1. Since all pipe entries into the base are variable, the dimensions shown are typical. Actual dimensions and quantities for concrete and reinforcement shall be as required in the work.

2. The preset plan for pipe entry may be used on any manhole. The eccentric cone may be used when the manhole height is at least 6 ft.

3. The manhole ring frame shall be set in a bed of concrete. The frame shall be surrounded with a cement grout in concrete areas. A concrete collar in paved area or details on sheets 2 and 3.

4. Design of box base is based on standard ring of pipe of change in direction of less than 45°. Special design is required for 45° or greater.

5. Precast manholes and reinforcement shall conform to ASTM C 478.

6. Flow channels and invert shall be formed by shaping concrete. The slope of the manhole cover shall match the roadway profile and cross slope.

7. Steps shall be required when the manhole depth exceeds 3 ft. - 6 in. and shall conform to AASHTO M 199.

8. All reinforcing steel shall be grade 60 and epoxy coated.

9. All pipe entries into the base of manhole shall be connected by open channelization adjusted for pipe size, shape, and direction of flow. Details shown are typical for installations with all flows of same relative elevation for excessive elevation difference between invert, special base/channel details will be shown on the plans.

10. Flow channels and invert shall be formed by shaping with class B concrete or approved concrete. The slope of the manhole cover shall match the roadway profile and cross slope.

11. The slope of the manhole cover shall match the roadway profile and cross slope. When final grade is pavement surface, recess manhole ring and cover 3/4 in. to 5/8 in.
FLEXIBLE JOINT SEAL SHALL CONFORM TO AASHTO M198 (TYP.) CLASS B CONCRETE BASE

TOE POCKETS AT 16" O.C. IF TOP OF BENCH ~18" ABOVE INVERT MANHOLE RISER

SECTION 8-8:
BASE MAY BE POURED SQUARE AT CONTRACTOR'S OPTION.

SECTION B-B:
BASE MAY BE POURED SQUARE AT CONTRACTOR'S OPTION.

SECTION D-D:
BASE MAY BE POURED SQUARE AT CONTRACTOR'S OPTION.

SECTION C-C:
CAST-IN-PLACE SLAB BASE

SECTION E-E:
PRECAST SLAB BASE

MANHOLE RISER DETAIL

LEGEND

PRECAST MANHOLE BASES NOTES:
1. THE BASE SLAB SHALL BE POURED MONOLITHICALLY WITH BOTTOM RISER SECTION.
2. PRECAST MANHOLE BASES SHALL FIT THE CONDITIONS AND LOCATIONS FOR WHICH THEY ARE SUPPLIED AND FIELD MODIFICATIONS TO MANHOLE BASES WHICH REQUIRE FIELD CUTTING OR MODIFICATION IN ORDER TO FIT THE LOCATIONS INTENDED WILL BE REJECTED BY THE ENGINEER AND REMOVED AND REPLACED BY THE CONTRACTOR AT NO COST TO THE DEPARTMENT.
3. PRECAST MANHOLE BASES SHALL BE BEDDED ON AN APPROVED GRANULAR BEDDING MATERIAL AS SHOWN ABOVE.
WHEN ADJUSTMENT HEIGHT IS 3 IN. OR LESS, METAL ADJUSTMENT RINGS COMPATIBLE WITH THE EXISTING MANHOLE RING AND COVER MAY BE USED IF APPROVED BY THE ENGINEER.

CONCRETE COLLAR OR FULL DEPTH HMA PATCHING

T-BASE MANHOLES NOTES

1. THE T-BASE SECTION SHALL BE SHOP-FABRICATED FOR DELIVERY TO THE CONSTRUCTION SITE AS A COMPLETE UNIT.

2. THESE DETAILS SHOW ONLY THE CONCEPTUAL AND STANDARD DIMENSIONAL REQUIREMENTS FOR T-BASE MANHOLES. THE CONTRACTOR SHALL FURNISH DETAILED SHOP DRAWINGS FOR APPROVAL PRIOR TO FABRICATION. THE DETAILS SHOWN HEREIN APPLY ONLY TO 48 IN. AND GREATER DIAMETER PIPES.

3. EXCEPT FOR CLASS OF PIPE, SPECIFICATIONS FOR THE MANHOLE SHALL BE THE SAME AS THOSE REQUIRED FOR THE ADJOINING PIPE.

4. THE T-BASE SECTION SHALL MAINTAIN ITS INTERNAL SHAPE AND CROSS-SECTIONAL AREA. GROUTING OR FILLING SHALL BE APPLIED SO AS TO NOT DISTURB THE NORMAL FLOW OR REDUCE THE AREA.

CIRCULAR RIGID PIPE (LONGITUDINAL SECTION)

CIRCULAR RIGID PIPE (TRANSVERSE SECTION)