

PROJECT MANUAL FOR
SAGINAW COUNTY
COMMUNITY MENTAL HEALTH AUTHORITY
500 HANCOCK RE-ROOF PROJECT
SAGINAW, MICHIGAN

500 HANCOCK STREET
SAGINAW, MICHIGAN
48602

July 26, 2013

OWNER

SCCMHA

ARCHITECT / ENGINEER

William A. Kibbe & Associates, Inc.
1475 S. Washington Ave.
Saginaw, Michigan 48601

WAK Project No. 13-0614-0278

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SECTION 00020 - INVITATION TO BID

1.1 GENERAL

A. Owner requests proposals on Work as follows:

1. Project: Saginaw County Community Mental Health Authority
Re-Roofing Project
Saginaw, MI.
2. Project Address: 500 Hancock
Saginaw, MI 48601
3. Owner: Saginaw County Community Mental Health Authority (SCCMHA).
4. Architect: William A. Kibbe & Associates, Inc.
5. Bid Due: Friday, August 2, 2013 at 3:00 p.m.
Mailed or faxed bids do not qualify
6. Place Due: William A. Kibbe & Associates, Inc.
1475 South Washington Ave.
Saginaw, MI 48601
7. Site Meeting There will be a mandatory site meeting at 500 Hancock, Saginaw, MI. for the General Contractors Friday, July 26, 2013 at 2:00 p.m. Sign in sheet will be located at the front entrance.
8. Type of Bidding General construction to include work of all trades.
9. In lower corner of Envelope, in large, bold print: **“CONFIDENTIAL - DO NOT OPEN”**
ATTN: KENNETH NEIGH

B. Scope Work

Demolition will consist of removal of existing stone ballast, fascia, flashing, and EPDM roof layer, (approximately 24,000 s.f.). Prefabricated, concrete caps of existing steel columns will also be removed. All materials will be disposed of in a licensed landfill or recycled. If vacuum removal is selected as a removal process the work must be done on weekends or after office hours.

New construction will consist of new “RubberGuard, 20 year, EPDM roof by Firestone, 1.5” of polyiso insulation, ½” “ISO Guard” substrate board and pre-finished fascia. Cover board will be supplied and mechanically fastened through the polyiso and existing EPS insulation. Substrate board, polyiso and existing insulation will be mechanically fastened to the existing metal deck. EDPM membrane will be fully adhered to substrate board. All manufacturers’ requirements will be followed to provide a 20 year warrantee. A cost will be provided for the repair of existing EPS insulation. See “Unit Prices”.

- C. Contractors are to pay for all building permits and include them in their bid.
- D. Addendums can be accessed from the William A Kibbe and Associates website at www.kibbe.com, press “Enter Website”, press “Bid/Projects”, press “Current Bids”, press “500 Hancock Re-Roofing Project” Reproductions of plans are available (for a fee) at
 - 1. Prints Plus Inc.:
2301 N. Michigan
Saginaw, Michigan 48601
989-755-7773
WAK Project # 12-0614-0180

Bidder is responsible for examining and referencing all addenda from the architect’s website.

- E. Withdrawal:
Bids may not be withdrawn prior to 60 calendar days after bid due date.
- F. Rejection:
The owner reserves right to waive any informality or to reject any or all bids and to accept any bid deemed most advantageous to the owner.
- G. Bonding:
Bid Bond and 100% Performance Bond will be required.

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION (NOT APPLICABLE)

END OF SECTION 00020

SECTION 00100 - INSTRUCTIONS TO BIDDERS

1.1 GENERAL

A. Saginaw County Community Mental Health Authority (SCCMHA), (herein called the "owner"), invites bids for construction.

B. Bids will be received at place and time indicated in Invitation for Bid.

C. Seal envelope containing bid and address to:

William A. Kibbe & Associates, Inc.
1475 South Washington Ave.
Saginaw, Michigan 48601

Please place on lower right corner of envelope
"CONFIDENTIAL - DO NOT OPEN"
ATTN: KENNETH NEIGH

D. Owner invites bid on general construction work.

E. Preparation of bid

1. Submit on forms furnished herein.
2. Fill out in ink or typewritten, without erasure, interlineation or changes.
3. Make Bid in name of principal and if co-partnership, give names of all parties. Give complete address. If bid is submitted by an agent, provide satisfactory evidence of agency authority.
4. Fill in all blank spaces for bid prices in both words and figures. Submit each bid in sealed envelope. Indicate on outside of envelope, name of bidder, bidders address, and name of project for which bid is submitted. If forwarded by mail, enclose sealed envelope containing bid in another envelope addressed indicated.
5. Bid must be received prior to due dated time indicated in Invitation To Bid.

F. Irregular Bids

1. Bids are considered irregular and may be rejected for following reasons unless otherwise provided by law:
 - a. If form furnished is not used or is altered.

- b. If there are unauthorized additions, conditional bids, or irregularities of any kind which may tend to make bid incomplete, indefinite, or ambiguous as to its meaning.
 - c. If bidder adds any provisions reserving right to accept or reject any award, or contacts owner pursuant to an award.
 - d. If unit or lump sum prices contained in bid schedule are obviously unbalanced either in excess of, or below, reasonable cost analysis values.
 - e. If bidder fails to insert alternate and unit prices for every item indicated.
 - f. If bidder fails to complete bid in any other particulars where information is requested so bid can not be properly evaluated.
2. Owner reserves right to reject any or all bids and to waive irregularities or informalities as may be deemed in owner's interest.

G. Interpretations

1. If bidder for proposed work is in doubt as to the true meaning of any part of contract documents, submit written request for interpretation. Bidder submitting request is responsible for its prompt and actual delivery. Interpretations will not be made orally. The architect is not responsible for any other explanations or interpretations, which anyone presumes to make.
2. Written request for interpretation shall be made to William A. Kibbe & Associates, Inc., 1475 S. Washington Ave., Saginaw, Michigan 48601. Request must be received at least 2 days prior to bid submittal date. All interpretations or supplemental instructions will be posted on the web.

Copy of such addendum will be mailed to each individual or entity listed in the first mandatory walk through. Failure to receive such addendum does not relieve bidder from any obligation under his bid as submitted. All addenda are part of the contract documents.
3. Bidder desiring approval of material or equipment not specified must comply with Section 00440-Substitutions Prior To Award of Contract.

H. Method of Award

Upon receiving notice of acceptance of a bid, The contractors will enter into his or her contract within fifteen (15) working days.

I. Contractor Qualifications

- 1.. All contractors shall be licensed contractors, possessing good labor relations, capable of performing quality workmanship and working in harmony with other contractors on the job. All work shall be coordinated with the general project work. In the event contractor willfully violates the requirements of this paragraph, owner shall have the right to order contractor to remove itself, its equipment, and its employees from the job.

1.2 PRODUCTS (NOT APPLICABLE)

1.3 EXECUTION (NOT APPLICABLE)

END OF SECTION 00100

SECTION 00310 - PROPOSAL FORM

Date _____

Proposal of _____ (hereinafter called "Contractor")

a * _____ organized and existing under the laws of
the State of _____, and doing business as ** _____.

* Insert corporation, partnership, or individual, as applicable.

** Insert trade or business name.

TO: Saginaw County Community Mental Health Authority (SCCMHA), (hereinafter called "Owner")

The Contractor, in compliance with the invitation for Proposals for work on the 500 Hancock Re-Roof Project, Saginaw, Michigan having examined the Request for Proposals and construction documents prepared by William A. Kibbe & Associates, Inc. and being familiar with the site of the proposed work, and with all conditions surrounding construction of proposed project including availability of materials and labor, hereby propose to furnish all labor, materials, tools, equipment, machinery, equipment rental transportation, superintendence, perform all work, provide all services, and to construct all work in accordance with the Project Manual and Construction Documents, within time set forth herein, at the price stated below. All permits will be the responsibility of the contractor.

BASE QUOTE BREAKDOWN:

Name of Company: _____

Contact Individual _____

Address: _____

Telephone No. _____

Date: _____

BASE BID \$ _____

Exceptions to the specifications: _____

If none, please indicate No exceptions taken to the Project Specifications.

Unit price for EPS replacement \$ _____

SUBCONTRACTORS:

The Contractor shall state here the names of the Subcontractors that form the basis of this quote.

<u>Work Item</u>	<u>Subcontractor's Name</u>	<u>Value</u>
_____	_____	_____
_____	_____	_____
_____	_____	_____

PRICE GUARANTEE

The prices stated in this quotation are guaranteed for _____ days or _____ months from date thereof, and, if authorized to proceed within that period, we will agree to complete the work covered by this quote at said price.

All taxes are included in above base Proposals.

Each contractor agrees that this Proposal will be good, and will not be withdrawn for period of 60 calendar days after the date for opening of the Proposal.

Contractor understands the Owner reserves right to reject any or all Proposals and to waive any informalities or irregularities therein.

Contractor, if awarded a Contract, hereby agrees to commence work under this contract on or before a date to be specified within the "Notice to Proceed" of Owner and to fully complete the project within _____ consecutive calendar days thereafter.

Contractor acknowledges receipt of following addenda:

RESPECTFULLY SUBMITTED,

Signature: _____

Printed Name: _____

Company: _____

Business Address: _____

Telephone Number: _____

SECTION 011000 - SUMMARY

PART 1 - GENERAL

1.1 SUMMARY

A. Section includes:

1. Project information.
2. Work covered by Contract Documents.
3. Coordination with occupants.
4. Work restrictions.

1.2 PROJECT INFORMATION

A. Project Identification: Saginaw County Community Mental Health Authority (SCCMHA) Re-Roof Project, Saginaw, Michigan, WAK Job No.13-0614-0278.

1. Project Location: 500 Hancock Street, Saginaw, Michigan 48602.

B. Owner: SCCMHA

1. Owner's Representative: Fred Stahl, Human Resources Director.

C. Architect: Kenneth Neigh, William A. Kibbe and Associates, 1475 S. Washington Ave., Saginaw MI 48601

1.3 WORK COVERED BY CONTRACT DOCUMENTS

A. The Work of the Project is defined by the Contract Documents and consists of the following:

1. Removal of existing stone ballast and EPDM roof layer, of approximately 24,000 s.f. Removal of prefabricated, concrete, capping of existing steel columns. If vacuum process of removal is used, the work must be done on weekends or after business hours.
2. New construction will consist of new EPDM roof, 1.5" added polyiso insulation, substrate board (.5") and manufacturers prefinished fascia. Substrate board will be supplied and installed over polyiso insulation board and mechanically fastened to existing deck. New membrane will be fully adhered to board. **The new roof must be warranted for 20 years.**
3. Provide and install joint sealants compatible with Firestone to comply with designated warrantee

B. Type of Contract.

1. Project will be constructed under a single prime contract.

1.4 ACCESS TO SITE

- A. General: Contractor shall have limited use of Project site for construction operations.
- B. Use of Site: Limit use of Project site to work in areas indicated. Do not disturb portions of Project site beyond areas in which the Work is indicated.
 - 1. Driveways, Walkways and Entrances: Keep driveways loading areas, and entrances serving premises clear and available to Owner, Owner's employees, and emergency vehicles at all times. Do not use these areas for parking or storage of materials.
 - a. Schedule deliveries to minimize use of driveways and entrances by construction operations.
 - b. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on-site.
- C. Condition of Existing Building: Maintain portions of existing building affected by construction operations in a weather tight condition throughout construction period. Repair damage caused by construction operations.

1.5 COORDINATION WITH OCCUPANTS

- A. Full Owner Occupancy: Owner will occupy site and existing building(s) during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits unless otherwise indicated.
 - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used facilities. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and approval of authorities having jurisdiction.
 - 2. Notify the Owner not less than 24 hours in advance of activities that will affect Owner's operations.

1.6 WORK RESTRICTIONS

- A. Work Restrictions, General: Comply with restrictions on construction operations.
 - 1. Comply with limitations on use of public streets and other requirements of authorities having jurisdiction.
- B. On-Site Work Hours: Limit work in the existing building to normal business working hours of 8:00 a.m. to 5:00 p.m., Monday through Sunday, except as otherwise indicated.
- C. Existing Utility Interruptions: Do not interrupt utilities serving facilities occupied by Owner or others unless permitted under the following conditions and then only after providing temporary utility services according to requirements indicated:
 - 1. Notify Owner not less than two days in advance of proposed utility interruptions.

- D. Noise, Vibration, and Odors: Coordinate operations that may result in high levels of noise and vibration, odors, or other disruption to Owner occupancy with Owner.
- E. Nonsmoking Building: Smoking is not permitted anywhere on site.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

SECTION 012200 - UNIT PRICES

PART 1 - GENERAL

1.1 SUMMARY

- A. Section includes administrative and procedural requirements for unit prices.

1.2 DEFINITIONS

- A. Unit price is an amount incorporated in the Agreement, applicable during the duration of the Work as a price per unit of measurement for materials, equipment, or services, or a portion of the Work, added to or deducted from the Contract Sum by appropriate modification, if the scope of Work or estimated quantities of Work required by the Contract Documents are increased or decreased.

1.3 PROCEDURES

- A. Unit prices include all necessary material, plus cost for delivery, installation, insurance, applicable taxes, overhead, and profit.
- B. Owner reserves the right to reject Contractor's measurement of work-in-place that involves use of established unit prices and to have this work measured, at Owner's expense, by an independent surveyor acceptable to Contractor.
- C. List of Unit Prices: A schedule of unit prices is included in Part 3. Specification Sections referenced in the schedule contain requirements for materials described under each unit price.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION

3.1 SCHEDULE OF UNIT PRICES

- A. Unit Price No. 1
 - 1. Description: Replacement of existing "EPS" (Expanded Polystyrene) sheet insulation board.
 - 2. Unit of Measurement: 1" x 48" x 96".

END OF SECTION 012200

SECTION 024119 - SELECTIVE STRUCTURE DEMOLITION

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Demolition and removal of selected portions of building or structure.

1.2 DEFINITIONS

- A. Remove: Detach items from existing construction and legally dispose of them off-site unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Carefully detach from existing construction, in a manner to prevent damage, and deliver to Owner.
- C. Remove and Reinstall: Detach items from existing construction, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Existing items of construction that are not to be permanently removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

1.3 FIELD CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
- B. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
1. If suspected hazardous materials are encountered, do not disturb; immediately notify Architect and Owner. Hazardous materials will be removed by Owner under a separate contract.
- C. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
1. Maintain fire-protection facilities in service during selective demolition operations.

1.4 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- B. Standards: Comply with ANSI/ASSE A10.6 and NFPA 241.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped before starting selective demolition operations.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.

3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems to Remain: Maintain services/systems indicated to remain and protect them against damage.
 - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."
- B. Existing Services/Systems to Be Removed, Relocated, or Abandoned: Locate, identify, disconnect, and seal or cap off indicated utility services and mechanical/electrical systems serving areas to be selectively demolished.
 - 1. Owner will arrange to shut off indicated services/systems when requested by Contractor.
 - 2. Arrange to shut off indicated utilities with utility companies.
 - 3. If services/systems are required to be removed, relocated, or abandoned, provide temporary services/systems that bypass area of selective demolition and that maintain continuity of services/systems to other parts of building.
 - a. Equipment to Be Removed: Disconnect and cap services and remove equipment.

3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.

3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
 - 1. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
 - 2. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain fire watch and portable fire-suppression devices during flame-cutting operations.
 - 3. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
 - 4. Dispose of demolished items and materials promptly.
 - 5. If vacuum process of removing existing stone ballast is used, work must be on weekends or after business hours.
- B. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

3.5 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.
 - 1. Do not allow demolished materials to accumulate on-site.
 - 2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
 - 3. Remove debris from elevated portions of building by chute, hoist, or other device that will convey debris to grade level in a controlled descent.
- B. Burning: Do not burn demolished materials.

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

3.6 CLEANING

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began. **Provide for ground repair up to and including re-grade of soil and reseedling of landscaping. Repair or replace concrete damaged by selective demolition.**

END OF SECTION 024119

SECTION 075323 - ETHYLENE-PROPYLENE-DIENE-MONOMER (EPDM) ROOFING

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Adhered EPDM membrane roofing system.

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roofing system. Include plans, elevations, sections, details, and attachments to other work.
- C. Samples: For each product included in the roofing system.
- D. Field quality-control reports.
- E. Maintenance data.

1.3 QUALITY ASSURANCE

- A. Installer Qualifications: A qualified firm that is approved, authorized, or licensed by membrane roofing system manufacturer to install manufacturer's product and that is eligible to receive manufacturer's special warranty.
- B. Source Limitations: Obtain components including for membrane roofing system from same manufacturer as membrane roofing.
- C. Pre installation Roofing Conference: Conduct conference at Project site.

1.4 PROJECT CONDITIONS

- A. Weather Limitations: Proceed with installation only when existing and forecasted weather conditions permit roofing system to be installed according to manufacturer's written instructions and warranty requirements.

1.5 WARRANTY

- A. Warranty Period: 20 years from date of Substantial Completion. Note: provisions for an additional 5 year extended warrantee must be available upon manufacturers designated inspection period

PART 2 - PRODUCTS

2.1 EPDM MEMBRANE ROOFING - Basis of design- Firestone “ Red Shield”

- A. EPDM: ASTM D 4637, Type I, non-reinforced, uniform, flexible EPDM sheet. Thickness: 60 mils, nominal, LSFR.

2.2 SUBSTRATE BOARD

- A. Substrate Board: “ISOGUARD HD”, ½”, R=2.5 as manufactured by “Firestone”.

2.3 AUXILIARY MEMBRANE ROOFING MATERIALS

- A. General: Auxiliary membrane roofing materials recommended by roofing system manufacturer for intended use and compatible with membrane roofing.
- B. Sheet Flashing: 60-mil- thick EPDM, partially cured or cured, according to application.
- C. Bonding Adhesive: Manufacturer's standard. Provide MSDS information for evaluation by the owner prior to shop drawing approval.
- D. Seaming Material: Manufacturer's standard, synthetic-rubber polymer primer and 3-inch- wide minimum, butyl splice tape with release film.
- E. Miscellaneous Accessories: Provide lap sealant, water cutoff mastic, metal termination bars, metal battens, pourable sealers, preformed cone and vent sheet flashings, preformed inside and outside corner sheet flashings, reinforced EPDM securement strips, T-joint covers, in-seam sealants, termination reglets, cover strips, and other accessories.

2.4 ROOF INSULATION

- A. Polyisocyanurate (polyiso) Board Insulation: ASTM C 1289, Type II, Class 1, felt or glass-fiber mat facer on both major surfaces.

PART 3 - EXECUTION

3.1 INSULATION INSTALLATION

- A. Coordinate installing membrane roofing system components so insulation is not exposed to precipitation or left exposed at the end of the workday.
- B. Comply with membrane roofing system and insulation manufacturer's written instructions for installing roof insulation.

- C. Install cover boards over insulation with long joints in continuous straight lines with end joints staggered between rows. Offset joints of insulation below a minimum of 6 inches in each direction. Loosely butt cover boards together.
 - 1. Mechanically fasten cover boards through insulation to existing metal deck. Install fasteners per manufacturers recommendations.

3.2 ADHERED MEMBRANE ROOFING INSTALLATION

- A. Adhere membrane roofing over area to receive roofing according to membrane roofing system manufacturer's written instructions. Unroll membrane roofing and allow to relax before installing.
- B. Accurately align membrane roofing and maintain uniform side and end laps of minimum dimensions required by manufacturer. Stagger end laps.
- C. Bonding Adhesive: Apply to substrate and underside of membrane roofing at rate required by manufacturer and allow to partially dry before installing membrane roofing. Do not apply to splice area of membrane roofing.
- D. In addition to adhering, mechanically fasten existing insulation as required by membrane manufacturer.
- E. Adhesive Seam Installation: Clean both faces of splice areas, apply splicing cement, and firmly roll side and end laps of overlapping membrane roofing according to manufacturer's written instructions to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of membrane roofing terminations.

3.3 BASE FLASHING INSTALLATION

- A. Install sheet flashings and preformed flashing accessories and adhere to substrates according to membrane roofing system manufacturer's written instructions.
- B. Apply bonding adhesive to substrate and underside of sheet flashing at required rate and allow to partially dry. Do not apply to seam area of flashing.
- C. Flash penetrations and field-formed inside and outside corners with cured or uncured sheet flashing.
- D. Clean splice areas, apply splicing cement, and firmly roll side and end laps of overlapping sheets to ensure a watertight seam installation. Apply lap sealant and seal exposed edges of sheet flashing terminations.
- E. Terminate and seal top of sheet flashings.

3.4 FIELD QUALITY CONTROL

- A. Final Roof Inspection: Arrange for roofing system manufacturer's technical personnel to inspect roofing installation on completion.

- B. Repair or remove and replace components of membrane roofing system where inspections indicate that they do not comply with specified requirements.

END OF SECTION 075323

SECTION 077100 - ROOF SPECIALTIES

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

1. Roof-edge

1.2 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: For roof specialties. Include plans, elevations, expansion-joint locations, keyed details, and attachments to other work. Distinguish between plant- and field-assembled work.
- C. Samples: For each exposed product and for each color and texture specified.
- D. Product test reports.
- E. Maintenance data.

1.3 WARRANTY

- A. Special Warranty on Painted Finishes: Manufacturer's standard form in which manufacturer agrees to repair finish or replace roof specialties that show evidence of deterioration of factory-applied finishes within 20 years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MISCELLANEOUS MATERIALS

- A. General: Provide materials and types of fasteners, protective coatings, sealants, and other miscellaneous items required by manufacturer for a complete installation.
- B. Fasteners: Manufacturer's recommended fasteners, suitable for application and designed to meet performance requirements. Furnish the following unless otherwise indicated:

2.2 ROOF-EDGE FLASHINGS

- A. Firestone "ANCHORGARD SP" Fascia.

1. Corners: Factory mitered and mechanically clinched and sealed watertight.
2. Splice Plates: Concealed, of same material, finish, and shape as fascia cover.

2.3 INSTALLATION, GENERAL

- A. General: Install roof specialties according to manufacturer's written instructions. Anchor roof specialties securely in place, with provisions for thermal and structural movement. Use fasteners, solder, protective coatings, separators, sealants, and other miscellaneous items as required to complete roof-specialty systems.
1. Install roof specialties level, plumb, true to line and elevation; with limited oil-canning and without warping, jogs in alignment, buckling, or tool marks.
 2. Provide uniform, neat seams with minimum exposure of solder and sealant.
 3. Install roof specialties to fit substrates and to result in watertight performance. Verify shapes and dimensions of surfaces to be covered before manufacture.
 4. Torch cutting of roof specialties is not permitted.
 5. Install underlayment with adhesive for temporary anchorage. Apply in shingle fashion to shed water, with lapped joints of not less than 2 inches.
- B. Metal Protection: Protect metals against galvanic action by separating dissimilar metals from contact with each other or with corrosive substrates by painting contact surfaces with bituminous coating or by other permanent separation as recommended by manufacturer.
1. Coat concealed side of uncoated aluminum roof specialties with bituminous coating where in contact with wood, ferrous metal, or cementitious construction.
 2. Underlayment: Where installing metal flashing directly on cementitious or wood substrates, install a course of self-adhering, high-temperature sheet underlayment or polyethylene sheet.
- C. Expansion Provisions: Allow for thermal expansion of exposed roof specialties.
1. Space movement joints at a maximum of 12 feet with no joints within 18 inches of corners or intersections unless otherwise shown on Drawings.
 2. When ambient temperature at time of installation is between 40 and 70 deg F, set joint members for 50 percent movement each way. Adjust setting proportionately for installation at higher ambient temperatures.
- D. Fastener Sizes: Use fasteners of sizes that will penetrate substrate not less than recommended by fastener manufacturer to achieve maximum pull-out resistance.
- E. Seal joints with sealant as required by roofing-specialty manufacturer.
- F. Seal joints as required for watertight construction. Place sealant to be completely concealed in joint. Do not install sealants at temperatures below 40 deg F.

2.4 ROOF-EDGE FLASHING INSTALLATION

- A. Install cleats, cants, and other anchoring and attachment accessories and devices with concealed fasteners.
- B. Anchor roof edgings with manufacturer's required devices, fasteners, and fastener spacing to meet performance requirements.

2.5 CLEANING AND PROTECTION

- A. Remove temporary protective coverings and strippable films as roof specialties are installed.

END OF SECTION 077100