

7.2.6 Fasteners and Accessories

Strap fasteners shall be of gauge 24, galvanized iron sheet, 25 mm wide and be sufficiently long for the required connection. Rivets and washer shall be galvanized mild iron. Rivets shall not be less than 5 mm in diameter and 10 mm in length. Washers shall not be less than 1.5 mm thick and 20 mm in outside diameters.

7.2.7 Storage of Material

Corrugated galvanized steel sheets and other molded materials shall be stacked in level sites using lumber placed right angles to corrugation. Stacks shall be kept covered and protected from the weather and from contact with soil.

7.3 Construction Requirements

7.6.4 Roofing and Siding Installation

(1) General

Except as specified otherwise herein, all materials shall be installed in accordance with the manufacturer's printed erection instructions. Care shall be exercised in storing, handling and installing to prevent any damage to roofing sheets. The sheets shall be of the length indicated or the greatest length to suit the purlins spacing. End laps of roofing shall be located over purlins. Extreme care shall be exercised in drilling, pilot holes for fattening to keep drills perpendicularly center valleys or crowns as applicable. After drilling, all melt filings and burrs shall be removed from holes prior to installing fasteners and washers. Sheets deformed or otherwise damaged by over-torque fastenings, shall be removed and new sheets be installed. Size and spacing, of fasteners used in erection shall be as recommended by manufacturer subject to the approval of the consultant. All metal shaving shall be swept from roofs upon completion to prevent rusting and discoloration.

Prior to the installation of roofing, purlins should have been placed and spaced properly to fit the length of roofing sheets to be used.

(2) Installation of Roofing Sheets

Installation of roofing sheets shall start at the lower part of the roof and to proceed towards the direction of the prevailing monsoon wind. Side laps shall be two and a half (2 1/2) corrugations and end laps shall be 250-mm minimum. Each sheet shall be fastened temporarily by a galvanized flat head to be covered by side or end laps. Succeeding upper rows of roofing sheet shall be installed in the same manner until the roof area is covered.

(3) Joint Sealing

To provide watertight construction joint sealing material shall be provided to seal all joint in and around sealing strips at ridges, eaves valleys and, bolt holes before inserting fasteners for all flashing and elsewhere as necessary.

(4) Fastening and riveting

Pre-painted roofing sheets shall be fastened to the purlins by means of metal strap GA. 24, 25 mm wide, strapped to steel purlins and riveted to metal roofing.

Install the ridge roll and gutters when required before fastening the roofing sheets with plain galvanized iron straps and washer. East strap end shall be fastened at every other corrugation along gutter lines and end laps. The other strap end shall be bent around and nailed taut to the purlins. Riveting at intermediate purlins and laps shall be done at every third corrugation. Rivet shall be provided with galvanized iron washers below and above the roofing sheet. Rivets shall be sufficiently long to allow for a hemispherical head formation. Riveting shall be done such that the lead washer will be compressed to provide a watertight fir around the rivets.

|| The use of Teks screw for the installation of the roofing may be adopted upon written approval from the Project Manager.

(5) Flashing

Flashing shall not be bent at sharp angles, but shall be worked to as large radius as possible. Exposed edges of counter-flashing shall not be less than 75 mm and shall be made watertight with plastic cement.

Use cadmium plated or zinc-coated sheet metal screws to secure sheet metal flashing to roofing in accordance with the manufacturer's recommendations and subject tot he approval of the Consultant.

(6) Ridge Rolls

Ridge roll shall be lapped at least 600 mm over the end of roofing sheets and shall be riveted at every second corrugation.

(7) Fabrication of Gutters

Gutters shall be fabricated to the shape and dimensions indicated in the plans. Gutter joints shall be flat seams folded and sealed evenly in the direction of flow. Otherwise, gutter joints shall be lapped at least 25 mm, fastened together with a 3.175 mm diameter or No. 8 copper rivets and burrs and sealed.

Gutter shall be attached to the facial frame with galvanized nails or screws spaced at not less than 900 mm on centers and at a point slightly higher than the leading edge of the gutter. As additional support, gutters shall be fastened to