

OAK LODGE

WATER SERVICES

SEWER SYSTEM STANDARD DRAWING INDEX

STANDARD DRAWINGS

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| 4 | | | | DISTRICT ENGINEER |

NOTES:

1. CONSTRUCTION OF IMPROVEMENTS SHALL BE IN ACCORDANCE WITH OAK LODGE WATER SERVICES (OLWS a.k.a. DISTRICT) DEVELOPER EXTENSION AGREEMENT (as applicable), DISTRICT STANDARD DETAILS AND THE OREGON STANDARD SPECIFICATIONS FOR CONSTRUCTION, MOST CURRENT EDITION, AS ISSUED BY THE OR. STATE DEPT. OF TRANSPORTATION.
2. A PRE-CONSTRUCTION CONFERENCE IS REQUIRED PRIOR TO CONSTRUCTION AND 48 HOURS ADVANCE NOTIFICATION OF THE LOCAL MUNICIPALITY, OLWS AND ALL AFFECTED UTILITY COMPANIES PRIOR TO THE ACTUAL START OF WORK.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLYING WITH THE PROVISIONS OF THE ROAD OPENING PERMIT AS ISSUED BY CLACKAMAS COUNTY.
4. LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO VERIFY, LOCATE AND PROTECT ALL UTILITIES WITHIN THE PROJECT AREA. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACING OR REPAIRING ANY UTILITIES DAMAGED DURING CONSTRUCTION. SHOW THESE UTILITIES ON THE AS-BUILTS. IF A UTILITY IS DAMAGED, THE CONTRACTOR SHALL NOTIFY THE AFFECTED UTILITY COMPANY IMMEDIATELY.
5. SANITARY MAIN TRENCH SECTION AND ALL EXCAVATED AREAS SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE STANDARD DETAILS, THE ROAD OPENING PERMIT, AND WITH SECTION 01140.40 OF THE STANDARD SPECIFICATIONS. COMPACTION TESTING SHALL BE REQUIRED DURING BACKFILLING OPERATIONS WITHIN ALL ROADWAYS AND AT THE DISCRETION OF THE DISTRICT. IF TRENCH BACKFILL DOES NOT MEET COMPACTION REQUIREMENTS, CONTRACTOR SHALL EXCAVATE, RECOMPACT AND RETEST MATERIAL AT CONTRACTOR'S EXPENSE.
6. RESTORATION OF DAMAGED ROAD SURFACING SHALL BE IN ACCORDANCE WITH CLACKAMAS COUNTY REQUIREMENTS. ALL OTHER AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR AS DIRECTED BY THE DISTRICT. THIS INCLUDES SHOULDERS, LANDSCAPING, WALLS, DRIVEWAYS, FENCES AND OTHER IMPROVEMENTS.
7. POLYVINYL CHLORIDE PIPE (PVC) SHALL CONFORM TO THE REQUIREMENTS OF ASTM D-3034, SDR 35, AND JOINT TYPE SHALL BE ELASTOMERIC GASKET CONFORMING TO ASTM D-3212.
8. MANHOLES TO BE PRECAST CONCRETE SECTIONS WITH MINIMUM INSIDE DIAMETER OF 48-INCHES, CONFORMING TO THE REQUIREMENTS OF ASTM C-478, EXCEPT AS NOTED ON THE PLANS.
9. POLYVINYL CHLORIDE PIPE (PVC) SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURERS' RECOMMENDATIONS. PVC SEWER PIPE SHALL BE CONNECTED TO CONCRETE MANHOLES BY MEANS OF A KOR-N-SEAL BOOT (OR EQUIVALENT). SAND COLLARS WILL NOT BE ACCEPTED.
10. AFTER THE CONTRACTOR HAS BACKFILLED THE PIPE ZONE OF THE TRENCH AS REQUIRED, HE SHALL THEN BACKFILL THE BALANCE OF THE TRENCH, WITH THE TYPE OF BACKFILL SPECIFIED, IN ONE FOOT (1') LAYERS, MECHANICALLY COMPACTING EACH LAYER TO 95% OF MAXIMUM DENSITY IN ROADWAYS AND 85% TO 90% IN ALL OTHER AREAS. MAXIMUM RELATIVE DENSITY SHALL BE DETERMINED PER AASHTO T-180. IN PLACE, DENSITY SHALL BE DETERMINED PER AASHTO T-191, T-205 OR T-238. ANY SUBSEQUENT SETTLEMENT OF THE TRENCH OR DITCH DURING THE GUARANTEE PERIOD SHALL BE CONSIDERED TO BE THE RESULT OF IMPROPER COMPACTION AND SHALL BE PROMPTLY CORRECTED BY THE CONTRACTOR AT NO EXPENSE TO THE DISTRICT OR THE OWNER.
11. SANITARY SEWER PIPE AND APPURTENANCES SHALL BE TESTED FOR LEAKAGE IN ACCORDANCE WITH OLWSD STANDARDS. LEAKAGE TESTS INCLUDE AN AIR TEST OF THE SEWER MAINS AND SERVICE CONNECTIONS AND VACUUM TEST OF THE MANHOLES. ANY PORTION OF THE SEWER WHICH FAILS TO PASS THESE TESTS SHALL BE EXCAVATED, REPAIRED OR REALIGNED, AND RETESTED. IN ADDITION TO LEAKAGE TESTING, SANITARY SEWERS CONSTRUCTED OF PVC SEWER PIPE SHALL BE DEFLECTION TESTED AFTER THE TRENCH BACKFILL AND COMPACTION HAS BEEN COMPLETED. THE TEST SHALL BE CONDUCTED BY PULLING AN APPROVED SOLID POINTED MANDREL 95% OF THE INSIDE DIAMETER THROUGH THE PIPELINE ON A MANHOLE TO MANHOLE BASIS. IN ADDITION, ALL MAIN LINES MUST BE VIDEO INSPECTED, AND A VIDEO RECORD ON A FLASH DRIVE MUST BE SUBMITTED TO OLWSD. NOTE THAT ALL TESTS AND THE VIDEO INSPECTIONS MUST BE PERFORMED IN THE PRESENCE OF THE OLWSD INSPECTOR.
12. UNLESS OTHERWISE SPECIFIED ON THE PLANS OR DIRECTED BY THE ENGINEER, EACH SERVICE CONNECTION SHALL BE LAID IN A SEPARATE TRENCH ON A STRAIGHT LINE AND GRADIENT FROM THE TEE TO THE END OF THE SERVICE CONNECTION. THE SERVICES CONNECTION SHALL BE INSTALLED PERPENDICULAR TO THE MAIN LINE AND MUST HAVE A MINIMUM OF 5 FEET OF COVER IN ALL PARTS OF THE ROAD RIGHT OF WAY AND UTILITY EASEMENT. NO SERVICE CONNECTION SHALL BE LAID ON A SLOPE OF LESS THAN TWO PERCENT, UNLESS OTHERWISE DIRECTED BY THE ENGINEER OR SHOWN ON THE PLANS. THE ENGINEER WILL PROVIDE A CUT STAKE AT THE TERMINAL POINT OF EACH SERVICE CONNECTION. THE CONTRACTOR WILL USE A PIPE LASER TO ACHIEVE CORRECT GRADE AND ALIGNMENT. EACH SERVICE CONNECTION SHALL BE PLUGGED WITH A RUBBER RING PLUG. A 2 X 4 MARKER PAINTED GREEN SHALL BE PLACED AT THE END OF EACH SERVICE CONNECTION, AND SHALL EXTEND FROM THE END OF THE PIPE TO A POINT THREE FEET (3') OR MORE ABOVE THE SURFACE OF THE GROUND. A DETECTABLE GREEN MAGNETIC TAPE WITH THE WORD "SEWER" AT REGULAR INTERVALS SHALL BE PLACED ALONG THE SERVICE CONNECTION FROM THE MAINLINE TEE TO THE GROUND SURFACE. EACH SERVICE CONNECTION MUST HAVE A CLEAN OUT WITH A TRAFFIC-RATED BOX LOCATED AT THE EDGE OF THE ROAD RIGHT-OF-WAY OR UTILITY EASEMENT.
13. IN EASEMENT AREAS ALL MANHOLES SHALL HAVE TAMPER-PROOF LIDS PER OLWSD SPECIFICATIONS, OR APPROVED EQUAL. IN EASEMENT AREAS MANHOLE FRAMES SHALL BE INSTALLED A MINIMUM OF 6" ABOVE THE SURROUNDING GRADE.
14. THE CONTRACTOR SHALL AT ALL TIMES PROVIDE AND MAINTAIN AMPLE MEANS AND DEVICES TO REMOVE AND DISPOSE OF ALL WATER ENTERING THE TRENCH EXCAVATION DURING THE PROCESS OF LAYING THE PIPE. WATER AND DEBRIS SHALL NOT ENTER INTO THE DISTRICT'S SEWER SYSTEM. WATER AND DEBRIS SHALL BE DISPOSED OF IN AN APPROVED MANNER.
15. THERE MUST BE A MINIMUM OF 10 FEET OF CLEAR HORIZONTAL SEPARATION BETWEEN A WATER MAIN AND A SANITARY LINE. THERE MUST BE A MINIMUM OF 5 FEET OF CLEAR HORIZONTAL SEPARATION BETWEEN A WATER SERVICE AND A SANITARY LINE.



SANITARY SYSTEM STANDARD DRAWING

**SANITARY SEWER
CONSTRUCTION NOTES**

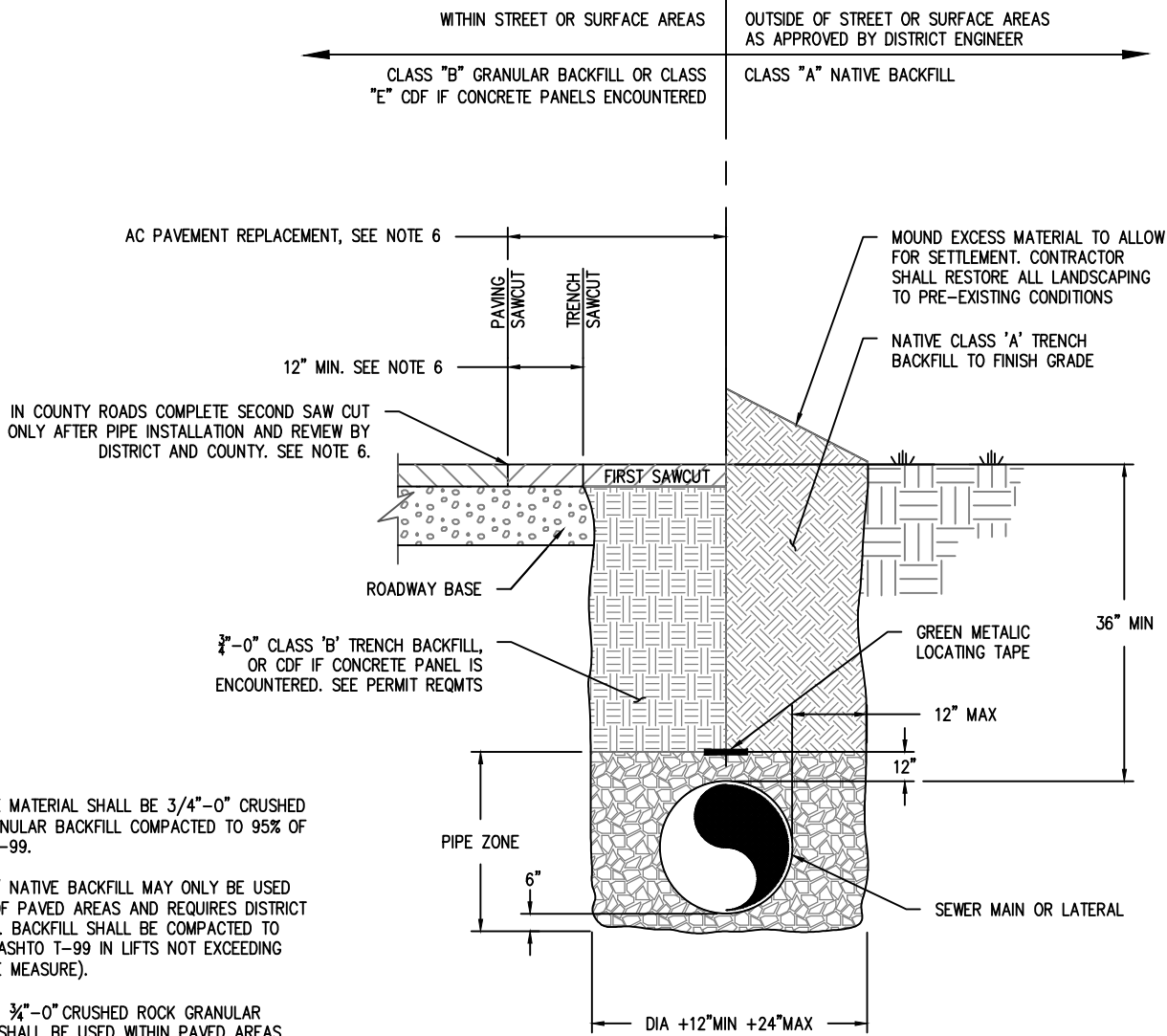
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301

| NO. | REVISIONS | DATE | BY | APPROVED |
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| 1 | TITLE and NOTES 5, 8, 9, 11, 12, 13, 15 | 1/9/2019 | HSD | |
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DATE: 9/12/2017

SCALE: NTS

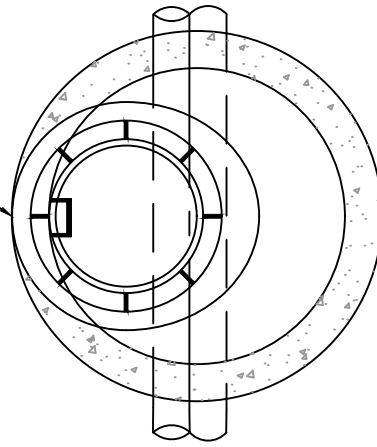


NOTES:

1. PIPE ZONE MATERIAL SHALL BE 3/4"-0" CRUSHED ROCK GRANULAR BACKFILL COMPACTED TO 95% OF AASHTO T-99.
2. CLASS "A" NATIVE BACKFILL MAY ONLY BE USED OUTSIDE OF PAVED AREAS AND REQUIRES DISTRICT APPROVAL. BACKFILL SHALL BE COMPACTED TO 90% OF AASHTO T-99 IN LIFTS NOT EXCEEDING 18" (LOOSE MEASURE).
3. CLASS "B" 3/4"-0" CRUSHED ROCK GRANULAR BACKFILL SHALL BE USED WITHIN PAVED AREAS. BACKFILL SHALL BE COMPACTED TO 95% OF AASHTO T-99.
4. BACKFILL SHALL BE PLACED AND COMPACTED IN A MAXIMUM OF 24-INCH LIFTS. COMPACTION TESTING REQUIRED AT A FREQUENCY OF 1 TEST EVERY 100 FEET OF TRENCH.
5. RESURFACING TO BE MINIMUM 4 INCHES 1/2-INCH LEVEL 2 HMAC (PG 64-22) OR MATCH EXISTING, WHICHEVER IS GREATER.
6. SAWCUT WIDTH AND AC PAVEMENT REPLACEMENT SHALL BE PER APPLICABLE JURISDICTIONAL REQUIREMENTS. SAWCUT CLEAN EDGE FOR AC PAVEMENT REPLACEMENT. SAND SEAL JOINT.
7. PROVIDE CLASS "E" CDF BACKFILL FOR ALL TRENCH CROSSINGS LOCATED IN VEHICLE TRAVEL LANES OF ARTERIAL & COLLECTOR STREETS, OR WHERE CONCRETE PANELS ARE ENCOUNTERED. IF THESE SPECIFICATIONS CONFLICT WITH THE SPECIFICATIONS OF ANOTHER APPLICABLE JURISDICTION, THE MORE STRINGENT SPECIFICATION SHALL GOVERN.

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LOCATE FRAME AND COVER OVER LEDGE OF AT LEAST 12" IN WIDTH

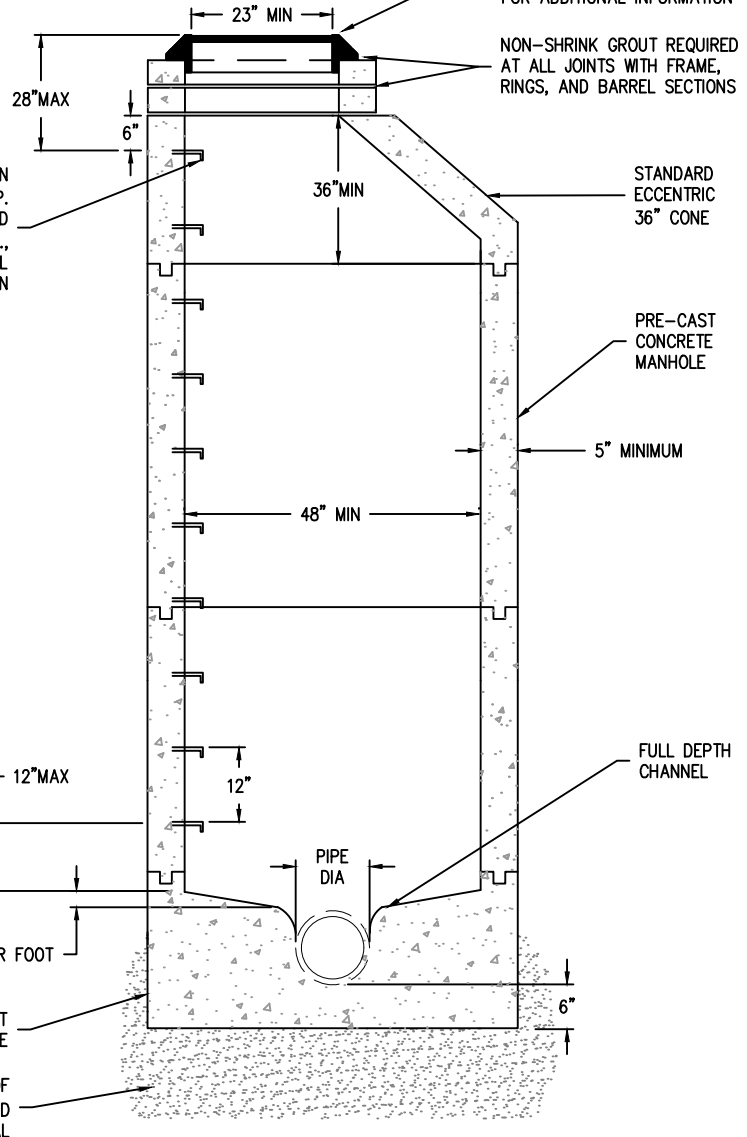


PLAN

MANHOLE FRAME MUST BE FLUSH WITH ROADWAY WITHOUT THE USE OF PAVING RINGS, SEE NOTE 5 FOR ADDITIONAL INFORMATION

NON-SHRINK GROUT REQUIRED AT ALL JOINTS WITH FRAME, RINGS, AND BARREL SECTIONS

POLYETHYLENE STEPS W/ IRON REINFORCEMENT, 8"x12" WIDE, 2" DROP. LOCATE FIRST STEP OVER SHELF AND INSTALL W/ 3" IMBED AT 12" O.C., TYP., U.N.O., SEE NOTE 6 FOR ADDITIONAL INFORMATION

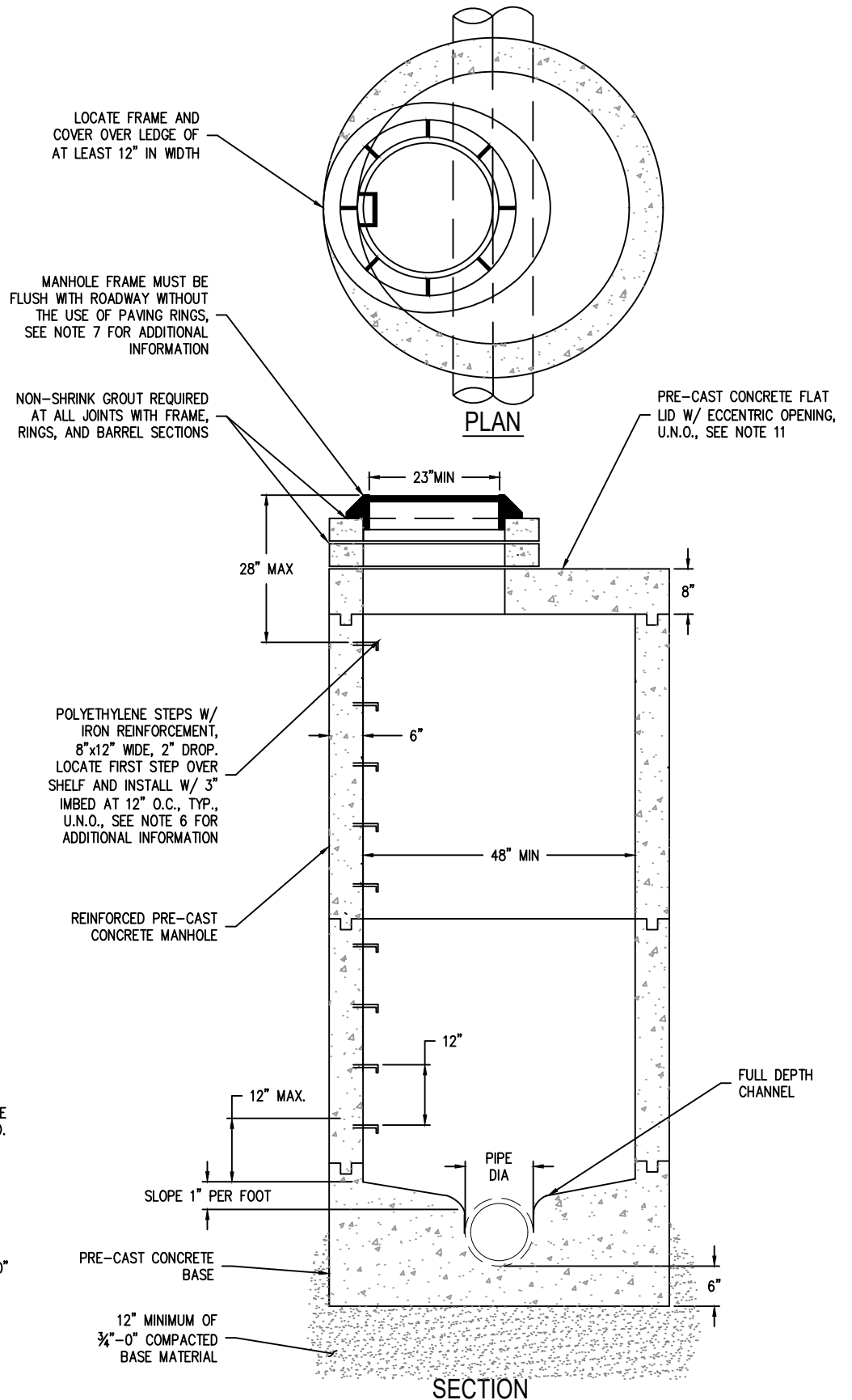


SECTION

NOTES:

1. MANHOLE LID TO BE FLUSH WITH ROADWAY OR 6" ABOVE FINISH GRADE IN EASEMENTS UNLESS OTHERWISE SPECIFIED.
2. SHELF SHALL NOT BE BELOW THE SPRING LINE OF THE PIPE.
3. STRUCTURE OPENINGS TO BE PRE-CAST OR CORE DRILLED ONLY.
4. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
5. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
6. STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND (MIXING OF UNMATCHED STEPS IS NOT PERMITTED). MANHOLES UNDER 3' DEEP DO NOT REQUIRE STEPS.
7. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
8. CHANNEL MUST HAVE A MINIMUM OF 0.2' DROP BETWEEN INLET AND OUTLET.
9. CHANNELS MUST BE ABLE TO PASS A 7"x30" CYLINDER INTO PIPES.

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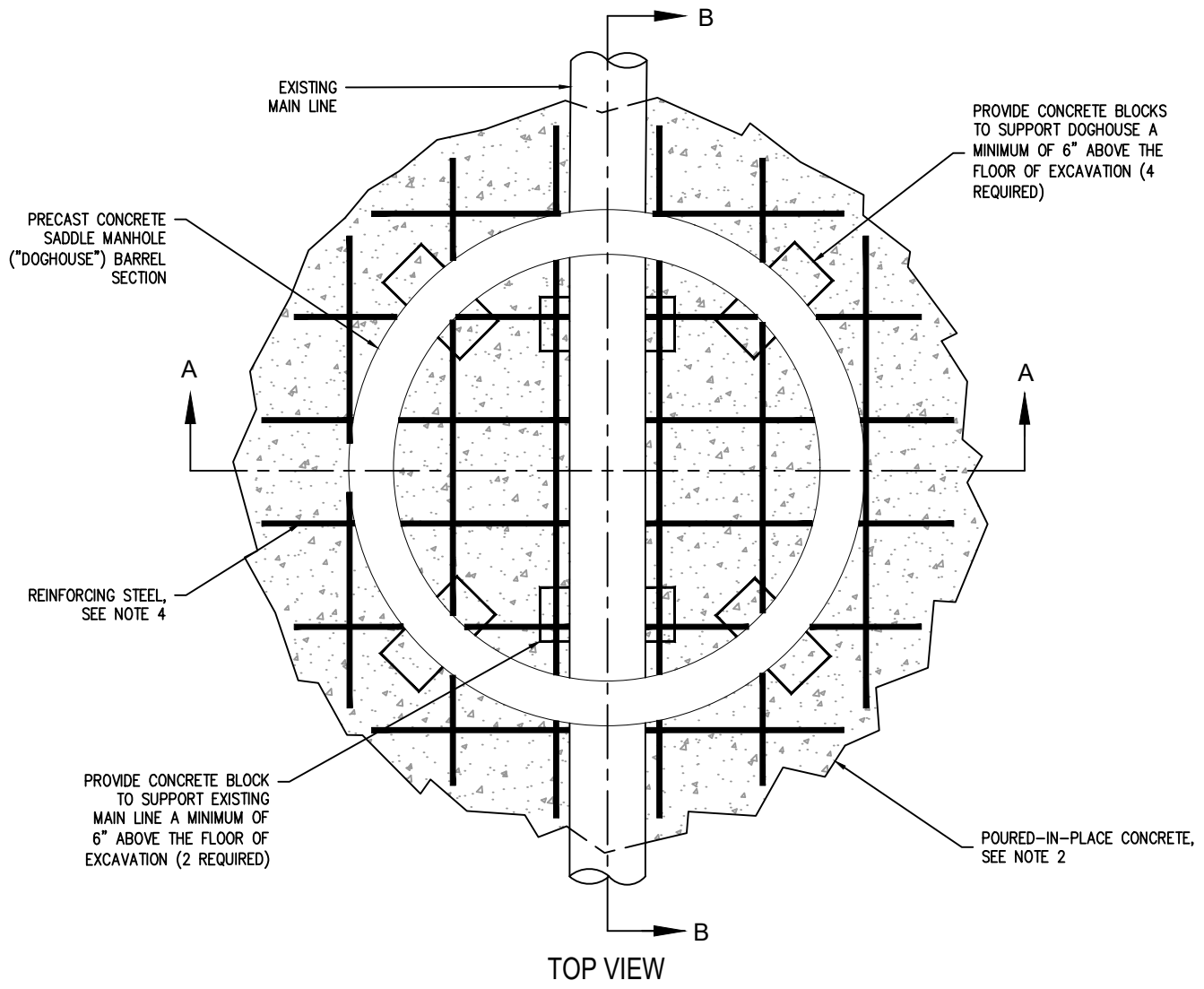
1. FLAT TOP IS REQUIRED WHEN HEIGHT FROM SHELF TO TOP OF LAST BARREL SECTION IS 4' OR LESS.
2. SHELF SHALL NOT BE BELOW THE SPRING LINE OF THE PIPE.
3. STRUCTURE OPENINGS TO BE PRE-CAST OR CORE DRILLED ONLY.
4. ALL PRE-CAST MANHOLE SECTIONS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478.
5. ALL JOINTS AND RUBBER GASKETS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-443.
6. STEPS SHALL CONFORM TO THE REQUIREMENTS OF ASTM C-478. MANHOLE STEPS MUST BE TIGHT AND FIRMLY EMBEDDED. ALL STEPS WITHIN A MANHOLE SHALL BE OF THE SAME DESIGN, TYPE, AND (MIXING OF UNMATCHED STEPS IS NOT PERMITTED.) MANHOLES UNDER 3' DEEP DO NOT REQUIRE STEPS.
7. MANHOLE LID TO BE 6" ABOVE FINISH GRADE IN EASEMENTS UNLESS OTHERWISE SPECIFIED.
8. ALL PIPE CONNECTIONS TO MANHOLE SHALL BE WATERTIGHT.
9. CHANNEL MUST HAVE A MINIMUM OF 0.2' DROP BETWEEN INLET AND OUTLET.
10. CHANNELS MUST BE ABLE TO PASS A 7"x30" CYLINDER INTO PIPES.
11. CONCENTRIC LID REQUIRED WHEN HEIGHT FROM SHELF TO TOP OF LAST BARREL SECTION IS 3' OR LESS.

POLYETHYLENE STEPS W/
IRON REINFORCEMENT,
8"x12" WIDE, 2" DROP.
LOCATE FIRST STEP OVER
SHELF AND INSTALL W/ 3"
IMBED AT 12" O.C., TYP.,
U.N.O., SEE NOTE 6 FOR
ADDITIONAL INFORMATION

REINFORCED PRE-CAST
CONCRETE MANHOLE

12" MINIMUM OF
¾"-0" COMPACTED
BASE MATERIAL

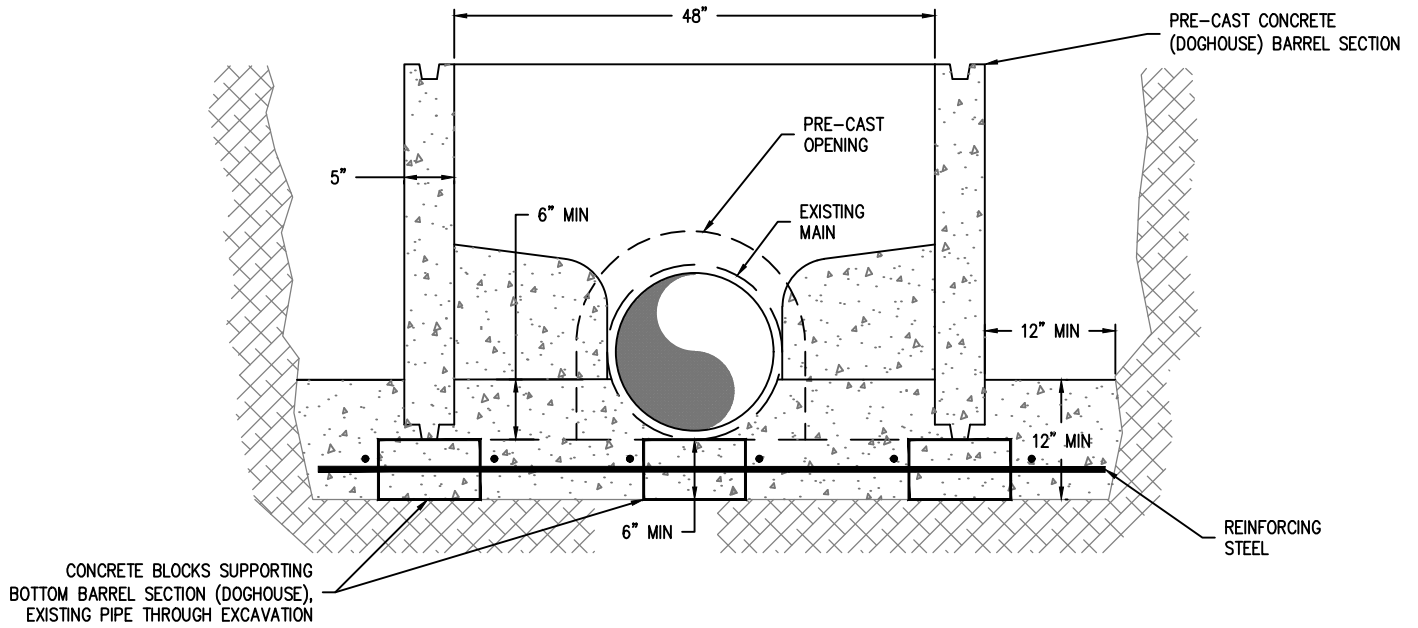
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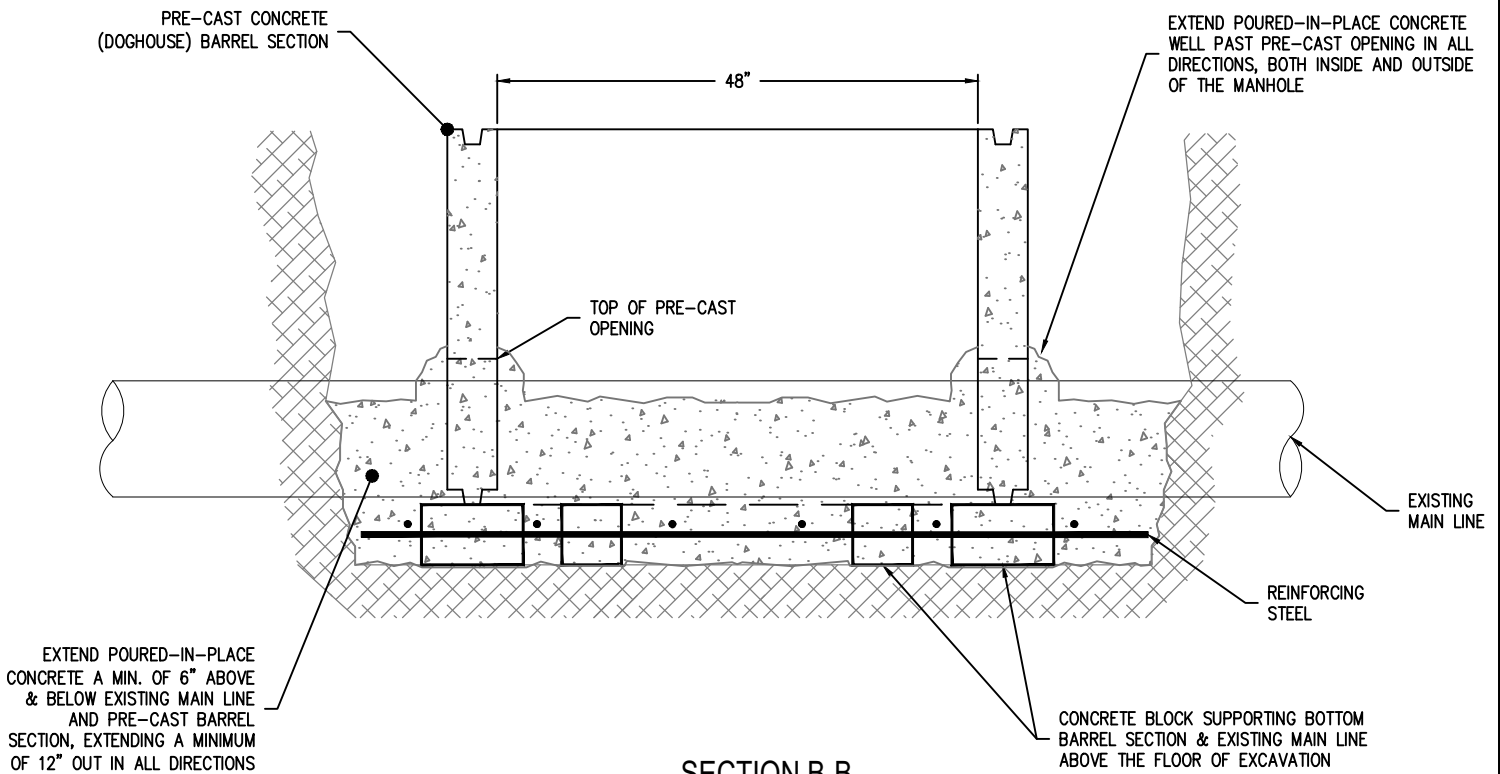
TOP VIEW

1. POURED-IN-PLACE BASE IS ALLOWED ONLY FOR NEW MANHOLES CONSTRUCTED OVER EXISTING MAIN LINES. ALL OTHER MANHOLE BASES MUST BE PRE-CAST UNITS.
2. A MINIMUM OF 6" OF POURED-IN-PLACE CONCRETE MUST BE PROVIDED UNDER ALL PARTS OF THE EXISTING MAIN AND UNDER THE BOTTOM OF THE DOGHOUSE. THIS CONCRETE MUST EXTEND 12" OUTSIDE OF THE MANHOLE WALL IN ALL DIRECTIONS AND MUST EXTEND 6" ABOVE THE BOTTOM OF THE DOGHOUSE BOTH INSIDE AND OUTSIDE THE MANHOLE.
3. THE POURED CONCRETE MUST HAVE A MINIMUM OF 5 SACKS OF CEMENT PER CUBIC YARD AND MEET A MINIMUM 3000 psi COMPRESSION TEST AFTER 28 DAYS.
4. REINFORCING SHALL BE #5 REBAR AT 12" ON CENTER, EACH WAY, OR TWO (2) MATS OF 6 x 6 x 10 GAUGE SHEET MESH. CENTER REINFORCING WITHIN POURED-IN-PLACE CONCRETE SLAB WITH 3" COVER.
5. THE DIAMETER OF THE PRE-CAST OPENINGS IN THE DOGHOUSE CAN BE NO MORE THAN 6" GREATER THAN THE OUTSIDE DIAMETER OF THE EXISTING MAIN. THE DOGHOUSE SHALL BE PLACED SO THAT THE EXISTING MAIN IS CENTERED IN THE OPENING.
6. IF THE EXISTING MAIN IS PVC OR HDPE, SANDED COLLARS MUST BE INSTALLED ON THE MAIN AND CENTERED IN THE PRE-CAST OPENINGS.
7. PIPE CONNECTIONS MUST BE MADE TO THE PRE-CAST OR CORED HOLES WITH KOR-N-SEAL BOOTS OR EQUIVALENT WHENEVER POSSIBLE. SANDED COLLARS WILL BE ACCEPTED ONLY WHEN THEY ARE POURED INTO THE MANHOLE BASE.
8. THE ANNULAR SPACES BETWEEN THE EXISTING MAIN AND THE PRE-CAST OPENINGS MUST BE FILLED WITH CONCRETE WHICH EXTENDS WELL BEYOND THE OPENINGS IN ALL DIRECTIONS, BOTH INSIDE AND OUTSIDE OF THE MANHOLE.
9. NOTE THAT THE TOP OF EXISTING MAIN IS NOT TO BE "CUT OUT" UNTIL A MANHOLE VACUUM TEST HAS BEEN WITNESSED AND APPROVED BY THE OLWS INSPECTOR. THE OPENING IN THE PIPE IS TO BE NEATLY FINISHED AND SHALL BE SIZED TO ALLOW A 7" x 30" CYLINDER TO PASS INTO ALL PIPES.

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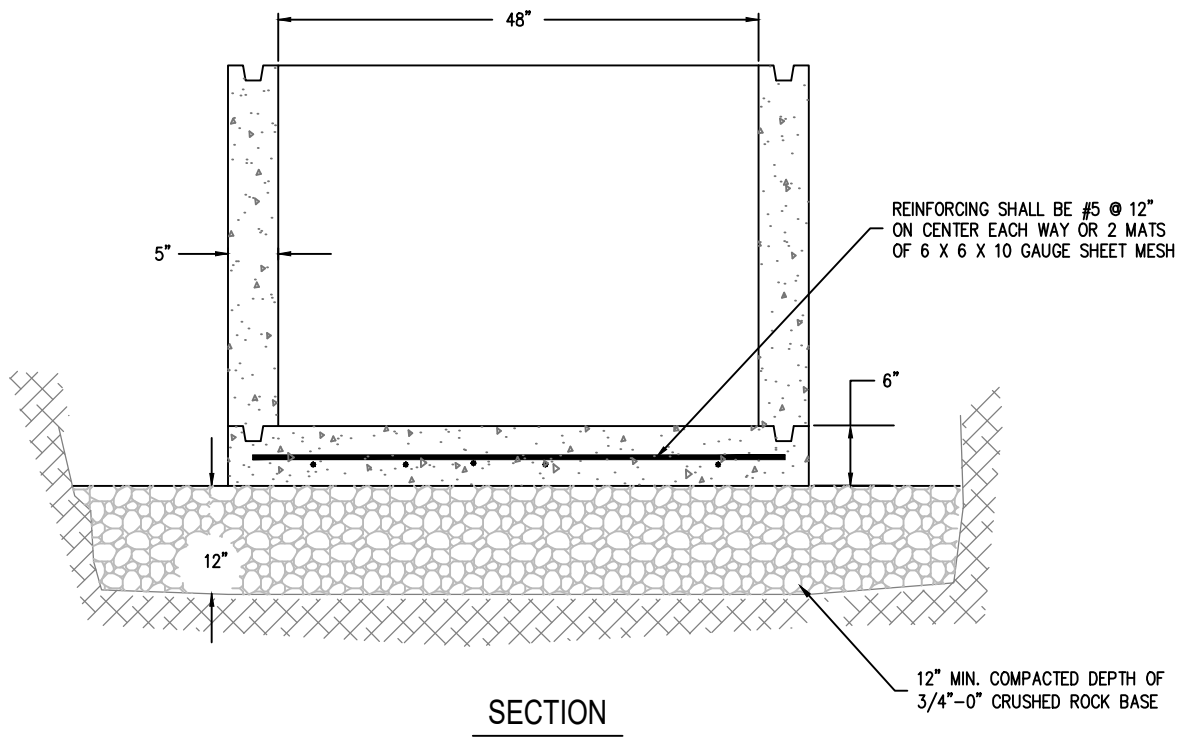


SECTION A-A



SECTION B-B

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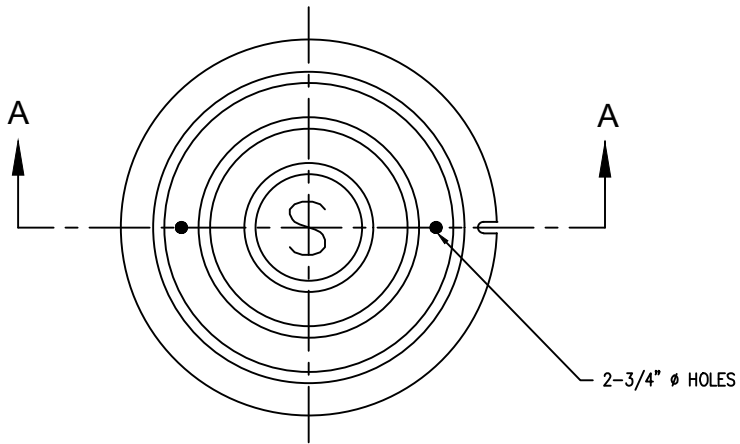


SECTION

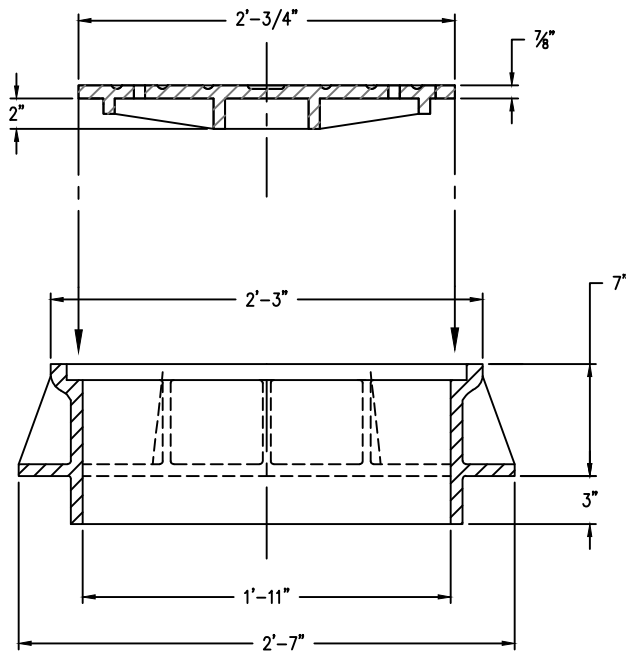
NOTES:

1. ALL MANHOLE BASE SECTIONS SHALL BE PRE-CAST CONCRETE, EXCEPT THOSE LOCATED OVER EXISTING MAIN LINES.
2. PIPE CONNECTIONS MUST BE MADE TO PRE-CAST OR CORED HOLES WITH A KOR-N-SEAL BIT OR EQUIVALENT. SANDED COLLARS ARE NOT ACCEPTABLE.

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TOP VIEW



SECTION A-A

NOTES:

1. STANDARD FRAME AND COVER TO BE USED ON COLLECTOR, ARTERIAL, AND INDUSTRIAL STREETS OR AS NOTED ON CONSTRUCTION PLANS.
2. SANITARY COVER WILL HAVE TWO 3/4" \emptyset HOLES.

OAK LODGE
 WATER SERVICES

FRAME & COVER (STANDARD)

DRAWING NO.

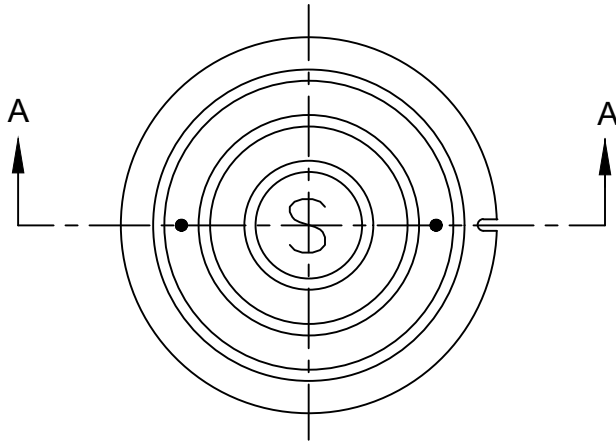
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SANITARY SYSTEM STANDARD DRAWING

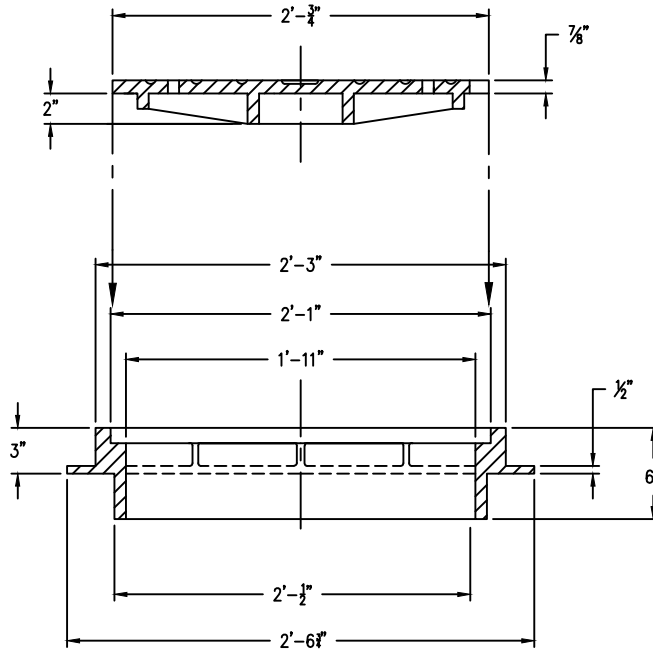
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DATE: 09/12/2017

SCALE: NTS



TOP VIEW



SECTION A-A

NOTES

1. COVER AND FRAME SHALL BE OF GRAY CAST IRON
A.S.T.M. A-48 CLASS 30
2. SUBURBAN FRAME & COVER CAN BE USED IN
EASEMENTS AND SUBDIVISION STREETS EXCEPT
COLLECTOR, ARTERIAL, AND INDUSTRIAL STREETS, OR
AS NOTED ON CONSTRUCTION PLANS.
3. SANITARY COVER WILL HAVE TWO 3/4" Ø HOLES.

OAK LODGE
WATER SERVICES

SANITARY SYSTEM STANDARD DRAWING

FRAME & COVER (SUBURBAN)

| NO. | REVISIONS | DATE | BY | APPROVED |
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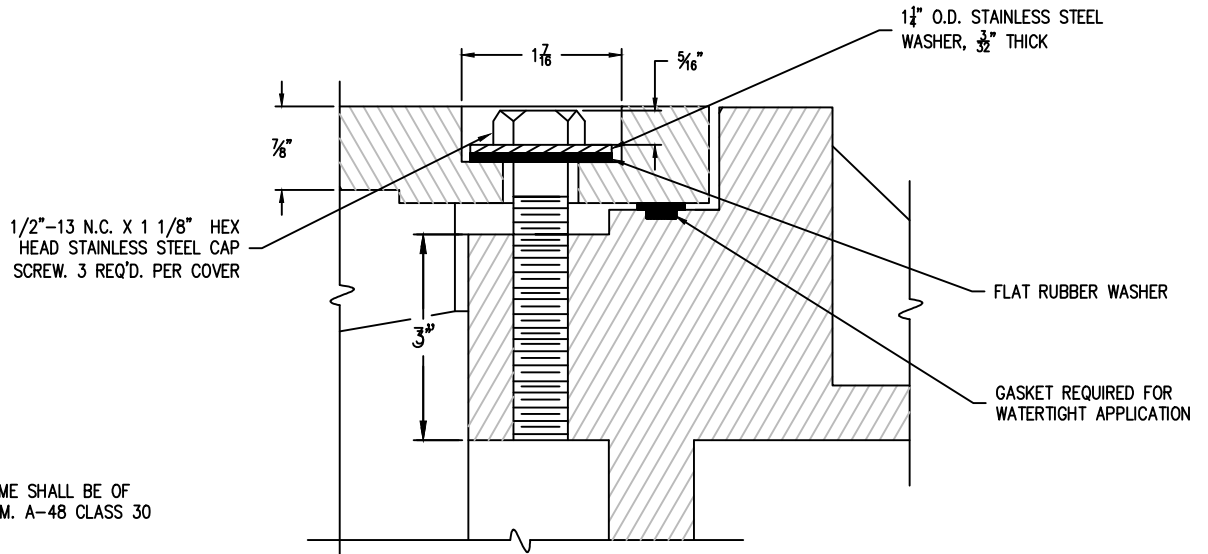
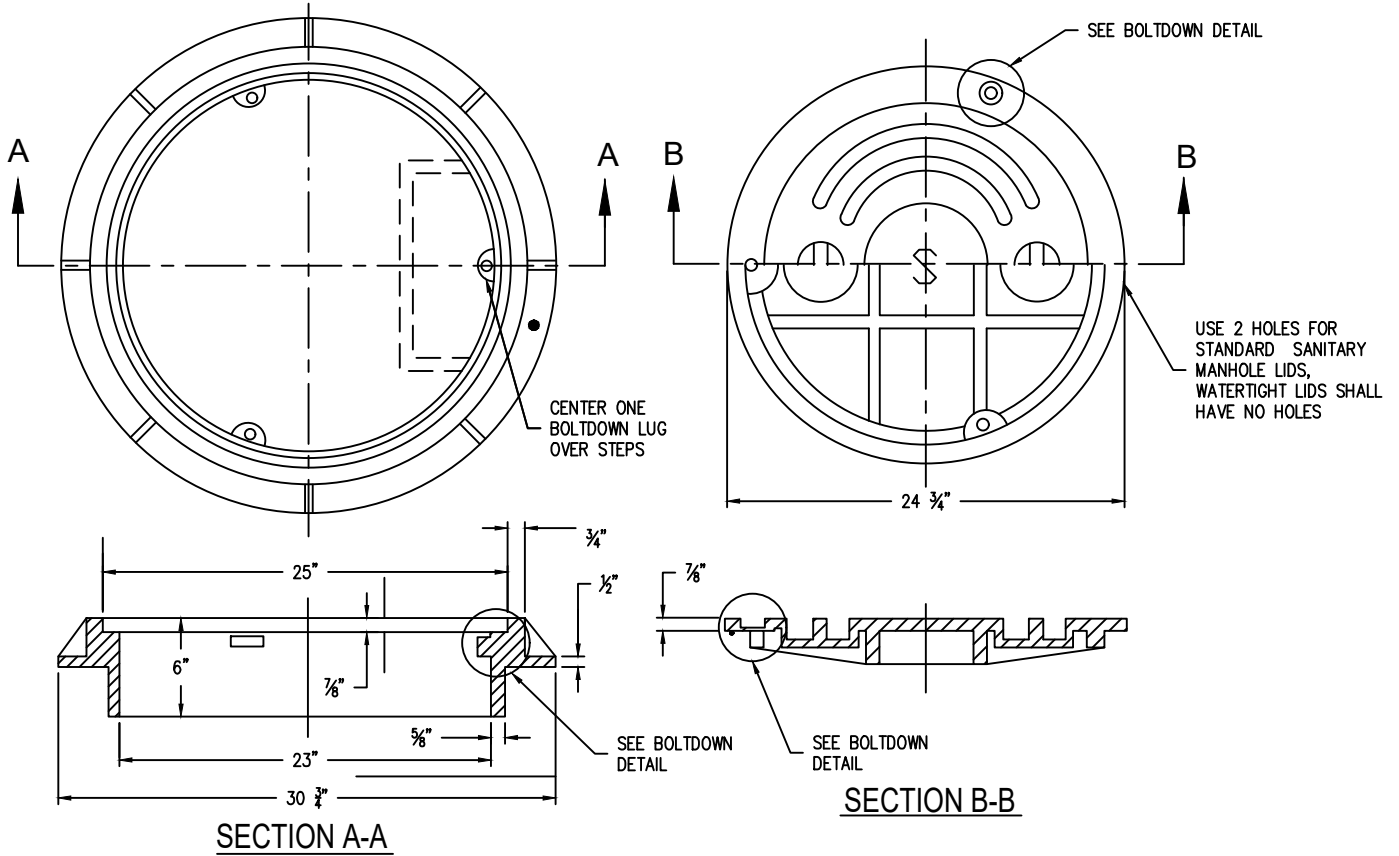
309

DATE: 09/12/2017

SCALE: NTS

TAMPERPROOF MANHOLE RING

3-BOLTDOWN COVER



BOLT-DOWN DETAIL

NOTE: COVER AND FRAME SHALL BE OF GRAY CAST IRON A.S.T.M. A-48 CLASS 30

OAK LODGE

WATER SERVICES

SANITARY SYSTEM STANDARD DRAWING

FRAME & COVER (SECURE / WATERTIGHT)

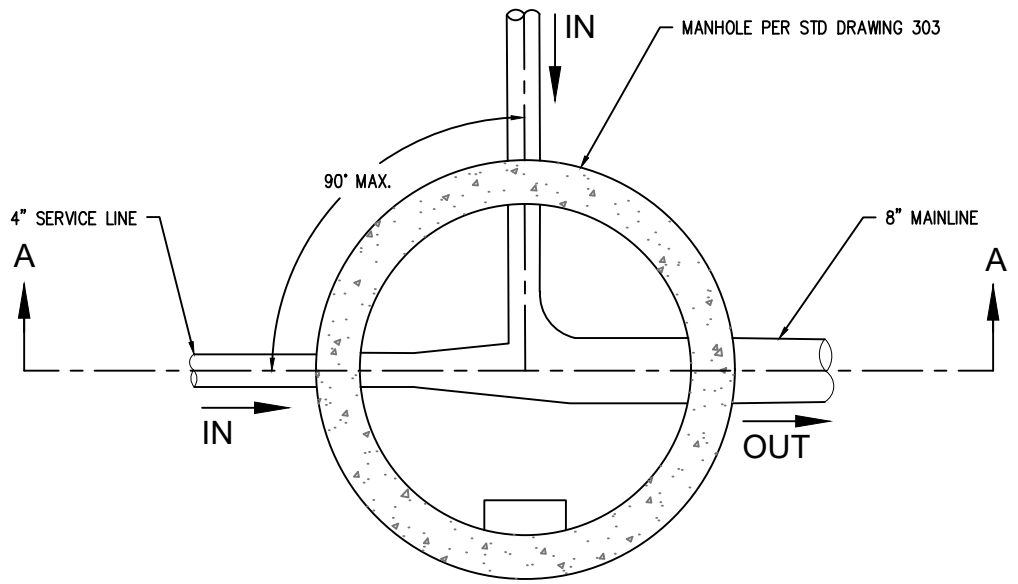
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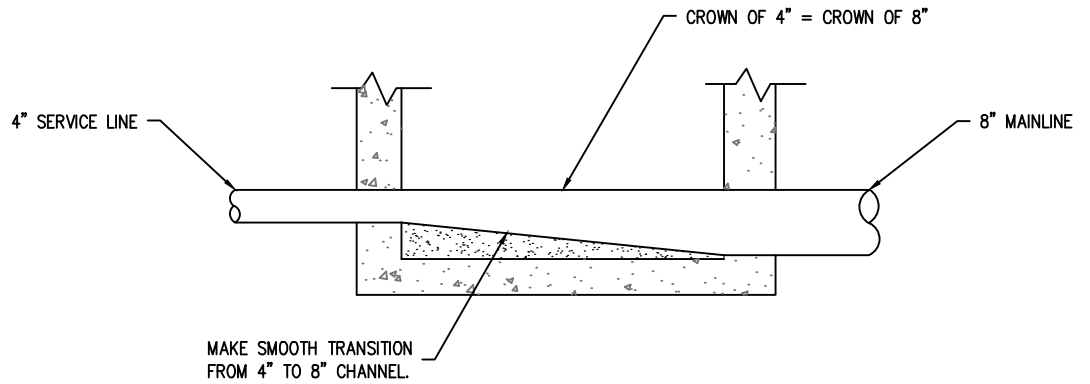
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PLAN



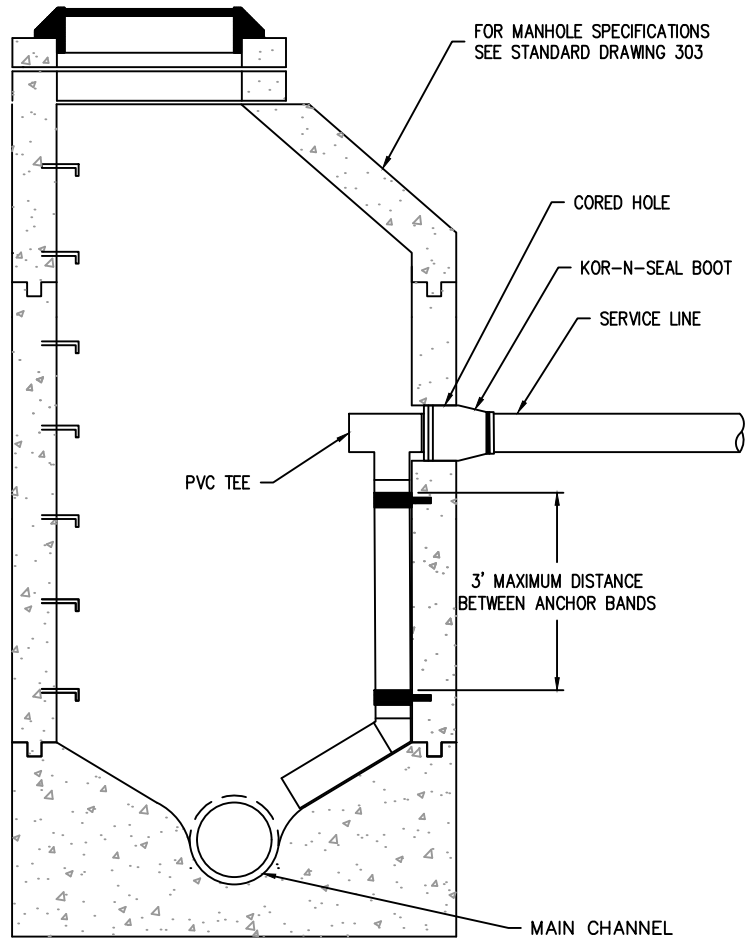
SECTION A-A

NOTES:

1. CHANNEL MANHOLE TO MATCH INLET & OUTLET PIPE DIAMETERS & PROVIDE SMOOTH TRANSITION.
2. MATCH CROWN OF INLET & OUTLET PIPES & CHANNELIZATION.

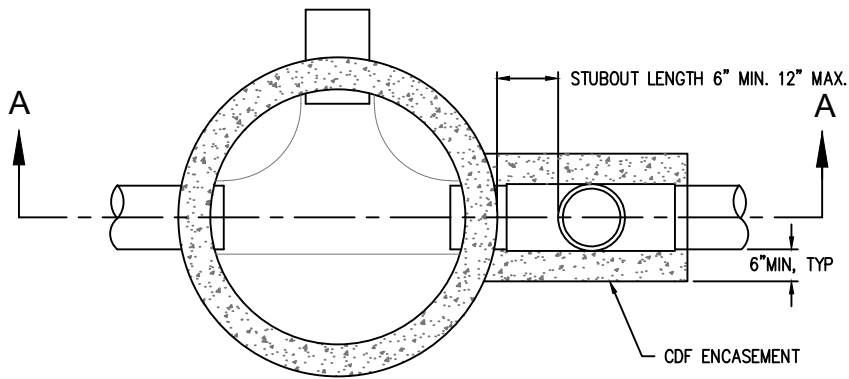
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1. THE DISTRICT MAY ALLOW INSIDE DROP SERVICE CONNECTIONS AT THE DISCRETION OF THE DISTRICT ENGINEER.
2. INSIDE DROPS MAY BE 4" OR 6" & SHALL BE SIZED TO MATCH THE INFLOW PIPE.
3. THE ENTRY POINT IN THE MANHOLE WALL MUST BE CORE DRILLED.
4. THE SERVICE LATERAL IS TO BE SEALED INTO THE CORED HOLE WITH A KOR-N-SEAL BOOT OR EQUIVALENT.
5. THE SERVICE LATERAL WILL COUPLE DIRECTLY TO A PVC SLIP TEE IN THE MANHOLE TO ALLOW THE DROP PIPE TO CONTACT THE MH WALL FOR ITS ENTIRE LENGTH.
6. THE DROP PIPE, 45° BEND, AND EXTENSION PIPE ARE TO HAVE GLUED JOINTS.
7. THE DROP PIPE EXTENSION MUST CONVEY SEWAGE ALL THE WAY TO THE MAIN CHANNEL.
8. THE DROP PIPE IS TO BE SECURED TO THE MANHOLE WALL BY:
 STAINLESS STEEL STRAPS MEASURING A MINIMUM OF 1-1/2" WIDE BY 1/8" THICK;
 STRAP SPACING WILL BE 3' ON CENTER, WITH A MINIMUM OF 2 STRAPS;
 EACH STRAP WILL BE SECURED TO THE WALL BY A PAIR OF 5/16" STAINLESS STEEL WEDGE ANCHORS.
9. THE ANNULAR SPACE AT THE CORED HOLE IS TO BE GROUTED NEATLY AFTER ASSEMBLY.

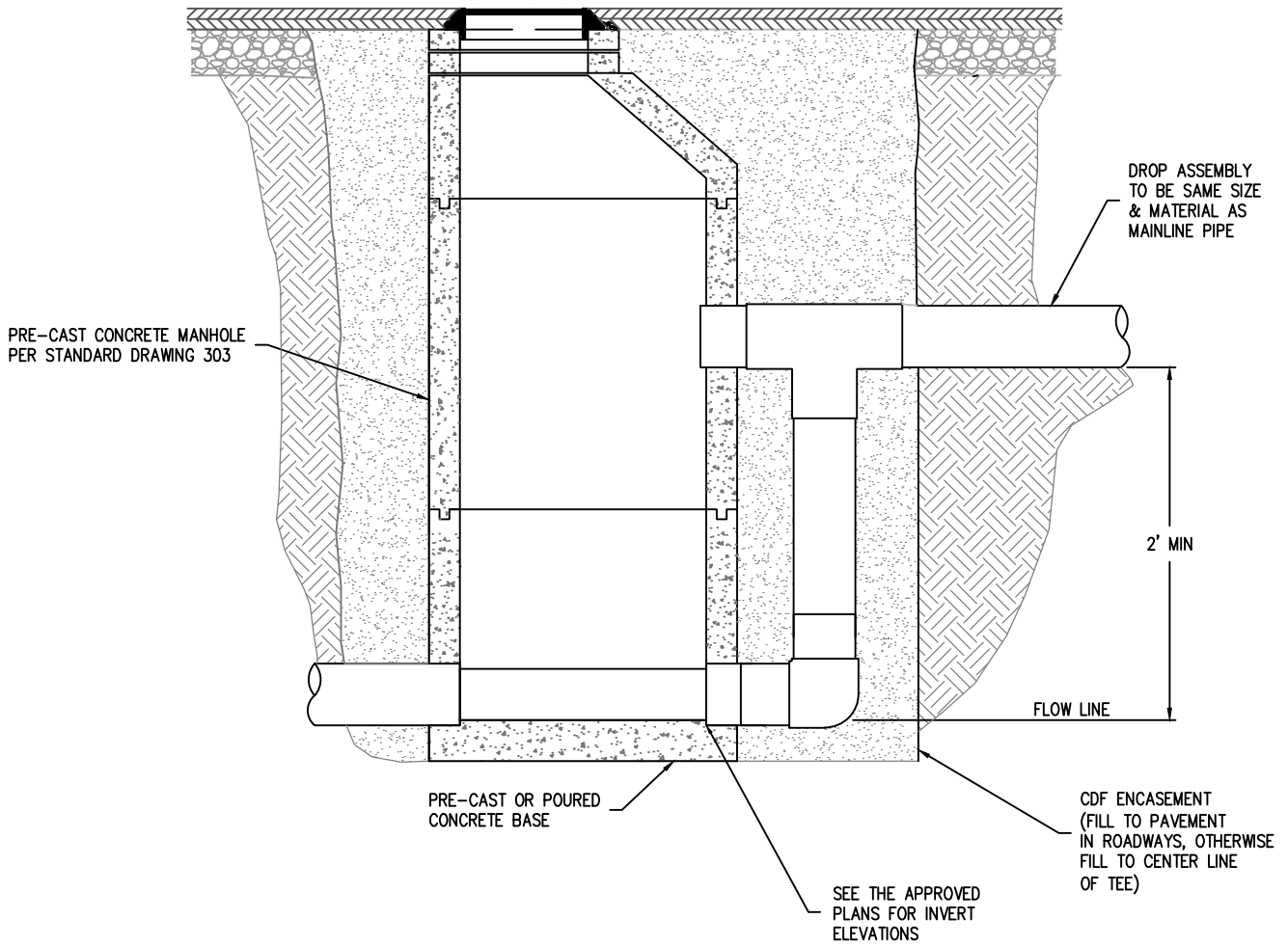


SECTION

| NO. | REVISIONS | DATE | BY | APPROVED |
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| 4 | | | | DISTRICT ENGINEER |

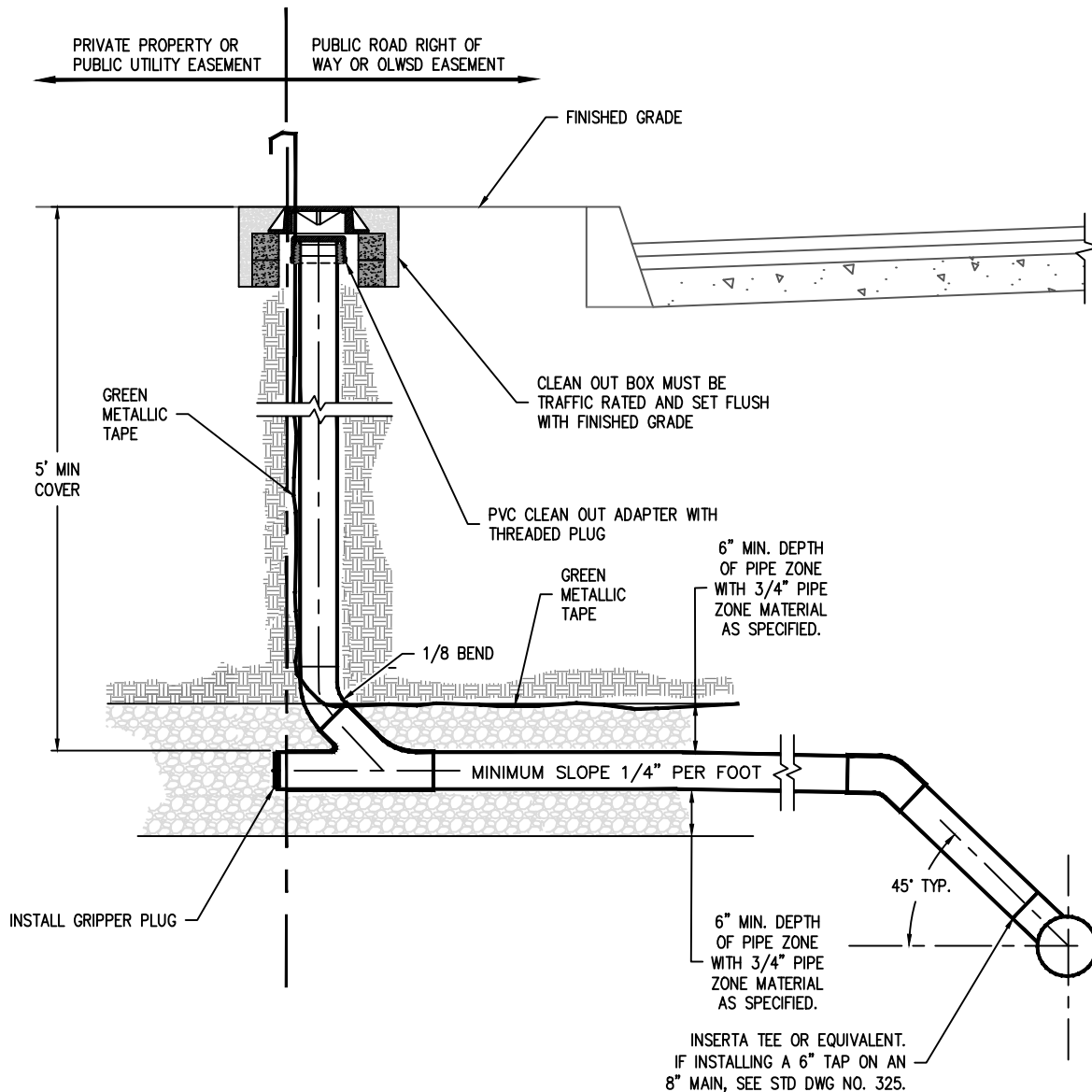


PLAN



SECTION A-A

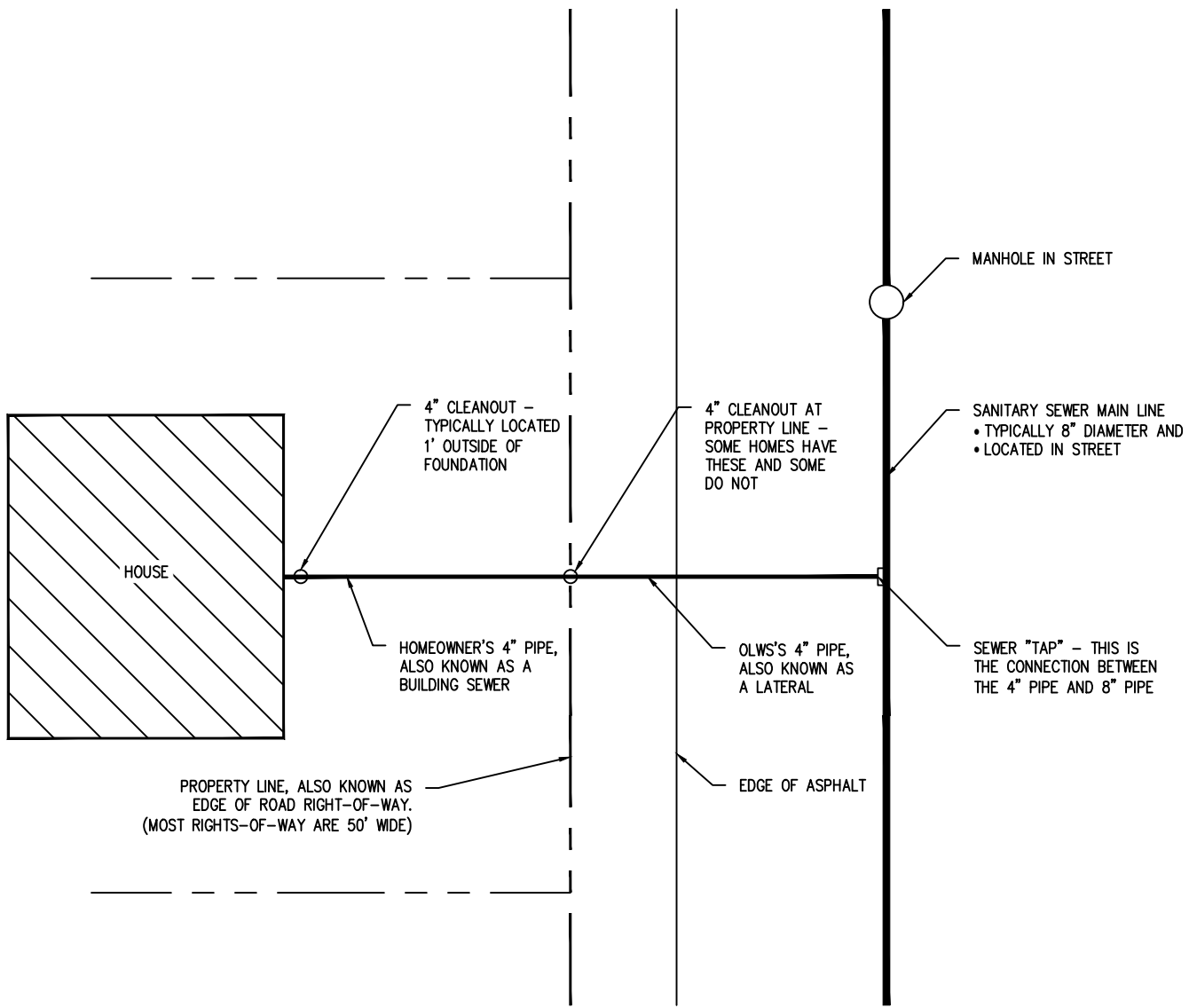
| NO. | REVISIONS | DATE | BY | APPROVED |
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NOTES:

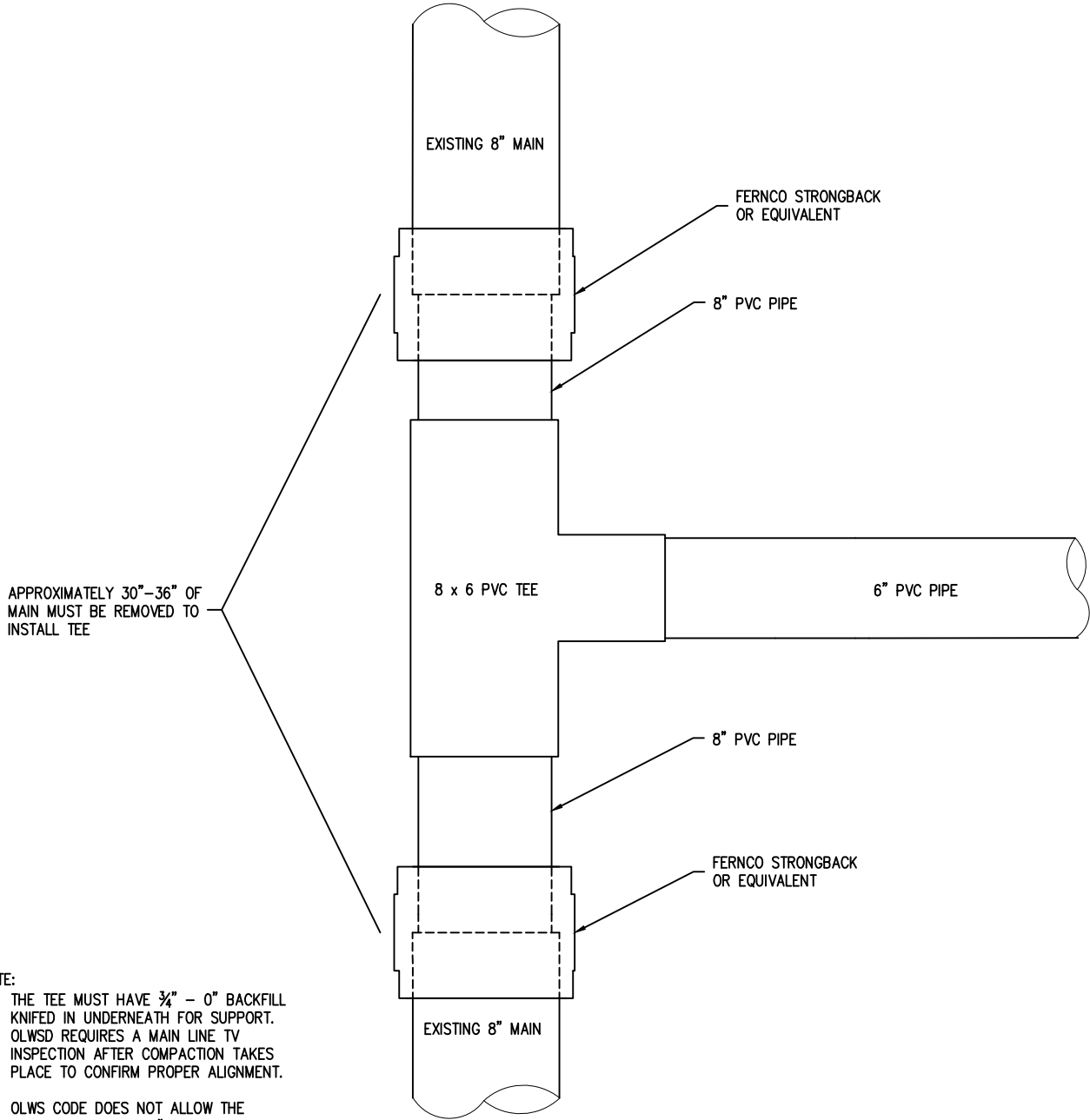
1. 4" LATERALS MUST HAVE 4" CLEAN OUT RISERS, AND 6" LATERALS MUST HAVE 6" CLEAN OUT RISERS.
2. THE CLEAN OUT RISER MUST BE LOCATED WITHIN 6" OF THE PROPERTY LINE AND JUST INSIDE THE ROAD RIGHT OF WAY OR THE OLWSD EASEMENT. THE CLEAN OUT RISERS MAY NOT BE LOCATED ON PRIVATE PROPERTY OR IN A PUBLIC UTILITY EASEMENT.
3. THE LATERAL MUST BE INSTALLED WITH A MINIMUM GRADE OF 2% AND MUST RUN PERPENDICULAR FROM THE MAIN TO THE CLEAN OUT.
4. THE CLEAN OUT RISER MUST BE TOPPED WITH A PVC CLEAN OUT ADAPTER WITH A THREADED PLUG.
5. THE CLEAN OUT MUST BE PROTECTED BY A TRAFFIC RATED BOX. EITHER A CAST IRON UNIT OR A COMBINATION CONCRETE AND CAST IRON UNIT IS ACCEPTABLE.
6. OLWSD MAY REQUIRE THE TV INSPECTION OF A LATERAL AFTER BACKFILL AND COMPACTION.

| NO. | REVISIONS | DATE | BY | APPROVED |
|-----|--------------------------------|----------|-----|-------------------|
| 1 | MISC CALLOUTS, DIMS, AND NOTES | 1/9/2019 | HSO | |
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| 4 | | | | DISTRICT ENGINEER |



← PRIVATE PROPERTY | STREET →

| NO. | REVISIONS | DATE | BY | APPROVED |
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| 4 | | | | DISTRICT ENGINEER |



APPROXIMATELY 30"–36" OF MAIN MUST BE REMOVED TO INSTALL TEE

NOTE:

1. THE TEE MUST HAVE $\frac{3}{4}$ " – 0" BACKFILL KNIFED IN UNDERNEATH FOR SUPPORT. OLWSD REQUIRES A MAIN LINE TV INSPECTION AFTER COMPACTION TAKES PLACE TO CONFIRM PROPER ALIGNMENT.
2. OLWS CODE DOES NOT ALLOW THE INSTALLATION OF A 6" INSERTA TEE ON AN 8" MAIN LINE AS IT WEAKENS THE STRUCTURAL INTEGRITY OF THE MAIN LINE. INSTEAD, A SECTION OF MAINLINE MUST BE REMOVED AND AN 8"x 6" PVC TEE SPLICED IN TO PROVIDE THE NEW TAP. NOTE THAT THIS OPERATION WILL REQUIRE THE SUBMISSION OF A WRITTEN "PUMP AROUND PLAN" FOR DISTRICT REVIEW.

| NO. | REVISIONS | DATE | BY | APPROVED |
|-----|------------------------------|----------|-----|-------------------|
| 1 | REMOVED COUPLER JOINT ON TEE | 1/9/2019 | HSD | |
| 2 | | | | |
| 3 | | | | |
| 4 | | | | DISTRICT ENGINEER |