### SECTION 609 – CATCH BASINS, MANHOLES AND INLETS

**DESCRIPTION**

**609.01.01 GENERAL**

***ADD THE FOLLOWING TO THIS SUBSECTION:***

B. The final adjustments and concrete collar for manholes shall be constructed after the final placement of pavement.

**MATERIALS**

**609.02.01 GENERAL**

***add The following to this subsection:***

F. Grout shall conform to ASTM C476 and shall have a minimum strength of 2000 psi. Fine grout shall be proportioned by volume of one part Portland cement and 2-1/4 to 3 parts sand. Coarse grout shall consist of one part Portland cement, 2-1/2 to 3 parts sand, and 1 to 2 parts course aggregate.

G. Laboratory design mixes for grout, approved by a Licensed Professional Engineer in the State of Nevada, are acceptable in lieu of the above proportions and are required if the maximum strength is more than 2000 psi. Grout shall be of a fluid consistency with proper proportions of sand to gravel for pouring and pumping.

H. All exposed steel shall be hot-dipped galvanized per section 715.

I. At lined or T-locked manhole locations, concrete or polyethylene adjustment ring shall be

coated after grouting with and approved anticorrosion mastic putty.

J. The Contractor shall notify the Engineer of any non-standard or broken metal frames and

covers.

**CONSTRUCTION**

NOTE TO SPEC WRITER: Clark County requires steps in manholes; check your jurisdiction limits.

**609.03.01 GENERAL**

***add The following to this subsection:***

I. Steps in drop inlets shall be installed per local entity requirements.

**609.03.02 ADJUSTING CATCH BASIN, MANHOLE, AND INLET COVERS**

***add The following to this subsection:***

E. Frames, grates, and covers shall be match marked in pairs before removal and/or replacement. Covers shall fit into the frames without rocking. The integrity of the frames, grates, and cover are the responsibility of the contractor.

**609.03.03 CLEAN OUT**

***ADD THE FOLLOWING TO THIS SUBSECTION:***

B. The Contractor shall also provide positive means of preventing debris from entering the existing sewer or storm drain lines while work is being performed on the project. The method chosen by the Contractor shall be approved by the Engineer prior to the start of construction.

***ADD THE FOLLOWING SUBSECTION TO THIS SECTION:***

***Note to Spec Writer – Section 693 is to be used on all projects with new sewer and storm drain pipelines and structures, rehabilitated manholes, and rehabilitated sewer lines.***

**609.03.70 VIDEO INSPECTION**

1. Internal video inspection shall be performed by the Contractor per Section 693 – INTERNAL INSPECTION OF SEWER AND STORM DRAIN FACILITIES.

**METHOD OF MEASUREMENT**

**609.04.01 MEASUREMENT**

***ADD THE FOLLOWING TO THIS SUBSECTION:***

The quantity of X-FOOT TYPE X DROP INLET will be measured per each.

The quantity of XX-INCH TYPE X STORM DRAIN MANHOLE will be measured per each.

The quantity of ADJUST COVERS will be measured per each.

The quantity of [FILL IN ITEM DESCRIPTION] will be measured per [UNIT].

No direct measurement shall be made for [FILL IN ITEM DESCRIPTION].

**BASIS OF PAYMENT**

**609.05.01 PAYMENT**

***DELETE THIS SUBSECTION IN ITS ENTIRETY AND REPLACE WITH THE FOLLOWING:***

NOTE TO SPEC WRITER: Make sure video inspection is incidental to new structures

The accepted quantity of X-FOOT TYPE X DROP INLET will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, excavation; shoring; grading; shaping; dewatering; aggregate base materials; granular backfill; drain rock; compaction; dowels; concrete; reinforcing steel; cones; steps; grout; beams; rings; frames; grates; castings; concrete collars around manholes; protection and restoration of all existing facilities; relocation of existing street light pull-boxes in the excavated area; internal video inspection; support and protection of all utilities and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer

The accepted quantity of XX-INCH TYPE X STORM DRAIN MANHOLE will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, excavation; shoring; grading; shaping; dewatering; aggregate base materials; granular backfill; drain rock; compaction; dowels; concrete; reinforcing steel; cones; steps; grout; beams; rings; frames; grates; castings; concrete collars around manholes; protection and restoration of all existing facilities; relocation of existing street light pull-boxes in the excavated area; internal video inspection; support and protection of all utilities and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

The accepted quantity of ADJUST EXISTING MANHOLE COVER TO FINISHED GRADE will be paid for at the contract unit price of each and shall include all materials, equipment and labor required including, but not limited to, sawcutting; pavement removal; excavation; base preparation; concrete; reinforcing steel; forming; grout; grade rings; concrete finishing and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

Unless otherwise provided in the Special Provisions, no payment will be made for Internal Video Inspection as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which Internal Video Inspection is required.

The accepted quantity of [FILL IN ITEM DESCRIPTION] will be paid for at the contract unit price of [UNIT] and shall include all materials, equipment and labor required including, but not limited to, [FILL IN] and all other items necessary to complete the work as shown on the Plans, as specified herein and as directed by the Engineer.

The accepted quantity of [FILL IN ITEM DESCRIPTION] will be paid for at the contract unit price of [UNIT] and shall conform to the requirements of subsection 605.05.01 of the Uniform Standard Specifications and shall include all materials, equipment, labor and disposal required to perform this work and all work as shown on the Plans, as specified herein and as directed by the Engineer. The above payment shall also include,

Unless otherwise provided in the Special Provisions, no payment will be made for [FILL IN ITEM DESCRIPTION] as such. The cost thereof shall be considered as included in the price bid for construction or installation of the items to which [FILL IN ITEM DESCRIPTION] is required.

Payment will be made under:

|  |  |  |
| --- | --- | --- |
| **ITEM NO.** | **ITEM DESCRIPTION** | **UOM** |
| 609.XXXX | XX-INCH TYPE X STORM DRAIN MANHOLE | EA |
| 609.XXXX | X-FOOT TYPE X DROP INLET | EA |
| 609.0700 | ADJUST EXISTING MANHOLE COVER TO FINISHED GRADE | EA |

**END OF SECTION 609**