

### **2.3.2 Installation - GRP Ladders**

- A. GRP ladders shall be mechanically bonded into the concrete structure by means of suitable lugs or concrete anchors and be also bonded to the internal GRP lining of manholes and wet wells. The bonding lugs shall have a roughened surface to provide adequate bond with concrete and shall project a minimum of 100 mm into the concrete. The geometry of the lugs shall be such that it shall not dislocate from its fixing points.

### **2.3.3 Installation - GRP Hand railing**

- A. Fixings used for anchoring GRP hand railing shall be approved stainless steel anchors. All fixing holes shall be grouted with a two component epoxy mortar and the exposed fixing material sealed with coal tar epoxy or GRP coating as appropriate
- B. Horizontal mounting flanges shall be drilled for not less than three bolts with two bolts on a line parallel to and on the walkway side of the hand railing. Vertical mounting flanges shall be drilled for not less than two bolts the line through the bolts being vertical. Fittings shall be screwed or secured with stainless steel grub screws.

### **2.3.4 Installation - GRP Grab Handles**

- A. Handles shall have a 150 mm x 150 mm square opening when in their final positions. They shall be positioned 400 mm apart and centrally over the ladder as directed by the Engineer and securely anchored into the concrete or block work.

### **2.3.5 Protection of Finished Work**

- A. Protect finished Work and do not permit work to be damaged prior to covering insulation.

### **2.3.6 Quality Control**

- A. Follow Quality control under provisions of Section 01400.

### **2.3.7 Schedules**

- A. Interior Face of Manholes, Pump Stations wet wells: GRP Ladders, Grab Handles and Cages.

**END OF SECTION**