# CONSTRUCTION SPECIFICATIONS
**FOR:**

# LAKEFRONT AIRPORT
# WILLIAMS TAYLOR HANGAR
# ROOF REPLACEMENT
**6001 STARS AND STRIPES BLVD.**
**NEW ORLEANS, LOUISIANA 70126**

ARCHITECTURE, LLC

*Planning*
•
*Architecture*
•
*Interiors*
•
*Construction Management*

**RCLA PROJECT NO. 22236**
**LMA PROJECT NO.**
**DATE: AUGUST 4, 2023**

**OWNER:** **LAKEFRONT MANAGEMENT AUTHORITY (LMA)**
New Orleans Lakefront Airport Terminal Building
6001 Stars and Stripes Blvd. Ste. 219
New Orleans, La 70126
Phone: 504-355-5990
Fax: 504-539-4283

**PROJECT LOCATION:** **FLIGHTLINE FIRST**
**NEW ORLEANS LAKEFRONT AIRPORT**
6001 Stars and Stripes Blvd.
New Orleans, LA 70126

**ARCHITECT:** **RCL ARCHITECTURE, LLC**
900 W. Causeway Approach
Mandeville, LA 70471
Phone: 985-727-4440
Fax: 985-727-4467

PAUL F. DIMITRIOS
Reg. No. 6931
STATE OF LOUISIANA
REGISTERED ARCHITECT

**STRUCTURAL:** **FOX-NESBIT ENGINEERING, LLC**
1515 Poydras St. Ste. 1020
New Orleans, LA 70112
Phone: 504-522-4441

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# ADVERTISEMENT FOR BIDS

Sealed bids will be received by the Lakefront Management Authority (LMA), 6001 Stars & Stripes Blvd., Terminal Bldg., Suite 219, New Orleans, Louisiana 70126 until **10:00 a.m. on September 28, 2023**.

FOR: **LAKEFRONT AIRPORT**
**WILLIAMS TAYLOR HANGAR ROOF REPLACEMENT**

Complete Bid Documents for this project are available in electronic and printed form. Printed bid documents are available upon payment of **One Hundred dollars ($100.00)** per set. Payment for drawings is **non-refundable**. Electronic bid documents may be obtained without charge and without deposit. Bid Documents may be obtained from:

RCL Architecture, LLC , 900 W. Causeway Approach, Mandeville, LA 70471
Attn: Paul F. Dimitrios , Email: pdimitrios@rclconsultants.com, Phone: 985-727-4467 or
City Blueprint & Supply Company, cityblueprintplans.com, 504-522-0387.

All bids shall be accompanied by bid security in the form of certified check, cashier's check, or Bid Bond as prescribed by LA RS 38:2218.A.C, in the amount equal to at least five percent (5%) of the total amount bid and payable without conditions to the Owner as a guarantee that the Bidder, if awarded the Contract, will promptly execute a Contract in accordance with bid proposal and all terms and conditions of the Bid Documents.

The successful Bidder shall be required to furnish a Performance and Payment Bond written as described in the Instructions to Bidders included in the Bid Documents for this project.

**A NON-MANDATORY PRE-BID CONFERENCE WILL BE HELD**
**at *10:00 a.m.* on *September 18, 2023* at the**
***New Orleans Lakefront Airport, Terminal Bldg., 2nd Floor Conference Room***
***6001 Stars and Stripes Blvd, New Orleans, LA 70126.***

A **jobsite visit** will be held following the Pre-Bid Conference. The pre-bid conference and jobsite visit are not mandatory, but are **highly encouraged** for those submitting a bid to attend. The jobsite visit being conducted by LMA will facilitate access to project features that are located on private property. Outside of the recommended site visit, the Contractor may not have access to the facilities located on private property.

ANY PERSON REQUIRING SPECIAL ACCOMMODATIONS SHALL NOTIFY LMA OF THE TYPE(S) OF ACCOMMODATION REQUIRED NOT LESS THAN SEVEN (7) DAYS BEFORE THE BID OPENING.

Contact the Lakefront Management Authority at (504) 355-5990 if directions are needed to the Pre-Bid Conference.

Bids shall be accepted from Contractors who are licensed under LA. R.S. 37:2150-2163 for the classification of Building Construction.

The Owner reserves the right to reject any and all bids for just cause. In accordance with La. R.S. 38:2212 (A)(1)(b), the provisions and requirements of this Section, those stated in the advertisement bids,

and those required on the bid form shall not be considered as informalities and shall not be waived by any public entity.

The Times Picayune and The Advocate:
09/01/23
09/08/23
09/15/23

# SECTION INSTRUCTIONS TO BIDDERS

**COMPLETION TIME:**

The Bidder shall agree to fully complete the contract in **Two hundred seventy (270) consecutive calendar days**, subject to such extensions as may be granted under Paragraph 8.3, in the General Conditions and the Supplementary Conditions, and acknowledges that this construction time will start on or before the date specified in the written "Notice to Proceed" from the Owner.

**LIQUIDATED DAMAGES:**

The Bidder shall agree to pay as Liquidated Damages the amount of Five Hundred Dollars ($500.00) for each consecutive calendar day for which the work is not complete, beginning with the first day beyond the completion date stated on the "Notice to Proceed".

## ARTICLE 1 – DEFINITIONS

1.1 The Bid Documents include the following:

- Advertisement for Bids
- Instructions to Bidders
- Bid Form
- Bid Bond
- Contract Between Owner and Contractor
- Performance and Payment Bond
- Affidavit
- General Provisions
- Special Provisions
- User Agency Documents (if applicable)
- Other Documents (if applicable)
- Addenda issued during the bid period and acknowledged in the Bid Form

1.2 All definitions set forth in the General Provisions and the Special Provisions of the Contract are applicable to the Bid Documents, unless otherwise specifically stated or written.

1.3 Addenda are written, and/or graphic instruments issued by the Engineer prior to the opening of bids which modify or interpret the Bid Documents by additions, deletions, clarifications, corrections and prior approvals.

1.4 A bid is a complete and properly signed proposal to do the work or designated portion thereof for the sums stipulated therein supported by data called for by the Bid Documents.

1.5 Base bid is the sum stated in the bid for which the Bidder offers to perform the work described as the base, to which work may be added, or deleted for sums stated in alternate bids.

1.6 An alternate bid (or alternate) is an amount stated in the bid to be added to the amount of the base bid if the corresponding change in project scope or materials or methods of construction described in the Bid Documents is accepted.

1.7 A Bidder is one who submits a bid for a prime Contract with the Owner for the work described in the Bid Documents.

1.8 A Sub-bidder is one who submits a bid to a Bidder for materials and/or labor for a portion of the work.

1.9 Where the word "Engineer" is used in any of the documents, it shall refer to the Prime Designer of the project, regardless of discipline.

**ARTICLE 2 – PRE-BID CONFERENCE**

2.1 A Pre-Bid Conference shall be held at the time and location described in the Advertisement for Bids The purpose of the Pre-Bid Conference is to familiarize Bidders with the requirements of the Project and the intent of the Bid Documents, and to receive comments and information from interested Bidders. If the Pre-Bid Conference is stated in the Advertisement for Bids to be a Mandatory Pre-Bid Conference, bids shall be accepted only from those bidders who attend the Pre-Bid Conference. Bidders who are not in attendance for the entire Pre-Bid Conference will be considered to have not attended.

2.2 Any revision of the Bid Documents made as a result of the Pre-Bid Conference shall not be valid unless included in an addendum.

**ARTICLE 3 – BIDDER'S REPRESENTATION**

3.1 Each Bidder by making his bid represents that:

3.1.1 He has read and understands the Bid Documents and his bid is made in accordance therewith.

3.1.2 He has had the opportunity to visit the site and has familiarized himself with the local conditions under which the work is to be performed.

3.1.3 His bid is based solely upon the materials, systems, and equipment described in the Bid Documents as advertised and as modified by addenda.

3.1.4 His bid is not based on any verbal instructions contrary to the Bid Documents and addenda.

3.1.5 He is familiar with the Code of Governmental Ethics requirement that prohibits public servants and/or their immediate family members from bidding on or entering into

contracts; he is aware that the Designer and its principal owners are considered Public Servants under the Code of Governmental Ethics for the limited purposes and scope of the Design Contract with the State on this Project (see Ethics Board Advisory Opinion, No. 2009-378 and 2010-128); and neither he nor any principal of the Bidder with a controlling interest therein has an immediate family relationship with the Designer or any principal within the Designer's firm. (La. R.S. 42:1113). Any Bidder submitting a bid in violation of this clause shall be disqualified and any Contract entered into in violation of this clause shall be null and void.

3.2 The Bidder must be fully qualified under any State or local licensing law for Contractors in effect at the time and at the location of the work before submitting his bid. In the State of Louisiana, Revised Statutes 37:2150, et seq. will be considered, if applicable.

The Contractor shall be responsible for determining that all of his Sub-bidders or prospective Subcontractors are duly licensed in accordance with law.

## ARTICLE 4 – BID DOCUMENTS

4.1 Copies

4.1.1 Bid Documents may be obtained from the Lakefront Management Authority as stated in the Advertisement for Bids.

4.1.1.1 One (1) set of Plans and Specifications shall be furnished to each Bidder.

4.1.1.2 In addition to the availability of printed Bid Documents, the Lakefront Management Authority will provide the Bid Documents in electronic format. They may be obtained without charge and without deposit as stated in the Advertisement for Bids.

4.1.1.3 Where electronic distribution is provided, all other plan holders are responsible for their own reproduction costs.

4.1.2 Complete sets of Bid Documents shall be used in preparing bids; neither the Owner nor the Engineer assume any responsibility for errors or misinterpretations resulting from the use of incomplete sets of Bid Documents.

4.1.3 The Owner or Engineer in making copies of the Bid Documents available on the above terms, do so only for the purpose of obtaining bids on the work and do not confer a license or grant for any other use.

4.2 Interpretation or Correction of Bid Documents

4.2.1 The Contract and Bonds which govern the Work shall be performed in accordance with the Plans and Specifications. ~~Items not covered in the provided plans and specifications~~

~~shall be performed in accordance with the Louisiana Standard Specifications for Roads and Bridges, current edition. The Bidder understands that all quantities for performing the Work have been estimated by the Engineer, and that the Bid shall be the sum of the quantities multiplied by their respective unit rates.~~

4.2.2 Bidders shall promptly notify the Lakefront Management Authority contact person listed in the Advertisement for Bids of any ambiguity, inconsistency or error which they may discover upon examination of the Bid Documents or of the site and local conditions.

4.2.3 Bidders requiring clarification or interpretation of the Bid Documents shall make a written request to the Lakefront Management Authority contact person listed in the Advertisement for Bids, to reach him at least seven days prior to the date for receipt of bids.

4.2.4 Any interpretation, correction, or change of the Bid Documents will be made by addendum. Interpretations, corrections, or changes of the Bid Documents made in any other manner will not be binding and Bidders shall not rely upon such interpretations, corrections, and changes.

4.3 Substitutions

4.3.1 The materials, products, and equipment described in the Bid Documents establish a standard of required function, dimension, appearance, and quality to be met by any proposed substitution. No substitutions shall be allowed after bids are received.

4.3.2 No substitution will be considered unless written request for approval has been submitted by the Proposer and has been received by the Engineer at least seven (7) working days prior to the opening of bids. (La.R.S.38:2295C) Each such request shall include the name of the material or equipment for which it is to be substituted and a complete description of the proposed substitute including model numbers, drawings, cuts, performance and test data and any other information necessary for an evaluation.

A statement setting forth any changes in other materials, equipment or work that incorporation of the substitute would require shall be included. It shall be the responsibility of the proposer to include in his proposal all changes required of the Bid Documents if the proposed product is used. Prior approval is given contingent upon supplier being responsible for any costs which may be necessary to modify the space or facilities needed to accommodate the materials and equipment approved.

4.3.3 If the Engineer approves any proposed substitution, such approval will be set forth in an addendum. Bidders shall not rely upon approvals made in any other manner.

4.4 Addenda

4.4.1 Addenda will be emailed or delivered to all who are known by the Lakefront

Management Authority to have received a complete set of Bid Documents.

4.4.2 Copies of addenda will be made available for inspection wherever Bid Documents are on file for that purpose.

4.4.3 Except as described herein, addenda shall not be issued within a period of seventy-two (72) hours prior to the advertised time for the opening of bids, excluding Saturdays, Sundays, and any other legal holidays. If the necessity arises of issuing an addendum modifying plans and specifications within the seventy-two (72) hour period prior to the advertised time for the opening of bids, then the opening of bids shall be extended at least seven but no more than twenty-one (21) working days, without the requirement of re- advertising. The Lakefront Management Authority shall be consulted prior to issuance of such an addendum and shall approve such issuance. The revised time and date for the opening of bids shall be stated in the addendum.

4.4.4 Each Bidder shall ascertain from the Lakefront Management Authority prior to submitting his bid that he has received all addenda issued, and he shall acknowledge their receipt on the Bid Form.

4.4.5 The Owner shall have the right to extend the bid date by up to (30) thirty days without the requirement of re-advertising. Any such extension shall be made by addendum issued by the Lakefront Management Authority.

## ARTICLE 5 – BID PROCEDURE

5.1 Form and Style of Bids

5.1.1 Bids shall be submitted on the Louisiana Uniform Public Work Bid Form provided by the Engineer.

5.1.2 All blanks on the Bid Form shall be filled in manually in ink or typewritten.

5.1.3 Bid sums shall be expressed in both words and figures, and in case of discrepancy between the two, the written words shall govern.

5.1.4 Any interlineation, alteration, or erasure must be initialed by the signer of the bid or his authorized representative.

5.1.5 Bidders are cautioned to complete all alternates should such be required in the Bid Form. Failure to submit alternate prices will render the bid non-responsive and shall cause its rejection.

5.1.6 Bidders are cautioned to complete all unit prices should such be required in the Bid Form. Unit prices represent a price proposal to do a specified quantity and quality of work.

5.1.7 Bidders are strongly cautioned to ensure that all blanks on the bid form are completely and accurately filled in.

5.1.8 Bidder shall make no additional stipulations on the Bid Form nor qualify his bid in any other manner.

5.1.9 The bid shall include the legal name of Bidder and shall be signed by the person or persons legally authorized to bind the Bidder to a Contract.

The authority of the signature of the person submitting the bid shall be deemed sufficient and acceptable under any of the following conditions:

a) Signature on bid is that of any corporate officer or member of a partnership or partnership in commendam listed on most current annual report on file with Secretary of State.
b) Signature on bid is that of authorized representative of corporation, partnership, or other legal entity and bid is accompanied by corporate resolution, certification as to the principal, or other documents indicating authority.
c) Corporation, partnership, or other legal entity has filed in the records of the Secretary of State, an affidavit, resolution or other acknowledged or authentic document indicating the names of all parties authorized to submit bids for public contracts.

The name and license number on the envelope shall be the same as the entity identified on the Bid Form.

5.1.10 On any bid in excess of fifty thousand dollars ($50,000.00), the Contractor shall certify that he is licensed under R.S. 37: 2150-2173 and show his license number on the bid above his signature or his duly authorized representative.

5.2 Bid Security

5.2.1 No bid shall be considered or accepted unless the bid is accompanied by bid security in the amount identified in the advertisement for bids.

The bid security shall be in the form of a certified check or cashier's check drawn on a bank insured by the Federal Deposit Insurance Corporation, or a Bid Bond written by a surety company licensed to do business in Louisiana and signed by the surety’s agent or attorney-in-fact. The Bid Bond shall be written on the Lakefront Management Authority Bid Bond Form, and the surety for the bond must meet the qualifications stated thereon. The Bid Bond shall include the legal name of the bidder be in favor of the Lakefront Management Authority and shall be accompanied by appropriate power of attorney. The Bid Bond must be signed by both the bidder/principal and the surety in the space provided on the Lakefront Management Authority Bid Bond Form. Failure by the bidder/principal or the surety to sign the bid bond shall result in the rejection of the bid.

Bid security furnished by the Contractor shall guarantee that the Contractor will, if awarded the work according to the terms of his proposal, enter into the Contract and furnish Performance and Payment Bonds as required by these Bid Documents, within ten (10) days after written notice that the instrument is ready for his signature.

Should the Bidder refuse to enter into such Contract or fail to furnish such bonds, the amount of the bid security shall be forfeited to the Owner as liquidated damages, not as penalty.

5.2.2 The Owner will have the right to retain the bid security of Bidders until either (a) the Contract has been executed and bonds have been furnished, or (b) the specified time has elapsed so that bids may be withdrawn, or (c) all bids have been rejected.

5.3 Submission of Bids

5.3.1 The Bid shall be sealed in an envelope. The bid envelope shall be identified on the outside with the name of the bid, and the name, address, and license number of the Bidder. The envelope shall contain only one bid form and will be received until the time specified and at the place specified in the Advertisement for Bids. It shall be the specific responsibility of the Bidder to deliver his sealed bid to Lakefront Management Authority at the appointed place and prior to the announced time for the opening of bids. Late delivery of a bid for any reason, including late delivery by United States Mail, or express delivery, shall disqualify the bid.

If the bid is sent by mail, the sealed envelope shall be enclosed in a separate mailing envelope with the notation "Bid Enclosed" on the face thereof. Such bids shall be sent by Registered or Certified Mail or by express delivery, Return Receipt Requested, addressed to:

Lakefront Management Authority
6001 Stars and Stripes Blvd, Suite 219
New Orleans, LA 70126

5.3.2 Bids shall be deposited at the designated location prior to the time on the date for receipt of bids indicated in the Advertisement for Bids, or any extension thereof made by addendum. Bids received after the time and date for receipt of bids will be returned unopened.

5.3.3 Bidder shall assume full responsibility for timely delivery at location designated for receipt of bids.

5.3.4 Oral, telephonic, or telegraphic bids are invalid and shall not receive consideration. Owner shall not consider notations written on outside of bid envelope which have the effect of amending the bid. Written modifications enclosed in the bid envelope, and

signed or initialed by the Contractor or his representative, shall be accepted.

5.4 Bidder Requirements

It is the responsibility of each Bidder before submitting a Bid to:

5.4.1 Examine the Bidding Documents including the Plans and Specifications and any Addenda or related data identified in the Bidding Documents;

5.4.2 Visit the Project Site to become familiar with the local conditions if they are believed to affect cost, progress, or the completion of the Work;

5.4.3 Become familiar and satisfied with all federal, state, and local Laws and Regulations that may affect cost, progress, or the completion of the Work;

5.4.4 Study and correlate all information known to the Bidder including observations obtained from Bidder's visits, if any, to the Project Site, with the Bidding Documents;

5.4.5 Submit a written notice to the Engineer within three (3) days regarding any conflicts, errors, ambiguities, or discrepancies discovered in the Bidding Documents and confirm that the written resolution thereof by the Engineer is acceptable to the Bidder; and

5.4.6 Determine that the Bidding Documents are generally sufficient to convey an understanding of all terms and conditions for completing the required Work.

The submission of a Bid will constitute an incontrovertible representation that the Bidder has complied with every requirement of the Bid Documents including all requirements specified in the Advertisement for Bids, the Instruction To Bidders, and the Plans and Specifications.

5.5 Modification or Withdrawal of Bid

5.5.1 A bid may not be modified, withdrawn or canceled by the Bidder during the time stipulated in the Advertisement for Bids, for the period following the time and bid date designated for the receipt of bids, and Bidder so agrees in submitting his bid, except in accordance with La. R.S. 38:2214 which states, in part, "Bids containing patently obvious mechanical, clerical or mathematical errors may be withdrawn by the Contractor if clear and convincing sworn, written evidence of such errors is furnished to the public entity within forty eight hours of the Bid Opening excluding Saturdays, Sundays and legal holidays".

5.5.2 Prior to the time and date designated for receipt of bids, bids submitted early may be modified or withdrawn only by notice to the party receiving bids at the place and prior to the time designated for receipt of bids.

5.5.3 Withdrawn bids may be resubmitted up to the time designated for the receipt of bids

provided that they are then fully in conformance with these Instructions to Bidders. No bid can be withdrawn after the hour set for opening such bid except as provided in LSA-R.S. 38:2214C, i.e. bids containing patently obvious, unintentional, and substantial mechanical, clerical, or mathematical errors, or errors of unintentional omission of a substantial quantity of work, labor, material, or services made directly in the compilation of the bid, may be withdrawn by the contractor if clear and convincing sworn, written evidence of such errors is furnished to the Lakefront Management Authority within forty-eight (48) hours of the bid opening excluding Saturdays, Sundays, and legal holidays. Such errors must be clearly shown by objective evidence drawn from inspection of the original work papers, documents, or material used in the preparation of the bid sought to be withdrawn. If the Lakefront Management Authority determines that the error is a patently obvious mechanical, clerical, or mathematical error, or unintentional omission of a substantial quantity of work, labor, material, or service, as opposed to a judgment error, and that the bid was submitted in good faith it shall accept the withdrawal and return the bid security to the contractor. A contractor who attempts to withdraw a bid under these provisions shall not be allowed to resubmit a bid on the project (LSA-R.S.38:2214D).

5.5.4 Bid Security shall be in an amount sufficient for the bid as modified or resubmitted.

## ARTICLE 6 – CONSIDERATION OF BIDS

6.1 Opening of Bids

6.1.1 The properly identified Bids received on time will be opened publicly and will be read aloud, and a tabulation abstract of the amounts of the base bids and alternates, if any, will be made available to Bidders.

6.2 Rejection of Bids

6.2.1 The Owner shall have the right to reject any or all bids and in particular to reject a bid not accompanied by any required bid security or data required by the Bid Documents or a bid in any way incomplete or irregular.

6.3 Acceptance of Bid

6.3.1 It is the intent of the Owner, if he accepts any alternates, to accept them in the order in which they are listed in the Bid Form. Determination of the Low Bidder shall be on the basis of the sum of the base bid and the alternates accepted. However, the Owner shall reserve the right to accept alternates in any order which does not affect determination of the Low Bidder.

6.4 Notice of Award

6.4.1 The Owner, or its designated bidding agent, shall provide written notice to the Successful Bidder stating that the Owner will sign and deliver the Contract upon

compliance with the conditions enumerated therein and within the time specified.

## ARTICLE 7 – POST-BID INFORMATION

7.1 Submissions

7.1.1 The Contractor shall submit all required deliverables in conformance with the Bid Documents.

It is the preference of the Owner that, to the greatest extent possible or practical, the Contractor utilize Louisiana Subcontractors, manufacturers, Suppliers and labor.

7.1.2 The Contractor will be required to establish to the satisfaction of the Engineer the reliability and responsibility of the proposed Subcontractors to furnish and perform the work described in the sections of the Specifications pertaining to such proposed Subcontractor's respective trades. The General Contractor shall be responsible for actions or inactions of Subcontractors and/or material suppliers.

The General Contractor is totally responsible for any lost time or extra expense incurred due to a Subcontractor's/or Material Supplier's failure to perform. Failure to perform includes, but is not limited to, a Subcontractor's financial failure, abandonment of the project, failure to make prompt delivery, or failure to do work up to standard. Under no circumstances shall the Owner be obligated to mitigate the General Contractor's losses or reimburse the General Contractor for losses caused by these events.

7.1.3 Subcontractors and other persons and organizations selected by the Bidder must be used on the work for which they were proposed and shall not be changed except with the written approval of the Owner and the Engineer.

In accordance with La. R.S. 38:2227, LA. R.S. 38:2212.10 and LA. R.S. 23:1726(B) each bidder on this project must submit the completed Attestations Affidavit (Past Criminal Convictions of Bidders, Verification of Employees and Certification Regarding Unpaid Workers Compensation Insurance) form found within this bid package. The Attestations Affidavit form shall be submitted to Lakefront Management Authority within 10 days after the opening of bids.

## ARTICLE 8

## PERFORMANCE AND PAYMENT BOND

8.1 Bond Required

The Contractor shall furnish and pay for a Performance and Payment Bond written by a company licensed to do business in Louisiana, which shall be signed by the surety's agent

or attorney-in-fact, in an amount equal to the total contract price as awarded. Surety must be listed currently on the U. S. Department of Treasury Financial Management Service List (Treasury List) as approved for an amount equal to or greater than the Contract amount or must be an insurance company domiciled in Louisiana or owned by Louisiana residents. If surety is qualified other than by listing on the Treasury list, the Contract amount may not exceed fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance and may not exceed the amount of $500,000. However, a Louisiana domiciled insurance company with at least an A- rating in the latest printing of the A. M. Best's Key Rating Guide shall not be subject to the $500,000 limitation, provided that the Contract amount does not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide nor fifteen percent of policyholders' surplus as shown by surety's most recent financial statements filed with the Louisiana Department of Insurance. The Bond shall be signed by the surety's agent or attorney-in-fact. The Bond shall be in favor of the Lakefront Management Authority.

8.2 Time of Delivery and Form of Bond

8.2.1 The Bidder shall deliver the required bond to the Owner simultaneous with the execution of the Contract.

8.2.2 8.2.2 Bond shall be in the form furnished by the Lakefront Management Authority, entitled CONTRACT BETWEEN OWNER AND CONTRACTOR and PERFORMANCE AND PAYMENT BOND, copies of which are included in the Bid Documents.

8.2.3 8.2.3 The Bidder shall require the Attorney-in-Fact who executes the required bond on behalf of the surety to affix thereto a certified and current copy of his power of Attorney.

8.3 Recordation of Contract and Bond [38:2241A (2)]

8.3.1 The Contractor shall record within thirty (30) days the Contract Between Owner and Contractor, and Performance and Payment Bond with the Clerk of Court in the Parish in which the Work is to be performed. The Contractor shall obtain a Certificate of Recordation from the Clerk of Court and forward this Certificate immediately to the Lakefront Management Authority contact person listed in the Advertisement for Bids. No request for payment will be processed until receipt of the Certificate of Recordation.

## ARTICLE 9 – FORM OF CONTRACT BETWEEN OWNER AND CONTRACTOR

9.1 Form to be Used

9.1.1 Form of the Contract to be used shall be furnished by the Lakefront Management

Authority, an example of which is bound in the Bid Documents.

9.2 Award

9.2.1 Before award of the Contract, the successful Bidder shall furnish to the Owner a copy of a Disclosure of Ownership Affidavit stamped by the Secretary of State, a certified copy of the minutes of the corporation or partnership meeting which authorized the party executing the bid to sign on behalf of the Contractor.

9.2.2 In accordance with Louisiana Law, when the Contract is awarded, the successful Bidder shall, at the time of the signing of the Contract, execute the Non-Collusion Affidavit included in the Contract Documents

9.2.3 When this project is financed either partially or entirely with State Bonds, the award of this Contract is contingent upon the sale of bonds by the State Bond Commission. The State shall incur no obligation to the Contractor until the Contract between Owner and Contractor is duly executed.

9.2.4 Award of Contract is expressly conditioned upon the receipt of funding for the project from the Federal Emergency Management Agency(“FEMA”). The Management Authority reserves the right to reject all bids for just cause in accordance with Louisiana R.S. 38:2214, et seq.

# LOUISIANA UNIFORM PUBLIC WORK BID FORM

**TO:** Lakefront Management Authority
6001 Stars and Stripes Blvd, Suite 219
New Orleans, LA 70126

**BID FOR:** LAKEFRONT AIRPORT
WILLIAMS TAYLOR HANGAR
ROOF REPLACEMENT

The undersigned bidder hereby declares and represents that she/he; a) has carefully examined and understands the Bidding Documents, b) has not received, relied on, or based his bid on any verbal instructions contrary to the Bidding Documents or any addenda, c) has personally inspected and is familiar with the project site, and hereby proposes to provide all labor, materials, tools, appliances and facilities as required to perform, in a workmanlike manner, all work and services for the construction and completion of the referenced project, all in strict accordance with the Bidding Documents prepared by:
**RCL Architecture, L.L.C** and dated: **August 4, 2023.**

Bidders must acknowledge all addenda. The Bidder acknowledges receipt of the following **ADDENDA: (**Enter the number the Designer has assigned to each of the addenda that the Bidder is acknowledging) _____.

**TOTAL BASE BID**: For all work required by the Bidding Documents (including any and all unit prices designated "Base Bid" * but not alternates) the sum of:

_____Dollars ($_____)

**ALTERNATES:** For any and all work required by the Bidding Documents for Alternates including any and all unit prices designated as alternates in the unit price description.

**Alternate No. 1** *(Not Applicable)* for the lump sum of:

Not Applicable Dollars ($_____)

**Alternate No. 2** *(Not Applicable)* for the lump sum of:

Not Applicable Dollars ($_____)

**NAME OF BIDDER:** _____

**ADDRESS OF BIDDER:** _____

**LOUISIANA CONTRACTOR'S LICENSE NUMBER:** _____

**NAME OF AUTHORIZED SIGNATORY OF BIDDER:** _____

**TITLE OF AUTHORIZED SIGNATORY OF BIDDER:** _____

**SIGNATURE OF AUTHORIZED SIGNATORY OF BIDDER **:** _____

**DATE:** _____

* The Unit Price Form shall be used if the contract includes unit prices. Otherwise it is not required and need not be included with the form. The number of unit prices that may be included is not limited and additional sheets may be included if needed.
** If someone other than a corporate officer signs for the Bidder/Contractor, a copy of a corporate resolution or other signature authorization shall be required for submission of bid. Failure to include a copy of the appropriate signature authorization, if required, may result in the rejection of the bid unless bidder has complied with La. R.S. 38:2212(A)(1)(c) or RS 38:2212(O).
**BID SECURITY** in the form of a bid bond, certified check or cashier's check as prescribed by LA RS 38:2218.A is attached to and made a part of this bid.

# BID BOND
## FOR
## LAKEFRONT MANAGEMENT AUTHORITY PROJECTS

Date: _____

KNOW ALL MEN BY THESE PRESENTS:

That _____ of _____, as Principal, and _____, as Surety, are held and firmly bound unto the Lakefront Management Authority (Obligee), in the full and just sum of _____, lawful money of the United States, for payment of which sum, well and truly be made, we bind ourselves, our heirs, executors, administrators, successors and assigns, jointly and severally firmly by these presents.

Surety represents that it is listed on the current U. S. Department of the Treasury Financial Management Service list of approved bonding companies as approved for an amount equal to or greater that the amount for which it obligates itself in this instrument or that it is a Louisiana domiciled insurance company with at least an A – rating in the latest printing of the A. M. Best's Key Rating Guide. If surety qualifies by virtue of its Best's listing, the Bond amount may not exceed ten percent of policyholders' surplus as shown in the latest A. M. Best's Key Rating Guide.

Surety further represents that it is licensed to do business in the State of Louisiana and that this Bond is signed by surety's agent or attorney-in-fact. This Bid Bond is accompanied by appropriate power of attorney.

THE CONDITION OF THIS OBLIGATION IS SUCH that, whereas said Principal is herewith submitting its proposal to the Obligee on a Contract for:

LAKEFRONT AIRPORT
WILLIAMS TAYLOR HANGAR ROOF REPLACEMENT

NOW, THEREFORE, if the said Contract be awarded to the Principal and the Principal shall, within such time as may be specified, enter into the Contract in writing and give a good and sufficient bond to secure the performance of the terms and conditions of the Contract with surety acceptable to the Obligee, then this obligation shall be void; otherwise this obligation shall become due and payable.

| | |
|---|---|
| _____ | _____ |
| PRINCIPAL (BIDDER) | SURETY |
| BY: _____ | BY: _____ |
| AUTHORIZED OFFICER-OWNER-PARTNER OR ATTORNEY-IN-FACT (SEAL) | AGENT |

**CONTRACT/PROJECT NAME**

**N.O. LAKEFRONT AIRPORT WILLIAMS TAYLOR HANGAR ROOF REPLACEMENT**

**STATE OF LOUISIANA**

**PARISH OF ORLEANS**

# ATTESTATIONS AFFIDAVIT

**Before me**, the undersigned notary public, duly commissioned and qualified in and for the parish and state aforesaid, personally came and appeared Affiant, who after being duly sworn, attested as follows:

## LA. R.S. 38:2227 PAST CRIMINAL CONVICTIONS OF BIDDERS

A. No sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes:

(a) Public bribery (R.S. 14:118)
(b) Corrupt influencing (R.S. 14:120)
(c) Extortion (R.S. 14:66)
(d) Money laundering (R.S. 14:23)

B. Within the past five years from the project bid date, no sole proprietor or individual partner, incorporator, director, manager, officer, organizer, or member who has a minimum of a ten percent (10%) ownership in the bidding entity named below has been convicted of, or has entered a plea of guilty or nolo contendere to any of the following state crimes or equivalent federal crimes, during the solicitation or execution of a Contract or bid awarded pursuant to the provisions of Chapter 10 of Title 38 of the Louisiana Revised Statutes:

(a) Theft (R.S. 14:67)
(b) Identity Theft (R.S. 14:67.16)
(c) Theft of a business record of (R.S.14:67.20)
(d) False accounting (R.S. 14:70)
(e) Issuing worthless checks (R.S. 14:71)
(f) Bank fraud (R.S. 14:71.1)
(g) Forgery (R.S. 14:72)
(h) Contractors; misapplication payments (R.S. 14:202)
(i) Malfeasance in office (R.S. 14:134)

## LA. R.S. 38:2212.10 Verification of Employees

A. At the time of bidding, Appearer is registered and participates in a status verification system to verify that all new hires in the state of Louisiana are legal citizens of the United States or are legal aliens.

B. If awarded the Contract, Appearer shall continue, during the term of the Contract, to utilize a status verification system to verify the legal status of all new employees in the state of Louisiana.

C. If awarded the Contract, Appearer shall require all Subcontractors to submit to it a sworn affidavit verifying compliance with Paragraphs (A) and (B) of this Subsection.

**CONTRACT/PROJECT NAME**
**N.O. Lakefront Airport Williams Taylor Hangar Roof Replacement**

**LA. R.S. 23:1726(B) Certification Regarding Unpaid Workers Compensation Insurance**

A. R.S. 23:1726 prohibits any entity against whom an assessment under Part X of Chapter 11 of Title 23 of the Louisiana Revised Statutes of 1950 (Alternative Collection Procedures & Assessments) is in effect, and whose right to appeal that assessment is exhausted, from submitting a bid or proposal for or obtaining any Contract pursuant to Chapter 10 of Title 38 of the Louisiana Revised Statutes of 1950 and Chapters 16 and 17 of Title 39 of the Louisiana Revised Statutes of 1950.

B. By signing this bid /proposal, Affiant certifies that no such assessment is in effect against the bidding / proposing entity.

_____ _____
**NAME OF BIDDER** **NAME OF AUTHORIZED SIGNATORY OF BIDDER**

_____ _____
**DATE** **TITLE OF AUTHORIZED SIGNATORY OF BIDDER**

_____
**SIGNATURE OF AUTHORIZED**
**SIGNATORY OF BIDDER/AFFIANT**

**Sworn to and subscribed** before me by Affiant on the_____day of_____, 20___.

_____
Notary Public

**CONTRACT**

**BETWEEN**

**LAKEFRONT MANAGEMENT AUTHORITY**
**NEW ORLEANS LAKEFRONT AIRPORT**
**6001 STARS AND STRIPES BLVD.**
**NEW ORLEANS, LA 70126**

**AND**

_____
_____
_____

**BEFORE** the undersigned, Notaries Public, duly commissioned and qualified, and in the presence of the witnesses hereinafter named and undersigned,

**PERSONALLY CAME AND APPEARED:**

**The Lakefront Management Authority** ("Management Authority" or "Owner"), a political **subdivision** of the State of Louisiana and the governing authority of the non-flood protection assets of the Orleans Levee District ("District"), with its office located at 6001 Stars and Stripes Boulevard, New Orleans Lakefront, Terminal Building, Suite 219, New Orleans, Louisiana 70126, appearing through its Executive Director, Louis J. Capo, duly authorized by a Resolution adopted by the Management Authority, and,

_____, a Louisiana corporation, with its registered office located at _____, as Contractor ("Contractor"), appearing through its undersigned duly authorized Owner, _____;

who declared, that for and in consideration of the payment, hereinafter provided for, to be made by the Management Authority, Contractor agrees and is obligated to furnish all labor, equipment, supplies, materials, and to perform all work necessary for the _____ (the "project"), and all other work required under and in accordance with the Proposed Bid by Contractor dated on _____, and Contract Documents described below for the total price and sum of (_____) $_____ (the "Contract Sum").

The Contractor agrees that it shall be solely responsible for payment of tax liability arising in connection with the Contractor's receipt of payments made pursuant to this Agreement. The Contractor represents that its federal taxpayer identification number is _____.

The parties agree that the Contract Documents for purposes of this Contract consist of this Contract, and the drawings dated on _____ which are incorporated and made a part hereof (collectively referred to as the "Contract Documents"). These Contract Documents form the contract between the parties and Contractor shall perform all the work required by the Contract Documents for the Contract Sum set forth above.

Contractor agrees to complete all work contracted for within _____ (___) calendar days from the date the Notice to Proceed is issued by Owner (the "Contract Time").

Contractor agrees that in default of completing all work within the period of time stipulated above, to be bound in the amount of Five Hundred Dollars ($500.00) for LIQUIDATED DAMAGES, not as a penalty, for each calendar day beyond the stipulated time.

Payments shall be made by the Owner to the Contactor in the following manner: Based upon Applications for Payment submitted by the Contractor to the Management Authority and Certificates for Payment issued by the Engineer, the Owner shall make progress payments on account of the Contract Sum to the Contractor for the period ending the 25th day of each month for work completed as follows: Not later than 30 days following the end of the period covered by the Application for Payment, Ninety five percent (95%) of the portion of the Contract Sum properly allocable to labor, materials and equipment used in the Construction Work and Ninety five percent (95%) of the portion of the Contract Sum properly allocable to materials and equipment suitably stored at the site or at some other location agreed upon in writing by the Owner, for the period covered by the Application for Payment, less the aggregate of previous payments made by the Owner.

In accordance with Louisiana Revised Statutes Title 38, Section 2248(A), payment of the five percent (5%) retainage held by the Owner shall be made forty-five (45) days after recordation of acceptance of the work in the office of the Clerk of Court, Ex-Officio Recorder of Mortgages for the Parish of Orleans, State of Louisiana and after delivery by the Contractor to the Owner of a Certificate from the Clerk of Court, Ex-Officio Recorder of Mortgages for the Parish of Orleans showing that no liens or claims have been filed in connection with the work, except for punch list items that have not been completed, which will be paid after completion of the punch list items. The cancellation of all liens and claims that might be recorded, growing out of this Contract, shall be at the cost and expense of the Contractor, and the cost of same may be retained by the Owner from payments due or to become due until the liens and claims are cancelled by the Contractor.

In accordance with Louisiana Revised Statutes Title 38, Section 2248(B), any punch list generated during this project shall include the cost estimates for the particular items of work based on the mobilization, labor, material, and equipment costs of each punch list item. The Owner shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The Owner shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon expiration of the forty-five-day lien period provided for under the Louisiana Public Works Act and delivery of a clear Lien & Privilege Certificate. La.Rev.Stat. 38:2248, et seq.

The Contractor shall indemnify and save harmless the Owner, its commissioners, officers, employees, or agents against any and all claims, losses, liabilities, demands, suits, causes of action, damages, and judgments of sums of money to any person for loss of life or injury or damage to property growing out of, resulting from, or by reason of, any negligent act or omission, operation or work of the Contractor, its agents, servants, or employees, while engaged upon or in connection with the Services required or performed

by the Contractor under this contract. The obligation of the Contractor to defend the Owner shall arise upon notice of any such claim to Owner. The obligations under this provision of this Contract shall survive the expiration or earlier termination of this Contract.

The Contractor shall comply with all applicable federal, state and local laws and ordinances, as shall all others employed by Contractor in carrying out the provisions of this Contract.

If the Contractor defaults or neglects to carry out the work in accordance with the Contract Documents and fails within a two-day period after receipt of written notice, which may be sent by email or facsimile transmission, from the Owner to commence and continue the work, the Contractor shall be in default and the Owner shall have the right to complete the work and shall be entitled to recover any costs incurred over the Contract Sum to complete the work and also to recover any costs, expenses and attorney fees incurred in connection with the completion of the work, without prejudice to other remedies the Owner may have under this Contract.

The Contractor and Owner waive claims against each other for consequential damages arising out of or relating to this Contract. This mutual waiver includes damages incurred by the Contractor for principal office expenses, including the compensation of personnel stationed there, for losses of financing, business and reputation, and for loss of profit except anticipated profit arising directly from the work.

This Contract shall be governed under and by the laws of the State of Louisiana. Further, the parties acknowledge that this Contract has been entered into pursuant to the Louisiana Public Bid Law, La.Rev.Stat. 38:§2211, et seq. and agree that all terms and conditions required under the Louisiana Bid Law are incorporated herein as if written in their entirety.

The provisions of this Contract shall be enforced, and venue and jurisdiction of any suit, right or cause of action arising under or in connection with this Contract shall be in the Civil District Court for the Parish of Orleans, State of Louisiana.

In the event of litigation between the parties concerning this Contract, the parties agree that the prevailing party in any such litigation shall be entitled to recover reasonable attorney's fees, expenses and costs against the non-prevailing party.

The Contractor warrants that it has not employed or retained any company or person, other than a bona fide employee working solely for the Contractor, to solicit or secure this Contract, and that they have not paid or agreed to pay any company or person, other than a bona fide employee working solely for the Contractor, any fee, commission, percentage, brokerage fee, gifts, or any other consideration, contingent upon or resulting from the award or making of this Contract. For breach or violation of this warranty, the Owner shall have the right to terminate this Contract without notice or liability, and, in its discretion, deduct from the Contract price or consideration, or otherwise recover, the full amount of such fee, commission, percentage, brokerage fee, gift or contingent fee.

This Contract shall not be transferred or assigned by the Contractor without the prior written consent of the Owner.

This Contract constitutes the entire Contract between the Owner and the Contractor and supersedes all prior written or oral understandings. This Contract may only be amended, supplemented, modified or cancelled by a duly written instrument executed by the parties.

Contractor shall provide a payment and performance bond for fulfilment of its obligations under this Contract as required under the Louisiana Public Bid Law. La.Rev.Stat. 38:2211,et seq.

All notices required to be given under the Contract Documents, except as provided above for a notice of default for failure to carry out the work in accordance with the Contract Documents, shall be in writing and either personally served by hand delivery or sent by United States mail, sufficient postage prepaid, certified mail return receipt requested, or sent by a nationally recognized overnight commercial delivery service, and addressed to the parties at the addresses set forth above in this Contract, and shall be deemed to be given on the day that such Notice is received by the Party to whom it is sent. If notice is sent by Certified Mail and it is refused by the recipient and returned to the Post Office, notice shall be deemed to have been given on the date the recipient rejected the notice by Certified Mail.

Neither the form nor any language of this Contract shall be interpreted or construed in favor of or against either party hereto.

Nothing herein shall be construed as creating any personal liability on the part of any commissioner, public official, or officer or member of the public body which is a party to this Contract, or any of their representatives, agents, staff members, personnel or employees.

If any term or provision of this Contract, or of any of the Contract Documents, or the application thereof to any person or circumstances, shall to any extent be invalid or unenforceable, the remainder of this Contract shall not be affected thereby, and each term and provision of this Contract shall be valid and be enforced to the fullest extent permitted by law.

The services contracted for are of such a nature, and the size of the contract, is such that Contractor’s performance hereunder does not significantly impact Contractor’s operations. Should the Contractor be adjudicated a bankrupt or there be the appointment of a Receiver for Contractor, or the filing of a bankruptcy, receivership or respite petition by the Contractor or upon Contractor's suspension, failure or insolvency, in such event, ipso facto, this Contract shall terminate, without any further notice to Contractor and without the Management Authority taking any further action.

The Contract Documents identified herewith, and made part hereof, have been paragraphed "**NE VARIETUR**" by one of the undersigned Notaries for identification herewith. The parties hereto relieve and release the Notaries from any and all liability in connection to the terms of the Contract.

This Contract shall inure to the benefit of and be binding upon the parties and their respective successors and assigns.

This contract shall be effective as of _____, 2023.

**THUS DONE AND PASSED**, in multiple originals, on the_____ day of _____, 2023, in the presence of the undersigned competent witnesses, who signed their names with said appearer, and me, Notary, after reading of the whole.

**WITNESSES:** **OWNER:**

**LAKEFRONT MANAGEMENT AUTHORITY**

_____

_____ **BY:** _____

**LOUIS J. CAPO**
**EXECUTIVE DIRECTOR**

_____

**GERARD G. METZGER**
**LA. BAR #9468**
**NOTARY PUBLIC**

**State of Louisiana Parish of Jefferson**

**THUS DONE AND PASSED,** in multiple originals, on the _____day of August, 2023, in the presence of the undersigned competent witnesses, who signed their names with said appearer, and me, Notary, after reading of the whole.

**WITNESSES:** **OWNER:**

**CONTRACTOR:**

_____ _____

_____ **BY:** _____

OWNER_____

_____

**NOTARY PUBLIC**

**BOND** **BOND # _____**

**KNOW ALL PERSONS BY THESE PRESENTS** that _____, a Louisiana corporation, authorized and doing business in the State of Louisiana, as **PRINCIPAL ("PRINCIPAL")**, appearing through its undersigned duly authorized President, William Bill Luebbert, and _____, a foreign insurance company admitted and authorized to do business in the State of Louisiana, with its office located at municipal address 151 N. Franklin St. Chicago, IL 60606, as **SURETY ("SURETY")**, appearing through its duly authorized Agent and Attorney-in-Fact, Kay Doyle Smith, are held and firmly bound, in solido, unto the **Lakefront Management Authority and the Orleans Levee District,** political subdivisions of the State of Louisiana, 6001 Stars & Stripes Boulevard, Suite 219, New Orleans, LA 70126, as **OWNER ("OWNER")**, in the sum of _____ (_____), as security for the faithful and satisfactory performance by _____, as Contractor, of all clauses and conditions of the Contract, identified as the "_____," ("Contract") with the Lakefront Management Authority, for the performance of the Contract and payment by Contractor for all work done, labor performed, or materials or supplies furnished for the construction, alteration, and work under this Contract, and for transportation and delivery of such materials or supplies to the site of the job by a for-hire carrier, and for furnishing materials or supplies for use in the project and in machines used in the construction, alteration, or work under the Contract: and, the condition of this obligation being that if _____, Contractor, shall well, truly and faithfully and satisfactorily perform all of the obligations assumed by _____, as Contractor, under the Contract and payment be made by Contractor and by all subcontractors for all work done, labor performed and material furnished

under the Contract, in accordance with law, then this Bond shall become null and void, otherwise to remain in full force and effect.

Surety consents and yields to the jurisdiction of the Civil District Court for the Parish of Orleans, State of Louisiana, and formally waives any pleas of jurisdiction on account of residence elsewhere in the event of suit under the Contract and Bond, and Surety herein shall be limited to such defenses only as the principal of this Bond could make.

Surety agrees that this is a statutory performance and payment bond issued pursuant to the provisions of the Louisiana Public Bid Law, La. Rev. Stat. 38:2211, et seq., and that all of the terms, conditions and obligations provided for under that law are incorporated herein and that Surety is bound and obligated as if same had been written herein in its entirety.

**SURETY** further stipulates and agrees that no change, extension of time, alteration or addition to the terms of the Contract or to the work to be performed thereunder or the specifications accompanying the same shall in any way affect its obligation on this Bond, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of this Contract or to the work or to the specifications.

IN WITNESS WHEREOF, this instrument is executed in quadruplicate original in Jefferson, Louisiana, on this _____ day of _____, 2023.

**WITNESSES**

_____
**Signature**

_____
**Print Name**

**PRINCIPAL:**

**CONTRACTOR**

**BY:** _____
**OWNER**

**SURETY:**

**_____**

**_____** **BY: _____**

**Signature** **_____**

**AGENT AND ATTORNEY-IN-Fact**

**_____**

**Print Name**

## PART I1 - GENERAL PROVISIONS

GP-1 DEFINITION OF TERMS

Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs and the titles of other documents or forms.

Unless stated otherwise in the Contract Documents, words or phrases which have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

a. Acceptance: A written approval from the Authority Representative which certifies that specific items of work in the Contract have been completed and/or obligations have been fulfilled by the Contractor.

b. Addenda: Those written or graphic documents which are issued prior to opening of Bids in accordance with the Bidding Requirements and clarify or change the bidding requirements or the proposed Contract Documents.

c. Application of Payment: That form which is used by the Contractor to request partial and final payment and is deemed acceptable to the Owner. It shall be accompanied by any supporting documentation required by the Contract Documents.

d. Authority: The Lakefront Management Authority(LMA)

e. Authority Representative: On site representative for the Lakefront Management Authority(LMA).

f. A.S.T.M.: American Society for Testing and Materials.

g. Bid: An offer or proposal submitted on the prescribed form setting forth the prices for the Work.

h. Bidder: The person, association of persons, firm, or corporation submitting an offer or proposal for the Work.

i. Bidding Requirements: The Advertisement for Bids, Instructions to Bidders, Form of Bid Security, if any, and Bid Form with any supplements.

j. Change Order: A written order which is submitted to the Contractor, signed by the Owner, and authorizes an addition, deletion, or revision in the Work, or an adjustment in the contract price or the contract time issued after the effective date of the Contract.

k. Claim: A written demand or assertion by Owner or Contractor seeking an adjustment of Contract Price or Contract Times, or both or other relief with respect to the terms of the Contract.

l. Contract: The written agreement between the Owner and the Contractor which defines the work to be completed and shall be understood to include all Contract Documents.

m. Contract Documents: The Contract, all addenda which pertains to the Contract Documents, Bid Documents and specified Attachments accompanying the Bid and any post-bid documentation submitted prior to the Notice of Award, Contractor's Bid when attached as an exhibit to the Agreement, the Bonds (Bid and Performance/Payment), General Provisions, Special Provisions, Technical Specifications, Plans, and all Field or Change Orders issued after the execution of the Agreement. Shop Drawings and other submittals by the Contractor are not Contract Documents.

n. Contract Price: The moneys payable by the Owner to the Contractor for the Work in accordance with the Contract Documents as stated in the Contract.

o. Contract Time: The number of calendar days specified in the Contract for completion of the Work, together with any extensions authorized through change orders.

p. Contractor: The person, association of persons, firm, or corporation entering into the duly awarded Contract.

q. Contracting Agency: The Lakefront Management Authority(LMA).

r. Day: When any period of time is referred to in the Contract Documents using days, it will be computed to exclude the first day and include the last day of such period. If the last day of any such period falls on a Saturday, Sunday, or a legal holiday, that day will be omitted from the computation. A calendar day is measured as twenty-four (24) hour period starting at midnight and ending the following midnight.

s. Design Report: A written report by the Engineer which provides the design methodology for the Work.

t. Effective Date of the Contract: The date indicated in the Contract on which it becomes effective.

u. Engineer: The Lakefront Management Authority~~,~~ or its designee.

v. Equipment: All machinery, implements, and power-tools, in conjunction with the necessary supplies for the operation, upkeep, maintenance, and all other tools and apparatuses necessary for the proper construction and acceptable completion of the Work.

w. Extension of Contract: Any extension of time for completion of Work beyond the Contract Time which is granted by the Owner, recommended by the Engineer and approved by the Management Authority in the form of a Change Order.

x. Federal Sponsor: The federal agency which has been tasked, if applicable, to manage the implementation of the project.

y. Field Order: A written order issued by the Engineer which requires minor changes in the Work but which does not involve a change in the Contract Price or Contract Time.

z. Laboratory: The firm, company, or corporation which is used to test materials and is approved for use by the Engineer.

aa. Laws and Regulations; Laws or Regulations: Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

bb. Materials: Any substance used in the Work to build structures, but does not include material used in false work or other temporary structures not incorporated in the Work.

cc. Milestone: A principal event specified in the Contract Documents relating to an intermediated completion date or time prior to the Contract Times.

dd. Notice of Award: A written notice to the successful Bidder stating that the Bid has been accepted by the Owner and that the successful Bidder is required to execute the Contract and furnish the Payment and Performance Bond and Non-Collusion Affidavit.

ee. Notice to Proceed: The written notice to the Contractor by the Owner which provides the starting date for the Contract Time.

ff. Owner: The Owner is the Lakefront Management Authority.

gg. Performance and Payment Bond: The approved form of security furnished by the Contractor and Surety for the faithful performance of the Work, and the payment for all labor, materials, and/or obligations incurred by the Contractor in the prosecution thereof.

hh. Plans: That part of the Contract Documents prepared or approved by the Engineer which graphically shows the scope, intent, and character of the Work to be completed by the Contractor.

ii. Project Site: The location where the Work is to be performed as stated in the Contract Documents.

jj. Resident Project Representative: An authorized representative of the Engineer who is responsible to inspect the Work and materials furnished by the Contractor.

kk. Right-of-way: That entire area reserved for constructing, maintaining, and protecting the proposed improvement, structures, and appurtenances of the Work.

ll. Samples: Physical examples of materials, equipment, or workmanship that are representative of some portion of the Work and which establish the standards by which such portions of the Work will be judged.

mm. Shop Drawings: All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for the Contractor and submitted by the Contractor to illustrate some portion of the Work to be performed.

nn. Specifications: That part of the Contract Documents consisting of written technical descriptions of materials, equipment, systems, standards, and workmanship as applied to the work to be performed and certain administrative details applicable thereto.

oo. State: Louisiana.

pp. Structures: Bridges, plugs, weirs, bulkheads, berms, dams, levees, and other miscellaneous construction encountered during the Work and not otherwise classified herein.

qq. Subcontractor: Any person, association of persons, firm, or corporation who contracts with the Contractor to perform any part of the project covered by the Contract.

rr. Submittals: Certificates, samples, shop drawings, and all other project data which are submitted to the Engineer in order to verify that the correct products will be installed on the project.

ss. Successful Bidder: The lowest responsible Bidder whom the Owner makes an award.

tt. Special Provisions: That part of the Contract Documents which amends or supplements these General Provisions.

uu. Surety: The corporate body, licensed to do business in Louisiana, bound with and for the Contractor's primary liability, and engages to be responsible for payment of all obligations pertaining to acceptable performance of the Work contracted.

vv. Temporary Structures: Any non-permanent structure required while engaged in the prosecution of the Contract.

ww. Work: All work specified herein or indicated on the Plans.

xx. Work Plan: A written plan by the Contractor that details how the Work will be provided including layout drawings, projected schedule (Initial Progress Schedule), and a list of labor hours, materials, and equipment.

GP-2 CONTACT INFORMATION

Prior to Bid opening date, the Contractor shall send all questions and requests for clarification or interpretation of the Bid Documents in writing to the attention of the RCL Architecture, LLC. The address and contact information are as follows:

ALL QUESTIONS MUST BE SUBMITTED IN WRITING TO RCL Architecture,
pdimitrios@rclconsultants.com, with copy to hmorales@rclconsultants.com
900 W. Causeway Approach
Mandeville, LA 70471
Phone: 985-727-4440

After execution of the contract between Owner and Contractor, the successful Contractor shall contact the Engineer concerning contract documentation or questions. The addresses and contact information for the Engineer is listed as follows:

900 W. Causeway Approach
Mandeville, LA 70471

Phone: 985-727-4440

The Owner and Engineer shall deliver all written Claims, Notices, Submittals, Plans, and other documents to the Contractor at the address indicated on the Bid.

GP-3 LAWS, REGULATIONS, STANDARDS, SPECIFICATIONS, AND CODES

Bidders are required to become familiar and remain in compliance with all Federal, State, and local laws, ordinances, and regulations and all orders and decrees of bodies or tribunals having any jurisdiction or authority which may affect those employed for the execution of the Work or which may affect the conduct of the Work. The Contractor shall indemnify the Owner and its representatives against any claim or liability arising from all violations of any laws, bylaws, ordinances, codes, regulations, orders, or decrees, whether by the Contractor or by the Contractor's employees. The filing of a bid will be presumptive evidence that the Bidder has complied with this requirement. The Owner will not be responsible for any inaccurate interpretations or conclusions drawn by the Contractor from information and documentation provided by the Owner.

References to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, may not be in effect at the time of opening the Bids (or on the Effective Date of the Contract if there were no Bids), except as may be otherwise specifically stated in the Contract Documents. No provision of any such standard, specification, manual, or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of the Owner or Engineer, or any of their Subcontractors, consultants, agents, or employees from those set forth in the Bid Documents. No such provision shall be effective to assign to the Owner or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of the Contractor's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

The obligations imposed by these specifications are in addition to and are not to be construed in any way as a limitation of any rights available to the Engineer or Owner which are otherwise imposed by any laws or regulations or other provisions within the Contract Documents.

The Contractor shall abide by laws set forth in the Davis-Bacon Act of 1931 which states that all laborers and mechanics employed by recipients, the recipient's contractors, or subcontractors on this project shall be paid wages at rates no less than those prevailing on projects of a character similar in the locality as determined by the Secretary of Labor in accordance with Subchapter IV of Chapter 31 of Title 40 United States Code. Additionally, with respect to the labor standards specified in this section, the Secretary of Labor shall have the authority and functions set forth in Reorganization Plan Number 14 of 1950 (64 Stat. 1267; 5 U.S.C. App.) and The Copeland Act of Title 40 (40 U.S.C. § 3145). Prevailing Wage Determination Schedules, as determined by the United States Department of Labor, are provided in the Appendix. Prevailing Wage Determination Schedules are subject to modification by the United States Department of Labor. The Contractor is responsible for utilizing the most current Prevailing Wage Determination Schedule. These documents can be downloaded from the following link: http://www.wdol.gov/dba.aspx#3. Modifications to Prevailing Wage Determination Schedules shall be effective if received (or posted) no less than

10 days prior to bid opening.

GP-4 INSURANCE AND BONDS

A. Minimum Scope and Limits of Insurance

The Contractor shall purchase and maintain without interruption for the duration of the contract insurance against claims for injuries to persons or damages to property which may arise from or in connection with the performance of the Work hereunder by the Contractor, its agents, representatives, employees or subcontractors. The duration of the contract shall be from the inception of the contract until the date of final payment.

1) Worker's Compensation & Employer's Liability

Worker's Compensation insurance shall be in compliance with the Worker's Compensation law of the State of Louisiana. Employers Liability is included with a minimum limit of $500,000 per accident/per disease/per employee. If Work is to be performed over water and involves maritime exposure, applicable LHWCA, Jones Act or other maritime law coverage shall be included and the Employers Liability limit increased to a minimum of $1,000,000.

A.M. Best's insurance company rating requirement may be waived for Worker's compensation coverage only.

2) Commercial General Liability

Commercial General Liability insurance, including Personal and Advertising Injury Liability and Products and Completed Operations Liability, shall have a minimum limit per occurrence based on the project value. The Insurance Services Office (ISO) Commercial General Liability occurrence coverage form CG 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. Claims-made form is unacceptable.

The aggregate loss limit must apply to each project. ISO form CG 25 03 (current form approved for use in Louisiana), or equivalent, shall also be submitted. The State project number, including part number, and project name shall be included on this endorsement.

COMBINED SINGLE LIMIT (CSL) PER OCCURRENCE

The required minimum combined single limit amount of insurance shall be as provided below:

| Initial Contract Amount | Minimum Insurance |
|---|---|
| Up to $1,000,000 | $1,000,000 |
| From $1,000,001 to $2,000,000 | $2,000,000 |
| Over $2,000,000 | $5,000,000 |

3) Automobile and Watercraft Liability

Automobile Liability Insurance and Watercraft Liability Insurance shall have a minimum combined single limit per occurrence of $1,000,000. ISO form number CA 00 01 (current form approved for use in Louisiana), or equivalent, is to be used in the policy. This insurance shall include third-party bodily injury and property damage liability for owned, hired and non- owned automobiles and/or watercraft. If any non-licensed motor vehicles and/or watercraft are engaged in operations within the terms of the contract on the site of the work to be performed thereunder, such insurance shall cover the use of any such vehicles.

NOTE: If the Contractor does not own automobiles and/or watercraft, and such vehicles are utilized in the execution of the contract, then hired and non-owned coverage is acceptable. If automobiles and/or watercraft are not utilized in the execution of the contract, then automobile and/or watercraft coverage is not required.

4) Excess Umbrella

Excess Umbrella Insurance may be used to meet the minimum requirements for General Liability, Automobile Liability, and Watercraft Liability only.

5) Pollution Liability (required when asbestos or other hazardous material abatement is included in the contract)

Pollution Liability insurance, including gradual release as well as sudden and accidental shall have a minimum limit of not less than $1,000,000 per claim. A claims-made form will be acceptable. A policy period inception date of no later than the first day of anticipated Work under this contract and an expiration date of no earlier than 30 days after anticipated completion of all Work under the contract shall be provided. There shall be an extended reporting period of at least 24 months, with full reinstatement of limits, from the expiration date of the policy. The policy shall not be cancelled for any reason, except non-payment of premium.

6) Builders Risk Coverage

Contractor shall procure at its expense a Builder's Risk Insurance policy covering the building and other constructions to be constructed under the Contract with coverage for the full value of the building and other constructions at the time of completion, naming the Owner and Orleans Levee District as additional insured.

7) Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and accepted by the Owner. The Contractor shall be responsible for all deductibles and self-insured retentions.

B. Other Insurance Provisions

1) The policies are to contain, or be endorsed to contain, the following provisions:

i. Worker's Compensation and Employers Liability Coverage

ii. The insurer shall agree to waive all rights of subrogation against the Owner and the Orleans Levee District, their commissioners, officers, agents, and employees for losses arising from Work performed by the Contractor for the Owner.

2) General Liability Coverage

i. The Owner and the Orleans Levee District, and their commissioners, officers, agents, and employees are to be added as additional insureds as respects liability arising out of activities performed by or on behalf of the Contractor; products and completed operations of the Contractor, premises owned, occupied or used by the Contractor. ISO Form CG 20 10 (current form approved for use in Louisiana), or equivalent, is to be used;

ii. The Contractor's insurance shall be primary as respects the Owner and the Orleans Levee District, and their commissioners, officers, agents, and employees. The coverage shall contain no special limitations on the scope of protection afforded to the Owner and the Orleans Levee District, and their commissioners, officers, agents, and employees. Any insurance or self-insurance maintained by the Owner shall be excess and non-contributory of the Contractor's insurance;

iii. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought, except with respect to the policy limits.

3) All Coverages

i. Coverage shall not be canceled, suspended, or voided by either party (the Contractor or the insurer) or reduced in coverage or in limits except after 30 days written notice has been given to the Owner. Ten-day written notice of cancellation is acceptable for non-payment of premium. Notifications shall comply with the standard cancellation provisions in the Contractor's policy;

ii. Neither the acceptance of the completed Work nor the payment thereof shall release the Contractor from the obligations of the insurance requirements or indemnification agreement;

iii. The insurance companies issuing the policies shall have no recourse against the Owner for payment of premiums or for assessments under any form of the policies;

iv. Any failure of the Contractor to comply with reporting provisions of the policy shall not affect coverage provided to the Owner, its officers, agents, employees and volunteers.

4) Acceptability of Insurers

All required insurance shall be provided by a company or companies lawfully authorized to do business in the jurisdiction in which the Project is located. Insurance shall be placed with insurers with an A.M. Best's rating of A-:VI or higher. This rating requirement may be waived for Worker's compensation coverage only.

If at any time an insurer issuing any such policy does not meet the minimum A.M. Best rating, the Contractor shall obtain a policy with an insurer that meets the A.M. Best rating and shall submit another certificate of insurance as required in the contract.

C. Verification of Coverage

Contractor shall furnish the Owner with Certificates of Insurance reflecting proof of required coverage. The Certificates for each insurance policy are to be signed by a person authorized by that insurer to bind coverage on its behalf. The Certificates are to be received and approved by the Owner before Work commences and upon any contract renewal thereafter. The Certificate Holder must be listed as follows:

Lakefront Management Authority (LMA)
6001 Stars and Stripes Blvd, Suite 219
New Orleans, LA 70126
Attn: N.O. Lakefront Airport Williams Taylor Hangar Roof Replacement

In addition to the Certificates, Contractor shall submit the declarations page and the cancellation provision endorsement for each insurance policy. The Owner reserves the right to request complete certified copies of all required insurance policies at any time.

Upon failure of the Contractor to furnish, deliver and maintain such insurance as above provided, this contract, at the election of the Owner, may be suspended, discontinued or terminated. Failure of the Contractor to purchase and/or maintain any required insurance shall not relieve the Contractor from any liability or indemnification under the contract.

If the Contractor does not meet the insurance requirements at policy renewal, at the option of the Owner, payment to the Contractor may be withheld until the requirements have been met, OR the Owner may pay the renewal premium and withhold such payment from any monies due the Contractor, OR the contract may be suspended or terminated for cause.

D. Subcontractors

Contractor shall include all subcontractors as insureds under its policies OR shall be responsible for verifying and maintaining the certificates provided by each subcontractor. Subcontractors shall be subject to all of the requirements stated herein. The Owner reserves the right to request copies of subcontractor's certificates at any time.

If Contractor does not verify subcontractors" insurance as described above, Owner has the right to withhold payments to the Contractor until the requirements have been met.

E. Worker's Compensation Indemnity

In the event Contractor is not required to provide or elects not to provide Worker's compensation coverage, the parties hereby agree the Contractor, its Owners, agents and employees will have no cause of action against, and will not assert a claim against, the Owner, its agents and employees as an employer, whether pursuant to the Louisiana Worker's Compensation Act or otherwise, under any circumstance. The parties also hereby agree that the Owner, its agents and employees shall in no circumstance be, or considered as, the employer or statutory employer of Contractor, its Owners, agents and employees. The parties further agree that Contractor is a wholly independent Contractor and is exclusively responsible for its employees, Owners, and agents. Contractor hereby agrees to protect, defend, indemnify and hold the Owner, agents and employees harmless from any such assertion or claim that may arise from the performance of this contract.

F. Indemnification/Hold Harmless Agreement

The Contractor shall indemnify and save harmless the Owner and the Orleans Levee District and their commissioners, officers, employees, or agents against any and all claims, losses, liabilities, demands, suits, causes of action, damages, and judgments of sums of money to any person for loss of life or injury or damage to property growing out of, resulting from, or by reason of, any negligent act or omission, operation or work of the Contractor, its agents, servants, or employees, while engaged upon or in connection with the Services required or performed by the Contractor under this contract. The obligation of the Contractor to defend the Owner and the Orleans Levee District shall arise upon notice of any such claim to Owner or the Orleans Levee District. The obligations under this provision of this Contract shall survive the expiration or earlier termination of this Contract.

Contractor agrees to investigate, handle, respond to, provide defense for and defend any such claims, demands, suits or causes of action at its sole expense and agrees to bear all other costs and expenses related thereto, even if the claims, demands, suits, or causes of action are groundless, false or fraudulent.

GP-5 NOTICE TO PROCEED AND CONTRACT TIME

The Contractor shall begin the Contract Time upon receipt of the Notice to Proceed and start the Work within thirty (30) calendar days after receipt of the Notice to Proceed from the Owner. The Work shall be conducted using sufficient labor, materials, and equipment as necessary to ensure completion within the Contract Time. The Contract Time for completion of the Base Bid for the Work is provided in the Instructions to Bidders, unless an extension is granted to the Contract Time as specified in GP-45. If the Bid contains an Alternate Bid(s),

and the Alternate Bid(s) is awarded and included in the Contract, the Contract Time associated with the Alternate Bid(s) will be as provided in the Special Provisions.

GP-6 WORK PLAN

The Contractor shall develop a written Work Plan which accounts for all of the construction activities required by the Contract Documents. The Work Plan shall include a list of the individual construction tasks to be completed and the estimated dates for beginning and completing the tasks. It shall also include all other items which are applicable to completing the Work such as, but not limited to, the following:

a. Typical report form for the Bi-Weekly Progress Meeting;

b. Typical form for Daily Progress Report;

c. Hurricane and Severe Storm Plan;

d. Site-specific Health and Safety Plan;

e. The delivery method and source(s) of all construction materials (company or producer name, mailing and physical address, phone number, and name of contact person).

f. The personnel, material, subcontractors, fabricators, suppliers, types of equipment, and equipment staging areas the Contractor proposes to use for construction;

g. Shop drawings, test results, and sample submittals;

h. Survey layout and stakeout;

i. All supplemental items specified in the Special Provisions.

The Work Plan shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall review the Work Plan and have the Contractor make any necessary revisions prior to acceptance of the plan.

GP-7 PROGRESS SCHEDULE

The Contractor shall develop a written Progress Schedule which provides for an orderly progression of the Work, submittals, tests, and deliveries in order to complete the Work within the specified Milestones and Contract Time. All of the items listed in the Work Plan shall be integrated into the Progress Schedule. The format of the schedule shall be composed using Microsoft Project®, or any other software deemed acceptable by the Engineer. It shall be updated weekly by the Contractor, at a minimum. The Progress Schedule shall also include, but not be limited to the following:

a. All of the elements in the Work Plan, including updates;

b. A work order issued from Louisiana One Call ordering all their subscribers in the project area to mark their utilities;

c. A telephone log verifying that all property owners and utilities have been contacted. This log should list the time, date, and names of the personnel representing the property owners, utilities, and Contractor;

The following table defines the monthly anticipated adverse weather days that are expected to occur during the Contract Time and will constitute the baseline monthly weather time for evaluations. The schedule is based upon National Oceanic and Atmospheric Administration (NOAA) or similar data for the regional geographic area.

| Monthly Anticipated Adverse Weather Calendar Days | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Jan. | Feb. | Mar. | Apr. | May | Jun. | Jul. | Aug. | Sep. | Oct. | Nov. | Dec. |
| 13 | 8 | 9 | 5 | 6 | 9 | 9 | 8 | 7 | 3 | 6 | 11 |

The Progress schedule must reflect these anticipated adverse weather delays on all-weather dependent activities. Adverse weather days must prevent Work for fifty percent (50%) or more of the work day and delay work critical to the timely completion of the project. The number of actual adverse weather days shall be calculated chronologically from the first to the last day of each month.

The Progress Schedule shall be submitted to the Engineer prior to the Pre-Construction Conference by the date provided in the Special Provisions. The Engineer shall perform a review and have the Contractor make necessary any necessary revisions prior to acceptance of the schedule. Acceptance will not impose responsibility on the Owner or Engineer for the sequencing, scheduling, or progression of the Work. The Contractor is fully responsible for progression of the Work in order to maintain the compliance with the Progress Schedule.

GP-8 DAILY PROGRESS REPORTS

The Contractor shall record the following daily information on Daily Progress Reports:

a. Date and signature of the author of the report;

b. Dollar amount of all bid items that are fabricated, installed, backfilled, pumped, constructed, damaged, replaced, etc. The amount of material shall be expressed in the units stated in the bid;

c. Field notes of all surveys;

d. Notes on all inspections;

e. Details of Health and Safety meetings;

f. A brief description of any Change Orders, Field Orders, Claims, Clarifications, or Amendments;

g. Weather conditions (adverse weather day, wind speed and direction, temperature, wave height, precipitation, etc.);

h. The amount of time lost to severe weather or personnel injury, etc;

i. Notes regarding compliance with the Progress Schedule;

j. Visitor log including Name, organization affiliation, contact number and email.

The daily progress reports shall be submitted to the Engineer at the Bi-Weekly Progress Meetings specified in GP-13 in both hard copy and digital format (Adobe Acrobat® Format, or approved equal). The typical form for Daily Progress Reports shall be developed by the Contractor and incorporated into the Work Plan.

## GP-9 HURRICANE AND SEVERE STORM PLAN

### 11.1 Hurricane and Severe Storm Plan

Hurricane season extends from 1 June to 30 November. The Contractor shall develop and maintain a written Hurricane and Severe Storm Plan. The Plan shall include, but not be limited to, the following:

a. What type of actions will be taken before storm strikes at the Project Site. The plan should specify what weather conditions will require shutdown of the Work and removal of equipment, personnel, etc.

b. Notes from continuous monitoring of NOAA marine weather broadcasts and other local commercial weather forecasts.

c. Equipment list with details on their ability to handle adverse weather. The time each phase of the plan will be put in effect. The time shall be the number of hours remaining for the storm to reach the worksite if it continues at the predicted speed and direction.

d. The estimated time necessary to secure and evacuate the site including any emergency flood protection.

e. Methods which will be used to secure equipment left onsite during adverse weather conditions.

f. Evacuation or immediate reaction plans to be taken by personnel for sudden storm occurrences.

g. Communications protocol with local law enforcement and fire and rescue agencies.

The Contractor shall incorporate the Hurricane and Severe Storm Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

## GP-10 HEALTH AND SAFETY PLAN AND INSPECTIONS

The Contractor shall develop and maintain a written Health and Safety Plan which allows the Work to be performed in compliance with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the safety of personnel or property. This includes maintaining compliance with the Code of Federal Regulations, Title

29, Occupational Safety and Health Administration (OSHA) and all applicable Health and Safety Provisions of the State of Louisiana.

The Contractor shall institute a daily inspection program to assure that the requirements of the Health and Safety Plan are being fulfilled. Inspections shall include the nature of deficiencies observed, corrective action taken or to be taken, location of inspection, date, and signature of the person responsible for its contents. The results of the inspections shall be recorded on Daily Progress Reports and kept at the Project Site during the Work.

The Contractor shall incorporate the Health and Safety Plan into the Work Plan. The Owner and Engineer are not responsible for the adequacy of this plan.

GP-11 PROGRESS MEETINGS AND REPORTS

The Engineer shall schedule meetings to review the progress of the Work, coordinate future efforts, discuss compliance with the Progress Schedule and resolve miscellaneous problems. The Engineer or Resident Project Representative, Contractor, and all Subcontractors actively working at the Project Site shall attend each meeting. Representatives of suppliers, manufacturers, and other Subcontractors may also attend at the discretion of the Contractor. The Contractor shall record the details of each meeting in a Progress Report. The format of this report shall be developed by the Contractor, approved by the Engineer, and included in the Work Plan. The progress meetings and reports shall be scheduled according to the Special Provisions.

GP-12 PRE-CONSTRUCTION CONFERENCE

A Pre-Construction Conference shall be held by the Contractor, Owner, Engineer, local stakeholders, and other appropriate personnel prior to starting construction on a date specified by the owner following the Award of the contract. This conference shall serve to establish a mutual understanding of the Work to be performed, the elements of the Progress Schedule and Work Plan, expectations for bi-weekly progress meetings, the Plans and Specifications, processing Applications for Payment, and any other items of concern. If any subcontractors are not present, another pre-construction conference will be required.

GP-13 CONTRACT INTENT

The Bid Documents are complementary; what is called for by one is as binding as if called for by all. Clarifications and interpretations or notifications of minor variations and deviations of the Contract Documents will be issued by Engineer as provided in these Specifications. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Bid Documents or from prevailing custom or trade usage as being required to produce the intended result will be provided at no additional cost to the Owner.

GP-14 ENGINEER AND AUTHORITY OF ENGINEER

The Engineer will be the designated representative of the Owner, the initial interpreter of the Contract Documents and the judge over acceptability of all the Work. Claims, disputes, and other matters relating to the acceptability of the Work, performance by the Contractor or the interpretation of the requirements of the Contract Documents must be submitted to the Engineer in writing. Upon written request from the Contractor, the Engineer shall issue written

clarifications or interpretations which are consistent with the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on the Owner and the Contractor. Either the Owner or the Contractor may make a Claim if a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times.

The Engineer has the authority to suspend the Work in whole or in part due to failure of the Contractor to correct conditions unsafe for workmen or the general public, carry out provisions of the Contract, perform conformance work, or to carry out orders. The Engineer shall submit a written order to the Contractor for work which must be suspended or resumed. Nothing in this provision shall be construed as establishing responsibility on the part of the Engineer for safety which is the responsibility of the Contractor.

The Engineer or Resident Project Representative shall keep a daily record of weather and flood conditions and may suspend the Work as deemed necessary due to periods of unsuitable weather, conditions considered unsuitable for execution of the Work, or for any other condition or reason deemed to be in the public interest.

GP-15 CONFORMITY WITH PLANS AND SPECIFICATIONS

All work and materials involved with the Work shall conform with the lines, grades, cross sections, dimensions, and other requirements shown on the Plans or indicated in these Specifications unless otherwise approved by the Engineer.

GP-16 CLARIFICATIONS AND AMENDMENTS TO CONTRACT DOCUMENTS

The Contract Documents may be clarified or amended by the Engineer to account for additions, deletions, and revisions to the Work after the Effective Date of the Contract. The clarifications and amendments shall be addressed by either a Change Order or a written clarification by the Engineer. The Contractor shall not proceed with the Work until the Change Order or clarification has been issued by the Engineer. The Contractor shall not be liable to the Owner or Engineer for failure to report any such discrepancy unless the Contractor had reasonable knowledge.

The Contractor may request a clarification or amendment for the following:

a. Any conflict, error, ambiguity, or discrepancy within the Contract Documents; or

b. Any conflict, error, ambiguity, or discrepancy between the Bid Documents and the provision of any Law or Regulation applicable to the performance of the Bid; or

c. Any standard, specification, manual, or code (whether or not specifically incorporated by reference in the Bid Documents); or

d. Instructions by a supplier.

The written clarification shall be filled out appropriately by the Contractor and submitted to the Engineer. The Engineer shall clarify the issue in writing on either the Field Order or a Change Order and submit it to the Contractor.

GP-17 SUBCONTRACTS

The Contractor shall provide the names of all Subcontractors to the Engineer in writing before awarding any Subcontracts. The Contractor shall be responsible for the coordination of the trades and Subcontractors engaged in the Work. The Contractor is fully responsible to the Owner for the acts and omissions of all the Subcontractors. The Owner and Engineer will not settle any differences between the Contractor and Subcontractors or between Subcontractors. The Contractor shall have appropriate provisions in all Subcontracts to bind Subcontractors to the Contractor by the terms of the General Provisions and other Contract Documents, as applicable to the Work of Subcontractors. The provisions should provide the Contractor the same power regarding termination of Subcontracts that the Owner may exercise over the Contractor under any provisions of the Contract Documents.

GP-18 WORKERS, METHODS, AND EQUIPMENT

The Contractor shall provide competent, qualified, and trained personnel to perform the Work. The Contractor shall not employ any person found objectionable by the Engineer. Any person employed by the Contractor or any Subcontractor who, in the opinion of the Engineer, does not perform the Work in a proper, skillful, and orderly manner shall be immediately removed upon receiving a written order by the Engineer. The Engineer may also suspend the Work until the Contractor removes the employee or provides a suitable replacement. Such an employee shall not be re-employed in any portion of the Work without written approval from the Engineer.

The on-site superintendent for the Contractor shall be competent, English-speaking, and qualified to receive orders, supervise, and coordinate all Work for the Contractor and any Subcontractors. The qualifications of the superintendent must be established and approved by the Engineer prior to commencement of the Work. The superintendent shall be furnished by the Contractor regardless of how much Work may be sublet. In the performance of the Work under this Contract, the Contractor shall conduct operations to avoid interference with any other Contractors.

All equipment, products, and material incorporated into the Work shall be as specified, or if not specified, shall be new, of good quality, and protected, assembled, used, connected, applied, cleaned, and conditioned in accordance with the manufacturer's instructions, except as otherwise may be provided in the Bid Documents. All equipment shall be of sufficient size and mechanical condition to meet the requirements of the Work and produce a satisfactory quality of work. Equipment shall not damage adjacent property throughout the performance of the Work. The Plant and Equipment Schedule should be completed by the Contractor.

The Contractor shall be solely responsible for the means, methods, techniques, sequences, and procedures used to complete the Work in conformance with the Contract Documents.

The Contractor shall obtain permission from the Engineer if a method or type of equipment other than specified in the Contract is desired. The request shall be in writing and shall include a full description of the methods, equipment proposed, and reasons for the modification. A proposed item of material or equipment may be considered by the Engineer to be functionally equal to an item specified in the Contract if:

a. It is at least equal in quality, durability, appearance, strength, and design characteristics;

b. There is no increase in any cost including capital, installation, or operating to the Owner;

c. The proposed item will conform substantially, even with deviations, to the detailed requirements of the item named in the Bid Documents.

If, after trial use of the substituted methods or equipment, the Engineer determines that the Work produced does not meet Contract requirements, the Contractor shall discontinue use of the substituted methods or equipment and shall complete the Work with the specified methods and equipment. The Contractor shall remove the deficient Work and replace it with Work of specified quality or take other corrective action as directed. No change will be made in basis of payment for construction items involved or in Contract Time as a result of authorizing a change in methods or equipment.

GP-19 ACCIDENT PREVENTION, INVESTIGATIONS, AND REPORTING

The Contractor shall be responsible to develop and maintain all safeguards and safety precautions necessary to prevent damage, injury, or loss throughout the performance of the Work. All accidents at the Project Site shall be investigated by the immediate supervisor of employee(s) involved and reported to the Engineer or Resident Project Representative within one (1) working day. A complete and accurate written report of the accident including estimated lost time days shall be submitted to the Engineer within four (4) calendar days. A follow- up report shall be submitted to the Engineer if the estimated lost time days differ from the actual lost time days.

GP-20 PRESERVATION AND RESTORATION OF PROPERTY, MONUMENTS, ETC.

The Contractor shall comply with all applicable laws, ordinances, rules, and regulations of any government agency having jurisdiction over the preservation and protection of public and private property. The Contractor shall install and maintain suitable safeguards and safety precautions during the Work as necessary to prevent damage, injury, or loss to property. This responsibility shall remain with the Contractor until the Work has been completed and accepted. Any damage, injury, or loss to property which is caused by the Contractor or Subcontractors shall be repaired or replaced at the expense of the Contractor.

The Contractor shall protect all land monuments, State and United States bench marks, geodetic and geological survey monuments, and property markers from disturbance or damage until an authorized agent has witnessed or otherwise referenced their location. The Contractor shall also provide protection for all public and private property including trees, utilities, pipes, conduits, structures, etc. These items shall not be removed unless directed by the Engineer. The Contractor shall be responsible to completely repair all damages to public or private property due to any act, omission, neglect, or misconduct in the execution of the Work unless it is due to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, public enemies, or governmental authorities. The damage must be repaired at the expense of the Contractor before final acceptance of the Work can be granted by the Engineer. If the Contractor fails to repair the damage within forty-eight (48) hours, the Owner may independently proceed with the repairs at the expense of the Contractor by deducting the cost from the Contract. If the Contractor cannot provide for the cost of repairs, the Surety of the Contractor shall be held until all damages, suits, or claims have been settled

GP-21 PROTECTION OF THE WORK, MATERIALS, AND EQUIPMENT

It shall be the responsibility of the Contractor to protect the Work, materials, and equipment from damages or delays due to inflows, tidal rise, and storm water runoff which may occur at the Project Site. The Owner shall not be held liable or responsible for these types of delays or damages.

GP-22 LAND RIGHTS

The Owner has care, custody, control, or sufficient property interests therein for construction and operation, maintenance, repair, rehabilitation, and replacement of this alteration.

GP-23 UTILITIES

The Owner has been granted all of the temporary easements, servitudes, and right-of-way agreements from known public and private utilities in order to perform the Work. The utilities include, but are not limited to telephone, telegraph, power poles or lines, water or fire hydrants, water or gas mains and pipelines, sewers, conduits, and other accessories or appurtenances of a similar nature which are fixed or controlled by a city, public utility company or corporation.

The Contractor shall conduct the Work in such a manner as to cooperate and minimize inconveniences with utilities. Prior to commencement of the Work, the Contractor is responsible to notify all of the utilities and abide by stipulations required by the utility company(s). The Contractor shall also call Louisiana One Call at 1-800-272-3020 a minimum of five (5) working days prior to construction to locate existing utilities at the Project Site.

Any damage to utilities that is caused by the Contractor within the Project Site shall be repaired at the expense of the Contractor. The Owner will not be responsible for any delay or damage incurred by the Contractor due to working around or joining the Work to utilities left in place or for making adjustments.

Any unidentified pipes or structures which may be discovered within the limits of the Project Site shall not be disturbed and shall be reported to the Engineer as soon as possible. Construction or excavation shall not be performed around unidentified utilities without prior approval from the Engineer.

GP-24 PERMITS

Federal and State permits that are required to perform the Work, such as the Department of the Army Permit and Coastal Use Permit have been secured by the Owner. Permit conditions affecting the construction processes have been included in these Specifications. Copies of these permits will be provided to the Contractor at the pre-construction conference. These permits will not relieve the responsibility of the Contractor from obtaining any additional permits which may be needed to complete the Work. Copies of any special permits that are obtained by the Contractor must be submitted to the Owner. The Contractor shall conform to the requirements therein and display copies of the permits in a public setting at the Project Site at all times.

GP-25 PROJECT SITE CLEAN-UP

The Contractor shall keep the Project Site free from accumulations of waste material or trash

at all times. All trash and waste materials shall be removed by the Contractor and disposed off-site in an approved waste disposal facility. In addition, all equipment, tools, and non-conforming work shall also be removed prior to the Work being accepted. No materials shall be placed outside of the Project Site.

GP-26 OWNER INSPECTION

The Owner and Resident Project Representative shall have the right to perform reasonable inspections and testing of the Work at the Project Site. Access shall be granted to the entire Project Site including all materials intended for use in the Work. The Contractor shall allow reasonable time for these inspections and tests to be performed. The inspections shall not relieve the Contractor from any obligation in accordance with the requirements of the Contract.

The Owner shall notify the Contractor prior to all tests, inspections, and approvals of the Work which are to be conducted at the Project Site. The Owner shall also provide the Contractor with the written results of all inspections and tests. Inspections, tests, or Payments made by the Owner shall not constitute acceptance of non-conforming Work or prejudice the Owner's rights under the Contract.

GP-27 DUTIES OF RESIDENT PROJECT REPRESENTATIVE

A Resident Project Representative shall be assigned by the Engineer to the Project Site to observe the Contractor and monitor the progress and manner in which the Work is being performed. The Resident Project Representative will also report to the Engineer and Contractor whenever materials or Work fail to comply with the Contract. The Resident Project Representative is authorized to reject any materials or suspend work which does not comply with the Contract until the issue is resolved by the Engineer.

However, the Resident Project Representative is not authorized to revoke, alter, enlarge, relax, or release any requirements of the Contract, or to approve or accept any portion of the Work, or to issue instructions contrary to the Plans and Specifications. The Resident Project Representative shall not manage or perform duties for the Contractor.

GP-28 CONSTRUCTION STAKES, LINES, AND GRADES

The Engineer shall direct the Contractor to all control points necessary for setting stakes and establishing lines and grades as shown on the Plans. The Contractor shall be responsible for laying out all of the Work. All layouts shall be witnessed and verified by the Engineer or Resident Project Representative prior to beginning the Work. The Contractor shall be responsible for proper execution of the Work according to the layouts after receiving verification from the Engineer.

The Contractor shall be responsible for furnishing and maintaining stakes such that the Work can be verified for acceptance. The Engineer may suspend the Work at any time if it cannot be adequately verified due to the number, quality, or condition of the stakes.

GP-29 CONTRACTOR'S RESPONSIBILITY FOR WORK

The Contractor shall execute all items covered by the Contract, and shall furnish, unless

otherwise definitely provided in the Contract, all materials, implements, machinery, equipment, tools, supplies, transportation, and labor necessary to complete the Work. The Contractor shall pay constant attention to the progress of the Work and shall cooperate with the Engineer in every way possible. The Contractor shall maintain a complete copy of the Contract at all times, including the Plans, Specifications, and any authorized modifications.

GP-30 ENVIRONMENTAL PROTECTION

The Contractor shall comply with and abide by all federal, state, and local laws and regulations controlling pollution of the environment, including air, water, and noise. The Contractor shall take precautions to prevent pollution of waters and wetlands with fuels, oils, bituminous materials, chemicals, sewage, or other harmful materials and contaminants, and to prevent pollution of the atmosphere from particulate and gaseous matter, in accordance with all terms and conditions of federal, state, and local air and water pollution control laws and programs and their rules and regulations, including the federal Clean Air Act and the federal Clean Water Act.

The Contractor shall adhere to the provisions which require compliance with all standards, orders, or requirements contained under Section 306 of the Clean Air Act and Section 508 of the Clean Water Act, which prohibit the use under non-exempt Federal contracts, grants, or loans, of facilities included on the Environmental Protection Agency (EPA) list of Violating Facilities.

Construction operations in rivers, streams, lakes, tidal or coastal waters, reservoirs, canals, wetlands, and any other impoundments shall be restricted to areas where it is necessary to accomplish the Work and performed in accordance with any applicable federal, state, and local laws, regulations, permit requirements, and guidelines, and the Contractor shall conduct the Work in a manner that will not cause damaging concentrations of silt or pollution to water.

Contractor shall maintain and operate equipment to minimize noise, dust, and vibration near noise, dust and vibration-sensitive areas such as churches, hospitals, schools, and residential areas, and assure that any activities conducted near such areas are not unduly disruptive. Contractor shall maintain all equipment with properly functioning mufflers.

The Contractor shall be responsible for determining and utilizing any erosion and pollution control features or methods that may be necessary to comply with all federal, state, and local laws and regulations.

When any item having apparent historical or archeological interest is discovered in the course of any construction activities, then no work will proceed in the area containing these cultural resources until a CEMVN archaeologist has been notified and final coordination with the State Historic Preservation Officer and any federally-recognized Tribes has been completed. The Contractor will leave the archeological find undisturbed and shall immediately report the find to the Authority so that the proper authorities may be notified.

GP-31 SANITARY PROVISION

The Contractor shall provide and maintain sanitary accommodations for use by all employees and Subcontractors. Facilities shall comply with the requirements of the Louisiana State Board of Health and Hospitals and other authorities having jurisdiction. Committing public nuisance on the Project Site is prohibited.

GP-32 PAYMENT OF TAXES

The Contractor shall be solely responsible for all taxes and duties that maybe levied under existing State, Federal, and local laws arising in connection with the Contractor's receipt of payments made pursuant to this Agreement during the completion of the Work. The Owner will presume that the amount of such taxes is included in the unit prices bid by the Contractor and will not provide additional reimbursement.

GP-33 RADIO AND TELEPHONES

The Contractor shall furnish and maintain radio and telephone equipment throughout the Contract Time which will allow communication between the Contractor and the Engineer or Resident Project Representative.

~~GP-34 NAVIGATION~~

~~All marine vessels shall comply with the following Federal Laws and Regulations:~~

~~a. The International Navigational Rules Act of 1977 (Public Law 95-75, 91 Stat. 308, or 33 U.S.C. 1601 – 1608); and~~

~~b. The Inland Navigation Rules Act of 1980 (Public Law 96-591, 94 Stat. 3415, 33 U.S.C. 2001-2038).~~

~~These rules can be found on the Internet at: http://www.navcen.uscg.gov//?pageName=navRulesContent.~~

~~All marine vessels shall display the lights and day shapes required by Part C- Lights and Shapes of the Inland Navigation Rules. The location, type, color, and size of the lights and day shape shall be in accordance with Annex I – Positioning and Technical Details of Lights and Shapes. Any vessel engaged in dredging is considered a "Vessel restricted in her ability to maneuver" and shall display all the lights and shapes required in Rule 27, "Vessel Not Under Control."~~

~~GP-35 OBSTRUCTION TO NAVIGATION~~

~~The Contractor shall minimize all obstructions to navigation in compliance with pertinent U. S. Coast Guard regulations while conducting the Work. The Contractor shall promptly move any floating equipment or marine vessels which obstruct safe passage of other marine vessels. Upon completion of the Work, the Contractor shall remove all marine vessels and other floating equipment such as temporary ranges, buoys, piles, and other marks or objects that are not permanent features of the Work.~~

~~GP-36 MARINE VESSELS AND MARINE ACTIVITIES~~

~~All marine vessels operated by the Contractor shall possess a valid United States Coast Guard (USCG) inspection certificate and current American Bureau of Shipping (ABS) Classification. All officers and crew shall possess valid USCG licenses as required by USCG regulations. These certificates, classifications, and licenses shall be posted in a public area on board each vessel.~~

~~All marine vessels not subject to USCG certification or ABS Classification shall be inspected annually by a marine surveyor accredited by the National Association of Marine Surveyors (NAMS) or the Society of Accredited Marine Surveyors (SAMS). All inspections shall be documented using an appropriate report format. At a minimum, the inspections shall evaluate the structural integrity of the vessel and comply with the National Fire Protection Association Code No. 302 Pleasure and Commercial Motor Craft. The most recent inspection report shall be posted in a public area on board each vessel.~~

GP-37 (RESERVED)

GP-38 (RESERVED)

GP-39 (RESERVED)

GP-40 RECORD KEEPING

The Contractor shall maintain orderly records of the Progress Schedule, Daily Progress Reports, Progress Meetings, correspondence, submittals, reproductions of original Contract Documents, Change Orders, Field Orders, certificates, additional drawings issued subsequent to the executed Contract, clarifications and interpretations of the Contract Documents by the Engineer, and other related documents at the Project Site until all of the Work is accepted by the Engineer.

GP-41 CERTIFICATES OF COMPLIANCE

Any certificates required for demonstrating proof of compliance of materials with specification requirements shall be executed in three (3) copies. Each certificate shall be certified by an authorized agent of the supplying company and shall contain the name and address of the Contractor, the project name and location, and the quantity and date of shipment. Copies of laboratory test reports submitted with certificates shall contain the name and address of the testing laboratory and the testing date. The Contractor shall also certify that all materials and test reports conform to the requirements of the Contract. Certification shall not be construed as relieving the Contractor from furnishing satisfactory material if the material is tested and determined to be in nonconformance.

GP-42 SUBMITTALS

The Contractor shall review all Submittals for compliance with the requirements of the Contract prior to delivery to the Engineer. Each Submittal shall contain a signed statement by the Contractor that it complies with the Contract requirements with any exceptions explicitly listed. The Contractor shall comply with these requirements for Submittals from Subcontractors, manufacturers, and suppliers.

All Submittals shall include sufficient data to demonstrate that the requirements of the Contract are met or exceeded. All submittals shall be legible and marked with the project title and clearly identify the item submitted. Each submittal package shall include an itemized list of the items submitted.

All Submittals will be reviewed within fourteen (14) days after being received by the Engineer. The Contractor shall allow the Engineer sufficient time for review, corrections, and resubmission of all Submittals prior to beginning the associated Work. The Contract Time shall not be extended based on incorrect or incomplete Submittals.

The Contractor shall maintain a submittal register for the project in accordance with the specifications. The submittal register shall show items or equipment and materials for which submittals are required by the specifications; this submittal register may not be all inclusive and additional submittals may be required. The Authority will provide the initial submittal register in electronic format. Thereafter, the Contractor shall maintain a complete list of all submittals, including completion of all data columns. Dates on which submittals are received and returned by the Authority will be included in its export file to the Contractor. The Contractor shall track all submittals.

GP-43 CLAIMS FOR EXTRA COST

The Contractor is expected to complete the Work for the Contract Price specified in the Contract Documents. If the Contractor deems additional compensation is due for work, materials, delays or other additional costs/or expenses not covered in the Contract or not ordered as extra work, the Contractor shall give the Engineer written notice thereof within fourteen (14) calendar days after the receipt of such instructions and, in any event, before commencing the work. The Contractor shall justify the claim for extra cost by providing supporting data and calculations. The Engineer shall determine whether the Contractor is entitled to be compensated for such extra cost and shall make any required adjustments of the Contract in accordance with GP-43. If no written claim is made within this fourteen (14) calendar-day period, the Contractor will be deemed to have waived any claim for extra cost for such work.

Claim for damages or delays of the Work shall not be made by the Contractor for a relocation of the construction operation or portions thereof to other locations within the geographical scope of the project, when in the opinion of the Engineer, such relocation is necessary for the most effective prosecution of the Work and may be accomplished without undue hardship.

GP-44 ALTERATION OF THE CONTRACT AND COMPENSATION

Using Change Orders, Field Orders, or Written Amendments, the Owner may order extra work or make changes by altering the details of construction, add to or deduct from the Work. The requirements and stipulations of these documents shall be binding on the Owner and Contractor throughout the remainder of the Contract. Any claim for an extension of Contract Time caused thereby shall be adjusted at the time of ordering such change.

The value of any such extra work or change shall be determined in one or more of the following ways and in the following priority:

a. By application of the unit prices in the Contract to the quantities of the items involved or subsequently agreed upon; or

b. By mutual acceptance between the Owner and Contractor of a lump sum.

If none of the above methods is agreed upon, the Contractor, provided he is so ordered by the Owner in writing, shall proceed with the Work on a "force account" basis. In such a case, the Contractor shall keep and preserve in such form as the Engineer may direct, a correct itemized account of the direct cost of labor, materials, equipment, together with vouchers bearing written certification by the Contractor. In any case, the Engineer shall certify to the amount, including an allowance of fifteen percent (15%) for jobsite and home office overhead indirect expenses and profit due to the Contractor. Where such change involves a subcontractor, an allowance of fifteen percent (15%) for overhead and profit shall be due the subcontractor and an allowance of ten percent (10%) shall be due the Contractor. Pending final determination of value, payments on account of changes shall be made on the Engineer's estimate and as approved in an executed Change Order.

If the Contractor is prevented from completing the Work according to the Contract Price due to the Owner, the Contractor may be entitled to any reasonable and necessary addition of cost as determined by the Engineer. Neither the Owner nor the Contractor shall be entitled to any damages arising from events or occurrences which are beyond their control, including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, acts of war, and other like matters. The provisions of this section exclude recovery for damages caused by the Contractor and compensation for additional professional services by either party.

GP-45 EXTENSION OF CONTRACT TIME

The Contractor is expected to complete the Work within the Contract Time specified in the Bid Documents. A legitimate increase of the Contract time may be requested by the Contractor throughout the course of the Work. This Claim must be submitted to the Engineer in writing within fourteen (14) days of the event which caused the time delay to the Contractor. If an extension of Contract Time involves an increase in Contract Price, both claims shall be submitted together. The Contractor shall justify the increase of the Contract Time in the Claim using supporting data and calculations. The Engineer may deny the claim if there is insufficient information to make a determination. The Contract Time shall be increased on a basis that is commensurate with the amount of additional or remaining Work. For example, the Contract Time can be increased where the number of actual adverse weather days exceeds the number of days estimated in the Contract.

GP-46 TIME EXTENTIONS FOR UNUSUALLY SEVERE WEATHER

This provision specifies the procedure for the determination of time extensions for unusually severe weather in accordance with GP-7 and GP-46. In order for the Owner to award a time extension under this clause, the following conditions must be satisfied:

9.1 The weather experienced at the Project Site during the Contract Time must be found to be unusually severe; that is, more severe than the adverse weather anticipation for the Project Site during any given month as listed in GP-7;

9.2 The unusually severe weather must actually cause a delay to the completion of the Project. The delay must be beyond the control and without the fault or negligence of the Contractor. Throughout the Contract, the Contractor will record on the Daily Progress Report, the actual occurrence of adverse weather and resultant impact to normal scheduled work. Actual adverse weather delay days must prevent work on critical activities for fifty percent (50%) or more of the Contractor's scheduled work day. The number of actual adverse weather delay days shall include days impacted by actual adverse weather (even if adverse weather occurred in previous month) be calculated chronologically from the first to the last day of each month and be recorded as full days. If the number of actual adverse weather delay days exceeds the number of anticipated days, the Engineer may grant an extension of Contract Time, giving full consideration for equivalent fair-weather work days, in accordance with GP-46.

GP-47 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE

47.1 TERMINATION FOR CAUSE

The Owner shall submit a written notice to the Contractor and Surety which justifies placement of the Contractor in default if:

a. The Work is not begun within the time specified in the Notice to Proceed; or

b. The Work is performed with insufficient workmen, equipment, or materials to assure prompt completion; or

c. The Contractor performs unsuitable, neglected or rejected work, refuses to remove materials; or

d. The Work is discontinued; or

e. The Work is not completed within the Contract Time or time extension; or

f. Work is not resumed within a reasonable time after receiving a notice to continue; or

g. The Contractor becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency; or

h. The Contractor allows any final judgment to stand unsatisfied for a period of ten (10) days; or

i. The Contractor makes an assignment for the benefit of creditors; or

j. The Work is not performed in an acceptable manner.

If the Contractor or Surety does not remedy all conditions cited in the written notice within two (2) days after receiving such a notice, except as provided in sub-section h. above, the Contractor will be in default and the Owner shall remove the Contractor from the Work. If the Contractor is placed into default, the Owner may obtain the necessary labor, materials, and equipment or enter into a new Contract in order to complete the Work.

If the Contractor is placed into default, all costs incurred by the Owner for completing the Work will be deducted from the payment due the Contractor, including any costs, expenses and attorney fees incurred in connection with the completion of the work, without prejudice to other remedies the Owner may have under this Contract. If the expense exceeds the sum payable under the Contract, the Contractor and Surety shall be liable to pay the Owner the difference.

47.2 TERMINATION FOR CONVENIENCE

Owner may, at any time, terminate this Contract or any portion thereof, for Owner's convenience, upon providing written notice to the Contractor. In such case, Contractor shall be paid for all work completed through the date notice was provided (less payments already received) and reasonable demobilization and restocking charges incurred and reasonable overhead and profit based upon industry standards on the work performed. In no event shall the Contractor be entitled to payment of overhead and profit on work not performed. In the event it is determined that the Contractor was wrongfully terminated for cause, pursuant to Section GP 45.1 above, such termination shall be automatically converted to a termination for convenience under and payment made as provided under this Section.

GP-48 TEMPORARY SUSPENSION OF WORK

The Engineer shall have the authority to temporarily suspend the Work in whole or in part. A Field Order shall be issued to the Contractor for any of the Work that is suspended for periods exceeding one (1) calendar day. The Field Order shall include the specific reasons and details for the suspension. The Contract Time shall not be extended if the Work is suspended due to failure by the Contractor to comply with a Field Order or with the Plans and Specifications. If the Work is suspended in the interest of the Owner, the Contractor shall make due allowances for the lost time.

GP-49 NON-CONFORMING AND UNAUTHORIZED WORK

Work not conforming to the Plans, Specifications, Field Orders, or Change Orders shall not be accepted for payment. Unacceptable or unauthorized work shall be removed and replaced in an acceptable manner at the expense of the Contractor in order to obtain final acceptance of the Work.

If the Contractor should neglect to prosecute the work properly or fail to perform any provision of this Contract, the Owner after seven (7) calendar days written notice to the Contractor, may correct such deficiencies itself or by use of other contractors without prejudice to any other remedy it may have, and may deduct the cost thereof from the payment then or thereafter due to the Contractor.

GP-50 CONTRACTOR'S RIGHT TO TERMINATE CONTRACT

The Contractor may terminate the Contract or Work and recover payment from the Owner for labor and materials if the Work is stopped through no act or fault of the Contractor for more than three (3) months. For example, such an occurrence could be caused by a court order or other public authority. In any case, the Contractor shall submit a written notice to the Engineer at the beginning of the occurrence, and a written Claim to the Owner at the end of the occurrence.

GP-51 BREACH OF CONTRACT

The Owner shall submit a written Claim to the Contractor regarding any breach of the Contract. The Contractor must provide a written response to the Owner regarding the breach of Contract within ten (10) days after the Claim. This response must provide either an admission to the Claim or a detailed denial based on relevant data and calculations. The failure of the Contractor to provide a proper response within ten (10) days shall result in justification of the Claim by default.

GP-52 NO WAIVER OF LEGAL RIGHTS

The Owner shall not be prevented from recovering costs from the Contractor, Surety, or both due to failure of the Contractor to fulfill all of the obligations under the Contract. If a waiver is provided to the Contractor for a breach of Contract by the Owner, it shall not apply to any other breach of Contract. Final acceptance of the Work shall not prevent the Owner from correcting any measurement, estimate, or certificate. The Contractor shall be liable to the Owner without prejudice to the terms of the Contract or any warranty for latent defects, fraud, or gross negligence.

GP-53 LIABILITY FOR DAMAGES AND INJURIES

To the fullest extent permitted by Laws and Regulations, the Contractor shall indemnify and hold harmless the Owner, Orleans Levee District, Engineer, and their officers, employees, representatives, and/or agents from all suits, actions, claims, costs, losses, demands, and judgments (including but not limited to fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) brought because of injuries or damage sustained by an person or property due to the operations of Contractor; due to negligence in safeguarding the Work, or use of unacceptable materials in constructing the Work,; or any negligent act, omission, or misconduct of the Contractor; or claims or amounts recovered under the Workmen-s Compensation Act or other law, ordinance, order, or decree; any money due the Contractor as considered necessary by the Owner for such purpose may be retained for use of the Owner or in case no money is due, the performance and payment bond may be held until such suits, actions, claims for injuries or damages have been settled and suitable evidence to that effect furnished to the Owner; except that money due the Contractor will not be withheld when the Contractor produces satisfactory evidence that adequate Workman's Compensation, Public Liability, and Property Damage Insurance are in effect.

The indemnification obligations of the Contractor shall not extend to the liability of the Owner, Engineer, and their affiliates arising out of the preparation or approval of the Plans, Specifications, maps, opinions, reports, surveys, or Change Orders or for the intentional acts or gross negligence of the Owner, Engineer and their officers, employees, representatives, and/or agents.

Should the Owner or Contractor suffer from any injury or damage due to an error, omission, or act of the other party or their legally liable affiliates, a written Claim shall be submitted to the other party within ten (10) days. The Claim shall provide all details regarding the injury or damage, the results of any investigations, and the action to be taken to prevent any reoccurrence.

GP-54 LIABILITY FOR LOSSES BY ACTS OF THE GOVERNMENT

The Owner shall not be liable for any loss or damage suffered by the Contractor arising out of a cessation of Work under this Contract due to any act or order of any local, state, or federal government agency. If this cessation occurs, the Contractor may request an extension of the Contract Time according to the provisions in GP-44.

GP-55 SUBSTANTIAL COMPLETION AND NOTICE OF ACCEPTANCE

Upon notice from the Contractor that it believes the project has reached substantial completion, and before final acceptance, the Engineer will make an inspection of the Work. "Substantial Completion" is defined as the date on which the Work is complete in accordance with the Contract Documents in order that the Owner can occupy and use the project for its intended use. The date of Substantial Completion shall be specified in the Notice of Acceptance.

If the Owner or its representative determines the Project is substantially complete, the Owner shall issue a Notice of Acceptance identifying the date the Project reached Substantial Completion and attach a punch list, if applicable, identifying the remaining items that must be completed before final payment. The Contractor shall then file the executed Notice of Acceptance with the Clerk of Court in the Parish where the work is performed and shall forward one copy of the recorded acceptance to the Owner and Engineer.

If the inspection discloses any work as being unsatisfactory or incomplete and such work generates a formal punch list, the Engineer will give the Contractor instructions for correction of same, and the Contractor shall immediately comply with such instructions. Upon satisfactory completion of the corrections, when a "Punch List" is generated, the Engineer shall prepare a "Recommendation of Acceptance" incorporating the punch list and submit to the Owner. Upon approval of the Recommendation of Acceptance, the Owner may issue a Notice of Acceptance of the Contract which shall establish the date of Substantial Completion.

In accordance with Louisiana Revised Statutes Title 38, Section 2248(B), any punch list generated during this project shall include the cost estimates for the particular items of work based on the mobilization, labor, material, and equipment costs of each punch list item. The Owner shall retain his working papers used to determine the punch list items cost estimates should the matter be disputed later. The Owner shall not withhold from payment more than the value of the punch list. Punch list items completed shall be paid upon expiration of the forty-five day retainage period provided for under the Louisiana Public Works Act and delivery of a clear Lien & Privilege Certificate. La.Rev.Stat. 38:2248, et seq.

If the dollar value of the punch list exceeds the amount of funds, less retainage amount, in the remaining balance of the Contract, the Project shall not be accepted as Substantially Complete. If the funds remaining are less than required to complete the punch list work, the Contractor shall pay the difference. The provisions listed above shall not be subject to waiver.

Warranties required by the Contract Documents shall commence on the date of Substantial Completion of the Work/project as provided in the Notice of Acceptance, unless otherwise agreed to in writing by the Owner and Contractor. In the instance where the Owner has accepted the Work/project as substantially complete and issued a Notice of Acceptance, and the Contractor must remain on the premises to complete the "Punch List" or for whatever

reason, the Contractor shall maintain Commercial General Liability insurance, Auto Liability insurance and Worker's Compensation insurance as set forth herein until the expiration of the forty-five (45) day lien period or upon the completion of the work/project, whichever is later. Builder's Risk insurance, if applicable, may be cancelled only with the written permission of the Owner or the Owner's representative at Substantial Completion.

If the punch list is not completed within forty-five (45) days, through no fault of Owner or Engineer, the Owner may, but is not required, to place the Contractor in default. Thereafter, the Owner shall notify the Surety. If the Surety has not completed the punch list within forty-five days of receipt of notification, the Owner may, but is not required to, complete the remaining punch list items. Any costs incurred shall be paid for first out of any remaining Contract funds. If the costs incurred exceed the remaining Contract funds, the Contractor and its Surety shall be liable for such costs.

Upon completion of the punch list, Contractor shall request Final Inspection.

GP-56 FINAL INSPECTION AND ACCEPTANCE

Whenever the work provided for, or contemplated by the contract, have been satisfactorily completed, all punch list items completed and the final cleaning up is performed, the Engineer shall be notified in writing that said work is completed and ready for final inspection. The Engineer shall, unless otherwise provided, make the final inspection within a reasonable length of time after the receipt of such notification.

If all construction provided for in the contract is found completed to the Engineer's satisfaction that inspection shall constitute the final inspection and the Engineer will make recommendation to the Owner for final acceptance and notify the Contractor in writing of this recommendation of acceptance.

GP-57 AS-BUILT DRAWINGS

The Contractor shall submit all originals and copies of the As-Built Drawings to the Engineer for review and acceptance in accordance with the Special Provisions. The As-Built Drawings shall provide complete data for quantities, dimensions, specified performance and design criteria, and similar items which clearly represent the services, materials, and equipment the Contractor has provided. All revision sheets shall be clearly stamped with the words "As-Built".

GP-58 COMPLETION OF CONTRACT

Notwithstanding any other provision of this Contract and all applicable and necessary time delays under Louisiana law, completion of the Contract requires all of the Work to be complete, inspected by the Engineer, accepted by the Owner as recommended by the Engineer, and after final payment is made. After the Contract is complete, the Contractor will then be released from further obligation except as set forth in the Contract Bond and Contractor's Guarantee.

GP-59 CONTRACTOR'S GUARANTEE

The Contractor is obligated to provide a written guarantee to the Owner that all of the Work conforms to the Contract Documents.

a. The guarantee shall exclude defects or damage caused by:

1. Abuse or improper modification, maintenance, or operation by anyone other than the Contractor; or

2. Wear and tear under normal usage.

b. This obligation by the Contractor shall be absolute. The following actions will not constitute acceptance of non-conformance Work or release the Contractor from obligation to furnish the Work in accordance with the Contract Documents:

1. Observations by the Owner or Engineer; or

2. Recommendations by the Engineer or payment by the Owner; or

3. Use of the Work by the Owner; or

4. Issuance of a notice of acceptance by the Owner pursuant to the provisions of GP-53, or failure to do so; or

5. Any inspection, test, or approval by others; or

6. Any correction to non-conforming work by the Owner.

GP-60 DISPUTE RESOLUTION

The parties shall use their best efforts to resolve all disputes in an amicable fashion. Prior to filing suit by either party with respect to any claims, or disputes arising between the parties, the disputes shall be submitted first to non-binding mediation. The mediation shall be conducted in accordance with the Construction Industry Mediation Rules of the American Arbitration Association. If the parties cannot agree to a private mediator, then the mediator shall be selected by the American Arbitration Association, upon the filing of a demand for mediation.

If the dispute is not resolved by mediation within 60 days from the request for mediation, then either party may institute legal proceedings. Any litigation involving the Owner and arising under or related to the Contract or the bidding or award thereof shall be instituted exclusively in the Civil District Court for the Parish of Orleans, State of Louisiana.

GP-61 PAYMENT

The Owner hereby agrees to pay to the Contractor as full compensation for all work performed under the contract, and/or supplemental agreements thereto, the monetary value of the actual quantities in the completed work according to the schedule of unit prices and/or lump sum prices set forth in attached bid proposal and/or duly authorized supplements thereto, and made a part of the Contract.

Partial payments under the Contract shall be made at the request of the Contractor not more than once each month, based upon partial estimates agreed to by the Contractor and Engineer and shall be furnished to the Engineer and approved by the Engineer prior to transmittal to the Owner for approval and payment.

The partial estimates will be approximately stated, and all partial estimates and payments shall be subject to corrections in the estimate rendered following the discovery of any error in any previous estimates.

The payment of the partial estimate shall be taken as verification that the work has been performed and that its quality is satisfactory, however it will in no way serve as a release to the Contractor for the responsibility of any portions thereof. The Work and any particulars relating thereto shall be subject to revision and adjustment by the Engineer and/or the Owner at any time prior to final payment, regardless of any previous action taken.

There shall be reserved from the payments provided for the Contract ten percent (10%) for contracts less than $500,000 or five percent (5%) for contracts of $500,000 or more, of the estimates submitted, said sum to constitute a trust fund for the protection of and payment to any person or persons, mechanic, subcontractor or material men who shall perform any labor upon such contract, or the doing of said work, and all persons who shall supply such person or persons or subcontractors with provisions and supplies for the carrying on of such work, and shall be withheld for a minimum of forty-five (45) calendar days after final acceptance of the completed contract.

In accordance with Louisiana Revised Statutes Title 38, Section 2248(A), payment of the retainage held by the Owner shall be made forty-five (45) days after recordation of acceptance of the work in the office of the Clerk of Court, Ex-Officio Recorder of Mortgages for the Parish of Orleans, State of Louisiana and after delivery by the Contractor to the Owner of a Certificate from the Clerk of Court, Ex-Officio Recorder of Mortgages for the Parish of Orleans showing that no liens or claims have been filed in connection with the work, except for punch list items that have not been completed, which will be paid after completion of the punch list items. The cancellation of all liens and claims that might be recorded, growing out of this Contract, shall be at the cost and expense of the Contractor, and the cost of same may be retained by the Owner from payments due or to become due until the liens and claims are cancelled by the Contractor.

## GP-62 PAYMENTS WITHHELD

In addition to the percentage provided for in Section GP-61 of these General Provisions and in accordance with any other provision of this Contract, the Owner may withhold such amounts from any payment as may be necessary to protect himself from loss on account of:

a. Defective work not remedied;

b. Claims filed or reasonable evidence indicating probable filing of claims;

c. Failure of the Contractor to make payments properly to subcontractors or for material or labor;

d. Reasonable evidence that the Work will not be completed within the Contract time and that the unpaid balance would not be adequate to cover damages for the anticipated delay;

e. A reasonable doubt that the contract can be completed within the time period remaining under the contract;

f. Damage to another contractor;

g. Failure to submit required reports; or

h. Modifications of the contract which necessitate the execution of change orders prior to payment of funds.

Furthermore, nothing contained in this Section shall be deemed to limit the right of the Owner to withhold liquidated damages, as stated in the Instructions to Bidders and as permitted under the Special Provisions, from any amounts which may be due and owing the Contractor for work performed under the contract.

GP-63 LIENS

Neither the final payment nor any part of the retained percentage shall come due until the Contractor shall deliver to the Owner a complete release of all liens arising out of this contract, or receipts in full in lieu thereof, and, if required by the Owner, an affidavit that so far as he has knowledge or information, the releases and receipts include all labor and material for which a lien could be filed; but if any subcontractor refuses to furnish a release or receipt in full, the Contractor may furnish a bond satisfactory to the Owner to indemnify the Owner against any lien, construction cost, or attorney's fees.

GP-64 DISADVANTAGED BUSINESS ENTERPRISES

It is the established policy of the Management Authority to provide reasonable opportunities for Disadvantaged Business Enterprises to compete for or perform on contracts let by the Management Authority. Toward this end, the Management Authority encourages, to the extent feasible, the structuring of major projects into categories which may be commensurate with the capabilities of Disadvantaged Business Enterprises and actively encourages major prime contractors to provide opportunities for these businesses to become involved as subcontractors. The goal for participation is 18%.

“Disadvantaged Business Enterprise” means a small business organized for profit performing a commercially useful function which is owned and controlled by one or more DBE individuals or businesses. Owned and controlled means a business in which one or more DBE owns at least fifty-one percent, or in the case of a corporation, at least fifty-one percent of the voting stock and controls at least fifty-one percent of the management and daily business operations of the business.

Whenever the decision is made to sublet any of the work required under this Contract, affirmative steps should be taken to include small business and disadvantaged/women owned business participation. A list of certified firms in each specialized field may be obtained from the Louisiana Department Of Transportation. Affirmative steps shall include the following:

1. Including qualified small and disadvantaged/women businesses on solicitation lists.

2. Assuring that small and disadvantaged/women businesses are solicited whenever they are potential sources.

3. When economically feasible, dividing total requirements into smaller tasks or quantities so as to permit maximum small and disadvantaged/women business participation.

4. Where the requirements permit, establishing delivery schedules which will encourage participation by small and disadvantaged/women businesses.

5. Using the services and assistance of the Small Business Administration, the Office of Disadvantaged Business Enterprise of the Department of Commerce and the Community Services Administration as required.

The Contractor is requested to submit a statement to the Owner detailing its efforts to comply with the DBE goal.

GP-65 EQUAL EMPLOYMENT OPPORTUNITY

The LMA is an equal opportunity employer, and looks to its Contractor, subcontractors, vendors and suppliers to take affirmative action to effect this commitment in its operations.

By submitting the bid proposal and executing the Contract, the Contractor agrees to abide by the requirements of the following as applicable: Title VI and VII of the Civil Rights Act of 1964, as amended by the Equal Opportunity Act of 1972, Federal Executive Order 11246, the Federal Rehabilitation Act of 1973, as amended, the Vietnam Era Veterans Readjustment Assistance Act of 1974, Title IX of the Education Amendments of 1972, and the Age Act of 1975, and the Contractor agrees to abide by the requirements of the Americans with Disabilities Act of 1990.

The Contractor agrees not to discriminate in its employment practices, and will render services the Contract, without regard to their race, age, color, religion, sex, national origin, veteran status, political affiliation or disabilities. Any act of discrimination committed by the Contractor, or failure to comply with these statutory obligations when applicable, shall be grounds for termination of the Contract.

GP-66 ANTI-KICKBACK CLAUSE

The Contractor agrees to adhere to the mandate dictated by the Copeland “Anti-Kickback” Act which provides that each contractor or subcontractor shall be prohibited from inducing, by any means, any person employed in the completion of the work, to give up any part of the compensation to which he is otherwise entitled.

GP-67 SUSPENSION/DEBARMENT

Contractor certifies, by signing and submitting any bid, that their company, any subcontractors, or principals are not suspended or debarred by the General Services Administration (GSA) in accordance with the requirements in OMB Circular A-133. A list of

parties who have been suspended or debarred can be viewed via the internet at www.epls.gov.

Contractor agrees to secure from any contractor(s) and subcontractor(s) for the captioned project, certification that such contractor(s) and subcontractor(s) are not suspended, debarred or declared ineligible from entering into contracts with any department or agency of the Federal Government or of the State of Louisiana, or in receipt of a notice of proposed debarment or suspension.

Contractor shall provide immediate notice to Owner in the event of it or its contractor(s) or any subcontractor(s) being suspended debarred or declared ineligible by any department or agency of the Federal Government or of the State of Louisiana, or upon receipt of a notice of a proposed debarment or suspension, either prior to or after execution of this Contract.

Upon receipt of notice of suspension, debarment, or declaration that Contractor or its contractor(s) or any subcontractor(s) is/are ineligible to enter into contracts with any department or agency of the Federal Government or of the State of Louisiana, either prior to or after execution of this Contract, Owner reserves the right to review cause for said debarment, suspension, or declaration of ineligibility, and to terminate this Contract pursuant to the terms of GP-45 OWNER'S RIGHT TO TERMINATE CONTRACT FOR CAUSE OR CONVENIENCE, or take such other action it deems appropriate under this Contract.

GP-68 LOUISIANA FIRST HIRING ACT

Contractor shall comply with the Louisiana First Hiring Act (La. R.S. 39:2201-2204), which requires that within ten (10) days of executing the Contract, Contractor shall submit the following information to the Louisiana Workforce Commission:

1. The number and types of jobs anticipated for the Work.

2. The skill level of the jobs anticipated for the Work.

3. The wage or salary range for each job anticipated for the Work.

4. Methods, if any, that the Contractor will use to recruit unemployed persons or person employed in low wage jobs to fill job openings for the Work.

**END OF PART I - GENERAL PROVISIONS**

# SECTION 01010 - SUMMARY OF WORK

## PART 1 GENERAL

### 1.01 WORK COVERED BY CONTRACT DOCUMENTS / REQUIREMENTS INCLUDED

A. Included in the work is the following: Includes the furnishings of all labor, equipment and materials necessary for the demolition and removal of the existing roofing system and installation of a new multi-ply SBS-modified bitumen membrane torch down roofing system over new deck cover board, tapered rigid insulation and metal decking. Also, the installation of a new pre-finished sheet metal roof edge system, work pads around the existing HVAC units and retrofit drains with screens, clamping rings and flashing at the Williams Taylor Hangar for the Lakefront Management Authority (LMA).

C. The Contractor shall furnish all labor, materials, equipment, tools, services, and incidentals to complete all work required by these Specifications and as shown on the Drawings.

D. The Contractor shall perform the work complete and shall include repairs, replacements, and restoration required as a result of damages caused during this construction.

E. Furnish and install all materials, equipment, and labor which is reasonably and properly inferable and necessary for the proper completion of the work, whether specifically indicated in the Contract Documents or not.

### 1.02 CONTRACTOR'S DUTIES

A. Contractor shall verify all field and job conditions prior to preparing his bid. Any conditions not described in these drawings and specifications shall be brought to the attention of the Design Professional prior to bid date. Failure to do so shall render the Contractor responsible for correction of this condition should he be awarded the contract.

B. Visit and examine the job site, and with all authorities concerned in order to become familiar with all existing conditions pertinent to the work to be performed thereon. No additional compensation will be allowed for failure to be so informed. Pay all costs and fees for utility connections.

C. Check all specifications and all drawings and bring to attention any conflicts or variations as shown or noted.

D. For any points which are not clear, or from items and/or details which the Contractor feels are in need of clarification, consult the Design Professional before submission of a Bid proposal in writing. The Design Professional will answer all questions in writing by Addendum to the Contract Documents prior to Bid.

E. In case of discrepancies and/or ambiguities in the drawings and/or in the specifications, the Design Professional shall be consulted prior to submission of a Bid proposal. Failure to do so on the part of the successful bidder shall be construed as explicit agreement on his part to abide by the Design Professional's decision in such matters.

F. Except as specifically noted, provide and pay for:
1. Labor, materials and equipment
2. Tools, construction equipment and machinery.
3. Temporary facilities required for construction.
4. Other facilities and services necessary for proper execution and completion of work.
5. Pay legally required sales, consumer, and use taxes.

G. Secure and pay for, as necessary for proper execution and completion of Work, and as applicable at time of receipt of bids:
1. Permits.
2. Government Fees.
3. Licenses.

H. Give required notices.

I. Comply with codes, ordinances, rules, regulations, and other legal requirements of public authorities which bear on performance of Work.

J. Promptly submit written notice to Design Professional of observed variance of Contract Documents from legal requirements.
1. Appropriate Modifications to Contract Documents will adjust necessary changes.

K. Enforce strict discipline and good order among employees. Do not employ on Work:
1. Unfit persons.
2. Persons not skilled in assigned task.

L. Work by Others:
1. Independent Testing Laboratory Services will be employed and paid for by the Contractor and selected from an owner-approved list.

M. Contractor use of Premises:
1. Confine operations at site to areas permitted by:
   a. Law
   b. Permit(s)
   d. Contract Documents
   e. Design Professional
   f. Owner

N. Do not unreasonably encumber site with materials or equipment.

O. Assume full responsibility for protection and safekeeping of products stored on premises.

P. Move any stored products which interfere with operations of Owner or other Contractors.

1.03 CONTRACTS

A. Construct the Work under a single lump sum or unit price contract as stated for each item in the bid form.

1.04 WORK SEQUENCE

A. All work to be done under this Contract shall be done with lump sum price.

B. Construct Work in stages to accommodate the Owner's use of the premises during the construction period; coordinate the construction schedule and operations with the Owner's Representative.

C. Construct the Work in stages to provide for public convenience & Fire Marshal Requirements for Egress out of Existing Building.

D. Assume full responsibility for the protection and safekeeping of Products under this Contract, stored on the site.

E. Move any stored products, under Contractor's control, which interfere with operations of the Owner or separate contractor.

F. Obtain and pay for the use of additional storage or work areas needed for operations.

**END OF SECTION**

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# 01200 CONSTRUCTION SAFETY AND PHASING PLAN (CSPP)

## PART 1 GENERAL

### 1.1 PURPOSE

A. The purpose of this special provision is to describe methods, procedures, rules and authorities to be followed during the construction of this project. The Contractor's attention is directed to the *Department of Transportation Federal Aviation Administration Advisory Circular 150/5370-2F*. Nothing contained in this special provision supercedes or alters any content of *Advisory Circular 150/5370-2F* and its references, neither do the contents of this special provision waive the duty of the Contractor to adhere to all safety regulations of the Advisory Circular and its references and to all and any other advisory material pertaining to Operational Safety on Airports with Emphasis on Safety During Construction.

### 1.2 OBJECTIVES

A. General objectives that must be attained in order to minimize time and economic loss to the aviation community, airline passengers, and the construction contractor are as follows:
   1. Maintain safety of aircraft operations.
   2. Maintain safety of construction activities.
   3. Minimize aircraft operations and construction activity conflicts.
   4. Minimize flight operation delays.
   5. Minimize delays to contractor activities.
   6. Keep the airport operational for all user aircraft.
   7. Maintain access to all airport areas by emergency response equipment.

### 1.3 WORK SCHEDULE

A. A minimum of one week prior to the preconstruction conference, the contractor will be required to submit, in writing, his proposed construction schedule for review and approval by the Architect. The schedule shall include number of personnel, type of equipment, date construction will commence, estimated date, and/or number of days to complete each phase.

B. The Contractor's construction schedule shall be prepared considering the various conditions outlined herein, but it will be subjected to modifications during construction if necessary to keep interference with the airport operations to the minimum possible.

C. The contractor shall make his own estimate of the inherent difficulties involved in completing the construction under the conditions described herein and shall not make any claims for additional compensation for delays, increased cost, or any reason, due to completing the required work in the manner described below or as directed.

### 1.4 MAINTENANCE OF TRAFFIC

A. It is the explicit intention of the contract that the safety of aircraft, as well as the Contractor's equipment and personnel, is the most important consideration.
   1. It is understood and agreed that the Contractor shall provide for the free and unobstructed movement of aircraft in the air operations areas (AOAs) of the airport with respect to his or her own operations and the operations of all subcontractors as specified in the subsection 1.5 Limitation of Operations. It is further understood and agreed that the Contractor shall provide for the uninterrupted operation of visual and electronic signals (including power supplies thereto) used in the guidance of aircraft while operating to, from, and upon the airport.

2. With respect to the Contractor's operations and the operations of all subcontractors, the Contractor shall provide marking, lighting, and other acceptable means of identifying personnel, equipment, vehicles, storage areas, and any work area or condition that may be hazardous to the operation of aircraft, fire-rescue equipment, or maintenance vehicles at the airport.
3. When the contract requires the maintenance of vehicular traffic on an existing road, street, or highway during the Contractor's performance of work that is otherwise provided for in the contract, plans, and specifications, the Contractor shall keep such road, street, or highway open to all traffic and shall provide such maintenance as may be required to accommodate traffic. The Contractor shall be responsible for the repair of any damage caused by the Contractor's equipment and personnel. The Contractor shall furnish, erect, and maintain barricades, warning signs, flag person, and other traffic control devices in reasonable conformity with the Manual on Uniform Traffic Control Devices (MUTCD) (http://mutcd.fhwa.dot.gov/), unless otherwise specified. The Contractor shall also construct and maintain in a safe condition any temporary connections necessary for ingress to and egress from abutting property or intersecting roads, streets or highways.

1.5 LIMITATION OF OPERATIONS.

A. The Contractor shall control his or her operations and the operations of his or her subcontractors and all suppliers to provide for the free and unobstructed movement of aircraft in the air operations areas (AOA) of the airport.

B. If the work requires the Contractor to conduct his or her operations within an AOA of the airport, the work shall be coordinated with airport operations (through the Architect and Owner) at least 48 hours prior to commencement of such work. The Contractor shall not close an AOA until so authorized by the Architect and Owner and until the necessary temporary marking and associated lighting is in place as provided in the sections below.

C. Contractor shall be required to conform to safety standards contained in AC 150/5370- 2, Operational Safety on Airports During Construction.

1.6 WORK AREA, STORAGE AREA and SEQUENCE OF CONSTRUCTION

A. The Contractor shall obtain approval from the Architect prior to beginning any work in all areas of the airport. No operating runway, taxiway, or air operations area (AOA) shall be crossed, entered, or obstructed while it is operational. The Contractor shall plan and coordinate his or her work in such a manner as to ensure safety and a minimum of hindrance to flight operations. All Contractor equipment and material stockpiles shall be stored a minimum or 250 feet from the centerline of an active runway. No equipment will be allowed to park within the approach area of an active runway at any time. No equipment shall be within 250 feet of an active runway at any time.

B. The Contractor will be required to submit to the Architect, at least one week prior to the start of any work, a copy of his proposed sequence of construction as pertaining to this work, for the Architect's approval. This Sequence of Construction must meet with the approval of the Engineer prior to beginning the work.

C. The Contractor is required to submit a written schedule, as required in Section 1.3 Pre-Construction Conference information that is to be approved by the Architect before construction begins. The construction of this project is to be planned to minimize disruption of aircraft operations.

1.7 NAVIGATIONAL AIDS.

A. All navigational aids must be protected during this construction. Should unplanned, accidental shutdown of any navigational aid occur, the Contractor will immediately notify the Architect and Owner.

1.8 TRENCHES AND/OR OPEN EXCAVATION.

A. No trenches or excavation will remain open during aircraft operation within clearance zones shown in the safety plan of the contract drawings.

1.9 DEBRIS.

A. Waste and loose materials capable of causing damage to aircraft landing gear, propellers or being ingested in jet engines will not be left on active aircraft movement areas. Material tracked on these areas should be removed continuously during the work project. The Contractor shall also make provisions for dust control and removal of mud from the areas if it becomes a problem.

B. A regular inspection program will be performed by the Contractor and a representative of the Architect prior to commencement of aircraft operation.

1.10 STORAGE OF EQUIPMENT, MATERIAL OR EXCAVATION.

A. It is not anticipated that Contractor will store materials on the airfield. However, the Contractor shall not store materials or park equipment in aircraft operational areas when the equipment or material is not in use or about to be installed. Material or equipment in use in operational areas must be stored or-parked in a manner that they may be quickly removed to accommodate aircraft operations.

B. Vehicles, equipment and materials will be stored in the Contractor’s designated fenced-in area as shown on the site plan.

C. Delivery vehicles and operational equipment shall be escorted by airport security or fire department, through the AOA areas and into the Contractor’s fenced-in work area.

1.11 DAILY INSPECTION.

A. At the end of each day's construction activities, an inspection is to be made by the contractor to insure the safety of the airfield. Items to be checked include:
   1. Runways and taxiways clear of debris and accumulation of dust and/or mud.
   2. Equipment, material, and vehicles parked or stored not less than 500 feet from centerline of active runways.
   3. No open trenches or excavations in excess of 3-inches deep and no rough grades within the aircraft safety zones.
   4. Marking of closed taxiways correctly and securely placed.

1.12 COMMUNICATION REQUIREMENTS.

A. A positive communication system between the following will be required:
   1. N.O. Lakefront Airport / LMA Representative
   2. Contractor
   3. Architect

PART 2 NOT USED
PART 3 NOT USED

**END OF SECTION**

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# SECTION 01300 - SUBMITTALS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:
   1. Preparing and processing of submittals for review and action.
   2. Preparing and processing of informational submittals.
   3. Wording of Contractor's Submittal Review Stamp.

B. Submit the following for the Architect's review and action:
   1. Shop drawings.
   2. Product data.
   3. Samples.
   4. Submittals for which procedures are not defined elsewhere.

C. Submit the following as informational submittals:
   1. Structural design information required by the Contract Documents.
   2. Certificates.
   3. Coordination drawings.
   4. Reports.
   5. Qualification statements for manufacturers/installers.

D. Specific submittals required are described in individual sections.

### 1.2 DEFINITIONS

A. Shop Drawings: See General Conditions.

B. Product Data: See General Conditions.
   1. Product data submittals also include:
      a. Performance curves, when issued by the manufacturer for all products of that type.
      b. Selection data showing standard colors.
      c. Wiring diagrams, when standard for all products of that type.

C. Samples: See General Conditions.

D. Informational Submittals: Submittals identified in the Contract Documents as to be submitted for information only.

1.3 FORM OF SUBMITTALS

A. Sheets Larger Than 8-1/2 by 14 Inches:
   1. Maximum sheet size: 36 by 48 inches.
      a. Exception: Full size pattern or template drawings.
   2. Number of copies:
      a. Submittals for review:
         1. 3 opaque prints.
            a. Two copies will be returned.
         2. or one digital copy
            a. One digital copy will be returned

      b. Informational submittals:
         1. One copy of opaque prints or one digital copy.
            a. One digital copy will be returned.

B. Small Sheets or Pages:
   1. Minimum sheet size: 8-1/2 by 11 inches.
   2. Maximum sheet size for opaque copies: 11 by 17 inches.
   3. Number of copies: One opaque print or one digital copy. One digital copy will be returned.

C. Samples: 2 sets of each.
   1. 1 set will be returned.
   2. Submit actual sample of material to be provided following initial selection if required.

D. If additional sets are needed by other entities involved in work represented submit with original submittal.

E. Copies in excess of the number requested will not be returned, the Contractor is responsible for reproducing additional copies for distribution if needed.

1.4 COORDINATION OF SUBMITTALS

A. Coordinate submittals and activities that must be performed in sequence, so that the Architect has enough information to properly review the submittals.

B. Coordinate submittals of different types for the same product or system so that the Architect has enough information to properly review each submittal.

C. Submittals requiring color / finish selection should be prioritized and submitted all at one time to the Architects Office for final review and selections. No color selections will be made until all required submittals requiring color / finish selection are received. Review associated with incomplete receipt of required submittals will not be the basis of schedule delay.

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION

3.1 TIMING OF SUBMITTALS

A. Transmit each submittal at or before the time indicated on the approved schedule of submittals.
   1. Prepare and submit for approval a schedule showing the required dates of submittal of all submittals.
   2. Organize the schedule by the applicable specification section number.
   3. Incorporate the Contractor's construction schedule specified elsewhere.
   4. Incorporate the quality control activities schedule specified elsewhere.
   5. Submit within 30 days after commencement of the work.
   6. Revise and resubmit the schedule for approval when requested.
   7. Submit items requiring State Fire Marshal review as soon as possible to avoid delays while waiting on required agency reviews.

B. Deliver each submittal requiring approval in time to allow for adequate review and processing time, including re-submittals if necessary; failure of the Contractor in this respect will not be considered as grounds for an extension of the contract time.

C. Deliver each informational submittal prior to start of the work involved, unless the submittal is of a type which cannot be prepared until after completion of the work, submit promptly.

D. If a submittal must be processed within a certain time in order to maintain the progress of the work, state so clearly on the submittal.

E. If a submittal must be delayed for coordination with other submittals not yet submitted, the Architect may at his option either return the submittal with no action or notify the Contractor of the other submittals which must be received before the submittal can be reviewed.

3.2 SUBMITTAL PROCEDURES - GENERAL

A. Notify the Architect, in writing and at time of submittal, of all points upon which the submittal does not conform to the requirements of the Contract Documents, if any.

B. Do not commence work which requires review of any submittals until receipt of returned submittals with an acceptable action.

C. DO NOT ALLOW SUBMITTALS WITHOUT AN ACCEPTABLE ACTION MARKING TO BE USED FOR THE PROJECT.

D. Do not submit substitute items that have not been approved by means of the procedure specified elsewhere.

E. Do not include requests for substitution (either direct or indirect) on submittals; comply with procedures for substitutions specified elsewhere.

F. Preparation of Submittals:
1. Label each copy of each submittal, with the following information:
a. Project name and location.
b. Date of submittal.
c. Contractor's name and address.
d. Architect's name and address.
e. Subcontractor's name and address.
f. Supplier's name and address.
g. Manufacturer's name.
h. Specification section and article where the submittal is specified.
i. Numbers of applicable drawings and details.
j. Other necessary identifying information.
k. Indicate whether manufacturer or other source is listed on the Owner's preferred vendor list.
l. Contractor's review stamp with wording as approved by the Architect and their insurer.
1. Required wording for the review stamp is as follows:

DATE:_____ SUBMITTAL NO.:
_____
REVISION DATE_____
PROJECT TITLE: _____
PROJECT LOCATION: _____
ARCHITECT: RC L ARCHITECTURE, L.L.C.
CONTRACTOR: _____
SUBCONTRACTOR / SUPPLIER:_____
MANUFACTURER:_____
PRODUCT I.D.:_____
SPECIFICATION SECTION NO.:_____

**THIS SUBMITTAL COMPLIES WITH THE CONTRACT DOCUMENTS.**

**NOTE: APPROVAL OF SHOP DRAWINGS AND SUBMITTALS DOES NOT RELIEVE THE SUBCONTRACTOR OR MATERIAL SUPPLIER OF HIS RESPONSIBILITY TO COMPLY WITH THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.**

**NAME OF CONTRACTOR** **REVIEWED BY:_____**

2. Pack submittals suitably for shipment.
3. Submittals to receive Architect's action marking: Provide blank space on the label or on the submittal itself for action marking; minimum 4 inches wide by 5 inches high adjacent to Contractor's stamp.
4. Contractor to coordinate electrical requirements (wire size, voltage, disconnect switches, breaker sizes, etc.) for mechanical and electrical items at time of submittal to ensure the equipment will be ordered properly.
5. Contractor shall make all markings in green ink. Architect shall make all markings in red ink.

G. Transmittal of Submittals:
1. Submit all submittals to the Architect.
2. Submittals will be accepted from the Contractor only. Submittals received from

other entities will be returned without review or action.

3. Submittals received without a transmittal form will be returned without review or action.
   a. Project name.
   b. Submittal date.
   c. Specification section number.
   d. Transmittal number.
   e. To:
   f. From:
   g. Contractor's name.
   h. Subcontractor's and supplier's names.
   i. Manufacturer's name.
   j. Submittal type (shop drawing, product data, sample, informational submittal).
   k. Description of submittal.
   l. Records of distribution.
   m. Action marking.
   n. Comments.
4. Fill out a separate transmittal form for each submittal; also include the following:
   a. Other relevant information.
   b. Requests for additional information.
5. SUBMIT REQUIRED SUBMITTALS OF EACH SPECIFICATION SECTION IN THEIR ENTIRETY AT ONE TIME.
   a. Incomplete submittals for a specific section will be grounds for delaying review by the Architect until all required information is obtained for the given specification section.

## 3.3 SHOP DRAWINGS

A. Content: Include the following information:
   1. Dimensions, at accurate scale.
   2. All field measurements that have been taken, at accurate scale.
   3. Names of specific products and materials used.
   4. Details, identified by Contract Document sheet and detail numbers.
   5. Show compliance with the specific standards referenced.
   6. Coordination requirements; show relationship to ALL adjacent or critical work.
   7. Name of preparing firm.
   8. Contractor's review stamp with wording as approved by the Architect (see above).

B. Preparation:
   1. Reproductions of Contract Documents are not acceptable as shop drawings.
   2. Copies of standard printed documents are not acceptable as shop drawings.
   3. Identify as indicated for all submittals.
   4. Space for Architect's action marking preferably shall be adjacent to the title block.

## 3.4 PRODUCT DATA

A. Submit all product data submittals for each system or unit of work as one submittal.

B. Content:
1. Submit manufacturer's standard printed data sheets.
2. Identify the particular product being submitted; submit only pertinent pages.
3. Show compliance with properties specified.
4. Identify which options and accessories are applicable.
5. Include recommendations for application and use.
6. Show compliance with the specific standards referenced.
7. Show compliance with specified testing agency listings; show the limitations of their labels or seals, if any.
8. Identify dimensions which have been verified by field measurement.
9. Show special coordination requirements for the product.

3.5 SAMPLES

A. Samples:
1. Provide samples that are the same as proposed product.
B. Preparation:
1. Attach a description to each sample.
2. Attach name of manufacturer or source to each sample.
3. Where compliance with specified properties is required, attach documentation showing compliance.
4. Where there are limitations in availability, delivery, or other similar characteristics, attach description of such limitations.
5. Where selection is required, the first submittal may be a single set of all options; after return of submittal with selection indicated, submit standard number of sets of selected item.
C. Keep final sample set(s) at the project site, available for use during progress of the work.

3.6 REVIEW OF SUBMITTALS

A. Submittals for approval will be reviewed, marked with appropriate action, and returned. Submittals will be reviewed "X" action:
1. “A” - “Approved No Exceptions Taken”
2. “ANN” - “Approved As Noted”
3. “RR” - "Revise and Resubmit”. Revise the submittal or prepare a new submittal complying with the comments made.
4. “R” – “Rejected”. Proposed submittal is not in compliance, prepare a new submittal complying with the Contract Document Requirements. Contractor will be responsible for shipping of rejected submittals and or Transmittal form only, will be returned if submittal is unsatisfactory.
5. “I” – “Incomplete Not Reviewed (Resubmit)”.

B. Informational submittals: will be marked;
1. Information Only - No action taken.

3.7 RETURN, RE-SUBMITTAL, AND DISTRIBUTION

A. Submittals will be returned to the Contractor by mail.

B. Perform re-submittals in the same manner as original submittals; indicate all changes

other than those requested by the Architect, and review revision number.

1. All costs (including, but not limited to the Architect's charges of not less than $100.00 per submittal per review) that are incurred by the Owner and are made necessary by the Contractor's submission of a particular submittal after the *second review* of that submittal shall be borne by the Contractor, and shall be reimbursed by the Contractor to the Owner.

C. Distribution:
   1. Distribute returned submittals to all subcontractors and suppliers involved in work covered by the submittal.
   2. Make one copy for project record documents.
   3. Record distribution on transmittal form with copy to the Architect.

**END OF SECTION**

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# SECTION 01600 - PRODUCT REQUIREMENTS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:
   1. General product requirements, including:
      a. General specification requirements for all products.
      b. Product options; Prior Approvals; Substitutions.
   2. General requirements for product documentation, including:
      a. Requirements and procedures for schedule of products.
      b. General requirements for operation and maintenance data.
      c. General requirements for warranties.

### 1.2 SUBMITTALS

A. Schedule of Products: Submit for approval.

B. Final Schedule of Products: Submit for project record.

C. Operation and Maintenance Data: Submit for information only.

D. Warranties: Submit for project record.

## PART 2 - PRODUCTS

### 2.1 GENERAL

A. Components required to be supplied in quantity within a specification section shall be identical, interchangeable, and made by the same manufacturer.

B. Do not use products removed from existing construction, unless specifically permitted by the contract documents or approved by the owner.

C. PRIOR APPROVALS**:** The materials, products, and equipment described in the Bidding Documents establish a standard of required function, dimension, appearance, and quality but do not restrict bidders to the specific brand, manufacturer, or specification named. No substitution will be considered unless written request of approval has been submitted at least 10 days prior to bid date in proper format. See Substitution Request Form Section 01631. The burden of proof of the merit of the proposed substitute is upon the proposer. Approval by the Design Professional will not modify or lessen the requirements of the specifications. The Design Professional's decision of approval or disapproval shall be final. If the Design Professional approves any proposed substitution, such approval will be set forth in an Addendum. Bidders shall not rely upon approvals made in any other manner.

## PART 3 - EXECUTION

## 3.1 PRODUCT OPTIONS

A. It is the contractor's responsibility to select products which comply with the contract documents and which are compatible with one another, with existing work, and with products selected by other contractors.
   1. Verify that electrical characteristics of products are compatible with electrical systems; notify architect of all discrepancies.
   2. Where visual matching to an established physical sample is required, the architect's decision will be final.

B. Do not use any substitute products which have not been prior approved in accordance with the requirements of the contract documents; formal substitution request is required.

C. Definition of Substitute Product: Any product or manufacturer not listed in the individual specification section is to be considered a substitute.

D. Product Options: Where products are specified using more than one method, such as description with a manufacturer list, use a product meeting the requirements of both specification methods.

E. Products Specified by Reference Standard: Use any product meeting the specification. Provisions of reference standards shall not modify the responsibilities of the owner or architect as defined in the contract documents.

F. Products Specified by Description: Use any product meeting the specification.

G. Products Specified by Performance Requirements: Use any product meeting the specification.

H. Products Covered by an Allowance Included in the Contract Documents: Provide products of types and in quantity as directed by the architect.
   1. At the earliest possible date after execution of the contract, inform the architect of the latest date by which the final selection of the product is required in order to avoid delay of the work.
   2. When requested, provide information for use in making selections.

I. Products Specified to Match a Physical Sample: Use any product that matches; obtain the architect's approval.

J. Products Specified by Listing a Brand Name Product as the "Basis of Design": Provide a product equivalent to the product specified within the limits of variation specified; submit substitution request for all products other than that listed in specifications.

K. Products Specified by Listing Brand Name(s): Provide a product at least equal to the brand name product, or products, listed; submit substitution request for any brand name product not listed.

L. Products Specified by Listing Manufacturer(s): Provide a product meeting the specification; submit substitution request for any manufacturer not listed.

3.2 SUBSTITUTIONS AFTER AWARD OF THE CONTRACT

A. Substitutions after award of the contract will only be considered under one or more of the following conditions;
   1. Required for compliance with interpretation of code requirements or insurance regulations;
   2. Unavailability of specified products through no fault of the Contractor;
   3. Subsequent information discloses inability of specified products to perform properly or to fit in designated space;
   4. Or manufacturers/ fabricator refuses to certify or guarantee performance of specified product as required.

B. The contractor will be notified in writing within a reasonable time; verbal acceptance will not be valid.

C. Acceptable substitutions will be added to the contract documents by Change Order.

3.3 SUBSTITUTION PROCEDURE

A. Submission of request for substitution shall constitute a representation by the contractor that he:
   1. Has investigated the proposed product and determined that it is equal to or better than the specified product. Absence of an explicit comparison of any characteristic of the proposed product to the specified product shall constitute a representation that the proposed product is equal to or better than the specified product with regard to that characteristic.
   2. Will provide the same warranty for the proposed product as for the specified product.
   3. Will coordinate the installation and make other changes which may be required for the work to be complete in all respects, including:
      a. Redesign.
      b. Additional components and capacity required by other work affected by the change.
   4. Waives all claims for additional costs and time extensions which subsequently may become apparent and which are caused by the change.

B. Substitution Request Procedure: Submit written request with complete data substantiating compliance of the proposed product with the requirements of the contract documents.
   1. Submit request at least 14 days prior to the date when the specified product needs to be ordered.
   2. Properly complete Form in Section 01631, Substitution Request Form.
   3. Form is to be submitted through a General Contractor bidding the project.

C. Data Required with Substitution Request: Provide at least the following data:
   1. Identify product by specification section and paragraph number.
   2. Manufacturer's name and address, trade name and model number of

product (if applicable), and name of fabricator or supplier (if applicable).
3. Complete product data.
4. Description of changes that will be required in other work or products if the substitute product is approved.

D. When the proposed substitution is not accepted, provide the product (or one of the products, as the case may be) specified.

3.4 SCHEDULE OF PRODUCTS

A. Prepare a complete schedule of products used, including the following for each product:
1. Manufacturer's name.
2. Brand or trade name.
3. Model number, if applicable.
4. Reference standard, if more than one is applicable.
5. Arrange products in the schedule by specification sections; indicate paragraph where specified.

B. Prepare and submit a preliminary schedule within 30 days after award of contract; resubmit when revised; submit final schedule prior to final payment.

C. Schedule of products shall not be used to obtain approval of substitute products; make separate request for substitutions.

3.5 OPERATION AND MAINTENANCE DATA

A. Provide operation and maintenance data as specified in individual product sections.
1. Provide data sufficient for operation and maintenance by owner without further assistance from the manufacturer.
2. Provide completed data in time for use during owner instruction.

B. Data Required For Products - General:
1. Name of manufacturer and product.
2. Name, address, and telephone number of subcontractor or supplier.
3. Local source of replacements.
4. Local source of replaceable parts and supplies.

C. Product Data: Where product data is specified for inclusion in operation and maintenance data provide manufacturer's data sheets marked to indicate specific product and product options actually installed; delete inapplicable data.

D. Finish Materials: Manufacturer's product data, color/texture designations, and manufacturer's instructions for care, cleaning, and maintenance.

E. Equipment: Provide at least the following information:
1. Product data giving equipment and function description, with normal operating characteristics and limiting conditions.
2. Starting, operating, and troubleshooting procedures.

3. Cleaning and maintenance requirements and procedures.
4. External finish maintenance requirements.
5. List of maintenance materials required.
6. List of special tools required.
7. Parts list: List all replaceable parts, with ordering data.
8. Recommended quantity of spare parts to be maintained in storage.

F. Systems: Provide overall function description, with diagrams, prepared especially for this project.

G. Form of Data: Prepare data and in the form of an instructional manual. Provide (2) complete sets of manuals to the owner at closeout.
1. Arrange content logically, using section numbers and sequence of sections indicated on the table of contents of this project manual.
2. When multiple volumes are used, arrange by related subjects; identify contents in cover title.
3. Assemble into 3-ring binders with maximum 2-inch ring size.
   a. Hardback, cleanable plastic covers.
   b. Identify each book with title "Operation and Maintenance Instructions" and project name.
   c. Page size 8-1/2 by 11 inches, maximum.
   d. Prepare special typewritten data on minimum 20-pound paper.
   e. Provide tabbed divider for each product and system.
   f. Drawings: Bind in with other data; provide reinforced binding edge; fold larger drawings to size of pages.
      1. Do not use pockets or loose drawings.
4. Provide table of contents for each volume listing:
   a. Name of the project.
   b. Name, address, telephone number, and contact name of:
      1. Architect.
      2. Contractor.
   c. Index of products and systems included in volume.
5. Provide electronic copy of all documents on CD or USB flash drive format.

## 3.6 WARRANTIES

A. Provide warranties as specified in individual product sections and in the division 00 – General Conditions. At time of submittal provide sample warranty filled out for this specific project with all information required and label “Sample Warranty”.

B. Manufacturer Warranties: Manufacturer's standard product warranty running for the manufacturer's standard term, unless otherwise indicated.
1. Submit copies of all manufacturer warranties which extend beyond the end of the contract correction period.

C. Special Project Warranties: Written warranty commencing at date of substantial completion, running for the term indicated, and signed by the entities specified.
1. Where completion of warranty item is materially delayed beyond the date of substantial completion, provide warranty commencing on date of acceptance.
2. Submit each special project warranty.

D. Provide 2 notarized copies of each executed warranty.

E. Show actual date of commencement on each warranty.

**END OF SECTION**

## SECTION 01631 – SUBSTITUTION REQUEST FORM

TO: RCL Architecture, LLC
900 West Causeway Approach
Mandeville, LA 70471

PROJECT: Lakefront Airport Williams Taylor Hangar Roof Replacement
RCLA Project No. 22236

SPECIFIED ITEM:

DWG/ Specification Section _____ Paragraph _____

Description _____

The undersigned requests consideration of the following:

PROPOSED SUBSTITUTION:

Manufacturer _____

Upon submitting this Request for Substitution, the undersigned certified that the following paragraphs are correct, unless otherwise modified on attachments:

1. Contractor has investigated the proposed substitution and believes that it is equal to or superior in all respects to specified item, and will conform to design requirements and artistic effect.

2. Cost saving to Owner for accepting substitution: None _____ $ _____

3. Contractor will pay the Architect and/or Engineers for additional studies, investigations, submittal reviews, redesign and/or analysis caused by the requested substitution and at not additional cost to Owner.

4. Substitution requires dimensional changes or redesign of Structural:
No. _____ Yes _____ (If yes, attach complete data).

5. Substitution requires dimensional changes or redesign of Mechanical:
No. _____ Yes _____ (If yes, attach complete data).

6. Substitution requires dimensional changes or redesign of Electrical:
No. _____ Yes _____ (If yes, attach complete data).

7. Substitution requires dimensional changes or redesign of Plumbing:
No. _____ Yes _____ (If yes, attach complete data).

8. Contractor will waive future claims for added cost to Contract caused by substitution.

9. Changes in contract time caused by substitution: No _____ Yes _____ Add/Deduct

___ days.

10. Adverse affect on other Trades caused by substitution:
None _____ Yes _____ (If yes, explain on attachment).

11. Contractor will modify other parts of the work as may be required to make all parts of work complete and functioning.
Not Required _____ Yes _____ (If yes, explain on an attached page if necessary).

12. Same type of warranty for specified product or system will be furnished for proposed substitution.
No _____ Yes _____ (If no, explain on an attached page).

13. Maintenance Service Available:
No _____ Yes _____ (If no, explain on an attached page).
Where? _____ Spare Parts Source:_____

14. Contractor has complied with requirements of Section 01631, General Conditions and Contract Documents as part of the request for substitution, and has completely filled-in this form.
No _____ Yes _____

REASON FOR NOT GIVING PRIORITY TO SPECIFIED ITEM:

See attached _____ Not required _____

Submitted by:

Signature: _____

Firm: _____

Address: _____

_____

For use by Architect:

_____ Approved _____ Approved as Noted (Correct & resubmit for record)

_____ Revise & Resubmit _____ Rejected
Reviewed only for conformance with Design Concept of project and with information given in Contract Documents.

Signature: _____

Date: _____

ATTACHMENTS TO THIS FORM:

1. Manufacturer's Product Data for Specified Item: Clearly marked to indicate full compliance with spec section and Contract Documents:_____Attached

2. Manufacturer's Product Data for Substitution: Clearly marked for adequate evaluation and comparison with data submitted for specified item: _____Attached

3. Samples: Attached _____ Not Required _____

4. Cost Data and Implications of Substitution: Attached _____ Not Required _____

5. Contractor's Comments: Attached _____ Not Required _____

6. Other: _____

**END OF SECTION**

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# SECTION 01740 – WARRANTIES

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

### 1.2 SUMMARY

A. This Section includes administrative and procedural requirements for warranties required by the Contract Documents, including manufacturer's standard warranties on products and special warranties.
   1. Refer to the Owner's Contract / General Conditions for terms of the Contractor's period for correction of the Work.

B. Related Sections: The following Sections contain requirements that relate to this Section:
   1. Division 1 Section "Submittals" specifies procedures for submitting warranties.
   2. Division 1 Section "Contract Closeout" specifies contract closeout procedures.
   3. Divisions 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.
   4. Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.

**C. Disclaimers and Limitations: Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the Work that incorporates the products. Manufacturer's disclaimers and limitations on product warranties do not relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor. Manufacturer's disclaimers and limitations on product warranties do not alter the Contractor's requirements of the Contract Documents.**

D. Separate Prime Contracts: Each prime Contractor is responsible for warranties related to its own Contract.

### 1.3 DEFINITIONS

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A. Standard products warranties are preprinted written warranties published by individual manufacturers for particular products and are specifically endorsed by the manufacturer to the Owner.
B. Special warranties are written warranties required by or incorporated in the Contract Documents, either to extend time limits provided by standard warranties or to provide greater rights for the Owner.

### 1.4 WARRANTY REQUIREMENTS

A. Related Damages and Losses: When correcting failed or damaged warranted construction, remove and replace construction that has been damaged as a result of such failure or must be removed and replaced to provide access for correction of warranted construction.

B. Reinstatement of Warranty: When Work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.

C. Replacement Cost: Upon determination that Work covered by a warranty has failed, replace or rebuild the Work to an acceptable condition complying with requirements of the Contract Documents. The Contractor is responsible for the cost of replacing or rebuilding defective Work regardless of whether the Owner has benefited from use of the Work through a portion of its anticipated useful service life.

D. Owner's Recourse: Expressed warranties made to the Owner are in addition to implied warranties and shall not limit the duties, obligations, rights, and remedies otherwise available under the law. Expressed warranty periods shall not be interpreted as limitations on the time in which the Owner can enforce such other duties, obligations, rights, or remedies.
   1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selection to products with warranties not in conflict with requirements of the Contract Documents.

E. Where the Contract Documents require a special warranty, or similar commitment on the Work or part of the Work, the Owner reserves the right to refuse to accept the Work, until the Contractor presents evidence that entities required to countersign such commitments are willing to do so.

1.5 SUBMITTALS

A. Submit written warranties to the Architect prior to the date certified for Substantial Completion. If the Architect's Certificate of Substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the Work, submit written warranties upon request of the Architect.
   1. When a designated portion of the Work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Architect within 15 days of completion of that designated portion of the Work.

B. When the Contract Documents require the Contractor, or the Contractor and a Subcontractor, supplier or manufacturer to execute a special warranty, prepare a written document that contains appropriate terms and identification, ready for execution by the required parties. Submit a draft to the Owner, through the Architect, for approval prior to final execution.

C. Prepare a written document utilizing the appropriate form, ready for execution by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Submit a draft to the Owner, through the Architect, for approval prior to final execution.
   1. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.

D. Form of Submittal: At Final Completion compile 2 copies of each required warranty properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual as described in Div 01600, Product Requirements.

E. Bind warranties and bonds in heavy-duty, commercial-quality, durable 3-ring, vinyl-covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8-1/2-by-11-inch (115-by-280-mm) paper.

1. Provide heavy paper dividers with celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address, and telephone number of the Installer.
2. Identify each binder on the front and spine with the typed or printed title "WARRANTIES," Project title or name, and name of the Contractor.
3. When warranted construction requires operation and maintenance manuals, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used – see individual Specification Section for warranty Requirements)

**END OF SECTION**

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# SECTION 02070 - SELECTIVE DEMOLITION

## PART 1 – GENERAL

### 1.1 SUMMARY

A. This section includes the following:
   1 Demolition and removal of selected portions of a building.
   2 Repair procedures for selective demolition operations.

B. Definitions:
   1 Remove: Detach items from existing construction and legally dispose of them.
   2 Existing to Remain: Existing items of construction that are not to be removed.

### 1.2 MATERIALS OWNERSHIP

A. Except for items or materials indicated to be salvaged, reinstalled or otherwise indicated to remain the Owner's property, demolished materials shall become the Contractor's property and shall be removed from the site with further disposition at Contractor's option.

### 1.3 SUBMITTALS

A. Qualification Data: List of demolition firm's completed projects with project addresses, and contact information.

B. Proposed dust-control measures.

D. Schedule of Selective Demolition Activities: Indicate the following:
   1 Detailed sequence of selective demolition work, with starting and ending dates for each activity.
   2 Interruption of utility services.
   3 Coordination for shutoff, capping, and continuation of utility services.

E. Photographs or Videotape: Before work begins, submit sufficiently detailed photographs or videotapes showing existing conditions of adjoining construction and site improvements, including finish surfaces, that might be misconstrued as damage caused by selective demolition operations.

### 1.4 QUALITY ASSURANCE

B. Regulatory Requirements: Comply with governing EPA notification regulations before starting selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.

C. Standards: Comply with NFPA 241 and ANSI A10.6.

D. Pre-Demolition Conference: Conduct conference at Project site to comply with requirements in Division 1, Section 01041 – Project Coordination Review methods and procedures related to selective demolition including, but not limited to, the following:
   1 Inspect and discuss condition of construction to be selectively demolished.
   2 Review and finalize demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
   3 Review requirements of work performed by other trades that rely on substrates exposed by demolition operations.

E. In company with the Architect, visit the site prior to demolition work and verify the extent and location of selective demolition required. Carefully identify limits of selective demolition, prior to meeting. Mark interface surfaces as required to enable workmen also to identify items to be removed and items to be left in place intact.

F. Prepare and follow an organized plan for demolition and removal of items. Submit to Architect for review and approval.

1.5 PROTECTION

A. Perform demolition in such manner as to eliminate hazards to persons and property; to minimize interference with use of adjacent areas, utilities and structures or interruption of use of such utilities; and to provide free passage to and from such adjacent areas of structures.

B. Provide safeguards, including warning signs, barricades, temporary fences, warning lights and other similar items that are required for protection of all personnel during demolition and removal operations.

C. Prevent spread of flying particles and dust on pavements. Sprinkle rubbish and debris with water to keep dust to a minimum. Do not use water if it results in hazardous or objectionable condition such as, but not limited to; ice, flooding or pollution. Sweep the work area daily. Sweep pavements as often as necessary to control the spread of debris.

D. In addition to previously listed fire and safety rules to be observed in performance of work include the following:
   1 No wall or part of wall shall be permitted to fall outwardly from structures.
   2 Wherever a cutting torch or other equipment that might cause a fire is used, provide and maintain fire extinguishers nearby ready for immediate use. Instruct all possible users in the use of fire extinguishers.
   3 Keep hydrants clear and accessible at all times. Prohibit debris from accumulating within a radius of 15 feet of fire hydrants.

E. Before beginning any demolition work, the Contractor shall survey the site and examine the drawings and specifications to determine the extent of the work. The Contractor shall take necessary precautions to avoid damages to existing items to remain in place, to be reused, or to remain the property of the Owner any damaged items shall be repaired or replaced as approved by the Architect. The Contractor shall coordinate the work of this section with all other work and shall construct and maintain shoring, bracing, and supports as required. The Contractor shall ensure that structural elements are not overloaded and shall be responsible for increasing structural supports or adding new supports as may be required as a result of any cutting, removal or demolition work performed under this contract. Do not overload structural elements. Provide new supports and reinforcement for existing construction weakened by demolition or removal works. Repairs, reinforcement or structural replacement must have Architect's approval.

G. Temporary Roofing: Install temporary roofing and flashing as necessary to maintain a watertight condition throughout the course of the wok. Remove temporary work prior to installation of permanent roof system materials unless approved otherwise by the Architect.

H. Demolition contractor to install filter media (MERV 7) securely over all intake trills and duct openings before starting anny demolition work. Inspect and maintain all filter media on a daily basis.

1.6 PROJECT CONDITIONS

A. Maintain access to existing walkways, corridors and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from the Owner.

B. On-site storage or sale of removed items or materials will not be permitted.

C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.

D. Fire Protection: Maintain fire-protection services during selective demolition operations.

1.7 WEATHER PROTECTION

A. For portions of the building to remain, protect building interior and materials and equipment from the weather at all times. Where removal of existing roofing is necessary to accomplish work, have materials and workmen ready to provide adequate and temporary covering of exposed areas.

1.8 WARRANTIES

A. Existing Special Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials that do not void existing warranties.

PART 2 PRODUCTS

2.1 REPAIR MATERIALS

A Where available and appropriate for use, provide repair materials that are identical to existing materials.

B Where identical materials are unavailable or cannot be used for exposed surfaces, use materials that visually match existing adjacent surfaces to the fullest extent possible.

C Use materials whose installed performance equals or surpasses that of existing materials.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify that utilities to be removed have been disconnected and capped.

B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.

C. When encountering unanticipated mechanical, electrical or structural elements that conflict with the intended function or design, investigate and measure the nature and extent of the conflict. Promptly submit a written report to the Architect.

D. Survey the condition of the building to determine whether removing any element might result in a structural deficiency or unplanned collapse of any portion of the structure or adjacent structures during selective demolition.

E. Perform surveys as the selective demolition progresses to detect hazards resulting from the activities.

3.2 UTILITY SERVICES

A. Existing Utilities: Maintain services indicated to remain and protect them against damage during selective demolition operations.

B. Do not interrupt existing utilities serving occupied or operating facilities, except when authorized in writing by th Owner.
   1 Provide temporary services during interruptions to existing utilities, as acceptable to the Owner.
   2 Provide not less than 72 hours notice to the Contracting Officer's Representative if shutdown of service is required during changeover.

C. Utility Requirements: Locate, identify, disconnect, and seal or cap off indicated utility services serving areas to be selectively demolished.
   1 Owner will arrange to shut off indicated utilities when requested by Contractor.
   2 Arrange to shut off indicated utilities with utility companies.
   3 Where utility services are required to be removed, relocated or abandoned, provide bypass connections to maintain continuity of service to other parts of the building before proceeding with selective demolition.
   4 Cut off pipe or conduit in walls or partitions to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit after bypassing.

   5 Do not start selective demolition work until utility disconnection, preconstruction cleaning, and sealing have been completed and verified.

3.3 PREPARATION

A. Dangerous Materials: Drain, purge or otherwise remove, collect and dispose of chemicals, gases, explosives, acids, flammables or other dangerous materials before proceeding with selective demolition operations.

C. Temporary Site Control: Remove debris and conduct demolition operations in a manner to ensure minimum interference with roads, streets, walks, walkways, corridors, and other adjacent occupied or used facilities.
   1 Do not close or obstruct streets, walks, walkways, corridors, or other adjacent occupied or used facilities without permission from the Owner and the City.
   2 Provide alternate routes around closed or obstructed traffic ways if required by governing regulations.

D. Temporary Facilities: Conduct demolition operations in a manner to prevent injury to people and damage to adjacent building and facilities to remain. Provide for safe passage of people around selective demolition area.
   1 Erect temporary protection, such as walks, fences, railings, canopies and covered passageways, where required by authorities having jurisdiction.
   2 Protect existing site improvements, appurtenances and landscaping to remain.
   4 Provide temporary weather protection, during interval between demolition and removal of existing construction, on exterior surfaces and new construction to prevent water leakage or damage to structure or interior areas.
   5 Protect walls, ceilings, floors and other existing finish work that are to remain and are exposed during selective demolition operations.
   6 Cover and protect furniture, furnishings and equipment that have not been removed.

E. Temporary Enclosures: Erect and maintain dustproof partitions and temporary enclosures to limit dust and dirt migration and to separate areas from fumes and noise.

F. Temporary Shoring: Provide and maintain shoring, bracing or other structural support to preserve stability and prevent movement, settlement or collapse of building to be selectively demolished. Strengthen or add new supports when required during the progress of selective demolition.

3.4 POLLUTION CONTROLS

A. Dust Control: Use temporary enclosures and other suitable methods complying with governing environmental protection regulations to limit the spread of dust and dirt.
   1 Do not use water when it may damage existing construction or create hazardous or objectionable conditions, such as ice, flooding or pollution.
   2 Wet mop floors to eliminate trackable dirt, and wipe down walls and doors of demolition enclosure.

B. Disposal: Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

C. Cleaning: Clean adjacent structures and site improvements of dust, dirt and debris caused by selective demolition operations. Return adjacent areas to condition existing before start of selective demolition.

3.5 SELECTIVE DEMOLITION

A. Demolish and remove existing construction only to the extent required by new construction and as indicated on the drawings. Use methods required to complete selective demolition within limitations of governing regulations and as follows:
   1 Proceed with selective demolition systematically. Conduct work in an order that avoids transporting removed items and debris through areas with completed selective demolition work, and that allows for removal of items before supports for those items are removed in another area.
   2 Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage adjoining construction to remain. Use hand or small power tools designed for sawing or grinding, not for hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
   3 Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
   4 Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations, and maintain adequate ventilation when using cutting torches.
   5 Remove decayed, vermin-infested and other dangerous or unsuitable materials, and promptly dispose of these materials off-site.
   6 Locate selective demolition equipment throughout the structure and remove debris and materials so as not to impose excessive loads on supporting walls, floors or framing.
   7 Return elements of construction and surfaces to remain to condition existing before start of selective demolition operations.

B. Existing Facilities: Protect stairs, walkways, loading docks, building entries and other building facilities during selective demolition operations.

C. Protection of Salvaged Items: Pack or crate salvaged materials and equipment after removal. Identify contents of containers. Protect items from damage during transport and storage.

D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by the Owner, items may be removed to a suitable, protected storage location during selective demolition and then cleaned and reinstalled in their original locations.

E. Concrete and Masonry: Demolish concrete and masonry in small sections. At junctures with construction to remain, cut concrete and masonry using power-driven masonry saw or hand tools; do not use power-driven impact tools.

F. Resilient Floor Coverings: Remove floor coverings and adhesive, and prepare substrate for new floor covering, according to recommendations of the Resilient Floor Covering Institute (RFCI).

G. Roofing: Remove no more existing roofing than can be covered in one day by new roofing. Refer to applicable Division 7 Section for new roofing requirements.

H. Air-Conditioning Equipment: Remove equipment without releasing refrigerants. Contractor to provide a crane for removal of existing HVAC equipment. Coordinate with the installation of new HVAC unit.

3.6 PATCHING AND REPAIRS

A. Promptly patch and repair holes and damaged surfaces caused to adjacent construction by selective demolition operations.

B. Repairs: Where repairs to existing surfaces are required, patch to produce surfaces suitable for new materials.
   1 Completely fill holes and depressions in existing masonry walls to remain with an approved masonry patching material, applied according to the manufacturer's written recommendations.

C. Finishes: Restore exposed finishes of patched areas and extend finish restoration into adjoining construction to remain in a manner that eliminates evidence of patching and refinishing.

D. Floor and Wall Surfaces: Patch and repair floor and wall surfaces in each space where demolished walls or partitions result in extending one finished area into another. Provide a flush and even surface of uniform color and appearance.
   1 Closely match texture and finish of existing adjacent surface.
   2 Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
   3 Where patching smooth painted surfaces, extend final paint coat over entire unbroken surface containing the patch after the patched surface has received primer and other specified undercoats.
   4 Remove existing floor and wall coverings and replace with new materials, if necessary to achieve uniform color and appearance.
   5 Where feasible, inspect and test patched areas to demonstrate integrity of the installation.

3.7 DISPOSAL OF DEMOLISHED MATERIALS

A. Promptly dispose of demolished materials. Do not allow demolished materials to accumulate on-site.

B. Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner property and legally dispose of them.

**END OF SEC`TION**

# SECTION 05300 - STEEL DECKING

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

A. Section Includes:

1. Roof deck.

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of deck, accessory, and product indicated.

B. Shop Drawings: Reproductions made from contract drawings will not be accepted. Submit one (1) electronic print. Review of shop drawings by the Architect/Engineer will be for general compliance with contract documents.

1. Include plans showing layout and types of deck panels, anchorage details, reinforcing channels, pans, cut deck openings, special jointing, accessories, and attachments to other construction.

### 1.4 INFORMATIONAL SUBMITTALS

A. Welding certificates.

B. Product Certificates: For each type of steel deck.

C. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, indicating that each of the following complies with requirements:

1. SMS Screws.

D. Evaluation Reports: For steel deck.

E. Field quality-control reports.

1.5 QUALITY ASSURANCE

A. Testing Agency Qualifications: Qualified according to ASTM E 329 for testing indicated.

B. Welding Qualifications: Qualify procedures and personnel according to AWS D1.3, "Structural Welding Code - Sheet Steel."

1.6 DELIVERY, STORAGE, AND HANDLING

A. Protect steel deck from corrosion, deformation, and other damage during delivery, storage, and handling.

B. Stack steel deck on platforms or pallets and slope to provide drainage. Protect with a waterproof covering and ventilate to avoid condensation.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. AISI Specifications: Comply with calculated structural characteristics of steel deck according to AISI's "North American Specification for the Design of Cold-Formed Steel Structural Members."

B. Fire-Resistance Ratings: Comply with ASTM E 119; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

1. Indicate design designations from UL's "Fire Resistance Directory" or from the listings of another qualified testing agency.

2.2 ROOF DECK

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Canam Steel Corporation.

2. Epic Metals Corporation.

3. New Millennium Building Systems, LLC.

4. Nucor Corp.; Vulcraft Group. (design basis on structural plans)

5. Valley Joist.

6. DACS, Inc.

7. Cordeck.

8. Consolidated Systems, Inc.

B. Roof Deck: Fabricate panels, without top-flange stiffening grooves, to comply with "SDI Specifications and Commentary for Steel Roof Deck," in SDI Publication No. 31, and with the following:

1. Galvanized Steel Sheet: ASTM A 653/A 653M, Structural Steel (SS), Grade 50 (minimum yield stress in ksi), G60 zinc coating. At all exposed conditions, galvanized deck shall cleaned, pretreated, and primed with manufacturer's standard baked-on, rust-inhibitive primer. Verify compatibility with top coat specified by Architect.

2. Deck Profile: As indicated.

3. Profile Depth: As indicated.

4. Design Uncoated-Steel Thickness: As indicated.

5. Design Uncoated-Steel Thicknesses; Deck Unit/Bottom Plate: As indicated.

6. Span Condition: Triple span or more unless not permitted by geometry.
7. Side Laps: Overlapped.

## 2.3 ACCESSORIES

A. General: Provide manufacturer's standard accessory materials for deck that comply with requirements indicated.

B. Mechanical Fasteners: Corrosion-resistant, low-velocity, power-actuated or pneumatically driven carbon-steel fasteners; or self-drilling, self-threading screws.

C. Side-Lap Fasteners: Corrosion-resistant, hexagonal washer head; self-drilling, carbon-steel screws, No. 10 minimum diameter.

D. Fasteners indicated on plans as “Tek Screws” shall be self-drilling tapping screws complying with the material, process, and performance requirements of ASTM C1513. Tek screws shall be corrosion resistant and meet the minimum requirements of ASTM F1941. Provide larger screws if required for attachment to structural steel. Provide screws penetrating joined members by not less than three exposed screw threads

E. Flexible Closure Strips: Vulcanized, closed-cell, synthetic rubber.

F. Miscellaneous Sheet Metal Deck Accessories: Steel sheet, minimum yield strength of 33,000 psi, not less than 0.0359-inch design uncoated thickness, of same material and finish as deck; of profile indicated or required for application.

G. Pour Stops and Girder Fillers: Steel sheet, minimum yield strength of 33,000 psi, of same material and finish as deck, and of thickness and profile recommended by SDI Publication No. 31 for overhang and slab depth.

H. Column Closures, End Closures, Z-Closures, and Cover Plates: Steel sheet, of same material, finish, and thickness as deck unless otherwise indicated.

I. Weld Washers: Uncoated steel sheet, shaped to fit deck rib, 0.0598 inch thick, with factory-punched hole of 3/8-inch minimum diameter.

J. Galvanizing Repair Paint: ASTM A 780.

K. Repair Paint: Manufacturer's standard rust-inhibitive primer of same color as primer.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

A. Examine supporting frame and field conditions for compliance with requirements for installation tolerances and other conditions affecting performance.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. Install deck panels and accessories according to applicable specifications and commentary in SDI Publication No. 31, manufacturer's written instructions, and requirements in this Section.

B. Install temporary shoring before placing deck panels if required to meet deflection limitations.

C. Locate deck bundles to prevent overloading of supporting members.

D. Place deck panels on supporting frame and adjust to final position with ends accurately aligned and bearing on supporting frame before being permanently fastened. Do not stretch or contract side-lap interlocks.

E. Place deck panels flat and square and fasten to supporting frame without warp or deflection.

F. Cut and neatly fit deck panels and accessories around openings and other work projecting through or adjacent to deck.

G. Provide additional reinforcement and closure pieces at openings as required for strength, continuity of deck, and support of other work. See structural drawings for 12 gage reinforcement plate required at small openings in the deck.

H. Comply with AWS requirements and procedures for manual shielded metal arc welding, appearance and quality of welds, and methods used for correcting welding work.

I. Deck fasteners shall be in accordance with structural contract drawings.

3.3 ROOF-DECK INSTALLATION

A. Fasten roof-deck panels to steel supporting members as indicated on the plans.

B. Side-Lap and Perimeter Edge Fastening: Fasten side laps and perimeter edges of panels as indicated on the plans.

C. End Bearing: Install deck ends over supporting frame with a minimum end bearing of 1-1/2 inches, with end joints as follows:

1. End Joints: Lapped 2 inches minimum.

D. Miscellaneous Roof-Deck Accessories: Install ridge and valley plates, finish strips, end closures, and reinforcing channels according to deck manufacturer's written instructions. mechanically fasten to substrate to provide a complete deck installation.

E. Flexible Closure Strips: Install flexible closure strips over partitions, walls, and where indicated. Install with adhesive according to manufacturer's written instructions to ensure complete closure.

3.4 FIELD QUALITY CONTROL

A. Testing Agency: Owner will engage a qualified testing agency to perform tests and inspections.

B. Tests and inspections shall be performed in accordance with SDI-QA/QC “Standard for Quality Control and Quality Assurance for Installation of Steel Deck.”

C. Field welds will be subject to inspection.

D. Testing agency will report inspection results promptly and in writing to Contractor and Architect.

E. Remove and replace work that does not comply with specified requirements.

F. Additional inspecting, at Contractor's expense, will be performed to determine compliance of corrected work with specified requirements.

G. Prior to placement of roofing material over metal roof deck, the Contractor shall notify Testing Agency to perform inspection of roof deck fastening to supporting elements. Roofing material shall not be placed until inspection results are reviewed by Architect and all corrective work is complete.

3.5 PROTECTION

A. Galvanizing Repairs: Prepare and repair damaged galvanized coatings on both surfaces of deck with galvanized repair paint according to ASTM A 780 and manufacturer's written instructions.

B. Repair Painting: Wire brush and clean rust spots, welds, and abraded areas on both surfaces of prime-painted deck immediately after installation, and apply repair paint.

1. Apply repair paint, of same color as adjacent shop-primed deck, to bottom surfaces of deck exposed to view.

2. Wire brushing, cleaning, and repair painting of bottom deck surfaces are included in Division 09 Section.

C. Provide final protection and maintain conditions to ensure that steel deck is without damage or deterioration at time of Substantial Completion.

**END OF SECTION**

# SECTION 05500 - METAL FABRICATIONS

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:
1. Miscellaneous metal fabrications.
2. Shop coatings.

### 1.2 SUBMITTALS

A. Shop Drawings: For each fabricated item, show the following:
1. Plans and elevations.
2. Jointing and connections.
   a. Indicate welded connections using standard AWS symbols; indicate net weld length.
3. Profiles of sections and reinforcing.
4. Fasteners and anchors.
5. Accessories.
6. Location of each finish.

B. Product Data: Manufacturer's specifications and installation instructions. Submit for:
1. All manufactured products used in fabrications.

### 1.3 JOB CONDITIONS

A. Fit fabrications accurately to actual construction. If it is not practical or possible to take field measurements before fabrication, allow adequate fabrication tolerances and trim to fit.

B. All supporting steel, plates, angles, and lintels in contact with Precast Concrete to be galvanized.

## PART 2 - PRODUCTS

### 2.1 MATERIALS - METALS

A. Steel Shapes:
1. Plates, bars, angles, channels, and H-sections: ASTM A 36.
2. Galvanizing: Hot-dip galvanizing after fabrication in accordance with ASTM A 123.
3. Tube:
   a.Cold-formed: ASTM A 500.
      1. Galvanizing: Hot-dip galvanizing after fabrication in accordance with ASTM A 123.

B. Steel Sheet:
1. For nonstructural uses: Cold-rolled, ASTM A 366; hot-rolled, ASTM A 569.

C. Galvanizing for Steel Rough Hardware Fabrications: Hot-dip galvanizing in accordance with ASTM A 153.

### 2.2 MATERIALS - MISCELLANEOUS

A. Concrete: Normal weight ready-mix concrete as specified in Division 3.

1. Compressive strength: 2500 pounds per square inch, minimum, at 28 days, unless otherwise indicated.

B. Concrete Inserts: Style as required for application.

C. Fasteners: Use fasteners suitable for the material being fastened and for the type of connection required.
1. For exterior use or built into exterior walls: Nonferrous stainless steel, zinc coated or cadmium plated.
2. Use fasteners of same material as items being fastened unless otherwise indicated.
3. Bolts and studs: ASTM A 307.
4. Nuts: ASTM A 563.
5. Machine screws: FS FF-S-92.
6. Plain washers: FS FF-W-92.
7. Lock washers: FS FF-W-84.
8. Expansion shields: FS FF-S-325.

D. Galvanizing Repair Paint: Zinc dust paint complying with SSPC-Paint 20 or MIL P-21035B, Type I or II.

E. Shop Primer: Fabricator's standard primer.

2.3 FABRICATION - GENERAL

A. Fabricate and shop-assemble in largest practical sections for delivery to site.
1. Prepare and reinforce fabrications as required to receive applied items.
2. Fabricate items with joints tightly fitted and secured.
3. Make exposed joints tight, flush, and hairline.

B. Fasteners: Use concealed fasteners if possible.
1. Exposed fasteners: Flathead, countersunk type unless otherwise indicated.

C. Anchors: Fabricate to suit conditions indicated; use anchors of same material and finish as item except where specifically indicated otherwise.

D. Welding:
1. Provide continuous welds at welded corners and seams.
2. Exposed welds: Grind flush and smooth.

2.4 FABRICATION - SHEET METAL

A. Comply with general fabrication requirements.

B. Bend sheet metal corners to smallest possible radius.

C. Welding Steel Sheet: Comply with AWS D1.3 recommendations.

2.5 FABRICATION - SHOP COATINGS

A. Shop prime all iron and steel fabrications, except:
1. Galvanized fabrications.
2. Fabrications embedded in concrete or mortar.

B. Prepare surfaces to be coated as follows:
1. Solvent-clean in accordance with SSPC-SP 1.
2. Interior fabrications: Clean in accordance with SSPC-SP 3, SSPC-SP 5, SSPC-SP 6, SSPC-SP 8, or SSPC-SP 10.

C. Shop Priming: Comply with SSPC-PA 1.
1. Apply primer immediately following surface preparation.
2. Do not prime surfaces to be welded.
3. Do not prime surfaces in direct contact bond with concrete.
4. Apply extra coat to corners, welds, edges, and fasteners.

D. Shop Painting: Comply with SSPC-PA 1.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

A. Anchor metal fabrications to substrates indicated; provide all fasteners required.

B. Perform all field fabrication required for installation.
1. Fit joints tightly.
2. Weld joints as indicated.
a. Weld in accordance with AWS code.
b. Exposed welds: Grind flush and smooth.

C. Do not cut or weld items galvanized after fabrication that are indicated for bolted or screwed connections.

D. Install items in correct location, plumb and level, without rack or warp.

E. Provide temporary supports and bracing as required.

3.2 CLEANING AND TOUCH-UP

A. Touch up damage to galvanized surfaces using galvanizing repair paint in accordance with ASTM A 780.

B. Touch up shop paint immediately after erection.
1. Clean field welds, bolted joints, and areas where primer is damaged.
2. Paint with material used for shop painting, minimum 2 mils dry film thickness.

**END OF SECTION**

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# SECTION 06100 - ROUGH CARPENTRY

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:
   1. Carpentry work not specified as part of other sections and which generally is not exposed, except as otherwise indicated.
   2. Rough carpentry for:
      a. Miscellaneous lumber for attachment and support of other work.

### 1.2 SUBMITTALS

A. Treated Wood: Treating plant's instructions for use, including storage, cutting, and finishing.

### 1.3 QUALITY ASSURANCE

A. Lumber: Comply with NIST PS 20 and approved grading rules and inspection agencies.

B. Grade Stamps for Concealed Lumber: Each piece of lumber, applied by inspection agency and showing compliance with each specified requirement.

### 1.4 DELIVERY STORAGE AND HANDLING

A. Protect wood products against moisture and dimensional changes. Support stacks at several uniformly spaced points to prevent deformation. Store stacks raised above ground. Cover to protect from rain and snow. Select and arrange cover to allow air circulation under and all around stacks to prevent condensation. Maintain and restore displaced coverings. Remove from the site any wood products that have been subjected to moisture or that do not comply with the specified moisture requirements.

## PART 2 - PRODUCTS

### 2.1 DIMENSION LUMBER

A. Size: Provide nominal sizes indicated, complying with NIST PS 20 except where actual sizes are specifically required.

B. Miscellaneous Lumber: Provide dimension lumber and boards necessary for the support of work specified in other sections, whether or not specifically indicated, and including but not limited to blocking, nailers, etc.
   1. Moisture content: 19 percent maximum (S-dry) lumber; 18 percent maximum plywood.
   2. Lumber: S4S, No. 2 or standard grade.
   3. Boards: Construction, 2 common, or No. 2 grade.

### 2.2 MISCELLANEOUS MATERIALS

A. Fasteners: Provide as required by applicable codes in metal types recommended by the manufacturer for type of wood treatment provided, and as otherwise indicated.

### 2.3 WOOD TREATMENT BY PRESSURE PROCESS

A. Pressure Treatment:

1. Provide treatment classified for use as Exterior Type for exterior and Interior Type A (low hydroscopicity) for interior.

PART 3 - EXECUTION

3.1 INSTALLATION - GENERAL

A. Arrange work to use full length pieces except where lengths would exceed commercially available lengths. Discard pieces with defects that would lower the required strength or appearance of the work.

B. Cut and fit members accurately. Install plumb and true to line and level.

C. Fasten carpentry in accordance with applicable codes and recognized standards.

D. Where exposed, countersink nails and fill flush with suitable wood filler.

E. Use fasteners of appropriate type and length. Predrill members when necessary to avoid splitting wood.

3.2 MISCELLANEOUS CARPENTRY

A. Provide miscellaneous blocking, nailers, grounds, and framing as shown and as required for support of facing materials, fixtures, specialty items, and trim. Cut and shape to the required size. Provide in locations required by other work.

B. Use countersunk fasteners appropriate to applied loading.

**END OF SECTION**

# SECTION 07410 - FORMED METAL WALL PANELS

## PART 1 - GENERAL

### 1.1 RELATED DOCUMENTS

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

### 1.2 SUMMARY

A. Section Includes:
   1. Exposed-fastener, lap-seam metal wall panels.

B. Related Sections:
   1. Section 07600 Flashings and Sheet Metal
   2. Section 07710 Manufactured Roof Specialties
   3. Section 07900 Joint Sealers

### 1.3 ACTION SUBMITTALS

A. Product Data: For each type of product.
   1. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of panel and accessory.

B. Shop Drawings:
   1. Include fabrication and installation layouts of metal panels; details of edge conditions, joints, panel profiles, corners, anchorages, attachment system, trim, flashings, closures, and accessories; and special details.
   2. Accessories: Include details of the flashing, trim, and anchorage systems, at a scale of not less than 3" = 1'-0" (1:5).

C. Calculations:
   1. Manufacturer’s seal calculations will be acceptable.

D. Samples for Initial Selection: For each type of metal panel indicated with factory-applied finishes.
   1. Include Samples of trim and accessories involving color selection.

E. Samples for Verification: For each type of exposed finish, prepared on Samples of size indicated below:
   1. Metal Panels: 12 inches (305 mm) long by actual panel width. Include fasteners, closures, and other metal panel accessories.

### 1.4 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and Manufacturer.

B. Product Test Reports: For each product, for tests performed by a qualified testing agency.

C. Field quality-control reports.

D. Sample Warranties: For special warranties.

### 1.5 CLOSEOUT SUBMITTALS

A. Maintenance Data: For metal panels to include in maintenance manuals.

1.6 QUALITY ASSURANCE

A. Installer Qualifications: An entity that employs installers and supervisors who are trained and approved by manufacturer.

B. Manufacturer Qualifications: Company specializing in Architectural Sheet Metal Products.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Deliver components, metal panels, and other manufactured items so as not to be damaged or deformed. Package metal panels for protection during transportation and handling.

B. Unload, store, and erect metal panels in a manner to prevent bending, warping, twisting, and surface damage.

C. Stack metal panels horizontally on platforms or pallets, covered with suitable weathertight and ventilated covering. Store metal panels to ensure dryness, with positive slope for drainage of water. Do not store metal panels in contact with other materials that might cause staining, denting, or other surface damage.

D. Remove strippable protective covering on metal panels as panels are being installed. Do not leave the film on installed panels.

1.8 FIELD CONDITIONS

A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit assembly of metal panels to be performed according to manufacturers' written instructions and warranty requirements.

1.9 COORDINATION

A. Coordinate metal panel installation with rain drainage work, flashing, trim, construction of soffits, and other adjoining work to provide a leakproof, secure, and noncorrosive installation.

1.10 WARRANTY

A. Galvalume Substrate Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of metal panel systems that fail in materials or workmanship within specified warranty period.
   1. Failures include, but are not limited to, the following:
      a. Structural failures including rupturing or perforating.
      b. Deterioration of metals and other materials beyond normal weathering.
   2. Warranty Period: 20 years and 6 months from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Structural Performance: Provide metal panel systems capable of withstanding the effects of the following loads:
   1. Wind Loads: As indicated on Drawings.
   2. Deflection Limits: For wind loads, no greater than 1/240 of the span.

2.2 EXPOSED-FASTENER, LAP-SEAM METAL WALL PANELS

A. Tapered-Rib-Profile, Exposed-Fastener Metal Wall Panels formed with raised, trapezoidal major ribs and a flat pan between major ribs.

B. Basis-of-Design Product: Subject to compliance with requirements, provide Berridge Manufacturing Company; R-Panel.

C. Refer to drawings for locations.

D. Unpainted metal shall be Aluminum-Zinc Alloy Coated (AZ-55 Acrylic Coated Galvalume®) Steel Sheet, 24-Gauge, ASTM 792-08, Grade 40, yield strength 40 ksi min., with clear acrylic coating on both sides of material.

E. Overall panel width shall be 38-1/4, with 36” net coverage.

F. Panels shall be factory-formed to 40’ max and shall have exposed fasteners.

G. 1-1/4” high ribs to be spaced 12” on center, with ¾” wide by ¼” high minor ribs spaced 4” on center between major ribs.

H. Panel-to-panel and panel-to-stud connections to be No. 12-14 self-drilling tapping fasteners, 1” min. for panel-to-stud connections, ¾” minimum for panel-to-panel connections.

I. Refer to Drawings for location & orientation.

2.3 MISCELLANEOUS MATERIALS

A. Miscellaneous Metal Subframing and Furring: ASTM C 645, cold-formed, metallic-coated steel sheet, ASTM A 653/A 653M, G90 (Z275) hot-dip galvanized coating designation or ASTM A 792/A 792M, Class AZ50 (Class AZM150) aluminum-zinc-alloy coating designation unless otherwise indicated. Provide manufacturer's standard sections as required for support and alignment of metal panel system.

B. Panel Accessories: Provide components required for a complete, weathertight panel system including trim, copings, fasciae, mullions, sills, corner units, clips, flashings, sealants, gaskets, fillers, closure strips, and similar items. Match material and finish of metal panels unless otherwise indicated.
   1. Closures: Provide closures at eaves and rakes, fabricated of same metal as metal panels.
   2. Backing Plates: Provide metal backing plates at panel end splices, fabricated from material recommended by manufacturer.
   3. Closure Strips: Closed-cell, expanded, cellular, rubber or crosslinked, polyolefin-foam or closed-cell laminated polyethylene; minimum 1-inch- (25-mm-) thick, flexible closure strips; cut or premolded to match metal panel profile. Provide closure strips where indicated or necessary to ensure weathertight construction.

C. Flashing and Trim: Provide flashing and trim formed from same material as metal panels as required to seal against weather and to provide finished appearance. Locations include, but are not limited to, bases, drips, sills, jambs, corners, endwalls, framed openings, rakes, fasciae, parapet caps, soffits, reveals, and fillers. Finish flashing and trim with same finish system as adjacent metal panels.

D. Panel Fasteners: Self-tapping screws designed to withstand design loads. Provide exposed fasteners with heads matching color of metal panels by means of factory-applied coating. Provide EPDM or PVC sealing washers for exposed fasteners.

E. Panel Sealants: Provide sealant type recommended by manufacturer that are compatible with panel materials, are nonstaining, and do not damage panel finish.
   1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape 1/2 inch (13 mm) wide and 1/8 inch (3 mm) thick.
   2. Joint Sealant: ASTM C 920; elastomeric polyurethane or silicone sealant; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended in writing by metal panel manufacturer.
   3. Butyl-Rubber-Based, Solvent-Release Sealant: ASTM C 1311.

2.4 FABRICATION

A. General: Fabricate and finish metal panels and accessories at the factory, by manufacturer's standard procedures and processes, as necessary to fulfill indicated performance requirements demonstrated by laboratory testing. Comply with indicated profiles and with dimensional and structural requirements.

B. Provide panel profile, including major ribs and intermediate stiffening ribs, if any, for full length of panel.

C. Sheet Metal Flashing and Trim: Fabricate flashing and trim to comply with manufacturer's recommendations and recommendations in SMACNA's "Architectural Sheet Metal Manual" that apply to design, dimensions, metal, and other characteristics of item indicated.
   1. Form exposed sheet metal accessories that are without excessive oil canning, buckling, and tool marks and that are true to line and levels indicated, with exposed edges folded back to form hems.
   2. Seams for Aluminum: Fabricate nonmoving seams with flat-lock seams. Form seams and seal with epoxy seam sealer. Rivet joints for additional strength.
   3. Seams for Other Than Aluminum: Fabricate nonmoving seams in accessories with flat-lock seams. Tin edges to be seamed, form seams, and solder.
   4. Sealed Joints: Form nonexpansion, but movable, joints in metal to accommodate sealant and to comply with SMACNA standards.
   5. Conceal fasteners and expansion provisions where possible. Exposed fasteners are not allowed on faces of accessories exposed to view.
      Fabricate cleats and attachment devices from same material as accessory being anchored or from compatible, noncorrosive metal recommended in writing by metal panel manufacturer.
      a. Size: As recommended by SMACNA's "Architectural Sheet Metal Manual" or metal wall panel manufacturer for application but not less than thickness of metal being secured.

2.5 FINISHES

A. Protect mechanical and painted finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, metal panel supports, and other conditions affecting performance of the Work.
   1. Examine wall framing to verify that girts, angles, channels, studs, and other structural panel support members and anchorage have been installed within alignment tolerances required by metal wall panel manufacturer.

2. Examine wall sheathing to verify that sheathing joints are supported by framing or blocking and that installation is within flatness tolerances required by metal wall panel manufacturer.
   a. Verify that air- or water-resistive barriers have been installed over sheathing or backing substrate to prevent air infiltration or water penetration.

B. Examine roughing-in for components and systems penetrating metal panels to verify actual locations of penetrations relative to seam locations of metal panels before installation.

C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Miscellaneous Supports: Install subframing, furring, and other miscellaneous panel support members and anchorages according to ASTM C 754 and metal panel manufacturer's written recommendations.

3.3 METAL PANEL INSTALLATION

A. General: Install metal panels according to manufacturer's written instructions in orientation, sizes, and locations indicated. Install panels perpendicular to supports unless otherwise indicated. Anchor metal panels and other components of the Work securely in place, with provisions for thermal and structural movement.
   1. Shim or otherwise plumb substrates receiving metal panels.
   2. Flash and seal metal panels at perimeter of all openings. Fasten with self-tapping screws. Do not begin installation until air- or water-resistive barriers and flashings that will be concealed by metal panels are installed.
   3. Install screw fasteners in predrilled holes.
   4. Locate and space fastenings in uniform vertical and horizontal alignment.
   5. Install flashing and trim as metal panel work proceeds.
   6. Locate panel splices over, but not attached to, structural supports. Stagger panel splices and end laps to avoid a four-panel lap splice condition.
   7. Align bottoms of metal panels and fasten with blind rivets, bolts, or self-tapping screws. Fasten flashings and trim around openings and similar elements with self-tapping screws.
   8. Provide weathertight escutcheons for pipe- and conduit-penetrating panels.

B. Fasteners:
   1. Steel Panels: Use stainless-steel fasteners for surfaces exposed to the exterior; use galvanized-steel fasteners for surfaces exposed to the interior.

C. Metal Protection: Where dissimilar metals contact each other or corrosive substrates, protect against galvanic action as recommended in writing by metal panel manufacturer.

D. Lap-Seam Metal Panels: Fasten metal panels to supports with fasteners at each lapped joint at location and spacing recommended by manufacturer.
   1. Lap ribbed or fluted sheets one full rib. Apply panels and associated items true to line for neat and weathertight enclosure.
   2. Provide metal-backed washers under heads of exposed fasteners bearing on weather side of metal panels.
   3. Locate and space exposed fasteners in uniform vertical and horizontal alignment. Use proper tools to obtain controlled uniform compression for positive seal without rupture of washer.
   4. Install screw fasteners with power tools having controlled torque adjusted to compress washer tightly without damage to washer, screw threads, or panels. Install screws in predrilled holes.
   5. Flash and seal panels with weather closures at perimeter of all openings.

E. Watertight Installation:

1. Apply a continuous ribbon of sealant or tape to seal lapped joints of metal panels, using sealant or tape as recommend by manufacturer on side laps of nesting-type panels; and elsewhere as needed to make panels watertight.
2. Provide sealant or tape between panels and protruding equipment, vents, and accessories.
3. At panel splices, nest panels with minimum 6-inch (152-mm) end lap, sealed with sealant and fastened together by interlocking clamping plates.

F. Accessory Installation: Install accessories with positive anchorage to building and weathertight mounting, and provide for thermal expansion. Coordinate installation with flashings and other components.
1. Install components required for a complete metal panel system including trim, copings, corners, seam covers, flashings, sealants, gaskets, fillers, closure strips, and similar items. Provide types indicated by metal wall panel manufacturer; or, if not indicated, provide types recommended by metal panel manufacturer.

G. Flashing and Trim: Comply with performance requirements, manufacturer's written installation instructions, and SMACNA's "Architectural Sheet Metal Manual." Provide concealed fasteners where possible, and set units true to line and level as indicated. Install work with laps, joints, and seams that are permanently watertight.
1. Install exposed flashing and trim that is without buckling and tool marks, and that is true to line and levels indicated, with exposed edges folded back to form hems. Install sheet metal flashing and trim to fit substrates and achieve waterproof performance.
2. Expansion Provisions: Provide for thermal expansion of exposed flashing and trim. Space movement joints at a maximum of 10 feet (3 m) with no joints allowed within 24 inches (610 mm) of corner or intersection. Where lapped expansion provisions cannot be used or would not be sufficiently waterproof, form expansion joints of intermeshing hooked flanges, not less than 1 inch (25 mm) deep, filled with mastic sealant (concealed within joints).

## 3.4 FIELD QUALITY CONTROL

A. Manufacturer's Field Service: Engage a factory-authorized service representative to test and inspect completed metal wall panel installation, including accessories.

B. Remove and replace metal wall panels where tests and inspections indicate that they do not comply with specified requirements.

C. Additional tests and inspections, at Contractor's expense, are performed to determine compliance of replaced or additional work with specified requirements.

D. Prepare test and inspection reports.

## 3.5 CLEANING AND PROTECTION

A. Remove temporary protective coverings and strippable films, if any, as metal panels are installed, unless otherwise indicated in manufacturer's written installation instructions. On completion of metal panel installation, clean finished surfaces as recommended by metal panel manufacturer. Maintain in a clean condition during construction.

B. After metal panel installation, clear weep holes and drainage channels of obstructions, dirt, and sealant.

C. Replace metal panels that have been damaged or have deteriorated beyond successful repair by finish touchup or similar minor repair procedures.

**END OF SECTION**

# SECTION 07520 MODIFIED BITUMINOUS MEMBRANE ROOFING

## PART 1 GENERAL

### 1.01 SECTION INCLUDES:

A. Preparation of Substrate to Receive Roofing Materials

B. Roof Insulation Application to Prepared Substrate

C. Roof Membrane Application

D. Roof Flashing Application

E. Incorporation of Sheet Metal Flashing Components and Roofing Accessories into the Roof System

### 1.02 PRODUCTS INSTALLED BUT NOT FURNISHED UNDER THIS SECTION

A. Sheet Metal Flashing and Trim

B. Sheet Metal Roofing Specialties

### 1.03 RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07410 – Formed Metal Wall Panels

C. Section 07600 – Flashing and Sheet Metal

D. Section 07710 – Manufactured Roof Specialties

E. Section 07900 – Joint Sealers

### 1.04 REFERENCE STANDARDS

References in these specifications to standards, test methods and codes, are implied to mean the latest edition of each such standard adopted. The following is an abbreviated list of associations, institutions, and societies which may be used as references throughout this specification section.

| | |
|---|---|
| ASTM | American Society for Testing and Materials<br>Philadelphia, PA |
| FM | Factory Mutual Engineering and Research<br>Norwood, MA |
| NRCA | National Roofing Contractors Association<br>Rosemont, IL |
| OSHA | Occupational Safety and Health Administration<br>Washington, DC |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association<br>Chantilly, VA |
| UL | Underwriters Laboratories |

Northbrook, IL

1.05 DESCRIPTION OF WORK

The basic work descriptions required in this specification are referenced below.

**Roof Type 1**

| | |
|---|---|
| Project Type: | New Construction |
| Deck: | New min 22 gauge Steel |
| Slope: | Minimum 1/8 inch per foot |
| Insulation – bottom layer: | Polyisocyanurate approved by Siplast, having a thickness of 2 inches, mechanically attached simultaneously with Roof Cover Panel. |
| Insulation – tapered system: | Tapered Polyisocyanurate approved by Siplast, providing for a 1/4-inch tapered slope, adhered in ParaStik Insulation Adhesive to the bottom layer of insulation. |
| Roof Cover Panel: | DensDeck Prime, having a thickness of 1/2 inch, mechanically attached. |
| Roof System: | Paradiene 20 TG, torch applied; |
| | Paradiene 30 FR TG, torch applied. |
| Proform Edge Stripping: | Paradiene 20 EG TG, torch applied. |
| Flashing System: | Paradiene 20 SA, self-adhered; |
| | Veral Aluminum, torch applied. |

**Roof Type 2**

| | |
|---|---|
| Project Type: | New Construction |
| Deck: | New min 22 gauge Steel |
| Slope: | 3-inch on 12 |
| Insulation – bottom layer: | Polyisocyanurate approved by Siplast, having a thickness of 2-inches, mechanically attached simultaneously with Roof Cover Panel. |
| Roof Cover Panel: | DensDeck Prime, having a thickness of 1/2 inch, mechanically attached. |
| Roof System: | Paradiene 20 SA, self-adhered; |
| | Veral Aluminum, torch applied. |
| Flashing System: | Paradiene 20 SA, self adhered; |
| | Veral Aluminum, torch applied. |

**Roof Type 3**

| | |
|---|---|
| Project Type: | Tear Off |
| Deck: | Existing Precast Concrete |
| Slope: | Less than 1/8-inch per foot |
| Insulation – bottom layer: | Polyisocyanurate approved by Siplast, having a thickness of 2-inches, adhered in ParaStik Insulation Adhesive. |
| Insulation – tapered system: | Tapered Polyisocyanurate approved by Siplast, providing for a 1/4-inch tapered slope, adhered in ParaStik Insulation Adhesive to the bottom layer of insulation. |
| Gypsum Sheathing Panel: | DensDeck Prime, having a thickness of 1/2 inch, adhered in ParaStik Insulation Adhesive to the tapered insulation system. |
| Roof System: | Paradiene 20 TG, torch applied; |
| | Paradiene 30 FR TG, torch applied. |
| Proform Edge Stripping Ply: | Paradiene 20 EG TG, torch applied. |
| Flashing System: | Paradiene 20 SA, self adhered; |
| | Veral Aluminum, torch applied. |

1.06 SUBMITTALS **All submittals which do not conform to the following requirements will be rejected.**

A. Submittal of Equals: Submit primary roof systems to be considered as equals to the specified roof system no less than 10 days prior to bid date. Primary roof systems which have been reviewed and accepted as equals to the specified roof system will be listed in an addendum prior to bid date; only then will equals be accepted at bidding. Submittals shall include the following:

1. Two 3 inch x 5 inch samples of the primary roofing and flashing sheets.

2. Latest edition of the roofing system manufacturer's specifications and installation instructions.

3. Evidence that the manufacturer of the proposed roofing system utilizes a quality management system that is ISO 9001 certified. Documentation of ISO 9001 certification of foreign subsidiaries without domestic certification will not be accepted.

4. Evidence and description of manufacturer's quality control/quality assurance program for the primary roofing products supplied. The quality assurance program description shall include all methods of testing for physical and mechanical property values. Provide confirmation of manufacturer's certificate of analysis for reporting the tested values of the actual material being supplied for the project prior to issuance of the specified guarantee.

5. Descriptive list of the materials proposed for use.

6. Evidence of Underwriters' Laboratories Class A acceptance of the proposed roofing system without additional requirements for gravel or coatings. No other testing agency approvals will be accepted.

7. For roof Types 1 and 2: The roof field configuration (including fastening of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-135 (-67.5 psf, Limitation No.7) uplift design pressure, the roof perimeter and corner configuration (including fastening of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-270 (-135 psf, Limitation No.7) uplift pressure.

8. For roof Type 3: The roof field configuration (including adhering of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-315 (-157.5 psf, Limitation No.9) uplift design pressure.

9. Letter from the proposed primary roofing manufacturer confirming that a phased roof application, with only the modified bitumen base ply in place for a period of up to 10 weeks, is acceptable and approved for this project.

10. List of 3 of the proposed primary roofing manufacturer's projects, located in the United States, of equal size and degree of difficulty which have been performing successfully for a period of at least 10 years.

11. Request for substitution constitutes a representation that the Contractor:

    a. Has personally investigated the proposed substitute product and determined that it is equal to or superior in all respect to that specified.
    b. Will provide the same or better warranties, bonds and guarantees for the substitution as for the specified product.
    c. Will coordinate the installation of an accepted substitution into the Work and making such changes as may be required to make the Work complete in all repects.
    d. Waives all claims for additional costs, related to the substitution which may subsequently become apparent.
    e. Certifies that the cost data presented is complete and includes all related costs under this Contract except the Architect’s redesigns costs, and waives all claims for additional costs related to the substitution which subsequently become apparent.

12. Should the Contractor propose a substitute material or method assembly that is of questionable quality or suitability to the Architect, suitable tests may be required to establish a basis for acceptance or rejection. Such tests will be paid for by the Contractor and conducted in accordance with industry accepted standards and as accepted to the Architect.

13. Substitutions will not be considered when they are indicated or implied in shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
14. The Architect shall be the judge of the acceptablility of proposed substitutions.

15. The Owner reserves the right to disapprove and reject any request for substitution.

16. Letter from the proposed primary roofing manufacturer confirming that the filler content in the elastomeric blend of the proposed roof membrane and flashing components does not exceed 35% in weight.

17. Complete list of material physical and mechanical properties for each sheet including: weights and thicknesses; low temperature flexibility; peak load; ultimate elongation; dimensional stability;

compound stability; high temperature stability; granule embedment and resistance to thermal shock for foil faced products.

18. Sample copy of the proposed guarantee.

19. Completed Product Substitution Request Form included with this specification section.

B. Submittals Prior to Contract Award:

1. Letter from the proposed primary roofing manufacturer confirming that the bidder is an acceptable Contractor authorized to install the proposed system.

2. Letter from the primary roofing manufacturer stating that the proposed application will comply with the manufacturer's requirements in order to qualify the project for the specified guarantee.

C. Submittals Prior to Project Close-out:

1. Certificate Of Analysis from the testing laboratory of the primary roofing materials manufacturer, confirming the physical and mechanical properties of the roofing membrane components. Testing shall be in accordance with the parameters published in ASTM D 5147 and ASTM D 7051 and indicate Quality Assurance/Quality Control data as required to meet the specified properties. A separate Certificate Of Analysis for each production run of material shall indicate the following information:

a) Material type
b) Lot number
c) Production date
d) Dimensions and Mass (indicate the lowest values recorded during the production run);
- Roll length
- Roll width
- Selvage width
- Total thickness
- Thickness at selvage (coating thickness)
- Weight
e) Physical and Mechanical Properties;
- Low temperature flexibility
- Peak load
- Ultimate Elongation
- Dimensional stability
- Compound Stability
- Granule embedment
- Resistance to thermal shock (foil faced products)

2. Manufacturer's printed recommendations for proper maintenance of the specified roof system including inspection frequencies, penetration addition policies, temporary repairs, and leak call procedures.

1.07 QUALITY ASSURANCE

A. Acceptable Products: Primary roofing products, including each type of sheet, all manufactured in the United States, shall be supplied by a single manufacturer which has been successfully producing the specified types of primary products for not less than 10 years. The primary roofing products shall have maintained a consistent composition for a minimum of five years.

B. Product Quality Assurance Program: Primary roofing materials shall be manufactured under a quality management system that is monitored regularly by a third party auditor under the ISO 9001 audit process. A certificate of analysis for reporting/confirming the tested values of the actual material being supplied for the project will be required prior to project close-out.

C. At Owner's option the Contractor shall have the roofing materials for the project delivered to the area of the project (i.e. distribution warehouse, job site, or other location where materials can be stored properly and securely) (within 75 mile radius) and be identified and held specifically for this project. Roofing contractor at owner request and direction shall provide samples from the pallets of roofing materials indicated to be designated for this project as needed for independent lab testing for quality of roofing per ASTM standards as requested by the owner. Cost of testing shall be paid by the owner. If any materials tested are found to not meet ASTM standards indicated by the project specifications and data sheets of the material, the materials will not be accepted for the project and will be replaced by the contractor. Any replacement materials shall be paid by the Contractor. Contractor should allow a minimum of 10-12 weeks for testing of roofing products prior to the need to place roofing on structure. While testing is being done, the owner will not pay for any roofing materials stored on/off site.

D. Agency Approvals: The proposed roof system shall conform to the following requirements. No other testing agency approvals will be accepted.

1. Underwriters Laboratories Class A acceptance of the proposed roofing system (including mopping asphalt or cold adhesive) without additional requirements for gravel or coatings.

2. For roof Types 1 and 2: The roof field configuration (including fastening of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-135 (-67.5 psf, Limitation No.7) uplift design pressure, the roof perimeter and corner configuration (including fastening of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-270 (-135 psf, Limitation No.7) uplift pressure.

3. For roof Type 3: The roof field configuration (including adhering of insulation) shall be tested by either an Independent Accredited Testing Agency and/or FM for a 1-315 (-157.5 psf, Limitation No.9) uplift design pressure.

E. Accessory Products: Accessory products shall be supplied by the primary roof system manufacturer for coverage under the terms of the guarantee. The primary membrane manufacture shall have private labeling agreements with secondary and accessory product suppliers for the listed products; thermal insulation, cover panel, insulation fasteners, fastener plates, cements, primers, sealants, membrane and insulation adhesives, perimeter metal systems, etc. Manufacturer shall provide evidence that it complies with these requirements by providing

1. Primary manufacturer's commercial product data sheets.

2. If a primary roof system manufacturer has an expressed endorsement for primary and secondary roof system products. A letter will be required from the primary roofing system manufacturer detailing any expressed endorsements with accessory product suppliers and evidence of how the product is to be covered under the guarantee

F. Acceptable Contractor: Contractor shall have a minimum of 2 years experience in successfully installing the same or similar roofing materials and be certified in writing by the roofing materials manufacturer to install the primary roofing products.

G. Scope of Work: The work to be performed under this specification shall include but is not limited to the following: Attend necessary job meetings and furnish competent and full time supervision, experienced roof mechanics, all materials, tools, and equipment necessary to complete, in an

acceptable manner, the roof installation in accordance with this specification. Comply with the latest written application instructions of the manufacturer of the primary roofing products. In addition, application practice shall comply with requirements and recommendations contained in the latest edition of the Handbook of Accepted Roofing Knowledge (HARK) as published by the National Roofing Contractor's Association, amended to include the acceptance of a phased roof system installation.

H. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.

I. Manufacturer Requirements: Ensure that the primary roofing materials manufacturer provides direct trained company personnel to attend necessary job meetings, perform periodic inspections as necessary, and conducts a final inspection upon successful completion of the project.

1.08 PRODUCT DELIVERY STORAGE AND HANDLING

A. Delivery: Deliver materials in the manufacturer's original sealed and labeled containers and in quantities required to allow continuity of application.

B. Storage: Store materials out of direct exposure to the elements on pallets placed over clean, flat and dry surfaces. Storage of pallets over dirt, grass-covered ground or newly placed concrete may result in upward moisture transpiration and contamination of product. Store rolls of roofing on end. For roof-top storage, avoid overloading of deck and building structure. Factory packaging is not intended for job site protection. Slit factory packaging immediately upon arrival at the job site to prevent build-up of condensation and cover materials using a breathable cover such as a canvas. Polyethylene or other non-breathable plastic coverings shall not be used. Store flammable or temperature sensitive materials away from open flame, ignition sources or excessive heat.

C. Handling: Handle all materials in such a manner as to preclude damage and contamination with moisture or foreign matter. Handle rolled goods to prevent damage to edges or ends.

D. Damaged Material: Any materials that are found to be damaged or stored in any manner other than stated above will be automatically rejected, removed and replaced at the Contractor's expense.

1.09 PROJECT/SITE CONDITIONS

A. Requirements Prior to Job Start

1. Notification: Give a minimum of 5 days notice to the Owner and manufacturer prior to commencing any work and notify both parties on a daily basis of any change in work schedule.

2. Permits: Obtain all permits required by local agencies and pay all fees which may be required for the performance of the work.

3. Safety: Familiarize every member of the application crew with all fire and safety regulations recommended by OSHA, NRCA and other industry or local governmental groups.

B. Environmental Requirements

1. Precipitation: Do not apply roofing materials during precipitation or in the event there is a probability of precipitation during application. Take adequate precautions to ensure that materials, applied roofing, and building interiors are protected from possible moisture damage or contamination.

C. Protection Requirements

1. Membrane Protection: Provide protection against staining and mechanical damage for newly applied roofing and adjacent surfaces throughout this project.

2. Torch Safety: Crew members handling torches shall be trained by an Authorized Certified Roofing Torch Applicator (CERTA) Trainer, be certified according to CERTA torch safety guidelines as published by the National Roofing Contractor's Association (NRCA), and follow torch safety practices as required by the contractor's insurance carrier. Designate one person on each crew to perform a daily fire watch. The designated crew member shall watch for fires or smoldering materials on all areas during roof construction activity, and for the minimum period required by CERTA guidelines after roofing material application has been suspended for the day.

3. Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.

4. Debris Removal: Remove all debris daily from the project site and take to a legal dumping area authorized to receive such materials.

5. Site Condition: Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by the construction.

1.10 GUARANTEE/WARRANTY

A. Roof Membrane/System Guarantee: Upon successful completion of the project, and after all post installation procedures have been completed, furnish the Owner with the manufacturer's twenty (20) year labor and materials guarantee covering the rigid insulation, roof cover panel, insulation fasteners, insulation adhesive, roof membrane/flashing system and perimeter metal systems per Section 07 71 00. The guarantee shall be a term type, without deductibles or limitations on coverage amount (N.D.L., No Dollar Limit), and shall be issued at no additional cost to the Owner.

1. Siplast 20 year Single Source Guarantee with Perimeter Metal Inclusion Addendum
2. Contractor shall provide 2 year weathertight warranty for all materials/installations.
3. Complete system warranty for all roof penetrations shall be provided.

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Siplast, Inc. (Basis of Design)
B. Soprema, Inc.
C. GAF
D. Others, with approval of Architect, prior to bid, in accordance with Division 01 requirements.

2.02 ROOFING SYSTEM ASSEMBLY/PRODUCTS

A. Rigid Roof Insulation: Roof insulation shall be UL and FM approved. Insulation shall be approved in writing by the insulation manufacturer for intended use and for use with the specified roof assembly.

1. Polyisocyanurate Flat Roof Insulation: Panels composed of a closed cell, rigid polyisocyanurate foam core material, integrally laminated between glass fiber facers, in full compliance with ASTM C 1289, Type II, Class 1, Grade 2. A single layer of insulation having a thickness of 2.0 inches as indicated in Part 1, 1.05 Description of Work. Acceptable types are as follows:

a. Polyisocyanurate Tapered Roof Insulation: Tapered panels and standard fill panels composed of a closed cell, rigid polyisocyanurate foam core material, integrally laminated

between glass fiber facers, in full compliance with ASTM C 1289, Type II, Class 1, Grade 2. The tapered system shall provide for a roof slope of 1/4 inch per foot, with a minimum starting thickness of 1/2 inch. Acceptable types are as follows:

> Tapered Paratherm by Siplast; Dallas, TX

b. Polyisocyanurate Tapered Cricket Insulation: Tapered panels and standard fill panels composed of a closed cell, rigid polyisocyanurate foam core material, integrally laminated between glass fiber facers, in full compliance with ASTM C 1289, Type II, Class 1, Grade 2. The crickets shall be constructed to provide positive drainage double the slope of the existing structure. Locate cricket on the backside of all equipment curbs locaed on the roof. Acceptable types are as follows:

> Tapered Paratherm Crickets by Siplast; Dallas, TX

4. Cover Panel: A panel composed of a gypsum based, non-structural water resistant core material integrally bonded with fiberglass mats on both sides having a nominal thickness of 1/2 inch. The panel surface shall be factory primed with a non-asphaltic primer. Acceptable types are as follows:

> DensDeck Prime Gypsum Roof Board, by Georgia Pacific Corporation; Atlanta, GA

2.03 DESCRIPTION OF SYSTEMS

A. Roofing Membrane Assembly: A roof membrane assembly consisting of two plies of a prefabricated, reinforced, homogeneous Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane, applied over a prepared substrate. Reinforcement mats shall be impregnated/saturated and coated each side with SBS modified bitumen blend and coated one side with a torch grade SBS bitumen blend adhesive layer. The adhesive layer shall be manufactured using a process that embosses the surface with a grooved pattern to provide optimum burn-off of the plastic film and to maximize application rates. The cross sectional area of the sheet material shall contain no oxidized or non-SBS modified bitumen. The roof system shall pass 500 cycles of ASTM D 5849 Resistance to Cyclic Joint Displacement (fatigue) at 14°F (-10°C). Passing results shall show no signs of membrane cracking or interply delamination after 500 cycles. The roof system shall pass 200 cycles of ASTM D 5849 after heat conditioning performed in accordance with ASTM D 5147. The assembly shall possess waterproofing capability, such that a phased roof application, with only the modified bitumen base ply in place, can be achieved for prolonged periods of time without detriment to the watertight integrity of the entire roof system.

> Siplast Paradiene 20 TG/30 FR TG torchable roof system (Basis of Design)

1. Modified Bitumen Base and Stripping Ply

a) Thickness (avg): 114 mils (2.9 mm) (ASTM D 5147)
b) Thickness (min): 110 mils (2.8 mm) (ASTM D 5147)
c) Weight (min per 100 ft² of coverage): 76 lb (3.7 kg/m²)
d) Maximum filler content in elastomeric blend: 35% by weight
e) Low temperature flexibility @ -15°F (-26°C): PASS (ASTM D 5147)
f) Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D 5147)
g) Peak Load (avg) @ 0°F (-18°C): 75 lbf/inch (13.2 kN/m) (ASTM D 5147)
h) Ultimate Elongation (avg.) @ 73°F (23°C): 80% (ASTM D 5147)
i) Dimensional Stability (max): 0.1% (ASTM D 5147)
j) Compound Stability (min): 250°F (121°C) (ASTM D 5147)
k) Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
l) Reinforcement: fiberglass mat or other meeting the performance and dimensional stability criteria

> Siplast Paradiene 20 - torchable grade

2. Modified Bitumen Stripping Ply at Gravel Stop

a) Thickness (avg): 138 mils (3.5 mm) (ASTM D 5147)
b) Thickness (min): 134 mils (3.4 mm) (ASTM D 5147)
c) Weight (min per 100 ft² of coverage): 96 lb (4.7 kg/m²)
d) Peak filler content in elastomeric blend - 35% by weight
e) Low temperature flexibility @ -13°F (-25°C): PASS (ASTM D 5147)
f) Peak Load (avg) @ 73°F (23°C): 80 lbf/inch (14.1 kN/m) (ASTM D 5147)
g) Peak Load (avg) @ 0°F (-18°C): 150 lbf/inch (26.5 kN/m) (ASTM D 5147)
h) Ultimate Elongation (avg.) @ 73°F (23°C): 100% (ASTM D 5147)
i) Compound Stability (max): 0.1% (ASTM D 5147)
j) High Temperature Stability (min): 250°F (121°C) (ASTM D 5147)
k) Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
l) Reinforcement: fiberglass mat or other meeting the performance and Compound stability criteria

> Siplast Paradiene 20EG TG, torch grade

3. Modified Bitumen Finish Ply

a) Thickness (avg): 138 mils (3.5 mm) (ASTM D 5147)
b) Thickness at selvage (coating thickness) (avg): 118 mils (3.0 mm) (ASTM D 5147)
c) Thickness at selvage (coating thickness) (min): 114 mils (2.9 mm) (ASTM D 5147)
d) Weight (min per 100 ft² of coverage): 112 lb (5.4 kg/m²)
e) Maximum filler content in elastomeric blend: 35% by weight
f) Low temperature flexibility @ -15°F (-26°C): PASS (ASTM D 5147)
g) Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D 5147)
h) Peak Load (avg) @ 0°F (-18°C): 75 lbf/inch (13.2 kN/m) (ASTM D 5147)
i) Ultimate Elongation (avg.) @ 73°F (23°C): 80% (ASTM D 5147)
j) Dimensional Stability (max): 0.1% (ASTM D 5147)
k) Compound Stability (min): 250°F (121° C) (ASTM D 5147)
l) Granule Embedment (max loss): 2.0 grams per sample (ASTM D 5147)
m) Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
n) Reinforcement: fiberglass mat or other meeting the performance and dimensional stability criteria
o) Surfacing: ceramic granules

> Siplast Paradiene 30 FR - torchable grade

B. Flashing Membrane Assembly: A flashing membrane assembly consisting of a prefabricated, reinforced, Styrene-Butadiene-Styrene (SBS) block copolymer modified asphalt membrane with a continuous, channel-embossed metal-foil surfacing. The finish ply shall conform to ASTM D 6298 and the following physical and mechanical property requirements.
> Siplast Veral flashing system, aluminum finish
1. Cant Backing Sheet and Flashing Reinforcing Ply

a) Thickness (avg): 102 mils (2.6 mm) (ASTM D 5147)
b) Thickness (min): 98 mils (2.5 mm) (ASTM D 5147)
c) Weight (min per 100 ft² of coverage): 72 lb (3.5 kg/m²)
d) Maximum filler content in elastomeric blend: 35% by weight
e) Low temperature flexibility @ -15° F (-26° C) - PASS (ASTM D 5147)
f) Peak Load (avg) @ 73°F (23°C): 30 lbf/inch (5.3 kN/m) (ASTM D 5147)

g) Peak Load (avg) @ 0ºF (-18ºC): 75 lbf/inch (13.2 kN/m) (ASTM D 5147)
h) Ultimate Elongation (avg.) @ 73ºF (23ºC): 80% (ASTM D 5147)
i) Dimensional Stability (max): 0.1% (ASTM D 5147)
j) Compound Stability (min - sheet): 250ºF (121ºC) (ASTM D 5147)
k) Compound Stability (min – adhesive coating): 212ºF (100ºC) (ASTM D 5147)
l) Approvals: UL Class listed, FM Approved (products shall bear seals of approval)
m) Reinforcement: fiberglass mat or other meeting the performance and dimensional stability criteria
n) Back Surfacing: polyolefin film

> Siplast Paradiene 20 SA

2. Metal-Clad Modified Bitumen Flashing Sheet

a) Thickness (avg): 150 mils (3.8 mm) (ASTM D 5147)
b) Thickness (min): 146 mils (3.7 mm) (ASTM D 5147)
c) Weight (min per 100 ft² of coverage): 96 lb (4.6 kg/m²)
d) Coating Thickness – back surface (min): 40 mils (1 mm) (ASTM D 5147)
e) Low temperature flexibility @ 0º F (-18º C): PASS (ASTM D 5147)
f) Peak Load (avg) @ 73ºF (23ºC): 85 lbf/inch (15 kN/m) (ASTM D 5147)
g) Peak Load (avg) @ 0ºF (-18ºC): 180 lbf/inch (31.7 kN/m) (ASTM D 5147)
h) Ultimate Elongation (avg) @ 73ºF (23ºC): 45% (ASTM D 5147)
i) Tear-Strength (avg): 120 lbf (0.54 kN) (ASTM D 5147)
j) Dimensional Stability (max): 0.2% (ASTM D 5147)
k) Compound Stability (min): 225ºF (107ºC) (ASTM D 5147)
l) Cyclic Thermal Shock Stability (maximum): 0.2% (ASTM D 7051)
m) Approvals: UL Approved, FM Approved (products shall bear seals of approval)
n) Reinforcement: fiberglass scrim mat or other meeting the performance and dimensional stability criteria
o) Surfacing: aluminum metal foil

> Siplast Veral Aluminum

C. Catalyzed Acrylic Resin Flashing System: A specialty flashing system consisting of a liquid-applied, fully reinforced, multi-component acrylic membrane installed over a prepared or primed substrate. The flashing system consists of a catalyzed acrylic resin primer, basecoat and topcoat, combined with a non-woven polyester fleece. The resin and catalyst are pre-mixed immediately prior to installation. The use of the specialty flashing system shall be specifically approved in advance by the membrane manufacturer for each application.
> Parapro 123 Flashing System by Siplast; Dallas, TX

2.04 ROOFING ACCESSORIES

A. Insulation Adhesives

1. Insulation Adhesive: A single component, moisture cured, polyurethane foam adhesive, dispensed from a portable, pre-pressurized container used to adhere insulation panels to the substrate, as well as to other insulation panels.

> Para-Stik Insulation Adhesive by Siplast; Dallas, TX

B. Bituminous Cutback Materials

1. Primer: An asphalt/solvent blend meeting ASTM D 41, South Coast Air Quality District and Ozone Transport Commission requirements.

   > PA-917 LS Primer by Siplast; Irving, TX

2. Primer: An asphalt, solvent blend conforming to ASTM D 41 requirements.

   > Siplast PA-1125 Asphalt Primer by Siplast; Dallas, TX

3. Primer for Self-Adhesive Sheets: A quick drying, low-VOC, water-based, high-tack primer specifically designed to promote adhesion of roofing and waterproofing sheets to approved substrates. Primer shall meet South Coast Air Quality District and Ozone Transport Commission requirements.

   > Siplast TA-119 Primer by Siplast; Dallas, TX

4. Mastics: An asphalt cutback mastic, reinforced with non-asbestos fibers, used as a base for setting metal flanges conforming to ASTM D 4586 Type II requirements.

   > Siplast PA-1021 Plastic Cement by Siplast; Dallas, TX

C. Sealant: A moisture-curing, elastomeric sealant designed for roofing applications. The sealant shall be approved by the roof membrane manufacturer for use in conjunction with the roof membrane materials. Acceptable types are as follows:

   > Horizontal Applications: PS-209 Elastomeric Sealant by Siplast; Dallas, TX
   > Sloped and/or Vertical Applciation PS-715 NS Elastomeric Sealant by Siplast; Dallas, TX

D. Ceramic Granules: No. 11 grade specification ceramic granules of color scheme matching the granule surfacing of the finish ply.

E. Perlite Cant Strips: A cant strip composed of expanded volcanic minerals combined with waterproofing binders. The top surface shall be pre-treated with an asphalt based coating. The face of the cant shall have a nominal 4 inch dimension.

F. Retrofit Drain Assembly: A roof drain assembly consisting of a one-piece drain body with cast aluminum clamping ring, cast aluminum strainer and mechanical compression seal.

   > Paraguard Roof Drain by Siplast, Inc.; Irving, TX

   1. Drain Body
      a) Material: 11 gauge (0.125”) spun aluminum
      b) Flange Diameter: 17-1/2 inches with depressed sump area
      c) Stem Length: 12 inches
      d) Studs: six - threaded aluminum - 2 ½” long – 3/8” diameter

   2. Strainer Dome
      a) Material: cast aluminum
      b) Height: 6 inches
   3. Clamping Ring
      a) Material: cast aluminum
      b) Ring Height: 1.2 inches
      c) Drainage Slots: 18 “V” shaped

   4. Backflow Seal

a) Type: compression seal
b) Materials: Polyamid, brass, steel and EPDM rubber

G. Fasteners

1. Insulation Fasteners: Insulation fasteners and plates shall be FM Approved, and/or approved by the manufacturer of the primary roofing products. The insulation fasteners shall provide attachment required to meet the specified uplift performance and to restrain the insulation panels against the potential for ridging. The fastening pattern for each insulation panel to be used shall be as recommended by the insulation manufacturer and approved by the manufacturer of the primary roofing products. Acceptable insulation fastener manufacturers for specific deck types are listed below.

a) Metal Decks (Field/Perimeter Assemblies): Insulation mechanical fasteners for metal decks shall be factory coated for corrosion resistance. The fastener shall conform meet or exceed Factory Mutual Standard 4470 and when subjected to 30 Kesternich cycles, show less than 15% red rust. Acceptable insulation fastener types for metal decks are listed below.
- A fluorocarbon coated screw type roofing fastener having a minimum 0.220 inch thread diameter. Plates used in conjunction with the fastener shall be a metal type having a minimum 3 inch diameter, as supplied by the fastener manufacturer.

> Parafast Fastener by Siplast; Dallas, TX

2. Flashing Reinforcing Sheet Fasteners for Wood/Plywood Substrates to Receive Flashing Coverage: Fasteners shall be approved by the manufacturer of the primary roofing products. Acceptable fasteners for specific substrate types are listed below.

a) Wood/Plywood Substrates

- A 12 gauge, spiral or annular threaded shank, zinc coated steel roofing fastener having a minimum 1 inch head.
> Square Cap by W.H. Maze Co.; Peru, IL
> 12 Gauge Simplex Nail by the Simplex Nail and Manufacturing Co., Americus, GA

H. Walktread: A prefabricated, puncture resistant polyester core reinforced, polymer modified bitumen sheet material topped with a ceramic-coated granule wearing surface.

1. Thickness: 0.217 in (5.5 mm)
2. Weight: 1.8 lb/ft² (8.8 kg/m²)
3. Width: 30 in (76.2 cm)

> Paratread Roof Protection Material by Siplast; Dallas, TX

## PART 3 EXECUTION

### 3.01 PREPARATION

A. General: Sweep or vacuum all surfaces, removing all loose aggregate and foreign substances prior to commencement of roofing.

B. Wet Areas. Remove any areas of the existing assembly where moisture is present and replace with compatible materials, bringing the area back to level with surrounding surfaces.

### 3.02 SUBSTRATE PREPARATION

A. Insulation: Install insulation panels with end joints offset; edges of the panels shall be in moderate contact without forcing applied in strict accordance with the insulation manufacturer's requirements and the following instructions. Where insulation is installed in two or more layers, stagger joints between layers.

1. Insulation – multiple layers: Mechanically attach the insulation panels, using the specified fasteners, at a rate of 1 fastener for every 1.6 square feet of panel area (20 fasteners per 4' x 8' panel). Increase the fastening frequency a minimum of 60% along the perimeters and corners of the roof, at a rate of 1 per 1 square feet of panel area (32 fasteners per 4’ x 8’ panel).

2. Insulation - multiple layer: Install all layers in an application of the specified insulation adhesive in 3/4- to 1-inch wide beads spaced 12 inches on center in the field of the roof, 7 inches on center at the perimeter of the roof, and 4.5 inches on center in the corners of the roof. Panels may be affected by post-growth of the insulation adhesive. Continuous walking in of the panels is recommended particularly in perimeter/corner areas with reduced bead spacing. Follow the requirements and guidelines of the insulation adhesive manufacturer/supplier. Stagger the panel joints between insulation layers.

3. Crickets: Construct crickets of tapered insulation panels in a layout as indicated on the roof plan.

B. Examination/Preparation of Existing Drain Plumbing**:** Remove any debris or foreign material that may have built up on the interior of the drain leader that would interfere with the fit/seal of the new drain assembly. Examine the existing drain leader to ensure that there is not an elbow that will prevent the stem of the insert drain from being fully inserted into the leader. If an elbow is present, cut the stem of the new drain assembly to a length which permits the drain seal to expand a minimum of 1 inch above the point where the drain pipe joins the elbow.

C. Examination/Preparation of Membrane/Flashing System to Interface with Drain Assembly: Ensure that the roof membrane/flashing system is suitable to receive the insert drain assembly.

D. Preparation of Retrofit Drain Assembly: Insert the seal into the end of the drain seal stem and tighten screws sufficiently to hold the seal in place during insertion of the stem into the existing plumbing leader.

3.03 ROOF MEMBRANE INSTALLATION

A. Membrane Application: Apply roofing in accordance with roofing system manufacturer's instructions and the following requirements. Application of roofing membrane components shall immediately follow application of base sheet and/or insulation as a continuous operation.

B. Aesthetic Considerations: Construction of an aesthetically pleasing overall appearance of the finished roof application is a standard requirement for this project. Make necessary preparations, utilize recommended application techniques, apply the specified materials including granules, and exercise care in ensuring that the finished application is acceptable to the Owner.

C. Priming: Prime metal and concrete and masonry surfaces with a uniform coating of the specified asphalt primer.

D. Bitumen Consistency: Cutting or alterations of bitumen, primer, and sealants will not be permitted.

E. Roofing Application: Apply all layers of roofing free of wrinkles, creases or fishmouths. Exert sufficient pressure on the roll during application to ensure prevention of air pockets.
1. Apply all layers of roofing perpendicular to the slope of the deck.

2. Fully bond the base ply to the prepared substrate, utilizing minimum 3 inch side and end laps. Apply each sheet directly behind the torch applicator. Cut a dog ear angle at the end laps on overlapping selvage edges. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application. Stagger end laps a minimum of 3 feet.

3. Fully bond the finish ply to the base ply, utilizing minimum 3 inch side and end laps. Apply each sheet directly behind the torch applicator. Stagger end laps of the finish ply a minimum 3 feet. Cut a dog ear angle at the end laps on overlapping selvage edges. Using a clean trowel, apply top pressure to top seal T-laps immediately following sheet application. Stagger side laps of the finish ply a minimum 12 inches from side laps in the underlying base ply. Stagger end laps of the finish ply a minimum 3 feet from end laps in the underlying base ply.

F. Granule Embedment: Broadcast mineral granules over all bitumen overruns on the finish ply surface, while the bitumen is still hot or the adhesive is soft, to ensure a monolithic surface color.

G. Flashing Application: Cut the cant backing sheet into 12 inch widths and peel the release film from the back of the sheet. Set the sheet into place over the primed substrate extending 6 inches onto the field of the roof area and 6 inches up the vertical surface utilizing minimum 3 inch laps. Set the non-combustible cant into place dry prior to installation of the roof membrane base ply. Flash walls and curbs using the reinforcing sheet and the metal foil flashing membrane. After the base ply has been applied to the top of the cant, prime the base ply surfaces to receive the reinforcing sheet. Fully adhere the reinforcing sheet, utilizing minimum 3 inch side laps onto the primed base ply surface and up the primed wall or curb to the desired flashing height. After the final roofing ply has been applied to the top of the cant, prepare the surface area that is to receive flashing coverage by torch heating granular surfaces or by application of asphalt primer; allowing primer to dry thoroughly. Torch apply the metal foil-faced flashing into place using three foot widths (cut off the end of roll) always lapping the factory selvage edge. Stagger the laps of the metal foil flashing layer from lap seams in the reinforcing layer. Extend the flashing sheet a minimum of 4 inches beyond the toe of the cant onto the prepared surface of the finished roof and up the wall or curb to the desired flashing height. Exert pressure on the flashing sheet during application to ensure complete contact with the vertical/horizontal surfaces, preventing air pockets; this can be accomplished by using a damp sponge or shop rag. Check and seal all loose laps and edges. Nail the top edge of the flashing on 9 inch centers. (See manufacturer's schematic for visual interpretation).

H. Catalyzed Acrylic Resin Flashing System: Install the liquid-applied primer and flashing system in accordance with the membrane system manufacturer’s printed installer’s guidelines and other applicable written recommendations as provided by the manufacturer.

I. Water Cut-Off: At end of day's work, or when precipitation is imminent, construct a water cut-off at all open edges. Cut-offs can be built using asphalt or plastic cement and roofing felts, constructed to withstand protracted periods of service. Cut-offs must be completely removed prior to the resumption of roofing.

## 3.04 ROOF SYSTEM INTERFACE WITH RELATED COMPONENTS

A. Drain Installation

1. Insert the drain stem, with seal attached, into the existing drain plumbing leader until the flange lies flush over the roofing plies.

2. Tighten the compression seal screws gradually in a crisscross pattern using the tool supplied by the drain manufacturer, ensuring that the compression seal is evenly expanded. The insert drain body is correctly installed when pressure placed on the body results in no vertical movement. Tighten only until hand tight – care must be taken not to over-tighten the compression seal screws.

3. Secure the drain flange to the roof deck/substrate using a minimum of four (4) “pan-head” fasteners, evenly spaced around the flange.

4. Flash the drain in accordance with the membrane manufacturer’s requirements.

5. Place the clamping ring over the metal studs and tighten the stainless steel nuts/lock washers gradually in a crisscross pattern until the clamping ring is secure against the flashing system above the flange. Secure the strainer dome to the clamping ring.

B. Walktread: Cut the walktread into maximum 5 foot lengths and allow to relax until flat. Adhere the sheet using the specified plastic cement. Apply the specified cement in a 3/8 inch thickness to the back of the product in 5 inch by 5 inch spots in accordance with the pattern as supplied by the walktread manufacturer. Walk-in each sheet after application to ensure proper adhesion. Use a minimum spacing of 2 inches between sheets to allow for proper drainage.

C. Sealant: Apply a smooth continuous bead of the specified sealant at the exposed finish ply edge transition to metal flashings incorporated into the roof system.

3.05 FIELD QUALITY CONTROL AND INSPECTIONS

A. Site Condition: Leave all areas around job site free of debris, roofing materials, equipment and related items after completion of job.

B. Notification Of Completion: Notify the manufacturer by means of manufacturer's printed Notification of Completion form of job completion in order to schedule a final inspection date.

C. Final Inspection

1. Post-Installation Meeting: Hold a meeting at the completion of the project, attended by all parties that were present at the pre-job conference. A punch list of items required for completion shall be compiled by the Contractor and the manufacturer's representative. Complete, sign, and mail the punch list form to the manufacturer's headquarters.

D. Issuance Of The Guarantee: Complete all post installation procedures and meet the manufacturer's final endorsement for issuance of the specified guarantee.

SUBSTITUTION REQUEST FORM

PROJECT NAME: _____ LOCATION: _____

MANUFACTURER: _____ SYSTEM NAME: _____

**ASTM test result evaluation:**
**Provide official laboratory results demonstrating compliance to the following requirements.**

**Minimum Physical and Mechanical Properties**

| MATERIAL PROPERTY | PRODUCT NAME | STANDARD METHOD | CRITERIA | TEST RESULT |
|---|---|---|---|---|
| | | | | |

| | | | | |
|---|---|---|---|---|
| **GRANULE EMBEDMENT –** As granule loss occurs, bitumen may be exposed to UV causing premature aging of the sheet | | | | |
| **FINISH PLY** | | **ASTM D 5147** | **Maximum 1.5 grams loss average result, and 2.0 grams loss per individual specimen** | |
| **DIMENSIONAL STABILITY -** Dimensional stability is directly related to membrane shrinkage. Related problems include but are not limited to, lap shear stress, wrinkling, ridging, stress at flashing, and potential areas of SBS bitumen exposed to UV. | | | | |
| **BASE PLY** | | **ASTM D 5147** | **Maximum 0.5%** | |
| **FINISH PLY** | | **ASTM D 5147** | **Maximum 0.5%** | |
| **FLASHING SHEET** | | **ASTM D 5147** | **Maximum 0.5%** | |
| **SBS-MODIFIED BITUMEN CROSS SECTION –** When oxidized asphalt is used to saturate reinforcement, there is a reduction in performance. All oxidized bitumen continues to oxidize over time. | | | | |
| **BASE PLY** | | **UV Fluorescence microscopy** | **Only SBS-modified bitumen in the sheet cross-section (top-to-bottom)** | |
| **FINISH PLY** | | **UV Fluorescence microscopy** | **Only SBS-modified bitumen in the sheet cross-section (top-to-bottom)** | |
| **FLASHING SHEET** | | **UV Fluorescence microscopy** | **Only SBS-modified bitumen in the sheet cross-section (top-to-bottom)** | |

| | | | | |
|---|---|---|---|---|
| **LOW TEMPERATURE FLEXIBILITY –** As manufactured, or unaged, products with high quality SBS blend should exhibit low temperature flexibility numbers below 0°F. | | | | |
| **BASE PLY** | | **ASTM D 5147** | **Pass 0°F before and after aging.** | |

| | | | | |
|---|---|---|---|---|
| | | | | |
| **FINISH PLY** | | **ASTM D 5147** | **Pass 0°F before and after aging.** | |
| **FLASHING SHEET** | | **ASTM D 5147** | **Pass 0°F before and after aging.** | |
| **ULTIMATE ELONGATION (ELONGATION AT 5% PEAK LOAD) –** It is a good indicator of SBS blend quality for most glass reinforced materials. | | | | |
| **BASE PLY** | | **ASTM D 5147** | **80% (unaged)** | |
| **FINISH PLY** | | **ASTM D 5147** | **80% (unaged)** | |
| **FLASHING SHEET** | | **ASTM D 5147** | **45% (unaged)** | |
| **RESISTANCE TO CYCLIC FATIGUE –** Test method provides data on classifying polymer-modified bituminous membranes by their performance related to the fatigue conditions to which they are subjected. | | | | |
| **COMPOSITE ASSEMBLY (BASE AND FINISH PLIES TOGETHER)** | | **ASTM D 5849, condition 4** | **Pass 500 cycles new, 200 cycles aged** | |
| **COMPOUND STABILITY –** This test is a measure of the modified bitumen blend's resistance to flow at high temperature. | | | | |
| **BASE PLY** | | **ASTM D 5147** | **>225 F** | |
| **FINISH PLY** | | **ASTM D 5147** | **>225 F** | |
| **FLASHING SHEET** | | **ASTM D 5147** | **>225 F** | |

| | | | | |
|---|---|---|---|---|
| **FILLER CONTENT –** Asphalt, filler, and SBS ratios can vary within reasonable limits creating different high performance formulations. The key is that the chemical integrity of the asphalt/SBS mixture must be invariable day-to-day, batch-to-batch | | | | |
| **BASE PLY** | | **Wet lab separation.** | **<35% by weight** | |
| **FINISH PLY** | | **Wet lab separation.** | **<35% by weight** | |
| **FLASHING SHEET** | | **Wet lab separation.** | **<35% by weight** | |
| **Hail Rating – Provides assurance of adequate puncture resistance of roof membrane.** | | | | |
| **FINISH PLY** | | **FM 4470** | **SH (Severe Hail)** | |

**Please note: Important statement of product quality compliance.**

We reserve the right to take sample rolls from the project job site to perform independent laboratory testing to verify compliance. If rolls do not meet the specified test results the roofing manufacturer agrees to pay for testing expense, removal and replacement of out of specification material; this includes paying for materials, freight, labor, and all associated costs. Submittal of substitution request signifies agreement with this requirement.

I, AS A CERTIFIED INSTALLER OF THE ABOVE-REFERENCED ROOF MEMBRANE SYSTEM, HEREBY CERTIFY THAT THE ABOVE INFORMATION IS CORRECT AND I AGREE WITH THE PRODUCT QUALITY COMPLIANCE STATEMENT LISTED ABOVE.

SIGNATURE: _____ DATE: _____

COMPANY NAME: _____ TITLE: _____

PHONE: _____

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# SECTION 07600 - FLASHING AND SHEET METAL

## PART 1 - GENERAL

### 1.1 SUMMARY

A. Section Includes:
1. Sheet metal flashing and trim.
2. Fasteners and attachment devices.
3. Coatings and slip sheets to isolate sheet metal from dissimilar materials.
5. Composite flashings.
6. Reglets

B. Flashings which are integral with prefabricated roof accessories, commercial gutters and downspouts, equipment, and the like are not included in this section.

C. Wood blocking, nailers, edge strips, and battens are not specified in this section.

D. All flashing and sheet metal trim shall be anchored per the manufacturer’s instructions in order to meet the required building wind loads per code.

### 1.2 SUBMITTALS

A. Product Data: Manufacturer's technical information and installation instructions, in sufficient detail to demonstrate products comply with Contract Documents.

B Shop Drawings: Detailed drawings clearly indicating component profiles, joints, transitions, fastening methods, and relationship of flashing materials to adjacent construction.

C Samples: Submit 6-inch-square samples of each type of metal and finish required.

### 1.3 QUALITY ASSURANCE

A Installer: A company familiar with installing products included in this section and which has completed at least 20 installations similar in scope to work included in this section.

B Quality Standard:
1. Fabricate and install sheet metal work in accordance with Sheet Metal and Air Conditioning Contractors' National Association, Inc. (SMACNA) "Architectural Sheet Metal Manual," unless specifically indicated otherwise.

PART 2 - PRODUCTS

2.1 MATERIALS

A. Prefinished Aluminum Sheet: ASTM B 209, manufacturer's standard alloy and temper for indicated applications.
   1. Finish: 70 percent "Kynar 500" or "Hylar 5000" resin finish over epoxy primer; minimum system thickness 1.0 mil. Provide manufacturer's standard prime coat on underside.
      a. Color: T.B.D.
   2. Provide strippable plastic protective film on prefinished surface.

B. Steel - ASTM A 446, steel sheet, zinc coated (galvanized) by the dipped process, structural physical quality.Steel - ASTM A 525, steel sheet, zinc coated by the hot dip process.
   1. Finish: 70 percent "Kynar 500" or "Hylar 5000" resin finish over epoxy primer; minimum system thickness 1.0 mil. Provide manufacturer's standard prime coat on underside.
      a. Color: T.B.D.
   2. Provide strippable plastic protective film on prefinished surface.

2.2 REGLETS

A. Approved Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to the following:
   1. Fry Reglet Corporation
   2. W.P. Hickman Co.
   3. Keystone Flashing Co.

B. General: Units of type, material, and profile indicated, formed to provide secure interlocking of separate reglet and counterflashing pieces and compatible with flashing indicated.

C. General Contractor to coordinate providing precast manufacturer suitable reglet for application as shown on drawings.

D. All exposed metal to be prefinished to match adjacent roofing and storefront system.

2.3 ACCESSORY MATERIALS

A. Fasteners: Corrosion-resistant metal of same material as the material being fastened, or other material recommended by sheet metal manufacturer. Match finish and color of exposed fastener heads to finish and color of sheet material being fastened.

B. Sealant: As specified in Division 7.
   1. Use noncuring type for concealed joints.
   2. Use nonsag elastomeric type for exposed joints.

C. Joint Adhesive: Two-component noncorrosive epoxy adhesive, recommended by metal manufacturer for sealing of nonmoving joints.

D. Bituminous Coating: Heavy bodied, sulfur-free, asphalt-based paint; FS TT-C-494.

2.4 FABRICATION – GENERAL

A. Form sheet metal to match profiles indicated, substantially free from oil-canning, fish-mouths, and other defects.

B. Comply with SMACNA "Architectural Sheet Metal Manual" for applications indicated.

C. Provide for thermal expansion of exposed sheet metal work exceeding 15 feet running length.
   1. Flashing and trim: Provide movement joints at maximum spacing of 10 feet; no joints allowed within 2 feet of corner or intersection.

D. Conceal fasteners and expansion provisions wherever possible.
   1. Exposed fasteners are not allowed on faces of sheet metal exposed to public view.

E. Form a 1/2-inch hem on underside of exposed edges.

F. Fabricate cleats and attachment devices from same material as sheet metal component being anchored or from compatible, noncorrosive metal recommended by sheet metal manufacturer.
   1. Continuous cleat, Gage: 22 ga. Min. or in no case less than gage of metal being secured. Anchor at minimum necessary to meet requirements of FEMA P-361 and no less than 8” O.C.
   2. Provide attachment to comply with requirements of International Building Code 2012 and FEMA P-361.

2.5 SHEET METAL FABRICATIONS

A. General: As a minimum, fabricate flashings using materials in the thickness listed for each flashing application.

B. Exposed Flashings - Low Slope Roofs or Waterproofing:
   1. Formed:
      b. Prefinished aluminum sheet: 20 B & S gage (0.0312 inch).

PART 3 - EXECUTION

3.1 EXAMINATION

A Examine substrates and conditions under which products of this section are to be installed and verify that work may properly commence. Do not proceed with the work until unsatisfactory conditions have been fully resolved.
1. Verify that nailers, blocking, and other attachment provisions for sheet metal work are properly located and securely fastened to resist effects of wind and thermal stresses.

3.2 PREPARATION

A. Verify shapes and dimensions of surfaces to be covered before fabricating sheet metal.

B. Isolate dissimilar metals by means of a heavy bituminous coating, approved paint coating, adhered polyethylene sheet, or other means approved by the Architect.

3.3 INSTALLATION

A. General: Comply with sheet metal manufacturer's installation methods and recommendations in the SMACNA "Architectural Sheet Metal Manual."

B. Sealed Joints: Form minimum 1-inch hooked joints and embed flange into sealant or adhesive. Form metal to completely conceal sealant or adhesive.
1. Use joint adhesive for nonmoving joints specified not to be soldered.
2. Moving joints: When ambient temperature is moderate (40-70 degrees F) at time of installation, set joined members for 50 percent movement either way. Adjust setting position of joined members proportionally for temperatures above 70 degrees F. Do not install sealant at temperatures below 40 degrees F. Refer to section on sealants elsewhere in Division 7 for handling and installation requirements for joint sealers.
3. Fastening:
   c. Conceal all fasteners. Nail one edge only to permit freedom of expansion perpendicular to the line of nailing. Space nails at no more than 3 inches-on-center. Select nails to penetrate backing by not less than 1 inch.
   d. Use cleats to secure edges of sheet metal members over 12-inches wide and at other designated locations. Fasten cleats with 2 nails and fold the end over the nails. Lock the other end of the cleat into the seam of the folded edge of the member being fastened.
   e. Fit screws with neoprene washers to protect the surface of sheet metal and provide a watertight connection.

3.4 CLEANING AND PROTECTION

A. Remove protective film from prefinished sheet metal immediately after installation.

B. Repair or replace work which is damaged or defaced, as directed by the Architect.

1. Refinish marred and abraded areas of prefinished sheet using finish manufacturer's recommended methods and materials. Replace units which, in the opinion of the Architect, cannot satisfactorily be refinished in place.

C. Protect sheet metal work as recommended by the installer so that completed work will be clean, secured, and without damage at substantial completion.

3.5 SCHEDULES

A. Thickness Schedule (minimums as allowed by SMACNA for loading requirements) or as otherwise specified

B. Provide fasteners, gauges and thickness required to meet IBC, International Building Code 2012 and FEMA P-361.

**END OF SECTION**

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# SECTION 07710 MANUFACTURED ROOF SPECIALTIES

## PART 1 GENERAL

### 1.01 SECTION INCLUDES:

A. Preparation of surfaces to receive factory fabricated metal perimeter systems.

B. Installation of factory fabricated and finished metal perimeter systems.

### 1.02 RELATED SECTIONS

A. Section 06100 - Rough Carpentry

B. Section 07520 - Modified Bitumen Membrane Roofing

### 1.03 REFERENCE STANDARDS

| | |
|---|---|
| NRCA | National Roofing Contractors Association<br>Rosemont, IL |
| OSHA | Occupational Safety and Health Administration<br>Washington, DC |
| SMACNA | Sheet Metal and Air Conditioning Contractors National Association<br>Chantilly, VA |
| FM | Factory Mutual Engineering and Research<br>Norwood, MA |
| ANSI | American National Standards Institute<br>Washington, DC |
| SPRI | Single Ply Roofing Industry<br>Waltham, MA |

### 1.04 SUBMITTALS

A. Submittals Prior to Contract Award:

1. Submit a letter from the roofing membrane manufacturer confirming that the factory fabricated metal accessory systems furnished for the project are supplied or manufactured by the roofing membrane manufacturer and that each component section is embossed with the roofing membrane manufacturer’s logo.

2. Latest edition of factory fabricated metal component manufacturer/supplier’s installer’s guide for factory fabricated metal perimeter systems.

3. Samples from the manufacturer/supplier sized to represent metal components.

4. Copies of the manufacturer/supplier's color selection chart showing the manufacturer/supplier's full range of standard colors as well as physical samples of each standard color.

5. Sample copy of the roofing system manufacturer's inclusion addendum offering coverage of the factory fabricated metal perimeter systems.

1.05 QUALITY ASSURANCE

A. Agency Approvals: The proposed factory fabricated metal component shall conform to the following requirements. No other testing agency approvals will be accepted.

1. The roof perimeter fascia systems shall be certified through third party verification by the manufacturer/supplier to meet performance design criteria according to the most recent edition of ANSI/SPRI/FM 4435/ES-1: Wind Design Standard for Edge Systems Used with Low Slope Roofing Systems.

2. The Paraguard M Continous Cleat Coping shall meet an FM rating for .050 aluminum material, having a maximum width of 24-inches and a maximum face dimension of 6-inches with the 20 gauge continuous cleats.
   - Perimeter 1-135 and Corner 1-90.

B. Scope of Work: The work to be performed under this specification shall include but is not limited to the following: Attend necessary job meetings and furnish competent and full time supervision, experienced mechanics, all materials, tools, and equipment necessary to complete, in an acceptable manner, the factory fabricated metal installation in accordance with this specification. Comply with the latest written application instructions of the manufacturer/supplier of the factory fabricated metal components.

C. Local Regulations: Conform to regulations of public agencies, including any specific requirements of the city and/or state of jurisdiction.

D. Manufacturer Requirements:

1. Ensure that the factory fabricated metal components are embossed with the roofing membrane manufacturer’s logo.

2. Ensure that the factory fabricated metal component manufacturer/supplier provides direct trained company personnel to attend necessary job meetings, perform periodic inspections as necessary, and conducts a final inspection upon successful completion of the project.

1.06 PRODUCT DELIVERY STORAGE AND HANDLING

A. Delivery: Deliver materials in the manufacturer's original packaging.

B. Storage: Store materials out of direct exposure to the elements.

C. Strippable Film Masking: Do not remove the strippable film masking on the metal component until immediately following installation. Do not allow extended UV or heat exposure to metal components covered with strippable film masking.

D. Damaged Material: Any materials that are found to be damaged will be automatically rejected, removed and replaced at the Contractor's expense.

1.07 PROJECT/SITE CONDITIONS

A. Requirements Prior to Job Start

1. Related Work: Verify that all related work performed by other trades is complete prior to installing the factory fabricated metal components.

2. Component Substrate Condition: Mounting surfaces shall be straight and secure and provide adequate widths to properly support the factory fabricated metal components.

3. Safety: Familiarize every member of the application crew with all safety regulations recommended by OSHA, SMACNA and other industry or local governmental groups.

B. Protection Requirements

1. Component Protection: Protect newly applied factory fabricated metal component surfaces against mechanical damage.

2. Limited Access: Prevent access by the public to materials, tools and equipment during the course of the project.

3. Debris Removal: Remove all debris daily from the project site.

4. Site Condition: Complete, to the owner's satisfaction, all job site clean-up including building interior, exterior and landscaping where affected by construction.

1.08 GUARANTEE/ ADDENDUM

A. Roof Membrane Guarantee Addendum: In addition to the specified guarantee under section 07520, furnish the Owner with the roofing manufacturer's inclusion addendum to the guarantee offering coverage of the factory fabricated coping and gravel stop systems under the standard terms of the roofing membrane/system guarantee.
> Siplast Paraguard Roof Perimeter System Inclusion Addendum

PART 2 PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. Siplast, Inc. (Basis of Design)
B. Soprema, Inc.
C. GAF
D. Others, with approval of Architect, prior to bid, in accordance with Division 01 requirements.

2.02 DESCRIPTION OF FACTORY FABRICATED METAL SYSTEMS

A. Factory fabricated Obtuse Gravel Stop: Factory fabricated gravel stop components shall be factory formed according to the requirements of the membrane manufacturer and labeled with the roofing manufacturer’s logo. The gravel stop system shall consist of the following components:

- A factory formed retainer cleat with pre-punched nail holes fabricated from 22 gauge, G90 galvanized steel, secured using galvanized roofing nails.

- A factory formed gravel stop with pre-punched nailing holes, secured using galvanized roofing nails. fabricated from minimum .050 aluminum having a coil coated Kynar™ finish.

- Factory formed concealed splice plates.

- Factory formed welded miters, end terminations and cant closures.

> Proform Obtuse Drip Edge Gravel Stop, by Siplast, Inc., Dallas TX (800) 922-8800

B. Factory Fabricated Metal Coping System: Metal Coping components shall be factory fabricated according to the requirements of the roofing membrane manufacturer and labeled with the roofing manufacturer's logo. The metal coping system shall consist of the following components:

- Factory formed continuous inside and outside cleats fabricated from G90 galvanized steel.

- Factory formed splice plates fabricated from 0.032 inch aluminum with factory applied sealant strips.

- A factory formed coping cap fabricated from minimum 0.050 inch aluminum having a coil coated Kynar™ finish.

- Factory formed miters and end caps.

> Paraguard M Continuous Cleat Coping System, by Siplast, Inc., Dallas, TX (800) 922-8800

PART 3 EXECUTION

3.01 SUBSTRATE PREPARATION

A. Perimeter Nailers: Perimeter nailers shall be flat and level to the building perimeter edge. The front edge of the nailer must be flush with the outside face or wall of the building. Anchor all perimeter nailers in strict accordance with the guidelines set forth in FM Global Property Loss Prevention Data Sheet 1-49.

B. Curbs for Expansion Joint Components: Curbs must be straight, level, and properly anchored to the building structural deck. Any curbs, which are improperly installed or anchored, must be corrected prior to installation of the expansion joint systems.

C. Flashing Membrane Installation: Ensure that all roofing flashing treatments used in conjunction with factory fabricated metal components are installed according to the roofing membrane manufacturer's specifications, current technical guide, and details prior to installation of the factory fabricated metal component.

D. Surface Cleaning: Sweep or vacuum all surfaces to receive the metal components, removing all loose aggregate, soil, and foreign substances prior to installation of the factory fabricated metal components.

3.02 FACTORY FABRICATED METAL COMPONENT INSTALLATION

A. Install metal components in accordance with the roofing/waterproofing manufacturer's instructions and the following requirements.

B. Factory fabricated Gravel Stop

1. Place the continuous retainer cleat to the roofing surface firmly against the perimeter nailer. The retainer cleat should be level and the nailing slots should align centered with the nailer underneath. Fasten the retaining cleat in accordance with the gravel stop system manufacturer's installation instructions.

2. Starting at the corners, trowel a bead of the roofing manufacturer's specified mastic over the base ply of membrane where the flange of the exterior fascia is to be set. Hook the drip edge of the exterior fascia over the retainer cleat and fasten the flange through the pre-punched holes in accordance with the gravel stop system manufacturer's installation instructions. Slide a concealed joint splice plate halfway into the fascia to allow the next section to fit halfway over the joint splice

plate as well. Allow a 1/8 inch gap between gravel stop sections for thermal movement. Increase the gap to 1/4 inch when installing in temperature below 40°F.

3. After installation of the factory fabricated gravel stop is complete, ensure that the roofing stripping and finish plies are installed in accordance with the roofing membrane manufacturer's specifications and details.

C. Factory Fabricated Metal Coping Installation.

1. Set outside and inside continuous cleats beginning at corners and/or ends. Position all cleats using a splice plate as a spacer in strict accordance with the factory coping system manufacturer's installation instructions and code approval requirements.

2. Install splices centered into the end of coping sections, miters, end caps, and end wall terminations in accordance with the coping system manufacturer's installation instructions.

3. Beginning again at the corners and/or ends, hook the outside leg of the coping cap over the outside continuous cleat first. Rotate the cap over the top of the wall pressing lightly, but firmly, on the top of the cap until the inside leg fully locks over the inside continuous cleat. Field crimp the drip on the inside leg of the coping cap at splice joints and at 18 inches on center. Allow a 3/8 inch gap between coping sections for thermal movement.

3.03 FIELD QUALITY CONTROL AND INSPECTIONS

A. Site Condition: Leave all areas around the job site free of debris, construction materials, equipment and related items after completion of job.

B. Issuance Of The Addendum to the Roofing Membrane/System Guarantee: Complete all post installation procedures and meet the factory fabricated metal manufacturer/supplier's final endorsement for issuance of the addendum to the specified roofing/waterproofing guarantee.

**END OF SECTION**

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# SECTION 07900 - JOINT SEALERS

## PART 1: GENERAL

### 1.1 SUMMARY

A. Section Includes:
1. The sealing of joints indicated on schedule at the end of this section.
2. The sealing of joints in floors, and pedestrian paving.
3. The sealing of penetrations through exterior walls, and roofs by pipes, ducts and conduit.
4. The sealing of other joints indicated on drawings.

B. Joints of a nature similar to that of joints indicated on the schedule shall be sealed with same sealer, whether indicated on drawings to be sealed or not.

### 1.2 REFERENCES

A. ASTM C834 – Latex Sealing Compounds.

B. ASTM C919 – Practice for Use of Sealants in Acoustical Applications.

C. ASTM C920 – Elastomeric Joint Sealants.

D. ASTM C1193 – Guide for Use of Joint Sealants.

E. ASTM D1056 – Flexible Cellular Materials – Sponge or Expanded Rubber.

F. ASTM D1565 – Flexible Cellular Materials – Vinyl Chloride Polymers and Copolymers (Open-Cell Foam).

G. ASTM D1667 – Flexible Cellular Materials – Vinyl Chloride Polymers and Copolymers (Closed-Cell Foam).

H. ASTM D2628 – Preformed Polychloroprene Elastomeric Joint Seals for Concrete Pavements.

### 1.3 DEFINITIONS

A. Substrates:
1. M-type substrates: Concrete, concrete masonry units, brick, mortar, natural stone. The term "masonry" means brick, stone, and concrete masonry work.
2. G-type substrates: Glass and transparent plastic glazing sheets.
3. A-type substrates: Metals, porcelain, glazed tile, and smooth plastics.
4. O-type substrates: Wood, unglazed tile; substrates not included under other categories.

### 1.4 SUBMITTALS

A. Product Data: Manufacturer's data on each joint sealer, with instructions for substrate preparation and installation.

B. Samples for Color Selection: Cured samples of actual products showing manufacturer's full range of colors. (Products exposed to view only.)

C. Samples for Color Verification: Cured samples of each color of each product used, prepared

to simulate actual joints minimum 3 inches long; use substrates similar in appearance to actual substrates. (Products exposed to view only.)

D. Substrate Test Report for Each Sealer.

E. Field Installation Test Reports.

F. Installer's Preconstruction Inspection Report: List all conditions detrimental to performance of joint sealer work.

1.5 QUALITY ASSURANCE

A. Installer Qualifications:
1. Execution of at least 50 sealer installations of similar size and scope.
2. Similar installations completed within 5 years before start of this project.
3. Lead mechanic assigned from among those experienced on previous similar projects.

B. Substrate Tests: Have samples of actual substrate materials tested by manufacturer(s) of sealer products.
1. Test to determine what preparation procedures (if any) are necessary to make sealers adhere properly under environmental conditions that may occur during installation.
2. Test to determine compatibility with substrates, backers, and secondary seals, if any.
3. Use manufacturer's standard test methods.
4. Report the sealer manufacturer's recommendations for substrate preparation and sealer installation and identify specific primer(s) required.
5. The requirement for testing for this project will be waived if test reports based on previous testing of the products and substrates to be used are acceptable to the Architect.

C. Field Installation Tests: Before installation, test the adhesion of all sealers to actual substrates.
1. Seal at least 5-foot lengths of joints and cure properly. Try to pull sealer out of joint by hand, by method recommended by sealer manufacturer.
2. Select test joints representative of joints to be sealed by the product to be tested.
3. Perform tests for each type of sealer used on exterior.
4. Do tests in the presence of the Architect and the technical representative of sealer manufacturer.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Deliver materials in original containers or bundles with labels showing manufacturer, product name or designation, color, shelf life, and installation instructions.

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install sealers if any of the following conditions exist:
1. Air or substrate temperature exceeds the range recommended by sealer manufacturer or is below 40 degrees F (4.4 degrees C).
2. Substrate is wet, damp, or covered with snow, ice, or frost.

B. Dimensional Limitations: Do not install sealers if joint dimensions are less than or greater than that recommended by sealer manufacturer; notify the Architect and get sealer manufacturer's recommendations for alternative procedures.

1.8 WARRANTY

A. Submit written warranty signed by Contractor and installer guaranteeing to correct failures in sealer work that occur within 5 years after substantial completion, without reducing or otherwise limiting any other rights to correction which the Owner may have under the Contract Documents. Failure is defined as failure to remain weathertight due to faulty materials or workmanship. Correction is limited to replacement of sealers.

PART 2: PRODUCTS

2.1 MATERIALS - GENERAL

A. General: Provide only products which are recommended and approved by their manufacturer for the specific use to which they are put and which comply with all requirements of the Contract Documents.
1. For each generic product, use only materials from one manufacturer.
2. Provide only materials which are compatible with each other and with joint substrates.
3. Colors of exposed sealers: As selected by the Architect from manufacturer's standard colors.

B. Manufacturers: Provide products complying with requirements of the Contract Documents and made by one of the manufacturers listed.
1. Silicone sealants:
   a. Dow Corning Corporation.
   b. Pecora Corporation.
   c. Tremco, Inc.
2. Butyl sealants:
   a. Pecora Corporation.
   b. Koch Protective Treatments, Inc.
   c. Tremco, Inc.
3. Acrylic-latex emulsion sealant:
   a. Bostik Inc.
   b. Pecora Corporation.
   c. Sonneborn Building Products Division/ChemRex, Inc.

2.2 ELASTOMERIC SEALANTS

A. Elastomeric Sealants - General: Chemically curing elastomeric sealants of types indicated, complying with ASTM C 920, including specific Type, Grade, Class, and Uses indicated, as well as all other requirements specified.
1. Where movement capability exceeding that measured by ASTM C 920 is specified, sealant shall withstand the total movement indicated while remaining in compliance with the other requirements specified, when tested in accord with ASTM C 719, with base joint width measured at the time of application.
2. For M-type substrates: Comply with requirements for Use M.
3. For G-type substrates: Comply with requirements for Use G.
4. For A-type substrates: Comply with requirements for Use A.
5. For O-type substrates: Comply with requirements for Use M (minimum) and Use O for the particular substrate.

B. High Movement Silicone Sealant: One- or two-part, non-acid-curing, Grade NS, Class 25, Use NT, plus movement capability of at least 50 percent in both extension and compression.

C. Mildew-Resistant Silicone Sealant: One-part, Type S, Grade NS, Class 25, Use NT,

formulated with fungicide, for interior use on nonporous substrates.

D. Silicone Sealant for Use T: One-part, non-acid curing, Type S, Grade NS, Class 25, Use T, Use M, plus movement capability of 50 percent in both extension and compression.

2.3 SOLVENT-RELEASE-CURING SEALANTS

A. Butyl Sealant: Nonsag, one part, solvent-release-curing; complying with FS A-A-272, Type III; nonstaining; paintable.

2.4 LATEX SEALANTS

A. Acrylic-Latex Emulsion Sealant: One-part, nonsag, mildew-resistant, paintable; complying with ASTM C 834.

2.5 SEALANT BACKERS

A. Backers - General: Nonstaining; recommended or approved by sealant manufacturer for specific use.

B. Backer Rods: Flexible, nonabsorbent, compressible polyurethane foam, either open-cell or non-gassing closed-cell, unless otherwise restricted by sealant manufacturer; preformed to appropriate size and shape.

C. Bond-Breaker Tape: Self-adhesive, polyethylene or other plastic tape, unless otherwise restricted by sealant manufacturer; suitable for preventing sealant adhesion.

2.6 MISCELLANEOUS MATERIALS

A. Primers: Use primers determined to be required by substrate tests.

B. Cleaners: As recommended by sealer manufacturer and not damaging to substrates.

C. Masking Tape: Nonabsorbent, nonstaining.

D. Tooling Agents: Approved by sealant manufacturer; nonstaining to sealant and substrate.

PART 3: EXECUTION

3.1 EXAMINATION

A. Examine joints for characteristics that may affect sealer performance, including configuration and dimensions.

B. Do not begin joint sealer work until unsatisfactory conditions have been corrected.

3.2 PREPARATION

A. Cleaning: Just before starting sealer installation, clean out joints in accord with recommendations of sealer manufacturers and as follows:
1. Remove all material that could impair adhesion, including dust, dirt, coatings, paint, oil, and grease. Exception: Materials tested to show acceptable adhesion and compatibility.
2. Dry out damp and wet substrates thoroughly.
3. Clean M-type and O-type substrates by suitable mechanical or chemical methods.
4. Remove loose particles by vacuuming or by blowing with oil-free compressed air.

5. Concrete: Remove laitance and form-release coatings.
6. Clean A-type and G-type substrates by chemical or other methods which will not damage the substrate.
7. Use methods which will not leave residues that will impair adhesion.

B. Priming: Prime substrates as recommended by sealer manufacturer.

C. Masking Tape: Use masking tape to keep primers and sealers off of adjacent surfaces which would be damaged by contact or by cleanup. Remove tape as soon as practical.

D. Install fillers where needed to provide proper joint depth or support for sealant backers.

## 3.3 INSTALLATION

A. Comply with sealer manufacturers' installation instructions and recommendations, except where more restrictive requirements are specified.

B. Gunnable and Pourable Sealants: Comply with recommendations of ASTM C 1193.

C. Backers:
1. Install backers at depth required to result in shape and depth of installed sealant which allows the most joint movement without failure.
    a. Make backers continuous, without gaps, tears, or punctures.
    b. Do not stretch or twist backers.
2. Use bond-breaker tape where indicated and wherever it is necessary to keep sealant from adhering to back or third side of joint.
3. If backers become wet or damp before installation of sealant, dry out thoroughly before proceeding.
4. For Precast concrete at office building, equipment rooms, and occupiable spaces, repeat above process and provide (2), two continuous layers of sealant and backers from exterior side of panel consecutively. First layer to inside of building is to have (2) backer rods placed at about 25 percent of the panel depth behind the first .

D. Sealants: Use methods recommended by manufacturer; completely fill the joint; make full contact with bond surfaces; tool nonsag sealants to smooth surface eliminating air pockets.
1. Use concave joint shape shown in Figure 5A in ASTM C 1193, where not otherwise indicated.
2. Use flush joint shape shown in Figure 5B in ASTM C 1193, where indicated.

## 3.4 PROTECTION AND CLEANING

A. Clean surfaces adjacent to joints as work progresses and before sealants set using methods and materials approved by manufacturers of sealers and of surfaces to be cleaned.

B. Protect joint sealers from contamination and damage.

C. Remove and replace damaged sealers.

## 3.5 SCHEDULE OF JOINT SEALERS

A. Exterior Joints for Which No Other Sealer Is Indicated:
1. Use one of the following sealants:
    a. High movement silicone sealant.

2. Backer: Closed cell neoprene sponge Backer rod conforming to ASTM C509 or as recommended by mfg..
3. Joint shape: Concave joint configuration.

B. Interior Joints for Which No Other Sealer Is Indicated:
1. Use one of the following sealants:
   a. Acrylic-emulsion latex sealant.
2. Backer: Backer rod as recommended by mfg...
3. Joint shape: Concave joint configuration.

C. Exterior Joints Well Protected from Weather and Not Subject to Movement:
1. Use one of the following sealants:
   a. Butyl sealant.
2. Backer: Backer rod as recommended by mfg...

D. Joints around Pipes, Ducts, and Conduit Penetrating Exterior Walls and Roofs:
1. Use one of the following sealants:
   a. Same as used for adjacent substrates.

**END OF SECTION**

# SECTION 13100 – LIGHTNING PROTECTION AND BONDING

## PART 1 – GENERAL

### 1.1 RELATED DOCUMENTS

Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 1 Specification Sections shall apply to this Section.

Other Specification Sections that directly relate to the work of this section include, but are not limited to the following:

07520 Membrane Roofing
07710 Manufactured Roof Specialties

### 1.2 SUMMARY

This specification for the lightning protection system is intended to be a performance type specification for furnishing the design, labor, materials and services required for the completion of a functional and unobtrusive lightning protection system consisting of air terminals, conductors, grounds, and other component parts for complete coverage of the building(s) or structures against damage by lightning, as indicated on the contract documents. The system shall provide safety for the building, building contents and occupants by preventing damage caused by lightning.

The lightning protection system shall be installed by a firm actively engaged in the installation of Master Labeled Lightning Protection Systems and shall be so listed by Underwriters Laboratories Inc.

The system(s) shall be designed and installed in accordance with NPFA 780, UL 96A, LPI 175 and the requirements of State and Local Codes and Regulations.

### 1.3 SUBMITTALS

#### Product Data

Provide manufacturer’s technical data of features, performance, electrical characteristics and finishes for each type of product indicated. Examples include grounding down conductors, thru-roof/thru-wall assemblies, roof conductors, air terminals, and other necessary components.

#### Shop Drawings

Provide the system layout designed specifically for the building(s) or structures included in the contract drawings along with details of how the products are to be used in the installation. Show the type, size, and locations of grounding down conductors, thru-roof/thru-wall assemblies, roof conductors and air terminals. The shop drawings shall include indications for use of raceway for concealment of system downleads.

Shop drawings shall be submitted to the Architect or Engineer for approval prior to commencement of the installation.

Certification or Qualification Data

Submit evidence of qualifications to the Architect or Engineer. This may include UL Manufacturer's Listing, UL Installer's Listing, and/or LPI Master Installer Designer Certification.

## 1.4 QUALITY ASSURANCE

Designer's Qualifications

An LPI Master Installer/Designer shall complete the design of the system.

Installer Qualifications

Installation of the system shall be completed by a UL Listed Lightning Protection Installation Company and shall be under the supervision of an LPI Master Installer/Designer.

## 1.5 CODES, STANDARDS AND REGULATIONS

The completed lightning protection system shall comply with the latest issue of the following standards and form a part of this specification.

National Fire Protection Association
NFPA 780 - Standard for the Installation of Lightning Protection Systems

Lightning Protection Institute
LPI 175 – Standard of Practice for the Design, Installation & Inspection of Lightning Protection Systems

Underwriters Laboratories
UL 96 – Lightning Protection Components
UL 96A – Installation Requirements for Lightning Protection Systems

## 1.6 COORDINATION

The installation of the lightning protection system shall be coordinated with other building trades to insure a correct, neat and unobtrusive installation.

Coordinate with the roofing contractor prior to installing any roof penetrations, fasteners, or adhesive(s) on the roof.

The roofing contractor shall be responsible for sealing and/or flashing all lightning protection roof penetrations per the roof manufacturer's recommendations. The lightning protection contractor shall use a compatible adhesive to adhere components to the roof when required. Prior to the installation, the lightning protection contractor must obtain approval of the compatible adhesive from the roof manufacturer/contractor. Should the roofing manufacturer/contractor require any special walk pads, membrane patches, pavers, etc.

under the components of the lightning protection system, it shall be the responsibility of the roofing contractor to furnish and install such items. The lightning protection contractor shall be

responsible for marking the locations of conductors and other components that would require such items.

The lightning protection installer shall assure a sound bond to the main water service and to assure interconnection with other ground systems.

## PART 2 – PRODUCTS

### 2.1 STANDARDS

The system furnished under this specification shall be the standard product of manufacturer's regularly engaged in the production of lightning protection equipment and shall be the manufacturer's latest approved design.

The equipment shall be UL Listed and properly UL Labeled for use in lightning protection systems.

All equipment shall be new and of a design and construction for the application in which it is used in accordance with accepted industry standards and UL, NFPA and LPI code requirements.

### 2.2 ACCEPTABLE MANUFACTURERS

Subject to compliance with requirements, provide materials by one of the following:

Preferred Lightning Protection Company – 2100 E First St, Maryville
MO 64468 Phone: 660-562-2771
Email: sales@preferredlp.com

Prior-approved Equals

### 2.3 LIGHTNING PROTECTION SYSTEM COMPONENTS

#### Materials

All down conductors need to be copper and all roof top work needs to be aluminum and of the size, weight, and construction to suit the application and used in accordance with UL, NFPA and LPI code requirements.

Class I sized components shall be used on roof levels 75 feet and below in height. Class II sized components shall be used on roof levels exceeding 75 feet in height.

Bolt tension connectors and splicers shall be utilized on Class I and Class II structures. Compression fittings are acceptable only on Class I structures.

All mounting hardware shall be stainless steel to prevent corrosion.

Copper materials shall not be installed on aluminum surfaces including Galvalume, galvanized

steel, zinc or any painted steel.

Aluminum Components

Aluminum materials may not be used except on roofs that utilize aluminum, galvalume, galvanized metal roofing or painted steel components. On these roofs or where parapets of these materials are present, the entire roof lightning protection system shall utilize aluminum materials to ensure compatibility. Where an aluminum lightning protection system is present, a bimetallic transition shall occur at the thru-roof assembly so that copper components can be utilized for downleads and grounding.

Air Terminals

Air terminals shall be of solid construction and shall project a minimum of 10 inches above the object or area it is to protect. Air terminals shall be spaced at intervals not exceeding 20’-0” along ridges and around the perimeter of flat or gently sloping roofs (roofs with a pitch of less than 3:12). Flat or gently sloping roofs exceeding 50’-0” in width shall be protected with additional air terminals spaced at 50’-0” maximum intervals. Air terminal shall be located within two feet of roof edges and outside corners of protected areas.

Air terminals shall be installed on mechanical units, stacks, flues and other metallic objects not located within a zone of protection and with metal thickness of less than 3/16 inch. Metallic objects having a thickness of 3/16 inch or greater shall be bonded to the lightning protection system with using main-size conductor and a bonding plate with a minimum of 3 square inches of surface contact area.

Air terminal bases shall be securely fastened to the structure in accordance with the specified standards. Installation methods include the use of adhesive that is compatible with the mounting surface or stainless steel fasteners. Installation of the air terminal base shall be coordinated with the roofing contractor so as not to void the roof warranty.

Main Conductors

Main conductors shall be sized in accordance with the specified standards for Class I or Class II structures and shall provide a two-way path to ground for each air terminal. The conductor shall maintain a horizontal or downward path from the air terminals to the connections with the ground system.

Conductors shall be free of excessive splices and shall be secured at 36 inch maximum intervals.

Conductors shall be installed so that no bend of the conductor is less than 90 degrees nor has a radius of bend of less than eight (8) inches.

Down Conductors

Down conductors shall be sized in accordance with the specified standards for Class I or Class II structures and in no case shall be smaller than the roof circuit. Down conductors shall be spaced at intervals averaging not more than 100 feet around the perimeter of the structure. No structure shall have fewer than two (2) down conductors.

Where down conductors are installed exposed on the outside of a structure and are subject to damage or displacement, they shall be protected with conduit a minimum of six (6) feet above grade. Conductor inside metallic conduit shall be bonded at each end.

Steel Frame Construction

In case of structural steel frame construction, down conductors may be omitted.

Roof conductors shall be connected to the structural steel framework at intervals averaging not more than 100 feet around the perimeter of the structure.

Roof Penetrations

Roof penetrations required for down conductors or for connection to structural steel framework shall be made using thru-roof assemblies. Conductors shall not pass directly through the roof.

The roofing contractor shall furnish and install the materials required to properly seal all lightning protection roof penetrations.

Ground Terminations

Ground electrodes (rods) shall be copper clad steel, 3/4" diameter, 10 feet in length. A ground electrode shall be provided for each down conductor. The connection between the down conductor and the ground electrode shall be made with a mechanical ground rod clamp having a minimum of 1-1/2” of contact measured parallel to the axis of the ground electrode or by an exothermically welded connections.

Ground electrodes shall be located a minimum of one (1) feet below grade and two (2) feet from the foundation wall.

**END OF SECTION**

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