

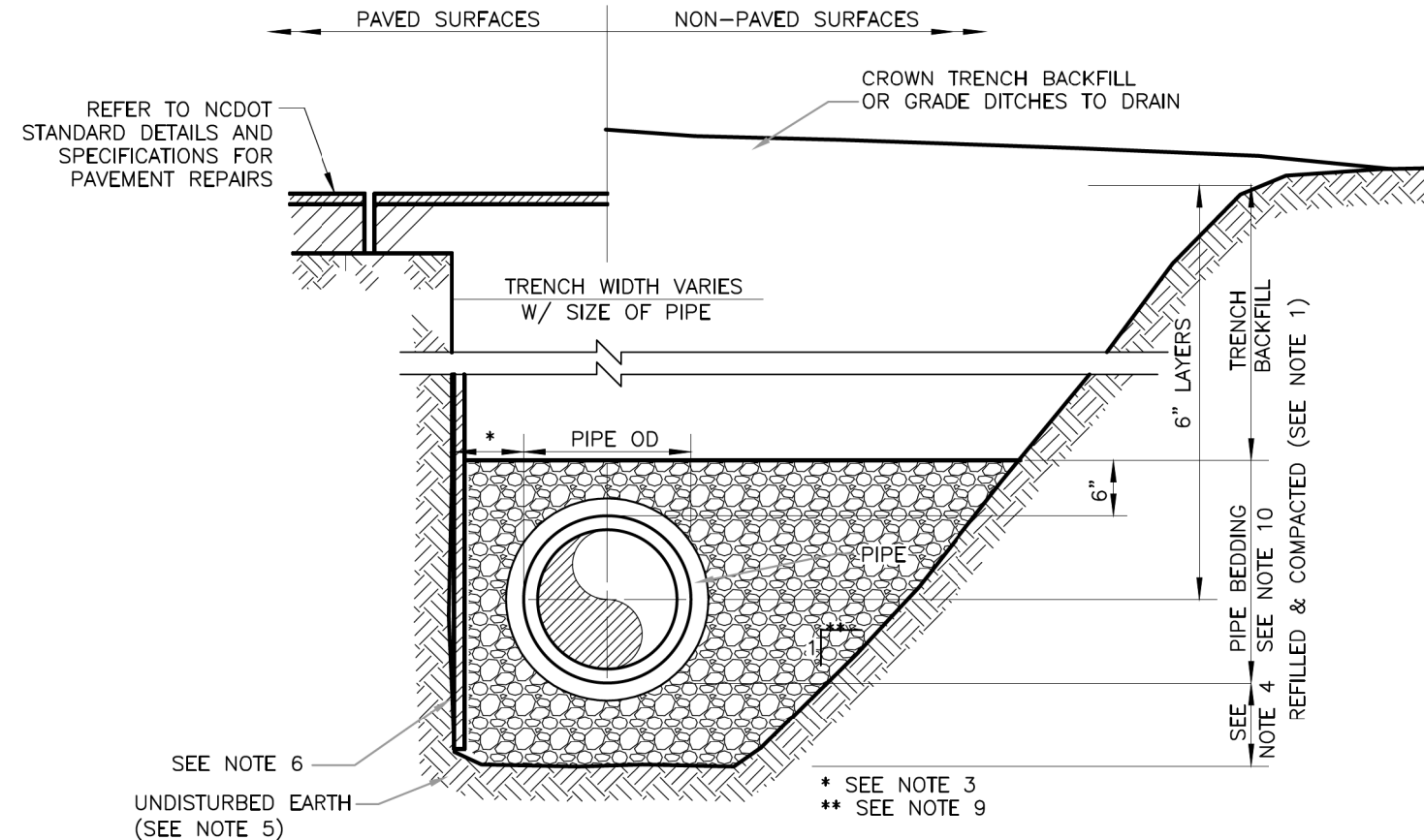
5/14/99

# PROJECT TYPICAL DETAILS

PROJECT REFERENCE NO.	SHEET NO.
<b>R-5752</b>	<b>UC-3A</b>
DESIGNED BY: WPS	
DRAWN BY: KAP	
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NORTH CAROLINA DEPARTMENT OF TRANSPORTATION UTILITIES ENGINEERING SEC. PHONE: (919) 707-6690 FAX: (919) 250-4151	
UTILITY CONSTRUCTION PLANS ONLY	

## UTILITY CONSTRUCTION

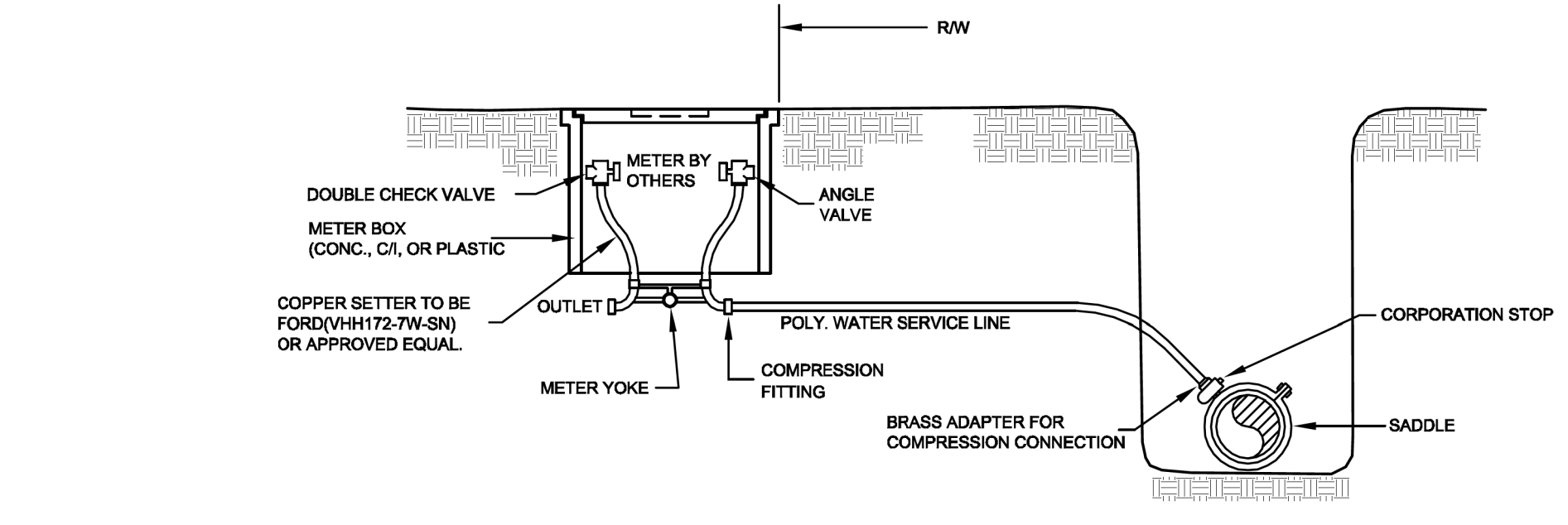
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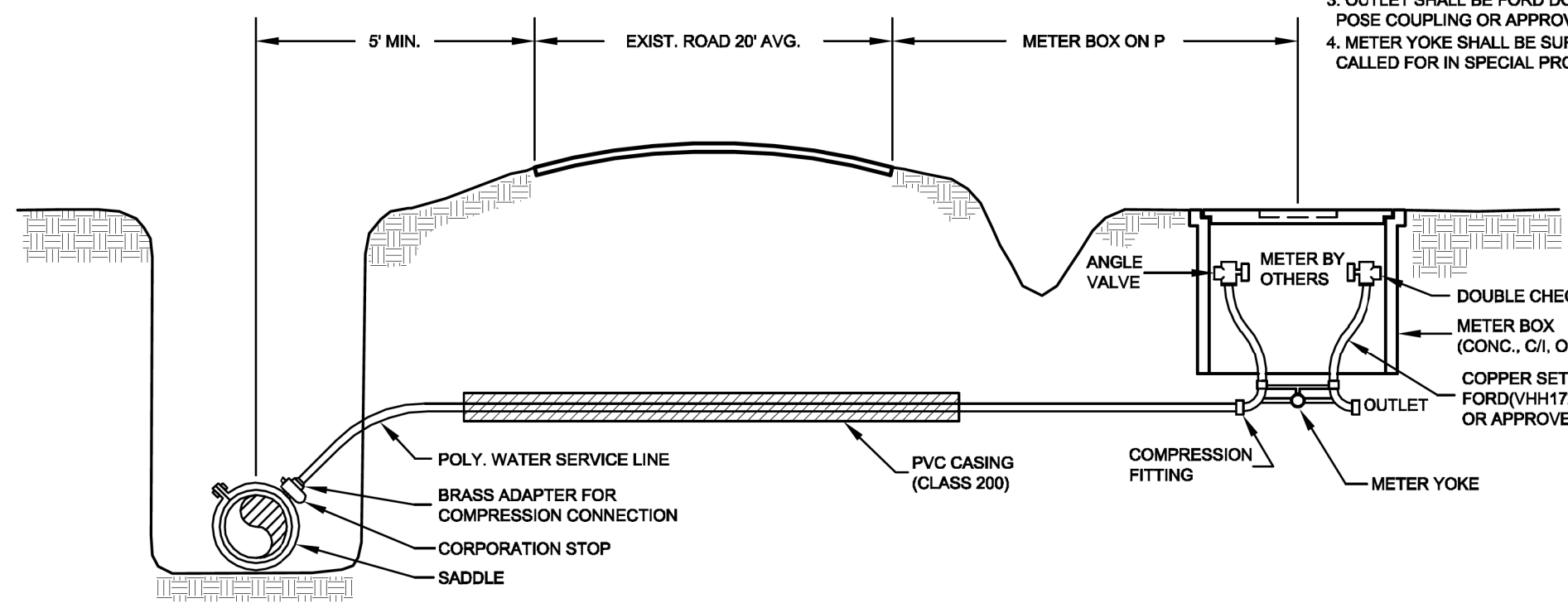
- NOTES:**
- PIPE BEDDING & TRENCH BACKFILL - COMPACTED IN LAYERS TO 95% MAXIMUM DENSITY AS PER ASTM D698 (STANDARD PROCTOR) AND 98% IN AREAS UNDER PAVEMENT IN ACCORDANCE WITH AASHTO T-99 AS MODIFIED BY THE NC DEPARTMENT OF TRANSPORTATION
  - WATER SHALL NOT BE PERMITTED IN THE TRENCH DURING CONSTRUCTION. DEWATER AS NECESSARY.
  - MINIMUM 18" BEYOND PIPE OD.
  - MINIMUM 6" LOOSELY PLACED SELECT MATERIAL CLASS III OR CLASS II, TYPE 1 FOR PIPE BEDDING. LEAVE SECTION DIRECTLY BENEATH PIPE UNCOMPACTED AS PIPE SEATING AND BACKFILL WILL ACCOMPLISH COMPACTION.
  - PLACE FOUNDATION CONDITIONING MATERIAL (SELECT MATERIAL) BELOW BEDDING IF REQUIRED OR AS DIRECTED BY ENGINEER. FOUNDATION CONDITIONING MATERIAL SHALL BE ENCAPSULATED WITH GEOTEXTILE FABRIC AS SPECIFIED.
  - SHEETING SHALL BE DRIVEN BELOW THE UTILITY INVERT IF REQUIRED FOR LATERAL SUPPORT OR UNSUITABLE MATERIAL REMOVAL. WHERE DRIVEN BELOW PIPE SPRINGLINE, SHEETING SHALL BE CUT OFF A MIN OF 12" ABOVE TOP OF PIPE OR HIGHER, AS AUTHORIZED BY THE ENGINEER, AND LEFT IN PLACE. IN NO CASE SHALL SHEETING LEFT IN PLACE EXTEND HIGHER THAN 18" BELOW SURFACE GRADE UNLESS SPECIFICALLY APPROVED. BRACING SHALL BE PROVIDED AS REQUIRED.
  - EXCAVATED MATERIALS MIXED WITH DELETERIOUS SUBSTANCES DURING CONSTRUCTION SHALL NOT BE USED FOR BACKFILLING.
  - FOR INSTALLATIONS IN PAVEMENT, ALL EXISTING PAVEMENT SHALL BE CUT SQUARELY WITH A SAW. WEARING SURFACE SHALL BE SAME TYPE AND THICKNESS AS THE EXISTING PAVEMENT.
  - TRENCH SLOPES SHALL BE AS REQUIRED BY OSHA AND SHALL NOT EXCEED 1:1 NEXT TO ROADS - USE ACTIVE SHORING AS REQUIRED.
  - SELECT BACKFILL MATERIAL CLASS III OR CLASS II, TYPE 1 INSTALLED AND COMPACTED IN 6" LIFTS.
  - TRENCH BOXES SHALL NOT EXTEND BELOW THE SPRINGLINE OF THE PIPE, UNLESS APPROVED BY THE ENGINEER ON A PER-CASE BASIS.

**PIPE BEDDING DETAIL**

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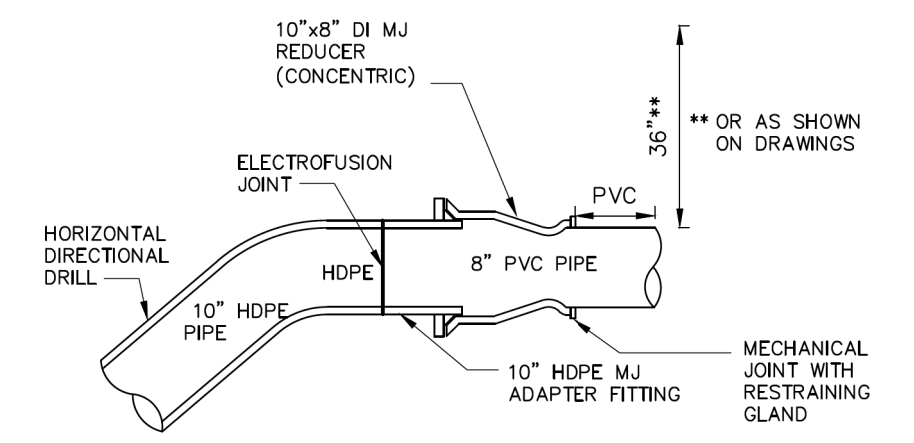


- NOTES:**
- INLETS WILL HAVE A BRASS ADAPTOR AS REQUIRED FOR A COMPRESSION FITTING TO 1"PS" WATER SERVICE PIPE.
  - YOKE WILL HAVE CHECK VALVE THAT SHALL HAVE SPRING-ASSISTED SEATING, AND THE SEAT SHALL BE OF BUNA-N-RUBBER.
  - OUTLET SHALL BE FORD DOUBLE PURPOSE COUPLING OR APPROVED EQUAL.
  - METER YOKE SHALL BE SUPPORTED AS CALLED FOR IN SPECIAL PROVISIONS.



**TYPICAL HOUSE SERVICE DETAIL**

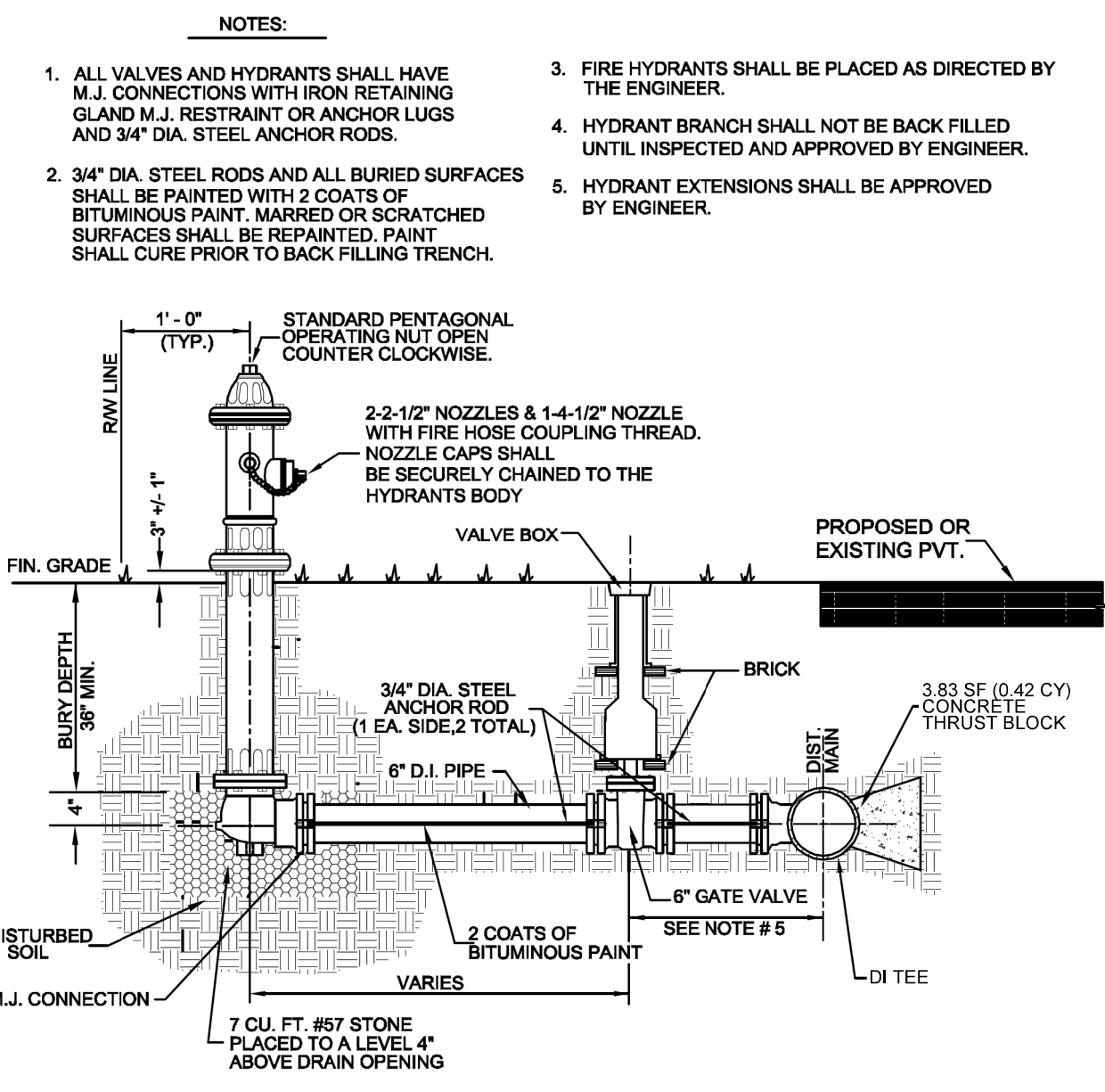
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- NOTES:**
- HDPE AND PVC SIZE SHALL BE AS NOTED ON THE DRAWINGS AT EACH TRANSITION. PIPE CLASS AND THICKNESS AS SPECIFIED.
  - SEE DRAWING NOTES AND SPECIFICATIONS FOR DI FITTING CLASS.
  - TRANSITION TO PVC SHALL OCCUR AFTER HDD ALIGNMENT HAS REACHED NEAR HORIZONTAL SLOPE.

**PVC/HDPE TRANSITION DETAIL**

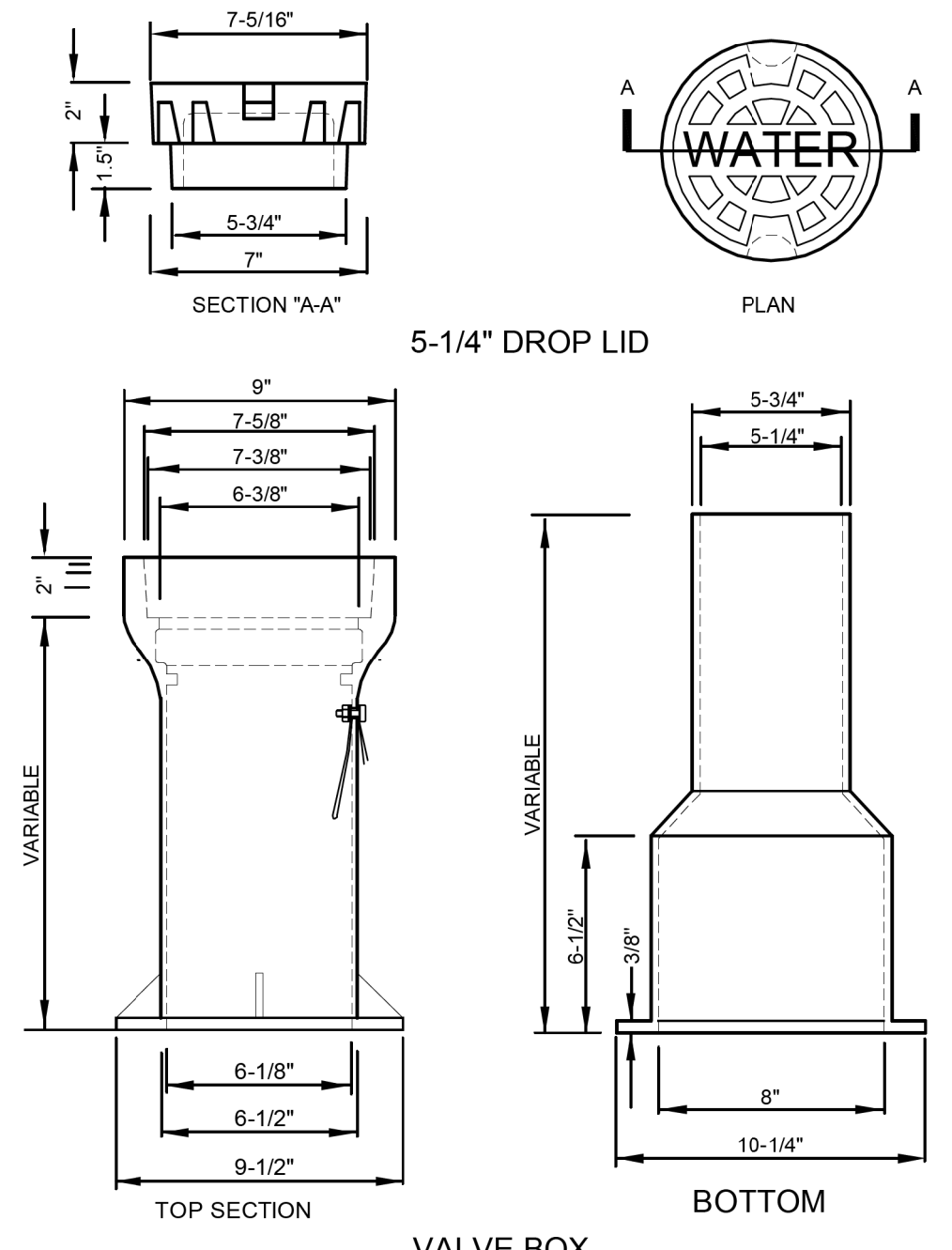
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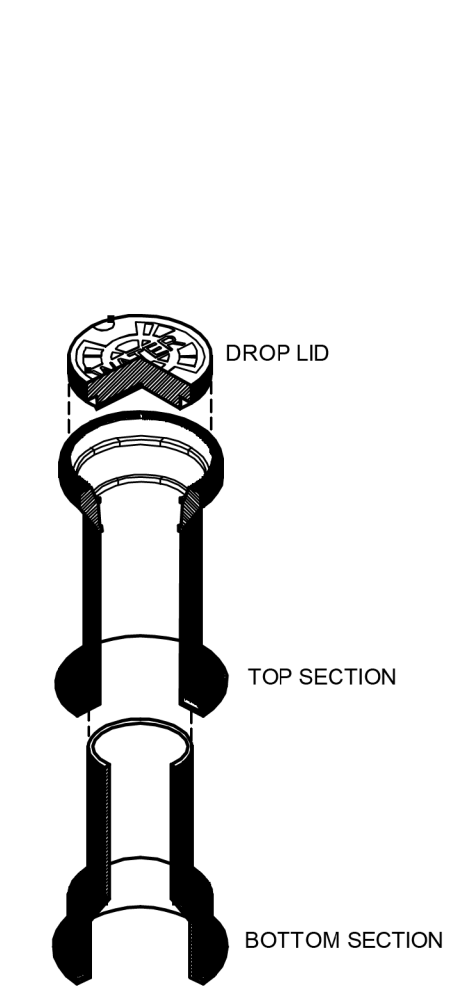
- NOTES:**
- ALL VALVES AND HYDRANTS SHALL HAVE M.J. CONNECTIONS WITH IRON RESTRAINING GLAND M.J. RESTRAINT OR ANCHOR LUGS AND 3/4" DIA. STEEL ANCHOR RODS.
  - 3/4" DIA. STEEL RODS AND ALL BURIED SURFACES SHALL BE PAINTED WITH 2 COATS OF BITUMINOUS PAINT. MARKED OR SCRATCHED SURFACES SHALL BE REPAINTED. PAINT SHALL CURE PRIOR TO BACK FILLING TRENCH.
  - FIRE HYDRANTS SHALL BE PLACED AS DIRECTED BY THE ENGINEER.
  - HYDRANT BRANCH SHALL NOT BE BACK FILLED UNTIL INSPECTED AND APPROVED BY ENGINEER.
  - HYDRANT EXTENSIONS SHALL BE APPROVED BY ENGINEER.

**HYDRANT DETAIL**

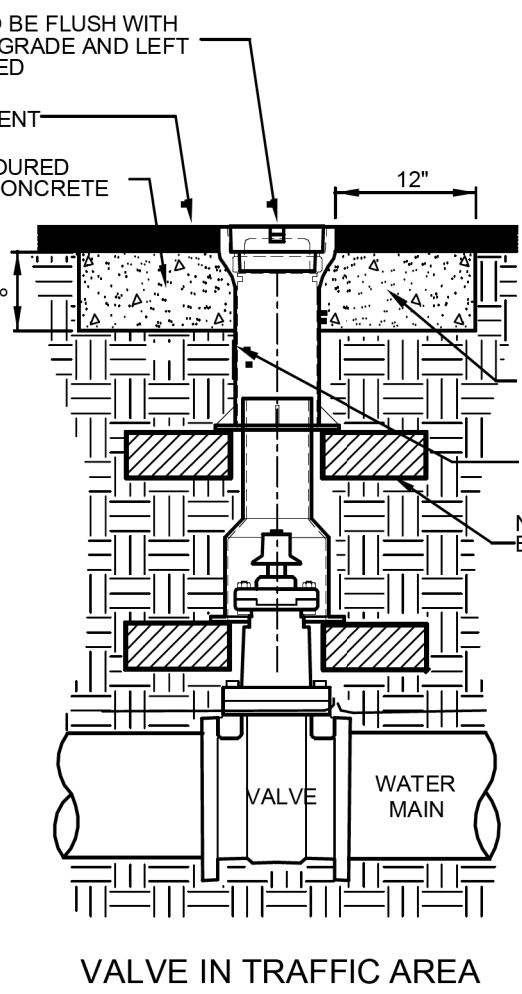
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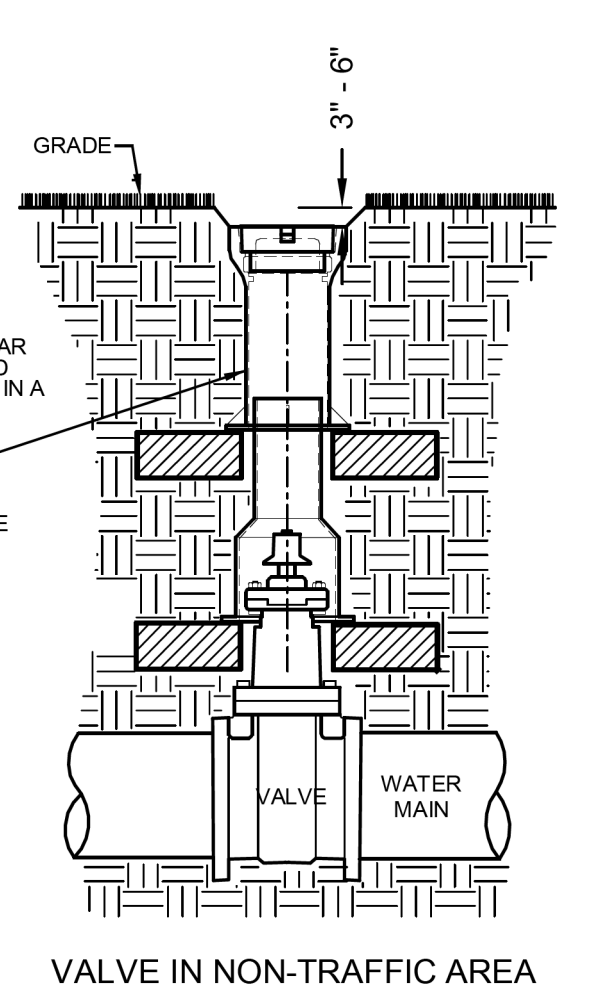
**VALVE BOX**



**VALVE BOX DETAIL**



**VALVE IN TRAFFIC AREA**



**VALVE IN NON-TRAFFIC AREA**

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