



Calamba Water District

Lakeview Subdivision, Halang, Calamba, Laguna
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PROJECT : PROPOSED VEHICLE CANOPY
LOCATION : Lakeview, Halang, Calamba City

I. SCOPE OF WORKS

To supply labor and materials for the fabrication and installation of proposed vehicle canopy.

A. Steel and Tinsmithry Works

The work calls for the performance of all operations to install plain GI sheet #24, upholstery, fully welded GI pipes and other miscellaneous items, but required for proper execution of the work. Materials to be applied shall be thoroughly clean, free from any defect or scratches that might affect the quality of the items. Color for upholstery shall be coordinated to owner prior to delivery.

The contractor shall verify all measurements in the field; submit shop drawings to the Engineer or owner's representative, showing sizes, details and method of installation. Installation work shall not commence until all shop drawings are approved.

B. Upholstery

All upholstery fabrics shall be treated with an approved stain/soil Resistant Finish. Such treatment shall be in accordance with all applicable code restrictions and requirements and shall be in accordance with manufacturers' recommendations.

Approved stain/soil Resistant Finishes are as follows:

- a. Fiber-Seal by Fiber-Seal International.*
- b. Scotchgard by 3M.*
- c. Teflon by DuPont.*

II. MATERIAL SPECIFICATIONS

A. Steel and Tinsmithry Works:

1. GI Pipes

Pipes shall be schedule 40

Pipes shall be coated with zinc, both inside and outside surfaces, in accordance to ASTM, A153/A153M-05 (Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware).

Nominal Pipe Size, in	$\frac{1}{2}$	$\frac{3}{4}$
Nominal Diameter, mm	15	20
Pipes		
Outside Diameter, mm	21.3	26.7
Wall Thickness, mm	2.8	2.9
Tolerance		
outside diameter	±0.397	±0.397
Weight per meter, kg	1.27-1.34	1.68-1.78

2. Plain GI Sheet Ga.26

The general requirements relating to the supply of galvanized sheets and strips shall conform to IS 8910. The base metal of plain galvanized sheets and coils shall conform to **IS 1079** or **IS 513**. The zinc ingots used for galvanizing shall conform to any of the grades specified in **IS 209** or **IS 13229**

Zinc Coating: The zinc coating shall conform to the requirement of anyone of the grades prescribed in Table 2, grade 100 and 80 may also be used for non-critical applications and the requirements are specified in **IS 277:2003**. The recommended grade of coating for various thickness of sheet is as follows

SI no.	Thickness	Grade of Zinc Coating
a)	0.18 to 0.28 (both inclusive)	200
b)	0.30 to 0.55 (both inclusive)	220
c)	0.63 to 1.0 (both inclusive)	275
d)	above 1.0 mm	350

Testing: Important physical characteristics of galvanized steel sheets are calculated according to following test standards:

- IS 277: 2003:** To perform Bend test and requirements to be fulfilled
- IS 6745:** Determination of Mass of Zinc Coating and shall conform to the values specified in Table 2

Freedom from Defects: Galvanized plain sheets, corrugated sheets and coils shall be reasonably flat and free from bare spots, pin holes, tears and other harmful defects. However, imperfections such as rough/non-uniform coating, minor dents, water/passivation marks, etc, may be present at certain portions which are not harmful for intended use. Coils, however, may contain some abnormal imperfections which render a portion of the coil unusable since the imperfections in the coil cannot be removed as in the case with cut length.

Mass: The mass of sheets and coils shall be calculated as given in Table 3 on the basis of nominal dimensions and mass of zinc coating

Dimension and Tolerances of Plain sheets/coils: The plain sheets shall be supplied in any combination of the following lengths, widths and thicknesses:

- Length: 1800, 2200, 2500, 2800 and 3000 mm. No sheet shall be smaller in length than that specified. Tolerances on length on plus side shall be 15 mm or 0.5 percent of length whichever is greater. The diagonal distance between opposite corners of any sheet shall not differ by more than 20 mm
- Width: 750, 900, 1000 and 1200 mm. No plain sheet shall be smaller in width than that specified. The positive tolerances on width shall be 10mm

3. Welding Rods: Use 6013 welding rod for all steel and stainless welding rod for stainless works.