

CITY OF YANKTON
SOUTH DAKOTA
PROJECT MANUAL

SPECIFICATIONS AND BID FORM
FOR

**Chan Gurney Municipal Airport
Yankton, South Dakota
Barrel Hangar Re-roofing**

Community & Economic Development Project 2018-005

CITY OF YANKTON, OWNER
PO BOX 176
YANKTON, SOUTH DAKOTA 57078

BID SUBMITTAL TO:
CITY OF YANKTON
ATTN: CITY FINANCE OFFICER
PO BOX 176
YANKTON, SOUTH DAKOTA 57078

BID CLOSING & OPENING:
July 16, 2018
3:00 P.M.

BID AWARD
July 23, 2018
AFTER 7:00 P.M.

CITY OF YANKTON
PROJECT MANUAL

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FOR

**Chan Gurney Municipal Airport
Barrel Hangar Re-roofing**

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Publishing Dates: June 25 & 28, 2018

NOTICE TO BIDDERS

Sealed bids will be received by the City Commission of the City of Yankton, South Dakota, at the office of the City Finance Officer of said City until 3:00 P.M. or may be hand delivered to the place of opening at 3:00 P.M. on the 16th day of July, 2018 at which time they will be publicly opened and read in the Second Floor Meeting Room "A" at City Hall, 416 Walnut, Yankton, South Dakota. Disposition of said bids is expected to be held on the 23rd day of July 2018 at 7:00 P.M., in the Chambers of the City Commission at 1200 W. 21st Street, Yankton, South Dakota.

Bids will be received for the following:

**City of Yankton
Chan Gurney Municipal Airport
Barrel Hanger Re-roof**

This project includes the following:

- Removal of existing roofing materials and shingles.
- Re-sheeting roof with 7/16-inch exposure 1 oriented strand board (Bid Alternate)
- Placement of new shingles, underlayment, trim, flashing and associated materials needed for a complete shingle installation.
- Re-roofing the asphalt bitumen roofing section with a new rubber-roof system including all flashing needed for a complete installation
- Repairing and replacing trim and soffits
- The project shall include all equipment, labor, materials and expertise necessary for a complete installation.

The contractor shall be responsible for inspecting the premises and identifying existing conditions and measurements.

Copies of the specifications may be obtained at the office of the Department of Community and Economic Development 416 Walnut Street, Yankton, South Dakota 57078 or by telephoning (605) 668-5251.

The City of Yankton, South Dakota reserves the right to reject any or all bids and to waive any informalities therein to determine which is the best and lowest bid.

Joe Morrow
City of Yankton, South Dakota

-THE CITY OF YANKTON IS AN EQUAL OPPORTUNITY EMPLOYER-

INSTRUCTIONS TO BIDDERS

BIDS will be received by the Finance Officer of the CITY OF YANKTON, South Dakota (herein called the "OWNER"), at the City Finance Office until 3:00 P.M. on the date specified in the Notice to Bidders or the BIDS may be hand delivered to the Second Floor Meeting Room "A" in City Hall at 416 Walnut Street, Yankton, South Dakota until 3:00 P.M. on the date specified in the Notice to Bidders, whereupon they will be publicly opened and read aloud.

Each BID must be submitted in a sealed envelope, addressed to The Board of City Commissioners, c/o City Finance Officer, Yankton, South Dakota. Each sealed envelope containing a BID must be plainly marked on the outside with the name of the project for which the BID is submitted, and the name of the BIDDER and the bidder's address. If forwarded by mail, the sealed envelope containing the BID must be enclosed in another envelope addressed to the City of Yankton, 416 Walnut Street, Yankton, South Dakota 57078.

All BIDS must be made on the required BID forms. All blank spaces for BID prices must be filled in, in ink or typewritten, and the BID form must be fully completed and executed when submitted. Only one copy of the BID form is required.

The OWNER may waive any informalities or minor defects or reject any and all BIDS. Any BID may be withdrawn prior to the above scheduled time for the opening of BIDS or authorized postponement thereof. Any BID received after the time and date specified shall not be considered. No BIDDER may withdraw a BID within thirty (30) days after the actual date of the opening thereof. Should there be reasons why the contract cannot be awarded within the specified period, the time may be extended by mutual agreement between the OWNER and the BIDDER.

BIDDERS must satisfy themselves of the accuracy of the estimated quantities in the BID schedule by examination of the site and a review of the drawings and specifications including ADDENDA. After BIDS have been submitted, the BIDDER shall not assert that there was a misunderstanding concerning the quantities of WORK or of the nature of the WORK to be done.

The OWNER shall provide to BIDDERS prior to BIDDING, all information which is pertinent to, and delineates and describes, the land owned and rights of way acquired or to be acquired.

The CONTRACT DOCUMENTS contain the provisions required for the construction of the PROJECT. Information obtained from an officer, agent, or employee of the OWNER or any other person shall not affect the risks or obligations assumed by the CONTRACTOR or relieve him from fulfilling any of the conditions of the contract.

Each BID must be accompanied by a certified check, cashier's check or draft, for five percent of the amount of the BID, such check to be certified or issued by either a state or a national bank and payable to the OWNER, or in lieu thereof a BID BOND for ten percent of the amount of the BID, such bond to be issued by a surety authorized to do business in the State of South Dakota payable to the OWNER, as a guaranty that such BIDDER will enter into a contract with the OWNER, in accordance with the terms of such letting and BID in case such BIDDER be awarded the contract.

As soon as the BID has been awarded, the OWNER will return the BONDS of all unsuccessful BIDDERS. The BID BOND of the successful BIDDER will be retained until the CONTRACT, PAYMENT BOND and the PERFORMANCE BOND have been executed and approved, after which it will be returned.

A PERFORMANCE BOND and a PAYMENT BOND, each in the amount of 100 percent of the CONTRACT PRICE, with a corporate surety approved by the OWNER, will be required for the faithful performance of the contract.

Attorneys-in-fact who sign BID BONDS or PAYMENT BONDS and PERFORMANCE BONDS must file with each BOND a certified and effective dated copy of their power of attorney.

The party to whom the contract is awarded will be required to execute the Agreement and obtain the PERFORMANCE BOND, PAYMENT BOND and all required insurance certificates within ten (10) calendar days from the date when the NOTICE OF AWARD is delivered to the BIDDER. The NOTICE OF AWARD shall be accompanied by the necessary Agreement and BOND forms. In case of failure of the BIDDER to execute the Agreement, the OWNER may at his option consider the BIDDER in default in which case the BID BOND accompanying the proposal shall become the property of the OWNER.

The OWNER within ten (10) days of receipt of acceptable insurance certificates and Agreement signed by the party to whom the Agreement was awarded shall sign the Agreement and return to such party an executed duplicate of the Agreement.

The NOTICE TO PROCEED shall be issued within ten (10) days of the execution of the Agreement by the OWNER. Should there be reasons why the NOTICE TO PROCEED cannot be issued within such period, the time may be extended by mutual agreement between the OWNER and CONTRACTOR.

The OWNER may make such investigations as he deems necessary to determine the ability of the BIDDER to perform the WORK, and the BIDDER shall furnish to the OWNER all such information and data for this purpose as the OWNER may request. The OWNER reserves the right to reject any BID if the evidence submitted by, or investigation of, such BIDDER fails to satisfy the OWNER that such BIDDER is properly qualified to carry out the obligations of the Agreement and to complete the WORK contemplated therein.

A conditional or qualified BID will not be accepted.

Award will be made to the lowest responsible BIDDER.

All applicable laws, ordinances, and the rules and regulations of all authorities having jurisdiction over construction of the PROJECT shall apply to the contract throughout.

Each BIDDER is responsible for inspecting the site and for reading and being thoroughly familiar with the CONTRACT DOCUMENTS. The failure or omission of any BIDDER to do any of the foregoing shall in no way relieve any BIDDER from any obligation in respect to his BID.

The low BIDDER shall supply the names and addresses of major material SUPPLIERS and SUBCONTRACTORS when requested to do so by the OWNER.

BID PROPOSAL

Date: _____

Proposal of _____ (hereinafter called "BIDDER") a corporation, organized and existing under the laws of the State of _____, a partnership, or an individual doing business as:

_____.

To: City Finance Officer
City of Yankton
Yankton, South Dakota

Proposals to be filed
no later than 3:00 P.M.
on July 16, 2018

Gentlemen:

The BIDDER, in compliance with your invitation to bid for:

**City of Yankton
Chan Gurney Municipal Airport
Barrel Hangar Re-roof**

Having examined the specifications and related documents, the site of the proposed work and being familiar with all of the conditions surrounding the proposed project, including the availability of materials and labor hereby proposes to furnish all labor, materials, and supplies in strict accordance with the CONTRACT DOCUMENTS, within the time set forth therein, and at the prices stated below. This price covers all expenses incurred in performing the work required under the contract documents, of which this proposal is a part.

The undersigned bidder does hereby declare and stipulate that each proposal is made in good faith, without collusion or connection with any other person or persons bidding for the same work, and that it is made in pursuance of and subject to the detailed specifications, and all other contract documents, pertaining to the work to be done, all of which have been examined by the undersigned.

Name of Bidder: _____

All the various phases of work enumerated in the contract documents with their individual jobs and overhead, whether specifically mentioned, included by implication or appurtenant thereto, are to be performed by the Contractor.

The BIDDER hereby agrees to fully complete the PROJECT by **October 15, 2018**.

The BIDDER agrees to perform all the work described in the CONTRACT DOCUMENTS for the following price. (Note: BIDS shall include all applicable taxes and fees.)

Description:

Base Bid, Chan Gurney Municipal Airport Re-roof, Shingles and EDPM Roofing:

\$ _____

Alternate Bid, 7/16 Oriented Strand Board (OSB) Re-Sheeting on Shingled Portion of building:

Alternate Amount for OSB \$ _____

*Contractors must bid on all components (base bid and alternate). The City of Yankton Reserves the right to accept the base bid without the alternate.

(Total Bid Amount Written Out base bid plus alternate)
Bid amount shall include all sales & excise taxes

Name and address of Bidder: _____

Bidder acknowledges receipt of the following addenda:

Date: _____ Number _____

_____	_____
_____	_____
_____	_____

The Bidder understands that the Owner reserves the right to reject any or all bids, to waive any informalities in the bidding and to award the contract in the best interest of the Owner.

Respectfully submitted:

Name of Firm Federal ID No.

Officer

_____ _____
Address Telephone No.

Name of Bidder: _____

BID BOND

That we, the undersigned,

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called PRINCIPAL, and

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are hereby held and firmly bound unto the CITY OF YANKTON, SOUTH DAKOTA, hereinafter called OWNER, in the penal sum of _____ Dollars, (\$ _____) in lawful money of the United States, for the payment of which, will and truly to be made, we hereby jointly and severally bind ourselves, successors, and assign.

THE CONDITON OF THIS OBLIGATION is such that whereas, the PRINCIPAL has submitted the accompanying BID PROPOSAL, dated _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE,

(a) If said BID shall be rejected, or

(b) If said BID be accepted and the PRINCIPAL shall execute and deliver a contract in the Form of Contract attached hereto (properly completed in accordance with said BID) and shall furnish a BOND for his faithful performance of said contract, and for the payment of all persons performing labor or furnishing materials in connection therewith, and shall in all other respects perform the agreement created by the acceptance of said BID, then this obligation shall be void, otherwise the same shall remain in force and effect; it being expressly understood and agreed that the liability of the SURETY for any and all claims hereunder shall, in no event, exceed the penal amount of this obligation as herein stated.

The SURETY, for value received, hereby stipulates and agrees that the obligations of said SURETY and its BOND shall be in no way impaired or affected by any extension of the time within which the OWNER may accept such BID; and said SURETY does hereby waive notice of any such extension.

IN WITNESS WHEREOF, the PRINCIPAL and the SURETY have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(Lump Sum)
PRINCIPAL

by _____(s)

ATTEST:

(Principal) Secretary

(SEAL)

(Witness as to Principal)

(Address)

BY SURETY

ATTEST:

(Surety) Secretary

(SEAL)

(Witness as to Surety)

(Address)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of South Dakota

BIDDERS STATEMENT OF QUALIFICATIONS

(Must be submitted with bid)

To: City of Yankton
Yankton, South Dakota

Date Submitted: _____

The following statements of qualification and experience are current for:

Name of Organization: _____

Address: _____

We are incorporated in the State of: _____

Our principal work is: _____

We are licensed to perform this work in the State of South Dakota at the present time: (Yes) (No)

EXPERIENCE RECORD

A. Completed projects of comparable nature (list 3 minimum)

Location & Description of Work	Owner	Contract Amount	Date Completed
--------------------------------	-------	-----------------	----------------

I certify that all the statements outlined above or attached hereto are a true representation of:

Name of Organization: _____

Address: _____

Prepared by: _____
(Signature)

Title: _____

Address: _____

Telephone: _____

NOTICE OF AWARD

Date: _____

TO: _____

ADDRESS: _____

OWNER'S PROJECT NO. _____

PROJECT: _____

CONTRACT FOR: _____

You are notified that your bid, dated _____

for the above contract has been considered. You are the apparent Successful Bidder and

have been awarded a contract for the **Chan Gurney Municipal Re-roofing Project.**

The contract price of your contract is: **Total Amount of Award \$:** _____

_____ dollars

(Written out)

The bid award is for the following:

Base Bid: Shingles & EPDM Roofing: \$ _____

Alternate: 7/16 Inch OSB Sheeting (Shingle Portion) \$ _____

Total Amount of Award: \$ _____

Three copies of each of the proposed Contract Documents accompany this Notice of Award.

You must comply with the following conditions precedent within ten (10) days of the Notice of Award, that is by _____.

(Date)

1. You must deliver to the OWNER three (3) fully executed counterparts of the Agreement.
2. You must deliver with executed agreement, the contract security (bonds) as specified in the Instructions to Bidders and General Conditions.
3. Provide a certificate of insurance with the contract.

Failure to comply with these conditions within the time specified will entitle the OWNER to consider your bid abandoned to annul the Notice of Award and to declare your Bid Security forfeited.

Within the ten (10) days after you comply with those conditions, the OWNER will return to you one fully signed counterpart of the Agreement with the Contract Documents attached.

CITY OF YANKTON, SOUTH DAKOTA

By: _____

(Title)

You are required to return an acknowledged copy of the NOTICE OF AWARD to the OWNER.

ACCEPTANCE OF NOTICE OF AWARD

Receipt of the above NOTICE OF AWARD is hereby acknowledged by

_____ this the _____ day of _____ 20____.

By: _____

Title: _____

AGREEMENT

THIS AGREEMENT, made this _____ day of _____, 20____, by and between the CITY OF YANKTON, SOUTH DAKOTA, hereinafter called "OWNER", and

_____ doing business as (an individual,) or (a partnership,) or (a corporation) hereinafter called "CONTRACTOR".

WITNESSETH: That for and in consideration of the payments and agreements hereinafter mentioned:

1. The CONTRACTOR will commence and complete the construction of

2. The CONTRACTOR will furnish all of the material, supplies, tools, equipment, labor and other services necessary for the construction and completion of the PROJECT described herein.

3. The CONTRACTOR will commence the work required by the CONTRACT DOCUMENTS within (60) calendar days after the NOTICE TO PROCEED and will complete the same within (12) calendar days unless the period for completion is extended otherwise by the CONTRACT DOCUMENTS.

4. The CONTRACTOR agrees to perform all of the WORK described in the CONTRACT DOCUMENTS and comply with the terms therein for the sum of \$ _____ or as shown in the BID schedule

5. The term "CONTRACT DOCUMENTS" means and includes the following:

- Advertisement for Bids
- Instruction to Bidders
- Bid Proposal
- Bid Bond
- Bidders Statement of Qualifications
- Agreement
- General Conditions
- Payment Bond
- Performance Bond
- Notice of Award
- Notice to Proceed
- Change Order
- Waiver and Release of Lien
- Specifications and drawings prepared or issued by The City of Yankton
- Addenda:

No. _____, dated _____

No. _____, dated _____

6. The OWNER will pay to the CONTRACTOR in the manner and at such times as set forth in the GENERAL CONDITIONS such amounts as required by the CONTRACT DOCUMENTS.

7. This agreement shall be binding upon all parties hereto and their respective heirs, executors, administrators, successors, and assigns.

IN WITNESS WHEREOF, the parties hereto have executed, or caused to be executed by their duly authorized officials, this Agreement in duplicate each of which shall be deemed an original on the date first above written.

OWNER:
The City of Yankton, South Dakota

Amy Nelson
City Manager

(SEAL)

ATTEST:

Al Viereck Date
Finance Officer

CONTRACTOR:

Date
By _____

Title

Address

(SEAL)

ATTEST:

Title

PAYMENT BOND

That we, the undersigned,

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called PRINCIPAL, and

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are hereby held and firmly bound unto the CITY OF YANKTON, SOUTH DAKOTA, hereinafter called OWNER, in the penal sum of _____ Dollars, (\$ _____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL has entered into a contract with the OWNER, dated _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the PRINCIPAL shall promptly make payment to all persons, firms, SUBCONTRACTORS and corporations furnishing materials for or performing labor in the prosecution of the WORK provided for in such contract, and any authorized extension or modification thereof, including all amounts due for materials, lubricants, oil, gasoline, coal and coke, repairs on machinery, equipment and tools, consumed or used in connection with the construction of such WORK, and all insurance premiums on said WORK, and for all labor, performed in such WORK whether by SUBCONTRACTOR or otherwise, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby 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 wise affect its obligation in this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the PRINCIPAL and the SURETY have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
PRINCIPAL

By _____(s)

ATTEST:

(Principal) Secretary
(SEAL)

(Witness as to Principal)

(Address)

SURETY

BY _____

ATTEST:

(Surety) Secretary
(SEAL)

(Witness as to Surety)

(Address)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of South Dakota.

PERFORMANCE BOND

That we, the undersigned,

(Name of Contractor)

(Address of Contractor)

a _____, hereinafter called PRINCIPAL, and

(Name of Surety)

(Address of Surety)

hereinafter called SURETY, are hereby held and firmly bound unto the CITY OF YANKTON, SOUTH DAKOTA, hereinafter called OWNER, in the penal sum of _____ Dollars, (\$_____)

in lawful money of the United States, for the payment of which sum well and truly to be made, we bind ourselves, successors, and assigns, jointly and severally, firmly by these presents.

THE CONDITION OF THIS OBLIGATION is such that whereas, the PRINCIPAL has entered into a contract with the OWNER, dated _____, a copy of which is hereto attached and made a part hereof for the construction of:

NOW, THEREFORE, if the PRINCIPAL shall well, truly and faithfully perform its duties, all the undertakings, covenants, terms, conditions, and agreements of said contract during the original term thereof, and any extensions thereof which may be granted by the OWNER, with or without notice to the SURETY, and if he shall satisfy all claims and demands incurred under such contract, and shall fully indemnify and save harmless the OWNER from all costs and damages which it may suffer by reason of failure to do so, and shall reimburse and repay the OWNER all outlay and expense which the OWNER may incur in making good any default, then this obligation shall be void; otherwise to remain in full force and effect.

PROVIDED, FURTHER, that the said SURETY, for value received hereby 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 wise affect its obligation in this BOND, and it does hereby waive notice of any such change, extension of time, alteration or addition to the terms of the contract or to the WORK to the SPECIFICATIONS.

PROVIDED, FURTHER, that no final settlement between the OWNER and the CONTRACTOR shall abridge the right of any beneficiary hereunder, whose claim may be unsatisfied.

IN WITNESS WHEREOF, the PRINCIPAL and the SURETY have hereunto set their hands and seals, and such of them as are corporations have caused their corporate seals to be hereto affixed and these presents to be signed by their proper officers, the day and year first set forth above.

_____(L.S.)
PRINCIPAL
By _____(s)

ATTEST:

(Principal) Secretary
(SEAL)

(Witness as to Principal)

(Address)

SURETY
BY _____

ATTEST:

(Surety) Secretary
(SEAL)

(Witness as to Surety)

(Address)

IMPORTANT: Surety companies executing BONDS must appear on the Treasury Department's most current list (Circular 570 as amended) and be authorized to transact business in the State of South Dakota.

NOTICE TO PROCEED

Dated _____, 20____

TO: _____
(Contractor)

ADDRESS: _____

PROJECT NO: _____

PROJECT: _____

CONTRACT FOR: _____

You are notified that the correct time under the above contract will commence to run on _____ . By that date, you are to start performing your obligations under the Contract Documents. In accordance with the Agreement the date of final completion is _____ .

Other requirements, if any

(Owner)

By _____
(Authorized Signature)

(Title)

ACCEPTANCE OF NOTICE

Receipt of the above NOTICE TO PROCEED is hereby acknowledged by

_____, this _____ day of _____, 20____.

(Signature)

Project No. _____

CHANGE ORDER

PROJECT TITLE: _____ CHANGE ORDER NO.: _____

PROEJCT NO: _____ DATE: _____

DESCRIPTION: _____

The following changes are hereby made to the Contract Documents:

<u>Quantity</u>	<u>Each</u>	<u>Total</u>
-----------------	-------------	--------------

Total Amount of this Change Order \$ _____

JUSTIFICATION:

Original Contract Amount:	\$ _____
Current Contract Amt. Adjusted by Previous Change Orders:	\$ _____
Contract Amt. due to this Change Order will be (increased)(decreased) by:	\$ _____
Contract Amount including this Change Order will be:	\$ _____

Contract Time will be (increased)(decreased) by _____

Completion Date for all work will be _____

APPROVAL:

ORDERED BY: _____
City of Yankton

ACCEPTED BY: _____
Contractor

WAIVER AND RELEASE OF LIEN

WHEREAS, the undersigned, _____
(Manufacturer, Materialman, Subcontractor)

has furnished to _____ the following
(Name of Contractor)

_____ for use in the construction
(Kind of Material and Services Furnished)

of a project belonging to _____, and
(Name of Owner)

designated as _____
(Name of Project)

NOW, THEREFORE, the undersigned:

_____ for and in
(Manufacturer, Materialman, Subcontractor)

consideration of \$ _____, and other good and valuable consideration, the receipt
whereof is hereby acknowledged, do (does) hereby waive and release any and all liens, or
right to or claim of lien, on the above described project and premises, under any law,
common or statutory, on account of labor or materials, or both, heretofore or hereafter
furnished by the undersigned to or for the account of said _____
(Name of Contractor)
for said project.

Given under my (our) hand(s) and seal(s) this _____ day of _____, 20 ____.

(Manufacturer, Materialman or Subcontractor)

By: _____

GENERAL CONDITIONS

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GENERAL CONDITIONS

1. DEFINITIONS:

1.1 Wherever used in the contract documents the following terms shall have the meanings indicated which shall be applicable to both the singular and plural thereof.

1.2 ADDENDA: Written or graphic instruments issued prior to the execution of the agreement, which modify or interpret the contract documents' drawings and specifications by additions, deletions, clarifications or corrections.

1.3 BID: The offer or proposal of the bidder submitted on the prescribed form setting forth the prices for the work to be performed.

1.4 BIDDER: Any person, firm or corporation submitting a bid for the work.

1.5 BONDS: Bid, performance and payment bonds and other instruments of security furnished by the contractor and his surety in accordance with the contract documents.

1.6 CHANGE ORDER: A written order to the contractor authorizing an addition, deletion or revision in the work within the general scope of the contract documents, or authorizing an adjustment in the contract price or contract time.

1.7 CONTRACT DOCUMENTS: The contract, including advertisement for bids, information for bidders, bid, bid bond, agreement, payment bond, performance bond, notice of award, notice to proceed, change order, drawings, specifications and addenda.

1.8 CONTRACT PRICE: The total monies payable to the contractor under the terms and conditions of the contract documents.

1.9 CONTRACT TIME: The number of calendar days stated in the contract documents for the completion of the work.

1.10 CONTRACTOR: The person, firm or corporation with whom the owner has executed the agreement.

1.11 DRAWINGS: The part of the contract documents which show the characteristics and scope of the work to be performed and which have been prepared or approved by the Engineer.

1.12 ENGINEER: The person, firm, owner or corporation named as such in the contract documents.

1.13 FIELD ORDER: A written order effecting a change in the work not involving

an adjustment in the contract price or an extension of the contract time issued by the Engineer to the contractor during construction.

1.14 NOTICE OF AWARD: The written notice of the acceptance of the bid from the owner to the successful bidder.

1.15 NOTICE TO PROCEED: Written communication issued by the owner to the contractor authorizing him to proceed with the work and establishing the date of commencement of the work.

1.16 OWNER: A public or quasi-public body or authority, corporation, association, partnership, or individual for whom the work is to be performed.

1.17 PROJECT: The undertaking to be performed as provided in the contract documents.

1.18 RESIDENT PROJECT REPRESENTATIVE: The authorized representative of the owner who is assigned to the project site or any part thereof.

1.19 SHOP DRAWINGS: All drawings, diagrams, illustrations, brochures, schedules and other data which are prepared by the contractor, a subcontractor, manufacturer, supplier or distributor which illustrate how specific portions of the work shall be fabricated or installed.

1.20 SPECIFICATIONS: A part of the contract documents consisting of written descriptions of a technical nature of materials, equipment, construction systems, standards and workmanship.

1.21 SUBCONTRACTOR: An individual, firm or corporation having a direct contract with the contractor or with any other subcontractor for the performance of a part of the work at the site.

1.22 SUBSTANTIAL COMPLETION: That date as certified by the Engineer when the construction of the project or a specified part thereof is sufficiently completed in accordance with the contract documents so that the project or specified part can be utilized for the purpose for which it is intended.

1.23 SUPPLEMENTAL GENERAL CONDITIONS: Modifications to general conditions required by a Federal agency for participation in the project and approved by the agency in writing prior to inclusion in the contract documents, or such requirements that may be imposed by applicable state laws.

1.24 SUPPLIER: Any person or organization who supplies materials or equipment for the work including that fabricated to a special design, but who does not perform labor at the site.

1.25 WORK: All labor necessary to produce the construction required by the contract documents and all materials and equipment incorporated or to be incorporated in the project.

1.26 WRITTEN NOTICE: Any notice to any party of the agreement relative to any part of this agreement in writing and considered delivered and the service thereof completed when posted by certified or registered mail to the said party at his last given address or delivered in person to said party or his authorized representative on the work.

2. ADDITIONAL INSTRUCTIONS AND DETAIL DRAWINGS:

2.1 The contractor may be furnished additional instructions and detail drawings by the Engineer as necessary to carry out the work required by the contract documents.

2.2 The additional drawings and instruction thus supplied will become a part of the contract documents. The contractor shall carry out the work in accordance with the additional detail drawings and instructions.

3. SCHEDULES, REPORTS AND RECORDS:

3.1 The contractor shall submit to the owner such schedule of quantities and costs, progress schedules, payrolls, reports, estimates, records and other data where applicable as are required by the contract documents for the work to be performed.

3.2 Prior to the first partial payment estimate the contractor shall submit construction progress schedules showing the order in which he proposes to carry on the work including dates at which he will start the various parts of the work and, as applicable, the dates at which special detail drawings will be required and respective dates for submission of shop drawings, the beginning of manufacture, the testing and the installation of materials, supplies and equipment.

4. DRAWINGS AND SPECIFICATIONS:

4.1 The intent of the drawings and specifications is that the contractor shall furnish all labor, materials, tools, equipment and transportation necessary for the proper execution of the work in accordance with the contract documents and all incidental work necessary to complete the project in an acceptable manner ready for use, occupancy or operation by the owner.

4.2 In case of conflict between the drawings and specifications, the specifications shall govern. Figure dimensions on drawings shall govern over scale dimensions and detailed drawings shall govern over general drawings.

4.3 Any discrepancies found between the drawings and specifications and site conditions or any inconsistencies or ambiguities in the drawings or specifications shall be immediately reported to the Engineer in writing who shall promptly correct such inconsistencies or ambiguities in writing. Work done by contractor after his discovery of such discrepancies, inconsistencies or ambiguities and prior to the Engineer's written response shall be done at the contractor's risk.

5. SHOP DRAWINGS:

5.1 The contractor shall provide shop drawings as may be necessary for the prosecution of the work as required by the contract documents. The Engineer shall promptly review all shop drawings. The Engineer's approval of any shop drawings shall not release the contractor from responsibility for deviations from the contract documents. The approval of any shop drawings, which substantially deviates from the requirement of the contract documents, shall be evidenced by a change order.

5.2 When submitted for the Engineer's review shop drawings shall bear the contractor's certification that he has reviewed, checked and approved the shop drawings and that they are in conformance with the requirements of the contract documents.

5.3 Portions of the work requiring a shop drawing or sample submission shall not begin until the shop drawing or submission has been approved by the Engineer. A copy of each approved shop drawing and each approved sample shall be kept in good order by the contractor at the site and shall be available to the Engineer.

6. MATERIALS, SERVICES AND FACILITIES:

6.1 It is understood that, except as otherwise specifically stated in the contract documents, the contractor shall provide and pay for all material, labor, tools, equipment, water, lights, power, transportation, supervision, temporary construction of any nature and all other services and facilities of any nature whatsoever necessary to execute, complete and deliver the work within the specified time.

6.2 Materials and equipment shall be so stored as to insure the preservation of their quality and fitness for the work. Stored materials and equipment to be incorporated in the work shall be located so as to facilitate prompt inspection.

6.3 Manufactured articles, materials and equipment shall be applied, installed, connected, used, cleaned and conditioned as directed by the manufacturer.

6.4 Materials, supplies and equipment shall be in accordance with samples submitted by the contractor and approved by the Engineer.

6.5 Materials, supplies or equipment to be incorporated into the work shall not be purchased by the contractor or the subcontractor subject to a chattel mortgage or under a conditional sale contract or either agreement by which an interest is retained by the seller.

7. INSPECTION AND TESTING:

7.1 All materials and equipment used in the construction of the project shall be subject to adequate inspection and testing in accordance with generally accepted standards as required and defined in the contract documents.

7.2 The owner shall provide all inspection and testing services not required by the contract documents.

7.3 The contractor shall provide, at his expense, the testing and inspection services required by the contract documents.

7.4 If the contract documents, laws, ordinances, rules, regulations or orders of any public authority having jurisdiction require any work to specifically be inspected, tested or approved by someone other than the contractor, the contractor will give the Engineer timely notice of readiness. The contractor will then furnish the Engineer the required certificates of inspection, testing or approval.

7.5 Inspections, tests or approvals by the Engineer or others shall not relieve the contractor from his obligations to perform the work in accordance with the requirements of the contract documents.

7.6 The Engineer and his representatives will at all time have access to the work. In addition, authorized representatives and agents of any participating Federal or State agency be permitted to inspect all work, materials, payrolls, records of personnel, invoices of materials and other relevant data and records. The contractor will provide proper facilities for such access and observation of the work and also for any inspection or testing thereof.

7.7 If any work is covered contrary to the written instructions of the Engineer it must be uncovered for the Engineer's observation and if requested by the Engineer be replaced at the contractor's expense.

7.8 If the Engineer considers it necessary or advisable that covered work be inspected or tested by others, the contractor at the Engineer's request will uncover, expose or otherwise make available for observation, inspection or testing as the Engineer may require, that portion of the work in question furnishing all necessary labor, materials, tools and equipment. If it is found that such work is defective the contractor will bear all the expenses of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction. If, however, such work is not found to be defective, the contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction and an appropriate change order shall be issued.

8. SUBSTITUTIONS:

8.1 Whenever a material, article or piece of equipment is identified on the drawings or specifications by reference to brand name or catalog number it shall be understood that this is referenced for the purpose of defining the performance or other salient requirements and that other products of equal capacities, qualities and function shall be considered. The contractor may recommend the substitution of a material, article or piece of equipment of equal substance and function for those referred to in the contract documents by reference to brand name or catalog number and if in the opinion of the Engineer such material, article or piece of equipment is of equal substance and function to that specified the Engineer may approve its substitution and use by the contractor. Any cost

differential shall be deductible from the contract price and the contract document shall be appropriately modified by change order. The contractor warrants that if substitutes are approved, no major changes in the function or general design of the project will result. Incidental changes or extra component parts required to accommodate the substitute will be made by the contractor without a change in the contract price or contract time.

9. PATENTS:

9.1 The contractor shall pay all applicable royalties and license fees. He shall defend all suits or claims for infringement of any patent rights and save the owner harmless from loss on account thereof, except that the owner shall be responsible for any such loss when a particular process, design, or the product of a particular manufacturer or manufacturers is specified, however, if the contractor has reason to believe that the design, process or product specified is an infringement of a patent, he shall be responsible for such loss unless he promptly gives such information to the Engineer.

10. PERMITS, REGULATIONS:

10.1 Permits and licenses for the prosecution of the work shall be secured and paid for by the contractor unless otherwise stated in the general conditions

11. PROTECTION OF WORK, PROPERTY AND PERSONS:

11.1 The contractor will be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the work. He will take all necessary precautions for the safety of and will provide the necessary protection to prevent damage, injury or loss to all employees on the work and other persons who may be affected thereby, all the work and all materials or equipment to be incorporated therein whether in storage on or off the site and other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures and utilities not designated for removal, relocation or replacement in the course of construction.

11.2 The contractor will comply with all applicable laws, ordinances, rules, regulations and orders of any public body having jurisdiction. He will erect and maintain as required by the conditions and progress of the work all necessary safeguards for safety and protection. He will notify owners of adjacent utilities when prosecution of the work may affect them. The contractor will remedy all damage, injury or loss to any property caused, directly or indirectly in whole or in part by the contractor, any subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them be liable, except damage or loss attributable to the fault of the contract documents or to the acts or omissions of the owner or the Engineer or anyone employed by either of them or anyone for whose acts either of them may be liable, and not attributable, directly or indirectly, in whole or in part to the fault or negligence of the contractor.

11.3 In emergencies affecting the safety of persons or the work or property at the site or adjacent thereto the contractor without special instruction or authorization from the Engineer or the owner shall act to prevent threatened damage, injury or loss. He will give the Engineer prompt written notice of any significant changes in the work or deviations from the contract documents caused thereby, and a change order shall thereupon be issued

covering the changes and deviations involved.

12. SUPERVISION BY CONTRACTOR:

12.1 The contractor will supervise and direct the work. He will be solely responsible for the means, methods, techniques, sequences and procedures of construction. The contractor will employ and maintain on the work a qualified supervisor or superintendent who shall have been designated in writing by the contractor as the contractor's representative at the site. The supervisor shall have full authority to act on behalf of the contractor and all communications given to the supervisor shall be as binding as if given to the contractor. The supervisor shall be present on the site at all times as required to perform adequate supervision and coordination of the work.

13. CHANGES IN THE WORK:

13.1 The owners may at any time, as the need arises, order changes within the scope of the work without invalidating the Agreement. If such changes increase or decrease the amount due under the contract documents or in the time required for performance of the work an equitable adjustment shall be authorized by change order.

13.2 The Engineer also may at any time by issuing a field order make changes in the details of the work. The contractor shall proceed with the performance of any changes in the work so ordered by the Engineer unless the contractor believes that such field order entitles him to a change in contract price or time or both in which event he shall give the Engineer written notice thereof within seven (7) days after the receipt of the ordered change. Thereafter the contractor shall document the basis for the change in contract price on time within thirty (30) days. The Contractor shall not execute such changes pending the receipt of an executed change order or further instruction from the owner.

14. CHANGES IN CONTRACT PRICE:

14.1 The contract price may be changed only by a change order. The value of any work covered by a change order or of any claim for increase or decrease in the contract price shall be determined by one or more of the following methods in the order of precedence listed below:

- (a) Unit prices previously approved.
- (b) An agreed lump sum.
- (c) The actual cost for labor, direct overhead, materials, supplies, equipment and other services necessary to complete the work. In addition there shall be added an amount to be agreed upon but not to exceed fifteen (15) percent of the actual cost of the work to cover the cost of general overhead and profit.

15. TIME FOR COMPLETION AND LIQUIDATED DAMAGES:

15.1 The date of beginning and the time for completion of the work are essential conditions of the contract documents and the work embraced shall be commenced on a date specified in the Notice to Proceed.

15.2 The contractor will proceed with the work at such rate of progress to insure full completion within the contract time. It is expressly understood and agreed, by and

between the contractor and the owner, that the contract time for the completion of the work described herein is a reasonable time, taking into consideration the average climatic and economic conditions and other factors prevailing in the locality of the work.

15.3 If the contractor shall fail to complete work within the contract time or extension of time granted by the owner, the contractor will pay to the owner the amount for liquidated damages as specified in the bid for each calendar day that the contractor shall be in default after the time stipulated in the contract documents.

15.4 The contractor shall not be charged with liquidated damages or any excess cost when the delay in completion of the work is due to the following and the contractor has promptly given written notice of such delay to the owner or Engineer.

(1) To any preference, priority or allocated order issued by the owner.

(2) To unforeseeable causes beyond the control and without the fault or negligence of the contractor including but restricted to acts of God, or the public enemy, acts of the owner, acts of another contractor in the performance of a contract with the owner, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and abnormal and unforeseeable weather, and

(3) To any delays of subcontractors occasioned by any of the causes specified in the two paragraphs above.

16. CORRECTION OF WORK:

16.1 The contractor shall promptly remove from the premises all work rejected by the Engineer for failure to comply with the contract documents, whether incorporated in the construction or not, and the contractor shall promptly replace and re-execute the work in accordance with the contract documents and without expense to the owner and shall bear the expense of making good all work of other contractors destroyed or damaged by such removal or replacement.

16.2 All removal and replacement work shall be done at the contractor's expense. If the contractor does not take action to remove such rejected work within ten (10) days after receipt of written notice the owner may remove such work and store the materials at the expense of the contractor.

17. SUBSURFACE CONDITIONS:

17.1 The contractor shall promptly, and before such conditions are disturbed, except in the event of an emergency, notify the owner by written notice of:

(1) Subsurface or latent physical conditions at the site differing materially from those indicated in the contract documents, or

(2) Unknown physical conditions at the site of an unusual nature differing materially from those ordinarily encountered and generally recognized as

inherent in work of the character provided for in the contract documents.

17.2 The owner shall promptly investigate the conditions and if he finds that such conditions do so materially differ and cause an increase or decrease in the cost of, or in the time required for, performance of the work an equitable adjustment shall be made and the contract documents shall be modified by a change order. Any claim of the contractor for adjustment thereunder shall not be allowed unless he has given the required written notice, provided that the owner may if he determines the facts so justify, consider and adjust any such claims asserted before the date of final payment.

18. SUSPENSION OF WORK, TERMINATION AND DELAY:

18.1 The owner may suspend the work or any portion thereof for a period of not more than ninety days or such further time as agreed upon by the contractor by written notice to the contractor and the Engineer which notice shall fix the date on which work shall be resumed. The contractor will resume that work on the date so fixed. The contractor will be allowed an increase in the contract price or an extension of the contract time, or both, directly attributable to any suspension.

18.2 If the contractor is adjudged a bankrupt or insolvent or if he makes a general assignment for the benefit of his creditors or if a trustee or receiver is appointed for the contractor or for any of his property, or if he files a petition to take advantage of any debtor's act, or to reorganize under the bankruptcy or applicable laws, or if he repeatedly fails to supply sufficient skilled workmen or suitable materials or equipment, or if he repeatedly fails to make prompt payments to subcontractors, or for labor, materials or equipment or if he disregards laws, ordinances, rules, regulations or orders of any public body having

jurisdiction of the work or if he disregards the authority of the Engineer, or if he otherwise violates any provision of the contract documents then the owner may, without prejudice to any other right or remedy, and after giving the contractor and his surety a minimum of ten (10) days from delivery of a written notice terminate the services of the contractor and take possession of the project and of all materials, equipment, tools, construction equipment and machinery thereon owned by the contractor and finish the work by whatever method he may deem expedient. In such case the contractor shall not be entitled to receive any further payment until the work is finished. If the unpaid balance of the contract price exceeds the direct and indirect costs of completing the project, including compensation for additional professional services such excess shall be paid to the contractor. If such costs exceed such unpaid balance the contractor will pay the difference to the owner. Such costs incurred by the owner will be determined by the Engineer and incorporated in a change order.

18.3 Where the contractor's services have been so terminated by the owner said termination shall not affect any right of the owner against the contractor then existing or which may thereafter accrue. Any retention or payment of monies by the owner due the contractor will not release the contractor from compliance with the contract documents.

18.4 After ten (10) days from delivery of a written notice to the contractor and the Engineer the owner may, without cause and without prejudice to any other right or remedy,

elect to abandon the project and terminate the contract. In such case, the contractor shall be paid for all work executed and any expense sustained plus reasonable profit.

18.5 If, through no act or fault of the contractor, the work is suspended for a period of more than ninety (90) days by the owner or under an order of court or other public authority, or the owner fails to pay the contractor substantially the sum approved by the Engineer or awarded by arbitrators within thirty (30) days of its approval and presentation then the contractor may, after ten (10) days delivery of a written notice to the owner and the Engineer, terminate the contract and recover from the owner payment for all work executed and all expenses sustained in addition and in lieu of terminating the contract. If the Engineer has failed to act on a request for payment or if the owner has failed to make any payment as aforesaid the contractor may upon ten (10) days written notice to the owner and the Engineer stop the work until he has been paid all amounts then due, in which event and upon resumption of the work change orders shall be issued for adjusting the contract price or extending the contract time or both to compensate for the costs and delays attributable to the stoppage of the work.

18.6 If the performance of all or any portion of the work is suspended, delayed or interrupted as a result of a failure of the owner or Engineer to act within the time specified, within a reasonable time, an adjustment in the contract price or an extension of the contract time, or both, shall be made by change order to compensate the contractor for the costs and delays necessarily caused by the failure of the owner or Engineer.

19. PAYMENTS TO CONTRACTOR:

19.1 At least ten (10) days before each progress payment falls due, the contractor will submit to the Engineer a partial payment estimate filled out and signed by the contractor covering the work performed during the period covered by the partial payment estimate and supported by such data as the Engineer may reasonably require. If payment is requested on the basis of materials and equipment not incorporated in the work but delivered and suitably stored at or near the site, the partial payment estimate shall also be accompanied by such supporting data satisfactory to owner as will establish the owner's title to the material and equipment and protect his interest therein including applicable insurance. The Engineer will within ten (10) days after receipt of each partial payment estimate either indicate in writing his approval of payment and present the partial payment estimate to the owner, or return the partial payment estimate to the contractor indicating in writing his reasons for refusing to approve payment. In the latter case, the contractor may make the necessary corrections and resubmit the partial payment estimate. The owner will, within ten (10) days of presentation to him of an approved partial payment estimate, pay the contractor a progress payment on the basis of the approved partial payment estimate. The owner shall retain ten (10) percent of the amount of each payment until final completion and acceptance of all work covered by the contract documents. The owner at any time, however, after fifty (50) percent of the work has been completed, if he finds that satisfactory progress is being made, shall reduce retainage to five (5) percent on the current and remaining estimates. When the work is substantially complete (operational or beneficial occupancy) the retained amount may be further reduced below five (5) percent to only that amount necessary to assure completion. On completion and acceptance of a part of the work on which the price is stated separately

in the contract documents payment may be made in full including retained percentages, less authorized deductions.

19.2 The request for payment may also include an allowance for the cost of such major materials and equipment, which are suitably stored either at or near the site.

19.3 Prior to substantial completion the owner with the approval of the Engineer and with the concurrence of the contractor may use any completed or substantially completed portions of the work. Such use shall not constitute an acceptance of such portions of the work.

19.4 The owner shall have the right to enter the premises for the purpose of doing work not covered by the contract documents. This provision shall not be construed as relieving the contractor of the sole responsibility for the care and protection of the work or the restoration of any damaged work except such as may be caused by agents or employees of the owner.

19.5 Upon completion and acceptance of the work the Engineer shall issue a certificate attached to the final payment request that he has accepted the work under the conditions of the contract documents. The entire balance found to be due the contractor, including the retained percentages but except such sums as may be lawfully retained by the owner, shall be paid to the contractor within thirty (30) days of completion and acceptance of the work.

19.6 The contractor will indemnify and save the owner or the owner's agents harmless from all claims growing out of the lawful demands of subcontractors, laborers, workmen, mechanics, materialmen, and furnishers of machinery and parts thereof, equipment, tools and all supplies incurred in the furtherance of the performance of the work. The contractor shall, at the owner's request, furnish satisfactory evidence that all obligations of the nature designated above have been paid, discharged or waived. If the contractor fails to do so the owner may, after having notified the contractor either pay unpaid bills or withhold from the contractor's unpaid compensation a sum of money deemed reasonably sufficient to pay any and all such lawful claims until satisfactory evidence is furnished that all liabilities have been fully discharge where upon payment to the contractor shall be resumed in accordance with the terms of the contract document, but in no event shall the provisions of this sentence be construed to impose any obligation upon the owner to either the contractor, his surety, or any third party. In paying any unpaid bills of the contractor any payment so made by the owner shall be considered as a payment made under the contract documents by the owner to the contractor and the owner shall not be liable to the contractor for any such payment made in good faith.

19.7 If the owner fails to make payment thirty (30) days after approval by the Engineer in addition to other remedies available to the contract there shall be added to each such payment interest at the maximum legal rate commencing on the first day after said payment is due and continuing until the payment is received by the contractor.

20. ACCEPTANCE OF FINAL PAYMENT AS RELEASE:

20.1 The acceptance by the contractor of final payment shall be and shall operate as a release to the owner of all claims and all liability to the contractor other than claims in stated amounts as may be specifically excepted by the contractor for all things done or furnished in connection with this work and for every act and neglect of the owner and others relating to or arising out of this work. Any payment, however, final or otherwise shall not release the contractor or his sureties from any obligations under the contract documents or the performance bond and payment bond.

21. INSURANCE:

21.1 The contractor shall purchase and maintain such insurance as will protect him from claims set forth below which may arise out of or result from the contractor's execution of the work, whether such execution be by himself or by any subcontractor or by anyone directly or indirectly employed by any of them or by anyone for whose acts any of them may be liable:

- (1) Claims under workmen's compensation, disability benefit and other similar employee benefit acts.
- (2) Claims for damages because of bodily injury, occupational sickness or disease, or death of his employees.
- (3) Claims for damages because of bodily injury, sickness or disease, or death of any person other than his employees.
- (4) Claims for damages insured by usual personal injury liability coverage which are sustained (1) by any person as a result of an offense directly or indirectly related to the employment of such person by the contractor, or (2) by any other person, and
- (5) Claims for damages because of injury to or destruction of tangible property, including loss of use resulting therefrom.

21.2 Certificates of insurance acceptable to the owner shall be filed with the owner prior to commencement of the work. These certificates shall contain a provision that coverages afforded under the policies will not be canceled unless at least fifteen (15) days prior written notice has been given to the owner.

21.3 The contract shall procure and maintain at his own expense during the contract time liability insurance as hereinafter specified:

- (1) Contractor's general public liability and property damage insurance including vehicle coverage issued to the contractor and protecting him from all claims for personal injury, including death, and all claims for destruction of or damage to property arising out of or in connection with any operations under the contract documents whether such operations be by himself or by a subcontractor under him or anyone directly or indirectly employed by the contractor or by a subcontractor under him. Insurance shall be written with a limit of liability of not less than \$500,000 for all damages arising out of

bodily injury, including death, at any time resulting therefrom sustained by any one person in any one accident and a limit of liability of not less than \$500,000 aggregate for any such damages sustained by two or more persons in any one accident. Insurance shall be written with a limit of liability of not less than \$200,000 for all property damage sustained by any one person in any one accident and a limit of liability of not less than \$500,000 aggregate for any such damage sustained by two or more persons in any one accident.

(2) The contractor shall acquire and maintain if applicable fire and extended coverage insurance upon the project to the full insurable value thereof for the benefit of the owner, the contractor and subcontractors as their interest may appear. This provision shall in no way release the contractor or contractor's surety from obligations under the contract documents to fully complete the project.

21.4 The contractor shall procure and maintain at his own expense during the contract time in accordance with the provisions of the laws of the state in which the work is performed workmen's compensation insurance including occupational disease provisions for all of his employees at the site of the project and in case any work is sublet, the contractor shall require such subcontractor similarly to provide workmen's compensation insurance including occupational disease provisions for all of the latter's employees unless such employees are covered by the protection afforded by the contractor. In case any class of employees engaged in hazardous work under this contract at the site of the project is not protected under workmen's compensation statute, the contractor shall provide, and shall cause each subcontractor to provide adequate and suitable insurance for the protection of his employees not otherwise protected.

22. CONTRACT SECURITY:

22.1 The contractor shall within ten (10) days after the receipt of the notice of award furnish the owner with a performance bond and a payment bond in penal sums equal to the amount of the contract price conditioned upon the performance by the contractor of all undertakings, covenants, terms, conditions and agreements of the contract documents and upon the prompt payment by the contractor to all persons supplying labor and materials in the prosecution of the work provided by the contract documents. Such bonds shall be executed by the contractor and a corporate bonding company licensed to transact such business in the state in which the work is to be performed and named on the current list of Surety Companies acceptable on Federal Bonds as published in the Treasury Department Circular Number 570. The expense of these bonds shall be borne by the contractor. If at any time a surety on any such bond is declared a bankrupt or loses its right to do business in the state in which the work is to be performed or is removed from the list of surety companies accepted on Federal bonds the contractor shall within ten (10) days after notice from the owner to do so substitute an acceptable bond (or bonds) in such form and sum and signed by such other surety or sureties as may be satisfactory to the owner. The premiums on such bond shall be paid by the contractor. No further payments shall be deemed due nor shall be made until the new surety or sureties shall have furnished an acceptable bond to the owner.

23. ASSIGNMENTS:

23.1 Neither the contractor nor the owner shall sell, transfer, assign or otherwise dispose of the contract or any portion thereof or his right, title or interest therein, or his obligations thereunder, without written consent of the other party.

24. INDEMNIFICATION:

24.1 The contractor will indemnify and hold harmless the owner and the Engineer and their agents and employees from and against all claims, damages, losses and expenses including attorney's fees arising out of or resulting from the performance of the work provided that any such claims, damages, loss or expense is attributable to bodily injury, sickness, disease or death or to injury to or destruction of tangible property, including the loss of use resulting therefrom and is caused in whole or in part by any negligent or willful act or omission of the contractor and subcontractor or anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable.

24.2 In any and all claims against the owner or the Engineer or any of their agents or employees by any employee of the contractor, any subcontractor, anyone directly or indirectly employed by any of them or anyone for whose acts any of them may be liable the indemnification obligation shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for the contractor or any subcontractor under workmen's compensation acts, disability benefit acts or other employee benefits acts.

24.3 The obligation of the contractor under this paragraph shall not extend to the liability of the Engineer, his agents or employees arising out of the preparation or approval of maps, drawings, opinions, reports, surveys, change orders, designs or specifications.

25. SEPARATE CONTRACTS:

25.1 The owner reserves the right to let other contracts in connection with this project. The contractor shall afford other contractors reasonable opportunity for the introduction and storage of their materials and the execution of their work and shall properly connect and coordinate his work with theirs. If the proper execution or results of any part of the contractor's work depends upon the work of any other contractor, the contractor shall inspect and promptly report to the Engineer any defects in such work that render it unsuitable for such proper execution and results.

25.2 The owner may perform additional work related to the project by himself or he may let other contracts containing provisions similar to these. The contractor will afford the other contractors who are parties in such contracts for the owner if he is performing the additional work himself reasonable opportunity for the introduction and storage of materials and equipment and the execution of work and shall properly connect and coordinate his work with theirs.

25.3 If the performance of additional work by other contractors or the owner is not noted in the contract documents prior to the execution of the contract written notice thereof

shall be given to the contractor prior to starting any such additional work. If the contractor believes that the performance of such additional work by the owner or others involves him in additional expense or entitles him to an extension of the contract time he may make a claim therefor as provided in prior sections.

26. SUBCONTRACTING:

26.1 The contractor may utilize the services of specialty subcontractors on those parts of the work, which under normal contracting practices are performed by specialty subcontractors.

26.2 The contractor shall not award work to subcontractors in excess of fifty (50) percent of the contract price without prior written approval of the owner.

26.3 The contractor shall be fully responsible to the owner for the acts and omissions of his subcontractors and of persons either directly or indirectly employed by them as he is for the acts and omissions of persons directly employed by him.

26.4 The contractor shall cause appropriate provisions to be inserted in all subcontracts relative to the work to bind subcontractors to the contractor by the terms of the contract documents insofar as applicable to the work of subcontractors and to give the contractor the same power as regards terminating any subcontract that the owner may exercise over the contractor under any provision of the contract documents.

26.5 Nothing contained in this contract shall create any contractual relation between any subcontractor and the owner.

27. ENGINEER'S AUTHORITY:

27.1 The Engineer shall act as the owner's representative during the construction period. He shall decide questions that may arise as to quality and acceptability of materials furnished and work performed. He shall interpret the intent of the contract documents in a fair and unbiased manner. The Engineer will make visits to the site and determine if the work is proceeding in accordance with the contract documents.

27.2 The contractor will be held strictly to the intent of the contract documents in regard to the quality of materials, workmanship and execution of the work. Inspections may be made at the factory or fabrication plant of the source of material supply.

27.3 The Engineer will not be responsible for the construction means, controls, techniques, sequences, procedures or construction safety.

27.4 The Engineer shall promptly make decisions relative to interpretation of the contract documents.

28. GUARANTY:

28.1 The contractor shall guarantee all materials, equipment furnished and work performed for a period of one (1) year from the date of substantial completion. Where a

manufacturer's standard warranty is more than one year, the manufacturer's warranty shall apply.

29. TAXES:

29.1 The contractor will pay all sales, excise, consumer, use and other similar taxes required by the law of the place where the work is performed.

Shingle Roofing
Chan Gurney Municipal Airport Barrel Hangar

Scope of Work:

The Contractor shall supply all labor, materials, tools and other appliances necessary for the complete installation of shingles and EDPM roofing system in accordance with established roofing and building code practices and as required by the materials manufacturer. The work under this section includes the removal of the existing shingles and the installation of new shingles/EDPM roofing materials, flashings, drip edges, rake edges, installation of new soffits and the repair of fascia for a complete roofing installation. The Contractor shall be responsible for inspecting the building and job site prior to bidding.

100: Shingle Specification, Removal of Existing Shingles and Installation:

Existing shingles shall be removed and properly disposed. Shingles shall be properly covered with tarps or removed from the site at the end of each working day. Provisions shall be made to insure removed roofing materials will be secured to prevent materials from being wind-blown from the work area. All roofing nails shall be picked up by a magnetic broom at the end of each work day.

101: Product Identification: Roofing materials shall be delivered in packages bearing the manufacturer's identifying marks and approved testing agency labels. Bulk shipments of materials shall be accompanied by the same information issued in the form of a certificate or on a bill of lading by the manufacturer.

102: Roof covering application: Roof coverings shall be applied in accordance with the applicable provisions of this section and the manufacturer's installation instructions. Starter strips/shingles shall be used per manufactures installation specifications.

103: Underlayment Installation: The underlayment shall be **two layers** applied in following manner. Apply a minimum 19-inch-wide strip of underlayment parallel with and starting at the eave, apply 36-inch wide sheets of underlayment overlapping successive sheets 19 inches, fastened sufficiently to hold in place. Horizontal laps shall be 12 inches. Distortions in the underlayment shall not interfere with the ability of the shingles to seal. Underlayment shall be applied shingle fashion, parallel to and starting from the eave. Install fastener spacing per the underlayment manufactures installation guidelines. Fasteners shall be corrosion-resistant metal or plastic cap nails with a head diameter of at least 1 inch. Fasteners shall penetrate the existing roof materials to sufficiently hold the underlayment in place.

104: Flashings: Flashings shall be installed in a manner that prevents moisture from entering the wall and roof through joints in copings, through moisture permeable materials and at intersections with walls and other penetrations through the roof plane. Old flashings shall be removed and new installed unless directed by the owner. All flashings shall be 29 auge

galvanized. The dormer surfaces located on the south and north side of the building shall be covered with a self-adhering underlayment (ice barrier).

- 105: **Sidewall Flashings:** Base flashing against a vertical sidewall shall be continuous or step flashing and shall be not less than 4 inches in height and 4 inches in width and shall direct water away from the vertical sidewall onto the roof. The flashings shall be attached in a manner that prevents moisture from entering walls and roof. Flashings shall be 29 gauge galvanized.
- 106: **Drip Edges:** A drip edge shall be provided at eaves and rake edges. Adjacent segments of drip edge shall be overlapped not less than 2-inches. Drip edges shall extend not less than 1/4 inch below the roof sheathing and extend up back onto the roof deck not less than 2 inches. Drip edges shall be mechanically fastened to the roof deck at not more than 12 inches on-center with fasteners that will that penetrate the roof sheathing. Underlayment shall be installed over the drip edge along eaves and under the underlayment along rake edges. Drip edges and rake edges shall be 29-gauge galvanized steel.
- 107: **Fasteners:** Fasteners for asphalt shingles shall be galvanized steel, stainless steel, aluminum or copper roofing nails, minimum 12 gage shank with a minimum 3/8 inch-diameter head, complying with ASTM F 1667, of a length to penetrate through the roofing material and not less than 3/4-inch into the wood roof sheathing. Where the roof sheathing is less than 3/4-inch-thick, the fasteners shall penetrate through the roof sheathing. Roofing nails shall be driven per manufacturers specifications. Where conditions require, Shingles shall be hand nailed.
Note: unless the 7/16 re-sheeting alternate is accepted, the roofing nails shall be a minimum of 1-3/4 in length and penetrate through the existing roofing materials and to penetrate the existing wood roof boards a minimum 3/4-inch.
- 108: **Shingle Attachment and Hand sealing:** Asphalt shingles shall have a minimum number of fasteners required by the manufacturer, **but not less than six (6) fasteners per strip shingle.** Each shingle shall be hand hand-sealed (hand tabbing) with 4 quarter-sized dabs of shingle tab adhesive on the back of the shingle 1 inch and 13 inches in from each side and 1 inch up from the bottom of the shingle. Press shingle firmly into the adhesive. Apply only a thin uniform layer of a compatible cement less than 1/8 inch thick. Excess amounts can cause blistering of the shingles and may soften the underlayment and leak barriers, resulting in dripping and staining.
- 109: **Soffits and Fascia:** The underside of the roof soffits on the east and west side shall be covered with 1/2-inch APA exterior rated sanded plywood. Plywood shall be primed and painted white to match existing paint. Soffit plywood shall be solidly with screws per standard roofing practices. Plywood soffits shall be trimmed with wood quarter round. Fascia shall be inspected and replaced where it has deteriorated or is water damaged. Boards shall be replaced with matching material, primed and painted to match the existing.

110: **Roof Sheathing (Alternate Bid Item):** 7/16-inch-thick Exposure 1 APA rated OSB (Oriented Strand Board) Shall be solidly attached with galvanized wood screws spaced a maximum of 6 inches on center at edges and 12 inches on center at interior. Fasteners shall be placed 3/8 inch from panel ends and 3/8 inch from panel edges. The wood screws shall penetrate the existing wood roof boards a minimum of 1-1/2-inches. The wood screws shall be sized to solidly hold the OSB Panels in place and the OSB shall be spaced 1/8 inch at paned ends and edges to allow for expansion or per the manufacturers specifications.

111: **Job Conditions:**

- Carefully coordinate the work in this section with the work in other sections to be sure the Contract Areas are in weathertight condition at the end of each day's work. This includes all flashing work.
- All surfaces to receive underlayment, shingled roofing or flashings shall be thoroughly dry. Should surface moisture such as dew exist, the Contractor shall provide the necessary equipment to dry the surface prior to application of roofing materials. No open flames will be allowed.
- Completed roof areas shall be trafficked as little as practical. Work shall be coordinated to prevent this situation by working toward the roof edges and access ways. The Contractor shall provide protection for existing roof areas trafficked during construction.
- Prior to and during asphalt shingle installation, all dirt and debris shall be removed from surfaces by sweeping and/or by similar methods.
- The Contractor shall take all precautions to properly install the specified materials at cold temperatures. Consult with and follow all manufacturer requirements. Materials which have a temperature other than the recommended application temperature of the manufacturer shall not be installed.
- The Contractor shall provide and equip as much labor force as is necessary to complete the project within the Contract period and in accordance with the Contract Documents without sacrificing workmanship quality.
- Remove only as much existing roofing as can be replaced and made watertight each day, including flashings.
- The contractor is responsible for following all safety and OSHA (Occupational Safety and Health Administration) practices for construction and roofing.

112: **Product Specifications:**

Shingles:

- Two-piece laminated fiber-glass base construction
- 250 lbs. per square minimum
- 15 year-110 mph wind-resistance warranty
- Fire Resistance, UL Class A
- Wind Resistance: UL certified to meet ASTM D3018 Type I, ASTM D3161 Class F
- Tear Resistance: UL Certified to meet ASTM D3462, CSA standard A123.5-98

- Impact Resistance: UL2218 Class 4
 - Quality Standards: ICC-ES-ESR-1389 & ESR-3537 or equivalent
 - Color shall be selected from the manufacturer's standard color chart by the Owner.
 - All shingles shall match size and color.
- 113: **Accepted Shingle Manufacturers:**
 *Other shingle manufacturers accepted with prior approval
- CertainTeed Landmark Impact Resistant, Class 4
 - Markey Legacy Impact Resistant, Class 4
 - GAF Timberline ArmorShield II Impact Resistant, Class 4
 - Tamko Heritage Impact Resistant, Class 4
 - IKO Cambridge Impact Resistant, Class 4
- 114: **Underlayment Specifications:**
- A synthetic underlayment that is compatible with all installation materials.
 - Underlayment shall meet ASTM D226 Types I & II and D4869 Types II & IV
 - ASTM E 108 (as part of shingle system)
 - Meets CAN/CSA A123.3 & CAN/CSA A220.1
- 115: **Accepted Underlayment Manufacturers**
 *Other underlayment manufacturers accepted with prior approval
- Rhino Roof Synthetic Roof Underlayment
 - CertainTeed Synthetic Roof Underlayment
 - Tyvek Synthetic Roof Underlayment
 - GAF Synthetic Roof Underlayment
 - IKO Synthetic Underlayment
- 116: **General Workmanship for a Complete Installation**
- Refer to the I Asphalt Roofing Manual and all recommendations of the Asphalt Roofing Manufacturers Association for the installation of roofing and flashing for this project
 - The prepared existing roof surface must be dry, clean and smooth with no obtrusions or irregularities.
 - Comply with the manufacturer's written instructions and these Specifications for all renovations and associated work.
 - Handle materials to prevent damage to building components and project site areas.
 - Flashings shall be installed along with roof systems to assure weather tight termination.
 - Do not cut any material with a solvent or dilutant unless specifically instructed by the manufacturer in writing.
- 117: **Substrate Preparation**
- The Contractor shall inspect the underlying substrate (composite board and roofing) following removal of the existing roof systems. Deck areas found to have surface defects or otherwise unsuitable shall be repaired. Determination and extent of repairs shall be made by the Owner.

- Ensure that surfaces to receive the roofing are clean and thoroughly dry. Provide the necessary equipment to dry the surface prior to application should surface moisture such as dew exist. Do not dry with open flames.
 - Clean deck surfaces using brooms, air spray or other means necessary to provide a clean, smooth, uniform deck.
- 118: **EDPM Transition Flashings:** Proper flashings shall be installed for a watertight seal between the shingled section of the roof and the EDPM roofing system.

END OF SECTION

EPDM Adhered Roofing Specification

Chan Gurney Municipal Airport Barrel Hangar

Scope of Work:

Provide all labor, material, tools, equipment, and supervision necessary to complete the installation of a 60-mil EPDM membrane Fully Adhered Roofing System including flashings and sheeting in accordance with the EPDM manufacturer's most current specifications and details. The contractor shall provide all flashing required to transition with the shingle roof system. The roofing contractor shall make themselves aware of all job site conditions that will affect their work.

200: **Submittals:** Prior to starting work, the roofing contractor must submit the following:

- The manufacturer's warranty covering all components of the roofing system.
- Submit a letter of certification from the manufacturer which certifies the roofing contractor is authorized to install the manufacturer's roofing
- Upon completion of the installed work, submit copies of the manufacturer's final inspection report to the Owner.

201: **Product Delivery, Storage and Handling:** Deliver materials to the job site in the manufacturer's original, unopened containers or wrappings with the manufacturer's name, brand name and installation instructions intact and legible. Deliver in sufficient quantity to permit work to continue without interruption.

- Comply with the manufacturer's written instructions for proper material storage.
- Store materials between 60°F and 80°F in dry areas protected from water and direct sunlight. If exposed to lower temperature, restore to 60°F minimum temperature before using.
- Store materials containing solvents in dry, well ventilated spaces with proper fire and safety precautions. Keep lids on tight. Use before expiration of their shelf life.
- Any materials which are found to be damaged shall be removed and replaced at the applicator's expense.

202: **Completed Roof Sections:** Care should be exercised to provide protection for the interior of the building and to ensure water does not flow beneath any completed sections of the membrane system.

203: **Existing Conditions:** The roofing contractor may schedule a job site inspection to observe actual conditions and verify all dimensions on the roof prior to bidding.

204: **Building Site:** The roofing contractor shall use reasonable care and responsibility to protect the building and site against damages. The contractor shall be responsible for the correction of any damage incurred as a result of the performance of the contract. The roofing contractor shall remove all construction debris from the job site in a timely and legally acceptable manner so as to not detract from the aesthetics or the functions of the building.

205: Job Site Conditions:

- The roofing contractor shall adequately protect building, paved areas, service drives, lawn, shrubs, trees, etc. from damage while performing the required work. Provide canvas, boards and sheet metal (properly secured) as necessary for protection and remove protection material at completion. The contractor shall repair or be responsible for costs to repair all property damaged during the roofing application.
- Do not overload any portion of the building, either by use of or placement of equipment, storage of debris, or storage of materials.
- Remove all traces of piled bulk materials and return the job site to its original condition upon completion of the work.

206: Safety: The roofing contractor shall be responsible for all means and methods as they relate to safety and shall comply with all applicable local, state, Occupational Safety Health Administration (OSHA) and federal requirements that are safety related. Safety shall be the responsibility of the roofing contractor.

207: Workmanship:

- Applicators installing new roof, flashing and related work shall be factory trained and approved by the manufacturer they are representing.
- All work shall be of highest quality and in strict accordance with the manufacturer's published specifications and to the building owner's satisfaction.
- There shall be a supervisor on the job site at all times while work is in progress.
- All field seams and flashing details are to be completed according to manufacturer's specifications and details by the end of each work day.

208: Quality Assurance:

- The membrane must be manufactured by the material supplier. Manufacturer's supplying membrane made by others are not acceptable.
- The manufacturer must have a minimum of 20 years' experience in the manufacturing of vulcanized thermoset sheeting and the manufacturer shall have domestic manufacturing experience commensurate with the term of warranty coverage of the products supplied.
- Unless otherwise noted in this specification, the roofing contractor must strictly comply with the manufacturer's current specifications and details.
- The roofing system must be installed by an applicator authorized and trained by the manufacturer in compliance with shop drawings as approved by the manufacturer. The roofing applicator shall be thoroughly experienced and upon request be able to provide evidence of having at least five (5) years successful experience installing single-ply EPDM roofing systems and having installed at least one (1) EPDM roofing application or several similar systems of equal or greater size within one year.
- Provide adequate number of experienced workmen regularly engaged in this type of work who are skilled in the application techniques of the materials specified. Provide at least one thoroughly trained and experienced superintendent on the job at all times roofing work is in progress.

- There shall be no deviations made from the manufacturer's installation Specifications and procedures.
- Upon completion of the installation, the applicator shall arrange for an inspection to be made by a non-sales technical representative of the membrane manufacturer in order to identify any needed corrective repairs that will be required for warranty issuance. Notify the building owner seventy-two (72) hours prior to the manufacturer's final inspection.
- Inspector shall be employed and trained by the manufacturer and have received product-specific training from the manufacturer of the products.

209: **Job Conditions:** Refer to the Manufacturer's EPDM Roofing System specification for General Job Site Considerations.

- When positioning membrane sheets, exercise care to locate all field splices away from low spots. All field splices should be shingled to prevent bucking of water.
- When loading materials onto the roof, the Roofing Contractor must prevent overloading and possible disturbance to the building structure.
- Proceed with roofing work only when weather conditions are in compliance with the manufacturer's recommended limitations, and when conditions will permit the work to proceed in accordance with the manufacturer's requirements and recommendations.
- Proceed with work so new roofing materials are not subject to construction traffic. When necessary, new roof sections shall be protected and inspected upon completion for possible damage.
- The surface on which the roofing membrane is to be applied shall be clean, smooth, dry, and free of projections or contaminants that would prevent proper application of or be incompatible with the new installation, such as fins, sharp edges, foreign materials, oil and grease.
- New roofing shall be complete and weathertight at the end of the work day.
- Contaminants such as grease, fats and oils shall not be permitted to come in direct contact with the roofing membrane.

210: **Warranty:** Provide manufacturer's 15-year Warranty covering both labor and all materials.

211: **Products:** All components of the specified roofing system shall be products of Carlisle, Firestone or equivalent.

- Unless otherwise approved by the specifier and accepted by the membrane manufacturer, all products (including insulation, fasteners, fastening plates and edgings) must be manufactured and supplied by the roofing system manufacturer and covered by the warranty and manufacturer of roof membrane shall also manufacture all polymeric components for the roofing system, including, but limited to, membrane, adhesives, primers, flashings, caulks and tapes.

212: **Membrane:** Furnish 60-mil EPDM (Ethylene, Propylene, Diene Terpolymer) in the largest sheet possible. The membrane shall conform to the minimum physical properties of ASTM D4637. When a 10-foot-wide membrane is to be used, the membrane shall be manufactured in a single panel with no factory splices to reduce splice intersections.

213: Underlayment: The existing roof shall be leveled and the contractor shall install a 7/16-inch Oriented Strand Board underlayment with approved fasteners to the existing roof. The (OSB) shall be solidly attached and joints sealed per the EPDM manufacturer's specifications. The EPDM membrane shall be adhered to the OSB in accordance with the manufacturer's specifications. The OSB shall be provided with expansion joints as required by manufacturer's installation requirements.

214: Adhesives, Cleaners and Sealants: All products shall be furnished and specifically formulated for the intended purpose.

215: Edging and Membrane Terminations:

Install edgings, drip edge, copings, terminations bars and transitions to asphalt shingles for a watertight seal. Position sheets to accommodate contours of the roof deck to avoid bucking water.

216: Execution-General: Comply with the manufacturer's published instructions for the installation of the membrane roofing system including proper substrate preparation, jobsite considerations and weather restrictions.

217: Membrane Placement and Bonding:

- Unroll and position membrane without stretching. Allow the membrane to relax for approximately 1/2 hour before bonding. Fold the sheet back onto itself so half the underside of the membrane is exposed.
- Apply the Bonding Adhesive in accordance with the manufacturer's published instructions and coverage rates, to both the underside of the membrane and the substrate. Allow the adhesive to dry until it is tacky but will not string or stick to a dry finger touch.
- Roll the coated membrane into the coated substrate while avoiding wrinkles. Brush down the bonded half of the membrane sheet with a soft bristle push broom to achieve maximum contact.
- Fold back the unbonded half of the membrane sheet and repeat the bonding procedure.
- Install adjoining membrane sheets in the same manner, overlapping edges approximately 4 inches. Do not apply bonding adhesive to the splice area.

218: Membrane Splicing:

- Position membrane sheet to allow for required splice overlap. Mark the bottom sheets with an indelible marker approximately 1/4" to 1/2" from the top sheet edge. The pre-marked line on the membrane edge can also be used as a guide for positioning splice tape.
- When the membrane is contaminated with dirt, fold the top sheet back and clean the dry splice area (minimum 3" wide) of both membrane sheets by scrubbing with clean natural fiber rags saturated with membrane cleaner.
- Apply EPDM Primer to splice area and permit to flash off.
- When adhering Factory Applied Tape (FAT), pull the poly backing from FAT beneath the top sheet and allow the top sheet to fall freely onto the exposed primed surface. Press top sheet on to the bottom sheet using firm even hand pressure across the splice towards the splice edge

- For end laps, apply 3” or 6” tape to the primed membrane surface in accordance with the manufacturer’s specifications. Remove the poly backing and roll the top sheet onto the mating surface.
- Tape splices must be a minimum of 2-1/2” wide using 3” wide tape extending 1/8” minimum to 1/2” maximum beyond the splice edge.
- Immediately roll the splice using positive pressure when using a 2” wide steel roller. Roll across the splice edge, not parallel to it. When FAT is used, Seam Roller can be used to roll parallel to the splice edge.
- At all field splice intersections, apply Lap Sealant along the edge of the membrane splice to cover the exposed tape 2” in each direction from the splice intersection.

219: **Daily Seal:** On phased roofing, when the completion of flashings and terminations is not achieved by the end of the work day, a daily seal must be performed.

220: **Clean-up:**

- Perform daily clean-up to collect all wrappings, empty containers, paper, and other debris from the project site. Upon completion, all debris must be disposed of in a legally acceptable manner. The contractor shall be responsible for all roofing material disposal costs.
- Prior to the manufacturer’s inspection for warranty, the applicator must perform a pre-inspection to review all work and to verify all flashing has been completed as well as the application of all caulking.

END OF SPECIFICATION

