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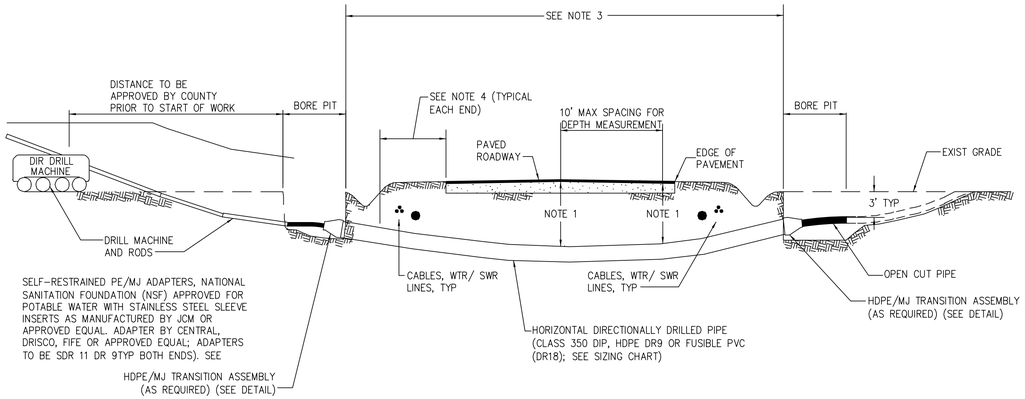
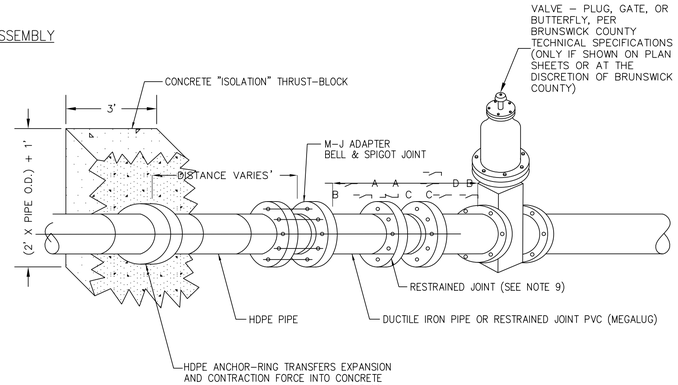
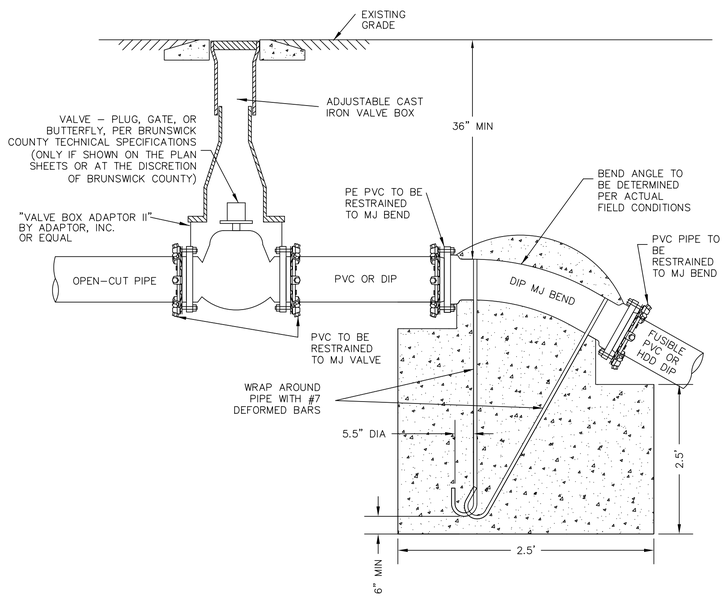


HDPE DIAMETER CONVERSION TABLE	
NOMINAL OPEN CUT PIPE SIZE (INCHES)	NOMINAL HDPE DR9 HDD PIPE SIZE (INCHES)
3	3
4	6
6	8
8	10
10	12
12	16
14	18
16	20
18	24
20	24
24	30
30	36

DIRECTIONAL DRILL DETAIL WS-4

HDPE/MJ TRANSITION ASSEMBLY WS-4A



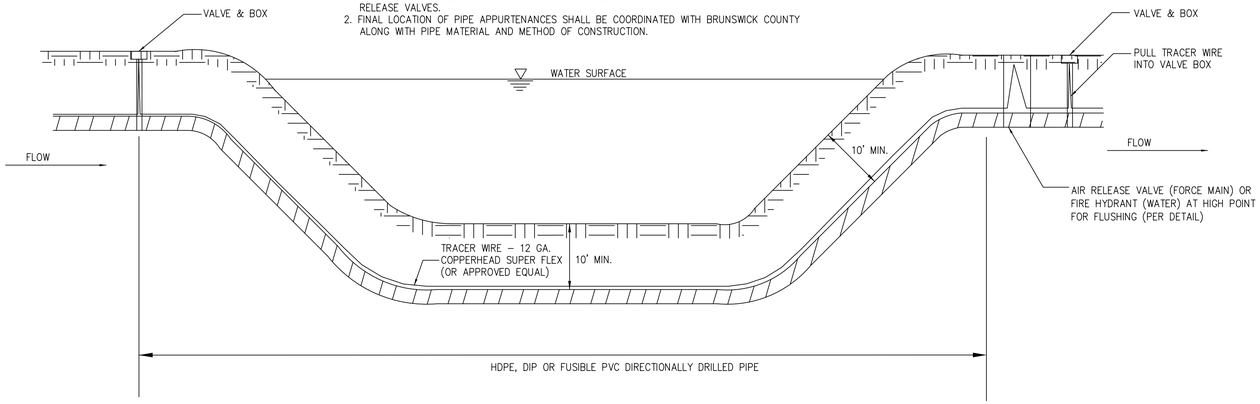


OPEN-CUT PIPE TO FUSIBLE PVC OR HDD DIP TRANSITION ASSEMBLY WS-4C

HDPE/MJ TRANSITION ASSEMBLY WS-4B

NOTES:

1. THIS DETAIL IS A GENERAL SCHEMATIC SHOWING ISOLATION VALVE LOCATIONS AND AIR RELEASE VALVES.
2. FINAL LOCATION OF PIPE APPURTENANCES SHALL BE COORDINATED WITH BRUNSWICK COUNTY ALONG WITH PIPE MATERIAL AND METHOD OF CONSTRUCTION.



VALVE LOCATIONS FOR DIRECTIONAL DRILL OF PIPE UNDER WETLANDS/WATER BODY DETAIL WS-5

Prepared In the Office of:

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F - 0342

PROJECT REFERENCE NO.	SHEET NO.
R-5021	UC-3G

DESIGNED BY:
DRAWN BY:
CHECKED BY:
APPROVED BY:
REVISED:

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

UTILITIES ENGINEERING SEC.
PHONE: (919)707-6690
FAX: (919)250-4151

9/9/2021
NORTH CAROLINA PROFESSIONAL SEAL I0666 ENGINEER D. STEPHEN SCRUGGS
D. Stephen Scruggs
167A1DCE3D5E427...
UTILITY CONSTRUCTION PLANS ONLY

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

UTILITY CONSTRUCTION

NOTES:

1. AN AS-BUILT PLAN AND PROFILE SHALL BE PROVIDED FROM ENTRY TO EXIT FOR EACH DIRECTIONAL BORE SECTION BY THE DIRECTIONAL BORE CONTRACTOR. THIS SHALL INCLUDE ACCURATE HORIZONTAL AND VERTICAL DIMENSIONS AND SHALL MEET OR EXCEED NCDOT VERTICAL REQUIREMENTS FROM HDD PIPE TO EDGE OF PAVEMENT.
2. ALL BORE SECTIONS SHALL BE HYDROSTATICALLY TESTED PER COUNTY STANDARDS AFTER INSTALLATION, AND PRIOR TO CONNECTION TO THE OPEN CUT WATER/SEWER LINE. A FINAL TEST WILL BE A PART OF THE TOTAL MAIN LINE SYSTEM TEST.
3. LENGTH OF CROSSING, LOCATION OF INSPECTION/OBSERVATION EXCAVATION, NUMBER OF HDD PIPE JOINTS, LOCATION OF DRILL MACHINE, AUGER ENTRANCE LOCATION AND TIE-IN POINTS ARE TO BE APPROVED BY COUNTY PRIOR TO ANY START OF WORK.
4. ON CONVENTIONAL HIGHWAYS, AS A MINIMUM, THE HDD PIPE SHALL EXTEND TO THE SHOULDER BREAK OR 10 FEET BEYOND THE EDGE OF PAVEMENT ON FILL SLOPES, WHICHEVER IS GREATER; 3 FEET BEYOND THE DITCH LINE IN CUTS; AND ON CURBED SECTIONS TO THE BACK OF THE SIDEWALK AREA. ON FREEWAYS, EXPRESSWAYS, AND OTHER CONTROLLED ACCESS HIGHWAYS, THE HDD PIPE WILL BE REQUIRED TO EXTEND TO THE ACCESS CONTROL LINES, TO THE OUTSIDE OF FRONTAGE ROADS, OR A SUFFICIENT DISTANCE TO ALLOW FOR FUTURE HIGHWAY IMPROVEMENTS, OR AS REQUIRED BY THE NCDOT ENCROACHMENT AGREEMENT.
5. THE BORE DEVELOPED FOR THE DIRECTIONALLY DRILLED PIPE SHALL BE KEPT AT A MINIMUM DIAMETER FOR THE PIPE INSTALLATION. THE AUGER HEAD SIZE SHALL BE APPROVED BY THE COUNTY PRIOR TO THE START OF WORK.
6. HORIZONTAL DIRECTIONAL DRILL OF NCDOT STATE ROADS TO BE APPROVED BY NCDOT PRIOR TO CONSTRUCTION. PIPE MATERIAL AND THICKNESS MAY VARY.
7. THE CONTRACTOR SHALL ALLOW SUFFICIENT LENGTHS OF PIPE TO EXTEND PAST THE TERMINATION POINT TO ALLOW FOR CONTRACTION. PULLED HDD PIPE SHALL BE ALLOWED TO RELAX A MINIMUM OF (48) HOURS OR THE AMOUNT OF TIME RECOMMENDED BY THE MANUFACTURER PRIOR TO INITIAL PRESSURE TEST AND MAKING CONNECTIONS.
8. FUSIBLE PVC HAS BEEN APPROVED FOR USE WITHIN NCDOT RIGHT-OF-WAYS.
9. MINIMUM OF (3) RESTRAINED JOINTS ARE REQUIRED UPSTREAM AND DOWNSTREAM OF DIP/HDPE/FUSIBLE PVC MJ ADAPTER ON EACH END OF THE HORIZONTAL DIRECTIONALLY DRILLED PIPE UNLESS OTHERWISE APPROVED BY BRUNSWICK COUNTY.
10. DIP NOT ALLOWED IN SEWER APPLICATION WITHOUT WRITTEN PERMISSION FROM BRUNSWICK COUNTY.

Revisions
1.1 - DATED 3/10/2017 Mod WS-4C
1.2 - DATED 1/23/2019 Mod NOTES
1.3 - DATED 3/14/2019 Mod NOTES

COUNTY OF BRUNSWICK

GENERAL WATER & SEWER DETAILS FOR BRUNSWICK COUNTY NORTH CAROLINA

Date: 07-13-12
Scale: NTS
Drawn By: JDM
Checked By: WLP

DATE: 8/13/2021
TIME: 12:35:49 PM
DGN: P:\60428203\900-Work\905_Utility Construction\R-5021_UC_UC3Gdgn