

# REQUEST FOR PROPOSALS



## ROOF REPLACEMENT Central Office 1917 Harden Street

### PROPOSAL DUE DATE:

Tuesday, October 13, 2020  
2:00 PM Local Time

**RFP**  
**Commercial Roof Replacement**  
**Columbia Housing Main Office**  
**1917 Harden St**  
**Columbia SC, 29204**

**SOLICITATION TYPE:**           **REQUEST FOR PROPOSALS**

**SOLICITATION #**               **RFP 2020 - 09282020**

**DESCRIPTION:**               **COMMERCISL ROOF REPLACEMENT**

**ISSUE DATE:**                 **SEPTEMBER 28, 2020**

**PRE-BID SITE VISIT:**       **OCTOBER 6, 2020 @ 10AM**

**SUBMITTAL DATE:**         **OCTOBER 13, 2020 2PM Local**

**PROPOSAL SUBMITTAL PLACE:**

The Housing Authority of the City of Columbia, SC  
C/O Adam Dalenburg: Manager Capital Assets  
1917 Harden St  
Columbia, South Carolina 29204

Respectfully,

Adam J Dalenburg  
Manager Capital Assets

## **PROJECT DESCRIPTION**

The scope of work consists of a complete roof replacement, with a watertight construction at the completion of the project. The demolition includes the removal and disposal of the existing TPO membrane roof and roof insulation down to the existing metal deck. The removal and disposal of the existing asphalt shingle mansard roof is to be included as well, along with any replacement of damaged roof sheathing material. Quote shall include a cost/square foot for the replacement of the damaged roof sheathing material. The renovation includes the installation of a new TPO roofing membrane, 60 mil minimum, per specifications, and new above roof deck rigid insulation, R-20ci minimum per IECC 2009 requirement, to be installed. The TPO membrane will wrap the existing parapet walls and HVAC curbs. New asphalt shingles and new waterproofing membrane to be provided on the existing mansard roof. Asphalt shingle basis of design to be Certainteed, Landmark Pro, color selected from manufacturer's full range. Substitutions should be submitted prior to the submittal of the quote for approval. All metal coping and metal flashing to be replaced. All existing roof penetrations to remain, and new flashing/ waterproofing to be provided with the new roofing membrane. Coordination between existing roof penetrations, curbs, and new insulation will be required.

## **LOCATION OF WORK**

The Housing Authority of the City of Columbia, SC  
1917 Harden St  
Columbia, South Carolina 29204

## **SITE VISIT**

OCTOBER 6, 2020 @ 10AM

## **BONDING:**

For all contracts, which exceed \$250,000, the selected respondent will be required to furnish and pay for satisfactory Performance and Payment bonding for 100% of the contract price. The selected respondent will also be required to furnish certificates of insurance.

## **STATE LICENSING REQUIREMENTS/PERMITS**

All respondents shall possess and provide a valid South Carolina Contractor's license and will be required to possess and provide a license to work in the City of Columbia, SC if not already possessed, at contract execution. The Offeror's attention is directed to the fact that all applicable Federal and State laws, municipal ordinances, and the rules and regulations of all authorities having jurisdiction over the project shall apply to the Contract throughout, and they will be deemed to be included in the Contract herein the same as though written out in full. The selected respondent shall be responsible for obtaining all required permits needed to complete contract as well as for paying all required permit and dump fees.

## **INVOICING AND PAYMENT**

The contractor will submit a monthly invoice. The invoice must identify the billing period, amount of work performed during the billing period and amount of work left to be performed on the contract.

## **WORK QUALITY**

All work performed under this contract shall be in compliance with the highest performance standards; the industry guidelines and all applicable Federal, State, and Local laws.

## **DAVIS-BACON LABOR STANDARDS COMPLIANCE**

Attention is called to the fact that not less than the minimum of salaries and wages must be paid on this project. The Contractor must ensure that employees and applicants for employment are not discriminated against because of race, color, creed, sex, handicap or national origin.

In accordance with Department of Labor and Davis-Bacon Regulations for Projects and Work in excess of \$2,000.00 the Contractor shall submit Certified Payrolls (forms HUD WH-347 & WH-348) on a weekly basis. Submittals shall begin no later than ten (10) days after the start of the Work on-site.

## **SUBMITTAL REQUIREMENTS**

Responses to this Request for Proposals shall be delivered to The Housing Authority of the City of Columbia, 1917 Harden Street, Columbia, South Carolina, 29204 by **TUESDAY, OCTOBER 13, 2020 2:00 PM LOCAL TIME** to be considered. Any response which is not in the possession of CH and stamped prior to this stipulated deadline will be considered late and non-responsive.

Respondents shall submit an electronic response on a FLASH/THUMB DRIVE tabbed and numbered as follows:

1. Qualifications – Description and type of company: sole proprietor; Limited Liability Corporation (LLC); or, other corporation type. If a corporation, submit articles of incorporation and listing of all officers of the corporation. Include Minority/Women or Disadvantaged Business Enterprise certification and/or application, as applicable.
2. Experience – Describe the experience of the company and list other similar types of work performed. Identify the individual(s) that will perform the work, list any specialty licenses or certifications held and provide copies of same; and a brief resume of the individual(s),
3. Sub-contractors – Submit all sub-contractor who will be used on this project and their qualifications, references, and licenses.
4. Cost Proposal – Complete the costs proposal form included in this package.
5. References – Complete the reference form included in this package.
6. Other forms – Complete all other forms included in this package including Section 3 Plan and Efforts; HUD various forms; and the Non-Collusive Affidavit.

Proposals must be signed in the firm or corporate name and must bear the longhand signature of the principal duly authorized to make contracts for the bidding party. The Offerer's name must be fully stated. Where an agent of the Offerer signs a Proposal, evidence of his authority to act as the Offerer's

agent shall accompany the Proposal. The name of each person signing the proposal shall be typed or printed below his signature.

Any respondent may withdraw his proposal by letter or with proper identification in person securing his Proposal at any time prior to the time stated for the receipt of Proposals. No telephone requests for withdrawal of Proposals will be honored.

The Owner reserves the right to reject any and all Proposals and the right to waive any informality in procedure.

### **SUBCONTRACTORS**

The respondent is specifically advised that any person, firm or party to whom it is prepared to award a subcontract under this Contract must be acceptable to the Owner and/or Owner's Representative.

The respondent shall, within 10 days after the execution of the Contract, submit to the Owner and/or Owner's Representative, in writing the names of Subcontractors proposed for the principle parts of the work and for such others as the Owner and/or Owner's Representative may direct and shall not employ any that are not acceptable as provided above.

### **TIME OF COMPLETION**

The actual time required to complete this demolition project is **45 working days** with an anticipated start date of **October 26, 2020** and a completion date of **December 25, 2020**. Contractors may request in writing to the Housing Authority to work weekends. The respondent agrees that if awarded a contract for the work he will commence work under the Contract on that date specified in the Notice to Proceed, to be issued by the Owner and will efficiently, diligently and expeditiously conduct the work in manner consistent with the Demolition Progress Schedule as approved by the Owner and/or the Owner's Representative so as to assure completion by the completion date appearing on that schedule.

It is the intent of the Owner to provide to the Contractors, a "Notice of Award" as shown in the schedule.

### **PRE-AWARD CONFERENCE**

Within seven (7) days after notification by the Owner that the selected respondent is being considered for the award of the Contract, the respondent will be required to attend a pre-award conference along with their known subcontractors.

### **PROPOSED SCHEDULE**

RFP to proposers:	09/28/2020
Response to RFP:	10/13/2020
Award Notification:	10/16/2020
Pre-award and Contract Execution:	10/23/2020
Notice to Proceed:	10/26/2020

## **PROPOSAL DOCUMENTS**

A complete set of Proposal Documents will be available to the respondents through October 13, 2020 and may be obtained via CH's website under *Business Opportunities*:  
<https://www.columbiahousingsc.org/procurement-postings>

## **ADDENDUM**

No interpretations of the meaning of the specifications or other documents will be made to any Respondent except by Addendum.

Should a Respondent find discrepancies or ambiguities in or omission from, specifications, or should he/she be in doubt as to their meaning, he/she shall at once notify Mr. Adam Dalenburg, Manager Capital Assets. The notification must be electronic through e-mail:  
[adalenburg@columbiahousingsc.org](mailto:adalenburg@columbiahousingsc.org)

Deadline for any questions concerning the specifications or forms is October 7, 2020. Any addendum that may be issued by the owner will be issued no later than October 9, 2020.

The Proposal Form contains blanks for the respondents to inscribe the number and date of each addendum that may be issued and respondents shall acknowledge receipt of Addenda by properly filling in said blanks. If no Addenda are issued, these blanks are to be filled with the word "none".

**EVALUATION CRITERIA**

The Housing Authority will select a single respondent for this contract. Selection will be based on a combination of the factors listed below:

**Qualifications**

**35 Points**

The respondent company has successfully performed similar type of work in commercial roof replacement. This factor will be scored based on the description in the RFP and the references provided

**Experience**

**35 Points**

The individual(s) that will perform the work have extensive experience in commercial roof replacement; have specialty licenses or certifications in areas of commercial roof replacement. This factor will be scored based on the description in the RFP, the resumes of the individual(s), and the copies of licenses or certifications.

**Cost**

**20 points**

The fully loaded costs provided are reasonable and competitive in the Columbia area for same and similar work performed by contractors. This factor will be scored using the cost proposal provided and other data retained by the Housing Authority of area costs.

**MBE/WBE/DBE**

**5 Points**

The firm or individual is certified or has applied to the appropriate state agency for certification as a Minority, Woman or Disadvantaged Business Enterprise. This factor will be scored based on a certification or application provided in the RFP.

**Section 3**

**5 Points**

The firm or individual intends to utilize Section 3 residents for any portion of the contract work. This factor will be scored based on the information provided in the Section 3 Plan in the RFP.

**TOTAL POINTS**

**100 Points**

**REQUIRED INSURANCE LIMITS**

The selected respondent shall provide a certification of insurance, which meets or exceeds the following limits and lists the Housing Authority of the City of Columbia, as additional insured.

TYPE OF COVERAGE	LIMITS OF LIABILITY
Worker's Compensation – Statutory	Required over and above SC State requirements and regardless of the number of employees
Employer's Liability	\$25,000 One Accident & Aggregate Disease
<b>COMPREHENSIVE GENERAL LIABILITY:</b>	
Bodily Injury and Personal Injury	\$100,000 ea. person – Premise & Operations \$100,000 ea. person – Independent Contractors *\$100,000 ea. person – Products, including completed operations* \$100,000 ea. person – Contractual, to include Owner & Architect \$300,000 ea. Occurrence: \$300,000 ea. Aggregate: Products, including completed operations to include Owner & Architect
Property Damage	\$ 50,000 ea. Occurrence: Premises & Operations \$ 50,000 ea. Occurrence: Independent Contractors \$ 50,000 ea. Occurrence: Products, including completed operations \$ 50,000 ea. Occurrence: Contractual, to include Owner & Architect \$100,000 Aggregate \$300,000 Aggregate: Operations; protective products; contractual, to include Owner & Architect
<b>**COMPREHENSIVE AUTOMOBILE LIABILITY** (Includes owned, non-owned, hired)</b>	
(A) Bodily Injury	\$150,000 ea. person \$300,000 ea. Occurrence
(B) Property Damage	\$ 50,000 ea. Accident

\* Shall be carried for a minimum of one (1) year after completion of the Agreement.

\*\* Coverage shall include owned, non-owned, and hired automobiles



## **SECTION 3 REQUIREMENTS**

### **A TOOL FOR “ECONOMIC UPLIFT”**

Section 3 of the Housing and Urban Development Act of 1968 is a tool that is used to realize HUD’s commitment to the “economic uplift” for public housing (HA) communities. It requires that public housing authorities (HAs), as well as their contractors and subcontractors, make good faith efforts to provide opportunities for job training, employment, and contracting to low-income persons, particularly those who are recipients of Federal housing assistance.

### **GOOD FAITH EFFORT**

Under regulations at 24 CFR 135, HAs and their contractors must make “good faith efforts” to use area residents as trainees and employees and to award contracts to businesses located within the Section 3-covered project areas. Good faith effort means a contractor must take concrete steps to expand resident training and employment opportunities, such as making residents aware of the employment application process and actually employing Section 3 area residents.

### **OUTREACH TO EXPAND SECTION 3 RESIDENT TRAINING AND EMPLOYMENT OPPORTUNITIES**

- Advertising in the local media
- Distributing flyers on training & job opportunities to every occupied dwelling unit of Section 3 communities, and posting in common areas.
- Asking resident councils and other resident bodies to help promote resident participation, and asking similar help from community leaders and organizations.
- Informing labor organizations and private job training agencies of potential jobs and contracting opportunities.
- Holding job information meetings and workshops to help Section 3 resident’s complete applications.
- Arranging for a place within the housing community for residents to drop off employment application forms and hold interviews.

### **PROMOTING SECTION 3 BUSINESS PARTICIPATION**

- Advertisement in local media and trade association papers.
- Posting flyers in the housing community.
- Developing a list of eligible Section 3 businesses.
- Giving all eligible concerns written notice in time for them to participate in pre-bid meetings and meet proposal deadlines.
- Holding workshops on contract procedures.
- Dividing contract work to allow wider participation.
- Promoting joint ventures between a large business and Section 3 business concerns.
- Limiting competition for PHA-administered opportunities to resident-owned businesses through the use of alternative procurement procedures for contracts under \$500,000, as described in HUD regulations at 24 CFR 963.

The Housing Authority has established a goal of awarding at least 10% of the dollar value of federally funded contracts to Minority Business Enterprise and Women Owned Business Enterprise (MBEs/WBEs) to either General Contractors or Contractors with MBE participation.

In accordance with Section 3 of the U.S. Department of Housing and Urban Development Act of 1968, the Housing Authority requires all contractors, to the maximum extent feasible to provide training, contracting and employment opportunities to low income residents residing in Housing Authority communities or to low income businesses located in the community. Ten (10%) percent of the total dollar amount of all Section 3 covered contracts for building trades work for maintenance, repair, modernization or development of public housing rehabilitation, housing construction and other public construction, shall be awarded to Section 3 business and three (3%) percent of the total dollar amount of all non-construction Section 3 covered contracts, shall be awarded to Section 3 business. The Housing Authority of the City of Greenville will require evidence throughout the demolition contract that the Contractor has complied with this provision and will assist the Contractor in contacting qualified residents and businesses.

Any contractor who fails to submit the required documents with their Proposal, in sufficient detail and completeness, may be declared non-responsive and ineligible for consideration of an award.

### **REQUIRED DOCUMENTS AND FORMS**

Attached is the documentation which shall be duly executed by each Contractor and submitted with this Request for Proposal. Failure to submit these documents may result in disqualification.

#### Exhibits Included:

1. Cost Proposal Form
2. Non-Collusive Affidavit
3. HUD Form 50070 – Certification for a Drug Free Workplace
4. HUD Form 5360 – General Conditions
5. Drawing

#### Exhibits NOT Included (To be provided by Contractor):

6. Schedule of Values
7. Other Required Information

**COST PROPOSAL FORM**

The Housing Authority intends to award a single contract under this proposal. Please provide a fully loaded hourly rate for each of the work categories identified below. The loaded rate should be inclusive of all costs to conduct the work including transportation; tools and equipment; overhead and profit.

Proposal	Total Cost of All Work
<b>Complete Cost for the Roof Replacement</b>	\$

The undersigned hereby certifies that he/she is a duly authorized representative of the company submitting this proposal who herewith legally binds the company in the execution of all documents and any contract to follow. The undersigned, having familiarized themselves with the local conditions affecting the cost of the work, average local weather conditions, the specifications and the stipulations referred to herein, hereby proposes in accordance with all aspects of this solicitation to furnish all labor, materials, equipment, and services required for:

I/We, the undersigned, being thoroughly familiar with the site and other conditions affecting the cost of the work, and with the Contract Documents which include the General Conditions, the Scope of Work, this Proposal and the Instructions for Bidders hereby Propose to furnish all labor, materials, equipment and services required for this Work, and perform and do all things necessary to complete the work herein as called for and in accordance with all the Contract documents.

I/We have also received: Addendum # \_\_\_\_\_, dated \_\_\_\_\_ and have included its provisions in this proposal and Addendum # \_\_\_\_\_, dated \_\_\_\_\_ and have included its provisions in this proposal.

Complete Roof Replacement: \$ \_\_\_\_\_  
 \_\_\_\_\_ Dollars

The respondent represents that he ( ) has ( ) has not, participated in a previous contract or subcontract subject to the equal opportunity clause prescribed by Executive Orders 10925, 11114, 11246 or the Secretary of Labor; that he ( ) has ( ) has not filed all required compliance reports; and that representation including submission of required compliance reports signed by proposed subcontractors, will be obtained prior to subcontractor awards. (This representation need not be submitted in connection with contracts or subcontracts that are exempt from the clause.)

Certificate of Non-segregated Facilities: By signing this response to proposal, the respondent certifies that he does not maintain or provide for his employees any segregated facilities at any of his establishments, and that he does not permit his employees to perform their services at any location, under his control, where segregated facilities are maintained. He further certifies that he will not maintain or provide for his employees any segregated facilities at any of his establishments and that

he will not permit his employees to perform their services at any location under his control, where segregated facilities are maintained.

The respondent agrees that a breach of this certification is a violation of the Equal Opportunity clause in the Contract. As used in this certification, the term "segregated facilities means any waiting room, work areas, rest rooms and wash rooms, restaurants and other fountain areas, transportation, and housing facilities provide for employees which are segregated by explicit directive and area in fact segregated on the basis of race, color, religion or national origin, because of habit, local customs, or otherwise. The respondent further agrees that (except where he has obtained identical certifications from proposed subcontractors prior to the award of subcontracts exceeding \$10,000 which are not exempt from the provisions of the Equal Opportunity clause; that he will retain such certifications in his files, and that he will forward a notice to his proposed Subcontractors.

Respectfully submitted,

By: \_\_\_\_\_  
Print Name
Signature

Title: \_\_\_\_\_

Bidder's Firm Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

State of South Carolina Contractor's License No: \_\_\_\_\_

SEAL IF BIDDER IS A CORPORATION

**NON-COLLUSIVE AFFIDAVIT**

STATE OF SOUTH CAROLINA

COUNTY OF RICHLAND

\_\_\_\_\_, being first duly sworn, deposes and says:

THAT HE/SHE IS \_\_\_\_\_ (a partner or officer of the firm of, etc.) the party making the foregoing proposal or bid; that such proposal or bid is genuine and not collusive nor sham; that said bidder has not colluded, conspired, connived nor agreed, directly or indirectly, with any bidder or person, to put in a sham bid or to refrain from bidding; and has not in any manner, directly or indirectly, sought by agreement of collusion, or communication or convergence, with any person, to fix the bid price of affiant or of any other bidder; nor to fix any overhead, profit, or cost element of said bid price, nor of that of any other bidder; nor to secure any advantage against THE HOUSING AUTHORITY OF THE CITY OF COLUMBIA, SOUTH CAROLINA, or any person interested in the proposed contract; and that all statements in said proposal or bid are true.

Signatures of:

BIDDER, if the Bidder is an individual: \_\_\_\_\_

PARTNER, if the Bidder is a partnership: \_\_\_\_\_

OFFICER, if the Bidder is a corporation: \_\_\_\_\_

SUBSCRIBED AND SWORN TO BEFORE ME

This \_\_\_\_\_ day of \_\_\_\_\_, 20 \_\_\_\_\_

\_\_\_\_\_  
(Notary Public)

My Commission expires: \_\_\_\_\_

# Certification for a Drug-Free Workplace

U.S. Department of Housing  
and Urban Development

Applicant Name \_\_\_\_\_

Program/Activity Receiving Federal Grant Funding \_\_\_\_\_

Acting on behalf of the above named Applicant as its Authorized Official, I make the following certifications and agreements to the Department of Housing and Urban Development (HUD) regarding the sites listed below:

I certify that the above named Applicant will or will continue to provide a drug-free workplace by:

a. Publishing a statement notifying employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the Applicant's workplace and specifying the actions that will be taken against employees for violation of such prohibition.

b. Establishing an on-going drug-free awareness program to inform employees ---

(1) The dangers of drug abuse in the workplace;

(2) The Applicant's policy of maintaining a drug-free workplace;

(3) Any available drug counseling, rehabilitation, and employee assistance programs; and

(4) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

c. Making it a requirement that each employee to be engaged in the performance of the grant be given a copy of the statement required by paragraph a.;

d. Notifying the employee in the statement required by paragraph a. that, as a condition of employment under the grant, the employee will ---

(1) Abide by the terms of the statement; and

(2) Notify the employer in writing of his or her conviction for a violation of a criminal drug statute occurring in the workplace no later than five calendar days after such conviction;

e. Notifying the agency in writing, within ten calendar days after receiving notice under subparagraph d.(2) from an employee or otherwise receiving actual notice of such conviction. Employers of convicted employees must provide notice, including position title, to every grant officer or other designee on whose grant activity the convicted employee was working, unless the Federalagency has designated a central point for the receipt of such notices. Notice shall include the identification number(s) of each affected grant;

f. Taking one of the following actions, within 30 calendar days of receiving notice under subparagraph d.(2), with respect to any employee who is so convicted ---

(1) Taking appropriate personnel action against such an employee, up to and including termination, consistent with the requirements of the Rehabilitation Act of 1973, as amended; or

(2) Requiring such employee to participate satisfactorily in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency;

g. Making a good faith effort to continue to maintain a drug-free workplace through implementation of paragraphs a. thru f.

**2. Sites for Work Performance.** The Applicant shall list (on separate pages) the site(s) for the performance of work done in connection with the HUD funding of the program/activity shown above: Place of Performance shall include the street address, city, county, State, and zip code. Identify each sheet with the Applicant name and address and the program/activity receiving grant funding.)

Check here  if there are workplaces on file that are not identified on the attached sheets.

I hereby certify that all the information stated herein, as well as any information provided in the accompaniment herewith, is true and accurate.

**Warning:** HUD will prosecute false claims and statements. Conviction may result in criminal and/or civil penalties.

(18 U.S.C. 1001, 1010, 1012; 31 U.S.C. 3729, 3802)

Name of Authorized Official		Title
Signature		Date
X		

# General Contract Conditions for Small Construction/Development Contracts

U.S. Department of Housing and Urban Development  
Office of Public and Indian Housing  
OMB Approval No. 2577-0157 (exp. 3/31/2020)

**Applicability.** The following contract clauses are applicable and must be inserted into small construction/development contracts, greater than \$2,000 but not more than \$150,000.

## 1. Definitions

Terms used in this form are the same as defined in form HUD-5370

## 2. Prohibition Against Liens

The Contractor is prohibited from placing a lien on the PHA's property. This prohibition shall apply to all subcontractors at any tier and all materials suppliers. The only liens on the PHA's property shall be the Declaration of Trust or other liens approved by HUD.

## 3. Disputes

- (a) Except for disputes arising under the **Labor Standards** clauses, all disputes arising under or relating to this contract, including any claims for damages for the alleged breach thereof which are not disposed of by agreement, shall be resolved under this clause.
- (b) All claims by the Contractor shall be made in writing and submitted to the Contracting Officer for a written decision. A claim by the PHA against the Contractor shall be subject to a written decision by the Contracting Officer.
- (c) The Contracting Officer shall, within 30 days after receipt of the request, decide the claim or notify the Contractor of the date by which the decision will be made.
- (d) The Contracting Officer's decision shall be final unless the Contractor (1) appeals in writing to a higher level in the PHA in accordance with the PHA's policy and procedures, (2) refers the appeal to an independent mediator or arbitrator, or (3) files suit in a court of competent jurisdiction. Such appeal must be made within 30 days after receipt of the Contracting Officer's decision.
- (e) The Contractor shall proceed diligently with performance of this contract, pending final resolution of any request for relief, claim, appeal, or action arising under or relating to the contract, and comply with any decision of the Contracting Officer.

## 4. Default

- (a) If the Contractor refuses or fails to prosecute the work, or any separable part thereof, with the diligence that will insure its completion within the time specified in this contract, or any extension thereof, or fails to complete said work within this time, the Contracting Officer may, by written notice to the Contractor, terminate the right to proceed with the work (or separable part of the work) that has been delayed. In the event, the PHA may take over the work and complete it by contract or otherwise, and may take possession of and use any materials, equipment, and plant on the work site necessary for completing the work. The Contractor and its sureties shall be liable for any damage to the PHA resulting from the Contractor's refusal or failure to complete the work within the specified time, whether or not the Contractor's right to proceed with the work is terminated. This liability includes any increased costs incurred by the PHA in completing the work.

- (b) The Contractor's right to proceed shall not be terminated or the Contractor charged with damages under this clause if –
  - (1) The delay in completing the work arises from unforeseeable causes beyond the control and without the fault or negligence of the Contractor; and
  - (2) The Contractor, within 10 days from the beginning of such delay notifies the Contracting Officer in writing of the causes of delay. The Contracting Officer shall ascertain the facts and the extent of the delay. If, in the judgment of the Contracting Officer, the findings of Fact warrant such action, time for completing the work shall be extended by written modification to the contract. The findings of the Contracting Officer shall be reduced to a written decision which shall be subject to the provisions of the **Disputes** clause of this contract.
- (c) If, after termination of the Contractor's right to proceed, it is determined that the Contractor was not in default, or that the delay was excusable, the rights and obligation of the parties will be the same as if the termination had been for convenience of the PHA.

## 5. Termination for Convenience

- (a) The Contracting Officer may terminate this contract in whole, or in part, whenever the Contracting Officer determines that such termination is in the best interest of the PHA. Any such termination shall be effected by delivery to the Contractor of a Notice of Termination specifying the extent to which the performance of the work under the contract is terminated, and the date upon which such termination becomes effective.
- (b) If the performance of the work is terminated, either in whole or in part, the PHA shall be liable to the Contractor for reasonable and proper costs resulting from such termination upon the receipt by the PHA of a properly presented claim setting out in detail: (1) the total cost of the work performed to date of termination less the total amount of contract payments made to the Contractor; (2) the cost (including reasonable profit) of settling and paying claims under subcontracts and material orders for work performed and materials and supplies delivered to the site, payment for which has not been made by the PHA to the Contractor or by the Contractor to the subcontractor or supplier; (3) the cost of preserving and protecting the work already performed until the PHA or assignee takes possession thereof or assumes responsibility therefore; (4) the actual or estimated cost of legal and accounting services reasonably necessary to prepare and present the termination claim to the PHA; and (5) an amount constituting a reasonable profit on the value of the work performed by the Contractor.
- (c) The Contracting Officer will act on the Contractor's claim within days (60 days unless otherwise indicated) of receipt of the Contractor's claim.
- (d) Any disputes with regard to this clause are expressly made subject to the provisions of the Disputes clause of this contract.

## 6. Insurance

- (a) Before commencing work, the Contractor and each subcontractor shall furnish the PHA with certificates of insurance showing the following insurance is in force and will insure all operations under the Contract:

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breakdowns by hours or unit costs (identified with specific work to be performed); Construction equipment exclusively necessary for the change; Costs of preparation and/ or revision to shop drawings resulting from the change; Worker's Compensation and Public Liability Insurance; Employment taxes under FICA and FUTA; and, Bond Costs - when size of change warrants revision.

- (2) Indirect Costs. Indirect costs may include overhead, general and administrative expenses, and fringe benefits not normally treated as direct costs.
- (3) Profit. The amount of profit shall be negotiated and may vary according to the nature, extent, and complexity of the work required by the change.

The allowability of the direct and indirect costs shall be determined in accordance with the Contract Cost Principles and Procedures for Commercial Firms in Part 31 of the Federal Acquisition Regulation (48 CFR 1-31), as implemented by HUD Handbook 2210.18, in effect on the date of this contract. The Contractor shall not be allowed a profit on the profit received by any subcontractor. Equitable adjustments for deleted work shall include a credit for profit and may include a credit for indirect costs. On proposals covering both increases and decreases in the amount of the contract, the application of indirect costs and profit shall be on the net-change in direct costs for the Contractor or subcontractor performing the work.

- (g) The Contractor shall include in the proposal its request for time extension (if any), and shall include sufficient information and dates to demonstrate whether and to what extent the change will delay the completion of the contract in its entirety.
- (h) The Contracting Officer shall act on proposals within 30 days after their receipt, or notify the Contractor of the date when such action will be taken.
- (i) Failure to reach an agreement on any proposal shall be a dispute under the clause entitled Disputes herein. Nothing in this clause, however, shall excuse the Contractor from proceeding with the contract as changed.
- (j) Except in an emergency endangering life or property, no change shall be made by the Contractor without a prior order from the Contracting Officer.

#### 9. Examination and Retention of Contractor's Records

The HA, HUD, or Comptroller General of the United States, or any of their duly authorized representatives shall, until three years after final payment under this contract, have access to and the right to examine any of the Contractor's directly pertinent books, documents, papers, or other records involving transactions related to this contract for the purpose of making audit, examination, excerpts, and transcriptions.

#### 10. Rights in Data and Patent Rights (Ownership and Proprietary Interest)

The HA shall have exclusive ownership of, all proprietary interest in, and the right to full and exclusive possession of all information, materials, and documents discovered or produced by Contractor pursuant to the terms of this Contract, including but not limited to reports, memoranda or letters concerning the research and reporting tasks of this Contract.

#### 11. Energy Efficiency

The Contractor shall comply with all mandatory standards and policies relating to energy efficiency which are contained in the energy conservation plan issued in compliance with the Energy Policy and Conservation Act (Pub.L. 94-163) for the State in which the work under this contract is performed.

#### 12. Procurement of Recovered Materials

- (a) In accordance with Section 6002 of the Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act, the Contractor shall procure items designated in guidelines of the Environmental Protection Agency (EPA) at 40 CFR Part 247 that contain the highest percentage of recovered materials practicable, consistent with maintaining a satisfactory level of competition. The Contractor shall procure items designated in the EPA guidelines that contain the highest percentage of recovered materials practicable unless the Contractor determines that such items: (1) are not reasonably available in a reasonable period of time; (2) fail to meet reasonable performance standards, which shall be determined on the basis of the guidelines of the National Institute of Standards and Technology, if applicable to the item; or (3) are only available at an unreasonable price.
- (b) Paragraph (a) of this clause shall apply to items purchased under this contract where: (1) the Contractor purchases in excess of \$10,000 of the item under this contract; or (2) during the preceding Federal fiscal year, the Contractor: (i) purchased any amount of the items for use under a contract that was funded with Federal appropriations and was with a Federal agency or a State agency or agency of a political subdivision of a State; and (ii) purchased a total of in excess of \$10,000 of the item both under and outside that contract.

#### 13. Training and Employment Opportunities for Residents in the Project Area (Section 3, HUD Act of 1968; 24 CFR 135)

- (a) The work to be performed under this contract is subject to the requirements of section 3 of the Housing and Urban Development Act of 1968, as amended, 12 U.S.C. 1701u (section 3). The purpose of section 3 is to ensure that employment and other economic opportunities generated by HUD assistance or HUD-assisted projects covered by section 3, shall, to the greatest extent feasible, be directed to low- and very low-income persons, particularly persons who are recipients of HUD assistance for housing.
- (b) The parties to this contract agree to comply with HUD's regulations in 24 CFR Part 135, which implement section 3. As evidenced by their execution of this contract, the parties to this contract certify that they are under no contractual or other impediment that would prevent them from complying with the Part 135 regulations.
- (c) The contractor agrees to send to each labor organization or representative of workers with which the contractor has a collective bargaining agreement or other understanding, if any, a notice advising the labor organization or workers' representative of the contractor's commitments under this section 3 clause, and will post copies of the notice in conspicuous places at the work site where both employees and applicants for training and employment positions can see the notice. The notice shall describe the section 3 preference, shall set forth minimum number and job titles subject to hire, availability of apprenticeship and training positions, the



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of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program; *provided*, that the Secretary of Labor has found, upon the written request of the Contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the Contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(b) Withholding of Funds. HUD or its designee shall, upon its own action or upon written request of an authorized representative of the Department of Labor, withhold or cause to be withheld from the Contractor under this contract or any other Federal contract with the same prime Contractor, or any other Federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime Contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the Contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working in the construction or development of the project, all or part of the wages required by the contract, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased. HUD or its designee may, after written notice to the Contractor, disburse such amounts withheld for and on account of the Contractor or subcontractor to the respective employees to whom they are due.

(c) Payrolls and Basic Records.

(1) Payrolls and basic records relating thereto shall be maintained by the Contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working in the construction or development of the project. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made, and actual wages paid. Whenever the Secretary of Labor has found, under 29 CFR 5.5(a)(1)(iv), that the wages of any laborer or mechanic include the amount of costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the Contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of

the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

- (2) (i) The Contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the Contracting Officer for transmission to HUD or its designee. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under subparagraph (c)(1) of this clause. This information may be submitted in any form desired. Optional Form WH-347 (Federal Stock Number 029-005-00014-1) is available for this purpose and may be purchased from the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402. The prime Contractor is responsible for the submission of copies of payrolls by all subcontractors. (Approved by the Office of Management and Budget under OMB Control Number 1214-0149.)
- (ii) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (A) That the payroll for the payroll period contains the information required to be maintained under paragraph (c)(1) of this clause and that such information is correct and complete;
- (B) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in 29 CFR Part 3; and
- (C) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (iii) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirements for submission of the "Statement of Compliance" required by subparagraph (c)(2)(ii) of this clause.
- (iv) The falsification of any of the above certifications may subject the Contractor or subcontractor to civil or criminal prosecution under Section 1001 of Title 18 and Section 3729 of Title 31 of the United States Code.
- (3) The Contractor or subcontractor shall make the records required under subparagraph (c)(1) available for inspection, copying, or transcription by authorized representatives of HUD or its designee, the Contracting Officer, or the Department of Labor and shall permit such representatives to interview employees during working hours on the job. If the Contractor or subcontractor fails to submit the required records or to make them available, HUD or its designee may, after written notice to the Contractor, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

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contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(3) The penalty for making false statements is prescribed in the U. S. Criminal Code, 18 U.S.C. 1001.

(l) Subcontracts. The Contractor or subcontractor shall insert in any subcontracts all the provisions contained in this clause, and such other clauses as HUD or its designee may by appropriate instructions require, and also a clause requiring the subcontractors to include these provisions in any lower tier subcontracts. The prime Contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all these provisions.

(m) Non-Federal Prevailing Wage Rates. Any prevailing wage rate (including basic hourly rate and any fringe benefits), determined under State law to be prevailing, with respect to any employee in any trade or position employed under the contract, is inapplicable to the contract and shall not be enforced against the Contractor or any subcontractor, with respect to employees engaged under the contract whenever such non-Federal prevailing wage rate exceeds:

- (i) the applicable wage rate determined by the Secretary of Labor pursuant to the Davis-Bacon Act (40 U.S.C. 3141 et seq.) to be prevailing in the locality with respect to such trade;
- (ii) an applicable apprentice wage rate based thereon specified in an apprenticeship program registered with the U.S. Department of Labor (DOL) or a DOL-recognized State Apprenticeship Agency; or
- (iii) an applicable trainee wage rate based thereon specified in a DOL-certified trainee program.

### **OTHER REQUIRED INFORMATION**

Provide at least three (3) clients for whom the firm has performed work comparable to the work described in the Scope of Services/Specifications.

Provide a list of equipment including transportation the firm has available for performing the work described.

Provide outreach efforts your company has/will undertake under this contract to employ Section 3 Residents or Businesses. Section 3 residents are individuals residing within the Section 3 area whose family income does not exceed 80% of the area median income.

## SECTION 075423 - THERMOPLASTIC-POLYOLEFIN (TPO) ROOFING

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

A. Section Includes:

1. Mechanically fastened, thermoplastic polyolefin (TPO) roofing system.
2. Roof insulation.

#### 1.3 DEFINITIONS

A. Roofing Terminology: Definitions in ASTM D1079 and glossary in NRCA's "The NRCA Roofing Manual: Membrane Roof Systems" apply to Work of this Section.

#### 1.4 PREINSTALLATION MEETINGS

A. Preliminary Roofing Conference: Before starting roof deck construction, conduct conference at Project site.

1. Meet with Owner, Architect, Owner's insurer if applicable, testing and inspecting agency representative, roofing Installer, roofing system manufacturer's representative, deck Installer, air barrier Installer, and installers whose work interfaces with or affects roofing, including installers of roof accessories and roof-mounted equipment.
2. Review methods and procedures related to roofing installation, including manufacturer's written instructions.
3. Review and finalize construction schedule, and verify availability of materials, Installer's personnel, equipment, and facilities needed to make progress and avoid delays.
4. Review deck substrate requirements for conditions and finishes, including flatness and fastening.
5. Review structural loading limitations of roof deck during and after roofing.
6. Review base flashings, special roofing details, roof drainage, roof penetrations, equipment curbs, and condition of other construction that affects roofing system.
7. Review governing regulations and requirements for insurance and certificates if applicable.
8. Review temporary protection requirements for roofing system during and after installation.
9. Review roof observation and repair procedures after roofing installation.

#### 1.5 ACTION SUBMITTALS

A. Product Data: For each type of product.

B. Shop Drawings: Include roof plans, sections, details, and attachments to other work, including the following:

1. Layout and thickness of insulation.
2. Base flashings and membrane termination details.

3. Flashing details at penetrations.
4. Roof plan showing orientation of steel roof deck and orientation of roof membrane, fastening spacings, and patterns for mechanically fastened roofing system.
5. Insulation fastening patterns for corner, perimeter, and field-of-roof locations.

#### 1.6 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer manufacturer .
- B. Manufacturer Certificates:
  1. Performance Requirement Certificate: Signed by roof membrane manufacturer, certifying that roofing system complies with requirements specified in "Performance Requirements" Article.
    - a. Submit evidence of compliance with performance requirements.
- C. Product Test Reports: For roof membrane and insulation, for tests performed by a qualified testing agency, indicating compliance with specified requirements.
- D. Evaluation Reports: For components of roofing system, from ICC-ES.
- E. Sample Warranties: For manufacturer's special warranties.

#### 1.7 CLOSEOUT SUBMITTALS

- A. Maintenance Data: For roofing system to include in maintenance manuals.
- B. Final Warranties: For all warranties.

#### 1.8 QUALITY ASSURANCE

- A. Manufacturer Qualifications: A qualified manufacturer that is UL listed and/or listed in FM Approvals' RoofNav for roofing system identical to that used for this Project.
- B. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.

#### 1.9 DELIVERY, STORAGE, AND HANDLING

- A. Deliver roofing materials to Project site in original containers with seals unbroken and labeled with manufacturer's name, product brand name and type, date of manufacture, approval or listing agency markings, and directions for storing and mixing with other components.
- 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. Protect stored liquid material from direct sunlight.
  1. Discard and legally dispose of liquid material that cannot be applied within its stated shelf life.
- C. Protect roof insulation materials from physical damage and from deterioration by sunlight, moisture, soiling, and other sources. Store in a dry location. 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.

#### 1.10 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

#### 1.11 WARRANTY

A. Special Warranty: Manufacturer agrees to repair or replace components of roofing system that fail in materials or workmanship within specified warranty period.

1. Special warranty includes roof membrane, base flashings, roof insulation, fasteners, cover boards, and other components of roofing system.

2. Warranty Period: 15 years from date of Substantial Completion.

B. Special Project Warranty: Submit roofing Installer's warranty, on warranty form at end of this Section, signed by Installer, covering the Work of this Section, including all components of roofing system such as roof membrane, base flashing, roof insulation, fasteners, cover boards, substrate boards, vapor retarders, roof pavers, and walkway products, for the following warranty period:

1. Warranty Period: One year Installation Warranty from date of Substantial Completion.

### PART 2 - PRODUCTS

#### 2.1 PERFORMANCE REQUIREMENTS

A. General Performance: Installed roofing system and flashings shall withstand specified uplift pressures, thermally induced movement, and exposure to weather without failure due to defective manufacture, fabrication, installation, or other defects in construction. Roof system and flashings shall remain watertight.

1. Accelerated Weathering: Roof membrane shall withstand 2000 hours of exposure when tested according to ASTM G152, ASTM G154, or ASTM G155.

2. Impact Resistance: Roof membrane shall resist impact damage when tested according to ASTM D3746, ASTM D4272, or the "Resistance to Foot Traffic Test" in FM Approvals 4470.

B. Material Compatibility: Roofing materials shall be compatible with one another and adjacent materials under conditions of service and application required, as demonstrated by roof membrane manufacturer based on testing and field experience.

C. FM Approvals' RoofNav Listing: Roof membrane, base flashings, and component materials shall comply with requirements in FM Approvals 4450 or FM Approvals 4470 as part of a roofing system, and shall be listed in FM Approvals' RoofNav for Class 1 or noncombustible construction, as applicable. Identify materials with FM Approvals Certification markings.

1. Fire/Windstorm Classification: Class 1A-60 .

2. Hail-Resistance Rating: FM Global Property Loss Prevention Data Sheet 1-34 MH

#### 2.2 THERMOPLASTIC POLYOLEFIN (TPO) ROOFING

A. TPO Sheet: ASTM D6878/D6878M, internally fabric- or scrim-reinforced, fabric-backed TPO sheet.

1. Manufacturers: Subject to compliance with requirements, available

manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Carlisle SynTec Incorporated.
- b. Firestone Building Products.
- c. GAF.
- d. Johns Manville; a Berkshire Hathaway company.

2. Source Limitations: Obtain components for roofing system from roof membrane manufacturer or manufacturers approved by roof membrane manufacturer.

3. Thickness: 60 mils , nominal.

4. Exposed Face Color: White

### 2.3 AUXILIARY ROOFING MATERIALS

A. General: Auxiliary materials recommended by roofing system manufacturer for intended use and compatible with other roofing components.

1. Adhesive and Sealants: Comply with VOC limits of authorities having jurisdiction.

B. Sheet Flashing: Manufacturer's standard unreinforced TPO sheet flashing, 55 mils thick, minimum, of same color as TPO sheet.

C. Prefabricated Pipe Flashings: As recommended by roof membrane manufacturer.

D. Roof Vents: As recommended by roof membrane manufacturer.

1. Size: Not less than 4-inch diameter.

E. Bonding Adhesive: Manufacturer's standard.

F. Slip Sheet: Manufacturer's standard, of thickness required for application.

G. Metal Termination Bars: Manufacturer's standard, predrilled stainless steel or aluminum bars, approximately 1 by 1/8 inch thick; with anchors.

H. Metal Battens: Manufacturer's standard, aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, prepunched.

I. Fasteners: Factory-coated steel fasteners and metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roofing components to substrate, and acceptable to roofing system manufacturer.

J. Miscellaneous Accessories: Provide pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, T-joint covers, lap sealants, termination reglets, and other accessories.

### 2.4 ROOF INSULATION

A. General: Preformed roof insulation boards manufactured or approved by TPO roof membrane manufacturer , approved for use in FM Approvals' RoofNav listed roof assemblies .

B. Polyisocyanurate Board Insulation: ASTM C1289, Type II, Class 1, Grade 2 , felt or glass-fiber mat facer on both major surfaces.

1. Manufacturers: Subject to compliance with requirements, available manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. Carlisle SynTec Incorporated.
- b. Firestone Building Products.
- c. GAF.

- d. Johns Manville; a Berkshire Hathaway company.
- 2. Compressive Strength: 20 psi .
- 3. Size: 48 by 48 inches .
- 4. Thickness:
  - a. Base Layer: 1-1/2 inches .
  - b. Upper Layer: Thickness to be coordinated with Product Manufacturer to meet minimum R-Value requirement of R-20ci per IECC 2009 .
    - 1) If, due to existing penetrations, curbs, etc. a R-value of R-20ci cannot be achieved without compromising the integrity of the roof drainage system, contractor shall propose maximum R-value able to be provided and obtain written permission from Owner PRIOR to submission of pricing.

## 2.5 INSULATION ACCESSORIES

- A. General: Roof insulation accessories recommended by insulation manufacturer for intended use and compatibility with other roofing system components.
- B. Fasteners: Factory-coated steel fasteners with metal or plastic plates complying with corrosion-resistance provisions in FM Approvals 4470, designed for fastening roof insulation to substrate, and acceptable to roofing system manufacturer.
- C. Insulation Adhesive: Insulation manufacturer's recommended adhesive formulated to attach roof insulation to substrate or to another insulation layer as follows:
  - 1. Modified asphaltic, asbestos-free, cold-applied adhesive.

## 2.6 WALKWAYS

- A. Flexible Walkways: Factory-formed, nonporous, heavy-duty, slip-resisting, surface-textured walkway pads or rolls, approximately 3/16 inch thick and acceptable to roofing system manufacturer.
  - 1. Size: Approximately 36 by 60 inches.
  - 2. Color: Contrasting with roof membrane.

# PART 3 - EXECUTION

## 3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements and other conditions affecting performance of the Work.
  - 1. Verify that roof openings and penetrations are in place, curbs are set and braced, and roof-drain bodies are securely clamped in place.
  - 2. Verify that wood blocking, curbs, and nailers are securely anchored to roof deck at penetrations and terminations and that nailers match thicknesses of insulation.
  - 3. Verify that surface plane flatness and fastening of steel roof deck complies with requirements in Section 053100 "Steel Decking."
- B. Proceed with installation only after unsatisfactory conditions have been corrected.

## 3.2 PREPARATION

- A. Clean substrate of dust, debris, moisture, and other substances detrimental to roofing system installation according to roofing system manufacturer's written instructions.



Remove sharp projections.

B. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.

### 3.3 INSTALLATION OF ROOFING, GENERAL

A. Install roofing system according to roofing system manufacturer's written instructions, FM Approvals' RoofNav listed roof assembly requirements, and FM Global Property Loss Prevention Data Sheet 1-29.

B. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of roofing system at end of workday or when rain is forecast. Remove and discard temporary seals before beginning Work on adjoining roofing.

### 3.4 INSTALLATION OF INSULATION

A. Coordinate installing roofing system components so insulation is not exposed to precipitation or left exposed at end of workday.

B. Comply with roofing system and roof insulation manufacturer's written instructions for installing roof insulation.

C. Installation Over Metal Decking:

1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows.

a. Locate end joints over crests of decking.

b. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.

c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.

d. Make joints between adjacent insulation boards not more than 1/4 inch in width.

e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

1) Trim insulation so that water flow is unrestricted.

f. Fill gaps exceeding 1/4 inch with insulation.

g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

h. Mechanically attach base layer of insulation using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to metal decks.

1) Fasten insulation according to requirements in FM Approvals' RoofNav for specified Windstorm Resistance Classification

2. Install upper layers of insulation and tapered insulation with joints of each layer offset not less than 12 inches from previous layer of insulation.

a. Staggered end joints within each layer not less than 24 inches in adjacent rows.

b. Install with long joints continuous and with end joints staggered not less

than 12 inches in adjacent rows.

c. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.

d. Make joints between adjacent insulation boards not more than 1/4 inch in width.

e. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

1) Trim insulation so that water flow is unrestricted.

f. Fill gaps exceeding 1/4 inch with insulation.

g. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

h. Loosely lay each layer of insulation units over substrate.

**D. Installation Over Decking:**

1. Install base layer of insulation with joints staggered not less than 24 inches in adjacent rows .

a. Where installing composite and noncomposite insulation in two or more layers, install noncomposite board insulation for bottom layer and intermediate layers, if applicable, and install composite board insulation for top layer.

b. Trim insulation neatly to fit around penetrations and projections, and to fit tight to intersecting sloping roof decks.

c. Make joints between adjacent insulation boards not more than 1/4 inch in width.

d. At internal roof drains, slope insulation to create a square drain sump with each side equal to the diameter of the drain bowl plus 24 inches.

1) Trim insulation so that water flow is unrestricted.

e. Fill gaps exceeding 1/4 inch with insulation.

f. Cut and fit insulation within 1/4 inch of nailers, projections, and penetrations.

2. Mechanically attach base layer of insulation using mechanical fasteners specifically designed and sized for fastening specified board-type roof insulation to decks.

a. Fasten insulation according to requirements in SPRI's Directory of Roof Assemblies for specified Wind Uplift Load Capacity.

### 3.5 INSTALLATION OF MECHANICALLY FASTENED ROOF MEMBRANE

A. Mechanically fasten roof membrane over area to receive roofing according to roofing system manufacturer's written instructions.

B. Unroll roof membrane and allow to relax before installing.

C. For in-splice attachment, install roof membrane with long dimension perpendicular to steel roof deck flutes.

D. Accurately align roof membrane, and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.

E. Mechanically fasten or adhere roof membrane securely at terminations, penetrations, and perimeter of roofing.

F. Apply roof membrane with side laps shingled with slope of roof deck where possible.

G. In-Seam Attachment: Secure one edge of TPO sheet using fastening plates or metal

battens centered within seam, and mechanically fasten TPO sheet to roof deck.

H. Seams: Clean seam areas, overlap roof membrane, and hot-air weld side and end laps of roof membrane and sheet flashings to ensure a watertight seam installation.

1. Test lap edges with probe to verify seam weld continuity. Apply lap sealant to seal cut edges of roof membrane and flashing sheet.

2. Verify field strength of seams a minimum of twice daily, and repair seam sample areas.

3. Repair tears, voids, and lapped seams in roof membrane that do not comply with requirements.

I. Spread sealant bed over deck-drain flange at roof drains, and securely seal roof membrane in place with clamping ring.

### 3.6 INSTALLATION OF WALKWAYS

A. Flexible Walkways:

1. Install flexible walkways at the following locations:

- a. Perimeter of each rooftop unit.

- b. Between each rooftop unit location, creating a continuous path connecting rooftop unit locations.

- c. Between each roof hatch and each rooftop unit location or path connecting rooftop unit locations.

- d. Top and bottom of each roof access ladder.

- e. Between each roof access ladder and each rooftop unit location or path connecting rooftop unit locations.

- f. As required by roof membrane manufacturer's warranty requirements.

2. Provide 6-inch clearance between adjoining pads.

3. Heat weld to substrate or adhere walkway products to substrate with compatible adhesive according to roofing system manufacturer's written instructions.

### 3.7 PROTECTING AND CLEANING

A. Protect roofing system from damage and wear during remainder of construction period. When remaining construction does not affect or endanger roofing system, inspect roofing system for deterioration and damage, describing its nature and extent in a written report, with copies to Architect and Owner.

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 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.

### 3.8 ROOFING INSTALLER'S WARRANTY

A. WHEREAS \_\_\_\_\_ of \_\_\_\_\_, herein called the "Roofing Installer," has performed roofing and associated work ("work") on the following project:

1. Owner: <Insert name of Owner>.
2. Address: <Insert address>.
3. Building Name/Type: <Insert information>.
4. Address: <Insert address>.
5. Area of Work: <Insert information>.
6. Acceptance Date: \_\_\_\_\_.
7. Warranty Period: <Insert time>.
8. Expiration Date: \_\_\_\_\_.

B. AND WHEREAS Roofing Installer has contracted (either directly with Owner or indirectly as a subcontractor) to warrant said work against leaks and faulty or defective materials and workmanship for designated Warranty Period,

C. NOW THEREFORE Roofing Installer hereby warrants, subject to terms and conditions herein set forth, that during Warranty Period Roofing Installer will, at Roofing Installer's own cost and expense, make or cause to be made such repairs to or replacements of said work as are necessary to correct faulty and defective work and as are necessary to maintain said work in a watertight condition.

D. This Warranty is made subject to the following terms and conditions:

1. Specifically excluded from this Warranty are damages to work and other parts of the building, and to building contents, caused by:
  - a. lightning;
  - b. peak gust wind speed exceeding <Insert mph>;
  - c. fire;
  - d. failure of roofing system substrate, including cracking, settlement, excessive deflection, deterioration, and decomposition;
  - e. faulty construction of parapet walls, copings, chimneys, skylights, vents, equipment supports, and other edge conditions and penetrations of the work;
  - f. vapor condensation on bottom of roofing; and
  - g. activity on roofing by others, including construction contractors, maintenance personnel, other persons, and animals, whether authorized or unauthorized by Owner.
2. When work has been damaged by any of foregoing causes, Warranty shall be null and void until such damage has been repaired by Roofing Installer and until cost and expense thereof have been paid by Owner or by another responsible party so designated.
3. Roofing Installer is responsible for damage to work covered by this Warranty but is not liable for consequential damages to building or building contents resulting from leaks or faults or defects of work.
4. During Warranty Period, if Owner allows alteration of work by anyone other than Roofing Installer, including cutting, patching, and maintenance in connection with penetrations, attachment of other work, and positioning of anything on roof, this Warranty shall become null and void on date of said alterations, but only to the extent said alterations affect work covered by this

Warranty. If Owner engages Roofing Installer to perform said alterations, Warranty shall not become null and void unless Roofing Installer, before starting said work, shall have notified Owner in writing, showing reasonable cause for claim, that said alterations would likely damage or deteriorate work, thereby reasonably justifying a limitation or termination of this Warranty.

5. During Warranty Period, if original use of roof is changed and it becomes used for, but was not originally specified for, a promenade, work deck, spray-cooled surface, flooded basin, or other use or service more severe than originally specified, this Warranty shall become null and void on date of said change, but only to the extent said change affects work covered by this Warranty.

6. Owner shall promptly notify Roofing Installer of observed, known, or suspected leaks, defects, or deterioration and shall afford reasonable opportunity for Roofing Installer to inspect work and to examine evidence of such leaks, defects, or deterioration.

7. This Warranty is recognized to be the only warranty of Roofing Installer on said work and shall not operate to restrict or cut off Owner from other remedies and resources lawfully available to Owner in cases of roofing failure. Specifically, this Warranty shall not operate to relieve Roofing Installer of responsibility for performance of original work according to requirements of the Contract Documents, regardless of whether Contract was a contract directly with Owner or a subcontract with Owner's General Contractor.

E. IN WITNESS THEREOF, this instrument has been duly executed this

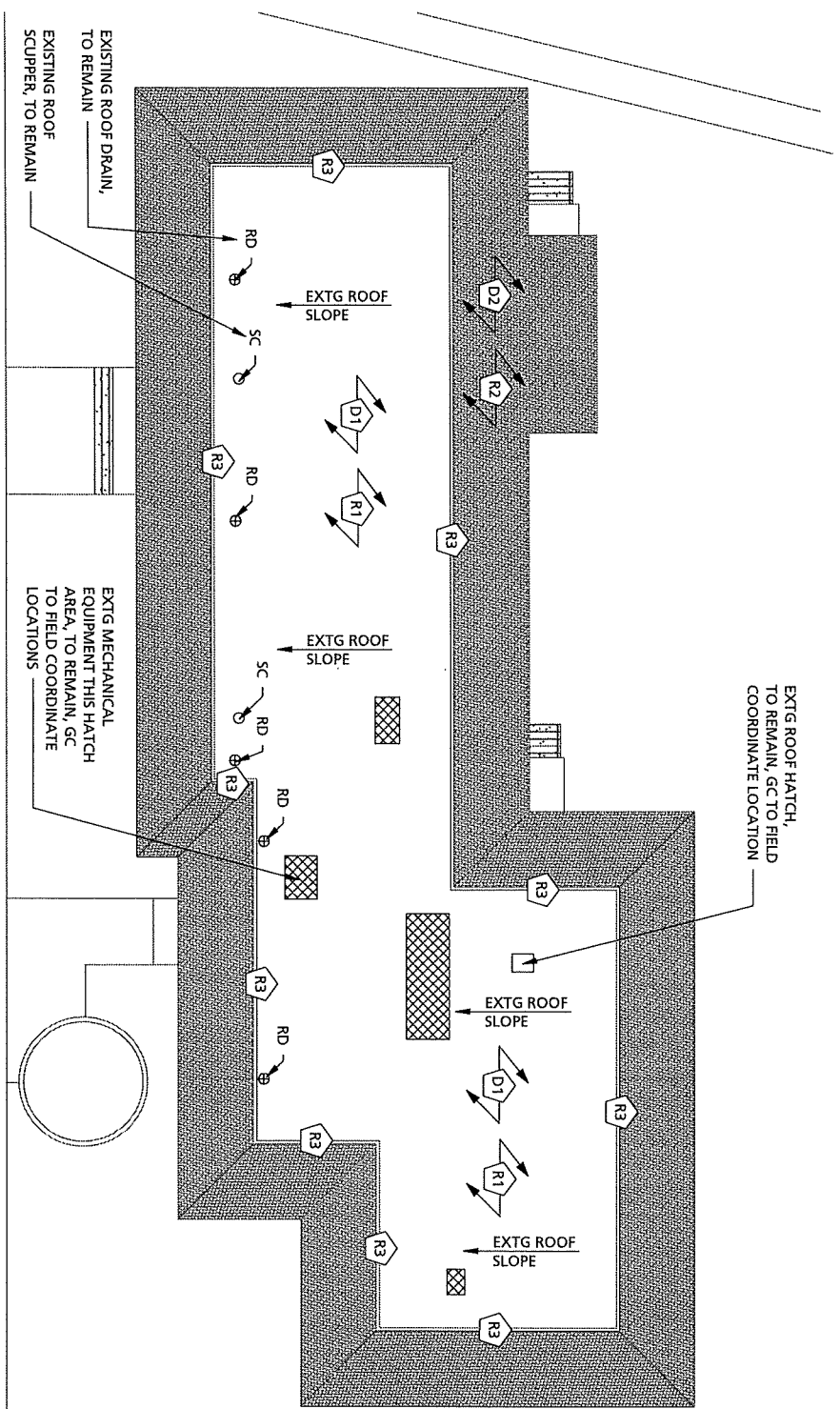
\_\_\_\_\_ day of \_\_\_\_\_, \_\_\_\_\_.

1. Authorized Signature: \_\_\_\_\_.

2. Name: \_\_\_\_\_.

3. Title: \_\_\_\_\_.

END OF SECTION 075423



EXTG ROOF HATCH, TO REMAIN, GC TO FIELD COORDINATE LOCATION

**DEMOLITION KEY NOTE LEGEND**

- D1** EXISTING TPO AND ROOF INSULATION TO BE REMOVED AND DISPOSED.
- D2** THIS HATCH AREA, EXISTING ASPHALT SHINGLES AND WATERPROOFING MEMBRANE TO BE REMOVED FROM EXISTING MANSARD ROOF AND REPLACED AS REQUIRED.

**RENOVATION KEY NOTE LEGEND**

- R1** NEW TPO ROOFING MEMBRANE, 60 MIL MIN, PER SPECIFICATIONS, AND NEW RIGID INSULATION, R-20d MIN PER IECC 2009 REQUIREMENT, TO BE INSTALLED. TPO MEMBRANE TO WRAP EXISTING PARAPET WALLS AND HVAC CURBS.
- R2** THIS HATCH AREA, NEW ASPHALT SHINGLES AND NEW WATERPROOFING MEMBRANE TO BE INSTALLED ON THE EXISTING MANSARD ROOF. COLOR AND STYLE OF SHINGLES TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.
- R3** PROVIDE NEW METAL FLASHING AND CORING, COLOR TO BE SELECTED BY ARCHITECT FROM MANUFACTURER'S FULL RANGE.

NOTE: DRAWING NOT TO SCALE

COLUMBIA HOUSING AUTHORITY - MAIN BUILDING ROOF RENO		
ROOF DEMO & RENOVATION PLAN		
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