



CITY OF
WESTLAND
An All **AMERICAN** City

City of Westland

INSTRUCTIONS FOR PROPOSALS

FIRE STATION # 5 – ROOF REPLACEMENT
MARCH 27, 2009 @ 11:00 A.M.

1. Unless otherwise called for, **two copies** of the Bid/Proposal, typewritten or printed in ink, must be submitted.
2. Carefully read and comply as applicable with the standard Terms and Conditions.
3. No taxes are to be included in any bid/proposal price. Generally, states and political subdivisions are exempt from Federal taxes. In the event that taxes must be paid on any materials necessary to complete the contract, the Contractor shall bear the cost and responsibility of such taxes. To the extent any sales, import or other taxes apply, they are to be invoiced as a separate item.
4. The Instructions to Bidders and Terms and Conditions are part of the proposal package and should be read thoroughly and considered when submitting bids.
5. Awarded bidders should allow for approximately 30 days from receipt of invoice to receive payment from the City of Westland.
6. The request for proposal and any accompanying documents shall be submitted by the time specified (*no exceptions will be made*) in a sealed envelope addressed as follows:

City of Westland
Purchasing Division
36601 Ford Road
Westland, MI 48185-2298

In addition, subject matter of the proposal, date and the hour of the bid opening as stated in the invitation should be printed in the lower left corner of the envelope. Failure to do so may result in premature opening of/or failure to open.



CITY OF
WESTLAND
An All AMERICAN City

City of Westland

BID/PROPOSAL TERMS AND CONDITIONS

1. PREPARATION OF BIDS/PROPOSAL:

- a. Bidders are expected to examine specifications and all instructions.
- b. If any person contemplating submitting a proposal is in doubt as to the true meaning of any part of the specifications or other conditions within the invitation, he/she may submit to the Purchasing Division a written request for an interpretation thereof. The person submitting the request will be responsible for its prompt delivery. Any interpretation will be made only by an addendum duly issued by the designated City Representative. A copy of each addendum will be mailed or delivered to each person in receipt of the invitation. Failure on the part of the prospective bidder to receive a written interpretation prior to the time of the opening of bids will not be grounds for withdrawal of proposal. Bidder will acknowledge receipt of each addendum issued by stating it in his proposal. Oral explanations will not be binding.
- c. Each bidder shall furnish all information required on Bid Form. The person signing the Bid Form must initial any and all erasures and/or other changes made to the bid document.

2. SUBMISSION OF BIDS/PROPOSALS:

- a. All bids shall be submitted in sealed envelopes and shall include the following information on the face of the envelope: bidder's name, address, subject matter of proposal, date and hour of bid opening as stated in the invitation. Failure to do so may result in a premature opening of or failure to open such proposal.
- b. Bidders are responsible for submitting proposals before the stated closing time. Delays in the mail will not be considered. Any proposal received after the stated closing time will not be opened and shall not be considered in the bid opening. No exceptions will be made.
- c. In the event no bid is to be submitted, do not return the invitation. However, a letter or post card should be sent to the Purchasing Division advising whether future invitations are desired.
- d. Any bid may be withdrawn by giving a written notice to the Purchasing Division before stated closing time. After stated closing time no bid may be withdrawn or canceled for a period of 60 days after said closing time.
- e. All Bids and/or proposals are to be submitted on the bid forms supplied in the bid package.
- f. When reviewing bids, totals written out in words will take precedence over totals written in figures.

3. CONSIDERATION OF BIDS/PROPOSALS:

- a. A designated City Department Head shall represent the City in all matters pertaining to this proposal and contract in conjunction therewith. The City reserves the right to reject any or all proposals and to disregard any informality in the bids and bidding.
- b. Proposals submitted on Bid Forms are understood to be according to Specification Date. Variations in proposals will be considered when same are submitted on Substitution Proposal forms furnished herein and all required information is contained in such proposal.

In cases where an item requested is identified by a manufacturer's name, trade name, catalog number or reference, it is understood that the bidder proposed to furnish the item so identified and does not propose to furnish an "equal" unless the proposed "equal" is definitely indicated by submission of the Substitution Proposal form.

Reference to any of the above is intended to be descriptive, but not restrictive and only indicates articles that will be satisfactory. Bids of "equal" will be considered, provided that the bidder states in

his proposal exactly what he proposed to furnish, including sample, illustration, or other descriptive matter which will clearly indicate the character of the article covered by such proposal.

The designated City Representative hereby reserves the right to approve as an equal, or to reject as not being an equal, any article proposed which contains major or minor variations from specifications requirements, but which may comply substantially therewith.

- c. The City reserves the right, when it seems to be in the best interest of the City, to award the bid in part or in whole, reject any bids or waive informalities.
- d. Pursuant to Chapter 2, Section 2-707(a), of Westland City Code, before any contract is awarded which requires approval by the City Council, the vendor must disclose any substantial interest held by any city official or city employee or their immediate family in the vendor's business.

4. FAIR EMPLOYMENT PRACTICE AND NON-DISCRIMINATION:

The firm or their subcontractors shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, marital status or handicap. The firm shall take affirmative action to ensure that applicants are employed and employees are treated during employment without regard to race, color, religion, sex, age, national origin, marital status or handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination, rate of pay or other forms of compensation, and selection of training, including apprenticeship. Breach of this covenant may be regarded as a material breach of contract.

5. PERSONNEL REQUIREMENTS:

All installation personnel costs must meet Davis Bacon Act Regulations (prevailing wages) and must comply with all Community Development Block Grant requirements. Prevailing wage rates will be available upon request.

All companies must comply with the Fair Employment Practice Act, Executive Order 1126 entitled the "Equal Employment Opportunity," as amended by Executive Order 11375 and Department of Labor Regulations (41 CFR Part 60), and other Federal, State and City requirements which are applicable to grants-in-aid programs.

All companies shall not discriminate against any employee or applicant for employment because of race, color, religion, sex, age, national origin, marital status or handicap. Companies shall take affirmative action to ensure that applicants are employed, and employees are treated during employment without regard to race, color, religion, sex, age, national origin, marital status, or handicap. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer; recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection of training, including apprenticeship.

All companies must agree that the city of Westland, the County of Wayne, the Federal grantor agency, the Comptroller General of the United States, or any of their duly authorized representatives, shall have access, during regular business hours, to any books, documents, papers and records of their company which are directly pertinent to this agreement, for the purpose of making an audit, examination, excerpts and transcriptions. The company shall maintain all records for three years after all pending matters under this agreement are closed.

6. INDEMNIFICATION

Proposer to the fullest extent permitted by law agrees to indemnify, defend and save harmless the City of Westland and its elected and appointed officials and officers, agents, servants and employees from and against all loss or expense, including cost and attorney's fees by reason of liability imposed by law upon the City of Westland and its elected and appointed officials and officers, agents, servants and employees for damages because of bodily injury, including death, resulting from or sustained by any person or persons on account of damage to property, including loss of use thereof, arising out of or in consequence of the performance of the contract whether such injuries to persons or damage to property is due or claimed to be due to the negligence of the City of Westland, its elected and appointed Officials, officers, appointed agents, servants and employees, except only if such injury or damage is occasioned by the sole negligence of the City of Westland

7. **INSURANCE PROVISIONS**

The proposer shall purchase and maintain, throughout the term of this agreement, comprehensive general liability insurance, including contractual liability, to protect the provider from all claims for bodily injury, including accidental death, personal injury, and property damage arising from operations under this agreement, whether such operation be by the proposer, subcontractor, agent, or by anyone else directly or indirectly employed by the proposer. In addition, all statutory insurance requirements, including worker's compensation, shall be met. All required insurance policies shall be issued by reputable insurance companies duly authorized to engage in the insurance business in the State of Michigan. Limits of such insurance shall be stated below:

Worker's Compensation	Statutory
Comprehensive General Liability	\$1,000,000
Employer's Liability	\$1,000,000 per occurrence
Motor Vehicle Insurance – Owned, Non- Owned and Hired	
Bodily Injury	\$500,000 per occurrence
Property Damage	\$500,000 per occurrence

The City of Westland shall be named on such policies as insured or named as additional insured. Failure to maintain insurance coverage throughout the life of the contract, consistent with the provisions of this Section, shall be considered a breach of contract. Proposer shall procure and maintain during the life of the contract umbrella excess liability insurance in the single amount limit of at least two million dollars. This insurance shall be project specific and the umbrella excess policy wording shall apply to the Proposers general liability and its automobile liability insurance. Each insurance policy shall specify that no policy may be terminated for any reason unless 30 days prior written notice of such proposed termination shall be given to the City of Westland, and before commencing any work related to the contract Proposer shall provide the City of Westland certificates of insurance for the required insurance policies.

8. **SEVERABILITY OF CONTRACT**

In the event any one or more of the provisions contained in this agreement shall for any reason be held to be invalid, illegal or unenforceable in any respect, such invalidity, illegality, or unenforceability shall not affect any other provision of this agreement, but this agreement shall be construed as if such invalid or unenforceable provisions had never been contained. Further, in the event that any provision of this agreement shall be held to be unenforceable by virtue of its scope, but may be made enforceable by a limitation thereof, such provision shall be deemed to be amended to the minimum extent necessary to render it enforceable under the laws of the jurisdiction in which enforcement is sought.

9. **AMENDMENTS TO CONTRACT**

When awarded, the agreement shall not be changed, modified, altered, or amended in any respect without the mutual consent of the parties hereto, which consent shall be evidenced by a written amendment to the agreement executed by both parties.

(Vendor's Name) _____

(Address) _____

(Name of Person Completing) _____

(Title) _____

Signature _____

Date _____



CITY OF
WESTLAND
An All **AMERICAN** City

City of Westland

BOARD OF ETHICS VENDOR DISCLOSURE STATEMENT

NOTE: Pursuant to Chapter 2, Section 2-707(a), of Westland City Code, before any contract is awarded which requires approval by the City Council, the vendor must disclose any substantial interest held by any city official or city employee or their immediate family in the vendor's business.

- Please fill out this form to the best of your knowledge and belief; attach additional pages if needed.
- Pursuant to Chapter, Section 2-707(b) of the Westland City Code, your completed disclosure statement (original) is a public document to be filed with the Westland City Clerk, 36601 Ford Road, Westland, Michigan 48185. A copy of your disclosure statement will be forwarded to the Board of Ethics.

(Vendor's Name) _____

(Address) _____

(Name of Person Completing) _____

(Title) _____

The following individuals or their immediate family members, to the best of my knowledge, have a substantial interest in (Vendor's Name) _____ :

Name of Individual With Substantial Interest:

Mayor _____
City Council Member _____
City Clerk _____
Department Directors _____
Deputy Directors _____
Board or Commission Members _____
Employee _____
None of the Above _____

I certify that to the best of my knowledge, information and belief the above is true.

Signature _____

Date _____



CITY OF
WESTLAND

An All AMERICAN City

City of Westland

SPECIFICATIONS

**FIRE STATION # 5 – ROOF REPLACEMENT
MARCH 27, 2009 @ 11:00 A.M.**

FIRE STATION #5 ROOF REPLACEMENT 1850 NORTHGATE, WESTLAND, MI 48185

ALL QUESTIONS ARE TO BE DIRECTED TO SCOTT NEAL AT 734-467-3182

1.0 GENERAL

A. Scope-

1. Remove existing roofing system to roof decking.
2. Install 2 layers of 1.5" polyisocyanurate insulation over existing roof decking, fastening in accordance with membrane manufacturer specifications.
3. Contractor shall furnish and install a **tan** 40 mil single-ply membrane roofing system that is fabricated of a weft inserted low-shrink, anti-wicking polyester fabric and has a thermoplastic coating material laminated to both sides as manufactured by Duro-Last Roofing, Inc.
4. Install prefabricated flashings around all curbs and deck penetrations in accordance with membrane manufacturer specifications.
5. Install 4" 2-piece compression edge detail with Kynar-coated metal cover, as manufactured by Exceptional Metals, Inc., at roof perimeter. Cover color shall be chosen by building owner.
6. All mechanical and plumbing work, including, but not limited to disconnection and re-connection, shall be the responsibility of the building owner.
7. Dispose of all debris in an approved facility in accordance with all local, state and federal regulations.

B. Application

This specially formulated thermoplastic coated membrane classified as PVC in this section consists of a weft inserted polyester scrim (18x14, 100 denier), laminated on both sides with a plasticized blend of vinyl and acrylic polymers which allows installation through the use of continuous securing tabs, factory welded (prefabricated). Mechanical fasteners and distribution plates are used through the continuous securing tabs eliminating the need for ballast.

C. Physical Properties

The single ply membrane shall allow installation at any time of the year and shall provide: resistance to ultra-violet rays, superb tear and puncture strength, the ability to be impervious to most caustic chemicals and acids, and show no ill effects to heat or cold.

1.1 THE GENERAL CONDITIONS, SUPPLEMENTARY CONDITIONS AND APPLICABLE PROVISIONS OF DIVISION (1) ARE HEREBY MADE A PART OF THIS SECTION AS FULLY AS IF REPEATED HEREIN.

A. Requirements of Regulatory Agencies

Membrane and related items shall be classified by Underwriters Laboratories, Inc. as a Class A Sheathing Material for use in construction of Class A coverings and amendments. (If required, membrane and related items shall be Factory Mutual Research approved as an assembly.)

B. Roofing Contractor's Qualifications

1. Contractor shall submit work history data showing having had successful warranted installation experience of the system specified, and of being authorized by the roofing system manufacturer to install the specified manufacturer's materials.
2. The contractor shall use adequate amounts of such qualified workmen who are thoroughly trained in the crafts and techniques required to properly install the type of roofing system proposed for use and other work required to complete the work specified and within the specified time.
3. The contractor shall have an experienced, pre-qualified, thoroughly trained superintendent having experience installing the roof system specified, who is familiar with the requirements of this project, on the job at all times when roofing system work is in progress. Training for superintendent shall include certification of completion of manufacturer's in-house training course and on-site training.

C. Requirements of the Membrane manufacturer

1. All components of the roofing system shall conform to the current published specifications and details of Duro-Last Roofing, Inc.
2. There shall be no deviation made from this specification without prior written approval of Duro-Last Roofing, Inc. and building owner or his/her duly appointed representative.
3. Any other manufacturer proposing to supply material for this project shall fourteen (14) days prior to bid date, provide financial information regarding their roofing company, i.e. a current D&B report. A manufacturer who has less than \$50,000,000.00 in annual roofing material sales, a net worth of less than \$3,000,000.00 or a history of late payments to creditors will not be permitted to submit their roofing material for use on this project. Manufacturer may be asked to submit an audited document listing the long-term warranty liability commitment of manufacturer.
4. Provide primary flexible sheet factory prefabricated roofing system from a single manufacturer, which has successfully manufactured raw materials into specified products for not less than five (5) years. No secondary private labels are acceptable. Provide secondary materials, such as but limited to insulation, gypsum board, vapor barriers, etc. as recommended and approved by manufacturer of primary materials.
5. Products primary and secondary shall be manufactured in the United States of America by a company owned by citizens of the United States.

D. Field Inspection

1. The Owner reserves the right to retain, at the Owner's expense, an independent inspection service to provide full-time inspection of the roofing system installation. The inspector shall have free access to the work area.
2. The contractor shall arrange for Duro-Last Roofing, Inc. to provide inspection of the roofing system installation. Upon completion of the installation, an inspection shall be made by a Quality Assurance Specialist of the membrane manufacturer at no extra charge to the building owner or contractor. The inspection is to ascertain that the visible elements of the roofing system have been installed in accordance with the membrane manufacturer's published specifications and details.

E. Defective Work

Should the installation of the roofing system not be approved by Duro-Last Roofing, Inc.'s technician, correcting the defective work shall be done by the contractor until the roofing system satisfactorily meets all the specifications and manufacturer's requirements. Corrective work will be done **WITH NO ADDITIONAL EXPENSE TO THE OWNER.**

F. Guarantees

1. The contractor shall warrant the roof application with respect to workmanship and proper application for two (2) years from the date of acceptance by the membrane manufacturer. Should any leaks covered under the warranty occur during this period, corrective action will be taken by the contractor to repair the roof to the satisfaction of the owner and Duro-Last Roofing, Inc. **ALL CORRECTIVE WORK WILL BE DONE AT NO COST TO THE OWNER.**
2. The warranty shall be full roofing system repair and/or replacement fifteen- (15) year warranty covering materials and labor. The warranty shall provide repairs and/or replacement of membrane or total replacement of the "roofing system" at the then current material and labor prices throughout the life of the warranty. Warranty shall contain no exclusions for ponded water, biological growth, incidental or consequential damages.
3. Warranty shall be issued by the original manufacturer of the roofing membrane. No private label membranes will be accepted.

4. No work shall be done on said roof, including but without limitations, openings made for flues, vents, drains, sign braces, or other equipment fastened to or set on the roof, unless the Contractor or membrane manufacturer is notified first. Contractor or membrane manufacturer shall be given the opportunity to make the necessary roofing application recommendations with respect thereto, and require such recommendations are complied with. Failure to observe this condition shall render the warranty null and void. The contractor or membrane manufacturer shall be paid for time and material expended in making recommendations or repairs occasioned by the work of others on said roof.
5. Corrective measures on leaks shall be undertaken within seventy-two (72) hours after notification has been received by the Contractor or Duro-Last Roofing, Inc. from the Owner.

G. Weight Requirements

The total weight of the installed roofing system including all accessories, i.e.: screws, plates, 2-way breather vents, etc. shall not exceed 27 pounds per square. Insulation weight varies according to R-value desired.

H. Mechanical Attachment

1. Consult Duro-Last Roofing, Inc. for proper fastening.
2. Deck membrane shall be fastened with approved fasteners.
3. Deck membrane shall be fastened around cut-outs with approved fasteners 12 inches on center or a minimum of 1 per round penetration having a diameter of not more than 6 inches.

1.2 SUBMITTALS

A. Required Submittals to the Architect/Owner

1. Written confirmation from Duro-Last Roofing, Inc., that the installer is an approved applicator.
2. Duro-Last Roofing, Inc.'s literature on the following items:
 - a. Roofing membrane with dielectrically welded seams
 - b. Pre-manufactured parapet flashings
 - c. Pre-manufactured pipe flashing
 - d. Urethane sealant
 - e. PVC weldable drip-edge, gravel/water stop, termination bar
 - f. Breathable 2-way vents
 - g. Self-leveling pourable sealer
 - h. Maintenance & repair instructions
3. 6" long samples of the following:
 - a. Gravel/water stop
 - b. Drip edge
 - c. Termination Bar
 - d. Sample of membrane
 - e. Mechanical fasteners
 - f. Lap splice sample (factory & field)
 - g. Roofing insulation
 - h. Walkway pad
4. Shop drawings (copies of these must be sent to Duro-Last Roofing, Inc.).
5. Pullout Tests: Perform pullout tests and submit engineering results of Duro-Last Roofing, Inc.'s random location pull tests. Duro-Last Roofing, Inc. shall obtain at least one pull resistance test from indicated locations on the drawings. Submit pull test results with drawing indicating the locations of the tests. Engineering results shall demonstrate the Duro-Last Roofing, Inc.'s reasons for selection of anchorage, frequency and the seaming patterns.
6. Membrane Data: Prior to receipt of bids, contractor shall submit all forms and other required data to Duro-Last Roofing, Inc. for pre-approvals. Advise building owner/representative in writing of any recommendations made or revisions required by Duro-Last Roofing, Inc. to particular job conditions. In the absence of any comments, the Owner and/or his representative shall assume Duro-Last Roofing, Inc.'s most recently published specifications shall be followed.
7. Samples: Submit samples to the building owner/representative for approval prior to ordering and delivery so as to not delay progress and completion of the work or final inspection.
8. Provide repair procedures to the Owner and/or Owner's representative.

B. Required Submittals to the Building Owner

1. Submit shop drawings for approval. Shop drawings may be required for final inspection of the warranted roof. Shop drawings shall be approved by Duro-Last Roofing, Inc.

2. Shop drawings shall include: outline of the roof and roof size, perimeter and penetration details, special details and section layout, location of factory dielectric and field welds, accessory and material list.

1.3 PRODUCT DELIVERY, STORAGE AND HANDLING PROCEDURES

- A. Deliver materials in original unopened packaging.
- B. Containers labeled with manufacturer's name, brand name, and identification of various items.
- C. Store materials in a dry area and protect from inclement weather. Damaged materials shall be replaced at contractor's expense.
- D. Do not allow roofing membrane to come in contact or be exposed to any materials that would be detrimental to or cause degradation of the roofing membrane.

1.4 JOB CONDITIONS

A. Environmental Conditions

1. In making field heat welds, make sure all welding surfaces are clean and free of moisture or foreign items.
2. Weather precautions: Proceed with roofing work when existing and forecasted weather conditions permit work performance in compliance with Duro-Last Roofing, Inc.'s recommendations.
3. Roofing system shall not be applied when the surrounding air, surface temperature, relative humidity or wind velocity is not within the range acceptable under the Duro-Last Roofing, Inc.'s recommendations.

B. Protection

1. Prior to starting work, protect all work in an approved manner including all paving and faces of building walls. Provide special protection of the face of the building wall adjacent to hoist.
2. Complete the whole roofing section or any portion of the roof in a single day to avoid exposure to rain, dew, or moisture of any kind. If rain threatens during the day or in an emergency, protect the unfinished exposed roofing components and provide temporary water cut-off around exposed edges and incomplete flashing areas.
3. All hoisting equipment shall bear on solid pad blocking. If on the roof surface, pad shall be large enough to evenly distribute the load to avoid crushing insulation and roof system. Pad shall consist of two separate layers of material to eliminate vibration and movement to directly affect the roofing membrane. Pad shall be of sufficient size to accommodate work tools and weights used around hoisting operations.
4. Repairs: Clean or repair surfaces damaged or soiled by operations under this contract to the satisfaction of the Owner or Owner's representative without additional cost to the Owner. These would include, but not be limited to, windows, doors, floors, walls, stairs, elevators, steps, walks, curbs, lawn areas, or other roofs.

2.0 PRODUCT

A. Roof Membrane

1. A special formulated, permanent, thermoplastic alloy, bonded to a high tenacity, low shrinkage weft inserted polyester fabric with resistance to ultraviolet rays, microorganisms and impervious to most caustic chemicals.
2. Membrane shall be factory dielectrically welded prefabricated sheets up to 2,000 square feet or as determined by job condition.
3. The new roofing shall be a prefabricated mechanically fastened installation (if required FM requirements); single-ply reinforced membrane, 40 mils thick.

B. Manufacturer

1. The following PVC manufacturer has been approved for this project. No substitutions by secondary, indirect manufacturers will be allowed:

Duro-Last Roofing, Inc.
525 Morley Drive
Saginaw, MI 48601
(800) 248-0280
2. Other manufacturers requesting approval must submit acceptable information certifying that they are the direct manufacturer from raw material into specified membrane, factory prefabricate the membrane into roofing panels, and meet the performance and financial criteria required.

3. Fire resistance of PVC roofing system shall meet UL Class A. All packaging of membrane and insulation shall bear UL Class A label.
4. Membrane color shall be white, as selected from manufacturer's samples.

2.1 MATERIALS

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 as furnished by Duro-Last Roofing, Inc.
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 Duro-Last Roofing, Inc.
6. Fasteners: Compatible with roof deck as furnished by the membrane manufacturer. Fasteners shall be furnished by Duro-Last Roofing, Inc. and be Duro-Guard coated #14 and 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. Breather Vents: Two-way vents with factory-attached skirt shall be installed at a density of one per 1000 square feet of roof deck area and in accordance with Duro-Last Roofing, Inc.'s specifications. Vents shall be furnished by Duro-Last Roofing, Inc.
8. 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 Duro-Last Roofing, Inc.
9. 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. Pad installation minimum configuration is shown on the drawings. Walkway pads shall be a contrasting color to the roof membrane. Owner and/or Owner's representative shall choose from Duro-Last Roofing, Inc.'s samples.

B. 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.

C. Tapered Crickets (where required)

Crickets shall be formed of tapered material having the same requirements and characteristics as listed in the preceding paragraph.

D. Roofing Nails

Nails shall be galvanized "Stronghold" type: (for use on parapet walls, wood nailers)

E. 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.

F. Accessories

Primary accessories shall be factory prefabricated or manufactured by or under the direction of Duro-Last Roofing, Inc. All other shall be furnished and approved by the Duro-Last Roofing, Inc.

3.0 EXECUTION

A. Substrate Inspection

1. Inspect all surfaces to receive roofing for any condition that will adversely affect execution, performance, or quality of work.
2. All roof surfaces and all sloped surfaces to drains and outlets shall be checked and approved by the roofing contractor prior to the start of the roofing work.
3. Install roofing material only under satisfactory conditions as specified by Duro-Last Roofing, Inc.
4. Scheduling: Schedule the roofing work in areas and sections in such a manner as to keep the new and existing insulation, roofing materials, and building absolutely dry and watertight during new roofing work.
5. Any damage sustained to the facility or contents as a result of improper scheduling of roofing work shall be the contractor's responsibility.

B. Surface Preparation

Contractor's proposal shall include all costs for the removal of wet or damaged existing roofing insulation and replacement as required, repair of blisters, existing flashings, expansion and control joint covers, and repair or replacement of required treated wood nailers or blocking.

1. The total extent of preparation shall include the above and comply with the Duro-Last Roofing, Inc.'s recommendations.
2. Mechanically secure separation material units to roofing deck independent of membrane attachment and cover immediately with membrane. Butt units tightly together, limiting joint separation to 1/8 inch, maximum. Meet attachment pattern requirements of Duro-Last Roofing, Inc.

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 INSULATION INSTALLATION

A. General

The roof insulation shall be installed with approved fasteners and distribution plates placed according to specification. Insulation board having maximum of dimensions of 2 x 4 feet shall require a minimum of 2 fasteners. Insulation boards having maximum of dimensions of 4 x 4 feet shall require a minimum of 4 fasteners. Insulation boards having maximum dimensions of 4 x 8 feet shall require a minimum of 5 fasteners. Install the fasteners flush with the top surface of the insulation board. The ends of the insulation boards shall be staggered 50% from row to row. Butt each insulation board firmly to the adjacent board. Do not jam insulation boards or allow cracks between insulation boards. Cut boards to allow a maximum 1/4 inch gap away from vertical surfaces. The following FM approved insulations are approved for use with the membrane cover, fiberglass, urethane/OSB composite, polyisocyanurate or others approved by Duro-Last Roofing, Inc. Contact Duro-Last Roofing, Inc. for specific applications.

3.3 MEMBRANE INSTALLATION

A. Laying Out

Select the proper factory marked rolled sheet of roofing membrane for an outside corner or high point. Orient the roofing membrane so that the fastening tabs are perpendicular to the ribs or corrugations of a steel deck or perpendicular to the width of the prestressed concrete "T" slabs, etc. When laying out each tab, pull the membrane tight.

B. Roof Sections

Unfold first sheet along edge of roof or parapet wall. Position and fasten first tab with plates and screws according to membrane manufacturer specifications. Unfold roofing sheet to the second fastening tab. Pull tab tight and secure to deck as herein described, maintaining proper plate and screw frequency, squarely placed. Continue unfolding and fastening roofing membrane until entire sheet is in place. Install the adjacent roofing membrane sheets using the fastening procedure described. Proceed until all sheets are in place, thus forming a monolithic roof cover. Make sure all edges of each sheet of roofing are fastened with the same fastener spacing as tabs or are welded to another sheet that is fastened in this manner.

C. Field Welding

All field heat seams of the roofing materials shall be 1-1/2 inch wide minimum and be made with a hot air welder. The hot air welder shall be in such a position so that the outside edge and both pieces of material will receive an equal amount of heat and all of which will be closely followed by a 1-5/8 inch wide roller specially designed for this purpose. Make a hands and knees inspection of all field welds with a probe.

D. Perimeter Nailing

The membrane shall be mechanically fastened at all roof perimeters, parapets, curbs, wall, penetrations, etc. in strict accordance with the Contract Documents and Duro-Last Roofing, Inc.'s specifications and details.

E. Cut-Outs

Make cutouts in roofing membrane for protrusions through the roof. Some situations might require that the deck membrane be slit to the section edge for fitting around protrusions. Fasten around cutouts with approved fasteners, 12 inches on center or a minimum of one per side. The skirts on factory prefabricated accessories when welded to deck will cover these.

F. Stacks

After membrane has been attached, select proper size of premanufactured round stack for roof vents and pipes. Drop stack flashing over the pipe, lay flat to the roof, and heat weld the skirt to the deck membrane. Using appropriate hand tool, tighten stainless steel band (or stainless steel screw clamp) around top of stack flashing to prevent water penetration, and cut off excess. Using factory-approved sealant, liberally seal the top of the stack flashing and steel band.

G. Custom Curbs/Pitch Pockets

After securing cutout as stated, heat weld the bottom of the skirt to the deck membrane. If the square or rectangle penetration has a removable top, i.e. roof hatch, skylight, etc. remove the unit and fold the custom curb flashing over the top, secure, then replace unit. If top is not removable, secure the top of the custom curb flashing with termination bar and seal with factory approved sealant. Use this same procedure on existing or new pitch pockets.

H. Breather Vents

Install a two-way breather vent for every 1,000 square feet of deck area. Factory prefabricated vents with a skirt made from roofing membrane shall be used. For new construction or reroof after tear-off, a 2-1/2 inch diameter hole cut down through the roofing membrane and insulation facer is required. For recover/non-tear-off application a 2-1/2 inch diameter hole is to be cut through the roofing membrane and the facer down to the facer on the existing insulation. Heat weld skirt to the deck membrane so as to position two-way vent directly over the hole. Careful placement of the breather vents must be observed. **DO NOT** locate in valleys, next to roof penetrations, scuppers, roof drains, etc. Equally space the vents throughout the roof area. Do not fasten the vent or

the skirt to the roof deck. This two-way breather vent is designed to vent the roofing system only and not the building to which it is installed.

I. Parapet Walls

Fasten bottom tab of prefabricated parapet wall flashing 12 inches on center with approved fasteners. This fastening sequence will secure both bottom of parapet and edge of deck membrane. Base skirt should extend approximately 6 inches onto the roof. This allows for a 1-1/2 inch wide weld and covering of the fasteners and plates. Heat weld skirt to deck membrane. On all termination bar applications, start fastening at one end and proceed to the other. This will eliminate buckling of the termination bar. Seal behind the parapet wall material and on top of termination bar with factory approved sealant. If parapet wall coping is to be covered, extend covering down 2 inches on exterior face of coping and terminate accordingly.

J. Scuppers

Use of prefabricated custom roof scuppers is required. Terminate outside of scupper lining with termination bar as specified and field weld inside skirting to membrane. Apply sealant to underside of lining and top of termination bar.

K. Gutter Edge

1. If gutter is attached to building 2 inches or more below roofline, extend deck membrane over edge and terminate with termination bar and fasten 6 inches on center. Apply sealant as specified.
2. When the gutter is attached to the building level with the roof line, notch the drip edge face around the gutter support brackets and install according to specifications.

L. Roof Drains

1. Secure cutout made in deck membrane with four (4) equally spaced fasteners and distribution plates. If drain is flush with deck, use a prefabricated drain boot. Apply factory-approved sealant all around drain approximately 12 inches under deck membrane and install the expanding snap rings.
2. If the roof drain has a secure clamping ring and strainer, unbolt and remove. Clean and apply factory-approved sealant under deck membrane around drain for use as a water block seal after cutting properly sized hole. Secure clamping ring and strainer to drain base over deck membrane. Seal with factory approved sealant between clamping ring and roofing membrane.

M. Expansion Joints/Valleys

1. Whenever encompassing an elevated mid-roof expansion joint, must use a prefabricated expansion joint section. This section shall allow loose layment over the joint and approved fastening on either side. A 6 inch skirt on both sides will provide coverage of fasteners and still allow approximately 1-1/2 inch for a heat weld to deck membrane.
2. Valleys are worked in the same manner. Fasten according to specifications, 12 inches on center, and lap deck membrane over fasteners. Heat weld deck membrane to valley section.

N. Roof Tie-Ins

1. When terminating the roofing membrane onto an existing roof, care must be taken to stop any water from backing under the new deck membrane.
2. For tie-ins on flat roofs, i.e. wood, concrete, gypsum, Tectum, etc. cut a 2 inch slot to substrate or vapor barrier. Apply sealant and terminate using termination bar secured 6 inches on center with approved fasteners. Fill slots with urethane foam sealant, level with roofline.
3. When the tie-in is perpendicular to the flutes of a steel deck, they must be filled level. Terminate according to above instructions.
4. On tie-ins into shingled pitch roof, secure on flat deck according to specifications 12 inches on center and fold membrane over fasteners and up under shingles. Apply approved sealant for water stop under membrane and terminate 3 inches on center with fasteners at a vertical height of no less than 12 inches.

3.4 CLEAN-UP

Upon completion of the membrane installation, the contractor shall remove all foreign matter, rubbish and scrap material from the roof. The membrane surface shall be cleaned using cleaners recommended by the membrane manufacturer.

3.5 INSPECTION & WARRANTY

- A.** Inspection: Duro-Last Roofing, Inc.'s Quality Assurance Technician, building owner/representative and roofing contractor shall conduct all required inspections. Submit all required drawings, details, and completed questionnaires to the roofing manufacturer before obtaining the specified warranty. After an authorized Quality Assurance Technician has inspected the roof for determining acceptability for warranty issuance, any deficiencies on the final inspection report shall be corrected by the contractor/applicator and made ready for reinspection within five (5) working days.
- B.** Warranty: Upon receipt of required materials, certifying inspection, and acceptance of the roofing system by Duro-Last Roofing, Inc., the warranty shall be duly executed and issued to the Owner.

3.6 REPAIRS

Future repairs or additions to the roofing system shall be made using the heat welding process. Adhesive bonded or butyl tape repairs shall not be allowed for the life of the roof. Provide repair procedures to the Owner and/or Owner's representative.

3.7 CONSTRUCTION DAMAGE

Upon completion of work, repair or replace as required, all building materials damaged as a result of the roofing operations. Match existing materials as close as possible. Owner and/or Owner's representative will be involved in the selection of matching materials.

END OF SECTION

Bid Form-

1. Remove existing roofing system to roof decking.
2. Install 2 layers of 1.5" polyisocyanurate insulation over existing roof decking, fastening in accordance with membrane manufacturer specifications.
3. Contractor shall furnish and install a **tan** 40 mil single-ply membrane roofing system that is fabricated of a weft inserted low-shrink, anti-wicking polyester fabric and has a thermoplastic coating material laminated to both sides as manufactured by Duro-Last Roofing, Inc.
4. Install prefabricated flashings around all curbs and deck penetrations in accordance with membrane manufacturer specifications.
5. Install 4" 2-piece compression edge detail with Kynar-coated metal cover, as manufactured by Exceptional Metals, Inc., at roof perimeter. Cover color shall be chosen by building owner.
6. All mechanical and plumbing work, including, but not limited to disconnection and re-connection, shall be the responsibility of the building owner.
7. Dispose of all debris in an approved facility in accordance with all local, state and federal regulations.

Base Bid: \$ _____

Number of days to Completion _____ days

Contractor Company name _____

Contact name: _____ Phone: _____

Address: _____

City: _____ State: _____ Zip: _____

Signature of Contractor: _____



CITY OF
WESTLAND
An All AMERICAN City

City of Westland

References Sheet

The City of Westland requires all applicants to submit three references.

Reference #1

Business Name:	
Contact:	
Address:	
Phone Number:	
E-mail Address:	

Reference #2

Business Name:	
Contact:	
Address:	
Phone Number:	
E-mail Address:	

Reference #3

Business Name:	
Contact:	
Address:	
Phone Number:	
E-mail Address:	