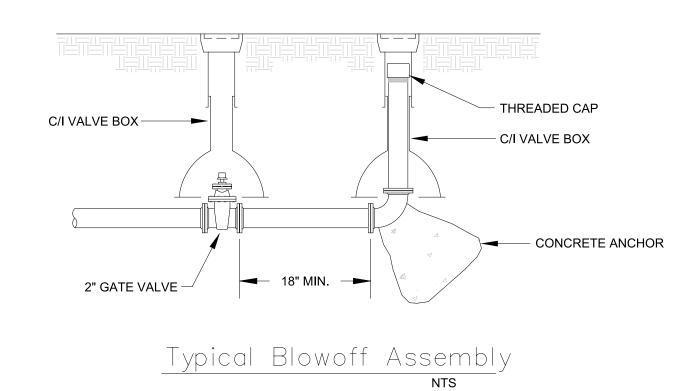
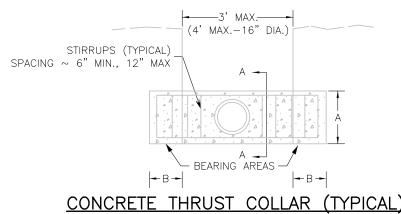


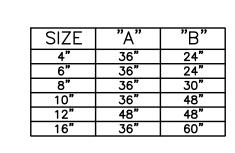
- NOTES:
 1. INSTALLATION SHALL BE DRY BORE AND JACKING OF SMOOTH WALL STEEL PIPE. JETTING OR WET BORING WITH WATER SHALL NOT BE ALLOWED. 2. SEE BORE SIZING CHART FOR CARRIER PIPE SIZE AND STEEL CASING SIZE , MIN. DIA. AND WALL THICKNESS.
- 3. CASING PIPE SHALL BE IN ACCORDANCE WITH ASTM A-53, GRADE B WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI 4. THE BORE SHALL BE ACCOMPLISHED BEFORE PIPE
- CONSTRUCTION BEGINS. THE MAXIMUM TOLERANCE,
 IF ANY, IN VARIATION OF INVERT ELEVATIONS BETWEEN ENDS
 OF CASING AND CARRIER PIPE IS SHOWN ON THE PLAN PROFILE FOR EACH SPECIFIC BORE LOCATION AND STATION. 5. THE BORING SHALL BE PERFORMED FROM "UPHILL" TO "DOWNHILL" DIRECTION MAINTAINING THE CRITICAL UPHILL ELEVATION
 IF APPROVED BY THE ENGINEER, GRADE ADJUSTMENTS DOWNHILL
 TO COMPENSATE FOR AN INVERT ELEVATION VARIANCE SHALL
 BE CONSTRUCTED AT NO ADDITIONAL COSTS TO THE OWNER.
- 6. THE BORING OPERATION SHALL BE CONDUCTED IN A MANNER THAT THE FLOW OF TRAFFIC IS NOT IMPEDED OR IN SUCH A MANNER SO AS NOT TO CREATE A HAZARD.
- 7. IF AN OBSTRUCTION IS ENCOUNTERED DURING THE BORING OPERATION, THE AUGER SHALL BE WITHDRAWN THE EXCESS CASING PIPE CUT-OFF, CAPPED AND THE INTERIOR AND EXTERIOR VOIDS SHALL BE COMPLETELY FILLED W/1:3 PORTLAND CEMENT GROUT UNDER PRESSURE. NO SEPARATE PAYMENT FOR UNSUCCESSFUL BORES.
- CONTRACTOR SHALL FIELD ADJUST AND INSTALL PROPER PIPE BRACES TO ACCOMPLISH GRADE AND INVERTS AS SHOWN ON THE DRAWINGS.
- A MANUAL CONTROL STEERING HEAD OR OTHER GUIDANCE SYSTEM IS RECOMMENDED FOR BORES 30" DIAM. AND/OR LARGER AND FOR BORES EXCEEDING 100' IN LENGTH OR AS SPECIFIED. 10. SUBCONTRACTORS SHALL BE APPROVED BY THE ENGINEER AND SHALL PROVIDE APPROVED INSURANCE CERTIFICATES AS REQUIRED.
- 11. CONTRACTOR SHALL EXECUTE AND PERFORM ALL REQUIREMENTS AND CONDITIONS STIPULATED BY ENCROACHMENT PERMITS.

Boring Detail for Highways and Railroads





NOT TO SCALE



UC-3A I-5987A DESIGNED BY: ABN ABN DRAWN BY: CHECKED BY: ASV APPROVED BY: 025221 1/12/2022 REVISED: 3. FIRE HYDRANTS SHALL BE PLACED AS DIRECTED BY NORTH CAROLINA DEPARTMENT OF I. HYDRANT BRANCH SHALL NOT BE BACK FILLED TRANSPORTATION UNTIL INSPECTED AND APPROVED BY ENGINEER. UTILITIES ENGINEERING SEC HYDRANT EXTENSIONS SHALL BE APPROVED PHONE: (919)707-6690 UTILITY CONSTRUCTION FAX: (919)250-4151 PLANS ONLY

PROJECT REFERENCE NO.

UTILITY CONSTRUCTION

SHEET NO.

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

NV5 ENGINEERS & CONSULTANTS, INC. 7500 E. INDEPENDENCE BLVD, STE 100 CHARLOTTE, NC 28227 P: 704.537.7300 www.NV5.com

STV Engineers, Inc. 100 1600 Perimeter Park E Suite 225 Morrisville, NC 27560 NC License Number F-0991

HYDRANT DETAIL

_2 COATS OF BITUMINOUS PAINT

THE ENGINEER.

BY ENGINEER.

<u></u> → / BRICK

_6" GATE VALVE SEE NOTE # 5

2-2-1/2" NOZZLES & 1-4-1/2" NOZZLE

BE SECURELY CHAINED TO THE

VALVE BOX-

- NOZZLE CAPS SHALL

HYDRANTS BODY

3/4" DIA. STEEL ANCHOR ROD

(1 EA. SIDE,2 TOTAL)

6" D.I. PIPE -

WITH FIRE HOSE COUPLING THREAD.

NOTES:

ALL VALVES AND HYDRANTS SHALL HAVE M.J. CONNECTIONS WITH IRON RETAINING

AND 3/4" DIA. STEEL ANCHOR RODS.

FIN. GRADE

UNDISTURBED___ SOIL

M.J. CONNECTION -

GLAND M.J. RESTRAINT OR ANCHOR LUGS

2. 3/4" DIA. STEEL RODS AND ALL BURIED SURFACES

SHALL BE PAINTED WITH 2 COATS OF BITUMINOUS PAINT. MARRED OR SCRATCHED

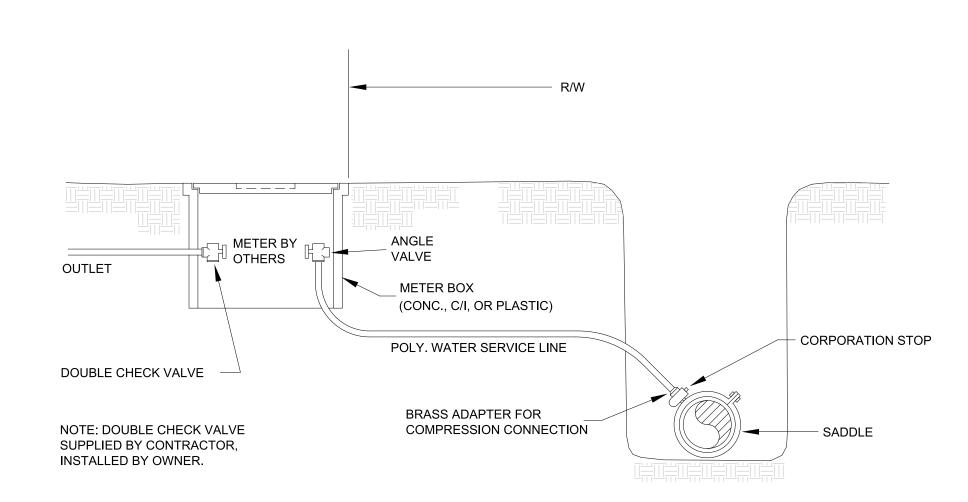
SHALL CURE PRIOR TO BACK FILLING TRENCH.

1' - 0" STANDARD PENTAGONAL OPERATING NUT OPEN COUNTER CLOCKWISE.

7 CU. FT. #57 STONE

PLACED TO A LEVEL 4"
ABOVE DRAIN OPENING

SURFACES SHALL BE REPAINTED. PAINT



PROPOSED OR

EXISTING PVT.

SLEEVE AS REQUIRED

2" SERVICE CONNECTION DETAIL

