

**SECTION 07210**  
**BUILDING INSULATION**

1. **SCOPE:**

Under this heading shall be included the furnishing and installation of all building insulation not specified elsewhere.

2. **APPLICABLE STANDARDS:**

Where any material or operation is specified by reference to the following published specifications or standards or the specifications or standards of any other organization, the latest edition of the referenced specifications or standards shall be as much a part of this Section as if quoted in full herein.

3. **MATERIALS:**

Insulation shall be Owens-Corning Urethane, or equal, of the thickness shown on the plans.

4. **INSULATION:**

Insulation shall be installed in accordance with the manufacturers insulation using a minimum of 7 gallons of adhesive per 1000 per square feet.

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**SECTION 07240**  
**ROOF INSULATION**

1. **SCOPE:**

Under this heading shall be included the furnishing and installation of insulation.

2. **APPLICABLE STANDARDS:**

Where any material or operation is specified by reference to the following published specifications or standards or the specifications or standards of any other organizations, the latest edition of the referenced specification or standard shall be as much a part of this Section as if quoted in full herein.

3. **MATERIALS:**

Insulation shall be R-30 BAT in ceiling and R-19 BAT in walls unless shown otherwise on the plans and shall be Owens-Corning Fiberglass Roof Insulation, or equal.

4. **INSTALLATION:**

- a. Support insulation between trusses with staples and "tiger teeth @ 16 inch" o.c.
- b. Vapor barrier and insulation shall be installed in accordance with the manufacturer's instruction.

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**SECTION 07500**  
**BUILT-UP ROOFING**

1. **SCOPE:**

Under this heading shall be included the furnishing and installation of roofing and flashings.

Roofing system shall be NOrd-Bitumi-Nordflex Specification NF 506 (date 7/86).

Fascias, copings and sheet metalwork are specified in Section 07600, Sheetmetal Work.

2. **GUARANTEE:**

The Owner shall be furnished with a written guarantee signed by the Contractor and the subcontractor for the roofing which shall stipulate that they shall jointly and severally, during a period of five years after and commencing on the day of the acceptance of the project repair all defects caused by ordinary wear and tear, faulty workmanship or faulty materials, without cost to the Owner, so as to maintain the work weathertight.

The guarantee shall cover roofing and flashing.

Repairs that become necessary during the guarantee period shall be made promptly.

The roofing subcontractor shall, when so requested by the Owner in the third and fifth years of the guarantee period, inspect the roof and shall then make such repairs as may then be necessary.

3. **GENERAL:**

a) **Roof Decks.**

Roof decks shall be smooth, clean, dry and free of loose material.

b) **Labels.**

All materials shall be delivered with manufacturer's labels attached and legible.

c) **Storage.**

Store material, off the ground and protected from the weather; any of these which become wet shall not be used but shall be removed from the site and disposed of. Also do not store these materials in direct contact with damp concrete slabs. Felts and base sheets which are to be used in cold weather shall be stored in a heated space for a sufficiently long time before using so that the felt and base sheet will be at a temperature of 45 degrees F. or warmer when they are unrolled.

d) Manufacturer.

Materials shall be by the same manufacturer. Submit manufacturer's name and detailed identification of all materials being furnished under this Section. Submit certificate of conformance with required ASTM Standards. Submit samples if requested.

e) Roofer.

Roofer shall be approved by the manufacturer of the roofing materials for the application of these materials. Submit evidence of this approval. Roofer shall also be subject to approval as a subcontractor in accordance with applicable provisions in the General Conditions and/or Special Conditions.

4. MATERIALS:

a) Insulation material and installation shall be acceptable to the roofing manufacturer.

b) Fiber class base sheet equal to type GR.

c) Membrane - Nordflex M - Mineral surface - color white.

d) Asphalt - steep asphalt ASTM D-312-111.

e) Cant strips and nailing strips shall be wood and furnished and installed under the carpentry section.

5. ROOFING:

a) General.

Nord Specification WF 506, dated 7/86.

6. FLASHING:

Flashing shall be provided for all roofing, at all abutting walls, curbs, around all obstructions and at all edges of roofs as per manufacturers drawings contained in manual dated 7/86.

7. PROTECTION:

Following completion of the roofing work, the Contractor shall be responsible for protection of the work. If work is necessary on the roof, proper care shall be taken and protection furnished to prevent damage. Any damage which does occur shall be repaired.

8. PERFORMANCE:

In addition to the requirements specified above, roofing and flashing shall be completely weathertight.

**SECTION 07600**  
**SHEETMETAL WORK**

1. **SCOPE:**

Under this heading shall be included the furnishing and installation of sheet metal work in connection with the roofing work.

2. **SHOP DRAWINGS:**

Shop drawings shall be submitted. See the Special Conditions. Shop drawings shall show fastening methods, splices and joints, and details of special pieces.

3. **MATERIALS:**

a) **Zinc-Coated Steel.**

Commercial quality with 0.20% copper, ASTM A 525 except ASTM A 527 for lock-forming, G90 hot-dip galvanized, mill phosphatized for painting; 0.0359" thick (24 gauge) except as otherwise indicated. All metal shall be "paint grip" type. Paint grip shall be stamped on metal.

b) **Sealant.**

Sealant for work under this Section shall conform to F.S. TT-S-230 and shall be a color to provide a reasonable match to painted sheet metal work.

c) **Fasteners.**

Fasteners shall be suitable for the purpose intended and shall be stainless steel, hot-dip galvanized or aluminum.

5. **FABRICATION:**

Fabrication shall be in accordance with shop drawings and so as to make a weathertight structure.

Fabricate shop made inserts and/or reglets to build into precast concrete, as shown and as required. Fabricate shop made corners and intersections for flashings.

Allow for thermal expansion and contraction when fabricating sheet metal work.

6. **INSTALLATION:**

All sheet metal work shall be installed securely in place using suitable fasteners. All work shall be installed so as to make the structure weathertight. Seal joints with sealant in continuous beads. Allow for thermal expansion and contraction. Insert cap flashing into reglets and/or inserts, secure with wedges, and seal in place with sealant. Completed work shall be straight and plumb and to the required slopes and shall be neat and sightly and show good workmanship.

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**SECTION 07900**  
**CAULKING AND SEALANTS**

1. **SCOPE:**

Under this heading shall be included the preparation of joint surfaces and application of all sealants and back-up materials not specified elsewhere.

2. **GENERAL REQUIREMENTS:**

Caulking and sealing shall not be done when the air temperature is less than 40 degrees F or greater than 90 degrees F without the written concurrence of the sealant manufacturer. Neither shall caulking or sealing be done when the surfaces to which sealant is to be applied are wet or otherwise unsatisfactory.

3. **MATERIALS:**

a) **Sealants.**

1. **Vertical Horizontal Joints.**

All joints one-part moisture curving, gum grade, elastomeric, polyurethane sealant. Color shall match adjacent surfaces. Sealant shall conform to Federal Specification TT-S-00230C, Type II, Class A and ASTM C920-79, Type S, Grade NS, Class 25. Acceptable manufacturers are: Vulkem 116 Quaker Sealants QSC-102, Pecora-Dynatrol 1.

b) **Primers.**

Primers shall be non-staining, suitable for the surfaces on which they are used and conform to the requirements of the sealant manufacturer.

c) **Joint Cleaner.**

Cleaner shall be non-corrosive and non-staining type recommended by the sealant manufacturer and compatible with joint forming materials.

d) **Back-up Material and Joint Fillers:**

Back-up rods and joint fillers shall be open-cell polyurethane foam or expanded closed-cell polyethylene foam conforming to ASTM D1056 or D1565. Sealant shall not adhere to the back-up material.

e) **Bond Breakers.**

Bond breakers, where required by the sealant manufacturer, shall be polyethylene tape, masking tape or other material recommended by the sealant manufacturer.

4. **SURFACE PREPARATION:**

Thoroughly clean, prepare, and size joints, removing foreign matter such as dust, oil,

grease, water and surface dirt. Prime joint as required. Primer must adhere permanently or be entirely removed and replaced as required by joint condition.

Clean porous materials such as concrete, where necessary, by grinding, sand or water blast cleaning, mechanical abrading, acid washing or a combination of methods as required to provide a clean, sound base surface for proper adhesion.

Joints to receive sealant shall be a minimum of 1/4 inch wide by 1/4 inch deep, unless shown otherwise.

Joints in Concrete: Depth of sealant shall be equal to one-half the width of joints up to one inch wide. For expansion and other joints between one inch and 2 inches wide, depth shall not be greater than 1/2 inch deep. For joints exceeding 2 inches in width, depth shall be as recommended by the sealant manufacturer.

Above dimensions should be increased as directed by the sealant manufacturer when application is made at temperature above 90 degrees F or below 40 degrees F.

5. APPLICATION:

Install back-up materials or joint filler at proper depth in joints to provide proper sealant dimension. Back-up material shall be of suitable size and shape so that, when compressed (25 to 50 percent), it will fit in joints as required. Sealant shall not be applied without back-up material and, if necessary, bond breaker strip.

Prime surfaces where required with primer as recommended by the sealant manufacturer.

Apply sealant under pressure with hand or power actuated gun or other appropriate means. Gun nozzle shall be of proper size and provided with sufficient pressure to completely fill joints as detailed. Neatly point or tool joint surface to provide a concave contour unless shown otherwise on drawings. When tooling light colored sealants, use clean water-wet tool or tooling solution recommended by the sealant manufacturer. Joints shall be free of air pockets, foreign embedded matter, ridges and sags.

6. CLEANING:

Clean adjacent surfaces free of sealant or soiling resulting from this work as work progresses. Use solvent or cleaning agent recommended by the sealant manufacturer. Exercise due care to prevent damage or discoloration to adjacent materials when removing excess sealant materials.

END OF SECTION