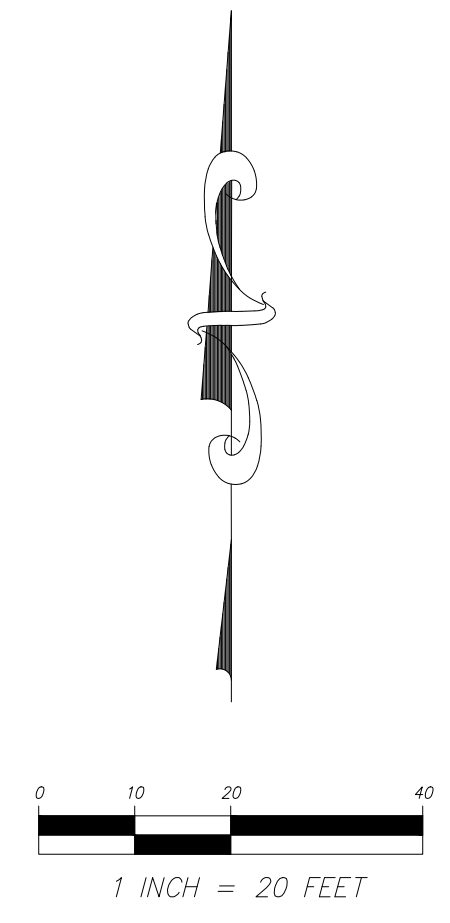
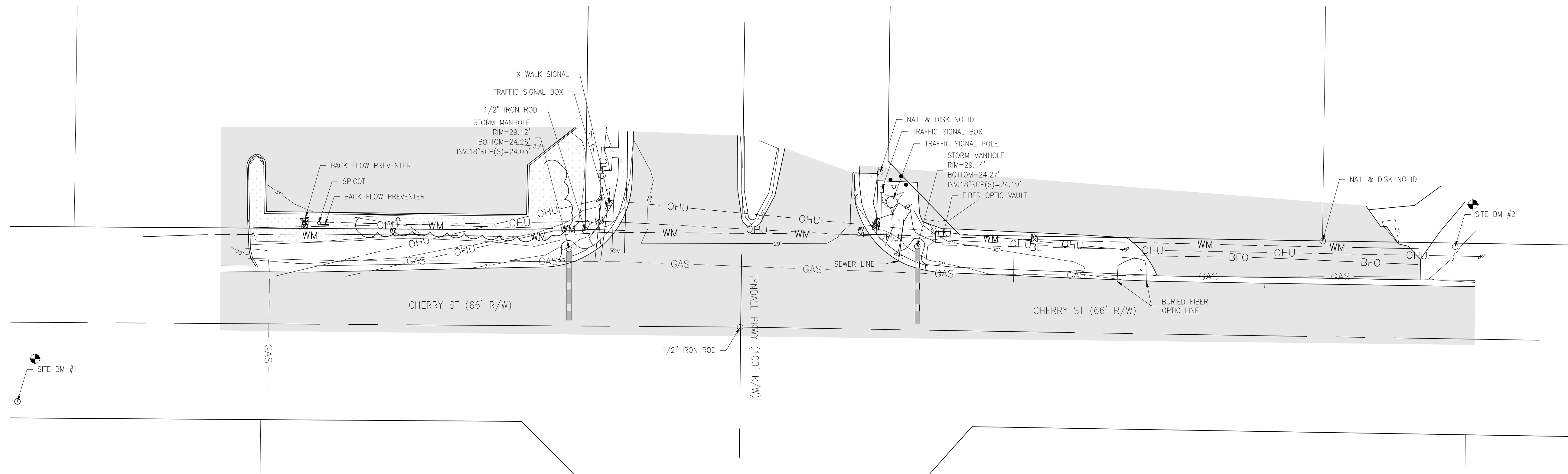


May 16, 2018 (16:18:19 EST)
 DRAWING NAME: M:\50093562\CALLAWAY_CHERRY ST. DIRECTIONAL BORE SURVEY.DWG\50093562 CHERRY ST.DWG - S(1) BY: BROCHER



SYMBOLS & ABBREVIATIONS:

- # = NUMBER
- L.B. = LICENSED BUSINESS
- P.S.M. = PROFESSIONAL SURVEYOR AND MAPPER
- INV. = INVERT
- RCP = REINFORCED CONCRETE PIPE
- TS = TRAFFIC SIGN
- WV = WATER VALVE
- SSM = STORM SEWER MANHOLE
- GV = GAS VALVE
- CWB = CONCRETE/WOOD BOLLARD
- GA = GUY ANCHOR
- UP = UTILITY POLE
- SB = SITE BENCHMARK
- 10' = CONTOUR ELEVATION AT 1' INTERVALS
- BFO = BURIED FIBER OPTIC CABLE LINE
- BE = BURIED ELECTRIC LINE
- GAS = BURIED GAS LINE
- SS = BURIED SANITARY SEWER GRAVITY LINE
- WM = BURIED WATER MAIN
- OHU = OVERHEAD UTILITY LINE
- [Hatched Box] = EXISTING ASPHALT PAVEMENT
- [Dotted Box] = EXISTING CONCRETE
- [Stippled Box] = EXISTING LANDSCAPE

SITE BENCHMARKS:

1. SET 5/8" CAPPED IRON ROD L.B. 8011 - ELEVATION = 29.78'
2. SET 5/8" CAPPED IRON ROD L.B. 8011 - ELEVATION = 31.06'

SURVEYOR'S NOTES:

1. SURVEY SHOWN HEREON IS REFERENCED TO FLORIDA STATE PLANE COORDINATES, NORTH ZONE, NAD 1983/90, U.S. SURVEY FEET, ESTABLISHED WITH SPECTRA PRECISION EPOCH 80 GNSS RTK GPS SYSTEM, TOGETHER WITH THE FLORIDA DEPARTMENT OF TRANSPORTATION PERMANENT REFERENCE NETWORK (FPRN).
2. VERTICAL DATUM SHOWN HEREON IS REFERENCED TO NAVD 1988.
3. THIS SURVEY, MAP, AND REPORT IS NOT VALID WITHOUT THE SIGNATURE AND ORIGINAL RAISED SEAL OF A FLORIDA LICENSED SURVEYOR AND MAPPER. ADDITIONS OR DELETIONS TO SURVEY MAPS OR REPORTS BY OTHER THAN THE SIGNING PARTY OR PARTIES IS PROHIBITED WITHOUT WRITTEN CONSENT OF THE SIGNING PARTY OR PARTIES.
4. NO UNDERGROUND UTILITIES, UTILITY LINES, FOUNDATIONS, OR OTHER UNDERGROUND STRUCTURES HAVE BEEN LOCATED BY DEWBERRY/PREBLE-RISH, EXCEPT AS SHOWN.
5. DATE OF FIELD SURVEY: APRIL 16, 2018.

| NO. | DATE | BY | REVISION |
|-----|------|----|----------|
| | | | |
| | | | |
| | | | |
| | | | |

Dewberry
 DEWBERRY ENGINEERS, INC.
 1000 W. GARDNER STREET
 PANAMA CITY, FLORIDA 32405
 PHONE: 850.522.0644 FAX: 850.522.1011
 WWW.DEWBERRY.COM
 CERTIFICATE OF AUTHORIZATION NO. LB 8011

DAVID JON BARLETT, P.S.M.
 PROFESSIONAL SURVEYOR & MAPPER NO. 139018
 DATE SIGNED

TOPOGRAPHIC SURVEY
 CITY OF CALLAWAY
 BAY COUNTY, FLORIDA

| | |
|--------------|-----------|
| FB/PG | 258/59-60 |
| FIELD DATE | 4/16/2018 |
| DRAWING DATE | 4/17/2018 |
| BY | AF |
| APPROVED | DJB |
| PROJECT NO. | 50093562 |

SCALE
 1" = 20'

S1

| NO. | DESCRIPTION | DATE |
|-----|-------------|------|
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |

DRAWN BY _____ BWR
APPROVED BY _____ JMS
CHECKED BY _____ EHP
DATE _____ NOVEMBER 2017

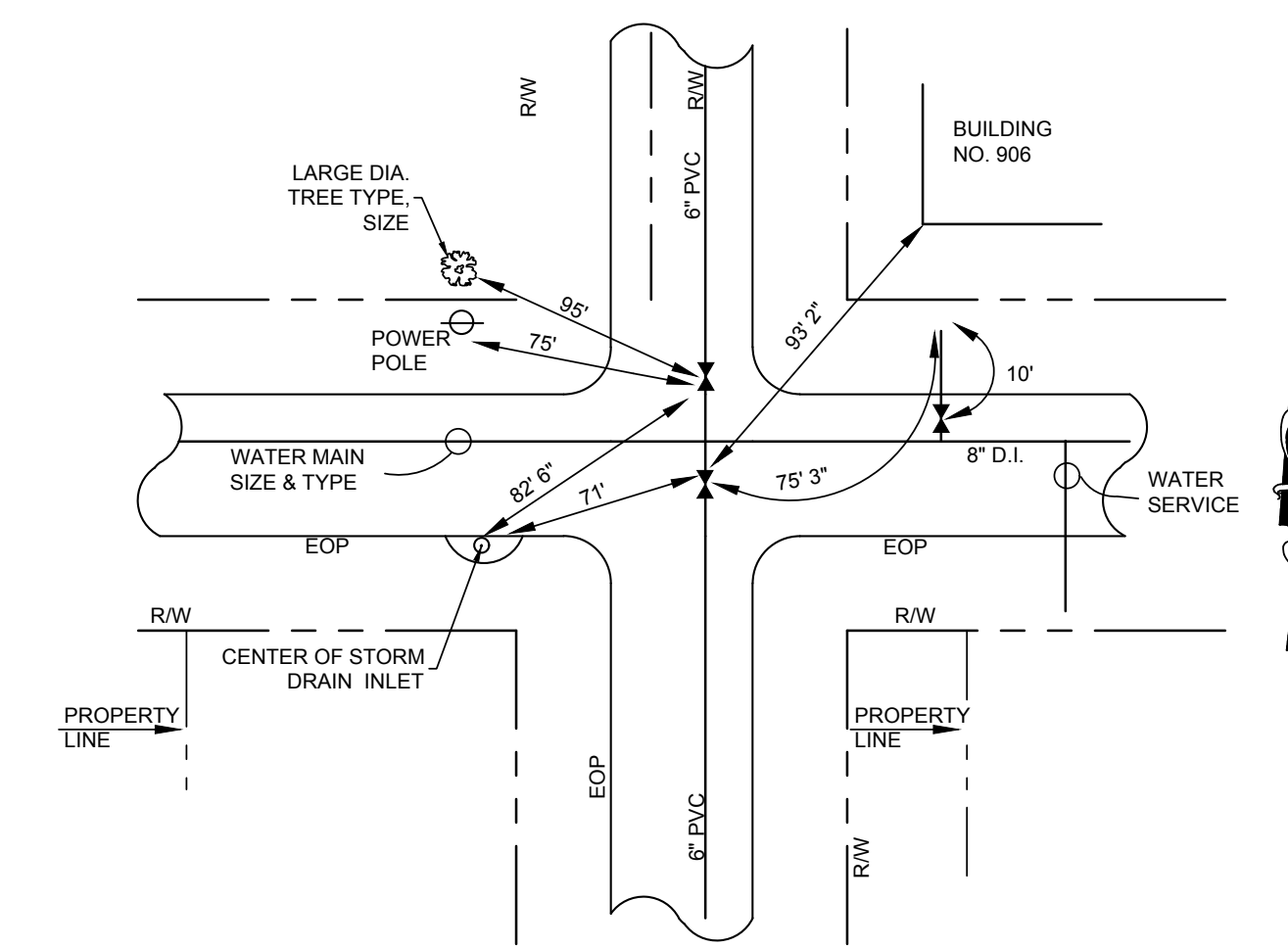
TITLE

**MISCELLANEOUS
DETAILS**

PROJECT NO. 50089994

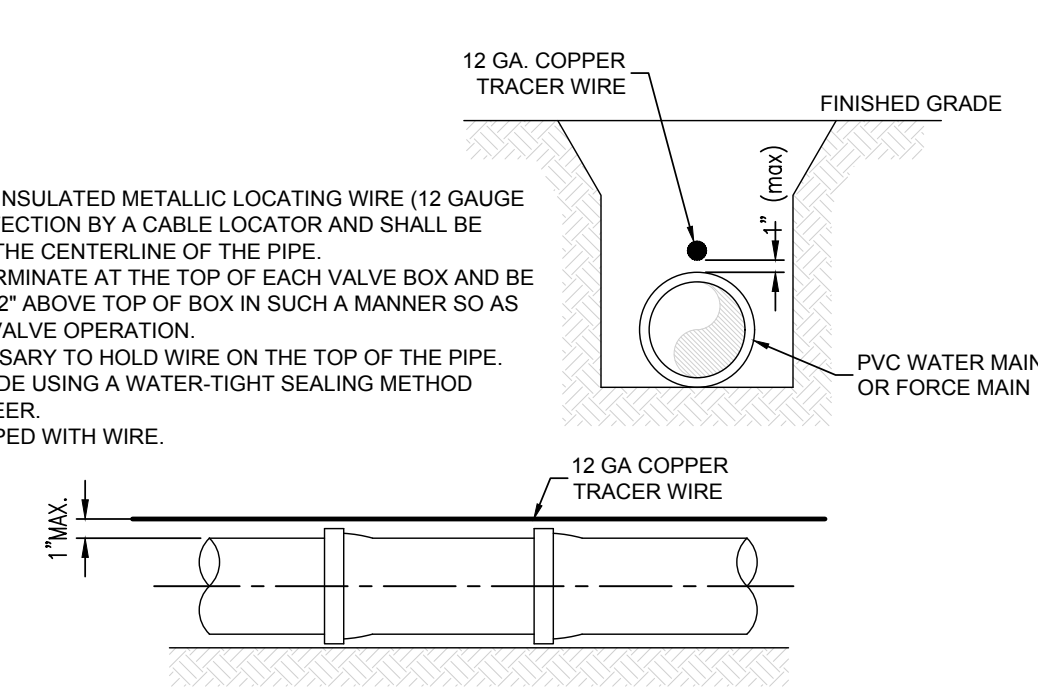
D1

SHEET NO.

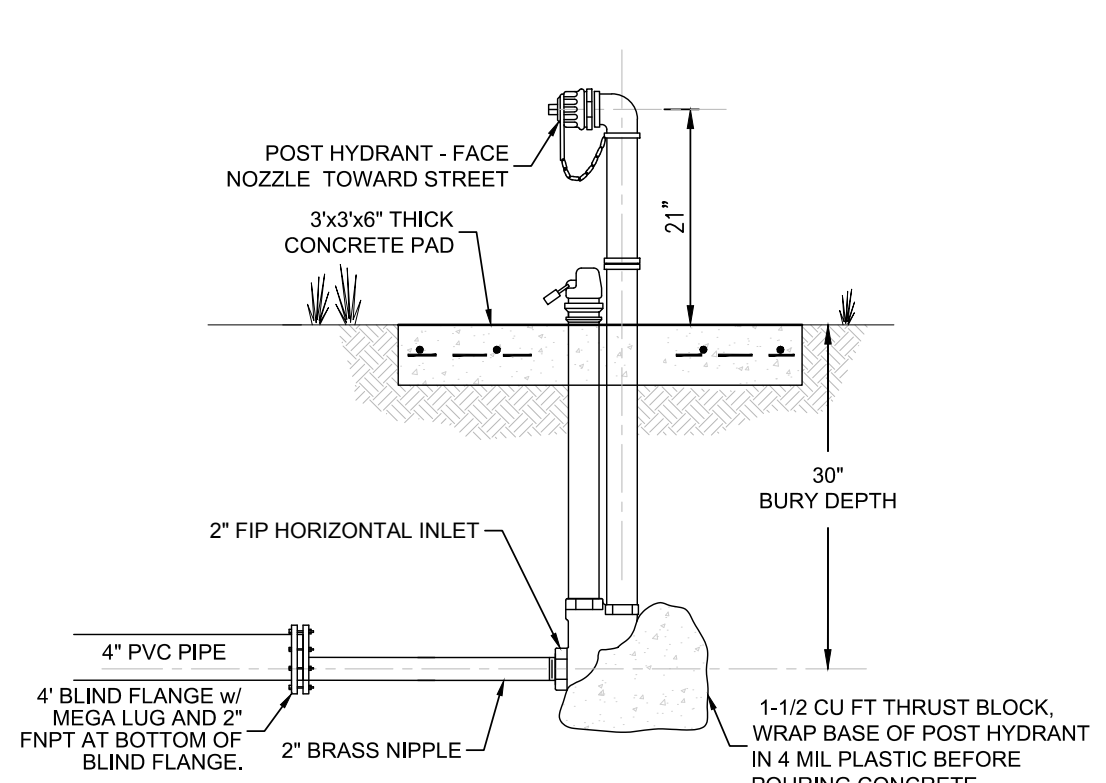


DETAIL AS-BUILT REQUIREMENTS
SCALE: N.T.S.

NOTES:
1. AS BUILT DRAWINGS WILL BE PREPARED INDICATING LOCATIONS OF ALL SERVICES, LOCATIONS AND TYPES OF ALL FITTINGS, WITH RESPECT TO LOT CORNERS, LOCATIONS OF ALL VALVE AND DEAD END RUNS WITH THREE (3) TIES TO PHYSICAL FEATURES (BUILDING CORNERS, MAN HOLES, EXISTING STRUCTURES, POWER POLES, STORM DRAIN INLETS, CENTER OF FIRE HYDRANTS, FACE OF LARGE DIAMETER TREES >18").
2. AS BUILT DRAWINGS MUST BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL BEFORE A LETTER OF ACCEPTANCE WILL BE ISSUED.
3. CONTRACTOR SHALL ALSO PROVIDE CERTIFIED AS-BUILTS BY A P.S.M. REGISTERED IN THE STATE OF FLORIDA IN DIGITAL AND HARD COPY SIGNED AND SEALED. THE AS-BUILTS SHALL BE IN STATE PLANE COORDINATES.

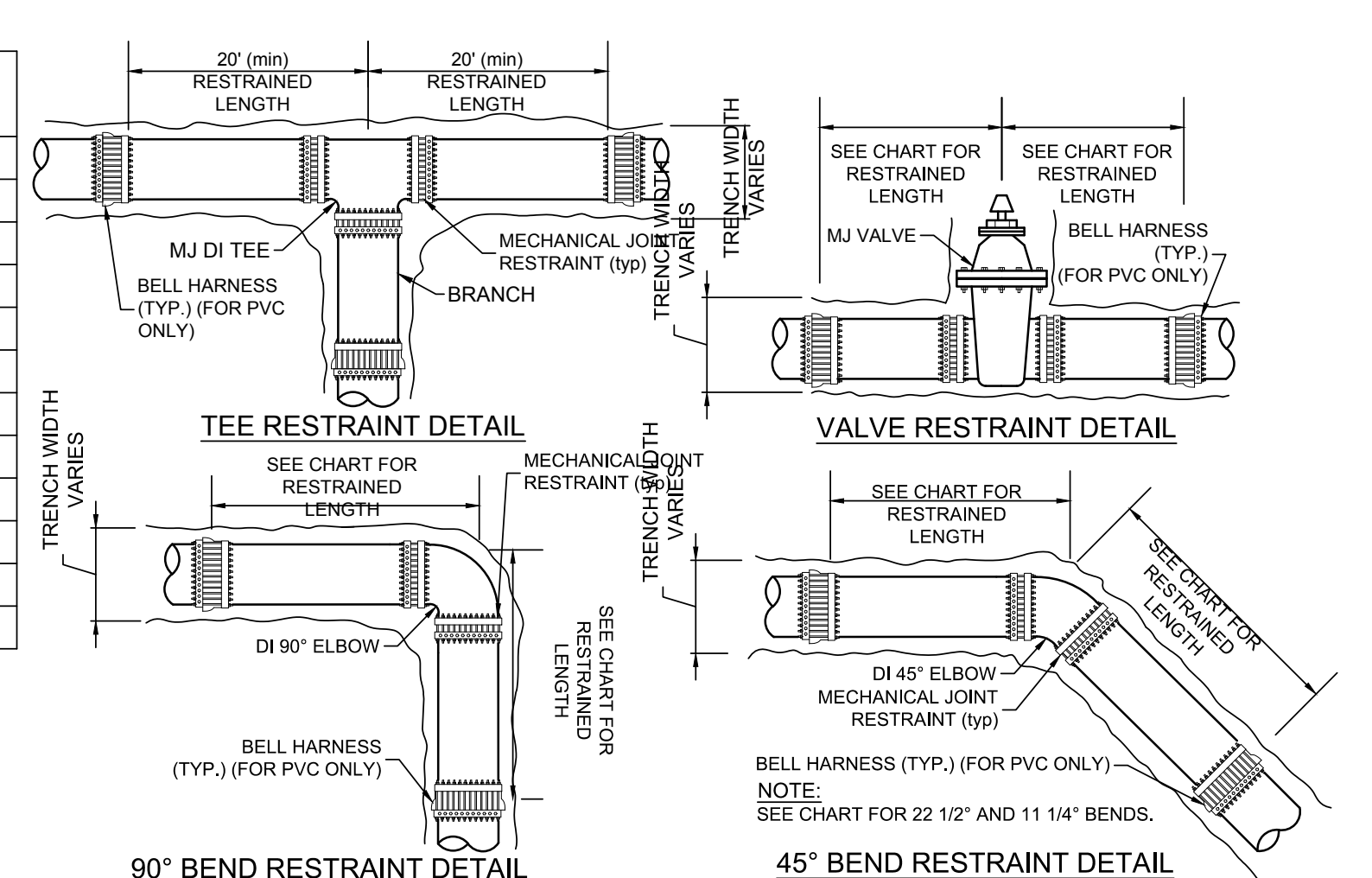


DETAIL PVC PIPE LOCATING WIRE DETAIL
SCALE: N.T.S.



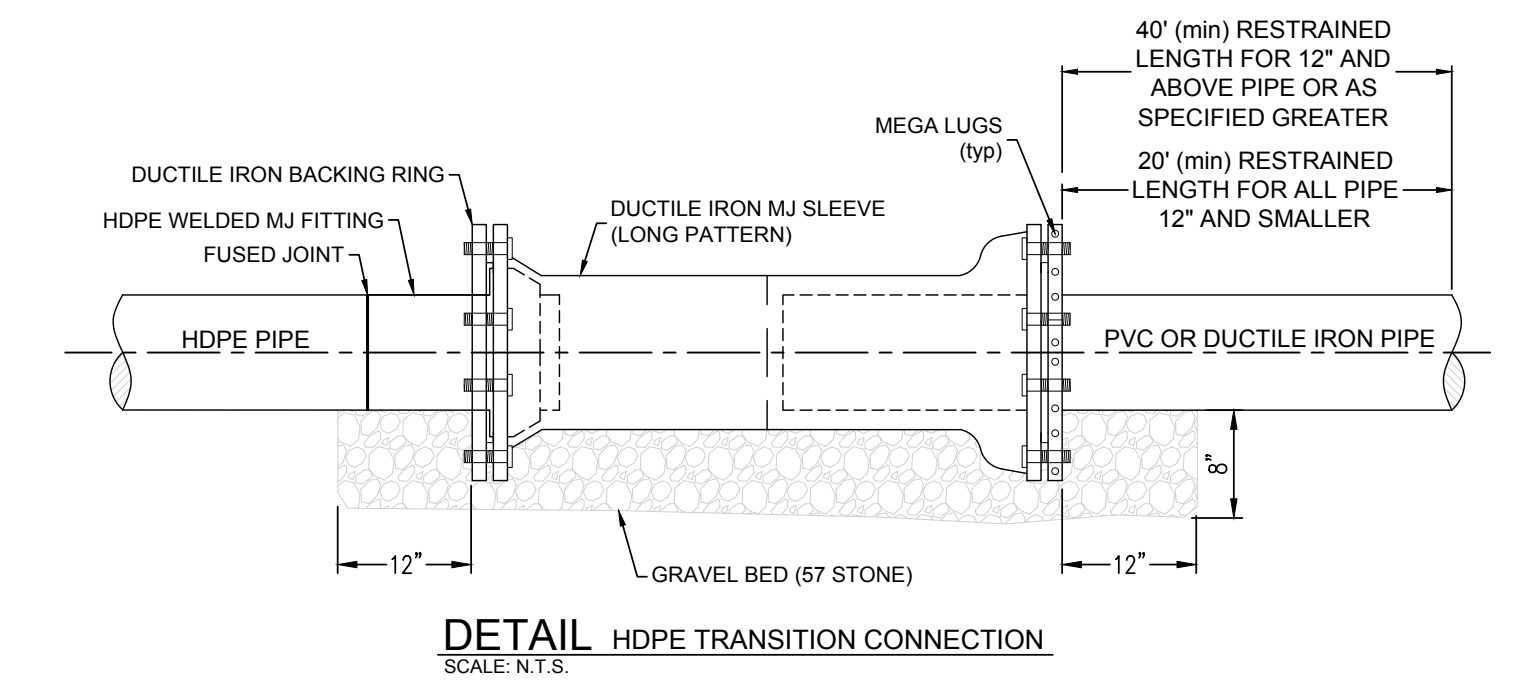
DETAIL FLUSHING POST HYDRANT ASSEMBLY
SCALE: N.T.S.

| MAIN PIPE SIZE | HORIZ. BENDS | | | TEES | | | | | | | | | | | | REDUCERS | | | | | | | | | | | | PLUGS |
|----------------|--------------|-----|-------|------|-----|--------|-----|------|-----|--------|-----|------|-----|--------|-----|----------|-----|--------|-----|-----|--|--|--|--|--|--|--|-------|
| | 90° | 45° | 22.5° | SIZE | | LENGTH | | SIZE | | LENGTH | | SIZE | | LENGTH | | SIZE | | LENGTH | | | | | | | | | | |
| 48 | 128 | 53 | 26 | X48 | X42 | X36 | X30 | X24 | X18 | X12 | X6 | X48 | X42 | X36 | X30 | X24 | X18 | X12 | X6 | 321 | | | | | | | | |
| 42 | 117 | 49 | 24 | X42 | X36 | X30 | X24 | X18 | X12 | X6 | X42 | X36 | X30 | X24 | X18 | X12 | X6 | X42 | X36 | 289 | | | | | | | | |
| 36 | 106 | 44 | 21 | X36 | X30 | X24 | X18 | X12 | X6 | X36 | X30 | X24 | X18 | X12 | X6 | X36 | X30 | X24 | X18 | 257 | | | | | | | | |
| 30 | 93 | 39 | 19 | X30 | X24 | X18 | X12 | X6 | X30 | X24 | X18 | X24 | X18 | X12 | X6 | X24 | X18 | X12 | X6 | 222 | | | | | | | | |
| 24 | 79 | 33 | 16 | X24 | X18 | X12 | X6 | X24 | X18 | X12 | X6 | X24 | X18 | X12 | X6 | X24 | X18 | X12 | X6 | 185 | | | | | | | | |
| 20 | 68 | 29 | 14 | X20 | X16 | X12 | X8 | X16 | X12 | X8 | X16 | X12 | X8 | X16 | X12 | X8 | X16 | X12 | X8 | 159 | | | | | | | | |
| 16 | 57 | 24 | 12 | X16 | X12 | X8 | X6 | X12 | X8 | X6 | X12 | X8 | X6 | X12 | X8 | X6 | X12 | X8 | X6 | 131 | | | | | | | | |
| 12 | 45 | 19 | 9 | X12 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | 102 | | | | | | | | |
| 10 | 39 | 16 | 8 | X10 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | X8 | X6 | X4 | 87 | | | | | | | | |
| 8 | 33 | 14 | 7 | X8 | X6 | X4 | X4 | X6 | X4 | X4 | X6 | X4 | X4 | X6 | X4 | X4 | X6 | X4 | X4 | 72 | | | | | | | | |
| 6 | 25 | 11 | 5 | X6 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | 55 | | | | | | | | |
| 4 | 18 | 8 | 4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | X4 | 39 | | | | | | | | |

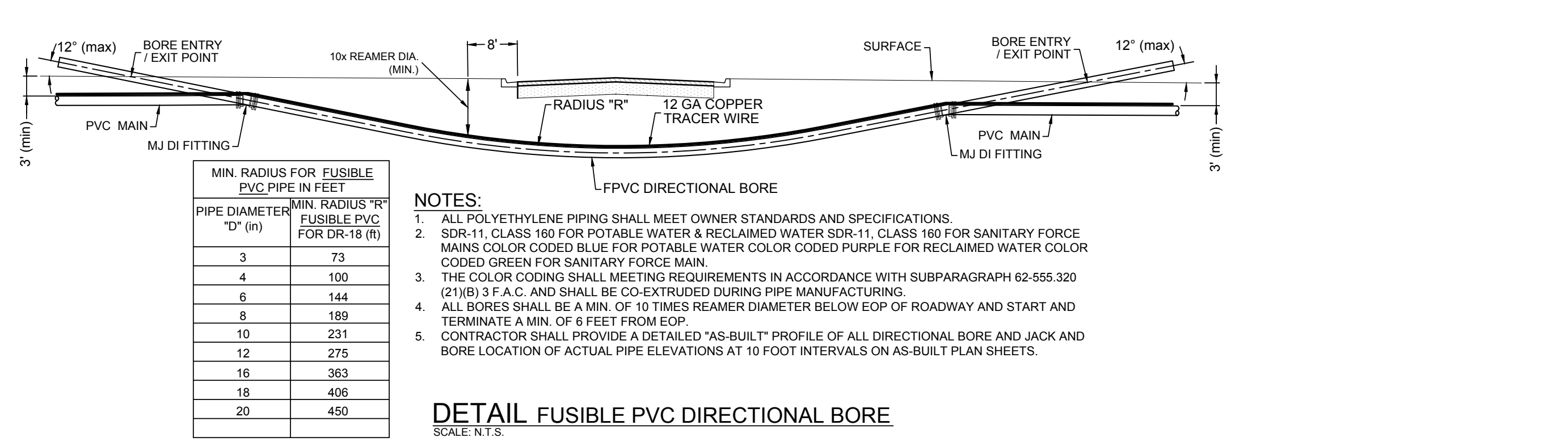


DETAIL THRUST RESTRAINTS
SCALE: N.T.S.

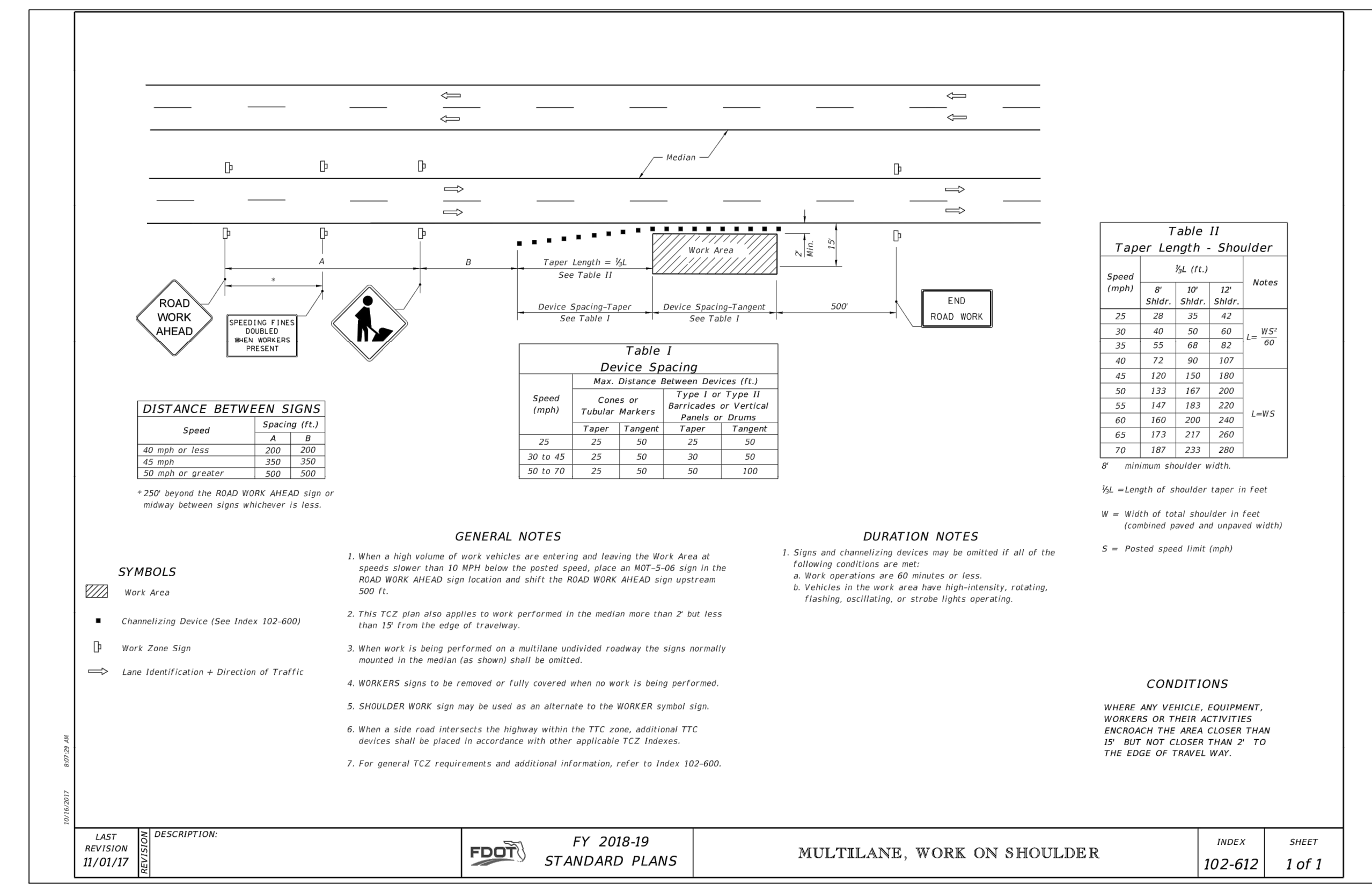
NOTES:
1. RESTRAIN TO NEXT FULL JOINT BEYOND GIVEN LENGTH.
2. RESTRAIN 11 25° BENDS 50% OF LENGTH FOR 22.5° BENDS.
3. ALL VALVES AND FITTINGS SHALL BE RESTRAINED TO THE CONNECTING SECTIONS OF PIPE.
4. ALL VALVES MUST BE PROPERLY ANCHORED OR RESTRAINED TO RESIST A 150 PSI TEST PRESSURE IN EITHER DIRECTION.
5. PIPE SIZES ARE GIVEN IN INCHES.
6. PIPE LENGTHS ARE GIVEN IN FEET.
7. LENGTHS SHOWN ARE FOR A TEST PRESSURE OF 150 PSI.
8. RESTRAIN LENGTHS ARE TO BE USED FOR WATER.
9. THE RESTRAINED LENGTHS SHOWN IN THESE TABLES ARE BASED ON THE USE OF LIGHTLY COMPACTED CLEAN SAND WITH AT LEAST A 95% COARSE PARTICLE CONTENT. ACTUAL SOIL CONDITIONS MUST BE DETERMINED BY THE ENGINEER OF RECORD AND THE RESTRAINED LENGTHS MODIFIED ACCORDINGLY. SAFETY FACTOR OF 1.5:1 TO BE CALCULATED WITH A "SM" SOIL TYPE AND "TRENCH TYPE" "Y".



DETAIL HDPE TRANSITION CONNECTION
SCALE: N.T.S.



DETAIL FUSIBLE PVC DIRECTIONAL BORE
SCALE: N.T.S.



May 20, 2019 (07:42:48 EST) K:\00089994_CALLAWAY_CHERRY STREET DIRECTIONAL BORE\CALLAWAY_C\DWG\BROCHER