analysts | <input checked="" type="checkbox"/> Real Estate Professionals |
| <input checked="" type="checkbox"/> Construction Experts | <input checked="" type="checkbox"/> FF&E Procurement Specialists | <input checked="" type="checkbox"/> Relocation Managers |

Scalable to any industry and size

Our clients span corporate offices to K-12 schools, single buildings to global portfolios. You get the full depth and breadth of our expertise, no matter the industry or scale of the project.



One Firm, Infinite Resources



Plante Moran is one of the nation's largest certified public accounting and business advisory firm, providing clients with financial, human capital, operations, strategy, technology, and family wealth management services.

3,500+ total staff

1,300+ public sector clients

9 affiliated entities

500+ government clients

35+ states with clients

200+ staff dedicated to serving governmental clients

70+ years serving governmental clients

25 years on FORTUNE Magazine's list of "100 Best Companies to Work For"



Cresa is North America's largest capital planning and space user representation firm, with 58 offices in the United States and Canada. Through its international locations and partnerships Cresa covers more than 200 locations in 40 countries.

25+ years of commercial real estate experience

80+ offices worldwide

1,000+ total staff

118 project managers

2,000 satisfied clients

4,300 real estate transactions last year

526 buildouts last year



**Plante Moran
Cresa Headquarter
Office**
3000 Town Center,
Suite 100
Southfield, MI
48075



Engaging with us will give you unfiltered access to the right experts at the right time through our affiliation with Plante Moran and Cresa. With such robust team resources, our approach is truly unique in that we customize and create holistic solutions to fit your project needs.

Real estate & construction “department for hire”

We seamlessly integrate into municipalities, providing leadership for any real estate or construction project through a single point of contact.

Our services include:



Real Estate Consulting

- Facility Condition Assessments
- Operational Consulting
- Development Advisory & Feasibility
- Incentives
- Market Studies
- Due Diligence
- Construction Project Reviews
- E-Builder Implementation
- Debt Capacity Studies
- Portfolio Strategy
- Workplace Consulting



Real Estate Transaction Management

- Space Programming
- Portfolio Optimization
- Lease Administration
- Site Selection
- Tenant & Buyer Representation (land/facilities)
- Transaction Management
- Sale-Leasebacks



Owner Representation/ Program Management

- Program Budget, Schedule, & Scope Development
- Team Selection & Procurement
- Contract Advisory
- Furniture, Technology, & Equipment Coordination
- Payment Application & Invoice Review
- Cash Flow Monitoring
- Relocation Management
- Change Order Management
- Closeout

The Plante Moran Cresa difference



Custom solutions and unmatched resources.

Your project will entail expertise from experienced team members. Our seasoned staff assigned to this project have backgrounds in architecture, construction, accounting, technology, market relevant conceptual estimating, and master planning.



Unmatched Experience with Similar Facilities

The County of Alpena has recognized that its community and building occupants may need a better functioning real estate footprint and facility layout to fit today's needs. Many of our assessments have been for facility portfolios **similar to the County of Alpena's**, which have several unique characteristics: built at the early part of the century, historically significant, and community visible.



Historical Data Base

Because of our involvement with a significant amount of projects in Michigan, we understand market dynamics, supply chain and workforce issues. Our PMC staff has a **robust data base** containing building assessment budget items ranging from site parking lots to building boiler replacement items. This will help the County of Alpena establish a budget for future projects with a high degree of confidence.



Independence.

We will solely represent and advocate on behalf of the County of Alpena, which allows us to provide unbiased recommendations throughout the project as your independent advocate.



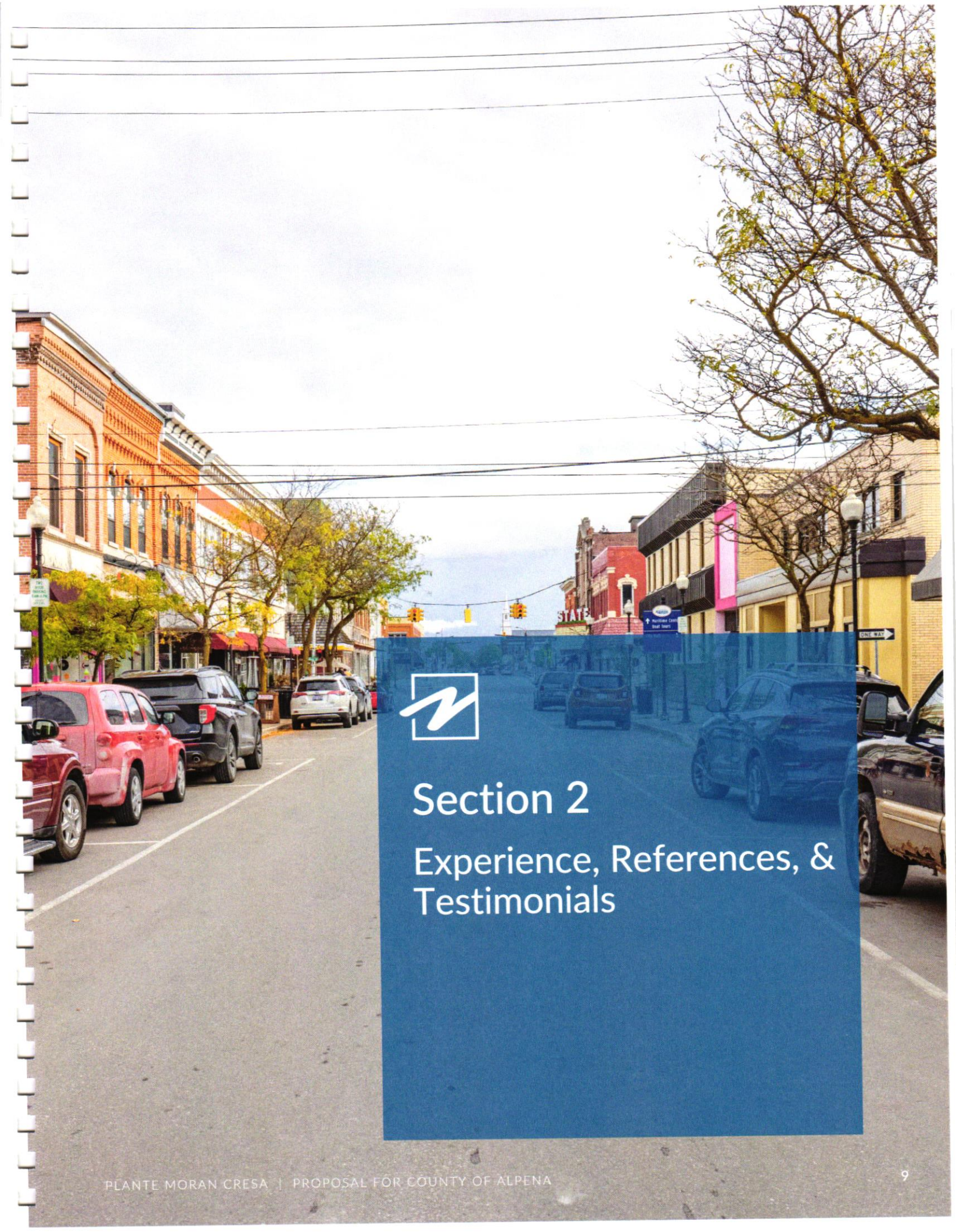
Understanding the Right Approach for the County of Alpena

Our experience will allow us to assist the County of Alpena with formulating the right solution, budget and schedule to minimize project risk. Our unbiased approach will help assist and advise how to finance, procure professionals, and appropriate construction delivery method.



Scalability & Business Acumen.

We offer our clients scalability and an understanding of the business and financial components that makes programs successful.



Section 2

Experience, References, & Testimonials



Services Provided:
Current Facility Use & Condition Assessment
Space Programming & Cost Estimating
Owner's Representative/Program Management Services

Size:
440,000 SF across five buildings

Cost:
\$75 Million

Reference Contact:
Mark Deldin, Deputy County Executive
deldin@macombgov.org | (586) 469-0419

Macomb County Central Campus Renovation

In 2013, an electrical fire in the basement of the Old County Building displaced more than 100 workers. This prompted the Macomb County Office of County Executive and Board of Commissioners to take a closer look at the County's facilities and use of space.

More than 650 staff work in the Macomb County Central Campus, which is comprised of 440,000 square feet in five buildings: the Old County Building, Administrative Building, 16th Circuit Court, Talmer Building, and Clemens Center.

Macomb County engaged Plante Moran Cresa (PMC) to conduct a long-term space utilization study and facility/parking assessment to determine how to better utilize department space within the campus.

The Office of County Executive, along with the Board of Commissioners, adopted PMC's plan. With the comprehensive conceptual budget and schedule PMC

created, they approved funding for a three-year capital improvement plan that would include phased renovations to the facilities within the Central Campus.

Taking into account public access, adjacency between roles, department function, anticipated growth, security, parking, and available space, PMC designed a plan that did more than offer a solution: it served as a means to make the central campus more efficient, accommodate growth without the need to acquire additional space, and lower occupancy costs.

PMC has since been retained to act as the program manager for the improvement project, which includes renovations to each building, demolition of an aging parking structure, and construction of a new 600-space parking deck located behind the Administrative Building. Construction is expected to last 36 months with a proposed project cost of \$75 million.



Services Provided:

Real Estate Master Planning
Facility Assessments
Space Programming

Size:

18 buildings totaling over
2.5 million SF

Reference Contact:

Khalil Rahal, Chief Administrative
Officer
krah@waynecounty.com | (313) 967-
1034

Wayne County

Located along the Detroit River, Wayne County is the 13th most populous county in the United States. The County contains 43 unique communities more than 1.8 million residents call home.

Contingent to the pandemic, Wayne County was seeking to better understand how its real estate holdings may be impacted by COVID restrictions and potential pandemic implications. The County then commissioned Plante Moran Cresa (PMC) to analyze its current real estate footprint.

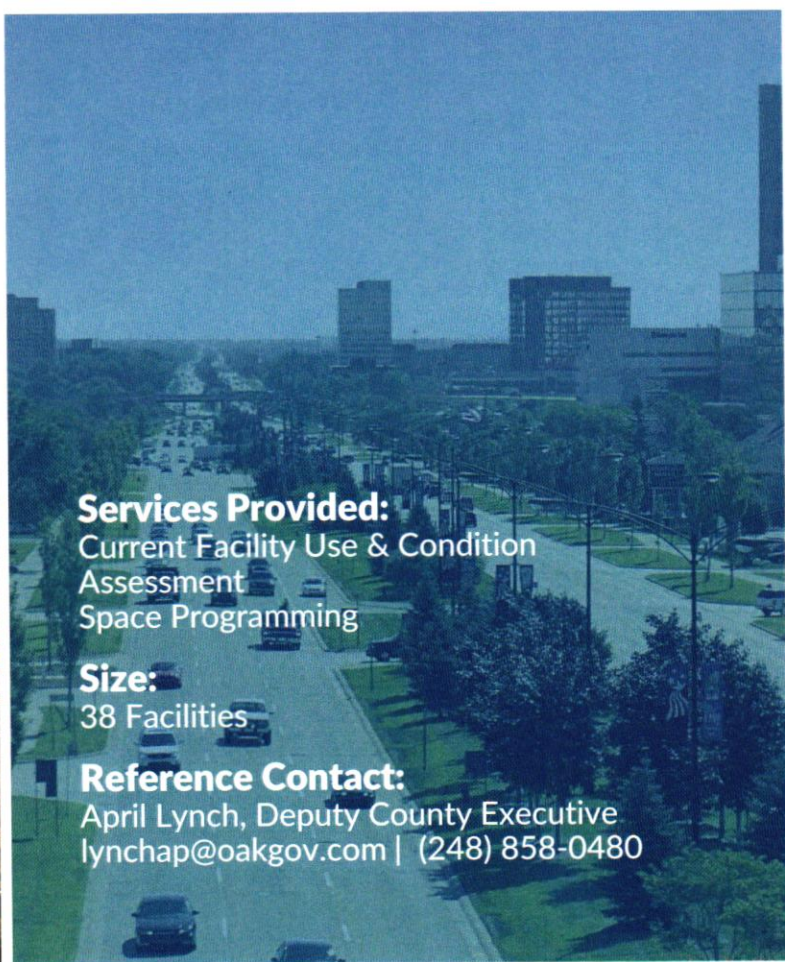
Our space programming experts began by gaining a holistic understanding of Wayne County’s facilities by analyzing preexisting space and capital funding assessments, followed by interviews with key stakeholders, surveys shared with staff members, and facility tours.

We then conducted a space utilization and capacity analysis to illustrate current use of space vs. potential

use of space considering social distancing requirements. We also reviewed lease administration documents to gain a holistic view of the County’s real estate commitments.

With our findings, we created a high-level capital plan that identified potential future facility improvements. We also recommended a technology integration plan that would allow the County to more efficiently use its current space and service staff working remotely.

Our space needs assessment provided the County with an accurate and all-encompassing view of its real estate footprint while providing a holistic inventory of items to be budgeted for in the future.



Services Provided:
Current Facility Use & Condition
Assessment
Space Programming

Size:
38 Facilities

Reference Contact:
April Lynch, Deputy County Executive
lynchap@oakgov.com | (248) 858-0480

Oakland County

Operating 38 facilities across 907 square miles, the government of Oakland County (OC) serves over 1.2 million residents in the Metro Detroit area. With such a vast real estate footprint, OC needed to document the current state of its facilities and plan for any capital improvements over the next 10 years.

OC commissioned Plante Moran Cresa (PMC) to create a 10-year capital plan, which would include a comprehensive facility analysis and a detailed study on the utilization for each of its 38 on-campus and off-campus buildings.

Through conducting an in-depth examination of OC's real estate portfolio, PMC is providing OC with the information necessary to strategically plan and execute its capital improvement projects. As part of the facility analysis, PMC is touring every facility and conducting meetings with stakeholders, steering committees, and

administration to gain a full perspective on the county's real estate needs.

As OC considers a hybrid work model, with flexibility for employees to work remotely, PMC is also conducting space programming studies to understand OC's current space usage, capacities, and potential future space utilization. PMC will present OC with a benchmark report of current and projected real estate market conditions in relation to the repurpose, sale, or demolition of excess municipal facilities.

By providing OC with a full inventory of capital needs across facilities, a 10-year capital improvement plan, and insights into the county's current and future building utilization, OC will have all its key real estate information organized into a comprehensive document that categorizes needs based on urgency and can be used to drive the county's long-term real estate strategy.



Services Provided:

Development Consulting
Owner's Representative/Program Management
Services
Disposition Management

Cost:

\$100 Million

Reference Contact:

Todd Fenton, Economic Development Manager
toddf@romi.gov | (248) 246-3208

City of Royal Oak

Plante Moran Cresa has been engaged with the City of Royal Oak since 2015, assisting the City with planning, financing, and implementing its \$100 million redevelopment plan for its municipal campus.

Included in the redevelopment plan was the construction of a 43,000-square-foot, \$19 million headquarters building for the Royal Oak Police Department. Our team assisted the Police Department in creating modern spaces that were in alignment with current safety/security best practices.

We assisted in installing state-of-the-art security technology including secure access entries, cameras, and related security hardware. Our team also created a private ingress/egress space for police officers and perpetrators that is temperature-controlled, allowing for ease of entry/exit in cold weather. One unique feature of the building is a skywalk from police station to the

courthouse, allowing for the private transport of perpetrators.

Overall, our work with the City of Royal Oak has resulted in the successful delivery of:

- Walkability between City buildings
- New 140,000-square-foot office tower
- New parking deck, with about 580 parking spaces
- New 32,000-square-foot City Hall
- New 43,000-square-foot police station
- Development of a city park
- Development of the connectivity sites

We understand working with municipalities and public organizations



15th District Court of Ann Arbor, MI
 16th District Court of Livonia, MI
 43rd District Court of Ferndale, MI
 Bedford Public Schools
 Birmingham Public Schools
 Cassopolis School District
 City of Ann Arbor
 City of Royal Oak
 City of Westland - City Hall, Fire Station, & Police Department
 City of Wyandotte Police & Court
 Clarenceville Schools

Crestwood School District
 DeWitt Public Schools
 Detroit Public Schools
 Farmington Public School District
 Grand Rapids Public Schools
 Grosse Pointe Public Library
 Grosse Pointe Public Schools
 Grosse Pointe Neighborhood Club
 Hamilton County, Ohio
 Harrison Township Fire Station
 Huron Police Station & Township Hall
 Lincoln Consolidated Schools

Livonia Public Schools
 Macomb County, Michigan
 Milan Area Schools
 Montrose Community Schools
 Niles Community Schools
 Northville Police, Fire, & Township Hall
 Novi Police & Fire
 Oakland County, Michigan
 Pittsburgh Water & Sewer Authority
 Southfield Public Schools
 Southgate Community Schools
 The State of Michigan

Van Buren Public Schools
 Washington Township Fire Station
 Warren Consolidated Schools
 West Bloomfield Fire Department
 Westland Public Library
 White Lake Township
 Woodhaven-Brownstown School District
 Ypsilanti Public Schools

Testimonials



Mark Deldin
Chief Deputy
County Executive,
Macomb County

“We have been extremely impressed with Plante Moran Cresa’s leadership throughout our central campus renovation project. They have advocated on our behalf and put the best interests of the County first by showing us countless options to maximize the benefits of this project to the residents of Macomb County.”



Thomas Skrobola
Finance Director,
City of Farmington
Hills

“The Plante Moran Cresa team was extremely contentious and energetic in evaluating proposals for potential overcharges and/or opportunities for savings by way of benchmarking and best practices.”



Todd E. Fenton
Deputy City
Manager, City of
Royal Oak

“Very responsive and detail-oriented. I don’t worry when Plante Moran Cresa is “on it”.”



Lauren Wood
Director of Public
Services,
City of Birmingham

“Plante Moran Cresa is a great advocate for the City during our large-scale construction project. They are very responsive and knowledgeable. All around fantastic representative for the Owner.”



Steven Kaplan
West Bloomfield
Township
Supervisor

“Very knowledgeable staff and on top of critical issues that came up along the project whether it be additional cost potential or time delays.”



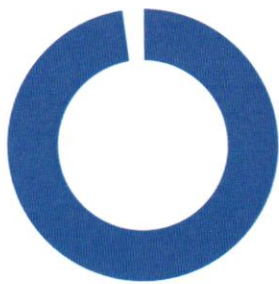
Bryan Santo
Director of the
Macomb County
Department of
Roads in Michigan

“Very professional, knowledgeable, and responsive”

We provide the best for the best!

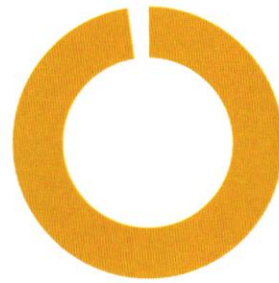
We love client feedback because it points out the best ideas and allows us to repeat them with you.

The desire to exceed client expectations is woven into the fabric of our firm. We consciously look for opportunities to add value to the work we do. We let clients tell us how we are doing throughout the year. We are happy to report the results of our most recent client satisfaction survey:



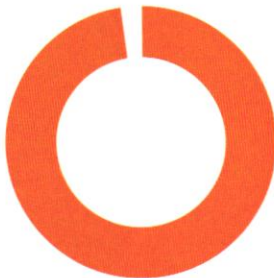
98%

were very satisfied with the overall value of Plante Moran Cresa's services



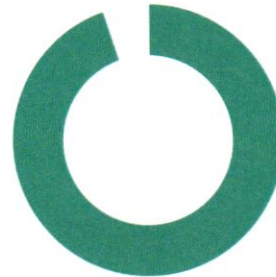
98%

would work with Plante Moran Cresa again



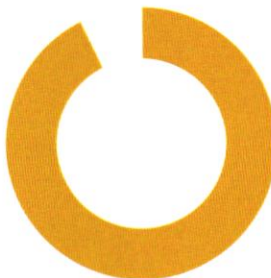
98%

provided industry insight



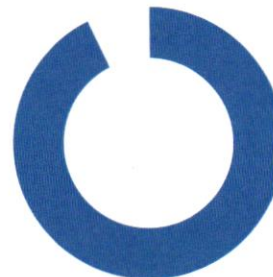
95%

developed a strategy



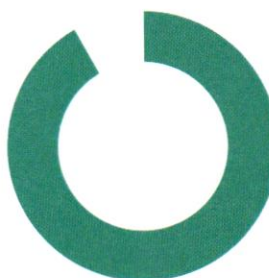
93%

demonstrated responsiveness



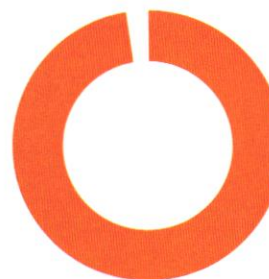
93%

advocated in our best interest



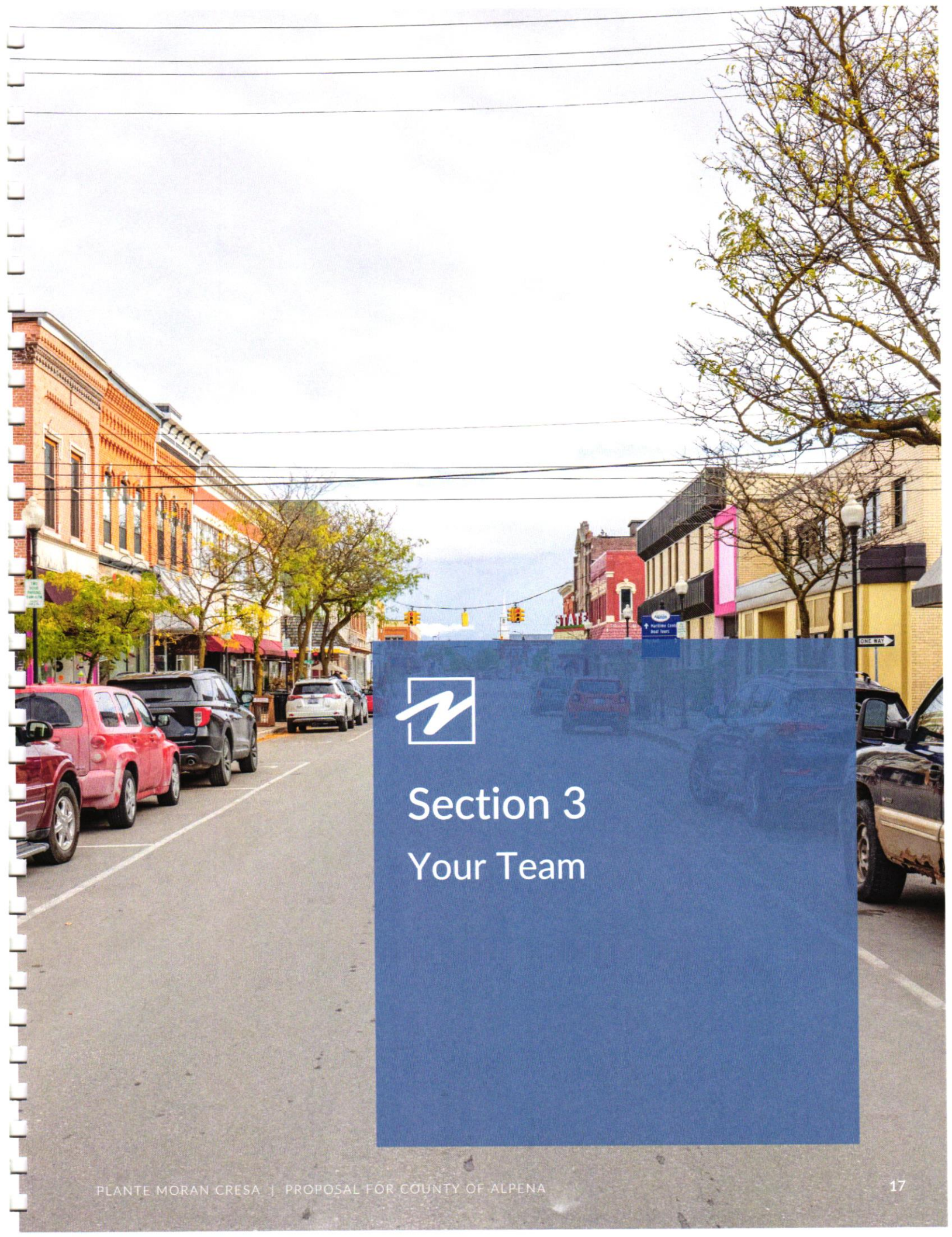
92%

offered creative solutions and insights



90%

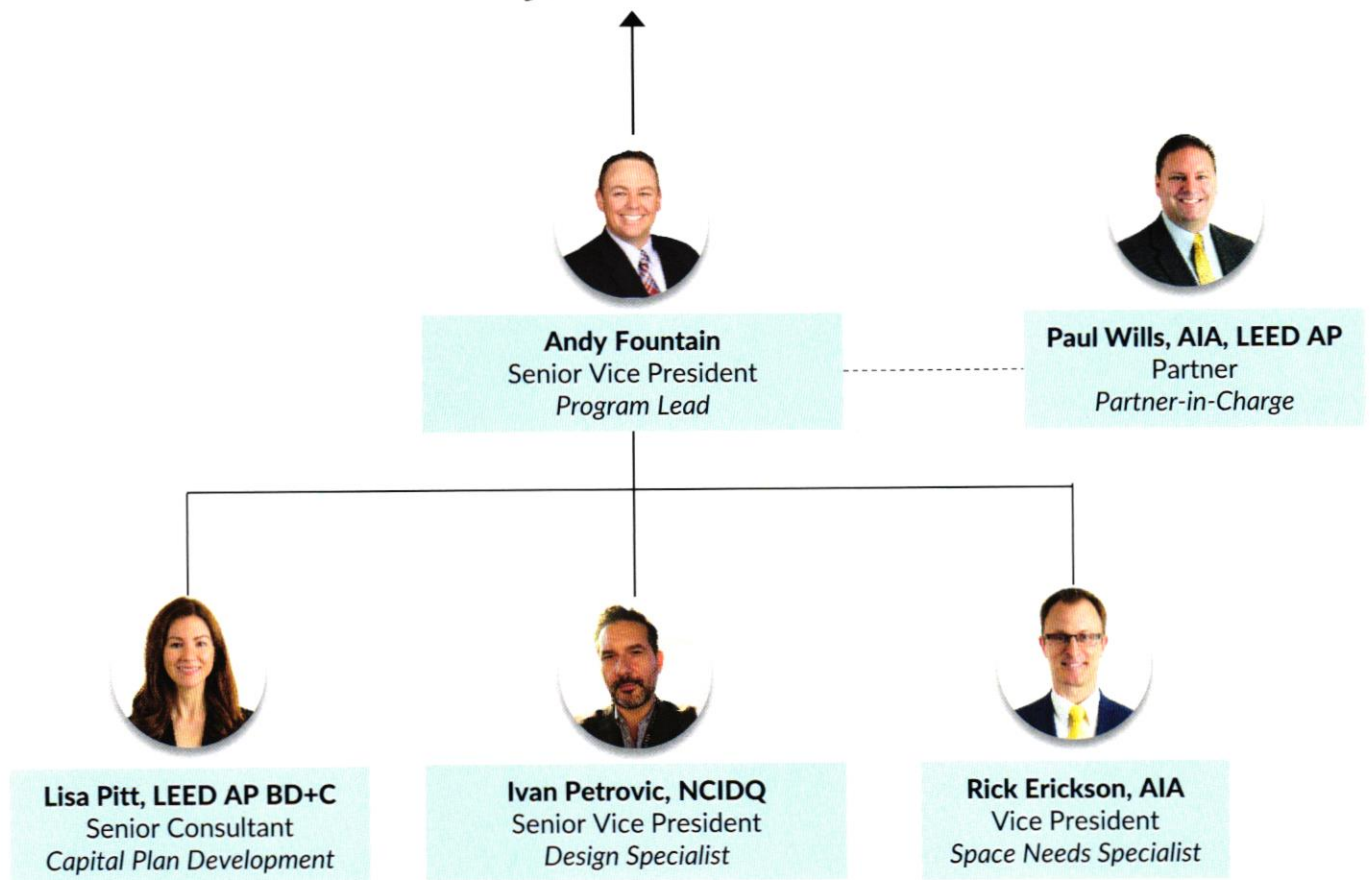
brought timely completion



Section 3 Your Team

Your team

Organization Chart | Management Approach



*Additional staff can be utilized as needed.

Over 100 Years of collective capital planning experience offered to your County!

Your team



Andy Fountain

SENIOR VICE PRESIDENT

Andy.Fountain@plantemoran.com | (248) 603-5088

With more than 20 years of experience in the construction and real estate market, Andy has the technical skills necessary to lead large capital programs from planning to a successful close-out. He is known for his firm and fair approach to problem-solving, through which he strives to seek the best possible resolution for his clients.

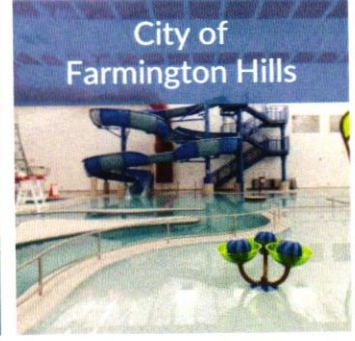
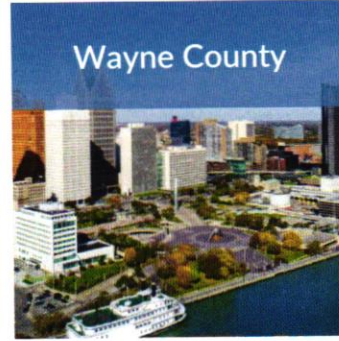
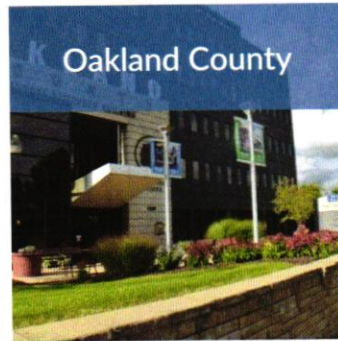
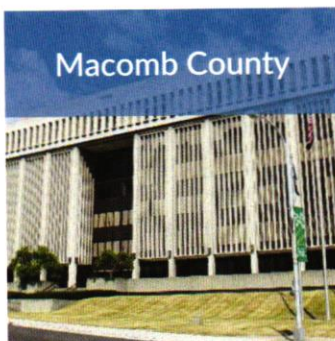
"Our proven process starts with comprehensive planning and ends with a successful project and a satisfied client."

As a senior vice president with Plante Moran Cresa (PMC), Andy has worked on a variety of multimillion-dollar capital improvement programs. His role as a capital planner and owner's representative is to guide clients through the process as they plan and execute their projects, helping them realize cost savings while meeting the needs of their organization.

Prior to joining PMC, Andy worked primarily in the K-12 and private sectors as both a construction manager and owner's representative. In these roles, Andy provided process refinement, budget development, evaluation and assessment, and project management services.

Andy has a B.A. in business management from Western Michigan University.

Relevant Clients



Your team



Paul R. Wills, AIA, LEED AP

PARTNER

Paul.Wills@plantemoran.com | (248) 223-3316

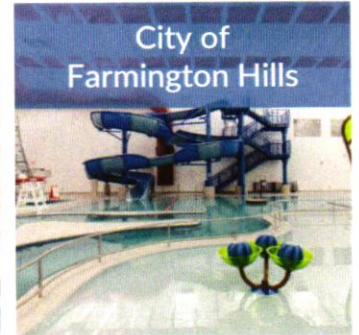
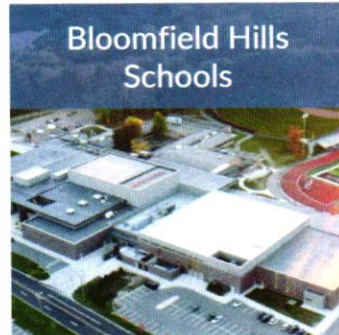
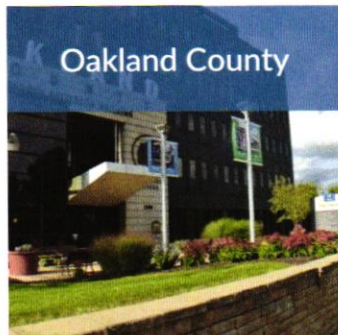
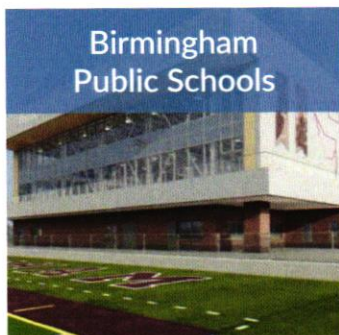
"Project management is about leading the team with a shared vision for success. There is nothing better than seeing your hard work come to life."

An enthusiastic client server, Paul is extremely effective at assisting clients with defining project parameters, such as budget and schedule, while determining the delivery method best suited to meet the client's needs. He can also help with the selection of design and construction team members, working with legal counsel to develop favorable contracts, and monitoring project progress from pre-planning through completion. His collaborative leadership puts his clients' projects in a position for success.

Paul began his career at Gourdie Fraser Associates, designing site improvement projects and new land developments and conducting feasibility studies. He also worked on-site as a project surveyor and field superintendent where he supervised and managed various corporate, K-12, higher education, and government construction contracts. While at Barton Malow Company, Paul worked on preliminary programming, developing schematic and design development drawings and presentation models, producing construction contracts documents, and performing construction administration for clients throughout the Midwest.

Paul received his Bachelor of Science and Master of Architecture degrees from Lawrence Technological University. He became a licensed architect in 2001. Paul is a LEED-accredited professional (Leadership in Energy and Environmental Design) and a member of the American Institute of Architects (AIA). He is certified by the National Council of Architectural Registration Boards (NCARB).

Relevant Clients



Your team



Ivan Petrovic, NCIDQ
SENIOR VICE PRESIDENT

Ivan.Petrovic@plantemoran.com | (248) 736-7886

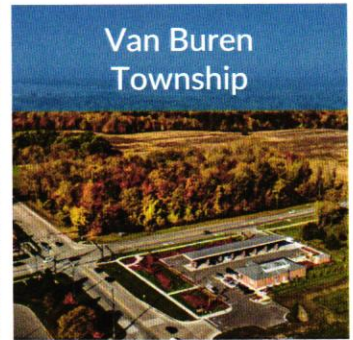
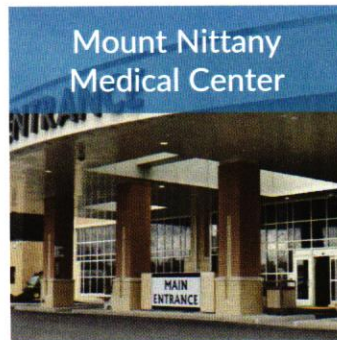
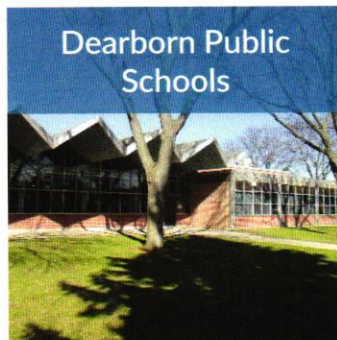
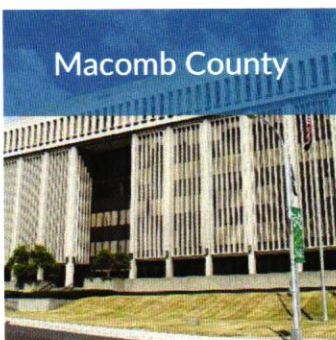
As a senior vice president at Plante Moran Cresa, Ivan helps advise business owners with their capital planning and implementation. His goals are to ensure project needs are met and the project completes on time and within the budget. The majority of his client base is from the industrial and commercial sector, but he has also led projects in K-12, higher education, healthcare, retail, and entertainment.

“Understanding a business’s operations is the foundation to build upon and determine the appropriate solution. It all begins with the awareness that we are all in the same business: the business of people.”

Through developing clear processes around budget, schedule, and team management, Ivan acts as a principal liaison with our clients for the duration of their projects. He has the technical expertise in construction, real estate, and architecture to manage relationships with general contractors, architects, construction companies, municipal authorities, and financial institutions involved in the project.

With over 25 years of experience, Ivan has been involved in diverse architectural and construction projects. His career began with his family’s construction business in Canada and progressed as he developed design and technical skills with several major architecture firms, most recently with IBI Group. At IBI, Ivan was associate principal of design and architecture, responsible for business development, operations, quality control, and management.

Relevant Clients



Your team



Rick Erickson, AIA

VICE PRESIDENT

Rick.Erickson@plantemoran.com | (248) 603-5079

"If you don't know where you're going, how can you expect to get there? Proper planning that addresses scope, schedule, and budget is the road map for all successful projects."

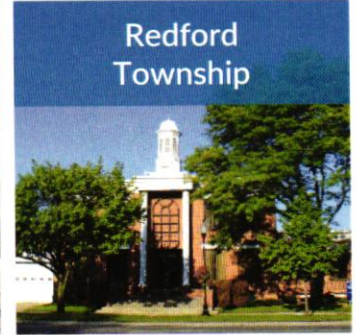
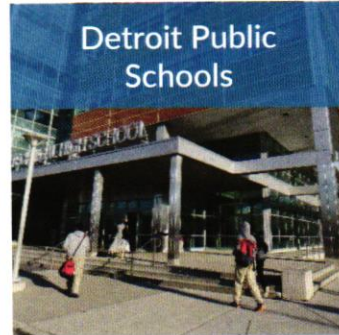
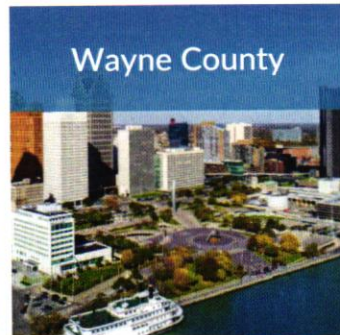
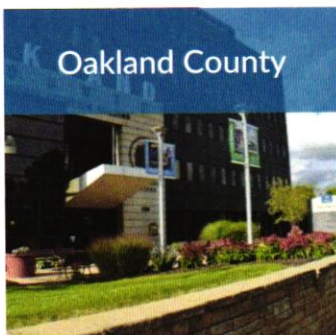
Rick, a senior consultant with Plante Moran Cresa, is a project manager with more than 25 years of experience in the design and construction field. He is a well-rounded professional who's been involved with a broad range of project types in the commercial, retail, industrial, K-12, higher education, residential, and hospitality industries.

Over the course of his career, Rick has worked as a designer, project architect, draftsman, field representative, project manager, department manager, and owner's representative. Because of his diverse experience, Rick has learned to view projects from various perspectives, making him a more effective problem-solver, team member, and team leader. Rick takes great pride in utilizing his experience as the owner's advocate to ensure projects are complete on time, on budget, and to a quality that exceeds the owner's expectations.

Rick has played a key role on numerous projects throughout his career, including MotorCity Casino, Detroit Institute of Arts building assessment, Toyota Technical Center campus expansion study, GM Lab 1 consolidation and expansion, Eastern Michigan University Strong Hall addition and renovation, and Central Michigan's Center for Integrated Health Studies addition and renovation are a few notable projects.

Rick received his Master of Architecture degree, with distinction, from Lawrence Technological University. He is a registered architect and a member of the American Institute of Architects (AIA).

Relevant Clients



Your team



Lisa Pitt, LEED AP BD+C

SENIOR CONSULTANT

Lisa.Pitt@plantemoranc.com | (248) 603-5271

Lisa brings over 10 years of architectural design and construction administration experience to Plante Moran Cresa's project management team. She has a background that encompasses a wide range of design and construction assignments, including preliminary space planning and programming, technical and contract documentation, and code compliance.

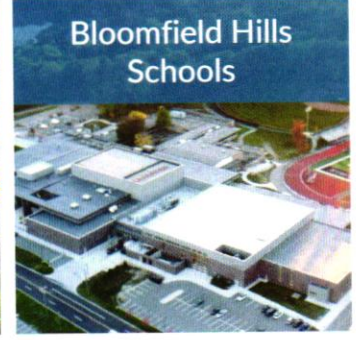
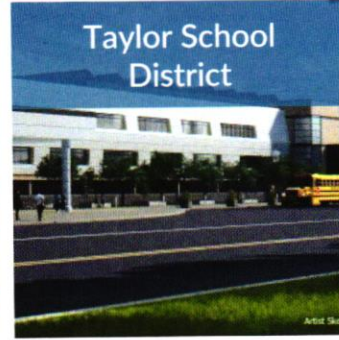
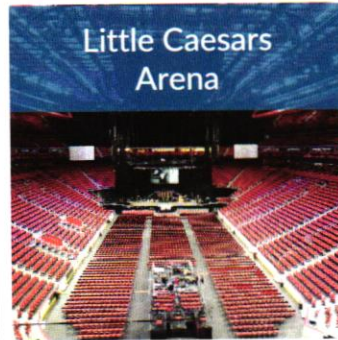
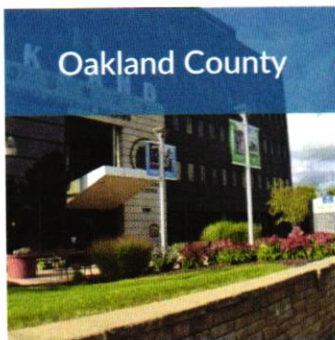
An effective leader, Lisa is excellent at coordinating key activities between all vendors and owners to ensure projects remain on task. Her strong design background and green building expertise gives her a unique perspective that helps align projects to the organization's business needs, particularly for clientele focused on sustainability.

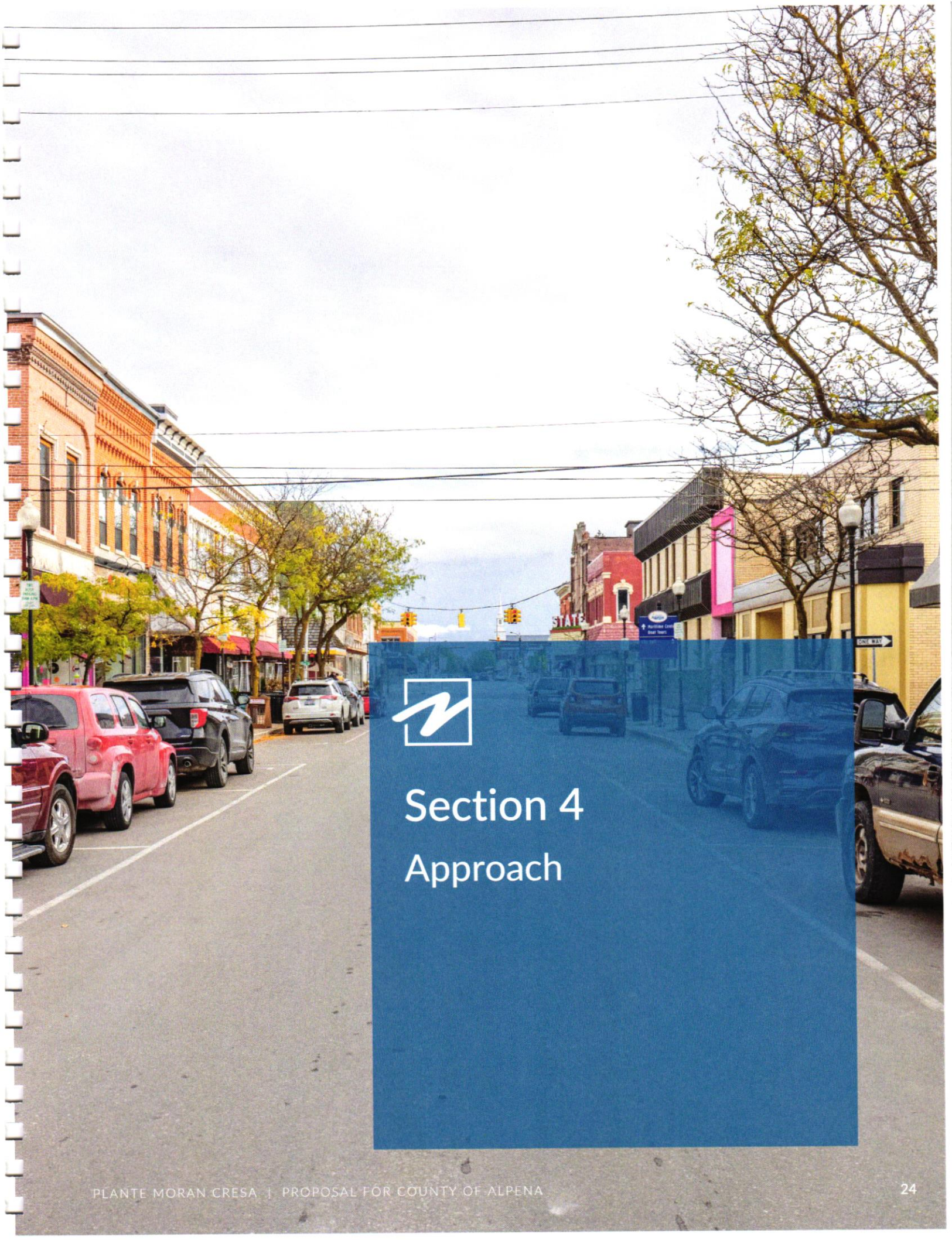
At Plante Moran Cresa, Lisa was part of the development team working on the new Little Caesars Arena and projects within The District Detroit, a 50-block development in Detroit, Michigan, featuring businesses, parks, restaurants, and event destinations. Prior to joining Plante Moran Cresa, Lisa was employed with Wold Architects and Engineers in Royal Oak, Michigan.

Lisa, a graduate of Lawrence Technological University, has a Bachelor of Science in architecture as well as a Master of Architecture. She is a Leadership in Energy and Environmental Accredited Professional with a specialty in building design and construction (LEED AP BD+C).

"We focus on creating great project teams and focusing them on developing value as we create projects that provide brilliant outcomes."

Relevant Clients





Section 4 Approach

Approach

Organizational Needs Analysis

Designated Contact from County of Alpena

It is expected that the County of Alpena will designate a staff member as our primary point of contact for the project. This staff member should represent the interests of administration, significant departments and elected officials. This will ensure the process remains transparent and will garner significant buy-in from all involved.

Project Initiation Meeting

PMC will conduct a project initiation meeting with the designated contact to finalize the project scope, approach, deliverables and timing.

Review of Current Documentation

To more fully understand the work completed to date, PMC would review the following documentation if available.

- Facility Assessments
- Budget Projections
- Technology Plans
- Other Department and County Strategic Plans
- Building Floor Plans

Space Planning

PMC will work with County of Alpena's Departments to determine each of their respective space needs. The space needs will be reaffirmed by incorporating the following approach.

- Establishment of space standards based on function
- Interviews with Department Directors and appropriate staff by our Organizational Structuring Expert
- Review of current and projected staffing levels

PMC will send a pre-interview questionnaire (survey) for management and staff to complete. The completed questionnaires will then be collected and reviewed by PMC staff. PMC will then conduct a series of interviews with management and staff to understand the needs of the organization as it relates to operations, technology, space and future staffing levels.

Adjacency Considerations

PMC will prepare separate plans of each proposed department location based on the area each department head requires, their inter-department interactions (adjacencies), interactions with the public, and location to accessible parking. PMC will review the proposed plan with each department head, the Project Committee, and other members of the County’s Departments in order to make additional refinements based on input received from each group. The plans will then be shown or described to each department head for comment and sign-off.

SAMPLE ADJACENCY STUDY

Current Inter-department Interactions	Board of Commissioners	County Executive	County Board	Court	Regulation	Public Works	Finance	Health and Community Services	Human Resources	MCCSA	Central Action	Office of County Administration	Planning	Prosecutors Office	Register of Deeds	Treasurer
Board of Commissioners	2															
County Executive		2														
County Board			2													
Court				2												
Regulation					2											
Public Works						2										
Finance							2									
Health and Community Services								2								
Human Resources									2							
MCCSA										2						
Central Action											2					
Office of County Administration												2				
Planning													2			
Prosecutors Office														2		
Register of Deeds															2	
Treasurer																2

Key
 1 = At least daily interaction
 2 = A few times per week to weekly interaction
 x = occasional interaction

Matrix based solely on data obtained in survey and in interview
 Blank cell = no information given from department interviewed

Preliminary Space Layouts

Based on the space needs and adjacency between departments, we will work to develop a preliminary layout of the departments within the current facilities owned by County of Alpena.

The preliminary layouts will be based on the following factors:

- Building layout
- Facility capital costs for renovation and expansions
- Site redevelopment opportunities
- Adjacency considerations
- Service levels
- CAD floor plans of existing facility

Facility Review/Preliminary Cost Information

Facility Review

Included in this proposal is a broad overview of major building components including exterior, roofing, mechanical, electrical, plumbing systems, and interior architecture. This Overview will assist in our cost estimates for department moves. If a more in-depth facility assessment is required, please see our Additional Information section of the proposal for further information.

Cost Estimates

The following cost estimates and general projections will be prepared for the County of Alpena.

- Cost to realign staff and make improvements to the buildings to handle the realignment. These cost estimates will include the following:
 - Prioritized Renovation Costs
 - Furniture Costs (as applicable)
 - Technology Costs (as applicable)
 - Professional Services
 - Soft Costs (i.e. insurance)
- The objective will be to provide County of Alpena with a complete project cost for each alternative identified.
- Our Michigan market knowledge matched with our facility planning expertise allows us to integrate accurate cost escalation factors into your capital plan development.

Line No.	Program Area	Area Requisites	Unit	Qty. of Requisites	Base Unit Cost (\$)	Effective Program Area Cost (\$)
1						
2	Interior Building Support Office / Court Room Renovation					
3	Demolition	72,000	SF	1	\$5.00	\$360,000
4	Rough Framing / New Partitions / Drywall	72,000	SF	1	\$5.00	\$360,000
5	Ceilings / Acoustical Tile	72,000	SF	1	\$5.00	\$360,000
6	Floors - Office Mid Level - Flooring/Parting	21,300	SF	1	\$12.00	\$255,600
7	Floors - Court - High Level - Flooring/Parting	42,300	SF	1	\$12.00	\$507,600
8	Glazed Doors / Hardware	72,000	SF	1	\$5.00	\$360,000
9	Mechanical	72,000	SF	1	\$12.00	\$864,000
10	Electrical - Includes Higher End Fixtures	72,000	SF	1	\$12.00	\$864,000
11	Plumbing	72,000	SF	1	\$12.00	\$864,000
12	Fire Protection	72,000	SF	1	\$5.00	\$360,000
13	FA / Low Voltage / Cabling & Patches	72,000	SF	1	\$5.00	\$360,000
14	Miscellaneous Permits, Fees & Licenses	82,800	SF	1	\$5.00	\$414,000
15	Subtotal				\$83.00	\$4,067,500
16						
17	Building Renovation Hard Cost Project Sub Total					
18						\$ 4,067,500
19	Building Renovation Hard Cost Project Sub Total					
20	Building Project Contingency			1.00%	OF Building & Site Budget	\$40,675
21	Design Project Contingency			2.00%	OF Building & Site Budget	\$81,350
22	Construction General Conditions, Support Services and Fee			8.00%	OF Building & Site Budget	\$325,400
23	Performance & Payment Bonds			1.00%	OF Building & Site Budget	\$40,675
24	Architect/Engineer Fees and Costs			7.00%	OF Building & Site Budget	\$284,725
25						
26	BUILDING AND SITE GRAND TOTAL:					
27	Less: Furniture and Equipment Cost			2.5%	Per sq. ft. of finished space	\$ 1,016,875
28	Less: Building Permits & Inspection Fees			1.25%	OF Building & Site Budget	\$ 50,844
29	Program Manager			1.50%	OF Building & Site Budget	\$ 61,013
30	Net Available			0.00%	OF Building & Site Budget	\$ 0
31	PROJECT TOTAL:					
32	Training & Grants and related:				OF Project Total	\$0
33	Less: In Accounting Costs & Fees, etc.:				OF Project Total	\$0
34	Subtotal Costs				OF Project Total	\$0
35	PROJECT GRAND TOTAL:				\$71.7%	\$ 3,050,625

ASSUMPTIONS
 This estimate is based on a 2014 cost and replacement of 2014, 2015, and 2016 unit price program. Existing floors 2-4 are to remain in use. All materials to be replaced are listed as an alternative. All new materials are to be replaced. It is assumed that there are no existing floors 1, 5 and 6. Demolition is assumed to include handling, sorting and disposal. GC to provide the health, safety and environmental services. All other logical work is assumed to be in the budget. All pricing is based on 2014/2015 market prices and is to remain as is. This estimate assumes that removal & installation of existing project systems will be completed and included in a bid & high level FA in the bid all together as stated.

Schedule Strategy

Due to the complexity of the current bidding environment, our team will assist the County of Alpena with procuring professional services in a strategic and cost-effective manner.

Space Forecasting and Operational Assessment

We have served as an independent real estate consultant and owner’s representative for more than 25 years, successfully completing more than \$3 billion worth of work which includes the identification of program requirements for capital projects for the public and municipal sectors.

Part of our dedication to providing excellent client service is ensuring that the continued education, state certifications, and general industry knowledge of our team members is regularly addressed and updated.

Below is an example of a recently completed client deliverable, which demonstrates our ability to meet the needs of this project:



We will provide examples upon request.

Future facility & operational cost

PMC will analyze potential recreation operational costs related to staffing, building maintenance and utility costs. We will also identify potential revenue opportunities to help offset capital expenditures. This will include:

- **Comparable Analysis:** PMC will gather information on similar operations to inform the County of Alpena of comparable practices. We will work jointly with the County to identify 3-5 comparable organizations and also develop a questionnaire for the County to review, amend, and approve. This questionnaire will serve as a script for interviews recreation center operations.
- **Comparable Interviews:** We will request an introductory message from the County to authenticate that we act on behalf of the County and will schedule remote interviews to glean information related to programs, operational standards, staffing levels, budgets, and other pertinent information. These meetings will be scheduled so that the County participants may join if desired.
- **Summary Report:** The product of the comparable analysis will be a summary memo (4-6 pages) that includes the project approach, a summary of each participatory organization, key observations, and comparability information. Because participation by the jurisdictions is voluntary, we recommend that the County consider offering a copy of the memo to participants in order to increase the likelihood of participation if needed.

Capital issue planning report

Upon approval and acceptance of our needs analysis, PMC will assist the County of Alpena to develop capital planning information materials and potential financial options.

Excluded services

PMC will provide information and recommendations based on our observations. All code compliance and design will be addressed in a future phase.

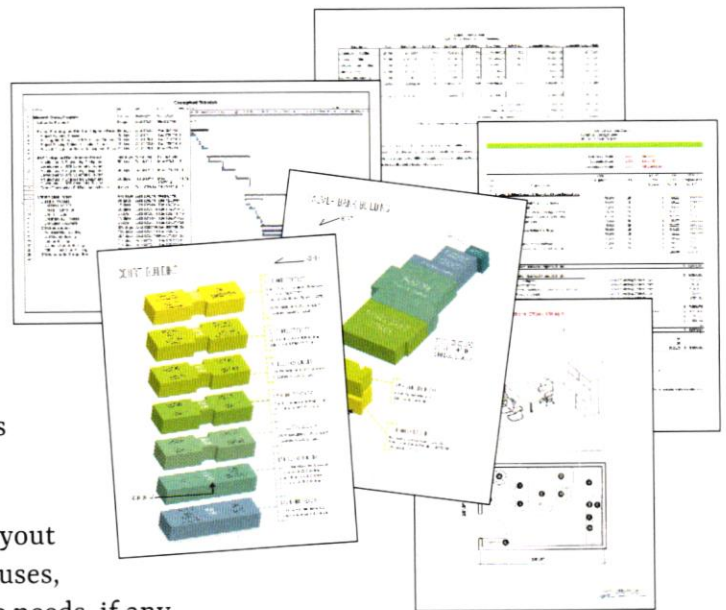
PMC will provide stacking diagrams, adjacency matrices, etc. that will be utilized during the design phase by the Architect.

Clarifications

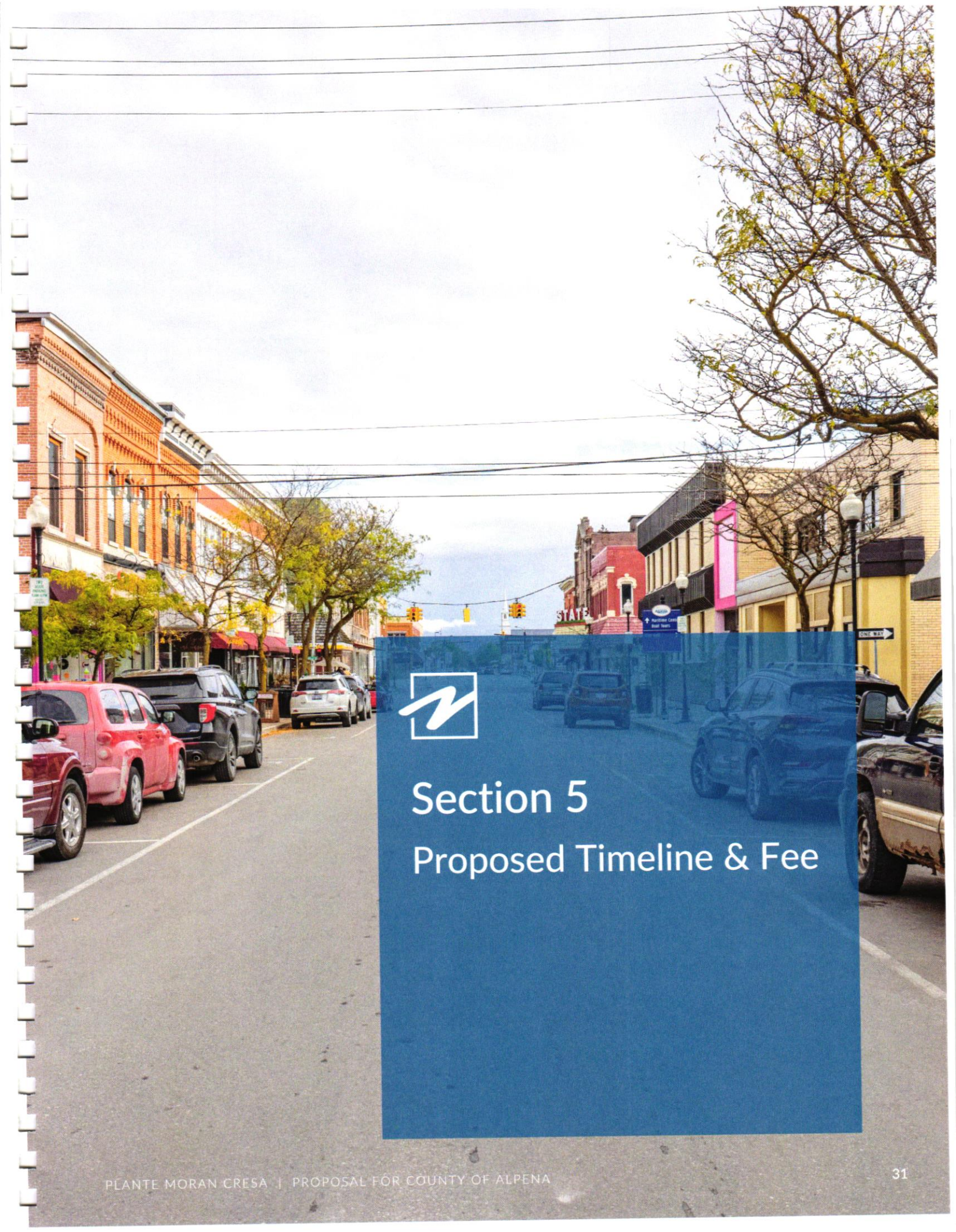
If awarded, PMC will work with the County of Alpena arrive at mutually agreeable contractual terms

Recommendations/Deliverables

After evaluating County of Alpena's long and short term organizational and space needs, PMC will develop a refined master program and plan for the City. By gaining a thorough understanding of your objectives, requirements, standards, budgets, and schedules we test for the validity and compatibility of an individual and combined facility basis. The master program and plan identifies the best correlation between facility site needs, costs parameters, timetables, and funding mechanisms to maximize County of Alpena's goals and objectives. We will provide:



- An evaluation of the most optimal and efficient layout within the proposed facilities for departments or uses, including the potential for additional future space needs, if any.
- An illustrative layout of departments within the building and square footages associated with each department and/or use, along with a narrative that explains the reasoning for such.
- A narrative report and supporting materials for an implementation strategy on the relocation of departments, including potential costs and timing.
- Alternative solution concepts that range from remodels with minor reconstruction, to new construction and their associated costs by location. These will include:
 - Phasing
 - Temporary Facilities
 - Transition Costs
- A final report and supporting materials
 - Findings and recommendations
 - Projected renovation costs by location
 - Drawings and conceptual plans of the proposed spaces



Section 5 Proposed Timeline & Fee

Delivery Schedule and Timeline

Proposed Timeline

PMC assumes a duration of 6 months for the project. Our experienced team will be available to work on behalf of the County during the anticipated timeframe. PMC is open to discussion of a revised timeline if desired by the County of Alpena.

	MONTH	1	2	3	4	5	6
Project Initiation		Active	Light	Light	Light	Light	Light
Internal & External Input Gathering		Light	Active	Active	Light	Light	Light
Facilities Audit		Light	Light	Active	Active	Active	Active
Building Use Study		Light	Light	Active	Active	Active	Active
Future Planning***		Light	Light	Light	Light	Light	Active

***The timeline for future planning depends on how many facilities need this analysis

Fee Proposal

We believe our fee is reflective of the value we will provide to the County of Alpena in the form of thorough, complete, and strategic planning for the County's facilities. Plante Moran Cresa has experience with municipalities and counties of all sizes, delivering successful results across the board. With our capital planning expertise, the County of Alpena will be well-positioned to plan, develop, and implement facility solutions moving forward.

Fee Proposal

Activity	NRC	MRC
Project Initiation & Planning	\$10 K	\$--
Internal & External Input Gathering	\$15 K	\$--
Facilities Audit	\$50 K	\$--
Building Use Study/Design	\$40 K	\$--
Future Planning	More information needed to make this determination	\$--

Reimbursable Costs

Reimbursable expenses such as travel expense (mileage, airfare, overnight accommodations), use of licenses, printing, overnight courier services, etc., will be invoiced at actual cost, without mark-up and invoiced monthly. Expenses of this nature will be NTE \$15,000 if needed.

A mutually agreed upon schedule of reimbursable costs would be provided for the duration of the engagement.



pmcresa.com

3000 Town Center, Suite 100
Southfield, MI 48075
(248) 223-3500

Alpena

July 12, 2022

Proposal for Evaluation Services

**FACILITIES AUDIT &
BUILDING USE STUDY**
County of Alpena

c2ae

Attention:

Ms. Mary Catherine
Hannah
Alpena County
Administrator
720 Chisholm Street
Suite 7
Alpena, MI 49707

Regarding:

Alpena County Facilities
Audit & Building Use
Study



123 West Main Street
Suite 200
Gaylord, MI 49735

July 12, 2022

Ms. Hannah and Selection Committee:

Thank you for the opportunity to submit our qualifications to Alpena County. We understand that the County is seeking a qualified consultant to help prepare a facility condition assessment and building use study on four County-owned buildings in the City of Alpena.

C2AE is proud to serve as a trusted advisor to hundreds of governmental entities across Michigan. We have worked with many rural communities to plan, design, and manage their buildings and infrastructure.

In addition to helping governmental entities plan for their building and infrastructure needs, C2AE is a full service architectural and engineering firm focused in the markets of government, education, and manufacturing. With our knowledge of these other markets, we will provide valuable insight into the uses of existing and future buildings beyond governmental uses, a unique set of qualifications matched by few.

C2AE's harmonious approach to client service looks to the long term impact our work can have on the quality of life within a community for its residents and businesses. Our clients appreciate our work on day one and value it even more over time and use. That's because our solutions remain foundational through the changes of time and taste. We are stewards of our communities, complete with our possibilities, and visionary in our thinking.

Having an office in the neighboring community of Gaylord, C2AE offers deep familiarity with the Northeast Lower Peninsula, and we are currently working for the surrounding communities of Gaylord, Rogers City, Mackinaw City, and East Tawas.

We look forward to the opportunity to work together toward your goals.

Sincerely,

C2AE

Robert Winks, PE/CEM
Project Manager

Bill Kimble, PE
Government Leader

FIRM INFORMATION



As the world moves rapidly forward, C2AE is here to help you navigate the current with straightforward, impactful, and enduring solutions.

Beginning with a highly personal approach, we translate environmental and spatial challenges into graceful, practical possibilities. We listen, we study, we embrace, and we create. As a result, our designs are loved on day one and appreciated even more over time and use.

Through underground infrastructure, buildings, or a harmonious combination of all we offer, we are empowering the communities in which we live, work, and pass on to the next generation. We believe in going beyond the challenge at hand to envision the world to come. We are future-minded in our solutions. We are stewards of the public trust. We are passionate about our craft. And we are here as your guide, making the complex simple.

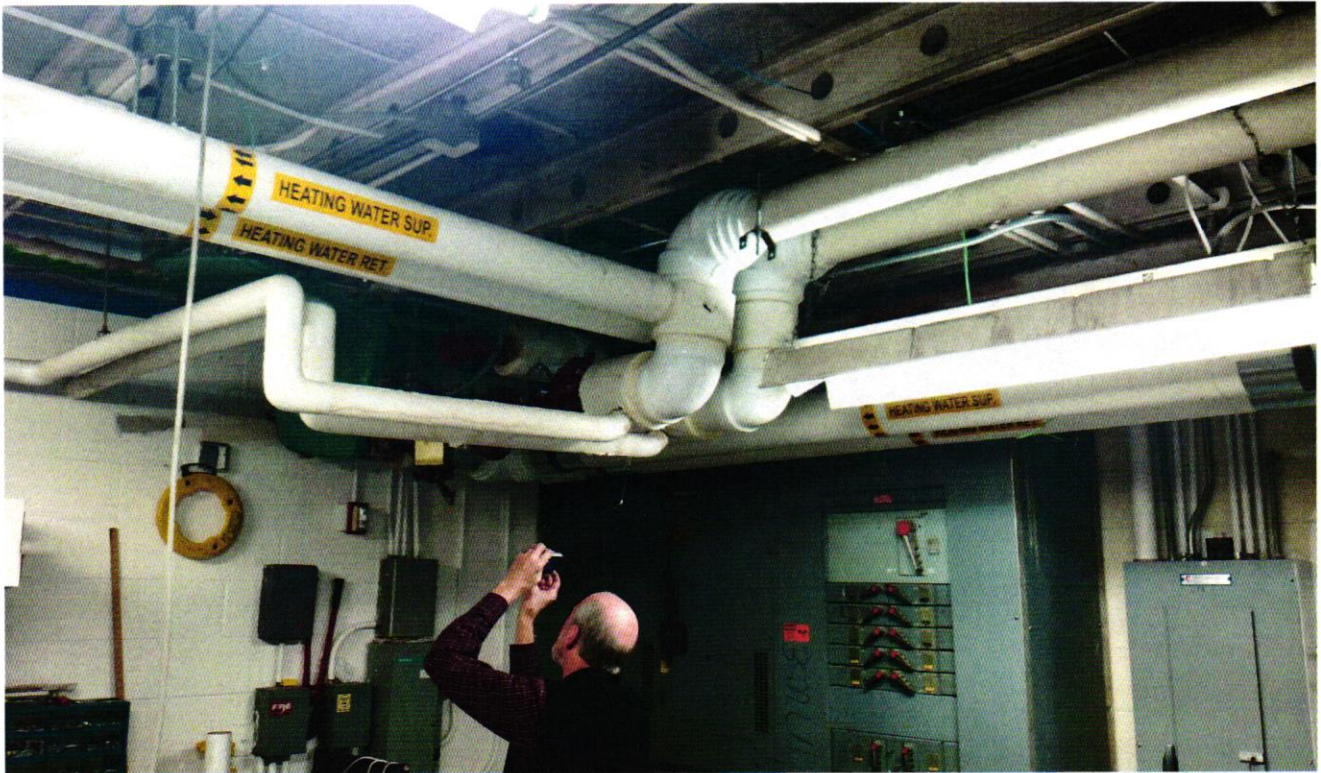
We are C2AE.

Create ahead.

SERVICES

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





PROJECT UNDERSTANDING

C2AE understands that Alpena County is requesting an evaluation of a specified list of capital assets and need for current and future use.

The specified capital assets consist of a grouping of buildings on both sides of US-23 in the City of Alpena from which the County conducts business. They include:

1. The main courthouse (a registered historic building)
2. An annex building presently housing County offices, Commissioner's conference room, District Family Court, and the Prosecutor's offices
3. Two additional buildings housing 911 emergency operations and probation offices

The intent of this study is to identify and prioritize needed repairs and renovations, determine the remaining useful life of the buildings and major systems, identify whether any of the buildings are in need of replacement, and what the estimated costs may be.

The evaluation of each building and site is to include the following elements.

- Site features (pavement, drainage, lighting, etc.)
- Building envelope (exterior walls, doors, windows, roof)
- Structural system
- Architectural systems and finishes
- Mechanical (heating and cooling) and plumbing systems
- Electrical systems
- Life safety systems
- Energy consumption and efficiency
- Barrier-free access

The assessments will assist Alpena County with both annual capital planning priorities over the next few years, as well as identifying longer-term facility needs.

PROJECT APPROACH, SCHEDULE, & FEE

EVALUATION APPROACH

We propose the following primary steps for the evaluation, but we would also welcome reviewing this with you and adjusting the process to best meet your needs.

1. Kick-off meeting with Alpena County assessment team
 - Confirm Alpena County assessment team members, decision-making structure, and primary contact
 - Review and confirm evaluation approach, timeline and deliverables
 - Establish date and time for each building evaluation
 - Review access to each building and site
 - Check-in procedures, badging, escorted access
 - Roof access
 - Access to mechanical rooms and other locked or secured spaces
2. On-site inspections of buildings and sites
 - C2AE team will conduct a visual inspection of all four buildings and sites, including the roofs
 - Review of building envelope, HVAC systems, and lighting will be used to assess energy efficiency
3. Develop preliminary findings and draft report
 - General description of each building and property
 - Identify needed repairs or renovations, along with supporting photos for critical items
 - Recommendations for repairs or renovations
 - Estimated remaining useful life of major systems
 - Prioritize recommendations (e.g. service in less than two years, two to five years, or five to ten years or a similar set of priority recommendations)
 - Provide a condition rating for major building systems (e.g., very inadequate, poor, borderline, satisfactory, and excellent or a similar scale). This will help to determine if replacement is recommended.
4. Review preliminary findings and draft report with

Alpena County assessment team

5. Develop cost opinions
 - The C2AE team will develop an initial cost opinion for each facility and compile them in one summary
 - A comparative cost to replace the building with a new building will be provided as appropriate
6. Review cost opinions with Alpena County assessment team
7. Prepare final report
8. Present findings and recommendations to Alpena County
 - Present to assessment team
 - Present to the Board if desired

PROJECT MANAGEMENT METHODOLOGY

Given the wide range of professional services our team will provide to and coordinate with Alpena County, we have devised a specialized approach to project management and client communication.

Though we rely on a team of professionals to assist our clients, we manage our projects through a single point of contact. The primary contact for this project will be Bob Winks, PE/CEM, project manager, for all services. Should the specialized knowledge of another staff person be needed, Bob will be responsible for involving the appropriate professional team member to accomplish the task at hand.

Bob Winks will remain involved in all aspects of work regardless of whether or not he is directly involved in the technical completion of tasks. This management style allows for ease of communication between the County and our team, creating continuity from one segment of work to another.

In the event that the project manager is not available to you for an immediate need we have established a secondary contact, Roger Marks, PE. Roger will be able to address any concerns or questions you may have, conferring with Bob as the project manager or other senior staff as needed.

We also believe that QA/QC is critical to efficient task completion, production of quality results, and good client-consultant relations. To that end, we have established a senior staff person to serve in this position. Their primary task would be QA/QC and provide second party review of all work product produced by the staff.

We understand the world of professional services is a competitive one. Our responsiveness to our clients is often what tips the scales in our favor. The C2AE team commits to dedicating a core group of experienced professionals to Alpena County for the completion of services. This core group will remain consistent throughout the duration of this contract. This consistency will facilitate familiarity between the team members and enable a good working relationship.

C2AE conducts resource scheduling meetings among all of our project managers every two weeks to ensure that our project workload is balanced and projects are on schedule.

ELECTIVE ADDITION: ASSET MANAGEMENT PROGRAMMING

As an actionable financial and operational management tool, the C2AE team strongly recommends that the County consider implementing an asset management program (AMP). Asset management is the leading program utilized by municipal governments and bodies across the country for managing their local roads, drains and stormwater management infrastructure, buildings, vehicle maintenance garages, parks, trails, and public venues like libraries, airports, and fairgrounds.

AMPs are written plans designed to serve as the cornerstone for an effective fiscal operation, best utilizing limited funds. AMPs provide road maps for organizations to understand their objectives and long-term asset management strategy. They are also a communication tool, synchronizing different departments and answering to the general public. AMPs often integrate several plans, such as climate action plans, strategic plans, integrated resource plans, capital improvement plans, and emergency preparedness plans into one comprehensive document.

AMPs drive daily actionable activities and direct annual operations and capital improvement spending based on a wants and needs analysis. They communicate public work activities and save municipalities hundreds of thousands of dollars in operations and capital improvements.

The return on investment realized by an asset management program is community-specific and you will get out of it what you put into it. However, the benefits can be in areas such as reduction in infrastructure needs, increased asset lifespans, reduction of failures, and higher customer satisfaction.

At a minimum, establishing an AMP will include the following steps:

Step 1. Complete an asset inventory of the specified buildings

You can't effectively manage your assets if you don't know what assets you have. Before constructing your program, you must take a close look at your assets by conducting a complete asset inventory. This will serve as the basis of your program and will be documented in your plan. An asset inventory should include:

- What assets you have
- Where they are (recommended to utilize GIS)
- What their values are
- When they were built or bought
- What their expected life-cycles are

Step 2. Calculate life-cycle costs

In order for your program to be as accurate as possible, you need to calculate your assets' entire life-cycle costs, not just how much they cost at initial purchase. During an average asset's life, there are many opportunities for added costs, like maintenance, capital, condition and performance modeling, and even disposal costs. An asset management program is only as accurate as your life-cycle costs.

Step 3. Set levels of service

Use levels of service to outline the overall quality, capacity, function, and safety of the different services your assets provide. The requirements of maintaining that service will dictate the operating, maintenance, and renewal activities that need to occur moving forward. To access levels of service, think about:

- The level of service you're currently providing
- How that level of service is expected to change (movement towards renewable energy)
- The annual cost of current service
- If there is funding to support any change in service
- If your current level of service is meeting the needs and expectations of users (public participation)

Step 4. Apply Cost-Effective Management

Are you managing your assets in a proactive or reactive manner? In most cases, proactive management is more cost-effective in the long-run than reactive management. For example, if you wait until there is a bad pothole on one of your streets before performing road maintenance, you can end up spending more money than if you proactively conduct road maintenance over time.

You're practicing cost-effective management when you do the most cost-effective maintenance, repair, or replacement at the right time during the entire asset life-cycle.

Step 5. Execute long-term financial planning

Your asset management should naturally translate into a long-term financial planning and capital improvement plan. A long-term financial plan will help you determine which of your objectives are feasible, which are important, and which can maintain your priority assets over the long term.

Delayed or ineffective implementation of asset management will result in a loss of operational capacity, increased equipment breakdowns, diminished workforce productivity, elevated spare parts inventory, and expanding costs.

Utilizing your existing systems, the C2AE team can help you place the information collected on the assessed buildings into the beginning of an AMP. The County can begin immediately using this initial AMP and add other capital assets to see a more complete picture of the infrastructure controlled by the County. Setting up this initial AMP is an elective, added cost and broken out in our pricing.

ASSUMPTIONS

We have made the following assumptions relative to our scope of services.

- Alpena County will provide a file(s) containing general information about each of the buildings for inclusion in the assessment report, e.g. building description, property map, general building floor plan(s), etc.
- Alpena County will provide a copy of, or access to, available "record drawings" or construction prints of each building showing building floor plans, building sections and details, mechanical and electrical plans, etc.
- Access to the buildings will be provided based on a mutually agreeable schedule during normal business hours (Monday through Friday from 8 am to 5 pm).
- Roof access is available via internal wall ladder/ roof hatches or exterior ladders. If a personnel lift is required for access, C2AE can rent this equipment as a reimbursable expense.

SCHEDULE

(Project Timeframe)

Our team is available for the kick-off meeting within a week of notification of award. We estimate that the assessment process will take approximately 12 weeks to complete. We plan to have a draft report and initial recommendations and priorities established to coordinate with Alpena County's capital budgeting process on or before December 15, 2022.

FEE

Based on the approach and the scope of services outlined above, C2AE proposes a lump sum fee for the facilities assessment of \$46,000 (an average of about \$15,450 per building). We estimate approximately 425 staff hours to complete the assessment for the four buildings and services outlined. The lump sum fee includes all travel expenses.

Project Initiation and Planning <i>(one-time/monthly billing)</i>	\$7,000
Internal and External Input Gathering <i>(one-time/monthly billing)</i>	\$4,600
Facilities Audit <i>(one-time/monthly billing)</i>	\$25,700
Building Use Study/Design <i>(one-time/monthly billing)</i>	\$8,700
Future Planning <i>(one-time/monthly billing)</i>	\$15,800
Total	\$61,800

To include the additional work necessary to initiate your high-level asset management program utilizing Arc-GIS, an additional fee of **\$5,000** will be required.

REIMBURSABLE EXPENSES

The following services and/or expenses are not included in our fee, but can be provided as a reimbursable expense on a time and materials basis if required:

- Thermal imaging for energy efficiency analysis
- Roof core sampling to assist in assessing amount of insulation and roof condition
- Personnel lift to access building roofs

PROJECT TEAM

COUNTY OF ALPENA



PROJECT MANAGEMENT

Bob Winks

QUALITY ASSURANCE/QUALITY CONTROL

Craig Jansen

DESIGN/ENGINEERING

Tyler Ruel

Kevin Makarewicz

Jamie McArdle

Dennis Jensen

Hannah Snyder

Mandy Marsh

Eric Rantanen

James Etters

HISTORIC PRESERVATION

WTA Architects (subconsultant)

GENERAL CONTRACTOR

The Christman Co. (subconsultant)



BOB WINKS, PE/CEM

Project Manager

Bob has managed the design and implementation of capital engineering projects across the globe. He collaborates effectively on even the most complex projects and in challenging environments, and he values transparency.

Years of Experience 33

Education

Bachelor of Science, Mechanical Engineering - Energy Generation and Delivery: Michigan Technological University, 1989

Naval Nuclear Power Training - Electrical Emphasis: US Navy

Registrations

Professional Engineer: MI

Certifications

Association of Engineers Certified Energy Manager

CSI Vibration Institute Level 1 Vibration Analyst

Agema Thermography Academy Level 1 Thermographer

* Completed before joining C2AE

Highlighted Experience

Amway Corporation Powder Manufacturing Facility Closure*

Mechanical engineer for the decommissioning of work centers, the salvage or disposal of manufacturing equipment, selecting facility demolition, and site environmental hazard remediation, all within a \$1.6 million budget,

Amway Corporation Site and Utilities Improvements*

Project manager for a three-year, \$10 million project that upgraded roads and potable water, sewer, and wastewater systems. The work also improved parking, replaced aging water piping with HDPE piping, and added bioswales to capture and retain stormwater.

Amway Corporation Amway Nutritional Facility Wastewater System*

Mechanical engineering services for the design and installation of a \$1.4 million wastewater system to analyze and treat the process effluent emerging from the nutritional facility to comply with City of Grand Rapids, Michigan, discharge permit specifications for oils and pH levels to the sewer system.

Amway Corporation Plastic Manufacturing Facility Air Drying System*

Mechanical engineering services for the design and installation of the \$800,000 Descant Air Drying system to improve plastic blow molder cooling air quality, resulting in a 15% increase in the bottle production rate.

Amway Corporation India Amway Nutritional Facility*

Mechanical, electrical, and plumbing engineering supervisor for the construction of the Tamil Nadu, India, nutritional facility to ensure specifications, quality, budget, and schedule were met.

Amway Corporation Corporate Aircraft Hangar, Passenger Terminal, and Maintenance Facility*

Project manager for the design and construction of the \$15 million facility at the Kent County International Airport to accommodate growth of the Amway corporate air fleet.

Amway Corporation Warehouse Remodel*

Mechanical engineer for the \$7.5 million remodel of an existing warehouse on campus into a 25,000 SF, multistory, multiuse conference and office space as part of a 1,500-employee relocation from Amway North America to the main Amway campus.

Amway Corporation Sorbitol Railroad Delivery System*

Project manager for the \$2 million design and construction of the bulk Sorbitol railroad delivery system at the Ada, Michigan, campus. The project finished ahead of schedule, resulting in \$1 million of annual savings.

Amway Corporation Laundry Simulation Laboratory*

Mechanical engineer for the design and construction of the \$1.2 million simulation lab, designed to simulate any water hardness, pH, and temperature combination that may be encountered worldwide in any Amway market. The project improved the research and development team's ability to test and evaluate products by 200% over the old system.



CRAIG JANSEN, PE

QA/QC

Craig is an experienced engineer and a member of C2AE's executive team. Prior to joining the firm, Craig spent several years providing building system analysis and layout design for industrial plants.

Years of Experience 31

Education

Bachelor of Science, Mechanical Engineering: Michigan State University, 1991

Registrations

Professional Engineer: MI, IL, KY, MO, SC

LEED Accredited Professional with Specialty, BD+C, U.S. Green Building Council (USGBC)

Certifications

Construction Documents Technologist (CDT)

Professional Affiliations

American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)

American Society of Mechanical Engineers (ASME)

National Society of Professional Engineers (NSPE)

Highlighted Experience

City of Lansing Police/Courts Consolidation Study

Project manager for a study to consolidate two community police precincts and the greater Lansing area District Court. Services included reviewing current and future operations based on projected staff levels and operating models, and developing cost opinions for two existing buildings/sites and new sites to serve for short- and long-term needs.

City of Lansing City Hall Renovations

Mechanical engineer for upgrades to an existing fire suppression system at the Lansing City Hall to allow for future system expansions and for a later project that renovated 9,000 SF for the Attorney/Probation 5th Floor.

Clinton County 2016 Sheriff's Office Roof Replacement

Project manager for an EPDM (ethylene propylene diene terpolymer) rubber ballasted roof tear off and replacement at the Clinton County Jail.

Cosma Castings Utility Study

Project manager for an initial load capacity study of the 480v distribution system, which indicated that one of four substations was overloaded. The team then devised a solution to balance the electrical loads by removing equipment from the overloaded substation and adding it to another with sufficient capacity.

Cosma Eagle Bend Facilities Study and Expansion

Project manager for the study of a 220,000 SF facility expansion—including a high bay for two new hot forming press lines, space for laser and welding assembly, and finished good storage—to an existing manufacturing plant. The team was later retained for the design and construction of the work.

American Seating Company Manufacturing Facility Feasibility Study

Mechanical engineer for the completion of a pre-demolition/pre-construction feasibility study for preparation of future manufacturing facility renovations.

J. Rettenmaier Office Expansion

Project manager for a 12,400 SF office expansion and remodeling effort, including conference rooms, offices, laboratory spaces, and a basement storage area. A later expansion now adding a warehouse facility and additional office space.

Bekum America Corporation Master Plan

QA/QC 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.

Battle Creek VA Medical Center Inpatient Mental Health Expansion

QA/QC for the design of a 36-bed, 38,538 SF addition that houses multiple inpatient services without compromising the campus' place on the Historic Register. Internal courtyards separate the addition from the existing facility, providing a tranquil, healing environment. The design extended the existing anti-ligature camera system into the addition to monitor all corridors and common spaces.



TYLER RUEL, PE

Transportation Engineer

Tyler has designed and managed projects involving civil and transportation engineering, both at C2AE and in his previous role with the Michigan Department of Transportation.

Years of Experience 11

Education

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

Registrations

Professional Engineer: MI

Certifications

Nuclear Gauge Safety Training (Troxler), Hazmat Certification

Highlighted Experience

City of Gaylord Downtown Development Authority Downtown Improvement

Transportation engineer for .35 miles of roadway and streetscape improvements on Main Street from the railroad tracks to Center Street and S. Otsego from 2nd Street to Main Street. The project changed the M-32 traffic configuration to provide traffic calming, placemaking, and a more accessible downtown shopping district. Ornate street lighting helped to enhance the pedestrian-friendly environment.

City of Grand Ledge Library Parking Lot Reconfiguration

Transportation engineer for improvements to the downtown parking lot. Alterations improved efficiency, circulation, and safety for vehicles and pedestrians. Improvements also increased connectivity with adjacent pedestrian routes, used sustainable storm water management solutions, implemented lighting, and buried overhead utilities.

City of Lansing Major Streets FY2019

Transportation engineer for improvements to Kalamazoo St., American Rd., and Miller Rd. Work includes milling and resurfacing with necessary base repairs. Federal funding participation and a local match bring the total project cost to \$125,000.

City of Lansing Forest & Collins Roads Improvements

Civil engineer for off-site infrastructure improvements including road widening, vehicular circulation (including a new roundabout), storm water management, water main, sanitary sewer, electrical feed, and non-motorized paths and bike lanes for the roads surrounding McLaren Greater Lansing's new 52-acre medical campus.

Clinton County Road Commission Turner Road Rehabilitation

Transportation engineer for the rehabilitation of Turner Road, including mapping and right-of-way engineering, funded by the Transportation Improvement Program (TIP) over four fiscal years. Work included a mile per year of overlay rehabilitation, including trenching, and widening for added 6 ft. shoulders and drainage improvements.

Village of Chesaning Pine and Gasper Streets Reconstruction

Transportation engineer for the design and construction of Pine and Gasper Streets including subbase, aggregate base, storm sewer, water main, and ADA ramps.

City of DeWitt Local Streets Improvements

Transportation engineer for the resurfacing of several residential streets, including a portion of South Geneva, Lucerne, Alpine, Larkwood, and East Geneva Drive as part of the 2019 Local Streets contract.

City of Boyne City North Lake Street Reconstruction and Trail Planning

Transportation engineer for the complete mill and resurface of North Lake Street, totaling 4,620 LF. In conjunction with the design and construction on Lake St., the team developed plans for an adjacent trail. MDOT LAP.



KEVIN MAKAREWICZ, PE

Civil Engineer

Trained in civil engineering and architectural technology, Kevin provides project management and design by approaching projects holistically. He enjoys supporting the essential, invisible functions and systems that keep our world in motion, such as running water and stormwater drainage.

Years of Experience 31

Education

Bachelor of Science, Civil Engineering; Michigan Technological University, 1991

Associates in Architectural Technology (High Distinction); Ferris State University, 1986

Registrations

Professional Engineer: MI

Certifications

Troxler Nuclear Density/Moisture Gauge Operator

Professional Affiliations

National Society of Professional Engineers (NSPE)

Highlighted Experience

Whitewater Township Infrastructure Needs Assessment

Civil engineer for a high-level evaluation of a clean water collection system and drinking water distribution system and related facilities. The planning effort is focused on estimating capital improvement costs, determining operating options, identifying partnerships opportunities, reviewing possible funding sources, and recommending project phasing for new infrastructure systems.

Otsego County Courthouse Plaza Site Improvements

Civil engineer for updates to the layout plan for the courthouse plaza; concepts included café area with tables/seating, a fire pit and seating, a small decorative fountain with seating, paver areas, and plantings.

City of Boyne City Public Facilities Study

Civil engineer for preliminary and schematic design services for new Boyne City facilities for the Department of Public Works, City Hall, and emergency response services.

City of Boyne City Air Industrial Park Drive Reconstruction

Civil engineer for the reconstruction of Air Industrial Park Drive between M-75 and Airview Road, which is approximately 1,300 ft. The new roadway will have concrete curb and gutter full length, storm sewer and drainage structures, and pavement suitable for heavy truck traffic.

City of Gaylord Downtown Development Authority Study

Civil engineer assisting the Downtown Development Authority in implementing changes to the historic downtown district. Work included conceptual design of changes to the M-32 traffic configuration and improvements to pedestrian safety. The plan and cost estimates were used as the basis for obtaining project funding.

City of Cadillac New Municipal Well Field Phases I and II

Civil engineer for a 6,800 SF public works department headquarters and 12,400 SF pre-engineered steel garage complex to accompany the design and construction of two new municipal well fields. The DPW building includes offices, restrooms, a lunch room, a conference room, and large training facility. The 12,400 SF attached heated garage will have workshops, storage, laundry, locker rooms, truck wash, and vehicle storage.

Kirtland Community College Michigan Forest Products Institute Addition

Civil engineer for the addition of the new Michigan Forest Products Institute to promote Michigan's timber industry. The team provided construction administration and site work, including grading and a parking lot expansion, along with improvements to the water and sewer utilities.

Otsego County District Court Parking Lot

Civil engineer for improvements at the district court parking lot.



JAMIE MCARDLE, PLA

Landscape Architect

Jamie thrives at the meeting point of her dual passions for landscape architecture and social work, where the natural and built environment can encourage the end user toward an intended experience.

Years of Experience 5

Education

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

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

Bachelor of Social Work: Wayne State University, 2010

Registrations

Professional Landscape Architect: MI

Highlighted Experience

Village of Elk Rapids Ames District

Landscape architect for the development of a plan for corridor improvements based on data and input from businesses and homeowners. The plan looks to improve safe, non-motorized amenities, ADA accessibility, street design, parking, lighting, trail connectivity, the US-31 underpass, and other infrastructure. Work is focused on bringing more businesses into the area.

Village of Kalkaska Downtown Development Authority Streetscape Study

Landscape architect for the development of streetscape concepts and cost opinions for Cedar Street from 5th to M-72 and Elm Street from Cedar Street eastward.

Village of Kalkaska Downtown Development Authority Cedar Street Alley Planning

Landscape architect for the development of a downtown alley concept plan for the redevelopment of an alley west of Cedar Street and between 3rd and 4th Streets. The goal is to create a more inviting plan with better pedestrian accessibility using an attractive rear entrance area for businesses to draw visitors directly from parking. Outdoor seating and exhibit spaces are included.

St. Ignace Area EMS Council New Facility

Landscape architect for preliminary documents for a 6,000 to 7,000 SF building to assist the council in securing funding, developing bidding plans and specifications, and providing construction administration after funding is secured. The new facility will accommodate the entire program under one roof, complete with garage, storage, training, and living space for staff as well as public spaces open after hours and for weekend classes.

Eaton County Substation Replacement Phase 1

Landscape architect for the study of the existing Sheriff's Department substation site and facility to identify potential options for a replacement substation, either on the same site or a new one. Criteria for possible options include site size, topography, soils, available utilities, and location-relative access to major roads. The final deliverable of this phase will include conceptual floor plans and site plans with conceptual budgets.

City of Cadillac New Municipal Well Field Phases I and II

Landscape architect for a 6,800 SF public works department headquarters and 12,400 SF pre-engineered steel garage complex to accompany the design and construction of two new municipal well fields. The DPW building includes offices, restrooms, a lunch room, a conference room, and large training facility. The 12,400 SF attached heated garage will have workshops, storage, laundry, locker rooms, truck wash, and vehicle storage.

Cornerstone University Tower Drive Improvements

Landscape architect for improvements to a 220 lf drive to the university's radio tower. This project paved the previously dirt road and added a turnaround.



DENNIS JENSEN, AIA, ALA, NCARB

Design Architect

Dennis develops creative solutions to client-specific needs by actively listening and transforming ideas into real designs using concept sketches one-on-one with clients. He plans within budget to design attractive, lasting environments that promote their intended use.

Years of Experience 43

Education

Master of Architecture -
Conservation and Preservation:
University of Michigan, 1981

Bachelor of Science, Architecture:
University of Michigan, 1979

Associates of Science, Architecture:
Grand Rapids Community College,
1977

Registrations

Registered Architect: MI, AL, GA, IA,
OH, PA, SC

Certifications

American Institute of Architects
(AIA)

National Council of Architectural
Registration Boards (NCARB)

American Library Association (ALA)

Highlighted Experience

Whitewater Township Infrastructure Needs Assessment

Design architect for a high-level evaluation of a clean water collection system and drinking water distribution system and related facilities. The planning effort is focused on estimating capital improvement costs, determining operating options, identifying partnerships opportunities, reviewing possible funding sources, and recommending project phasing for new infrastructure systems.

Delta Charter Township Building & Site Needs Assessment

Design architect for a building and site needs analysis for two fire stations, a sheriff substation building, a community center, and an enrichment center (a former school building).

Lansing School District Facilities Assessment

Design architect for facilities assessments at 26 school buildings as the district neared the end of its previous bond program to determine the need for additional projects using a sinking fund. Evaluated items included the site, facility exterior and interiors, accessibility, fire/life safety and fire protection systems, HVAC and plumbing, electrical systems, and security/technology systems.

City of Cadillac New Municipal Well Field Phases I and II

Design architect for a 6,800 SF public works department headquarters and 12,400 SF pre-engineered steel garage complex to accompany the design and construction of two new municipal well fields. The DPW building includes offices, restrooms, a lunch room, a conference room, and large training facility. The 12,400 SF attached heated garage will have workshops, storage, laundry, locker rooms, truck wash, and vehicle storage.

City of Lansing Police/Courts Consolidation Study

Design architect for a study to consolidate two community police precincts and the greater Lansing area District Court. Services included reviewing current and future operations based on projected staff levels and operating models, and developing cost opinions for two existing buildings/sites and new sites to serve for short- and long-term needs.

Michigan Career & Technical Institute Facility Design Study

Design architect for the study of facility improvements including architectural, mechanical, and electrical upgrades to expand and renovate the 70-year-old building.

City of Rockford Public Safety Building Study

Lead designer for the study and design of a forthcoming public safety building that will consolidate the local department of public works, main police department precinct, and main fire station into a single 73,000 SF facility. 30,000 SF will be dedicated to vehicle and equipment storage. Space will also be dedicated to maintenance bays and a community meeting/training room. Sustainability will feature prominently in the finished design. The landscaped front yard will lend a welcoming, civic presence to the facility.



HANNAH SNYDER, ASSOCIATE IIDA

Interior Designer

Hannah believes empathy is the cornerstone of design; environments evoke strong human emotions, which drive behaviors. Hannah's inspiration comes from everyday joy, bold graphic design, bright colors, and fine art with a whimsical modern style. Hannah thrives at creating synergy between intentional and unexpected design elements.

Years of Experience 6

Education

Bachelor of Fine Arts, Interior Design: Kendall College of Art & Design, 2016

Professional Affiliations

International Interior Design Association (IIDA)

International Design Continuing Education Council Inc. (IDCEC)

Highlighted Experience

City of Battle Creek City Hall Remodel

Interior designer for the reorganization of the city hall's first floor to improve wayfinding, security, and ADA accessibility. In addition, the a revamp of the existing third floor lounge will add a quiet room and update flooring, cabinetry, seating, lighting, and ceiling tiles. C2AE is now conducting an initial study of the remodel.

City of Cadillac New Municipal Well Field Phases I and II

Interior designer for a 6,800 SF public works department headquarters and 12,400 SF pre-engineered steel garage complex to accompany the design and construction of two new municipal well fields. The DPW building includes offices, restrooms, a lunch room, a conference room, and large training facility. The 12,400 SF attached heated garage will have workshops, storage, laundry, locker rooms, truck wash, and vehicle storage.

Cornerstone University Daverman Hall Nursing School Building Renovation

Interior designer for the initial study and later implementation of renovations to an existing building, including an adaptive reuse of one 8,000 SF floor to serve the new nursing program. This space has simulation labs to equip nursing students with realistic experience with interactions. The remaining 9,000 SF of the building underwent renovations to the HVAC system and windows.

Spring Lake District Library Renovation Study

Interior designer for the preparation of a study that considers minor, moderate, and major remodel options within various areas of the library. At 34,500 SF, the existing facility is rightsized for the community but requires reconfigurations to meet changing needs since the original 2003 construction.

Ingham Intermediate School District Master Plan

Interior designer for the development of a master plan for an ISD space complete with programs like auto tech, welding, engineering, precision machining, and construction trades. The team reviewed existing facility documentation, conducted a field survey of the existing facilities, met with district staff to discuss various program needs, and identified areas for growth or adjustment. The final master plan included phasing recommendations and a conceptual cost opinion.

Detroit VA Medical Center South Lobby Renovation

Interior designer for the 3,000 SF renovation of the existing South Lobby and addition of 2,000 SF new waiting space. The project added a new building entrance, improved wayfinding, added high windows to brighten the space, and incorporated natural tones to improve visitor comfort.

C2AE Grand Rapids Office Renovation

Interior designer for the remodel of a larger new office space to replace the existing office. The design incorporates a variety of workstations, from groupwork pods to individual desks to enclosed offices as well as comfortable lounge areas, a dedicated kitchenette, and state-of-the-art telecommunications technology.



MANDY 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 system design strategies.

Years of Experience 20

Education

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

Registrations

Professional Engineer: MI, NY

LEED Accredited Professional, Specialty, U.S. Green Building Council (USGBC)

Professional Affiliations

American Institute of Steel Construction (AISC)

Highlighted Experience

Ingham County Courthouse Clock Tower Evaluation and Restoration

Structural engineer for the assessment and repair of the building envelope, which has evidence of water infiltration and structural damage, particularly in the historic courthouse's signature clock tower. The team gave special attention to the building's dental molding at the top of the clock tower and created a scope for restorations to be completed in the second phase.

Ironwood Township Fire Hall Evaluation

Structural engineer for a formal evaluation of the carrying capacity of the fire hall floor.

City of Marshall Fire Station Relocation

Structural engineer for 11,800 SF new fire station for the city with five new apparatus bays and living quarters for eight. The project also includes a training facility and historic museum for the original 1918 La France fire truck.

City of Durand City Hall Improvements

Structural engineer for the design of improvements to the existing building's façade along with the addition of parking lot lighting.

City of Lansing City Hall Improvements

Structural engineering services as part of a renovation to mechanical, electrical, and fire suppression systems in the Lansing City Hall over the course of two projects. Areas included in the project were Assessor offices, Courtrooms, Finance offices, Public Service, Police department offices and locker space and the City Council offices and meeting room.

St. Paul Episcopal Church Emergency Repair Services

Structural engineer for emergency assessment and repair design services at the historic church building. Following heavy winds, the front wall of the sanctuary, featuring a priceless stained glass window, separated precariously from the other walls. With C2AE's assistance, the wall and window were saved and the sanctuary was fully functional again within a year.

Battle Creek VA Medical Center ADA Improvements

Structural engineer for evaluations of the interior and exterior of 20 buildings on campus for ADA compliance followed by ADA-compliant improvements to several facilities' interiors as well as new exterior ramps and melt systems. This work took place under an ongoing IDIQ contract with the US Department of Veterans Affairs.

Detroit VA Medical Center South Lobby Renovation

Structural engineer for the 3,000 SF renovation of the existing South Lobby and addition of 2,000 SF new waiting space. The project added a new building entrance, improved wayfinding, added high windows to brighten the space, and incorporated natural tones to improve patient comfort.



ERIC RANTANEN, PE, BCXP, LEED AP

Mechanical Engineer

Eric is skilled in HVAC, plumbing and fire protection design and specifications, sustainable design practices, LEED project certifications, and energy and facility audits. He is among an elite group of engineers certified to provide building commissioning services.

Years of Experience 26

Education

Master of Science, Engineering Management: West Coast University, 1996

Bachelor of Science, Mechanical Engineering: Michigan Technological University, 1993

Registrations

Professional Engineer: MI, NY

LEED Accredited Professional, U.S. Green Building Council (USGBC)

ASHRAE Certified Building Commissioning Professional (BCxP)

Professional Affiliations

American Society of Heating, Refrigeration and Air Conditioning Engineers (ASHRAE)

American Society of Plumbing Engineers (ASPE)

Highlighted Experience

Lansing School District Facilities Assessment

Mechanical engineer for facilities assessments at 26 school buildings as the district neared the end of its previous bond program to determine the need for additional projects using a sinking fund. Evaluated items included the site, facility exterior and interiors, accessibility, fire/life safety and fire protection systems, HVAC and plumbing, electrical systems, and security/technology systems.

Lansing School District 2011 Facility Audit

Mechanical engineer for the fast-track, comprehensive energy audit of 25 of the district's buildings. The results of this audit were then used to prioritize the district's electrical and mechanical upgrades for design and construction in a later bond program.

Eaton Regional Educational Service Agency HVAC Study

Mechanical engineer for an HVAC system analyses and the development of a menu of recommended upgrades for the Packard building following the passage of a \$2.5 million district bond. C2AE later implemented several.

Ann Arbor VA Medical Center Interior Water Line Study

Mechanical engineer for the intensive study of a million square feet of the Ann Arbor VA's interior water line through three historic connected buildings lacking interstitial space. Work documented the routing and size of pipes as well as certain qualities. The deliverable included a final report noting the presence of any dead ends and methodologies for monitoring and improving water quality.

Cornerstone University Daverman Hall Nursing School Building Renovation

Mechanical engineer for the initial study and later implementation of renovations to an existing building, including an adaptive reuse of one 8,000 SF floor to serve the new nursing program. This space has simulation labs to equip nursing students with realistic experience with interactions. The remaining 9,000 SF of the building underwent renovations to the HVAC system and windows.

Lansing Center Facility Audit

Mechanical engineer for the study of 71,500 SF of column-free exhibit space, 12,000 SF of ballrooms, and 12,000 SF of meeting space. The concourse and public spaces compose 27,000 SF. Among five firms consulting on this study, C2AE reviewed the mechanical, electrical, plumbing, and fire protection systems for the entire four-level building. The team recommended replacements for aged equipment.

Plainwell Mill Office Renovation

Mechanical engineer for the transformative renovation of a floor of a historic paper mill building to create new offices using LEED design. The selected lighting utilizes magnetic induction lamp technology for improved efficiency. The reuse of 100% of existing tenant walls, ample daylighting and views, and repurposed office furnishing are all factors included in the final design.



JAMES ETTERS, PE

Electrical Engineer

A seasoned power systems engineer and leader of C2AE's electrical engineering discipline, James offers two decades of experience. He excels at problem-solving and communication.

Years of Experience 20

Education

Bachelor of Science, Electrical Engineering: Western Michigan University, 2003

Registrations

Professional Engineer: MI, NY

Highlighted Experience

Lansing School District Facilities Assessment

Electrical engineer for facilities assessments at 26 school buildings as the district neared the end of its previous bond program to determine the need for additional projects using a sinking fund. Evaluated items included the site, facility exterior and interiors, accessibility, fire/life safety and fire protection systems, HVAC and plumbing, electrical systems, and security/technology systems.

City of Portage Building Assessments

Electrical engineer for the assessments of 10 municipal buildings totaling almost 130,000 SF. Among the buildings are the city hall, a police station, a DPS building, a senior center, two fire stations, and four historic landmarks.

Lansing Center Facility Audit

Electrical engineer for the study of 71,500 SF of column-free exhibit space, 12,000 SF of ballrooms, and 12,000 SF of meeting space. The concourse and public spaces compose 27,000 SF. Among five firms consulting on this study, C2AE reviewed the mechanical, electrical, plumbing, and fire protection systems for the entire four-level building. The team recommended replacements for aged equipment.

Cosma Castings Utility Study

Electrical engineer for an initial load capacity study of the 480v distribution system, which indicated that one of four substations was overloaded. The team then devised a solution to balance the electrical loads by removing equipment from the overloaded substation and adding it to another with sufficient capacity.

Battle Creek Public Schools Elementary Facility Assessments

Electrical engineer for the assessment of LaMora Park Elementary, Dudley STEM, Verona Elementary, Fremont International Academy, and W.K. Kellogg Preparatory High to document the age and condition of the existing HVAC systems. Following the assessment, C2AE provided recommendations for improvements and maintenance.

East Lansing Public Library Site Assessment

Electrical engineer for the assessment of site access and potential aesthetic improvements and the development of a master plan outlining three distinct project phases to allow for segmented implementation in the continual development of the library's building and site.

Ingham Intermediate School District Master Plan

Electrical engineer for the development of a master plan for an ISD space complete with programs like auto tech, welding, engineering, precision machining, and construction trades. The team reviewed existing facility documentation, conducted a field survey of the existing facilities, met with district staff to discuss various program needs, and identified areas for growth or adjustment. The final master plan included phasing recommendations and a conceptual cost opinion.

Michigan State University Presidential Suite Renovation

Electrical engineer for the renovated Presidential Suite. The design balances transparency with confidentiality and security, using glass panels and light wooden accents. Materials throughout the offices and conference rooms use energetic patterns to welcome visitors forward.



ROB CROWE, PE

Cost Estimator

Prior to joining Christman, Rob spent eight years in the United States Army, where he was selected as commander of the only Technical Rescue Engineer Company in the Department of Defense, supporting multiple inter-agency homeland defense missions, general engineering and high-profile ceremonial events.

Years of Experience 14

Education

Master of Science, Civil Engineering: Missouri University of Science and Technology

Bachelor of Science, Mechanical Engineering: Michigan Technological University

Registrations

Professional Engineer: MI, MO

Highlighted Experience

Christman's senior project managers are seasoned veterans of the construction industry and are skilled at running projects in a variety of target markets. Rob is an expert at managing large and complex projects and at managing many team members both internally and externally. Additionally, he has the ability to foresee project challenges and leadership needs and will work to address them before they become an issue onsite. Rob will also act as an expert resource for the project manager to help resolve issues that may arise. He is an expert in scheduling, cost control and team building.

Lansing School District Facilities Assessment

Estimator for facilities assessments at 26 school buildings as the district neared the end of its previous bond program to determine the need for additional projects using a sinking fund. Evaluated items included the site, facility exterior and interiors, accessibility, fire/life safety and fire protection systems, HVAC and plumbing, electrical systems, and security/technology systems.

Auto-Owners Insurance

Building 6105 and 6215 Renovations
Emergency Power Replacement
Lansing Facilities Security Upgrade
South Campus Expansion

Okemos Public Schools, Bond Program

Bath Community Schools Bond Program

Durr Systems, New North American Headquarters

Newaygo Public Schools Facility Assessment

Olivet College Vision 2020 Campus Master Plan

Egelston Township Fire Station

Howell Carnegie Library Renovations

State of Michigan Capital Area Reconfiguration

State of Michigan New Veterans Home - Southeast Michigan

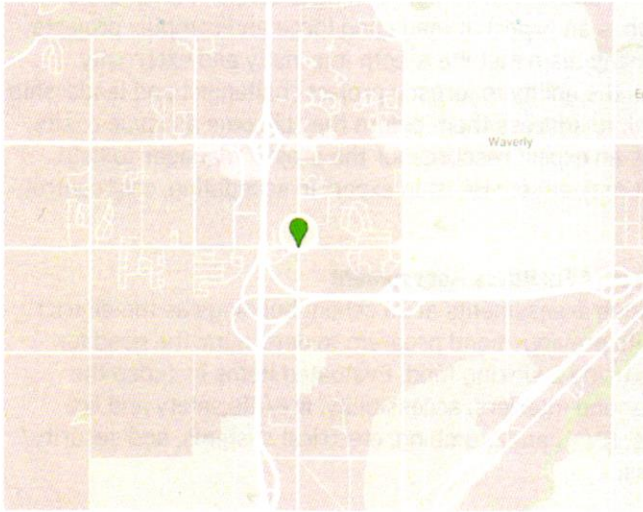
State of Michigan New Veterans Home - Grand Rapids

Ford Motor Company Michigan Central Station

Ferris State University Center

Interurban Transit Partnership Silver Line Bus Rapid Transit System

EXPERIENCE



DELTA CHARTER TOWNSHIP

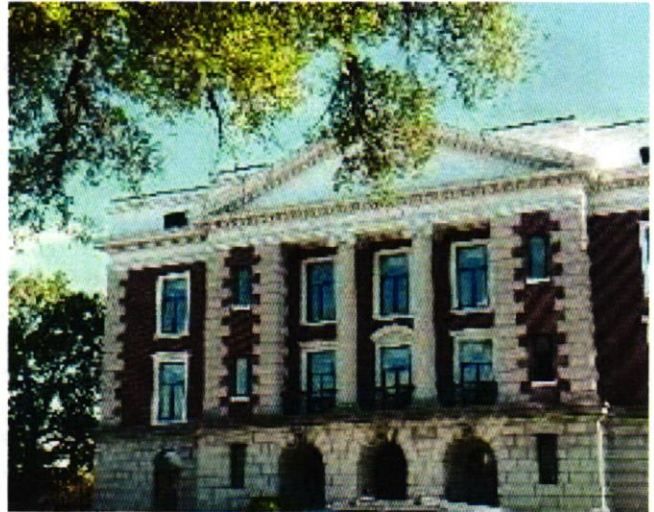
Building & Site Needs Assessment

C2AE performed a facility needs assessment spanning eight buildings for Delta Charter Township: a sheriff substation, a township administration building, a community center, two fire stations, two parks and maintenance buildings, and an event center.

At each facility, C2AE identified and prioritized any necessary repairs and renovations, determining the remaining useful life of the buildings and systems, specifying whether any buildings needed to be replaced, and estimating the costs associated with each recommendation. The assessments required a multi-discipline team to analyze the diverse range of facility elements.

Reference

Ernie West | 517.323.8540



CITY OF BATTLE CREEK

City Hall Remodel

Built in 1914, the Battle Creek City Hall is a landmark building attractively adorned with marble and cherry. In recent years, however, the structure began to show signs of aging, and in 2017, a portion of the building crumbled off due to water damage during a restoration project.

A 1,300 SF renovation will alleviate congestion at the building's east end with an inviting new entrance. A new ADA ramp, a centralized reception desk, and two visitor kiosks will increase ease of access. Other alterations include an office relocation, ergonomic new furniture, a reconfigured drop box station, and the installation of new light fixtures, flooring, and finishes. Payment stations are separated from the public by bulletproof glass to protect employees in the case of an emergency situation.

With the failing limestone façade, safety hazards split improvements into two projects, both awarded to C2AE. Restored, this historic building will boast of a thriving, engaging place to live.

Reference

Katie Norton | 269.966.3355 x1351

	EDR	Costs	Savings	Rebates
Averill Elementary	50%	\$120,800	\$5,742	\$11,374
Beekman Center	77%	\$1,162,999	\$51,865	\$74,000
Bingham Elementary	50%	\$294,100	\$14,411	\$20,056
Cavanaugh Elementary	47%	\$297,700	\$18,143	\$15,858
Cumberland Elementary	60%	\$475,300	\$18,367	\$29,015
Eastern High School	69%	\$1,537,998	\$41,154	\$79,651
Elmhurst Elementary	62%	\$517,200	\$20,848	\$20,050
Everett High School	66%	\$1,922,200	\$72,845	\$60,452
Fairview Elementary	50%	\$249,400	\$14,545	\$13,349
Forest View Elementary	62%	\$347,400	\$14,629	\$21,647
Gardner Middle School	61%	\$2,431,200	\$93,210	\$123,878
Hill Center	62%	\$2,554,700	\$90,866	\$142,933
Johnson Field House	69%	\$432,300	\$26,863	\$23,989
Kendon Elementary	58%	\$164,400	\$8,685	\$13,997
Lawton Elementary	53%	\$319,400	\$13,404	\$22,796
Lynns Elementary	57%	\$409,800	\$13,437	\$11,855
Mt. Hope Elementary	60%	\$418,800	\$17,518	\$28,558
North Elementary	47%	\$933,100	\$26,127	\$52,912
Reo Elementary	54%	\$388,100	\$11,101	\$18,723
Rich Middle School	62%	\$1,801,884	\$67,845	\$67,413
Riddle Elementary	61%	\$454,700	\$15,230	\$27,439
Sexton High School	49%	\$1,404,400	\$57,344	\$74,350
Sheridan Elementary	64%	\$195,300	\$11,262	\$14,899
Wainwright Elementary	64%	\$473,800	\$12,547	\$22,799
Westford Messersch	63%	\$312,100	\$8,280	\$8,422
Totals		\$19.6 M	\$760,000	\$1.1 M



LANSING SCHOOL DISTRICT Facilities Assessment

As Lansing School District wrapped up a 2016 bond program, which brought major improvements to the district, C2AE preformed an assessment of 26 buildings that had not already seen upgrades.

The grand total for recommended improvements reached \$243 million; however, the available sinking fund for alterations was closer to \$180 million. Thus, the assessment specifically prioritized items such as security, roofs, and boilers. In fact, the sinking fund was marketed by the district under the slogan “Warm, Safe, and Dry.”

The complete list of evaluated items includes the site, facility exterior and interiors, accessibility, fire/life safety and fire protection systems, plumbing fixtures and systems, HVAC systems, electrical systems, special spaces (e.g. pools, stadiums, auditoriums, etc.), and security/technology systems.

Reference

Barry Roney | 517.281.4491

WHITWATER TOWNSHIP Infrastructure Needs Assessment

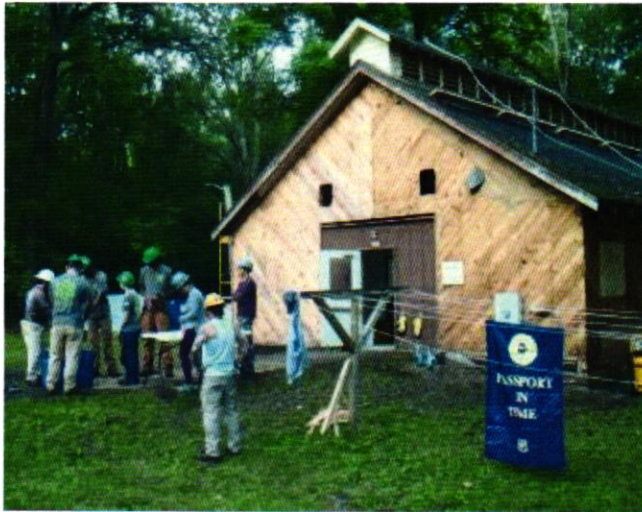
C2AE is conducting a high-level evaluation of a clean water collection system and drinking water distribution system in Whitewater Township.

This important planning effort is focused on estimating capital improvement costs, determining operating options, identifying partnerships opportunities, reviewing possible funding sources, and recommending project phasing for new infrastructure systems—all serving the ultimate goal of maximizing economic and environmental benefits to the community. Preliminary needs are estimated to service approximately 250 end users, with consideration for future growth up to 1,200.

A future utility extension will provide a permanent solution to failing septic systems, bring municipal sanitary sewer and drinking water utilities to areas designated as high-density residential, and bring utilities to areas designated as commercial and industrial to spur economic growth.

Reference

Ron Popp | 231.267.5141



US FOREST SERVICE

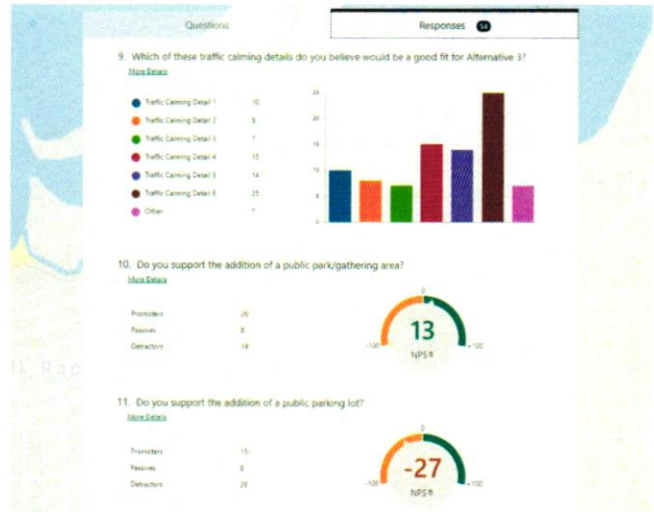
Chittenden Building Renovation

Purchased by the U.S. Forest Service in 1934, the Chittenden Nursery is a 16-building complex on 87 acres of the Manistee National Forest. The complex remained in operation until 1973 and hosted programs for local schools until 2003. Spanning 34,294 SF of mostly warehouse space, Chittenden is eligible as a National Register Historic District.

With C2AE's assistance, the Chittenden Nursery will be converted into an administrative campus serving local, regional, and national communities. The project will exemplify the adaptive, multiple use management principles of the Huron- Manistee National Forests. In addition to the campus' administrative purposes, contributing historic and non-contributing structures will be maintained to provide storage and housing for various Forest Service departments. Renewable energy resources will be installed to help power the site, contribute back to the main grid, and reinforce the agency's commitment to sustainable operations.

Reference

Heather Jamison, Interim Forest Engineer | 231.942.4951



VILLAGE OF ELK RAPIDS

Ames District

The Village of Elk Rapids is a jewel in the coastline of Michigan's Lower Peninsula. With an economy dependent on tourism, this 2019 streetscape plan is directly tied to the village's prosperity.

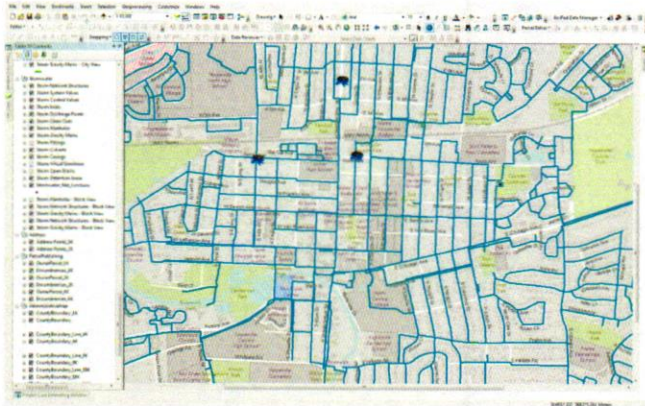
Using data and input from Elk Rapids' business owners and residents, C2AE is planning upgrades along a 6,200 LF downtown thoroughfare to make the area more inviting for businesses and tourists.

Located a short distance from Lakeland Elementary School, the Ames District plan prioritizes pedestrian and cyclist safety with improvements to the non-motorized amenities. The project also looks to improve ADA accessibility, street design, parking, lighting, trail connectivity, the US-31 underpass, and other infrastructure. The project team has begun analyzing the corridor to collect data on current and projected traffic. The team will explore options for enticing businesses to improve the facade of their facilities as well.

Reference

Bryan Gruesbeck, Village Manager | 231.264.9274

CLIENT TESTIMONIALS



MICHIGAN SAW PROGRAM

Over several years, \$450 million in grants and loans have been awarded to municipalities for projects related to stormwater or wastewater assets through Michigan's SAW program. C2AE has helped many communities secure funding to gather detailed data on existing systems, thus enabling asset improvement plans that maximize the effectiveness of every dollar funded.

The plans have enabled communities to predict when to schedule work on public utilities and reduce the likelihood of surprise asset failures. For each SAW project, C2AE:

- Collected asset data using mapping tools, CCTV inspection, and record drawings
- Entered data into GIS databases for analysis
- Assessed the condition of each asset
- Determined asset criticality and ranked repair needs
- Created a funding plan for the next 5-20 years

SAW Clients

Bath Charter Township	Village of Kalkaska
Bessemer Area Sewer Auth.	City of Laingsburg
City of Bessemer	Village of Mackinaw City
Bessemer Township	Masonville Township
City of Boyne City	City of Menominee
City of Corunna	Village of Newberry
City of DeWitt	City of Onaway
City of Durand	City of Owosso
City of Escanaba	City of Owosso
City of Gaylord	City of Petoskey
Gogebic-Iron Wastewater Authority	Powderhorn Area Utility District
Charter Township of Ironwood	City of Rogers City
	City of Saint Ignace
	City of Sault Ste. Marie
	City of Williamston

"C2AE accommodated every programmed element, always with a close eye on our schedule and budget."

- Sam Sinicropi, Former Lansing School District Superintendent

"Your company has assisted us in so very many ways."

- Cash Cook, Kalkaska Downtown Development Authority Director

"C2AE can be counted on to provide a quality product and provide great engineering services."

- Ann Parry, City of Lansing Engineer

"I have worked on many building projects throughout my career and with top-notch architects from around the country. C2AE easily ranks with the best."

- Kristin Shelley, Director of East Lansing Public Library

"My past experience with C2AE has been very positive. They did great work and were a pleasure to work with. C2AE was always responsive and met project milestones on time and within budget."

- Chris VanNorwick, MDOT Grand Rapids Transportation Service Center Project Engineer

"C2AE goes the extra mile, listens, and then delivers! C2AE took the time to go on site visits, with me, to better understand the other nursing simulation spaces in the area. They also engaged many constituents, listened to feedback and wishes, in order to craft an impressive and functional learning space."

- Jaime Sinutko, Nursing Consultant, Cornerstone University

Bob Winks, PE/CEM
Project Manager
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616.822.0779

c2ae