

CONTRACT DOCUMENTS and SPECIFICATIONS

for

Spinnaker Recreation Center Roof Replacement

BID #04-21

Bid Proposal

Karen S. Conard, City Manager

City of Portsmouth, New Hampshire

Prepared by:

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Portsmouth, NH

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City of Portsmouth
Bid# 04-21
Spinnaker Recreation Center Roof Replacement

INVITATION TO BID

Sealed bid proposals, **plainly marked**, “**Spinnaker Recreation Center Roof Replacement Bid #04-21**” **on the outside of the mailing envelope as well as the sealed bid envelope**, addressed to the Finance/Purchasing Department, City Hall, 1 Junkins Avenue, Portsmouth, New Hampshire, 03801, will be accepted until **July 24th, 2020 at 2:00 p.m.** at which time all bids will be publicly opened and read aloud. A mandatory pre-bid meeting will be held **July 17, 2020 at 11:00 a.m.**, at the Spinnaker Fieldhouse 130 Spinnaker Way in Portsmouth.

This project consists of removal and replacement of roofing at the Spinnaker Recreation Facility in Portsmouth, NH. Specifically, the work includes removal and replacement of existing asphalt shingles, cedar shakes, and all damaged blocking, insulation and sheathing.

Work is intended to begin **August 1, 2020** and completion is expected by **October 1, 2020**. Liquidated damages shall be assessed at \$100.00 per day.

Specifications may be obtained from the City’s web site: <https://www.cityofportsmouth.com/finance/purchasing-bids-and-proposals>. Questions may be addressed by calling the Purchasing Coordinator at (603) 610-7227 or by email purchasing@cityofportsmouth.com

The City of Portsmouth reserves the right to reject any or all bids, to waive technical or legal deficiencies, to re-bid, and to accept any bid that it may deem to be in the best interest of the City.

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid.

INSTRUCTIONS TO BIDDERS

BIDDING REQUIREMENTS AND CONDITIONS

COVID-19 – PANDEMIC SPECIAL ATTENTION

Attendees of any pre-bid meeting, bid opening or other meeting will be required to wear masks and socially distance themselves while in any municipal building. Bidders are requested to send only a single representative to any public bid opening.

1. Special Notice to Bidders and Addenda

Appended to these instructions is a complete set of bidding and general contract forms. These forms may be detached and executed for the submittal of bids. The plans, specifications, and other documents designated in the proposal form will be considered as part of the proposal, whether attached or not.

The bidders must submit a statement of bidder's qualifications, if requested, subsequent to bid opening but prior to award.

Addenda to this bid document, if any, including written answers to questions, will be posted on the City of Portsmouth website at <http://www.cityofportsmouth.com/finance/purchasing.htm> under the project heading. Addenda and updates will NOT be sent directly to firms. Contractors submitting a bid should check the web site daily for addenda and updates after the release date. Firms should print out, sign and return addenda with the proposal. Failure to do so may result in disqualification.

2. Interpretation of Quantities in Bid Schedules

The quantities appearing in the bid schedule are approximate only and are prepared for the comparison of bids. Payment to the contractor will be made only for actual work performed and accepted in accordance with the contract. Any scheduled item of work to be done and materials to be furnished may be increased, decreased or omitted as hereinafter provided, and no claim for loss, anticipated profits or costs incurred in anticipation of work not ultimately performed will be allowed due to such increase or decrease.

3. Examination of Plans, Specifications and Site Work

The bidder is expected to examine carefully the site of the proposed work, the plans, technical specifications, supplemental specifications, special provisions and contract forms before submitting a proposal. The submission of a bid shall be considered conclusive evidence that the bidder has made such examination and is satisfied as to the conditions to be encountered in performing the work and as to the requirements of the contract. It will be conclusive evidence that the bidder has also investigated and is satisfied with the sources of supply for all materials.

Plans, surveys, measurements, dimensions, calculations, estimates and statements as to the condition under which the work is to be performed are believed to be correct, but the contractors must examine for themselves, as no allowance will be made for any errors or inaccuracies that maybe found therein.

4. Familiarity with Laws

The bidder is assumed to have made himself or herself familiar with all federal and state laws and all local by-laws, ordinances and regulations which in any manner affect those engaged or employed on the work or affect the materials or equipment used in the work or affect the conduct of the work, and the bidder, if awarded the contract, shall be obligated to perform the work in conformity with said laws, by-laws, ordinances and regulations notwithstanding its ignorance thereof. If the bidder shall discover any provision in the plans or specifications which is in conflict with any such law, by-law, ordinance or regulation the bidder shall forthwith report it to the engineer in writing.

5. Preparation of Proposal

- a) The bidder shall submit its proposal upon the forms furnished by the Owner. The bidder shall specify a lump sum price in figures, for each pay item for which a quantity is given and shall also show the products of the respective prices and quantities written in figures in the column provided for that purpose and the total amount of the proposal obtained by adding the amount of the several items. All words and figures shall be in ink or typed. If a unit price or a lump sum bid already entered by the bidder on the proposal form is to be altered it should be crossed out with ink, the new unit price or lump sum bid entered above or below it and initialed by the bidder, also with ink.
- b) The bidder's proposal must be signed with ink by the individual, by one or more general partners of a partnership, by one or more members or officers of each firm representing a joint venture; by one or more officers of a corporation, by one or more members (if member-managed) or managers (if manager-managed) of a limited liability company, or by an agent of the contractor legally qualified and acceptable to the owner. If the proposal is made by an individual, his or her name and post office address must be shown, by a partnership the name and post office address of each general and limited partner must be shown; as a joint venture, the name and post office address of each venturer must be shown; by a corporation, the name of the corporation and its business address must be shown, together with the name of the state in which it is incorporated, and the names, titles and business addresses of the president, secretary and treasurer.

6. Nonconforming Proposals

Proposals will be considered nonconforming and may be rejected in the Owner's sole discretion for any of the following reasons:

- If the proposal is on a form other than that furnished by the Owner, or if the form is altered or any portion thereof is detached;
- If there are unauthorized additions, conditional or altered bids, or irregularities of any kind which may tend to make the proposal or any portion thereof incomplete, indefinite or ambiguous as to its meaning; or
- If the bidder adds any provisions reserving the right to accept or reject an award, or to enter into a contract pursuant to an award.

7. Bid Bond/Proposal Guaranty

Each Bidder shall furnish a bid security in the amount of ten percent (10%) of the bid. The Bid Security may be in the form of a certified check drawn upon a bank within the State of New Hampshire or a bid bond executed by a surety company authorized to do business in the State of New Hampshire, made payable to the City of Portsmouth, N.H.

If a bid bond is used by the bidder it shall be:

- In a form satisfactory to the Owner;
- With a surety company licensed, authorized to do business in, and subject to the jurisdiction of the courts of the State of New Hampshire; and
- Conditioned upon the faithful performance by the principal of the agreements contained in the sub-bid or the general bid.

In the event any irregularities are contained in the proposal guaranty, the bidder will have four business days (not counting the day of opening) to correct any irregularities. The corrected guaranty must be received by 4:00 p.m. If irregularities are not corrected to the satisfaction of the Owner, the Owner, in its sole discretion, may reject the bid.

8. Delivery of Proposals

When sent by mail, the sealed proposal shall be addressed to the Owner at the address and in the care of the official in whose office the bids are to be received. All proposals shall be filed prior to the time and at the place specified in the invitation for bids. Proposals received after the time for opening of the bids will be returned to the bidder, unopened.

9. Withdrawal of Proposals

A bidder will be permitted to withdraw his or her proposal unopened after it has been submitted if the Owner receives a request for withdrawal in writing prior to the time specified for opening the proposals.

10. Public Opening of Proposals

Proposals will be opened and read publicly at the time and place indicated in the invitation for bids. Bidders, their authorized agents, and other interested parties are invited to be present.

11. Disqualification of Bidders

Any or all of the following reasons may be deemed by Owner in its sole discretion as being sufficient for the disqualification of a bidder and the rejection of his proposal:

- More than one proposal for the same work from an individual, firm, or corporation under the same or different name;
- Evidence of collusion among bidders;
- Failure to submit all required information requested in the bid specifications;
- Unqualified to complete the work as demonstrated by previous project experience and reference checks;
- Lack of competency or of adequate machinery, plant or other equipment, as revealed by the statement of bidders qualification or otherwise;
- Uncompleted work which, in the judgment of the owner, might hinder or prevent the prompt completion of additional work if awarded;
- Failure to pay, or satisfactorily settle, all bills due for labor and materials on former contracts;
- Default or unsatisfactory performance on previous contracts;
- Failure to be licensed by the State of New Hampshire to work on elevators; or
- Such disqualification would be in the best interests of the Owner.

12. Material Guaranty and Samples

Before any contract is awarded, the bidder may be required to furnish a complete statement of the origin, composition and manufacture of any or all materials to be used in the construction of the work, and the Owner may, in its sole discretion, reject the bid based on the contents of the statement or as a result of the failure of the bidder to submit the statement.

AWARD AND EXECUTION OF CONTRACT

1. Consideration of Proposals

a) After the proposals are opened and read, they will be compared on the basis of the total price for all sections of work to be charged to perform the work and any such additional considerations as may be identified in the bid documents. The results of such comparisons will be immediately available to the public. In case of a discrepancy between the prices written in words and those written figures, the prices written in words shall govern. In case of a discrepancy between the total shown in the proposal and that obtained by adding the products of the quantities of items and unit bid prices, the latter shall govern.

b) The Owner reserves the right to reject any or all proposals, to waive technicalities or to advertise for new proposals, if, in the sole discretion of the Owner, the best interest of the City of Portsmouth will be promoted thereby.

2. Award of Contract

Within 30 calendar days after the opening of proposals, if a contract is to be awarded, the award will be made to the lowest responsible and qualified bidder whose proposal complies with all the requirements prescribed. The successful bidder will be notified, in writing, mailed to the address on his or her proposal, that his or her bid has been accepted and that the bidder has been awarded the contract.

The award shall not be considered official until such time that a Purchase Order, fully executed contract or an award letter has been issued by the Finance Director. No presumption of award shall be made by the bidder until such documents are in hand. Verbal notification of award is not considered official. Any action by the bidder to assume otherwise is done so at his/her own risk and the City will not be held liable for any expense incurred by a bidder that has not received an official award.

Determination of the lowest bidder will be based on the Base bid, or the Base Bid with any combination of Add Alternates the City deems to be in its best interest, for the work described on the bid proposal form.

Contract award is dependent upon available funds.

3. Cancellation of Award

The Owner reserves the right to cancel the award of any contract at any time before the execution of such contract by all parties without any liability of the Owner.

4. Return of Proposal Guaranty

All proposal guaranties, except those of the three lowest bidders, will be returned upon request following the opening and checking of the proposals. The proposal guaranties of the three lowest bidders will be returned within ten days following the award of the contract if requested.

5. Contract Bond

At the time of the execution of the contract, the successful bidder shall furnish:

- Labor and materials payment bond in the sum equal to 100 percent of the contract amount.

At the time of project completion, the Owner may, in its sole discretion, permit the Contractor to substitute a maintenance bond in lieu of holding retainage for the entire guaranty period. If a bond is furnished it shall meet the following criteria:

- The bond shall be in an amount equal to 20 percent of the contract amount. Such bond shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the contractor. The guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

Each bond shall be: (1) in a form satisfactory to the Owner; (2) with a surety company licensed and authorized to do business and with a resident agent designated for services of process in the State of New Hampshire; and (3) conditioned upon the faithful performance by the principal of the agreements contained in the original bid. All premiums for the contract bonds are to be paid by the contractor.

6. Execution and Approval of Contract

The successful bidder is required to present all contract bonds, to provide proof of insurance, and to execute the contract within 10 days following receipt of the City's notification of acceptance of the bid. No contract shall be considered in effect until it has been fully executed by all parties.

7. Failure to Execute Contract

Failure to execute the contract and file an acceptable bond within 10 days after notification of acceptance of bid shall be just cause for the cancellation of the award and the forfeiture of the proposal guarantee which shall become the property of the Owner, not as a penalty, but in liquidation of damages sustained. Award may then be made to the next lowest responsible bidder, or the work may be re-advertised as the Owner may determine at its sole discretion.

PROPOSAL FORM

Spinnaker Recreation Center Roof Replacement

CITY OF PORTSMOUTH, N.H.

To the City of Portsmouth, New Hampshire, herein called the Owner.

The undersigned, as Bidder, herein referred to as singular and masculine declares as follows:

1. All interested in the Bid as Principals are named herein;
2. This bid is not made jointly, or in conjunction, cooperation or collusion with any other person, firm, corporation, or other legal entity;
3. No officer, agent or employee of the Owner is directly or indirectly interested in this Bid;
4. The bidder has carefully examined the sites of the proposed work and fully informed and satisfied himself as to the conditions there existing, the character and requirements of the proposed work, the difficulties attendant upon its execution and the accuracy of all estimated quantities stated in this Bid, and the bidder has carefully read and examined the Drawings, Agreement, Specifications and other Contract Documents therein referred to and knows and understands the terms and provisions thereof;
5. The bidder understands that the quantities of work calculated in the Bid or indicated on the Drawings or in the Specifications or other Contract Documents are approximate and are subject to increase or decrease or deletion as deemed necessary by the Portsmouth Engineer. Any such changes will not result in or be justification for any penalty or increase in contract prices; and agrees that, if the Bid is accepted the bidder will contract with the Owner, as provided in the Contract Documents, this Bid Form being part of said Contract Documents, and that the bidder will supply or perform all labor, services, plant, machinery, apparatus, appliances, tools, supplies and all other activities required by the Contract Documents in the manner and within the time therein set forth, and that the bidder will take in full payment therefore the following item prices; and
6. It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All other items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.
7. Provide an installed unit price for the following work items including materials and labor:

ITEM	QTY	UNIT COST	TOTAL COST
1. Remove and Dispose existing materials	LS	\$	
2. Polyiso Insulation	SQ	\$	
3. 2x4 sleepers	LF	\$	
4. 5/8" CDX sheathing	EA	\$	
5. Aluminum Drip Edge	LF	\$	
6. Ice & Water Shield	LF	\$	
7. Roofing Underlayment	SQ	\$	

8. Starter Shingle strip	LF	\$	
9. 20 year shingles	SQ	\$	
10. Hip and Ridge Vent	LF	\$	
11. Flashings/Boots	LS	\$	
12. Sealants/Adhesives	LS	\$	
13. Fasteners	LS	\$	
14. Air barrier	LF	\$	
15. Other		\$	

Hourly Labor rate for additional work: \$ _____

BASIS FOR AWARD	
This project will be bid by Lump Sum	
Remove and Replace Spinnaker roof per specifications.	
In Figures	\$ _____
In Words	_____ Dollars

To Bidder: It is the intention of this contract that the items listed above describe completely and thoroughly the entirety of the work as shown on the plans and as described in the specifications. All items required to accomplish the above items are considered to be subsidiary work, unless shown as a pay item.

The undersigned agrees that for extra work, if any, performed in accordance with the terms and provisions of the Contract Documents, the bidder will accept compensation as stipulated therein.

 DATE

 COMPANY

BY: _____

 SIGNATURE

 TITLE

 STREET ADDRESS, CITY, STATE, ZIPCODE, TELEPHONE NUMBER

The Bidder has received and acknowledged Addenda No. _____ through _____.

All Bids are to be submitted on this form and in a sealed envelope, plainly marked on the outside with the Bidder's name and address and the Project name as it appears at the top of the Proposal Form.

BID SECURITY BOND

(This format provided for convenience, actual Bid Bond is acceptable in lieu of, if compatible.)

KNOW ALL MEN BY THESE PRESENTS, that we the undersigned

_____, as Principal, and

_____, as Surety, are hereby

held and firmly bound unto _____

IN THE SUM OF _____

as liquidated damages for payment of which, well and truly to be made we hereby jointly and severally bind ourselves, our heirs, executors, administrators, successors and assigns.

The condition of this obligation is such that whereas the Principal has submitted to the

_____ A CERTAIN Bid attached hereto and hereby made a part hereof to enter into a contract in writing, hereinafter referred to as the "AGREEMENT" and or "CONTRACT", for

NOW THEREFORE,

- (a) If said Bid shall be rejected or withdrawn as provided in the INFORMATION FOR BIDDERS attached hereto or, in the alternative,
- (b) If said Bid shall be accepted and the Principal shall duly execute and deliver the form of AGREEMENT attached hereto and shall furnish the specified bonds for the faithful performance of the AGREEMENT and/or CONTRACT and for the payment for labor and materials furnished for the performance of the AGREEMENT and or CONTRACT,

then this obligation shall be void , otherwise it shall remain in full force and effect; it being expressly understood and agreed that the liability of the Surety for any and all claims hereunder in no event shall exceed the amount of this obligation.

BID SECURITY BOND (continued)

The Surety, for value received, hereby agrees that the obligation of said surety and its bond shall be in no way impaired or affected by any extensions of the time within such BID may be accepted, and said Surety does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the parties hereto have duly executed

this bond on the _____ day of _____, 20__.

(Name of Principal) L.S.

(SEAL)

BY _____

(Name of Surety)

BY _____

STATEMENT OF BIDDER'S QUALIFICATIONS

Note: This is a required submittal, fill out completely.

All questions must be answered and the data given must be clear and comprehensive. This statement must be notarized. Add separate sheets if necessary

1. Name of Bidder
2. Permanent Main Office Address
3. Form of Entity
4. When Organized
5. Where Organized
6. How many years have you been engaged in the contracting business under your present name; also state names and dates of previous firm names, if any.
7. How many years have you been certified to install by manufacturer of proposed shingles.
8. Contracts on hand; (schedule these, showing gross amount of each contract and the approximate anticipated dates of completion).
9. Have you ever failed to complete any work awarded to you? _____(no)_____(yes). If so, where and why?
10. Have you ever defaulted on a contract?
_____ (no)_____ (yes). If so, where and why?
11. Have you ever failed to complete a project in the time allotment according to the Contract Documents?
_____ (no)_____ (yes). If so, where and why?
12. List the most important contracts recently executed by your company, stating approximate cost for each, and the month and year completed.

13. List your major equipment available for this contract.

14. List your key personnel such as project superintendent and foremen available for this contract and their years of experience.

15. List the names, locations and contact information for previous **conical** roofing installations or replacements.

17. List any subcontractors whom you will use for the following. If self-performed, please state.

(The City reserves the right to approve subcontractors for this project)

- a. Demolition _____
- b. Insulation _____
- c. carpentry and framing _____
- d. Shingles _____

17. With what banks do you do business?

a. Do you grant the Owner permission to contact this/these institutions?
____(yes) ____ (no).

b. Latest Financial Statements, certified audited if available, prepared by an independent certified public accountant, may be requested by Owner. If requested, such statements must be provided within five (5) business days or the bid proposal will be rejected. Certified Audited Statement are preferred. Internal statements may be attached only if independent statements were not prepared.

Dated at _____ this _____ day of _____, 20__.

Name of Bidder

BY _____ TITLE _____

State of _____ County of _____

_____ being duly sworn, deposes and says that the bidder is
_____ of _____
(Name of Organization)

and answers to the foregoing questions and all statements contained therein are true and correct.

Sworn to before me this ____ day of _____, 20__.

Notary of Public

My Commission expires _____

CONTRACT AGREEMENT

Spinnaker Recreation Center Roof Replacement

THIS AGREEMENT made as of the ____ day of _____ in the year 2020, by and between the City of Portsmouth, New Hampshire (hereinafter called the Owner) and _____ hereinafter called the Contractor),

WITNESSETH; that the Owner and Contractor, in consideration of the mutual covenants hereinafter set forth, agree as follows:

ARTICLE I- Work - The Contractor shall perform all work as specified or indicated in the Contract Documents. The Contractor shall provide, at his expense, all labor, materials, equipment and incidentals as may be necessary for the expeditious and proper execution of the Project.

ARTICLE II - ENGINEER - The Director of Public Works or his authorized representative will act as Engineer in connection with completion of the Project in accordance with the Contract Documents.

ARTICLE III - CONTRACT TIME - Work will begin in accordance with the Notice to Proceed and work shall be completed within 90 days.

ARTICLE IV - CONTRACT PRICE - Owner shall pay Contractor for performance of the work in accordance with the Contract Documents as shown under item prices in the Bid Proposal.

ARTICLE V - PAYMENT - Partial payments will be made in accordance with the Contract Documents. Upon final acceptance of the work and settlement of all claims, Owner shall pay the Contractor the unpaid balance of the Contract Price, subject to additions and deductions provided for in the Contract Documents.

ARTICLE VI - RETAINAGE - To insure the proper performance of this Contract, the Owner shall retain certain amounts in the percentage of the Contract Price and for the time specified as provided in the Contract Documents.

ARTICLE VII - LIQUIDATED DAMAGES - In event the Contractor fails to successfully execute the work within the specified contract time the Owner shall assess the Contractor liquidated damages in the amount of **one hundred dollars (\$100)** for each calendar day beyond the specified completion date for each section of work. Liquidated damages shall be deducted from the Contract Price prior to final payment of the Contractor.

ARTICLE VIII – CONTRACT DOCUMENTS – The Contract Documents which comprise the contract between Owner and Contractor are attached hereto and made a part hereof and consist of the following:

- 8.1 This Agreement
- 8.2 Contractor’s Bid and Bonds
- 8.3 Notice of Intent to Award, Notice to Proceed
- 8.4 Instruction to Bidders
- 8.5 General Requirements, Control of Work, Temporary Facilities, Measurement and Payment, Technical Specifications
- 8.6 Insurance Requirements
- 8.7 Technical Specifications
- 8.8 Drawings
- 8.9 Special Provisions
- 8.10 Any modifications, including change orders, duly delivered after execution of this Agreement.

ARTICLE IX – TERMINATION FOR DEFAULT – Should contractor at any time refuse, neglect, or otherwise fail to supply a sufficient number or amount of properly skilled workers, materials, or equipment, or fail in any respect to prosecute the work with promptness and diligence, or fail to perform any of its obligations set forth in the Contract, Owner may, at its election, terminate the employment of Contractor, giving

CONTRACT AGREEMENT (continued)

notice to Contractor in writing of such election, and enter on the premises and take possession, for the purpose of completing the work included under this Agreement, of all the materials, tools and appliances belonging to Contractor, and to employ any other persons to finish the work and to provide the materials therefore at the expense of the Contractor.

ARTICLE X – INDEMNIFICATION OF OWNER – Contractor will indemnify Owner against all suits, claims, judgments, awards, loss, cost or expense (including without limitation attorneys fees) arising in any way out of the Contractor’s negligent performance or non-performance of its obligations under this Contract. Contractor will defend all such actions with counsel satisfactory to Owner at its own expense, including attorney’s fees, and will satisfy any judgment rendered against Owner in such action.

ARTICLE XI – PERMITS – The Contractor will secure at its own expense, all permits and consents required by law as necessary to perform the work and will give all notices and pay all fees and otherwise comply with all applicable City, State, and Federal laws, ordinances, rules and regulations.

ARTICLE XII – INSURANCE – The Contractor shall secure and maintain, until acceptance of the work, insurance with limits not less than those specified in the Contract.

ARTICLE XIII – MISCELLANEOUS –

- A. Neither Owner nor Contractor shall, without the prior written consent of the other, assign, sublet or delegate, in whole or in part, any of its rights or obligations under any of the Contract Documents; and, specifically not assign any monies due, or to become due, without the prior written consent of Owner.
- B. Owner and Contractor each binds himself, his partners, successors, assigns and legal representatives, to the other party hereto in respect to all covenants, agreements and obligations contained in the Contract Documents.
- C. The Contract Documents constitute the entire Agreement between Owner and Contractor and may only be altered amended or repealed by a duly executed written instrument.

- D. The laws of the State of New Hampshire shall govern this Contract without reference to the conflict of law principles thereof.
- E. Venue for any dispute shall be the Rockingham County Superior Court unless the parties otherwise agree.

IN WITNESS WHEREOF, the parties hereunto executed this
AGREEMENT the day and year first above written.

BIDDER:

BY: _____

TITLE: _____

CITY OF PORTSMOUTH, N.H.

BY: _____
Karen S. Conard

TITLE: City Manager

NOTICE OF INTENT TO AWARD

Date:

TO:

IN AS MUCH as you were the low responsible bidder for work entitled:

**Bid 04-21
Spinnaker Recreation Center Roof Replacement**

You are hereby notified that the City intends to award the aforesaid project to you for the base bid amount of \$_____

Immediately take the necessary steps to execute the Contract and to provide required bonds and proof of insurance within ten (10) calendar days from the date of this Notice.

The City reserves the right to revoke this Notice if you fail to take the necessary steps to execute this Contract.

City of Portsmouth
Portsmouth, New Hampshire

Judie Belanger,
Finance Director

NOTICE TO PROCEED

DATE: _____

PROJECT: **Spinnaker Recreation Center Roof Replacement**

TO: _____

YOU ARE HEREBY NOTIFIED TO COMMENCE WORK IN ACCORDANCE
WITH THE AGREEMENT DATED, ON: _____

WORK SHALL BE COMPLETED PRIOR TO: _____

CITY OF PORTSMOUTH, N.H.

BY: _____
Peter H. Rice, PE

TITLE: Public Works Director

ACCEPTANCE OF NOTICE

RECEIPT OF THE ABOVE NOTICE TO
PROCEED IS HEREBY ACKNOWLEDGED BY

This the _____ day of _____ 20__

By: _____

Title: _____

CHANGE ORDER

Change Order # _____

Date of Issuance: _____

Owner: CITY OF PORTSMOUTH, N.H

Contractor: _____

You are directed to make the following changes in the
Contract Documents:

Description:

Purpose of Change Order:

Attachments: _____

CHANGE IN CONTRACT PRICE

CHANGE IN CONTRACT TIME

Original Contract Price:
\$ _____

Original Completion Date: _____

Contract Price prior to this
Change Order:
\$ _____

Contract Time prior to this
Change Order: _____

Net Increase of
this Change Order:
\$ _____

Net Increase or Decrease of
this Change Order: _____

Contract Price with all
approved Change Orders:
\$ _____

Contract Time with all
approved Change Orders: _____

RECOMMENDED:

APPROVED:

APPROVED:

by _____

by _____

by _____

by _____

Public Works Director

City Finance

City Manager

Contractor

LABOR AND MATERIAL PAYMENT BOND

(This format provided for convenience, actual Labor and Material Bond is acceptable in lieu, if compatible)

Bond Number _____

KNOW ALL MEN BY THESE PRESENTS:

that _____

as Principal, hereinafter called Contractor, and _____ (Surety Company) a corporation organized and existing under the laws of the State of

_____ and authorized to do business in the State of New Hampshire hereinafter called Surety, are held and firmly bound unto the City of Portsmouth, N.H. Oblige, hereinafter called Owner, for the use and benefit of claimants as herein below defined, in the

amount of _____ Dollars (\$ _____), for the payment whereof Principal and Surety bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, Principal has by written agreement dated _____ entered into a

contract with Owner for _____ in accordance with drawings and specifications prepared by the Public Works Department, 680 Peverly Hill Road, Portsmouth, N.H. 03801 and the Community Development, 1 Junkins Avenue, Portsmouth, NH 03801, which contract is by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that the Principal shall promptly make payment to all claimants as hereinafter defined, for all labor and material used or reasonably required for use in the performance of the Contract and for the hire of all equipment, tools, and all other things contracted for or used in connection therewith, then this obligation shall be void, otherwise it shall remain in full force and effect, subject however, to the following conditions:

(1) A claimant is defined as one having a direct contract with the Principal or, with a subcontractor of the Principal for labor, material, equipment, or other things used or reasonably required for use in the performance of the Contract. "Labor and material" shall include but not be limited to that part of water, gas, power, light, heat, oil and gasoline, telephone service or rental of equipment applicable to the Contract.

(2) The above named Principal and Surety hereby jointly and severally agree with the Owner that every claimant as herein defined, who has not been paid in full before the expiration of a period of ninety (90) days after the date on which the last of such claimant's work or labor was done or performed, or materials were furnished by such a claimant, may sue on this bond for the use of such claimant, prosecute the suit by final judgment for such sum or sums as may be

LABOR AND MATERIAL PAYMENT BOND (continued)

justly due claimant, and have execution thereon. The Owner shall not be liable for the payment of any such suit or any costs or expenses of any such suit, and principal and surety shall jointly and severally indemnify, defend and hold the Owner harmless for any such suit, costs or expenses.

(3) No suit or action shall be commenced hereunder by any claimant:

(a) Unless Claimant, other than one having a direct contract with the Principal, shall have given notice to all the following:

The Principal, the Owner and the Surety above named, within six (6) calendar months after such claimant did or performed the last of the work or labor, or furnished the last of the materials for which said claim is made, stating with substantial accuracy the amount claimed and the name of the party to whom the materials were furnished, or for whom the work or labor was done or performed. Such notice shall be served by mailing the same by registered mail or certified mail, postage prepaid, in an envelope addressed to the Principal, Owner, and Surety, at any place where an office is regularly maintained for the transaction of business, or served in any manner in which legal process may be served in the State of New Hampshire save that such service need not be made by a public officer.

(b) After the expiration of one (1) year following the date on which Principal ceased all work on said contract, it being understood, however, that if any limitation embodied in this bond is prohibited by any law controlling the construction hereof, such limitation shall be deemed to be amended so as to be equal to the minimum period of limitation permitted by such law.

(c) Other than in a State court of competent jurisdiction in and for the county or other political subdivision of the State in which the project, or any part thereof, is situated, or in the United States District Court for the district in which the project, or any part thereof, is situated, and not elsewhere.

(4) The amount of this bond may be reduced by and to the extent of any payment of payments made in good faith hereunder, inclusive of the payment by Surety of mechanics' liens which may be filed on record against said improvement, whether or not claim for the amount of such lien by presented under and against this bond.

Signed and sealed this _____ day of _____, 20____. In the presence of:

(Witness) BY: _____
(Principal) (Seal)

(Surety Company)

(Witness) BY: _____
(Title) (Seal)

Note:

If the Principal (Contractor) is a partnership, the Bond should be signed by each of the partners.

If the Principal (Contractor) is a corporation, the Bond should be signed in its correct corporate name by its duly authorized Officer or Officers.

If this bond is signed on behalf of the Surety by an attorney-in-fact, there should be attached to it a duly certified copy of his Power of Attorney showing his authority to sign such Bonds.

There should be executed an appropriate number of counterparts of the bond corresponding to the number of counterparts of the Agreement.

MAINTENANCE BOND

At the Owner's election, a maintenance bond may be substituted for retainage at the completion of the project. If the Owner permits a maintenance bond, it shall be in the amount of Twenty **Percent (20%)** of the contract price with a corporate surety approved by the Owner. Such bond shall be provided at the time of Contract completion and shall guarantee the repair of all damage due to faulty materials or workmanship provided or done by the Contractor. This guarantee shall remain in effect for a period of one year after the date of final acceptance of the job by the Owner.

CONTRACTOR'S AFFIDAVIT

STATE OF _____:

COUNTY OF _____:

Before me, the undersigned, a _____
(Notary Public, Justice of the Peace)

in and for said County and State personally appeared, _____
(Individual, Partner, or duly authorized representative of Corporate)

who, being duly sworn, according to law deposes and says that the cost of labor, material, and equipment and outstanding claims and indebtedness of whatever nature arising out of the performance of the Contract between

CITY OF PORTSMOUTH, NEW HAMPSHIRE

and _____
(Contractor)

of _____

Dated: _____

has been paid in full for Construction of: **Spinnaker Recreation Center Roof Replacement**

(Individual, Partner, or
duly authorized representative of
Corporate Contractor)

Sworn to and subscribed
before me this _____ day
of _____ 20____

CONTRACTOR'S RELEASE

KNOW ALL MEN BY THESE PRESENTS that

_____ (Contractor) of _____, County
of _____ and State of

_____ does hereby acknowledge
that _____ (Contractor)

has on this day had, and received from the CITY OF PORTSMOUTH NEW HAMPSHIRE, final and
completed payment for the Construction of:

Spinnaker Recreation Center Roof Replacement

NOW THEREFORE, the said _____
(Contractor)

for myself, my heirs, executors, and administrators) (for itself, its successors and assigns) do/does by these presents remise, release, quit-claim and forever discharge the City of Portsmouth, New Hampshire, its successors and assigns, of and from all claims and demands arising from or in connection with the said Contract dated _____, and of and from all, and all manners of action and actions, cause and causes of action and actions, suits, debts, dues, duties, sum and sums of money, accounts, reckonings, bonds, bills, specifications, covenants, contracts, agreements, promises, variances, damages, judgments, extents, executions, claims and demand, whatsoever in law of equity, or otherwise, against the City of Portsmouth, New Hampshire, its successors and assigns, which (I, my heirs, executors, or administrators) (it, its successors and assigns) ever had, now have or which (I, my heirs, executors, or administrators) (it, its successors and assigns) hereafter can shall or may have, for, upon or by reason of any matter, cause, or thing whatsoever; from the beginning of record time to the date of these presents.

IN WITNESS WHEREOF,

Contractor:

By: _____

print name of witness: _____

Its Duly Authorized _____

Dated: _____

INSURANCE REQUIREMENTS

Insurance shall be in such form as will protect the Contractor from all claims and liabilities for damages for bodily injury, including accidental death, and for property damage, which may arise from operations under this contract whether such operation by himself or by anyone directly or indirectly employed by him.

AMOUNT OF INSURANCE

- A) Commercial General Liability:
Bodily injury or Property Damage - \$2,000,000
Per occurrence and general aggregate
- B) Automobile and Truck Liability:
Bodily Injury or Property Damage - \$2,000,000
Per occurrence and general aggregate

Additionally, the Contractor shall purchase and maintain the following types of insurance:

- A) Workers Comprehensive Insurance coverage for all people employed by the Contractor to perform work on this project. This insurance shall at a minimum meet the requirements of the most current laws of the State of New Hampshire.
- B) Contractual Liability Insurance coverage in the amounts specified above under Comprehensive General Liability.
- C) Product and Completed Operations coverage to be included in the amounts specified above under Comprehensive General Liability.
- D) Builder's Risk.

ADDITIONAL INSURED

All liability policies (including any excess policies used to meet coverage requirements) shall include the City of Portsmouth, New Hampshire as named Additional Insured.

- 1) The contractor's insurance shall be primary in the event of a loss.
- 2) The Additional Insured endorsement must include language specifically stating that the entity is to be covered for all activities performed by, or on behalf of, the contractor, including the City of Portsmouth's general supervision of the contractor.
- 3) City of Portsmouth shall be listed as a Certificate Holder. The City shall be identified as follows:

City of Portsmouth
Attn: Legal Department
1 Junkins Avenue
Portsmouth, NH 03801

GENERAL REQUIREMENTS

SCOPE OF WORK

1. INTENT OF CONTRACT

The intent of the Contract is to provide for the construction and completion in every detail of the work described. The Contractor shall furnish all labor, materials, equipment, tools, transportation and supplies required to complete the work in accordance with the terms of the Contract. The Contractor shall be required to conform to the intent of the plans and specifications. No extra claims shall be allowed for portions of the work not specifically addressed in the plans and specifications but required to produce a whole and complete project, such work will be considered subsidiary to the bid items.

2. INCIDENTAL WORK

Unless specifically excepted in the Bid or Technical Specifications, incidental work items for which separate payment is not measured includes, but is not limited to, the following items:

- a. Cleaning mechanical/machine room
- b. Daily clean up after job
- c. Signs
- d. Mobilization/Demobilization
- e. Restoration of property
- f. Cooperation with other contractors and utility companies.
- g. Steel and/or wood sheeting as required.
- h. Accessories and fasteners or components required to make items paid for under unit prices or lump sum items complete and functional.

3. ALTERATION OF PLANS OR OF CHARACTER OF WORK

The Owner reserves the right, without notice to Surety, to make such alterations of the plans or of the character of the work as may be necessary or desirable to complete fully and acceptably the proposed construction; provided that such alterations do not increase or decrease the contract cost. Within these cost limits, the alterations authorized in writing by the Owner shall not impair or affect any provisions of the Contract or bond and such increases or decreases of the quantities as a result from these alterations or deletions of certain items, shall not be the basis of claim for loss or for anticipated profits by the contractor. The contractor shall perform the work as altered at the contract unit price or prices.

4. EXTRA WORK ITEMS

Extra work shall be performed by the Contractor in accordance with the specifications and as directed, and will be paid for at a price as provided in the Contract documents or if such pay items are not applicable then at a price negotiated between the contractor and the Owner or at the unit bid price. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 15% (overhead & profit). Costs shall be substantiated by invoices and certified payroll. If the Owner determines that extra work is to be performed, a change order will be issued.

5. CHANGE ORDERS

The Owner reserves the right to issue a formal change order for any increase, decrease, deletion, or addition of work or any increase in contract time or price. The contractor shall be required to sign the change order and it shall be considered as part of the Contract documents.

6. FINAL CLEANING UP

Before acceptance of the work, the contractor shall remove from the site all machinery, equipment, surplus materials, rubbish, temporary utility connections, temporary structures, barricades and signs. All parts of the work shall be left in a neat and presentable condition. On all areas used or occupied by the contractor, regardless of the contract limits, the bidder shall clean-up all sites and storage grounds.

The items prescribed herein will not be paid for separately, but shall be paid for as part of the total contract price.

7. ERRORS AND INCONSISTENCY IN CONTRACT DOCUMENTS

Any provisions in any of the Contract Documents that may be in conflict with the paragraphs in these General Requirements shall be subject to the following order of precedence for interpretation.

1. Technical Specifications will govern General Requirements.
2. Plans and/or Shop Drawings will govern Technical Specifications, and General Requirements.

CONTROL OF WORK

1. AUTHORITY OF ENGINEER

(a) All work shall be done under supervision of the Engineer and to his satisfaction. The Engineer will decide all questions which may arise as to the quality and acceptability of materials furnished and work performed and as to the rate of progress of the work; all questions that may arise as to the interpretation of the plans and specifications; and all questions as to the acceptable fulfillment of the Contract by the Contractor.

(b) The Engineer will have the authority to suspend the work wholly or in part for such periods as he may deem necessary due to the failure of the Contractor to correct conditions unsafe for workers or the general public; for failure to carry out provisions of the Contract; for failure to carry out orders; for conditions considered unsuitable for the prosecution of the work, including unfit weather; or for any other condition or reason deemed to be in the public interest. The Contractor shall not be entitled to any additional payments arising out of any such suspensions.

(c) The Owner reserves the right to demand a certificate of compliance for a material or product used on the project. When the certificate of compliance is determined to be unacceptable to the Engineer, the Contractor may be required to provide engineering and testing services to guarantee that the material or product is suitable for use in the project, at its expense (see Sample of Certificate of Compliance).

2. PROTECTION AND RESTORATION OF PROPERTY AND LANDSCAPES

(a) The Contractor shall be responsible for all damage or injury to property of any character, during the prosecution of the work, resulting from any act, omission, neglect, or misconduct in his manner or method of executing the work, or at any time due to defective work or materials, and said responsibility will not be released until the project shall have been completed and accepted.

(b) When or where any direct or indirect damage or injury is done to public or private property by or on account of any act, omission, neglect, or misconduct in the execution of the work, or as a result of the failure to perform work by the Contractor, the Contractor shall restore, at its own expense, such property to a condition similar or equal to that existing before such damage or injury was done, by repairing rebuilding, or otherwise restoring as may be directed, or the Contractor shall make good such damage or injury in an acceptable manner.

(c) If the Contractor fails to repair, rebuild or otherwise restore such property as may be deemed necessary, the Owner, after 48 hours notice, may proceed to do so, and the cost thereof may be deducted from any money due or which may become due the Contractor under the contract.

(d) The Contractor shall use every precaution to prevent injury or damage to wires, poles, or other property of public utilities; trees, shrubbery, vegetation, and fences along and adjacent to the right-of-way, all underground structures such as pipes and conduits, within or outside of the right-of-way; and the Contractor shall protect and carefully preserve all property marks until an authorized agent has witnessed or otherwise referenced their location.

3. MAINTENANCE DURING CONSTRUCTION

The Contractor shall maintain the work during construction and until the project is accepted. This maintenance shall constitute continuous and effective work prosecuted day by day, with adequate equipment and workers to ensure that the structure is kept in satisfactory conditions at all times.

CONTROL OF WORK (continued)

4. SAFETY PRECAUTIONS

Upon commencement of work, the Contractor shall be responsible for initiating, maintaining and supervising all safety precautions necessary to ensure the safety of employees on the site, other persons who may be affected thereby, including the public, and other property at the site or adjacent thereto.

5. PERMITS

It will be the responsibility of the Contractor to obtain all permits required for this project, and for the operation of equipment in, or on, all city streets and public ways associated with this project.

6. BARRICADES, WARNING SIGNS AND TRAFFIC OFFICERS

(a) The Contractor shall provide, erect and maintain all necessary barricades, suitable and sufficient lights, danger signals, signs and other traffic control devices, and shall take all necessary precautions for the protection of the work and safety of Building Occupants and the public. Work Areas shall be protected by effective barricades and signage. Obstructions shall be illuminated during hours of darkness. Suitable warning signs shall be provided to control and direct traffic in a proper manner, as approved by the engineer.

(b) The Contractor will be held responsible for all damage to the work due to lack of adequate controlling devices.

The work prescribed herein will not be paid for separately but will be paid for as part of the Contract Price unless specifically appearing as a bid item.

TEMPORARY FACILITIES

1. STORAGE FACILITIES

(a) The Contractor shall not store materials or equipment in a public right-of-way beyond the needs of one working day. Equipment and materials shall be stored in an approved location.

(b) The Contractor shall protect all stored materials from damage by weather or accident and shall insure adequate drainage at and about the storage location.

(c) Prior to final acceptance of the work all temporary storage facilities and surplus stored materials shall be removed from the site.

2. SANITARY FACILITIES

The Contractor shall provide toilet facilities for the use of the workers employed on the work.

3. WATER FACILITIES

The Owner shall provide the Contractor with reasonable access to water facilities for construction operations.

4. TEMPORARY ELECTRICITY

The Owner shall provide the Contractor with reasonable access to electrical power necessary for construction operation at the site.

MEASUREMENT AND PAYMENT

1. MEASUREMENT OF QUANTITIES

(a) All work completed under the contract will be measured according to the United States standard measure.

(b) The method of measurement and computations to be used in determination of quantities of material furnished and of work performed under the contract will be those methods generally recognized as conforming to good engineering practice. Unless otherwise stated all quantities measured for payment shall be computed or adjusted for "in place" conditions.

(c) Structures will be measured according to lines shown on the plans or as ordered unless otherwise provided for elsewhere in the specifications.

(d) When material is weighed, the individual weight slips, which shall be furnished by the Contractor, for trucks, trailers, or distributors, shall show the following information: the date; the project; the material or commodity; the dealer or vendor; the Contractor or Subcontractor; the location of the scales; the vehicle registration number or other approved legible identification mark; the tare and net weights, with gross weights when applicable; and the weigher's signature or his signed initials.

(e) The right is reserved to weigh any truck, trailer, or distributor, at locations designated, before and after making deliveries to the project.

(f) The term "lump sum" when used as an item of payment will mean complete payment for the work described in the item.

(g) When a complete structure or structural unit (in effect, "lump sum" work) is specified as the unit of measurement, the unit will be construed to include all necessary fittings and accessories, so as to provide the item complete and functional. Except as may be otherwise provided, partial payments for lump sum items will be made approximately in proportion to the amount of the work completed on those items.

(h) Material wasted without authority will not be included in the final estimate.

2. SCOPE OF PAYMENT

(a) The Contractor shall receive and accept compensation provided for in the contract as full payment for furnishing all materials and for performing all work under the contract in a complete and acceptable manner and for all risk, loss, damage or expense of whatever character arising out of the nature of the work or the prosecution thereof.

(b) The Contractor shall be liable to the Owner for failure to repair, correct, renew or replace, at his own expense, all damage due or attributable to defects or imperfections in the construction which defects or imperfections may be discovered before or at the time of the final inspection and acceptance of the work.

(c) No monies, payable under the contract or any part thereof, shall become due or payable if the Owner so elects, until the Contractor shall satisfy the Owner that the Contractor has fully settled or paid all labor performed or furnished for all equipment hired, including trucks, for all materials used, and for fuels, lubricants, power tools, hardware and supplies purchased by the Contractor and used in carrying out said contract and for labor and parts furnished upon the order of said Contractor for the repair of equipment used in carrying out said contract; and the Owner, if he so elects, may pay any and all such bills, in whole or in part.

MEASUREMENT AND PAYMENT (continued)**3. PAYMENT PROCEDURES**

Submit Application for Payment after completion of Project closeout procedures with release of liens and supporting documentation. Include consent of surety to final payment and insurance certificates.

4. COMPENSATION FOR ALTERED QUANTITIES

(a) Except as provided for under the particular contract item, when the accepted quantities of work vary from the quantities in the bid schedule the Contractor shall accept as payment in full, so far as contract items are concerned, at the original contract unit prices for the accepted quantities of work done. No allowance will be made for any increased expense, loss of expected reimbursement, or loss of anticipated profits suffered or claimed by the Contractor resulting either directly from such alterations or indirectly from unbalanced allocation among the contract items of overhead expense on the part of the Bidder and subsequent loss of expected reimbursements therefore or from any other cause.

(b) Extra work performed will be paid for at the contract bid prices or at the price negotiated between the Owner and the Contractor if the item was not bid upon. If no agreement can be negotiated, the Contractor will accept as payment for extra work, cost plus 10% (overhead and profit). Costs shall be substantiated by invoices and certified payroll.

5. PARTIAL PAYMENTS

Partial payments will be made on a monthly basis during the contract period. From the total amount ascertained as payable, an amount equivalent to ten percent (10%) of the whole will be deducted and retained by the Owner until such time as the work is 50 % complete at which time retainage will be reduced to 5%.

6. FINAL ACCEPTANCE

Upon due notice from the Contractor of presumptive completion of the entire project, the Owner or City Engineer will make an inspection. If all construction provided for and contemplated by the contract is found complete to his satisfaction, this inspection shall constitute the final inspection and the Owner or City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of the final inspection.

If, however, the City Engineer's inspection discloses any work in whole or in part, as being unsatisfactory, the Engineer will give the Contractor the necessary instructions for correction of such work, and the Contractor shall immediately comply with and execute such instructions. Upon correction of the work, another inspection will be made which shall constitute the final inspection provided the work has been satisfactorily completed. In such event, the City Engineer will make the final acceptance and notify the Contractor in writing of this acceptance as of the date of final inspection.

7. ACCEPTANCE AND FINAL PAYMENT

(a) When the project has been accepted and upon submission by the Contractor of all required reports, completed forms and certifications, the Owner will review the final estimate of the quantities of the various classes of work performed. The Contractor may be required to certify that all bills for labor and material used under this contract have been paid.

(b) The Contractor shall file with the Owner any claim that the Contractor may have regarding the final estimate at the same time the Contractor submits the final estimate. Failure to do so shall be a waiver of all such claims and shall be considered as acceptance of the final estimate. From the total amount ascertained as payable, an amount equal to two percent (2%) of the whole will be deducted and retained by the Owner for the guaranty period. This retainage may be waived, at the discretion of the City, provided the required Maintenance Bond has been posted. After approval of the final estimate by the Owner, the Contractor will be paid the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the contract.

MEASUREMENT AND PAYMENT (continued)

(c) All prior partial estimates and payments shall be subject to correction in the final estimate and payment.

8. GENERAL GUARANTY AND WARRANTY OF TITLE

(a) Neither the final certification of payment nor any provision in the contract nor partial or entire use of the improvements embraced in this Contract by the Owner or the public shall constitute an acceptance of work not done in accordance with the Contract or relieve the Contractor of liability in respect to any express or implied warranties or responsibility for faulty materials or workmanship. The Contractor shall promptly remedy any defects in the work and pay for any damage to other work resulting therefrom which shall appear within a period of five (5) years from the date of final acceptance of the work. The Owner will give notice of defective materials and work with reasonable promptness.

(b) No material, supplies or equipment to be installed or furnished under this Contract shall be purchased subject to any chattel mortgage or under a conditional sale, lease purchase or other agreement by which an interest therein or in any part thereof is retained by the Seller or supplier. The Contractor shall warrant good title to all materials, supplies and equipment installed or incorporated in the work and upon completion of all work, shall deliver the same together with all improvements and appurtenances constructed or placed thereon by him to the Owner free from any claims, liens or charges. Neither the Contractor nor any person, firm or corporation furnishing any material or labor for any work covered by this Contract shall have the right to a lien upon any improvements or appurtenances thereon.

Nothing contained in this paragraph, however, shall defeat or impair the right of persons furnishing materials or labor to recover under any bond given by the Contractor for their protection or any rights under any law permitting such persons to look to funds due the Contractor in the hands of the Owner. The provisions of this paragraph shall be inserted in all subcontractors and material contracts and notice of its provisions shall be given to all persons furnishing materials for the work when no formal contract is entered into for such materials.

(c) At completion of the project, the Contractor to provide to the Owner written guarantee of five (5) year Workmanship warranty and a ten (30) year Manufacturer's warranty.

(d) Upon completion and acceptance of all closeout requirements including warranties, the Owner will release all but 2% of retained funds which will be released one year after final acceptance.

9. NO WAIVER OF LEGAL RIGHTS

(a) Upon completion of the work, the Owner will expeditiously make final inspection and notify the Contractor of acceptance. Such final acceptance, however, shall not preclude or stop the Owner from correcting any measurement, estimate, or certificate made before or after completion of the work, nor shall the Owner be precluded or be stopped from recovering from the Contractor or his Surety, or both, such overpayment as it may sustain by failure on the part of the Contractor to fulfill his obligations under the contract. A waiver on the part of the Owner of any breach of any part of the contract shall not be held to be a waiver of any other or subsequent breach.

(b) The Contractor, without prejudice to the Contract shall be liable to the terms of the Contract, shall be liable to the Owner for latent defects, fraud or such gross mistakes as may amount to fraud, and as regards the Owner's right under any warranty or guaranty.

10. TERMINATION OF CONTRACTOR'S RESPONSIBILITY

The termination of the contractor's responsibility shall occur whenever the improvement provided for by the Contract shall have been completely performed on the part of the Contractor and all parts of the work have been released from further obligations except as set forth in his bond and as provided in Section 8 above.

SHOP DRAWINGS

Shop Drawings for this project shall be submitted under the following conditions:

1. The Contractor shall submit working and detail drawings, well in advance of the work, to the Engineer for review.
2. The Contractor's drawings shall consist of shop detail, erection and other working plans showing dimensions, sizes and quality of material, details and other information necessary for the complete fabrication and erection of the pertinent work.
3. The Contractor shall submit three (3) sets of drawings to the Engineer.
4. Prior to the approval of the drawings, any work done or materials ordered for the work involved shall be at the Contractor's risk.
5. One (1) set of the drawings will be returned to the Contractor approved or marked with corrections to be made. After approval has been given, the Contractor shall supply the Engineer with two sets of the revised detail working drawings.
6. The Engineer's approval of the Contractor's working drawings will not relieve the Contractor from responsibility for errors in dimensions or for incorrect fabrication processes, or from responsibility to complete the contract work.

- - - END OF SECTION - - -

TECHNICAL SPECIFICATIONS

- 011000 SUMMARY
- 013000 ADMINISTRATIVE REQUIREMENTS
- 016000 PRODUCT REQUIREMENTS
- 017000 EXECUTION & CLOSEOUT REQUIREMENTS
- 024119 SELECTIVE STRUCTURE DEMOLITION
- 061053 MISCELLANEOUS ROUGH CARPENTRY
- 061600 SHEATHING
- 070150 PREPARATION FOR RE-ROOFING
- 072100 THERMAL INSULATION
- 073113 ASPHALT SHINGLE ROOFING SYSTEMS
- 076200 SHEET METAL FLASHING AND TRIM

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 DEMOLITION

- A. Remove and dispose of all existing asphalt and cedar shingles.
 - 1. On the upper west end conical roof section, remove all defective materials to the tongue and groove decking.
- B. Remove only what can be covered again at the end of the work day.

1.2 REBUILD ROOF ASSEMBLY

- A. Rebuild new roof assembly to match adjacent existing assembly depth where needed.
- B. Install the following in order:
 - 1. A continuous 6 mil air barrier
 - 2. insulation
 - 3. air space
 - 4. sheathing
- C. Install 20 year asphalt shingle roof system over new air barrier, insulation and sheathing per manufacturers specifications.
- D. Materials will be installed to manufacturer's direction, and meet all local & state building codes and requirements.

1.2 WORK RESTRICTIONS

- A. Owner will occupy premises during construction. Clean up work areas and return to a useable condition at the end of each work period.
- B. During construction, Contractor will have limited use of area indicated as follows:
 - 1. All work will be done between 7:00a.m.and 6:00 p.m., Monday to Friday. Weekend work must be formally requested, authorized by Owner in advance of any work.
 - 2. All work shall create minimal disruptions, if any, to occupants in the building during time of construction.
- C. Provide proper Federal, State, and local safety measures during installation of all components and handling of material.

1.3 WORK IN OTHER DIVISIONS AND BY OTHER CONTRACTORS

- A. The Owner shall provide for coordination of the activities of the Owner's own forces and of each separate contractor with the Work of the Contractor, who shall cooperate with them. The Contractor shall participate with other separate contractors and the Owner in reviewing their construction schedules. The Contractor shall make any revisions to the construction schedule deemed necessary after a joint review and mutual agreement.
- B. If part of the Contractor's Work depends for proper execution or results upon construction or operations by the Owner or a separate contractor, the Contractor shall, prior to proceeding with that portion of the Work, promptly report to the Owner apparent discrepancies or defects in such construction that would render it unsuitable for such proper execution and results. Failure of the Contractor to so report shall constitute an acknowledgment that the Owner's or separate

contractor's completed or partially completed construction is fit and proper to receive the Contractor's Work, except as to defects not then reasonably discovered.

END OF SECTION 011000

SECTION 013000 - ADMINISTRATIVE REQUIREMENTS

PART 1- GENERAL

A. PROJECT MANAGEMENT AND COORDINATION

- A. Conduct preconstruction meeting onsite, prior to commencement of Project.
- B. Schedule and conduct progress meetings with Owner at Project site as needed, or as requested by Owner. Required attendance of each subcontractor or other entity concerned with current progress or involved with planning or coordination of future activities.

B. 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. Identify deviations from the Contract Documents.
 - 3. Submit three (3) copies of each submittal.
- B. Include the following information on each submittal:
 - 1. Project name.
 - 2. Date.
 - 3. Name and address of Contractor.
 - 4. Name and address of subcontractor or supplier.
- C. Owner will review each action submittal, mark as appropriate to indicate action taken, and return copies less those retained. Compliance with specified requirements remains Contractor's responsibility.
- D. Construction Schedule Submittal Procedure:
 - 1. Submit schedule within 10 days after date established for Commencement of the Work.
 - 2. Distribute copies to Owner 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. Manufacturer's written recommendations, product specifications, & installation instructions, indicating compliance with specified standards and requirements.
 - 2. Notation of coordination requirements.
- B. Samples: Submit Samples for review of kind, color, pattern, and texture and for a comparison of these characteristics between submittal and actual component as delivered and installed. Include name of manufacturer and product name on label.

2.2 INFORMATION SUBMITTALS

Product Certificates: Prepare written statements on manufacturer's letterhead certifying that product complies with requirements.

END OF SECTION 013000

SECTION 016000 - 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 after award of the Contract.
 - 1. Submit three (3) copies of each request for product substitution.
 - 2. Submit requests within 10 days after signing the Contract.
 - 3. 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.
 - 4. 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 any proposed changes in the Contract Sum or the Contract Time should the substitution be accepted.
- C. Comparable Product Submittal:
 - 1. Submit three (3) copies of each request for approval of products as comparable to basis-of-design products. 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 products on Shop Drawings or other submittals.
 - 2. Identify product to be replaced and provide complete documentation showing compliance of proposed product with applicable requirements. Include a full comparison with the specified product.
- D. 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.

PRODUCTS

1.2 PRODUCT OPTIONS

- A. Provide products that comply with the Contract Documents, are undamaged, and are new at the time of installation.
- B. Provide products complete with accessories, trim, finish, and other devices and components needed for a complete installation and the intended use and effect.
- C. Unless otherwise indicated, Owner will select color, pattern, and texture of each product from manufacturer's full range of options that includes both standard and premium items.

PART 2 - EXECUTION (Not Applicable)

END OF SECTION 016000

SECTION 017000 - EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL

1.1 CLOSEOUT SUBMITTALS

A. Record Drawings:

1. Maintain a set of shop drawing prints of the as Record Drawings. Mark to show actual installation where installation varies from that shown originally.
2. Identify and date each Record Drawing; include the designation "PROJECT RECORD DRAWING" in a prominent location.

B. Operation and Maintenance Data: Submit two (2) copies of manual. Organize data into three-ring binders with identification on front and spine of each binder, and envelopes for folded drawings. Include the following:

1. Manufacturer's operation and maintenance documentation.
2. Maintenance and service schedules.
3. Maintenance service contracts.
4. Emergency instructions.
5. Spare parts list.
6. Wiring diagrams.
7. Copies of warranties.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Examine substrates and conditions for compliance with manufacturer's written requirements including, but not limited to, surfaces that are sound, level, plumb, smooth, clean, and free of deleterious substances; substrates within installation tolerances; and application conditions within environmental limits. Proceed with installation only after unsatisfactory conditions have been corrected.
- B. Take field measurements as required to fit the Work properly. Where fabricated products are to be fitted to other construction, verify dimensions by field measurement before fabrication and, when possible, allow for fitting and trimming during installation.

3.2 CUTTING AND PATCHING

- A. Do not cut structural members or operational elements without prior written approval of Owner.

- B. Fabricate and assemble structural steel in shop to greatest extent possible.
- C. Where existing services/systems are required to be removed, relocated, or abandoned, bypass such services/systems before cutting to prevent interruption to occupied areas.
- D. Patch with durable seams that are as invisible as possible. Provide materials and comply with installation requirements specified in other Sections.

3.3 ROOF DEMOLITION PROTECTION

- A. Protect building interior from weather at all times. Do not remove any more roofing than can be covered at the end of the workday.

INSTALLATION

- A. Comply with manufacturer's written instructions for installation. Anchor each product securely in place, accurately located and aligned with other portions of the Work. Clean exposed surfaces and protect from damage.
- B. Clean Project site and work areas daily, including common areas.

3.4 FINAL CLEANING

Complete the following cleaning operations before requesting inspection for certification of Final Acceptance:

- A. Remove labels that are not permanent.
- B. Clean exposed finishes to a dust-free condition, free of stains, films, and foreign substances.
- C. Vacuum carpeted surfaces and wax resilient flooring.
- D. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication.
- E. Clean plumbing & light fixtures.
- F. Clean Project site, yard, and grounds, in areas disturbed by construction activities. Sweep paved areas; remove stains, spills, and foreign deposits.

3.5 CLOSEOUT PROCEDURES

- A. Final Acceptance: Before requesting Final Acceptance inspection, complete the following:
 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
 2. Advise Owner of pending insurance changeover requirements.
 3. Submit specific warranties, maintenance service agreements, and similar documents.
 4. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
 5. Submit Record Drawings, operation and maintenance manuals, and similar final record information.

6. Deliver tools, spare parts, extra materials, and similar items.
 7. Make final changeover of permanent locks and deliver keys to Owner.
 8. Complete startup testing of systems.
 9. Remove temporary facilities and controls.
 10. Submit changeover information related to Owner's occupancy, use, operation, and maintenance.
 11. Complete final cleaning requirements, including touchup painting.
 12. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Submit a written request for inspection for Final Acceptance. On receipt of request, Owner will proceed with inspection or advise Contractor of unfulfilled requirements. Owner will prepare a certificate of Final Acceptance after inspection or will advise Contractor of items that must be completed or corrected before certificate will be issued.
- C. Submit request for re-inspection when the Work identified in previous inspections as incomplete is completed or corrected. On receipt of request, Owner will proceed with inspection or advise Contractor of unfulfilled requirements that must be completed or corrected before final invoice will be processed.

3.6 DEMONSTRATION AND TRAINING

Engage qualified instructors to instruct Owner's personnel to adjust, operate, and maintain systems, subsystems, and equipment not part of a system. Include a detailed review of the following: Include instruction for basis of system design and operational requirements, review of documentation, emergency procedures, operations, adjustments, troubleshooting, maintenance, and repairs.

END OF SECTION 017000

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

- B. Remove and dispose of all asphalt shingles, cedar shakes and horizontal nailers.
- C. Remove and dispose of failed subassembly and insulation where encountered.

1.2 SECTION REQUIREMENTS

- A. Comply with EPA regulations and hauling and disposal regulations of authorities having jurisdiction.
- B. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.

PART 2 - PRODUCTS (Not Applicable)

PART 3 - EXECUTION

3.1 DEMOLITION

- A. Maintain services/systems indicated to remain and protect them against damage during selective demolition operations. Before proceeding with demolition, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of the building.
- B. Locate, identify, shut off, disconnect, and cap off utility services and mechanical/electrical systems serving areas to be selectively demolished. Owner to be notified and assist in coordination of such actions.
- C. Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
- D. Provide and maintain shoring, bracing, and structural supports as required to preserve stability and prevent movement, settlement, or collapse of construction and finishes to remain or construction being demolished.
- E. Provide temporary weather protection to prevent water leakage and damage to structure and interior areas.
- F. Protect walls, ceilings, floors, and other existing finish work that are to remain. Erect and maintain dustproof partitions. Cover and protect furniture, furnishings, and equipment that have not been removed.
- G. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction.
- H. Promptly remove demolished materials from Owner's property and legally dispose of them. Do not burn demolished materials. This includes any hazardous materials requiring disposal, encountered during this project.

- I. Welding and torch cutting within building only allowed with prior Owner approval, and properly implemented exhaust and ventilation.
- J. Provide proper Federal, State, and local safety measures and work space requirements during installation of all elevator components and handling of material.

SECTION 061053 - MISCELLANEOUS ROUGH CARPENTRY

PART 1 - GENERAL

A. SECTION REQUIREMENTS

- A. For defective roof assembly members that are to be replaced.
- B. Submittals: ICC-ES evaluation reports for treated wood.

PART 2 - PRODUCTS

A. WOOD PRODUCTS, GENERAL

- A. Lumber: Provide dressed lumber, S4S, marked with grade stamp of inspection agency.

B. TREATED MATERIALS

- A. Preservative-Treated Materials: AWPA U1; Use Category UC3b for exterior construction not in contact with the ground.

C. LUMBER

- A. Miscellaneous Dimension Lumber: Construction, or No. 2 grade with 19 percent maximum moisture content of any species. Provide for nailers, blocking, and similar members.
- B. Concealed Boards: Eastern softwoods, No. 3 Common: NELMA with 19 percent maximum moisture content.

D. FASTENERS

- A. Fasteners: Size and type indicated. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
 - 1. Power-Driven Fasteners: CABO NER-272.

PART 3 - EXECUTION

A. INSTALLATION

- A. For conical roof, maintain minimum 5 SF free space for ventilation where 1 1/2" spacers converge at the peak
- B. Set miscellaneous rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Locate nailers, blocking, and similar supports to comply with requirements for attaching other construction.
- C. Securely attach miscellaneous rough carpentry to substrates, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Table 2304.9.1, "Fastening Schedule," in the IBC.

SECTION 061600 - SHEATHING

PART 1 - GENERAL

1.1 SECTION REQUIREMENTS

A. Submittals:

1. ICC-ES evaluation reports for Composite Nail Base Insulated Roof Sheathing.
2. ICC-ES evaluation reports for bendable plywood.

B. WOOD PANEL PRODUCTS, GENERAL

- A. Plywood: DOC PS 1.

C. ROOF SHEATHING

- A. Plywood Roof Sheathing: **Exposure 1, Structural I** sheathing.
- B. Thickness: 19/32”
1. Conical roof sheathing may be applied in two layers to facilitate curves.
- C. Composite Nail Base Insulated Roof Sheathing: Polyisocyanurate foam with oriented strand board laminated to one face complying with ASTM C 1289, Type V.

D. MISCELLANEOUS PRODUCTS

- A. Fasteners: Size and type indicated.
1. For roof sheathing, provide fasteners **with hot-dip zinc coating complying with ASTM A 153/A 153M.**
 2. Power-Driven Fasteners: CABO NER-272.
- B. Adhesives for Field Gluing Panels to Framing: APA AFG-01.

PART 2 - EXECUTION

A. INSTALLATION

- A. Securely attach to substrates, complying with the following:
1. CABO NER-272 for power-driven fasteners.
 2. **Table 2304.9.1, "Fastening Schedule," in the IBC.**
- B. Fastening Methods:
1. Nail roof sheathing to wood framing. Do not use staples.

END OF SECTION 061600

SECTION 070150- PREPARATION FOR RE-ROOFING

PART 1 - GENERAL

A. SUMMARY

- A. Remove and dispose of all existing asphalt shingles and cedar shakes.
 - 1. At west end conical roof, remove all damaged/defective materials to the tongue and groove ceiling.
- B. Construct mockup of new roof assembly for approval by Owner to assure continuity of sheathing on the same plane and tight to the fascia at the eaves.

B. SECTION REQUIREMENTS

- A. Submittals: Product Data.
- B. Field Conditions: Owner will occupy portions of building immediately below reroofing area. Conduct reroofing so Owner's operations are not disrupted. Provide Owner with not less than 24 hours' notice of activities that may affect Owner's operations.
- C. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities.

PART 2 - PRODUCTS

A. MATERIALS

- A. Use infill materials matching existing roofing system materials unless otherwise indicated.
- B. Fasteners: Factory-coated steel fasteners, **No. 12**, and metal or plastic plates listed in FM Global's "Approval Guide," and acceptable to new roofing system manufacturer.
- C. General: Use auxiliary reroofing preparation materials recommended by roofing system manufacturer.

PART 3 - EXECUTION

A. PREPARATION

- A. Protect existing roofing system that is not to be reroofed.
- B. Coordinate with Owner to shut down air-intake equipment in the vicinity of the Work.
- C. Prevent debris from entering or blocking flat roof drains.
 - 1. Maintain roof gutters and downspouts in functioning condition.

B. ROOF TEAR-OFF

- A. Do not tear off more roof area than can be protected at the end of the day.
- B. Partial Roof Tear-Off: Where roof assembly is to remain, remove existing asphalt shingles and cedar shakes and underlayment, leaving nailers for cedar shakes.
- C. Full Roof Tear-Off: Remove existing roofing, nailers, insulation and components down to the tongue and groove deck.

C. DECK PREPARATION

- A. Verify that substrate is visibly dry and free of moisture.
- B. If broken or loose fasteners are observed, or if deck appears or feels inadequately attached, immediately notify Owner. Do not proceed with installation until directed by Owner.
- C. If tongue and groove deck surface is unsuitable for receiving new roofing system or if structural integrity of deck is suspect, immediately notify Owner. Do not proceed with installation until directed by Owner.

D. INFILL MATERIALS INSTALLATION

- A. Immediately after roof tear-off and, if needed, inspection and repair of deck, fill in tear-off areas to match existing roofing system construction.

E. ROOF RE-COVER PREPARATION

- A. Remove blisters, ridges, buckles, and other substrate irregularities from existing roofing that inhibit new roofing from conforming to substrate.
 - 1. Remove materials that are wet or damp.
 - 2. Provide additional uplift securement for existing roofing system with new screws and plates applied to each roof zone at the following densities:
Perimeters of roof, one fastener for each framing member. Width of perimeter zone of roof is 12".

F. BASE FLASHING REMOVAL

- A. Remove existing base flashings. Clean substrates of contaminants, such as asphalt, sheet materials, dirt, and debris.
- B. Do not damage metal counterflashings that are to remain. Replace metal counterflashings damaged during removal with counterflashings of same metal, weight or thickness, and finish. .

END OF SECTION 070150

SECTION 072100 - THERMAL INSULATION

PART 1 - GENERAL

A. SUMMARY

- A. Furnish and install new insulation over new air 6 mil polyethylene air barrier where needed.

B. SECTION REQUIREMENTS

- A. Submittals: Product Data and ICC-ES evaluation reports for foam-plastic insulation.
- B. Surface-Burning Characteristics: According to ASTM E 84 by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

PART 2 - PRODUCTS

A. INSULATION PRODUCTS

- A. Polyisocyanurate Board Insulation: ASTM C 1289, Type I, **Class 1 or 2** with flame-spread and smoke-developed indexes of 75 and 450, respectively.
- B. Flexible Glass-Fiber-Board Insulation: ASTM C 612, Type IA or ASTM C 553, Types I, II, and III; unfaced nominal density of **1.5 lb/cu. ft.** with flame-spread and smoke-developed indexes of 25 and 450, respectively.
- C. Closed-Cell Polyurethane Foam Insulation: ASTM C 1029, Type II, with maximum flame-spread and smoke-developed indexes of 75 and 450, respectively, and minimum density of **1.5 lb/cu. ft. (24 kg/cu. m).**

B. ACCESSORIES

- A. Air Barrier: Polyethylene, 6 mils thick.
- B. Eave Ventilation Troughs: Preformed, rigid fiberboard or plastic sheets designed to fit between roof framing members and to provide cross-ventilation between insulated attic spaces and vented eaves.

PART 3 - EXECUTION

A. INSTALLATION

- A. Install insulation in areas and in thicknesses indicated or required to produce R-values indicated. Cut and fit tightly around obstructions and fill voids with foam insulation.
- B. Maintain **1 1/2"** open airspace below roof sheathing from eaves to peak. Install spacers staggered as circumference lessens. eave ventilation troughs between roof framing members in insulated attic spaces at vented eaves.
- C. Except for loose-fill insulation and insulation that is friction fitted in stud cavities, bond units to substrate with adhesive or use mechanical anchorage to provide permanent placement and support of units.
- D. Place loose-fill insulation to comply with ASTM C 1015.
 - 1. Comply with the CIMA's Special Report #3, "Standard Practice for Installing Cellulose Insulation."

- E. Spray-Applied Insulation: Apply insulation according to manufacturer's written instructions. Do not apply insulation until installation of pipes, ducts, conduits, wiring, and electrical outlets in walls is completed and items not indicated to receive insulation are masked. After insulation is applied, make flush with face of studs.
- F. Install sheet radiant barriers according to ASTM C 1158.
- G. Extend vapor retarder to extremities of areas to be protected from vapor transmission. Secure in place with adhesives or other anchorage. Locate seams at framing members, overlap, and seal with tape. Seal joints caused by pipes, conduits, electrical boxes, and similar items with tape.

END OF SECTION 072100

SECTION 073113 ASPHALT SHINGLE ROOFING SYSTEMS**PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Granule surfaced asphalt shingle roofing.
- B. Moisture shedding underlayment, eaves, valley and ridge protection
- C. Associated metal flashing

1.2 RELATED SECTIONS

- A. Section 06 10 00 – Rough Carpentry: Plywood Roof Sheathing
- B. Section 07 13 00 – Sheet Waterproofing.
- C. Section 07 60 00 – Flashing and Sheet Metal.

1.3 REFERENCES

- A. Asphalt Roofing Manufacturers Association Technical Bulletin “How to Shingle a Cone Roof” Final Draft March 2000. **ATTACHMENT A**
- B. ASTM A 653/A 653M – Standard Specification for Steel Sheets, Zinc-coated (Galvanized) or Zinc-Iron-Alloy-Coated (Galvannealed) by the Hot-Dip Process
- C. ASTM B 209 – Standard Specification for Aluminum and Aluminum- Alloy Sheet and Plate
- D. ASTM B 370 – Standard Specification for Copper Sheet and Strip for Building Construction.
- E. ASTM D 225 – Standard Specification for Asphalt Shingles (Organic Felt) Surfaced with Mineral Granules.
- F. ASTM D 226 – Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
- G. ASTM D 1970 – Standard Specification for Self-Adhering Polymer Modified Bituminous Sheet Materials used as Steep Roofing Underlayment for Ice Dam Protection.
- H. ASTM D 3018 – Standard Specification for Class A Shingles Surfaced with mineral granules.
- I. ASTM D 3161 – Standard Test Method for Wind Resistance of Asphalt Shingles (Fan-Induced Method).
- J. ASTM D 3462 – Standard Specification for Asphalt Shingles Made from Glass Felt and Surfaced with Mineral Granules.
- K. ASTM D 4586 – Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- L. ASTM D-4869 – Standard Specification for Asphalt-Saturated Organic Felt Shingle Underlayment Used in Roofing.
- M. ASTM D 6757 – Standard Specification for Inorganic Underlayment for Use with Steep Slope Roofing Products.
- N. ASTM E 108 – Standard Test Methods for Fire Test of Roof Coverings
- O. ASTM G 21 – Determining Resistance of Synthetic Polymers to Fungi

1.4 SUBMITTALS

- A. Product Data: Venting cap for conical roof

- B. Product Data: Provide manufacturer's printed product information indicating material characteristics, performance criteria and product limitations.
- C. Manufacturer's Installation Instructions: Provide published instructions that indicate preparation required and installation procedures, including methods for conical roofing.
- D. Certificate of Compliance: Provide Certificate of Compliance from an independent laboratory indicating that the asphalt fiberglass shingles made in normal production meet or exceed the requirements of the following:
 - 1. ASTM E 108/UL 790 Class A Fire Resistance
 - 2. ASTM D 3161/UL 997 Wind Resistance.
 - 3. ASTM D 3462
- E. Shop Drawings:
 - 1. Indicate specially configured metal flashing, jointing methods and locations, fastening methods and locations and installation details as required by project conditions indicated.
 - 2. Provide cross sections including ventilation path and plan for conical sections of roof,

1.5 QUALITY ASSURANCE

- A. Installer Minimum Qualifications:
 - A. Installer will have approval of installation method by manufacturer before proceeding.
 - B. Installer shall be licensed or otherwise authorized by all federal, state and local authorities to install all products specified in this section.
 - C. Installer will have experience building roof assemblies on a conical roof.
 - D. Installer shall perform work in accordance with NRCA Roofing and Waterproofing Manual
 - E. Installer shall have a minimum of 10 years of experience certified by shingle manufacturer.
- B. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Provide mockup of roof assembly below sheathing that matches depth of existing assembly to remain
 - 2. Proceed with remaining work only after workmanship, color and pattern are approved by Owner.
 - 3. Rework Mock-Up area as required to produce acceptable work
- C. Pre-Installation Meeting – Conduct a pre-installation meeting at the site prior to commencing work of this section: Require attendance of entities directly concerned with roof installation. Agenda will include:
 - 1. Installation procedures and manufacturer's recommendations
 - 2. Safety procedures
 - 3. Coordination with installation of other work
 - 4. Availability of roofing materials.
 - 5. Preparation and approval of substrate and penetrations through roof.
 - 6. Other items related to successful execution of work

- D. Maintain one copy of manufacturers application instructions on the project site.
- E. Verify that manufacturer’s label contains references to specified ASTM standards.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store Products in manufacturer’s unopened packaging until ready for installation.
- B. Store and dispose of solvent-based materials and materials used with solvent based materials, in accordance with requirements of local authorities having jurisdiction.
- C. Deliver shingles to site in manufacturer’s unopened labeled bundles. Promptly verify quantities and conditions. Immediately remove damaged products from site.

1.7 PROJECT CONDITIONS

- A. Anticipate and observe environmental conditions (temperature, humidity and moisture) within limits recommended by manufacturer for optimum results. Do not install products under environment conditions outside manufacturer’s absolute limits.
- B. Extra Material – Furnish under provision of section 01 70 00
- C. Provide 100 square feet of extra shingles of each color specified.
- D. Take special care when applying Waterproofing Underlayment and shingles when ambient or wind chill temperature is below 45 degrees F. Tack underlayment in place if it does not adhere immediately to the deck.

1.8 WARRANTY

- A. Manufacturer’s Warranty: Furnish shingle manufacturer’s Lifetime limited warranty.
- B. Warranty Supplement: Provide manufacturer’s supplemental warranty to cover labor and materials in the event of a material defect for the following period after completion of application of shingles: First Ten Years
- C. Extended Warranty Protection: (20 years) material and labor costs for repair or replacement and tear off.
- D. Warranty Transferability Clause: Make available to Owner shingle manufacturer’s standard option for transferring warranty to a new owner.
- E. Refer to manufacturer’s warranty for adjustments for commercial applications.
- F. Provide Upgraded Wind Warranty from 110 to 130 mph on shingles for first 15 years by complying with all manufacturers’ conditions and instructions (see section 2.2-B below).

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturers:
 - 1. CertainTeed Corporation. 1 800-233-8990
 - 2. GAF Residential Roofing. Gaf.com
- B. Requests for substitutions will be considered in accordance with provisions of Section 016000

2.2 ASPHALT FIBERGLASS SHINGLES

- A. Conforming to ASTM D 3018 Type I – Self-Sealing, UL Certification of ASTM D 3462, ASTM D 3161/UL997 110-mph Wind Resistance and UL Class A Fire Resistance, glass fiber mat base, ceramically colored/UV resistant mineral surface granules across entire face of shingle; algae-resistance; two piece laminate shingle.
- B. Wind warranty upgrade – Warranty to resist blow-off due to wind velocities, including gusts, up to a maximum of 130 miles per hour during the first fifteen (15) years.
- C. Weight: 229 / 240 pounds per square
- D. Color: As selected by Owner from manufacturer’s standards

2.3 SHEET MATERIALS

- A.. Waterproofing Underlayment: ASTM D 1970 sheet barrier of self-adhering rubberized asphalt membrane shingle underlayment having internal reinforcement, and “split” back plastic release film; Use in “low slope” areas (below 4:12, but no less that 2:12 pitch); provide material warranty with equal in duration to that of shingles being applied.

2.4 FLASHING MATERIALS

- A. Sheet Flashing: ASTM B 209; 0.025 (0.63mm) thick aluminum, mill finish.
- B. Bitumious Paint: Acid and alkali resistant type; black color.

2.5 ACCESSORIES

- A. Nails: Standard round wire type roofing nails, corrosion resistant; hot dipped zinc coated steel, aluminum or chormated steel; shank to be sufficient length to penetrate through the roof sheathing or ¾ inch (19mm) into solid wood, plywood or non-veneer wood decking.
- B. Asphalt Roofing Cement: ASTM D 4586, Type I or II

2.6 FLASHING FABRICATION

- A. Form flashing to profiles indicated on Drawings and to protect roofing materials from physical damage and shed water.
- B. Form sections square and accurate to profile, in maximum possible lengths, free from distortion or defects detrimental to appearance or performance.

2.7 ROOF VENTILATION SYSTEM

- A. Provide ridge cap ventilation per manufacturers instruction.
- B. On the conical roof, provide a minimum of 5 SF ventilation.

PART 3 EXECUTION**3.1 EXAMINATION**

- A. Verify existing site conditions under provisions of Section 01 70 00.
- B. Verify that roof penetrations and plumbing stacks are in place and flashed to deck surfaces.
- C. Verify deck surfaces are dry and free of ridges, warps or voids.

3.2 ROOF DECK PREPARATION

- A. Follow shingle manufacturer's recommendations for acceptable roof deck material
- B. Broom clean deck surfaces under eave protection and underlayment prior to their application

3.3 INSTALLATION-CONICAL ROOF

- A. Refer to Asphalt Roofing Manufacturers Association Technical Bulletin "**How to Shingle a Cone Roof**" Final Draft March 2000.
- B. Consult shingle manufacturer's representative for proper installation to support Warranties.
- C. Apply underlayment directly to the deck according to application instructions provided with the product.
- D. Shingles at the eaves will be trimmed to fit the rounded edge.
- E. Trim the shingles in an angle parallel to the flow of water. The angle may be determined by pulling a string line from the top of the cone to the base and then trimming along that line.
- F. Snap chalk lines from the peak center point to the eaves at intervals of one-half tab measured at the eaves. Gauging size to ensure that the shingles lay flat and uniform, fit the shingles between the chalk lines.
- G. Shingle end joints should be offset 3" or more to prevent water infiltration.
- H. Shingle portions get progressively smaller as the rounded arc gets smaller further up the roof. Applied pieces will still maintain a staggered side offset; i.e., cutouts will align every other course if chalk lines are followed.

3.4 INSTALLATION – EAVE ICE DAM PROTECTION

- A. Place eave edge and gable metal edge flashing tight with fascia boards. Weather-lap joints 2 inches. Secure flange with nails spaced 8 inches on center.
- B. Apply granulated Waterproofing Shingle Underlayment as eave protection in accordance with manufacturer's instructions.
- C. Extend eave protection membrane minimum 24 inches up slope beyond interior face of exterior wall.

3.4 INSTALLATION – PROTECTIVE UNDERLAYMENT

- A. Conical roof: Run underlayment perpendicular to eaves. Overlap joints by 2 inches. Follow instructions of shingle and waterproofing membrane manufacturer.
- B. Roof Slopes 4:12 or Greater: Install one layer of asphalt felt shingle underlayment perpendicular to slope of roof and lap minimum 4 inches (100 mm) over eave protection.
- C. Weather-lap and seal watertight with asphalt roofing cement items projecting through or mounted on roof. Avoid contact or solvent-based cements.

3.5 INSTALLATION – VALLEY PROTECTION

- A. Place one ply of waterproof underlayment a minimum 36 inches wide, centered over valleys. Lap joints minimum of 6 inches. Follow instructions of shingle and waterproofing membrane manufacturer.

3.6 INSTALLATION – METAL FLASHING

- A. Weather-lap joints minimum 2 inches.
- B. Seal work projecting through or mounted on roof with asphalt roofing cement and make weather tight.

3.7 INSTALLATION- ASPHALT SHINGLES

- A. Install shingles on conical roof in accordance with manufacturer's written instructions for product type and application specified.
- B. Cone roof per man

3.8 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Section 01 40 00.
- B. Visual inspection of the work will be provided by Owner.

3.9 PROTECTION OF FINISHED WORK

- A. Protect finished work under provisions of Section 01 70 00.
- B. Do not permit traffic over finished roof surface.

END OF SECTION

SECTION 076200 - SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

A. SECTION REQUIREMENTS

- A. Submittals: Product Data, Shop Drawings, and color Samples.
- B. Coordinate installation of sheet metal flashing and trim with adjoining roofing and wall materials, joints, and seams to provide a leakproof, secure, and noncorrosive installation.

PART 2 - PRODUCTS

B. PERFORMANCE REQUIREMENTS

- A. Standard: Comply with NRCA's "The NRCA Roofing Manual" and SMACNA's "Architectural Sheet Metal Manual" unless otherwise indicated. Conform to dimensions and profiles shown unless more stringent requirements are indicated.

C. SHEET METAL

- A. Aluminum Sheet: ASTM B 209 (ASTM B 209M), alloy as standard with manufacturer for finish required, not less than 0.032 inch (0.8 mm) thick; finished as follows:
 - 1. Finish: Manufacturer's standard two-coat fluoropolymer system with color coat containing not less than 70 percent polyvinylidene fluoride (PVDF) resin by weight
 - 2. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.
- B. Zinc-Tin Alloy-Coated Stainless Steel: ASTM A 240/A 240M, Type 304, fully annealed stainless-steel sheet, not less than 0.015 inch (0.38 mm) thick, with 0.787-mil (0.020-mm) thickness zinc-tin alloy coating applied to each side; with factory-applied gray preweathering.
- C. Metallic-Coated Steel Sheet: Galvanized steel sheet, ASTM A 653/A 653M, G90 (Z275), or aluminum-zinc alloy-coated steel sheet, ASTM A 792/A 792M, Class AZ50 coating designation, Grade 40 (Class AZM150 coating designation, Grade 275); **0.022-inch (0.56-mm)** nominal thickness.
 - 1. Finish: Manufacturer's standard two-coat fluoropolymer system with color coat containing not less than 70 percent PVDF resin by weight.
 - 2. Concealed Finish: Manufacturer's standard white or light-colored acrylic or polyester backer finish.

D. ACCESSORIES

- B. Felt Underlayment: ASTM D 226, **Type II (No. 30)**, asphalt-saturated organic felts.
- D. Self-Adhering, High-Temperature Sheet Underlayment: Butyl or SBS-modified asphalt; slip-resisting-polyethylene surfaced; with release paper backing; cold applied. Stable after testing at 240 deg F (116 deg C) and passes after testing at minus 20 deg F (29 deg C); ASTM D 1970.
- F. Slip Sheet: Rosin-sized building paper, 3-lb/100 sq. ft. (0.16-kg/sq. m) minimum.

- G. Fasteners: Wood screws, annular-threaded nails, self-tapping screws, self-locking rivets and bolts, and other suitable fasteners.
 - 1. Exposed Fasteners: Heads matching color of sheet metal roofing using plastic caps or factory-applied coating.
 - 2. Spikes and Ferrules: Same material as gutter; with spike with ferrule matching internal gutter width.
 - 3. Fasteners for Copper: Copper, hardware bronze, or Series 300 stainless steel.
 - 4. Fasteners for Aluminum Sheet: Aluminum or Series 300 stainless steel.
 - 5. Fasteners for Zinc-Tin Alloy-Coated Stainless-Steel Sheet: Series 300 stainless steel.
 - 6. Fasteners for Metallic-Coated Steel Sheet: Hot-dip galvanized steel or Series 300 stainless steel.
- E. Butyl Sealant: ASTM C 1311, solvent-release butyl rubber sealant.
- F. Bituminous Coating: Cold

G. FABRICATION

- A. Fabricate sheet metal flashing and trim to comply with details shown and recommendations in cited sheet metal standard that apply to the design, dimensions, geometry, metal thickness, and other characteristics of item indicated.
- B. Expansion Provisions: Where lapped expansion provisions cannot be used, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with butyl sealant concealed within joints.
- C. Fabrication Tolerances: Fabricate sheet metal flashing and trim that are capable of installation to tolerances specified in MCA's "Guide Specification for Residential Metal Roofing."

PART 3 - EXECUTION

A. INSTALLATION

- A. Comply with cited sheet metal standards. Allow for thermal expansion; set true to line and level. Install Work with laps, joints, and seams permanently watertight and weatherproof; conceal fasteners where possible.
- B. Sealant Joints: Where movable, nonexpansion-type joints are required, form metal to provide for proper installation of elastomeric sealant according to cited sheet metal standard.
- C. Seams: For aluminum, form seams and seal with epoxy seam sealer and rivet joints.
- E. Metal Protection: Where dissimilar metals contact each other, protect against galvanic action or corrosion by painting contact surfaces with bituminous coating.
 - 1. Coat concealed side of aluminum with bituminous coating where it contacts wood, ferrous metal, or cementitious construction.

END OF SECTION 076200