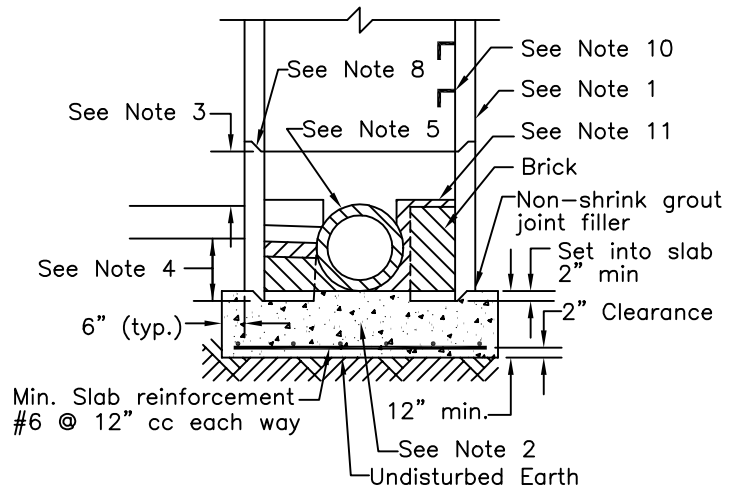
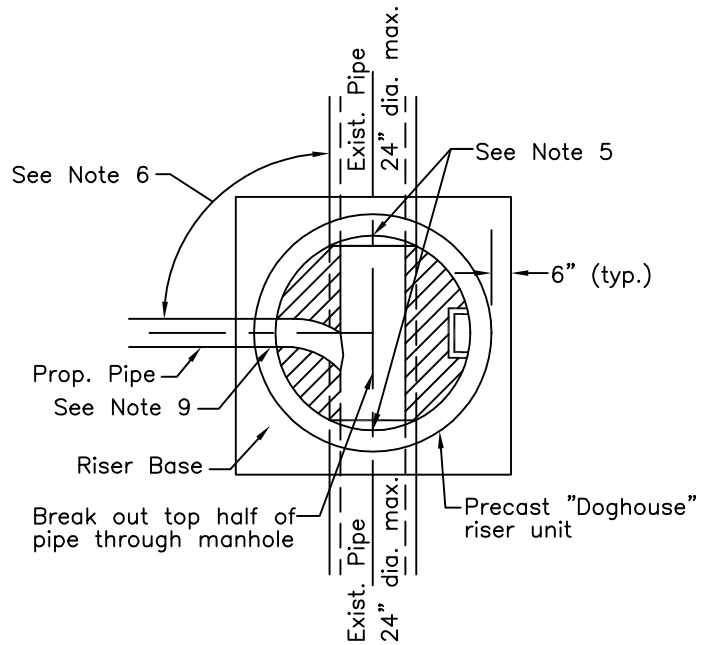

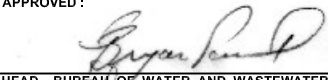



**NOTES:**

1. Manhole design specifications shall conform to "Precast Reinforced Concrete Manhole Section A.S.T.M. designation C-478, latest revisions".
2. Manhole base shall be Mix No. 3 (3,500 psi) poured-in-place concrete.
3. Provide 12" minimum clearance from top of highest pipe opening to upper riser joint.
4. Provide 6" minimum clearance from incoming pipe opening to bottom of doghouse unit.
5. Minimum 1" clearance shall be maintained between existing pipes and precast doghouse pipe openings. Openings shall be grouted with non-shrink grout joint filler.
6. Locate centerline of proposed incoming pipe a maximum of 90 degrees from existing incoming pipe, on either side of manhole. In all cases, a minimum 1" wide section of manhole wall shall be maintained between pipe openings in doghouse base unit.
7. See standard detail BC-831.04 for precast sanitary manhole risers use with doghouse riser shown.
8. The manufacturer shall form male and female ends of joints using their own designs. The joints shall be sealed by the contractor and made water tight using "O" ring rubber gaskets meeting A.S.T.M. C-443 and C-361. Any excessive openings within the joints shall be filled using a non-shrink grout filler.
9. The proposed pipe shall be sealed at manhole using an "A-LOK" gasket as manufactured by A-LOK Products Inc. or an approved equal meeting A.S.T.M. C-923, cast integrally in the manhole wall.
10. Ladder rungs shall be supplied and installed by the manufacturer in vertical alignment at 1'-0" typical c/c. Rung type shall be in accordance with Standard B.C.-831.31. Ladder rungs shall be incidental to the cost of the manhole.
11. Bench and channel to be constructed of one course of sewer brick on edge. Bench to slope a minimum of 1" per foot towards channel.



	APPROVED: 	CITY OF BALTIMORE DEPARTMENT OF PUBLIC WORKS BUREAU OF WATER AND WASTEWATER	ISSUED	REVISED	REVISED
	HEAD, BUREAU OF WATER AND WASTEWATER 		3 / 2008		
48" DIAMETER PRECAST "DOGHOUSE" RISER FOR PIPE DIAMETERS UP TO 24" TITLE LINE 4			STANDARD NO. BC 831.07		
			SCALE : NONE	SHEET 1 OF 1	