

EXAMINATION

- A. Verify that surfaces and site conditions are ready to receive work and conform to membrane manufacturer's requirements.
- B. Verify that deck is:
 - 1. Secure, well supported, solid, and in accordance with local code structural requirements.
 - 2. Clean and smooth, free of depressions, waves, and projections, properly sloped to drains, valleys, or eaves.
 - 3. Dry and free of ice and snow.
- C. Verify that adjacent precast deck members are flush within 1/4 inch (6 mm) vertical variation, with grout keys filled flush.
- D. Notify the Architect of any conditions that would prevent satisfactory completion of the work. Do not proceed until unsatisfactory conditions are corrected.

PREPARATION

- A. Do not proceed with installation until substrate preparation is complete.
- B. Coordinate timing of installation to avoid construction traffic over completed traffic membrane surfaces.
- C. Wood Deck: Fill joints, knot holes, voids, and low areas with filler and sand smooth.
- D. Wood Deck: Cover with cementitious board meeting requirements of Class A approved application. Fill joints, knot holes, voids, and low areas with filler and sand smooth.
- E. Coordinate installation with installation of drains and similar accessories.

INSTALLATION

- A. Install in accordance with manufacturer's instructions and applicable codes
- B. Do not install when temperature is below 45 degrees Fahrenheit (7.2 degrees Celsius) or above 80 degrees Fahrenheit (26.7 degrees C). Do not install when winds are gusting over 30 mph (48.3 kph).
- C. Do not dilute primers, adhesives, coatings, or sealants.
- D. Install membrane with minimum number of seams possible. Overlap seams 3/4 inch (19 mm), to shed water; heat-weld all seams.
- E. Adhere membrane to substrate.
- F. Mechanically fasten all perimeter edges and penetrations.
- G. Install flashings and accessories. Seal around all penetrations, drains, and edges.

ADJUSTING AND CLEANING

- A. Clean soiled areas in accordance with manufacturer's recommendations.
- B. Repair damaged areas to match original materials.

PROTECTION

- A. Protect finished work from traffic using durable temporary materials.

MATERIALS

- A. **MEMBRANE:** Duradek Ultra membrane is a calendared polyvinyl chloride (PVC) film laminated to a woven, heat-set polyester fabric. The surface of the PVC film is factory-printed and top coated with a PVC/acrylic finish. The membrane is produced in a variety of colors and patterns and is available in rolls of various widths and lengths. The membrane is nominally 0.060 inch (60 mils, 1.5 mm) thick.
- B. **ADHESIVES:**
 - a. Duradek D763: A white-colored, water-based, liquid adhesive with a shelf life of six months when stored at temperatures between 45 degrees Fahrenheit and 80 degrees Fahrenheit (7.2 degrees Celsius and 26.7 degrees Celsius).
 - b. Duradek D811: A yellow-colored, liquid contact adhesive with a shelf life of six months when stored at temperatures between 45 degrees Fahrenheit and 80 degrees Fahrenheit (7.2 degrees Celsius and 26.7 degrees Celsius).
- C. **SUBSTRATES:**
 - a. Plywood: Minimum 5/8-inch-thick (15.9 mm) exterior grade with tongue and groove edges, complying with US Department of Commerce Product Standard PS-1 (UBC Standard 23-2) or PS-2 (UBC Standard 23-3).
 - b. USG Durock Underlayment: A minimum nominally 1/2-inch-thick (12.7 mm) cementitious panel, as described in ICC-ES report ESR-2208.
- D. **ROOF EDGE FLASHING:**
 - a. The Duradek PVC/Metal Roof Edge Flashing system consists of a 2-1/4 inch wide x 3-1/4 inch high roof edge flashing, PVC coated on the exterior wall with 24 gauge (0.023 inch thick) steel base metal. The continuous cleat is 24 gauge steel (0.023 inch thick). The cleat and edge flashing are attached to structural lumber substrate using 11 gauge, 1-1/2 inch long galvanized annular right shank nails with 3/8" diameter head spaced as shown in Figures 1 and 2.

INSTALLATION

- A. **GENERAL:** Installation of the Duradek Ultra system is to be in accordance with the manufacturers published installation instructions, the applicable code and the published ICC-ES ESR report. The manufacturer's installation instructions are to be available on the jobsite during application. Installation is limited to conditions when the weather is dry and the ambient air temperature is a minimum of 45 degrees Fahrenheit (7.2 degrees Celsius). Materials are not to be applied if precipitation is occurring or expected.
- B. **PREPARATION OF SUBSTRATES:** Substrates are to be structurally sound, clean and dry, and shall be sloped a minimum of 1/4 inch per foot (2 percent slope).

- a. **PLYWOOD:** Plywood is to be applied to framing in accordance with the requirements of the applicable code. All unsupported edges are to be blocked. All penetrations through and termination of the sheathing are to be protected with metal flashing in accordance with the requirements of the applicable code and the manufacturers published installation instructions.
- b. **USG Durock Underlayment:** Where USG Durock is used as a substrate, it is installed over a plywood substrate complying with the requirements above.
- C. **MEMBRANE INSTALLATION:** The Duradek Ultra membrane is adhered to the substrate with either Duradek D763 or Duradek D811 adhesive. Duradek D763 is applied to the substrate with either a U-notched trowel having 1/32-inch-deep by 1/16-inch-side (0.8 by 1.6 mm) notches spaced 1/32 inch (0.8 mm) apart or a textured roller. The minimum coverage is 1 gallon per 190 square feet (1 liter per 4.66 m²). Duradek D811 is applied with either a brush or a roller at a coverage rate of 1 gallon per 95 square feet (1 liter per 2.33 m²). The minimum application temperature for both adhesives is 45 degrees Fahrenheit (7.2 degrees Celsius). A minimum 2-inch (51 mm) width of Duradek D811 adhesive is used at the perimeter of the deck and on walls, edges and right-angle corners. Membrane seams are overlapped a minimum of ¾ inch (19.1 mm) at edges and ends, and heat-fused with a hot-air seaming tool. Exposed edges, posts and trim strips are sealed with sealant.
- D. **METHOD OF REPAIR:** A portion of the membrane larger than the affected area is removed and a new piece of material is prepared that is 1/8 inch (3.2 mm) larger in dimension than the piece removed. Duradek D763 adhesive is applied to the substrate and the patch is placed into the space so it overlaps the existing sheet by 1/16 inch (1.6mm). The patch is welded to the existing sheet using a hot-air seaming tool. When substrate damage occurs, the retention of the fire classification and strength properties of the system are to be investigated to the satisfaction of the code official.
- E. **WIND RESISTANCE:** The roof deck construction over which the fully bonded coating is installed is to be designed to resist the minimum design wind pressures set forth in the applicable code. Refer to Figures 1 and 2 below for edge securement specifications using the Duradek PVC/Metal Roof Edge Flashing System. The cleat and edge flashing are attached to the structural lumber substrate using 11 gauge, 1-1/2 inch long galvanized annular right shank nails with 3/8" diameter head spaced as shown in Figures 1 and 2.
- F. **ROOF CLASSIFICATION:** Class A Classification: When adhered to USG Durock underlayment applied over plywood using Duradek D763 or Duradek D811 adhesive, the system provides a Class A roof covering classification in accordance with Section 1505.1 of the International Building Code (IBC) and Section R902.1 of the International Residential Code (IRC). USG Durock panels are applied to the plywood substrate using Mapei "Ultra Flex 2" polymer modified mortar and screwed with Rock-on #9 Hi-Lo thread 1-1/4" screws spaced 6 inches (152 mm) on center. Screws are to have sufficient length to penetrate the deck framing a minimum of 3/4 inch (19.1 mm).

END OF SECTION

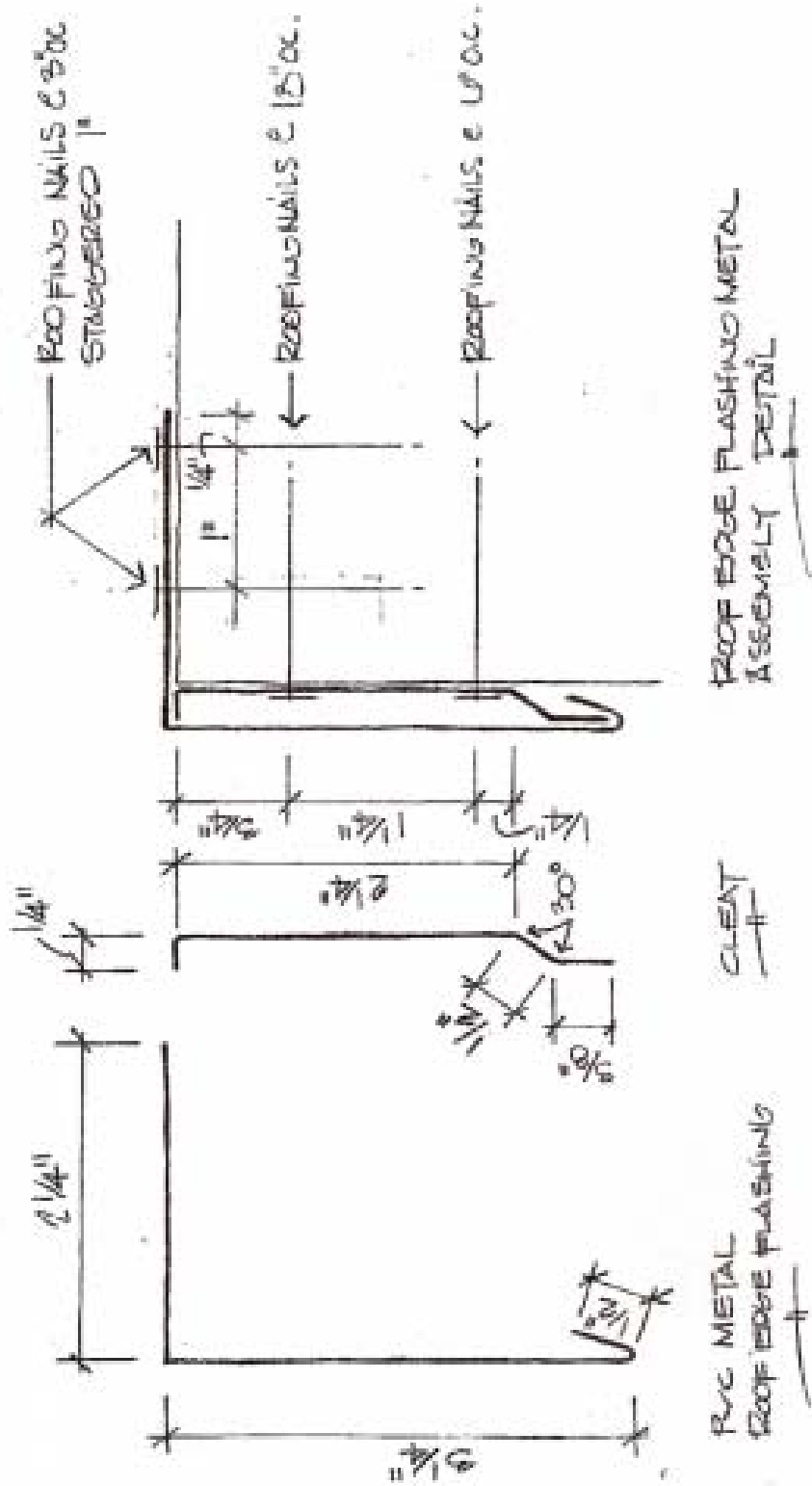


Figure 1: Duradek PVC/Metal Roof Edge Flashing

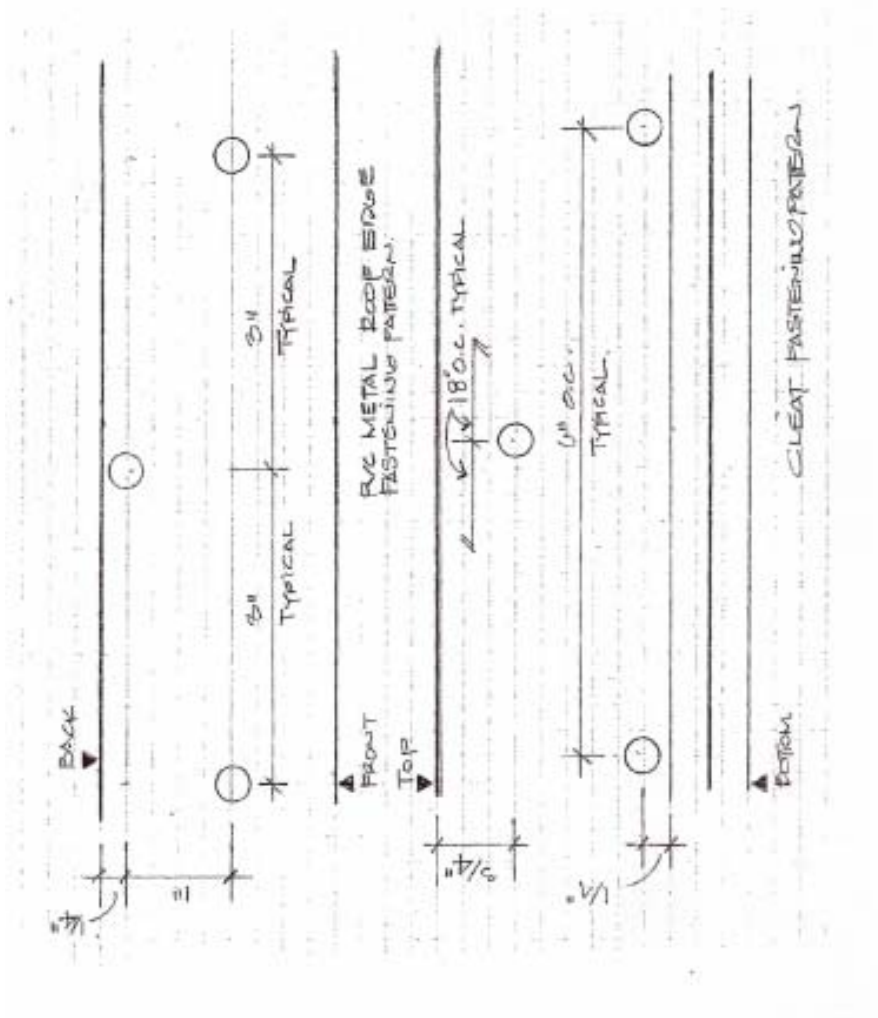


Figure 2: Typical fastener spacing for Duradek PVC/Metal Roof Edge Flashing