

# **ITEMIZED SPECIFICATION NUMBER TEN**

## **CATCH BASINS**

10.1 **SCOPE** - This item shall include the furnishing of all material for and the construction of catch basins, including frames and grates, of the type as herein specified and as shown on Standard Drawing No. 4.

All work, including excavation and backfill, shall be in accordance with all applicable requirements previously specified in the GENERAL SPECIFICATIONS.

10.2 **CATCH BASINS** - Catch basins shall be constructed as detailed in the Drawings and shall be furnished with cast iron frames and grates. Concrete and concrete work shall be as previously specified in GENERAL SPECIFICATION NUMBER ONE. Catch basins shall be set plumb and at the proper elevation.

Where approved by the Engineer, brick and block masonry may be used in lieu of precast concrete structures with the following requirements: All brick and block catch basins shall be constructed on a Class II concrete base of the size as indicated in the Drawings. The minimum base thickness shall be 8", unless the base will be constructed on solid rock. In such case the base thickness may be decreased to 6". Walls shall be constructed of solid concrete blocks not less than 8-inches thick and shall be firmly keyed together with mortar joints. Blocks shall have an average compressive strength of at least 2000 pounds per square inch. No individual block shall test less than 1500 pounds per square inch. Blocks shall show an average absorption of not less than 8 percent. All results shall be the average of tests on at least 5 specimens.

Precast catch basins shall be provided with knockouts for future shallow pipe underdrains at the location and elevations shown on the Drawings.

Precast Concrete Catch Basins shall have 6" thick walls and have the same inside dimensions as shown on the Drawings. Reinforcing shall be sufficient to prevent damage during shipping and placement.

Furnish and install a cast iron catch basin frame and grate. The frame and grate shall be as shown on the Drawings for the respective type curb.

Each catch basin which is connected to a combined sewer or where shown on the Drawings, shall be provided with a trap as detailed on the Drawings. All catch basins with traps shall be provided with two foot (2') deep sumps. The size of the outlet depends on the size of the catch basin connection.

Upon completion of the catch basin, the space between the walls and the face of the excavation shall be backfilled in the same manner as specified for backfilling sewer trenches, (GENERAL

SPECIFICATION NUMBER TWO). Backfilling shall not begin, until the mortar placed on the outside has had a sufficient time to set.

10.3 **CATCH BASIN RECONSTRUCTED TO GRADE** - Existing catch basins, where shown on the Drawings, shall be reconstructed to grade in accordance with all applicable requirements of ODOT Item 604 and as described on the Drawings. Existing frames and grates shall be revised unless new frames and grates are provided by the Owner.

10.4 **CATCH BASIN REPLACED** – Existing catch basins shall be replaced in accordance with details shown on the plans. This work shall include the removal of the catch basin top, casting and walls. The existing catch basin invert and pipes shall remain in place. A new “dog-house” style catch basin structure shall be installed over the catch basin invert and pipes. A grout material shall be placed around the interface between the existing catch basin invert and pipes and the bottom of the new catch basin wall to provide a seal around the new catch basin structure.

Materials for the replacement of catch basins shall be provided in accordance with the requirements of this specification.

Curb, gutter and pipe replaced as part of this replacement of catch basin item shall be paid under the appropriate bid item for curb removal, new concrete curb and pipe sewers.

10.5 **PVC CATCH BASIN** – Where indicated on the drawings, provide PVC Catch Basins in compliance with these specifications and the manufacturers requirements. Nylo Plast drain basins, or approved equals shall be used. Frame and grate shall be by Nylo Plast or approved equal. Frame and grate shall be flush with finished grades and swales shall be sloped to promote drainage to the basins.

Materials for the PVC basin shall meet ASTM D3034 and ASTM F1336. Joints shall meet ASTM D3212. The frame and grates shall conform to ASTM A536 grade 70-50-05 for ductile iron and ASTM A-48-83 Class 30B for cast iron.

10.6 **MINOR DETAILS** - Minor details not specifically mentioned in these Specifications nor shown on the Drawings, but necessary to secure a workmanlike job and proper operation, shall be provided by the CONTRACTOR without extra cost.

10.7 **PRICE BID** - The price bid for Catch Basins and Catch Basins Reconstructed to Grade shall include all necessary materials, labor, tools, and equipment to construct Catch Basins as described in the specifications and shown on the Drawings and shall be the price bid per each, installed complete.

<b><u>ITEM</u></b>	<b><u>ODOT NO.</u></b>	<b><u>DESCRIPTION</u></b>	<b><u>UNIT</u></b>
10a	202	Catch Basin Removed	EA
10b	604	Catch Basin	EA