NOTES:

1. SEPARATION DISTANCES AND/OR EXTRA PROTECTION SHALL BE REQUIRED TO PROTECT WATER MAINS FROM CONTAMINATION BY SANITARY SEWER MAINS.

2. SEE CROSS INSTALLATION DETAIL ON THIS SHEET FOR LIMITS OF SEPARATION/EXTRA PROTECTION. ALL DISTANCES ARE MEASURED PERPENDICULARLY FROM THE OUTSIDE OF THE PIPES.

A. NO WATER MAINS OR UTILITY CONDUITS SHALL FALL WITHIN ZONE A.

B. EXTRA PROTECTION WILL BE REQUIRED WHEN THE WATER MAIN FALLS WITHIN ZONE B. EXTRA PROTECTION SHALL CONSIST OF CONSTRUCTING SANITARY SEWER MAINS WITH MECHANICAL JOINTS OR RESTRAINED JOINT DUCTILE IRON PIPE. DUCTILE IRON PIPE SHALL COMPLY WITH THE REQUIREMENTS FOR SEWER INSTALLATION. IN A CROSSING, THE NUMBER OF JOINTS SHALL BE HELD TO A MINIMUM WITH ONE FULL JOINT OF PIPE CENTERED OVER/UNDER THE OTHER. AN ALTERNATIVE PROTECTION MAY CONSIST OF ENCASING SEWER MAINS IN REINFORCED CONCRETE PER MAG STD. DETAIL 404-3.

C. NO ADDITIONAL PROTECTION WILL BE REQUIRED OUTSIDE OF ZONES A AND B.

D. WATER MAINS PERMITTED IN ZONE C ONLY WITH WRITTEN PERMISSION FROM THE WATER RESOURCES DEPARTMENT.

3. SEPARATION REQUIREMENTS FOR 4" OR 6" INDIVIDUAL HOUSE SERVICE CONNECTIONS SHALL COMPLY WITH THE PLUMBING CODES ADOPTED BY THE CITY.

4. RECLAIMED WATER SHALL BE CONSIDERED AS POTABLE WATER WHEN PLACED NEXT TO A SANITARY SEWER AND CONSIDERED A PRESSURE OR FORCED SEWER MAIN, WHEN PLACED NEXT TO A POTABLE WATER MAIN.

5. ZONE A IS 24" WHERE WATER MAINS AND UTILITY CONDUITS CROSS PRESSURE SEWER MAINS.

6. THIS DRAWING REVISES MAG STD. DETAIL 404-1 ONLY. MAG STD. DETAILS 404-2 & 404-3 REMAIN INTACT.

7. REFERENCE COS STANDARD DETAIL 2370 AND 2372.
FORCE MAIN DISCHARGE MANHOLE

Standard Details

City of Scottsdale

DETAIL NO. 2402

D.I.P. FOR 3" PIPE AND ABOVE, SCHEDULE 80 PVC FOR 2" PIPE AND BELOW

ELASTOMERIC SEAL, ADEKA SEAL OR APPROVED EQUAL

STAINLESS STEEL FASTENERS AS NEEDED, 2 MINIMUM

NOTE: DISCHARGE OUTLET SHALL NEVER BE BELOW CROWN OF DOWNSTREAM PIPE

MJ X PLAIN END 90° ELBOW RESTRAINED TO DIRECT FLOW DOWN STREAM.

FLG CROSS

BLIND FLANGE W/ STAINLESS STEEL BOLTS, 3" AND ABOVE. IPT CAP, 2" AND BELOW.

5' MIN
30" MANHOLE RING AND COVER WITH ADJUSTING RINGS. CENTER OVER OPENING (SCOTTSDALE SEWER)

PRE-CAST CONCRETE VAULT
4" MIN. WIDTH, 2" CLEAR ON BOTH SIDES OF PIPE.

FINISHED GRADE

2" UNLESS LOCATED IN ROADWAY

MJ PLUG OR CAPS

PLUG VALVE TYPICAL THROUGHOUT

FULL PORT VALVE

RISER PIPES SAME DIA. AS FORCE MAIN

PROVIDE KNOCK OUTS AROUND FORCE MAIN

CRUSHED STONE

ADEKA SEAL OR APPROVED EQUAL AROUND ENTIRE PIPE

BETWEEN WALLS.

CONCRETE WALL

CEMENT GROUT

SEAL DETAIL

NOTE: TO BE USED FOR ALL PIPES PASSING THROUGH WALLS.

FOOTER PER MANUFACTURER'S RECOMMENDATIONS

RESTRAINED SOLID SLEEVES. TYPICAL

PVC OR DIP

PVC OR DIP

6" MIN.

6" MIN.

4" MIN.

WALL PIPE

* NOTE: ALL PIPING 4" AND LARGER IN CLEAN-OUT CHAMBER, EXCEPT AS NOTED, TO BE DUCTILE IRON CONNECTED WITH FLANGED JOINTS AND STAINLESS STEEL BOLTS.
SEWAGE AIR RELEASE VALVE (APCO Model 400, 1 1/2" VALVE HEIGHT, OR APPROVED EQUAL) SUPPORT AIR RELEASE VALVE AS NEEDED

30" MANHOLE RING AND COVER WITH ADJUSTING RINGS, CENTER OVER OPENING. (SCOTTSDALE SEWER)

SEWAGE AIR RELEASE VALVE

2" UNLESS LOCATED IN ROADWAY

PRE-CAST CONCRETE VAULT 4' MIN. WIDTH, 2' CLEAR ON BOTH SIDES OF PIPE.

FLANGED WYE 6" MIN.

OUTS AROUND PROVIDE KNOCK OUTS AROUND FORCE MAIN

MJ PLUG OR CAPS 8'-4" MJ PLUG OR CAPS THROUGHOUT

PLUG VALVE TYPICAL

FLANGED WYE LAT. W/45° PROVIDE KNOCK OUTS AROUND FORCE MAIN

RISER PIPES SAME DIA. AS FORCE MAIN

RISER PIPES 4" MIN.

4" HOSE WITH QUICK COUPLER 2' LONG BACK FLUSHING HOSE ATTACHED AT FREE END.

FORCE MAIN HEIGHT, OR APPROVED EQUAL SUPPORT AIR

PVC OR DIP 6" MIN.

CRUSHED STONE

FOOTER PER MANUFACTURER'S RECOMMENDATIONS

RESTRAINED SOLID SLEEVE, TYPICAL

CONCRETE WALL

CEMENT GROUT

SEAL DETAIL

NOTE: TO BE USED FOR ALL PIPES PASSING THROUGH WALLS.

* NOTE: ALL PIPING WITHIN THE VAULT TO HAVE FLANGED JOINTS WITH STAINLESS STEEL BOLTS. PIPING 4" AND LARGER TO BE DUCTILE IRON. ALL OTHER PIPING TO BE PAINTED STEEL

FORCE MAIN CLEANOUT WITH SEWAGE AIR RELEASE VALVE

DETAIL NO. 2404 City of Scottsdale Standard Details APPROVED BY: Scottsdale Standards & Specifications Committee
SEWER AIR RELEASE VALVE

Standard Details

City of Scottsdale

DETAIL NO.

SEAL DETAIL

THROUGH WALLS.

FOR ALL PIPES PASSING

NOTE: TO BE USED

CONCRETE WALL

OR APPROVED

EQUAL AROUND

WALL PIPE

GROUT

30" MANHOLE RING AND
COVER WITH ADJUSTING
RINGS. CENTER OVER OPENING.
(CITY OF SCOTTSDALE)

FINISHED GRADE

2" UNLESS LOCATED
IN ROADWAY

AIR RELEASE VALVE
ENLARGED TO SHOW
DETAIL

SEWAGE AIR RELEASE VALVE
(APCO MODEL 400, 17 1/2"
VALVE HEIGHT, OR APPROVED
EQUAL) CENTER IN VAULT
AND SUPPORT AIR RELEASE
VALVE AS NEEDED

PROVIDE KNOCK OUTS
AROUND FORCE MAIN

4" MANHOLE RING AND
COVER WITH ADJUSTING
RINGS. CENTER OVER OPENING.
(CITY OF SCOTTSDALE)

FINISHED GRADE

2' FOOT LONG BACK FLUSHING
HOSE WITH QUICK COUPLER
ATTACHED AT FREE END.

60" DIA. MANHOLE

PLUG VALVE

5" MIN.

4" DIP

4" SOLID SLEEVE
RESTRAINED, TYPICAL
BOTH SIDES.

CRUSHED STONE

* NOTE: ALL PIPING, EXCEPT AS
NOTED, TO BE DUCTILE IRON
WITH FLANGE JOINTS AND
STAINLESS STEEL BOLTS.

ADEXA SEAL
OR APPROVED
EQUAL AROUND
ENTIRE PIPE

CONCRETE WALL

CEMENT GROUT

SEAL DETAIL

NOTE: TO BE USED
FOR ALL PIPES PASSING
THROUGH WALLS.
BOLTDOWN, WATERTIGHT MANHOLE RING & COVER (SCOTTSDALE SEWER)

6" CLASS 'B' CONCRETE ENCASEMENT FROM RING & COVER TO TOP OF MANHOLE CONE SECTION

6" CLASS 'B' CONCRETE ENCASEMENT FROM RING & COVER TO TOP OF MANHOLE CONE SECTION

CONCRETE SEWER MANHOLE
PER MAG STD DETAIL 420
(WITHOUT MANHOLE STEPS)
NOTES

2. The Total Width Of Individual Letters To Be Such That Letters And Words Are Equally Spaced And Balanced.
3. Letters To Be 2" In Height And Raised 1/8" Above Level Of Cover. Type Of Letters To Be Submitted For Approval.
1. All construction shall conform to MAG Specifications and Details and City of Scottsdale Supplement to MAG Specifications and Details, unless modified on the plans.

2. All concrete for the flume walls inside the structure shall conform to MAG section 725, Class A, minimum compressive strength at 28 days = 3,000 psi.

3. All concrete for the grout fillet inside the structure shall conform to MAG section 725, Class A, minimum compressive strength at 28 days = 2,000 psi.

4. All steel reinforcing shall be deformed bars, Grade 60, billet steel conforming to ASTM Specification No. A 615, latest edition.

5. The Monitoring/Sampling Vault shall be installed on the owner's property as close to the customer tap to the City sewer as feasible, and approved by the City of Scottsdale.

6. Flume size should be based upon the minimum and maximum flow rates and velocities to insure free-flow conditions.

   - Maximum Flow = 100% - 100% maximum capacity of selected flume size.

7. Flume floor elevation should be high enough, relative to downstream conditions, to prevent submersion of selected flume size. Install the flume level (longitudinally and transversely) in the converging section.

8. Upstream flow should be wave free, nor-turbulent, and symmetrical having a uniform velocity (80% minimum to 3 ft maximum) at least 10 times the diameter of the upstream sewer pipe in length. In the approach channel, bends upstream in the flume will not be allowed for a distance of 25 ft between meters unless conditions in the approach section of the flume will not be adversely affected.

9. The flume shall be installed self-centering and away from the ladder to allow the maximum working space for City personnel.

10. It shall be the owner's responsibility to properly maintain the flume in accordance with the manufacturers recommendations to ensure the accuracy of the measurement.