

SPECIFICATIONS
FOR
LAMAR ALTERNATIVE EDUCATION CENTER RE-ROOF
FOR THE
GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

PROJECT NUMBER: 09-48

PRE-PROPOSAL MEETING: FRIDAY, APRIL 24, 2009 @ 10:00 A.M.

PROPOSAL DATE: TUESDAY, MAY 5, 2007 @ 2:00 P.M.

The contents of this Request for Competitive Sealed Proposals are considered to be private data of Grand Prairie Independent School District; therefore, the contents herein may not be used or reproduced without the specific written permission of Grand Prairie Independent School District.

BOARD OF TRUSTEES

GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

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CSP: REROOFING AT LAMAR ALTERNATIVE EDUCATION CENTER
GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

NAME OF CONTRACTOR: _____

DATE: _____

PURCHASING DEPARTMENT
GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT
2602 SOUTH BELT LINE ROAD
GRAND PRAIRIE, TX 75052-5344

To Whom It May Concern:

The undersigned, in compliance with your advertisement for proposals for reroofing on certain areas of the following buildings:

RE-ROOFING OF LAMAR ALTERNATIVE EDUCATION CENTER

have examined the Project Site and Specifications, together with the related documents and all conditions surrounding the work, and having visited the site of the proposed work, hereby, proposes to furnish all work in every detail in accordance with the Contract Documents within the time set forth herein and at the prices following. These prices shall cover all expenses incurred in performing the work under the Contract Documents, of which the Proposal is a part.

Attached herewith, please find (Cashier's Check) (Certified Check) (Bid Bond) in the amount of \$ _____ which is five percent (5%) of the proposal.

I (or we) acknowledge receipt of the following addenda:

ADDENDA #1: _____ (Initial)

ADDENDA #2: _____ (Initial)

ADDENDA #3: _____ (Initial)

CSP: REROOFING AT LAMAR ALTERNATIVE EDUCATION CENTER
GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

The Grand Prairie Independent School District will receive sealed bids and proposals for reroofing Lamar Alternative Education Center, located in Grand Prairie ISD, all in accordance with the Proposal, Contract Documents, General Instructions, Materials, Execution, and Drawings, at Grand Prairie ISD, Attn: Purchasing Department, 2602 South Belt Line Road, Grand Prairie, TX 75052-5344, no later than 2:00 P.M., on Tuesday, May 5, 2009.

Proposals will be publicly opened and read aloud at Grand Prairie ISD, same date and time.

Any proposal received AFTER the closing time WILL NOT BE CONSIDERED, AND WILL BE RETURNED UNOPENED. Contractor shall identify his proposal on the outside of the envelope by writing the words:

**"PROPOSAL FOR
RE-ROOFING OF LAMAR ALTERNATIVE EDUCATION CENTER
FOR GRAND PRAIRIE ISD"**

No oral, telephone, or telegraphic proposals will be considered.

It is highly recommended that the contractor attend the Walk-Through Conference which will be held at 10:00 A.M., on Friday, April 24, 2009, at the Lamar Alternative Education Center, 2099 Walnut Street, Grand Prairie, TX 75050. The Proposal, Contract Documents, General Instructions, Materials, Execution, may be obtained at the Walk-Through Conference. To inspect the facility work for this project prior to submitting the proposal, Contractor shall contact Mr. Charles Stefka, Construction Coordinator, 972.343.4473. Any questions concerning the specifications, specified work, and/or roof inspection should be directed to Mr. Charles Stefka.

A Cashier's Check, Certified Check, or acceptable Surety Company Bid Proposal Bond in the amount of five percent (5%) of the largest possible total of proposal submitted will be required with each proposal if the total contract price exceeds \$25,000.00. Proposals will be received PER ATTACHED PROPOSAL FORM, to include all work shown and specified.

The Board of Trustees of the Grand Prairie Independent School District reserves the right to reject any one and/or all proposals, to waive any formalities or irregularities, and to award the Contract in the best interest of the School District.

CSP: REROOFING AT LAMAR ALTERNATIVE EDUCATION CENTER
GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

CONTRACT DOCUMENTS: Having examined the Proposal, Contract, General Instructions, Materials, Execution, for Project No. 09-48 and conditions for reroofing work, and having examined the premises and circumstances affecting the work, the undersigned offer:

OFFER: 1. To furnish all labor, material, tools, equipment, transportation, bonds, all applicable taxes, incidentals, and other facilities, and to perform all work for the said reroofing for the following areas:

PROPOSAL: LAMAR ALTERNATIVE EDUCATION CENTER

Contractor shall include in this proposal \$7,500 allowance for installation of drains.

Contractor shall include in this proposal \$5,000 allowance for lumber.

Contractor shall include in this proposal the cost to replace 2,800 SF of decking material

_____ \$ _____

UNIT PRICE PROPOSAL:

1. Remove and replace damaged concrete decking: \$_____ per square foot.
2. Remove and replace damaged gypsum decking: \$_____ per inch per square foot, nominal 2-1/2" thickness.
3. Remove and replace damaged wood decking: \$_____ per square foot.
4. Remove and replace damaged metal decking: \$_____ per square foot.
5. Additional cost over and above the contract amount for replacing wet fill material:
\$_____ per inch per square foot, nominal 2-1/2" thickness.
6. Additional cost over and above the contract amount for replacing wet insulation, 1-3/4" thickness:
\$_____ per square foot .
7. Additional cost over and above the contract amount for replacing wet insulation, 2" thickness:
\$_____ per square foot.
8. Additional cost over and above the contract amount for replacing wet insulation, 2-1/2" thickness:
\$_____ per square foot.
9. Additional cost over and above the contract amount for replacing wet insulation, 3" thickness:
\$_____ per square foot.
10. Remove and replace deteriorated 2x12 nailers: \$_____ per linear foot.
2x10 nailers: \$_____ per linear foot
2x8 nailers: \$_____ per linear foot
2x6 nailers: \$_____ per linear foot

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GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

11. Install four inch (4") roof drain: \$_____ each.
12. Install four inch (4") PVC drain line complete with all connections, elbows, etc.: \$_____ per linear foot.
13. Additional cost over and above the contract amount for weekend or overtime requested by the Owner: \$_____ cost per man per hour.

Prequalifications: Contractor shall submit and/or answer the following:

1. Contractor shall submit documentation with their proposal to indicate their specific qualifications to perform the specified work, including, but not limited to, all Independent School Districts in the State of Texas where said company has worked. Contractor Initial_____
2. Within the last five years, has legal action, including, but not limited to, deceptive trade practices suits, been taken against your company for failure to perform work properly or for not completing a project? Yes____ No____ If yes, attach a separate sheet of explanation.
3. Within the last five years, has your organization or any officer/partner of your organization ever been an officer/partner of an organization that failed to complete a construction contract? Yes____ No____. If so, attach a separate sheet of explanation.
4. Within the last five years, has your organization or any officer/partner of your organization filed for bankruptcy? Yes____ No____. If so, attach a separate sheet of explanation.
5. Attach an AIA Document No. A305 with a separate sheet with all references including all Independent School Districts. Include contact name and telephone numbers for each and every reference.
6. Include a current year end review statement.
7. ***Include with proposal a submittal package of the manufacturer's product. Including but not limited to product sample(s), product specifications, typical installation details, sample warranty(ies), etc.***

EXAMINATION OF SITE: 3. By signing the Proposal Form, Contractor acknowledges he or an authorized representative has examined the roofs and is aware of all field conditions (rooftop equipment, penetrations, roof drains, etc.) which may affect the work.

Upon receipt of notice of acceptance of this proposal, within thirty (30) calendar days of the date of this proposal, I (or we) agree to execute the formal contract within ten (10) calendar days thereafter, and to deliver an Insurance Certificate, a ONE HUNDRED PERCENT (100%) STATUTORY PAYMENT BOND and a SURETY BOND in the amount of ONE HUNDRED PERCENT (100%) of the contract price for the faithful performance of the contract, as required.

The undersigned agrees to complete all work shown on the drawings and in the specifications within the time limits set forth below subject to additional days that may be added due to inclement weather and/or other justified and reasonable extensions of time as may be approved by the Owner.

Date to Commence and Stockpile Date: Work may not commence at any school site prior to June 4, 2009, but stockpiling of materials at site(s) will be permitted beginning May 29, 2009.

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GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

Contractors that are awarded contracts shall be prepared to immediately sit down with Grand Prairie
ISD Representatives and present a plan that will illustrate how progression of work is to take place to
ensure completion of all work within specified time limits. The time limits are as follows:

If a Contractor is awarded the project, project must be completed in a timely manner with production
averaging 1500 square feet per day minimum from start date or Contractor will be subject to liquidated
damages as set forth below.

A working day is defined as a calendar day, not including Saturdays, Sundays, or legal holidays, in
which weather or other conditions not under the control of the company will permit the performance of
the principal units of work underway for a continuous period of not less than seven (7) hours between
7:00 A.M. and 6:00 P.M. For every Saturday on which the company chooses to work, one day will be
charged against the working time when weather conditions will permit seven (7) hours of work as
delineated above. A principal unit of work shall be that unit which controls the completion time of the
agreement. Nothing in this item shall be construed as prohibiting the company from working on
Saturdays if it so desires. If Sunday work is permitted by the Owner, time will be charged on the same
basis as weekdays.

THE OFFICIAL WEATHER RECORD WILL BE KEPT IN THE GRAND PRAIRIE ISD DIRECTOR OF
MAINTENANCE'S OFFICE.

The undersigned agrees that the Owner may retain the sum of ONE THOUSAND DOLLARS
(\$1,000.00) from the amount to be paid to the undersigned for each calendar day that the work
contracted remains incomplete beyond the time set forth, Sundays and holidays INCLUDED. This
amount is agreed upon as the proper measure of liquidated damages which the Owner will sustain per
day by failure of the undersigned to complete the work at the stipulated time, and is not to be construed
in any sense as a penalty.

I (or we) agree to promptly furnish a correct and current financial statement of condition with list of
owned equipment and an experience record of completed projects for examination by owner and
architect, if same is required.

SEAL (If by Corporation)

RESPECTFULLY SUBMITTED BY

(Name)

(Title)

(Address)

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GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

Indicate if: () Partnership () Corporation () Sole Owner

If a partnership, list names and addresses of partners:

If corporation, indicate state in which corporation was organized and is existing: _____

Principal Stockholders: (Name and Address)

GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT

PROCEDURES FOR SEALED BID OR PROPOSALS

1.0.0 GENERAL CONDITIONS

- 1.1.0 APPLICABILITY - These conditions are applicable and form a part of the contract documents in each equipment and/or service contract, and a part of the terms of each purchase order for items of equipment and/or service included in the specifications and bid forms issued herewith.
- 1.2.0 WITHDRAWAL OF BIDS - Any bid or proposal may be withdrawn by the contractor prior to the scheduled time for opening. Any request by a bidder to withdraw a bid must be in person or in writing and submitted to the Director of Purchasing prior to the scheduled time for opening bids. Any bid that is received after the time specified shall not be considered and may be returned unopened to the bidder.
- 1.3.0 BIDS SHALL BE SUBMITTED ON THESE FORMS - Deviations to the General Conditions and/or Specifications shall be conspicuously noted in writing by the bidder and shall be included in the bid.
- 1.4.0 CONTRACTORS WHO DO NOT BID are requested to notify the Grand Prairie Independent School District (GPISD) Purchasing Department in writing if they wish to receive future bids. Failure to do so will result in their being deleted from our contractor list.
- 1.5.0 GPISD reserves the right to waive any or all bid irregularities, formalities, or other technicalities, to be the sole and independent judge of quality and suitability of any products offered, and may accept or reject any bid in its entirety, or may reject any part of any bid without affecting the remainder of that bid, and may award the individual items on this bid in any combination or in any way to best serve the interests of GPISD as it perceived those interests to be in its sole discretion.
- 1.6.0 GPISD will enter into contractual relationships only with those contractors who have, through word and action, affirmed that they comply with all applicable existing laws or executive orders to insure equal employment opportunities, without regard to race, creed, color, sex, or national origin. Minority contractors are encouraged to compete in providing goods and services to the District. GPISD does not operate under a set-aside program.

2.0.0 SPECIFICATIONS may be those developed by the Using Department or by the Manufacturer to represent items of regularly manufactured equipment.

2.1.0 DISTRICT SPECIFICATIONS have been developed by the Using Department to show minimal standards as to the usage, materials, and contents based on their needs.

2.2.0 MANUFACTURER'S SPECIFICATIONS (Design Guide), when used by the District, are to give the bidder information as to the type and kind requested. Proposals on any reputable manufacturer's regularly produced product of such items similar and substantially equivalent will be considered.

2.3.0 Whenever an article or material is defined by describing a proprietary product or by using the name of a manufacturer or brand name, the term "or equal" if not inserted shall be implied. The specified article or material shall be understood as indicating the type, function; minimum standard of design, efficiency and quality desired and shall not be construed as to exclude other manufactured products of comparable quality, design and efficiency. GPISD reserves the right to make final decisions as comparable items. Be very certain that items upon which you bid and deliver are equal to items listed. Materials, which are not equal, will be returned to the contractor, transportation charges collect. Contractor will reimburse GPISD for items returned at invoice cost within 30 days.

3.0.0 EVALUATION OF PROPOSALS, in accordance with Article 2368a.3, Section 5, Reviews of proposals are subject to the evaluation of the user department and subsequent recommendation. The following AWARD CRITERIA will be used.

| | |
|--|-----------|
| 3.0.1 Purchase Price | 35 points |
| 3.0.2 Attendance at all pre-proposal meetings | 20 points |
| 3.0.3 Completeness of bid package as specified | 15 points |
| 3.0.4 Project management approach | 10 points |
| 3.0.5 Quality of contractor's goods and services | 10 points |
| 3.0.6 Quality of references and experience | 10 points |

3.1.0 PREFERENTIAL REQUIREMENT - GPISD, as a governmental agency of the State of Texas, may not award a contract for general construction, improvements, services or public works projects a nonresident bidder unless the nonresident's bid is lower than the lowest bid submitted by a responsible Texas resident bidder by the same amount that a Texas resident bidder would be required to underbid a nonresident bidder to obtain a comparable contract in the state in which the nonresident's principal place of business is located (Article 601g V.T.C.S.).

3.2.0 IDENTICAL BIDS - In cases where bidding is required for proposed contracts, and more than one bidder submitted the lowest and best bids (identical bids), the bidder who is a resident of the District shall be selected by the governing body. If two or more bidders submitting the lowest and best bids are residents of the District, one of the resident bidders shall be selected by the casting of lots.

3.3.0 AWARD of BID; BID SUMMARY: The GPISD reserves the right to award a separate contract to more than one contractor for each item/group/service or to

award on contract for the entire bid. All contractors will receive a statement of bid award. Contractors desiring a copy of the bid summary may request such by enclosing a self-addressed stamped envelope to the Purchasing Office.

4.0.0 CONTRACTS

4.1.0 CONTRACTS FOR PURCHASE will be put into effect by means of a purchase order(s) executed by the Purchasing Department or the User Department after awards have been made.

4.2.0 ALL CONTRACTS AND AGREEMENTS between bidders and the GPISD shall strictly adhere to the statutes as set forth in the Uniform Commercial Code as last amended in 1977 by the American Law Institute in the National Conference of Commissioners on uniform state laws.

4.3.0 The District's obligation is payable only and solely from the funds available for the purpose of this purchase. Lack of funds shall render this contract null and void to the extent funds are not available and any delivered but unpaid for the Buyer will return goods to the Seller. Do not include Federal Excise, State or City Sales Tax. Entity shall furnish exemption certificate.

5.0.0 DISCLOSURES

5.1.0 Non-Collusion - By signing this statement, a bidder affirms that, to the best of his/her knowledge, the bid has been arrived at independently, and is submitted without collusion with anyone to obtain information or gain any favoritism that would in any way limit competition or give them an unfair advantage over other bidders in the award of this bid. Neither has the bidder offered to give, nor intends to give at any time hereafter any economic opportunity, future employment, gift, loan, gratuity, special discount, trip, favor or service to a public servant in connection with the bid submitted. BIDDER SHALL NOTE any and all relationships that might be a conflict of interest and include such information with the bid.

5.2.0 Felony Conviction - The person or entity responding to this invitation must give notice to the District if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in this conviction of a felony (This requirement does not apply to a publicly held corporation.).

5.3.0 BIDDER SHALL NOTE any and all relationships that might be a conflict of interest and include such information with the bid. A list of current board members and the superintendent may be reviewed at

http://www.gpisd.org/departments/business/purchasing/bids_proposals.htm

6.0.0 CONDUCT WHILE ON DISTRICT PREMISES - All personnel that conduct work of any nature on District premises, including but not limited to successful contractor(s), sub-contractors, service technicians, etc. will be required to comply with the same standards applicable to the employees of the GPISD as referenced in the Auxiliary Services Handbook.

- 6.1.0 Standards of conduct - A disregard of any one of the following rules will be subject to disciplinary action and including immediate termination of contract(s).
 - 6.1.1 Use or possession of alcohol or illegal drugs at work, coming to work under the influence of alcohol or drugs (illegal intoxication is not required.); or the possession of drugs or attempt to take part in the sale or illegal handling of drugs
 - 6.1.2 Use of profanity or crude language
 - 6.1.3 Violation of health or safety rules
 - 6.1.4 Fighting and any other attempt to injure or threaten to injure another person
 - 6.1.5 Willful destruction of District property or property of others
 - 6.1.6 Lack of courtesy to students, employees, parents, or guests; Contact with students in any manner that is not professional, businesslike and job related is strictly prohibited. (This includes dating, phone calls or any other action taken, or interpreted as such, to develop an association more than a level of contractor - District relationship.)
 - 6.1.7 Additionally, workers must adhere to a dress code conducive to promoting a positive learning environment in or on GPISD property. Specifically, GPISD prohibits pictures, emblems, bumper stickers, or writings on clothing that are lewd, offensive, vulgar, or obscene or depict or advertise tobacco products, alcoholic beverages of any kind, drugs, or any other substance.
 - 6.1.8 Finally, no person shall possess firearms or articles construed to be illegal weapons while on District property, including but not limited to buildings, grounds and/or parking areas.
- 7.0.0 STATEMENT OF QUALIFICATIONS, when required, must include a description of organizational experience, references and capabilities.
- 7.1.0 Organizational Experience: Contractor must describe their qualifications and experience to perform the work described in this invitation.
 - 7.2.0 References: Proposals must include at least three references, preferably state and local government organizations where the contractor currently provides the type of services and/or products requested. Reference listings must include organization names, addresses, and contact person and telephone number.
- 8.0.0 SECURITY
- 8.1.0 BID SECURITY shall be furnished with the bids, or prior to the award of the contract. BID SECURITY is required whenever either a PAYMENT BOND or PERFORMANCE BOND IS REQUIRED AS LISTED BELOW. The Bid Security shall consist of a certified check, cashier's check or a bid bond in the amount of five percent (5%) of the total bid which shall be a guarantee to furnish Performance and Payment Bonds. Bid Security shall be to GPISD. The successful bidder's

security will be retained until the Contract is signed and the required Performance and Payment Bonds have been furnished. If any bidder refuses to enter into a contract within thirty (30) days, or fails to furnish the required bonds, GPISD will retain the Bid Security as liquidated damages, but not as a penalty.

8.2.0 PAYMENT BONDS are required for bids in excess of \$25,000.00. PERFORMANCE BONDS are required for bids in excess of \$100,000.00. The successful bidder will furnish a performance and payment bond in an amount equal to one hundred percent (100%) of the total amount of the contract sum when required as specified in the amounts listed above. Bonding Company (underwriter) shall be currently registered with the Secretary of State and with the State Board of Insurance. Surety must be acceptable to Owner. This bond shall be conditioned upon the faithful performance of the work in accordance with the plans, specification, and contract documents. Said bond shall be for the protection of GPISD and of all claimants supplying labor and material as hereinafter defined, in the prosecution of the work provided in said contract. (Article 5160, Texas School Law Bulletin) This performance and payment bond shall be presented, to owner, within ten (10) days or prior to beginning work, whichever is less.

9.0.0 INSURANCE shall be provided by the successful contractor, in a company or companies licensed to do business in the State of Texas. Such insurance as will protect the Contractor and the District from claims set forth below, which may arise out of, or result from, the operations under the contract. The Contractor shall be a subscriber to the Texas Workers' Compensation Act for Workers' Compensation Insurance. The contractor shall file with the Director of Purchasing, before work is begun, certificates of such insurance which shall be subject to approval by the District as to the company providing insurance and the manner and adequacy of insurance protection.

9.1.0 Such policies of insurance shall be written by companies authorized by the Texas Department of Insurance to conduct business in the state and shall be satisfactory to the District. Contractor shall not commence work under this Agreement until satisfactory evidence of such insurance has been delivered to, and approved by the District.

9.2.0 Self-Insurance: A contractor who self-insures for workers compensation must possess a Certificate of Authority to Self-insure issued by the Texas Workers Compensation Commission as a subscriber to the Workers' Compensation Act. By signing below, the bidder/prospective Contractor certifies that it possesses such certificate, and shall furnish a copy of the Certificate of Self Insurance with Bid Invitation.

9.3.0 The Certificate of Insurance must be presented prior to start of service. The policy must reflect Grand Prairie I.S.D. as "additional insured" or "co-insured". The amount of deductibles and self-insurance retention must be shown on Certificate of Insurance.

9.4.0 The Contractor shall, for the duration* of this Agreement, keep in force the following insurance:

9.4.1 Worker's Compensation Insurance

a) Worker's compensation coverage shall be maintained for not less than the State of Texas statutory limits.

- b) Employer's Liability Insurance shall be maintained with minimum limits of not less than \$500,000.
- c) The policy shall contain a waiver of subrogation in favor of Grand Prairie ISD

9.4.2 Commercial General Liability Insurance: shall include coverage for Premises/Operations, Products/Completed Operations, Independent Contractors, Personal Injury and Contractual Liability insuring the indemnity provision contained in this Agreement.

- a) Combined limits of \$1,000,000 per occurrence for bodily injury and property damage.
- b) Annual aggregate limit of \$2,000,000
- c) Grand Prairie ISD and their officials shall be listed as additional insured.

9.4.3 Business Commercial Automobile Liability Insurance: shall include coverage for owned/leased vehicles, non-owned vehicles, and hired vehicles used by Concessionaire, its employees, or its agents.

- a) Bodily injury of \$500,000 per person and \$500,000 per occurrence.
- b) Property damage limit of \$100,000 per occurrence.
- c) Aggregate limit of \$1,000,000.
- d) Grand Prairie and their officials shall be listed as additional insured.

The District requires ten (10) days WRITTEN NOTICE prior to cancellation of ANY INSURANCE.

9.5.0 The Contractor shall either: (1) require each of its sub-contractors to procure and to maintain during the life of the sub-contract, Sub-contractor's Workers' Compensation Insurance as a subscriber to the act, Comprehensive General Liability, Automobile Liability, and Property Damage Liability Insurance of the type and in the same amounts as specified above, or (2) insure the activity of its sub-contractors in its own policy(ies).

9.5.1 Persons providing services on the project, otherwise referred to as "subcontractor(s), includes all persons or entities performing all or part of the services the contractor has undertaken to perform on the project, regardless of whether that person contracted directly with the contractor and regardless of whether that person has employees. This includes, without limitation, independent contractors, subcontractors, leasing companies, motor carriers, owner-operators, employees of any such entity, or employees of any entity, which furnishes persons to provide services on the project. "Services" include, without limitation, providing, hauling, or delivering equipment or materials, or providing labor, transportation, or other service related to a project. "Services" does not include activities unrelated to the project, such as food/beverage contractors, office supply deliveries, and delivery of portable toilets.

9.6.0 By signing this contract or providing or causing to be provided a certificate of coverage, the contractor is representing to the District that all employees of the contractor who will provide services on the project will be covered by workers' compensation coverage for the duration of the project, that the coverage will be based on proper reporting of classification codes and payroll amounts, and that

all coverage agreements will be filed with the appropriate insurance carrier or, in the case of a self-insured, with the commission's Division of Self-Insurance Regulation. Providing false or misleading information may subject the contractor to administrative penalties, criminal penalties, civil penalties, or other civil actions.

- 9.7.0 The contractor's failure to comply with any of these provisions is a breach of contract by the contractor, which entitles the District to declare the contract void if the contractor does not remedy the breach within ten days after receipt of notice of breach from the governmental entity.
- 9.8.0 The contractor shall post a notice on each project site informing all persons providing services on the project that they are required to be covered, and stating how a person may verify current coverage and report failure to provide coverage. This notice does not satisfy other posting requirements imposed by the Act or other commission rules. This notice must be printed with a title in at least 30-point bold type and text in at least 19-point normal type, and shall be in both English and Spanish and any other language common to the worker population.

10.0.0 OTHER REQUIREMENTS

- 10.1.0 LIQUIDATED DAMAGES of \$1000 per day will be assessed by GPISD for each calendar day that the project remains incomplete and unacceptable after the contract time has expired as specified by number of days needed to complete project indicated on bid response form. This sum, for compensation otherwise to be paid, will be determined to be the maximum amount of liquidated damages which GPISD will sustain per diem by the failure of the contractor to complete the work by the time stipulated. This sum shall not be construed in any sense as a penalty.
- 10.2.0 MATERIALS IN PLACE - The District will not be responsible for damage of materials "in place" due to acts of vandalism, fire, weather, or any other cause. All materials, equipment for installation, etc. shall remain the property of and the responsibility of the supplier until inspected and accepted by an official of the GPISD; and disapproval, if any, shall be based exclusively on apparent damage, defect or deviation from the specifications.
- 10.3.0 Contractor is responsible for any and all damages to GPISD property including filling of ruts, plant damage, and trash pick up, etc.
- 10.4.0 The Contractor shall provide a qualified supervisor over all crafts and who shall have the authority to make decisions regarding any and all phases of the work.
- 10.5.0 Project requirements will make it mandatory that the successful bidder communicate with the Director of Purchasing or User Department prior to the initiation of any work. This communication will relate to mutual scheduling for access to the project areas and parking.

10.6.0 Contractor will be responsible for any and all OSHA regulations that are applicable to this project.

10.7.0 Contractor will be responsible for compliance with Federal/State and Local codes applicable.

11.0.0 PRESENTATION OF PROPOSALS: All proposals must be received at the Purchasing Office in a sealed document. No oral, telegraphic, telephonic, or facsimile bids will be accepted.

12.0.0 INTERLOCAL AGREEMENT CLAUSE

The Grand Prairie ISD participates in the Educational Purchasing Cooperative of North Texas (EPCNT) There are several governmental entities which utilize this organization for potential purchases. A complete list may be viewed at

http://www.epcnt.com/Current_members.htm

Governmental entities utilizing Internal Governmental contracts with the EPCNT will be eligible, but not obligated, to purchase materials/services under the contract(s) awarded as a result of this solicitation. All purchases by governmental entity other than Grand Prairie ISD will be billed directly to that governmental entity and paid by that governmental entity. Grand Prairie ISD will not be responsible for another governmental entity's debts. Each governmental entity will order material/service as needed and issue the appropriate purchasing documents/contracts.

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Felony Conviction Notification

State of Texas Legislative Senate Bill No. 1, Section 44.034, Notification of Criminal History, Subsection (a), states “a person or business entity that enters into a contract with a school district must give advance notice to the district if the person or an owner or operator of the business entity has been convicted of a felony. The notice must include a general description of the conduct resulting in the conviction of a felony.”

Subsection (b) states “a school district may terminate a contract with a person or business entity if the district determines that the person or business entity failed to give notice as required by Subsection (a) or misrepresented the conduct resulting in the conviction. The district must compensate the person or business entity for services performed before the termination contract.”

This Notice Is Not Required of a Publicly Held Corporation

(I) (We), the undersigned agent for the firm named below, certify that the information concerning notification of felony convictions has been reviewed by me and the following information furnished is true to the best of my knowledge.

COMPANY NAME:

Check the appropriate box and sign the form.

- My firm is a publicly held corporation; therefore, this reporting requirement is not applicable.

AUTHORIZED SIGNATURE: _____

- My firm is not owned nor operated by anyone who has been convicted of a felony.

AUTHORIZED SIGNATURE: _____

- My firm is owned or operated by the following individual(s) who has/have been convicted of a felony.

Name of Felony: _____

Details of Conviction(s):

AUTHORIZED SIGNATURE: _____

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Non-Collusion Statement

This is to certify that the undersigned bidder has neither directly nor indirectly, entered into any agreement, participated in any collusion or otherwise taken any action in restraint of free competitive bidding in connection with this proposal.

It is agreed by the undersigned bidder that the signed delivery of this bid/proposal represents the bidder's acceptance of the terms and conditions of this invitation to bid/offer a proposal including all specifications and special provisions.

Note: Signature of the authorized representative **MUST** be of an individual who legally may enter his/her organization into a formal contract with the Grand Prairie Independent School District.

| |
|-------------|
| FIRM'S NAME |
|-------------|

| |
|--|
| NAME OF AUTHORIZED INDIVIDUAL (printed or typed) |
|--|

| | |
|----------------------|------|
| AUTHORIZED SIGNATURE | DATE |
|----------------------|------|

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| POSITION WITH COMPANY |
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BIDDER'S CERTIFICATE

This bidder, the below named firm, hereby submits bid prices as shown for furnishing the items listed herein, delivered in the quality and dimensions specified, and subject to the conditions listed under "Bid Specifications and Conditions." Bid prices shown are net and include all charges. Descriptive and illustrative material, including specifications and data sheets, and all other proposals accompanying this bid are considered to be an integral part of this bid offer.

| |
|-------------|
| FIRM'S NAME |
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| |
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| ADDRESS |
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|--------------|
| CITY & STATE |
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| ZIP CODE |
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| AUTHORIZED SIGNATURE |
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| POSITION WITH COMPANY |
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INTERLOCAL AGREEMENT

Should the governmental, referenced above, elect to participate in this contract, would you, (the contractor) agree that all terms, conditions, specifications, and pricing would apply?

Yes

No

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CONFLICT OF INTEREST QUESTIONNAIRE

FORM CIQ

For vendor or other person doing business with local governmental entity

This questionnaire is being filed in accordance with chapter 176 of the Local Government Code by a person doing business with the governmental entity. By law this questionnaire must be filed with the records administrator of the local government not later than the 7th business day after the date the person becomes aware of facts that require the statement to be filed. See Section 176.006, Local Government Code. A person commits an offense if the person violates Section 176.006, Local Government Code. An offense under this section is a Class C misdemeanor.

OFFICE USE ONLY

Date Received

1 Name of person doing business with local governmental entity.

2

Check this box if you are filing an update to a previously filed questionnaire.

(The law requires that you file an updated completed questionnaire with the appropriate filing authority not later than September 1 of the year for which an activity described in Section 176.006(a), Local Government Code, is pending and not later than the 7th business day after the date the originally filed questionnaire becomes incomplete or inaccurate.)

3 Describe each affiliation or business relationship with an employee or contractor of the local governmental entity who makes recommendations to a local government officer of the local governmental entity with respect to expenditure of money.

4 Describe each affiliation or business relationship with a person who is a local government officer and who appoints or employs a local government officer of the local governmental entity that is the subject of this questionnaire.

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CONFLICT OF INTEREST QUESTIONNAIRE FORM

CIQ Page 2

For vendor or other person doing business with local governmental entity

5 Name of local government officer with whom filer has affiliation or business relationship. (Complete this section only if the answer to A, B, or C is YES.)

This section, item 5 including subparts A, B, C & D, must be completed for each officer with whom the filer has affiliation or business relationship. Attach additional pages to this Form CIQ as necessary.

- A. Is the local government officer named in this section receiving or likely to receive taxable income from the filer of the questionnaire?

Yes No

- B. Is the filer of the questionnaire receiving or likely to receive taxable income from or at the direction of the local government officer named in this section AND the taxable income is not from the local governmental entity?

Yes No

- C. Is the filer of this questionnaire affiliated with a corporation or other business entity that the local government officer serves as an officer or director, or holds an ownership of 10 percent or more?

Yes No

- D. Describe each affiliation or business relationship.

6 Describe any other affiliation or business relationship that might cause a conflict of interest.

7

Signature of person doing business with the governmental entity

Date

**SECTION 01100
GENERAL REQUIREMENTS**

1
2
3
4
5 1.01 QUALIFICATIONS FOR SUBMITTING SEALED PROPOSAL
6

- 7 A. To qualify for submitting a proposal, each contractor is required to obtain a copy of the
8 Request for Proposal, Contract Documents, General Instructions, Materials, Execution. It
9 is highly recommended that each contractor attend the Walk-Through Conference on
10 Friday, April 24, 2009, at 10:00 A.M., at Lamar Alternative Education Center, 2099 Walnut
11 Street , Grand Prairie, TX 75050

12 1.02 BID PROPOSAL BONDS
13

- 14 A. AN ACCEPTABLE SURETY COMPANY BID PROPOSAL BOND or CERTIFIED CHECK
15 for the amount not less than five percent (5%) of the proposal amount shall accompany
16 each proposal. By "Acceptable Surety" is meant an Insurance Company licensed by the
17 Texas State Board of Insurance to act as surety, rated "A" or better, listed in the Federal
18 Register, and having an unblemished record. The check or bond of each unsuccessful
19 Contractor will be returned within ten (10) days after the proposal is awarded. FAILURE
20 OF AN ACCEPTED CONTRACTOR TO ENTER INTO A CONTRACT TO COMPLETE
21 THE SPECIFIED WORK MAY CAUSE FORFEITURE OF HIS SEALED PROPOSAL
22 SECURITY. FAILURE TO SUBMIT PROPER SEALED PROPOSAL SECURITY SHALL
23 CAUSE REJECTION OF THE PROPOSAL.
24

25 1.03 BOND AND INSURANCE SUBMITTALS
26

- 27 A. The successful Contractor shall be required to furnish the appropriate certificates of
28 insurance, and the executed Payment and Performance Bonds, if required, prior to
29 starting the project.
30
31 B. Bonds: Prior to commencement of Work hereunder, Contractor will, if the Contract Price
32 exceeds \$25,000.00, provide an Acceptable Surety Company Payment Bond, and if the
33 Contract Price exceeds \$100,000.00, provide an Acceptable Surety Company
34 Performance Bond, each in principal amount equal to one hundred percent (100%) of the
35 Contract Price, conditioned that Contractor will faithfully perform all its undertakings in this
36 Contract and will fully pay all persons furnishing labor and material in the prosecution of
37 the Work provided for in this Contract. If any surety upon any bond becomes insolvent or
38 otherwise ceases to do business in this State, the Contractor shall promptly furnish
39 equivalent security to protect the interests of Grand Prairie ISD and of persons furnishing
40 labor and materials in the prosecution of the Work.
41

42 1.04 INSURANCE
43

- 44 A. The Contractor shall maintain insurance of the kinds and in the amounts specified below
45 and furnish Grand Prairie Independent School District with Certificates of Insurance as
46 evidence thereof in the prescribed form. If any work provided for or to be performed under
47 any Specifications is sub-let (as otherwise permitted by the terms of such Specifications),
48 the Contractor shall require the Subcontractor to maintain and furnish him with satisfactory
49 evidence of Workmen's Compensation, Employer's Liability and such other forms and
50 amounts of insurance which the Contractor deems reasonably adequate.
51

- 1 B. The Contractor will provide and maintain standard fire, extended coverage perils,
2 vandalism and malicious mischief insurance to protect the interest of both the Contractor
3 and the Owner for materials brought into the job or stored on the premises. Such
4 insurance shall be for one hundred percent (100%) of the insurable value of the work to be
5 performed including all items of labor and materials incorporated therein, materials stored
6 at the job-site to be used in completing the work, and such other supplies and equipment
7 incidental to the work as are not owned or rented by the Contractor, the costs of which are
8 included in the direct cost of the work.
9
- 10 C. This insurance shall not cover any tools, derricks, machinery, tar buckets, ladders,
11 engines, workmen's quarters, boilers, pumps, wagons, scaffolds, forms, compressors,
12 shanties, or other items owned or rented by the Contractor, the cost of which is not
13 included in the direct cost of the work.
14
- 15 D. In accordance with above items, the Contractor shall maintain the following insurance:
16
17 Contractor shall carry throughout the life of this Contract, at his expense, with insurers
18 satisfactory to Grand Prairie ISD, insurance of not less than as listed in the included
19 document "GRAND PRAIRIE INDEPENDENT SCHOOL DISTRICT - PROCEDURES FOR
20 SEALED PROPOSALS".
21
- 22 E. This Insurance shall:
23 1. include coverage for the liability assumed by the Contractor;
24 2. include completed operation coverage which is to be kept in force by the Contractor
25 for a period of not less than one year after completion of the work provided for or
26 performed under these specifications;
27 3. not be subject to any of the special property damage liability exclusions commonly
28 referred to as the XCU exclusions pertaining to blasting or explosion, collapse or
29 structural damage and underground property;
30 4. not be subject to any exclusion of property used by the insured or property in the
31 case, custody or control of the insured or property as to which the insured for any
32 purpose is exercising physical control; and
33 5. the Certificates of Insurance furnished by the Contractor shall show by specific
34 reference that each of the foregoing items have been provided for.
35
- 36 F. The Certificates of Insurance furnished by the Contractor as evidence of the insurance
37 maintained by him shall include a clause obligating the Insurer to give Grand Prairie
38 Independent School District ten (10) days prior written notice of cancellation or any
39 material change in the insurance.
40

41 1.05 DESCRIPTIONS OF WORK
42

- 43 A. It is the intent of the specification that the new work will provide a watertight facility. The
44 attached specifications describe the minimum acceptable standards of construction and
45 finish.
46
- 47 B. Provide a single-ply fiber reinforced PVC membrane at the Lamar Alternative Education
48 Center located in Grand Prairie, TX. The roof shall be installed in accordance with the
49 attached specifications and in strict accordance with the manufacturer's recommended
50 procedures.
51
52

1 1.06 CHANGES
2

- 3 A. Changes to specifications and drawings will not be acceptable unless approved in writing
4 by the manufacturer and the Owner.
5

6 1.07 TAXES
7

- 8 A. Except as otherwise provided in the Contract Documents the Contract Price includes all
9 applicable federal, state and local taxes. The purchase, lease, rental, storage, use or
10 other consumption of tangible personal property, for the performance of this Contract by
11 the Contractor, is exempted from state and local sales tax pursuant to the provisions of
12 Article 20.04 (Y) of the Texas Limited Sales Excise and Use Tax Act. To claim the benefit
13 of this exemption, the Contractor must comply with such procedures as may be prescribed
14 by the State Comptroller of Public Accounts.
15

16 1.08 WORKING TIME
17

- 18 A. A working day is defined as a calendar day, not including Saturdays, Sundays, or legal
19 holidays, in which weather or other conditions not under the control of the company will
20 permit the performance of the principal units of work underway for a continuous period of
21 not less than seven (7) hours between 7:00 A.M. and 6:00 P.M. For every Saturday on
22 which the company chooses to work, one day will be charged against the working time
23 when weather conditions will permit seven (7) hours of work as delineated above. A
24 principal unit of work shall be that unit which controls the completion time of the
25 agreement. Nothing in this item shall be construed as prohibiting the company from
26 working on Saturdays if it so desires. If Sunday work is permitted by the Owner, working
27 time will be charged on the same basis as weekdays.
28

29 1.09 INSPECTION
30

- 31 A. An inspection shall be made by a representative of the material manufacturer of the
32 completed project to ensure that said project was installed in accordance with the
33 manufacturer's specifications and illustrated details. Upon this approval of the project, the
34 specified warranty or warranties shall be written.
35

36 1.10 BASE PROPOSALS
37

- 38 A. The Contractor will furnish all labor and materials, and all of the collective costs applicable
39 will be shown as total Base Proposal costs.
40

41 1.11 QUALITY ASSURANCE
42

- 43 A. All work and materials hereinafter specified shall be best of kind described and, unless
44 specified otherwise, shall be new and of best quality. The specified roofing system shall
45 have been used successfully in the United States for a minimum of ten (10) years.
46
47 B. All materials will be securely fastened in place in a watertight, neat and workmanlike
48 manner. All workmen shall be thoroughly experienced in the particular class of work upon
49 which employed. All work shall be done in accordance with these specifications and shall
50 meet the approval in the field of the Owner's representative. Contractor's representative
51 and/or job supervisor shall have a complete copy of specifications and drawings on job
52 site at all times.
53

- 1 C. Contractor shall plan and conduct the operations of the work so that each section started
2 on one day is complete, details installed and thoroughly protected before the close of work
3 for that day.
4
- 5 D. Where any material is specified by proprietary name, trade name, name of manufacturer,
6 generic name, or catalog number with the addition of such expressions as "or equal"/"or
7 approved equal", it is understood that the material named is intended and no substitution
8 will be allowed without written approval by the Owner's representative three (3) calendar
9 days prior to proposal due date.
10
- 11 E. Should a specified material not be available, a substitution shall require approval (in
12 writing) of the Owner's representative and the roof system manufacturer issuing the
13 warranty before being utilized on this project.
14
- 15 F. Unless otherwise indicated, the materials to be used in this specification are those
16 specified and denote the type, quality, performance, etc. required. All proposals shall be
17 based upon the use of specified material.
18
- 19 G. A Contractor who proposes to quote on the basis of an "or equal"/"or approved equal"
20 alternate material or system shall submit to the Owner's representative the following
21 information, at least five (5) calendar days prior to scheduled proposal opening. Only one
22 request for substitution will be considered for each material or system. When substitution
23 is not accepted, specified product or system shall be used.
- 24 1. A five (5) gallon sample of any adhesive, coating, mastic, or sealant and a three foot
25 by five foot (3' x 5') sample of any sheeting or rolled goods as may be specified.
 - 26 2. A certificate from an accredited testing laboratory comparing the physical and
27 performance attributes of the proposed material with those of the specified materials.
 - 28 3. A list of at least three (3) local jobs where the proposed alternate material was used
29 under similar conditions and written documentation showing successful installation in
30 the United States of similar size and scope for a minimum of ten (10) years. These
31 jobs must be available for inspection by the Owner's representative.
 - 32 4. In the event a substitution is acceptable by the Owner, all contractors shall be
33 notified of the acceptable alternate within three (3) calendar days prior to proposal
34 opening.
 - 35 5. During the course of work, the Owner's representative may secure from the
36 containers at the job site, samples of the materials being used and submit the
37 samples to an independent testing laboratory for comparison. If the results of the
38 independent testing laboratory prove that the materials are not comparable and
39 equal to the specified materials, the Contractor shall pay for the testing and the
40 Owner reserves the right to reduce the amount of the proposal by twenty percent
41 (20%) if all work has already been completed before the test results become known.
42 If the contract work is not completed when the test results become known, the
43 Owner shall impose a penalty in proportion to the amount of work already
44 completed, and all remaining work shall be completed with the specified materials.
45
- 46 H. Application of materials shall be in strict accordance with the manufacturer's
47 recommendations. In the instance of a conflict between these specifications and those of
48 the manufacturer, the most stringent shall take precedence.
49
- 50 I. Roofing system manufacturer shall have approval for FM Global wind uplift requirements
51 and shall meet Underwriter's Laboratory fire rating.
52
- 53 J. Roof system shall be installed in accordance with FM Global requirements.

1
2 1.12 EXAMINATION OF PREMISES
3

- 4 A. Before submitting proposals for his work, each contractor shall be held to have examined
5 the premises and satisfied himself as to the existing conditions under which he will be
6 obliged to work.
7

8 1.13 PROTECTION OF WORK AND PROPERTY
9

- 10 A. Work: The contractor shall maintain adequate protection of all his work from damage and
11 shall protect the Owner's and adjacent property from injury or loss arising from this
12 contract. He shall provide and maintain at all times any OSHA required danger signs,
13 guards, and/or obstructions necessary to protect the public and his workmen from any
14 dangers inherent with or created by the work in progress. All federal, state, and city rules
15 and requirements pertaining to safety and all EPA standards, OSHA standards, NESHAP
16 regulations pertaining to asbestos as required shall be fulfilled by the contractor as part of
17 his bid.
18

- 19 B. Property: Protect existing planting and landscaping as necessary or required to provide
20 and maintain clearance and access to the work of this contract. Examples of two
21 categories or degrees of protection are generally as follows:
22 1. Removal, protection, preservation, or replacement and replanting of plant materials.
23 2. Protection of plant materials in place, and replacement of any damage resulting from
24 the contractor's operations.
25

- 26 C. Twenty-four Hour Call: The contractor shall have personnel on call twenty-four (24) hours
27 per day, seven (7) days per week for emergencies during the course of a job. The
28 Owner's project manager is to have the twenty-four (24) hour numbers for the contact.
29 Contractor must be able to respond to any emergency call and have personnel on-site
30 within two (2) hours after contact. Numbers available to the Owner's project manager are
31 to be both home and office numbers for:
32 1. Job Foreman
33 2. Job Superintendent
34 3. Owner or Company Officer
35

36 1.14 PROTECTION OF PERSONS AND PROPERTY
37

- 38 A. Safety Precautions and Programs: The contractor shall be responsible for initiating,
39 maintaining and supervising all safety precautions and programs in connection with the
40 performance of the Contract.
41

- 42 B. Safety of Persons and Property: The contractor shall take reasonable precautions for
43 safety of, and shall provide reasonable protection to prevent damage, injury or loss to:
44 1. Employees on the work and other persons who may be affected thereby.
45 2. The work, materials and equipment to be incorporated therein, whether in storage on
46 or off the site, under care, custody or control of the contractor or the contractor's
47 Subcontractors or Sub-subcontractors.
48 3. Other property at the site or adjacent thereto, such as trees, shrubs, lawns, walks,
49 pavements, roadways, structures and utilities not designated for removal, relocation
50 or replacement in the course of construction.

- 1
2 C. The contractor shall give notices and comply with applicable laws, ordinances, rules,
3 regulations and lawful orders of public authorities bearing on safety of persons or property
4 or their protection from damage, injury or loss.
5
6 D. The contractor shall erect and maintain, as required by existing conditions and
7 performance of the contract, reasonable safeguards for safety and protection, including
8 posting danger signs and other warnings against hazards, promulgating safety regulations
9 and notifying owners and users of adjacent sites and utilities.
10
11 E. The contractor shall comply to all OSHA requirements and any other local, state or federal
12 regulations pertaining to protection and safety of persons or property.
13
14 F. The contractor and all Subcontractors shall take all necessary precautions to keep the
15 premises free of fire and safety hazards. The contractor shall prevent all agents,
16 employees, licensees and invitees of the contractor from smoking on the Owner's
17 premises and from operating or using any flame, sparks or explosion hazard producing
18 devices anywhere on or about the premises without the written approval of the Owner's
19 representative.
20
21 G. The contractor shall designate a responsible member of the contractor's organization at
22 the site whose duty shall be the prevention of accidents. This person shall be the
23 contractor's superintendent unless otherwise designated by the contractor in writing to the
24 Owner's representative.
25
26 H. The contractor shall not load or permit any part of the construction or site to be loaded so
27 as to endanger its safety.
28

29 1.15 PRE-CONSTRUCTION CONFERENCE

- 30
31 A. A conference shall be scheduled by the Owner's representative and conducted at the work
32 site prior to start of work. The Contractor's project supervisor or foreman and the Owner's
33 representative shall attend. Job schedule, submittals, existing conditions, and
34 specifications shall be reviewed and any questions arising shall be resolved to the
35 satisfaction of all parties prior to start of work. Contractor shall begin work within five (5)
36 calendar days following Owner's signing of contract and/or issuance of the written notice
37 to proceed with work, weather permitting.
38

39 1.16 SUBMITTALS

- 40
41 A. Upon receipt of notice of acceptance of this proposal, the Contractor shall submit the
42 following items. All submittals shall be submitted to the Owner/Owner's representative
43 within ten (10) calendar days of the date on the Notice Of Acceptance and prior to the
44 award of contract.
45 1. Contractor's executed insurance certificate.
46 2. Material manufacturer's approval/acceptance of the specifications and details as
47 written or noted for this project, fastener pattern layout, insulation, fasteners and all
48 related materials.
49 3. Contractor's executed payment and performance bonds as required.

- 1 4. Shop drawings of all perimeter and projection details, and sheet metal details
2 approved by manufacturer, for Owner's approval if proposed details differ from those
3 included with this proposal package. These drawings shall be approved by the
4 membrane manufacturer and submitted at the preconstruction conference for Owner
5 review and approval prior to work start.
- 6 5. Approved applicator must submit a roof drawing which will be employed in the
7 project if proposed drawing differs from that included with this proposal package.
- 8 6. Shop Drawings and Product Data:
 - 9 a) Manufacturer's Details: All termination details and other details normally required
10 by the membrane manufacturer's Technical Specifications, including both
11 standard details and special details, shall be furnished by the Contractor and
12 shall be approved in writing by the manufacturer, the company project manager,
13 and the Owner's representative prior to final installation.
 - 14 b) As-built Drawings: Contractor shall supply the Owner with a full set of "as-built"
15 drawings depicting location, size, nomenclature and manufacturer. One set of
16 reproducible drawings, twenty-four inches by thirty-six inches (24" x 36"), shall be
17 supplied along with one set of copies. Contractor shall also supply Owner with
18 "as-built" roofing details as approved by the appropriate manufacturer with
19 original manufacturer's seals and signatures thereon. Owner must have
20 "as-built" drawings in hand prior to release of final payment to the Contractor.
 - 21 c) Initially submit one reproducible sepia transparency and two prints of each
22 drawing, including fabrication, erection, layout and setting drawings, and other
23 such drawings as required under various sections of the specifications until final
24 approval is obtained.
 - 25 d) Date and mark shop drawings to show name of project, Owner, Contractor,
26 origination Subcontractor, manufacturer or supplier, and separate details as
27 pertinent.
 - 28 e) Shop drawings shall completely identify specification sections and locations at
29 which materials or equipment are to be installed.
 - 30 f) Minimum drawing size shall be eight and one-half inches by eleven inches
31 (8-1/2" x 11").
 - 32 g) Submit sufficient copies of manufacturer's descriptive data including catalog
33 sheets for materials, equipment and fixtures, showing dimensions, performance
34 characteristics and capacities, diagrams and controls, schedules, and other
35 pertinent information required.
 - 36 h) Submit brochures and other submittal data that cannot be reproduced
37 economically, in such quantities to allow the Owner to retain four copies of each
38 after review. Mark product data to show the name of project, Owner, Contractor,
39 originating Subcontractor, manufacturer or supplier, and separate details if
40 pertinent.
 - 41 i) Product data shall completely identify specification sections and locations at
42 which materials or equipment are to be installed.
 - 43 j) Accompany each submittal with a separate transmittal letter in duplicate,
44 containing date, project title and number, Contractor's name and address,
45 number of each shop drawing, product data and samples submitted, and
46 notification of deviations from Contract Documents.
 - 47 k) Three sets of prints from the final sepias will be returned to the Owner for record.
48 The cost of printing all sepias and all prints is the responsibility of the Contractor.
- 49 7. Detailed project sequencing, staging, material loading, manpower plans, and
50 detailed project construction schedule for approval.
- 51 8. Sample of warranty that is to be issued upon project completion.

- 1 9. Submit list of all mechanical, electrical, rigging, sheet metal, and other
2 Subcontractors with evidence of Subcontractor's insurance coverage in compliance
3 with contract requirements.
4 10. Project superintendent's resume and project experience list for proposed system.
5 11. Contractor shall submit written statement that their company or any Subcontractor
6 they may use is not employing workers classified as undocumented workers on this
7 project.
8 12. Samples of all materials not supplied or prior approved by the roofing membrane
9 manufacturer shall be submitted to the manufacturer for written approval prior to
10 installation start.

11
12 1.17 USE OF PREMISES

- 13
14 A. The Contractor is advised that the Owner will occupy the building at all times, and the
15 Contractor must provide all safeguards required to protect personnel and to keep noise
16 levels as low as reasonably possible for each operation.
17
18 B. The Contractor shall:
19 1. Coordinate work in such a manner as to not interfere with the normal operation of
20 the building.
21 2. Assume full responsibility for protection and safekeeping of products stored on
22 premises.
23 3. Agree to hold the Owner harmless in any and all liability of every nature and
24 description that may be suffered through bodily injuries, including death of any
25 persons by reason of negligence of the Contractor, agents, employees, or
26 Subcontractors.
27 4. The Contractor and all Subcontractors shall take all necessary precautions to
28 prevent the use of alcoholic beverages on the Owner's premises.

29
30 1.18 SAFETY

- 31
32 A. The contractor and all Subcontractors shall take all necessary precautions to keep the
33 premises free of fire and safety hazards. The contractor shall prevent all agents,
34 employees, licensees and invitees of the contractor from smoking on the Owner's
35 premises and from operating or using any flame, spark or explosion hazard producing
36 devices anywhere on or about the premises without the written approval of the Owner's
37 representative.
38

39 1.19 INSPECTION OF WORK IN PROGRESS

- 40
41 A. The Owner's representative will require the material manufacturer's representative to
42 periodically examine the work in progress, as well as on completion, in order to assist in
43 ascertaining the extent the materials and labor procedures conform to the requirements of
44 the specifications.
45
46 B. The authorized material manufacturer's field representative shall be responsible for:
47 1. Keeping the Owner's representative informed after periodic inspections as to the
48 progress and quality of the work observed.
49 2. Calling to the attention of the Contractor those matters observed which are
50 considered to be in violation of the contract requirements.
51 3. Reporting to the Owner's representative, in writing, any failure or refusal of the
52 Contractor to correct unacceptable practices called to his attention.

- 1 4. Confirming, after completion of the work and based on his observation and test, that
2 he has observed no application procedures in conflict with these specifications.
3 Final payment will not be released until all specified warranties have been received
4 by the Owner.
5

6 1.20 FIELD INSPECTION AND CONTRACTOR RESPONSIBILITY
7

- 8 A. The Owner's representative shall at all times have access to the job site and work areas.
9 The Contractor will provide proper and safe facilities for such access and inspection.
10
11 B. Any time during the course of the project, an inspection may be deemed necessary by the
12 Owner/Owner's representative to have one or all of the following members of the
13 Contractor's organization present in person to inspect the work along with the
14 Owner/Owner's representative: Owner, a Majority Stockholder, President and/or Chief
15 Executive Officer of the contracting firm.
16
17 C. The Owner/Owner's representative, if deemed necessary, will notify in writing who in the
18 Contractor's organization they want to inspect the work on the roof in addition to the
19 Contractor's normal inspection. If the designated person or persons requested by the
20 Owner/Owner's representative fails to respond within forty-eight (48) hours to the request,
21 the work may be suspended, payment withheld and/or liquidated damages outlined in the
22 specifications assessed until such time the individual(s) inspect(s) the work with the
23 Owner/Owner's representative.
24
25 D. Neither the presence nor absence of the Owner's representative nor the manufacturer's
26 representative, nor an inspection by the manufacturer of the work or operation of the
27 Contractor, nor any failure by the manufacturer to detect, pinpoint, or object to any defect
28 in the work completed, nor any deviation from these specifications, nor the acceptance by
29 the manufacturer of any such defect or the approval of the manufacturer of any such
30 deviation shall relieve the Contractor, or reduce, or in any way limit or divide, his full
31 responsibility for the full performance of the work required of him under these
32 specifications.
33
34 E. It shall be understood that such field inspection as the Owner's representative may cause
35 to be performed by the material manufacturer will be performed by the material
36 manufacturer solely for the benefit of the Owner and in an attempt to assist with the
37 requirements of this specification. These requirements bind the Contractor even without
38 such inspection.
39
40 F. No inspection or any act or omission of either the Owner's representative or the
41 manufacturer's representative in connection with such inspection shall prejudice the
42 Owner's right to strict conformance, or under any circumstances be construed to excuse
43 or mitigate any mistake or non-conformance by the Contractor.
44

45 1.21 ON-SITE SUPERVISION
46

- 47 A. The Contractor is responsible for the management and control of the work. He shall give
48 his personal superintendence of the work or have a competent resident manager or
49 superintendent satisfactory to the Owner on the job site at all times while work is in
50 progress, with full authority to act for the Contractor as his agent.
51

1 1.22 CHANGES OR EXTRA WORK
2

- 3 A. No change or addition shall be made except upon receipt by the Contractor of a signed
4 order from the Owner authorizing such a change. No claims for an extra to the contract
5 price shall be valid unless so authorized.
6

7 1.23 ROOFTOP EQUIPMENT
8

- 9 A. All air conditioning units and other rooftop equipment shall be moved by the roofing
10 Contractor as required to install roofing materials complete and in accordance with the
11 plans and specifications. When units or equipment are to be moved, they shall be
12 disconnected and moved by the roofing Contractor to a protected area so as not to
13 damage any part or component thereof, and shall be reset by the roofing Contractor and
14 reconnected at the Contractor's expense, all according to local building codes. All
15 disconnection and reconnection shall be performed by a mechanical and/or electrical
16 company licensed to perform such work and approved by the Owner's representative.
17
18 B. Contractor shall follow refrigerant recycling requirements as outlined in section 608 of the
19 Clean Air Act, 1990, as amended (CAA), including final regulations published on May 14,
20 1993 (58 FR 28660), and the prohibition on venting that became effective on July 1, 1992.
21
22 C. Where mechanical items, conduits, cables, raceways, piping or any other roof-top
23 mounted item must be moved in any manner, or disconnected and reconnected as made
24 necessary by the reroofing of the specified areas at the facility, all roof-top equipment,
25 piping, insulation, wires, fiber optic cable, any information systems components, conduits,
26 panels, motor starters, raceways, switches, antennas, satellite components, etc. shall be
27 replaced or renewed to match existing if damaged by Contractor. NOTE: It is the
28 responsibility of the Contractor to review the condition of any and all of the above noted, or
29 similar, items with authorized Owner personnel to determine condition of said items
30 PRIOR TO START OF WORK. If this review is not completed as prescribed, any and all
31 damage found at the end of the work will be repaired solely at the contractor's expense.
32
33 D. Any action by roofing contractor personnel which causes interruption of the ongoing works
34 of the Owner's facility will be repaired at the sole expense of the roofing contractor. Upon
35 interruption of the Owner's ability to meet required tasks, Owner may immediately, and
36 without the contractor's permission, take such action as necessary to repair said damage
37 so that the Owner's work may be resumed. The Owner has the obligation to notify the
38 contractor of such action as soon as possible, but in all cases must notify the contractor in
39 writing within 48 hours of the occurrence of the incident.
40

41 1.24 FINAL INSPECTION
42

- 43 A. Upon job completion, a final inspection will be made by Owner's representative. Final
44 payment will not be authorized for the work done until such inspection has been made and
45 all work is found to have been performed in accordance with the specifications and to the
46 satisfaction of the building Owner, and the specified warranties are issued.
47
48 B. The Contractor shall promptly remove any work that does not meet the requirements of
49 the plans and specifications or is incorrectly installed or otherwise disapproved by the
50 Owner as failing to meet with the plans and specifications. The Contractor shall promptly
51 replace any such work without expense to the Owner and shall bear the cost of making
52 good all work of other contractors or the Owner, destroyed or damaged by such removal
53 or replacement.

1
2 1.25 WAGES AND OVERTIME
3

4 A. Overtime: Work that the Contractor performs on overtime for the Contractor's benefit is
5 not billable to the Owner. The work that the Owner requests in writing to be performed
6 during off hours is billable to Owner by the Contractor at the rate as proposed under unit
7 cost.

8
9 B. Wage Rates:

10
11 1. Requirements:

12
13 a) Pay not less than the minimum wage scale and benefits indicated on the
14 "Minimum Wage Schedule" provided herein.

15
16 b) Wages listed are minimum rates only.

17
18 c) No claims for additional compensation will be considered by the Owner because
19 of payments of wage rates in excess of the applicable rate contained herein.

20
21 2. Applicable Statutes: Vernon's Civil Statutes, Section 2 of Article 5159a, which states
22 as follows:

23
24 "...The Contractor shall forfeit as a penalty to the State, County, City and County,
25 City, Town, District or other political subdivision on whose behalf the contract is
26 made or awarded, ten dollars (\$10.00) for each laborer, workman or mechanic, for
27 each working day, or portion thereof, such laborer, workman or mechanic is paid less
28 than the said stipulated rates for any work done under said contract, by him, or by
29 any Subcontractor under him, and the public body awarding the contract shall cause
30 to be inserted in the contract a stipulation to this effect..."

31
32 3. Payroll: In compliance with Article 5159a, Sections 2 and 3, of the Revised Civil
33 Statute referenced above, the Owner reserves the rights as defined by Section 3
34 which states as follows:

35
36 "Sec. 3. The Contractor and each Subcontractor shall keep, or cause to be kept, an
37 accurate record showing the names and occupations of all laborers, workmen and
38 mechanics employed by him, in connection with the said public work, and showing
39 also the actual per diem wages paid to each of such workers, which record shall be
40 open at all reasonable hours to the inspection of the public body awarding the
41 contract, its officers and agents."

42
43 4. Minimum Wage Rates:

44
45 a) Pay prevailing basic wage listed, plus any applicable fringe benefits.

46
47 PREVAILING WAGE SCALE NOTICE

48
49 i. Prevailing wages shall not be construed to prohibit the payment of more than
50 the rates named. Under no condition shall any laborer, workman or
51 mechanic employed on this job be paid less than the minimum wage scale.
52

- 1 ii. In execution of this contract, the Contractor must comply with all applicable
 2 state and federal laws, including, but not limited to, laws concerned with
 3 labor, equal employment opportunity, safety, and minimum wage.
 4
 5 iii. The following wage rates have been represented to the Owner as being
 6 relatively current and accurate. Anyone knowing these wage rates to be in
 7 error shall bring this to the attention of the Owner's representative so an
 8 Addendum can be issued, if the new rates can be substantiated. The Owner
 9 and Owner's representative shall not be held responsible for errors in these
 10 wage rates.

11
 12 b) Basic Rates:

| <u>Classification (Trade/Craft)</u> | <u>Basic Wage Rates</u> |
|--|-------------------------|
| 15 Acoustical Installer | \$ 12.16 |
| 16 Bricklayer | 18.77 |
| 17 Brick Tender | 8.60 |
| 18 Carpenter | 15.95 |
| 19 Cement Mason | 11.38 |
| 20 Cranes: | |
| 21 Hydraulic Crane (35 ton and under) | 19.20 |
| 22 Hydraulic over 35 tons, Derricks, Overhead | |
| 23 Gentry, Stiffleg, Tower, etc., and Cranes | |
| 24 With Piledriving or Caisson attachments | 19.70 |
| 25 Drywall Hanger | 11.71 |
| 26 Electricians: | |
| 27 Cable Splicer | 23.76 |
| 28 Electrician | 21.60 |
| 29 Glazier | 12.26 |
| 30 Ironworkers: | |
| 31 Reinforcing | 10.33 |
| 32 Structural | 17.44 |
| 33 Laborer, Unskilled (Excluding Landscape Laborers) | 7.58 |
| 34 Lather | 17.38 |
| 35 Mechanical Insulator | 10.55 |
| 36 Painters: | |
| 37 Brush and Spray | 10.76 |
| 38 Painters doing drywall finishing only | 10.42 |
| 39 Paperhanger | 11.30 |
| 40 Plasterer | 15.06 |
| 41 Plasterer Tender | 9.00 |
| 42 Plumbers and Pipefitters (Including HVAC Work) | 12.80 |

| | | |
|----|---|-------|
| 1 | Power equipment operators: | |
| 2 | Backhoes | 10.64 |
| 3 | Front End Loaders | 8.77 |
| 4 | Roofers (Including Built-up, Composition and Single-ply) | 9.45 |
| 5 | Sheet Metal Worker (Including HVAC Work) | 12.80 |
| 6 | Soft Floor Layer | 13.13 |
| 7 | Sprinkler Fitter, Fire | 22.62 |
| 8 | Tile Setter | 13.75 |
| 9 | Welders: Receive rate prescribed for craft performing operation | |
| 10 | to which welding is incidental. | |
| 11 | | |
| 12 | c) Apprentice Pay - All Trades and Crafts: The minimum rate for apprentices shall | |
| 13 | be in accordance with the scale determined by an approved apprenticeship | |
| 14 | program or \$1.00 per hour less than journeyman's rates, whichever is lower. An | |
| 15 | approved apprenticeship program is one approved by the U.S. Department of | |
| 16 | Labor, Bureau of Apprenticeship Training, and only apprentices enrolled in an | |
| 17 | approved program may be paid apprenticeship rates. | |
| 18 | | |
| 19 | d) Base Per Diem Rate: Hours worked per day, times base hourly rate. | |
| 20 | | |
| 21 | e) Multipliers for Overtime Rates: | |
| 22 | i. Over 40 hours per week: Base hourly rate times 1.5. | |
| 23 | ii. Holidays: Base hourly rate times 1.5. | |
| 24 | | |
| 25 | 1.26 PERMITS | |
| 26 | | |
| 27 | A. The Contractor shall obtain and pay for all permits required, give all legal notices and pay | |
| 28 | all fees required for the work. Contractor shall comply with all ordinances and laws. Any | |
| 29 | and all work done which does not meet requirements of any local authorities must be | |
| 30 | properly redone, and incidental work replaced by the Contractor, without cost to the | |
| 31 | Owner. | |
| 32 | | |
| 33 | 1.27 SUBCONTRACTING OF WORK | |
| 34 | | |
| 35 | A. The Owner shall have the right to accept or reject the use of any subcontractor. The | |
| 36 | Contractor shall submit a list of proposed Subcontractors with his proposal. | |
| 37 | | |
| 38 | 1.28 REJECTION OF PROPOSALS | |
| 39 | | |
| 40 | A. The Owner reserves the right to reject any one or all proposals, to waive any formalities or | |
| 41 | irregularities, and to award the contract in the best interest of the School District. | |
| 42 | | |
| 43 | 1.29 SELECTION CRITERIA FOR QUALIFYING ROOFING PROPOSALS | |
| 44 | | |
| 45 | A. It is not the policy of the School District to purchase on the basis of low price alone. In | |
| 46 | evaluating proposals submitted, the District has the right under the Texas Education Code, | |
| 47 | Section 44, to take several items into consideration before entering into a contract. These | |
| 48 | considerations can include, but are not limited to: | |
| 49 | 1. Unit price. | |
| 50 | 2. Total proposal price. | |

- 1 3. Suitability for the intended use.
- 2 a) Proposed system shall follow NRCA guidelines and the system manufacturer's
- 3 published specifications, and be installed in accordance with governing building
- 4 codes, FM Global, Underwriter's Laboratories, SMACNA, etc.
- 5 b) Is lap integrity dependent upon: 1) hot-air fusion monolithic weld, membrane to
- 6 membrane; 2) adhered, cold adhesive; 3) adhered, hot bitumen; 4) laminated,
- 7 torch applied SB S or APP product?
- 8 c) To substantiate Quality Assurance, please submit:
- 9 i. Sample of field report.
- 10 ii. Number of weekly jobsite visits to be performed.
- 11 iii. Sample of job manifest.
- 12 d) Warranty Comparison
- 13 i. Warranty must be provided by manufacturer of membrane.
- 14 ii. Submit disclaimers that affect proposed warranty. Does the published
- 15 warranty list an exclusion for hail; i.e., is the warranty voided by hail? If
- 16 there is no disclaimer in the published warranty, submit documentation
- 17 stating what size hail the system is warranted up to, including historical
- 18 supporting data and testing.
- 19 iii. Submit documentation stating who is responsible for maintaining the
- 20 integrity of laps in proposed system after contractor warranty expires.
- 21 iv. Submit documentation to designate what specifically constitutes Owner's
- 22 responsibilities concerning roof maintenance and what maintenance is
- 23 specifically manufacturer's responsibility.
- 24 v. Submit documentation stating that standard warranty shall cover all base
- 25 flashing, parapet wall flashing, and top of parapet wall flashing.
- 26 e) Institutional Insurance Discount: Provide documentation to show that property
- 27 insurance rates have been discounted as a direct result of the roof system's
- 28 capabilities to perform in a hail event.
- 29 4. Attendance at Pre-Proposal Conference
- 30 5. Probability of continuous availability and total long-term prices to acquire the
- 31 vendor's goods and services.
- 32 6. The reputation of the vendor and the vendor's goods and services.
- 33 7. The quality of the vendor's goods and services.
- 34 8. The extent to which the goods or services meet the District's needs.
- 35 9. The vendor's past relationship and past performance with the District.
- 36 10. Date of proposed delivery and placement.
- 37 11. Safety record of vendor.
- 38 12. Financial and technical resources of contractor adequate to service contract.
- 39 13. Any relevant factor that a private business entity would consider in selecting a
- 40 vendor.
- 41 14. Qualification of insurance and bonds.

42
43 1.30 ADDENDA

- 44
- 45 A. Any verbal statement or inference prior to the proposal opening regarding modification of
- 46 specifications is invalid unless so stated on an officially issued addendum.
- 47

1 1.31 DEMOLITION

- 2
3 A. All abandoned pitch pans, equipment, vents, curbs, and other such debris shall be
4 removed by the Contractor. Abandoned items that require deck placement shall be
5 marked by the Owner prior to proposal due date and/or the commencement of work.
6 Contractor shall install new decking of like dimensions to provide a suitable substrate in
7 areas where penetrations through the deck are removed.
8

9 1.32 CREWS AND EQUIPMENT

- 10
11 A. Contractor shall provide sufficient crews and equipment so that the project may progress
12 without interruption or unnecessary delay.
13

14 1.33 FUTURE REPAIRS

- 15
16 A. Contractor certifies by acceptance of this project that any future repairs or alterations he
17 might be called upon to execute after the project is complete, will be performed in
18 accordance with the manufacturer's recommended procedures so as to not void the
19 warranty.
20

21 1.34 NAILERS AND ROOF DECK

- 22
23 A. Contractor shall notify the Owner's representative of unforeseen areas of damaged
24 decking, wet insulation, wet fill material or deteriorated nailers. Where the damage is
25 serious and extensive, it will be the Owner's prerogative to authorize removal and
26 replacement.
27
28 B. Any areas of unusual deck deflection noticed by the Contractor during the course of the
29 job that will cause an area of ponding water should be brought to the attention of the
30 Owner's representative by the Contractor.
31
32 C. The Contractor shall furnish the Owner with a unit price for removal and replacement of
33 the damaged decking, wet insulation, wet fill material or deteriorated nailers. All nailers
34 required for the new roofing application shall be provided by the roofing Contractor, and
35 included in the proposal amount. Unit cost for nailers applies only to existing deteriorated
36 nailers. If lumber is required to make "flush" interior parapet wall, cost shall be included in
37 Base Proposal.
38

39 1.35 CONTRACT DOCUMENTS

- 40
41 A. In the event of a conflict between the reroofing specifications and the Owner's contract
42 documents, the Owner's contract documents shall take precedence.
43
44
45

46

END OF SECTION 01100

SECTION 07536

SINGLE-PLY MEMBRANE (PVC) ROOFING SYSTEM

SCOPE:

1. Install 1/2-inch fan-folded insulation over existing system in accordance with membrane manufacturer's published specifications.
2. Contractor shall furnish and install a single-ply membrane roofing system that is fabricated of a weft inserted, low-shrink, anti-wicking polyester fabric and has a thermoplastic coating of PVC material laminated to both sides.
3. Encapsulate all parapet walls with roofing membrane.
4. Install 4" fascia bar with Kynar-coated metal cover, as manufactured by Exceptional Metals, Inc. at perimeter. Cover color shall be chosen by building owner.
5. All electrical, HVAC and other mechanical work shall be the responsibility of the Contractor.
6. Dispose of all debris in an approved facility in accordance with all local, federal and state regulations.
7. This project is a turnkey project and all mechanical, electrical, and plumbing items currently installed on the existing roof shall be brought up to code per the governing authority. All of the Contractor's subcontractors shall be licensed in the state of Texas for their respective trade.

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Providing the entire roofing assembly, including, but not limited to:
 - 01 Tapered edge strips, cant strips, and wood nailers.
 - 02 Curbs
 - 03 Fully adhered thermoplastic single-ply membrane roofing
 - 04 Flashings, including sheet metal perimeter edge (fascia)
 - 05 Walkway pads, expansion joints, and other work incidental to, the complete and proper installation of a watertight roofing system as shown on the drawings or specified herein, and in accordance with all applicable requirements of the Contract Documents.
- B. It is the intent of this Section that the Work shall:
 - 01 Provide a watertight facility.
 - 02 Conform to all applicable building code requirements and of authorities having jurisdiction.
 - 03 Work of this Section shall be performed by a single source contractor.
 - 04 Coordinate with Owner of temporary equipment and conduit on roof and protection of installed roof membrane.

1.2 RELATED WORK

- A. All Sections of Work relating to the roofing system, including mechanical, plumbing and electrical items penetrating or installed on the roof system.

1.3 REFERENCES

- A. American Society for Testing and Materials (ASTM)
 - 01 A385, Practice for Providing High-Quality Zinc Coatings (Hot-Dip)
 - 02 D570, Water Absorption of Plastics
 - 03 D638, Tensile Properties of Plastics
 - 04 D751, Method of Testing Coated Fabrics
 - 05 D882, Tensile Properties of Thin Plastic Sheeting
 - 06 D1004 Initial Tear Resistance of Plastic Film and Sheeting
 - 07 D1204 Linear Dimensional Changes of Non-rigid Thermoplastic Sheeting or Film at Elevated Temperature
 - 08 D2136 Coated Fabrics – Low-Temperature Bend Test
 - 09 D2565 Operating Xenon Arc-Type Light Exposure Apparatus With and Without Water for Exposure of Plastics
 - 10 D3045 Heat Aging of Plastics Without Load
 - 11 D4434 Poly (Vinyl Chloride) Sheet Roofing
 - 12 E108 (Rev. A) Fire Tests of Roof Coatings
 - 13 G21 Determining Resistance of Synthetic Polymeric Materials to Fungi
 - 14 G53 Operating Light – and Water-Exposure Apparatus (Fluorescent UV-Condensation Type) for Exposure of Nonmetallic Materials

- B. Factory Mutual (FM)
 - 01 Loss Prevention Data Sheets: I-49, Perimeter Flashing
 - 02 I-90, Windstorm Resistance Classification

- C. Federal Specifications (FS)
 - 01 TT-S-00230C

- D. National Roofing Contractors Association (NRCA)
 - 01 Roofing and Waterproofing Manual

- E. Single Ply Roofing Institute (SPRI)

- F. Sheet Metal and Air Conditioning Contractors National Association, Inc. (SMACNA)
 - 01 Architectural Sheet Metal Manual

- G. Underwriters' Laboratories (UL)
 - 01 Fire Hazard Classifications
 - 02 Class 90-wind uplift.

- H. Texas Windstorm Certificate
 - 01 Texas Board of Insurance Windstorm Regulations

1.4 PERFORMANCE REQUIREMENTS

- A. General Requirements: Provide an installed thermoplastic single ply roofing system, flashing and related work that are watertight and will not permit the passage of liquid water, that will withstand wind loads, thermally induced movement, and exposure to weather without failure.

- B. Material Compatibility: Provide roofing materials that are compatible with one another under conditions of service and application required, as demonstrated by roofing system manufacturer based on testing and field experience.

- C. Roofing System Design: Comply with SPRI “Wind Design Guide for Fully Adhered Roofing Systems” for the following ground roughness exposure and system design:
 - 01 Exposure B: City, suburban areas, towns and wooded terrain.
 - 02 Fully Adhered single-ply membrane roofing.
- D. Underwriter’s Laboratories Inc. (UL)
 - 01 UL RMSD – 1998 Roofing Materials and Systems Directory
 - 02 UL 790 – 1998 Fire Resistance of Roofing Coverings Materials
 - 03 Exterior Fire Exposure Classification: Class A, ASTM E 108, for application and slopes shown.
 - 04 UL 90 – Wind uplift requirements
- E. FM Listing, General Performance, and Wind Uplift: Provide sheet membrane, base flashing, and component materials that meet requirements of FM 4450 and FM 4470 as part of a roofing system. Identify materials with FM markings.
 - 01 Roofing System shall comply with the following:
 - a. FM approval rating for a FM 1-90.
 - b. FM approval rating for Fire/Windstorm Classification Class 1A-90.
- F. American National Standards Institute (ANSI)
- G. American Architectural Manufacturer’s Association (AAMA)
- H. Occupational Safety and Health ACT (OSHA)

1.5 SUBMITTALS

- A. Product Data: Manufacturer’s printed instructions, schedules, charts, literature, and illustrations to indicate the performance, fabrication procedures, product variations, adhesive, and accessories to be used in the Work.
- B. Certifications:
 - 01 Manufacturer’s written certification that installer is approved and licensed to install specified roofing system. (Submit a copy with Proposal Form)
 - 02 Manufacturer’s affidavits that materials used in Project contain no asbestos.
 - 03 Installer shall submit resume and project experience list for proposed system for Project Manager and job site superintendent.
 - 04 Installer shall submit written certification that there are no undocumented workers being employed by them or any subcontractor on this project and that covers all workers on this project by workmen’s compensation.
 - 05 Installer shall submit list of all subcontractors with evidence of subcontractor’s insurance coverage in compliance with contract requirements.
 - 06 Manufacturer’s written certification of approval / acceptance of these specifications and details.
- C. Referenced Standards: Two (2) copies of each referenced standard and retain approved copies at site.
- D. Shop Drawings: Furnish from copies of the manufacturer’s literature or from copies of NRCA “Roofing and Waterproofing Manual”, fourth edition.
 - 01 Furnish for approval any proposed details, which differ from those, included with this proposal package. All proposed details shall first be approved in writing by roofing manufacturers prior to submitting to Architect for approval.
 - 02 Furnish detail project sequencing, staging, material loading, manpower plans, and project construction schedule for approval.

- E. Samples:
 - 01 Furnish copy of sample warranty that is to be issued upon project completion.
 - 02 Furnish samples of roof membrane.
 - 03 Furnish sample of metal edge to be installed.

- F. Upon Substantial Completion of Work, submit the following to Architect for his submission to Owner:
 - 01 Manufacturer's Warranty: Manufacturer's written warranty as specified.
 - 02 Maintenance Procedures: Three (3) copies of manufacturer have printed instructions for Owner's use regarding care and maintenance of roof.

1.6 INSPECTIONS / TESTS

- A. The Owner's and Manufacturer's representative shall at all times have access to the job site and work areas. The contractor will provide proper and safe facilities for such access and inspection.
 - 01 Owner Inspections:
 - a. The Owner will be providing periodic inspections throughout the duration of the project. Owner's Representative shall be required to inspect after completion of each major phase of construction for approval.

 - 02 Manufacturer Inspections:
 - a. An inspection shall be made by a representative of the material manufacturer three (3) times per month during performance of Work and at all major phases of construction, to ensure that said project is installed in accordance with the manufacturer's specifications and illustrated details. Daily written reports by the manufacturer shall be turned over to the Architect, on each Monday following the inspection.
 - b. The authorized material manufacturer's field representative shall be responsible for:
 - 1) Keeping the Owner's representative informed after periodic inspections as to the progress and quality of the work observed.
 - 2) Calling to the attention of the contractor those matters observed which are considered to be in violation of the contract requirements.
 - 3) Reporting to the Owner's representative, in writing, any failure or refusal of the contractor to correct unacceptable practices called to his attention.
 - 4) Confirming, after completion of the work and based on his observation and test, that he has observed no application procedures in conflict with these specifications. Final payment will not be released until the Owner has received all specified warranties.

- B. Any failure by the Owner's or Manufacturer's Representative to detect, pinpoint, or object to any defect or noncompliance of these specifications of work in progress or completed work shall not relieve the contractor, or reduce, or in any way limit, his responsibility of full performance of work required of him under these specifications.

- C. Owner may require tests and inspections as necessary to verify quality of roofing materials and workmanship. Laboratory tests will be performed in accordance with ASTM standard procedures.
 - 01 Owner will select testing laboratory and will pay for Work required by testing laboratory.
 - 02 Retest for work which fail initial tests or contractor shall pay inspections.
 - 03 Non compliance with contractor requirements will result in the Architect/Owner to assign full time quality control and will be subject to reimbursement by the construction manager/contractor.

1.7 QUALITY ASSURANCE

- A. Installer shall be an experienced single firm specializing in the type of roofing and sheet metal work required, employing only experienced workers for the class of work in which they are employed, having at least five (5) years successful experience on projects similar in size and scope and acceptable and licensed as applicators by the material manufacturer.
- B. No subcontracting of sheet metal fabrication or installation will be accepted. Contractor must have a sheet metal shop on the company premises.
- C. Contractor: The contractor is responsible for the management and control of the work. He shall give his personal superintendence of the work or have a competent resident manager or superintendent satisfactory to the Owner on the job site at all times while work is in progress, with full authority to act for the contractor as his agent.
- D. Work and materials hereinafter specified shall be best of kind described and, unless specified otherwise, shall be new and of best quality. All roofing materials utilized in performance of each type of work shall be the products of one manufacturer or supplier. Unless otherwise indicated, the materials to be used in this specification are those specified and denote the type, quality, performance, etc. required. All proposals shall be based upon the use of the specified material.
- E. Materials will be securely fastened in place in a watertight, neat and workmanlike manner. Contractor shall plan and conduct the operations of the work so that each section started on one day is complete, details installed and thoroughly protected before the close of work for that day.
- F. Application of materials shall be in accordance with the manufacturer's recommendations. In the instance of a conflict between these specifications and those of the manufacturer, the most stringent shall take precedence.
- G. Roof system shall be installed in accordance with Factory Mutual I-90 wind uplift requirements and I-49 perimeter flashing requirements and shall meet Underwriter's Laboratory Class "A" fire rating.
- H. Contractor shall ensure that fastener pull out resistance tests on existing decks were performed and approved by Architect and coordinated with Roofing Consultant prior to starting roofing application.
- I. Contractor shall take all necessary precautions to protect the new roof mat and deck from damage. The contractor shall be responsible for repairing all new areas of damage caused by the negligence of the contractor, at the contractor's expense. The Architect's on-site representative shall determine damage caused by contractor negligence.
- J. Contractor shall keep the job clean and free from all loose materials and foreign matter. Contractor shall take necessary precautions to keep outside walls clean and shall allow no roofing materials to remain on the outside walls.

1.8 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver materials in manufacturer's original unopened packaging with all tags and labels intact and legible. Carton and can labels, shall indicate appropriate warnings, storage conditions, lot numbers, and usage instructions. Handle and store materials and equipment in such a manner as to avoid damage. The proper storage of materials is the sole responsibility of the contractor. Materials damaged in shipping or storage shall not be used. Wet or damaged roofing materials shall be discarded, removed from job site, and replaced with new materials prior to application.

- B. Manufacturer's packaging and/or roll plastic is not acceptable for exterior storage. Tarpaulin with grommets shall be accepted minimum for exterior coverings. All materials stored, as above shall be minimum of four (4) inches off the substrate, and the tarpaulin tied off with rope.
- C. Products liable to degrade as a result of being frozen shall be maintained above 40° F in heated storage.
- D. Moisture sensitive products shall be maintained in dry storage areas or properly covered. Roofing insulation and felts must always be covered or stored in a dry area when not being used.
- E. No storage of materials shall be permitted on roof areas other than those materials that are to be installed the same day. Any exception must be in written form. Do not place materials or equipment in such a manner as to overload structure.

1.8 WARRANTY

- A. Roofing Manufacturer: Warrant the roofing and associated Work for 20 years from date of Substantial Completion as follows:
 - 01 The warranty shall be a NDL "No Dollar Limit" / no penal sum type, with total replacement cost.
 - 02 The warranty shall guarantee the entire roof system and associated work against defective materials and workmanship of installation, with NO exclusion for ponding water.
 - 03 The roof system including light weight insulating concrete, roofing insulation, flashing, metal work, labor, and material shall be guaranteed against failure of workmanship and materials. Repair of the system, including materials and labor, shall be done at no cost to the Owner.
- B. Roofing Contractor: Jointly with any subcontractors employed by him, shall guarantee the work required and performed under this contract will be free from defects in workmanship and materials, and that the building will be and remain waterproof for a five (5) year warranty period, after the Owner accepts the work as substantially complete. The warranty shall be in approved notarized written form, to obligate the Contractor, and subcontractors, to make good the requirements of the warranty. The warranty will be held jointly with the Bonding Company for the first two (2) years and the manufacturer for the remaining three (3) years.
- C. Make arrangements with the materials manufacturer to provide the required warranty. Final warranty shall be submitted to Owner at time of Substantial Completion.

PART 2 – PRODUCTS

2.1 GENERAL

- A. The components of the roof system are to be products of a single manufacturer as required providing the specified system warranty.
- B. Install all materials in accordance with manufacturer's current written specifications and details. Deviations shall not be made without prior written approval from the manufacturer and the Owner's Representative. Should any specifications or details conflict with the Contract Documents, submit to Owner the recommended alternative that provides the best long term moisture protection and complies with manufacturer's warranty requirements for approval.

- C. Bitumen kettles or tankers shall have a visible thermometer and thermostatic control to provide positive monitoring of the bitumen temperature when it is heated in accordance with manufacturer's instructions. All kettles shall be equipped with afterburners to minimize fumes. Circulate bituminous materials, do not allow bituminous materials to stand in luggers for long periods. Use insulated hot transport lines and luggers. Kettle shall be kept a minimum of 20 feet away from building, placed so that fumes, odors, and smoke, do not enter building through windows, doors, fresh air vents or similar entrances; are not directed towards freshly painted or anodized surfaces, glass or other glazing materials. Do not place kettle under trees or near vegetation. The assigned kettle man shall remain in close attendance, within 25 feet of ground level, while burners are lit. Kettle lids are to remain closed except for loading. Level of bitumen shall be kept within eight (8) inches from top of kettle.

- 01 Asphalt Bitumen Heating: Heat and apply bitumen in accordance with equiviscous temperature method ("EVT Method") as recommended by the manufacturer. Discard bitumen that has been held at temperature, exceeding finished blowing temperature (FBT) for a period exceeding three hours. Do NOT heat bitumen to a temperature higher than 25 degrees F (14 degrees C) below flash point.
- 02 Asphalt Temperatures: If the EVT information is not provided, the following asphalt temperature shall be observed. Maximum heating temperature shall be 525 degrees F. Minimum application temperature shall be 400 degrees F.
Asphalt Moppings: Ensure that all moppings do not exceed a maximum of 25 pounds per square. Mopping shall be total in coverage, leaving no breaks or voids.

2.2 APPROVED MANUFACTURERS

Manufacturer

1. The following PVC manufacturers have been approved for this project. No substitutions by secondary, indirect manufacturers will be allowed:
 - a. Carlisle SynTec, Incorporated.
 - b. Duro-Last Roofing, Inc.
 - c. GAF Materials Corporation.
 - d. Sarnafil Inc.
2. Fire resistance of PVC roofing system shall meet UL Class A. All packaging of membrane and insulation shall bear UL Class A label.
3. Membrane color shall be white, as selected from manufacturer's samples.

2.3 ROOF MEMBRANE ASSEMBLY

A. Membrane-Related Materials

1. All membrane components, including pipe and curb flashings must be factory prefabricated from the same fabric reinforced material used for the deck membrane.
2. Termination Sealant: Compatible with materials to which membrane is to be bonded, conforming to Federal Specifications TT-598 and TT-S-00230C.
3. Distribution Plates: Factory Mutual approved stress distribution plates formed from a minimum 24 gauge G-90 C.Q. steel with a galvalume coating for insulation attachment, or 20 gauge G-90-C.Q. steel with galvalume coating or high strength polyblend for membrane attachment.
4. Water Cut-Off Mastic: Compatible with materials with which it is used and furnished by the membrane manufacturer.
5. Pitch Pocket Sealant: Shall be a single component, self-leveling silicone sealant. furnished by manufacturer
6. Fasteners: Compatible with roof deck as furnished by the membrane manufacturer. Fasteners shall be furnished by manufacturer must pass 30

cycles in the Kesternich Cabinet, DIN #50018-2 Liter. The FM approved fastener is inserted through the hole in the distribution plate and properly secured to the roof deck.

7. Terminations/Edge Details: Shall be manufactured from rigid exterior vinyl with slotted holes for securement and furnished by membrane manufacturer. All other terminations/edge details must be approved and warranted by manufacturer
8. Walkway Pads: Provide Duro-Last Roofing, Inc.'s walkway pads made from the roofing membrane material installed in strict compliance with manufacturer's recommendations. Pads shall be non-skid, maintenance free, and restrained to remain in position. Walkway pads shall be a contrasting color to the roof membrane. Owner and/or Owner's representative shall choose from manufacturer's samples.

2.4 ROOF MEMBRANE ASSEMBLY

- A. Base Sheet: Shall be a heavy duty (plus) base sheet or venting base as approved by proposed manufacturer.
- B. Dry Sheathing Paper: (For use as a slip sheet) Rosin coated 5 lbs per 100 SF.

2.5 ROOF INSULATION

1. Board insulation shall be a minimum of 1/2 inch thick, fiberglass, or polyisocyanurate.
 2. Extruded polystyrene (EXPS) insulation and expanded polystyrene (EPS) shall be installed with a separator sheet and shall meet the following requirements.
 - a. Thickness: 1" minimum
 - b. Density: 1-1/2 pounds per cubic foot
 - c. Absorption by volume: Less than 2.5% as measured by ASTM C2272
 3. If re-roofing with no tear-off required, the minimum underlayment shall be
 - a. 3/8 inch thick extruded polystyrene with approved polyethylene or polypropylene facer.
 - b. 1/2 inch thick expanded polystyrene with approved polyethylene or polypropylene facer.
- A. **Tapered Crickets (where required)**
Crickets shall be formed of tapered material having the same requirements and characteristics as listed in the preceding paragraph.
- B. **Roofing Nails**
Nails shall be galvanized "Stronghold" type: (for use on parapet walls, wood nailers)
- C. **Nailers & Blocking**
1. Where required, nailers and wood blocking shall be S4S 1500 fc construction grade Douglas fir conforming to standard 15 grading and dressing rules of the West Coast Lumber Inspection Bureau, or other species of wood of equal strength. All lumber shall be grade marked at the mill.
 2. All specified treated lumber shall be pressure treated by a method approved by the roofing membrane manufacturer: "Wolmanized" or "Osmose K-33" are acceptable.
 3. Nailers shall be securely anchored to the deck to resist the minimum force required in Loss Prevention Data Sheet I-49, "Perimeter Flashing," Factory Mutual Systems, June, 1985. The thickness of the nailer shall be such that the top of the nailer is flush with the surface to which the membrane is to be applied.

2.6 ACCESSORIES

- A. General: Furnish auxiliary materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing materials.
 - 01 Furnish liquid-type auxiliary materials that meet VOC limits of authorities having jurisdictions.
- B. Flashing and Flashing Accessories: As recommended by the Thermoplastic sheet manufacturer's printed instructions for reinforced sheet flashing of same material, type, thickness, and color as sheet membrane.
- C. Lightweight Insulating Concrete Base Sheet Fasteners: Shall be approved by the fastener manufacturer, membrane manufacturer and FM for use with lightweight insulating concrete as follows:
 - 1. Fastener shall be a single unit, precision formed, of electro zinc coated steel having a 2.7 inch diameter rib reinforced cap and 1.7 inch long rectangular legs, designed to expand when fully driven into the lightweight insulating concrete. Fasteners for lightweight insulating concrete shall meet FM Standard 4470 requirements for corrosion resistance. As manufactured by Olympic Fasteners, or approved equal.
- D. Base Sheet: A heavy-duty base sheet mechanically fastened to Maintain a FM 1-90 wind up-lift rating.
- E. Roofing Adhesives for membrane and/or insulation: (option 1)
Mopping Asphalt: Asphalt that has been certified for full compliance with the requirements for Type IV asphalt listed in Table I, ASTM D312. Each container or bulk shipping ticket shall indicate the equiviscous temperature EVT, the finished blowing temperature, FBT, and the flash point, FP.
 - 1) Approved Product: Trumbull asphalt or as required by membrane.
- F. Bonding Adhesive: As recommended by thermoplastic sheet manufacturer's printed instructions to develop a bond between the membrane and the substrate to which the membrane is to be attached. Sarnacol 2121 Adhesive or approved equal.
- G. Metal Termination Bars: Manufacturer's standard aluminum bars, approximately 1-inch (25-mm) wide, roll formed and pre-punched.
- H. Metal Battens: Manufacturer's standard aluminum-zinc-alloy-coated or zinc-coated steel sheet, approximately 1 inch wide by 0.05 inch thick, pre-punched.
- I. Metal Flashings, Copings, Edge Trim and Accessories: Provide all roofing manufacturer's metal required for a complete roofing system covered under the manufacturer's warranty.
- J. Sealants: Membrane manufacturer's approved sealant shall be used to seal penetrations through the membrane system and at miscellaneous sealant applications that come in contact with roof systems components.
- K. Air Seal Membrane: If required by manufacturer to meet wind design requirements. Air seal membrane shall be a minimum 4 mil. Polyethylene sheeting or as required by roof system manufacturer.
- L. Sealing Tape Strip: Compressible foam with pressure-sensitive tape on one side. Sealing tape strip is to be used with metal flashing as a preventive measure against air and wind blown moisture entry.

- M. Metal Reglet: Manufacturer's 6063T5 extruded aluminum counter-flashing, approximately 2.25 inches wide and 0.10 inch thick, pre-punched at 8 inches o.c. for attachment to the wall or curb. Use prefabricated mitered inside and outside corners where walls interest.
- N. Miscellaneous Accessories: Provide pourable sealants, performed cone and vent sheet flashings, pre-formed inside and outside corner sheet flashings, T-joint covers, termination reglets, and other accessories as recommended by roofing system manufacturer for intended use.
- O. Other miscellaneous materials shall be of the best grade available and approved in writing by roof system manufacturer, prior to use, for the specific application.

PART 3 – EXECUTION

3.1 GENERAL REQUIREMENTS

A. Precautions

1. Do not lay out or expose any insulation on the deck that cannot be covered by membrane on the same day.
2. In making all field heat welds, make sure all edges are clean and free of tar, mastic or other foreign items.
3. Do not expose membrane and accessories to a constant temperature in excess of 120 degrees Fahrenheit.
4. Sealants and adhesives should be applied according to the manufacturer's specifications and all containers shall be disposed of properly.
5. Start securing the membrane at the highest point and work towards the drains.

B. Protection of Roofing Surfaces

Storing, wheeling, or trucking directly on roof insulation or membrane surface is not recommended. Smooth, clean plywood or plank walkways, runways and platforms shall be provided as necessary.

3.2 PROJECT CONDITIONS

- A. Existing Conditions: Examine existing building and new construction to determine existing physical conditions that affect installation of new roofing.
- B. Weather Limitations: Proceed with roofing work only when existing and forecasted weather conditions permit roofing to be installed according to manufacturer's written instructions and warranty requirements.
- C. Environmental Requirements:
 - 01 Apply roofing in dry weather.
 - 02 Do not expose roof components and flashing in inclement weather or when it is predicted 30% or more possibility for inclement weather.
 - 03 When ambient temperature is below 40 degrees Fahrenheit, expose only enough sensitive cements, sealants, and adhesives as required for use within a four-hour period.
 - 04 Do not expose membrane and accessories to a constant temperature of 180 degrees Fahrenheit.
- D. Protection:
 - 01 Provide special protection and avoid traffic on completed areas of membrane installation.

- 02 Restore to original condition or replace work or materials damaged during handling of roof materials.
- 03 Take precautions as required to protect adjacent work and structures.
- E. Emergency Equipment: Maintain on site equipment necessary to apply emergency temporary edge seal in event of sudden storms or inclement weather.
- F. Restrictions:
 - 01 Comply with General Requirements on use of site.
 - 02 Smoking is prohibited on all roof areas or in existing buildings.
 - 03 Maintain facility and all utility services in a functional condition.
 - 04 Provide sanitary facilities for employees.

3.3 EXAMINATION

- A. Examine and verify that receiving substrate surfaces of the structure have no defects or errors, which would result in poor or potentially defective application or cause latent defects in workmanship.
 - 01 Examine substrate to which roofing material is to be applied to ensure that its condition is satisfactory for roofing application. Do not permit voids greater than 1/4 inch wide in the substrate. Substrates for roofing materials shall be dry and free of oil, dirt, grease, sharp edges, and debris. Inspect substrates, and correct defects before application of thermoplastic sheets.
- B. Verify that roofing openings and penetrations are in place and set and braced and that roof drains are properly clamped into position.
- C. Do not proceed with installation until unsatisfactory conditions have been corrected. Starting installation shall imply acceptance of surfaces and conditions.

3.4 NAILERS

- A. Wooden nailers shall be installed at perimeter edges or drip edges on outside perimeter of building.
- B. All Construction: Nailers shall be the same height as the new lightweight insulating concrete deck or insulation being installed or to existing raised roof edge whichever is applicable. Nailers shall be anchored to resist a pullout force of 300 pounds per linear foot per Factory Mutual Data Sheet 1-49. Fasteners shall be no less than two (2) per nailer, and be spaced at three (3) feet on center maximum. Provide nailers at all penetrations. Raise all curbs, flashing, etc, a minimum of eight (8) inches above the deck.

3.5 SUBSTRATE PREPARATION

- A. Substrate Surface: Prepare substrate surfaces to insure proper and adequate installation, in strict accordance with the Contract Documents and approved Shop Drawings, or manufacturer's requirements.
- B. Fill all gaps and voids between substrate components that are wider than 1/4 inch. Fill all gaps with same materials as the substrate.
- C. The membrane manufacturer shall specify types of substrates that are suitable for use with the bonding adhesive.

- D. Protection of Adjacent Areas or Surfaces: Protect adjacent areas or surfaces from damage as a result of the Work of this section. Remove sharp projections.
- E. Prevent materials from entering and clogging roof drains and conductors and from spilling or migrating onto surfaces of other construction. Remove roof-drain plugs when no work is taking place or when rain is forecast.
- F. Complete terminations and base flashings and provide temporary seals to prevent water from entering completed sections of the roofing system at the end of the workday or when rain is forecast. Remove and discard temporary seals before beginning work on adjoining roofing.
- G. Tear-off (if applicable) :
 - 01 Tear-off existing roof system down to existing lightweight concrete deck, deck to remain. Remove all associated Flashings and abandoned equipment.
 - 02 Repair/Patch all existing decks as required, due to removal of equipment or deteriorated conditions.
 - 03 Sweep or vacuum all surfaces, removing all loose aggregate and foreign substances prior to commencement of roofing. Ensure dry, smooth surface with no depressions or ponding water. Notify Architect prior to roofing any areas that may result in ponding water.
 - 04 Trash Chutes: Roofing materials and other discarded materials shall be put into an enclosed trash chute. No material may be thrown off roof. Remove debris daily from roof and from grounds.
 - 05 Refer to phasing plans for flashing of existing curbs now and demolition of existing curbs and penetrations at future dates, flashing of new curbs and penetrations at a future date.

3.5 INSTALLATION OF PVC MEMBRANE

- A. General: Install in strict accordance with manufacturer's latest published requirements, instructions, specifications, and details and approved shop drawings.
- B. Over the properly installed and prepared substrate, manufactures adhesive (Sarnacol 2121 or approved equal) shall be poured out of the pail and spread using notched ¼"X ¼"X ¼" rubber squeegees. The adhesive shall be applied at a rate according to manufacture requirements. No adhesive is applied to the back of the feltback membrane. ***Do not allow adhesive to skin over or surface-dry prior to installation of feltback membrane.***
- C. The feltback roof membrane is unrolled immediately into the wet adhesive. Adjacent rolls overlap previous rolls by 3 inches. This process is repeated throughout the roof area. Immediately after application into the adhesive, each roll shall be firmly pressed into place with a water filled, foam covered lawn roller by frequent rolling in two directions. ***Do not allow adhesive to skin over or surface dry prior to installation of feltback membrane.***
- D. Weld cover strips at all seams that do not have a factory selvage edge.
- E. For application of hot asphalt as an adhesive for the membrane, refer to manufactures recommendations.

3.6 SEAM INSTALLATION

- A. Clean seam areas, overlap sheets, and weld side and end laps of sheets and flashings according to manufacturer's written instructions to ensure a watertight seam installation. Weld seam as follows:
 - 01 Weld Method: Hot Air
- B. Test lap edges with probe to verify seam weld continuity on a daily basis.

- C. Repair tears, voids, and lapped seams in roofing that does not meet requirements.

3.7 FLASHING INSTALLATION

- A. Install sheet flashings and performed flashing accessories and adhere to substrate according to roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of flashing sheet at required rate and allow to partially dry. Do not apply bonding adhesive to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with sheet flashing as recommended by manufacturer.
- D. Clean seam areas, overlap seams, and firmly roll flashings into the adhesive. Weld side and end laps to ensure a watertight seam installation.
- E. Test lap edges with probe to verify seam weld continuity. Apply lap sealant, if required by roofing manufacturer, and seal exposed edges of sheet flashing terminations per manufacturer's requirements.
- F. Terminate and seal top sheet flashings and mechanically anchor to substrate through termination bars.

3.8 METAL FLASHINGS, COPINGS, EDGE TRIM AND ACCESSORIES INSTALLATION

- A. General: Secure metal flashings accessories at roof edges according to FM Loss Prevention Data Sheet 1-49 for specified wind zone.

3.9 QUALITY CONTROL

- A. Roofing Applicator: On-site evaluation welded seams shall be made by the contractor to locations as directed by the owner's representative or PVC manufacturer's technical representative. Two-inch wide cross-section samples shall be taken three times a day minimum through completed seams. Correct welds shall display failure from shearing of the membrane prior to separation of weld. The contractor at no extra charge to the owner shall patch each test cut. Test seam samples shall be label with location of seam cut, date of seam cut, and retain for owner's representative or PVC manufacturer's technical representative for test cut inspection.
- B. Manufacturer's Quality Control Inspection: The Manufacturer's Technical Representative shall review the on-going work on a minimum of one time every 10 working days. All defects noted non-compliance with the specifications or the recommendations of the thermoplastic manufacturer should be itemized in a punch list. These items must be corrected immediately by the contractor to the satisfaction of the owner's representative and the thermoplastic manufacturer.

3.10 PROTECTING AND CLEANING

- A. Protect sheet membrane roofing from damage and wear during remainder of construction period.
- B. Immediately remove all spots, smears, stains, residues, adhesives, etc., from the Work of this Section and/or upon adjacent areas or surfaces, which result from the Work of this Section.

- C. Upon completion of the Work of this Section, dispose of, away from the Site, all debris, trash, containers, residue, roofing remnants and scraps which results from the Work of this Section.
- D. Correct deficiencies in or remove roofing that does not comply with requirements, repair substrates, reinstall roofing, and repair sheet flashings to a condition free of damage and deterioration at the time of Substantial Completion and according to warranty requirements.

3.11 ACCEPTANCE

- A. Prior to demobilization from the site, the owner/project manager, architect and installer shall review the work. All defects noted noncompliance with the specifications or the recommendations of the PVC manufacturer should be itemized in a punch list. These items must be corrected immediately by the contractor prior to demobilization to the satisfaction of the owner/project manager, and the PVC manufacturer.
- B. Notify Architect and Owner 48 hours in advance of the date and time of inspection.
- C. All warranties as required for the project of this specification shall be submitted for approval prior to final payment.

END OF SECTION