Proposal For:

CITY HALL MECHANICAL, ELECTRICAL AND PLUMBING RENEWAL DESIGN

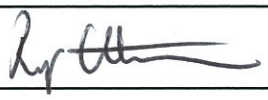
(RFP #21-AA24)

City of Duluth

KFI ENGINEERS

September 13, 2021

APPENDIX A - PROPOSAL COVER SHEET
CITY OF DULUTH, MINNESOTA
RFP# 21-AA24
City Hall MEP Renewal Design

Bidder Information:	
Bidder Name	KFI Engineers
Mailing Address	670 County Road B West, St. Paul, MN 55113
Contact Person	Maria Pfeffer, PE
Contact Person's Phone Number	651-254-6891
Contact Person's E-Mail Address	mdpfeffer@kfi-eng.com
Federal ID Number	46-5047297
Authorized Signature	
Name of Authorized Signer	Randy Christenson, PE
Title of Authorized Signer	Director

Purchasing Division
Finance Department

Room 120
411 West First Street
Duluth, Minnesota 55802

218-730-5340
purchasing@duluthmn.gov

Addendum 1
Solicitation 21-AA24
City Hall MEP Renewal Design Services

This addendum serves to notify all bidders of the following changes to the solicitation documents:

The pre-bid meeting sign-in sheet has been uploaded to the City purchasing website and the Bid Express solicitation.

Questions asked and answered during the pre-bid meeting follow:

1. Should existing newer LED lighting be retained in the remodeled areas? *Yes*.
2. Is there an estimated budget for the project? *The project budget is currently estimated at $12 million*.
3. What is the start of construction time frame? *As soon as possible/practical*.
4. Is the RFP anticipated end of contract date the targeted construction completion date? *The construction completion date is flexible due to variables of heating seasons and scheduling.*
5. Who is responsible for energy efficiency testing? *The design team*.
6. Are there existing preliminary energy testing results and will they be shared with the attendees? *Yes, attached is the recommendations from the energy study performed in 2020*.
7. Are there building plans/drawings available? *Yes. Exhibit A to this addendum is the original City Hall plans from early 1900's. Exhibit B to this addendum is the current floor plans. Due to the file sizes, the exhibits are uploaded as separate documents and Exhibit A is in two parts.*
8. Have there been building upgrades such as improvements to windows, doors, roof, and A/C? *Yes, some have been completed such as new windows, and roof. Any existing A/C will be replaced except for in the data center*.
9. What is the current A/C and ventilation status? *Some ventilation exists, there is no central A/C. Any existing A/C will be replaced except for in the data center.*
10. What are the natural ventilation requirements and do they include auto-closure systems for windows? *This depends on the design; but we expect that auto-closures would be included, as well as automated controls for natural ventilation. Also, outdoor air quality will need to be addressed with natural ventilation and filtration to ensure quality indoor air*.

11. Are there considerations for historic preservation? *Yes, the building envelope and exterior areas will need to be approved for historic preservation concerns.*
12. Will the design team need to have a historic building preservation consultant on their team? *Historic preservation will need to be addressed and approved by the Historic Preservation Commission. Whether a designer needs to have a consultant on their team is up to the designer.*
13. Where are the acceptable locations for equipment to be placed outdoors? *The roof areas can be considered after assessing the structural integrity of the proposed locations.*
14. Are meeting or exceeding the SB2030 energy standards required by funding sources? *No, not a requirement; although meeting City goals of performing as efficient as practical and green energy goals need to be met. Refer to the attached City of Duluth Municipal Building Owner Performance Requirements document.*
15. What are the locations of vertical chases? *For MEP, refer to original City Hall plans in Exhibit A to locate specific spaces. For department layouts and ceiling heights, refer to the current floor plans in Exhibit B. Both exhibits are uploaded as separate documents.*
16. Can ceiling heights be adjusted to accommodate ductwork, etc.? *Yes, refer to current floor plans in Exhibit B for specific locations. Ceiling heights vary throughout the entire building.*
17. Does the budget consider significant architectural alterations required for ADA bathrooms? *Yes.*

Please acknowledge receipt of this Addendum by including a copy of the first TWO pages with your proposal.

Posted: **August 27, 2021**

Attachments
Energy Study with HVAC Recommendations
City of Duluth Municipal Building Owner Performance Requirements

Uploads
Pre-bid meeting sign-in sheet
Addendum 1 Exhibit A Part 1 - Original City Hall Plans, pages 1-28
Addendum 1 Exhibit A Part 2 - Original City Hall Plans, pages 29-56
Addendum 1 Exhibit B - Current City Hall Plans as phased for the recent construction project

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Finance Department

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Addendum 2
Solicitation 21-AA24
City Hall MEP Renewal Design Services

This addendum serves to notify all bidders of the following changes to the solicitation documents:

Questions asked are answered below:

1. Do all bathrooms need to be brought up to ADA standards? Bathrooms that are altered to accommodate the placement of MEP runs will need to be replaced with bathrooms that meet current code which may include ADA standards.

2. Does the City require a cost estimator to check pricing at each phase (SD, DD, CD)? No, we expect the selected designer to design to our budget and provide a design estimate for that project.

3. If a cost estimator is required, does the City prefer a local contractor or 3rd party cost estimator? If the City of Duluth would like an independent estimate, we reserve the right to privately contract with a vendor of our choice.

4. Is there a requirement from the City of Duluth for this to be an Architect Led (Prime firm) or Engineer Led proposal? We understand both disciplines will be required as part of the team, but any clarification would be helpful as this relates to the (I-9) Small Diverse Business Information portion of our team and proposal. Either firm can be the lead for the project, to be determined by the firms.

5. Can you please confirm that a MEP engineering firm can lead this project incorporating a full team for the complete project. An MEP engineering firm can lead the project.

6. It was mentioned during the preproposal meeting that the budget is approximately $12 million. Can you please elaborate a bit? Is this the overall project budget, or the anticipated construction budget? If the overall project budget, is there an anticipated construction budget for the project? The overall project budget is $12,000,000.

7. Please confirm that MN B3 is not a part of this project as indicated in the preproposal meeting. MNB3 is a state requirement for state funding. We are not funded with state money, so that standard will not be applied. However, energy efficiency is critically important so we will make every effort to be as efficient as practical.

8. While historically sensitive and because work is generally not on the outside of the building, please confirm as indicated in the preproposal meeting that a historical consultant is not required for this project. A historical consultant is not required; however, plans may require approval of Historic Preservation Office or city Historic Preservation Commission.

9. Assuming restroom facilities need a larger footprint to meet ADA standards, is this space to be gained through the existing restroom space and associated chase, or can space be taken from other adjacent spaces? Space can be taken from a combination of existing and adjacent spaces. Given the source of funding, priority will be given to work that improves indoor air quality, which includes the HVAC, exhaust fans, building controls, etc. Bathrooms will be brought to current code where meeting these other priorities disrupts existing facilities, as stated in the answer to question one.

10. Regarding the power distribution system, I understand some of the generator backup system has been upgraded recently, is it the scope to upgrade the rest of the electrical distribution system in the building, or only on an as needed basis? We are updating the existing electrical infrastructure as needed to meet project goals.

11. Is it the intent that the existing Fire Alarm System stays, and the new smoke evac is added to this system? Or should the entire system be replaced? The intent is that the existing system stays. System will be improved to meet the new demands of the project.

12. Will background drawings for the entire building be provided in CAD or will these need to be created via scanned drawings? CAD drawings are not available.

13. Will there be any ADA accessibility work in addition to the restroom upgrades? No.

14. The more recent plans provided do not include a basement level. Are we to assume there may be work required on the basement level? Are there toilet rooms on this level that will need to be renovated? The most recent plans provided include the ground floor. Ground Floor is the lowest level besides the tunnel network under the building. Refer to question nine.

15. Are we to assume that the building toilet facilities will need to meet current code requirements for quantity as well as accessibility? Is the expectation the design team will do a full building code review and determine quantities required or is that information been done and available? The design team should review code as any adjustments are made to the current status of quantity and accessibility. Refer to #9.

16. Are there as-built/record drawings available for the entire building? Cadd files available? There are no CAD files in our possession. We have the original's (1927) that have been provided and the most recent floor plan, also provided. There are individual project files for specific projects and locations that can be provided to the selected design firm if they feel they will be relevant.

17. Should the design team have a Public Relations (PR) as part of their team or will does the City of Duluth have a PR individual and the design team will support this project by providing the appropriate technical information? The City of Duluth will be responsible for any PR and internal communications with support from the design team.

18. Should the design team have a Cost Estimator as part of their team or will the City of Duluth engage a cost estimator for this project? The design team is responsible for cost estimating. Please refer to questions two and three.

19. For the Appendix A and Byrd Anti-lobbying amendment signature – is electronic signature acceptable? Yes, electronic signatures are acceptable.

20. Building Automation Systems (BAS) – it is not clearly defined in the RFP if a BAS is currently in place or required. Is direct digital control (DDC) desired/required? Please clarify. There is an old BAS system in place. Any existing digital controls can be reused where practical. All new controls will be DDC and conform to the building control OPR that was provided.

21. Hot water is desired – are we to use city steam with convertors or a hot water boiler plant? City steam with convertors.

22. Has asbestos abatement been performed in the building, and to what extent? Asbestos abatement has been performed in areas under previous construction projects. Areas affected in this phase will be tested and abated for both asbestos and lead paint as necessary. The City of Duluth will be responsible.

23. Would you please provide a more in-depth description of the energy modeling? What are the deliverables? Energy modeling needs to include first cost, operational costs, and aesthetic/functional impacts to support the decision-making on the type of system that will be designed. We see this as a tool to determine the best type of system for this facility that is in line with our energy goals.

Please acknowledge receipt of this Addendum by including a copy with your proposal.

Posted: **September 2, 2021**

September 13, 2021

City of Duluth
ATTN: Purchasing Division
City Hall, Room 120
411 West 1st Street
Duluth, MN 55802

RE: City Hall Mechanical, Electrical and Plumbing (MEP) Renewal Design (RFP #21-AA24)

Dear Selection Team Members,

KFI Engineers (KFI) understands the City of Duluth is seeking a qualified engineering team to assist with the planning and implementation of the mechanical, electrical, and plumbing (MEP) infrastructure updates within City Hall. As you will see from our qualifications, our team includes seasoned professionals with the knowledge and experience necessary to successfully execute this project. We are committed to sustainability and understand the need for continuity and system optimization to attain the equipment longevity, energy efficiency, and occupant comfort you desire. Our extensive experience renovating and retrofitting HVAC systems as well as our in-house ability to interface control systems, will allow us to help your building achieve the highest level of system performance.

What sets KFI apart from other firms?

- We have completed hundreds of HVAC related renovation projects in the last five years, managing them from pre-design through project closeout.
- ***Our controls department is unique to the engineering industry.*** We have dedicated controls engineers on staff with extensive design and installation experience. We also have an in-house controls lab that we use to test vendor control products to verify communication compliance.
- KFI has an outstanding ***history of solving unique engineering problems with creative designs*** and balancing life-cycle costs within project budget limitations.
- You can ***count on us to be familiar with the City's standards***: The processes, proper systems, equipment selections, building codes, and treatment of historic properties.
- KFI's ***experienced in-house energy modeling engineer*** will identify, early in the design process, how the equipment affects ventilation requirements and building performance.
- KFI has teamed with BTR Architects to provide accessibility adjustments to City Hall, ***while also understanding the importance of historic preservation***. BTR is a WBE firm.

Thank you for your consideration of our proposal. We look forward to the opportunity to work with the City on this exciting and important project. Should you have any questions regarding our submittal, please do not hesitate to contact me at mdpfeffer@kfi-eng.com or 651-254-6891.

Sincerely,
KFI ENGINEERS

Maria Pfeffer, PE
SENIOR PROJECT MANAGER

PROJECT UNDERSTANDING

We understand this project consists of schematic design, and final design services involving the upgrades of the existing steam perimeter heating system to hot water, the replacement of existing air handlers, replacement of the existing control system with controls that follow the Owner Performance Requirements (OPR), and life safety additions that include smoke evacuation fans. Natural ventilation strategies will be considered, and any system sequences of operation will be incorporated in the new building automation system (BAS).

The existing perimeter radiation uses steam for primary space heat. When the source steam is converted to hot water the existing radiation will have a reduced capacity. The intent of our design would include reusing the existing radiators and providing new hydronic heat radiant panels in between for lost capacity.

The existing air handlers, installed in a basement mechanical room, are original to the building constructed in 1927. The air handlers are 94 years old and do not provide the required ventilation to the building's occupied spaces. Currently, operable windows in office areas are opened by occupants when ventilation is desired. During schematic design, it is desired to explore options for replacing the existing air handlers with dedicated outside air supply (DOAS) units that serve chilled beams in the ceilings of office spaces.

Chilled beams require a tight tolerance on dewpoints in the spaces. Operable windows do pose risk as this introduces spaces to unconditioned outdoor air, where the dewpoint could be higher than the coil temperature, then creates condensation and simulates rain. KFI has extensive experience with chilled beam systems and designs. Our controls group can implement strategies, such as window position and condensate sensors.

Restrooms that are impacted by the routing of renovation ductwork, heating piping, dual temperature piping, and chilled water piping will be upgraded to meet current ADA standard and building code requirements. LED lighting will be provided to achieve 15-30 foot-candle levels. The new lighting will be controlled by dual-technology occupancy sensors for automatic on/off.

Life safety for the building will be studied for smoke evacuation. The required fans will be located on the roof and the existing fire alarm system will be modified to incorporate the fan sequencing. Fan operation monitoring will be programmed into the new BAS.

The power distribution system will be upgraded to meet the revised energy demands of the new heating, ventilating and air conditioning (HVAC) equipment.

BACKGROUND AND EXPERIENCE

KFI ENGINEERS

KFI is a mechanical, electrical, structural and controls design engineering and commissioning firm that provides services for a wide range of customers, including governmental, educational, industrial, commercial, institutional, healthcare, and retail organizations. KFI was established in 1996 to make a difference in the way engineering and commissioning projects are delivered. Today, our clients, suppliers, and contractors have helped to establish KFI's reputation as a recognized industry leader in facilities infrastructure, design, and performance.

We understand how important versatility and practical innovation are to our clients. We focus on knowing the latest technologies and how they behave in real world settings – allowing us to design systems that match how they will be used, maximize energy efficiency and sustainability, and fit within project budgets.

KFI employs over 170 professionals, including more than 35 registered mechanical and electrical engineers. Because of the depth and diversity of our staff, we are able to respond to our client's needs and timelines promptly and efficiently. If services outside of our expertise are required, we contract with other trusted consultants whose capabilities are able to meet those needs.

Sustainable Design

KFI has a long-standing history of designing sustainable, energy efficient systems, including numerous Minnesota B3 and LEED certified projects. KFI's energy modeling group has extensive experience preparing energy models and has worked on both new construction and substantial renovation projects. LEED and other certification programs continue to raise the bar, challenging design teams to achieve higher energy savings and meet higher environmental goals. This continued push towards low energy, sustainable design requires design teams to work together to develop creative solutions. KFI understands the need for energy efficiency and sustainability to be a collaborative, integrated process between the Owner, engineers, architects, and contractors.

KFI is committed to the research and implementation of sustainable design. Sustainable design means doing what is right for the environment and building occupants. KFI also understands that Owners need to see sustainable design as a return on investment. In that respect, KFI works with Owners to create an overall system approach which follows the principles of sustainable design, while ensuring that respect for the environment does not come at the expense of project budget, occupant comfort, or building functionality.

At KFI, our integrated energy modeling enables clients to make smarter choices about efficiency, construction costs and the life cycle cost of their building. By highlighting estimated performance based on different combinations of materials and components, we are able to identify the best fit for your project and discover strategies to increase the value of the building.

Energy modeling is a key step in the integrated design process and sustainable design, as it helps to identify design changes that will create significant energy savings.

Controls Design

With experienced programmers on staff, we understand the details necessary to control a building. Twelve of our staff members hold Niagara AX/N4 certifications. Our expanded controls design allows us to deliver what is needed for equipment to perform in concert. In 2017, KFI helped develop the City's owner performance requirements (OPR) for building automation systems. We plan to leverage this experience for this project. We regularly design control systems for both basic and complex HVAC systems. We understand the important balance between the simplicity necessary for daily operation and the complexity necessary for maximum efficiency. Complex and unique HVAC systems often require specialized controls design that can make the difference between the success and failure of the overall HVAC design.

BENTZ THOMPSON RIETOW (BTR) ARCHITECTS

BTR is an award-winning architecture, interior architecture, and design firm. With an emphasis on community and government projects, they have designed and programmed projects for various stakeholders throughout Minnesota.

Collaboration is a key principle that guides their work. They focus on public projects of all types, emphasizing community building at all levels of local, county, and state government, higher education, parks, and libraries. They provide a variety of services, from long-range planning and deferred maintenance, pre-design studies through planning / programming / design to construction administration and post-occupancy evaluations. BTR has a strong conviction for protecting the environment and strives to integrate sustainable strategies in all of their work.

RELEVANT EXPERIENCE

KFI provides top quality MEP services for a wide-range of customers including local, state, and federal governments, correctional institutions, colleges and universities, K-12 schools, industrial, commercial, and healthcare organizations. The projects listed below are a sampling of our relevant government HVAC experience. In addition, we have provided detailed project descriptions for a selection of relevant projects as well as a project / team member matrix.

- City of Duluth - Duluth, MN
  - Comfort Systems BAS Energy Study
  - Fire Hall 1 Domestic Water Study
  - Fire House 10 HVAC System Design
  - Multiple Building Master Direct Digital Control System Specification
- City of Apple Valley - Apple Valley, MN
  - Old City Hall HVAC Upgrade
  - Air Handling Unit Replacement
- City of Minneapolis City Hall and Courthouse 20+ Projects - Minneapolis, MN
- City of St. Paul Public Housing Agency - St. Paul, MN
  - Roosevelt Office Renovation
  - Dunedin Office Renovation
- City of Bismarck Veteran's Memorial Public Library HVAC System Replacement - Bismarck, ND
- MN Historical Society Split Rock Lighthouse HVAC and Domestic Water Renovation - Two Harbors, MN
- Ramsey County - Multiple Locations, MN
  - Facilities HVAC Assessments, 26 Buildings
  - Metro Square Office Design and Renovation
  - Care Center Chiller Replacement
  - Public Works Mechanical Upgrades
  - Family Service Center Mechanical Upgrades
- Minnesota Veteran's Home - Minneapolis, MN
  - Building 1 HVAC Remodel
  - Building 15 Chiller and HVAC Replacement
- North Dakota National Guard Camp Gilbert-Camp Grafton - Devils Lake, ND
  - Heating Plant Boiler Conversion
  - Building 6400 Air Handler Replacement
  - Building 6400 Heating Replacement
  - Building 5825 Building Automation System Upgrade
  - Building 6850 Boiler Control Upgrade
- South Dakota Women's Prison HVAC System Replacement - Pierre, SD
- St. Croix County Government Center HVAC Pre-Design and Replacement - Hudson, WI
- State of Wisconsin La Crosse State Office Building HVAC Renovation - La Crosse, WI
- USPS Loring Station Building and HVAC System Remodel - Minneapolis, MN

HIGHLIGHTED PROJECT / TEAM MEMBER MATRIX

Project	Historical Building	Relevant Team Members	Role
City of Duluth Comfort Systems Building Controls Replacement - Duluth, MN		Chris Koenig	Project Manager and Controls
		Kate Edwards	Energy Modeling
College of St. Benedict Main Building Renovation - St. Joseph, MN	X	Randy Christenson	Principal-In-Charge
		Maria Pfeffer	Project Manager and Mechanical Engineer
		Dan Sieben	Mechanical Engineer
		Nick Oelke	Electrical Engineer and Low Voltage
		Kate Edwards	Energy Modeling
		Chris Koenig	Controls
		Randy Moe	Architect
Minneapolis Courthouse HVAC Infrastructure Upgrades - Minneapolis, MN	X	Randy Christenson	Project Manager and Mechanical Engineer
		Nick Oelke	Electrical Engineer
		Kate Edwards	Energy Modeling
		Chris Koenig	Controls
St. Croix County Government Center HVAC Pre-Design and Replacement - Hudson, WI		Randy Christenson	Principal-In-Charge
		Maria Pfeffer	Project Manager and Mechanical Engineer
		Nick Oelke	Electrical Engineer
		Kate Edwards	Energy Modeling
		Chris Koenig	Controls
USPS Loring Station Building and HVAC System Remodel - Minneapolis, MN	X	Dan Sieben	Mechanical Engineer
		Chris Koenig	Controls

CITY OF DULUTH COMFORT SYSTEMS BUILDING CONTROLS REPLACEMENT

Project Relevance: *Familiarity with the City of Duluth, historic building, controls integration*

The City of Duluth has 148 buildings (comprising 1,200,00 square feet) over a hundred park properties, and a diverse array of other real estate holdings within and just outside the City limits. These buildings are equipped with diverse control systems, ranging from manual controls, to varying levels and types of DDC controls. Recognizing the need for more consistency in their controls, they reached out to KFI Engineers. To address their problem, KFI began collaboration in early 2017 to develop a master controls specification for use on future construction, renovation, and maintenance projects. The first opportunity to use the new specification came later that same year at the Comfort Systems building.

Since 2015, the existing BAS consisting of Schneider Electric, Invensys I/A Series controllers and WorkPlace Pro front-end was no longer supported by the manufacturer. This presented an opportunity to expand the site's BAS to provide more control and monitoring of building systems. Portions of the BAS including wiring, conduit, enclosures, relay, sensors, etc. were able to be reused. The master controls specification was utilized, and construction drawings were developed, complete with system schematics, point lists, and sequences of operation. With sporadic use, motion sensors were utilized to ease time scheduling efforts associated with the public works portion of the building. Electrical submetering of the various systems was completed for monitoring, and to gain insights. The BAS at the Comfort Systems building was successfully replaced by a local controls contractor, with direction, and final punch list by KFI.

LOCATION:
Duluth, MN

OWNER:
City of Duluth

SQUARE FOOTAGE:
82,445

CONSTRUCTION COST:
$17,460

COMPLETION DATE:
May 2018

MINNEAPOLIS COURTHOUSE HVAC INFRASTRUCTURE UPGRADES

Project Relevance: *Historical building, mechanical and electrical design, energy modeling, controls integration, HVAC upgrades, extensive phasing*

This prestigious and historic 1902 building, once the tallest building in Minneapolis, had a master plan implemented for mechanical, electrical and life safety upgrades along with tenant renovations. The 680,000 square foot Minneapolis Courthouse houses a 575 prisoner jail, the Sheriff, Police Chief and Fire Chief offices, and offices for all County and City services.

Initially awarded stages 8-15, KFI modified the approach to the air handling system locating larger and fewer air handlers in existing attic space. This preserved valuable leasable space and provided ease of maintenance. The Commission recognized KFI's creative and proactive solutions subsequently awarding KFI the remaining stages, 16 through 23. Energy recovery units were proactively installed to preheat outside air with exhaust air from other building areas. This, along with modified building ventilation created energy reductions, which were modeled and proven by KFI's internal energy modeling team.

Creative installation solutions for the massive air handlers preserved the historic façade of the building. In order to power the new HVAC units, the existing switchgear was renovated or replaced, or new power distribution has been added to the existing service, utilizing the building's existing vertical shafts.

This project required a high level of coordination and staging, which aided in preserving the original building structure and architectural design. Our team worked extensively with each end user to identify their individual needs and plan internal choreography for the staging of department renovations. Individual department assessments identified each office's room layout, lighting, security, data, and electrical service needs to minimize work disruption. Except for the area under construction, the building remained fully operational and occupied through the project.

LOCATION:
Minneapolis, MN

OWNER:
Municipal Building Commission

SQUARE FOOTAGE:
680,000

CONSTRUCTION COST:
$26,000,000

COMPLETION DATE:
2018

COLLEGE OF ST. BENEDICT MAIN BUILDING RENOVATION

Project Relevance: *Same core team members, HVAC renovation, historic building, controls integration*

KFI has been working with the College of St. Benedict for over 20 years. When the College needed additional academic space, the existing buildings were evaluated for re-purposing. The College decided the historic Main Building, originally constructed in 1882, which is made up of Gertrude and Teresa Halls, would be a good candidate to be transformed into an academic building. KFI and BTR Architects teamed together to complete the design and construction administration for this project.

KFI provided the mechanical, electrical, plumbing, controls, and fire protection engineering to replace the majority of the aged systems within the building, while BTR Architects provided programming, accessibility upgrades, and historic preservation. Together, we provided a comprehensive design which included updating the building smoke evacuation, renovation of restrooms with accessibility and new plumbing fixtures, new interior and exterior lighting and ceiling systems throughout, upgrading the building automation system, replacement of air handling units and zone HVAC equipment, and electrical system including power distribution scheme, technology, life safety and fire alarm upgrades.

The freshly renovated building now serves as home to the computer science, mathematics, economics, nursing, and psychology departments.

LOCATION:
St. Joseph, MN

OWNER:
College of St. Benedict

SQUARE FOOTAGE:
79,184

CONSTRUCTION COST:
$6,000,000

COMPLETION DATE:
August 2019

ST. CROIX COUNTY GOVERNMENT CENTER HVAC PRE-DESIGN AND REPLACEMENT

Project Relevance: *Same core team members, extensive HVAC renovation, phased construction, controls integration, on-going client relationship*

KFI provided pre-design services to evaluate St. Croix County's Government Center's existing mechanical and electrical infrastructure. The pre-design included development of a phased approach for the replacement of three air handling units (AHUs) serving the jail, which remained 100% occupied during construction. In addition to the phased approach, KFI provided construction estimates for the proposed recommendations.

KFI also provided the mechanical and electrical design services based on the recommendations from the pre-design. The design included the replacement of three AHUs utilizing a phased approach, which provided ventilation to the jail, jail control area, mental health unit, and juvenile detection area, all of which remained operational during construction. At any given time, two of the three AHUs were operating. Due to the critical nature of the HVAC systems, 3D laser scanning was completed to ensure AHU placement, piping connections and ductwork were aligned to avoid construction delays. When the COVID-19 pandemic hit during a major point in construction, KFI assisted the Owner with adding temporary, portable, AHUs to increase air changes through these spaces, which is an ASHRAE recommended strategy to mitigate viral transmission.

In addition to the AHU replacements, all variable air volume (VAV) units throughout the facility were replaced, along with the HVAC and lighting controls.

KFI provided controls programming, equipment procurement, and air balancing for this project. This strategy allowed St. Croix County to ensure parts were delivered.

LOCATION:
Hudson, WI

OWNER:
St. Croix County

SQUARE FOOTAGE:
145,000

CONSTRUCTION COST:
$3,400,000

COMPLETION DATE:
September 2020

PROJECT TEAM

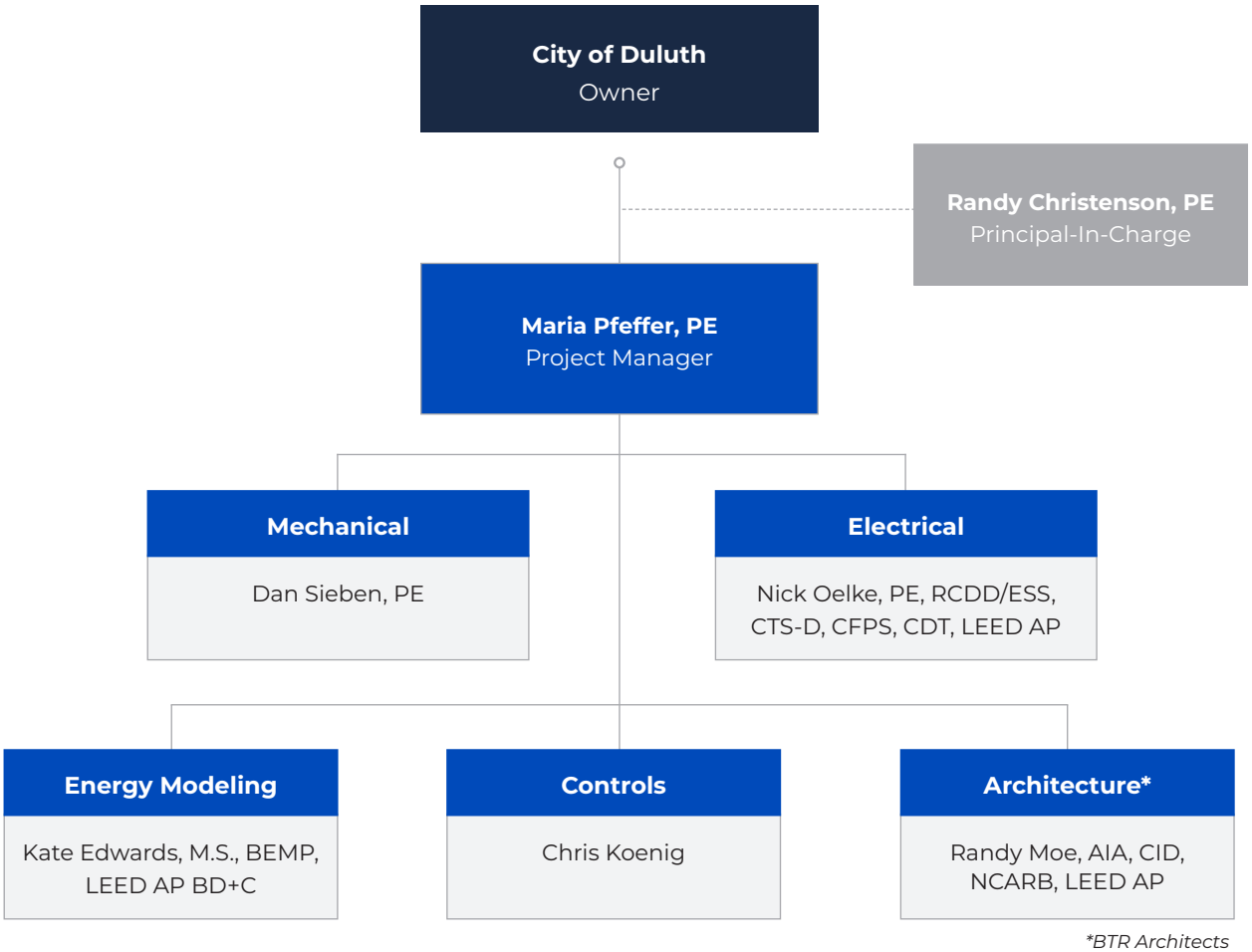
KFI has assembled an industry leading group of professionals for your project. Our team members have extensive experience and knowledge of building infrastructure, HVAC systems, controls, and historical building requirements.

The most critical elements of a successful project partnership are trust and communication between all team members. The team for this project was specifically selected because of their technical skills, collaborative nature, ability to achieve a client's project vision, and a history of working together on similar projects to your own. Our shared commitment to high quality services makes this the ideal group for a critical project.

We are proud of the team we have brought together to execute your project. The criteria we used to select our team members followed these guiding principles:

1. Depth of technical knowledge in select subject matter
2. Experience working on similar systems and facilities
3. Working experience with each other
4. Track record of success

A representative sampling of key team member qualifications and relevant project experience is reflected in their resumes included on the following pages. All team members are available, ready to start work immediately, and will be active on the project throughout its duration.



BTR Architects

DIRECTOR AND MECHANICAL ENGINEER

YEARS OF EXPERIENCE
25

EDUCATION
B.S. Mechanical Engineering
University of Minnesota

B.S. Social Science
Northwestern College

LICENSURE
Minnesota #40493 and 49 additional states including District of Columbia

AFFILIATIONS/CREDENTIALS
ASHRAE
ASPE
ASME
NCEES
OSHA Fall Protection Training (1926.500-1926.503)
OSHA 10 Card

RANDY P. CHRISTENSON, PE

Principal-In-Charge. *Randy will provide high-level project oversight and quality reviews of project documents. He will involve himself as necessary to ensure the City is receiving the highest possible value and quality.*

Randy is a partner and licensed mechanical engineer at KFI and is responsible for management of the commercial engineering department. He has over 25 years of mechanical engineering and project management experience for a wide range of government, commercial, educational, and healthcare facilities. Randy typically serves as the principal-in-charge for the majority of KFI's design projects, contributing to the more complex mechanical engineering systems.

His hands-on approach to engineering, extensive experience, communication skills, and drive for customer service excellence makes him a vital asset to every project. Randy has gained a reputation as a highly sought-after engineer for unique sustainable design, geothermal design, and fire protection systems.

Relevant Experience

Minneapolis City Hall and Courthouse Renovations - Minneapolis, MN

St. Croix County Government Center - Hudson, WI
- HVAC Pre-Design
- HVAC Replacement
- Geothermal Test Study
- Humidity Study

St. Croix County Health and Human Services - New Richmond, WI
- HVAC Upgrade
- HVAC Controls Engineering and TAB Services

College of St. Benedict Main Building Renovation - St. Joseph, MN

City of Morristown Existing HVAC Systems Survey - Morristown, MN

City of Woodbury - Woodbury, MN
- City Hall
- Public Safety Building Addition and Remodel
- HealthEast Sports Center Solar Feasibility Study

City of Cologne Community Center HVAC and Plumbing - Cologne, MN

Centennial Office Building - St. Paul, MN
- 5th Floor Mechanical and Electrical Design and Commissioning
- Senate Staff Relocation Mechanical and Electrical Design and Cx

Ramsey County Metro Square Office Design - St Paul, MN

La Crosse State Office Building HVAC Renovation - La Crosse, WI

Margaret A. Cargill Philanthropies Office Renovation and Expansion - Eden Prairie, MN - LEED

Fielding Nair New Headquarters Office Build-out - Minneapolis, MN

University of Minnesota Elmer L Andersen Library HVAC System Replacement Study - Minneapolis, MN

University of Notre Dame Stepan Chemistry Hall HVAC Design - Notre Dame, IN

KFI ENGINEERS

MARIA D. PFEFFER, PE

*As **Project Manager**, Maria's responsibilities will include systematic and thorough communication with the City as well as coordination, direction, engineering, and oversight of KFI's project team - ensuring project milestones are met, the City's standards are utilized, while providing a quality product.*

Maria is a project manager with over 13 years of mechanical engineering experience in HVAC and plumbing design. Maria applies her expertise to government, commercial, educational, industrial, and healthcare facilities. She has participated in all areas of construction, from pre-design, value engineering, and estimating to construction administration. Her ability to see project risks and rewards from an owner and design professionals perspective comes from performing engineering and construction services from both the office and the field.

SENIOR PROJECT MANAGER

YEARS OF EXPERIENCE
13

EDUCATION
B.S. Mechanical Engineering
St. Cloud State University

LICENSURE
Minnesota #50802, WI

AFFILIATIONS/CREDENTIALS
MSPE

OSHA 10 Card

ASHRAE

Society of Women Engineers (SWE)

Relevant Experience

City of Duluth - Duluth, MN

- Fire House 10 HVAC System Design
- Fire Hall 1 Domestic Water Study

St. Croix County - Hudson, WI

- Government Center
  - HVAC Pre-Design and Replacement
  - Mechanical, Electrical, and Plumbing Master Planning
  - COVID-19 Design
  - AHU - 1 Replacement
  - Humidifier Study
  - Cooling Tower Replacement
- Packaged Air Handling Unit (PAHU) Replacement Engineering
- Chiller and Boiler Plant Replacement

College of St. Benedict - St. Joseph, MN

- Main Building Renovation
- Schoenecker Commons Renovation
- Rosamond Hall Cooling Design

Ramsey County - St. Paul, MN

- Care Center Chiller Replacement
- Facilities HVAC Condition Assessments
- Metro Square Office Design and Renovation
- Law Enforcement Center Heat Recovery Unit Study

La Crosse State Office Building HVAC Renovation - La Crosse, WI

City of Woodbury Public Safety Building Addition and Remodel - Woodbury, MN

University of Notre Dame Stepan Chemistry Hall HVAC Design - Notre Dame, IN

University of Minnesota Elmer L Andersen Library HVAC System Replacement Study - Minneapolis, MN

Xcel Energy - Multiple Locations, MN

- HVAC Infrastructure Replacement - Mankato, MN
- Chilled Water System Upgrade - Maple Grove, MN
- 414 Building Chilled Water System - Minneapolis, MN

KFI ENGINEERS

SR. MECHANICAL ENGINEER

YEARS OF EXPERIENCE
44

EDUCATION
B.S. Chemical Engineering
University of North Dakota

LICENSURE
Minnesota #18954, AZ, FL, ID, IL, IN, MD, MI, OH, PA, TN, TX, WI

AFFILIATIONS/CREDENTIALS
ASHRAE

ASPE

- Member
- Past President of MN Chapter

DANIEL A. SIEBEN, PE

Mechanical Engineer. *Dan will provide mechanical engineering for this project, specifying HVAC and plumbing systems, designing flow schematics, and producing specifications.*

Dan is a licensed professional engineer with over 44 years of mechanical and plumbing design, and project management experience for government, commercial, higher education, and industrial clients. Dan's design tasks include the preparation of mechanical construction drawings and specifications. His project management responsibilities encompass the coordination of mechanical and plumbing design with other project design disciplines and the building owner, as well as overseeing and observing the construction process.

Relevant Experience

City of Apple Valley - Apple Valley, MN

- Old City Hall HVAC Upgrade
- Air Handling Unit Replacement

City of Staples Public Works Building HVAC System Evaluation - Staples, MN

City of St. Paul Public Housing Agency - St. Paul, MN

- Dunedin Office Renovation
- Roosevelt Office Renovation

City of New Richmond Civic Center Cooling System Upgrade - New Richmond, WI

City of Minnetonka Cold Storage Building Mechanical and Electrical Services - Minnetonka, MN

Hennepin County Government Center HVAC Cost Evaluation - Minneapolis, MN

Ramsey County - Saint Paul, MN

- Detox Center Convert Additional In-take Room
- Law Enforcement Center HVAC Assessment
- Family Service Center Mechanical Upgrades
- Facilities HVAC Condition Assessments
- IT Closet Cooling Study
- Public Works Mechanical Upgrades
- Metro Square Curtain Wall Improvement Project

United States Postal Service

- Air Handling Unit Replacement Commissioning - St. Cloud, MN
- Loring Station Building and HVAC System Remodel - Minneapolis, MN
- National Distribution Center - Eagan, MN
  - Cooling Tower Replacement Study
  - Chiller Replacement
- Process and Distribution Center Building Management System Investigation and Design - Minneapolis, MN
- Vehicle Maintenance Facility HVAC Upgrades Survey Services - Minneapolis, MN
- Main Post Office, Processing and Distribution Center and Vehicle Maintenance Facility - Minneapolis, MN*

KFI ENGINEERS

NICHOLAS T. OELKE, PE, RCDD/ESS, CTS-D, CFPS, CDT, LEED AP

Electrical Engineer. *Nick will provide both electrical and low voltage engineering for this project. He will oversee a team of electrical designers, while engineering and producing specifications.*

Nick is a licensed electrical engineer with over 17 years of experience. Nick specializes in low voltage systems including telecommunications, security, and audio-visual systems. He holds numerous certifications in various areas of low voltage design, including fire alarm and security systems. His diverse background ranges from K-12 renovations to a chiller plant for a 9,000,000 square-foot hospital campus in Dubai. Nicholas has completed the designs for construction projects with total costs exceeding $8 billion.

Relevant Experience

City of Duluth, Duluth ComfortSystems Building BAS Replacement - Duluth, MN

Minneapolis City Hall and Courthouse Stage 23 Electrical Design - Minneapolis, MN

St. Croix County - Hudson, WI

- Government Center
  - HVAC Pre-Design and Replacement
  - Mechanical, Electrical, and Plumbing Master Planning
  - Electrical Upgrade Design

College of St. Benedict - St. Joseph, MN

- Main Building Renovation
- Schoenecker Commons Renovation

City of Woodbury - Woodbury, MN

- City Hall Lobby Design
- Community Center Pre-Design Study
- Electric Vehicle Study

City of Brooklyn Park Water Treatment HVAC Upgrades - Brooklyn Park, MN

City of Bismarck Veterans Memorial Public Library HVAC Upgrade - Bismarck, ND

South Dakota Women's Prison Rooftop HVAC System Replacement - Pierre, SD

University of Minnesota Elmer L Andersen Library HVAC System Replacement Study - Minneapolis, MN

Margaret A. Cargill Philanthropies Office Renovation and Expansion - Eden Prairie, MN

Fielding Nair International New Headquarters Office Buildout - Minneapolis, MN

OlympiaTech Seven Story Office Building Design Build - Amarillo, TX

Waconia School District Alternative Learning Center HVAC Design - Waconia, MN

Osseo Area Schools Weaver Lake Elementary School HVAC Renovation - Osseo, MN

SENIOR ELECTRICAL ENGINEER

YEARS OF EXPERIENCE
17

EDUCATION
B.S. Electrical Engineering
Valparaiso University

IT Essentials and CCNA Preparation
Cisco Networking Academies I-IV - Chaska, MN

LICENSURE
Minnesota #47135, WI, ND, IA, AZ, CO, CT, IN, KS, MD, MA, MS, MT, NE, NH, OH, OK, SC, SD, TX, WV, AL, AR, DE, DC, HI, ID, LA, ME, NC, NJ, NM, NY, OR, PA, RI, TN, UT, VT, WY

AFFILIATIONS/CREDENTIALS
LEED AP

Certified Technology Specialist in Design

Construction Documents Technologist

Certified Fire Protection Specialist

Registered Communications Distribution Designer

Electronic Safety and Security Specialty

BICSI Member

NCEES Records Member

NFPA Member

MNAFAA Board Member

KFI ENGINEERS

ENERGY SIMULATION ENGINEER

YEARS OF EXPERIENCE
14

EDUCATION
M.S. Mechanical Engineering
University of Wisconsin-Madison

B.S. Mechanical Engineering
University of Wisconsin-Madison

B.A. Sociology, Math
Mt. Holyoke College

AFFILIATIONS/CREDENTIALS
ASHRAE - Building Energy Modeling Professional (BEMP)

LEED-AP BD+C

IBPSA

OSHA 10 Card

KATHERINE R. EDWARDS, M.S., BEMP, LEED AP BD+C

Energy Modeling. *Kate will assist the project team by creating an energy simulation model, to guide the path forward balancing initial cost verses annual utility saves, while providing code required ventilation.*

Kate is an energy simulation engineer responsible for energy modeling services. Prior to joining KFI, Kate was an instructor in the Mechanical Engineering Department at the University of Wisconsin – Madison where she taught Energy Systems and Mechanical Measurement. She has over 15 years of energy modeling experience with a number of energy simulation software packages including TRNSYS, Trane TRACE, EnergyPlus, and EES.

Relevant Experience

City of Duluth Comfort Systems Building Automation System Energy Study - Duluth, MN

St. Croix County - Multiple Locations, MN
- Government Center HVAC Replacement
- Health and Human Services HVAC Controls Engineering and TAB Services
- ERS Building Controls Upgrade

College of St. Benedict Main Building Renovation - St. Joseph, MN

United States Postal Service (USPS) - Multiple Locations, MN
- National Distribution Center Chiller Replacement
- Vehicle Maintenance Facility HVAC Upgrades Survey Services

Hennepin County
- Government Center - Minneapolis, MN
  - Recommissioning and System Evaluation Study
  - HVAC Cost Evaluation
- Webber Park New Library - Minneapolis, MN
- Oxboro Library Refurbishment - Minneapolis, MN

Minnesota Historical Society
- Split Rock Lighthouse HVAC and Domestic Water Renovation - Two Harbors, MN
- Charles Lindbergh Visitor Center HVAC Replacement - Little Falls, MN

City of Staples Public Works Building HVAC System Evaluation - Staples, MN

City of Bismarck Veteran's Memorial Public Library HVAC Upgrade - Bismarck, ND

Ramsey County - Multiple Locations, MN
- Facilities HVAC Condition Assessments
- Metro Square Study

Bobcat Product Engineering Office HVAC Design - Fargo, ND

Syngenta Office Building LEED Energy Modeling - Minnetonka, MN

Corporate Ridge IV Office Building - Olathe, KS

Margaret A. Cargill Philanthropies Office Renovation and Expansion - Eden Prairie, MN

KFI ENGINEERS

CONTROLS DESIGN MANAGER

YEARS OF EXPERIENCE
25

EDUCATION
B.S. Electrical Engineering
University of Minnesota I.T.

AFFILIATIONS/CREDENTIALS
Niagara-AX and N4 Certified

Niagara-AX Analytics Certified

VYKON Pro Advanced Niagara AX/N4 Course

Honeywell XL5000 Trained on Building Control Systems

Schneider Electric SmartStruxure Building Control System

Andover Trained on Building Control Systems

EasyIO Trained on Building Control Systems

Delta OrcaView Trained on Building Control Systems

Richards-Zeta Trained on Building Control Systems

CHRISTOPHER M. KOENIG

Controls. *Given his in-depth knowledge and understanding of the City of Duluth's BAS systems and preferences, Chris will provide guidance on instrumentation selections, sequence of operations, and software design. Chris assisted the City in the creation of the City of Duluth's OPR.*

Chris is an electrical engineer with 25 years of industry experience. Chris is an expert in controls design, installation, and operation. Chris has extensive design and project management experience with various control system designs including boiler and chiller plants, VAV air handlers and associated terminal units, process designs with unique pressure, temperature, and humidity requirements. In addition to providing stand alone controls design, Chris integrates controls into KFI's designs to ensure proper sequences and strategies are being used.

Relevant Experience

City of Duluth - Duluth, MN

- City Hall Building Automation System Assistance
- Building Automation System Consulting
- Building Automation System Training and Support Services
- ComfortSystems Building, Building Automation System Replacement
- Fire Hall 1 Domestic Water Study
- Fire House 10 HVAC System Design
- Multiple Building Master Direct Digital Control System Specification
- Public Safety Building
  - Building Automation System Replacement
  - Boiler and Data Room Integration

St. Croix County

- Government Center - Hudson, WI
  - HVAC Pre-Design and Replacement
  - Small Boiler Controls
- Health and Human Services Building HVAC Controls Engineering and TAB Services
- ERS Building Controls Upgrade

Municipal Building Commission Controls Study - Minneapolis, MN

College of St. Benedict Main Building Renovation - St. Joseph, MN

City of Woodbury Central Park Building Automation System Upgrade and Commissioning - Woodbury, MN

Minnesota Historical Society Split Rock Lighthouse HVAC and Domestic Water Renovation - Two Harbors, MN

Ramsey County - St. Paul, MN

- Government Center*
- Law Enforcement Center District Energy Meter Validation
- Law Enforcement Center BAS Commissioning

La Crosse State Office Building HVAC Renovation - La Crosse, WI

Hines 50 South Sixth - Minneapolis, MN

- HVAC Controls Replacement and IP Network Technical Support
- Building Automation System Replacement Support

KFI ENGINEERS

PRINCIPAL DESIGNER & INTERIOR DESIGNER

Years Experience

35+

Licenses/Orgs

MN Architect Lic. #20116

ND Architect Lic. #2640

SD Architect Lic. #12772

WI Architect Lic. #11963

IA Architect Lic. #ARC07679

Certified Interior Designer #C02150

LEED AP

RANDY L. MOE AIA, CID, NCARB, LEED AP

Architect. *Randy will provide Architectural support for our team. He will oversee other design staff to ensure renovations are meeting building and accessibility codes, along with advising on historical preservation.*

Randy Moe joined BTR in 1997 and with three other principals assumed leadership of the firm in 2005. His experience dates from 1981 and includes design and management of a wide array of public projects that range from simple interior remodeling to complex, new buildings. Randy is an award-winning designer and responsible for design of the firm's recent higher education and library projects. Randy is adept at working with diverse user groups that range from staff, patrons, and administration to community leaders and stakeholders with a unique ability to distill wide ranging input to create unique solutions to complex design problems. Randy is a member of the Society for College & University Planning.

Relevant Experience:

Main Building Renovation
College of Saint Benedict| St. Joseph, MN

Schoenecker Commons Administrative Renovation and Addition
College of Saint Benedict| St. Joseph, MN

Wells Family Center Study
Minneapolis Community and Technical College | Minneapolis, MN

Southdale Regional Service Center (Study, Renovation)
Hennepin County | Edina, MN

Government Center Service Center (Renovation)
Hennepin County | Minneapolis, MN

Midtown Exchange Service Center (Renovation)
Hennepin County | Minneapolis, MN

Chanhassen Service Center (New Construction)
Carver County | Chanhassen, MN

Chaska Service Center (Renovation)
Carver County | Chaska, MN

BTR

DETAILED WORK PLAN

PROJECT APPROACH

The project tasks and deliverables section on the following page provides a detailed breakdown of KFI's scope of work for this project. We understand the City of Duluth has Owner Standards and OPRs for projects. KFI has experience with the City of Duluth and many other clients implementing these OPRs.

KFI's design philosophy and approach to projects is to thoroughly plan the work and follow through with rigorous field investigation. Clear planning that fully addresses the project scope, schedule, and costs will be critical to the successful implementation of this project. KFI utilizes a graphic workplan, which clearly identifies the major tasks and coordination points of a project with respect to the project schedule. The workplan is an essential tool in tracking the progress of the design team and will be the first deliverable produced for the project. On a parallel path, the project team will be performing extensive field investigations to determine how the new and existing systems can be integrated into a coordinated design. Additionally, development of an energy simulation will begin to guide the team to make decisions on HVAC system selections.

During the engineering phase, our project team will use our quality control process to ensure that code and client requirements are fully addressed. KFI's plans are developed based on sound engineering principals that are fully coordinated to meet the physical parameters of the historic building.

The KFI team will take an active role throughout the project to ensure the City's OPR is maintained and the project remains on schedule and within budget.

PHASING

Because it can have significant cost and space use implications, construction phasing is critically important to analyze early in the design process. This is especially true for HVAC system replacement projects like yours. Knowing the equipment procurement lead time must allow the construction schedule to be maintained so the facility can remain operational with minimal disruptions. Typically, the most effective phasing plans strike a balance between construction efficiency and minimizing disruption to building operation. Communication is critical in determining the impact of each construction activity. We will be able to provide integrated cost and phasing information at each design stage. Within any given construction phase, we will use critical path schedules to help determine the most efficient sequence of work.

This phasing approach allows for proper planning of the work. Detailed cost information will be structured in a way to facilitate key project decisions, we will break down estimates by phase, work package, and component (quality/ sustainability).

QUALITY CONTROL

KFI's project manager, Maria Pfeffer, and design team engineers will monitor the quality of the documents produced by performing peer reviews and holding coordination meetings with other project team members. Coordination of the project documents is essential to the success and quality of the project. Randy Christenson, our principal-in-charge will also serve as the quality reviewer for this project. Randy will be responsible for reviewing and assessing the design and construction documents before the scheduled completion date. Corrections to be made will be noted and incorporated by project team members in the documents prior to issuing to your team or construction. We also recommend a final review of the documents with you and your team to ensure proper coordination and understanding of design documents and intent.

KFI has worked extensively to standardize master documents for the creation of projects. These documents are continuously updated by incorporating lessons learned from prior projects.

COST CONTROL

During design, the project team's estimators will calculate the construction costs of the project by performing construction-grade estimates based on current design documents. This information is communicated to the design team to assist in decision-making. Our estimators have several years of experience in the contracting field estimating projects for general, HVAC, plumbing, and electrical work.

SYSTEM SELECTIONS

We propose the use of an air-cooled chiller to provide chilled water cooling and dehumidification for the DOAS ventilation systems and chilled beams. The anticipated design would include supporting the chiller

unit from structure improvements on the low roof to minimize required screening. KFI has worked with many manufacturers to minimize noise pollution caused by chillers. Specifying low sound fans, condenser blankets, and sound louvers, in addition to maintaining energy efficiency from the equipment.

PROJECT TASKS AND DELIVERABLES

Schematic Design Phase – 1,080 team hours

October 12, 2021 – December 10, 2021

- Project kickoff meeting with the City of Duluth
- Identify and obtain all Owner standards and Owner Performance Requirements (OPR)
- Extensive field investigation
- Create a project workplan which illustrates all critical dates for the entire project
- Develop an energy simulation model to calculate building load, selection of systems, balancing cost and efficiency
- Evaluate and verify existing infrastructure
- Select equipment on a preliminary basis
- Create schematics for all systems and develop a preliminary routing plan
- Develop preliminary construction schedule and phasing plan
- Develop construction cost estimate for the project and check against the approved project budget.
- Review preliminary information with the owner and facilities staff to ensure that the initial design approach satisfies the project requirements
- Proceed with the creation of the schematic design submittal for review by the Owner. The submittal will include the proposed design along with a current cost estimate and project schedule

Deliverables

- Preliminary construction phasing plan
- Preliminary construction budget
- Project workplan (includes design and construction schedule)
- Design team meeting minutes
- Single line routings of plans
- SD drawings
- Schematic design report including construction cost estimates

Construction Documents Phase – 2,193 team hours

December 13, 2021 – February 25, 2022

- Field verify that all proposed work can be installed as shown on the documents
- Coordinate operation of the building automation system with the Owner and controls contractor so that requirements are clearly identified
- Develop plans into a fully biddable set with all required sections and details
- Owner review at 95% development
- Final project specifications
- Refine construction phasing workplan, to be included in bid package
- Refine the construction cost estimate
- Issuance of 100% complete construction package for bid

Deliverables

- Construction phasing plan
- Design team meeting minutes
- Fully biddable construction documents
- Includes control schematics and sequences
- Final construction cost estimate
- Submit for building and mechanical plan review
- Assist the City of Duluth with rebates from utility providers

Bidding and Construction Phase – 1,038 team hours

March 2022 – December 2022

- Attend a pre-bid meeting
- Review all bids and submit a recommendation to the City of Duluth
- Conduct pre-construction meeting to review all the requirements of the project and construction phasing plan
- Review material and equipment submittals
- Respond to all changes or clarifications that need to be made during construction
- Track the project and process payment applications.
- Conduct bi-weekly construction meetings during major construction, and issue field observation.
- Create punch lists at substantial completion of each construction phase (assuming three)
- Coordinate training of all new systems for City of Duluth
- Conduct pre-warranty expiration inspection

Deliverables

- Bid tabulations and recommendations for award
- Reviewed material and equipment submittals
- Prepare project construction meeting minutes
- Construction project coordination and communication documents (RFIs, Proposal Requests, etc.)
- Review of payment applications
- Construction observations and punch lists.
- Recorded drawings
- Facilitate the close-out process with the contractor (as-builts, O&Ms, warranty, etc.)

SCHEDULE AT-A-GLANCE

TASKS	ANTICIPATED SCHEDULE
Schematic Design	10/12/21 - 12/10/2021
Construction Documents	12/13/2021 - 2/25/2022
Bidding and Construction Administration	3/1/2022 - 12/31/2022

REFERENCES

Having provided consulting services for over 22 years, KFI has an extensive list of project experience. We strive to provide our clients with the highest possible value. Our clients' best interests are at the forefront of everything we do. Our advocacy covers a lot of ground, not just with our clients, but with their clients as well. They know that when we walk into a meeting with stakeholders, we will be prepared, effective communicators who inspire confidence. KFI has many clients who will attest to our owner advocacy and performance. We encourage you to reach out to the references provided below.

CITY OF DULUTH

Mr. Alex Jackson
Energy Coordinator
1532 West Michigan Street
Duluth, MN 55806
(e) ajackson@duluthmn.gov
(p) 218-730-4433

ST. CROIX COUNTY

Mr. Jim Elsbury
Director of Facilities Management
1101 Carmichael Road
Hudson, WI 54016
(e) jim.elsbury@sccwi.gov
(p) 715-386-4736

CITY OF WOODBURY

Mr. Eric Gager
Building Maintenance Supervisor
8595 Central Park, Suite 102
Woodbury, MN 55125
(e) egager@ci.woodbury.mn.us
(p) 651-714-3539

RAMSEY COUNTY

Mr. Gary Mrachek
Director of Building Operations
121 7th Place East, Suite 2200
St. Paul, MN 55101-2146
(e) gary.mrachek@co.ramsey.mn.us
(p) 651-266-2259

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION
(To be submitted with each bid or offer exceeding $100,000)

The undersigned, [Company] KFI Engineers certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, [Company] KFI Engineers, certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official

Randy Christenson, PE - Director
Name and Title of Contractor's Authorized Official

Sept 10, 2021
Date

BYRD ANTI-LOBBYING AMENDMENT CERTIFICATION
(To be submitted with each bid or offer exceeding $100,000)

The undersigned, [Company] Bentz/Thompson/Rietow, Inc. certifies, to the best of his or her knowledge, that:

1. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.

2. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form - LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

3. The undersigned shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31, U.S.C. § 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such failure.

The Contractor, [Company] Bentz/Thompson/Rietow, Inc , certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 U.S.C. § 3801 *et seq*., apply to this certification and disclosure, if any.

Randy L. Moe
Signature of Contractor's Authorized Official

Randy L. Moe, Vice President
Name and Title of Contractor's Authorized Official

09/07/2021
Date

COST PROPOSAL

CITY HALL MECHANICAL, ELECTRICAL AND PLUMBING RENEWAL DESIGN

(RFP #21-AA24)

City of Duluth

September 13, 2021

KFI ENGINEERS

September 13, 2021

City of Duluth
ATTN: Purchasing Division
City Hall, Room 120
411 West 1st Street
Duluth, MN 55802

RE: COST PROPOSAL for City Hall Mechanical, Electrical and Plumbing (MEP) Renewal Design (RFP #21-AA24)

KFI proposes to execute the scope of work outlined in our technical proposal for a **lump sum fee of $750,300**. Please note, this fee includes all reimbursable expenses for travel and production costs. The attached spreadsheet includes the breakout of employee hours by task, as well as assumptions, clarifications, and exclusions.

Randy Christenson, PE
AUTHORIZED SIGNER

City of Duluth
City Hall MEP Renewal Design (RFP #21-AA24)
KFI Proposal Number: P21 - 0915

Task Description	Anticipated Schedule	Randy Christenson Hours	Maria Pfeffer Hours	Dan Sieben Hours	Nick Oelke Hours	Kate Edwards Hours	Chris Koenig Hours	Designers and Support Staff Hours	BTR Hours	Subtotal Fees
Schematic Design	**October 12, 2021 -**									
Field Work, Verify Infrastructure	**December 10, 2021**		16	16	16		16	36	16	
Energy Modeling and Load Calculations						68			8	
Load Calcs/Equip Selections/Specs/Procurement				64	64	24		144		
Develop Bkgrds, Prelim Equip Layouts & Single Line Dwgs		4	16	48	48		24	190	10	
Construction Cost Estimates			4	4	4		4	48	4	
Submittal Preparation, Workplan, Construction Phasing		2	24	24	24			72	6	
Project Management, Meetings, QA/QC		2	4	8	4	4	4	4	2	
subtotal hours		**8**	**64**	**164**	**160**	**96**	**48**	**494**	**46**	**$ 187,500.00**
Construction Documents	**Decemeber 13, 2021**									
Field Work	**February 25, 2022**		10	32	32		8	64	16	
Detailed Mechanical Design		4	28	124				450		
Detailed Electrical Design		4	8	12	124			360		
Detailed Architectural Design		1						20	60	
HVAC Controls Design		2	8	4			54	120		
Preparation of Bid Packages & Specifications		2	8	68	68	4	68	320	10	
Project Manangement, Meetings, QA/QC, Compliance		8	16	12	12	8	12	24	8	
subtotal hours		**21**	**78**	**252**	**236**	**12**	**142**	**1358**	**94**	**$ 376,400.00**
Bidding and Construction Administration	**March 1, 2022 -**									
Bidding	**December 31, 2022**		8	12	12		12		4	
Shop drawings		2	24	72	72		40	100	14	
RFI's and Contractor Q's		2	24	72	72		24	100	8	
Site Inspections			8	92	24		24		8	
Punchlists				32	24		24		16	
Project Closeout		4	8	16	16	2	16	48	2	
subtotal hours		**8**	**72**	**296**	**220**	**2**	**140**	**248**	**52**	**$ 186,400.00**
Blended hourly rates		***$ 225.00***	***$ 204.00***	***$ 185.00***	***$ 185.00***	***$ 165.00***	***$ 185.00***	***$ 165.00***	***$ 140.00***	
Total Estimate of effort, including reimbursables:										**$ 750,300**

Assumptions, Clarifications, and Exclusions:

1. Limited architectual design work and structural engineering is anticipated
2. Design submittals are included; SD with construction cost estimate, 90% CD's with phasing plans and 100% CD's.
3. Pricing is based on lump sum, time and materials not to exceed.
4. TAB and commissioning services are not included. Note: KFI can provide pricing for these services, if requested
5. Pricing is based on estimated construction cost of $12,000,000.
6. Travel and production expenses are included in the base fee.

KFI ENGINEERS