

HOUSTON COUNTY PUBLIC WORKS



Water System Standard Details For Construction and Design

October 2023
REVISED January 2025

PREPARED BY



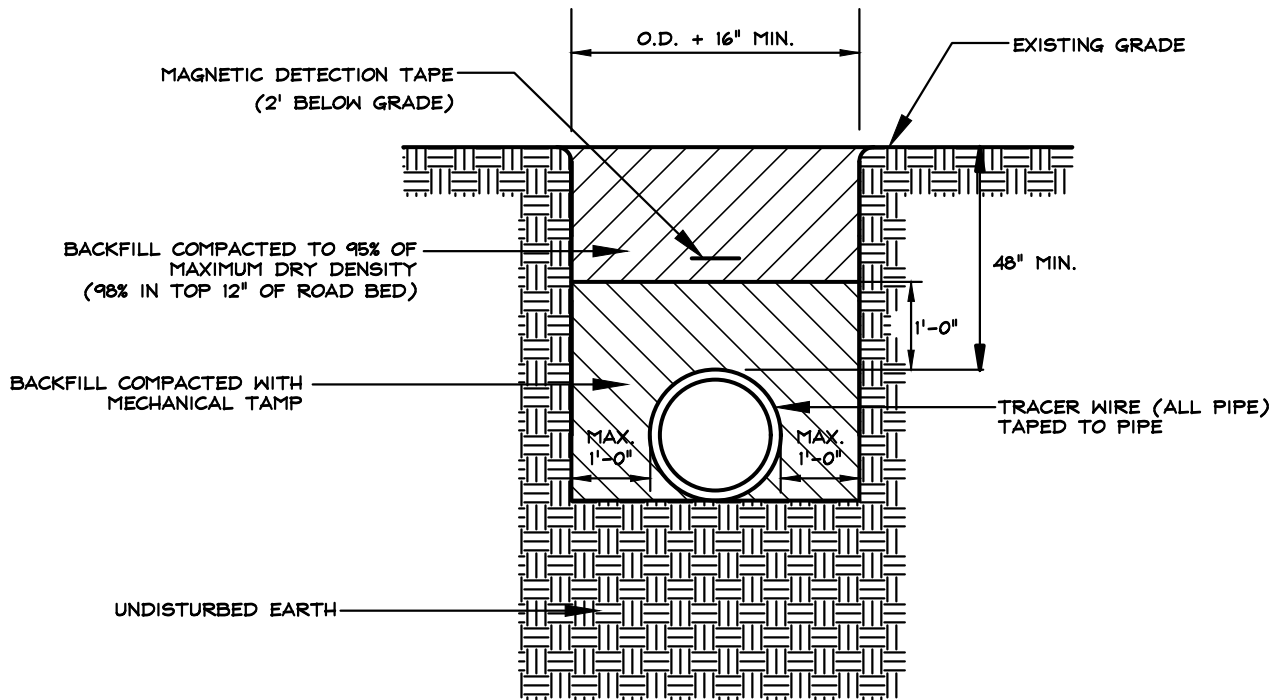
Carter & Sloope
CONSULTING ENGINEERS

115 WOODLAND WAY, SUITE 120, CANTON, GA 30114
PHONE: (770) 479-8782, FAX: (770) 479-1884

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NOTE: UNSUITABLE SOILS ENCOUNTERED IN BOTTOM OF EXCAVATED TRENCH SHALL BE EXCAVATED & REPLACED WITH SAND. UNSTABLE SOILS ENCOUNTERED IN BOTTOM OF EXCAVATED TRENCH SHALL BE EXCAVATED & REPLACED WITH NO. 57 STONE. FILTER FABRIC SHALL BE INSTALLED ABOVE & BELOW THE STONE. ONLY SUITABLE SOIL SHALL BE USED AS BACKFILL.

BEDDING DETAIL

N.T.S.

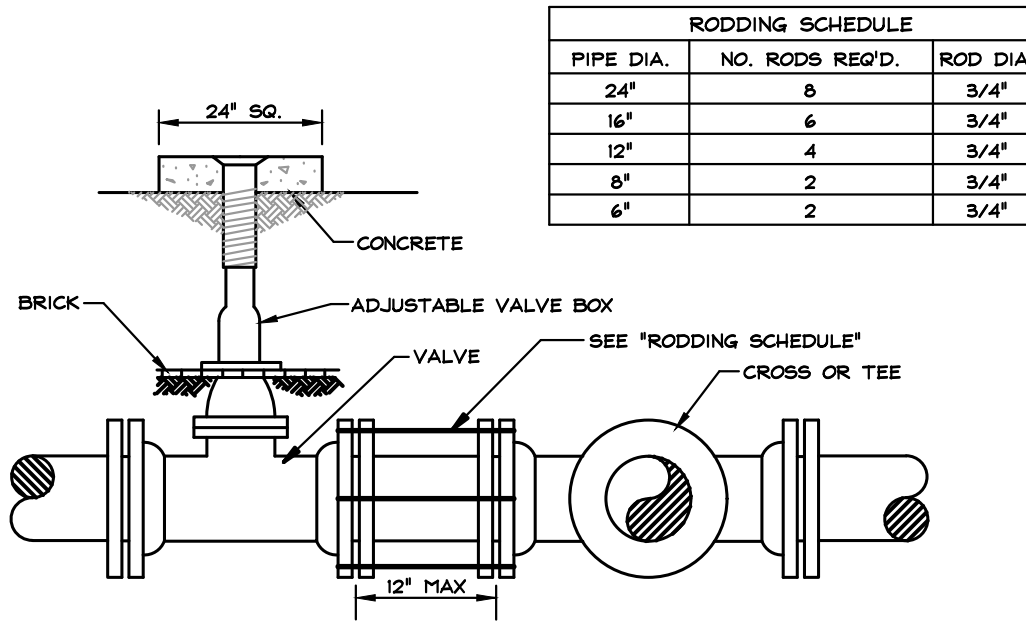
NOTE: ALL PIPELINES ARE TO BE LAID PER PIPE MANUFACTURER'S SPECIFICATIONS. ALL PIPE TO BE LAID STRAIGHT OR ON TRUE CURVES. WHEN THE MANUFACTURER'S CURVE RADIUS CANNOT BE MET, THE APPROPRIATE PIPE FITTINGS MUST BE USED.

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STANDARD CONSTRUCTION DETAILS
BEDDING DETAIL



RODDING SCHEDULE		
PIPE DIA.	NO. RODS REQ'D.	ROD DIA.
24"	8	3/4"
16"	6	3/4"
12"	4	3/4"
8"	2	3/4"
6"	2	3/4"

NOTE:
 1. ALL LINE VALVES SHALL HAVE "V" CUT INTO CURB.
 2. ALL OPERATING NUTS BURIED GREATER THAN 4 FEET DEEP ARE REQUIRED TO HAVE A STEEL OPERATING NUT EXTENSION.

VALVE SETTING & BOX DETAIL

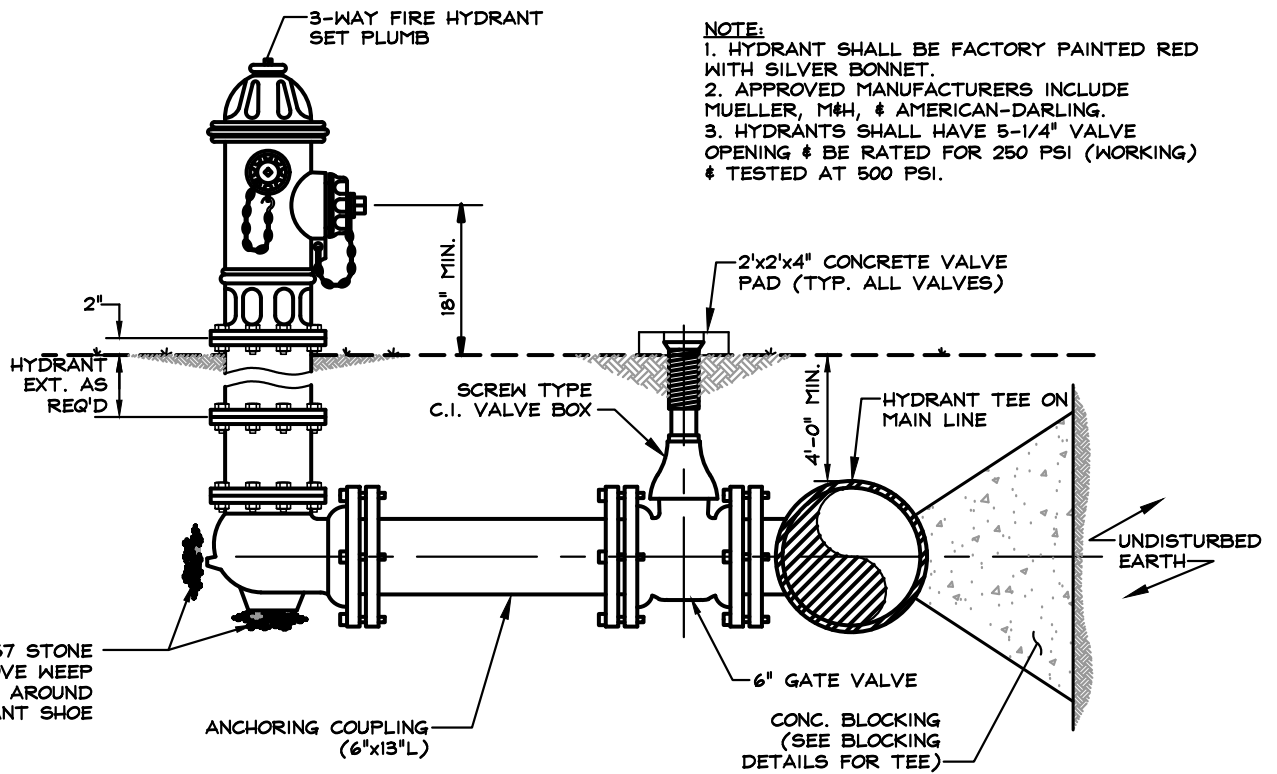
N.T.S.

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STANDARD CONSTRUCTION DETAILS
VALVE SETTING & BOX DETAIL



TYPICAL FIRE HYDRANT SETTING

N.T.S.

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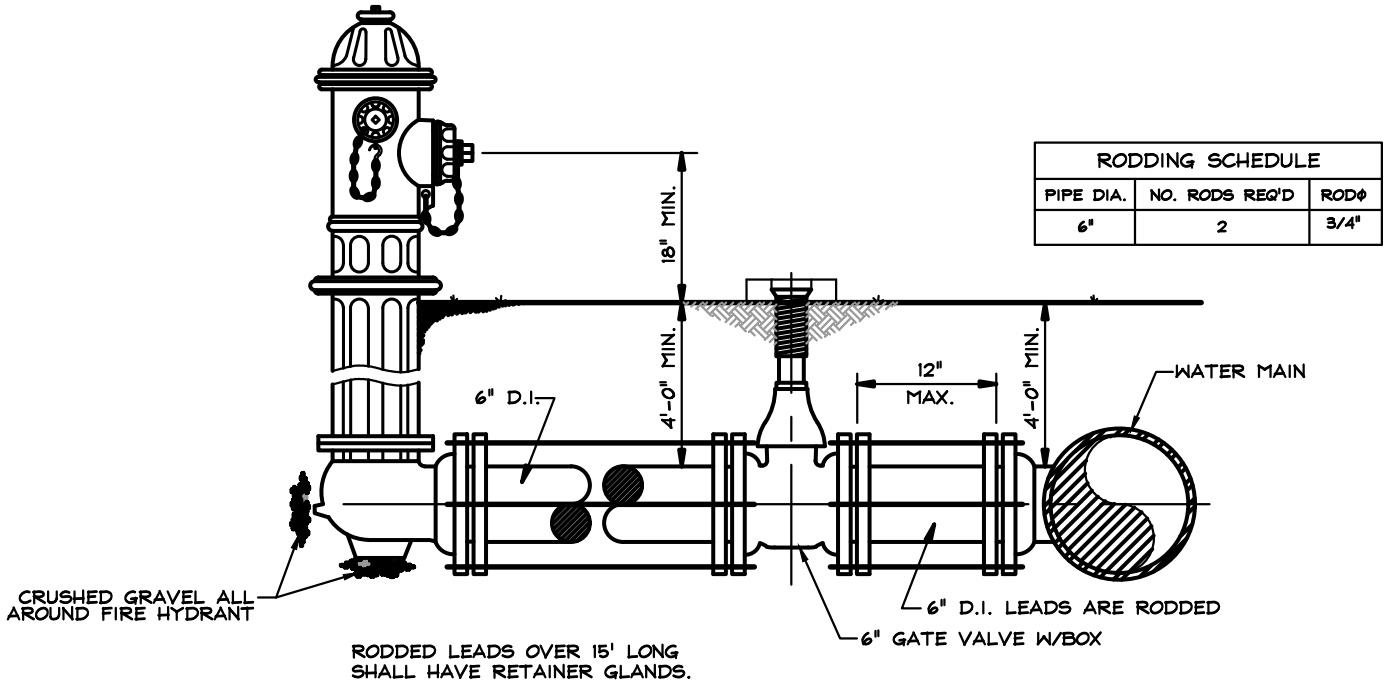


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STANDARD CONSTRUCTION DETAILS
FIRE HYDRANT SETTING DETAIL

NOTE:

- 1. HYDRANT SHALL BE FACTORY PAINTED RED WITH SILVER BONNET.
- 2. APPROVED MANUFACTURERS INCLUDE MUELLER, M#H, & AMERICAN-DARLING.
- 3. HYDRANTS SHALL HAVE 5-1/4" VALVE OPENING & BE RATED FOR 250 PSI (WORKING) & TESTED AT 500 PSI.



ALTERNATE FIRE HYDRANT SETTING

N.T.S.

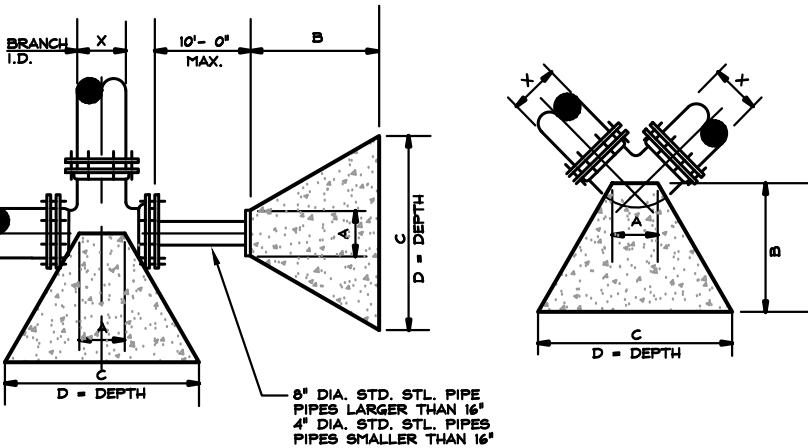
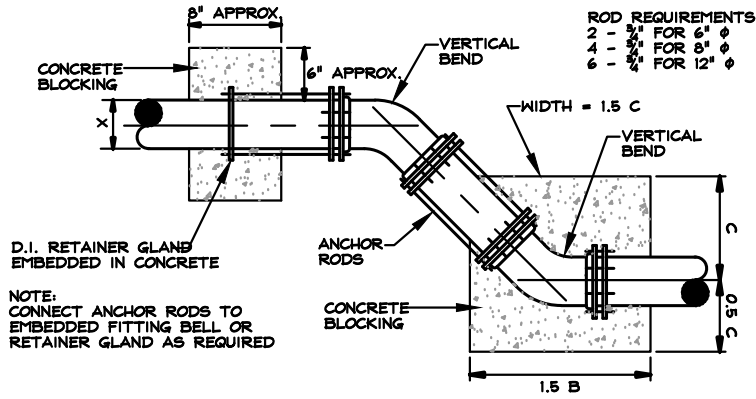
THE ALTERNATE FIRE HYDRANT ASSEMBLY SHOULD ONLY BE USED WHEN THE WATER MAIN IS INSTALLED NEAR THE EDGE OF PAVEMENT OR WHEN SPECIFICALLY DIRECTED BY THE ENGINEER.

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STANDARD CONSTRUCTION DETAILS
ALTERNATE FIRE HYDRANT SETTING



BLOCKING DIMENSIONS

	BENDS					BEND	BENDS					TEES & DEAD ENDS				
	X	A	B	C	D		X	A	B	C	D	X	A	B	C	D
90° BEND	30"	2'-0"	1'-6"	15'-3"	6'-0"	11-1/4° BEND	30"	1'-0"	2'-10"	4'-3"	3'-0"	30"	3'-0"	8'-9"	13'-0"	5'-0"
	24"	2'-0"	7'-9"	10'-9"	5'-6"		24"	1'-0"	2'-6"	3'-8"	2'-6"	24"	2'-6"	7'-3"	10'-8"	3'-9"
	20"	1'-9"	6'-0"	8'-6"	5'-0"		20"	10"	2'-0"	3'-0"	2'-0"	20"	2'-0"	5'-3"	8'-0"	3'-6"
	16"	1'-3"	4'-0"	6'-0"	4'-6"		16"	8"	1'-8"	2'-6"	1'-6"	16"	1'-0"	4'-8"	6'-4"	3'-0"
	12"	10"	2'-9"	4'-0"	4'-0"		12"	8"	1'-0"	1'-6"	1'-6"	12"	10"	2'-9"	4'-6"	2'-6"
	10"	10"	2'-6"	3'-9"	3'-0"		10"	10"	1'-0"	1'-6"	1'-0"	10"	10"	2'-0"	3'-3"	2'-6"
	8"	8"	1'-6"	2'-6"	2'-6"		8"	8"	1'-0"	1'-6"	1'-0"	8"	8"	1'-9"	2'-6"	2'-0"
	6"	6"	1'-3"	2'-0"	2'-0"		6"	6"	1'-0"	1'-0"	1'-0"	6"	6"	1'-3"	2'-0"	1'-6"
4"	4"	1'-0"	1'-6"	1'-6"	4"	4"	1'-0"	1'-0"	9"	4"	4"	1'-0"	1'-0"	1'-0"		
45° BEND	30"	1'-6"	7'-6"	10'-0"	5'-0"	22-1/2° BEND	30"	1'-0"	4'-8"	6'-4"	4'-0"	30"	1'-0"	3'-0"	5'-0"	3'-6"
	24"	1'-3"	5'-9"	8'-0"	4'-0"		24"	1'-0"	2'-6"	4'-4"	3'-0"	24"	1'-0"	2'-6"	4'-4"	3'-0"
	20"	1'-0"	4'-9"	6'-8"	3'-6"		20"	1'-0"	2'-6"	4'-4"	3'-0"	20"	1'-0"	2'-6"	4'-4"	3'-0"
	16"	1'-3"	3'-3"	5'-0"	3'-3"		16"	1'-0"	1'-9"	3'-0"	2'-6"	16"	1'-0"	1'-9"	3'-0"	2'-6"
	12"	10"	1'-9"	3'-0"	2'-0"		12"	10"	1'-3"	2'-3"	2'-0"	12"	10"	1'-3"	2'-3"	2'-0"
	10"	10"	1'-9"	3'-0"	2'-0"		10"	10"	1'-0"	2'-0"	1'-6"	10"	10"	1'-0"	2'-0"	1'-6"
	8"	8"	1'-6"	2'-0"	2'-0"		8"	8"	1'-0"	1'-9"	1'-9"	8"	8"	1'-0"	1'-9"	1'-9"
	6"	6"	1'-3"	1'-6"	1'-6"		6"	6"	1'-0"	1'-6"	1'-6"	6"	6"	1'-0"	1'-6"	1'-6"
4"	4"	1'-0"	1'-0"	1'-0"	4"	4"	1'-0"	1'-3"	1'-3"	4"	4"	1'-0"	1'-3"	1'-3"		

- NOTE:**
- 200 P.S.I. TEST PRESSURE
 - SOIL BEARING OF 2500 P.S.F.
 - 3000 P.S.I. CONCRETE
 - PIPE LESS THAN 4" IN DIAMETER SHALL HAVE THE SAME REQUIREMENTS AS 4" DIAMETER PIPE.
 - COUNTY STAFF TO VISUALLY INSPECT ALL FITTINGS PRIOR TO BURIAL.

THRUST BLOCK

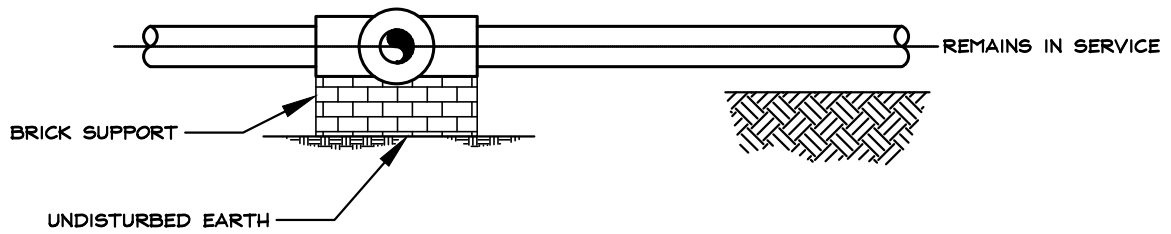
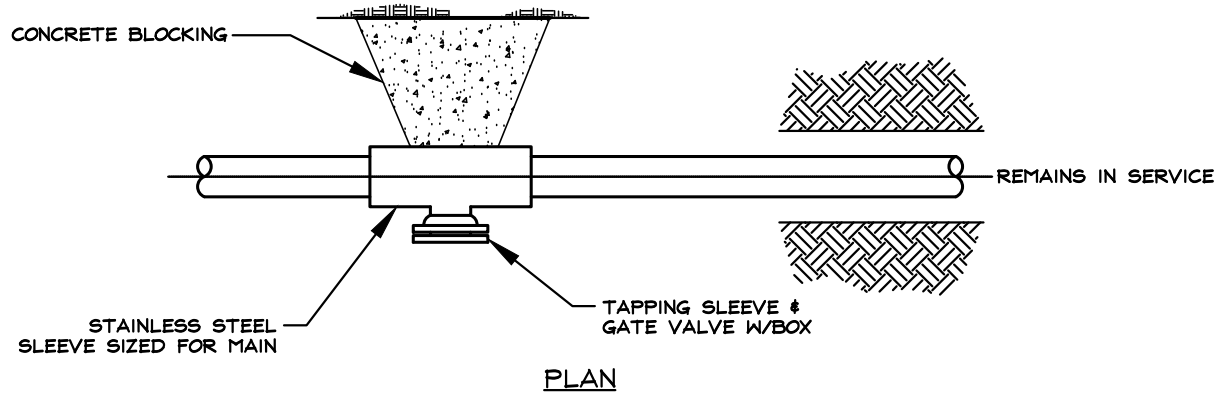
N.T.S.

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STANDARD CONSTRUCTION DETAILS
THRUST BLOCK DETAIL



NOTE: HOUSTON COUNTY MUST BE ONSITE FOR TESTING OF SLEEVE & WITNESSING OF TAP.

TAPPING SLEEVE DETAIL

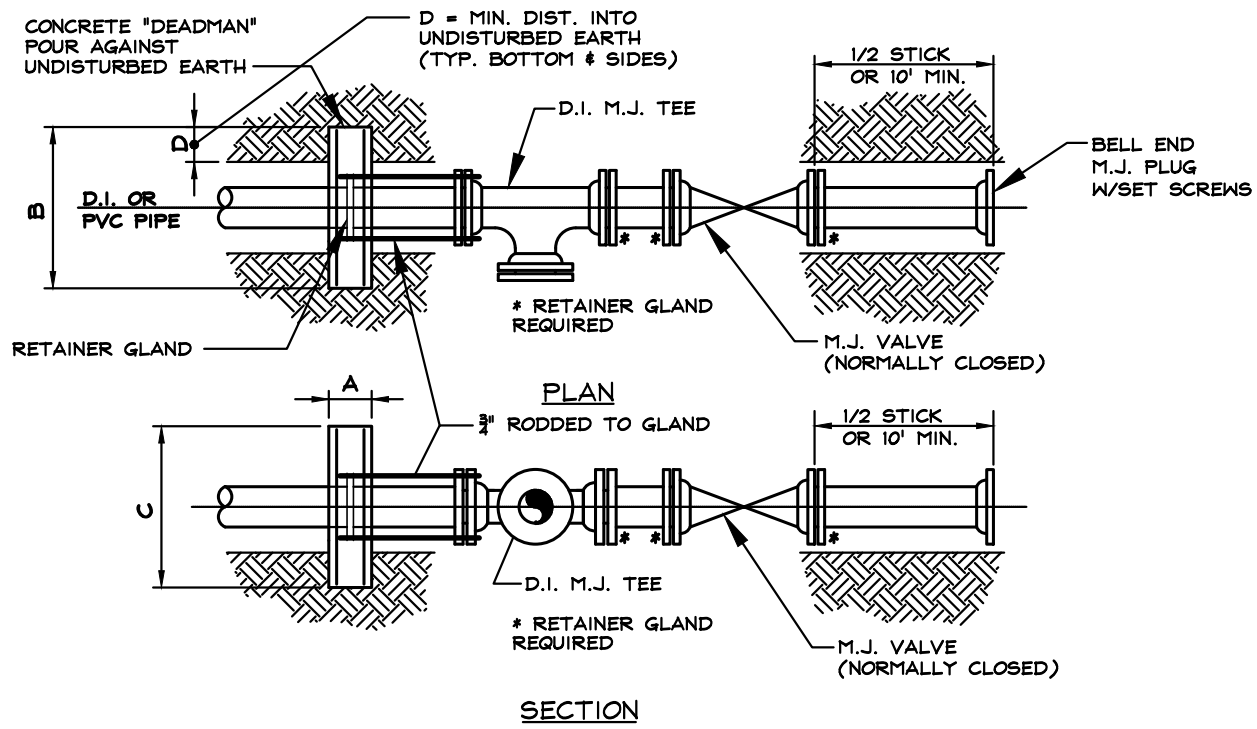
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STANDARD CONSTRUCTION DETAILS
TAPPING SLEEVE DETAIL



MAIN DIA	CONCRETE COLLAR DIM.			
	A	B	C	D
24"	1'-6"	8'-0"	8'-0"	2'-0"
16"	1'-3"	6'-6"	6'-6"	1'-6"
12"	1'-2"	5'-3"	5'-3"	1'-0"
6" or 8"	1'-0"	4'-0"	4'-0"	0'-8"

NOTE: CONCRETE THRUST BLOCKING REQUIRED ON ALL FITTINGS AS SPECIFIED IN THE THRUST BLOCK DETAIL.

TEST PRESSURE: 150 P.S.I.
 SOIL BEARING PRESSURE: 3000 P.S.F.

WATER MAIN TERMINATION

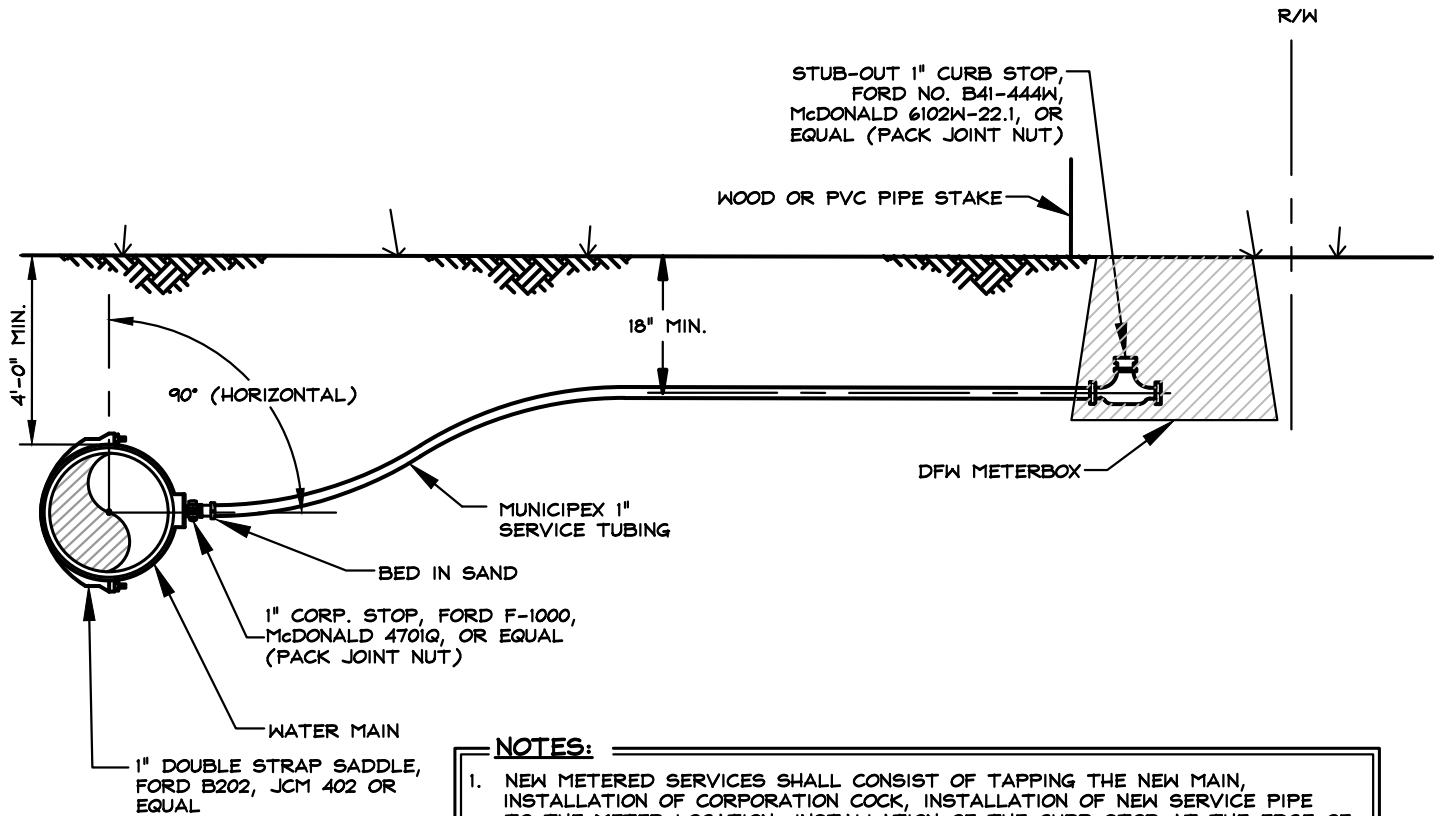
N.T.S.

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HOUSTON COUNTY
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STANDARD CONSTRUCTION DETAILS
WATER MAIN TERMINATION



NOTES:

1. NEW METERED SERVICES SHALL CONSIST OF TAPPING THE NEW MAIN, INSTALLATION OF CORPORATION COCK, INSTALLATION OF NEW SERVICE PIPE TO THE METER LOCATION, INSTALLATION OF THE CURB STOP AT THE EDGE OF METER BOX. MUST BE ENOUGH SPACE TO INSTALL METER & BACKFLOW PREVENTER IN BOX.
2. METER, & BACKFLOW PREVENTER TO BE PROVIDED & INSTALLED BY COUNTY WHEN CUSTOMER SIGNS UP FOR SERVICE.
3. WATER SERVICE TO BE INSTALLED NEAR CENTER OF LOT.
4. CORP CUT-OFF TO BE INSTALLED ON TOP
5. CORP STOP ANGLE NEVER EXCEEDS 45°
6. A "W" SHALL BE SAW-CUT INTO CURB AT EACH SERVICE LOCATION.
7. METER BOX SHALL BE DFW JUMBO BOX WITH LID (ITEM NO. 1600121) & BE 16" X 22" X 12".
8. ALL 2-INCH SERVICES SHALL HAVE VALVES WITH 2-INCH OPERATING NUTS IN PLACE OF CORP. STOP AND CURB STOP. VALVE BOXES SHALL BE INSTALLED AT CORP. STOP

TYPICAL SHORTSIDE SERVICE CONNECTION

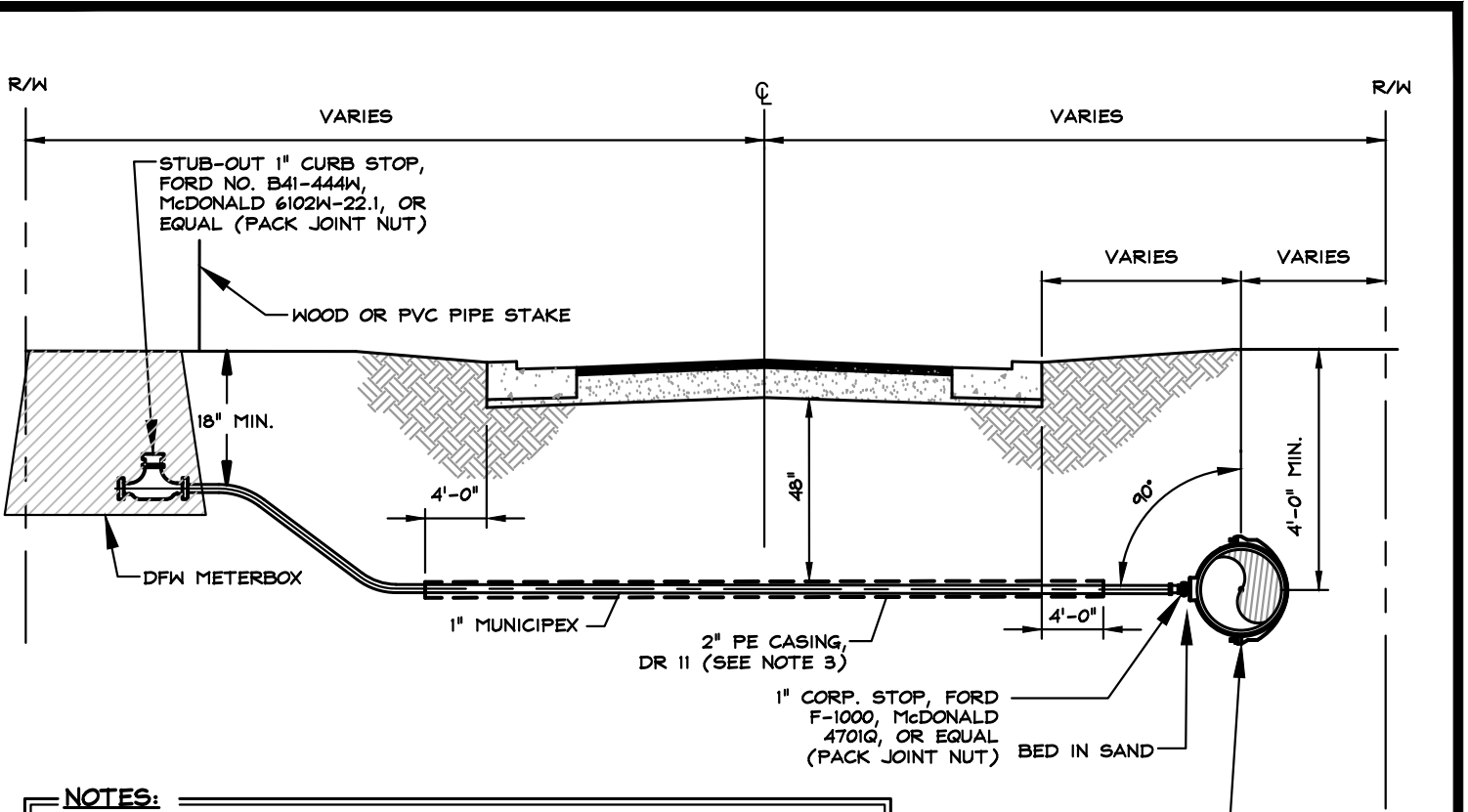
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STANDARD CONSTRUCTION DETAILS
TYPICAL SHORTSIDE SERVICE CONNECTION



NOTES:

1. METHOD OF INSTALLATION FOR CASING SHALL BE BY DIRECTIONAL BORE.
2. METERS ARE TO BE SET DIRECTLY OPPOSITE TAP ON MAIN. THE METER SHALL NOT BE OFFSET Laterally FROM TAP ON WATER MAIN.
3. CASING NOT REQUIRED FOR 2-LANE ROAD. ONLY REQUIRED FOR THREE LANE OR MORE.
4. NEW METERED SERVICES SHALL CONSIST OF TAPPING THE NEW MAIN, INSTALLATION OF CORPORATION COCK, INSTALLATION OF NEW SERVICE PIPE TO THE METER LOCATION, INSTALLATION OF THE CURB STOP AT THE EDGE OF METER BOX. MUST BE ENOUGH SPACE TO INSTALL METER & BACKFLOW PREVENTER IN BOX.
5. METER, & BACKFLOW PREVENTER TO BE PROVIDED & INSTALLED BY COUNTY WHEN CUSTOMER SIGNS UP FOR SERVICE.
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9. A "W" SHALL BE SAW-CUT INTO CURB AT EACH SERVICE LOCATION.
10. METER BOX SHALL BE DFW JUMBO BOX WITH LID (ITEM NO. 1600121) & BE 16" X 22" X 12".
11. ALL 2-INCH SERVICES SHALL HAVE VALVES WITH 2-INCH OPERATING NUTS IN PLACE OF CORP. STOP AND CURB STOP. VALVE BOXES SHALL BE INSTALLED AT CORP. STOP

1" DOUBLE STRAP SADDLE, FORD B202, JCM 402 OR EQUAL

TYPICAL LONGSIDE SERVICE CONNECTION

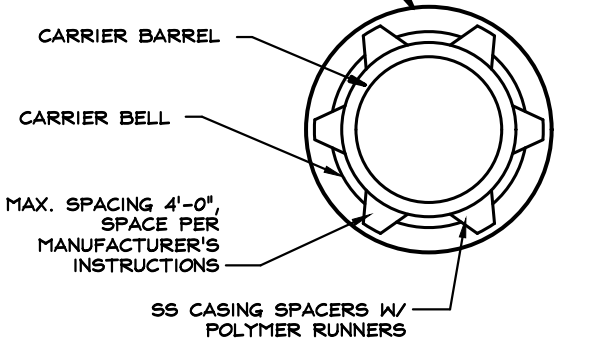
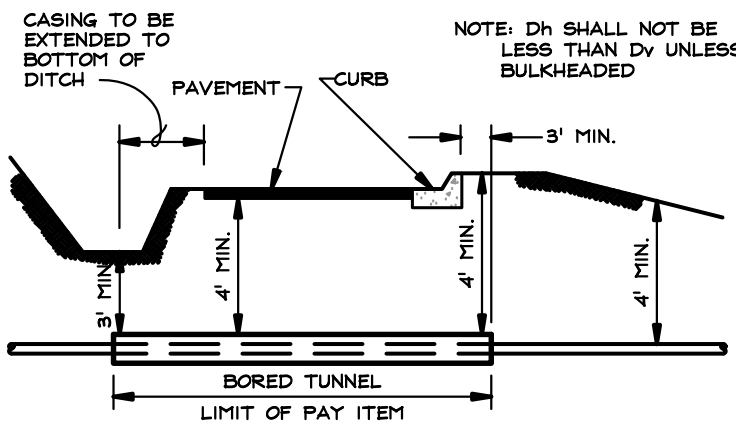
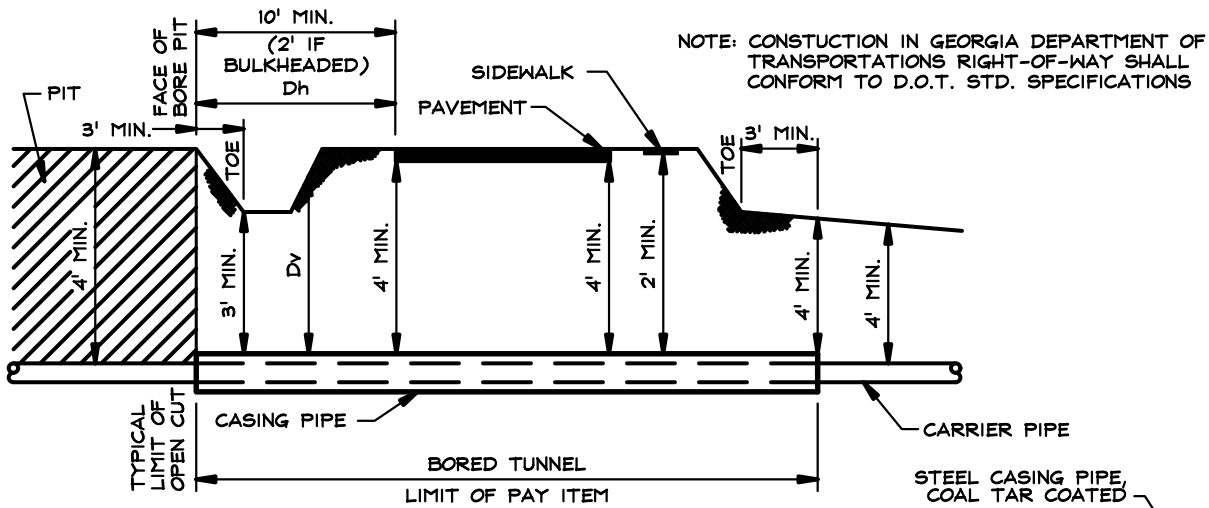
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STANDARD CONSTRUCTION DETAILS
TYPICAL LONGSIDE SERVICE CONNECTION



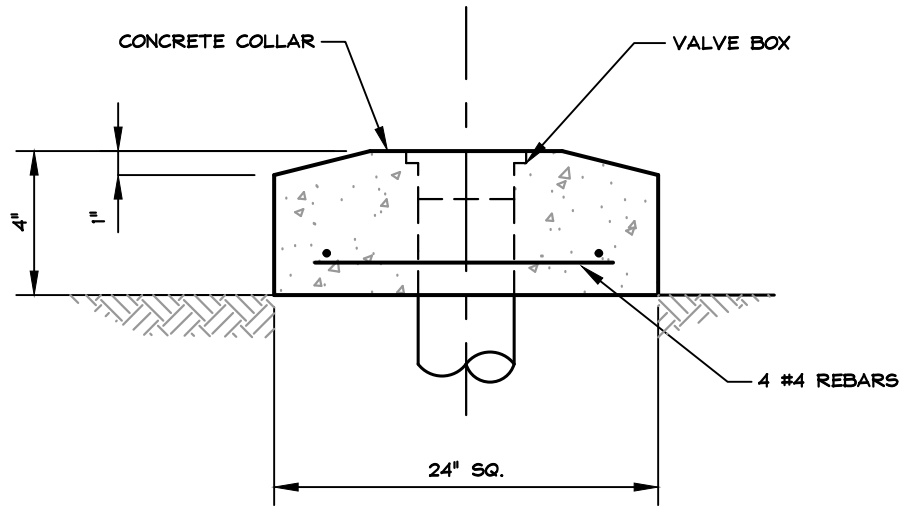
HIGHWAY UTILITY CROSSING DETAIL
N.T.S.

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PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS
HIGHWAY UTILITY CROSSING DETAIL



NOTE: CONCRETE COLLAR MAY BE PRECAST OR CAST IN PLACE

CONCRETE VALVE PAD DETAIL

N.T.S.

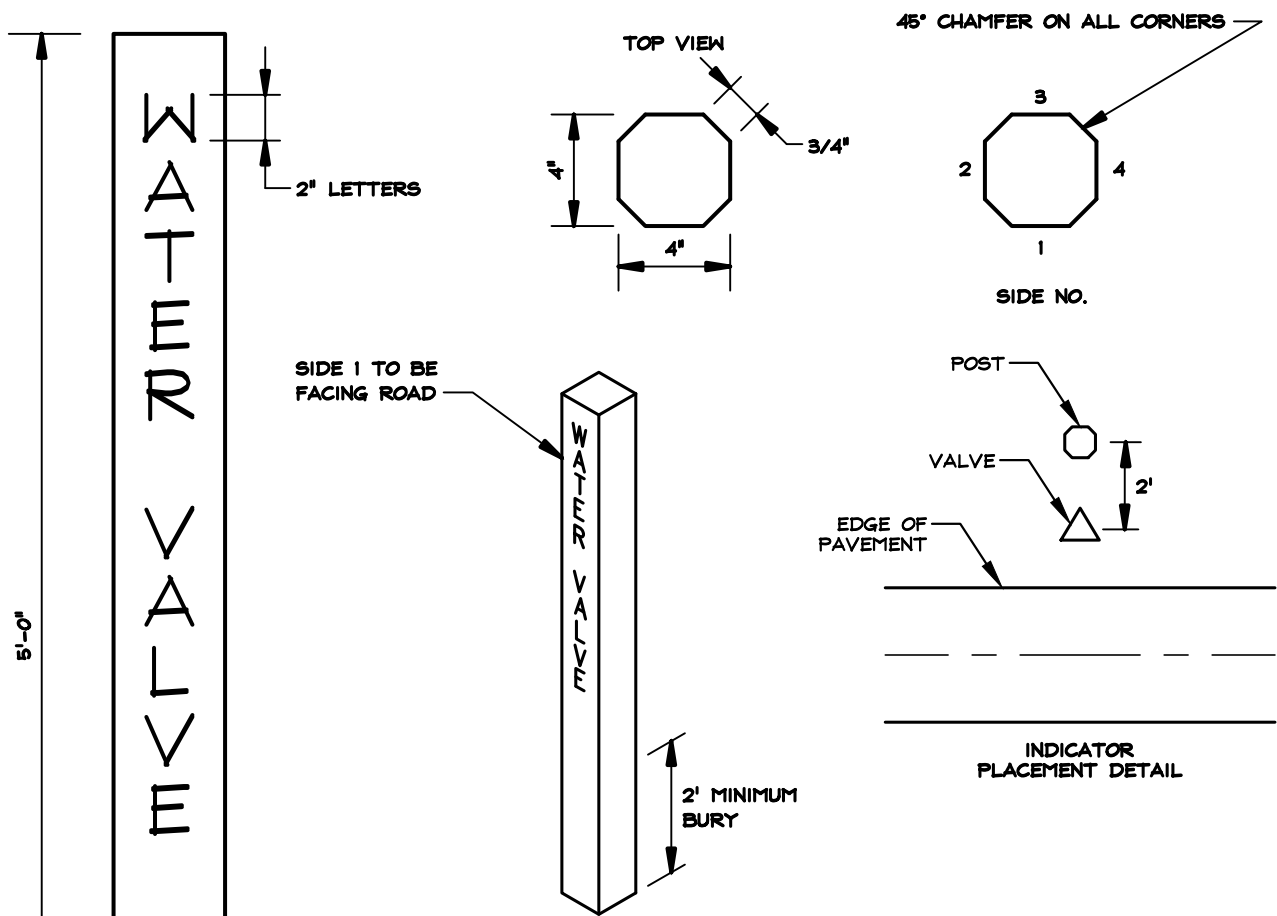
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HOUSTON COUNTY
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STANDARD CONSTRUCTION DETAILS
CONCRETE VALVE PAD DETAIL

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NOTES:

1. CENTER OF CONCRETE POST SHALL BE REINFORCED WITH NO. 4 REBAR STEEL.
2. "WATER VALVE" SHALL BE ON ONE SIDE ONLY FACING ROAD.
3. WATER VALVE INDICATOR POST IS REQ'D AT EACH BURIED VALVE (NOT HYDRANT VALVES).

WATER VALVE INDICATOR POST DETAIL

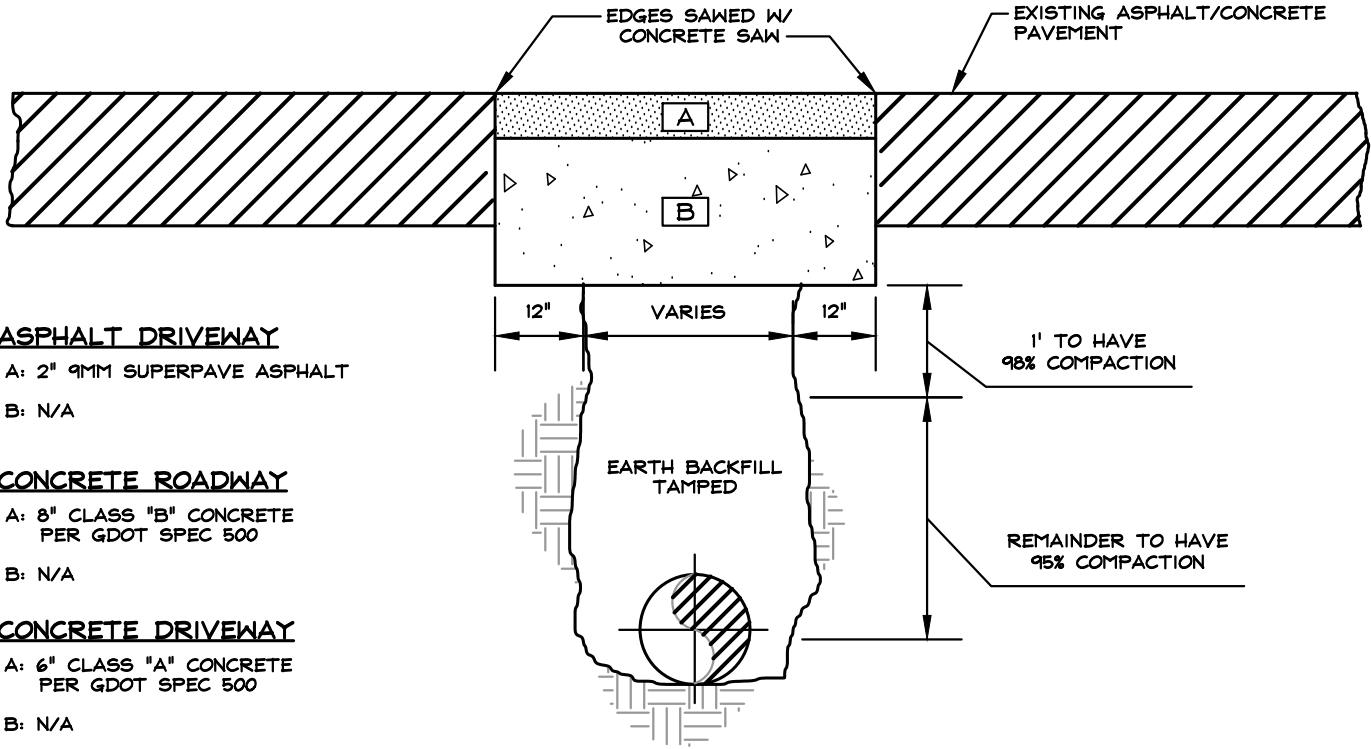
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STANDARD CONSTRUCTION DETAILS
WATER VALVE INDICATOR POST



ASPHALT DRIVEWAY

- A: 2" 9MM SUPERPAVE ASPHALT
- B: N/A

CONCRETE ROADWAY

- A: 8" CLASS "B" CONCRETE
PER GDOT SPEC 500
- B: N/A

CONCRETE DRIVEWAY

- A: 6" CLASS "A" CONCRETE
PER GDOT SPEC 500
- B: N/A

GRAVEL DRIVEWAY

- A: 6" GRAVEL
- B: N/A

ASPHALT ROADWAY

- A: TOP 2" OF PATCH TO BE REPLACED WITH SAME MATERIAL AS
EXISTING SURFACE. BITUMINOUS TACK COAT OR PRIME APPLIED
BEFORE PLACEMENT OF ASPHALTIC TOP.
- B: 8" CLASS "A" PORTLAND CEMENT CONCRETE

PAVEMENT REPLACEMENT DETAIL

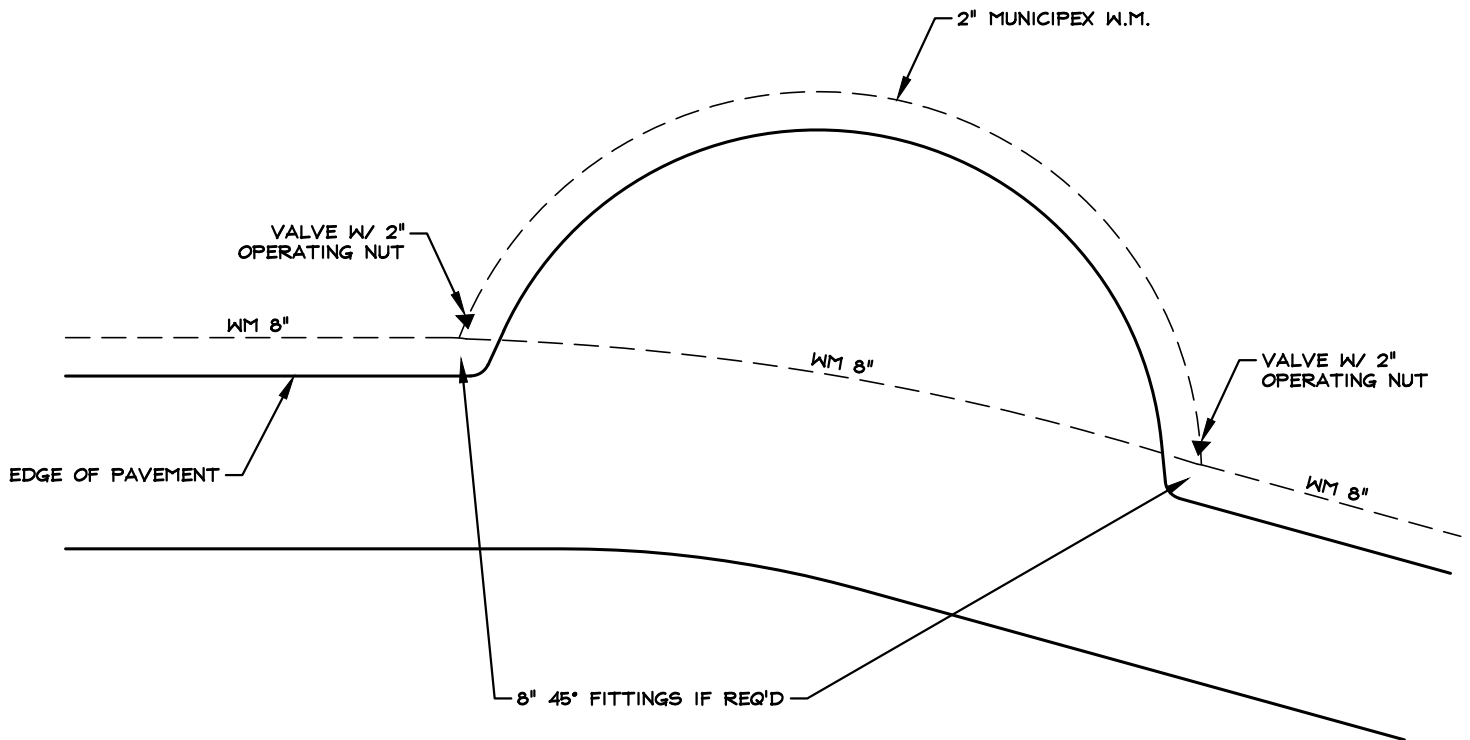
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STANDARD CONSTRUCTION DETAILS
PAVEMENT REPLACEMENT



"EYE BROW" LAYOUT DETAIL

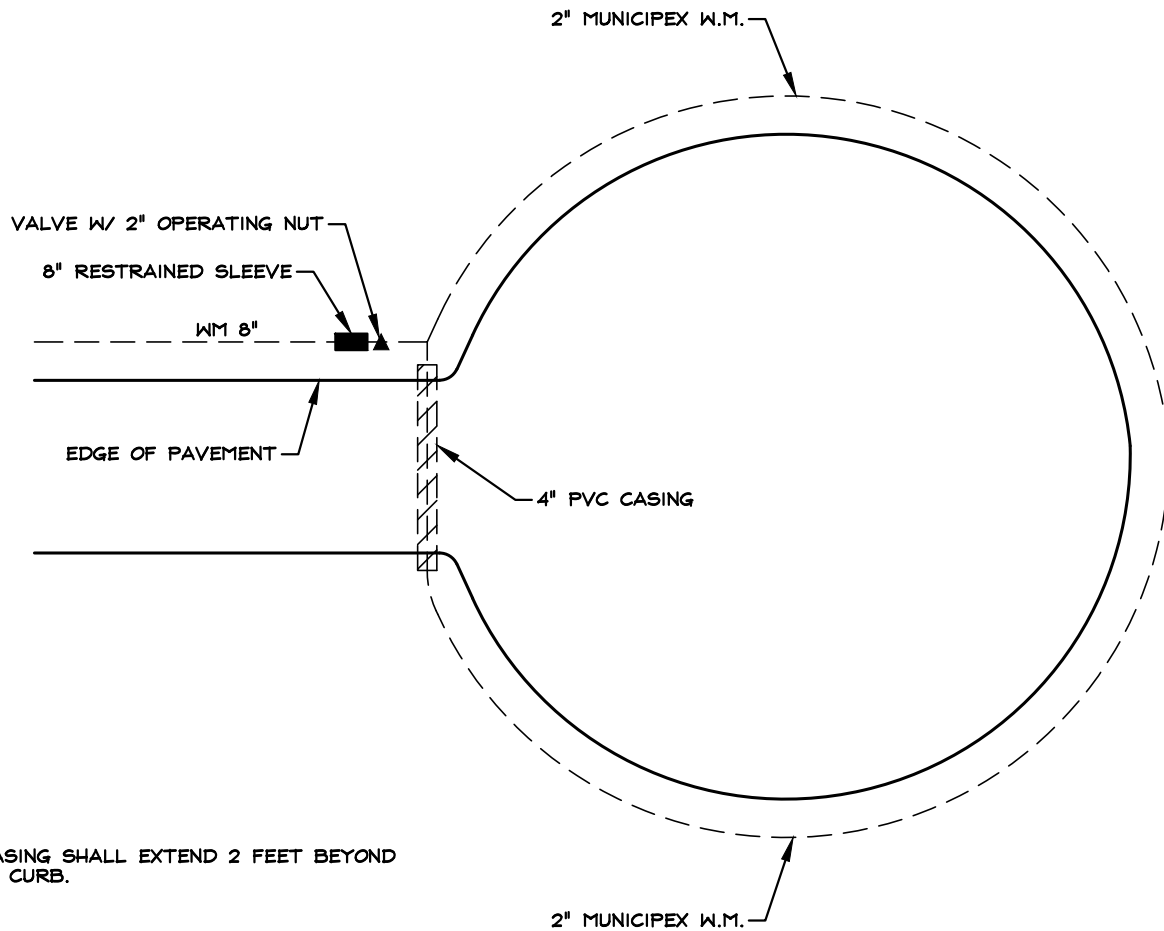
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HOUSTON COUNTY
PUBLIC WORKS

STANDARD CONSTRUCTION DETAILS
EYE BROW LAYOUT DETAIL



CUL-DE-SAC LAYOUT DETAIL
 N.T.S.

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HOUSTON COUNTY
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STANDARD CONSTRUCTION DETAILS
 CUL-DE-SAC LAYOUT DETAIL