



Jeff Johnson  
Architectural PC  
136 EAST THIRD STREET  
SUITE B  
RIFLE CO, 81650

PHONE 970-625-0580  
FAX 970-625-0581

**JEFFJOHNSON**

Owner/Architect



**COLORADO  
MOUNTAIN COLLEGE**

**Roofing Bid  
Spring Valley Campus Makerspace  
3000 CO RD 114, Glenwood Springs, Colorado**

**PROJECT SPECIFICATIONS**

INDEX:

|               |                              |
|---------------|------------------------------|
| SECTION 01100 | SUMMARY                      |
| SECTION 01300 | ADMINISTRATIVE REQUIREMENTS  |
| SECTION 01600 | PRODUCT REQUIREMENTS         |
| SECTION 01730 | CUTTING & PATCHING           |
| SECTION 01732 | SELECTIVE DEMOLITION         |
| SECTION 07220 | ROOF INSULATION              |
| SECTION 07425 | METAL TRIM                   |
| SECTION 07530 | ELASTOMERIC MEMBRANE ROOFING |

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 01100- SUMMARY

#### PART 1- GENERAL

##### 1.1 SUMMARY

- A. Project Identification: CMC SV Makerspace Roof
- B. Project Summary: Colorado Mountain College requests proposals from qualified firms to replace an existing low slope roof, approximately 2,667 SF, at the new Makerspace facility, Spring Valley Campus,
- C. Permits and Fees: Owner shall apply for, obtain, and pay for State of Colorado building permits, fees, and utility company charges required to perform the work. Contractor shall obtain necessary Electrical Permits to perform Scope of Work. Submit copies to Architect.
- D. Codes: Comply with applicable codes and regulations of authorities having jurisdiction. Submit copies of inspection reports, notices and similar communications to Owner.
- E. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
- F. Existing Conditions: Notify Architect of existing conditions differing from those indicated on the drawings. Do not remove or alter structural components without prior written approval.
- G. Coordination:
  - 1. Coordinate the work of all trades.
  - 2. Prepare coordination drawings for areas above ceilings where close tolerances are required between building elements and mechanical and electrical work.
  - 3. Verify location of utilities and existing conditions.
- H. Installation Requirements, General:
  - 1. Inspect substrates and report unsatisfactory conditions in writing.
  - 2. Do not proceed until unsatisfactory conditions have been corrected.
  - 3. Take field measurements prior to fabrication where practical. Form to required shapes and sizes with true edges, lines and angles. Provide inserts and templates as needed for work of other trades.
  - 4. Install materials in exact accordance with manufacturer's instructions & approved submittals.
  - 5. Install materials in proper relation with adjacent construction and with proper appearance.
  - 6. Restore units damaged during installation. Replace units which cannot be restored at no additional expense to the Owner.
  - 7. Refer to additional installation requirements and tolerances specified under individual specification sections.
- I. Limit of Use: Limit use of work as indicated. Keep driveways and entrances clear.
- J. Existing Construction: Maintain existing building in a weather tight condition. Repair damage caused by construction operations. Protect building and its occupants.
- K. Definitions:
  - 1. Provide: Furnish and install, complete with all necessary accessories, ready for intended use. Pay for all related costs.
  - 2. Approved: Acceptance of item submitted for approval. Not a limitation or release for compliance with the Contract Documents or regulatory requirements. Refer to limitations of 'Approved' in General and Supplementary Conditions.
  - 3. Match Existing: Match existing as acceptable to the Owner.
- L. Intent: Drawings and specifications are intended to provide the basis for proper completion of the work suitable for the intended use of the Owner. Anything not expressly set forth but which is reasonable implied or necessary for proper performance of the project shall be included.
- M. Writing Style: Specifications are written in the imperative mode. Except where specifically intended otherwise, the subject of all imperative statements is the Contractor. For example, 'Provide tile' means 'Contractor shall provide tile.'

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### 1.2 PROJECT SPECIFIC INFORMATION

#### A. Schedule:

Contractor to provide Owner with schedule at time of Bid Proposal indicating a logical chain of specific work items, start date, projected end date, key milestones, and date of substantial completion.

#### B. Staging:

Dumpster location for debris removal and on-site storage of materials shall be coordinated with Colorado Mountain College and conform to requirements of Garfield County.

#### C. Curb Size:

Contractor shall include labor and materials to raise curb height of the rooftop equipment and exhaust where necessary to maintain approved minimum vertical height after adding supplemental rigid insulation.

#### F. Removal of Unused Penetrations:

Contractor shall remove curbing and abandoned mechanical openings, cover with matching decking, and continue roof assembly over them.

PART 2- PRODUCTS - Not Applicable To This Section

PART 3- EXECUTION - Not Applicable To This Section

END OF SECTION

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 01300 - ADMINISTRATIVE REQUIREMENTS

#### PART 1 - GENERAL

##### 1.1 PROJECT MANAGEMENT AND COORDINATION

- A. Coordinate construction to ensure efficient and orderly installation of each part of the Work.
- B. Conduct progress meetings at Project site every week as necessary. Notify Colorado Mountain College of meeting dates and times. Require attendance of each subcontractor or other entity concerned with current progress or involved with planning or coordination of future activities.
  - 1. Upon Owner request, record minutes and distribute to parties involved.
- C. Contractor to work closely with on-site personnel to identify intake air locations, and sequence construction such that roofing application within 15 feet of these areas is coordinated with unit turn off within a four hour period
- D. Contractor will locate roofing application kettle at ground level in coordination with on-site personnel to minimize VOC impact during operation.
- E. Contractor shall provide MSDS sheet on provided low odor additive.

##### 1.2 SUBMITTAL PROCEDURES

- A. Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals, and related activities that require sequential activity.
  - 1. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing.
  - 2. Submittals from sources other than Contractor will not be accepted.
  - 3. Identify deviations from the Contract Documents, failure to do so will result in rejection.
  - 4. Submit three copies of each submittal.
- B. Place a permanent label or title block on each submittal for identification. Provide a 4- by 5-inch space on the label or beside title block to record review and approval markings and action taken. Include the following information on the label:
  - 1. Project name.
  - 2. Date.
  - 3. Name and address of Contractor.
  - 4. Name and address of subcontractor or supplier.
  - 5. Number and title of appropriate Specification Section.
- C. Owner will review each submittal, mark as appropriate to indicate action taken, and return copies less those retained. Compliance with specified requirements remains Contractor's responsibility.

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

- D. Construction Schedule Submittal Procedure:
1. Submit schedule within ten business days after date established for Commencement of the Work. Distribute copies to Owner, subcontractors, and parties required to comply with dates.
  2. Revise the schedule after each meeting or activity where revisions have been made. As Work progresses, mark each bar to indicate actual completion. Distribute revised copies to Owner, subcontractors, and parties required to comply with dates.

### PART 2 - PRODUCTS

#### 2.1 ACTION SUBMITTALS

- A. Product Data: Mark each copy to show applicable choices and options. Include the following:
1. Data indicating compliance with specified standards and requirements.
  2. Notation of coordination requirements.
- B. Shop Drawings: Submit Project-specific information drawn to scale. Do not base Shop Drawings on reproductions of the Contract Documents or standard printed data. Submit 1 reproducible print and 1 blue- or black-line print on sheets at least 8-1/2 by 11 inches but no larger than 24 by 36 inches. Include the following:
1. Dimensions, profiles, methods of attachment, large scale details, and other information, as appropriate for the Work.
  2. Identification of products and materials.
  3. Notation of coordination requirements.
  4. Notation of dimensions established by field measurement.
- C. Samples: Submit Samples finished as specified and identical with the material proposed. Where variations are inherent in the material, submit sufficient units to show full range of the variations. Include name of manufacturer and product name on label.

#### 2.2 INFORMATION SUBMITTALS

- A. Construction Schedule: Prepare a horizontal bar-chart Contractor's construction schedule.
1. Provide a separate time bar for each activity, and a vertical line to identify the first workday of each week.
  2. Coordinate each element with other activities. Show each activity in proper sequence. Indicate sequences necessary for completion of related Work.
  3. Indicate Substantial Completion and allow time for Owner's procedures necessary for certifying Substantial Completion.
- B. Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.
- C. Warranties: Provide all product specified warranties on manufacturer's letterhead

### PART 3 - EXECUTION (Not Applicable)

**Roofing Bid**  
**Spring Valley Campus Makerspace**

Jeff Johnson Architectural PC

End of Section

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 01600 - PRODUCT REQUIREMENTS

#### PART 1 - GENERAL

##### 1.1 SECTION REQUIREMENTS

- A. Provide products of same kind from a single source. The term "product" includes the terms "material," "equipment," "system," and similar terms.
- B. Product Substitutions: Substitutions include products and methods of construction differing from that required by the Contract Documents and proposed by Contractor.
  - 1. Submit three copies of each request for product substitution.
  - 2. Submit requests in time to permit processing of request and subsequent submittals, if any, sufficiently in advance of when materials are required in the Work. Do not submit unapproved substitutions on Shop Drawings or other submittals.
  - 3. Identify product to be replaced and provide complete documentation showing compliance of proposed substitution with applicable requirements. Include a full comparison with the specified product, a list of changes to other Work required to accommodate the substitution, and the proposed reduction in the Contract Sum or the Contract Time should the substitution be accepted.
  - 4. Architect will review the proposed substitution and notify Contractor of its acceptance or rejection.
- C. Deliver, store, and handle products using means and methods that will prevent damage, deterioration, and loss, including theft. Comply with manufacturer's written instructions.
  - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
  - 2. Deliver products to Project site in manufacturer's original sealed container or packaging, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
  - 3. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  - 4. Store materials in a manner that will not endanger Project structure.
  - 5. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.

#### PART 2 - PRODUCTS

##### 2.1 PRODUCT OPTIONS

- A. Select products to comply with all of the following that are applicable:
  - 1. Where a product or manufacturer is named, provide the item indicated. No substitutions will be permitted without prior approval by the Architect.
  - 2. Where a product is described with required characteristics, provide a product that complies with those characteristics.
  - 3. Where compliance with performance requirements is specified, provide products that comply and are recommended in writing by the manufacturer for the application.
  - 4. Where compliance with codes, regulations, or standards, is specified, select a product that complies with the codes, regulations, or standards referenced.
- B. Unless otherwise indicated, Architect will select color, pattern, and texture of each product from manufacturer's full range of standard options.

#### PART 3 - EXECUTION (Not Applicable)

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 01730- CUTTING AND PATCHING

#### PART 1- GENERAL

##### 1.1 SUMMARY

- A. Cutting and Patching: Provide cutting and patching work to properly complete the work of the project, complying with project requirements for:
  - 1. Structural work.
  - 2. Mechanical/electrical systems.
  - 3. Visual requirements, including detailing and tolerances.
  - 4. Operational and safety limitations.
  - 5. Fire resistance ratings.
  - 6. Inspection, preparation, and performance.
  - 7. Cleaning.
- B. Means and Methods: Do not cut and patch in a manner that would result in a failure of the work to perform as intended, decrease energy performance, increase maintenance, decrease operational life, or decrease safety performance.

#### PART 2- Not Used

#### PART 3- EXECUTION

##### 3.1 INSTALLATION

- A. Inspection: Inspect conditions prior to work to identify scope and type of work required. Protect adjacent work. Notify Owner of work requiring interruption to building services or Owner's operations.
- B. Performance of Operations: Perform work with workmen skilled in the trades involved. Prepare sample area of each type of work for approval.
- C. Cutting: Use cutting tools, not chopping tools. Make neat holes. Minimize damage to adjacent work. Inspect for concealed utilities and structure before cutting.
- D. Patching: Make patches, seams, and joints durable and inconspicuous. Comply with tolerances for new work. Finish work to match adjacent materials.
- E. Cleaning: Clean work area and areas affected by cutting and patching operations.

END OF SECTION



# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 01732- SELECTIVE DEMOLITION

#### PART 1- GENERAL

##### 1.1 SUMMARY

- A. Selective Demolition:
  - 1. Selective demolition of interior partitions, systems, and building components to be removed in accordance with performing the scope of work.
  - 2. Protection of building elements adjacent to or affected by selective demolition.
  - 3. Removal of abandoned utilities and wiring systems.
  - 4. Pollution control during selective demolition, including noise control.
  - 5. Removal and legal disposal of materials.
- B. Hazardous Materials: Asbestos and hazardous materials demolition or removal work is not part of this contract. Removal of materials containing asbestos and other hazardous materials, if found, will be handled under a separate contract.

##### 1.2 SUBMITTALS

- A. Schedule: Integrate demolition schedule into construction schedule submittal

##### 1.3 QUALITY ASSURANCE

- A. Codes and Regulations: Comply with governing codes and regulations.  
Use experienced workers.

##### 1.4 PROJECT CONDITIONS

- A. Occupancy: Immediate areas of work may be occupied during selective demolition. Contractor to coordinate with Owner about isolating the workspace from other areas within the building.
- B. Contractor will coordinate schedule with the Owner to obtain access to below floor areas, if necessary, for the purpose of performing the scope of work.
- C. Contractor will coordinate secure access and staging areas with the Owner prior performing the scope of work.

#### PART 2- Note Used

#### PART 3- EXECUTION

##### 3.1 SELECTIVE DEMOLITION

- A. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.
- B. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be removed.
- C. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
- D. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
- E. Internal security: Provide adequate protection against accidental trespassing. Secure project after work hours.
- F. Restoration: Restore finishes of patched areas.

END OF SECTION

# Roofing Bid

## Spring Valley Campus Makerspace

Johnson Carter Architects PC

### SECTION 07220- ROOF INSULATION

#### PART 1 - GENERAL

##### 1.1 SCOPE OF WORK

- A. Contractor will provide rigid insulation on roof decking.

##### 1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM):
  - 1. ASTM D-2178-, Standard Specification for Asphalt Glass Felts used in Roofing and Waterproofing.
  - 2. ASTM D-4601-, Specification for Asphalt-Coated Glass Fiber Base Sheet Used in Roofing.
  - 3. ASTM D-5147-, Sampling and Testing Modified Bituminous Sheet Material.
- B. National Roofing Contractors Association (NRCA):
  - 1. Roofing and Waterproofing Manual.
- C. Underwriters Laboratories, Inc. (UL):
  - 1. Fire Hazard Classifications.
- D. Insulation Board, Polyisocyanurate (FS HH-I-1972)
- E. Insulation Board, Thermal (Fiberboard) (FS LLL-1-535B)

##### 1.4 SUBMITTALS

- A. Product Data: Provide manufacturer's specification data sheets for each product in accordance with Section 01300.
- B. Certification
  - 1. Submit roof manufacturer's certification that insulation fasteners furnished are acceptable to roof manufacturer.
  - 2. Submit roof manufacturer's certification that insulation furnished is acceptable to roofing manufacturer as a component of roofing system and is eligible for roof manufacturer's system warranty.

##### 1.5 QUALITY ASSURANCE

- A. Fire Classification, ASTM E-108

##### 1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver products to site with seals and labels intact, in manufacturer's original containers, dry and undamaged.
- B. Store all insulation materials in a manner to protect them from the wind, sun and moisture damage prior to and during installation. Any insulation that has been exposed to any moisture shall be removed from the project site.
- C. Keep materials enclosed in a watertight, ventilated enclosure (i.e. tarpaulins).

# Roofing Bid

## Spring Valley Campus Makerspace

Johnson Carter Architects PC

- D. Store materials off the ground. Any warped, broken or wet insulation boards shall be removed from the site.

### PART 2 - PRODUCTS

#### 2.1 INSULATION MATERIALS

- 1. High Density Fiberboard Roof Insulation; ASTM C-208

Board Size: [Four feet by four feet (4' x 4')]

Thickness: Minimum 1 1/2" board, 6" minimum coverage

#### 2.3 RELATED MATERIALS

- A. Protection/ Cover Board: 5/8" exterior grade plywood

- B. Fasteners

- 1. Collared, flathead, self tapping, corrosion resistant screw fastener as recommended by manufacturer in length sufficient to penetrate cover board through rigid insulation and 3/4" minimum through metal decking

### PART 3 - EXECUTION

#### 3.1 INSPECTION OF SURFACES

- A. Roofing contractor shall be responsible for preparing an adequate substrate to receive insulation.
  - 1. Verify that work which penetrates roof deck has been completed.
  - 2. Verify that fasteners are properly and securely installed.
  - 3. Examine surfaces for defects, rough spots, ridges, depressions, foreign material, moisture, and unevenness.
  - 4. Do not proceed until defects are corrected.
  - 5. Do not apply insulation until substrate is sufficiently dry.
  - 6. Broom clean substrate immediately prior to application.

#### 3.2 INSTALLATION

- 1. All boards shall be cut and fitted where the roof deck intersects a vertical surface. The boards shall be cut to fit a minimum of one quarter (1/4) inch away from the vertical surface.
- 2. Install no more insulation at one time than can be roofed on the same day.

#### Attachment with Mechanical Fasteners.

- 1. Approved insulation board shall be fully attached to the deck with an approved mechanical fastening system. As a minimum, the amount of fasteners shall be in accordance with manufacturer's recommendation based on EAS-70.
- 2. Filler pieces of insulation require at least two fasteners per piece if size of insulation is less than four square feet.
- 3. Spacing pattern of fasteners shall be as per manufacturer's recommendations to meet the FM requirements. Placement of any fastener from edge of insulation board shall be a minimum of three inches, and a maximum of six (6) inches.

**Roofing Bid**  
**Spring Valley Campus Makerspace**

End of Section

Johnson Carter Architects PC

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 07425 METAL TRIM

#### PART 1 GENERAL

##### 1.1 SECTION INCLUDES

- A. Provide New Parapet Cap on all sides of new roof replacement

##### 1.2 REFERENCES

- A. ANSI/SPRI ES-1 - Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

##### 1.3 SUBMITTALS

- A. Shop Drawings: Show profiles, joining method, location of accessory items, anchorage and flashing details, adjacent construction interface, and dimensions.

##### 1.4 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing Products specified in this section with minimum twenty five years documented experience.
- B. Installer Qualifications: Company specializing in the installation of products specified in this section with minimum five years documented experience.

##### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Store products in manufacturer's unopened packaging until ready for installation.
- B. Store materials in a dry, protected, well-vented area.

##### 1.6 SEQUENCING

- A. Ensure that information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Coordinate installation with roof manufacturer's installation instructions.

#### PART 2 PRODUCTS

##### 2.1 MANUFACTURERS

- A. Presto Lock Coping System by Johns Manville or pre-approved equal

##### 2.2 PRODUCT

- A. General: Provide factory-formed metal coping system designed to be field assembled by attaching anchoring chairs to parapet wall and engaging coping cover to anchoring chairs.
- B. Features and Components.
  - 1. A snap on coping system designed for use with single ply, built-up and modified bitumen roofing systems. The system consists of galvanized steel anchor clips and aluminum or galvanized coping covers in a variety of thicknesses and colors.
  - 2. Anchor Clips: 12" wide Galvanized steel base with stainless steel spring clip designed to keep upward pressure on the coping cover. Pre-punched for proper fastener location.
  - 3. Coping Cover: Available in 12 foot lengths of aluminum Kynar 500 finish.
  - 4. Concealed Splice Plate: 8" wide plate, with metal and finish to match cover, and dual non-curing isocryl butyl sealant strips to allow for thermal movement and seals joints.
  - 5. Corners, tees, and other transitions shall be mitered, welded, and post-painted to match coping covers.

#### PART 3 EXECUTION

##### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify that the substrate is dry, clean and free of foreign matter.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Verify the manufacturer's roof edge details for accuracy to fit the assembly prior to fabrication.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's installation instructions.
- B. Use provided fasteners consistent with manufacturer's instructions, suitable for the substrate to which it is being installed.

END OF SECTION

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### SECTION 07530- EPDM MEMBRANE ROOFING

#### PART 1 - GENERAL

##### 1.1 SECTION INCLUDES

- A. EPDM Adhered membrane roofing system.

##### 1.2 REFERENCES

- A. Roofing Terminology: Refer to the following publications for definitions of roofing work related terms used in this Section:
  - 1. ASTM D 1079 "Standard Terminology Relating to Roofing and Waterproofing."
  - 2. Glossary of NRCA's "The NRCA Roofing Manual."
  - 3. Roof Consultants Institute "Glossary of Roofing Terms."

##### 1.3 DESIGN CRITERIA

- A. General: Installed roofing membrane systems shall remain watertight; and resist specified wind uplift pressures, thermally induced movement, and exposure to weather without failure.
- B. Material Compatibility: Roofing materials shall be compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.

##### 1.4 SUBMITTALS

- A. Product Data: Manufacturer's data sheets for each product to be provided.
- B. Detail Drawings: Provide roofing system plans and details of attachment to other Work for Tapered insulation, including slopes.
- C. Installer Certificates: Signed by roofing system manufacturer certifying that Installer is approved, authorized, or licensed by manufacturer to install roofing system.
- D. Maintenance Data: Refer to manufacturer's latest published documents.

##### 1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and is eligible to receive the specified manufacturer's guarantee.
- B. Source Limitations: Obtain all components from the single source roofing system manufacturer guaranteeing the roofing system. All products used in the system must be labeled by the single source roofing system manufacturer issuing the guarantee.

##### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, and directions for storage.
- B. Store liquid materials in their original undamaged containers in a clean, dry, protected location and within the temperature range required by roofing system manufacturer.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Comply with insulation manufacturer's written instructions for handling, storing, and protecting during installation.
- D. Handle and store roofing materials and place equipment in a manner to avoid permanent deflection of deck.

##### 1.7 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when current and forecasted weather conditions permit roofing system to be installed in accordance with manufacturer's written instructions and guarantee requirements.

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

### 1.8 GUARANTEES

- A. Provide manufacturer's system guarantee or warranty.
  - 1. Single-Source guarantee/ warranty to include roofing plies, base flashings, liquid applied flashing, roofing membrane accessories, roof insulation, fasteners, cover board, walkway products], and other single-source components of roofing system marketed by the manufacturer.
  - 2. Guarantee Period: 15 years from date of Substantial Completion.
    - a. Guarantee deviations must be approved in writing by roofing system manufacturer.

## PART 2 – PRODUCTS

### 2.1 EDPM MEMBRANE

- A. Non-reinforced uniform, flexible sheet made from Ethylene Propylene Diene Monomer, ASTM D 4637, Type I. Basis of Design: JM EPDM NR
  - 1. Thickness (minimum): 45 mils
  - 2. Exposed Face Color: White.
  - 3. Factory Inseam Tape: 6-inch wide minimum, butyl splice tape with release film.

### 2.2 AUXILIARY ROOFING MATERIALS

- A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
  - 1. Liquid-type auxiliary materials shall meet VOC limits of authorities having jurisdiction.
- B. Sheet Flashing: Manufacturer's sheet flashing of same material, type, reinforcement, thickness, and color as sheet membrane. Basis of Design: JM EPDM Peel & Stick Flashing
- C. Primer Material: Manufacturer's standard synthetic-rubber polymer primer. Basis of Design: JM EPDM Tape Primer (Low VOC)
- D. Seaming Material: Manufacturer's standard 6-inch wide minimum, butyl splice tape with release film. Basis of Design: JM EPDM Seam Tape Plus
- E. Bonding Adhesive: Manufacturer's bonding adhesive for membrane, and solvent-based bonding adhesive for base flashings. Basis of Design: JM EPDM Membrane Adhesive (Low VOC)
- F. Slip Sheet: Manufacturer's recommended slip sheet, of type required for application.
- G. Metal Termination Bars: Manufacturer's standard predrilled stainless-steel or aluminum bars, with anchors. Basis of Design: JM Termination Systems
- H. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, termination reglets, cover strips, sealants and other accessories.
  - Basis of Design: JM EPDM Peel & Stick Flashing
  - JM EPDM Peel & Stick Inside/Outside Corners
  - JM EPDM Peel & Stick Pipe Boots
  - JM EPDM Peel & Stick Pourable Sealer Pockets
  - JM EPDM Peel & Stick Sealing Strip
  - JM EPDM Peel & Stick T-Joint Patch
  - JM EPDM Protective Stone Mat,
  - JM EPDM Reinforced Termination Strip with Tape (RTS)
  - JM Single Ply Caulk

### 2.3 AUXILIARY ROOFING SYSTEM COMPONENTS

- B. Coping System: Manufacturer's factory fabricated coping consisting of a base piece and a snap-on cap. Provide product manufactured and marketed by single-source membrane supplier that is included in the guarantee or warranty. Basis of Design: JM Presto-Lock Coping

### 2.4 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads sourced from membrane roofing system manufacturer. Basis of Design: JM EPDM Peel & Stick Walk Pads



# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

Install per JM Detail E-PT-05

### PART 3 – EXECUTION

#### 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with the requirements affecting performance of roofing system.
  - 1. General:
    - a. Verify that roof openings and penetrations are in place and set and braced and that roof drains are securely clamped in place.
    - b. Verify that wood cants, blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 2. Steel Decks: Verify that surface plane flatness and fastening of steel roof deck is satisfactory
  - 3. Ensure general rigidity and proper slope for drainage.
  - 4. Verify that deck is securely fastened with no projecting fasteners and with no adjacent units in excess of 1/16 inch (1.6 mm) out of plane relative to adjoining deck.
- B. Unacceptable panels should be brought to the attention of the Architect and must be corrected prior to installation of roofing system.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 PREPARATION

- A. Clean and remove from substrate sharp projections, dust, debris, moisture, and other substances detrimental to roofing system installation in accordance with roofing system manufacturer's written instructions.
- B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.3 RE-ROOF PREPARATION

- A. Remove all roofing membrane, surfacing, cover boards, insulation, fasteners, asphalt, pitch, adhesives, etc.
  - 1. Remove an area no larger than can be re-roofed in one day.
- B. Tear out all base flashings, counter-flashings, pitch pans, pipe flashings, vents and like components necessary for application of new membrane.
- C. Remove abandoned equipment curbs, skylights, smoke hatches, and penetrations.
  - 1. Install decking to match existing.
- D. Raise all HVAC units and other equipment supported by curbs to conform with the following:
  - 1. Modify curbs as required to provide a minimum 8" base flashing height measured from the surface of the new membrane to the top of the flashing membrane.
  - 2. Secure top of flashing and install new metal counterflashing prior to re-installation of unit.
  - 3. Perimeter nailers must be elevated to match elevation of new roof insulation.
- E. Immediately remove all debris from roof surface. Demolished roof system may not be stored on the roof surface.
- F. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.4 ROOFING MEMBRANE INSTALLATION, GENERAL

- A. Install roofing membrane in accordance with roofing system manufacturer's written instructions, applicable recommendations of the roofing manufacturer and requirements in this Section.
- B. Coordinate installing roofing system so components of the roofing membrane system are not subjected to precipitation or left uncovered at the end of the workday or when rain is imminent.
  - 1. Provide tie-offs at end of each day's work to cover exposed roofing membrane sheets and other components.
  - 2. Complete terminations and base flashings and provide temporary seals to prevent water

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

- from entering completed sections of roofing system.
3. Remove and discard temporary seals before beginning work on adjoining roofing.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.5 ADHERED ROOFING MEMBRANE INSTALLATION

- A. Install roofing membrane over area to receive roofing.
  1. Unroll roofing membrane and allow to relax before installing.
  2. Install sheet in accordance with roofing system manufacturer's written instructions.
- B. Accurately align roofing membrane and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. Bonding Adhesive: Apply solvent-based bonding adhesive to substrate and underside of roofing membrane at rate required by manufacturer and allow to partially dry before installing roofing membrane. Do not apply bonding adhesive to splice area of roofing membrane.
- D. Mechanically fasten roofing membrane securely at terminations, penetrations, and perimeter of roofing.
- E. Apply roofing membrane with side laps shingled with slope of roof deck where possible.
- F. Field Fabricated Seam Installation: Clean and prime both faces of splice areas, apply splice tape, and firmly roll side and end laps of overlapping roofing membranes according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of roofing membrane terminations.
- G. Tape to Tape Installation: Align membrane for appropriate overlap, remove release liners and firmly roll side and end laps of overlapping roofing membranes according to manufacturer's written instructions to ensure a watertight seam installation.
- H. Tape to Standard Sheet Installation: Align membrane for appropriate overlap, clean and prime non-taped face of splice area, remove release liners and firmly roll side and end laps of overlapping roofing membranes according to manufacturer's written instructions to ensure a watertight seam installation.
- I. Spread sealant or mastic bed over deck drain flange at deck drains and securely seal roofing membrane in place with clamping ring.
- J. Install roofing membrane and auxiliary materials to tie in to existing roofing.
- K. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.6 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates in accordance with membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Terminate and seal top of sheet flashings and mechanically anchor to substrate through termination bars.
- E. Proceed with installation only after unsatisfactory conditions have been corrected.

### 3.7 WALKWAY INSTALLATION

- A. Flexible Walkways: Install walkway products in locations indicated. Adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.8 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's Registered Roof Observer (RRO) to inspect roofing installation on completion and submit report to Architect.
- B. Repair or remove and replace components of roofing system where test results or inspections indicate that they do not comply with specified requirements.

### 3.9 PROTECTION AND CLEANING

- A. Protect roofing system from damage and wear during remainder of construction period.
- B. Correct deficiencies in or remove roofing system that does not comply with requirements, repair substrates, and repair or reinstall roofing system to a condition free of damage and deterioration at

# Roofing Bid

## Spring Valley Campus Makerspace

Jeff Johnson Architectural PC

- time of Substantial Completion and according to warranty requirements.
- C. Clean overspray and spillage from adjacent construction using cleaning agents and procedures recommended by manufacturer of affected construction.

END OF SECTION