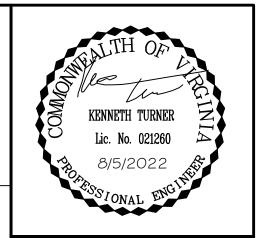
QUALITY ASSURANCE STATEMENT

A Quality Control and Assurance review has been performed on this document in accordance with the TIMMONS Quality Plan. The undersigned states that



S. MAURER

K. TURNER

CHECKED BY

K. TURNER

ROUTE 10 WATER MAIN EXTENSION PHASE 2 - HARDY E.S. TO BERRY HILL ROAD

TOWN OF SMITHFIELD & ISLE OF WIGHT COUNTY, VIRGINIA

AUGUST 2022

PROJECT LOCATION

CONTACTS

EASEMENT HOLDERS
ISLE OF WIGHT COUNTY

DEPARTMENT OF UTILITY SERVICES ADDRESS: P.O. BOX 80, ISLE OF WIGHT, VA 23397 CONTACT: DONALD JENNINGS, P.E. PHONE: (757) 365-1655 EMAIL: DJENNINGS@ISLEOFWIGHTUS.NET

PROJECT AREA LIES WITHIN THE CHESAPEAKE BAY PRESERVATION

AREA AND ENTRANCE CORRIDOR OVERLAY DISTRICT.

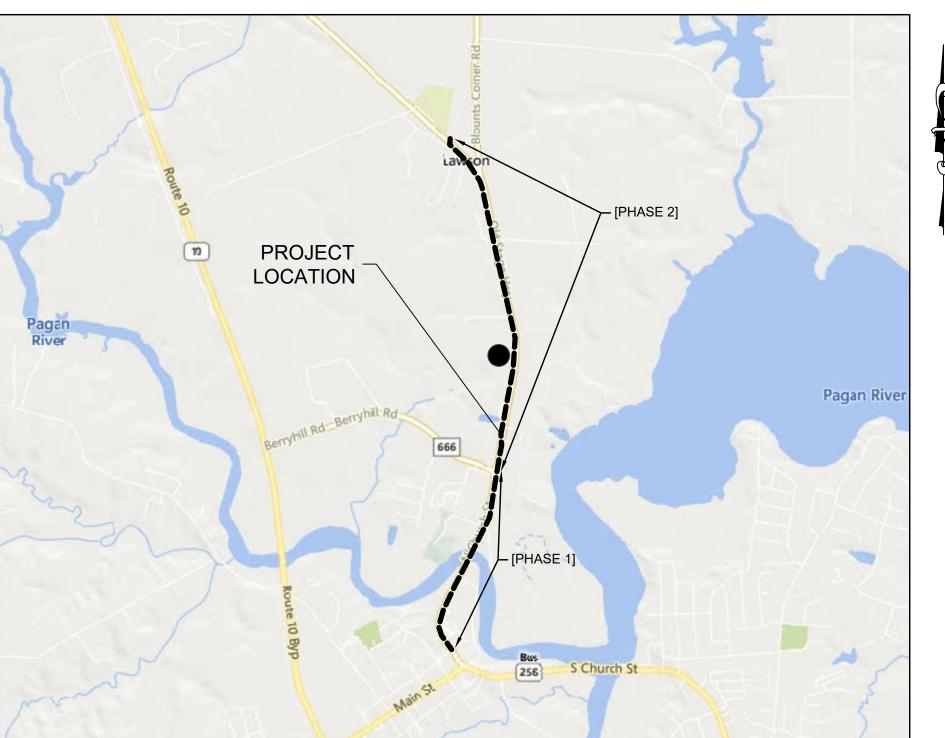
ESTIMATED CONSTRUCTION TIME IS 13 MONTHS.

TOWN OF SMITHFIELD

DEPARTMENT OF PUBLIC WORKS & UTILITIES ADDRESS: 310 INSTITUTE STREET, SMITHFIELD, VIRGINIA 23430 CONTACT: JACK REED PHONE: (757) 365-3338 EMAIL: JREED@SMITHFIELDVA.GOV

TIMMONS GROUP 2901 S LYNNHAVEN ROAD, SUITE 200 VIRGINIA BEACH, VA 23452 CONTACT: KENNETH TURNER, P.E. PHONE: (757) 213-6671 FAX: (757) 340-1415 EMAIL: KENNETH.TURNER@TIMMONS.COM

5032 ROUSE DRIVE, SUITE 200 VIRGINIA BEACH, VA 23462 CONTACT: GREG HAYES, P.E. PHONE: (757) 490-9264 EMAIL: GREG.HAYES@MSAONLINE.COM



VICINITY MAP

SCALE: 1'' = 2,000'

SHEET INDEX

TITLE	<u>SHEET</u>
COVER SHEET	G-1
ISLE OF WIGHT COUNTY NOTES	G-2
TOWN OF SMITHFIELD NOTES	G-3
VDOT NOTES	G-4
ISLE OF WIGHT COUNTY UTILITY AND SITE DETAILS	D-1 TO D-3
TOWN OF SMITHFIELD UTILITY AND SITE DETAILS	D-4 TO D-6
VDOT PAVING DETAILS	D-7
EROSION AND SEDIMENT CONTROL NOTES & DETAILS	ESC-1 TO ESC-2
WATER MAIN - KEY PLAN & LEGEND	C-1.0
PLAN & PROFILE - WATER MAIN HARDY ES TO BERRY HILL ROAD	C-1.1 TO C-1.7



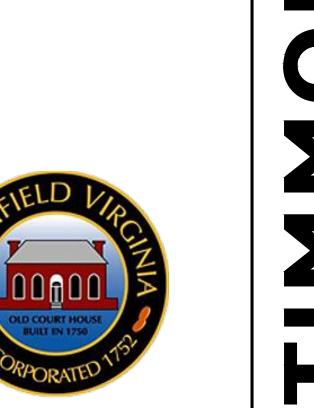
CALL BEFORE YOU DIG ALWAYS CALL 811 BEFORE YOU DIG IN VIRGINIA CALL 1-800-552-7001

SECTION 56-265.17 REQUIRES THREE WORKING DAYS NOTICE TO UTILITIES BEFORE YOU EXCAVATE, DRILL OR BLAST. VIRGINIA UTILITY PROTECTION SERVICE, INC.









EMERGENCY CONTACT

ISLE OF WIGHT COUNTY EMERGENCY CONTACT: DONALD JENNINGS DIRECTOR OF UTILITY SERVICES PO BOX 80 ISLE OF WIGHT, VIRGINIA 23397 OFFICE: (757) 365-1655

ISLE OF WIGHT GENERAL NOTES:

1. THE DEVELOPER SHALL SUBMIT TWO (2) SETS OF AS-BUILT PLANS AND ONE (1) CD/DVD WITH AS-BUILT AUTOCAD DRAWINGS AND PDF FILES OF EACH PLAN SHEET TO THE STORMWATER DIVISION FOR ALL STORM SEWER, PUBLIC SANITARY SEWER, PUBLIC WATER AND BMPS. AS A PART OF FINAL INSPECTION, DEVELOPER SHALL HIRE AN INDEPENDENT TELEVISION INSPECTION SERVICE TO PERFORM A CLOSED-CIRCUIT TELEVISION INSPECTION OF ALL NEWLY CONSTRUCTED STORM SEWERS AND SANITARY SEWERS UNLESS OTHERWISE DIRECTED BY THE STORMWATER DIVISION. A VIDEO/DVD OF THE INSPECTION SHALL BE PRODUCED AND DELIVERED TO THE COUNTY IN COLOR FORMAT, TOGETHER WITH A TYPED LOG OF THE INSPECTION.

2. All WATER AND SEWER UTILITIES SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LA TEST VERSION OF ISLE OF WIGHT COUNTY CONSTRUCTION SPECIFICATIONS AND STANDARDS.

3. ALL CONSTRUCTION METHODS, MATERIALS, TESTING AND STERILIZATION SHALL BE IN ACCORDANCE WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE DEPARTMENT OF PUBLIC UTILITIES COUNTY OF ISLE OF WIGHT, VIRGINIA, AS WELL AS CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF HEALTH AND THE HAMPTON ROADS SANITATION DISTRICT. TESTING SHALL INCLUDE BUT NOT BE LIMITED TO SOAKING WATERMAIN FOR A PERIOD OF 24 HOURS, HYDROSTATIC PRESSURIZATION TO 150 PSIG MAINTAINED FOR 2 HOURS WITH LEAKAGE NOT TO EXCEED WHAT IS STATED IN AWWA C600-93. FLUSHING THE MAIN SHALL INCLUDE BUT NOT BE LIMITED TO FULL FLUSHING THE MAIN WITH NO RESTRICTIONS WITH FINISHED WATER AT A VELOCITY OF NOT LESS THAN 2.5 FPS THE NDISINFECTING IN ACCORDANCE WITH AWWA C651-99 OR LATEST EDITION. EVERY 1200 FEET OF WATER MAIN SHALL UNDERGO (2) CONSECUTIVE DAYS OF NEGATIVE BACTERIOLOGICAL SAMPLING, COLLECTED NO LESS THAN 24 HOURS APART. THE ENTIRE DISINFECTION PROCESS SHALL BE IN ACCORDANCE WITH DIRECTIVES FROM THE VIRGINIA DEPARTMENT OF HEALTH. THE WATERMAIN CAN ONLY BE PUT INTO SERVICE ONCE ALL INSPECTIONS AND TESTING IS COMPLETED AND A LETTER OF CERTIFICATION WITH BACTIERLOGICAL SAMPLES ARE SENT TO VIRGINIA DEPARTMENT OF HEALTH BY THE CONTRACTOR.

4. DUCTILE IRON PIPE SHALL BE CENTRIFUGALLY CAST PIPE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.51. DUCTILE IRON PIPE SHALL BE CEMENT-MORTAR LINED INSIDE IN ACCORDANCE WITH ANSI SPECIFICATIONSA21.4-90. CEMENT FOR THE MORTAR SHALL BE TYPE II PORTLAND CEMENT. THE STANDARD SEAL COAT OF BITUMINOUS MATERIAL SHALL BE APPLIED TO THE EXTERIOR OF THE PIPE. DUCTILE IRON PIPE SHALL BE CLASS 50 (MIN.).

5. JOINTS FOR DUCTILE IRON PIPE SHALL BE ONE OF THE FOLLOWING,

- A. A. RUBBER GASKET (PUSH-ON) TYPE JOINT. RUBBER GASKET TYPE JOINTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.00 AND DESIGNED TO LOCK AGAINST DISPLACEMENT WITHOUT CAULKING. THE GASKET SHALL BE A RESILIENT RUBBER OF HEAVY SECTION, HIGH DUROMETER, AND SINGLE MOLDED AND SHALL BE INSTALLED IN ACCORDANCE WITH THE PIPE MANUFACTURER'S RECOMMENDATIONS. THE GASKET LUBRICANT SHALL BE A NON-TOXIC, TASTELESS, ODORLESS GREASE THAT \\1LL NOT SUPPORT BACTERIA. EACH GASKET LUBRICANT CONTAINER SHALL BE LABELED WITH THE TRADE NAME AND THE PIPE MANUFACTURER'S NAME.
- B. MECHANICAL JOINT. STANDARD MECHANICAL JOINTS SHALL BE MANUFACTURED IN ACCORDANCE WITH ANSI SPECIFICATIONS A21.00 (AWWA SPECIFICATIONS C111-9D). THE MECHANICAL JOINT BOLTS SHALL BE A U.S. STANDARD SIZE, HIGH STRENGTH, CORROSION RESISTANT STEEL ALLOY WITH HEXAGON NUTS. MECHANICAL JOINTS SHALL BE USED FOR THE CONNECTION OF ALL FITTINGS, VALVES, AND HYDRANTS FITTINGS SHALL BE MANUFACTURED OF DUCTILE IRON AND SHALL BE IN ACCORDANCE 111TH THE REQUIREMENTS OF ANSI SPECIFICATIONS A21.10-90 (AWWA SPECIFICATIONS C110-93). FITTINGS SHALL BE COMPATIBLE WITH THE PIPE AND SHALL PROVIDE AT LEAST EQUAL RESISTANCE TO INTERNAL AND EXTERNAL LOADS ON THE PIPE. FITTINGS SHALL BE BITUMINOUS COATED ON THE OUTSIDE AND CEMENT MORTAR LINED ON THE INSIDE ACCORDING TO ANSI SPECIFICATIONS A21.4-9D (AWWA SPECIFICATIONS C104-9D). ALL BOLTS ARE TO BE TORQUED TO A MINIMUM OF 90LBS.
- 6. WATER MAINS AND SEWER FORCE MAINS SHALL HAVE A MINIMUM COVER OF 36" UNLESS OTHERWISE NOTED ON THE PLANS. (MEASURED FROM ESTABLISHED FINISHED GRADE TO TOP OF PIPE.)
- 7. ALL TEES, BENDS, PLUGS, CAPS AND FIRE HYDRANTS SHALL BE SUBSTANTIALLY ANCHORED TO PREVENT ANY MOVEMENT BY PROVIDING ADEQUATE THRUST RESTRAINT. THE CONTRACTOR SHALL INSTALL A BED OF 57 STONE UNDER ALL FITINGS, VALVES AND HYDRANTS AND INCASE AFTER INSTALLED ALL FITTINGS, VALVES AND HYDRANTS WITH 57 STONE CHOCKED IN PLACE.

8. VALVE BOXES SHALL BE INSTALLED FOR ALL VALVES WHICH ARE BURIED BENEATH FINISHED GRADE ELEVATION. VALVE BOXES SHALL BE CAPITAL FOUNDRY NPN-15

9. ALL WATERMAIN AIR RELEASE VALVE ASSEMBLIES SHALL BE MANUAL AND INSTALLED AT HIGH POINTS IN THE LINE OR WHERE REQUIRED OTHERWISE. EACH ASSEMBLY SHALL CONSIST OF AN APPROVED TWO-INCH CORPORATION STOP, A RISER PIPE OF SUITABLE LENGTH, AND A TWO-INCH STAINLESS STEEL BALL VALVE. THE AIR RELEASE VALVE ASSEMBLY ENCLOSURE OR CHAMBER SHALL HAVE A CAST IRON FRAME AND COVER EQUAL TO DEWEY BROTHERS OF VIRGINIA, INC., MODEL B-1200.

10. BLOW-OFF ASSEMBLIES SHALL BE INSTALLED AT ALL PIPE DEAD ENDS AND LOW POINTS IN THE LINE OR WHERE OTHERWISE REQUIRED. THE BLOW-OFF ASSEMBLY PIPEWORK AND VALVING SHALL BE APPROPRIATELY SIZED AND SHALL CONFORM IN ALL RESPECTS TO THE APPLICABLE PORTIONS OF ISLE OF WIGHT COUNTY'S CONSTRUCTION SPECIFICATIONS THE BLOW-OFF ASSEMBLY ENCLOSURE OR CHAMBER SHALL HAVE A CAST

IRON FRAME AND COVER EQUAL TO DEWEY BROTHERS OF VIRGINIA, INC., MODEL 8-1200. THE TWO TYPES OF ASSEMBLY ENCLOSURES SHALL BE AS GRAPHICALLY INDICATED IN THE CONSTRUCTION STANDARDS. IN NO INSTANCE SHALL THE DRAIN OR THE OUTLET BE CONNECTED TO A SANITARY SEWER. NEITHER THE AIR RELEASE VALVE ASSEMBLY NOR THE BLOW-OFF ASSEMBLY SHALL BE INSTALLED UNDER PAVEMENT SUBJECT TO VEHICULAR TRAFFIC.

11. UNLESS OTHERWISE SPECIFIED, A MINIMUM VERTICAL SEPARATION OF 18" SHALL BE MAINTAINED BETWEEN ALL SANITARY SEWERS AND WATER LINES. THE LENGTH OF THE WATER LINE SHALL BE CENTERED ON THE CROSSING WHERE THE WATER LINE CROSSES OVER THE SANITARY SEWER. WHERE CLEARANCE IS LESS THAN 18" BUT GREATER THAN 12", THE SANITARY SEWER SHALL BE DUCTILE IRON PIPE. WHEN THE WATER LINE CROSSES UNDER THE SANITARY SEWER. 18" MINIMUM CLEARANCE MUST BE MAINTAINED, AND SANITARY SEWER SHALL BE DUCTILE IRON PIPE. HORIZONTAL SEPARATION OF SANITARY MAINS AND WATER MAINS SHALL BE 10', UNLESS OTHERWISE SPECIFIED.

12. A MINIMUM VERTICAL SEPARATION OF 12" SHALL BE MAINTAINED BETWEEN STORM SEWERS AND WATER LINES, UNLESS OTHERWISE SPECIFIED.

13. THE CONTRACTOR SHALL USE ONLY APPROVED BY ISLE OF WIGHT COUNTY MATERIAL IN THE BACKFILL OF UTILITY TRENCHES.

14. ALL CONSTRUCTION METHODS & MATERIALS SHALL CONFORM WITH THE CURRENT SPECIFICATIONS AND STANDARDS OF THE DEPARTMENT OF PUBLIC UTILITIES, COUNTY OF ISLE OF WIGHT, VIRGINIA (DPU), AS WELL AS CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF HEALTH AND THE HAMPTON ROADS SANITATION DISTRICT. DPU'S CONSTRUCTION STANDARDS ARE SET FORTH IN THEIR CONSTRUCTION SPECIFICATIONS AND STANDARD FOR WATERWORKS AND SANITARY SEWERAGE FACILITIES, A COPY OF WHICH MUST BE PURCHASED FROM DPU AND KEPT AT THE JOB SITE AT ALL TIMES. REFERENCE TO VDOT SHALL MEAN THE CURRENT STANDARDS AND/OR SPECIFICATIONS OF VDOT.

15. SUB-SURFACE UTILITY WARNING TAPE AS MANUFACTURED BY THE GRIFFOLYN COMPANY, OR EQUAL, 4 INCHES WIDE OR WIDER SHALL BE PLACED AT AN ELEVATION NOT LESS THAN6-INCHES NOR MORE THAN 12-INCHES BELOW THE PROPOSED FINISHED GRADE ABOVE NON-CONDUCTIVE SEWER, WATER AND SEWER FORCE MAINS IN PUBLIC RIGHTS-OF-WAY OR EASEMENTS. THE TAPE SHALL BE OF A DURABLE, METALIZED, PLASTIC FILM SIMILAR TO "TERRA-TAPE D" FOR IDENTIFICATION BY ELECTRONIC PIPE LOCATING DE'.1CE AS WELL AS VISUAL I DENTIFICATION. THE TAPE FOR SEWER FORCE MAIN LINE SHALL BE BRIGHT GREEN WITH THE FOLLOWING IMPRINTED LEGEND "CAUTION-SEWER LINE BELOW". THE TAPE FOR WATER LINES SHALL BE BRIGHT BLUE WITH THE FOLLOWING IMPRINTED LEGEND "CAUTION WATER LINE BELOW."

16. ALL PVC AND DUCTILE IRON WATERLINES SHALL BE AFFIXED WITH CONDUCTIVE 10 GAUGE SOLID TRACER WIRE AND TAPED TO TOP OF PIPE IN 5 FOOT INCREMENTS DURING INSTALLATION.TRACER WIRE SHALL BE BROUGHT UP IN ALL VALVE BOXES, AIR RELEASE BOXES AND HYDRANTS WIRE SHALL BE BLUE ON WATERMAINS AND SERVICE LINES AND GREEN FOR SEWER AS REQUIRED BY THE DEPARTMENT OF PUBLIC UTILITIES. 10 GAUGE COPPER WIRE SHALL BE INSTALLED ALONG THE PIPE AS DIRECT BURIAL INSULATED COVER WIRE FOR PURPOSES OR POSITIVE IDENTIFICATION AND LOCATION, AS REQUIRED BY THE DEPARTMENT OF PUBLIC UTILITIES.

17. PLUGS TO BE INSTALLED ON ALL OPEN DEAD-END SEWER LINES AT ELEVATION SHOWN ON THE PLANS.

18. CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC UTILITIES AT (757) 365-6319 AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF

19. THE PROPOSED UTILITIES WITHIN THE RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY ISLE OF WIGHT COUNTY. THIS INCLUDES ALL WATER LINES UP TO THE METER LOCATED AT THE RIGHT-OF-WAY LINE, ALL GRAVITY SEWER FACILITY UP TO THE CLEAN OUT AT THE RIGHT-OF-WAY LINE, AND ALL SANITARY FORCEMAIN.

20. ALL SANITARY SEWER FORCE MAIN AIR RELEASE VALVE ASSEMBLIES SHALL BE INSTALLED AS MANUAL AIR RELEASE VALVES.

21. FIRE HYDRANTS AND GATE VALVES SHALL BE MANUFACTURED BY KENNEDY VALVE COMPANY AND ALL TO OPEN LEFT. KENNEDY FIRE HYDRANTS ARE TO BE PAINTED FROM THE FACTORY KENNEDY YELLOW.

22. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE WRAPPED WITH 8 MIL POLYWRAP AND SECURED WITH DUCT TAPE.

23. ALL MECHANICAL JOINT AND BELL RESTRAINT NUTS AND BOLTS SHALL

BE FLUOROPYMER STAR-BLUE.

TESTED AT ANY GIVEN TIME.

24. NO MORE THAN 4000 LF OF WATERMAIN OR SEWER FORCEMAIN MAY BE

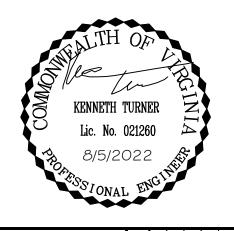
25. ALL EXCAVATIONS ARE TO BE BACKFILLED AT THE END OF EACH DAY. A MECHANICAL PLUG OR CAP IS TO BE USED TO SECURE THE END OF THE PIPE. NO MORE THAN 200 LF OF DITCH CAN BE OPEN AT ANY GIVEN TIME.

26. CONTRACTOR TO SCHEDULE A PRE-CONSTRUCTION MEETING WITH ISLE OF WIGHT COUNTY STAFF ONLY AFTER ALL MATERIAL SUBMITTALS ARE RECEIVED AND APPROVED.

27. FIRE HYDRANTS SHALL HAVE REFLECTIVE SPRING-LOADED BARREL MOUNTED MARKER FLAG. ALL VALVES AND AIR RELEASE VALVES SHALL HAVE BLUE FIBERGLASS MARKER POST WITH REFLECTIVE TAPE IDENTIFYING WATER VALVE.

SUGGESTED SEQUENCE OF CONSTRUCTION:

- 1. CONSTRUCTION OF THE ISLE OF WIGHT WATER MAIN AND BOOSTER PUMP STATION CAN OCCUR SIMULTANEOUSLY AND DO NOT HAVE TO OCCUR IN THE ORDER DISCUSSED IN THE FOLLOWING SEQUENCE.
- 2. OBTAIN ALL PERMITS RELATED TO EACH PHASE OF THE PROJECT PRIOR TO COMMENCING WORK.
- 3. INSTALL EROSION & SEDIMENT CONTROL MEASURES AND TRAFFIC CONTROL MEASURES RELATED TO EACH ACTIVE WORK AREA OF THE PROJECT PRIOR TO COMMENCING WORK.
- 4. ISLE OF WIGHT WATER MAIN FROM SMITHFIELD CONNECTION TO
- **BOOSTER PUMP STATION:** a. COMPLETE INSTALLATION OF ISLE OF WIGHT WATER MAIN TO
- PUMP STATION SITE. b. CONSTRUCT HORIZONTAL DIRECTIONAL DRILL (HDD) WITH
- WATER MAIN. c. TEST WATER MAIN.
- d. COMPLETE RESTORATION.
- 5. ISLE OF WIGHT WATER MAIN FROM BOOSTER PUMP STATION TO **ELEVATED STORAGE TANK:**
 - a. COMPLETE INSTALLATION OF ISLE OF WIGHT WATER MAIN TO
 - ELEVATED TANK SITE.
 - b. TEST WATER MAIN. c. COMPLETE RESTORATION.
- 6. ISLE OF WIGHT BOOSTER PUMP STATION: a. CONSTRUCT NEW BOOSTER PUMP STATION.
 - b. CONSTRUCT ONSITE UTILITIES. c. TIE-IN TO NEW ISLE OF WIGHT WATER MAIN.
 - d. PERFORM PUMP STATION START-UP AND TESTING IN
 - ACCORDANCE WITH SPECIFICATIONS. ACCEPTANCE OF START-UP TESTING IS REQUIRED PRIOR TO PROCEEDING. e. PERFORM SITE IMPROVEMENTS, ACCESS DRIVEWAY AND
 - RESTORATION. f. AMERICAN WATERWORKS ASSOCIATION STANDARD
- 7. ONCE THE PUMP STATION AND WATER MAINS ARE CONSTRUCTED AND TESTED, COMPLETE TIE-INS AND TOWN OF SMITHFIELD WATER MAIN CONNECTION.
- 8. COMPLETE ABANDONMENT OF SMITHFIELD FOODS FIRE SERVICE AT THE EMPLOYEE PARKING LOT AND REMOVAL OF EXISTING HYDRANTS AS CALLED OUT IN PLANS.
- 9. COMPLETE ALL FINAL SITE RESTORATION.
 - a. REMOVE EROSION AND SEDIMENTATION CONTROL MEASURES ONLY AFTER VEGETATIVE COVER IS ESTABLISHED
- 10. CLOSE OUT PERMITS.



8/5/2022

DRAWN BY S. MAURER **DESIGNED BY** K. TURNER CHECKED BY

K. TURNER SCALE

Z

0

JOB NO. 48527

[5]

EMERGENCY CONTACT:

TOWN OF SMITHFIELD EMERGENCY CONTACT: JACK REED DIRECTOR OF PUBLIC WORKS & UTILITIES 310 INSTITUTE STREET SMITHFIELD, VIRGINIA 23430 OFFICE: (757) 365-3338

COORDINATION WITH SMITHFIELD FOODS:

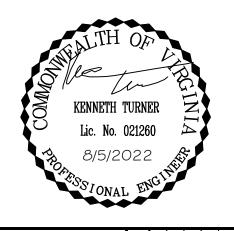
SMITHFIELD FOODS CONTACT: JASON REALE FACILITIES ENGINEERING MANAGER 111 N. CHURCH ST, SMITHFIELD, VA 23430 (757) 356-6719 JREALE@SMITHFIELD.COM

- THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITY ON SMITHFIELD FOODS PROPERTIES WITH SMITHFIELD FOODS OPERATIONS.
- ALL TEMPORARY TRENCH BACKFILL AT THE EMPLOYEE PARKING LOT PRIOR TO PERMANENT OVERLAY SHALL BE MAINTAINED ON A DAILY BASIS TO AVOID TRIP HAZARDS.
- VEHICLE ENTRANCES SHALL BE MAINTAINED EITHER BY TEMPORARY BACKFILL OR STEEL TRENCH PLATES AND MADE AVAILABLE FOR USE MONDAY - FRIDAY 7AM-10AM AND 3PM-5PM.
- NO MORE THAN ONE VEHICLE ENTRANCE/EXIT SHALL BE UNAVAILABLE FOR USE AT ONE TIME.

TOWN OF SMITHFIELD GENERAL NOTES FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS:

- A. ALL COMPONENTS OF THE WATER DISTRIBUTION AND SANITARY SEWER SYSTEM SHALL BE INSTALLED AND TESTED IN ACCORDANCE WITH THE LATEST EDITION OF THE TOWN OF SMITHFIELD DESIGN STANDARDS FOR WATER DISTRIBUTION AND SANITARY SEWER SYSTEMS, THE HRPDC REGIONAL CONSTRUCTION STANDARDS (SIXTH EDITION DATED JUNE 2016), THE VIRGINIA DEPARTMENT OF HEALTH WATERWORKS REGULATIONS, AND THE DEPARTMENT OF ENVIRONMENTAL QUALITY SEWAGE COLLECTION AND TREATMENT REGULATIONS. THE CONTRACTOR SHALL USE ONLY NEW MATERIALS, PARTS, AND PRODUCTS ON ALL PROJECTS. ALL MATERIALS SHALL BE STORED SO AS TO ASSURE THE PRESERVATION OF THEIR QUALITY AND FITNESS FOR THE WORK. A COPY OF THE TOWN OF SMITHFIELD DESIGN STANDARDS AND HRPDC REGIONAL CONSTRUCTION STANDARDS MUST BE KEPT ON-SITE BY THE CONTRACTOR DURING TIME OF INSTALLING, TESTING, AND CONVEYING FACILITIES TO THE
- B. THE CONTRACTOR/DEVELOPER SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES.
- C. A PRE-CONSTRUCTION MEETING SHALL BE HELD BETWEEN THE TOWN, THE DEVELOPER, THE CONTRACTOR INCLUDING RELEVANT SUBCONTRACTOR(S), AND THE PROJECT ENGINEER PRIOR TO ISSUANCE OF A TOWN OF SMITHFIELD CERTIFICATE TO CONSTRUCT. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SCHEDULE THIS MEETING WITH THE TOWN AND COORDINATE WITH THE OTHER ATTENDEES.
- D. THE DEVELOPER'S REPRESENTATIVE SHALL SUBMIT SHOP DRAWINGS FOR ALL MATERIALS AND RECEIVE TOWN APPROVAL PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL MATERIALS ORDERED AND INSTALLED PRIOR TO THE TOWN'S REVIEW AND ACCEPTANCE WILL BE AT THE CONTRACTOR'S/DEVELOPER'S RISK.
- E. PIPE LINES AND SERVICES SHALL BE INSTALLED AFTER GRADING TO WITHIN 6-INCHES OF FINAL GRADE AND PRIOR TO PLACEMENT OF BASE MATERIAL.
- F. ALL WATER MAINS SHALL BE FULLY FLUSHED, PRESSURE TESTED, AND DISINFECTED AND SATISFACTORY BACTERIOLOGICAL SAMPLES OBTAINED, IN ACCORDANCE WITH THE TOWN OF SMITHFIELD DESIGN STANDARDS. FLUSHING OF WATER MAINS SHALL BE SCHEDULED WITH THE TOWN INSPECTOR A MINIMUM 3 BUSINESS DAYS PRIOR TO THE FLUSHING. CONTRACTOR SHALL PROVIDE THE REQUIRED DURATION AND VOLUME TO THE INSPECTOR. FLUSHING WILL BE SCHEDULED TUESDAY THROUGH THURSDAY, UNLESS AUTHORIZED OTHERWISE BY THE TOWN, AND WILL BE ON A FIRST COME-FIRST SERVE BASIS.
- G. ROUTINE PERIODIC INSPECTIONS DURING CONSTRUCTION WILL BE PROVIDED BY THE TOWN. THESE INSPECTIONS DO NOT RELIEVE THE DEVELOPER/CONTRACTOR/OWNER FROM HIS OBLIGATION AND RESPONSIBILITY FOR CONSTRUCTING A WATER DISTRIBUTION AND SANITARY SEWER SYSTEM IN STRICT ACCORDANCE WITH THE TOWN OF SMITHFIELD DESIGN STANDARDS AND HRPDC REGIONAL CONSTRUCTION STANDARDS.
- H. ANY FIELD MODIFICATIONS OR CHANGES TO THE APPROVED PLANS SHALL BE VERIFIED AND CHECKED BY THE ENGINEER OF RECORD AND APPROVED BY THE TOWN PRIOR TO ANY FIELD MODIFICATIONS OR CHANGES. ALL APPROVED CHANGES AND FIELD MODIFICATIONS SHALL BE ACCURATELY INDICATED ON THE RECORD DRAWINGS.
- I. ALL LOTS SHALL BE PROVIDED WITH WATER SERVICE AND SANITARY SEWER CONNECTIONS. THE CONNECTIONS SHALL BE EXTENDED FROM THE MAIN TO THE PROPERTY LINE OR EASEMENT LINE, AND SHALL TERMINATE WITH A YOKE IN A METER BOX, OR AT THE CLEAN OUT, SET AT FINAL FINISHED METERS FOR ALL LOTS (UNITS) SHALL BE PURCHASED BY THE CONTRACTOR PER TOWN SPECIFICATION. THE TOWN SHALL INSTALL METERS 1" AND SMALLER. THE CONTRACTOR SHALL INSTALL METERS LARGER THAN 1" UNDER THE SUPERVISION OF THE TOWN. METER TYPE/MODEL SHALL BE APPROVED BY THE TOWN PRIOR TO THE CONTRACTOR PURCHASING THE WATER METER. METERS MAY NOT BE MORE THAN TWO MONTHS OUT OF DATE AT THE TIME OF INSTALLATION.
- J. ANY REQUIRED EASEMENTS, PERMITS AND APPROVALS SHALL BE

- ACQUIRED BY THE DEVELOPER PRIOR TO COMMENCEMENT OF WATER MAIN AND/OR SANITARY SEWER CONSTRUCTION.
- K. THE CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION. THE CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY AND PROTECTION. THE CONTRACTOR SHALL ALSO NOTIFY "MISS UTILITY" AT 1-800-552-7001 OR 811 PRIOR TO PERFORMING ANY UNDERGROUND EXCAVATION.
- L. WATER METER BOX INSTALLATION SHALL MAINTAIN A MINIMUM 18-INCH HORIZONTAL EDGE-TO-EDGE CLEARANCE FROM DRIVEWAYS AND/OR DRIVE PATHS, SIDEWALKS, BIKE PATHS, CURBING AND ADJACENT WATER METER BOXES.
- M. ONLY TOWN OF SMITHFIELD PERSONNEL ARE AUTHORIZED TO OPERATE VALVES ON EXISTING TOWN WATER MAINS AND SANITARY FORCE MAINS. ONCE A SYSTEM HAS BEEN HYDRAULICALLY ENERGIZED, THE TOWN WILL BE RESPONSIBLE FOR OPERATING THE VALVES. THE CONTRACTOR SHALL CONTACT THE TOWN OF SMITHFIELD PUBLIC WORKS AT 757-365-4200 IF THERE IS AN EMERGENCY OR NEED TO OPEN/CLOSE A VALVE.
- N. ANY EXISTING UNUSED WELL(S) SHALL BE ABANDONED IN ACCORDANCE WITH STATE PRIVATE WELL REGULATIONS AND TOWN OF SMITHFIELD CODE.
- O. BEDDING OF TOWN UTILITIES SHALL BE IN ACCORDANCE WITH HRPDC DETAIL EW_01, TYPE III FOR RIGID PIPE AND TYPE IV FOR
- P. NO TREES, SHRUBS, STRUCTURES, FENCES, IRRIGATION MAINS. INVISIBLE PET FENCES OR OTHER OBSTACLES SHALL BE PLACED WITHIN AN EASEMENT WHICH WOULD RENDER THE EASEMENT INACCESSIBLE BY EQUIPMENT. SHRUBS SHALL BE A MINIMUM OF 5 FEET, AND TREES A MINIMUM OF 10 FEET, FROM THE CENTER OF WATER AND SANITARY SEWER PIPELINES.
- Q. JOINT RESTRAINT SHALL BE PROVIDED IN ACCORDANCE WITH MINIMUM REQUIREMENTS OF TOWN OF SMITHFIELD DETAIL JR-1, UNLESS SHOWN OTHERWISE ON THE PLANS. ALL PRESSURE PIPELINES SHALL HAVE JOINT RESTRAINT. FIRE HYDRANTS SHALL BE RESTRAINED AT LEAST ONE FULL JOINT OF PIPE IN EACH DIRECTION ON THE MAINLINE.
- R. PROPOSED WATER AND SANITARY SEWER SYSTEMS SHALL MAINTAIN A MINIMUM HORIZONTAL SEPARATION OF 5-FEET FROM OTHER UTILITIES AND STRUCTURES, INCLUDING BUT NOT LIMITED TO STORM SEWERS, STREET LIGHTS, ETC. WATER AND SANITARY SEWER FACILITIES SHALL HAVE A MINIMUM 10-FOOT HORIZONTAL EDGE-TO-EDGE SEPARATION.
- S. ANY PROPOSED BACKFLOW PREVENTION DEVICE AND/OR GREASE TRAP MUST BE INSPECTED BY THE TOWN OF SMITHFIELD BACKFLOW PREVENTION MANAGER/FOG INSPECTOR (757- 365-3327/ 757- 365-4272).
- T. THE CONTRACTOR/DEVELOPER SHALL ACQUIRE A CERTIFICATE TO CONSTRUCT WATER AND SANITARY SEWER FACILITIES PRIOR TO COMMENCEMENT OF CONSTRUCTION OF ANY WATER OR SANITARY SEWER FACILITIES. PLUMBING INSIDE OF PROPOSED BUILDINGS MUST BE INSPECTED BY THE TOWN'S BACKFLOW PREVENTION MANAGER (757-365-3327), FOR POTENTIAL CROSS CONNECTIONS. ANY CROSS CONNECTIONS MUST BE PROTECTED BY THE APPROPRIATE BACKFLOW PREVENTION DEVICE(S).
- U. EASEMENTS DENOTED AS "TOWN OF SMITHFIELD UTILITY EASEMENTS" ARE FOR THE EXCLUSIVE USE OF THE TOWN AND THE PROPERTY OWNER. OTHER UTILITY SERVICE PROVIDERS DESIRING TO USE THESE EASEMENTS WITH THE EXCEPTION OF PERPENDICULAR UTILITY CROSSINGS MUST OBTAIN AUTHORIZATION FOR ACCESS AND USE FROM THE TOWN AND THE PROPERTY OWNER. ADDITIONALLY, THE TOWN SHALL NOT BE HELD RESPONSIBLE FOR ANY DAMAGE TO IMPROVEMENTS WITHIN THIS EASEMENT, FROM ANY CAUSE.
- V. THE TOWN OF SMITHFIELD SHALL NOT BE HELD RESPONSIBLE FOR ANY PAVEMENT SETTLEMENT DUE TO PIPE BEDDING, BACKFILLING, BACKFILL MATERIALS OR COMPACTION FOR WATER OR SANITARY SEWER FACILITIES FOR THIS PROJECT.
- W. FIRE HYDRANTS TO BE INSTALLED WITHIN EXISTING OR PROPOSED VDOT RIGHT-OF-WAYS SHALL BE LOCATED IN ACCORDANCE WITH VDOT REQUIREMENTS.
- X. PRIVATELY OWNED UTILITIES, (E.G., WATER AND SEWER LINES AND PRIVATE FIRE SERVICE MAINS), SHOWN ON THIS PLAN ARE REGULATED BY THE VIRGINIA UNIFORM STATEWIDE BUILDING CODE, AND ENFORCED BY THE ISLE OF WIGHT COUNTY PERMITS DIVISION. THESE PRIVATELY OWNED UTILITIES MUST COMPLY FULLY WITH THE INTERNATIONAL PLUMBING CODE, THE NATIONAL FIRE PROTECTION ASSOCIATION STANDARD 24, AND THE VIRGINIA STATEWIDE FIRE PREVENTION CODE. CONTRACTORS WORKING FROM THIS SITE PLAN ARE CAUTIONED NOT TO INSTALL OR CONCEAL PRIVATELY OWNED SITE UTILITIES WITHOUT FIRST OBTAINING THE REQUIRED PERMITS AND INSPECTIONS.
- Y. ALL PRIVATE UNDERGROUND FUEL STORAGE TANKS SHALL HAVE LEAK MONITORS AND SECONDARY CONTAINMENT IN ACCORDANCE WITH VIRGINIA STATE DEPARTMENT OF ENVIRONMENTAL QUALITY REQUIREMENTS.
- Z. AMERICAN AVK VALVES WITH STAINLESS STEEL COMPONENTS AND BOLTS SHALL BE USED FOR ALL VALVES WITHIN THE TOWN OF SMITHFIELD LIMITS.
- AA. TOWN WILL PROVIDE WATER METERS FOR CONNECTIONS LESS THAN ONE INCH (1").



8/5/2022

DRAWN BY S. MAURER **DESIGNED BY** K. TURNER CHECKED BY K. TURNER

SCALE

77

Z

0

JOB NO.

VIRGINIA DEPARTMENT OF TRANSPORTATION STANDARD NOTES HAMPTON ROADS DISTRICT - August 2018

1.0 GENERAL INFORMATION

- 1.1 THESE PLANS WERE PREPARED IN ACCORDANCE WIHT THE REQUIREMENTS OF (SELECT ONE):

 X
 VDOT SUBDIVISION STREET ACCEPTANCE REQUIREMENTS (SSAR)
- VDOT SUBDIVISION STREET ACCEPTANCE REQUIRÈMENTS (SSAR)

1.2	VDOT APPROVED EXCEPTIONS ACCESS MANAGEMENT	S (SELECT ONE): DATE OF APPROVAL	
_	SSAR	DATE OF APPROVAL	
_	OTHER:	DATE OF APPROVAL _	
_	N/A		
1.3 USE:	TRIP GENERATION DATA:		
	ITE CODE: TOTAL DAILY TRIPS: AM PEAK HOUR TRIPS:		_ _VPD VPH

1.4 A LAND USE PERMIT MUST BE OBTAINED FROM VDOT <u>BEFORE</u> ANY CONSTRUCTION IS STARTED WITHIN STATE MAINTAINED RIGHT OF WAY LIMITS. CONTACT THE LOCAL VDOT RESIDENCY FOR THE PERMIT FEE AND BOND AMOUNT.

ACCOMAC RESIDENCY (757) 787-5932
ACCOMACK AND NORTHAMPTON COUNTIES

FRANKLIN RESIDENCY (757) 346-3067

PM PEAK HOUR TRIPS:

GREENSVILLE, ISLE OF WIGHT, SOUTHAMPTON, AND SUSSEX COUNTIES

WILLIAMSBURG RESIDENCY (757) 253-5146

JAMES CITY AND YORK COUNTIES

SUFFOLK DISTRICT OFFICE (757) 956-3119 SURRY COUNTY AND LIMITED ACCESS

ALL LAND USE PERMIT APPLICATIONS MUST HAVE ONE (1) SET OF APPROVED PLANS, A COPY OF THE PLAN APPROVAL LETTER, A CHECK FOR THE PROCESSING FEE MADE PAYABLE TO TREASURER OF VIRGINIA, AND SURETY OR BOND IN THE REQUIRED AMOUNT.

APPLICATIONS FOR LAND USE PERMITS CAN BE MADE ON-LINE AT HTTP://WWW.VIRGINIADOT.ORG/BUSINESS/BULANDUSEPERMITS.ASP.

- 1.5 THE VDOT RESIDENCY IS TO RECEIVE WRITTEN NOTIFICATION 48 HOURS PRIOR TO THE START OF ANY WORK WITHIN STATE MAINTAINED RIGHT OF WAY. A PRE-CONSTRUCTION MEETING SHOULD BE HELD AT LEAST ONE WEEK PRIOR TO ANY LAND DISTURBANCE OR WHEN CONSTRUCTION ACTIVITIES WILL AFFECT TRAFFIC OPERATIONS OF ANY ARTERIAL CORRIDOR.
- 1.6 ALL CONSTRUCTION METHODS AND MATERIALS WITHIN STATE MAINTAINED RIGHT OF WAY SHALL COMPLY WITH THE CURRENT STANDARDS AND SPECIFICATIONS OF THE VIRGINIA DEPARTMENT OF TRANSPORTATION.
- 1.7 THE CONTRACTOR SHALL HAVE AVAILABLE A COPY OF THE LAND USE PERMIT(S), FINAL APPROVED PLANS, ANY APPROVED REVISIONS, AND A COPY OF THE APPROVAL LETTER ON SITE.
- 1.8 ANY ERRORS, CONFLICTS, OR DISCREPANCIES FOUND ON THE APPROVED PLANS SHALL BE REPORTED TO THE DEVELOPER'S ENGINEER. THE VDOT RESIDENCY SHOULD BE NOTIFIED FOR RESOLUTION BEFORE PROCEEDING FURTHER WITH THE WORK IF THE STATE MAINTAINED RIGHT OF WAY IS AFFECTED.
- 1.9 THE DEVELOPER IS RESPONSIBLE FOR ANY DAMAGE TO EXISTING ROADS, UTILITIES, AND ANY OTHER INSTALLATIONS ALREADY IN PLACE WHICH OCCUR AS A RESULT OF PROJECT CONSTRUCTION WITHIN OR CONTIGUOUS TO STATE RIGHT OF WAY DAMAGES WHICH EXIST PRIOR TO STARTING CONSTRUCTION MUST BE PHOTO DOCUMENTED.
- 1.10 THE COMMONWEALTH TRANSPORTATION BOARD, MEMBERS OF THE BOARD, THE COMMONWEALTH, AND ALL COMMONWEALTH EMPLOYEES, AGENTS, AND OFFICES, SHALL BE ABSOLVED FROM ALL RESPONSIBILITIES, DAMAGES AND LIABILITIES AS A RESULT OF WORK ARISING FROM THE EXERCISE OF THE PRIVILEGES GRANTED BY PLAN AND/OR PERMIT APPROVAL.
- 1.11 MATERIALS SHALL NOT BE STOCKPILED WITHIN STATE MAINTAINED RIGHT OF WAY OR EASEMENTS.
- 1.12 PRIVATE ENTRANCES LOCATED ON STREETS WITH CURB AND GUTTER (CG-6, CG-7) REQUIRE INSTALLATION OF CURB APRONS (CG-9B, CG-9D). PRIVATE ENTRANCES LOCATED ON STREETS WITH ROLLTOP CURB SHALL BE INSTALLED IN ACCORDANCE WITH THE DETAIL ON PAGE B(1)-29 OF THE VDOT ROAD DESIGN MANUAL. SIDEWALK SHALL BE 7" THICK AT DRIVEWAY CROSSINGS AND ADJACENT TO ROLLTOP CURB. INSTALLATION OF PIPE CULVERTS AND STORM SEWERS SHALL CONFORM TO THE CURRENT VDOT STANDARD PB-1. PIPE CULVERTS SHALL HAVE A MINIMUM OF 4" OF COVER UNDER CONCRETE GUTTERS, OR ADJUSTMENT SHALL BE REQUIRED TO CONCRETE GUTTER GRADES IN THE FIELD TO REACH THIS COVER OR AS DIRECTED BY THE VDOT ENGINEER. PRIVATE ENTRANCES LOCATED ON STREETS WITH ROADSIDE DITCHES REQUIRE 9" OF COVER.
- 1.13 THE DEVELOPER IS RESPONSIBLE FOR HIRING A QUALIFIED ENGINEER TO CONDUCT ALL REQUIRED CONSTRUCTION INSPECTIONS. DATE STAMPED PHOTOGRAPHS ARE RECOMMENDED TO BE A PART OF EVERY INSPECTION. CERTIFIED INSPECTIONS AND REPORTS MUST BE SUPPLIED TO VDOT FOR:
 A. FILL MATERIALS AND COMPACTION
- B. STORM SEWER TRENCH BEDDING MATERIALS, THICKNESS AND COMPACTION, AS WELL AS BACKFILL MATERIALS AND COMPACTION
- C. MATERIALS AND COMPACTION REPORTS FOR ALL UTILITY INSTALLATIONS IN RIGHT-OF-WAY.
- D. SUBBASE MATERIALS AND COMPACTION, FOR ROADS AND SIDEWALKS
- E. STORM SEWER VIDEO INSPECTIONS FOR ALL UNDERGROUND STORM SEWER SYSTEMS, AND FOR CULVERTS AS SELECTED BY VDOT.
- F. CBR'S AND FINAL PAVEMENT DESIGNS.
- G. AGGREGATE MATERIALS, THICKNESSES AND COMPACTION. AGGREGATE SHOULD NOT BE PLACED WITHOUT PASSING ALL SUBGRADE COMPACTION TESTS AND PROOF-ROLLS, AND RECEIVING APPROVAL FROM VDOT ON CBR REPORTS AND FINAL PAVEMENT DESIGNS. REPEAT TESTS AND INSPECTIONS MUST BE PERFORMED FOR UNDERCUTS OR GEO-TECHNICAL FABRIC APPLICATIONS UNTIL PASSING. ALL FABRIC APPLICATIONS SHOULD BE DOCUMENTED WITH PRECISE LOCATIONS. AGGREGATE INSPECTIONS MUST INCLUDE ANY UNDERDRAINS AND SIDEWALK APPLICATIONS.
- H. ASPHALT BASE AND SURFACE MATERIALS, THICKNESS AND COMPACTION.
- I. CONCRETE MATERIALS AND STRENGTH TESTS FOR ALL CONCRETE CASTE ON-SITE.
- J. SOURCE OF MATERIALS REPORTS FOR MATERIALS USED IN THE RIGHT-OF-WAY.

FOR MORE INFORMATION REGARDING INSPECTIONS, PLEASE SEE THE LAND DEVELOPMENT INSPECTION DOCUMENTATION BEST PRACTICES MANUAL, AVAILABLE ON THE VDOT WEBSITE. PLEASE CONTACT THE VDOT RESIDENCY AT LEAST 48 HOURS IN ADVANCE IF STONE DEPTHS OR PROOF ROLL INSPECTIONS WILL BE REQUESTED OF VDOT STAFF, WHICH WILL BE DEPENDENT ON STAFF AVAILABILITY.

2.0 DRAINAGE & EROSION CONTROL

- 2.1 VDOT SHALL NOT BE RESPONSIBLE FOR THE MAINTENANCE OF ANY STORMWATER MANAGEMENT FACILITY OR OUTFALL STRUCTURE LOCATED OUTSIDE OF STATE MAINTAINED RIGHT OF WAY LIMITS AND SHALL BE ABSOLVED FROM ALL RESPONSIBILITIES, DAMAGES AND LIABILITIES AS A RESULT OF SUCH.
- 2.2 ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR IN ACCORDANCE WITH THE VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK AND VIRGINIA STORMWATER MANAGEMENT PROGRAM. AN INDIVIDUAL CERTIFIED BY THE VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, HOLDING A RESPONSIBLE LAND DISTURBER CERTIFICATION, IS TO BE IN CHARGE OF THE LAND DISTURBING ACTIVITY AND FOR CONTINUED MAINTENANCE OF THE EROSION AND SEDIMENT CONTROL ON THE WORK SITE AT ALL TIMES.
- 2.3 TEMPORARY DRAINAGE MEASURES SHALL BE INSTALLED DURING CONSTRUCTION TO PREVENT PONDING AND DIVERT SEDIMENT LADEN WATER.
- 2.4 ALL NECESSARY PRECAUTIONS SHALL BE TAKEN TO ENSURE AGAINST SILTATION OF ADJACENT PROPERTIES, DITCHES, STREAMS, AND CONSTRUCTION VEHICLES TRACKING SILT ONTO ADJACENT ROADWAYS. ADDITIONAL DITCH LININGS OR SILTATION AND EROSION CONTROL MEASURES SHALL BE PROVIDED AS DETERMINED NECESSARY BY VDOT AND/OR THE COUNTY/TOWN DURING FIELD REVIEW. ALL COSTS SHALL BE ASSUMED BY THE DEVELOPER.
- 2.5 ALL DISTURBED AREAS SHALL BE STABILIZED IMMEDIATELY UPON THE END OF EACH DAY'S WORK AND RESEEDED IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS.
- 2.6 STRUCTURES EXCEEDING 4' IN DEPTH REQUIRE INSTALLATION OF STEPS IN ACCORDANCE WITH STANDARD ST-1. STRUCTURES EXCEEDING 12' IN DEPTH REQUIRE SAFETY SLABS IN ACCORDANCE WITH STANDARD SL-1. IS-1 IS REQUIRED ON ALL DRAINAGE STRUCTURES.
- 2.7 ROOF DRAIN CONNECTIONS ARE NOT PERMITTED IN STRUCTURES WITHIN THE VDOT RIGHT OF WAY.
- 2.8 FOR SAFETY CONCERNS IN RESIDENTIAL SUBDIVISIONS, THE MINIMUM LENGTH OF AN ENTRANCE CULVERT SHOULD BE THE ENTRANCE WIDTH PLUS 8'. FOR EXAMPLE, A 16' WIDE ENTRANCE WOULD REQUIRE A 24' CULVERT. THE LENGTH MAY BE LESSENED WHEN END WALLS ARE USED.
- 2.9 MANHOLES AND INLET CONNECTIONS ARE TO HAVE INLET SHAPING (IS-1) TO PREVENT SEDIMENT AND DEBRIS BUILDUP, AND IMPROVE FUNCTION. ALL MANHOLE AND INLET JOINTS AND TOPS MUST BE SEALED AGAINST LEAKS.
- 2.10 ALL PIPE JOINTS ARE TO BE SEALED BY GASKETS OR BANDS PER MANUFACTURERS SPECIFICATIONS TO PREVENT SOIL LEAKS, AND TO BE WRAPPED IN GEOTEXTILE FABRIC ON THE EXTERIOR OF EACH JOINT. MINOR HOLES OR CRACKS ARE TO BE REPAIRED PRIOR TO PLACEMENT. PIPES WITH BROKEN ENDS OR STRUCTURAL CRACKS, BENDS OR BREAKS MUST BE REPLACED. PHOTOS OF PIPE PLACEMENT PRIOR TO BACKFILL SHOULD BE IN INSPECTION REPORTS SUBMITTED TO VDOT.
- 2.11 PAVEMENT CROSS DRAINS (CD-1,2) ARE TO BE INSTALLED AT SAGS AND CUT-FILL TRANSITION POINTS.
 PAVEMENT UNDERDRAINS OR EDGE DRAINS ARE TO BE INSTALLED WHERE REQUIRED BY VDOT
 SPECIFICATIONS, WITH USE OF 21B AGGREGATES (UD-4), WITH RAISED MEDIANS (UD-2), AND WHERE CALLED
 FOR ON PLANS. PHOTOS OF PLACEMENT PRIOR TO BACKFILL SHOULD BE IN INSPECTION REPORTS
 SUBMITTED TO VDOT.

3.0 MATERIALS

- 3.1 INITIAL PAVEMENT DESIGN PROVIDED IS BASED ON A(N) ASSUMED VALUE. FINAL PAVEMENT DESIGN SHALL BE SUBMITTED IN ACCORDANCE WITH THE PAVEMENT DESIGN GUIDE FOR SUBDIVISION AND SECONDARY ROADS IN VIRGINIA. A COPY OF THE CBR REPORT SHALL BE PROVIDED PRIOR TO CONSTRUCTION. FOR PRIMARY ROADS AND INTERSTATE HIGHWAYS WHERE TRUCK TRAFFIC EXCEEDS 5%, PAVEMENT DESIGN SHALL BE PROVIDED IN ACCORDANCE WITH AASHTO GUIDELINES. TYPICAL PAVEMENT SECTIONS SHALL DEPICT THE PROPOSED PAVEMENT STRUCTURE INCLUDING THE TOP 6" OF THE SUBGRADE IMMEDIATELY UNDER THE PAVEMENT STRUCTURE COMPACTED TO 100% OF THE THEORETICAL MAXIMUM DRY DENSITY.
- 3.2 WHEN UNSUITABLE MATERIALS ARE ENCOUNTERED DURING CONSTRUCTION, SUCH MATERIALS SHALL BE UNDERCUT AND BACKFILLED WITH VDOT SELECT MATERIAL TYPE II MINIMUM CBR-20 ACCORDING TO VDOT SPECIFICATIONS. THE SOIL LAB TEST REPORTS OF THE PROPOSED SELECT MATERIAL SHALL BE INCLUDED IN THE GEOTECHNICAL SOILS REPORT.
- 3.3 ASPHALT PAVEMENT WIDENING SHALL CONFORM TO THE CURRENT VDOT STANDARD WP-2.
- 3.4 THE DEPARTMENT USUALLY PROHIBITS THE OPEN-CUTTING OF HARD-SURFACED ROADS EXCEPT IN EXTENUATING CIRCUMSTANCES. THEREFORE, ALL UNDERGROUND UTILITIES WITHIN STATE MAINTAINED RIGHT OF WAY, AS DETERMINED NECESSARY BY GOOD ENGINEERING PRACTICE TO SERVE THE COMPLETE DEVELOPMENT OF ADJACENT PROPERTIES, SHALL BE INSTALLED DURING THE STREETS INITIAL CONSTRUCTION AND PRIOR TO THE APPLICATION OF ITS FINAL PAVEMENT SURFACE COURSE. EVERY EFFORT MUST BE MADE TO MINIMIZE THE NUMBER AND SIZE OF OPEN CUTS. THIS SHALL INCLUDE EXTENSIONS OF ALL NECESSARY CROSS-STREET CONNECTIONS OR SERVICE LINES TO AN APPROPRIATE LOCATION BEYOND THE PAVEMENT AND PREFERABLY THE RIGHT OF WAY LINE. IN THE EVENT IT IS NECESSARY TO OPEN THE STREET PAVEMENT TO WORK ON UTILITIES AFTER THE SURFACE HAS BEEN PLACED, ADDITIONAL COMPACTION TESTS AND PAVING AS NECESSARY TO RESTORE THE INTEGRITY AND APPEARANCE OF THE ROADWAY MAY BE REQUIRED.

4.0 RIGHT OF WAY & UTILITIES

- 4.1 ALL FIXED OBJECTS SUCH AS UTILITY CABINETS, PEDESTALS, AND STREETLIGHTS SHALL BE LOCATED IN ACCORDANCE WITH CLEAR ZONE REQUIREMENTS, AS NOTED IN THE ROAD DESIGN MANUAL OR AASHTO ROADSIDE DESIGN GUIDE. THERE SHALL NOT BE ANY CABINETS, PEDESTALS, OR FIRE HYDRANTS LOCATED ON THE SHOULDER.
- 4.2 FLOWERS, SHRUBS, AND TREES SHALL NOT BE PLACED WITHIN STATE MAINTAINED RIGHT OF WAY LIMITS WITHOUT AN APPROVED SET OF PLANS AND AN APPROVED PLANTING AGREEMENT. NO IRRIGATION (SPRINKLER) SYSTEMS, BRICK COLUMNS, ENDWALLS, AND/OR BRICK MAILBOXES WILL BE CONSTRUCTED OR INSTALLED WITHIN STATE MAINTAINED RIGHT OF WAY LIMITS WITHOUT A PERMIT. ANY OF THE ABOVE OR OTHER NON-STANDARD ITEMS FOUND IN THE RIGHT OF WAY WITHOUT A PERMIT WILL BE REMOVED, AND ALL COSTS OF THE REMOVAL WILL BE BORNE BY THE OWNER AND/OR DEVELOPER.

- 4.3 THE CONTRACTOR SHALL BE RESPONSIBLE FOR LOCATING AND PROTECTING ALL UNDERGROUND AND OVERHEAD UTILITIES, WHETHER OR NOT THEY ARE SHOWN ON THE PLANS, PRIOR TO CONSTRUCTION. THE CONTRACTOR WILL BE RESPONSIBLE FOR REPAIRS AT HIS OWN EXPENSE OF ANY UTILITIES DAMAGED BY HIS CONSTRUCTION METHODS. MISS UTILITY MUST BE CONTACTED AT 811 AT LEAST 72 HOURS PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 4.4 THE PERMIT HOLDER SHALL BE RESPONSIBLE FOR PROTECTING ALL VDOT OWNED FACILITIES AND UTILITIES WITHIN THE RIGHT OF WAY. THE PERMIT HOLDER MUST CONTACT VDOT EASTERN REGION TRANSPORTATION OPERATIONS CENTER AT (757) 361-3033 OR (757) 361-3038 ON THE BUSINESS DAY PRECEDING 48 HOURS BEFORE ANY EXCAVATION WITHIN 1,000 FEET OF A TRAFFIC SIGNAL OR ADJACENT TO OTHER VDOT UTILITIES IS TO OCCUR. NO EXCAVATION SHOULD OCCUR UNTIL ALL UNDERGROUND VDOT UTILITIES ARE MARKED, VDOT HAS NOTIFIED THE PERMIT HOLDER THAT NO UTILITIES ARE PRESENT AT THE EXCAVATION SITE(S), OR THE 48 HOUR TIME LIMIT HAS EXPIRED AND THE PERMIT HOLDER HAS NOT RECEIVED NOTIFICATION FROM VDOT THAT ADDITIONAL TIME TO MARK THE UTILITIES IS NECESSARY. AS THERE IS POTENTIAL FOR UNDERGROUND VDOT UTILITIES ANYWHERE WITHIN THE STATE RIGHT-OF-WAY, ALL PERMIT HOLDERS EXCAVATING ON THE STATE HIGHWAY SYSTEM THAT MAY IMPACT VDOT UTILITIES SHOULD FOLLOW THESE NOTIFICATION AND MARKING PROCEDURES PRIOR TO COMMENCING EXCAVATION.
- 4.5 AUTHORIZED UNDERGROUND UTILITY INSTALLATIONS SHALL MAINTAIN A MINIMUM OF 36 INCHES OF COVER.
- 4.6 OVERHEAD UTILITY INSTALLATIONS WITHIN LIMITED ACCESS AND NON-LIMITED ACCESS RIGHT OF WAY SHALL BE INSTALLED IN ACCORDANCE WITH VDOT LAND USE PERMIT REGULATIONS.
- 4.7 ALL ROADWAY LIGHTING SHALL BE DESIGNED IN ACCORDANCE WITH IESNA LIGHTING CRITERIA AND INSTALLED IN ACCORDANCE WITH VDOT ROAD AND BRIDGE SPECIFICATIONS. ALL ROADWAY LIGHTING SHALL ADHERE TO THE VIRGINIA LIGHTING LAW.

5.0 TRAFFIC

- 5.1 THE CONTRACTOR IS RESPONSIBLE FOR THE REPLACEMENT OF ANY PAVEMENT MARKINGS DISTURBED BY CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR INSTALLING PAVEMENT MARKINGS ON FINAL PAVEMENT OVERLAY WITHIN 14 DAYS AFTER COMPLETION OF SURFACE TREATMENT. PAVEMENT MARKINGS SHALL BE INSTALLED AND ERADICATED IN ACCORDANCE WITH VDOT STANDARDS AND SPECIFICATIONS.
- 5.2 CONTACT EASTERN REGION TRANSPORTATION OPERATIONS CENTER AT (757) 361-3033 OR (757) 361-3038 A MINIMUM OF 48 HOURS IN ADVANCE WHENEVER EXCAVATION IS WITHIN 1000 FEET OF A TRAFFIC SIGNAL, OR LOCATED WITHIN LIMITED ACCESS HIGHWAYS, SO THE LINES CAN BE MARKED. FAILURE TO DO SO COULD BE A COSTLY REPAIR FOR THE DEVELOPER.
- 5.3 SIGHT DISTANCES AT ENTRANCES AND INTERSECTIONS SHALL BE MAINTAINED AT ALL TIMES DURING AND AFTER CONSTRUCTION. ANY OBJECT OR LANDSCAPING THAT OBSTRUCTS DRIVER VIEW SHALL BE RELOCATED AT THE DEVELOPER'S EXPENSE OR THE ENTRANCE MAY BE CLOSED AT VDOT'S DISCRETION.
- 5.4 WHEN WORKING WITHIN VDOT RIGHT OF WAY, ALL TRAFFIC CONTROL, WHETHER PERMANENT OR TEMPORARY, SHALL BE IN ACCORDANCE WITH THE CURRENT EDITION OF VDOT'S WORK AREA PROTECTION MANUAL.
- 5.5 CONTRACTOR IS RESPONSIBLE FOR THE MAINTENANCE OF ALL EXISTING SIGNS AND POSTS IN THE WORK ZONE. THIS INCLUDES, BUT IS NOT LIMITED TO, STOP, YIELD, STREET NAME, AND SPEED LIMIT SIGNS. ANY SIGN OR POST DAMAGED DURING CONSTRUCTION OR MISSING SHALL BE REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

6.0 ENVIRONMENTAL

6.1 THE PERMITTEE IS RESPONSIBLE FOR PURSUING AND OBTAINING ANY AND ALL ENVIRONMENTAL CLEARANCES AND/OR PERMITS, INCLUDING, BUT NOT LIMITED TO, WATER QUALITY, THREATENED AND ENDANGERED SPECIES, HAZARDOUS MATERIALS, AND CULTURAL RESOURCES, REQUIRED TO PURSUE THE PROPOSED ACTIVITY BEFORE ANY CONSTRUCTION IS STARTED WITHIN STATE MAINTAINED RIGHT OF WAY LIMITS. DOCUMENTS RELATED TO THESE ACTIVITIES SHALL BE SUBMITTED WITH THE LAND USE PERMIT APPLICATION.

7.0 PROJECT CLOSEOUT

- 7.1 INSPECTION DOCUMENTATION FOR STREETS TO BE ACCEPTED FOR STATE MAINTENANCE WILL BE REQUIRED IN ACCORDANCE WITH THE LAND DEVELOPMENT INSPECTION DOCUMENTATION BEST PRACTICES MANUAL. SEE NOTE 1.13. ADDITIONAL TESTING MAY BE REQUIRED AS DIRECTED BY THE AREA LAND USE ENGINEER OR OTHER REPRESENTATIVE.
- 7.2 THE PERMITTEE SHALL SUBMIT AN AS-BUILT DRAWING OF THE COMPLETED IMPROVEMENTS WITHIN AND ADJACENT TO THE PUBLIC RIGHT OF WAY UNLESS WAIVED BY VDOT. THE AS-BUILT DRAWING INFORMATION SHALL BE PREPARED USING THE SAME VERTICAL DATUM AS THAT USED TO DEVELOP THE ORIGINAL APPROVED PLAN. THE AS-BUILT DRAWING SHALL BEAR THE SEAL OF A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN VIRGINIA.
- 7.3 PRIOR TO RETURN OF THE PROJECT SURETY, THE PERMITTEE SHALL, IN A MANNER THAT IS SATISFACTORY TO VDOT, COMPLETE ALL PUNCHLIST ITEMS AS IDENTIFIED BY VDOT IN WRITING. COMPLETION OF ALL PUNCHLIST WORK WITHIN THE RIGHT OF WAY SHALL BE PERFORMED UNDER AN ACTIVE LAND USE PERMIT.



115 www.timmons.com

125 www.timmons.com

THIS DRAWING PREPARED AT TH

VIRGINIA BEACH OFFICE

2901 South Lynnhaven Road, Suite 200 | Virginia B

TEL 757.213.6679 FAX 757.340.1415 www.i

TEVED INKOUGH OOKS. 2901

DATE 8/5/2022

DRAWN BY

S. MAURER

DESIGNED BY

K. TURNER

CHECKED BY

CHECKED BY

K. TURNER

SCALE

N/A

N/A

ON - PH. 2

EXTENSION TY - VIRGINIA

ER MAIN E

10 WATER M
ISLE OF WIGH
VDC

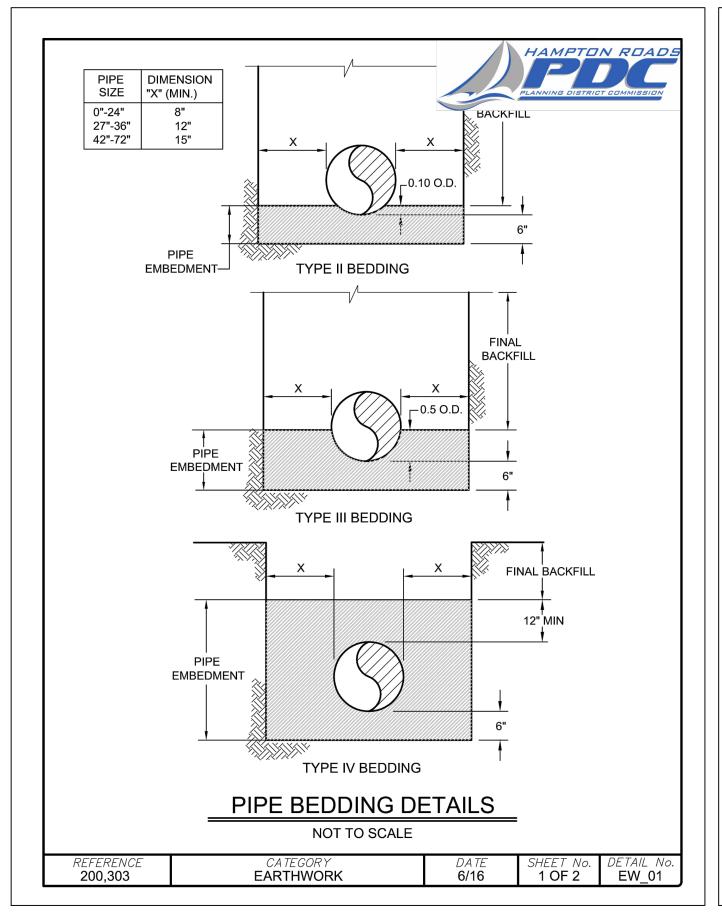
JOB NO.
48527

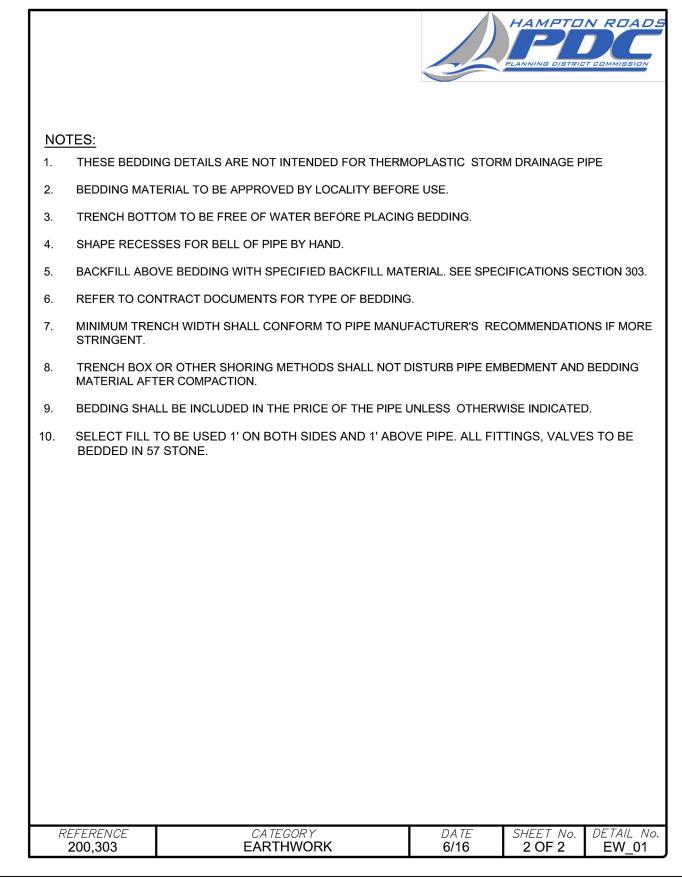
48527
SHEET NO.

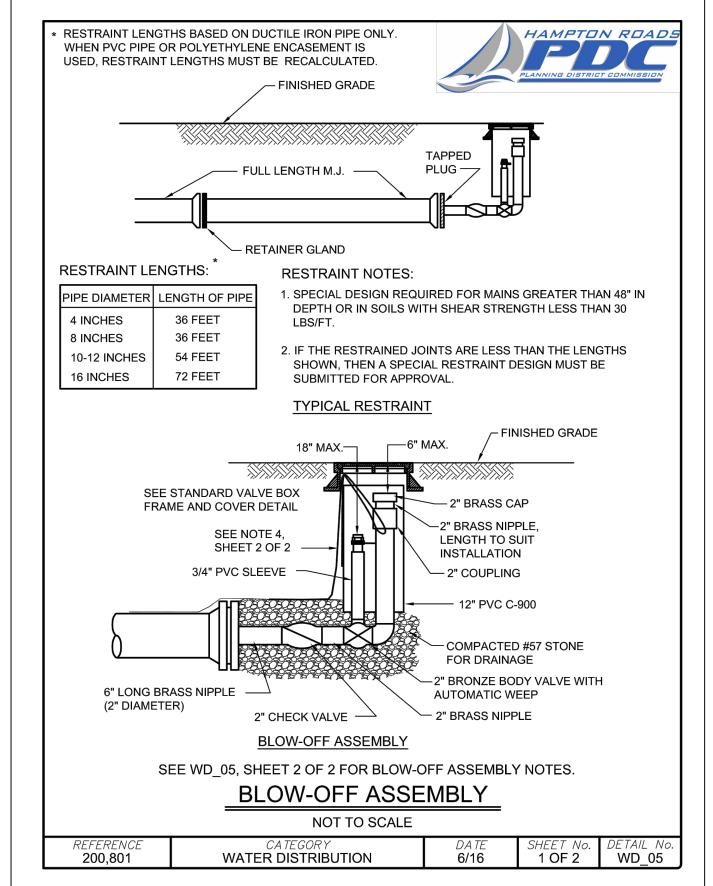
G-4

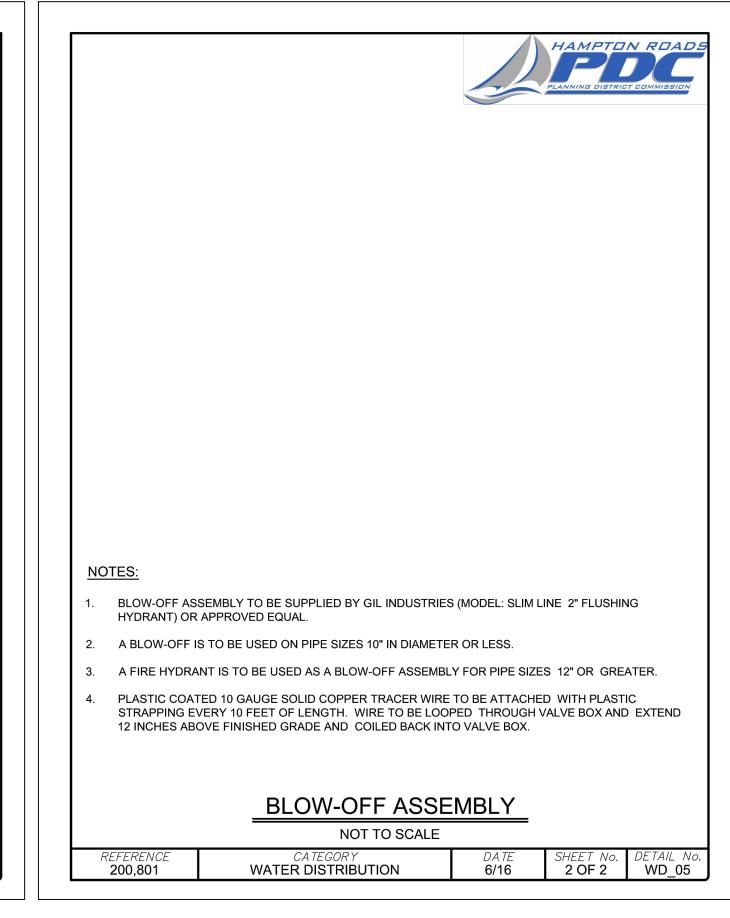
L

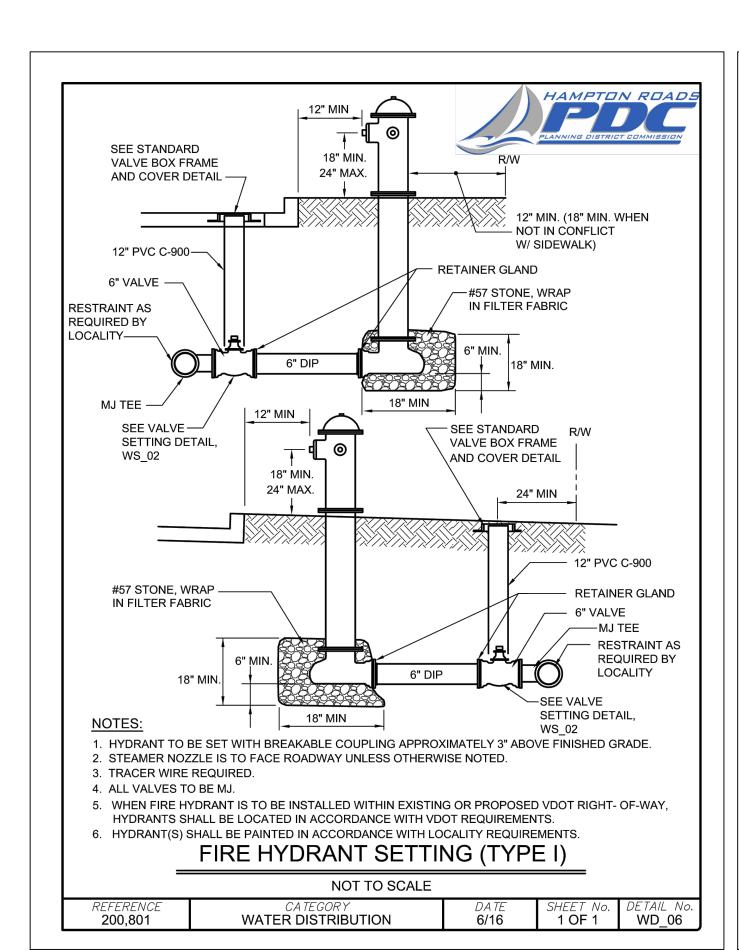
THE DETAILS ENCOMPASSED WITHIN SHEETS D-1 TO D-3 SHALL BE REFERENCED FOR WORK WITHIN ISLE OF WIGHT COUNTY, OUTSIDE OF THE TOWN OF SMITHFIELD LIMITS.

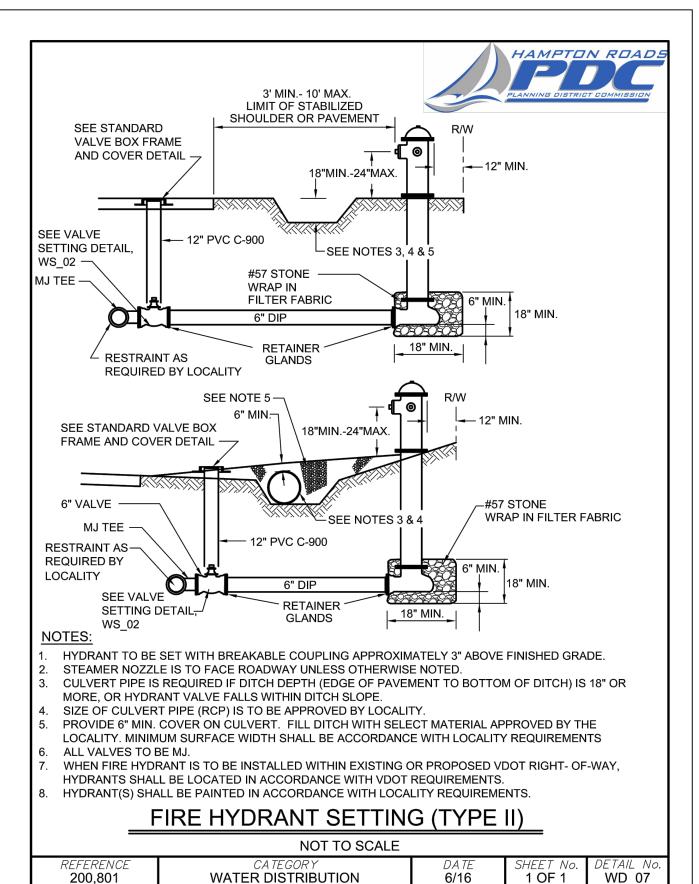


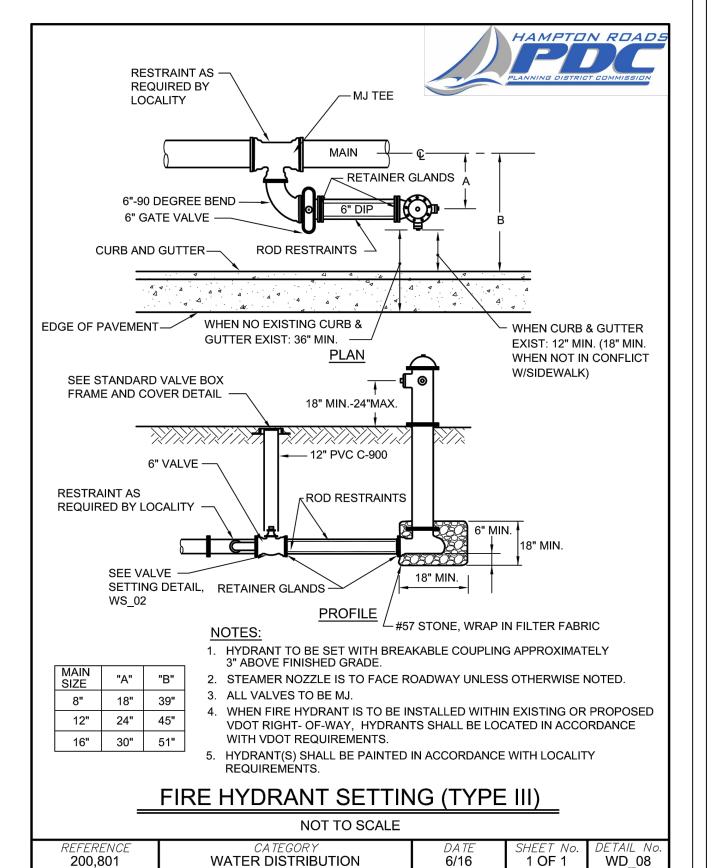


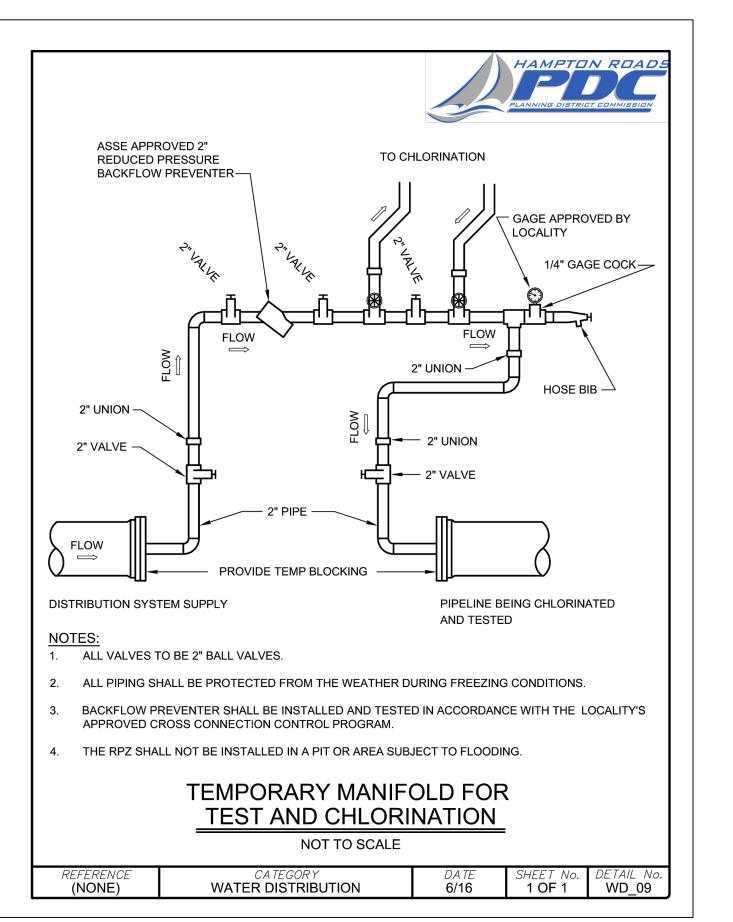












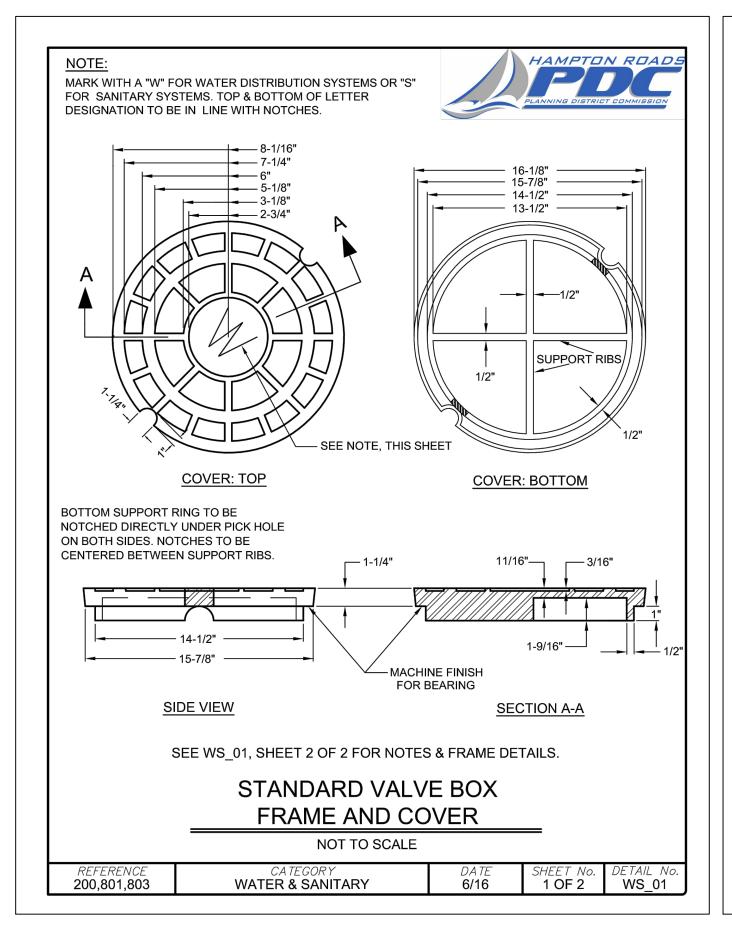


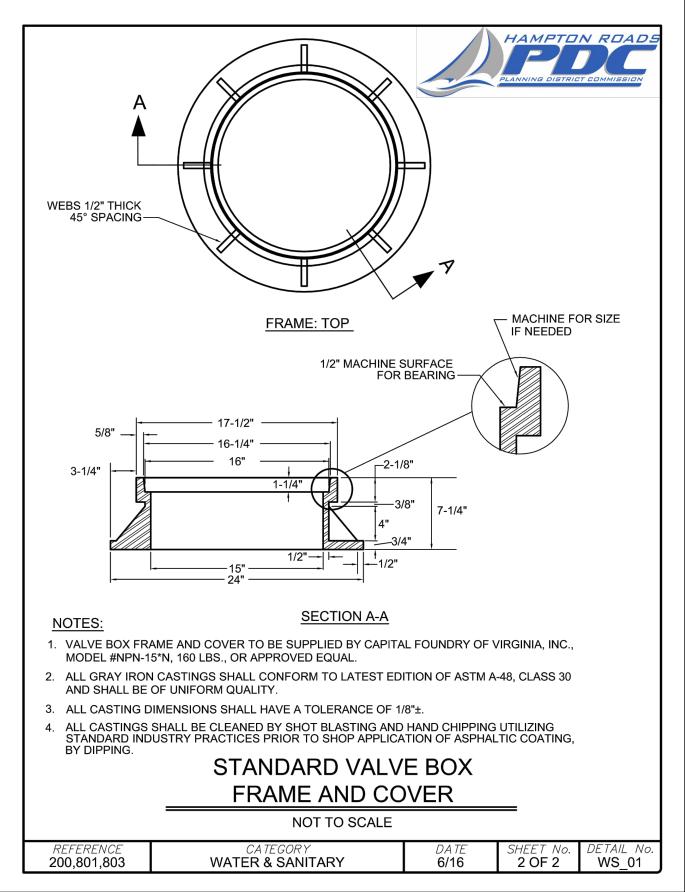
8/5/2022 DRAWN BY S. MAURER **DESIGNED BY** K. TURNER

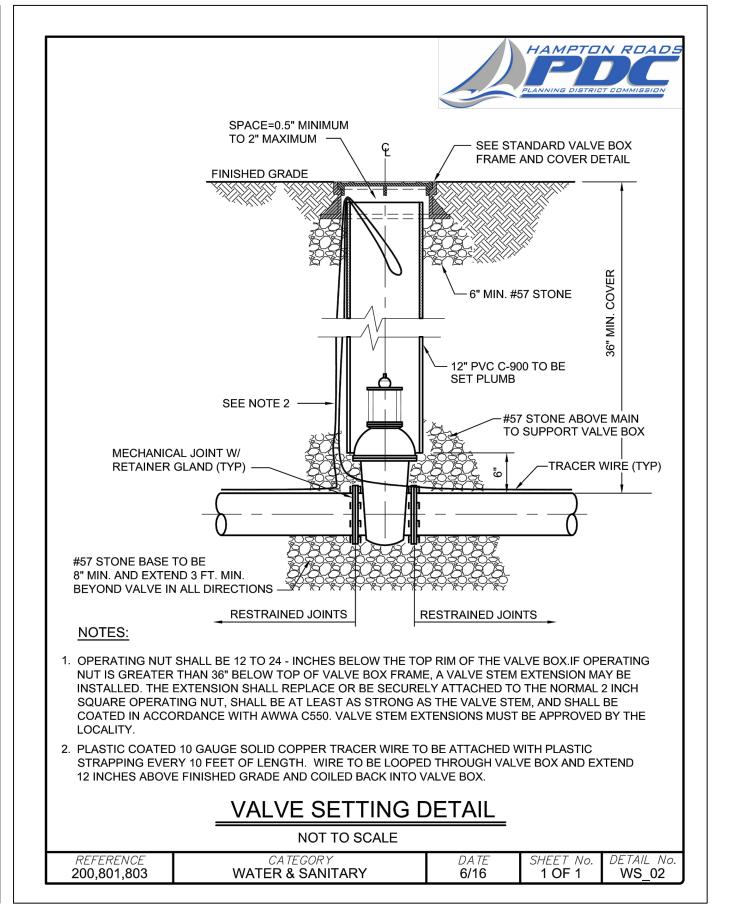
CHECKED BY K. TURNER SCALE AS SHOWN

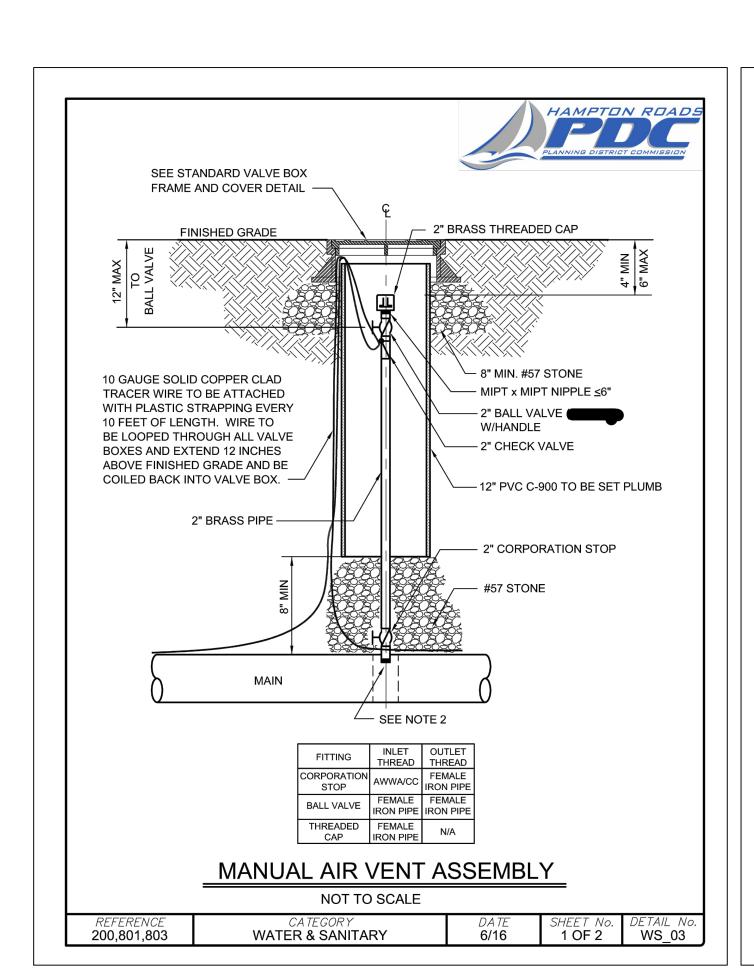
JOB NO. 48527

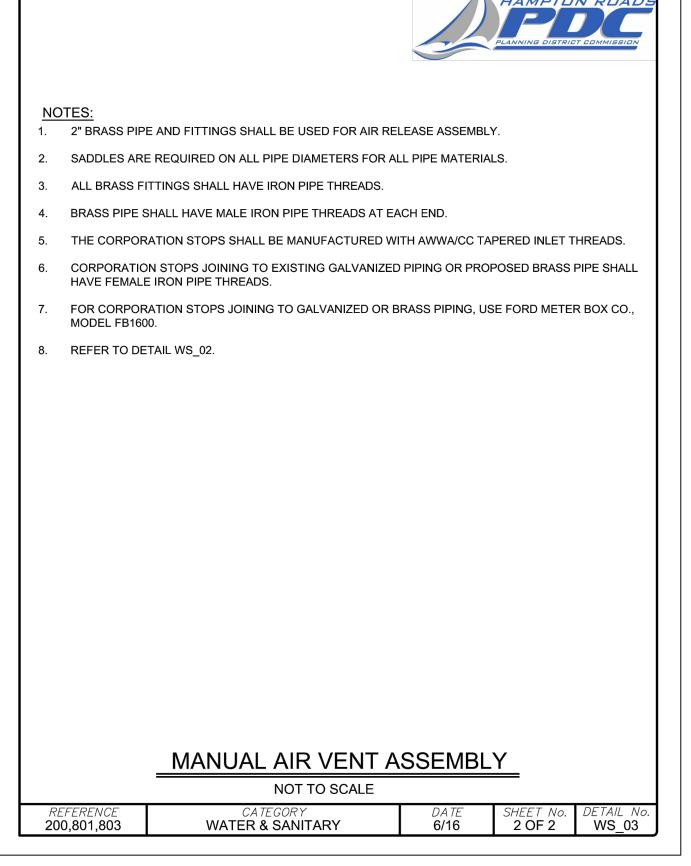
THE DETAILS ENCOMPASSED WITHIN SHEETS D-1 TO D-3 SHALL BE REFERENCED FOR WORK WITHIN ISLE OF WIGHT COUNTY, OUTSIDE OF THE TOWN OF SMITHFIELD LIMITS.

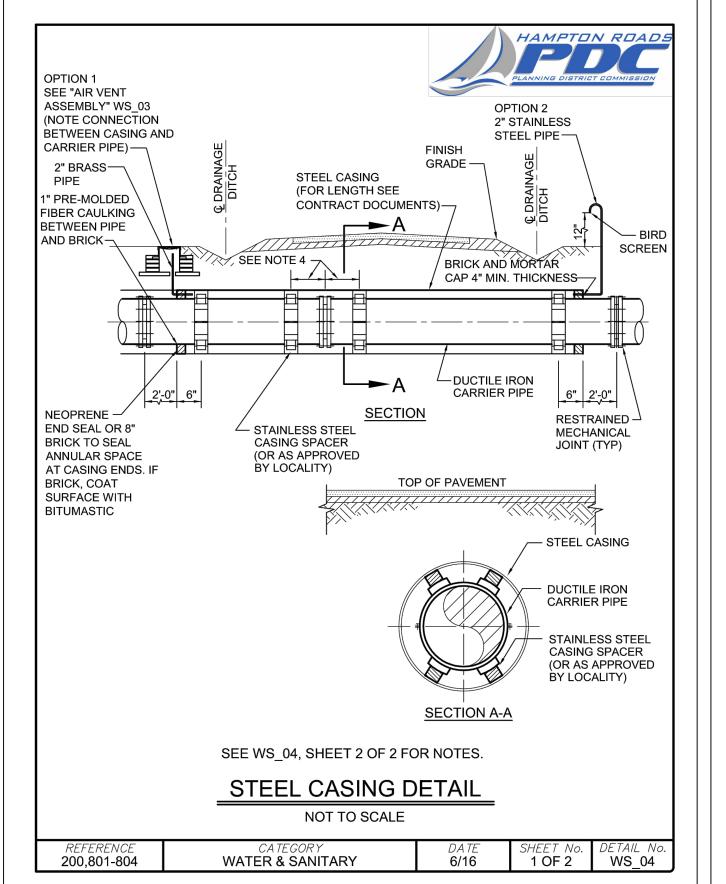


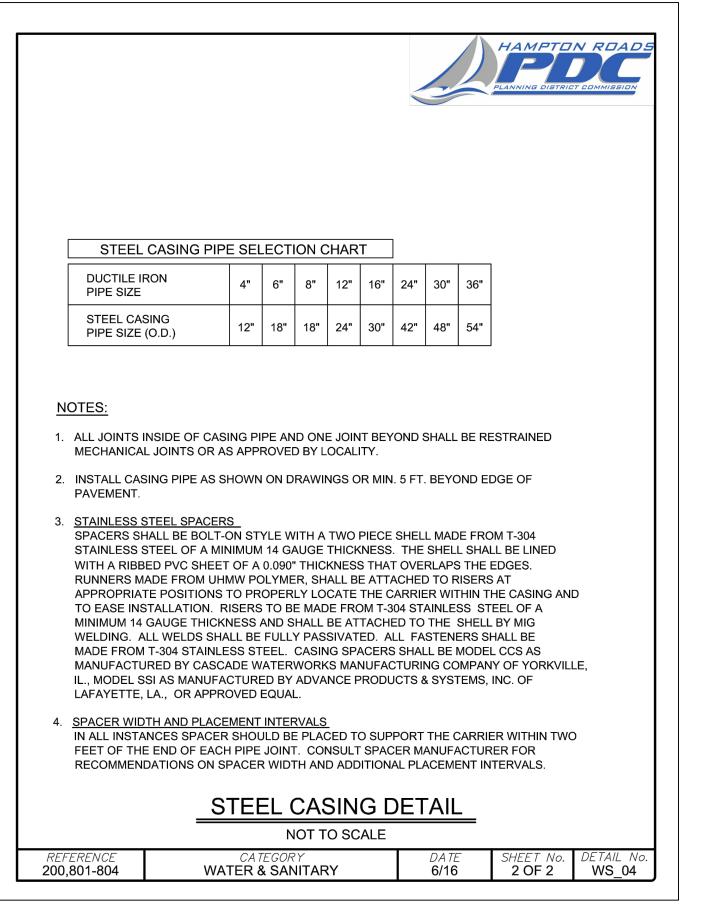














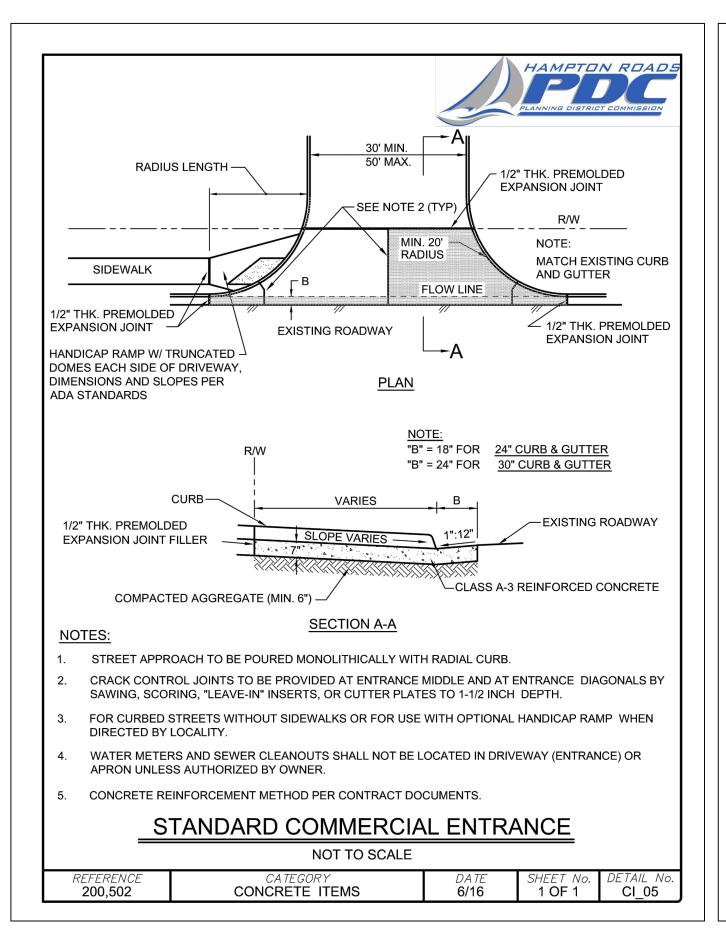
8/5/2022

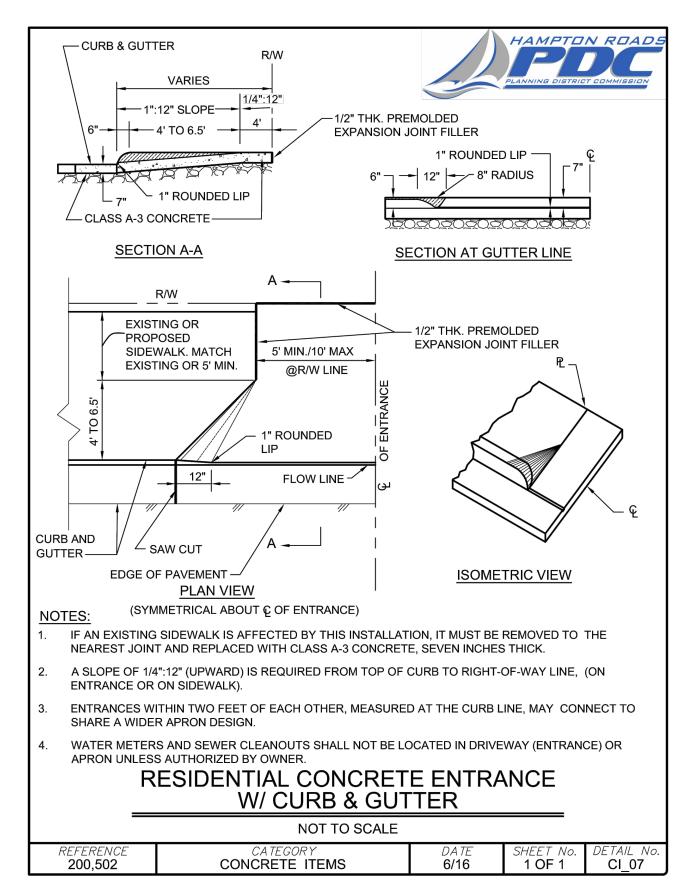
DRAWN BY S. MAURER **DESIGNED BY** K. TURNER CHECKED BY

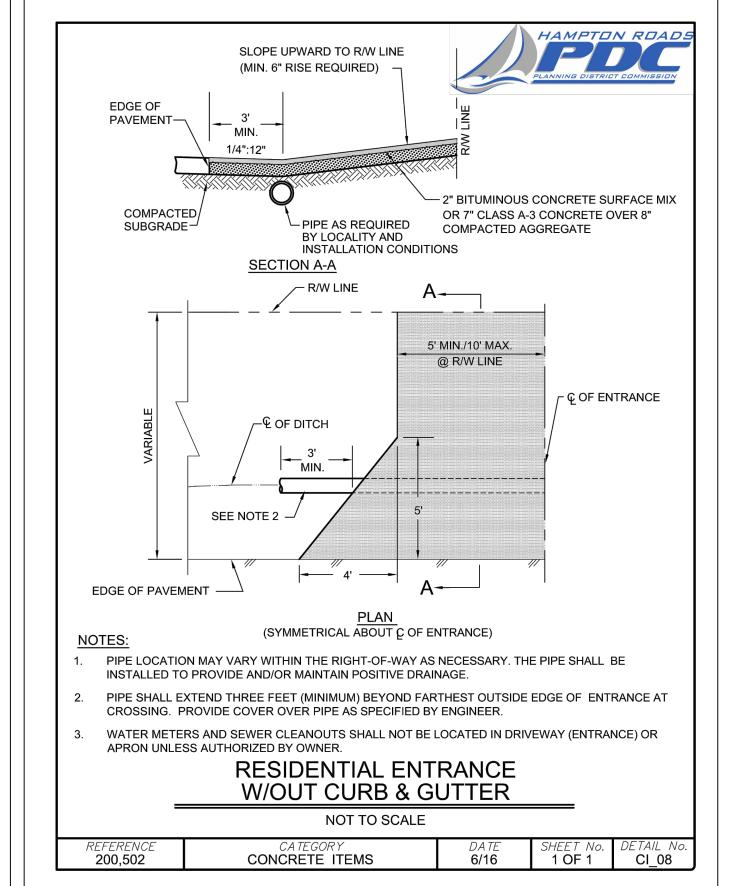
K. TURNER SCALE AS SHOWN

JOB NO. 48527

THE DETAILS ENCOMPASSED WITHIN SHEETS D-1 TO D-3 SHALL BE REFERENCED FOR WORK WITHIN ISLE OF WIGHT COUNTY, OUTSIDE OF THE TOWN OF SMITHFIELD LIMITS.









8/5/2022 DRAWN BY

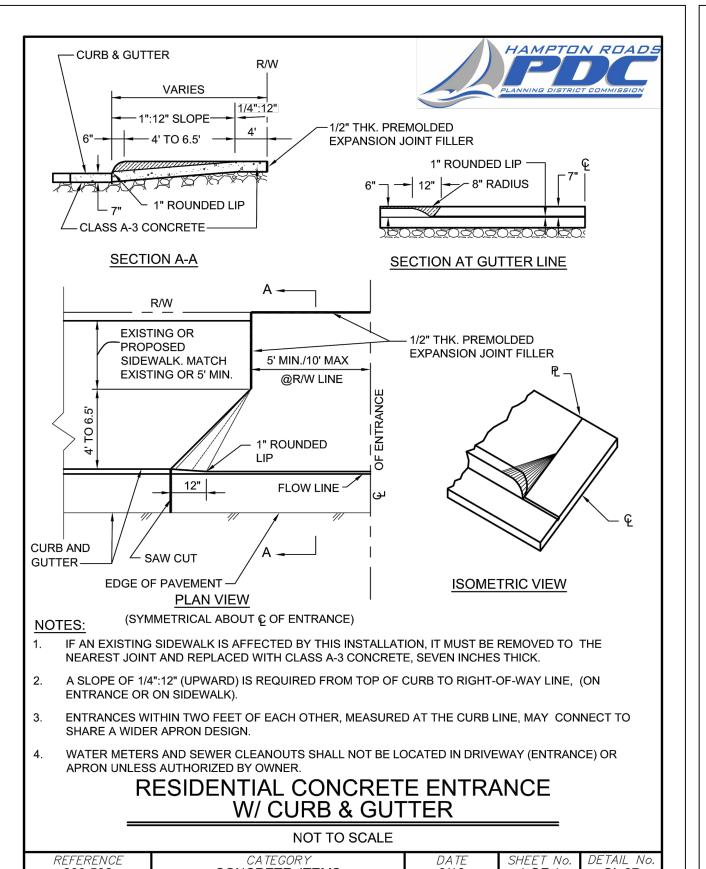
S. MAURER **DESIGNED BY** K. TURNER CHECKED BY K. TURNER SCALE

AS SHOWN

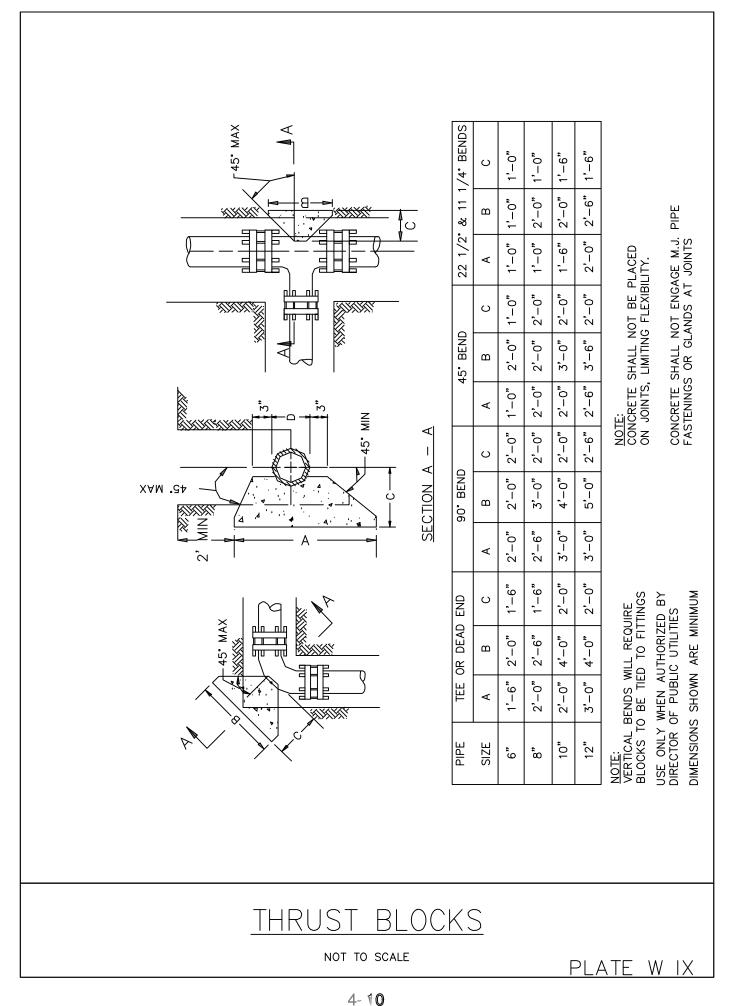
(

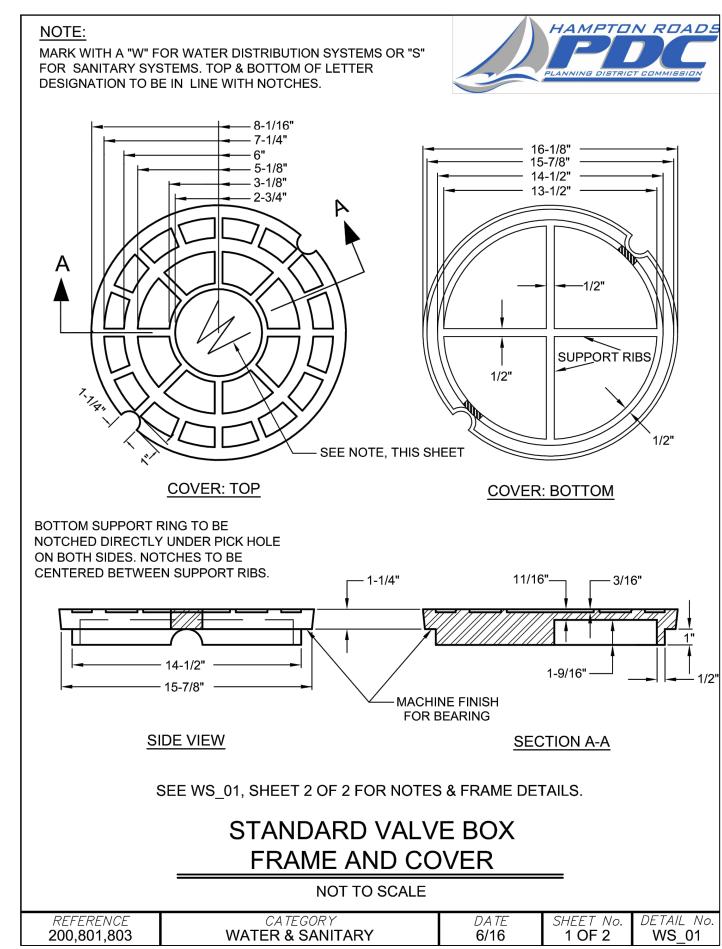
48527 D-3

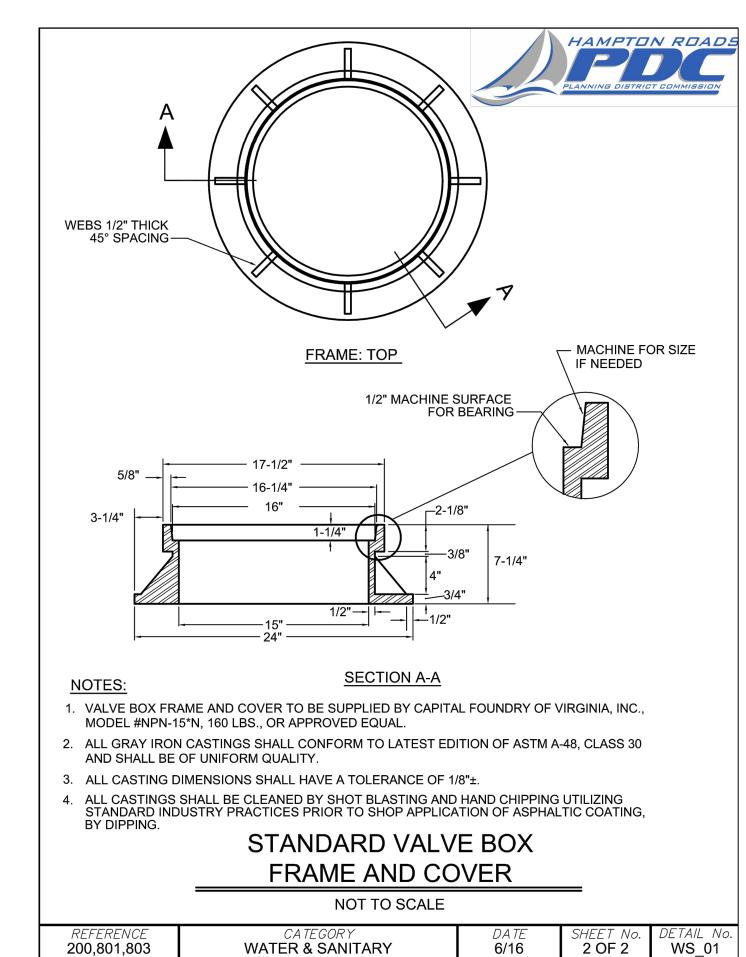
1/2" THK. PREMOLDED EXPANSION JOINT FILLER\ SEE NOTE 2 (TYP) MIN. 20' -RADIUS SIDEWALK MATCH EXISTING CURB /2" THK. PREMOLDED FLOW LINE EXPANSION JOINT HANDICAP RAMP W/ TRUNCATED — 1/2" THK. PREMOLDED DOMES EACH SIDE OF DRIVEWAY, EXISTING ROADWAY EXPANSION JOINT DIMENSIONS AND SLOPES PER ADA STANDARDS VARIES (4' MIN) -CLASS A-3 REINFORCED CONCRETE SLOPE VARIES - EXISTING ROADWAY 1/2" THK. PREMOLDED **EXPANSION JOINT FILLER** COMPACTED AGGREGATE (MIN. 6") SECTION A-A * TO MATCH 24" CURB & GUTTER, SLOPE = 1" : 32" TO MATCH 30" CURB & GUTTER, SLOPE = 1": 24" FOR USE ON STREETS HAVING A 45 MPH OR GREATER SPEED LIMIT. CRACK CONTROL JOINTS TO BE PROVIDED AT ENTRANCE MIDDLE AND AT ENTRANCE DIAGONALS BY SAWING, SCORING, "LEAVE-IN" INSERTS, OR CUTTER PLATES TO 1-1/2 INCH DEPTH. STREET APPROACH TO BE POURED MONOLITHICALLY WITH RADIAL CURB. FOR CURBED STREETS WITHOUT SIDEWALKS OR FOR USE WITH A HIGH VOLUME ENTRANCE WITH OPTIONAL HANDICAP RAMP WHEN DIRECTED BY LOCALITY. WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR APRON UNLESS AUTHORIZED BY OWNER. CONCRETE REINFORCEMENT METHOD PER CONTRACT DOCUMENTS. HIGH TRAFFIC SPEED COMMERCIAL ENTRANCE NOT TO SCALE REFERENCE **200,502** DATE **6/16** CI_06 CONCRETE ITEMS 1 OF 1

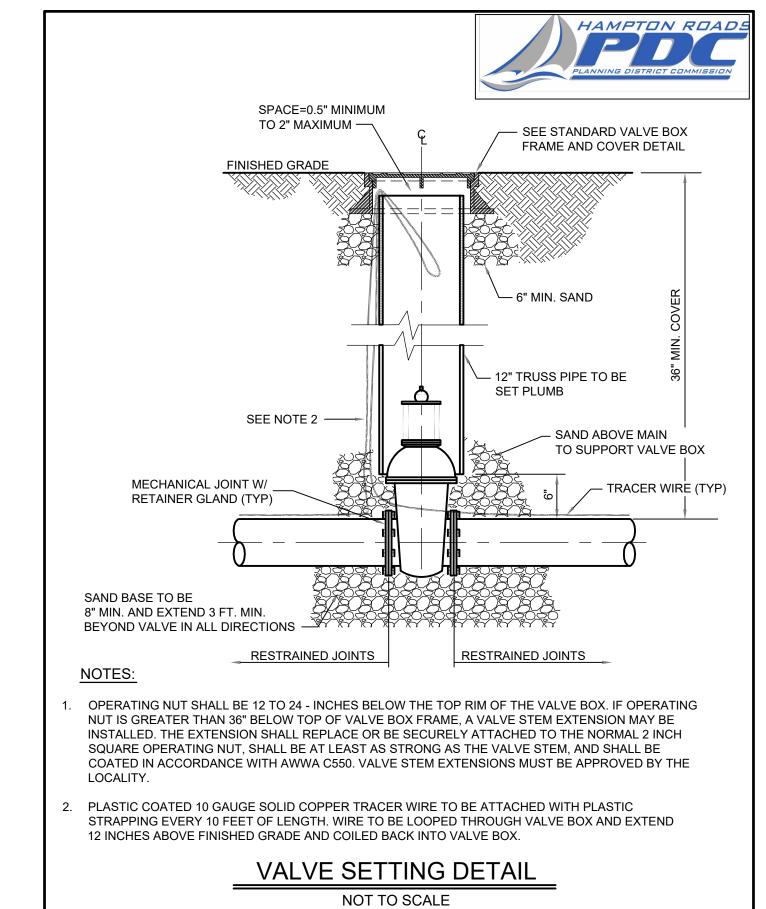


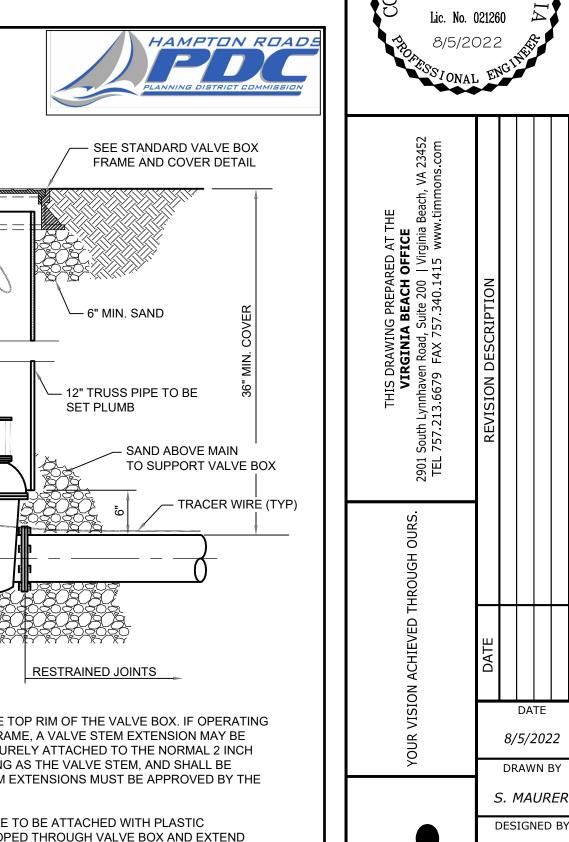
THE DETAILS ENCOMPASSED WITHIN SHEETS D-4 TO D-6 SHALL BE REFERENCED FOR WORK WITHIN THE TOWN OF SMITHFIELD LIMITS, ON THE DUCTILE IRON WATER MAIN.





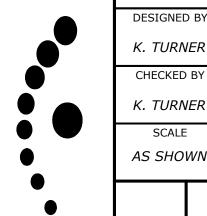






WS 02

1 OF 1

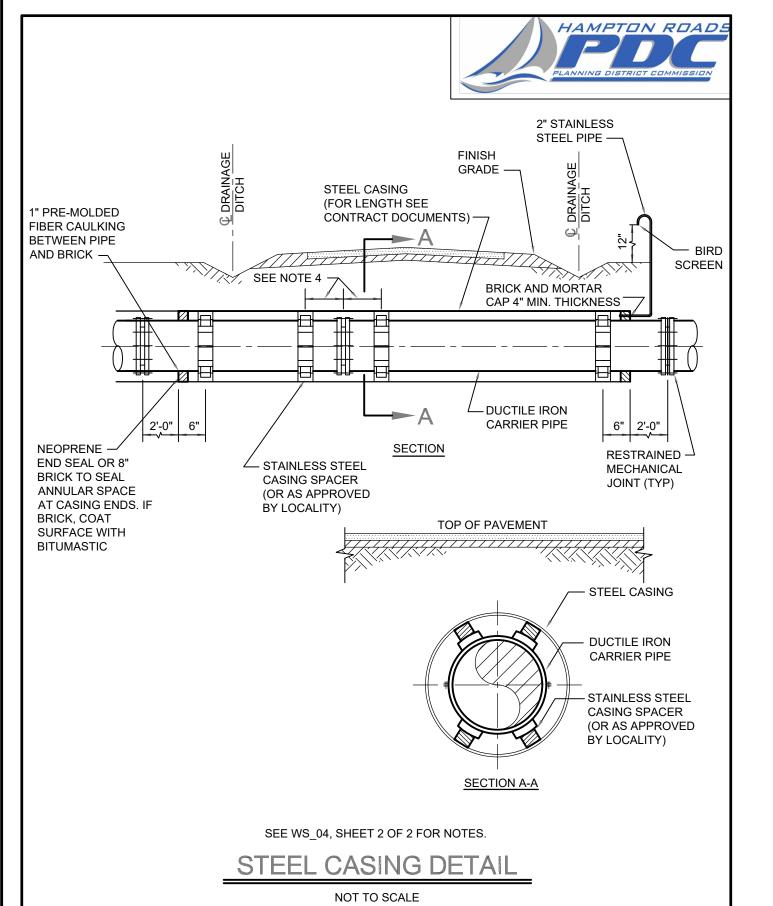


K. TURNER CHECKED BY K. TURNER SCALE AS SHOWN

O

JOB NO.

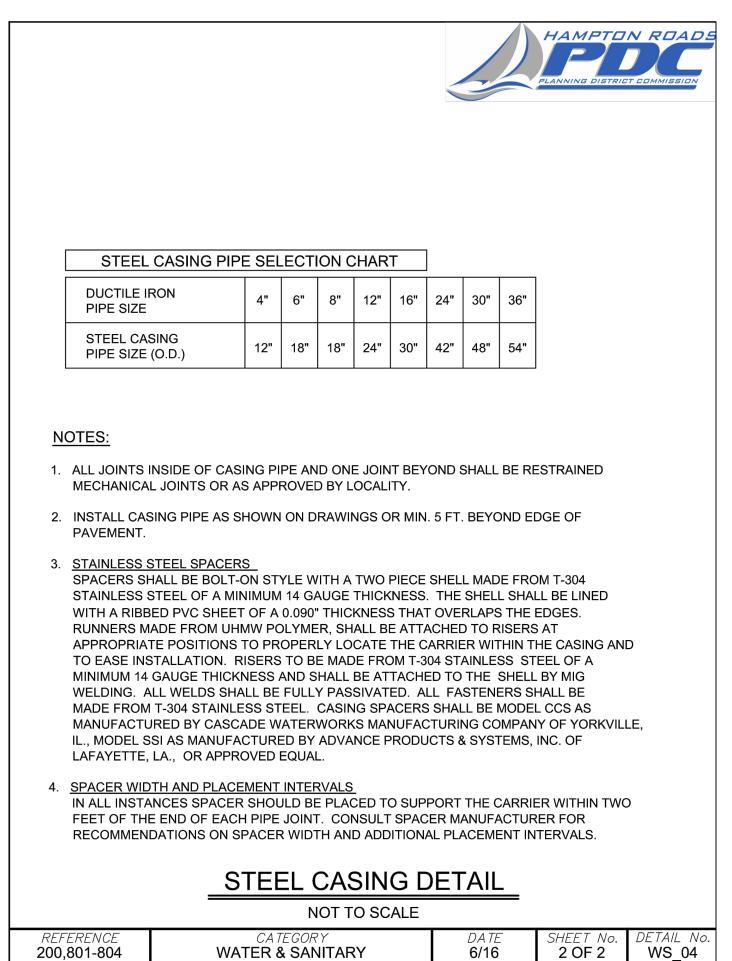
48527 SHEET NO.

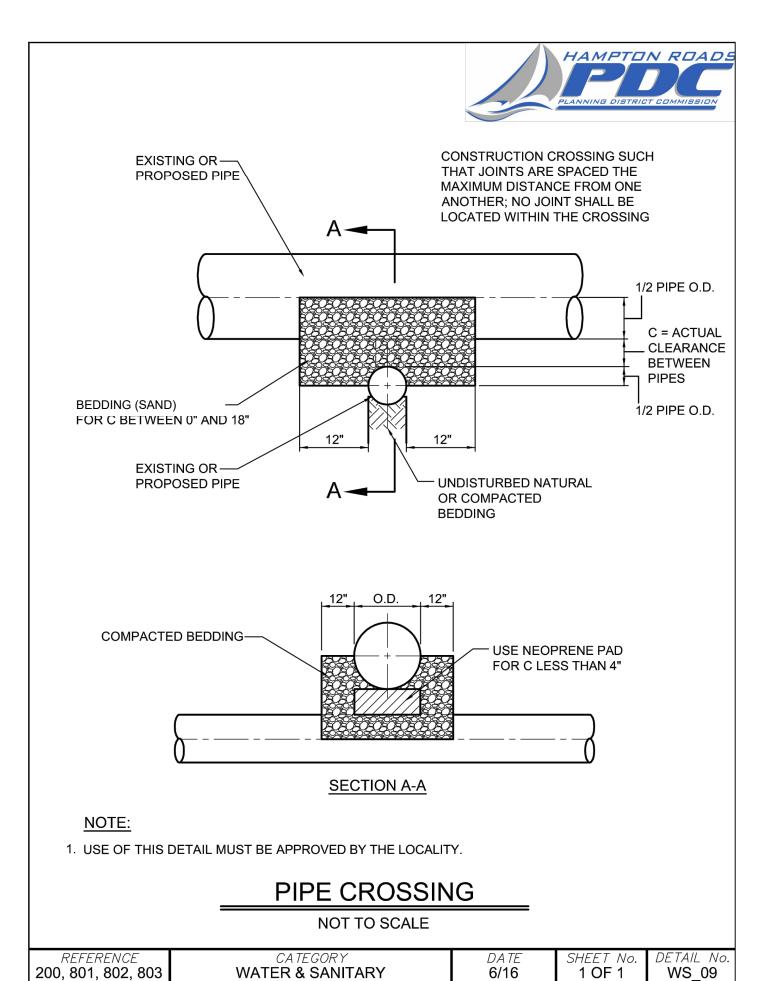


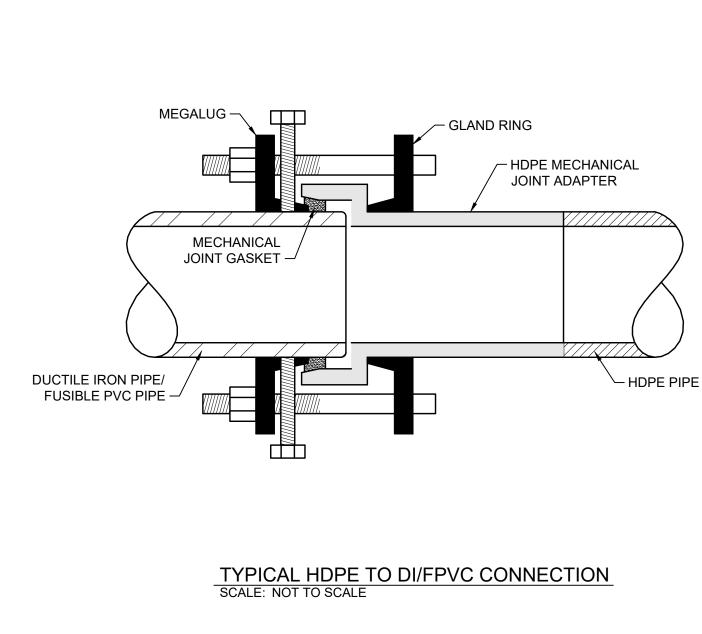
WATER & SANITARY

200,801-804

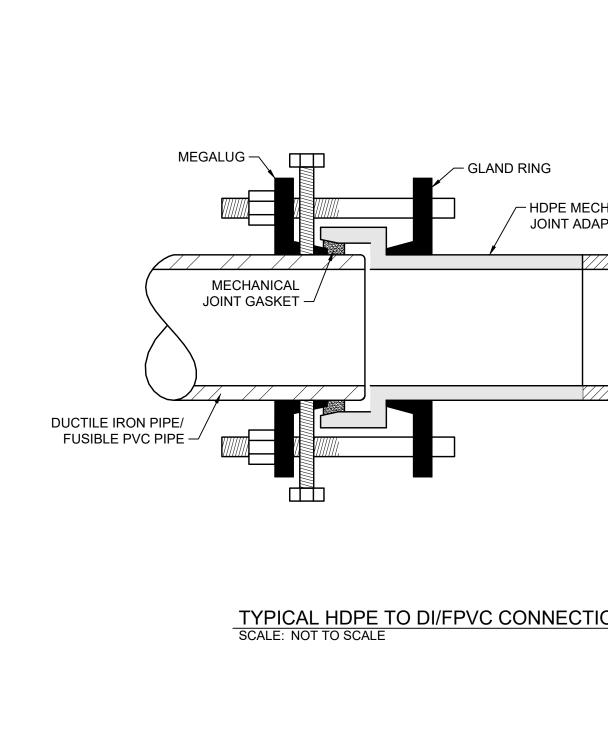
1 OF 2 WS 04





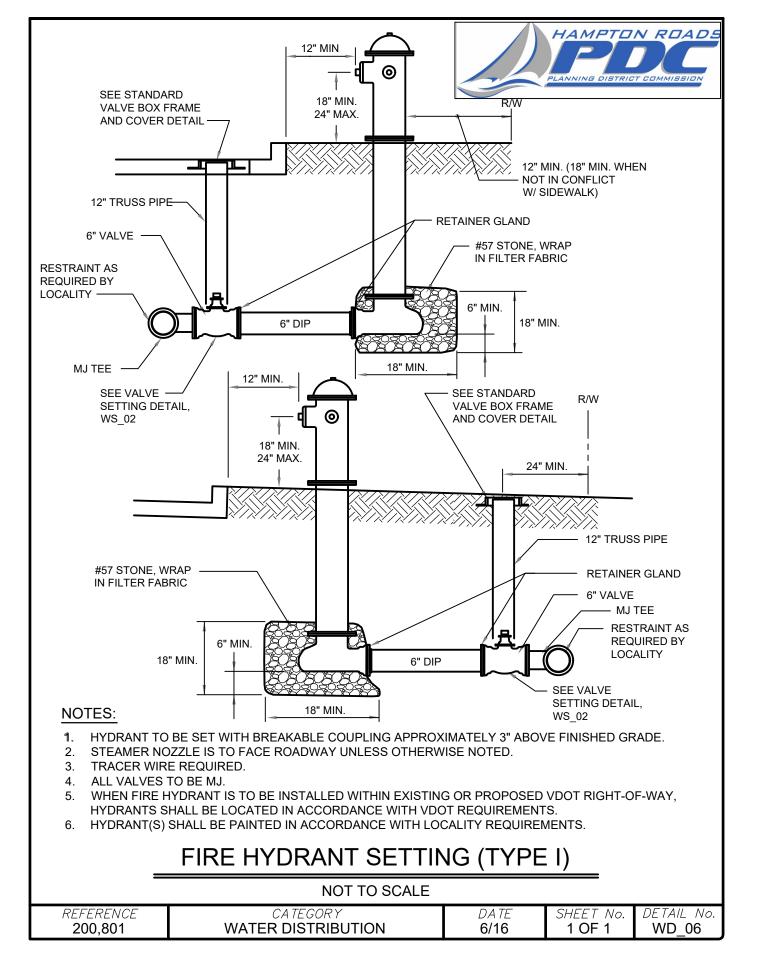


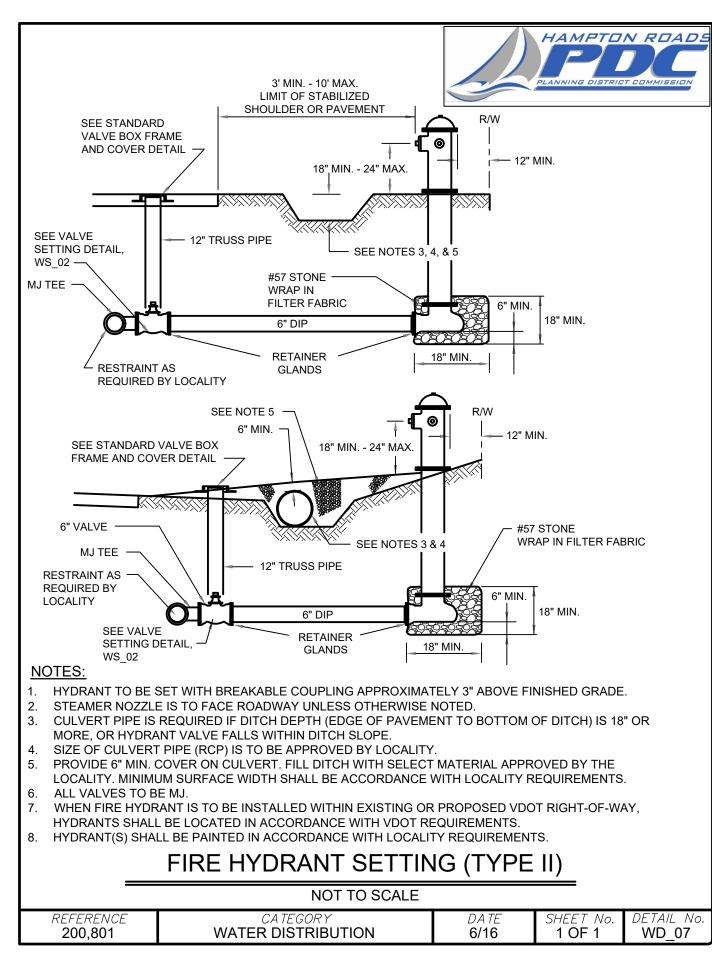
WATER & SANITARY

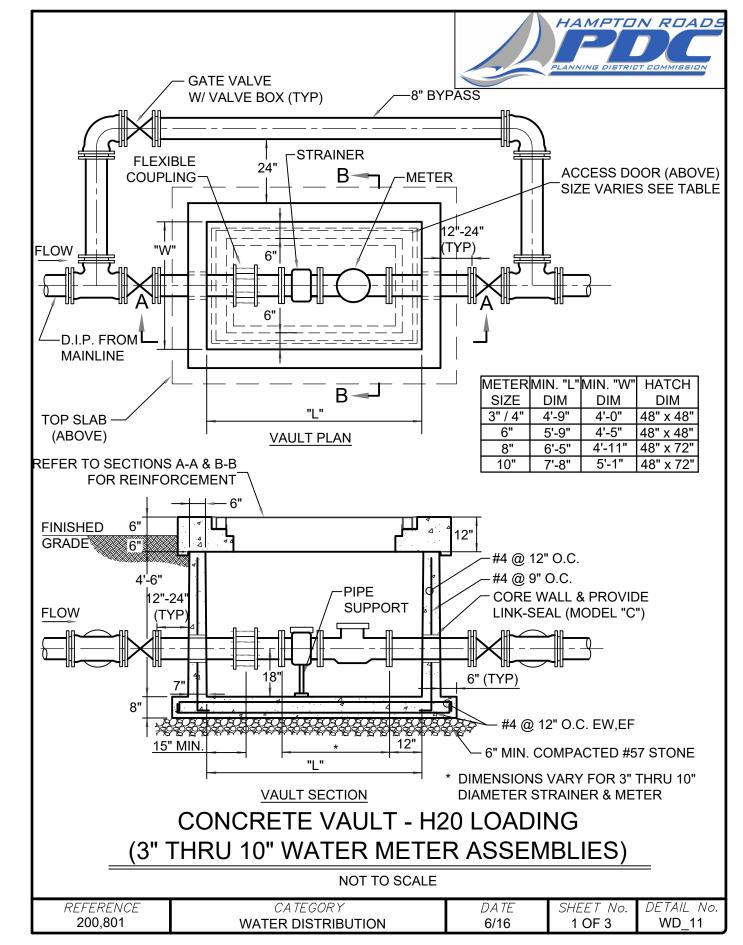


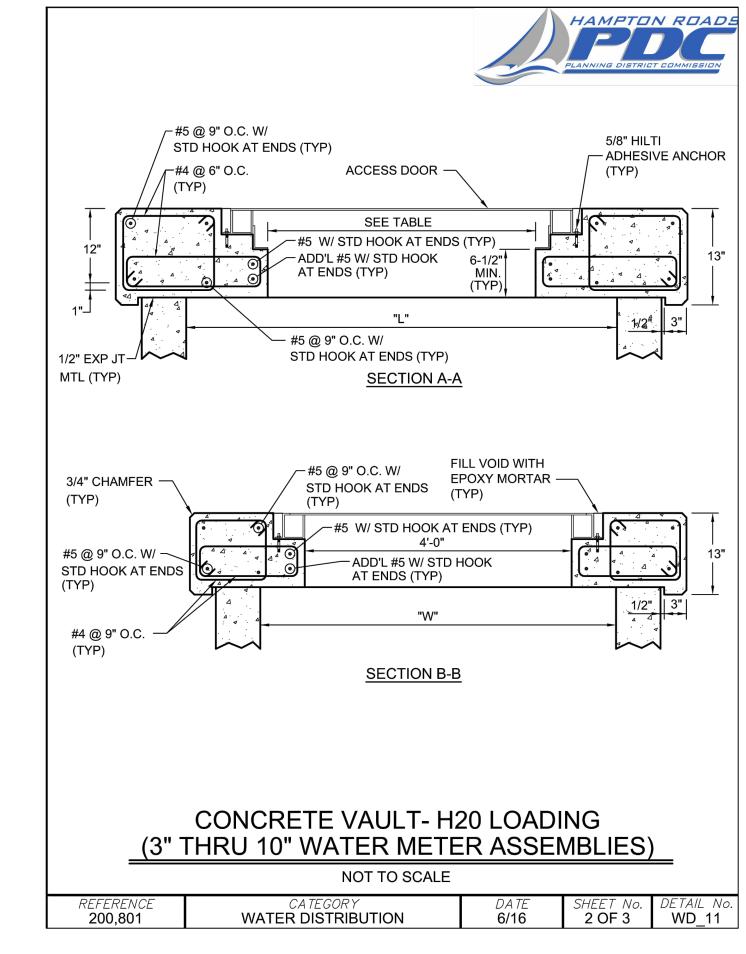
200.801.803

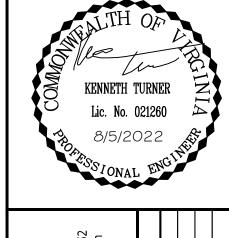
THE DETAILS ENCOMPASSED WITHIN SHEETS D-4 TO D-6 SHALL BE REFERENCED FOR WORK WITHIN THE TOWN OF SMITHFIELD LIMITS, ON THE DUCTILE IRON WATER MAIN.











8/5/2022

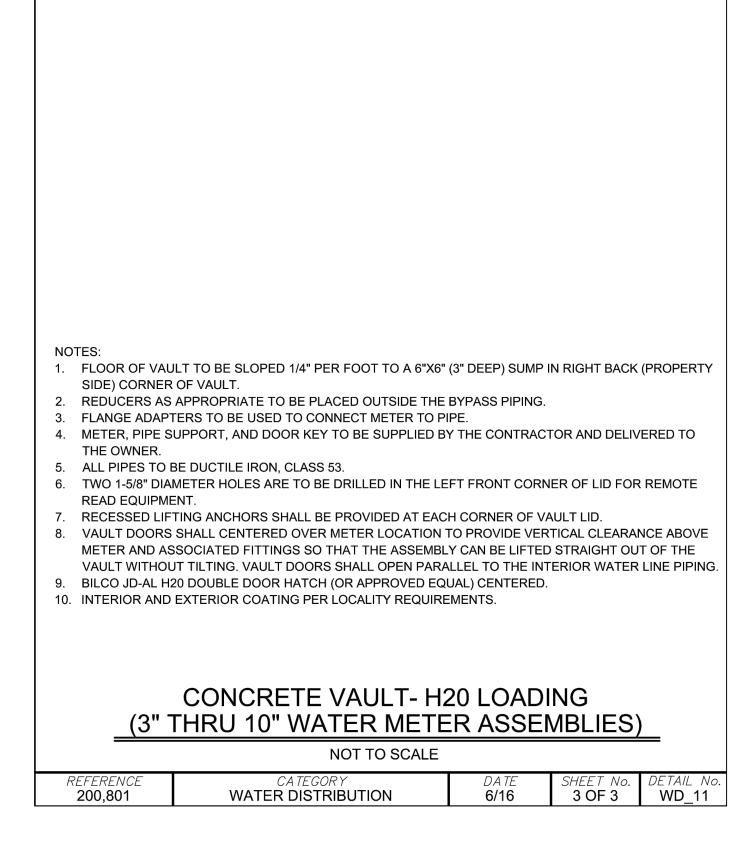
DRAWN BY S. MAURER **DESIGNED BY**

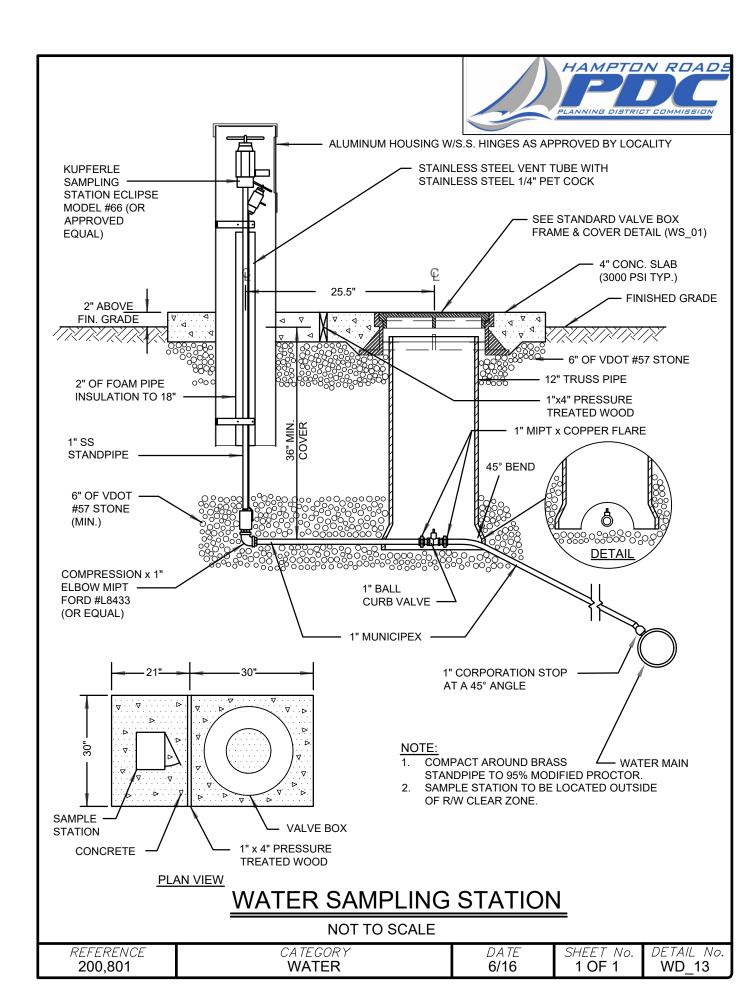
K. TURNER CHECKED BY

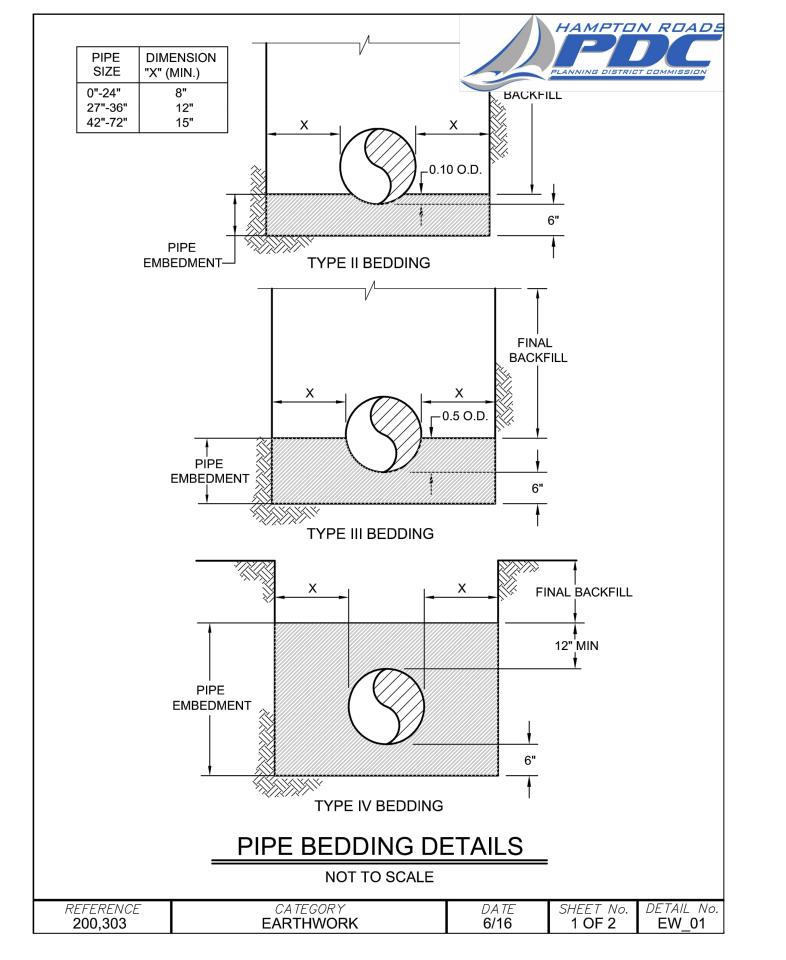
K. TURNER

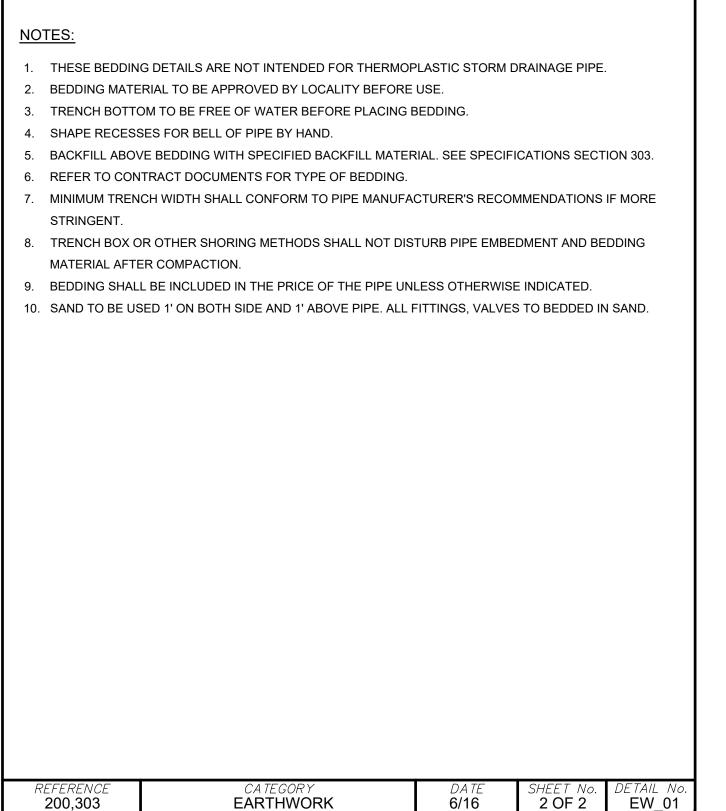
SCALE

AS SHOWN







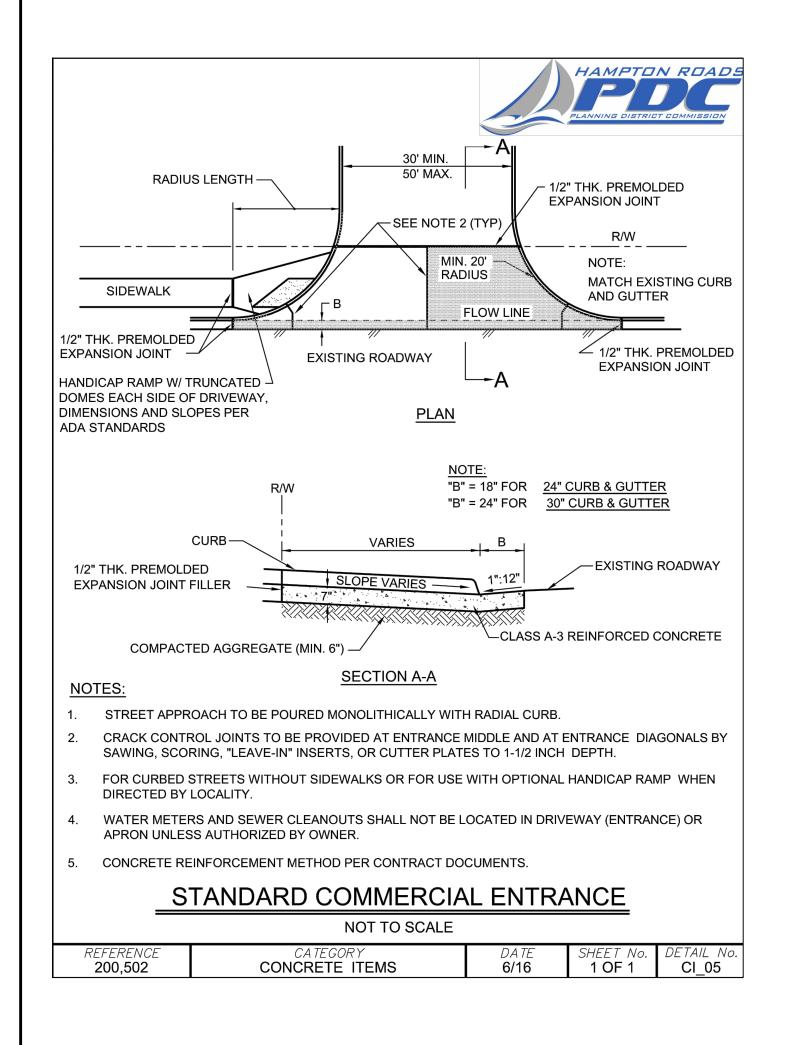


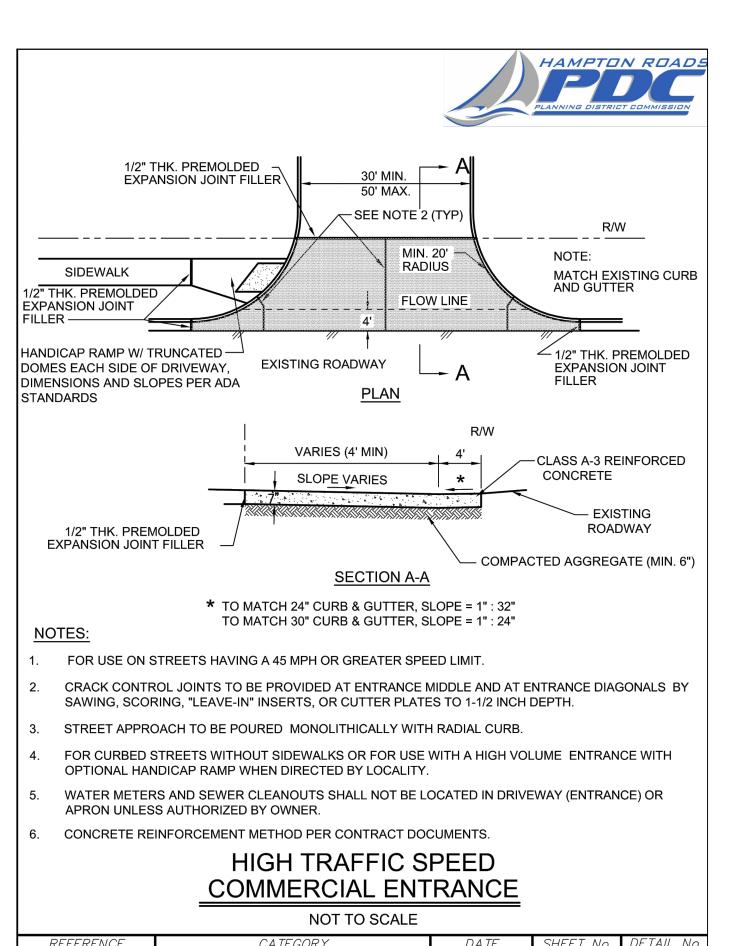


JOB NO. 48527 SHEET NO. D-5

THE DETAILS ENCOMPASSED WITHIN SHEETS D-4 TO D-6 SHALL BE REFERENCED FOR WORK WITHIN THE TOWN OF SMITHFIELD LIMITS, ON THE DUCTILE IRON WATER MAIN.

200,502



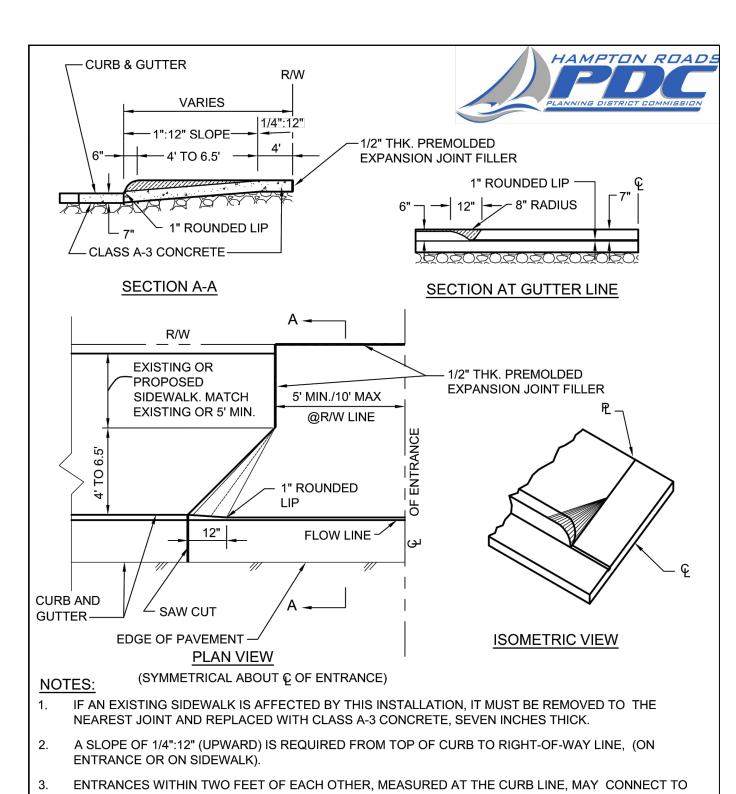


CONCRETE ITEMS

6/16

1 OF 1

CI 06



WATER METERS AND SEWER CLEANOUTS SHALL NOT BE LOCATED IN DRIVEWAY (ENTRANCE) OR

RESIDENTIAL CONCRETE ENTRANCE

W/ CURB & GUTTER

NOT TO SCALE

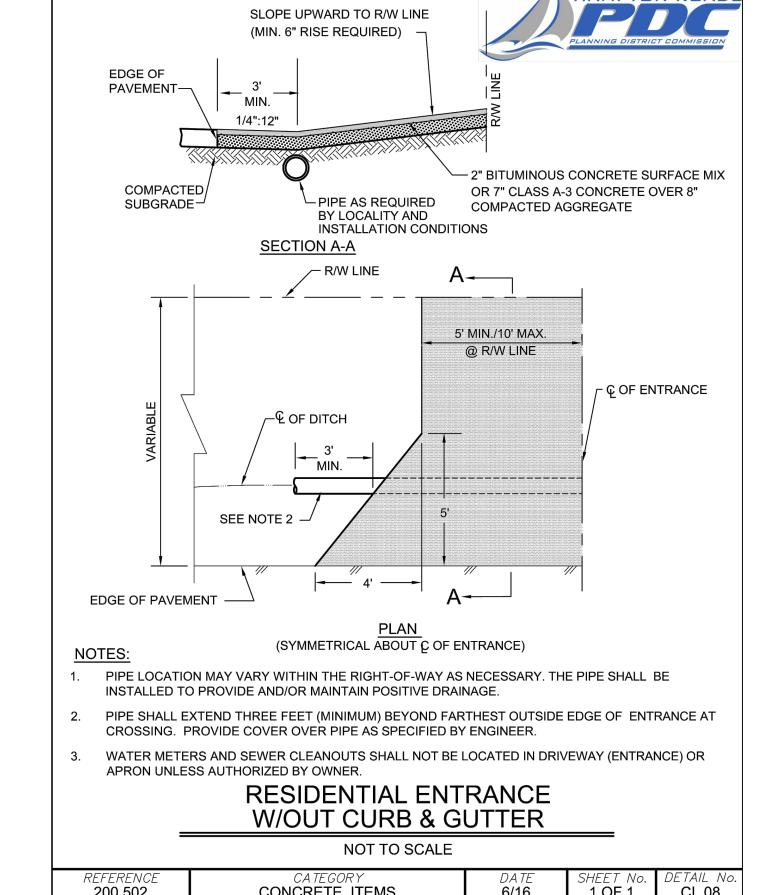
6/16

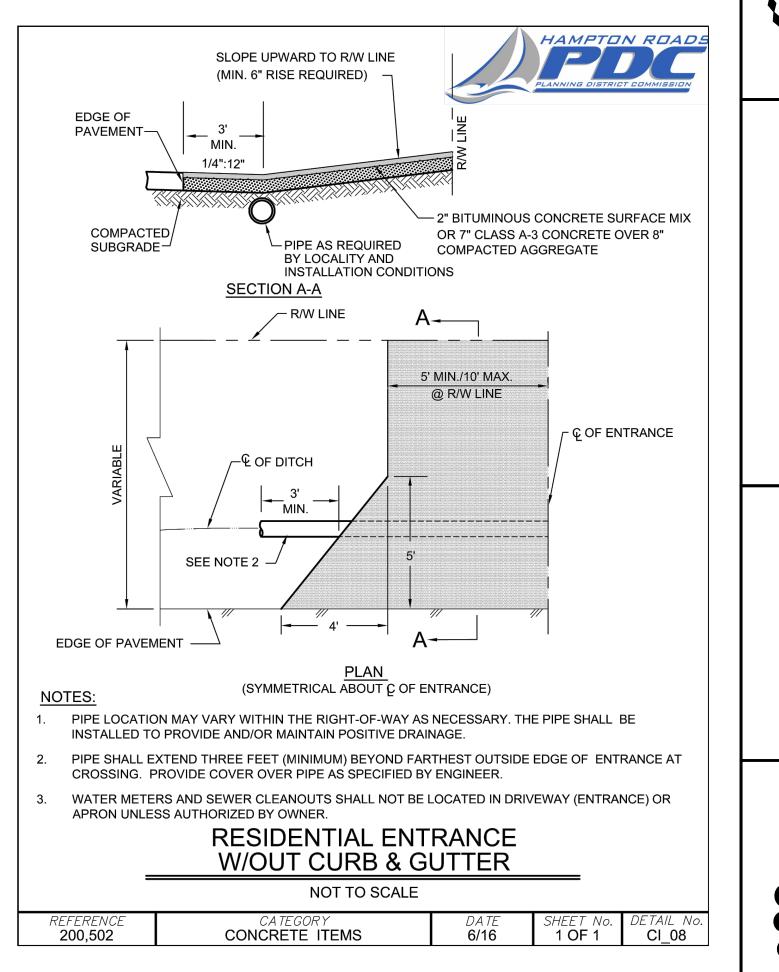
1 OF 1

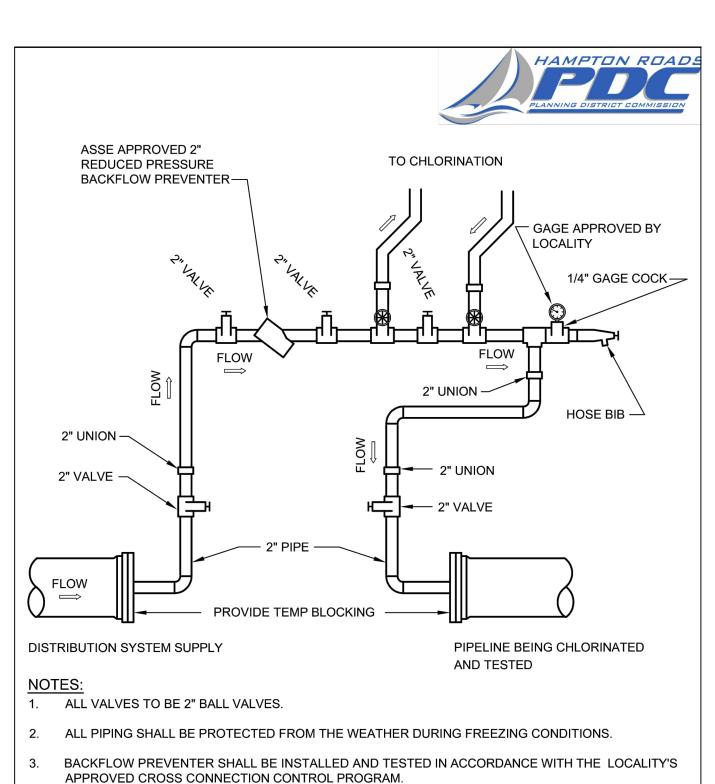
CONCRETE ITEMS

APRON UNLESS AUTHORIZED BY OWNER.

200,502







THE RPZ SHALL NOT BE INSTALLED IN A PIT OR AREA SUBJECT TO FLOODING.

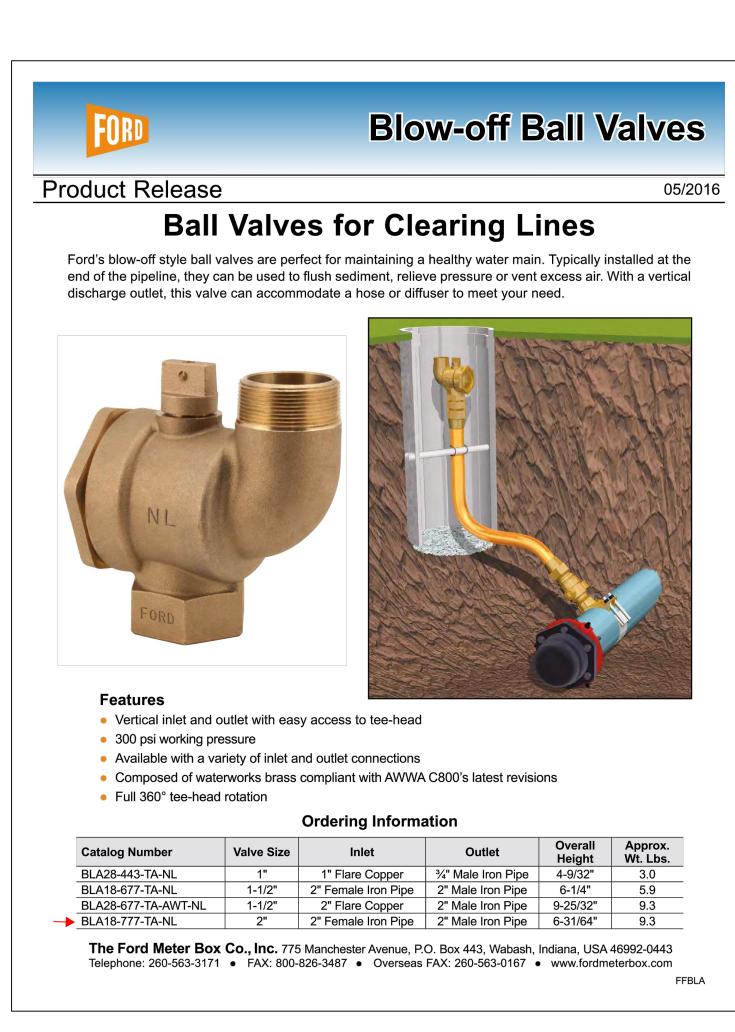
WATER DISTRIBUTION

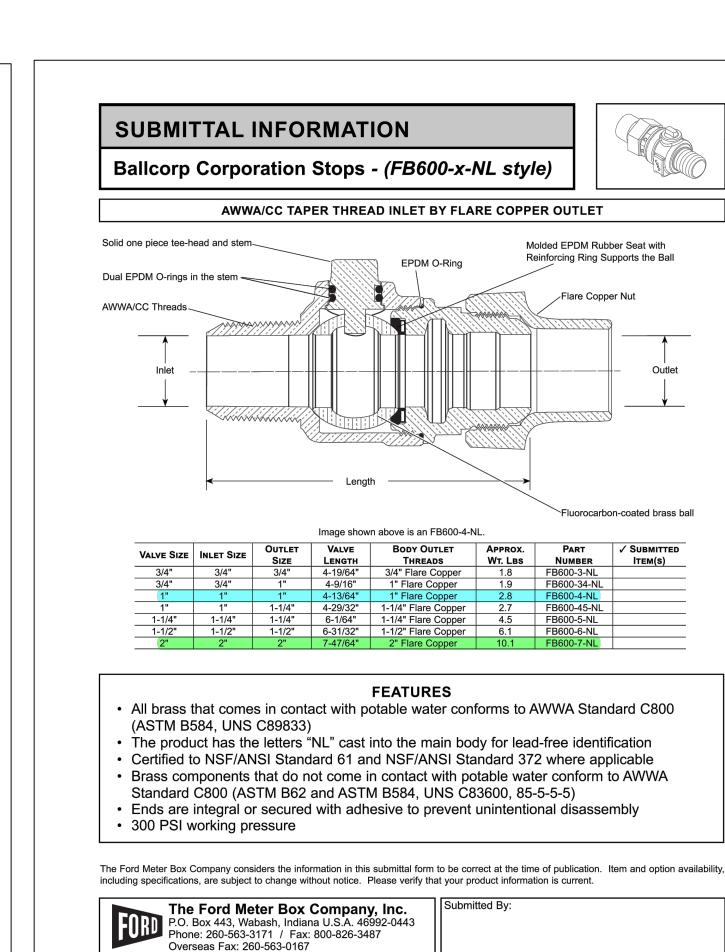
TEMPORARY MANIFOLD FOR

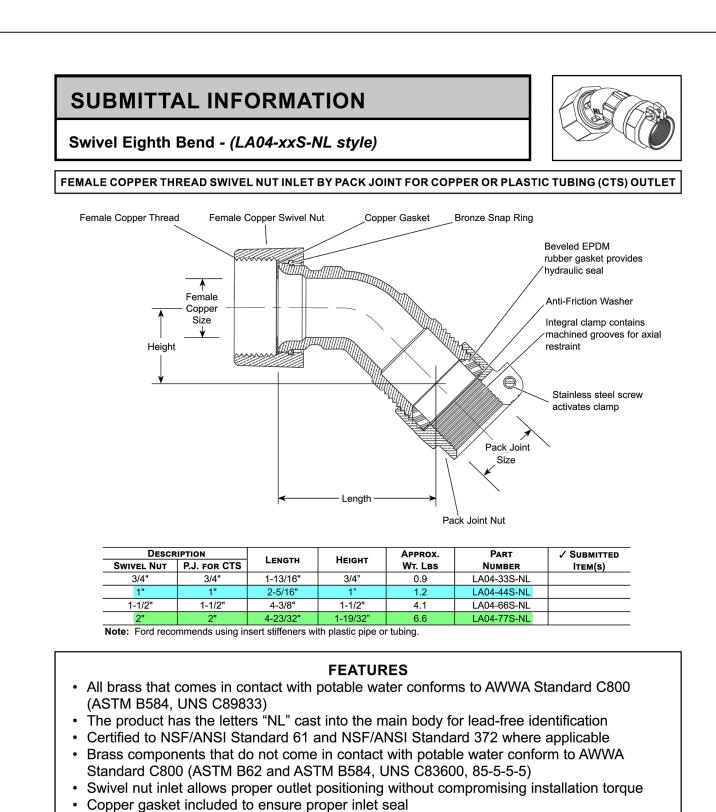
TEST AND CHLORINATION

NOT TO SCALE

SHEET NO 1 **OF** 1







The Ford Meter Box Company considers the information in this submittal form to be correct at the time of publication. Item and option availability,

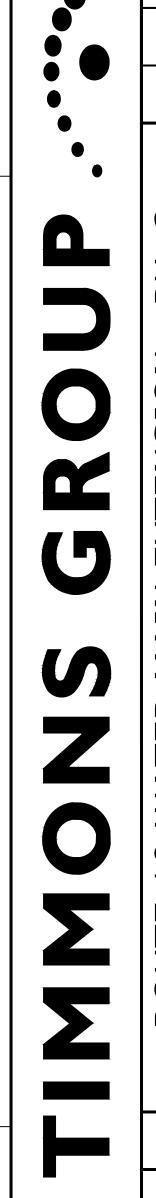
including specifications, are subject to change without notice. Please verify that your product information is current.

The Ford Meter Box Company, Inc.

Phone: 260-563-3171 / Fax: 800-826-3487

Overseas Fax: 260-563-0167

P.O. Box 443, Wabash, Indiana U.S.A. 46992-0443



K. TURNER SCALE AS SHOWN \vdash

8/5/2022

DRAWN BY

S. MAURER

DESIGNED BY

K. TURNER

CHECKED BY

Lic. No. 021260

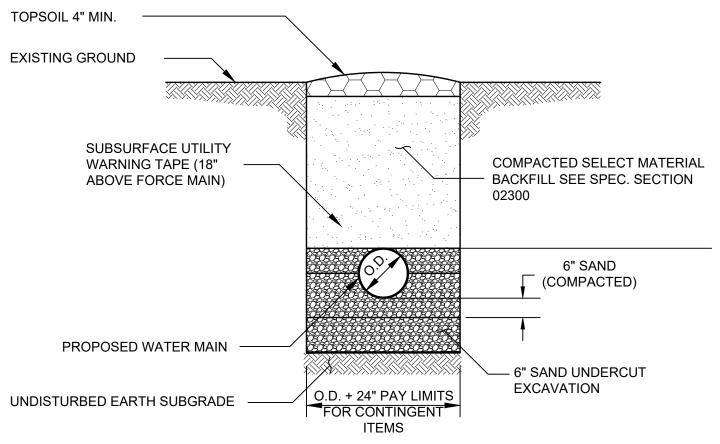
(NONE)

48527

- 1. WHERE PIPE IS NOT INSTALLED UNDER ROADWAY, DRIVEWAY OR COMMERCIAL BUSINESS ENTRANCE, TRENCH SHALL BE BACKFILLED WITH SUITABLE MATERIAL WHICH HAS BEEN EXCAVATED FROM THE TRENCH. SUITABLE MATERIAL IS CLASSIFIED AS SC OR SM MATERIAL AS DEFINED BY THE UNIFIED SOIL CLASSIFICATION SYSTEM. TRENCH BACKFILL SHALL BE AT OPTIMUM MOISTURE AND COMPACTED TO 85% OF THEORETICAL MAXIMUM DENSITY. STANDARD PROCTOR.
- 2. PAVEMENT RESTORATION SHALL BE IN ACCORDANCE WITH THE INITIAL AND FINAL PAVEMENT DETAILS SHOWN ON THIS
- 3. AT TRENCH SECTIONS AS SHOWN ON THE PAVEMENT SCHEDULE, TRENCH BACKFILL SHALL BE SELECT FILL OR SUITABLE FILL EXCAVATED FROM THE TRENCH CLASSIFIED AS SC OR SM AS APPROVED BY THE INSPECTOR. TRENCH BACKFILL SHALL BE COMPACTED TO 95% OF THEORETICAL MAXIMUM DENSITY AT OPTIMUM MOISTURE CONTENT. STANDARD
- 4. ALL PIPE SHALL BE BEDDED WITH 6" OF SAND AND SAND SHALL BE PLACED TO THE TOP OF THE PIPE.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.





TRENCH DETAIL NOTES:

1. THE TRENCH WIDTH SHOWN IS STRICTLY FOR MEASUREMENT AND PAYMENT OF CONTINGENT ITEMS. THE CONTRACTOR SHALL ADJUST THE UNIT BID PRICE(S) BASED ON THE METHOD OF CONSTRUCTION EMPLOYED FOR THE PIPELINE INSTALLATION.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.

TYPICAL PIPE TRENCH DETAIL (NON-PAVED AREAS) SCALE: NOT TO SCALE

CONCRETE PAVEMENT DEPTH OR EQUAL TO THE DEPTH OF EXISTING MILL & RESURFACE*** MILL & RESURFACE*** ASPHALT CONCRETE, UP TO SAW-CUT EXISTING FAVE......

TO THE FULL DEPTH OF ASPHALT* WHICHEVER IS GREATER 1.5" MIN.—-ASPHALT CONCRETE BASE AGGREGATE BASE MATERIAL 10" MIN.— TYPE I SIZE NO. 21 A OR 21B HORIZONTAL AND VERTICAL SUB-BASE COURSE SURFACES SHALL BE TACKED WITH DEPTH SHALL BE 10" OR RC-250 LIQUID ASPHALT AT A RATE EQUAL TO DEPTH OF OF 0.1 GALLON PER SY, OR AS 6"BENCH 6"BENCH EXISTING SUB-BASE, DETERMINED BY THE DISTRICT WHICHEVER IS GREATER ADMINISTRATOR'S DESIGNEE -─ SELECT MATERIAL TYPE I WITH MINIMUM CBR=30 CLASS I BACKFILL MATERIAL IN ACCORDANCE WITH SECTION 302 OF THE ROAD AND BRIDGE SPECIFICATIONS -- WATER MAIN - SAND BEDDING

7.5" TOTAL ASPHALT

* ASPHALT CONCRETE SURFACE MATERIAL: SM-9.5A FOR ADT < 10,000 SM-9.5D FOR ADT > 10,000

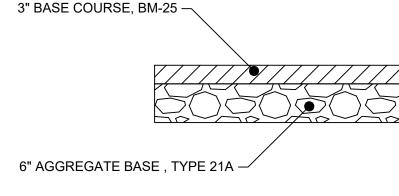
THE DISTRICT ADMINISTRATOR'S DESIGNEE SHALL DETERMINE THE RESTORATION REQUIREMENTS FOR OTHER PAVEMENT TYPES

** TRENCH WIDTH AND PIPE BEDDING SHALL BE IN ACCORDANCE WITH CDOT STD. PB-1

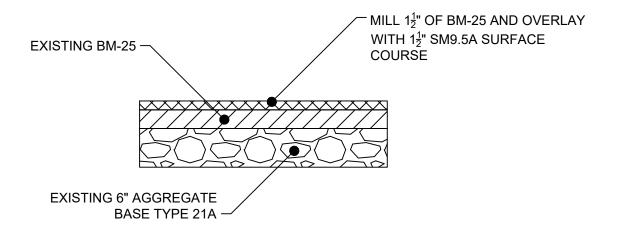
*** 12 INCHES MINIMUM BEYOND THE EDGE OF THE TRENCH ON LONGITUDINAL OPEN CUTS, OR 25 FEET MINIMUM BEYOND THE TRENCH CENTERLINE ON PERPENDICULAR OPEN CUTS, OR AS DETERMINED BY THE DISTRICT ADMINISTRATOR'S DESIGNEE.

PIPE BEDDING WITHIN ISLE OF WIGHT COUNTY TO FOLLOW DETAIL EW_01 ON SHEET D-1.





INITIAL ASPHALT REPLACEMENT DETAIL NOT TO SCALE



FINAL ASPHALT REPLACEMENT DETAIL NOT TO SCALE



S. MAURER DESIGNED BY K. TURNER CHECKED BY

SCALE

K. TURNER AS SHOWN

JOB NO.

SOILS LEGEND - ROUTE 10 WM & PS - ISLE OF WIGHT COUNTY

MAP UNIT SYMBOL	MAP UNIT NAME
2	Bohicket silty clay loam
5A	Emporia fine sandy loam, 0 to 2 percent slopes
5B	Emporia fine sandy loam, 2 to 6 percent slopes
7	Kinston loam
11E	Nevarc and Remlik soils, 15 to 35 percent slopes
12A	Peawick silt loam, 0 to 2 percent slopes
12B	Peawick silt loam, 2 to 6 percent slopes
14B	Peawick-Slagle complex, 2 to 6 percent slopes
18A	Slagle fine sandy loam, 0 to 2 percent slopes
18B	Slagle fine sandy loam, 2 to 6 percent slopes
19A	Uchee loamy sand, 0 to 2 percent slopes
19B	Uchee loamy sand, 2 to 6 percent slopes
21	Udorthents, loamy
22	Urban land
W	Water



ROUTE 10 WM & PS - SOILS MAP

GENERAL EROSION AND SEDIMENT CONTROL NOTES

- ES-1: THE PLAN APPROVING AUTHORITY MUST BE NOTIFIED ONE WEEK PRIOR TO THE PRE-CONSTRUCTION CONFERENCE, ONE WEEK PRIOR TO THE COMMENCEMENT OF LAND DISTURBING ACTIVITY, AND ONE WEEK PRIOR TO THE FINAL INSPECTION.
- ES-2: A COPY OF THE APPROVED EROSION AND SEDIMENT CONTROL PLAN SHALL BE MAINTAINED ON THE SITE AT ALL TIMES.
- ES-3: PRIOR TO COMMENCING LAND DISTURBING ACTIVITIES IN AREAS OTHER THAN INDICATED ON THESE PLANS (INCLUDING, BUT NOT LIMITED TO, OFF-SITE BORROW OR WASTE AREAS), THE CONTRACTOR SHALL SUBMIT A SUPPLEMENTARY EROSION CONTROL PLAN TO THE OWNER FOR REVIEW AND APPROVAL BY THE PLAN APPROVING AUTHORITY.
- ES-4: THE CONTRACTOR IS RESPONSIBLE FOR INSTALLATION OF ANY ADDITIONAL EROSION CONTROL MEASURES NECESSARY TO PREVENT EROSION AND SEDIMENTATION AS DETERMINED BY THE PLAN APPROVING AUTHORITY.
- ES-5: ALL DISTURBED AREAS ARE TO DRAIN TO APPROVED SEDIMENT CONTROL MEASURES AT ALL TIMES DURING LAND DISTURBING ACTIVITIES AND DURING SITE DEVELOPMENT UNTIL FINAL STABILIZATION IS ACHIEVED.

STRUCTURAL PRACTICES

3.01 SAFETY FENCE: A PROTECTIVE BARRIER INSTALLED TO PROHIBIT UNDESIRABLE USE OF AN EROSION CONTROL MEASURE

<u>3.07 STORM DRAIN INLET PROTECTION:</u> THE INSTALLATION OF VARIOUS KINDS OF SEDIMENT TRAPPING MEASURES AROUND DROP INLETS OR CURB INLET STRUCTURES PRIOR TO PERMANENT STABILIZATION OF THE DISTURBED AREA; LIMITED TO DRAINAGE AREAS NOT EXCEEDING ONE (1) ACRE, AND NOT INTENDED TO CONTROL LARGE, CONCENTRATED STORMWATER FLOWS.

3.08 CULVERT INLET PROTECTION: A SEDIMENT FILLER LOCATED AT THE INLET TO STORM SEWER CULVERTS WHICH PREVENTS SEDIMENT FROM ENTERING, ACCUMULATING IN AND BEING TRANSFERRED BY THE CULVERT. IT ALSO PROVIDES EROSION CONTROL AT CULVERTS DURING THE PHASE OF A PROJECT WHERE ELEVATIONS AND DRAINAGE PATTERNS ARE CHANGING, MAKING ORIGINAL CONTROL MEASURES TO BE INEFFECTIVE.

3.05 TEMPORARY SILT FENCE: A TEMPORARY SEDIMENT BARRIER CONSTRUCTED OF POSTS, FIBER FABRIC, AND, IN SOME CASES, A WIRE SUPPORT FENCE, PLACED ACROSS OR AT THE TOE OF A SLOPE OR IN A MINOR DRAINAGE WAY TO INTERCEPT AND DETAIN SEDIMENT AND DECREASE FLOW VELOCITIES FROM DRAINAGE AREAS OF LIMITED SIZE. APPLICABLE WHERE SHEET AND RILL EROSION MAY BE A PROBLEM. MAXIMUM EFFECTIVE LIFE - 6 MONTHS. - INSTALL ALONG CONTOUR IF AT ALL POSSIBLE AND SHOULD BE LOCATED 5'-7' BEYOND BASE OF DISTURBED SLOPES GREATER THAN 7%.

 $3.02~{
m TEMPORARY}$ STONE CONSTRUCTION ENTRANCE: A STONE PAD, LOCATED AT POINTS OF VEHICULAR INGRESS AND EGRESS TO REDUCE THE SOIL TRANSPORTED ONTO PUBLIC ROADS AND OTHER PAVED ARES. - IN THE EVENT FIELD CONDITIONS ARE SUCH THAT THE STONE PAD DOES NOT SIGNIFICANTLY REDUCE THE TRANSPORT OF SOIL ONTO THE ROADWAY, A WASH STATION SHALL BE INSTALLED AT EACH ENTRANCE AND AN ADEQUATE DEWATERING STRUCTURE OR WASH RACK SHALL BE INSTALLED.

3.26 DEWATERING STRUCTURE: A TEMPORARY SETTLING AND FILTERING DEVICE FOR WATER WHICH IS DISCHARGED FROM DEWATERING OR WASHING ACTIVITIES. - INSTALL IF REQUIRED TO ACCOMPANY WASHING ACTIVITY RELATED TO THE TEMPORARY STONE CONSTRUCTION ENTRANCE.

VEGETATIVE PRACTICES

ALL DENUDED AREAS WHICH WILL BE LEFT DORMANT FOR MORE THAN 30 DAYS SHALL BE SEEDED WITH FAST GERMINATING TEMPORARY VEGETATION IMMEDIATELY FOLLOWING GRADING OF THOSE AREAS. SELECTION OF THE SEED MIXTURE SHALL DEPEND ON THE TIME OF YEAR IT IS APPLIED.

3.32 PERMANENT SEEDING

FOLLOWING GRADING ACTIVITIES, ESTABLISH PERENNIAL VEGETATIVE COVER BY PLANTING SEED TO REDUCE EROSION, STABILIZE DISTURBED AREAS, AND ENHANCE NATURAL BEAUTY.

3.35 MULCHING: APPLICATION OF PLANT RESIDUES OR OTHER SUITABLE MATERIALS TO DISTURBED SURFACES TO PREVENT EROSION AND REDUCE OVERLAND FLOW VELOCITIES. FOSTERS PLANT GROWTH BY INCREASING AVAILABLE MOISTURE AND PROVIDING INSULATION AGAINST EXTREME HEAT OR COLD. SHOULD BE APPLIED TO ALL SEEDING OPERATIONS, OTHER PLANT MATERIALS WHICH DO NOT PROVIDE ADEQUATE SOIL PROTECTION BY THEMSELVES AND BARE AREAS WHICH CANNOT BE SEEDED DUE TO THE SEASON BUT WHICH STILL NEED PROTECTION TO PREVENT SOIL LOSS.

PERMANENT STABILIZATION

ALL NON-PAVED AREAS DISTURBED BY CONSTRUCTION SHALL BE STABILIZED WITH PERMANENT SEEDING AND MULCHED IMMEDIATELY FOLLOWING FINISH GRADING. TOPSOIL SHALL BE PLACED TO A DEPTH OF 4" & SEEDING SHALL BE IN ACCORDANCE WITH STD. & SPEC. 3.32, PERMANENT SEEDING. IMPORTED TOPSOIL SHALL BE OBTAINED FROM A SITE WITH AN APPROVED ESC PLAN. SEED TYPE SHALL BE AS SPECIFIED FOR "MINIMUM CARE LAWNS" AND "GENERAL SLOPES" IN THE HANDBOOK. MULCH (STRAW OR FIBER) IN ACCORDANCE WITH STD. & SPEC. 3.35, SHALL BE USED ON ALL SEEDED SURFACES. EROSION CONTROL BLANKETS WILL BE INSTALLED OVER FILL SLOPES WHICH HAVE BEEN BROUGHT TO FINAL GRADE AND HAVE BEEN SEEDED TO PROTECT THE SLOPES FROM RILL & GULLY EROSION AND TO ALLOW THE SEED TO GERMINATE PROPERLY. IN ALL SEEDING OPERATIONS SEED, FERTILIZER AND LIME SHALL BE APPLIED PER RECOMMENDATIONS OF THE SOIL TEST PRIOR TO MULCHING.

EROSION CONTROL NARRATIVE

PROJECT DESCRIPTION:

THE PURPOSE OF THIS PROJECT IS TO PROVIDE WATER SERVICE TO HARDY ELEMENTARY SCHOOL. A NEW WATER MAIN WILL CONVEY FLOW NORTH FROM THE TOWN OF SMITHFIELD WATER SYSTEM, FOLLOWING ROUTE 10 TO A (FUTURE) BOOSTER PUMP STATION JUST OUTSIDE THE TOWN OF SMITHFIELD LIMITS. THIS BOOSTER PUMP STATION WILL CONVEY FLOW THROUGH A NEW WATER MAIN EXTENDING FURTHER NORTH ALONG ROUTE 10 TO THE (FUTURE) HARDY ELEMENTARY SCHOOL ELEVATED WATER STORAGE TANK ON THE HARDY ELEMENTARY SCHOOL SITE.

PHASE 1 CONSISTS OF AN 12 INCH PVC C900 WATER MAIN WILL FOLLOW ALONG THE EASTERN SIDE OF ROUTE 10 FROM THE TOWN OF SMITHFIELD CONNECTION AT THE INTERSECTION OF N CHURCH STREET AND LUTHER DRIVE NORTH TOWARDS THE PAGAN RIVER. THE WATER MAIN WILL CONTINUE ACROSS THE PAGAN RIVER AND THE SMITHFIELD FOODS PARKING LOT ALONG THE EAST SIDE OF ROUTE 10. THE INTERSECTION OF ROUTE 10 AND BERRY HILL ROAD IS THE MEETING LOCATION BETWEEN PHASE 1 AND PHASE 2 INSTALLATION. PHASE 2 CONTINUES NORTH WITH A 12 INCH PVC C900 WATER MAIN THROUGH THE SMITHFIELD FOODS PARKING LOT. THE WATER MAIN WILL CROSS TO THE WEST SIDE OF ROUTE 10 AFTER THE SMITHFIELD FOODS PARKING LOT AND AND CONTINUE TOWARDS THE TOWN BORDER WHERE THE 12 INCH PIPELINE WILL REDUCE TO AN 8 INCH PVC C900 PIPELINE. THIS 8 INCH WATER MAIN WILL TERMINATE AT THE (FUTURE) BOOSTER PUMP STATION ON PARCEL 21-01-001B. AN 8 INCH PVC C900 WATER MAIN WILL CONVEY FLOW FROM THE (FUTURE) BOOSTER PUMP STATION NORTH ALONG THE WEST SIDE OF ROUTE 10 UNTIL CONNECTING TO THE (FUTURE) ELEVATED STORAGE TANK ON THE HARDY ELEMENTARY SCHOOL SITE, CROSSING ROUTE 10 NEAR THE INTERSECTION OF JENKINS LANE AND THOMAS PARK LANE. THE PROPOSED WATER MAIN ALSO INCLUDES A FUTURE CONNECTION FOR THE THOMAS PARK COMMUNITY WATER SYSTEM ON THOMAS PARK LANE.

THE PHASE 1 WATER MAIN IS APPROXIMATELY 0.78 MILES (4,140 LF) TOTAL LENGTH WITHIN THE TOWN OF SMITHFIELD. THE LIMITS OF CONSTRUCTION DISTURBANCE IS APPROXIMATELY 0.77 ACRES TEMPORARY IMPACT. THIS DISTURBANCE IS CONSIDERED TEMPORARY IMPACT AS DRAINAGE CHARACTERISTICS WILL NOT CHANGE FROM PRE- TO POST-DEVELOPMENT. IT WILL FOLLOW THE GUIDANCE FOR LINEAR DEVELOPMENT AND WILL BE ASSUMED TO FOLLOW A STORMWATER MANAGEMENT WAIVER UNDER THE LINEAR EXEMPTION.

THE PHASE 2 WATER MAIN IS APPROXIMATELY 1.34 MILES (7,100 LF) TOTAL LENGTH WITHIN ISLE OF WIGHT COUNTY. APPROXIMATELY 2,125 LF OF THE WATER MAIN IS WITHIN THE LIMITS OF THE TOWN OF SMITHFIELD (LENGTH INCLUDED IN THE 7,100 LF APPROXIMATION FOR ISLE OF WIGHT COUNTY). LIMITS OF CONSTRUCTION DISTURBANCE ARE BASED ON A VARIABLE TEMPORARY AND PERMANENT EASEMENTS RANGING FROM 20FT TO 30FT. WITHIN ISLE OF WIGHT COUNTY, THE CONSTRUCTION DISTURBANCE IS APPROXIMATELY 2.89 ACRES TEMPORARY IMPACT, INCLUDING 0.96 ACRES OF TEMPORARY CONSTRUCTION DISTURBANCE WITHIN THE TOWN OF SMITHFIELD. THIS DISTURBANCE IS CONSIDERED TEMPORARY IMPACT AS DRAINAGE CHARACTERISTICS WILL NOT CHANGE FROM PRE- TO POST-DEVELOPMENT. IT WILL FOLLOW THE GUIDANCE FOR LINEAR DEVELOPMENT AND WILL BE ASSUMED TO FOLLOW A STORMWATER MANAGEMENT WAIVER UNDER THE LINEAR EXEMPTION.

REGARDING THE WATER MAIN EXTENSION, THERE WILL BE NO INCREASE IN IMPERVIOUS AREA NOR ALTERATION OF ANY DRAINAGE PATTERNS. DISTURBANCE QUANTITIES AND STORMWATER AND NUTRIENT CALCULATIONS WILL BE INCLUDED SEPARATELY FOR THE BOOSTER PUMP STATION SITE.

EXISTING SITE CONDITIONS

THE SITE FOR THE WATER MAIN ALONG ROUTE 10 FROM THE TOWN OF SMITHFIELD CONNECTION AND CONTINUING NORTH TOWARDS THE HARDY ELEMENTARY SCHOOL SITE CONSISTS OF MOSTLY OPEN SPACES WITH OCCASIONAL WOODED SPACES ACROSS GENTLY ROLLING TERRAIN.

THE SITE FOR THE PROPOSED BOOSTER PUMP STATION WILL CONSIST OF PROPERTY PURCHASED FROM SMITHFIELD FOODS WHICH CONSISTS OF A MOSTLY FORESTED AREA.

ADJACENT AREAS:

THE WATER MAIN RUNS NORTH ADJACENT TO ROUTE 10 FROM THE CONNECTION POINT AT THE INTERSECTION OF N CHURCH STREET AND LUTER DRIVE IN THE TOWN OF SMITHFIELD, FOLLOWING ROUTE 10 PAST THE TOWN OF SMITHFIELD LIMITS AND ULTIMATELY TO THE HARDY ELEMENTARY SCHOOL SITE IN ISLE OF WIGHT COUNTY

THE PROPOSED BOOSTER PUMP STATION SITE WILL BE ADJACENT TO ROUTE 10 AND PRIVATE PROPERTY OWNERS.

OFF-SITE AREAS:

THERE WILL BE NO OFF-SITE LAND DISTURBANCE ASSOCIATED WITH THIS PROJECT. SPOILS WILL BE DISPOSED OF IN STRICT ACCORDANCE WITH COUNTY AND STATE REQUIREMENTS.

CRITICAL AREAS:

CRITICAL AREAS OF EROSION AND SEDIMENT CONTROL WILL BE THE SILT FENCING, ROCK CHECK DAMS, AND CONSTRUCTION ENTRANCES. CONTRACTOR MUST REGULARLY MAINTAIN / INSPECT THE ROCK CHECK DAM AND PERIMETER SILT FENCING IN ORDER TO PREVENT SEDIMENT FROM WASHING DOWNSTREAM DURING LAND DISTURBANCE. CONTRACTOR MUST ALSO MONITOR CONSTRUCTION TRAFFIC ON THE EXISTING ROAD SYSTEM TO PREVENT SEDIMENT BUILD UP ON EXISTING ROADS

STORMWATER RUNOFF CONSIDERATIONS:

A VSMP REGISTRATION STATEMENT WILL BE REQUIRED.

THE PROJECT WILL FOLLOW THE LINEAR UTILITY GUIDANCE MEMO NO. 15-2003, SPECIFICALLY

- THE PROJECT DOES NOT SIGNIFICANTLY ALTER THE PREDEVELOPMENT RUNOFF CHARACTERISTICS OF THE LAND SURFACE AFTER THE COMPLETION OF CONSTRUCTION AND FINAL STABILIZATION;
- THE PROJECT IS MANAGED SO THAT LESS THAN ONE (1) ACRE OF LAND DISTURBANCE OCCURS ON A DAILY BASIS;
- THE DISTURBED LAND WHERE WORK HAS BEEN COMPLETED IS ADEQUATELY STABILIZED ON A DAILY BASIS;
- THE ENVIRONMENT IS PROTECTED FROM EROSION AND SEDIMENTATION DAMAGE ASSOCIATED WITH THE LAND DISTURBING ACTIVITY;
- THE OWNER AND/OR CONSTRUCTION ACTIVITY OPERATOR DESIGNS, INSTALLS, IMPLEMENTS, AND MAINTAINS POLLUTION PREVENTION MEASURES TO:
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM EQUIPMENT AND VEHICLE WASHING, WHEEL WASH WATER, AND OTHER WASH WATERS:
- MINIMIZE THE EXPOSURE OF BUILDING MATERIALS, BUILDING PRODUCTS, CONSTRUCTION WASTES, TRASH, LANDSCAPE MATERIALS, FERTILIZERS, PESTICIDES, HERBICIDES, DETERGENTS, SANITARY WASTE, AND OTHER MATERIALS PRESENT ON-SITE TO PRECIPITATION
- MINIMIZE THE DISCHARGE OF POLLUTANTS FROM SPILLS AND LEAKS AND IMPLEMENT CHEMICAL SPILL AND LEAK PREVENTION AND RESPONSE PROCEDURES;
- PROHIBIT THE DISCHARGE OF WASTEWATER FROM THE WASHOUT OF CONCRETE;
- PROHIBIT THE DISCHARGE OF WASTEWATER FROM THE WASHOUT AND CLEANOUT OF STUCCO, PAINT, FORM RELEASE OILS, CURING COMPOUNDS, AND OTHER CONSTRUCTION MATERIALS; AND
- •• PROHIBIT THE DISCHARGE OF FUELS, OILS, OR OTHER POLLUTANTS USED IN VEHICLE AND EQUIPMENT OPERATION AND MAINTENANCE.
- THE OWNER AND/OR CONSTRUCTION ACTIVITY OPERATOR PROVIDES REASONABLE ASSURANCE TO DEQ OR THE LOCAL VSMP AUTHORITY THAT ALL OF THE ABOVE CONDITIONS WILL BE SATISFIED. THIS MAY BE ACCOMPLISHED BY INCORPORATING THESE CONDITIONS INTO AN EROSION AND SEDIMENT CONTROL PLAN DEVELOPED FOR THE PROJECT

CALCULATIONS:

NO DRAINAGE CALCULATIONS ARE REQUIRED DUE TO THE LINEAR NATURE OF THIS PROJECT WITH CONSIDERATION THAT THERE WILL BE NO INCREASE IN IMPERVIOUS AREA NOR DRAINAGE ALTERATION.

IN GENERAL, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE CHECKED AFTER EACH RAINFALL OR WEEKLY, WHICHEVER IS MORE FREQUENT. AND SHOULD BE CLEANED AND REPAIRED ACCORDING TO THE FOLLOWING SCHEDULE AND GUIDELINES:

- A. EROSION AND SEDIMENT CONTROL DEVICES WILL BE CHECKED REGULARLY FOR UNDERMINING OR DETERIORATION AND BUILDUP OR CLOTTING WITH SEDIMENT. CORRECTIVE ACTION WILL BE TAKEN IMMEDIATELY.
- B. ALL SEEDED AREAS WILL BE CHECKED REGULARLY TO SEE THAT A GOOD STAND IS MAINTAINED. AREAS SHOULD BE FERTILIZED, RE-SEEDED, WATERED AND MOWED AS NEEDED OR AS DIRECTED.
- C. ALL TEMPORARY EROSION AND SEDIMENT MEASURES SHALL BE DISPOSED OF WITHIN THIRTY (30) DAYS AFTER FINAL SITE STABILIZATION IS ACHIEVED AND VEGETATION IS ESTABLISHED.
- D. IF SEDIMENT-LADEN WATER IS REMOVED FROM A CONSTRUCTION SITE BY MEANS OF PUMPING, A TEMPORARY SETTLING AND FILTERING DEVICE SHALL BE USED TO FILTER THE SEDIMENT-LADEN WATER PRIOR TO THE WATER BEING DISCHARGED OFFSITE.

MINIMUM STANDARDS:

AN EROSION AND SEDIMENT CONTROL PROGRAM ADOPTED BY A DISTRICT OR LOCALITY MUST BE CONSISTENT WITH THE FOLLOWING CRITERIA TECHNIQUES AND METHODS PER THE VESCH HANDBOOK, LATEST EDITION:

- MS-1. PERMANENT OR TEMPORARY SOIL STABILIZATION SHALL BE APPLIED TO DENUDED AREAS WITHIN SEVEN DAYS AFTER FINAL GRADE IS REACHED ON ANY PORTION OF THE SITE. TEMPORARY SOIL STABILIZATION SHALL BE APPLIED WITHIN SEVEN DAYS TO DENUDED AREAS THAT MAY NOT BE AT FINAL GRADE BUT WILL REMAIN DORMANT FOR LONGER THAN 14 DAYS. PERMANENT STABILIZATION SHALL BE APPLIED TO AREAS THAT ARE TO BE LEFT DORMANT FOR MORE THAN ONE YEAR.
- MS-2. DURING CONSTRUCTION OF THE PROJECT, SOIL STOCKPILES AND BORROW AREAS SHALL BE STABILIZED OR PROTECTED WITH SEDIMENT TRAPPING MEASURES. THE APPLICANT IS RESPONSIBLE FOR THE TEMPORARY PROTECTION AND PERMANENT STABILIZATION OF ALL SOIL STOCKPILES ON SITE AS WELL AS BORROW AREAS AND SOIL INTENTIONALLY TRANSPORTED FROM THE PROJECT SITE.
- MS-3. A PERMANENT VEGETATIVE COVER SHALL BE ESTABLISHED ON DENUDED AREAS NOT OTHERWISE PERMANENTLY STABILIZED. PERMANENT VEGETATION SHALL NOT BE CONSIDERED ESTABLISHED UNTIL A GROUND COVER IS ACHIEVED THAT IS UNIFORM, MATURE
- ENOUGH TO SURVIVE AND WILL INHIBIT EROSION. MS-4. SEDIMENT BASINS AND TRAPS, PERIMETER DIKES, SEDIMENT BARRIERS AND OTHER MEASURES INTENDED TO TRAP SEDIMENT SHALL BE
- CONSTRUCTED AS A FIRST STEP IN ANY LAND-DISTURBING ACTIVITY AND SHALL BE MADE FUNCTIONAL BEFORE UPSLOPE LAND DISTURBANCE TAKES PLACE.
- MS-5. STABILIZATION MEASURES SHALL BE APPLIED TO EARTHEN STRUCTURES SUCH AS DAMS, DIKES AND DIVERSIONS IMMEDIATELY AFTER INSTALLATION.
- MS-6. SEDIMENT TRAPS AND SEDIMENT BASINS SHALL BE DESIGNED AND CONSTRUCTED BASED UPON THE TOTAL DRAINAGE AREA TO BE SERVED BY THE TRAP OR BASIN.
- A. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT TRAP SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA AND THE TRAP SHALL ONLY CONTROL DRAINAGE AREAS LESS THAN THREE ACRES.
- SURFACE RUNOFF FROM DISTURBED AREAS THAT IS COMPRISED OF FLOW FROM DRAINAGE AREAS GREATER THAN OR EQUAL TO THREE ACRES SHALL BE CONTROLLED BY A SEDIMENT BASIN. THE MINIMUM STORAGE CAPACITY OF A SEDIMENT BASIN SHALL BE 134 CUBIC YARDS PER ACRE OF DRAINAGE AREA. THE OUTFALL SYSTEM SHALL, AT A MINIMUM, MAINTAIN THE STRUCTURAL INTEGRITY OF THE BASIN DURING A 25-YEAR STORM OF 24-HOUR DURATION. RUNOFF COEFFICIENTS USED IN RUNOFF CALCULATIONS SHALL CORRESPOND TO A BARE EARTH CONDITION OR THOSE CONDITIONS EXPECTED TO EXIST WHILE THE SEDIMENT BASIN IS UTILIZED.
- MS-7. CUT AND FILL SLOPES SHALL BE DESIGNED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION. SLOPES THAT ARE FOUND TO BE ERODING EXCESSIVELY WITHIN ONE YEAR OF PERMANENT STABILIZATION SHALL BE PROVIDED WITH ADDITIONAL SLOPE STABILIZING MEASURES UNTIL THE PROBLEM IS CORRECTED.
- MS-8. CONCENTRATED RUNOFF SHALL NOT FLOW DOWN CUT OR FILL SLOPES UNLESS CONTAINED WITHIN AN ADEQUATE TEMPORARY OR
- PERMANENT CHANNEL, FLUME OR SLOPE DRAIN STRUCTURE. MS-9. WHENEVER WATER SEEPS FROM A SLOPE FACE, ADEQUATE DRAINAGE OR OTHER PROTECTION SHALL BE PROVIDED.
- MS-10. ALL STORM SEWER INLETS THAT ARE MADE OPERABLE DURING CONSTRUCTION SHALL BE PROTECTED SO THAT SEDIMENT-LADEN WATER CANNOT ENTER THE CONVEYANCE SYSTEM WITHOUT FIRST BEING FILTERED OR OTHERWISE TREATED TO REMOVE SEDIMENT.
- MS-11. BEFORE NEWLY CONSTRUCTED STORMWATER CONVEYANCE CHANNELS OR PIPES ARE MADE OPERATIONAL, ADEQUATE OUTLET PROTECTION AND ANY REQUIRED TEMPORARY OR PERMANENT CHANNEL LINING SHALL BE INSTALLED IN BOTH THE CONVEYANCE CHANNEL AND RECEIVING CHANNEL.
- MS-12. WHEN WORK IN A LIVE WATERCOURSE IS PERFORMED, PRECAUTIONS SHALL BE TAKEN TO MINIMIZE ENCROACHMENT, CONTROL SEDIMENT TRANSPORT AND STABILIZE THE WORK AREA TO THE GREATEST EXTENT POSSIBLE DURING CONSTRUCTION. NONERODIBLE MATERIAL SHALL BE USED FOR THE CONSTRUCTION OF CAUSEWAYS AND COFFERDAMS. EARTHEN FILL MAY BE USED FOR THESE STRUCTURES IF ARMORED BY NONERODIBLE COVER MATERIALS.
- MS-13. WHEN A LIVE WATERCOURSE MUST BE CROSSED BY CONSTRUCTION VEHICLES MORE THAN TWICE IN ANY SIX-MONTH PERIOD, A TEMPORARY VEHICULAR STREAM CROSSING CONSTRUCTED OF NONERODIBLE MATERIAL SHALL BE PROVIDED.
- MS-14. ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS PERTAINING TO WORKING IN OR CROSSING LIVE WATERCOURSES SHALL BE
- MS-15. THE BED AND BANKS OF A WATERCOURSE SHALL BE STABILIZED IMMEDIATELY AFTER WORK IN THE WATERCOURSE IS COMPLETED. MS-16. UNDERGROUND UTILITY LINES SHALL BE INSTALLED IN ACCORDANCE WITH THE FOLLOWING STANDARDS IN ADDITION TO OTHER APPLICABLE CRITERIA:
- NO MORE THAN 500 LINEAR FEET OF TRENCH MAY BE OPENED AT ONE TIME.
- B. EXCAVATED MATERIAL SHALL BE PLACED ON THE UPHILL SIDE OF TRENCHES.
- C. EFFLUENT FROM DEWATERING OPERATIONS SHALL BE FILTERED OR PASSED THROUGH AN APPROVED SEDIMENT TRAPPING DEVICE, OR BOTH, AND DISCHARGED IN A MANNER THAT DOES NOT ADVERSELY AFFECT FLOWING STREAMS OR OFF-SITE PROPERTY.
- D. MATERIAL USED FOR BACKFILLING TRENCHES SHALL BE PROPERLY COMPACTED IN ORDER TO MINIMIZE EROSION AND PROMOTE
- STABILIZATION.
- RESTABILIZATION SHALL BE ACCOMPLISHED IN ACCORDANCE WITH THESE REGULATIONS.
- APPLICABLE SAFETY REGULATIONS SHALL BE COMPLIED WITH.
- MS-17. WHERE CONSTRUCTION VEHICLE ACCESS ROUTES INTERSECT PAVED OR PUBLIC ROADS, PROVISIONS SHALL BE MADE TO MINIMIZE THE TRANSPORT OF SEDIMENT BY VEHICULAR TRACKING ONTO THE PAVED SURFACE. WHERE SEDIMENT IS TRANSPORTED ONTO A PAVED OR PUBLIC ROAD SURFACE, THE ROAD SURFACE SHALL BE CLEANED THOROUGHLY AT THE END OF EACH DAY. SEDIMENT SHALL BE REMOVED FROM THE ROADS BY SHOVELING OR SWEEPING AND TRANSPORTED TO A SEDIMENT CONTROL DISPOSAL AREA. STREET WASHING SHALL BE ALLOWED ONLY AFTER SEDIMENT IS REMOVED IN THIS THIS PROVISION SHALL APPLY TO INDIVIDUAL DEVELOPMENT LOTS AS WELL AS TO LARGER LAND-DISTURBING ACTIVITIES.
- MS-18. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHALL BE REMOVED WITHIN 30 DAYS AFTER FINAL SITE STABILIZATION OR AFTER THE TEMPORARY MEASURES ARE NO LONGER NEEDED, UNLESS OTHERWISE AUTHORIZED BY THE LOCAL PROGRAM AUTHORITY. TRAPPED SEDIMENT AND THE DISTURBED SOIL AREAS RESULTING FROM THE DISPOSITION OF TEMPORARY MEASURES SHALL BE PERMANENTLY STABILIZED TO PREVENT FURTHER EROSION AND SEDIMENTATION.
- MS-19. PROPERTIES AND WATERWAYS DOWNSTREAM FROM DEVELOPMENT SITES SHALL BE PROTECTED FROM SEDIMENT DEPOSITION, EROSION AND DAMAGE DUE TO INCREASES IN VOLUME. VELOCITY AND PEAK FLOW RATE OF STORMWATER RUNOFF FOR THE STATED FREQUENCY STORM OF 24-HOUR DURATION IN ACCORDANCE WITH THE STANDARDS AND CRITERIA LISTED IN THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, CHAPTER 8 PAGES 20-24.



8/5/2022 DRAWN BY S. MAURER

DESIGNED BY K. TURNER

CHECKED BY K. TURNER SCALE

JOB NO. 4852*7* SHEET NO.

ESC-1

	EROSION CONTROL LEGEND			
LABEL	SYMBOL	STANDARD NAME	SPEC.#	
SAF	SAFSAF	SAFETY FENCE	3.01	
CE		CONSTRUCTION ENTRANCE	3.02	
WSF		SILT FENCE (WIRE SUPPORT)	3.05-1	
SF		SILT FENCE	3.05-2	
(IP)		INLET PROTECTION	3.07	
CIP		CULVERT INLET PROTECTION	3.08	
OP		OUTLET PROTECTION	3.18	
CD		CHECK DAM	3.20	
TS	TS	TEMPORARY SEEDING	3.31	
PS	PS PS	PERMANENT SEEDING	3.32	
(M)	→ MU →	MULCHING	3.35	

INTENDED TO INCLUDE TO AND MU

	MULCHING RATES			
MULCH	PER ACRE	PER 1000 SQ	NOTES FT	
STRAW AND HAY	1.5 - 2 TONS (MIN 2 TONS FOR WINTER COV	ER) ^{70–90} LBS	FREE FROM WEEDS AND COARSE MATTER. MUST BE ANCHORED. SPREAD WITH MULCH BLOWER OR BY HAND.	
ORGANIC MULCH MATERIALS AND APPLICATION RATES				

PERMANENT SEEDING SPECIFICATIONS FOR COASTAL PLAIN AREA

No Scale

	SEED ¹	
LAND USE	SPECIES	APPLICATION PER ACRE
MINIMUM CARE LAWN (COMMERCIAL OR RESIDENTIAL)	TALL FESCUE ¹ or BERMUDAGRASS ¹	175 - 200 LBS 75 LBS
HIGH-MAINTENANCE LAWN	TALL FESCUE ¹ or BERMUDAGRASS ¹ (SEED) or BERMUDAGRASS ¹ (BY OTHER VEGETATIVE ESTABLISHMENT METHOD, SEE STD. & SPEC. 3.34)	200-250 LBS. 40 LBS.(UNHULLED) 30 LBS. (HULLED)
GENERAL SLOPE (3:1 OR LESS)	TALL FESCUE ¹ RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP ²	128 LBS 2 LBS <u>20LBS</u> TOTAL: 150 LBS
LOW-MAINTENANCE SLOPE (STEEPER THAN 3:1)	TALL FESCUE ¹ BERMUDAGRASS ¹ RED TOP GRASS OR CREEPING RED FESCUE SEASONAL NURSE CROP ² SERICEA LESPEDEZA ³	93 - 108 LBS 0 - 15 LBS 2 LBS 20 LBS 20 LBS TOTAL: 150 LBS

1 - WHEN SELECTING VARIETIES OF TURFGRASS, USE THE VIRGINIA CROP IMPROVEMENT ASSOCIATION (VCIA) RECOMMENDED TURFGRASS VARIETY LIST. QUALITY SEED WILL BEAR A LABEL INDICATING THAT THEY ARE APPROVED BY VCIA. A CURRENT TURFGRASS VARIETY LIST IS AVAILABLE AT THE LOCAL COUNTY EXTENSION OFFICE OR THROUGH VCIA AT 804-746-4884 OR AT HTTP://SUDAN.CSES.VT.EDU/HTML/TURF/TURF/PUBLICATIONS/PUBLICATIONS2.HTML

2 - USE SEASONAL NURSE CROP IN ACCORDANCE WITH SEEDING DATES AS STATED BELOW: FEBRUARY, MARCH - APRIL .. ANNUAL RYE

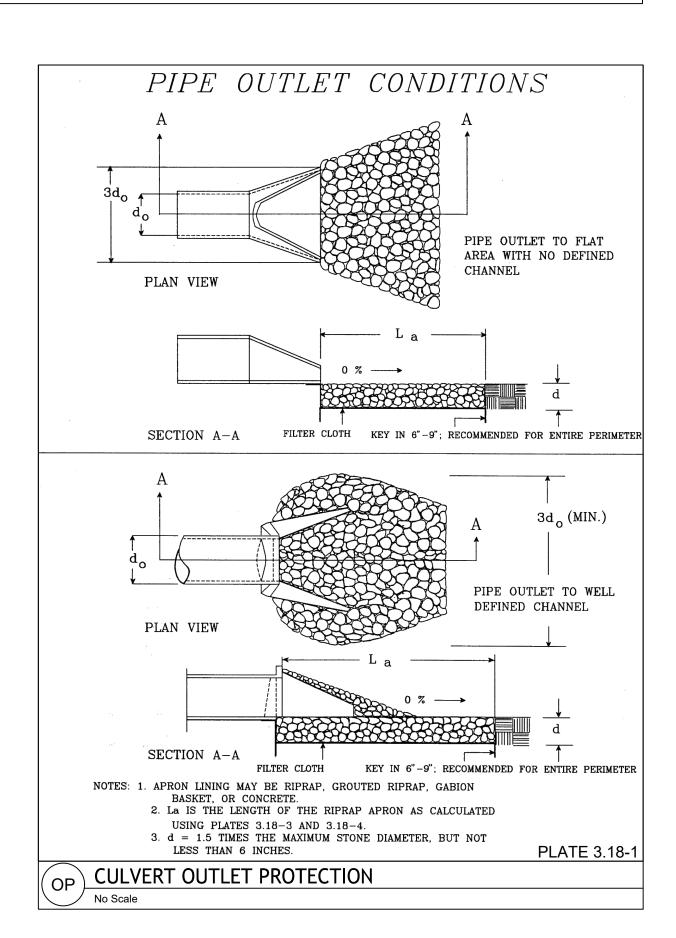
MAY 1ST - AUGUST FOXTAIL MILLET SEPTEMBER, OCTOBER - NOVEMBER 15TH ANNUAL RYE NOVEMBER 16TH - JANUARY ... WINTER RYE

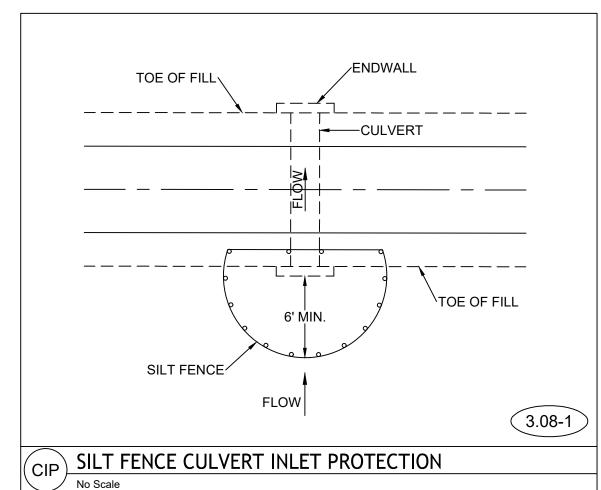
3 - MAY THROUGH OCTOBER, USE HULLED SEED. ALL OTHER PERIODS, USE UNHULLED SEED. IF WEEPING LOVEGRASS IS USED, INCLUDE IN ANY SLOPE OR LOW MAINTENANCE MIXTURE DURING WARMER SEEDING PERIODS, INCREASE TO 30 - 40 LBS/ACRE.

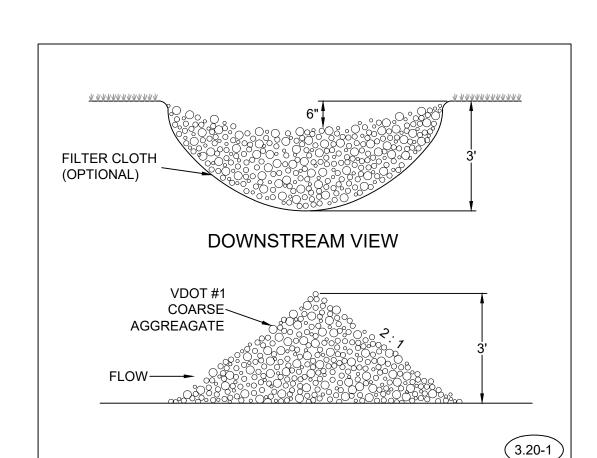
FERTILIZER & LIME

 APPLY 10-20-10 FERTILIZER AT A RATE OF 500 LBS. / ACRE (OR 12 LBS. / 1,000 SQ. FT.) APPLY PULVERIZED AGRICULTURAL LIMESTONE AT A RATE OF 2 TONS/ACRE (90 LBS. / 1,000 SQ. FT.)

- A SOIL TEST IS NECESSARY TO DETERMINE THE ACTUAL AMOUNT OF LIME REQUIRED TO ADJUST THE SOIL pH - INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 4 - 6 INCHES OF THE SOIL BY DISKING OR BY OTHER - WHEN APPLYING SLOWLY AVAILABLE NITROGEN, USE RATES AVAILABLE IN <u>EROSION & SEDIMENT CONTROL</u> <u>TECHNICAL BULLETIN #4, 2003 NUTRIENT MANAGEMENT FOR DEVELOPMENT SITES</u> AT <u>HTTP://WWW.DCR.STATE.VA.US/SW/E&S.HTM#PUBS</u>

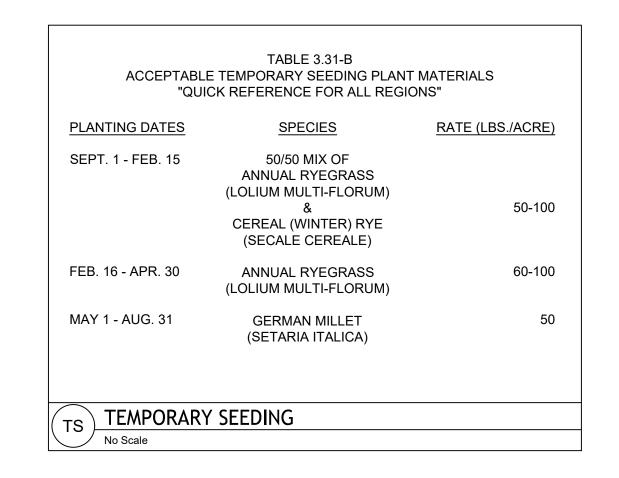


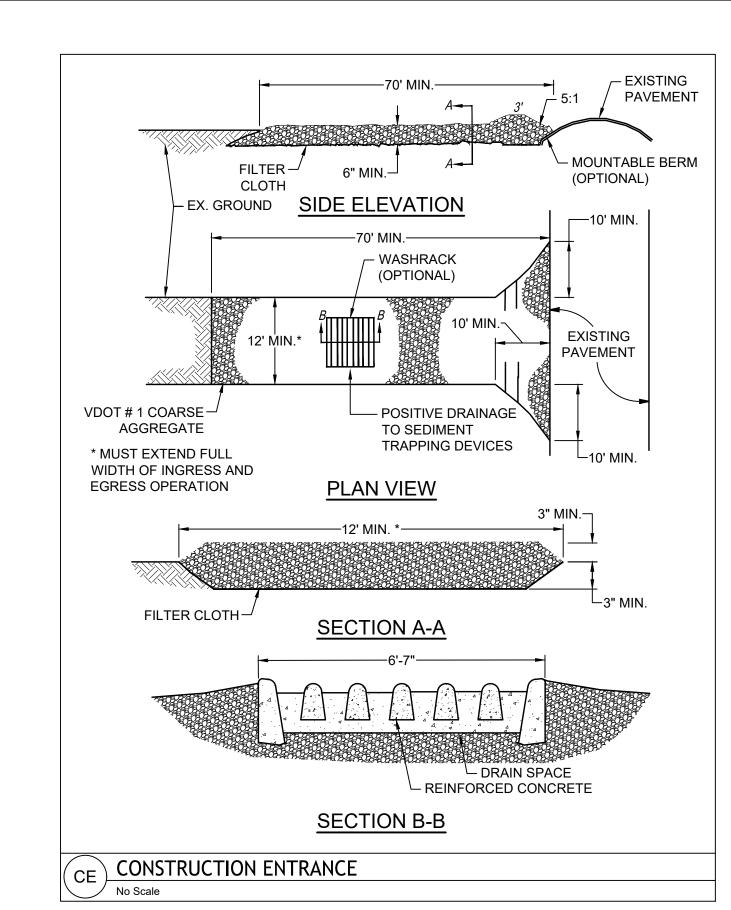


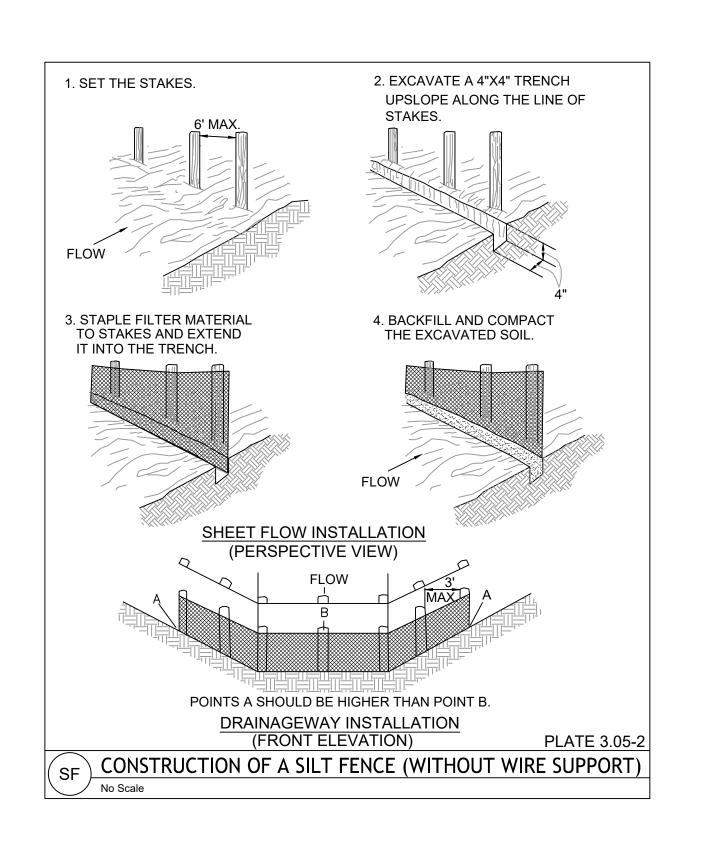


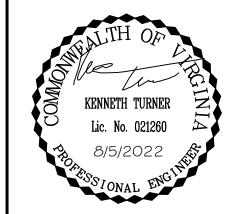
ROCK CHECK DAM

No Scale









DATE 8/5/2022 DRAWN BY

S. MAURER DESIGNED BY K. TURNER CHECKED BY K. TURNER

SCALE N/A

17

JOB NO.

48527 SHEET NO. ESC-2

