



Plymouth Public Works Request for Proposal

for

Solar on Public Buildings Fire Station 3 (SPB24-032)

Date of RFP Issue: August 5, 2024

Proposal Due Date: August 19, 2024 at Noon, CST
*Proposals are to be received by Plymouth Public Works Department
as listed below **prior to proposal** closing date and time.*

Contact Info:

Plymouth Public Works

Attn: Amy Hanson

3400 Plymouth Blvd

Plymouth, MN 55447

www.plymouthmn.gov

ae Hanson@plymouthmn.gov

**Plymouth Public Works
Request for Proposal
for Solar on Public Buildings
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City of Plymouth
Public Works
3400 Plymouth Blvd
Plymouth, MN 55447
www.plymouthmn.gov

Solar on Public Buildings Request for Proposal Fire Station 3

Overview

The City of Plymouth is soliciting proposals from qualified contractors to design, build, and maintain a solar installation on local government property and provide power to local government facilities. The city has been approved to submit a full grant application for the Minnesota Solar for Public Buildings Grant Program.

PROJECT OVERVIEW:

The City of Plymouth is seeking proposals from interested firms capable of designing, engineering, installing, and maintaining a solar PV roof-mounted array.

In the long term, the local government may be interested in developing solar energy for other sites, and the results of this RFP may be used for future projects, however, for purposes of this RFP, respondents should limit their responses to only this site.

The local government believes on-site PV power generation will provide a long-term financial benefit by reducing energy costs through the reduction of peak demand loads and daily energy consumption at the sites. Through on-site PV solar generation, the Local Government hopes to:

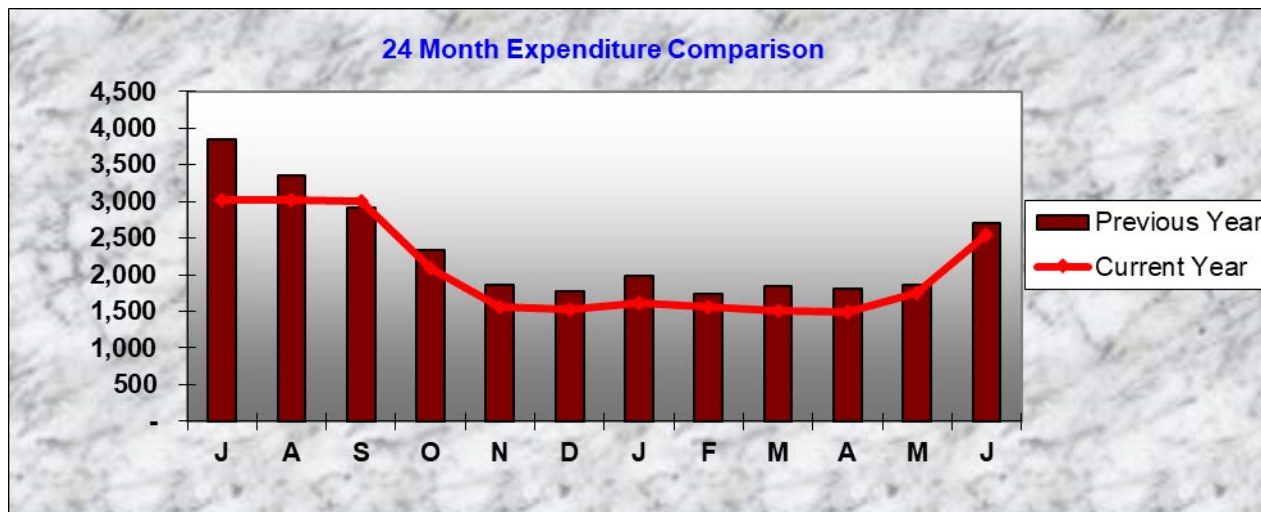
- Reap the financial benefits of more affordable electricity at minimal cost.
- Reduce environmental impact.
- Provide an example of successful renewable energy generation and showcase our organization as a leader in the development of renewable energy sources.

Through this RFP process, the local government intends to select only one provider for the solar project and is looking for the “best value” proposal based on the selection criteria stated within this RFP.

SITE INFORMATION:

Over the past two years, Fire Station 3 – 3300 Dunkirk Ln, Plymouth MN, has an average usage of 17,166 kWh per month.

Month	Electric			
	Account# 302981432			
	Demand (kW)	Energy (kWh)	Cost	\$/kWh
July-23	0	22,400	\$ 3,023.27	\$ 0.13
August-23	0	23,600	\$ 3,014.23	\$ 0.13
September-23	0	22,800	\$ 3,010.60	\$ 0.13
October-23	0	17,200	\$ 2,085.07	\$ 0.12
November-23	0	13,200	\$ 1,555.24	\$ 0.12
December-23	0	14,800	\$ 1,528.89	\$ 0.10
January-24	0	14,800	\$ 1,611.17	\$ 0.11
February-24	0	14,800	\$ 1,562.57	\$ 0.11
March-24	0	13,600	\$ 1,507.52	\$ 0.11
April-24	0	13,200	\$ 1,488.23	\$ 0.11
May-24	0	14,400	\$ 1,746.04	\$ 0.12
June-24	0	21,200	\$ 2,544.42	\$ 0.12
Totals	0	206,000	\$ 24,677.25	\$ 0.12



Additional example information:

Plymouth has identified the roof of Fire Station 3 as a good location for the 40 kW AC Solar array (Exhibit C). The roof at Fire Station 3 is a fully adhered EPDM that was installed in 2021. The underlining structure is original from 1980 and will need to review load capacity.

Plymouth determines that a roof-mounted array is the best option and has attached requirements for the system in order to maintain roof integrity. The provider will be responsible for ensuring that roof warranties remain in place and avoid damage to existing roofs (Exhibit D).

EXAMINATION OF SITE BEFORE SUBMITTING PROPOSAL:

Each provider must inform themselves fully of the conditions relating to the project and the employment of labor thereon. Failure to do so will not relieve a successful bidder of the obligation to carry out the provisions of the contract.

The provider will design, install, and maintain a solar photovoltaic system to maximize the solar resources considering the facilities' electrical demand and load patterns, proposed installation site, available solar resources, applicable zoning ordinances, installation costs, and other relevant factors, which shall be discussed in the provider's proposal.

The provider shall visit the site and determine the best course of action. The ability to tour the site will be part of the pre-bid conference and is a prerequisite to submitting a proposal.

Site visit is scheduled for August 9, 2024 at 11:00 a.m. at Fire Station 3, 3300 Dunkirk Ln, Plymouth MN.

PROVIDER QUALIFICATIONS:

To qualify as the provider for the award of this agreement, the provider must either individually or collectively demonstrate extensive training, relevant expertise, and a thorough knowledge of the professional services, functions, activities, and related responsibilities to successfully perform their role in this solar photovoltaic installation.

PERSONNEL QUALIFICATIONS AND ABILITIES:

Specialized experience is required of the proposed project personnel to undertake the work assignments. Proposals must demonstrate the capability, academic background, training, certifications, and experience of the proposed personnel. The availability of the proposed staff is also of crucial importance and must be demonstrated. The specific responsibility of staff to be assigned to the project must be included, as well as the professional background and caliber of previous experience of key persons and consultants to be assigned to the project. If sub-consultants are employed, similar information must be provided and the portions to be sub-consulted must be identified. (There is no penalty for the use of sub-consultants; the qualifications of the entire team will be evaluated).

Provider(s) shall possess:

- Valid and pertinent State of Minnesota contractor construction licenses.
- Minnesota Professional Engineering (PE) registration for photovoltaic/electrical, structural, civil, and fire protection work.
- North American Board of Certified Energy Practitioners (NABCEP) certification.

Proposal Information

SCHEDULE

Plymouth Public Works schedule for review of the RFP’s and final selection is as follows:

Date	Event
August 5, 2024	Request of Proposal Issued
August 9, 2024	Site Visit
August 12, 2024	Questions Submitted
August 14, 2024	Questions and Response
August 19, 2026	RFP Submittal Due
August 19 – 21 2024	Review Panel Decision
August 23, 2024	Elect Contractor

SUBMISSION REQUIREMENTS

Any and all responses to this RFP must include the following RFP elements. All signatures must be signed by an official who is legally authorized to bind the organization.

1. A completed Company Information form.
2. A completed Content Information which is explained in Section II, Scope of Services.
3. A completed and signed Certificate of Proposal.
4. A completed and signed Responsible Bidder Evaluation.
5. A completed and signed Contractor Verification of Compliance
6. A completed and signed Affidavit of Non-Collusion.

SELECTION CRITERIA

1. *Evaluation Criteria and Scoring Process* – All proposals received will be reviewed by a Review Panel as determined by the Plymouth Public Works Division. Each evaluation criteria have been given points relative to its value as a whole. The criteria and each associated points are listed in Section II, Scope of Services “Provider Selection Criteria”
2. *Selection* – The bidder considered most responsive to this RFP may be requested to attend at least one interview with Plymouth Public Works Division. Plymouth Public Works may determine that a selection can be made without conducting interviews.

QUESTIONS

Prospective contractors who have any questions regarding this RFP must submit questions by e-mail or phone to: Amy Hanson, Facilities Manager, ahanson@plymouthmn.gov. All questions must be submitted by August 12, 2024, and responses will be August 14, 2024.

SUBMITTALS

All proposal must be delivered to Plymouth City Hall by 12:00 p.m. Central Standard Time. **Email with a PDF attachment of the proposal is also acceptable.**

City of Plymouth
C/O Solar for Public Buildings RFP – Amy Hanson, Facilities Manager
3400 Plymouth Boulevard
Plymouth, MN 55447
ahanson@plymouthmn.gov

All proposals must be received no later than Noon on Monday, August 19, 2024 CST, as indicated by the time posted in the schedule. Late proposals will not be considered. Each quote must be signed by an authorized member of the firm.

Terms & Conditions

If a contract is awarded, the selected Contractor will be required to adhere to a set of general terms and conditions that will become a part of any formal agreement. These conditions are general principles that apply to all Contractors of service to Plymouth Public Works.

A. Reporting of Contractor

1. The Contractor is to report to Amy Hanson, Facilities Manager, Plymouth Public Works and will cooperate and confer with her as necessary to insure satisfactory work progress.
2. The Contractor to submit a timeline/milestone of the project.
3. Plymouth Public Works will review and inspect the Contractor's activities during the term of this contract.

B. Personnel

1. The Contractor will provide the required service personally and will not subcontract or assign services without Plymouth Public Works written approval.
2. The Contractor will not hire any City employee for any of the required services without the City's written approval.
3. The parties agree that the Contractor is neither an employee nor an agent of the City for any purpose.

C. Indemnification

The Contractor will protect, defend and indemnify the City of Plymouth, its officers, agents, servants, volunteers and employees against any and all liabilities, claims, liens, fines, demands and costs, including legal fees, of whatsoever kind and nature which may result in injury or death to any persons, including the Contractor's own employees, and for loss or damage to any property, including property owned or in the care, custody or control of the City of Plymouth in connection with or in any way incident to or arising out of the occupancy, use, service, operations, performance or non-performance of work in connection with this contract resulting in whole or in part from negligent acts or omissions of Contractor, any sub-contractor or any employee, agent or representative of the Contractor or any sub-contractor.

D. Non-Collusion

Submittal and signature of a quote swears that the document is genuine and not a sham or collusive, and not made in the interest of any person not named, and that the Contractor has not induced or solicited others to submit a sham offer or to refrain from quoting.

E. Responsible Quoter

The City will review the qualifications and experience of quoters for construction, alteration, repair, or maintenance of real or personal property after quotes are opened and before a contract is awarded, to determine if the quoter is "responsible." A "responsible" quoter is a bidder qualified to do the work. This will be determined by assessing the quoter's skill, resources, experience, successful performance of similar contracts (on time and on budget), and all other matters bearing upon the likelihood that the contract will be successfully completed.

F. Insurance Requirements

The insurance carrier for City of Plymouth requires evidence of coverage, certificates of insurance, from subcontractors working on city premises prior to the commencement of work. Coverage and limits required are as follows:

General Liability including Completed Operations coverage with minimum limits of:

- \$1,000,000 Each Occurrence Bodily Injury and Property Damage
- \$2,000,000 General Aggregate
- \$2,000,000 Products / Completed Operations Aggregate
- \$1,000,000 Personal Injury and Advertising Injury

The City of Plymouth should be named as an “Additional Insured” on a primary basis, with a Waiver of Subrogation in favor of the City of Plymouth, on the General Liability and Automobile Liability as related to the work performed by the subcontractor on behalf of The City of Plymouth.

Automobile Liability coverage for any Auto, Hired and Non-Owned Autos:

- \$1,000,000 Limit

Workers Compensation and Employers Liability:

- Statutory Limits on Workers Compensation
- Employer’s Liability
 - \$500,000 each Accident
 - \$500,000 Disease – each employee
 - \$500,000 Disease – policy limit

Workers Compensation includes a Waiver of Subrogation in favor of the City of Plymouth.

G. Compliance with Laws & Regulations

In addition to non-discrimination and affirmative action compliance requirements listed below, the Contractor(s) ultimately awarded a contract shall comply with federal, state and local laws, including, but not limited to, all applicable OSHA requirements and the Americans Disabilities Act. This requirement includes, but is not limited to, protection of public and employee safety and health; environmental protection; waste reduction and recycling; the protection of natural resources; permits; fees; taxes; and similar subjects.

H. Licenses

The Contractor shall obtain and maintain all licenses, permits and/or certificates both permanent and temporary throughout the period of the agreement. The Contractor and staff shall be licensed and authorized to do this specific type of work within the State of Minnesota.

I. Interest

The Contractor promises that it has no interest which would conflict with the performance of services required by this contract. The Contractor also promises that, in the performance of this contract, no officer, agency, employee of the City of Plymouth or member of its governing bodies, may participate in any decision relating to this contract which affects his/her personal interest or interest of any corporation, partnership or association in which he/she is directly or indirectly interested, or has any personal or pecuniary interest.

J. Equal Opportunity Employment

The City of Plymouth does not discriminate on the basis of race, color, creed, national origin, sex, religion, age, disability, affection preference, marital status, or status with regard to public assistance in employment. The City of Plymouth is an equal opportunity employer.

K. Ownership of Documents

All documents developed as a result of this contract will be freely available to the public and shall become the property of the City. None may be copyrighted by the Contractor. During the performance of the services, the Contractor will be responsible for any loss of or damage to the documents while they are in its possession and must restore the loss or damage at its expense. Any use of the information and results of this contract by the Contractor must reference the project sponsorship by the City. Any publication of the information or results must be co-authored by the City.

L. Data Practices

All data created, collected, received, maintained or disseminated for any purpose in the course of this Contract is governed by the Minnesota Government Data Practices Act, Minn. Stat. Ch. 13, any other applicable state statute, or any state rules adopted to implement the act, as well as federal regulations on data privacy.

M. Assigns & Successors

This contract is binding on the City and the Contractor, their successors and assigns. Neither the City nor the Contractor will assign or transfer its interest in this Contract without the written consent of the other.

N. Right to Reject Proposals:

1. Bid proposals shall remain valid for 60 days after the opening of the proposals
2. The local government reserves the right to reject any and all proposals.
3. All cost incurred in the preparation of the proposal, the submission of additional information, and/or any aspect of the proposal before the award of a written contract will be borne by the provider.
4. The local government will only provide the staff assistance and documentation specifically referred to herein and will not be responsible for any cost or obligation of any kind that may be incurred by the respondent.
5. All proposals submitted become the property of the local government.

O. Addendum

1. Any changes to the specifications will be issued as a written addendum. No oral statements, explanations or commitments by whosoever shall be of any effect.
2. The contract may be amended from time to time through written agreement by both parties.

Scope of Services

PROJECT SCOPE:

The provider will design, provide, install, and maintain the solar photovoltaic systems. The scope of this project is all-inclusive and includes planning, engineering, labor, materials, delivery, installation, and commissioning, as well as all warranties and maintenance. This includes all structural and utility modifications that are required. The provider shall include in its proposal all elements necessary for a turn-key project including rebate applications, interconnection Agreement, all permits and approvals from governing agencies, and all labor, taxes, services, and equipment. The provider shall apply for and obtain all necessary required approvals and permits. All fees required shall be the responsibility of the applicant.

The provider shall decide on the best location for the Xcel Solar metering. All proposed roof-mounted solar panels, tracks, and anchoring equipment shall not exceed six pounds per square foot. The provider shall verify the structural capacity of the roof.

The provider shall submit the Solar for Public Buildings full grant application to the State of Minnesota and abide by grant requirements. Grant applications are required to be submitted by September 23, 2024. Contractor will submit on behalf of the city. Contractor shall include the pricing of submittal of the grant application (refer to cost sheet in Exhibit B). Full award of contract will be approved once grant application has been finalized and approved by the City Council.

Ownership of Solar Renewable Energy Credits (RECS) or Certificates should be assumed to be owned by the local government unless otherwise specified by the provider as part of the proposal.

The provider is responsible for all connections and agreements with the utility.

All proposals shall include equipment specification sheets for solar panels and inverters.

Inverters shall be Solaredge, or CPS, or Fronius, or approved equal.

All equipment shall be UL listed and approved according to Xcel's solar program requirements and net metering. All installations shall comply with current local government-approved building and electrical codes. The performance guarantee, efficiency, degradation rate and warranty shall be listed on the forms below.

CONTENT OF PROPOSAL:

To maintain uniformity with all proposals furnished by the provider, proposals shall include the following:

- **Overview of Principal Elements.** A project understanding summary that includes an overview of the principal elements of the proposal, a demonstration of an understanding of the project objectives, and a description of your approach to solar systems. Include any suggestions or special concerns that the local government should be made aware of, the proposed configuration of equipment, and any additional scope of work tasks you feel are necessary for the successful completion of the project. Include a discussion of work assignments between the provider and subcontractors used, if any.
- **Schematic Design Layout.** Provider shall provide a system schematic design layout for the systems, including photovoltaic model type and model no., wattage, number of modules, year 1 production, degradation percentage, inverter type and model, inverter software, mounting system type, azimuth,

tilt, system size AC and DC, and the impact on the utility rates and demand charges.

- Cost. The local government is eligible to receive a Solar for Public Buildings grant of 50% of the cost of the project not to exceed \$60,000. Additionally, the local government intends to apply for elective pay from the federal government. The provider shall incorporate the grant and federal incentives into the proposal. Provider shall identify costs to the local government and anticipated savings over 30 years. If the solar system qualifies for domestic content, it should be clearly stated and certification provided open request.
- Minimum Qualifications. Sufficient information to evaluate the provider's ability to complete the scope of work and to meet the following minimum qualifications:
 - Appropriate business and contracting licenses in good standing.
 - Appropriate other licensing in good standing
 - A list of personnel who will work on the project, including resumes of proposed project team members that delineate education, current licenses and certificates, prior employment, and titles.
 - Project Team Structure: An organizational chart describing the roles and responsibilities of each person.
- References. A list of similar projects that your firm completed within the last 5 years. To be considered, respondents are required to have designed, installed, operated, maintained, and completed a minimum of five (5) solar PV projects in the United States that are commercial grid-connected solar PV systems. One (1) of the referenced projects must be with a local government, school, state, or tribal government.
- Project information should include project description, agency or client name along with the person to contact, telephone number(s) and e-mail addresses, year completed, and project construction and design cost.
- Proposal submittal and signature. The proposal shall be signed by a company official with the power to bind the company in its proposal. All proposals must be completely responsive to the RFP.
- Warranties/Guarantees. The Respondent shall provide the following minimum warranties/guarantees:
 - 12-year inverter warranty. Option for 20-year warranty.
 - 20-year PV panel warranty, with a maximum of 15% degradation.
 - Performance Guarantee – 85%.

TECHNICAL SPECIFICATIONS:

The following technical information should be discussed in this section.

- Major equipment manufacturers
- Description of technology and configuration
- Solar system layout of equipment and characteristics
- Electrical interconnection and metering/net-metering
- Foundation of PV support system
- Level of efficiency
- DC and AC capacity rating
- Expected annual energy production in kWh
- Communications, control and instrumentation
- Facility limitations that may constrain operation

- Project Management plan
- Start-up and testing
- Design life loading (wind, seismic, etc.)
- Description of frequency and duration of scheduled maintenance
- Provide any information that could impact the cost, construction schedule or output capability of the project.
- Proposals shall demonstrate a proven, comprehensive data acquisition system with current and historical data available remotely through a real-time internet site capable of tracking, but not be limited, to the following:
 - Site-specific actual kWh production (average and cumulative totals)
 - Site-specific instantaneous maximum kWh production
- Proposals shall provide evidence that the proposed technology and equipment would meet or exceed all currently applicable and proposed safety and interconnection standards. All equipment components must be listed or recognized by an appropriate safety laboratory (e.g., Underwriter’s Laboratory [UL]), and meet existing facility structural and fire safety requirements.
- Proposals shall provide evidence that the proposed technology and equipment would meet or exceed all currently applicable and proposed environmental standards.
- Proposals shall provide evidence that the proposed technology and equipment are designed for normal operation in the Minnesota climate.
- All electrical design work must be approved and signed by an electrical engineer.
- All inverters must be compatible with Plymouth’s existing PCC Solar edge inverter system. This is needed so that Plymouth can receive real time signals from the panels to show performance and alerts if something needs attention.

Proposals shall provide evidence that the proposed technology does not incorporate proprietary components and that the system design allows for multiple sources of supply and/or repair.

Proposals shall describe reusability or recyclability of proposed technology and equipment.

Contractor shall complete Solar Information form (Exhibit C) and Solar Pricing Schedule (Exhibit D), these should be submitted with proposals.

OPERATIONS AND MAINTNENANCE:

Describe the basic philosophy for performing O&M and include a discussion of contracting for outside services, if applicable. The successful respondent shall provide copies of the complete O&M manuals for all components of the system upon system commissioning.

The O&M plan shall include recycling for any solar module or inverter that needs to be replaced for any reason over the life of the system. At the time of any project-level work order execution, the Contractor shall use solar PV system components that are readily reusable or recyclable. The provider shall track solar system equipment that ceases to function as intended and report on an annual basis the recycling of any modules or inverters to the Minnesota Pollution Control Agency.

PROJECT SCHEDULE:

All proposals must include a project schedule that includes the following milestones:

- Permitting begins
- Final design plans complete.
- Equipment ordered.
- Construction begins.
- Electrical generation begins.

FINANCIAL STATEMENTS:

Please submit a detailed financial report prepared per generally accepted accounting principles (GAAP) reflecting the current (as of the most recent financial statement date) financial condition of the provider. Such a report must include a balance sheet, income statement, and statement of cash flows, along with applicable footnotes, dated concurrently for at least each of the preceding three years ending on the most recent fiscal quarter such statements were prepared. Public entities or subsidiaries should attach SEC Form 10-K along with, as applicable, detailed unaudited statements for the provider. Non-public entities may attach either unaudited financial statements or copies of tax forms and schedules that are filed with the Internal Revenue Service where applicable.

SELECTION COMMITTEE:

The local government has established a Selection Committee to evaluate provider proposals. The evaluation of each proposal will be based on technical criteria and qualifications, reference checks, and other information that will be gathered independently. The major component in awarding the provider is total cost per kWh over a 30-year period. This will take into account the efficiency and degradation rates. A helioscope, included by the provider, will help provide production data for each month of the year.

LOCAL GOVERNMENT RESPONSIBILITY:

The local government will be responsible for the following:

- Providing all available existing relevant plans and records.
- Coordinating access to the site for review before the bid due date.

PROVIDER SELECTION CRITERIA:

The local government, based on the requirements of this RFP has designated the following items as selection criteria for the successful provider. Each item will be individually and separately scored by Selection Committee members.

- A. Proposal Completeness (10 points): The measure for which the provider has provided all the requested information in a clear non ambiguous way as requested in this RFP.
- B. Cost/Best Value: (50 points): Cost information provided by the provider detailing the cost to the owner and potential savings over a 30-year period. This includes Domestic Content Certification.
- C. Financial Strength and Stability (10 points): Provide information indicating the provider's financial strength in terms of capital and liquid assets sufficient to complete the project listed in this RFP; and the stability of the provider in terms of length of service, professional capabilities, construction experience and capabilities over time.
- D. Photovoltaic engineering, project, and construction experience, including a minimum of five successful photovoltaic projects within the scope of this RFP (15 points).
- E. Project engineering analysis (10 points). Information provided by the provider detailing the estimated kWh generated by the proposed photovoltaic systems in this RFP; including all necessary assumptions for example sunlight availability, dark time, maintenance downtime, MTBF (mean time between failures), efficiency of the systems proposed, efficiency losses, net metering, etc.
- F. Photovoltaic performance monitoring (5 points). The provider's capabilities of monitoring photovoltaic generating systems, for example, how many systems does the provider monitor in centralized stations, etc.
- G. Provider customer service, and maintenance capabilities (5 points). The ability of the provider to respond quickly, efficiently, and cost-effectively to service calls so the photovoltaic systems are operating at optimum output.

- H. It is encouraged to provide multiple equipment proposals so the efficiencies and degradation factors can be evaluated. Low cost is not the only criteria being considered.

Criteria/Points	Points
Proposal Completeness	10
Cost/Best Value	50
Financial Strength	10
Project Experience	10
Engineering Analysis	10
Photovoltaic Performance Monitoring	5
Customer Service/References	5
Total Possible Points	100

RFP EXHIBITS:

Exhibit A: Solar Information Form

Exhibit B: Solar On Public Buildings Cost Sheet (Bid Form)

Exhibit C: Roof Plan and Details

Exhibit D: Johns Manville Photovoltaic Installation and Reference Guide

Attachment A: Advertisement for Proposal

NOTICE IS HEREBY GIVEN that the City of Plymouth is seeking proposals from qualified contractors to design, build and maintain a solar installation on local government property and provide power to local government facilities. The district has been approved to submit a full grant application for the Minnesota Solar for Public Buildings Grant Program. All services must meet the criteria as detailed in the scope of services.

An electronic copy of the Request for Proposal is available at www.plymouthmn.gov or by contacting Amy Hanson, Facilities Manager, at ahanson@plymouthmn.gov.

Details concerning submission requirements are included in the Request for Proposal. This notice does not obligate the City of Plymouth to complete the project and the City reserves the right to cancel this solicitation.

Deadline for submission of the RFP Response is no later than **Monday, August 19, 2024, at Noon, CST.**

City of Plymouth
Public Works
3400 Plymouth Blvd
Plymouth, MN 55447
www.plymouthmn.gov

Plymouth Public Works Company Information Form

Company Information

Company					
Main Contact		Title			
Email		Phone			
Address					
City		State		Zip	
Website					
Tax ID#		Corporation or Partnership			
Years in Business		Years in Plymouth Area			
Permanent Employees		Temporary Employees			
Type of work performed by your Company					

Recent Projects of similar scope and size performed.

Company	Contact	Email	Type of Work/Size/Year Installed

List all your companies applicable Licenses and Certificates

License/Certificate	Number	Expiration

List all lawsuits or complaints filed against quoter for the last five (5) years.

Company References – Other Solar Projects at least 2 years old.

Company Reference				
Main Contact		Title		
Email		Phone		
Address				
City		State		Zip
Website				
Description of Work Performed				

Company Reference				
Main Contact		Title		
Email		Phone		
Address				
City		State		Zip
Website				
Description of Work Performed				

Company Reference					
Main Contact		Title			
Email		Phone			
Address					
City		State		Zip	
Website					
Description of Work Performed					



Plymouth Public Works Certification of Proposal

We have read the Plymouth Public Works Request for Proposal and fully understand its intent. We certify that we have adequate personnel and resources to fulfill the proposal requirements. We further understand that our ability to meet the criteria and provide the required services shall be judged solely by Plymouth Public Works Division.

We further certify that since the receipt of this RFP, no contact, discussion, or negotiation has been made nor will be made regarding this RFP with any City of Plymouth City Council Member, Environmental Quality Committee Member or City of Plymouth staff.

We certify our quote shall remain valid for a period of 60 days after the due date of responses.

Submitted by:

Name

Authorized Signature

Title

Date

City of Plymouth Responsible Bidder Evaluation

The City will review the qualifications and experience of quoters for construction, alteration, repair, or maintenance of real or personal property after quotes are opened and before a contract is awarded, to determine if the quoter is “responsible.” A “responsible” quoter is a quoter qualified to do the work. This will be determined by assessing the quoter’s skill, resources, experience, successful performance of similar contracts (on time and on budget), and all other matters bearing upon the likelihood that the contract will be successfully completed. In all cases where a quoter is unknown or where there are any questions about the qualifications of the quoter, the following information will be required of the apparent low quoter:

You are required to complete and return this questionnaire before the City Council considers awarding you the contract.

1. Identify all similar public projects in which you were the contractor. If you have had more than five such contracts, list only the last five contracts, and as to each contract identified provide the following information:

Project #1		Date	
Project Description			
City Contact Person			
County Contact Person			
State Contact Person			
Were change orders in excess of 5% requested? If yes, explain the circumstances.			
Were liquidated damages assessed? If yes, explain the circumstances.			
Was the project completed on schedule? If no, explain the circumstances.			

Project #2		Date	
Project Description			
City Contact Person			
County Contact Person			
State Contact Person			
Were change orders in excess of 5% requested? If yes, explain the circumstances.			
Were liquidated damages assessed? If yes, explain the circumstances.			
Was the project completed on schedule? If no, explain the circumstances.			

Project #3		Date	
Project Description			
City Contact Person			
County Contact Person			
State Contact Person			
Were change orders in excess of 5% requested? If yes, explain the circumstances.			
Were liquidated damages assessed? If yes, explain the circumstances.			
Was the project completed on schedule? If no, explain the circumstances.			

Project #4		Date	
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Project Description	
City Contact Person	
County Contact Person	
State Contact Person	
Were change orders in excess of 5% requested? If yes, explain the circumstances.	
Were liquidated damages assessed? If yes, explain the circumstances.	
Was the project completed on schedule? If no, explain the circumstances.	

Project #5		Date	
Project Description			
City Contact Person			
County Contact Person			
State Contact Person			
Were change orders in excess of 5% requested? If yes, explain the circumstances.			
Were liquidated damages assessed? If yes, explain the circumstances.			
Was the project completed on schedule? If no, explain the circumstances.			



Contractor Verification of Compliance

The undersigned, being first duly sworn, as a responding contractor on the Project, represents and swears as follows:

Now, and at all times during the duration of the Project, the undersigned complies with each of the minimum criteria in Minn. Stat. § 16C.285, Subd. 3, the Responsible Contractor Statute.

The undersigned understands that a failure to meet or verify compliance with the minimum criteria established for a “responsible contractor” as defined in Minn. Stat. § 16C.285, Subd. 3, renders a bidder ineligible to be awarded a construction contract for the Project or to perform work on the Project.

Upon request, the undersigned will submit copies of the signed verifications of compliance from all subcontractors.

The undersigned understands that a false statement under oath verifying compliance with any of the minimum criteria shall make the undersigned, or its subcontractor that makes the false statement, ineligible to be awarded a constructed project and may result in termination of a contract awarded to the undersigned or its subcontractor that submits a false statement.

Certified as true and correct this _____ day of _____.

Printed name, Title

Signature

**Resolution No. 2015-016, January 13, 2015
(Supersedes Resolution No. 2004-024, January 13, 2004)**

**Plymouth Public Works
Affidavit of Non-Collusion**

I hereby swear (or affirm) under the penalty for perjury:

1. That I am a partner in the quoting partnership (if the quoter is a partnership) or an officer or employee of the quoting corporation (if the quoter is a corporation) having authority to sign on its behalf;
2. That the attached quote or quotes have been arrived at by the quoter independently, and have been submitted without collusion with, or without any other vendor of materials, supplies, equipment, or services described in the invitation to quote, designed to;
3. That the contents of the quote or quotes have not been communicated by the quoter or its employees or agents to any person not an employee or agent of the quoter and will not be communicated to any such person prior to the official opening of the quote(s); and
4. That I have fully informed myself regarding the accuracy of the statements made in this affidavit.

Company Name: _____

Authorized Signature: _____

Title: _____

Quoter's E.I.N.: _____
Number used on Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941

Subscribed and sworn to before me this _____ day of _____ 202__.

Notary Public Signature/Seal

Solar Proposal - City of Plymouth

Location - Fire Station 3

Provider: _____

Date: _____

Description	Answer
Solar Panel Equipment Manufacture	
Solar panel Equipment Model Number	
Watts per Panel (DC)	
Total System kW (DC)	
Watts per Panel (AC)	
Total System kW (DC)	
Number of Panels	
UL Approvals	
Meets Xcel's Requirements for Solar Program and Net Metering	
Efficiency of Panel	
Degradation Rate Year 1	
Degradation Rate years 2-30	
Efficiency at year 30	
Inverter Manufacture	
Warranty of Inverter	
Option for 20 Year inverter Warranty	
Optional Price for 80 kW electrical infrastructure equipment so it is solar ready in the future for an expansion.	
Performance Guarantee	

Panel Warranty	
If there is warranty work needed, is labor and equipment included?	
Weight Per Panel	
Panel Technology (HJT, PERC, Topcon...)	
Weight per SF of Total Solar System	
Does Solar System Meet Domestic Content requirements of IRA?	
Completion Date	

** Please include specification sheets for Panels and Inverters*

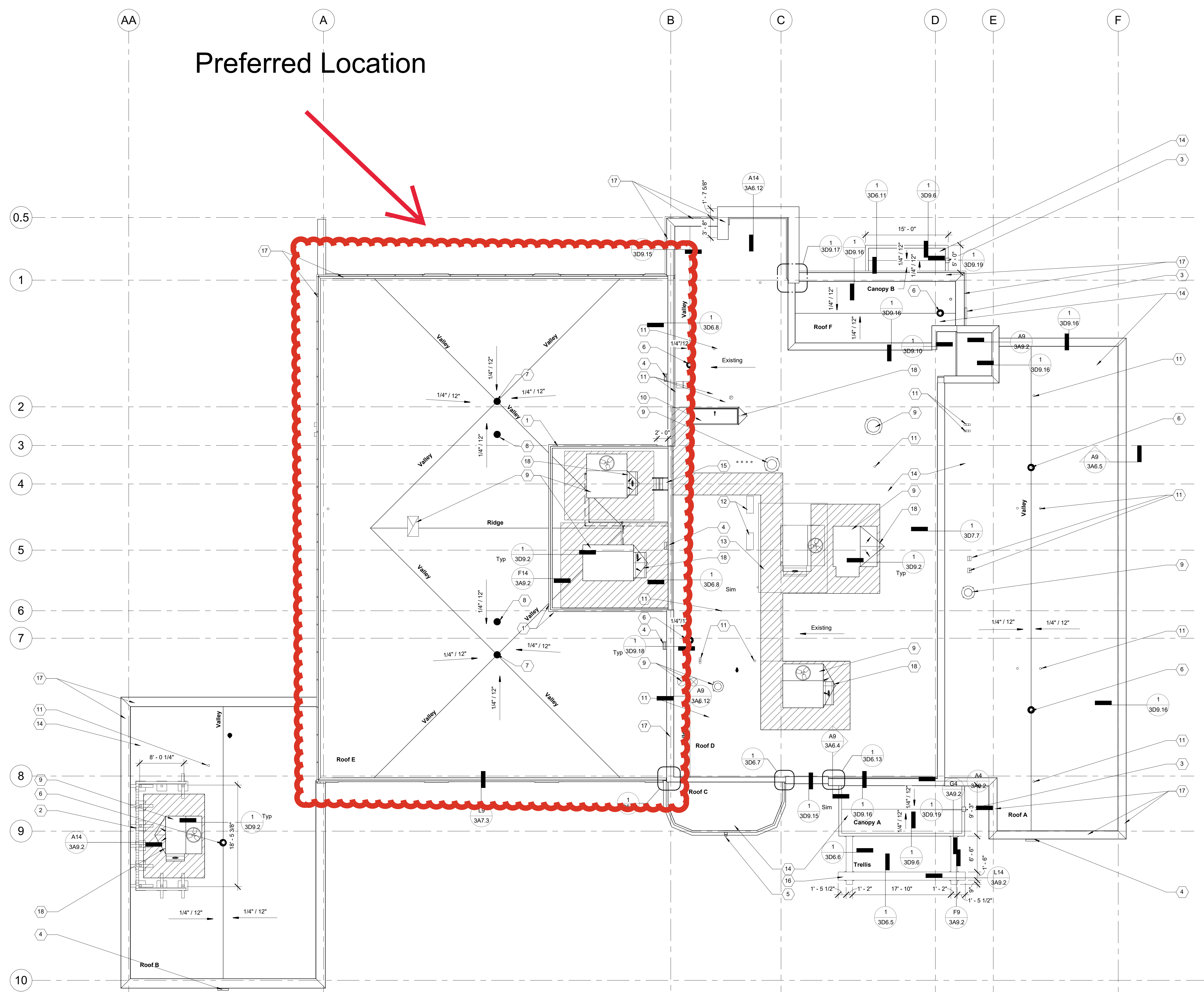
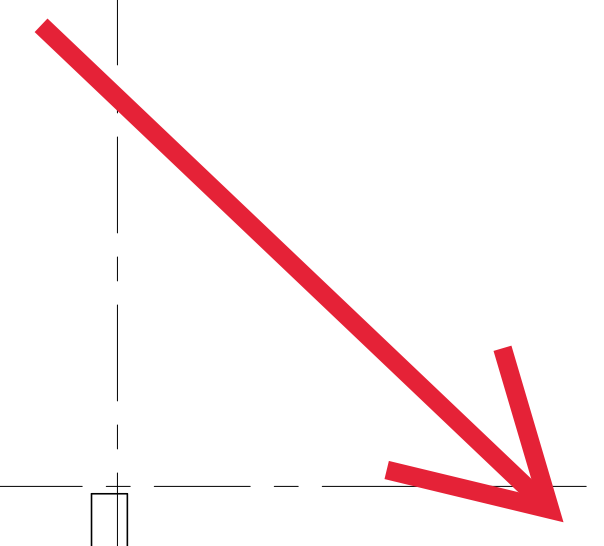
Solar Cost Sheet

Customer Name:	
Option #	
Date:	
Solar Manufacture	
Model #	
Watts/Panel	
Efficiency	
Degradation rate at 30 Years	
Cost of Panels	
Cost of Invertors	
Installation	
Electrical	
Total	\$ -
Performance Guarantee of Panels	
Warranty on Panels	
Monitoring Included	
Alternative 1 to increase monitoring to 5 years	\$ -
Inverter warranty included	
Alternative 2 to extend inverters to 20 Years	\$ -
Alternative 3 to increase electrical to handle 80 kW AC in the future	\$ -
Grant Application Fee- Please provide price to only submit Final Grant to State. City would like to do this so there is time to get final approval from the City Council. If the project is awarded to Vendor, this cost will be included in the total price.	\$ -

Exhibit C

Roof Plan Keynotes	
1	Aluminum lower screen on existing framing, stop north face
2	24" west of wall; paint all existing frame with HPC
3	Aluminum lower screen, weighted base
4	Primary scupper
5	Overflow scupper
6	Primary scupper with prefinished metal downspout
7	Roof drain, see Mechanical drawings
8	Existing roof drain to remain, see Mechanical drawings
9	Existing overflow roof drain to remain, see Mechanical drawings
10	Mechanical roof penetration, flash as detailed and to meet roofing manufacturer's requirements
11	Existing roof access hatch
12	Roof vent, see Mechanical drawings
13	Condenser unit
14	Flexible walkway; coordinate with mechanical contractor for placing at mechanical unit maintenance locations
15	Fully-adhered membrane roof system, typical
16	Existing ladder, prep and paint HPC
17	ACM trellis, see Details
18	Prefinished metal parapet cap
19	Tapered insulation cricket

Preferred Location



MEMBER OF THE STATE OF MINNESOTA
REGISTERED PROFESSIONAL ARCHITECT
DATE OF EXPIRATION: 12/31/2024
SIGNATURE: *Quinn S. Hulston*
PRINT NAME: Quinn S. Hulston
DATE: 02/24/22 LIC. NO.: 21234



Plymouth Fire Station #3
Remodel & Addition #2020-080
3300 Dunkirk Lane N
Plymouth, MN 55447

REVISIONS:
1 02/08/21 PAB/AM/RZ

CNH NO.: 19112
DATE: 01/13/21
Roof Plan

3A9.1

C:\Users\jacobson\Documents\19112 - Plymouth Fire Station #3_djacobson-cn.hvt
2/24/22 10:26 AM

A1 Roof Plan
3A9.1 1/8" = 1'-0"

Exhibit D



PHOTOVOLTAIC

JM INSTALLATION AND REFERENCE GUIDE



CONTENT	PAGE
UNDERSTANDING PV ROOFS	3
PV ARRAY CONSIDERATIONS	4
ADDING SOLAR TO EXISTING ROOFS	5
ADDING SOLAR TO NEW ROOFS	6
LAYOUT OF PV SYSTEMS	7
GUARANTEE IMPLICATIONS	9

This manual is provided as a courtesy. This complimentary assistance is not to be used or relied upon by anyone as a substitute for professional engineering design and documentation required by building code, contract or applicable law. By accepting these comments, you agree they do not constitute any representations of, endorsements of or an assumption by Johns Manville of any responsibility/liability for the adequacy of the design of any building/roofing system, code compliance, material or any other material not supplied by Johns Manville.

UNDERSTANDING PV ROOFS

The decision to install a photovoltaic (PV) array on your building is complex and requires understanding several critical issues. Determining the size and scope, retaining a design professional and photovoltaic contractor and understanding the costs and benefits take time and focus.

WHEN MAKING PLANS FOR YOUR BUILDING, IT'S IMPORTANT TO RECOGNIZE THE EFFECTS OF PHOTOVOLTAIC ARRAYS BEYOND JUST THEIR IMPACT ON ELECTRICAL SYSTEMS. CONSIDER THESE QUESTIONS:

What are the current mandates and code requirements?

Has the building been designed to absorb the additional weight of the array?

How effective is the current drainage system or the layout for a new roof? A large PV array may impact how quickly the roof drains.

What is the overall condition of the rooftop environment? Are the building walls, parapets, skylights and RTUs in good condition?

The presence of a PV system likely will make other projects more complex and costly. Ideally, if the roof and other components are in sufficient condition, major service or replacement will not typically be required over the lifecycle of the PV array.

A multitude of PV arrays is available for commercial applications. Some provide much easier interfaces with the roofing system. Given the critical nature of the roofing asset, it is important to consider how PV system components and overall design will affect the roofing system. The PV system should be designed to resist or accommodate movement due to weather changes, seismic activity, thermal expansion and/or structural load. One of the most critical design aspects is how the PV system is attached to the building structure.



PV ARRAY CONSIDERATIONS

Review and consider the following when installing a particular PV array:

- » Don't apply thin-film PV directly to the waterproofing membrane. Laminate thin-film blankets to a compatible sacrificial layer of like membrane; then apply the sacrificial sheet to the waterproofing membrane using an approved method.
- » Don't use non-penetrating attachment methods that rely solely on a heat-welded seam to anchor photovoltaic panels to a thermoplastic membrane. Roof systems are not designed to be the primary anchor point of any rooftop structure.
- » If penetration of the membrane is required to secure a racking system to the building structure, circular steel tubing will provide the best possible flashing option and

facilitate the use of prefabricated accessories.

- » Regardless of the type of penetration used, it is important to confirm it can be flashed in accordance with JM-approved details. A properly designed PV array will see maximum sunlight. Gaskets or washers that serve as a primary waterproofing component should be minimal or concealed as much as possible from sunlight, as they will require maintenance/replacement over time.
- » Don't use caulk or sealants as the primary method to waterproof the attachment to the roofing system. Don't rely on details that require consistent inspection and maintenance for primary waterproofing.
- » JM will not accept individual steel rods or dowels as flashing tie-ins to the roofing system. These types of penetrations do not

provide sufficient surface area to create a watertight seal.

- » Ballasted PV arrays often use concrete pavers or blocks to create wind uplift resistance. Use high-density concrete that has been tested to not break down under the stress of sunlight and freeze/thaw.

Check ballasted systems to determine that the point load at each roof interface is appropriate for the type of roof system. This is especially important on bituminous systems.

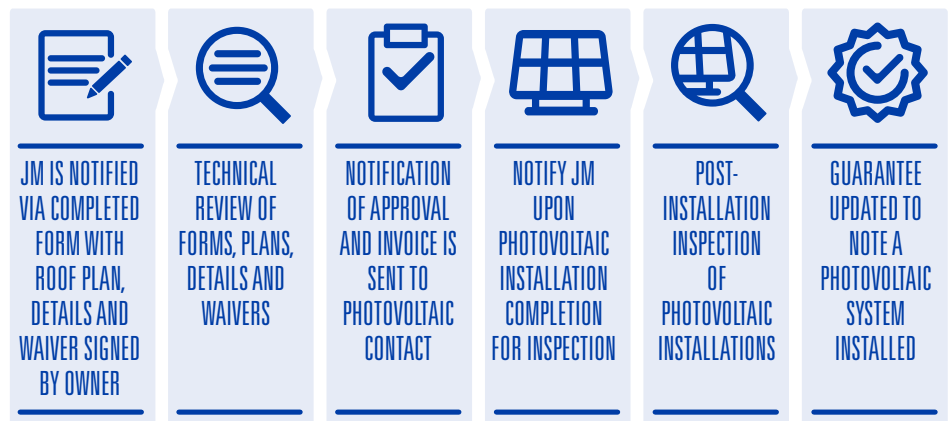
- » A PV system must consider thermal movement. Use racking clips and attachments that accommodate thermal expansion without transferring movement to the underlying roof system, as damage can occur, particularly on bituminous systems.

An alternative is to separate large arrays into smaller sub-arrays.

- » Mechanically attached racking systems may require the use of flexible flashing details to allow for movement of the array.
- » Depending on conduit material and length, you might need to use thermal expansion fittings.

KNOW THE JM PHOTOVOLTAIC SYSTEMS PROCESS >>>

This high level process goes through a series of steps to document the addition of solar components, ensuring the PV array and its installation does not violate or affect the terms of the guarantee.



ADDING SOLAR TO EXISTING ROOFS

WHEN ADDING PV TO AN EXISTING BUILDING, THE ROOF IS THE MOST IMPACTED. IT IS IMPORTANT TO CONSIDER THE MANY WAYS A PV SYSTEM CAN AFFECT THE ROOF.

If a roof replacement is not planned as part of your photovoltaic project, understanding the current condition of the roof becomes much more critical.

On an existing roof, it may be prudent to upgrade components or some details: add liquid flashing at all penetrations, mitigate areas prone to ponding water or introduce additional walkpads to protect the roof surface during solar maintenance.

WHAT IS THE ANTICIPATED REMAINING SERVICE LIFE?

It is critical to align the roof system's lifecycle with the anticipated PV life, which is often 20 to 25 years.

IS THE ROOF UNDER GUARANTEE?

Most manufacturers have specific requirements when adding photovoltaic. Regardless of the guarantee status, a professional evaluation of the roof by a licensed engineer or photovoltaic consultant can be invaluable when considering a PV installation. Whether done by a roofing consultant or trusted professional contractor, a thorough inspection of the roof system and related components is a vital step.

ONCE THE ROOF'S BEEN FULLY EXAMINED, ASK:

- » Is simple maintenance enough, or is a more comprehensive restoration of the roof system necessary?
- » Is it more cost-effective to recover the existing system, or is a complete replacement more appropriate?



Proper design and installation of PV systems are critical. Above is an EPDM ballasted roof that has compromised wind uplift performance due to reduced ballast to accommodate structural limitations and a ballasted PV array that failed due to insufficient wind uplift resistance.

ADDING SOLAR TO NEW ROOFS

**SPECIFY A MORE
ROBUST, RELIABLE
SYSTEM THAT
REQUIRES LESS
MAINTENANCE
WHENEVER
YOU REPLACE A
ROOF SYSTEM
THAT'S PART OF
THE OVERALL PV
INSTALLATION.**



JM RECOMMENDS THE FOLLOWING:

- » For ballasted PV arrays, specify an adhered high-density cover board (minimum 100 psi compressive strength) and a fully adhered membrane. This configuration will distribute loading and minimize long-term point-loading impacts on the waterproofing membrane.
- » On single ply systems, higher mil thickness membranes have additional resistance to scrapes, gouges and foot traffic, as well as a longer service life.
 - 80 mil thermoplastics (TPO and PVC) and 90 mil EPDM.
- » The roof system should have walkpads at all access and service points, as well as any corridors where foot traffic will be concentrated.
- » Design the drainage system with minimum ¼" slope, with particular attention to cricket width, which should not exceed a 3:1 ratio.
- » The slope of the roof should not exceed 1:12" (one inch per foot) for single ply systems and ¼:12" (one-quarter inch per foot) for bituminous membrane systems.
- » Install crickets on any projection or curb perpendicular to the drainage flow that is wider than 24".
- » Consider using 25- and 30-year details, which typically are more robust and require less maintenance over time.

- » Given the cost to remove and store a well-used PV array, it's worth considering a roof design that's eligible for a longer guarantee term of 25 or 30 years.
- » Please consult with a design professional for your project-specific needs.

**WITH MORE
THAN 164 YEARS
OF INDUSTRY
EXPERIENCE,
JOHNS MANVILLE
HAS RESOURCES
TO ASSIST YOU
WITH YOUR
ROOFING PROJECT.
FROM TOOLS TO
EXPERTISE TO
THE PRODUCTS
THEMSELVES, YOU
HAVE EVERYTHING
NEEDED TO
SUCCESSFULLY
COMPLETE YOUR
PROJECT.**

LAYOUT OF PV SYSTEMS

THE ROOF MUST BE ADEQUATELY PROTECTED FROM TRADE-RELATED ROOF TRAFFIC AND DAMAGE DURING INSTALLATION:

» Protect areas of the roof that are used for PV maintenance and access in accordance with JM published details using either walkpads or pavers. Best practice is to protect the membrane in high-traffic areas.

PV layouts should provide reasonable access to all RTUs, drains and other projections to allow for service.

» On ballasted PV array installations, install a compatible protection sheet at PV mounting contact points to protect the primary waterproofing membrane from premature wear and degradation. Recommended protection sheet materials include JM DynaTred walkway pads or DynaLastic polyester reinforced modified bitumen cap sheets for bituminous systems and JM walkpad material or a minimum 60 mil single ply membrane of the same type as the primary waterproofing membrane for single ply systems. The color of the protection sheet should match the primary membrane.

» Projections through the roof system should not be located within 2' of valleys or drainage collection points adjacent to drains, scuppers or gutters.

» Depending on the specific system chosen and the roof slope, consider modifying PV racking heights to counter varying thicknesses of tapered insulation.

» Ballasted systems must not impede the flow of drainage. A minimum height of 1-2" above the roof surface is recommended. All systems should allow water to drain completely within 48 hours of a precipitation event.

» Rack-supported PV arrays should provide proper clearance to the roof membrane for maintenance or repairs.

» Keep the number of roof penetrations to a minimum.

» Cables passing through the roof assembly shall not travel horizontally within a roof system, such as directly under the roof membrane or in a notched-out section of the insulation.

» Penetrations for electrical conduit into the building should be properly flashed to the roof system. Run electrical conduit passing through a roof assembly inside a sheet-metal enclosure with a roof curb; you can use a gooseneck vent where a cable needs to pass through a roof assembly.

» Penetration pockets (pitch pockets or pitch pans) are acceptable as a last alternative for flashing PV system electrical connections that pass through a roof assembly.

» Ensure the protection layer extends a minimum of 2" beyond the point of contact in all directions.

» Ballasted PV assemblies are NOT recommended on gravel-surfaced bituminous membrane assemblies. As an alternative to ballasting, JM recommends they be mounted to the building structure. The mounting apparatus can then be flashed (waterproofed) in accordance with JM-approved details. If there is no alternative, a piece of 1.5" minimum thickness extruded polystyrene (40 or 60



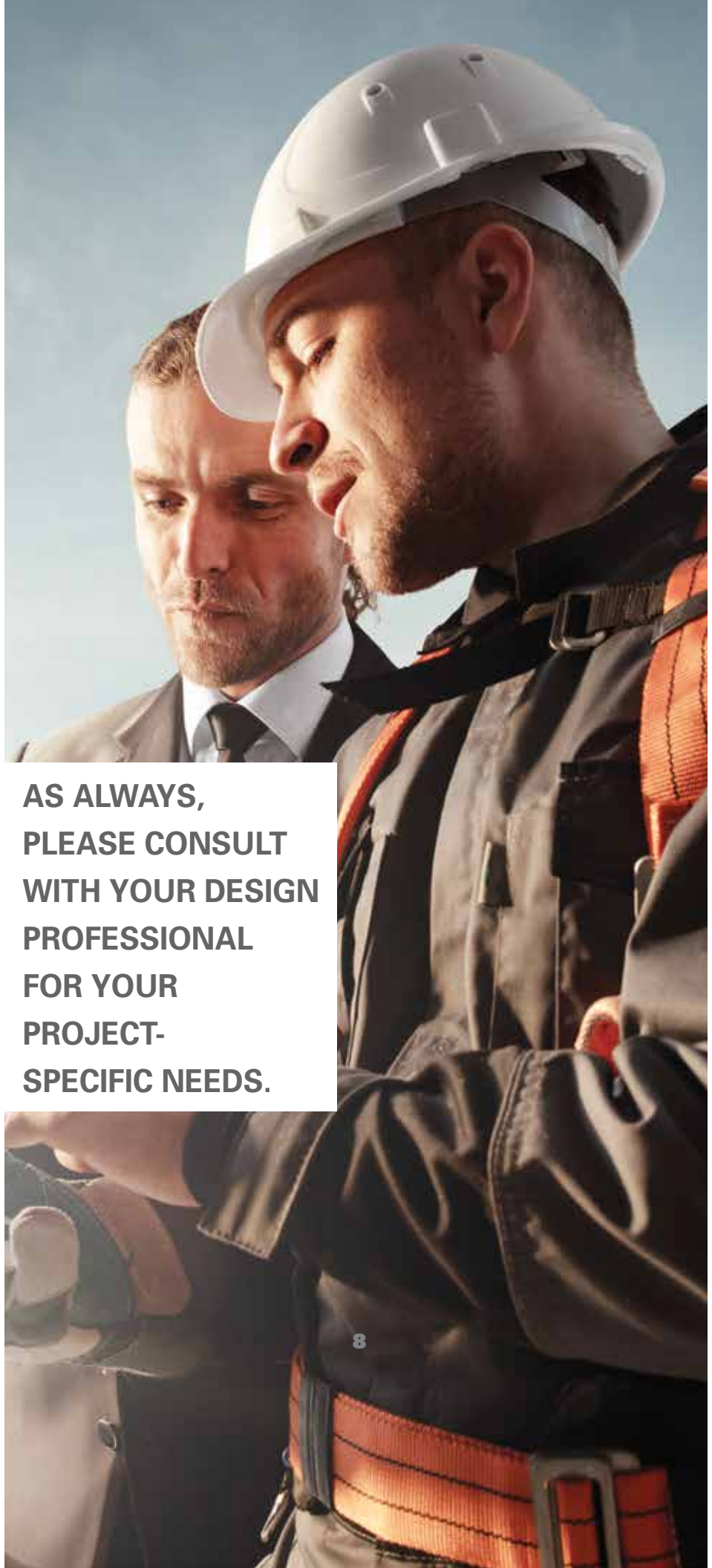
psi compressive strength) can be placed directly on the loose, unswept gravel surface in accordance with this guide. The XPS is then covered with a protection sheet to shield it from UV. JM will also accept a semi-rigid 1" minimum thickness EPDM rubber pad installed in the same manner.

» Ballasted PV assemblies are NOT acceptable for installation on stone aggregate ballasted single ply membrane assemblies; this installation will void the JM roofing system guarantee.

» Closely examine all waterproofing membrane T-joints in areas where the PV array will conceal access. Use non-reinforced T-joint patches of the same membrane material as the primary waterproofing membrane for single ply systems. Apply JM PermaFlash or JM PMMA at bituminous cap sheet T-joints.

» On single ply membranes, thoroughly examine and strip-in all seams with a membrane-appropriate cover strip in areas where the PV array will conceal access. NOTE: If the roof system has not received an approved final inspection from a JM Field Technical Representative prior to the installation of the PV array, you must strip-in any seams that will be covered by the PV array.

» JM recommends the weight at the point of contact on single ply roofs over standard polyisocyanurate insulation and bituminous systems not exceed 25 pounds per square foot. Single ply systems that include a cover board should not exceed 50 pounds per square foot.



**AS ALWAYS,
PLEASE CONSULT
WITH YOUR DESIGN
PROFESSIONAL
FOR YOUR
PROJECT-
SPECIFIC NEEDS.**

GUARANTEE IMPLICATIONS

**PV SYSTEMS WILL
CONCENTRATE
SERVICE TRAFFIC
TO SMALLER
AREAS AND WILL
REQUIRE PERIODIC
MAINTENANCE.
JM HAS VARIOUS
PUNCTURE RIDERS
(DEPENDING ON THE
SYSTEM) WITH OUR
NDL (NO DOLLAR
LIMIT) GUARANTEES.**

**THESE CAN OFFER
THE BUILDING
OWNER ADDITIONAL
PROTECTION
FROM ACCIDENTAL
DAMAGE.**



JM Guarantees offer valuable protection to you, the building owner. Guarantees impart obligations on the part of both manufacturer and building owner.

You should review the terms and conditions of your specific guarantee to understand your responsibilities. JM requires that all proposed alterations be communicated to JM for approval prior to project start. For any type of alteration, including PV, understand the following:



- » Any change to the roofing system must be approved by JM and utilize JM products installed in accordance with our details and specifications.
- » All alterations or changes to the roofing system must be performed by a JM Approved Peak Advantage Roofing Contractor.
- » While JM may permit a certain product to be installed on the roof system, only JM branded products are covered by the guarantee.
- » When reviewing proposed alterations, JM evaluates the proposed layout, products and details to ensure that there is not a significant issue with the proposed changes. This “approval” is not to be confused with an endorsement or warranty of the products being used. The JM Guarantee does not cover the alterations or additions – and any issues arising out of such are the sole responsibility of the building owner to address.

- » When a PV system is being installed, review and understand your responsibilities as outlined in JM’s Peak Advantage® Guarantee Photovoltaic Overburden Waiver, which includes but is not limited to the following:

The JM Guarantee does not cover any leaks, changes in appearance, damage or loss of performance in the roofing system resulting from the installation, operation or presence of a PV system on the roofing system.

JM is not responsible for any claims related to the JM Guarantee that are attributable, either in whole or in part, to the installation, operation and/or presence of a PV system.

Should the removal of any part of the PV system be required to complete repairs, whether covered by the JM Guarantee or not, these costs shall be the owner’s responsibility and are not covered.

JM does not guarantee or approve the suitability, installation or performance of any PV system or component.

Guarantee Maintenance

- » Once your PV system has been successfully installed, remember that, like the roofing system itself, photovoltaic arrays will require periodic inspection and maintenance.
- » Inspect the PV system at least twice a year, ideally in the spring and fall. Here are some factors to consider during an inspection:
 - Have all the slip sheets remained in place? Is the PV array abrading the roof surface at any location?
 - Are all the electrical connections secure?
 - Are the penetration pockets filled with pourable sealer and still watertight?
 - Are all the caulks and sealants adhered and free of cracking or deterioration?
 - Is any debris building up under the photovoltaic system and preventing proper drainage?

PEAK ADVANTAGE *Johns Manville*

Johns Manville offers one of the most comprehensive guarantees in the roofing industry. That's the advantage you can expect from a longtime, dependable leader with the financial backing of Berkshire Hathaway.

 **Johns Manville**
A Berkshire Hathaway Company


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