

Oro UTC, LLC

Upland Technology Center ("UTC")

2022 West 11th Street, Upland CA

PROJECT MANUAL



By accepting a copy of the Project Manual, you agree that this Project Manual, attached bid package and specifications are the property of RAFA, LLC and may not be copied, reused or duplicated without prior written consent and compensation to RAFA, LLC. A Fee of \$5,000.00 will be paid to RAFA, LLC if this Project Manual is not returned within 5 days of demand by

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INSTRUCTIONS TO BIDDERS

PROJECT IDENTIFICATION

PROJECT NAME: UTC

PROJECT NUMBER: Project ID RAFA #20018051:

SITE ADDRESS: 2022 West 11th Street
Upland CA

The Notice to Bidders (NTB) consists of the Notice, this Instructions To Bidders, the Bid Form, the Pre-Bid Question Form, the General Conditions of the Construction Contract, the Supplemental General Conditions, the Special Conditions, the Forms to be used, the Scope of Work as described by the Plans and Specifications, other documents listed in the Specifications, and any addenda which may be issued, all of which request qualified bidders to submit competitive prices or bids for providing the described work on the project.

1. CONDITIONS AT SITE OR STRUCTURE:

Bidders shall visit the Project Site and shall be responsible for ascertaining pertinent local conditions such as location, accessibility, general character of the site or building, and the character and extent of existing work within or adjacent to the site. Claims as a result of failure to carry out comprehensive site inspections, will not be considered by the Owner. (See Section 7 of the General Conditions entitled “Conditions at Site.”)

2. EXPLANATIONS TO BIDDERS:

No oral explanation in regard to the meaning of drawings and specifications will be made and no oral instructions will be given before the award of the contract. Discrepancies, omissions or doubts as to the meaning of drawings and specifications shall be communicated in writing to the Consultant for interpretation. Bidders should use the “Pre-bid Question Form” (RCI Form A003) provided in the bid documents. Bidders must so act to assure that questions reach the Consultant at least six (6) days prior to the time set for the receipt of bids to allow a sufficient time for an addendum to reach them before the submission of their bids. If, however, there are two (2) weeks or less between the first bid advertisement and the time set for receipt of bids, then bidders must submit questions in such a manner that they reach the Consultant no later than three (3) days prior to the time set for receipt of bids. Any interpretation made will be in the form of an addendum to the plans and/or specifications, which will be forwarded to all bidders, and its receipt shall be acknowledged by the bidder on Bid Forms.

3. TIME FOR COMPLETION:

- (a) The Contractor shall indicate the “time for completion” on the bid form.
- (b) The Contractor, in preparing and submitting his bid, is required to take into consideration normal weather conditions. Normal weather does not mean statistically average weather, but rather means a range of weather patterns, which might be anticipated, based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, such as the U.S. Department of Commerce, local Climatological Data Sheets, National Oceanic and Atmospheric Administration / Environmental Data and Information Service, National Climatic Center or National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner as indicated in the General Conditions.
- (c) Each bidder may select the public historical climatological records upon which he will rely in computing his bid. Each bidder shall designate in the space provided which of such climatological data records he used when formulating his bid. A bidder's failure to designate climatological records when submitting a bid shall not disqualify his bid but shall constitute a waiver of the right to claim any extension of time as the result of abnormal weather. In either case, the bid submitted and the time of completion shall be presumed to have been based upon normal weather derived from the climatological records used.

4. PREPARATION AND SUBMISSION OF BIDS:

- (a) Bids shall be submitted on the forms furnished, or copies thereof, and shall be signed in ink. Erasures or other changes in a bid must be explained or noted over the signature of the bidder. Bids containing any conditions, omissions, unexplained erasures, alterations or items not called for in the proposal, or irregularities of any kind, may be rejected by the Owner as being incomplete or non-responsive.
- (b) Each bid must give the complete legal name and full business address of the Bidder and be signed by the Bidder, or the Bidder's authorized representative, with the Bidder's usual signature. Bids by partnerships must be signed in the partnership name by one of the general partners of the partnership or an authorized representative, followed by the designation or title of the person signing, and a list of the partners. Bids by corporations must be signed with the legal name of the corporation followed by the name of the state in which it is incorporated and by the signature and title of the person authorized to bind it in this matter. The name of each person signing shall be typed or printed below the signature. A signature on a bid by a person who identifies his title as "Resident," "Secretary," "Agent" or other designation without disclosing the principal firm, shall be held to be the bid of the individual signing. When requested by the Owner, satisfactory evidence of the authority of the officer signing on behalf of the corporation shall be furnished. Trade or fictitious names may be referenced by using "t/a ___ __ __," but bids shall be in the legal name of the person or entity submitting the bid.
- (c) The Bidder must also place its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation, Limited Liability Company or other legal entity in the space provided on the Bid Form.
- (d) The Bidder must place any exceptions to the bid documents in the space provided on the Bid Form or write "NONE".
- (e) Do not include the Project Manual or Exhibit "C" with your bid. BID FORMS ONLY
- (f) Placed the Bid Form, addenda requested, completed Contractor Qualification Statement, company promotional literature, and job references in a package marked; "Sealed Bid for Oro UTC, LLC Project ID Project ID RAFA #20018051.
- (g) The Bidder must include a completed Contractor Qualification Statement with Bid Form.

5. BID GUARANTEE:

The Bidder guarantees, not to withdraw his bid during the period of sixty (60) days following the opening of bids, that if his bid is accepted, he will enter into a formal contract with the Owner in accordance with the Agreement, included as a part of the NTB Documents within _____ days following acceptance; and that in the event of the withdrawal of said bid within said period, or failure to enter into said contract within _____ days following acceptance the Bidder shall be liable to the Owner for the difference between the amount specified in said bid and such larger amount for which the Owner may contract with another party to perform the work covered by said bid.

6. WITHDRAWAL OR MODIFICATION OF BIDS:

Bids may be withdrawn or modified by withdrawal or modification may be made by the person signing the bid or by an individual(s) who is authorized by him on the face of the bid. Written modifications may be made on the bid form itself, on the envelope in which the bid is enclosed, or on a separate document. Written modifications, whether the original is delivered or emailed, must be signed by the person making the modification or withdrawal, and email messages must be sent in the name of said person. Unless otherwise specified by the Bidder, the modification will be applied to the TOTAL BASE BID amount shown on the Bid Form.

7. RECEIPT OF BIDS:

- (a) Bids will be received at or before the date and the hour and at the place stipulated in the Notice to Bidders or modified by subsequent Addenda.

- (b) It is the responsibility of the bidder to assure that his bid and any bid modifications are delivered to the place designated for receipt of bids by the date and hour (deadline) set for receipt of bids. No bids or bid modifications submitted or offered after the date and hour designated for receipt of bids will be accepted or considered.
- (c) The Owner's representative is designated to receive bids at the time and place noted in the NTB and to open the bids received at the appointed time.

8. OPENING OF BIDS:

Bids will be opened privately. The Owner's representative shall decide when the specified time for bid opening has arrived. No responsibility will be attached to any officer or agent for the premature opening of a bid not properly addressed and identified.

9. ERRORS IN BIDS:

A Bidder may withdraw his bid from consideration if the price bid was substantially lower than the other bids due solely to a mistake therein, provided the bid was submitted in good faith, and the mistake was a clerical mistake as opposed to a judgment mistake, and was actually due to an unintentional arithmetic error or an unintentional omission of a quantity of work, labor or material made directly in the compilation of a bid, which unintentional arithmetic error or unintentional omission can be clearly shown by objective evidence drawn from inspection of original work papers, documents and materials used in the preparation of the bid sought to be withdrawn.

The Bidder must submit to the Owner his original work papers, documents and materials used in the preparation of the bid within one day after the date fixed for submission of bids. Such work papers must be submitted in an envelope or package separate and apart from the envelope containing the bid and marked clearly as to the contents and shall be delivered to the Owner by the bidder in person or by registered mail prior to the time fixed for the opening of bids and may not be withdrawn until after the two-hour period (referred to later) has elapsed. Bid opening is fixed by the owner. Such mistake shall be proved only from the original work papers, documents and materials delivered to the Owner prior to bid opening. This procedure shall not apply to when the entire bid is required to be submitted on a unit price basis.

Failure of a Bidder to submit his original work papers, documents and materials used in the preparation of his bid on or before the time, date and place required shall constitute a waiver by that Bidder of his right to withdraw his bid due to a mistake.

No bid may be withdrawn under this section when the result would be the awarding of the Contract on another bid of the same Bidder or of another bidder in which the ownership of the withdrawing Bidder is more than five (5%) percent.

No Bidder who is permitted to withdraw a bid shall, for compensation, supply any material or labor to or perform any subcontract or other work agreement for the person or firm to whom the Contract is awarded or otherwise benefit, directly or indirectly, from the performance of the project for which the withdrawn bid was submitted. The person or firm to whom the Contract was awarded, and the withdrawing Bidder are jointly liable to the Owner in an amount equal to any compensation paid to or for the benefit of the withdrawing Bidder without such approval.

10. REJECTION OF BIDS

The Owner reserves the right to cancel the Invitation for Bids, to reject any and all bids at its sole discretion, or to reject the bid of any Bidder who is determined to be not responsive or not responsible.

11. DETERMINATION OF RESPONSIBILITY

Each Bidder shall be prepared, if so requested by the Owner, to present evidence of his experience, qualifications and financial ability to carry out the terms of the Contract

Prior to award of the Contract, an evaluation will be made to determine if the winning Bidder has the capability, in all respects, to perform fully the contract requirements and the moral and business integrity and reliability

which will assure good faith performance, and who has been prequalified, if required. Factors to be evaluated include, but are not limited to:

- (a) sufficient financial ability to perform the contract as evidenced by the Bidder's ability to obtain payment and performance bonds from an acceptable surety;
- (b) appropriate experience to perform the Work described in the bid documents;
- (c) any judgments entered against the Bidder, or any officers, directors, partners or owners for breach of a contract for construction;
- (d) any substantial noncompliance with the terms and conditions of prior construction contracts without good cause where the substantial noncompliance is documented; or
- (e) a conviction of the Bidder or any officer, director, partner, project manager, procurement manager, chief financial officer, or owner in the last five years of a crime relating to governmental or nongovernmental construction or contracting; payment and performance bonds shall be an acceptable surety;
- (f) any current debarment of the contractor, any officer, director or owner, from bidding or contracting by any public body of any State, any State agency, or any agency of the Federal government.

The Owner reserves the right to disqualify or refuse to accept the bid of any Bidder who has been convicted, or entered a plea of guilty or nolo contendere, in any Federal or State court to any charge involving any unlawful, corrupt or collusive practice involving a public contract whether Federal, State, or local, or who has been determined in any judicial proceeding to have violated any antitrust, bid-rigging or collusive practice statute in connection with any public contract, or against whom such formal criminal prosecution or other judicial proceeding has been initiated.

12. AWARD OF CONTRACT

- (a) **Basis for Contract Award:** The Contract, if awarded, will be awarded to the Bidder selected by Owner, if any, subject to the Owner's right to reject any and all bids and to waive informality in the bids and in the bidding.
- (b) **Informalities:** The Owner reserves the right to waive any informality in the bids.
- (c) **Negotiation with Bidder:** The Owner reserves the right to negotiate the Total Base Bid amount with the Bidder. This may involve changes in either the features or Scope of the work included in the Base Bid. Such negotiations with the Bidder may include reducing the quantity, quality, or other cost saving mechanisms involving items in the Total Base Bid. Negotiations for Additive Bid Items are excluded. The Owner and Bidder shall conduct their negotiations in person, by mail, by telephone, by email or by any means they find convenient. If an acceptable Contract can be negotiated, the changes to the Invitation for Bid documents agreed upon in the negotiations shall be summarized in a "Post Bid Modification" and included in the Contract. If an acceptable Contract cannot be negotiated, the Owner shall terminate negotiations.

13. CONTRACT SECURITY:

The Standard Performance Bond (RCI Form B006) and the Standard Labor and Material Payment Bond (RCI Form B005) may be required, as specified in the Invitation for Bids documents, unless waived in the Notice of Invitation for Bids. See the General Conditions. Do not include costs for bonds in the Base Bid.

14. BUILDING PERMITS:

The successful Contractor shall apply for all applicable building permits and shall pay all costs associated with the application for and payment of local building permits, including but not limited to any and all inspections, permit sign-offs and work approvals.

15. BID DOCUMENTS:

Bid Documents, including this project manual, are the property of RAFA LLC. Non-bidders are responsible for the safe return of the documents to RAFA LLC within ten (10) days of bid opening or a fee of \$5,000.00 will be paid to Oro UTC, LLC. This Project Manual attached bid package and specifications are the property of Oro UTC, LLC, and may not be copied, reused or duplicated without prior written consent and compensation to Oro UTC, LLC. A Fee of \$5,000.00 will be paid to Oro UTC, LLC, if this Project Manual is not returned within 10 days of bid opening.

16. GENERAL CONDITIONS:

The General Conditions of the Construction Contract are incorporated in the bid documents. If incorporated by reference, the bidder may obtain a copy of the current edition of the General Conditions of the Construction Contract from the Consultant.

17. PREBID CONFERENCE:

See the Notice to Bidder for mandatory pre-bid conference.

18. INSPECTION OF BID DOCUMENTS:

Copies of the Bid documents, including Plans and Specifications and the General Conditions of the Construction Contract will be provided, via email, prior to the pre-bid conference.

20. CONSULTANT:

FIRM NAME: RAFA LLC
CONTACT: Paul Vanni
ADDRESS: 12860 E Jenan Dr.
Scottsdale, AZ 85259
TELEPHONE: (949)678-5101
E-MAIL: Paul.vanni@rafallc.com

NOTICE TO BIDDERS**PART 1 - GENERAL****A. NOTICE TO BIDDERS**

1.1.1 The Notice to Bidders is attached following this page.

B. RELATED REQUIREMENTS

1.1.2 Section 00 21 13 – Instructions to Bidders

1.1.3 Section 00 41 13 – Bid Form

1.1.4 Section 00 41 15 – Pre-bid Question Form

1.1.5 Section 00 52 13 – Agreement Form (Attached)

1.1.6 Section 00 72 13 – General Conditions

1.1.7 Section 00 73 10 – Supplemental General Conditions

1.1.8 Section 00 74 10 – Special Conditions

1.1.9 Section 00 75 10 – Forms

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)****END OF SECTION – NOTICE TO BIDDERS**

PROJECT IDENTIFICATION

PROJECT NAME: UTC

PROJECT NUMBER: Project ID RAFA #20018051:

SITE ADDRESS: 2022 West 11th Street
Upland CA

You are hereby invited to submit a bid for the above referenced Project.

Following is a summary description of the Project:

Scope of Work: This complex is a single-level commercial structures that has concrete tilt-up with wood decking.

General Description: The roofing consists of (7) Seven buildings: Reroof (4) Four buildings that have low slope roofs.

- a. Reroof (4) Four buildings that have low slope roofs
- b. Reroof (3) Three buildings that have Low slope corrugated metal roof
- b. Repair (4) Four buildings that have low slope roofs
- c. Repair (3) Three buildings that have Low slope corrugated metal roof

Additional work includes replacement/repair of carpentry and repair.

Products for New Roofs:

- 1. (4) Four buildings that have Low Slope Roofs:
 - 15/20 year: NDL TPO 45 mils or 60 mils
 - 15/20 year: NDL EPDM 45 mils or 60 mils
 - 20 year: MOD BIT 3-ply
- 2. (3) Three buildings that have low slope corrugated metal roofs
 - 20 Year NDL reinforced coating system:
 - National Coatings or approved equal

A mandatory pre-bid conference will be held onsite on or before _____

Current Worker's Compensation certificate copy required prior to entering property for estimating; email to Consultant or bring a copy with you to the pre-bid meeting.

If you wish to submit a bid for this Project, please complete the following and submit to RAFA LLC. via email reply and attach a copy of your Current Worker's Compensation certificate, on or before, _____, and attend the mandatory pre-bid conference.

COMPANY BIDDING: _____

ATTN:

ADDRESS:

Street Address

City

()

Telephone

State

()

Email

ZIP Code

A Bid Guarantee will not be required.

All bidders will have proof of at least \$1,000,000.00 of liability insurance. Open roof exclusion and claims made are not acceptable. The successful bidder must list Oro UTC, LLC, Oro UTC Management, LLC, Oro Capital Advisors, LLC, DSM Group, Inc., Oro Manager III, LLC, and RAFA LLC as additional insureds.

All Bids shall be submitted on the Bid Proposal Form, forming part of the Bid Package and shall be completed as required in the Instructions to Bidders.

Any questions regarding the bid or the Project shall be addressed to the consultant on the Pre-Bid Question Form attached.

The bids will be due _____ at:

UTC
c/o Oro Capital Advisors LLC
Attention: Bradley Mindlin and Steven Firtel
11766 Wilshire Blvd, Suite 325
Los Angeles, CA 90025
Email: sfirtel@Orocap.com

WITH COPY TO

RAFA LLC
Attention: Harvey Malkin
12860 E. Jenan Drive
Scottsdale, AZ 85259
Office: 480-625-9238
Email: harvey.malkin@rafallc.com

Mark package "Sealed Bids for Oro Capital Advisors, LLC - UTC

A completed Contractor Qualification Statement must be included with bid.

Include any company promotional literature and job references with your bid.

No emailed or phone bids will be accepted.

Contractors replying to this notice will be provided project specifications via email, prior to the mandatory pre-bid conference.

BID FORM**PART 1 - GENERAL****A. BID FORM**

1.1.1 The Bid Form is attached following this page.

B. RELATED REQUIREMENTS

1.1.2 Section 00 21 13 – Instructions to Bidders

1.1.3 Section 00 22 13 – Notice to Bidders

1.1.4 Section 00 41 15 – Pre-bid Question Form

1.1.5 Section 00 52 13 – Agreement Form (Attached)

1.1.6 Section 00 72 13 – General Conditions

1.1.7 Section 00 73 10 – Supplemental General Conditions

1.1.8 Section 00 74 10 – Special Conditions

1.1.9 Section 00 75 10 – Forms

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)****END OF SECTION– BID FORM**

Having carefully examined the Instructions to Bidders and Bid Documents, and having attended the pre-bid conference and become familiar with all aspects, both existing and proposed, affecting the work entitled:

PROJECT IDENTIFICATION

PROJECT NAME: UTC
PROJECT NUMBER: Project ID RAFA #20018051:
SITE ADDRESS: 2022 West 11th Street
 Upland CA

The undersigned proposes to furnish all labor and materials and provide all equipment and manpower necessary to perform all work for the various parts of the construction in accordance with the above referenced documents for the considerations of the following amount(s):

BASE BID

Cost to Reroof (4) Four low slope roofs

15-year NDL TPO

45 Mils: Dollars (\$))
 (Including state and local taxes)

20-year NDL TPO

60 Mils: Dollars (\$))
 (Including state and local taxes)

15-year NDL EPDM

45 Mils: Dollars (\$))
 (Including state and local taxes)

20-year NDL EPDM

60 Mils: Dollars (\$))
 (Including state and local taxes)

20-year NDL MOD BIT

Dollars (\$))
 (Including state and local taxes)

Estimated squares of low slope BUR roofing: _____ Squares

Cost to recoat (3) Three low slope corrugated metal roofs with
 20 Year NDL reinforce coating system _____ Dollars (\$ _____)

(Including state and local taxes)

Material Used

Estimated squares of low slope metal roofs

Cost to Repair Low slope BUR roofed (4) Four Buildings: _____ Dollars (\$ _____)

(Including state and local taxes)

Cost to Repair Low slope metal buildings (3) Three Buildings: _____ Dollars (\$ _____)

(Including state and local taxes)

Base Bid Breakdown (Price to be included in Base Bid)

Linear feet of new coping metal _____ Ln Ft

Cost of new coping metal _____ Dollars (\$ _____)

UNIT COSTS:

Submit the following:

\$ _____ Ln Ft.

Lineal foot price to remove and replaced damaged or missing Z-bar counter flashing \$ _____ Ln Ft.

Price (per lineal foot) gutter repair or replacement \$ _____ Ln Ft.

Price (per lineal foot) down spouts \$ _____ Each.

Price (per 4' x 8') sheet for the replacement of damaged plywood sheeting: \$ _____.

Rates for Miscellaneous Labor & Materials, as requested by the owner: Materials Mark-up _____ %

Labor: \$ _____ per man hour; \$ _____

Estimated time to reroof all of the buildings: _____

OVERHEAD AND PROFIT:

All bid proposals enumerated in this Bid Proposal Form include overhead, profit and all other expenses involved in the execution and completion of the work described in the Contract Documents.

SALES TAX:

Bid prices in this Bid DO include applicable sales tax.

SUBCONTRACTORS:

If awarded a contract, I propose to contract with the following subcontractors for listed work and further agree that subcontractors may not be changed without owners' written consent.

Named subcontractors must have a reputation of competency in their fields of work. I assume responsibility for quality of work performed by my subcontractors.

Work Classification	Subcontractor
Sheet metal	
Electrical	
Mechanical	
Removals and Carting	
Plumbing	
Carpentry	
Others:	

Note: All other subcontractors shall be submitted within ____ days of bid date, if requested.

COMPLETION DATE:

The undersigned agrees if awarded the contract, work shall be completed within _____ working days ("time for completion"). The Undersigned further agrees that the owner may retain, from the compensation otherwise due, the sum of \$500.00 for each calendar working day (Monday through Friday) expiring beyond "time for completion", this sum not to be construed as a penalty, but as a fixed, agreed liquidated damages amount which the owner shall sustain in case of failure of the undersigned to complete the work within the time stipulated. The "time for completion" will be extended by each Excusable Delay as stipulated in the Construction Contract.

GENERAL LIABILITY INSURANCE:

Indicate here if your policy:

Includes "Open Roof Exclusion" YES or NO

Is your insurance "Claims Made" or "Occurrence"

ADDENDA ACKNOWLEDGMENT:

Receipt of Addenda (List by number and date appearing on Addenda):

Addendum # _____ Date: _____

Addendum # _____ Date: _____

EXECUTION OF BID:

NAME OF BIDDING COMPANY:

PRE-BID QUESTION FORM

PART 1 GENERAL

1.1 PRE-BID QUESTION FORM

1.1.1 The Pre-bid Question Form is attached following this page.

1.2 RELATED REQUIREMENTS

1.2.1 Section 00 21 13 – Instructions to Bidders

1.2.2 Section 00 22 13 – Notice to Bidders

1.2.3 Section 00 41 13 – Bid Form

1.2.4 Section 00 52 13 – Agreement Form (attached)

1.2.5 Section 00 72 13 – General Conditions

1.2.6 Section 00 73 10 – Supplemental General Conditions

1.2.7 Section 00 74 10 – Special Conditions

1.2.8 Section 00 75 10 – Forms

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION – PRE-BID QUESTION FORM

PROJECT IDENTIFICATION

PROJECT NAME: UTC
PROJECT NUMBER: Project ID RAFA #20018051:
SITE ADDRESS: 2022 West 11th Street
Upland CA

CONTRACTOR INFORMATION

NAME _____
CONTACT _____
ADDRESS: _____

TELEPHONE: _____

E-MAIL: _____

QUESTIONS (attach additional pages if necessary)

The following questions have arisen after review of the Project Documents. Clarification is needed in the following areas prior to bidding.

1. _____

2. _____

3. _____

4. _____

5. _____

AGREEMENT FORM

PART 1 - GENERAL

1.1 AGREEMENT FORM

1.1.1 The Agreement Form is attached, and includes the following categories:

1.2 RELATED REQUIREMENTS

1.2.1 Section 00 21 13 – Instructions to Bidders

1.2.2 Section 00 22 13 – Notice to Bidders

1.2.3 Section 00 41 13 – Bid Form

1.2.4 Section 00 41 15 – Pre-bid Question Form

1.2.5 Section 00 72 13 – General Conditions

1.2.6 Section 00 73 10 – Supplemental General Conditions

1.2.7 Section 00 74 10 – Special Conditions

1.2.8 Section 00 75 10 – Forms

A. PART 2 - PRODUCTS (Not Used)

B. PART 3 - EXECUTION (Not Used)

C. END OF SECTION 00 52 13 – AGREEMENT FORM

SAMPLE ROOFING AGREEMENT

[See attached]

GENERAL CONDITIONS

PART 1 - GENERAL

1.1 GENERAL CONDITIONS

1.1.1 The General Conditions is attached following this page.

1.2 RELATED REQUIREMENTS

1.2.1 Section 00210 – Instructions to Bidders

1.2.2 Section 00220 – Notice to Bidders

1.2.3 Section 00410 – Bid Form

1.2.4 Section 00420 – Pre-bid Question Form

1.2.5 Section 00520 – Agreement Form (attached)

1.2.6 Section 00730 – Supplemental General Conditions

1.2.7 Section 00740 – Special Conditions

1.2.8 Section 00750 – Forms

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION – GENERAL CONDITIONS

GENERAL CONDITIONS OF THE CONSTRUCTION CONTRACT (SHORT FORM)

1. DEFINITIONS

Whenever used in these General Conditions of the Construction Contract (“General Conditions”) or in the Contract Documents, the following terms have the meanings indicated, which are applicable to both the singular and plural and the male and female gender thereof.

Architect, Consultant, Engineer, Consultant or A/E: The term used to designate the Architect, Consultant and/or the Engineer that contracts with the Owner to provide the Architectural, Consulting and Engineering services for the Project. The Consultants are separate contractors and are not agents of the Owner. The term includes any associates or sub-consultants employed by the Consultant.

Beneficial Occupancy: The condition after Substantial Completion but prior to Final Completion of the Project at which time the Project, or portion thereof, is sufficiently complete and systems operational such that the Owner could occupy and utilize the space for its intended use. Guarantees and warranties applicable to that portion of the Work begin on the date the Owner accepts the Project, or a portion thereof, for such Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions or by separate agreement.

Change Order: A document (RCI Form D002) issued on or after the effective date of the Contract Between Owner and Contractor (RCI Form B003) which is agreed to by and signed by both the Contractor and the Owner, and which authorizes an addition, deletion or revision in the Work, including any adjustment in the Contract price and/or the Contract Completion Date. The term Change Order shall also include written orders to proceed issued pursuant to Section 31(a)(3). A Change Order, once signed by all parties, is incorporated into and becomes a part of the Contract.

Construction: The term used to include new construction, reconstruction, renovation, remediation, restoration, major repair, demolition and all similar work upon buildings and ancillary facilities, including any draining, dredging, excavation, grading or similar work upon real property.

Consultant: The term used to designate the consultant(s) retained by the Owner for specialty design and/or contract administration

Contract: The term “Contract” shall be interchangeable with the term “Contract Documents.”

Contract Administrator: The Owner, or his representative, may appoint the Contract Administrator to provide site administration of the Contract. This shall include the coordination of all Work, the administration of all meetings and the flow of all paperwork, including Applications for Payment, specified by the Contract. The Scope of Authority of the Contract Administrator shall be detailed in a contract between the Owner and the Contract Administrator. A copy of this Scope shall be provided to the Contractor.

Contract Completion Date: The date by which the Work must be available to the Owner for inspection to determine whether the work has reached Substantial Completion, in accordance with Section 36(a). The Contract Completion Date is customarily established in the Notice To Proceed, based on the Time for Completion provided in the Contract Between Owner and Contractor (RCI Form B003). In some instances, however, the Contract contains a mandatory Contract Completion Date.

Contract Documents: The Contract Between Owner and Contractor (Agreement) signed by the Owner and the Contractor and any documents expressly incorporated therein. Such incorporated documents customarily include, but are not limited to, the bid submitted by the Contractor, these General Conditions, any Supplemental General Conditions, any Special Conditions, the plans and the specifications, and all modifications, including addenda and subsequent Change Orders.

Contract Price: The total compensation payable to the Contractor for performing the Work, subject to modification by Change Order.

Contractor: The person with whom the Owner has entered into a contractual agreement to do the Work.

Day(s): Calendar day(s) unless otherwise noted.

Defective Work: Work determined to be nonconforming, deficient or defective by Consultant or Owner's Representative.

Drawing: A page or sheet of the Plans which presents a graphic representation, usually drawn to scale, showing the technical information, design, location, and dimensions of various elements of the Work. The graphic representations include, but are not limited to, plan views, elevations, transverse and longitudinal sections, large and small-scale sections and details, isometrics, diagrams, schedules, tables and/or pictures.

Emergency: Any unforeseen situation, combination of circumstances, or a resulting state that poses imminent danger to health, life or property.

Fall Protection Plan: A plan developed by the Contractor or Subcontractor conforming to Federal, State and local codes to protect employees from falling and to protect the general public from falling objects. The Contract Administrator shall review the Fall Protection Plan. A copy of the Fall Protection Plan shall be maintained in the Job Log.

Final Completion Date: The date of the Owner's acceptance of the Work from the Contractor upon confirmation from the Consultant and the Contractor that the Work is totally complete in accordance with Section 36(b).

Field Directive: A written order, using RCI Form D001 or an equivalent form, issued by a member of the Consultant which directs the Contractor to commence reviewing a change in design or amending an allowance incorporated in a Contract Price.

Field Order: A written order issued by a member of the Consultant which clarifies or explains the plans or specifications, or any portion or detail thereof, without changing the design, the Contract Price, the Time for Completion or the Contract Completion Date.

Float: The excess time included in a construction schedule to accommodate such items as inclement weather and associated delays, equipment failures, and other such unscheduled events. It is the contingency time associated with a path or chain of activities and represents the amount of time by which the early finish date of an activity may be delayed without delaying the overall completion of the Project. Any difference in time between the Contractor's approved early completion date and the Contract Completion Date shall be considered a part of the Project Float.

Float, Free: The time (in days) by which an activity may be delayed or lengthened without impacting upon the start day of any activity following in the chain.

Float, Total: The difference (in days) between the maximum time available within which to perform an activity and the duration of an activity. It represents the time by which an activity may be delayed or lengthened without impacting the Time for Completion or the Contract Completion Date.

Job Log: A log of all activities, submittals, meeting minutes, photographs, project documents, sign-in sheets, weather data, accident reports, Fall Protection Plans, Safety Plans, inspection reports, permits and project notes to be maintained by the contractor on site, two copies of which shall be provided to the Owner at project completion.

Notice: All written notices, including demands, orders, directives, instructions, claims, approvals and disapprovals, required or authorized under the Contract Documents. Any written notice by either party to the Contract shall be sufficiently given by any one or combination of the following, whichever shall first occur (1) delivered by hand to the last known business address of the person to whom the notice is due; (2) delivered by hand to the person's authorized agent, representative or officer wherever they may be found; or (3) enclosed in a postage prepaid envelope addressed to such last known business address and delivered to a United States Postal Service official or mailbox. Notice delivered by hand shall be effective upon such delivery. Notice delivered via United States Postal Service shall be deemed effective 72 hours after the delivery to the United States Postal Service official or mailbox, or upon the actual receipt of the Notice, whichever occurs first. All Notices to the Owner should be directed to the Contract Administrator.

If the Owner and the Contractor agree in writing that Notices transmitted by email are acceptable for the Project, such Notice shall be transmitted to the email address listed in the agreement. The emailed Notice shall be effective on the date it is acknowledged by reply email. All emailed Notices shall also be sent by hard copy, which shall be effective upon delivery, as provided herein. Notice shall be effective upon the date of acknowledgment of the emailed Notice or the date of delivery, whichever occurs first.

Notice to Proceed: A written notice, on RCI Form B004 or an equivalent document, given by the Owner to the Contractor (with a copy to the Consultant) fixing the date on which the Contract time will commence for the Contractor to begin the prosecution of the Work in accordance with the requirements of the Contract Documents. The Notice to Proceed will customarily confirm the Contract Completion Date based upon the requirements of the Contract Between Owner and Contractor (RCI Form B003).

Owner: The persons with whom the Contractor has entered into a contractual agreement and for whom the Work or services is to be provided. The term "Owner," as used herein, shall also include the Owner's Representative, if the Owner appoints one. (See limitations of the Owner's Representative below.)

Owner's Representative: The Owner's Representative as used herein shall be the Owner's designated agent on the Project. The Owner's Representative shall be the person through whom the Owner generally conveys written decisions and notices. All notices due the Owner and all information required to be conveyed to the Owner shall be conveyed to the Owner's Representative. The scope of the Owner's Representative's authority is limited to that authorized by the Owner, who shall provide written information to the Contractor at the Pre-construction meeting defining those limits. In all instances within the limits of such scope, the Owner's Representative shall be considered a fully authorized agent of the Owner. Upon receipt of such scope, the Contractor shall be on notice that it cannot rely on any decisions of the Owner's Representative outside the scope of his authority. Nothing herein shall be construed to prevent the Owner from issuing any notice directly to the Contractor. The Owner may change the Owner's Representative from time to time and may, in the event that the Owner's Representative is absent, disabled or otherwise temporarily unable to fulfill his duties, appoint an interim Owner's Representative.

Person: This term includes any individual, corporation, partnership, association, company, business, trust, joint venture, or other legal entity.

Plans: The term used to describe the group or set of project-specific drawings which are included in the Contract Documents.

Project: The term used instead of the specific or proper assigned title of the entire undertaking which includes, but is not limited to, the Work described by the Contract Documents.

Project Observer: One or more persons employed by the Owner or Contract Administrator to inspect the Work on behalf of the Owner and to document and maintain records of activities at the Site to the extent required by the Owner. The Owner shall notify the Contractor in writing of the appointment of such Project Observer(s). The scope of the Project Observer's authority with respect to the Contractor is limited to that indicated in Section 13(e) and (f) and as supplemented by the Owner in writing to the Project Observer, which shall be copied to the Contractor.

Provide: Shall mean furnish and install ready for its intended use.

Safety Plan: A plan developed by the Contractor or Subcontractor in compliance with Federal, State and local codes to provide safe working conditions on site and to protect the general public from the ongoing work. The Contract Administrator shall review the Safety Plan. A copy of the Safety Plan shall be maintained in the Job Log.

Site: Shall mean the location at which the Work is performed or is to be performed.

Specifications: That part of the Contract Documents containing the written administrative requirements and the technical descriptions of materials, equipment, construction systems, standards, and workmanship which describe the proposed Work in sufficient detail and provide sufficient information for the Building Official to determine code compliance and for the Contractor to perform the Work. (The General Conditions, any Supplemental General Conditions, various bidding information and instructions, and blank copies of various forms to be used during the execution of the Work shall be bound with the Specifications.)

Subcontractor: A person having a direct contract with the Contractor or with any other Subcontractor for the performance of the Work. Subcontractor includes any person who provides on-site labor but does not include any person who only furnishes or supplies materials for the Project Submittals: All shop, fabrication, setting and installation drawings, diagrams, illustrations, schedules, samples, and other data required by the Contract Documents which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information

prepared by a Supplier and submitted by the Contractor to illustrate material or equipment conformance of some portion of the Work with the requirements of the Contract Documents.

Substantial Completion: The condition when the Owner agrees that the Work, or a specific portion thereof, is sufficiently complete, in accordance with the Contract Documents, so that it can be utilized by the Owner for the purposes for which it was intended. The Owner at its sole discretion may take Beneficial Occupancy at this time or choose to wait to occupy until after Final Completion is achieved.

Supplemental General Conditions: That part of the Contract Documents which amends or supplements the General Conditions.

Supplier: A manufacturer, fabricator, distributor, material man or vendor who provides material for the Project but does not provide on-site labor.

Time for Completion: The number of consecutive calendar days following the issuance of the Notice to Proceed which the Contractor has to substantially complete all Work required by the Contract. When the Notice to Proceed is issued, it states a Contract Completion Date, which has been set by the Owner based on the Time for Completion.

Underground Facilities: All pipelines, conduits, ducts, cables, wires, manholes, vaults, tanks, tunnels or other such facilities or attachments, and any encasements containing such facilities which are or have been installed underground to furnish any of the following services or materials: electricity, gases, steam, liquid petroleum products, telephone or other communications, cable television, sewage and drainage removal, traffic or other control systems or water.

Work: The services performed under this Contract including, but not limited to, furnishing labor, and furnishing and incorporating materials and equipment into the construction. The Work also includes the entire completed construction, or the various separately identifiable parts thereof, required to be furnished under the Contract Documents.

2. CONTRACT DOCUMENTS

- (a) All references to particular RCI Forms shall instead refer to their Short Form equivalents, if the parties have chosen to utilize those particular RCI Short Forms.
- (b) The Contract Between Owner and Contractor, the Workers' Compensation Certificate of Coverage, the Standard Performance Bond (when required), the Standard Labor and Material Payment Bond (when required), the Schedule of Values and Certificate for Payment, the Contractor's Certificate of Substantial Completion, and the Contractor's Certificate of Completion are forms incorporated in these General Conditions by reference and are made a part hereof to the same extent as though fully set forth herein. The Contractor must use them for their respective purposes.
- (c) Any reference in the Contract Documents to RCI Forms that are not specified in Section 2(b) shall be treated as references either to the RCI Form or a functionally equivalent document.
- (d) All time limits stated in the Contract Documents, including but not limited to the Time for Completion of the Work, are of the essence of the Contract.
- (e) The Contract Between Owner and Contractor shall be signed by the Owner and the Contractor in as many original counterparts as may be mutually agreed upon, each of which shall be considered an original.
- (f) Anything called for by one of the Contract Documents and not called for by the others shall be of like effect as if required or called for by all, except that a provision clearly designed to negate or alter a provision contained in one or more of the other Contract Documents shall have the intended effect. In the event of conflicts among the Contract Documents, the Contract Documents shall take precedence in the following order: the Supplemental General Conditions (RCI Form B002); the Contract Between Owner and Contractor (Agreement); the General Conditions (this document); the Special Conditions (RCI Form A004); the specifications with attachments; and the plans.
- (g) If any provision of this Contract shall be held invalid by any court of competent jurisdiction, such holding shall not invalidate any other provision.

- (h) All correspondence, invoices, memoranda, submittals and other documents related to this Project whether generated by the Owner, the Consultant and/or Consultant, the Contractor or others should be identified at the beginning of the document by the Project Number. Additional identification such as a job number, purchase order number or such may also be shown at the generator's option.

3. LAWS AND REGULATIONS

- (a) The Contractor shall comply with all laws, ordinances, rules, regulations and lawful orders of any public authority bearing on the performance of the Work and shall give all notices required thereby.
- (b) This Contract and all other contracts and subcontracts are subject to the provisions of applicable laws within the jurisdiction of the Work relating to labor unions and the "right to work." The Contractor and its Subcontractors, whether residents or nonresidents of the jurisdiction, who perform any Work related to the Project shall comply with all of the said provisions.
- (c) IMMIGRATION REFORM AND CONTROL ACT OF 1986: By signing this Contract, the Contractor certifies that it does not and will not during the performance of this Contract violate the provisions of the Federal Immigration Reform and Control Act of 1986, which prohibits employment of illegal aliens.
- (d) The provisions of all rules and regulations governing safety in the jurisdiction of the Work shall apply to all Work under this Contract. Federal, State and local inspectors shall be granted access to the Work for inspection without first obtaining a search or administrative warrant
- (e) Building Permit: The Contractor shall be responsible for obtaining all permits required by the local building authority or such authority that has jurisdiction over the construction of the Work.
- (f) The Contractor shall include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same payment and interest requirements in Subsections (a), (b), and (c) of Section 30 of these Short Form General Conditions with respect to each lower-tier Subcontractor and Supplier.
- (g) The Contractor, if not licensed as an asbestos abatement contractor within the jurisdiction of the work, shall have all asbestos-related Work performed by subcontractors who are duly licensed as asbestos contractors as appropriate for the Work required.
- (h) If the Contractor violates laws or regulations that govern the Project, the Contractor shall defend and indemnify the Owner against any fines and/or penalties that result from such violation. To the extent that such violation is the result of negligence or other actionable conduct of the Contractor, the Contractor shall indemnify and hold the Owner harmless against any third-party claims, suits, awards, actions, causes of action or judgments, including but not limited to attorney's fees and costs incurred thereunder that result from such violation.

4. NONDISCRIMINATION

- (a) During the performance of this Contract, the Contractor agrees as follows:
 - (1) The Contractor will not discriminate against any employee or applicant for employment because of race, religion, color, sex, or national origin, except where religion, sex, or national origin is a bona fide occupational qualification reasonably necessary to the normal operation of the Contractor. The Contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices setting forth the provisions of this nondiscrimination clause.
 - (2) The Contractor, in all solicitations or advertisements for employees placed by or on behalf of the Contractor will state that such Contractor is an equal opportunity employer.
 - (3) Notices, advertisements and solicitations placed in accordance with federal law, rule or regulation shall be deemed sufficient for the purpose of meeting the requirements of this section.

The Contractor will include the provisions of the foregoing paragraphs (1), (2) and (3) in every subcontract or purchase order of over ten thousand dollars (\$10,000), so that the provisions will be binding upon each Subcontractor or vendor.

- (b) Where applicable, the Federal Americans with Disabilities Act shall apply to the Contractor and all Subcontractors.

5. PROHIBITION OF ALCOHOL AND OTHER DRUGS

- (a) The Contractor shall establish, maintain and enforce policies which prohibit the following acts by all Contractor, Subcontractor and Supplier personnel at the Site:
 - (1) The manufacture, distribution, dispensation, possession, or use of alcohol or other drugs, except possession and medically prescribed use of prescription drugs; and
 - (2) The impairment of judgment or physical abilities due to the use of alcohol or other drugs, including impairment from prescription drugs.
- (b) The Contractor shall post a copy of the policy in a conspicuous place at the Site and assure that all Contractor, Subcontractor and Supplier personnel entering the Site are informed of and comply with the policy.
- (c) Smoking shall not be allowed on the work site. A designated smoking area is to be agreed upon at the pre-construction meeting.

6. TIME FOR COMPLETION

- (a) The Time for Completion shall be as established in the Contract Documents. The Work must be completed by the Contract Completion Date. Contractor has satisfied for itself and agrees that the time for completion established herein is reasonable and achievable.
- (b) The Time for Completion shall be stated in the Contract Between Owner and Contractor and shall become a binding part of the Contract upon which the Owner may rely in planning the use of the facilities to be constructed and for all other purposes. If the Contractor fails to substantially complete the Work within the Contract Completion Date, he shall be subject to payment of actual damages incurred by the Owner.
- (c) The Contractor, in submitting his bid, acknowledges that he has taken into consideration normal weather conditions. Normal weather does not mean statistically average weather, but rather means a range of weather patterns, which might be anticipated, based on weather data for the past ten (10) years, (i.e., conditions which are not extremely unusual). Normal weather conditions shall be determined from the public historical records available, such as the U.S. Department of Commerce, local Climatological Data Sheets, National Oceanic and Atmospheric Administration / Environmental Data and Information Service, National Climatic Center or National Weather Service. The data sheets to be used shall be those for the locality or localities closest to the site of the work. No additional compensation will be paid to the Contractor because of adverse weather conditions; however, an extension of time for abnormal weather will be considered by the Owner under the following conditions:
 - (1) The request for additional time shall be further substantiated by weather data collected during the period of delay at the Site. Said data must demonstrate that an actual departure from normal weather occurred at the Site during the dates in question.
 - (2) The extension requested must be accompanied by a bar graph schedule detailing the time required to complete the project.
 - (3) All of the evidence and data supporting the request (including both historical data and the recordings at the Site during the time of delay) must be furnished to the Owner before any consideration will be given to the request.
- (d) The Contractor represents and agrees that he has taken into account in his bid the requirements of the bid documents, local conditions, availability of materials, equipment, and labor, and any other factors which may affect the performance of the Work. The Contractor agrees and warrants that he will achieve Substantial Completion of the Work to allow the Owner to have Beneficial Occupancy not later than fifteen (15) days following the Time for Completion or Contract Completion Date.

- (e) The Contractor agrees and warrants that he will achieve Final Completion of the Work (the entire completion of all Work, including “punch list” items), not later than twenty one (21) days after achieving Substantial Completion.

7. CONDITIONS AT SITE

- (a) The Contractor shall have visited the Site prior to bidding and is totally responsible for having ascertained pertinent local conditions such as location, accessibility and general character of the Site, and the character and extent of existing improvements and work within or adjacent to the Site. Claims, which result from the Contractor’s failure to do so, will be deemed waived.
- (b) If, in the performance of the Contract, hidden physical conditions of a building being modified are exposed revealing unusual or materially different conditions from those ordinarily encountered or inherent in work of this nature, or if subsurface or latent conditions at the Site are found which are materially different from those frequently present in the locality or from those indicated in the Contract Documents, the Contractor must report such conditions to the Owner and to the Consultant before the conditions are disturbed. Upon such notice, or upon his own observation of such conditions, the Consultant shall promptly propose such changes in the Contract Documents as he finds necessary to conform to the different conditions.
- (c) If the Contractor, during the course of the Work, observes the existence of any material, which he knows, should know, or has reason to believe is hazardous to human health, the Contractor shall promptly notify the Owner. The Owner will provide the Contractor with instructions regarding the disposition of the material. The Contractor shall not perform any Work involving the material or any Work causing the material to be less accessible prior to receipt of special instructions from the Owner.

8. SUBCONTRACTS

- (a) The Contractor shall, prior to the signing of the Contract, notify the Owner and Consultant in writing of the names of all Subcontractors proposed for the principal parts of the Work and of such others as the Consultant may direct. Where the Scope of Work or specifications establish qualifications or criteria for Subcontractors, manufacturers, or individuals performing Work on the project, the Contractor shall be responsible for ascertaining that those proposed meet the criteria or qualifications. The Contractor shall not employ any Subcontractor that the Owner may, within a reasonable time, object to as unsuitable. Neither the Owner nor the Consultant shall direct the Contractor to contract with any particular Subcontractor unless provided in the Contract Documents.
- (b) The Owner may select a particular Subcontractor for a certain part of the Work and designate in the Contract Documents or Supplemental General Conditions that the Subcontractor shall be used for the part of the Work indicated and that the Subcontractor has agreed to perform the Work for the subcontract amount stipulated in writing. The Contractor shall include the stipulated amount in the final Contract Sum. In such case, the Contractor shall be responsible for that Subcontractor and its work and the Subcontractor shall be responsible to the Contractor for its work just as if the Contractor had selected the Subcontractor.
- (c) The Owner shall, on request, furnish to any Subcontractor, if practicable, the amounts of payments made to the Contractor, the Schedule of Values and Requests for Payment submitted by the Contractor and any other documentation submitted by the Contractor which would tend to show what amounts are due and payable by the Contractor to the Subcontractor.
- (d) The Contractor shall be fully responsible to the Owner for all acts and omissions of his agents and employees and all succeeding tiers of Subcontractors and Suppliers performing or furnishing any of the Work. Nothing in the Contract Documents shall create any contractual relationship between Owner or Consultant and any such Subcontractor, Supplier or other person or organization, nor shall it create any obligation on the part of Owner or Consultant to pay for or to see to the payment of any moneys due any such Subcontractor, Supplier or other person or organization, except as may otherwise be required by law.
- (e) The Contractor shall be fully responsible for his invitees at the Site and for those of his Subcontractors, Suppliers, and their employees, including any acts or omissions of such invitees. All invitees shall sign-in at the Job Log.

- (f) The Contractor agrees that he alone is responsible for all dealings with his Subcontractors and Suppliers, and their subcontractors, employees and invitees, including, but not limited to, the Subcontractors' or Suppliers' claims, demands, actions, disputes and similar matters unless specifically provided otherwise by the Contract or by statute.
- (g) Contingent Assignment of Subcontracts. Each subcontract, purchase order or agreement for a portion of the work is assigned by the Contractor to the Owner provided that: (i) assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 34, and only for those subcontracts, purchase orders or similar agreements which the Owner accepts by notifying the Subcontractor(s) and Contractor in writing; and, (ii) this assignment includes, without limitations, the Contractor's rights under the Subcontractor's bonds, if any; provided (iii) the assignment is subject to prior rights of the surety, if any, that is obligated under the bond relating to the Contract.

9. CONTRACTOR'S AND SUBCONTRACTOR'S INSURANCE

- (a) The Contractor shall not commence Work under this Contract until he has obtained all the insurance required hereunder from an insurer authorized to do business in the jurisdiction of the Work and such insurance has been approved by the Owner, nor shall the Contractor allow any Subcontractor to commence Work on his subcontract until the same types of insurance in an appropriate amount have been obtained by the Subcontractor and approved by the Contractor. Approval of insurance by the Owner shall not relieve or decrease the liability of the Contractor hereunder. Prior to commencement of the Work, Contractor shall deliver to Owner a certificate of insurance evidencing all of the following coverages and naming Owner and its officers, board members, consultants, and agents as additional insured's. All insurance shall be occurrence based; claims-made policies are not permitted.
- (b) The Contractor shall take out and shall maintain at all times during the performance of the Work Workers' Compensation and Employers' Liability Insurance for all of his employees engaged in the Work in an amount not less than the minimum required by the State in which the Work is performed, and, in case any of the Work is sublet, the Contractor shall require each Subcontractor similarly to provide Workers' Compensation and Employers' Liability Insurance for all of the latter's employees to be engaged in the Work. The Contractor shall submit on the form provided by the Owner a Certificate of Coverage verifying Workers' Compensation coverage prior to award of the Contract. The Contractor shall likewise obtain a Certificate of Coverage for Workers' Compensation coverage from each Subcontractor prior to awarding the subcontract and shall provide a copy to the Owner.
- (c) During the performance of the Work under this Contract, the Contractor shall maintain commercial general liability insurance to include Premises/Operations Liability, Products and Completed Operations Coverage, Independent Contractor's Liability, Owner's and Contractor's Protective Liability, and Personal Injury Liability, which shall insure him against claims of personal injury, including death, as well as against claims for property damage which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of general liability insurance shall be not less than \$1,000,000.00 per occurrence and \$3,000,000 aggregate combined limit. The Owner, its officers, employees and agents, shall be named as an additional insured with respect to the Work being procured.
- (d) During the performance of the Work under this Contract, the Contractor shall maintain automobile liability insurance which shall insure him against claims of personal injury, including death, as well as against claims for property damage, which may arise from operations under this Contract, whether such operations be by himself or by any Subcontractor, or by anyone directly or indirectly employed by either of them. The amounts of automobile insurance shall be not less than \$1,000,000.00 combined limit for bodily injury and property damage per occurrence.
- (e) The Asbestos Contractor or Subcontractor, as the case may be, shall provide occurrence-based liability insurance with asbestos coverages in an amount not less than \$1,000,000.00 and shall name the following as additional insureds: The Owner; all members of the Consultant (if not the Asbestos Project Designer); and the Contractor (where the asbestos work is being performed by the Asbestos Subcontractor).

- (f) Contingent Assignment of Subcontracts. Each subcontract, purchase order or agreement for a portion of the work is assigned by the Contractor to the Owner provided that: (i) assignment is effective only after termination of the Contract by the Owner for cause pursuant to Paragraph 34, and only for those subcontracts, purchase orders or similar agreements which the Owner accepts by notifying the subcontractor (s) and Contractor in writing; and, (ii) this assignment includes, without limitations, the Contractor's rights under the subcontractor's bonds, if any; provided (iii) the assignment is subject to prior rights of the surety, if any, that is obligated under the bond relating to the Contract.

10. TAXES AND FEES

The Contractor shall pay all applicable Federal, State, and local taxes and fees applicable to the project. The Contractor shall identify in the bid all taxes and fees included in the contract amount and those taxes and fees that shall be added to the contract amount. Any tax or fee not identified as an addition to the contract amount shall be assumed to be included in the contract amount.

11. PATENTS

The Contractor shall obtain all licenses necessary to use any invention, article, appliance, process or technique of whatever kind used in the performance of the Contract and shall pay all royalties and license fees. The Contractor shall hold the Owner, its officers, agents and employees harmless against any loss or liability for or on account of the infringement of any patent rights in connection with any invention, process, technique, article or appliance manufactured or used in the performance of the Contract, including its use by the Owner, unless such invention, process, technique, article or appliance is specifically named in the specifications or plans as acceptable for use in carrying out the Work. If, before using any invention, process, technique, article or appliance specifically named in the specifications or plans as acceptable for use in carrying out the Work, the Contractor has or acquires information that the same is covered by letters of patent making it necessary to secure the permission of the patentee, or other, for the use of the same, he shall promptly advise the Owner and the Consultant. The Owner may direct that some other invention, process, technique, article or appliance be used. Should the Contractor have reason to believe that the invention, process, technique, article or appliance so specified is an infringement of a patent, and fail to inform the Owner and the Consultant, he shall be responsible for any loss or liability due to the infringement.

12. CONSULTANT STATUS

- (a) The Consultant shall have authority to endeavor to secure the faithful performance by Owner and Contractor of the Work under the Contract. The Consultant shall review the Contractor's Submittals for conformance to the requirements of the Contract Documents and return copies to the Contractor with appropriate notations. He shall interpret the requirements of the plans and specifications and issue Field Orders and Directives to the Contractor as may be required. He shall recommend to the Owner suspension of the Work (in whole or in part) whenever such suspension may be necessary to ensure the proper execution of the Contract. He shall have authority to reject, in writing, Work, including material, installation or workmanship, which does not conform to the requirements of the plans and specifications. He shall determine the progress and quality of the Work, subject to the right of the Owner to make an overriding decision to the contrary. Upon request by the Contractor, the Consultant shall confirm, in writing within seven (7) days, any oral order or determination made by him. Any determination not so confirmed shall be null and void.
- (b) The Consultant shall have no authority to approve or order changes in the Work which alters the design concept, or which call for an extension of time or a change in the Contract Price.
- (c) Although the Owner is bound by the terms of the Contract with the Contractor, including the plans and specifications, the Owner shall have the right, but not the duty, to countermand any decision of the Consultant and to follow or reject the advice of the Consultant, including but not limited to, acceptance of the Work, as it deems best. In those instances where the Consultant has been given authority to act, the Consultant shall promptly do so, but in the case of disagreement between the Consultant and the Owner, the decision of the Owner shall be final. The Contractor shall not be bound by any determination, interpretation, or decision of the Consultant if it is later determined that the same is not in accord with the Contract Documents. The party taking issue with the determination, interpretation or decision of the Consultant shall give the other party written notice of such fact within ten (10) days after

the determination, interpretation or decision is communicated by the Consultant. In the actual performance of the Work, however, the Contractor shall, in the first instance, proceed in accordance with instructions given by the Consultant unless the Owner and the Contractor mutually agree that the Contractor will proceed otherwise.

- (d) All orders from the Owner to the Contractor shall be transmitted through the Consultant.
- (e) The Consultant shall not be responsible for construction means, methods, techniques, sequences or procedures (other than those expressly specified in Contract Documents), or for safety and fall protection precautions and programs in connection with the Work, and they shall not be responsible for the Contractor's failure to carry out the Contractor's own responsibilities.
- (f) The provisions of this section are included as information only to describe the relationship between the Owner, Consultant, and Contractor. No failure of the Consultant to act in accordance with this section shall relieve the Contractor from his obligations under the Contract or create any rights in favor of the Contractor.

13. INSPECTION/OBSERVATION

- (a) All material and workmanship shall be subject to observation, examination and testing by the Owner, the Owner's Representative, the Consultant, the Project Observer, authorized inspectors and authorized independent testing entities at any and all times during manufacture and construction. The Consultant and the Owner shall have authority to reject defective material and workmanship and require its correction. Defective workmanship shall be satisfactorily corrected and defective material shall be satisfactorily replaced with proper material without charge therefore, and the Contractor shall promptly segregate and remove the defective material from the Site. If the Contractor fails to proceed within a reasonable time with replacement of defective material and/or the correction of defective workmanship, the Owner may, after 7 days' notice with opportunity to cure, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost to the Contractor, or terminate the right of the Contractor to proceed as provided in Section 34 of these General Conditions, the Contractor being liable for any damage to the same extent as provided in Section 34 for termination thereunder.
- (b) Site inspections, tests conducted on Site or tests of materials gathered on Site, which the Contract requires to be performed by independent testing entities shall be contracted and paid for by the Owner. The Contractor shall promptly furnish, without additional charge, all reasonable facilities, labor and materials necessary and convenient for making such tests. Except as provided in (d) below, whenever such examination and testing finds defective materials, equipment or workmanship, the Contractor shall reimburse the Owner for the cost of re-examination and retesting. Although conducted by independent testing entities, the Owner will not contract and pay for tests or certifications of materials, manufactured products or assemblies which the Contract, codes standards, etc., require to be tested and/or certified for compliance with industry standards such as Underwriters Laboratories, Factory Mutual or current ASTM protocols. If fees are charged for such tests and Certifications, they shall be paid by the Contractor. The Contractor shall also pay for all inspections, tests, and certifications which the Contract specifically requires him to perform or to pay, together with any inspections and tests which he chooses to perform for his own purposes but are not required by the Contract.
- (c) Where Work is found to be related to or dependent on Defective Work, the Contractor shall stop such related or dependent Work until the Defective Work or deficiency is corrected or an alternative solution is presented that is satisfactory to the Owner. Where Work is rejected because of defective material or workmanship, the Contractor shall stop like Work in other areas or locations on the Project until the matter is resolved, and the Owner has approved corrective measures.
- (d) The Project Observer has the authority to recommend to the Consultant and the Owner that the Work be suspended when in his judgment the Contract Documents are not being followed. Any such suspension shall be continued only until the matter in question is resolved to the satisfaction of the Owner. The cost of any such Work stoppage shall be borne by the Contractor unless it is later determined that no fault existed in the Contractor's Work.
- (e) The Project Observer has the right and the authority to:

- (1) Observe all construction materials, equipment, and supplies for quality and for compliance with the Contract Documents and/or approved shop drawings and Submittals.
 - (2) Observe workmanship for compliance with the standards described in the Contract Documents.
 - (3) Observe and report on all tests and inspections performed by the Contractor.
 - (4) Recommend to the Owner's Representative rejection of Work which does not conform to requirements of the Contract Documents.
 - (5) Keep a record of construction activities, tests, inspections, and reports
 - (6) Attend all joint site construction meetings and inspections held by the Owner and/or the Consultant with the Contractor.
 - (7) Check materials and equipment, together with documentation related thereto, delivered for conformance with approved Submittals and the Contract.
 - (8) Check installations for proper workmanship and conformance with shop drawing and installation instructions and report the findings to the Owner's Representative.
 - (9) Assist in the review and verification of the Schedule of Values and Certificate for Payment, submitted by the Contractor each month.
 - (10) Do all things for or on behalf of the Owner as the Owner may subsequently direct in writing; such things must be preapproved by the Consultant.
- (f) The Project Observer has no authority to:
- (1) authorize deviations from the Contract Documents,
 - (2) enter into the area of responsibility of the Contractor's superintendent,
 - (3) issue directions relative to any aspect of construction means, methods, techniques, sequences or procedures, or in regard to safety precautions and programs in connection with the Work,
 - (4) authorize or suggest that the Owner occupy the Project, in whole or in part,
 - (5) issue a certificate for payment, or institute any safety or fall protection procedures.
- (g) The duties of the Project Observer are for the benefit of the Owner only and not for the Contractor. The Contractor may not rely upon any act, statement, or failure to act on the part of the Project Observer, nor shall the failure of the Project Observer to properly perform his duties in any way excuse Defective Work or otherwise improper performance of the Contract by the Contractor.

14. SUPERINTENDENCE BY CONTRACTOR

- (a) The Contractor shall have a competent foreman or superintendent, satisfactory to the Consultant and the Owner, on the Site at all times during the progress of the Work. The superintendent or foreman shall be familiar with and be able to read and understand the plans and specifications and be capable of communicating orally and in writing with the Owner's inspectors and the Contractor's workers. The Contractor shall be responsible for all construction means, methods, techniques, sequences and procedures, for coordinating all portions of the Work under the Contract except where otherwise specified in the Contract Documents, and for all safety and worker health programs and practices. The Contractor shall notify the Owner and Consultant, in writing, of any proposed change in superintendent, including the reason therefore, prior to making such change. Contractor shall make a change in its Superintendent only upon approval by Consultant and Owner.
- (b) The Contractor shall, at all times, enforce strict discipline and good order among the workers on the Project, and shall not employ on the Work, or contract with, any unfit person, anyone not skilled in the Work assigned to him, or anyone who will not work in harmony with those employed by the Contractor, the Subcontractors, the Owner or the Owner's separate contractors and their subcontractors.

- (c) The Owner may, in writing, require the Contractor to remove from the Site any employee or Subcontractor's employee the Owner deems to be incompetent, careless, not working in harmony with others on the Site, or otherwise objectionable, but the Owner shall have no obligation to do so.

15. CONSTRUCTION SUPERVISION, METHODS AND PROCEDURES

- (a) The Contractor shall be solely responsible for supervising and directing the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction and for coordinating all portions of the Work under the Contract, except where otherwise specified in the Contract Documents. However, the Contractor shall not be responsible for the negligence of others in the design or selection of a specific means, method, technique, sequence or procedure of construction which is indicated in and required by the Contract. The Contractor is solely responsible to the Owner that the finished Work complies with the Contract Documents. The Contractor shall be solely responsible for health and safety precautions and programs for workers and others in connection with the Work. No inspection by, knowledge on the part of, or acquiescence by the Consultant, the Project Observer, the Owner, the Owner's employees and agents, or any other entity whatever shall relieve the Contractor from its sole responsibility for compliance with the requirements of the Contract or its sole responsibility for health and safety programs and precautions.
- (b) The Contractor shall develop and implement a written Fall Protection work plan including each area of the work place where the employees are assigned and where fall hazards greater than 6 feet, or otherwise defined in applicable safety regulations, exist. The Fall Protection Plan shall:
 - (1) Identify all fall hazards in the work area.
 - (2) Describe the correct procedures for the assembly, maintenance, inspection, and disassembly of the fall protection system to be used.
 - (3) Describe the correct procedures for the handling, storage, and securing of tools and materials.
 - (4) Describe the method of providing overhead protection for workers who may be in, or pass through, the area below the work site.
 - (5) Describe the method for prompt, safe removal of injured workers.
- (c) Prior to permitting employees into areas where fall hazards exist the Contractor shall:
 - (1) Ensure that employees are trained and instructed in the items described above.
 - (2) Inspect fall protection devices and systems to ensure compliance with local, state and federal requirements applicable to the project.
- (d) Training of employees:
 - (1) The Contractor shall ensure that employees are trained for the relevant job designation. Training shall be documented and shall be available on the job site.
 - (2) "Retraining." When the Contractor has reason to believe that any affected employee who has already been trained does not have the understanding and skill required by Section 15 (b) of this document, the Contractor shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:
 - a Changes in the workplace render previous training obsolete; or
 - b Changes in the type of fall protection systems or equipment to be used render previous training obsolete.
 - c Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the requisite understanding or skill.
- (e) If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method,

sequence, technique or procedure of construction acceptable to the Consultant, subject to the Owner's right to disapprove.

16. SCHEDULE OF THE WORK

- (a) **General:** The Contractor is responsible for the scheduling and sequencing of the Work, for coordinating the Work, for monitoring the progress of the Work, and for taking appropriate action to keep the Work on schedule. Extensions of time pursuant to Sections 31, 32, and 35, damages for delay, and all other matters between the Owner and the Contractor will be determined using the contractually required Substantial Completion date, not an early Contract Completion.

Within a reasonable time after the Contractor signs the Contract Between Owner and Contractor, unless otherwise extended by the Owner at the time of the signing, the Contractor shall prepare and submit to the Owner, with a copy to the Consultant, a preliminary bar graph schedule for accomplishing the Work based upon the Time for Completion stated in the Contract. The preliminary bar graph schedule shall be in sufficient detail to show the sequencing of the various trades for each floor level, wing or work area. The Owner will notify the Contractor of its acceptance of or objections to the preliminary schedule within seven (7) days of receipt by the Owner.

The Owner's failure to reject or its acceptance of any schedule, graph, chart, updated schedule, plan of action, etc., shall not constitute a representation or warranty by the Owner, including but not limited to a representation or warranty that the schedule is feasible or practical nor shall any such acceptance or failure to reject relieve the Contractor from sole responsibility for completing the Work within the time allowed.

No progress payments will be payable to the Contractor until after it has submitted a preliminary schedule which is acceptable to the Owner and which is compliance with the Contract Completion Date. Nor shall subsequent progress payments be payable to the Contractor unless and until he maintains the monthly bar graphs or status reports required by Section 16(c) herein or unless and until he provides any recovery schedule pursuant to Section 16(d) herein.

Failure to provide a satisfactory preliminary or fully complete Project Schedule within the time limits stated above shall be a breach of contract for which the Owner may terminate the Contract in the manner provided in Section 34 of these General Conditions.

- (b) **Bar Graph Schedule:** Where a bar graph schedule is required, it shall be time-scaled in weekly increments, shall indicate the estimated starting and completion dates for each major element of the Work by trade and by area, level, or zone, and shall schedule dates for all salient features, including but not limited to the placing of orders for materials, submission of shop drawings and other Submittals for approval, approval of shop drawings by Consultant, the manufacture and delivery of material, the testing and the installation of materials, supplies and equipment, and all Work activities to be performed by the Contractor.

The Contractor shall allow sufficient time in his schedule for the Consultant to conduct whatever associated reviews or inspections as may be required under the Consultant's contract with the Owner. If the Consultant and the Contractor are unable to agree as to what constitutes sufficient time, the Owner shall determine the appropriate duration for such Consultant activities. Each Work activity will be assigned a time estimate by the Contractor. One day shall be the smallest time unit used.

It is the Contractor's responsibility to submit a schedule that shows Substantial Completion of the Work by the Contract Time for Completion or the Contract Completion Date and any interim deadlines established by the Contract.

A copy of the Bar Graph Schedule shall be maintained in the Job Log. The bar graph schedule shall include required relocation dates for the occupants of each unit, as applicable. Contractor shall perform its Work in a manner that minimizes the need for and length of time for temporary relocations by Unit Owners. Contractor shall perform its Work in substantial adherence to such relocation schedule as approved by Owner. Contractor shall schedule its work with the Construction Administrator to coordinate relocation schedules.

- (c) **Monthly Project Reports:** The Contractor shall review progress not less than twice each month, but as often as necessary to properly manage the Project and stay on schedule or as otherwise required

by Owner. The Contractor shall collect and preserve information on Change Orders, including extensions of time. The Contractor shall evaluate this information and update the latest accepted schedule as often as necessary to finish within the Contract Time for Completion or before the Contract Completion Date. The Contractor shall submit to the Consultant along with any request for payment a copy of the bar graph schedule annotated to show the current progress. The bar graph schedule submitted with each periodic request for payment shall show the Work completed to date in comparison with the Work scheduled for completion, including but not limited to the dates for the beginning and completion of the placing of orders; and the installation of materials. The form shall be approved by the Consultant and the Owner. If any elements of the Work are behind schedule, regardless of whether they may prevent the Work from being completed on time, the Contractor must indicate in writing in the report what measures he is taking and plans to take to bring each such element back on schedule and to ensure that the Time for Completion or Contract Completion Date is not exceeded. Copies of all documents shall be maintained in the Job Log.

- (d) **Progress Delay:** Should any of the following conditions exist, the Owner may require the Contractor to prepare, at no extra cost to the Owner, a plan of action and a recovery schedule for completing the Work by the Contract Time for Completion or the Contract Completion Date:
 - (1) The Contractor's monthly progress report indicates delays that are, in the opinion of the Consultant or the Owner, of sufficient magnitude that the Contractor's ability to complete the Work by the scheduled Time for Completion or the Contract Completion Date is brought into question.
 - (2) The Contractor desires to make changes in the logic (sequencing of Work) or the planned duration of future activities of the Schedule, which, in the opinion of the Consultant or the Owner, are of a major nature.

The plan of action and recovery schedule, when required, shall explain and display how the Contractor intends to regain compliance with its schedule.

The plan of action, when required, shall be submitted to the Owner for review within two (2) business days of the Contractor receiving the Owner's written demand. The recovery schedule, when required, shall be submitted to the Owner within five (5) calendar days of the Contractor's receiving the Owner's written demand.

17. SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

- (a) Before submittal of the first partial payment request under the Contract, the Contractor shall prepare for review and approval of the Consultant and the Owner, a schedule of the estimated values listed by trades or by specification sections of the Work, totaling the Contract Price. Where the total project has multiple parts or phases, the Contractor shall prepare appropriate schedules of values to facilitate reviews and justifications for payments.
- (b) All requests for payment shall be made on the Schedule of Values and Certificate for Payment (Form D004, D004a and D004b). Succeeding pages may be on the Form D004a and D004b continuation sheets or a computerized spreadsheet which is in the same format and which contains the same information. Where a computerized spreadsheet is used, one copy of the entire Schedule of Values shall be provided to the Owner via an agreed format of electronic media (e-mail, diskette, CD-ROM, etc.) in a spreadsheet format (e.g. Lotus, Excel, or Quattro Pro) with the initial request for payment.
- (c) If the Contractor requests, or intends to request, payment for materials stored in an approved and secure manner, the Schedule of Values must indicate the amount for labor and the amount for materials, and in a supplement thereto must include an itemized list of materials for that trade or Work section. The material breakdown shall be in sufficient detail to allow verification of the quantities required for the project, the quantities delivered, the Work completed, and the quantities stored on or off site. No payment shall be made for offsite materials.
- (d) Every submitted Schedule of Values and Certificate for Payment (RCI Form D004) shall have the "Value of Work Completed" portion completed, the Contractor's certification completed and signed, and the appropriate substantiating material attached. Such substantiating material includes, but is not limited to, invoices for materials, delivery tickets, time sheets, payroll records, daily job logs/records,

and similar materials which, in the opinion of the Owner and the Consultant, are necessary or sufficient to justify payment of the amount requested.

- (e) Should Work included in previous RCI Form D004 submittals, and for which payment has been made, subsequently be identified, by tests, inspection, or other means, as not acceptable or not conforming to Contract requirements, the "Value of Work Completed" portion of the first RCI Form D004 submitted after such identification shall be modified to reduce the "completed" value of that Work by deleting the value of that which has been identified as not acceptable or nonconforming.

18. ACCESS TO WORK

The Consultant, the Owner, the Contract Administrator, the Owner’s observers and other testing personnel, inspectors from State and local agencies, and others authorized by the Owner, shall have access to the Work at all times. The Contractor shall provide proper facilities for access and inspection. All parties visiting the site shall sign in at the Job Log.

19. PLANS AND SPECIFICATIONS

- (a) The general character and scope of the Work are illustrated by the plans and the specifications. If the Contractor deems additional detail or information to be needed, he may request the same in writing from the Consultant to clarify intent conveyed in the Scope of Work or plans and specifications. His request shall precisely state the detail or information needed and shall explain why it is needed. The Contractor shall also indicate a date when the requested information is required. The Consultant shall provide by Field Order such further detail and information as is necessary by the date required so long as the date indicated is reasonable. Any additional drawings and instructions supplied to the Contractor shall be consistent with the Contract Documents, shall be true developments thereof, and shall be so prepared that they can be reasonably interpreted as a part thereof. The Contractor shall carry out the Work in accordance with the additional detail drawings and instructions.
- (b) Contractor shall perform a review of the Contract documents and identify any conflicts, errors, and discrepancies such as to avoid delays to the work. If the Contractor finds a conflict, error, or other discrepancy in the plans or specifications, he shall notify the Consultant in writing as soon as reasonably possible, but before proceeding with the affected Work. The Consultant shall issue a clarification by Field Order to the Contractor stating the correct requirements. If the Contractor deems the Field Order requires additional Work, he shall notify the Consultant of such prior to proceeding with that Work and he shall submit a request for Change Order along with a detailed substantiating cost proposal through the Consultant to the Owner within ten (10) calendar days.
- (c) In case of differences between small and large-scale drawings, the large-scale drawings shall govern. Where on any of the drawings a portion of the Work is drawn out and the remainder is indicated in outline, the parts drawn out shall apply also to all other like portions of the Work.
- (d) Where the word "similar" appears on the drawings or Scope of Work, it shall be interpreted in its general sense and not as meaning identical, and all details shall be worked out in relation to their location and their connection with other parts of the Work.
- (e) The specifications are divided into several parts, or sections, for convenience only, since the entire specifications must be considered as a whole. The divisions of the specifications are not intended to control the Contractor in dividing the Work among Subcontractors or to limit the Work performed by any trade. The Contractor shall be solely responsible for the coordination of the trades, Subcontractors and vendors engaged in the Work.
- (f) Measurements or dimensions shown on the drawings for Site features, utilities and structures shall be verified at the Site by the Contractor. The Contractor shall not scale measurements or dimensions from the drawings. If there are discrepancies, the Consultant shall be consulted. If new Work is to connect to, match with or be provided in existing Work, the Contractor shall verify the actual existing conditions and necessary dimensions prior to ordering or fabrication.

20. SUBMITTALS

- (a) The Contractor shall submit a listing of all Submittals required by the Consultant or which the Contractor identifies as necessary, fixing the dates for the submission of shop or setting drawings, samples and product data. The listing shall be in a format acceptable to the Consultant. The Contractor shall identify all Submittals with the Project Code Number as established by the Owner and the Contract Administrator.
- (b) Submittals shall be forwarded to the Consultant for approval if required by the specifications or Scope of Work or if requested by the Consultant or the Owner. No part of the Work dealt with by a Submittal shall be fabricated by the Contractor, save at his own risk, until such approval has been given.
- (c) Submittals shall be accompanied by a letter of transmittal which shall list the Project Number, the Submittals included, the specification section number applicable to each, and the date shown on each Submittal. Submittals shall be complete in every respect and bound in sets. Each Submittal shall be clearly marked to show each item, component and/or optional feature proposed to be incorporated into the Project and cross-referenced to the plans or specifications as needed to identify the use for which the item or component is intended.
- (d) The Contractor shall check the Submittals for compliance with the requirements of the Contract Documents. The Contractor shall clearly note in writing any and all items which deviate from the requirements of the Contract Documents. Reasons for deviation shall be included with the Submittal. The Contractor shall be solely responsible for checking all dimensions and coordinating all materials and trades to ensure that the components or products proposed, individually or in combination, will fit in the space available and that they will be compatible with other components or products provided.
- (e) The Contractor shall forward all Submittals sufficiently in advance of construction requirements to allow reasonable time for checking, correcting, resubmitting and rechecking so as not to delay the work.
- (f) If a Submittal indicates a departure from the Contract requirements, the Consultant may reject the Submittal or, if he deems it to have merit, may recommend it to the Owner, who shall approve or reject it as the Owner, in its sole discretion, sees fit. The departure from the Contract requirements shall be further authorized by a Change Order, if a reduction or increase in the Contract Price is appropriate. Approval of a submittal shall not be deemed a Change Order or approval of any deviation from the Contract Documents, unless the deviation is specifically identified in the submittal and is specifically authorized in writing as an approved deviation by the Owner's Representative.
- (g) The Work shall be in accordance with approved Submittals and the Contract Documents. Approval of the Contractor's Submittals by the Consultant does not relieve the Contractor from responsibility of complying with the Contract and all drawings and specifications, except as changed by Change Order.
- (h) Additional Submittal requirements are shown in the specifications.

21. FEES, SERVICES AND FACILITIES

- (a) The Contractor shall obtain all permits and pay for all fees and charges necessary for temporary access and public right-of-way blockage or use, for temporary connections to utilities and for the use of property (other than the Site) for storage of materials and other purposes unless otherwise specifically stated in the Contract Documents. However, the Owner accepts all responsibility for any delays in obtaining permits not reasonably under the control of the contractor, including but not limited to delays caused by the issuing agency. The contractor shall pay all cost associated with the application for and payment of local Building Permits.
- (b) It is understood that, except as otherwise specifically stated in the Contract Documents, the Contractor, either directly or through his Subcontractors, shall provide and pay for all material, labor, tools, equipment, water, light, power, telephone and other services or facilities of any nature whatsoever necessary to execute the Work completely and deliver the Work within the Contract Time for Completion or before the Contract Completion Date.

22. EQUALS

- (a) **Substitute materials, equipment or assemblies:** The Contractor may propose to substitute a material, product, equipment, or assembly which deviates from the requirements of the Contract Documents but which the Contractor deems will perform the same function and have equal capabilities, service life, economy of operations, and suitability for the intended purpose. The proposal must include any cost differentials proposed. The Owner will have the Consultant provide an initial evaluation of such proposed substitutes and provide a recommendation on acceptability and indicate the Consultant's redesign fee to incorporate the substitution in the design. If the proposed substitute is acceptable to the Owner, a Substitution Request Approval form will be issued to all known bidders prior to bid, or a Change Order will be proposed to the Contractor to accept the substitute and to deduct the cost of the Consultant redesign fee and the proposed cost savings from the Contract Price. The Owner shall have the right to limit or reject substitutions at its sole discretion.
- (b) The Contractor shall be responsible for making all changes in the Work necessary to adapt and accommodate any equal or substitute product which it uses. The necessary changes shall be made at the Contractor's expense.
- (c) The Scope of Work or Specification documents shall address timing of submission for alternates or substitutes, including response time to Contractor requests. Notwithstanding such letter, other than substitutions through Change Directives issued by Consultant, Contractor itself warrants that such components shall be compatible and further warrants (and shall procure manufacturers' warranties for) all substitutions to the same extent as the required warranty for the original item. The Contractor shall be responsible for review and confirming compatibility of all components in the event of a substitution. Letters from the relevant material Suppliers confirming compatibility shall be sufficient evidence of compatibility.

23. CONTRACTOR'S TITLE TO MATERIALS

No materials or supplies for the Work shall be purchased by the Contractor, or by any Subcontractor or Supplier, subject to any security interest, installment or sales contract or any other agreement or lien by which an interest is retained by the seller or is given to a secured party. The Contractor warrants that he has clear and good title to all materials and supplies which he uses in the Work or for which he accepts payment in whole or in part.

24. STANDARDS FOR MATERIALS INSTALLATION & WORKMANSHIP

- (a) Unless otherwise specifically provided in the Contract, all equipment, material, and accessories incorporated in the Work are to be new.
- (b) Unless specifically approved by the Owner or required by the Contract, the Contractor shall not incorporate into the Work any materials containing asbestos or any material known by the industry to be hazardous to the health of building construction workers, maintenance workers, or occupants. If the Contractor becomes aware that a material required by the Contract contains asbestos or other hazardous materials, he shall notify the Owner and the Consultant immediately and shall take no further steps to acquire or install any such material without first obtaining Owner approval.
- (c) All workmanship shall be of the highest quality found in the building industry in every respect. All items of Work shall be done by craftsmen or tradesmen skilled in the particular task or activity to which they are assigned. **In the acceptance or rejection of Work, no allowance will be made for lack of skill on the part of workmen.** Poor or inferior workmanship (as determined by the Consultant, the Owner or other observing authorities) shall be removed and replaced at Contractor's expense such that the Work conforms to the highest quality standards of the trades concerned, or otherwise corrected to the satisfaction of the Consultant, the Owner, or other inspecting authority, as applicable.

25. WARRANTY OF MATERIALS AND WORKMANSHIP

- (a) The Contractor warrants that, unless otherwise specified, all materials and equipment incorporated in the Work under the Contract shall be new and in compliance with the Submittals and the Contract Documents. The Contractor further warrants that all workmanship shall be of the highest quality and in accordance with best industry practices and the Contract Documents and shall be performed by persons qualified at their respective trades.

- (b) Work not conforming to these warranties shall be considered Defective.
- (c) This warranty of materials and workmanship is separate and independent from and in addition to any of the Contractor's and system manufacturer's other guarantees or obligations in the Contract or under relevant State law.

26. USE OF SITE AND REMOVAL OF DEBRIS

- (a) The Contractor shall:
 - (1) Perform the Work in such a manner as not to interrupt or interfere with the operation or enjoyment of any existing activity on, or in proximity to, the Site or with the Work of any other separate contract, as agreed and set forth in the pre-construction meeting.
 - (2) Store his apparatus, materials, supplies and equipment in such orderly fashion at the Site of the Work as will not unduly interfere with the progress of his Work or the work of any other separate contractor.
 - (3) Place upon the Work or any part thereof only such loads as are consistent with the safety of that portion of the Work. Prior to performance of the Work, contractor shall identify and obtain the Consultant's approval of all staging and storage areas and shall limit its staging and storage to such areas. Contractor shall leave the site in a clean and safe condition on a daily basis with tools and equipment properly stored.

27. PROTECTION OF PERSONS AND PROPERTY

- (a) The Contractor expressly undertakes, both directly and through his Subcontractors, to take every reasonable precaution at all times for the protection of all persons and property which may come on the Site or be affected by the Contractor's Work.
- (b) The Contractor shall be solely responsible for initiating, maintaining, and supervising and confirming the application of all safety precautions and programs in connection with the Work.
- (c) The provisions of all Federal, State and local rules and regulations governing health and safety as adopted by the relevant authority, shall apply to all Work under this Contract
- (d) The Contractor shall continuously maintain adequate protection of all his Work from damage and shall protect the Owner's property from injury or loss arising in connection with this Contract. He shall make good any such damage, injury or loss, except as may be directly and solely due to errors in the Contract Documents or caused by agents or employees of the Owner. The Contractor shall adequately protect adjacent property to prevent any damage to it or loss of use and enjoyment by its owners. The Contractor shall provide and maintain all passageways, guard fences, lights and other facilities for protection as required by State or local authority, local conditions, or the Contract.

28. CLIMATIC CONDITIONS

The Contractor shall suspend activity on and protect any portion of the Work that may be subject to damage by climatic conditions as a result of wind, storms, rain, hail, or other weather conditions. As specified in, and solely pursuant to, Section 6(c), the Contract period may be extended due to loss of time due to unfavorable climatic conditions not anticipated after evaluation of historical conditions.

29. PAYMENTS TO CONTRACTORLien Waivers

As a condition to final payment, Contractor shall deliver conditional and unconditional lien waivers from the Contractor and all Subcontractors and Suppliers (on RCI forms D006 and D008) without exception.

- (a) Unless otherwise provided in the Contract, the Owner will make partial payments to the Contractor on the basis of a duly certified and approved Schedule of Values and Certificate for Payment (RCI Form D004), showing the estimate of the Work performed during the preceding calendar month or work period, as recommended by the Consultant. When evaluating the Contractor's RCI Form D004, the Consultant will consider the value of the Work in place, the value of approved and properly stored materials, the status of the Work on the critical path with regard to the Time for Completion, and the

estimated value of the Work necessary to achieve Final Completion. The Contractor will submit his monthly estimate of Work completed on RCI Form D004 so that it is received by the Consultant and the Owner's Contract Administrator at least one work day prior to the date scheduled by the Consultant. Work done shall be taken into consideration, if properly documented as required by Section 17 of these General Conditions.

- (b) No payment shall be made to the Contractor until the Contractor furnishes to the Owner its Federal Employer Identification Number (FEIN) if a proprietorship, partnership, corporation, Limited Liability Company or other legal entity. No payment shall be made to the Contractor until Certificates of Insurance or other satisfactory evidence of compliance by the Contractor with all the requirements of Section 9 of these General Conditions have been delivered to the Owner. Further, no payments on the basis of Work performed by a Subcontractor shall be paid by the Owner until copies of any certificates of insurance required of the Subcontractor under Section 9 have been delivered to the Owner.
- (c) In making such partial payments, ten percent (10%) of each payment to the Contractor shall be retained until Final Completion and acceptance of all Work covered by the Contract, unless otherwise provided by any law, regulation or program of state or federal government. Such retainage shall be held to assure faithful performance of the Contract and may also be used as a fund to deduct amounts due to or claimed by the Owner, including, but not limited to, payment to the Owner of all moneys due for deductive change orders, credits, uncorrected Defective Work, interest, damages, and the like.
- (d) All material and Work for which partial payments are made shall thereupon become the sole property of the Owner, but this provision shall not relieve the Contractor from the sole responsibility for all materials and Work, including those for which payment has been made, or for the restoration of any damaged materials or Work. Nor shall this provision serve as a waiver of the right of the Owner to require the fulfillment of all of the terms and conditions of the Contract.
- (e) The final payment, which shall include the retainage and less any amounts due to or claimed by the Owner, shall not become due until the Consultant and the Owner agree that Final Completion has been achieved and until the Contractor delivers to the Owner through the Consultant a Certificate of Completion by the Contractor (RCI Form C002) and an Affidavit of Payment of Claims (RCI Form D011) stating that all Subcontractors and Suppliers of labor and/or materials have been paid all sums claimed by them for Work performed or materials furnished in connection with this Project less retainage. Amounts due the Owner which may be withheld from the final payment may include, but are not limited to, amounts due pursuant to Section 3(h), Section 13(a)-(d), costs incurred to repair or replace defective work, costs incurred as a result of the Contractor's negligent acts or omissions or omissions of those for whom the Contractor is responsible and any liquidated (if applicable) or actual damages. If all Subcontractors and Suppliers of labor and materials have not been paid the full amount claimed by them, the Contractor shall list each to which an agreed amount of money is due or which has a claim in dispute. With respect to all such Subcontractors and Suppliers, the Contractor shall provide to the Owner, along with the Affidavit of Payment of Claims (RCI Form D011) an affidavit from each such Subcontractor and Supplier stating the amount of their subcontract or supply contract, the percentage of completion, the amounts paid to them by the Contractor and the dates of payment, the amount of money still due if any, any interest due the Subcontractor or, Supplier pursuant to Section 30(b) below, and whether satisfactory arrangements have been made for the payment of said amounts. If no agreement can be reached between the Contractor and one or more Subcontractors or Suppliers as to the amounts owed to the Subcontractors or Suppliers, the Owner may, in its discretion, pay such portion of the moneys due to the Contractor which is claimed by the Subcontractor or Supplier into a State or Federal Court sitting in the State of the Work as an interpleader action, in the manner provided by law. Said payment into court shall be deemed a payment to the Contractor. Nothing in this Section shall be construed as creating any obligation or contractual relationship between the Owner and any Subcontractor or Supplier, and the Owner shall not be liable to any Subcontractor or Supplier on account of any failure or delay of the Owner in complying with the terms hereof. Owner shall have the right to withhold the amount of any payment required by a Subcontractor to submit a lien waiver or remove a lien that is in excess of the amount otherwise due Contractor. In the event any construction lien is filed against the Project, then provided Owner has paid the amounts then due Contractor under this Contract, Contractor shall pay the amount of such lien or bond over such lien within 15 days of its filing.

- (f) Upon successful completion of the final inspection and all Work required by the Contract, including but not limited to the delivery of equipment manuals, proof of date of manufacture and purchase of materials, written warranties, acceptance of the Work by the Owner and the delivery of the affidavits required in Section 29(e) of these General Conditions, the Consultant shall deliver the written Certificate of Completion (RCI Form C003) to the Owner, with a copy to the Contractor, stating the entire amount of Work performed and compensation earned by the Contractor, including extra work and compensation therefore. The Owner may accept the Work for occupancy or use while asserting claims against the Contractor; disputing the amount of compensation due to the Contractor; disputing the quality of the Work, its completion, or its compliance with the Contract Documents; or any other reason.
- (g) Unless there is a dispute about (i) the compensation due to the Contractor, (ii) Defective Work, (iii) quality of the Work, (iv) compliance with the Contract Documents, (v) completion itself, (vi) claims by the Owner, (vii) or other matters in contention between the parties, within thirty (30) days after receipt and acceptance of the Schedule of Values and Certificate for Payment (RCI Form D004) in proper form by the Consultant, the Owner shall pay to the Contractor the amount approved by the Consultant, less all prior payments and advances whatsoever to or for the amount of the Contractor. In the case of final payment, the completed Affidavit of Payment of Claims (RCI Form D011), the Certificate of Completion by the Contractor (RCI Form C002), and the Certificate of Completion by the Consultant (RCI Form C003) shall accompany the final Schedule of Values and Certificate for Payment (RCI Form D004) which is forwarded to the Owner for payment. The date on which payment is due shall be referred to as the Payment Date. In the event of disputes, payment shall be mailed on or before the Payment Date for amounts and Work not in dispute.
- (h) Interest shall accrue on all amounts owed by the Owner to the Contractor which remain unpaid seven (7) days following the Payment Date. Said interest shall accrue at the rate of three percent (3%) per annum.
- (i) The acceptance by the Contractor of the final payment shall be and operate as a release to the Owner of all claims by the Contractor, its Subcontractors and Suppliers, and of all liability to the Contractor whatever, including liability for all things done or furnished in connection with this Work.
- (j) No Certificate for Payment issued by the Consultant, and no payment, final or otherwise, no Certificate of Completion, nor partial or entire use or occupancy of the Work by the Owner, shall be an acceptance of any Work or materials not in accordance with the Contract, nor shall the same relieve the Contractor of responsibility for faulty materials or Defective Work.

30. PAYMENTS BY CONTRACTOR

The Contractor is obligated to:

- (a) Within seven (7) days after receipt of amounts paid to the Contractor by the Owner for Work performed by the Subcontractor or Supplier under this Contract:
 - (1) Pay the Subcontractor or Supplier for the proportionate share of the total payment received from the Owner attributable to the Work performed by the Subcontractor or the materials furnished by the Supplier under this Contract; or
 - (2) Notify the Subcontractor or Supplier, in writing, of his intention to withhold all or a part of the Subcontractor or Supplier's payment with the reason for nonpayment. If the Contractor withholds any portion of a payment to any Subcontractor that was previously paid to Contractor, then if the Contract Administrator so determines it appropriate, Owner shall receive a credit for that withheld amount on the next monthly certificate for payment.
- (b) Pay interest to the Subcontractor or Supplier on all amounts owed by the Contractor that remain unpaid after seven (7) days following receipt by the Contractor of payment from the Owner for Work performed by the Subcontractor or materials furnished by the Supplier under this contract, except for amounts withheld as allowed under subsection (a)(2) of this Section.
- (c) Include in each of his subcontracts a provision requiring each Subcontractor to include in each of its subcontracts a provision requiring each Subcontractor to include or otherwise be subject to the same

payment and interest requirements with respect to each lower tier subcontractor. Each Subcontractor shall include with its invoice to, or request for payment from, the Contractor, a certification that that Subcontractor has paid each of its suppliers and lower tier subcontractors their proportionate share of previous payments received from the Contractor attributable to the Work performed or the materials furnished by it under this Contract.

The Contractor's obligation to pay interest to the Subcontractor or Supplier pursuant to subsection (b) of this Section is not an obligation of the Owner. A modification to this Contract shall not be made for the purpose of providing reimbursement for such interest charge. A Contractor's cost reimbursement claim shall not include any amount for reimbursement of such interest charge.

31. CHANGES IN THE WORK

- (a) The Owner may at any time, by written order utilizing the Contract Change Order (RCI Form D002), make changes in the Work which are within the general scope of the Contract. At the time of the Pre-construction Meeting described in Section 40(b), the Contractor and the Owner shall advise each other in writing of their designees authorized to accept and/or approve changes to the Contract Price and of any limits to each designee's authority. Should any designee or limits of authority change during the time this Contract is in effect, the Contractor or Owner shall give written notice to the other within seven (7) calendar days, utilizing the procedures set forth in these General Conditions.

In making any change, the charge or credit for the change shall be determined by mutual agreement. The Owner agrees that the Contractor is not responsible for delays caused by either the Owner's or Consultant's failure to approve Change Orders or authorize the commencement of the work in writing. Changes shall be determined by one of the following methods:

- (1) By a mutually agreed fixed amount change to the Contract Price and/or time allowed for completion of the Work. The Change Order shall be substantiated by documentation itemizing the estimated quantities and costs of all labor, materials, and equipment required as well as any mark-up used. The price change shall include the Contractor's overhead and profit.
- (2) By using unit prices and calculating the number of net units of Work in each part of the Work which is changed, either as the Work progresses or before Work on the change commences, and by then multiplying the calculated number of units by the applicable unit price set forth in the Contract or multiplying by a mutually agreed unit price if none was provided in the Contract. No additional percentage markup for overhead or profit shall be added to the unit prices.
- (3) By ordering the Contractor, by Change Order citing this subsection, to proceed with the change to the Work to keep in a form acceptable to the Owner, an accurate, itemized account of the cost of the change in the Work, including, but not limited to, the costs of labor, materials, equipment, and supplies; and to annotate a copy of the Project schedule to accurately show the status of the Work at the time this initial change order is issued, to show the start and finish of the changed Work, and the status of the Work when the changed Work is completed. A Change Order citing this subsection shall describe the parameters of the change in the Work, describe the cost items to be itemized and verified for payment, address the impact on the schedule for Substantial Completion, and state that a subsequent Change order will be issued to incorporate the cost of the changed Work into the Contract Price and any change in the Contract Time for Completion or Contract Completion Date. The Contractor shall sign the Change Order acknowledging he has been directed to proceed with the changed Work. The Contractor's signature on each initial Change Order authorizing Work and citing this Subsection as the method for determining the cost of the Work shall not constitute the Contractor's agreement on the cost or time impact of the changed Work.

Within fourteen (14) days of the conclusion of such ordered Work, the Contractor and the Owner shall arrive at a cost for the Change Order, based on the records kept and the Contractor's allowance for overhead and profit and such costs shall be incorporated into a Change Order which references the Change Order ordering the Work. If agreement on the cost of the changed Work cannot be reached within the fourteen (14) days allotted, the Contractor may file a claim for the disputed amount as provided for in Section 39.

- (b) The Contractor shall review any Owner requested or directed change and shall respond in writing within seven (7) calendar days after receipt of the proposed change (or such other reasonable time as the Owner may direct), stating the effect of the proposed change upon his Work, including any increase or decrease in the Contract time and Price. The Contractor shall furnish to the Owner an itemized breakdown of the quantities and prices used in computing the proposed change in Contract Price. A Change Order must be issued before the Contractor is authorized to proceed with any change work. Contractor shall be entitled to no additional compensation for any work performed prior to issuance of a Change Order.

32. EXTRAS

If the Contractor claims that any instructions given to him by the Consultant or by the Owner, by drawings or otherwise, involve extra Work which increases the scope of the Contract, then, except in emergencies endangering life or property, he shall give the Consultant and the Owner written notice thereof before proceeding to execute the Work. Said notice shall be given promptly enough to avoid delaying the Work and in no instance later than 48 hours after the receipt of such instructions. Should it not be immediately clear to the Contractor that the change involves extra Work outside the scope of the Contract, written notice shall be sufficient if given as soon as possible after such realization, but in no event later than 48 hours after the start of such Work. If the Owner agrees, a Change Order shall be issued as provided in Section 31 of these General Conditions, and any additional compensation shall be determined by one of the three (3) methods provided in said Section 31, as selected by the Owner. Except as otherwise specifically provided, no claims for extra Work shall be allowed unless timely notice, as required by this section, is given by the Contractor and unless such Work is performed pursuant to written Change Order as provided in Section 31. The Change Order shall designate which of the three methods for computing charges and credits set forth in said Section 31(a) shall be used.

Contractor agrees that the intent of this Agreement is that all work required for building envelope repairs (building envelope included all exterior building elements) and related remediation is included in the basic scope of work. Accordingly, the only work that constitutes and qualifies as a change (under Paragraph 31 herein) or extra, in the event there are any changes or extras, is "betterment" to the premises which are the subject of this Agreement.

A Change Order must be issued before the Contractor is authorized to proceed with any change work. Contractor shall be entitled to no additional compensation for any work performed prior to issuance of a Change Order therefore.

33. CONTRACTOR'S RIGHT TO STOP WORK OR TERMINATE THE CONTRACT

If the Work should be stopped under an order of any court or other public authority for a period of ninety (90) days through no fault of the Contractor or anyone employed by him, or if the Owner should fail to pay to the Contractor within twenty-one (21) days any sum certified by the Consultant when no dispute exists as to the sum due or any provision of the Contract, then the Contractor may, upon seven (7) calendar days written notice to the Owner and the Consultant, stop Work or terminate the Contract and recover from the Owner payment for the cost of the Work actually performed, together with overhead and profit thereon, but profit on the Work performed shall be recovered only to the extent that the Contractor can demonstrate that he would have had profit on the entire Contract if he had completed the Work. The Contractor may not receive profit or any other type of compensation for parts of the Work not performed. The Contractor may recover the reasonable cost of physically closing down the Site, but no other costs of termination. The Owner may offset any claims it may have against the Contractor against the amounts due to the Contractor. Termination of the contract under this section is not without prejudice to any other right or remedy of the Contractor including, but not limited to, recovery of damages for breach of contract.

34. OWNER'S RIGHT TO TERMINATE THE CONTRACT FOR CAUSE

- (a) If the Contractor should be adjudged as bankrupt, or if he should make a general assignment for the benefit of his creditors, or if a receiver should be appointed on account of his insolvency, the Owner may terminate the Contract. If the Contractor should refuse or should repeatedly fail to complete work except in cases for which extension of time is provided, to supply enough properly skilled workmen or provide materials and equipment, or if he should fail to make prompt payment to Subcontractors or Suppliers of material or labor, or if he should disregard laws, ordinances or the written instructions of

the Consultant or the Owner, or otherwise be in substantial violation of any provision of the Contract, then the Owner may terminate the Contract.

- (b) Prior to termination of the Contract, the Owner shall give the Contractor seven (7) calendar days' written notice pursuant to Section 1 ("Notice") of these General Conditions, during which the Contractor may rectify the basis for the notice. If rectified to the satisfaction of the Owner within said seven (7) days, the Owner may rescind its notice of termination. If not, the termination for cause shall become effective at the end of the seven (7) day notice period. In the alternative, the Owner may, in writing, postpone the effective date of the termination for cause, at its sole discretion, if it should receive reassurances from the Contractor that the basis for the termination will be remedied in a time and manner which the Owner finds acceptable. If at any time after such postponement, the Owner determines that Contractor has not or is not likely to rectify the causes of termination in an acceptable manner or within the time allowed, then the Owner may immediately terminate the Contract for cause, without the necessity of further seven (7) day notice, by notifying the Contractor in writing of the termination.
- (c) Upon termination of the Contract for cause, the Owner shall take possession of the Site and of all materials thereon and finish the Work by whatever method it may deem expedient. In such case the Contractor shall not be entitled to receive any further payment unless the expense of finishing the Work, including compensation for additional managerial and administrative services is less than the unpaid balance of the correct price. If the cost to complete the work together with the cost of completed contract Work to date exceeds the contract price, then the Contractor shall pay the difference to the Owner, together with any other expenses of terminating the Contract and having it completed by others. At Owner's sole election, the Contractor shall assign, in whole or in part, its subcontracts, purchase orders, and documents evidencing other such sub tier relationships consistent with the assignment provisions stated in Paragraph 8 (g) of this Contract.
- (d) Termination of the Contract under this Section is without prejudice to any other right or remedy of the Owner.

35. DAMAGES FOR DELAYS; EXTENSION OF TIME

- (a) If the Contractor is delayed at any time in the progress of the Work by any act or omission of the Owner, its agents or employees or any separate independent contractor of the Owner, and the act or omission is the result of or is necessitated by causes outside the Owner's control; or if the Contractor is delayed by strikes, fires, unusual delays in transportation or unavoidable casualties, or other causes outside the Owner's or Contractor's control, the Contractor shall give the Owner and the Consultant written notice within (five) 5 calendar days of the inception of the delay. The Owner shall extend the time for Substantial Completion or Final Completion, as the case may be, for the length of time that the Substantial Completion or Final Completion of the Work was actually delayed thereby, and the Contractor shall not be charged with liquidated or actual damages for delay during the period of such extension nor shall the Contractor be due compensation or damages of any kind, under any theory of law, as a result of such delay, the impact of such delay, or acceleration of Work as a result of such delay.
- (b) The Contractor shall not be entitled to an extension of the Time for Completion or Contract Completion Date or to any additional compensation for delays caused by acts or omissions of the Contractor due to causes within his control, including, but not limited to, delays resulting from Defective Work including workmanship and/or materials, from rejected work which must be corrected before dependent work can proceed, from Defective Work or rejected work for which corrective action must be determined before like work can proceed, or from incomplete, incorrect or unacceptable Submittals or samples.

36. INSPECTION FOR SUBSTANTIAL COMPLETION & FINAL COMPLETION

- (a) The Contractor shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Contractor (RCI Form C001), of the date when the Work or designated portion thereof, will be, in his opinion, substantially complete and ready for inspection and testing to determine if it has reached Substantial Completion. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Consultant, who will attach his written endorsement as to whether or not he concurs with the Contractor's statement that the Work will be ready for inspection and testing on the

date given. The Consultant's endorsement is a convenience to the Owner only and shall not relieve the Contractor of his responsibility in the matter nor shall the Consultant's endorsement be deemed to be evidence that the Work was substantially complete and ready for inspection and testing. Inspection and testing shall take place at a time(s) mutually agreeable to the Contractor, Owner and Consultant.

The Contractor shall furnish access for the inspection and testing as provided in Section 18 of these General Conditions. The inspection and testing shall determine whether Substantial Completion has been accomplished and shall result in a written list of unfinished Work and Defective Work, commonly referred to as a "punch list," which must be finished and corrected to obtain Final Completion.

After successful completion of the inspection and the Consultant determines that, in its opinion, the Work, either in whole or in part, is substantially complete, the Consultant shall notify the Owner, in writing on the Certificate of Partial or Substantial Completion by the Consultant (RCI Form C003), that the Work, or a specified portion thereof, is recommended to be declared substantially complete. The Owner shall notify the Contractor, in writing, of the date the Owner accepts the Work, or the specified portion thereof, as substantially complete or the Owner shall notify the Contractor of the deficiencies to be corrected or completed before such Work will be accepted as substantially complete. Punchlists shall be prepared both upon Substantial Completion of the Work on each unit, and upon Substantial completion of the entire Project. Unit punchlist work shall be finally completed within 30 days after Substantial Completion of the Unit Work.

- (b) The Contractor shall notify the Owner, in writing on the Certificate of Completion by the Contractor (RCI Form C002), of the date when the Work has reached or will reach Final Completion and will be ready for final inspection and testing. The notice shall be given at least five (5) days in advance of said date and shall be forwarded through the Consultant, who will attach his endorsement as to whether or not he concurs in the Contractor's statement that the Work will be ready for inspection and testing on the date given. That inspection and any necessary testing shall be conducted in the same manner as the inspection for Substantial Completion. When the Work is finally and totally complete, including the elimination of all defects, the Work shall be finally accepted by the Owner and final payment shall be made in accordance with Section 29 of these General Conditions.
- (c) The Consultant shall conduct the inspections. The Owner may elect to have other persons of its choosing also participate in the inspections.

37. GUARANTEE OF WORK

- (a) Except as otherwise specified, all Work shall be, and is hereby, guaranteed by the Contractor against defects resulting from the use of materials, equipment or workmanship, which are defective, inferior, or not in accordance with the terms of the Contract, for five (5) year from the date of Final Completion of the Work and any related work (whether performed by Contractor or not), and acceptance of the Work and any related work by the Owner. Where the Owner agrees to take Beneficial Occupancy of a portion or phase of the Work which has been determined to be substantially complete before the entire Work is finally completed, the guarantees for the materials, equipment and workmanship in that portion or phase shall begin on the date that the Owner takes Beneficial Occupancy, unless otherwise specified in the Supplemental General Conditions, Special Conditions, or by separate agreement.
- (b) The Owner (or any Unit Owner) shall be entitled to make emergency warranty repairs (e.g. for water intrusion) if Owner is not able to reach Contractor to make such emergency repairs on Owner's first attempt to do so, or if contractor does not immediately take steps to commence such repairs upon Owner contacting Contractor, in which case Contractor shall reimburse Owner the reasonable cost of repair within ten days after request. If, within any guarantee period, Work which is not in accordance with the Contract, Defective Work, or inferior material, equipment or workmanship is noted by the Owner or Consultant which requires or renders necessary repairs or changes in connection with the guaranteed Work, the Contractor shall, promptly upon receipt of notice from the Owner, such notice being given not later than two weeks after the guarantee period expires, and without expense to the Owner:
 - (1) Place in satisfactory condition in every particular all of such guaranteed Work and correct all defects, inferior materials, equipment or workmanship therein;

- (2) Make good all damage to the structure or Site or equipment or contents thereof, which, in the opinion of the Owner or the Consultant, is the result of the use of materials, equipment or workmanship which are inferior, defective or not in accordance with the terms of the Contract, and
- (3) Make good any Work or materials or the equipment and contents of structures and/or Site disturbances that result from fulfilling the provisions of this Section.
- (c) In any case, when in fulfilling the requirements of the Contract and this guarantee or by other guarantee or warranty, the Contractor disturbs any work performed by a separate contractor, he shall restore such work to a condition satisfactory to the Consultant and Owner and guarantee such restored work to the same extent as if it was guaranteed under this Contract.
- (d) If the Contractor, after notice, fails to proceed promptly to comply with the terms of the guarantee as set forth in this Section, the Owner may have the defects or inferior materials, equipment or workmanship corrected, and the Contractor and his Surety shall be liable for all expense incurred.
- (e) All special warranties and guarantees applicable to definite parts of the Work that may be stipulated in or required by the Contract Documents shall be subject to the terms of this Section during the first year of the life of such special warranty or guarantee.
- (f) The guarantee of this Section shall be in addition to and not in lieu of all other warranties, express or implied, applicable to or arising from this Contract, the Contract Documents, or by law.
- (g) Nothing contained in this Section shall be construed to establish a period of limitation with respect to any other obligation which the Contractor might have under the Contract Documents, including liability for Defective Work under Section 25. This Section relates only to the specific obligation of the Contractor as set forth in this Section to correct the Work and does not limit the time within which his obligation to comply with the Contract Documents may be sought to be enforced, nor the time within which proceedings may be commenced to establish the Contractor's liability with respect to his other obligations under the Contract Documents.

Within ten (10) working days of the Contract Completion Date, which will be determined when the Notice to Proceed is issued, Contractor will supply the following closeout documentation to the Consultant.

- Certificate of Completion from the Contractor
- Proof of date of manufacture and purchase of materials
- Warranties (Labor and/or Material) from the Contractor and its Subcontractors
- All additional materials specifically needed to perfect a claim on a manufacturer's warranty on materials
- Product Data and/or Brochures for all materials used on this project (originals only)
- Final Lien Releases from the Contractor and its Subcontractors

38. ASSIGNMENTS

Neither party to the Contract shall assign the Contract in whole or any part without the written consent of the other, nor shall the Contractor assign any moneys due or to become due to him hereunder, without the prior written consent of the Owner. Consent to assignment shall not be unreasonably withheld. No assignment shall relieve any party from its obligations under the Contract.

39. CONTRACTUAL DISPUTES

Contractual claims, whether for money or for other relief, shall be submitted, in writing, no later than sixty (60) days after final payment; however, written notice of the Contractor's intention to file such claim must be given within a reasonable time of the occurrence or beginning of the event upon which the claim is based. The filing of a timely notice is a prerequisite to recovery under this Section. All claims shall be submitted along with all practically available supporting evidence and documentation.

The decision of the Owner on the Contract shall be final and conclusive unless the Contractor, within six (6) months of the date of the final decision on a claim, initiates legal action as provided by local, state and Federal statutes or in such other forum as may be agreed to in the Supplementary General Conditions. Failure of the Owner to render a decision within 90 days shall not result in the Contractor being awarded the relief claimed nor shall it result in any other relief or penalty. The sole result of the Owner's failure to render a decision within 90 days shall be the Contractor's right to immediately institute legal action.

40. PROJECT MEETINGS

- (a) The intention of this Section is that the Contractor, the Owner and the Consultant have timely exchange of information and cooperate to accomplish the Work as required by the Contract Documents. The Contractor is responsible for managing the Work, obtaining approvals and requesting clarifications on a timely, reasonable basis. The Owner and its Consultant are responsible for making a reasonable effort to provide timely responses to the Contractor.
- (b) Pre-construction Meeting:

Prior to the start of construction and no later than fifteen (15) calendar days after the Notice to Proceed, a "Pre-construction" meeting shall be held with attendees to include the Owner's Contract Administrator and Project Observer, the Consultant, the Contractor's superintendent, foreman (and scheduler, if Contractor desires), manufacturer's representative (for NDL warranty), and representatives of the Contractor's major Subcontractors. ALL trades that touch the roof or affected areas as part of the scope of Work will need to have a foreman present at this meeting. The purpose of the meeting is to clarify and discuss the specifics related to, but not limited to, the following:

- (1) Persons involved from each entity and their chain of authority including the names of persons authorized to sign Change Orders and any limits to their authority.
- (2) Names, addresses, telephone numbers and email addresses to be used for Requests for Information (RFI), Field Directives, Requests for Proposals (RFP), shop drawings, Submittals, and notices.
- (3) Contractor's proposed construction schedule and Owner's sequencing requirements, if any.
- (4) Schedule of Values and Certificate for Payment Form (RCI Form D004) requirements and procedures.
- (5) Procedures for shop drawings, product data and Submittals.
- (6) Procedures for handling Construction Field Directives (RCI Form D001) and Contract Change Orders (RCI Form D002).
- (7) Procedures for Contractor's request for time extension, if any.
- (8) Construction Site requirements, procedures and clarifications to include:
 - (a) Manner of conducting the Work
 - (b) Site specialties such as dust and erosion control, storm water management, project signs, clean up and housekeeping, temporary facilities, utilities, security and traffic
 - (c) Safety
 - (d) Fall Protection
 - (e) Layout of the Work
 - (f) Quality control, testing, inspections and notices required
 - (g) Site visits by the Consultant and others
 - (h) Owner's Project Observer duties
 - (i) Running Punch List
 - (j) As-Built Drawings

- (9) Procedures and documentation of differing or unforeseen Site conditions.
- (10) Monthly Pay Meeting.
- (11) Project Close-Out requirements and procedures.
- (12) Project records.
- (c) Other Meetings:
 - (1) Regular Meetings between the Consultant, the Contractor, Subcontractors, and the Owner's Representative shall take place at times and locations as decided in the Pre-construction Meeting. The Consultant, the Contractor or the Owner's representative may call additional meetings, on condition that they have provided a minimum of five (5) days' notice. Notice shall be provided on the Notice of Meeting form (RCI Form D013) and will indicate the date, time and location of the meeting, as well as a list of the expected attendees and a summary agenda.
 - (2) Requirements for other meetings, such as progress meetings, coordination meetings, pre-installation meetings and/or partnering meetings, may be included in the Contract Documents.

***** END OF SHORT FORM GENERAL CONDITIONS *****

SUPPLEMENTAL GENERAL CONDITIONS

PART 1 - GENERAL

1.1 SUPPLEMENTAL GENERAL CONDITIONS

1.1.1 The Supplemental Conditions is attached following this page.

1.2 RELATED REQUIREMENTS

1.2.1 Section 00 21 13 – Instructions to Bidders

1.2.2 Section 00 22 13 – Notice to Bidders

1.2.3 Section 00 41 13 – Bid Form

1.2.4 Section 00 41 15 – Pre-bid Question Form

1.2.5 Section 00 52 13 – Agreement Form

1.2.6 Section 00 72 13 – General Conditions

1.2.7 Section 00 74 10 – Special Conditions

1.2.8 Section 00 75 10 – Forms

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION – SUPPLEMENTAL GENERAL CONDITIONS

PROJECT IDENTIFICATION

PROJECT NAME:	<u>UTC</u>
PROJECT NUMBER:	<u>Project ID RAFA #20018051:</u>
SITE ADDRESS:	<u>2022 West 11th Street</u>
	Upland CA

SUPPLEMENTAL CONDITIONS

The following Supplemental Conditions shall be incorporated into the General Conditions of the Construction Contract (Agreement):

1. Contractor shall have liability insurance.
2. All building permits required for the work shall be obtained and posted onsite at each building, before starting any work.
3. The Owner, ORO Capital Advisors, LLC, DSM Group, Inc., Oro Manager III, LLC, and RAFA LLC. (RAFA LLC) will be named additional insureds and provided with correct documentation prior to job start.
4. RAFA LLC must be notified 24 hours in advance, via EMAIL (paul.vanni@rafallc.com) or phone call (949) 678-5101 prior to starting work.
5. The contractor must post RAFA LLC approved, Notices to Residence, 1 week prior to starting work. Notices to Residence must be posted at residence’s garage and front doors. Notices must also be posted at adjacent residences which might be affected.
6. Inclement Weather: Rainy day schedules must be submitted in writing and approved by RAFA LLC via email on the morning the rain day is requested.
7. No change is to be made in specifications or installation method without express approval by authorized representative of the owner. Protect yourself and ask for it in writing.
8. All correspondence and information pertinent to the job, prior to start and in progress must be submitted in writing. The Owner, Oro Capital Advisors, LLC, and RAFA LLC will honor no oral agreements. All written requests will be answered in a timely fashion.
9. The contractor shall provide trained and skilled workmen at all times, who are experienced with the product(s) being installed. Any worker proven to be incompetent, or who refuses to cooperate with the RAFA LLC inspector(s) shall be promptly dismissed from the project on request of RAFA LLC.
10. The Project must be fully staffed daily until completion. RAFA LLC must be notified if the installing crew needs to leave the work site prior to 4 PM on any regular workday.
11. Work must be completed within the agreed number of working days, or per agreed contract schedule. Liquidated damages of \$500.00 per day will be deducted by project owner or management from the funds due to the contractor for each additional day over the agreed completion date.
12. Whenever there are three or more crews working onsite, the Contractor is required to provide a full-time (non-working) superintendent, who shall be onsite during working hours. When less than 3 crews are working, each crew shall have a foreman who is authorized to make corrections or changes required by the Consultant. A copy of the project manual, including all addendums, addendum attachments, and post bid modification must be onsite during working hours. The superintendent and/or foreman must be able to read and understand the project manual.
13. No contractor/sub-contractors shall make any arrangements outside the scope of this contract without prior authorization given by RAFA LLC.
14. If conditional lien releases are submitted with an invoice, a joint check will be made to the contractor and supplier or subcontractor.

SPECIAL CONDITIONS

PART 1 - GENERAL

1.1 SPECIAL CONDITIONS

1.1.1 The Special Conditions is attached following this page.

1.2 RELATED REQUIREMENTS

1.2.1 Section 00 21 13 – Instructions to Bidders

1.2.2 Section 00 22 13 – Notice to Bidders

1.2.3 Section 00 41 13 – Bid Form

1.2.4 Section 00 41 15 – Pre-bid Question Form

1.2.5 Section 00 52 13 – Agreement Form (Attached)

1.2.6 Section 00 72 13 – General Conditions

1.2.7 Section 00 73 10 – Supplemental General Conditions

1.2.8 Section 00 75 10 – Forms

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SPECIAL CONDITIONS

PROJECT IDENTIFICATION

PROJECT NAME: UTC
PROJECT NUMBER: Project ID RAFA #20018051:
SITE ADDRESS: 2022 West 11th Street
Upland CA

SPECIAL CONDITIONS

The following Special Conditions regarding the Site and Project referenced above may impact bidding.

1. Where demolition is specified, all materials are to be hauled away the same day.
2. All new material shall be placed with cones and safety tape in the location approved by RAFA LLC. Cones must be 24" tall min. All material left on the job site must be coned and taped off at the end of every day. Material not placed in proper location shall be moved upon notification by RAFA LLC. If material not moved within a reasonable amount of time, the contractor will be back-charged for such movement at whatever the cost is to be deducted by the Owner or Management Company and reimbursed to RAFA LLC.
3. All structures are to be secured to a weather-tight condition at end of every workday. Contractor will provide a 24-hour emergency phone number for water entry problems. The contractor will not bill any extra charge for this service calls. RAFA LLC will make every attempt to contact the contractor. However, if no response is received within one hour, RAFA LLC will hire a repair service and charge back to the contractor.
4. No loud radios. No dogs allowed. No alcohol or illegal drugs.
5. Toilet facilities are to be provided by each contractor/sub-contractor at their own expense. No one is to request facilities of owner or tenant on property.
6. Electric power shall be provided by each contractor/sub-contractor at his own expense.
7. Degrading and/or offensive clothing worn on job site is not permitted. RAFA LLC reserves the right to request any worker to replace clothing in question, and/or told not to wear again on the project. RAFA LLC is the sole judge of such matters.
8. Prior to any payment, warranties and permits (finaled by City) must be submitted to RAFA LLC. No invoice will be processed until Final Payment Checklist is completed. Final inspections must be made with Consultants and all corrections made right then.

FORMS

PART 1 - GENERAL

1.1 FORMS

- 1.1.1 The following Forms are attached following this page:
 - 1.1.1.1 Certificate of Substantial Completion by Contractor
 - 1.1.1.2 Certificate of Completion by Contractor
 - 1.1.1.3 Schedule of Values and Certificate for Payment
 - 1.1.1.4 Contractor Affidavit and Partial Release of Lien
 - 1.1.1.5 Contractor Affidavit and Final Release of Claims and Lien
 - 1.1.1.6 Subcontractor Affidavit and Partial Release of Claims and Lien
 - 1.1.1.7 Subcontractor Affidavit and Final Release of Claims and Lien
 - 1.1.1.8 Supplier Affidavit and Partial Release of Lien
 - 1.1.1.9 Supplier Affidavit and Final Release of Claims and Lien
 - 1.1.1.10 Affidavit of Payment of Claims
 - 1.1.1.11 Final Payment Check List
 - 1.1.1.12 Meeting Notice

1.2 RELATED REQUIREMENTS

- 1.2.1 Section 00 21 13 – Instructions to Bidders
- 1.2.2 Section 00 22 13 – Notice to Bidders
- 1.2.3 Section 00 41 13 – Bid Form
- 1.2.4 Section 00 41 15 – Pre-bid Question Form
- 1.2.5 Section 00 52 13 – Agreement Form (Attached)
- 1.2.6 Section 00 72 13 – General Conditions
- 1.2.7 Section 00 73 10 – Supplemental Conditions
- 1.2.8 Section 00 74 10 – Special Conditions

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION – FORMS

END OF DIVISION - PROCUREMENT AND CONTRACTING REQUIREMENTS

CERTIFICATE OF SUBSTANTIAL COMPLETION BY CONTRACTOR

In accordance with the requirements of the Agreement between the Owner and the Contractor, the undersigned Contractor hereby states that portions of the above-named project are substantially completed in accordance with the requirements of the Contract Documents as modified by approved change orders. Those portions of the project now substantially complete are: *(list or describe)*

All applicable tests, certificates and regulatory inspections required by applicable laws and building codes and the Contract Documents have been performed with respect to the substantially completed portions of the project and the Owner has been provided with a copy of each report.

As-built, marked-up prints of the substantially completed portions of the project have been provided to the Design Team lead as required by the Contract Documents.

The Owner has been provided with a copy of all warranties and guarantees, including the starting date(s) of all warranties and guarantees, written and unwritten, required by the Contract Documents with respect to the completed portions of the project, except as follows:

All training, operating instructions and maintenance manuals required by the Contract Documents have been provided to the Owner, except as follows:

This certificate does not constitute an acceptance of Work not in accordance with the Contract Documents, nor is it a release of the Contractor's obligation to complete the Work in accordance with the Contract Documents.

Typed Contractor Name

By: _____

Typed Name & Title

The following documents are attached to and made part of this Certificate:

cc: Consultant

SCHEDULE OF VALUES AND CERTIFICATE FOR PAYMENT

PROJECT IDENTIFICATION

PROJECT NAME: UTC
PROJECT NUMBER: Project ID RAFA #20018051:
OWNER: Oro UTC, LLC
PAYMENT NUMBER: _____
FOR PERIOD: FROM: _____ TO: _____

SCHEDULE OF VALUES

Attach supporting detail sheets: - RCI Form D004a - RCI Form D004b	VALUE OF WORK COMPLETED				Percentile Complete
	Total Value	Previous Value to Date	Value This Report	Current Value to Date	
	A	B	C	D = B + C	E = D / A
ORIGINAL CONTRACT (Sum of D004b Form)					
APPROVED CHANGE ORDERS (Sum of D004a Form)					
ADJUSTED CONTRACT TOTAL					
LESS: RETAINAGE					
NET REQUISITION AMOUNT					

Amount this Certification

CONTRACTOR CERTIFICATION

The undersigned Contractor requests payment of that portion of the contract price shown on the last line of the foregoing Schedule of Values, and represents and warrants to the Owner that: (1) the data shown on the Schedule of Values is accurate and correct; (2) the Work covered by this Certificate has been completed in accordance with the Contract Documents; (3) all previous progress payments received from the Owner on account of Work done under this Contract have been applied to discharge in full (except for allowable retainage) all obligations of the Contractor incurred in connection with Work covered by prior Certificates _____ through _____ inclusive; and (4) title to all materials and equipment for which payment is requested in this Certificate, whether or not incorporated in said Work, will pass to Owner at time of payment free and clear of all liens, claims, security interests and encumbrances (except such materials and equipment which are covered by a bond previously accepted by the Owner).

FEIN #: _____ Contractor _____
 Date: _____ By: _____
 Type Name: _____

CONSULTANT CERTIFICATION

This is to certify that, in accordance with the terms of a contract for Project Number «Project_Number» executed the _____ day of _____ by and between, _____, the Contractor, and _____, the Owner, for work at _____, there is due to the Contractor the amount of _____

Dollars (_____).

Consultant: _____

By: _____ Type Name: _____ Date: _____

OWNER ACTION

Amount approved for payment this certificate is:

_____ Dollars (_____)

By: _____ Title:: _____ Date: _____

APPROVED CHANGE ORDERS

PROJECT NAME: UTC
 PROJECT NUMBER: Project ID RAFA #20018051:
 OWNER: Oro UTC, LLC
 PAYMENT NUMBER: _____
 FOR PERIOD: FROM _____ TO _____

Change Order Number	Change Order Description	Total Value	Value of Work Completed			Percent Complete
			Previous Value to Date	Value This Report	Current Value to Date	
		A	B	C = D - B	D = A x E	E = D / A
SUBTOTAL OF APPROVED CHANGE ORDERS						

ORIGINAL CONTRACT – ITEMIZED BREAKDOWN

PROJECT NAME: UTC
 PROJECT NUMBER: Project ID RAFA #20018051:
 OWNER: Oro UTC, LLC
 PAYMENT NUMBER: _____
 FOR PERIOD: FROM _____ TO _____

Item Number	Item Description	Category	Total Value	Value of Work Completed			Percent Complete
				Previous Value to Date	Value This Report	Current Value to Date	
			A	B	C = D - B	D = A x E	E = D / A
		MAT'L					
		LABOR					
		MAT'L					
		LABOR					
		MAT'L					
		LABOR					
		MAT'L					
		LABOR					
		MAT'L					
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		LABOR					
		MAT'L					
		LABOR					
		MAT'L					
		LABOR					
		MAT'L					
		LABOR					
SUBTOTAL (this sheet only)							

CONTRACTOR AFFIDAVIT AND PARTIAL RELEASE OF LIEN

THE STATE OF _____)
)
COUNTY OF _____) ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ("Contractor") and who, being duly sworn, upon his oath declares and acknowledges as follows:

1. I am the duly authorized agent for Contractor, which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.
2. Pursuant to an agreement dated _____, 20__ between Contractor and _____ ("Owner"), Contractor has supplied materials and performed labor in connection with construction of improvements upon certain real property in _____ County, _____, described as _____. Said improvements are more particularly described as construction of _____.
3. Contractor has received total payments to date in the amount of _____ Dollars (\$) for all materials supplied and labor performed by Contractor in connection with the construction of the improvements during the period through _____, 20__ [Insert date of end of prior progress payment period.]
4. In consideration of and conditioned upon receipt from Owner of _____ Dollars (\$) [insert amount requested in present Application for Payment], Contractor hereby waives and releases any and all liens, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and materialman's liens under the constitution and statutes of the state/commonwealth of _____ owned, claimed or held by Contractor in and to the land and improvements, whether or not affixed or severable from the land or from any other portion of the improvements.
5. Contractor warrants that all costs incurred and bills owed by Contractor to others for materials supplied or labor performed in connection with the improvements through _____, 20__ [insert date of end of prior progress payment period] have been fully paid and satisfied.

EXECUTED this _____ day of _____ 20__.

CONTRACTOR

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____, 20__, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20__.

CONTRACTOR AFFIDAVIT AND FINAL RELEASE OF CLAIMS AND LIEN

THE STATE OF _____)
)
COUNTY OF _____) ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ('Contractor') and who, being duly sworn, upon his oath declares and acknowledges as follows:

1. I am the duly authorized agent for Contractor which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.
2. Pursuant to an agreement dated _____, 20__ between Contractor and _____ ("Owner"), Contractor has supplied materials and performed labor in connection with the construction of improvements upon certain real property in _____ County, _____, described as _____. Said improvements are more particularly described as construction of _____.
3. Contractor hereby certifies it has received _____ Dollars (\$ _____), which constitutes payment in full for any and all materials supplied and labor performed by Contractor on the above described Improvements. Contractor does hereby waive and release any and all liens, claims, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and supplier's liens under the constitution and statutes of the State/Commonwealth of _____) owned, claimed or held by Contractor in and to the Land and Improvements or any part thereby by reason of materials supplied or labor performed on said project.
4. Contractor warrants that all costs incurred and bills owed by Contractor to others for materials supplied or labor performed in connection with the Improvements has been fully paid and satisfied, except for those bills set forth on Attachment A. Contractor certifies that within seven (7) days hereafter, Contractor shall pay all sums due for those bills set forth on Attachment A. Contractor further warrants that should any claim or lien be filed for material supplied or labor performed in connection with the Improvements, Contractor will immediately furnish a bond for the release of such liens, obtain settlement of any such liens, and furnish Owner a written, full release of such liens. Should Contractor be unable to obtain such release, Contractor agrees to fully indemnify and hold harmless Owner from any and all costs it may incur by reason of such liens.

EXECUTED this _____ day of _____ 20__.

CONTRACTOR

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____, 20__, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20__.

SUBCONTRACTOR AFFIDAVIT AND PARTIAL RELEASE OF CLAIMS AND LIEN

THE STATE OF _____)
)
COUNTY OF _____) ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ("Subcontractor") and who, being duly sworn, upon his oath declares and acknowledges as follows:

1. I am the duly authorized agent for Subcontractor, which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.
2. Pursuant to an agreement dated _____, 20__ between _____ ("Contractor") and _____ ("Owner"), Subcontractor has supplied materials and performed labor in connection with the construction of improvements upon certain real property in _____ County, _____, described as _____ . Said improvements are more particularly described as construction of _____.
3. Subcontractor has received total payment to date in the amount of _____ Dollars (\$_____).
4. In consideration of and conditioned upon the payment by Contractor of the sum of _____ Dollars (\$_____) [*insert amount requested in present Application for Payment*], the sufficiency of which is hereby acknowledged, Subcontractor hereby waives and releases any and all liens, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and materialman's liens under the constitution and statutes of the State/Commonwealth of _____) owned, claimed or held by Subcontractor in and to the Land and Improvements, whether or not affixed or severable from the Land or from any other portion of the improvements.
5. Subcontractor warrants that all costs incurred, and bills owed by Subcontractor to others for materials supplied or labor performed in connection with the Improvements through _____ [*insert date of end of prior progress payment period*] have been fully paid and satisfied. Subcontractor does further warrant that should any claim or lien be filed for material supplied or labor performed by virtue of Subcontractor's participation in the construction of said Improvements, Subcontractor will immediately furnish a bond for the release of each such lien, obtain settlement of any such liens and furnish Owner and Contractor written full release of such liens if Contractor has paid Subcontractor all amounts due Subcontractor. Should Subcontractor be unable to obtain such release, he agrees to fully indemnify and hold harmless Contractor and Owner for any and all costs they may incur by reason of such liens.

EXECUTED this _____ day of _____ 20__ .

SUBCONTRACTOR

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____ 20__, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20__.

SUBCONTRACTOR AFFIDAVIT AND FINAL RELEASE OF CLAIMS AND LIEN

THE STATE OF _____)
)
COUNTY OF _____) ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ("Subcontractor") and who, being duly sworn, upon his oath declares and acknowledges as follows:

1. I am the duly authorized agent for Subcontractor, which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.
2. Pursuant to an agreement dated _____, 20__ between _____ ("Contractor") and _____ ("Owner"), Subcontractor has supplied materials and performed labor in connection with the construction of improvements upon certain real property in _____ County, _____, described as _____. Said improvements are more particularly described as construction of _____.
3. Subcontractor hereby certifies it has received payment in the amount of _____ dollars (\$_____), which constitutes payment in full for any and all materials supplied and labor performed in connection with the construction of said Improvements, except as to claims in the amount of _____ dollars (\$_____) previously presented in writing to Contractor.
4. In consideration of payment by Contractor of all said sums, the receipt and sufficiency of which is hereby acknowledged, Subcontractor hereby waives and releases any and all liens, claims, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and materialman's liens under the constitution and statutes of the State/Commonwealth of _____) owned, claimed or held, or to be owned, claimed or held by Subcontractor in and to the Land and Improvements, whether or not hereafter thereon, whether real or personal property, and whether or not affixed or severable from the Land or from any other portion of the Improvements.
5. Subcontractor warrants that all bills owed by Subcontractor to others for materials supplied or labor performed, or labor performed in connection with the Improvements have been fully paid and satisfied, except for those bills set forth on Attachment A. Subcontractor certifies that within seven (7) days hereafter Subcontractor shall pay all sums due for those bills set forth on Attachment A. Subcontractor does further warrant that should any claim or lien be filed for material supplied or labor performed by virtue of Subcontractor's participation in the construction of said Improvements, Subcontractor will immediately furnish a bond for the release of each such lien, obtain settlement of any such liens, and furnish Owner and Contractor written full release of such liens. Should Subcontractor be unable to obtain such release, Subcontractor agrees to fully indemnify and hold harmless Contractor and Owner from any and all costs they may incur by reason of such liens.

EXECUTED this _____ day of _____ 20__.

SUBCONTRACTOR

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____ 20__, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20__.

SUPPLIER AFFIDAVIT AND PARTIAL RELEASE OF LIEN

THE STATE OF _____)
COUNTY OF _____)

ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ("Supplier") and who, being duly sworn, upon his oath declares and acknowledges as follows:

- 1. I am the duly authorized agent for Supplier, which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.
2. Pursuant to an agreement dated _____, 20 between Supplier and _____, (_____) ["Contractor" or "Subcontractor," as appropriate], Subcontractor has supplied materials in connection with the construction of improvements upon certain real property in _____ County, _____, described as _____. Said improvements are more particularly described as construction of _____.
3. In consideration of the payment by _____ ["Contractor" or "Subcontractor," as appropriate], of the sum of _____ dollars (\$_____), the sufficiency of which is hereby acknowledged, Supplier hereby waives and releases any and all liens, claims, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and materialman's liens under federal law or the statutes of the State/Commonwealth of _____) owned, claimed or held, or to be owned, claimed or held by Supplier in and to the Land and Improvements, whether or not affixed to or severable from the Land or from any other portion of the Improvements and/or against the Contractor, the Subcontractors, the Owner and any other person or party having any ownership interest in such Land and Improvements to the full extent of the amount set out above with regard to the work paid for by or on behalf of the Subcontractor for all materials supplied to the project through and including _____, 20___.
4. Supplier warrants that all costs incurred, and bills owed by Supplier to others for materials supplied in connection with the Improvements through _____ [insert date of end of prior progress payment period] have been fully paid and satisfied. Supplier does further warrant that should any claim or lien be filed for material supplied or labor performed by virtue of Supplier's participation in the construction of said Improvements, Supplier will immediately furnish a bond for the release of each such claim or lien, obtain settlement of any such claim or lien and furnish Owner, Contractor, and Subcontractor a written full release of such claim or lien. Should Supplier be unable to obtain such release, Supplier agrees to fully indemnify and hold harmless Owner, Contractor, and Subcontractor for any and all costs, including but not limited to attorneys' fees, any of them may incur by reason of such claims or liens.

EXECUTED this _____ day of _____ 20 __.

SUPPLIER

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____ 20__, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20 __.

SUPPLIER AFFIDAVIT AND FINAL RELEASE OF CLAIMS AND LIEN

THE STATE OF _____)
)
COUNTY OF _____) ss.

BEFORE ME, the undersigned authority, on this day personally appeared _____, known to me to be a credible person and officer of _____ ("Supplier") and who, being duly sworn, upon his oath declares and acknowledges as follows:

1. I am the duly authorized agent for Supplier, which has authorized me to make this affidavit, to enter into the agreements and to grant the lien waivers herein set forth, on its behalf and as its acts and deeds, and all the recitations herein are true and correct.

2. Pursuant to an agreement dated _____, 20__ between Supplier and _____, (_____) [*"Contractor" or "Subcontractor," as appropriate*], Supplier has supplied materials in connection with the construction of improvements upon certain real property in _____ County, _____, described as _____. Said improvements are more particularly described as construction of _____.

3. Supplier hereby certifies it has received payment in the amount of _____ dollars (\$_____) which constitutes payment in full for any and all materials supplied in connection with the construction of said Improvements, except as to claims in the amount of _____ dollars (\$_____) previously presented in writing to Contractor.

4. In consideration of payment by _____ [*"Contractor" or "Subcontractor," as appropriate*], of all said sums, the receipt and sufficiency of which is hereby acknowledged, Supplier hereby waives and releases any and all liens, claims, rights and interests (whether choate or inchoate and including, without limitation, all mechanic's and materialman's liens under the Constitution and statutes of the State/Commonwealth of _____) owned, claimed or held, or to be owned, claimed or held by Supplier in and to the Land and Improvements, whether or not hereafter thereon, whether real or personal property, and whether or not affixed or severable from the Land or from any other portion of the Improvements.

5. Supplier warrants that all bills owed by Supplier to others for materials supplied or labor performed in connection with the Improvements have been fully paid and satisfied, except for those bills set forth on Attachment A. Supplier certifies that within seven (7) days hereafter Supplier shall pay all sums due for those bills set forth on Attachment A. Supplier does further warrant that should any claim or lien be filed for material supplied or labor performed by virtue of Supplier's participation in the construction of said Improvements, Supplier will immediately furnish a bond for the release of each such lien, obtain settlement of any such liens, and furnish Owner, Contractor, and Subcontractor written full release of such liens. Should Supplier be unable to obtain such release, Supplier agrees to fully indemnify and hold harmless Owner, Contractor, and Subcontractor from any and all costs they may incur by reason of such liens.

EXECUTED this _____ day of _____ 20__.

SUPPLIER

By: _____

Title: _____

SUBSCRIBED AND SWORN TO before me, the said _____ this _____ day of _____ 20____, to certify which witness my hand and seal of office.

NOTARY PUBLIC in and for _____ County, _____

My commission expires on the _____ day of _____, 20 ____.

FINAL PAYMENT CHECK LIST

Your invoice will be processed only when all items are signed-off.

Project: UTC

Address: 2022 West 11th Street, Upland CA

Contractor: _____

The following items must be completed and signed-off by a Project Manager or Senior Consultant prior to issuance of payment for final invoices.

1. Original copy of signed manufacturer's product warranties with building address (Must include receipt of warranty fees paid to manufacturer).

Date Received: _____ Consultant's Approval: _____

2. Original copy of written and signed contractor's warranty, each building address.

Date Received: _____ Consultant's Approval: _____

3. Lien release from suppliers. If conditional lien release is issued, a joint check will be issued, listing the supplier

(_____) and the contractor as payees.

Date Received: _____ Consultant's Approval: _____

4. Lien release from sub-contractor. If conditional lien release is issued, a joint check will be issued, listing the sub-contractor (_____) and the contractor as payees.

Date Received: _____ Consultant's Approval: _____

5. Original Labor Release signed by All workers.

Date Received: _____ Consultant's Approval: _____

6. Original Building Department inspection card(s) signed-off as approved.

Date Received: _____ Consultant's Approval: _____

7. Return all access keys or keycards before final payment.

Date Received: _____ Consultant's Approval: _____

8. All trash and debris has been removed.

Date: _____

Consultant's Approval: _____

9. Gutters installed and complete.

Date: _____

Consultant's Approval: _____

10. Final job inspection with RAFA LLC Senior Consultant, PM or Inspector.

Date: _____

Consultant's Approval: _____

DATE OF ISSUE: _____

MEETING NOTICE

THIS MEETING NOTICE IS TO BE PROVIDED AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE MEETING DATE.

PROJECT IDENTIFICATION

PROJECT NAME: UTC

PROJECT NUMBER: Project ID RAFA #20018051:

SITE ADDRESS: 2022 West 11th Street

Upland CA

()

Site Telephone

()

Email

INDIVIDUAL / ENTITY REQUESTING MEETING

NAME: _____

ADDRESS: _____

TELEPHONE: _____

EMAIL: _____

MEETING LOCATION

MEETING DATE: _____ **TIME:** _____

ATTENDEES

The presence of the following individuals is requested at a meeting regarding the above referenced project.

INDIVIDUAL	OF (COMPANY)
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

DIVISION 01 - GENERAL REQUIREMENTS**SUMMARY****PART 1 - GENERAL**

1.1 Summary of Work

1.1.1 Project Name: UTC

1.1.2 Owner's Name: Oro UTC, LLC

1.1.3 Consultant's Name: RAFA LLC.

1.1.4 The Project consists of repair of low slope roofing on seven (7) buildings at 2022 West 11th Street, Upland CA.

1.1.4.1 Contractor shall furnish all labor and materials and provide all equipment and manpower necessary to perform all work, finished and complete, for the various parts of the construction in accordance with the bid documents.

1.1.4.2 All repairs must be finished to blend with adjacent surfaces.

1.1.4.3 All work must meet code and product manufacturer requirements and must be applied per manufacturer's written instructions.

1.1.4.4 All new wood specified to be painted will receive one coat of primer followed by two coats of paint.

1.1.5 The contractor shall include in base bid price for low slope and steep slope roofing:

1.1.5.1 It is the intention of the contract that there be no additional costs. If an existing counter-flashing is rusted, missing, in poor condition, or of insufficient height the contractor shall replace it in the base price.

1.1.5.2 The roofing contractor shall comply with all OSHA requirements on this job.

1.1.5.3 Roofers Mastic shall be permitted for any exposed surface.

1.1.6 The contractor shall provide the following unit prices, on the bid form, for additional work as directed by owner's representative. Price is to include all labor and materials required. (Do not include in base bid price).

1.1.6.1 Price for new skylights.

1.1.7 Remove and replace damaged plywood

1.1.7.1 Match existing

1.1.7.2 Plywood surfaces exposed to view must be primed and painted before installation.

1.1.7.3 Price for the replacement of any deteriorated or otherwise damaged plywood sheeting to match existing

1.1.7.4 Price to screw down all plywood old and new. See building codes for screw type and fastening pattern.

1.1.7.5 Price per Sq Ft of additional plywood

1.1.8 Man-hour rate for miscellaneous labor requested by owner.

1.1.9 Material mark up for miscellaneous material and equipment requested by owner.

1.1.10 The owner will perform the following at the owner's expense:

1.1.10.1 Remove any personal items from balconies before the work begins.

1.2 Contract Description

- 1.2.1 Contract Type: A single prime contract based on a Stipulated Price as described in bid documents.
- 1.2.2 Owner Occupancy
 - 1.2.2.1 Oro UTC, LLC, intends to continue to occupy or have tenants occupy the existing buildings during the entire construction period.
 - 1.2.2.2 Schedule the Work to accommodate such occupancy.
- 1.2.3 Contractor Use of Site and Premises
 - 1.2.3.1 Construction Operations: as determined at pre-bid conference.
 - 1.2.3.2 Provide access to and from site as required by law and by Oro Capital Advisors, LLC
 - 1.2.3.2.1 Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
 - 1.2.3.2.2 Do not obstruct roadways, sidewalks, or other public ways without permit.
 - 1.2.3.3 Utility Outages and Shutdown:
- 1.2.4 Prevent accidental disruption of utility services to other facilities.
- 1.2.5 Work Restrictions:
 - 1.2.5.1 Access to and Use of Site: Monday through Friday 7:30am to 5:30pm and as restricted by local ordinances.
- 1.2.6 Project Utility Sources:
 - 1.2.6.1 Water: Public utility.
 - 1.2.6.2 Electrical Power: Public utility.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION – SUMMARY

PRICE AND PAYMENT PROCEDURES**PART 1 - GENERAL**

1.1 Payment Procedures: See Contract

PART 2 - PRODUCTS (Not Used)**PART 3 - EXECUTION (Not Used)****END OF SECTION – PRICE AND PAYMENT PROCEDURES**

ADMINISTRATIVE REQUIREMENTS

PART 1 - GENERAL

1.1 Project Management and Coordination: Owner's agent RAFA LLC.

1.2 Construction Progress Documentation: See Contract

1.3 Submittal Procedures: See 01 60 00, 01 78 00, and product specifications for submittals required.

1.3.1 Submittals for Review: Shop drawings, product data, and samples,

1.3.1.1 Small Sheets, 8-1/2 x 11 inches maximum:

1.3.1.1.1 Number of copies required by submitter,

1.3.1.1.2 One copy for project record.

1.3.1.1.3 One copy which will be retained.

1.3.1.2 Large Sheets, 36 x48 inches maximum

1.3.1.2.1 One reproducible transparency.

1.3.1.2.2 Number of copies required by submitter.

1.3.1.2.3 One copy for project record.

1.3.1.2.4 One copy which will be retained.

1.3.1.3 Samples: Two of each, unless more are specified, one of which will be retained for project record, for review only for aesthetic characteristics or color or finish selection.

1.3.2 Submittals for Information: Certificates and certifications, test reports, a. Copies: Two.

1.3.3 Preparing Submittals:

1.3.3.1 Submit related information together or in appropriate sequence; submit all information required for an individual review together.

1.3.3.2 If verification of field conditions is required, do not submit until verified.

1.3.3.3 Do not make requests for deviations from contract documents via shop drawings, product data, or samples; deviations will not be valid unless specifically approved under specified modification procedures.

1.3.3.4 Coordinate with other submittals and with construction schedule.

1.3.3.5 For submittals for review, allow minimum of 15 days for review, excluding transit time.

1.3.3.6 Use a standard transmittal form; identify project entities involved, and relevant contract document drawing, detail, or specification.

1.3.3.7 Number each initial submittal with sequential number; number resubmissions with original number plus sequential alphabetic suffix.

1.3.3.8 Manufacturers' Standard Printed Data: Cross out inapplicable data or otherwise annotate to show applicable products, options, models, etc.

1.3.3.9 Clearly mark changes from previous submissions.

1.3.3.10 Provide space for review/approval stamps.

PART 2 – PRODUCT (Not Used)

PART 3 - EXECUTION (Not Used) END OF SECTION - ADMINISTRATIVE REQUIREMENTS

TEMPORARY FACILITIES AND CONTROLS

PART 1 - GENERAL

- 1.5.1 Temporary Utilities: Provide and pay for all electrical power required for construction purposes.
- 1.5.2 Construction Facilities: Provide all facilities required for construction purposes.
- 1.5.3 Temporary Construction: Provide all temporary construction required for construction purposes.
- 1.5.4 Construction Aids: Provide all tools, cranes, lifts, etc., required for construction purposes.
- 1.5.5 Vehicular Access and Parking: Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- 1.5.6 Temporary Barriers and Enclosures; Provide all barriers and enclosures required for construction purposes.
- 1.5.7 Temporary Controls; Provide all controls required for construction purposes.
- 1.5.8 Signs: No signs allowed on site without Oro Capital Advisors, LLC's permission except those required by law.
- 1.5.9 Removal of Temporary Facilities, Utilities, and Controls: Prior to Substantial Completion, remove, clean up, restore existing facilities used to original condition, restore permanent facilities used to specified condition, and repair damage.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION - TEMPORARY FACILITIES AND CONTROLS

PRODUCT REQUIREMENTS

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS

2.1 Basic Product Requirements:

- 2.1.1 Salvage: Do not use materials or equipment removed from existing premises, unless specifically allowed or required.
- 2.1.2 Multiple Instances of same Item: Use the same brand name product for each instance of the same item.
- 2.1.3 Warranties: Labor warranty for 1 years

2.2 Product Options:

- 2.2.1 Products Specified by Reference Standards or by Description Only.
- 2.2.2 Products Specified by Naming: Compatible products for repairs.

PART 3 - EXECUTION

3.3 Product Submittals Required:

- 3.3.1 Design Data: For each assembly specified to be designed or engineered by manufacturer or fabricator, submit calculations or test reports showing compliance with design criteria; or, for engineering design, submit certification by licensed professional engineer; or as specified; submit for review.
- 3.3.2 Shop Drawings: As required.
- 3.3.3 Product Data: On each product specified; include manufacturer's catalog data showing compliance and installation instructions.
- 3.3.4 Samples: For each product for which color, pattern, texture, or other optional characteristics must be selected and are not specified.
- 3.3.5 Warranties: Submit specimen warranty for review; submit actual warranty at project closeout.
- 3.3.6 Operation and Maintenance Data: See 01 78 00.

3.4 Product Delivery Requirements:

- 3.4.1 Transport and handle in accordance with manufacturer's instructions; inspect promptly upon delivery; handle by methods that prevent soiling and damage.

3.5 Product Storage and Handling Requirements;

- 3.5.1 Store and protect in accordance with manufacturer's instructions, with packaging, seals, and labels intact; store in manner required to prevent damage.

END OF SECTION - PRODUCT REQUIREMENTS

EXECUTION AND CLOSEOUT REQUIREMENTS

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 Examination:

- 3.1.1 Before starting work, verify that substrates are ready for and capable of supporting subsequent work.
- 3.1.2 Verify that field dimensions that would affect installation are as required.

3.2 Preparation:

- 3.2.1 Conduct preinstallation meetings to familiarize installers and others affected with procedures for installation and protection after installation.
- 3.2.2 Before starting work, prepare substrates and surfaces by cleaning and patching, as required, and as recommended by manufacturer of product to be installed.
- 3.2.3 Remove debris from areas of installation.

3.3 Execution;

- 3.3.1 Install products in manner specified and as required or recommended by manufacturer; if manufacturer's instructions conflict with contract documents, request clarification before proceeding.
- 3.3.2 Comply with specified standards as minimum quality, except where more stringent tolerances or other specified requirements indicate higher standards or more precise workmanship.
- 3.3.3 Have work performed by persons qualified to produce specified quality.
- 3.3.4 Install products level, straight, plumb, and in correct location, within tolerances specified, if any.
- 3.3.5 Install fixtures and fittings plumb and level and nicely aligned with each other and with finish materials.
- 3.3.6 Where one product covers another, install so covered product is completely concealed.
- 3.3.7 Where a product covers an opening, install so opening is completely covered.
- 3.3.8 Install sequential work in proper order; fit subsequent work to previous work neatly.
- 3.3.9 Where subsequent work alters previous work, replace and refinish previous work to correct condition.
- 3.3.10 Do not permanently enclose waste materials, debris, or rubbish in finished work.
- 3.3.11 In finished areas, conceal pipes within the construction, unless otherwise indicated.
- 3.3.12 Secure products in place with positive anchorage devices designed and sized to withstand reasonably anticipatable loads, stresses, vibration, and distortion.

3.4 Penetrating Items: Cut holes in previous and existing work as required to fit, unless otherwise indicated.

- 3.4.1 Conceal holes in finished work; use escutcheons unless otherwise indicated.
- 3.4.2 Fire-Rated Assemblies: Seal openings around penetrations.
- 3.4.3 Sound-Rated Assemblies: Pack openings around penetrations with noncombustible material.
- 3.4.4 Other Assemblies: Make airtight seal around openings.

- 3.4.5 If openings have been made too large, patch with matching materials to original condition before sealing or covering.

3.5 Remodeling Existing Work:

- 3.5.1 Where new work abuts existing work, align new work, with smooth and even transition.
- 3.5.2 Where existing finished work is cut so that a smooth transition with new work is not possible, terminate existing work along a straight line at a natural division.
- 3.5.3 Where existing work is to be refinished, finish as specified all visible surfaces in space, unless otherwise indicated.
- 3.5.4 Trim existing wood doors as necessary to clear new floor finish.

3.6 Cutting and Patching:

- 3.6.1 Cut new and existing work as little as possible, using appropriate tools that do as little damage as possible; obtain expert assistance for materials sensitive to damage.
- 3.6.2 Structural Work: Obtain approval prior to cutting.
- 3.6.3 Patch new work after cutting, to specified condition using specified materials; patch existing work to original or matching condition.
- 3.6.4 Finish Surfaces: Match adjacent finish without visible differences; if matching is not possible, refinish entire unit or continuous surface to nearest natural intersection or break, using the same finish.

3.7 Selective Demolition;

- 3.7.1 Cut portions to be removed neatly; make holes as small as possible; cut flat surfaces on straight lines.
- 3.7.2 Do not endanger structural members by cutting.

3.8 Cleaning:

- 3.8.1 Remove temporary labels, stains, and spots.
- 3.8.2 Daily nail clean-up
- 3.8.3 During construction, keep all project areas and site free of waste materials, debris, and rubbish, including daily cleanup of nails and other debris.
- 3.8.4 Place waste materials, debris, and rubbish in containers provided every day.
- 3.8.5 Final Cleaning:
 - 3.8.5.1 Clean interior and exterior surfaces exposed to view and equipment.
 - 3.8.5.2 Polish transparent and glossy surfaces.
 - 3.8.5.3 Vacuum clean carpet and other soft surfaces; broom clean other floors.
 - 3.8.5.4 Clean equipment, clean filters, and clean strainers.
 - 3.8.5.5 Clean light bulbs and lamps.
 - 3.8.5.6 Broom clean exterior paved areas; rake clean landscaped areas.

3.9 Protecting Installed Construction: Once work is installed, protect from damage due to subsequent construction operations whether or not relevant to installed work.

- 3.9.1 If necessary for complete protection, provide temporary coverings, warning signs, or barriers.
- 3.9.2 Positively protect sensitive finishes with durable materials capable of preventing damage, securely fastened.

- 3.9.3 Where possible avoid the need for traffic over sensitive materials like waterproofing, roofing, plantings, finished floorings, by proper sequencing of work; if traffic is unavoidable follow manufacturer's recommendations for protection, at a minimum.
- 3.9.4 Prohibit storage of materials on finished work.
- 3.9.5 Remove protective materials prior to final cleaning.

END OF SECTION - EXECUTION AND CLOSEOUT REQUIREMENTS

CLOSEOUT SUBMITTALS

PART 1 - GENERAL

1.1 Operation and Maintenance Data:

1.1.1 Products, Including Finishes, Moisture-Protection Materials, and Weather-Exposed Materials:

1.1.1.1 Manufacturer's catalog sheets marked to clearly identify products actually used and data applicable to actual installation.

1.1.1.2 Complete operation, adjustment, shut-down, troubleshooting, cleaning, preventative maintenance, inspection, and repair instructions and precautions, prepared especially for project if necessary, incorporating manufacturer's recommendations and diagrams.

1.2 Warranties:

1.2.1 Execute in duplicate, notarize, and mark with applicable specification number.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION - CLOSEOUT SUBMITTALS

END OF DIVISION- GENERAL REQUIREMENTS

DIVISION 02 – EXISTING CONDITIONS

DEMOLITION

PART 1 - GENERAL

1.1 SECTION INCLUDES

- 1.1.1 The Work covered by this Section shall consist of furnishing all labor, equipment, supplies, materials and supervision necessary to accomplish demolition as indicated in specifications. In particular;
 - 1.1.1.1 Removal and disposal of existing low slope roofing and parapet coping metal caps.
 - 1.1.1.2 Removal and disposal of stucco to facilitate, installation of stucco weep screed, z-bar flashings, and flashing of through wall penetrations.

1.2 RELATED SECTIONS

- 1.2.1 09 24 00 - Portland Cement Plastering

1.3 SCOPE

- 1.3.1 All materials, where called for in specs or drawings shall be stripped clean including pulling nails.
- 1.3.2 Contractor shall protect all landscape including plywood cover as needed to protect lawns and sprinklers.
- 1.3.3 Prime contractor must have his superintendent or foreman on site at the start of any demolition to verify each location, scope of work, and oversee start of process.

1.4 REQUIREMENTS

- 1.4.1 All Work identified which requires removal by the Contractor shall be removed as part of the basic Contract.
- 1.4.2 All existing materials removed by the Contractor as required by the Contract shall become property of the Contractor and shall be removed from the site at the Contractor's expense, the same day.
- 1.4.3 Tear-off sub-contractors shall be licensed and insured as per contract

PART 2 - PRODUCTS

2.1 MATERIALS

- 2.1.1 Temporary Protection: Minimum 6 mil thick sheet polyethylene or 5.1 mil thick all-purpose reinforced tarp; provide weights to retain sheeting in position.

2.2 EQUIPMENT

- 2.2.1 Products and equipment routinely required for removal and disposal of this type include:
 - 2.2.1.1 Roof cutter.
 - 2.2.1.2 Means of conveyance across and off the roof to the ground level,
 - 2.2.1.3 Chutes or enclosures for confined transport of roofing debris to minimize dust and scattering of materials beyond the disposal containers, vehicles, etc.
 - 2.2.1.4 Magnetic Sweepers
 - 2.2.1.5 Other products and tools, as approved by Consultant, required for a safe and orderly removal and conveyance off said site.

PART 3 - EXECUTION

3.1 MATERIAL REMOVAL

- 3.1.1 The Contractor shall accomplish any required demolition in such a manner as to minimize interference with adjacent building areas, & inconvenience to residents. Any and all damages to adjacent areas caused by the Contractor during demolition to be corrected at the Contractor's expense.
- 3.1.2 The use of equipment or wrecking devices shall be subject to the approval of the building owner; however, such approval does not relieve the contractor of responsibilities described herein.
- 3.1.3 The contractor shall review and visually survey areas marked for demolition before beginning demolition
- 3.1.4 Limit size of work sections to safeguard adjacent materials, structures, etc. and to minimize dust and noise. Contractor shall furnish necessary protection from the weather.
- 3.1.5 Protect existing facilities from damage during work. Do not overload existing pavement, curbs, sidewalk, planted earthen areas, etc., or new or existing construction with demolition debris, equipment, vehicles or containers, etc...
- 3.1.6 Pass over paved areas, around project perimeter of each building, and around dumpster with magnetic sweepers and clean up all fasteners, nails or any foreign objects throughout the day and close of each day.
- 3.1.7 Demolition adjacent to areas to remain shall be performed in a neat manner with straight lines to facilitate tie-ins of replacement materials. Demolition shall be performed by personnel familiar with the replacement of materials being removed. Excessive demolition, as determined by Owner, shall be replaced with similar and equal materials at Contractor's expense.
- 3.1.8 Contractor shall maintain required safety precautions during performance of work, including strict compliance with all applicable EPA and OSHA guidelines and regulations. The Contractor shall provide and maintain protected ingress and egress at all times.
- 3.1.9 Clean the ground around the dumpster twice daily, at mid-day and again at the end of the work day. Includes the removal of any material, debris or packaging as strewn about the site or adjacent areas. Debris must be restrained as such is created.
- 3.1.10 During demolition, the site shall be maintained in an acceptable state of cleanliness. All materials removed shall be loaded on trucks and hauled away the same day to a legal dump site. All dump fees and costs are included in the basic contract price.
- 3.1.11 Due to unacceptable water intrusion during the execution of the project, the Contractor shall:
 - 3.1.11.1 Continuously monitor all work to ensure that at no time are more areas exposed than can be made completely watertight prior to water intrusion due to sudden rains, damage caused by the Contractor to existing piping, or ponding water.
 - 3.1.11.2 At all times maintain a sufficiently sized, experienced crew with readily available materials to insure the above. At no time leave exposed areas unattended without making appropriate watertight repairs.
 - 3.1.11.3 Provide continuous and effective protection of building contents and interior areas from water or debris by use of acceptable sheet materials and methods during this project. Coordinate these activities with the owner's representative.

END OF SECTION - DEMOLITION

END OF DIVISION 02 – EXISTING CONDITIONS

DIVISION 03 – NOT USED

DIVISION 04 - NOT USED

DIVISION 05 - NOT USED

DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

ROUGH CARPENTRY

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS

2.1 Lumber Standards;

- 2.1.1 Comply with PS 20-2005 and grading rules of Western Wood Products Association (WWPA).
- 2.1.2 Mark each piece of lumber with grade stamp, identifying agency, species, grade, moisture content, and mill, except provide certificates for exposed lumber.
- 2.1.3 Provide dressed lumber, S4S. unless rough lumber is specifically indicated.
- 2.1.4 Moisture content per WWPA.

2.2 Concealed Dimension Lumber

- 2.2.1 Studs:
 - 2.2.1.1 Species: Any allowed under grading rules.
 - 2.2.1.2 Species: Provide Douglas fir.
 - 2.2.1.3 Grade: Construction.
- 2.2.2 Joists, Rafters, Posts, and Small Beams (Sizes Up to 4 x 16):
 - 2.2.2.1 Machine stress-rated (MSR) as follows:
 - 2.2.2.1.1 Minimum Extreme Fiber Stress In Bending (Fb): See Engineer's specifications psi.
 - 2.2.2.1.2 Minimum Modulus of Elasticity (E): See Engineer's specifications ksi.
 - 2.2.2.2 Grade; See Engineer's specifications.
 - 2.2.2.3 Species and Grade: As Indicated for each location. See Engineer's specifications.]

2.3 Exposed Dimension Lumber:

- 2.3.1 Studs:
 - 2.3.1.1 Species: Provide Douglas fir.
 - 2.3.1.2 Grade: Select.
- 2.3.2 Joists, Rafters, Posts, and Small Beams (Sizes Up to 4 x 16):
 - 2.3.2.1 Species; Provide Douglas fir.
 - 2.3.2.2 Grade: Select.
 - 2.3.2.3 Species and Grade: As indicated for each location. See Engineer's specifications.

2.4 Construction Panels:

- 2.4.1 Structural:
 - 2.4.1.1 APA Rated Roof Sheathing: Exposure Class Exterior, Structural I; span rating of 24/0 in.
 - 2.4.1.2 APA Rated Wall Sheathing: Exposure Class Exterior, Structural I; span rating of 24/0 in.
 - 2.4.1.3 Plywood Wall Sheathing: PS 1-2007, Grade C-D, Exposure I

2.5 Accessories;

- 2.5.1 Fasteners: Hot-dipped galvanized steel for exterior and high humidity locations, untreated steel elsewhere.
- 2.5.2 Joist Hangers: Hot dipped galvanized steel.
- 2.5.3 Building Paper. Spun bonded; Tyvek or equal.

2.6 Wood Treatment: Comply with AWPA U1 -2007,

- 2.6.1 Preservative Pressure Treatment: Use Category appropriate to application, using waterborne preservative.

PART 3 - EXECUTION**3.1 Installation**

- 3.1.1 Framing; Comply with member sizes, spacing, configurations, fastener sizes, and fastener spacing as indicated, but not less than required by code.
- 3.1.2 Construction Panels:
 - 3.1.2.1** Structural Sheathing: Orient perpendicular to framing, with ends staggered over firm bearing, and secure by nails or screws; staples are not permitted.
 - 3.1.2.1.1** Exterior sheathing board to have firm contact with framing members (no gaps)
 - 3.1.2.1.2** Exterior-grade plywood shall be installed with a minimum of 1/6 Inch (3 mm) gap along all panel edges and ends.
 - 3.1.2.1.3** Exterior sheathing boards to be installed per the manufacturer's recommendations and building code requirements,
 - 3.1.2.1.4** Protect the exterior sheathing board, once installed, from climatic conditions, until the installation of the stucco system.

END OF SECTION - ROUGH CARPENTRY

FINISH CARPENTRY

PART 1 - GENERAL (Not Used)

PART 2 - PRODUCTS

2.1 Standards:

2.1.1 Woodwork Quality Level: Comply with AWI/AWMAC Quality Standards Illustrated Economy grade.

2.2 Interior Hardwood Standing and Running Trim;

2.2.1 Species: Kiln-dried clear, white hardwoods.

2.2.2 Cut: Plain sliced.

2.2.3 Texture: Smooth surfaced.

2.3 Exterior fascia and railings;

2.3.1 Green lumber will not be acceptable for replacement fascia.

2.3.2 In matching existing fascia consider dimensions, finish (i.e. rough saw), voids, and knot holes.

2.3.3 Replace existing handrail component like for like.

2.4 Fasteners: Hot-dipped galvanized steel for exterior and high humidity locations, untreated steel elsewhere.

2.5 Fabrication: Shop assemble items to greatest possible extent

PART 3 – EXECUTION

3.1 Installation of exterior fascia and railing;

3.1.1 Fascia; All corners to be mitered and set in approved sealant.

3.1.2 Painting; all replacement wood shall be primed and painted with two coats of paint on all six sides.

END OF SECTION - FINISH CARPENTRY

END OF DIVISION 06 - WOOD, PLASTICS, AND COMPOSITES

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

- A. REROOFING LOW SLOPE ROOFING**
- B. REROOFING LOW SLOPE CORRUGATED METAL ROOFING**
- C. REPAIR TO LOW SLOPE ROOFING**
- D. REPAIRS TO LOW SLOPE METAL ROOFING**

DIVISION 07 – THERMAL AND MOISTURE PROTECTION

- A. REROOFING FOR LOW SLOPE ROOFING**

SECTION 07500

PART 1 - GENERAL

1.01 SECTION INCLUDES

- 1.01.1 Low Slope roofing system, including all components specified
- 1.01.2 Disposal of demolition debris and construction waste is the responsibility of Contractor. Perform disposal in manner complying with all applicable federal, state, and local regulations.
- 1.01.3 Comply with the published recommendations and instructions of the roofing membrane manufacturer.
- 1.01.4 Commencement of work by Contractor shall constitute acknowledgement by Contractor that this specification can be satisfactorily executed, under the project conditions and with all necessary prerequisites for warranty acceptance by roofing membrane manufacturer. No modification of the Contract Sum will be made for failure to adequately examine the Contract Documents or the project conditions.

1.02 RELATED REQUIREMENTS

- 1.02.1 Section 07 7100 - Roof Specialties: Manufactured copings, fascias, gravel stops, and other flashing-related items.

1.03 REFERENCE STANDARDS

- 1.03.1** ASTM C1289 - Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board; 2017.
- 1.03.2** ASTM C1549 - Standard Test Method for Determination of Solar Reflectance Near Ambient Temperature Using a Portable Solar Reflectometer; 2016.
- 1.03.3** ASTM D638 - Standard Test Method for Tensile Properties of Plastics; 2014.
- 1.03.4** ASTM D1004 - Standard Test Method for Tear Resistance (Graves Tear) of Plastic Film and Sheeting; 2013.
- 1.03.5** ASTM D1079 - Standard Terminology Relating to Roofing and Waterproofing; 2016.
- 1.03.6** ASTM D6878/D6878M - Standard Specification for Thermoplastic Polyolefin Based Sheet Roofing; 2017.
- 1.03.7** PS 20 - American Softwood Lumber Standard; 2015.

1.04 SUBMITTALS

1.04.1 See Section 01 3000 - Administrative Requirements, for submittal procedures.

Product Data:

1.04.2 Provide membrane manufacturer's printed data sufficient to show that all components of roofing system, including insulation and fasteners, comply with the specified requirements and with the membrane manufacturer's requirements and recommendations for the system type specified; include data for each product used in conjunction with roofing membrane.

1.04.3 Samples: Submit samples of each product to be used.

1.04.4 Shop Drawings: Provide:

1.04.4.1 The roof membrane manufacturer's standard details customized for this project for all relevant conditions, including flashings, base tie-ins, roof edges, terminations, expansion joints, penetrations, and drains.

1.04.5 Specimen Warranty: Submit prior to starting work.

1.04.6 Installer Qualifications: Letter from manufacturer attesting that the roofing installer meets the specified qualifications.

1.04.7 Pre-Installation Notice: Copy to show that manufacturer's required Pre-Installation Notice has been accepted and approved by the manufacturer.

1.04.8 Executed Warranty.

1.05 QUALITY ASSURANCE

1.05.1 Installer Qualifications: Roofing installer shall have the following:

1.05.1.1 Current Licensed Contractor status.

1.05.1.2 Current approval, license, or authorization as applicator by the manufacturer.

1.06 DELIVERY, STORAGE AND HANDLING

1.06.1 Deliver products in manufacturer's original containers, dry and undamaged, with seals and labels intact and legible.

1.06.2 Store materials clear of ground and moisture with weather protective covering.

1.06.3 Keep combustible materials away from ignition sources.

1.07 WARRANTY

1.07.1 Comply with all warranty procedures required by manufacturer, including notifications, scheduling, and inspections.

1.07.2 Warranty: Covering membrane, roof insulation, and other indicated components of the system, for the term indicated.

1.07.2.1 Limit of Liability: 15 Years for 45 mils system and 20-year 60 mils system and BUR system No dollar limitation

1.07.2.2 Scope of Coverage: Repair leaks in the roofing system caused by:

- 1.07.2.2.1 Ordinary wear and tear of the elements.
- 1.07.2.2.2 Manufacturing defect in materials.
- 1.07.2.2.3 Defective workmanship used to install these materials.
- 1.07.2.2.4 Damage due to winds up to 55 mph.

1.07.2.3 Not Covered:

- 1.07.2.3.1 Damage due to winds in excess of 55 mph.
- 1.07.2.3.2 Damage due hurricanes or tornadoes.
- 1.07.2.3.3 Hail.
- 1.07.2.3.4 Intentional damage.
- 1.07.2.3.5 Unintentional damage due to normal rooftop inspections, maintenance, or service.

PART 2 - PRODUCTS

2.01 MANUFACTURERS

- 2.01.1 Acceptable Manufacturer - Roofing System:
 - 2.01.2.1 GAF, Firestone, Carlisle, Certainteed, Johns Manville, or other comparable products
- 2.01.2 Manufacturer of Insulation and Cover Boards: Same manufacturer as roof membrane.

2.02 ROOFING SYSTEM DESCRIPTION

- 2.02.1 Roofing System: TPO 45 Mils & or 60 Mils, EPDM 45 Mils & or 60 Mils, BUR 3 PLY
- 2.02.2 Membrane Attachment: Mechanical or Adhesives
- 2.02.3 Warranty: Full system warranty; 15 Years for 45 Mils system and 20-year for 60 Mils system and BUR NDL Limited Warranty covering membrane, roof insulation, and membrane accessories.
- 2.02.4 Comply with applicable local building code requirements.
- 2.02.5 Roofing System Components: Listed in order from the top of the roof down:
 - 2.02.5.1 Membrane: Thickness as specified.
 - 2.02.5.2 Insulation:
 - 2.02.5.2.1 Maximum Board Thickness: 2 inches; use as many layers as necessary; stagger joints in adjacent layers.
 - 2.02.5.2.2 Total R-value of 11.4, minimum.
 - 2.02.5.2.3 Crickets: Tapered insulation of same type as specified for top layer; slope as indicated.

2.03 MEMBRANE MATERIALS

- 2.03.1 Membrane TPO:
 - 2.03.1.1 Flexible, heat weldable sheet composed of thermoplastic polyolefin polymer and ethylene propylene rubber; complying with ASTM D6878/D6878M, with polyester weft inserted reinforcement and the following additional characteristics:
 - 2.03.1.2 Thickness: 0.045 inch and or 0.060 inch plus/minus 10 percent, with coating thickness over reinforcement of 0.024 inch plus/minus 10 percent.

- 2.03.1.3 Puncture Resistance: 265 lbf, minimum, when tested in accordance FTM 101C Method 2031.
- 2.03.1.4 Solar Reflectance: 0.79, minimum, when tested in accordance with ASTM C1549.
- 2.03.1.5 Color: White.
- 2.03.1.6 Acceptable Product TPO: GAF, Firestone, Carlisle, or other comparable products.
- 2.03.2 Membrane EPDM:
 - 2.03.2.1 Membrane internally reinforced cure single-ply roofing membrane that features a 9 X 9, 1,000 denier polyester weft inserted reinforcing scrim.
 - 2.03.2.2 Thickness: Available in 0.045-inch and 0.060-inch thickness, inch plus/minus 10 percent.
 - 2.03.2.3 Thickness: 0.060 Tensile Strength: 217 Lbf, minimum, when tested in accordance with ASTM D751
 - 2.03.2.4 Elongation at Break: 250 percent, minimum, when tested in accordance with ASTM D412.
 - 2.03.2.5 Tearing Strength: 60 lbf, minimum, when tested in accordance with ASTM D751.
 - 2.03.2.6 Color: Black.
 - 2.03.2.7 Acceptable Product: Firestone, Carlisle, Johns Manville or other comparable products.
 - 2.03.2.8
- 2.03.3 Membrane BUR
- 2.03.4 Provide an installed roofing membrane and base flashing system that does not permit the passage of water and will withstand the design pressures calculated in accordance with the most current revision of ASCE 7.
 - 2.03.4.1 Three-ply Hot Mopped MOD BIT Mineral-Surface Roofing System over Plywood or nailable decks
 - 2.03.4.2 Rosin Paper and or ¼ inch DensDeck
- 3 Tape Flashing: 5-1/2-inch nominal wide membrane laminated to cured rubber polymer seaming tape, overall thickness 0.065-inch nominal.
- 4 Pourable Sealer: Two-part polyurethane, two-color for reliable mixing; Pourable Sealer.
- 5 Termination Bars: Aluminum bars with integral caulk ledge; 1.3 inches wide by 0.10-inch-thick.
- 6 General Purpose Sealant: EPDM-based, one-part, white general-purpose sealant.
- 7 Molded Flashing Accessories: Unreinforced EPDM membrane pre-molded to suit a variety of flashing details, including pipe boots, inside corners, outside corners, etc.

2.04 ROOF INSULATION AND COVER BOARDS

- 2.04.1 Polyisocyanurate Board Insulation: Closed cell polyisocyanurate foam with black glass reinforced mat laminated to faces, complying with ASTM C1289 Type II Class 1, with the following additional characteristics:
 - 2.04.1.1 Max Thickness: 2.0" Min ¼ inch Dens Deck
 - 2.04.1.2 Compressive Strength: 20 psi when tested in accordance with ASTM C1289.
 - 2.04.1.3 Ozone Depletion Potential: Zero; made without CFC or HCFC blowing agents.
 - 2.04.1.4 Recycled Content: 19 percent post-consumer and 15 percent pre-consumer (post-industrial), average.
 - 2.04.1.5 Acceptable Product: ISO 95+ GL Polyisocyanurate Insulation

2.05 INSTALLATION

2.05.1 GENERAL

- 2.05.1.1 Install roofing, insulation, flashings, and accessories in accordance with roofing manufacturer's published instructions and recommendations for the specified roofing system. Where manufacturer provides no instructions or recommendations, follow good roofing practices and industry standards. Comply with federal, state, and local regulations.
- 2.05.1.2 Obtain all relevant instructions and maintain copies at project site for duration of installation period.
- 2.05.1.3 Do not start work until Pre-Installation Notice has been submitted to manufacturer as notification that this project requires a manufacturer's warranty.
- 2.05.1.4 Perform work using competent and properly equipped personnel.
- 2.05.1.5 Temporary closures, which ensure that moisture does not damage any completed section of the new roofing system, are the responsibility of the applicator. Completion of flashings, terminations, and temporary closures shall be completed as required to provide a watertight condition.
- 2.05.1.6 Install roofing membrane only when surfaces are clean, dry, smooth and free of snow or ice; do not apply roofing membrane during inclement weather or when ambient conditions will not allow proper application; consult manufacturer for recommended procedures during cold weather. Do not work with sealants and adhesives when material temperature is outside the range of 60 to 80 degrees F.
- 2.05.1.7 Protect adjacent construction, property, vehicles, and persons from damage related to roofing work; repair or restore damage caused by roofing work.
- 2.05.1.8 Protect from spills and overspray from bitumen, adhesives, sealants and coatings.
- 2.05.1.9 Particularly protect metal, glass, plastic, and painted surfaces from bitumen, adhesives, and sealants within the range of wind-borne overspray.
- 2.05.1.10 Protect finished areas of the roofing system from roofing related work traffic and traffic by other trades.
 - 2.05.1.10.1 Until ready for use, keep materials in their original containers as labeled by the manufacturer.
 - 2.05.1.10.2 Consult membrane manufacturer's instructions, container labels, and Material Safety Data Sheets (MSDS) for specific safety instructions. Keep all adhesives, sealants, primers and cleaning materials away from all sources of ignition.

2.06 EXAMINATION

- 2.06.1 Examine roof deck to determine that it is sufficiently rigid to support installers and their mechanical equipment, and that deflection will not strain or rupture roof components or deform deck.
- 2.06.2 Verify that surfaces and site conditions are ready to receive work. Correct defects in the substrate before commencing with roofing work.
- 2.06.3 Examine roof substrate to verify that it is properly sloped to drains.
- 2.06.4 Verify that the specifications and drawing details are workable and not in conflict with the roofing manufacturer's recommendations and instructions; start of work constitutes acceptable of project conditions and requirements.

2.07 PREPARATION

- 2.07.1 Remove all of the existing roof system down to the roof deck including all existing composition base flashings. Dispose of all materials properly. Perform asbestos removal in accordance with federal, state and local regulations and dispose of waste in legal manner.
- 2.07.2 At penetrations, remove all existing flashings, including lead, asphalt, mastic, etc.
- 2.07.3 At walls, curbs, and other vertical and sloped surfaces, remove loose and unsecured flashings; remove mineral surfaced and coated flashings; remove excessive asphalt to provide a smooth, sound surface for new flashings.

- 2.07.4 Take appropriate measures to ensure that fumes from adhesive solvents are not drawn into the building through air intakes.
- 2.07.5 Prior to proceeding, prepare roof surface so that it is clean, dry, and smooth, and free of sharp edges, fins, roughened surfaces, loose or foreign materials, oil, grease and other materials that may damage the membrane.
- 2.07.6 Fill all surface voids in the immediate substrate that are greater than 1/4-inch-wide with fill material acceptable insulation to membrane manufacturer.
- 2.07.7 Wood Nailers: Provide wood nailers at all perimeters and other locations where indicated on the drawings, of total height matching the total thickness of insulation being used.
- 2.07.8 Install with 1/8-inch gap between each length and at each change of direction.
- 2.07.9 Mechanically fasten to deck to resist force of 200 lbf per linear foot.

2.08 INSULATION AND COVER BOARD INSTALLATION

- 2.08.1 Install insulation in configuration and with attachment method(s) specified in PART 2, under Roofing System.
- 2.08.2 Install only as much insulation as can be covered with the completed roofing system before the end of the day's work or before the onset of inclement weather.
- 2.08.3 Lay roof insulation in courses parallel to roof edges
- 2.08.4 Neatly and tightly fit insulation to all penetrations, projections, and nailers, with gaps not greater than 1/4 inch. Fill gaps greater than 1/4 inch with acceptable insulation. Do not leave the roofing membrane unsupported over a space greater than 1/4 inch.
- 2.08.5 Mechanical Fastening: Using specified fasteners and insulation plates engage fasteners through insulation into deck to depth and in pattern required by membrane manufacturer.

2.09 MEMBRANE INSTALLATION

- 2.09.1 Beginning at low point of roof, place membrane without stretching over substrate and allow to relax at least 30 minutes before attachment or splicing; in colder weather allow for longer relax time.
- 2.09.2 Lay out the membrane pieces so that field and flashing splices are installed to shed water.
- 2.09.3 Install membrane without wrinkles and without gaps or fishmouths in seams; bond and test seams and laps in accordance with membrane manufacturer's instructions and details.
- 2.09.4 Install membrane Invisiweld attached to the substrate using fasteners, and edge securement as specified and as required by membrane manufacturers.
- 2.09.5 Edge Securement: Secure membrane at all locations where membrane terminates or goes through an angle change greater than 2 in 12 inches using mechanically fastened reinforced perimeter fastening strips, plates, or metal edging as indicated or as recommended by roofing manufacturer.
 - 2.09.5.1 Exceptions: Round pipe penetrations less than 18 inches in diameter and square penetrations less than 4 inches square.
 - 2.09.5.2 Metal edging is not merely decorative; ensure anchorage of membrane as intended by roofing manufacturer.

2.10 FLASHING AND ACCESSORIES INSTALLATION

- 2.10.1 Install flashings, including laps, splices, joints, bonding, adhesion, and attachment, as required by membrane manufacturer's recommendations and details.
- 2.10.2 Metal Accessories: Install metal edgings, gravel stops, and copings in locations indicated on the drawings, with horizontal leg of edge member over membrane and flashing over metal onto membrane.

- 2.10.2.1 Follow roofing manufacturer's instructions.
- 2.10.2.2 Remove protective plastic surface film immediately before installation.
- 2.10.2.3 Install water block sealant under the membrane anchorage leg.
- 2.10.2.4 Flash with manufacturer's recommended flashing sheet unless otherwise indicated.
- 2.10.3 Where single application of flashing will not completely cover the metal flange, install additional piece of flashing to cover the metal edge.
- 2.10.4 If the roof edge includes a gravel stop and sealant is not applied between the laps in the metal edging, install an additional piece of self-adhesive flashing membrane over the metal lap to the top of the gravel stop; apply seam edge treatment at the intersections of the two flashing sections.
- 2.10.5 When the roof slope is greater than 1:12, apply seam edge treatment along the back edge of the flashing.
- 2.10.6 Roof Drains:
 - 2.10.6.1 Taper insulation around drain to provide smooth transition from roof surface to drain. Use specified pre-manufactured tapered insulation with facer or suitable bonding surface to achieve slope; slope not to exceed manufacturer's recommendations.
 - 2.10.6.2 Position membrane, then cut a hole for roof drain to allow 1/2 to 3/4 inch of membrane to extend inside clamping ring past drain bolts.
 - 2.10.6.3 Make round holes in membrane to align with clamping bolts; do not cut membrane back to bolt holes.
 - 2.10.6.4 Apply sealant on top of drain bowl where clamping ring seats below the membrane
 - 2.10.6.5 Install roof drain clamping ring and clamping bolts; tighten clamping bolts to achieve constant compression.
- 2.10.7 Flashing at Penetrations: Flash all penetrations passing through the membrane; make flashing seals directly to the penetration.

2.11 FINISHING AND WALKWAY INSTALLATION

- 2.11.1 Install walkways at access points to the roof, around rooftop equipment that may require maintenance, and where indicated on the drawings.
- 2.11.2 Walkway Pads: Adhere to the roofing membrane, spacing each pad at minimum of 1.0 inch and maximum of 3.0 inches from each other to allow for drainage.
 - 2.11.2.1 If installation of walkway pads over field fabricated splices or within 6 inches of a splice edge cannot be avoided, adhere another layer of flashing over the splice and extending beyond the walkway pad a minimum of 6 inches on either side.
 - 2.11.2.2 Prime the membrane, remove the release paper on the pad, press in place, and walk on pad to ensure proper adhesion.

2.12 FIELD QUALITY CONTROL

- 2.12.1 Inspection by Manufacturer: Provide final inspection of the roofing system by a Technical Representative employed by roofing system manufacturer specifically to inspect installation for warranty purposes (i.e. not a sales person).
- 2.12.2 Perform all corrections necessary for issuance of warranty.

2.13 CLEANING

- 2.13.1 Clean all contaminants generated by roofing work from building and surrounding areas, including bitumen, adhesives, sealants, and coatings.
- 2.13.2 Repair or replace building components and finished surfaces damaged or defaced due to the work of this section; comply with recommendations of manufacturers of components and surfaces.
- 2.13.3 Remove leftover materials, trash, debris, equipment from project site and surrounding areas.

2.14 PROTECTION

- 2.14.4 Where construction traffic must continue over finished roof membrane, provide durable protection and replace or repair damaged roofing to original condition.

END OF REROOFING LOW SLOPE ROOFING SECTION

Reroofing low slope corrugated metal roofs:

GENERAL

1.01 SUMMARY

- A. Provide labor, materials, equipment and supervision necessary to install spray applied elastomeric acrylic coating system as outlined in this specification to preserve and extend the service life of metal roofing.
- B. The manufacturer's application instructions for each product used are considered part of these specifications and should be followed at all times.

1.02 SUBMITTALS

- A. Submit product data sheets and literature verifying physical properties of materials.
- B. Submit material safety data sheets.

1.03 QUALITY ASSURANCE

- A. Supplier Qualifications: The ACRYSHIELD[®] Roof Management System for metal roofs, as supplied by National Coatings Corporation, is approved for use on the project. OR approved equal

- B. Applicator Qualifications: The applicator shall be approved by National Coatings Corporation to apply the system. Manufacturer's written verification of applicator approval is required. OR approved equal.

1.04 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Containers and Packaging: Deliver materials in original sealed containers, clearly marked with: manufacturer's logo; full product name; and lot number(s).
- B. Storage: Store materials between 40°F and 100°F with careful handling to prevent damage to products. If conditions exceed these ranges, special consideration in storage must be taken. Do not store at high temperatures in direct sunlight.
- C. Protection: Protect all materials from freezing and other damage during transit, handling, storage, and installation.

1.05 PROJECT CONDITIONS

- A. These minimum recommendations for material usage are for ideal conditions. The number of gallons per 100 square feet may need to increase due to uneven application, rough surface texture, wind conditions while spraying and/or other variables.
- B. Wet insulation must be thoroughly evaluated and then addressed with removal or other measures. Consult a National Coatings Technical Consultant regarding the need for moisture surveys and other assessments.
- C. Structural cracks should be referred to the appropriate National Coatings Technical Consultant.
- D. This installation guide specification assumes that the deck, if plywood, has no dry rot, and is in sound condition, or has been repaired.
- E. Do not apply materials unless surface to receive acrylic roofing system is clean, dry and prepared as specified.
- F. Install all material in strict accordance with all published safety, weather, or applicable regulations of the manufacturer and/or local, state, and/or federal agencies which have jurisdiction.
- G. The entire system shall be fully adhered to the surface on which it is applied. Voids left under the system by creating bridges are not acceptable.
- H. Do not proceed with application of coating or sealing materials when temperature is less than 50°F. No coating system shall be applied if weather will not permit it to dry prior to exposure to precipitation or freezing.
- I. Heavy puddles of coating on the roof are not acceptable.
- J. Instructions for use of all roofing materials and application equipment should be read and followed at all times.
- K. As a general principle, to prevent the ponding of water, install additional drains as necessary or install drainage systems with sprayed polyurethane foam (SPF).

1.06 DETAIL WORK

A. This specification does not extensively outline procedures for preparation and finishing of drains, vents, ducts, flashings, parapet walls, sheet metal work, etc. This work should be outlined by the contractor before work commences and shall be performed observing good trade practices.

PRODUCTS

2.01 ACRYSHIELD ROOF MANAGEMENT SYSTEM

- A. The roofing system is an acrylic, elastomeric, spray-applied ACRYSHIELD Roof Management System manufactured by National Coatings Corporation. OR approved equal.
- B. Physical Properties of Cured Roofing System: The testing of the coating shall be done under ASTM-D6083, "Standard Specification for Liquid Applied Acrylic Coating Used in Roofing", unless otherwise specified.
 - 1. The roofing system shall have good resistance to ponding water.
 - 2. The roofing system shall contain no plasticizers.
 - 3. The roofing system shall contain no migrating fire retardants.
 - 4. The roofing system shall have a Class A fire rating on a noncombustible deck when tested according to the procedures outlined in ASTM E-108.
 - 5. The roofing system shall also meet the following physical property requirements:

Property	ASTM Method	Results
Tensile Strength, psi (Max @ 73°F)	D6083	Minimum 250
% Elongation @ Break (73°F)	D6083	Minimum 250
Wet Adhesion to Galvanized Steel	D6083	Minimum 3.0 pli
Permeance, perms	D6083	Maximum 15
Volume Solids % Weight Solids %	D6083	> 50 > 65

- C. The reinforcing fabric shall be Tietex T272 or an equivalent that meets the following physical property requirements:

Properties	Test Method	Average Value
		T272
Weight (per sq. yard)	Calculated by formula	3 ounces

Bursting Strength (lbs)	ASTM D3786	177
Tensile Strength (psi)	ASTM D1682	57.1
Tear Strength (lbs)	ASTM D1117	16.1
Elongation (%)	ASTM D1682	62
Conformability		Excellent
Ease of Saturation		Excellent

2.02 RELATED MATERIALS

A. Flashing, adhesives, thinners, elastomeric caulking compounds, primers, and similar materials shall be approved by the manufacturer of the coatings. All materials used shall be applied in accordance with its manufacturer's recommendations.

2.03 EQUIPMENT

A. For recommended spray equipment guidelines, please refer to National Coatings Technical Paper "TP-102 Guide for Selecting Coating Spray Equipment" or consult the spray equipment manufacturer directly.

EXECUTION

3.01 MANUFACTURER'S INSTRUCTIONS

A. Compliance: Comply with manufacturer's product data, including product technical bulletins and product guide specification instructions.

3.02 EXAMINATION

- A. Inspect surfaces which will receive the ACRYSHIELD Roof Management System to make sure they are clean, smooth, sound, properly prepared, and free of moisture, dirt, debris, or other contamination.
- B. Verify that all roof penetrations, mechanical equipment, cants, edge metal, and other on-roof items are in place and secure.
- C. Verify that all critical areas around the immediate vicinity of the spray area are suitably protected.
- D. Verify all roof drains are clean and in working order.
- E. Verify that all air conditioning and air intake vents are suitably protected or closed.

3.03 PREPARATION

- A. The entire surface must be clean, sound, dry and free of any contaminants that would interfere with proper adhesion of the coating. All loose paint and loose rust must be removed prior to the application of coating or sealant. Achievement of this condition may require the use of INDUSTRIAL CLEANER, scraping, wire brushing, power brooming, vacuuming, sweepblasting, sandblasting or other means, and shall always be performed observing responsible trade practices.
- B. Spot prime rusty areas with RUSTSHIELD A120.
- C. Metal that has corroded to the point of being weak or broken must be replaced.
- D. Any new metal must be clean and oil-free. Prime ferrous metal with RUSTSHIELD A120 at the rate of 1 gallon per 200 square feet.
- E. Tighten or replace all fasteners where necessary. In no case shall joints or seams be allowed to separate greater than 1/16 inch.
- F. Seal all joints and seams with BUTYL SEAM TAPE. Seal all nails and fasteners with BUTYL CAPS.
- G. All detail areas unable to be sealed with BUTYL SEAM TAPE or BUTYL CAPS must be sealed with ACRYFLEX[□] using the method described below.

ACRYFLEX Sealing Method

- A. Seal all joints and seams with AcryFlex Sealant extending AcryFlex at least 2” beyond joints and seams in each direction. Seal all nails and fasteners with AcryFlex. After application of the ACRYFLEX, immediately embed 4-inch, 6-inch or 10-inch T272 polyester reinforcing fabric into the wet ACRYFLEX. T272 mesh width shall extend beyond the detail by at least 2 inches. Work the ACRYFLEX into the mesh to cause good saturation of the fabric. After drying, apply grey ACRYSHIELD to those areas at the rate of at least 1.5 gallons per 100 square feet. The edges of the reinforcing fabric shall be well sealed. Overlap the edges by at least 2 inches with the ACRYSHIELD
- B. Allow all coating to dry thoroughly, (normally 6 to 24 hours), before further application of the system.

C. 3.04 APPLICATION

- A. Following the surface cleaning, defect repair and custom reinforcing detailed in Section 3.03; the entire roof shall receive the ACRYSHIELD Roof Management System consisting of a minimum of 40 dry mils of ACRYSHIELD coating, or approximately 5 gallons per 100 square feet, in 2 coats. Apply 2.5 gals and work the ACRYFLEX into the mesh to cause good saturation of the fabric. After drying, apply grey ACRYSHIELD to those areas at the rate of at least 2.5 gallons per 100 square feet. The edges of the reinforcing fabric shall be well sealed. Overlap the edges by at least 2 inches with the ACRYSHIELD
- B. Apply a base coat of ACRYSHIELD coating by spray or roller at a rate of 1.5 gallon per 100 square feet. Allow to thoroughly dry for normally 4 to 12 hours.
- C. Apply 2 coats of top coat of ACRYSHIELD coating in a cross-hatch technique at a rate of 1.75gallon per 100 square feet. Allow to thoroughly dry before exposing to foot traffic.

D. All coating edges shall be cut in evenly in a uniform manner so as to provide an aesthetically pleasing appearance.

D. 3.05 FIELD QUALITY REQUIREMENTS

A. Manufacturer's Field Services: Inspection by the coating manufacturer's representative shall be made to verify the proper installation of the system. Any areas that do not meet the minimum standards for application as specified herein shall be corrected at the contractor's expense. Manufacturer's inspection or verification shall not constitute acceptance of responsibility for any improper application of material.

E. 3.06 CLEANING

A. Surfaces not intended to receive the ACRYSHIELD Roof Management System shall be protected during the application of the system. Should this protection not be effective, or not be provided, the respective surfaces shall be restored to their proper conditions by cleaning, repairing or replacing. All debris from completion of work shall be completely removed from the project site.

MATERIALS

The following materials listed in these recommendations are available from National Coatings Corporation:

1. ACRYSHIELD[®] acrylic, high-performance, elastomeric roof coating.
2. RUSTSHIELD A120 water-based, rust-inhibitive primer.
3. ACRYFLEX[®] acrylic architectural sealant; available as A150 trowelable grade or A151 brushable grade.
4. BUTYL CAPS polyester-reinforced roof fastener seals.
5. BUTYL SEAM TAPE polyester-reinforced waterproofing tape.
6. T272 polyester reinforcing fabric, 6-inch, 10-inch, 20-inch and 40-inch.
7. INDUSTRIAL CLEANER water-based, biodegradable cleaner.

A. REPAIRS TO LOW SLOPE ROOFS

1.01 Section Low Slope roofs

1.02 All repairs are to be made per NRCA guide lines

1.03 All repairs to be made with new materials

1.03.1 Inspection of interior ceiling and walls for signs of leaking

1.03.2 Discussion with owner/tenant on any known leak areas

1.03.3 Inspect and clean debris from roofs

1.03.4 Inspect and clean debris around drains and gutters

- 1.03.5 Install missing drain screens
- 1.03.6 Reset and reseal all loose term-bar at dividing walls
- 1.03.7 Inspect, clean and reseal term-bar at dividing walls
- 1.03.8 Inspection and sealing of all open penetrations, curbs, equipment and skylight flashings
- 1.03.9 Inspection of all waterway areas for deterioration and correction as needed
- 1.03.10 Inspection of field membrane, seams, and ponding areas and correction as needed
- 1.03.11 Reseal all pipe vents, T-Tops and roof vents
- 1.03.12 Replace rusted and missing sheet metal T-shields at exhaust
- 1.03.13 Insure repairs are performed per proper manufacturer specifications and/or NRCA guidelines
- 1.03.14 Photo document all completed repair and maintenance work

Repairs to low slope corrugated metal roofs

- 1.01 All repairs are to be made per NRCA guide lines
- 1.02 All repairs to be made with new materials
 - 1.02.1 Inspection of interior ceiling and walls for signs of leaking
 - 1.02.2 Discussion with owner/tenant on any known leak areas
 - 1.02.3 Inspect and clean debris from roofs
 - 1.02.4 Inspect and clean debris around drains and gutters
 - 1.02.5 Inspection and sealing of all open penetrations, curbs, equipment and skylight flashings
 - 1.02.6 Inspection of all waterway areas for deterioration and correction as needed
 - 1.02.7 Inspection of field coating, seams, and ponding areas and correction as needed
 - 1.02.8 Reseal all pipe vents, T-Tops and roof vents
 - 1.02.9 Replace rusted and missing sheet metal T-shields at exhaust
 - 1.02.10 Clean and recoat areas of SPF roofing on steep slope roofing
 - 1.02.11 Clean any loose or blistering coating
 - 1.02.12 Patch any old patches, splits, cracks or open blisters with compatible materials and reinforcement materials.
 - 1.02.13 Insure repairs are performed per proper manufacturer specifications and/or NRCA guidelines

1.02.14 Photo document all completed repair and maintenance work

SHEET METAL FLASHING AND TRIM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- 1.1.1 Fabricated sheet metal items, including flashings, counter flashings, and chimney metal caps.
- 1.1.2 The extent of sheet metal work is indicated on the drawings and by provisions of this section and is defined to include lead and galvanized metal flashing related to the new roof system. All existing metals are to be replaced with new. Plastic drains are to be replaced with cast iron.
- 1.1.3 This section includes all labor, materials, equipment and related services necessary to furnish and install roof related metal components required to complete the work specified herein, and/or on the drawings
- 1.1.4 Preparation and repair of existing sheet metal.

1.2 RELATED SECTIONS

- 1.2.1 Section 07 31 13.50 – Low slope and steep slope Maintenance and Repair

1.3 REFERENCE STANDARDS

- 1.3.1 ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized)
- 1.3.2 Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process; 2007.
- 1.3.3 ASTM B 32 - Standard Specification for Solder Metal; 2004.
- 1.3.4 SMACNA (ASMM) - Architectural Sheet Metal Manual; Sheet Metal and Air Conditioning Contractors' National Association; 2003.

1.4 QUALITY ASSURANCE

- 1.4.1 Perform work in accordance with SMACNA Architectural Sheet Metal Manual requirements and standard details, except as otherwise indicated.
- 1.4.2 A licensed sheet metal contractor or the skilled employees of the contractor shall accomplish all work of this section.
- 1.4.3 Refer to general requirements pertaining to quality control.
- 1.4.4 Alignment and elevation of installed sheet metal will be checked by Contractor and the Consultant. Contractor shall promptly make any corrections requested.
- 1.4.5 Prepare and paint all metals for inspection by consultants before loading.
- 1.4.6 The contractor shall provide his own Quality Control thru his supervision
- 1.4.7 Withdrawal tests of installed fasteners may be required if attachment is in question.

1.5 GUARANTEE

- 1.5.1 Work performed under this section shall be included in the Contractor's guarantee specified elsewhere in these documents.

1.6 PRE-INSTALLATION CONFERENCE

- 1.6.1 Convene one week before starting work of this section.

1.7 DELIVERY, STORAGE, AND HANDLING

- 1.7.1 Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- 1.7.2 Prevent contact with materials that could cause discoloration or staining.

PART 2 - PRODUCTS

2.1 SHEET MATERIALS

- 2.1.1 Bonderized Galvanized Steel: ASTM A 653/A 653M, with G90/Z275 zinc coating; minimum 0.02-inch-thick base metal.
- 2.1.2 Bonderized Galvanized Iron: Shall be 24-gauge or as otherwise specified or shown on the drawings, meeting ASTM A-525, G-90 coating designation.
- 2.1.3 All removable flashings shall be replaced including T-tops. Pipe jacks, dormers, etc., and replaced with new. T-tops & dormers shall have rodent protection screens except at dryer vent outlets.

2.2 ACCESSORIES

2.2.1 Fasteners

- 2.2.1.1 Exposed Fasteners: Stainless steel, with soft neoprene washers.
- 2.2.1.2 Fasteners such as nails, screws, bolts, etc., shall be of same material as flashings on which they are used. They shall be of type and size as shown on the drawings or specified herein.
- 2.2.1.3 Sheet Metal to Wood:
 - 2.2.1.3.1 Exposed Application - Screws shall be stainless steel No. 8 minimum, shall penetrate wood blocking minimum 1-1/2 inches and shall have watertight stainless steel/neoprene washers under head. The installed withdrawal resistance shall be a minimum of 150 pounds per screw.
- 2.2.1.4 Sheet Metal to Sheet Metal: Self-tapping sheet metal screws of 1/2- inch length and a minimum #3 diameter.

2.2.2 Paint

- 2.2.2.1 Primer: Zinc chromate type.
- 2.2.2.2 Protective Backing Paint: Zinc molybdate alkyd.
- 2.2.2.3 Paint for sheet metal shall be one of the following, or pre-approved equal:
 - 2.2.2.3.1 Benjamin Moore
 - 2.2.2.3.1.1 First coat - Iron clad galvanized metal latex primer.
 - 2.2.2.3.1.2 Second and third coats - MoorGard Latex Paint.
 - 2.2.2.3.2 Fuller-O'Brien
 - 2.2.2.3.2.1 First coat - Red Iron Primer
 - 2.2.2.3.2.2 Second and third coats - Weather King II.
- 2.2.2.4 Other Paints may be approved, submit to Consultants before using.

2.2.3 Sealant:

- 2.2.3.1 Elastomeric sealant shall be a low modulus, high performance, one-part polyurethane conforming to Federal Specification No. TT-5-00230C Type II, Class A, such as Mameco Vulkem 921 or Sikaflex-15LM, RainBuster.
- 2.2.3.2 Elastomeric cement shall conform to ASTM Specification D 4586-86.

2.2.4 New galvanized metal shall be bonderized.

2.2.5 Soldering flux shall conform to Federal Specification O-F-506C, Type I, A or B.

2.2.6 Solder: ASTM B 32; Sn50 (50/50) type.

2.3 FABRICATION

- 2.3.1 Shop-fabricate all items requiring soldering or welding, unless approved otherwise.
- 2.3.2 Sheet metal work shall be of material and gauge specified and shaped to install in strict conformance with details on drawings or on approved shop drawings.
- 2.3.3 Form sheet metal work lines, rises, and angles sharp and true. Reinforce all metal flashing corners. Plane surfaces shall be free from waves or buckles.
- 2.3.4 Form sections true to shape, accurate in size, square, and free from distortion or defects.
- 2.3.5 Form pieces in longest possible lengths.
- 2.3.6 Hem exposed edges on underside 1/2 inch, except drip; miter and seam corners.
- 2.3.7 Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- 2.3.8 Use approved sealant where necessary to make a watertight installation, including foam backer rod where necessary to make a good sealant joint.
- 2.3.9 All seams located in major (hog) valleys shall be hemmed and fully soldered prior to installation.
- 2.3.10 Form all corner, transition and termination pieces as a single unit, and do not extend less than 4 inches nor more than 12 inches in any direction.
- 2.3.11 All metal deck flanges shall be at least 4 inches wide. Vertical counter flashing flanges shall be at least 3 inches wide unless otherwise specified.
- 2.3.12 All T-Top vents shall:
 - 2.3.12.1 Be 24 gauges soldered at all seams
 - 2.3.12.2 Have soldered end caps on both sides.
- 2.3.13 Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.
- 2.3.14 Soldering:
 - 2.3.14.1 Pre-trim edges of sheet metals before soldering is begun and make a hemmed connection for all hog valleys.
 - 2.3.14.2 Apply flux and begin soldering immediately.
 - 2.3.14.3 Soldering shall be done slowly with well-heated soldering irons until the seams are thoroughly heated and the solder has been completely sweated through the full width of the seams.
 - 2.3.14.4 After soldering, all acid flux residue shall be removed with solution of washing soda in water.
- 2.3.15 Painting:
 - 2.3.15.1 Prepare metal surfaces to be painted by removing all dust, dirt, oil, grease, wax, asphalt stains, or any other contamination or condition that would adversely affect the performance of the coating. Follow the procedures outlined in Structural Steel Painting Councils SSPC-SP2 (Hand Tool Cleaning) and SSPC-SP1 (Solvent Cleaning). The use of bonderized metal items will eliminate acid etching/cleaning.
 - 2.3.15.2 Clean and prepare galvanized metals. Apply primer and two finish coats as recommended by the paint manufacturer.

PART 3 – EXECUTION

3.1 EXAMINATION

- 3.1.1 Verify deck termination and base flashings are in place, sealed, and secure.

3.2 REMOVAL OF EXISTING

- 3.2.1 Removal is to be coordinated so that existing system and newly installed work is watertight at the end of each day's work.
- 3.2.2 Removed materials need not be salvaged, unless specifically required for reuse.
- 3.2.3 Remove or cut existing work to extent necessary to join new work to existing construction and otherwise complete the work.
- 3.2.4 Remove flashings at roof-to-wall carefully and preserve the Z-Bar for later use.

3.3 PREPARATION

- 3.3.1 Verify that surfaces to receive sheet metal are smooth, clean, and have no free water present in any form.
- 3.3.2 Clean, straighten and repair existing Z-Bar for reuse.
- 3.3.3 Before fabrication of sheet metal, verify shapes and dimensions of surfaces to be covered.
- 3.3.4 Surfaces to receive elastomeric sealant shall be thoroughly cleaned and primed per manufacturer's recommendations.
- 3.3.5 Install starter and edge strips, and cleats before starting installation.
- 3.3.6 Back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mil.

3.4 INSTALLATION

- 3.4.1 All replacement metal to be new.
- 3.4.2 Integrate coping metal caps, edge metal flashings, and z-bar flashing ends into vertical surfaces with fully soldered saddle boots. Flanges of saddle boots must be installed in weather board fashion with adjacent waterproofing membrane and surfaces.
- 3.4.3 Secure flashings in place using concealed fasteners. Fastening through the top of horizontal metal surfaces is not acceptable.
- 3.4.4 Apply approved sealant between metal flashings.
- 3.4.5 Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- 3.4.6 Solder metal joints for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.

3.5 FIELD QUALITY CONTROL

- 3.5.1 Inspection will involve surveillance of work during installation to ascertain compliance with specified requirements.
- 3.5.2 Refer to general requirements pertaining to quality control.
- 3.5.3 Alignment and elevation of installed sheet metal will be checked by Contractor and the Consultant. Contractor shall promptly make any corrections requested.
- 3.5.4 Withdrawal tests of installed fasteners may be required if attachment is in question.
- 3.5.5 Contractor shall provide color samples to Consultant for owner approval before painting metals. Color matching is very important to the owner.

3.6 CLEAN-UP

3.6.1 Clean surfaces of flux, scraps, dirt, and other blemishes after the work is completed.

END OF SECTION - SHEET METAL FLASHING AND TRIM

END OF DIVISION 07 – THERMAL AND MOISTURE PROTECTION

DIVISION 08 – NOT USED

DIVISION 09 - FINISHES

SECTION 09 24 00 - PORTLAND CEMENT PLASTERING

PART 1 - GENERAL

1.1 SUMMARY

1.1.1 This Section includes exterior Portland cement plaster work (stucco) on metal lath plaster bases as required:

1.1.1.1 To install coping and z-bar termination boots.

1.1.1.2 To modify, replace, or install new z-bar counter flashings.

1.1.2 Replace plaster and paper backing at stucco breakout

1.2 RELATED SECTIONS

1.2.1 X01 - General Requirements

1.3 SUBMITTALS

1.3.1 Product Data: For each type of product indicated.

1.4 DELIVERY, STORAGE, AND HANDLING

1.4.1 Store materials inside under cover and keep them dry and protected against damage from weather, direct sunlight, surface contamination, corrosion, construction traffic, and other causes.

1.5 PROJECT CONDITIONS

1.5.1 Comply with ASTM C 926 requirements.

1.5.2 Exterior Plasterwork:

1.5.2.1 Apply and cure plaster to prevent plaster drying out during curing period. Use procedures required by climatic conditions, including moist curing, providing coverings, and providing barriers to deflect sunlight and wind.

1.5.2.2 Apply plaster when ambient temperature is greater than 40 deg F.

1.5.2.3 Protect plaster coats from freezing for not less than 48 hours after set of plaster coat has occurred.

1.5.3 Factory-Prepared Finishes: Comply with manufacturer's written recommendations for environmental conditions for applying finishes.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

2.1.1 In other Part 2 articles where titles below introduce lists, the following requirements apply to product selection:

2.1.1.1 Products: Subject to compliance with requirements, provide one of the products specified.

2.1.1.2 Manufacturers: Subject to compliance with requirements, provide products by one of the manufacturers specified.

2.2 METAL LATH

2.2.1 Expanded-Metal Lath: ASTM C 847 with ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.

2.2.1.1 Manufacturers:

2.2.1.1.1 Alabama Metal Industries Corporation (AMICO).

2.2.1.1.2 California Expanded Metal Products Company (CEMCO).

2.2.1.1.3 Dale/Incor.

2.2.1.1.4 Western Metal Lath & Steel Framing Systems.

2.2.1.1.4.1 Diamond-Mesh Lath: Flat. Weight: 2.5 lb./sq. yd.

2.2.2 Wire-Fabric Lath:

2.2.2.1 Manufacturers:

2.2.2.1.1 Davis Wire Corporation.

2.2.2.1.2 Jaenson Wire Company.

2.2.2.1.3 Keystone Steel & Wire.

2.2.2.1.4 K-Lath; Division of Georgetown Wire.

2.2.2.1.4.1 Welded-Wire Lath: ASTM C 933; self-furring. Weight: 1.4 lb./sq. yd.

2.2.3 Paper Backing: FS UU-B-790, Type I Grade D, Style 2 vapor-permeable paper. Provide 2 layers, lapped, at exterior locations.

2.3 ACCESSORIES

2.3.1 General: Comply with ASTM C 1063 and coordinate depth of trim and accessories with thicknesses and number of plaster coats required.

2.3.2 Zinc and Zinc-Coated (Galvanized) Accessories:

2.3.2.1 Manufacturers:

2.3.2.1.1 Alabama Metal Industries Corporation (AMICO).

2.3.2.1.2 California Expanded Metal Products Company (CEMCO).

2.3.2.1.3 Dale/Incor.

2.3.2.1.4 Western Metal Lath & Steel Framing Systems.

2.3.2.2 Foundation Weep Screed and Z-Bar: Fabricated from hot-dip galvanized steel sheet, ASTM A 653/A 653M, G60 zinc coating.

2.3.2.3 Cornerite: Fabricated from metal lath with ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.

2.3.2.4 External-Corner Reinforcement: Fabricated from metal lath with ASTM A 653/A 653M, G60, hot-dip galvanized zinc coating.

2.3.2.5 Casing Beads: Fabricated from zinc-coated (galvanized) steel; square-edged style; with expanded flanges.

2.4 MISCELLANEOUS MATERIALS

2.4.1 Water for Mixing: Potable and free of substances capable of affecting plaster set or of damaging plaster, lath, or accessories.

2.4.2 Fiber for Base Coat: Alkaline-resistant glass or polypropylene fibers, 1 /2-inch-long, free of contaminants, manufactured for use in Portland cement plaster.

2.4.3 Steel Drill Screws: For metal-to-metal fastening, ASTM C 1002 or ASTM C 954, as required by thickness of metal being fastened; with pan head that is suitable for application; in lengths required to achieve penetration through joined materials of not fewer than three exposed threads.

2.4.4 Fasteners for Attaching Metal Lath to Substrates: Complying with ASTM C 1063.

2.4.5 Penetration, Z-bar flashings, and Stucco Weep Screed Flashing: Comply with the following:

2.4.5.1 Basis of Design Product: Vycor V40 Weather Barrier Strips manufactured by Grace Construction Products.

2.4.5.2 Material: Manufacturer's standard self-adhered flashing comprising two waterproofing materials, rubberized asphalt and cross-laminated polyethylene. Minimum system thickness: 40 mils.

2.5 PLASTER MATERIALS

2.5.1 Portland Cement: ASTM C 150, Type I. Color for Finish Coats: Gray.

2.5.2 Lime: ASTM C 206, Type S; or ASTM C 207, Type S.

2.5.3 Sand Aggregate: ASTM C 897.

2.5.4 Finish Coat Aggregate: "Fine" sand (20-30 sieve size sand).

2.6 PLASTER MIXES

2.6.1 General: Comply with ASTM C 926 for applications indicated. Fiber Content: Add fiber to base-coat mixes after ingredients have mixed at least two minutes. Comply with fiber manufacturer's written instructions for fiber quantities in mixes, but do not exceed 1 lb of fiber/cu, ft, of cementitious materials. Reduce aggregate quantities accordingly to maintain workability.

2.6.2 Base-Coat Mixes for Use over Metal Lath: Scratch and brown coats for three-coat plasterwork as follows: Portland Cement Mixes:

2.6.2.1 Scratch Coat: For cementitious material, mix 1-part Portland cement and 0 to 3/4 parts lime. Use 2-1/2 to 4 parts aggregates per part of cementitious material (sum of separate volumes of each component material).

2.6.2.2 Brown Coat: For cementitious material, mix 1-part Portland cement and 0 to 3/4 parts lime. Use 3 to 5 parts aggregate per part of cementitious material (sum of separate volumes of each component material).

2.6.2.3 Job-Mixed Finish-Color Coat Mixes: Portland Cement Mix: For cementitious materials, mix 1-part Portland cement and 3/4 to 1-1/2 parts lime. Use 1-1/2 to 3 parts aggregates per part of cementitious material (sum of separate volumes of each component material).

PART 3 - EXECUTION

3.1 EXAMINATION

3.1.1 Examine areas and substrates, with Installer present, and including welded hollow-metal frames, cast-in anchors, and structural framing, for compliance with requirements and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

3.2.1 Protect adjacent work from soiling, spattering, moisture deterioration, and other harmful effects caused by plastering.

3.3 INSTALLING, STUCCO SCREED

3.3.1 Install stucco screed minimum 1 1/2 inches to 2 inches above top of roof. Cut and fit all corners of stucco stop and screed.

3.4 INSTALLING, Z-BAR FLASHING

3.5 Install z-bar flashing high enough to allow roof membrane to turn a minimum 8 inches up walls. Cut and fit all corners of z-bar.

3.6 INSTALLING, PAPER BACKING

3.6.1 Install paper backing tying into existing paper in shingle fashion with a minimum 6-inch lap.

3.7 INSTALLING METAL LATH

3.7.1 Expanded-Metal Lath: Install according to ASTM C 1063.

3.8 INSTALLING ACCESSORIES

3.8.1 Install according to ASTM C 1063 and at locations indicated on Drawings.

3.8.2 Reinforcement for External Corners: Install lath-type external-corner reinforcement at exterior locations.

3.9 MISCELLANEOUS MATERIALS

3.9.1 Penetration, Z-bar, and Stucco Screed Flashing: Install flashing where construction elements penetrate paper backing and along stucco screed or z-bar. Membrane flashing along stucco will be 12" high continuous piece of self adhered bitumen sheet membrane behind plaster and in front of metal at stucco screed. Seal penetrations to prevent passage of moisture.

3.9.2 Use additive to prep old plaster to receive new plaster.

3.10 PLASTER APPLICATION

3.10.1 General: Comply with ASTM C 926.

3.10.1.1 Do not deviate more than plus or minus 1/4 inch in 10 feet from a true plane in finished plaster surfaces, as measured by a 10-foot straightedge placed on surface.

3.10.1.2 Grout hollow-metal frames, bases, and similar work occurring in plastered areas, with base-coat plaster material, before lathing where necessary. Except where full grouting is indicated or required for fire-resistance rating, grout at least 6 inches at each jamb anchor.

3.10.1.3 Finish plaster flush with metal frames and other built-in metal items or accessories that act as a plaster ground, unless otherwise indicated. Where casing bead does not terminate plaster at metal frame, cut base coat free from metal frame before plaster sets and groove finish coat at junctures with metal.

3.10.1.4 Provide plaster surfaces that are ready to receive field-applied finishes indicated.

3.10.2 Plaster Finish Coats: Apply to provide finish to match existing.

3.11 CUTTING, BLENDING, AND PATCHING

3.11.1 Cut, patch, replace, and repair plaster as necessary to accommodate other work and to restore cracks, dents, and imperfections. Repair or replace work to eliminate blisters, buckles, crazing and check cracking, dry outs, efflorescence, sweat outs, and similar defects and where bond to substrate has failed.

3.11.2 Paint stucco repair area and fog finish blending with wall.

3.12 CLEANING AND PROTECTION

3.12.1 Remove temporary protection and enclosure of other work. Promptly remove plaster from doorframes, windows, and other surfaces not indicated to be plastered. Repair floors, walls, and other surfaces stained, marred, or otherwise damaged during plastering.

3.13 WARRANTY

3.13.1 Warranty all work against defects for two years.

END OF SECTION - PORTLAND CEMENT PLASTERING

END OF DIVISION 09 – FINISHES

PHOTOS

DETAIL PHOTO # 1



Clean and coat existing SPF roofing

DETAIL PHOTO #2



Remove and clean loose coating

DETAIL PHOTO #3



Repair per NRCA guide lines

DETAIL PHOTO #4



3-course around newly installed pipe flashing per NRCA guide lines

DETAIL PHOTO #5



Clean old mastic repairs and apply a 3-course repair

DETAIL PHOTO #6



Prep, apply reinforcement fabric and coating to the tops of the existing parapet walls

OVERVIEW PHOTO #7

