

REINFORCED OR PLAIN CONCRETE	12"
ALL METAL PIPE	15"
CPSSP* (STD. SPEC. 9-05.20)	12"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	15"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	15"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

- As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
- The knockout diameter shall not be greater than 20". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with WSDOT Standard Specifications.
- The maximum depth from the finished grade to the lowest pipe invert shall be 5".
- The frame and grate shall be installed with the flange down.
- The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
- The opening shall be measured at the top of the precast base section.
- All pickup holes shall be grouted full after the basin has been placed.

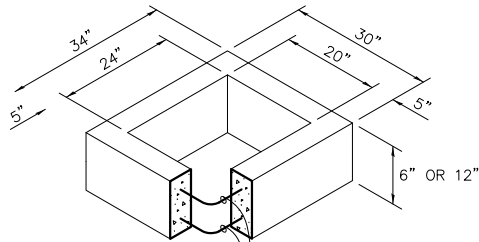
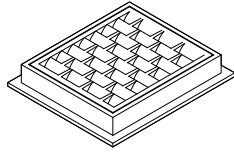


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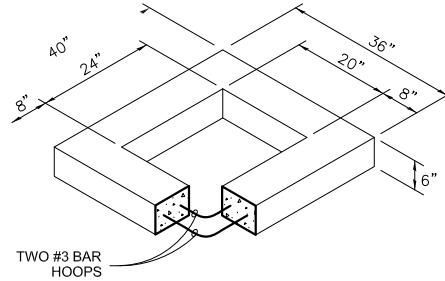
Catch Basin Type 1

Detail 5-01

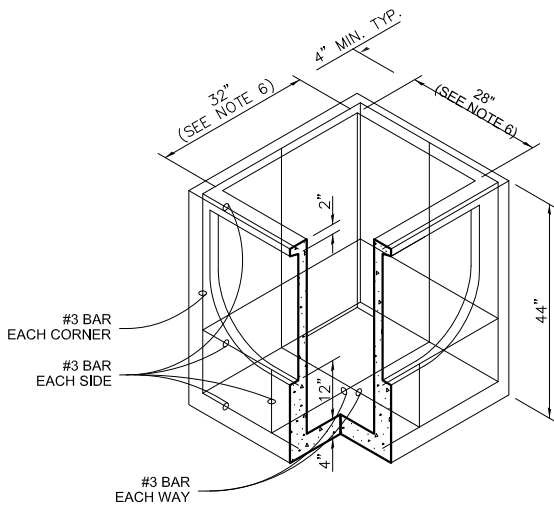
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ONE #3 BAR HOOP FOR 6" HEIGHT
TWO #3 BAR HOOPS FOR 12" HEIGHT

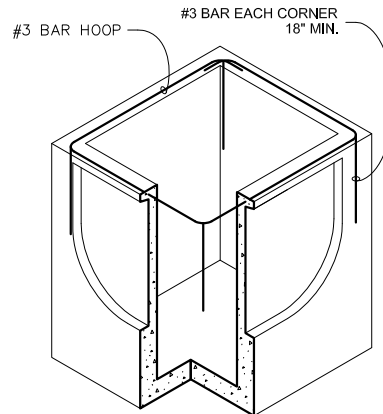


TWO #3 BAR HOOPS



#3 BAR EACH CORNER
#3 BAR EACH SIDE

#3 BAR EACH WAY



#3 BAR HOOP #3 BAR EACH CORNER 18" MIN.

SEE NOTE 1

REINFORCED OR PLAIN CONCRETE	18"
ALL METAL PIPE	21"
CPSSP* (STD. SPEC. 9-05.20)	18"
SOLID WALL PVC (STD. SPEC. 9-05.12(1))	21"
PROFILE WALL PVC (STD. SPEC. 9-05.12(2))	21"

* CORRUGATED POLYETHYLENE STORM SEWER PIPE

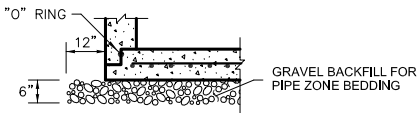
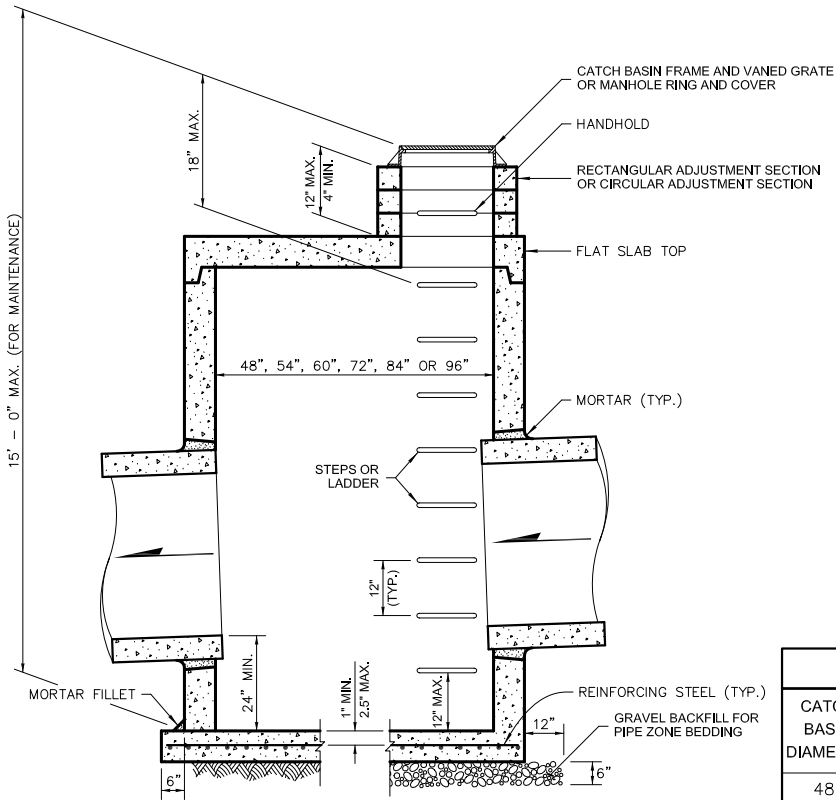
1. As acceptable alternatives to the rebar shown in the **PRECAST BASE SECTION**, fibers (placed according to the Standard Specifications), or wire mesh having a minimum area of 0.12 square inches per foot shall be used with the minimum required rebar shown in the **ALTERNATIVE PRECAST BASE SECTION**. Wire mesh shall not be placed in the knockouts.
2. The knockout diameter shall not be greater than 26". Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with WSDOT Standard Specifications.
3. The maximum depth from the finished grade to the lowest pipe invert shall be 5'.
4. The frame and grate shall be installed with the flange down.
5. The Precast Base Section may have a rounded floor, and the walls may be sloped at a rate of 1:24 or steeper.
6. The opening shall be measured at the top of the precast base section.
7. All pickup holes shall be grouted full after the basin has been placed.



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Catch Basin Type 1L

Detail 5-02
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CATCH BASIN DIAMETER	PIPE MATERIAL WITH MAX INSIDE DIAMETER				
	CONCRETE	ALL METAL	CPSSP	SOLID WALL PVC	PROFILE WALL PVC
48"	24"	30"	24"	27"	30"
54"	30"	36"	30"	27"	36"
60"	36"	42"	36"	36"	42"
72"	42"	54"	42"	36"	48"
84"	54"	60"	54"	36"	48"
96"	60"	72"	60"	36"	48"

CATCH BASIN DIAMETER	WALL THICKNESS	MIN. GAP	PIPE DIAMETER	STEP HEIGHT	SQ. IN. / FT. IN EA. DIRECTION	
					VERTICAL	HORIZONTAL
48"	4"	6"	36"	8"	0.23	0.15
54"	4.5"	8"	42"	8"	0.19	0.19
60"	5"	8"	48"	8"	0.25	0.25
72"	6"	8"	60"	12"	0.35	0.24
84"	8"	12"	72"	12"	0.39	0.29
96"	8"	12"	84"	12"	0.39	0.29

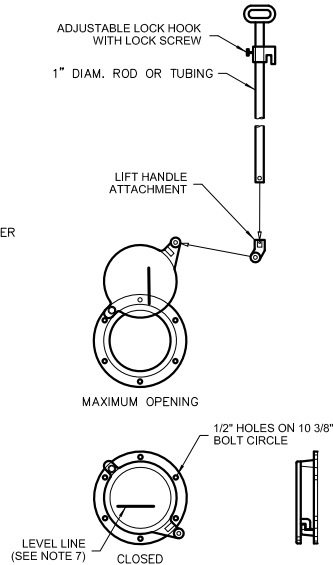
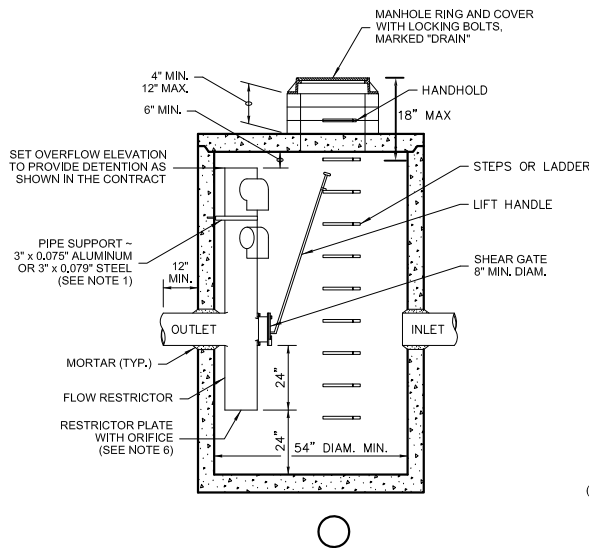
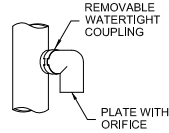
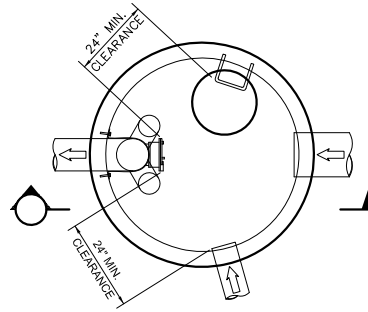
1. No steps are required when height is 4' or less.
2. The bottom of the precast catch basin may be sloped to facilitate cleaning.
3. The rectangular frame and grate shall be installed with the flange down.
4. Knockouts shall have a wall thickness of 2" minimum to 2.5" maximum. Provide a 1.5" minimum gap between the knockout wall and the outside of the pipe. After the pipe is installed, fill the gap with joint mortar in accordance with WSDOT Standard Specifications.



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Catch Basin Type 2

Detail 5-03
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1. The pipe supports and the flow restrictor shall be constructed of the same material and be anchored at a maximum spacing of 36". Attach the pipe supports to the manhole with 5/8" stainless steel expansion bolts or embed the supports into the manhole wall 2".
2. The vertical riser stem of the flow restrictor shall be the same diameter as the horizontal outlet pipe with a minimum diameter of 8".
3. The flow restrictor shall be fabricated from one of the following materials:
 - 0.060" Corrugated Aluminum Alloy Drain Pipe
 - 0.064" Corrugated Galvanized Steel Drain Pipe with Treatment 1
 - 0.064" Corrugated Aluminized Steel Drain Pipe
 - 0.060" Aluminum alloy flat sheet, in accordance with ASTM B 209, 5052 H32 or EPS
 - High Density Polyethylene Storm Sewer Pipe
4. The frame and ladder or steps are to be offset so that: the shear gate is visible from the top; the climb-down space is clear of the riser and gate; the frame is clear of the curb.
5. The multi-orifice elbows may be located as shown, or all placed on one side of the riser to assure ladder clearance. The size of the elbows and their placement shall be specified in the Contract.
6. Restrictor plate with orifice as specified in the Contract. The opening is to be cut round and smooth.
7. The shear gate shall be made of aluminum alloy in accordance with ASTM B 26 and ASTM B 275, designation ZG32A; or cast iron in accordance with ASTM A 48, Class 30B.

The lift handle shall be made of a similar metal to the gate (to prevent galvanic corrosion), it may be of solid rod or hollow tubing, with adjustable hook as required.

A neoprene rubber gasket is required between the riser mounting flange and the gate flange.

Install the gate so that the level-line mark is level when the gate is closed.
8. The mating surfaces of the lid and the body shall be machined for proper fit.
 - All shear gate bolts shall be stainless steel.
9. The shear gate maximum opening shall be controlled by limited hinge movement, a stop tab, or some other device.

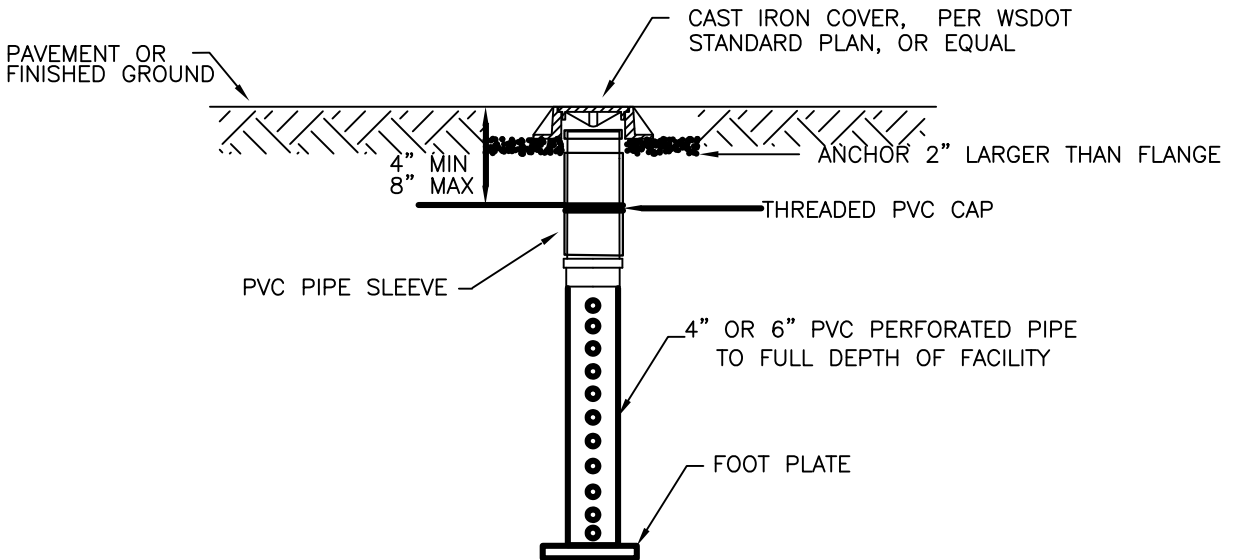
Alternative shear gate designs are acceptable if material specifications are met and flange bolt pattern matches.



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Catch Basin Type 2
with Flow Restrictor

Detail 5-04
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BEDDING AND BACKFILL SHALL BE PER DETAIL 6-02



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INFILTRATION OBSERVATION
WELL IN RIGHT OF WAY

DETAIL 5-05
Approval Date: