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3.10.1 **SCOPE**

The work described in this section pertains to the adjustments of all appurtenances.

All work described in this section is to be carried out in strict accordance with manufacturer’s recommendations unless otherwise noted.

3.10.2 **VALVE AND CURB BOXES**

Adjustments of valve box tops and curb box tops shall include the replacement of any broken boxes. The Developer shall shorten or lengthen the boxes and stems as required and block the boxes to prevent any settlement. The adjustments shall be made so that the valves operate effectively. The rock guard and operating nut is to be located no closer than 300 mm below finished grade.

Curb box to not be tightened at final install and to be maintained at grade with compacted backfill.

3.10.3 **MANHOLE FRAME ADJUSTMENTS**

Manhole frames shall be adjusted so that the top of the cover conforms exactly to the required elevation. All standard manhole frames shall be firmly set into position with cement.

Where it is necessary to raise manhole frames above the top it shall be done with approved pre-cast rings meeting the requirements of the current issue of ASTM C139 and a bedding of mortar. Under no circumstances shall the depth from the rim of the manhole to the first ladder rung be more than 800 mm. Pre-cast rings or courses of blocks shall be constructed in accordance with the standard drawings in Section 4.

3.10.4 **MANHOLE RECONSTRUCTION**

Manholes may be reconstructed if the adjustment is beyond the limit specified in Section 3.10.3 using pre-cast barrels, which meet the requirements of the current issue of ASTM C478. Should any backfill be required around the manhole below the elevation of the base course surface, reconstruction shall meet requirements of the standard drawings in Section 4.

3.10.5 **CATCH BASIN ADJUSTMENT**

Catch basin frames shall be adjusted so that the cover inlet conforms to the required elevation and face of curb.

All tops shall be set firmly into position with cement. Catch basin frame adjustments are to be done in a manner that provides a minimum of 250 mm clear, in the horizontal, for vertical access through the frame and rings to the sump.

All catch basins located within designated bicycle lanes are to be installed to ensure covers are flush with surrounding
3.10.6 FINAL ELEVATIONS

Tops of valve boxes, manholes, and catch basins shall conform to design elevations. Generally, the following shall apply for setting top elevations:

- Top in asphalt; top 6 mm below surface;
- Top in gravel; top 100 mm below surface;
- Top in landscaped area; top 50 mm above final grade with smooth transition to surrounding areas.