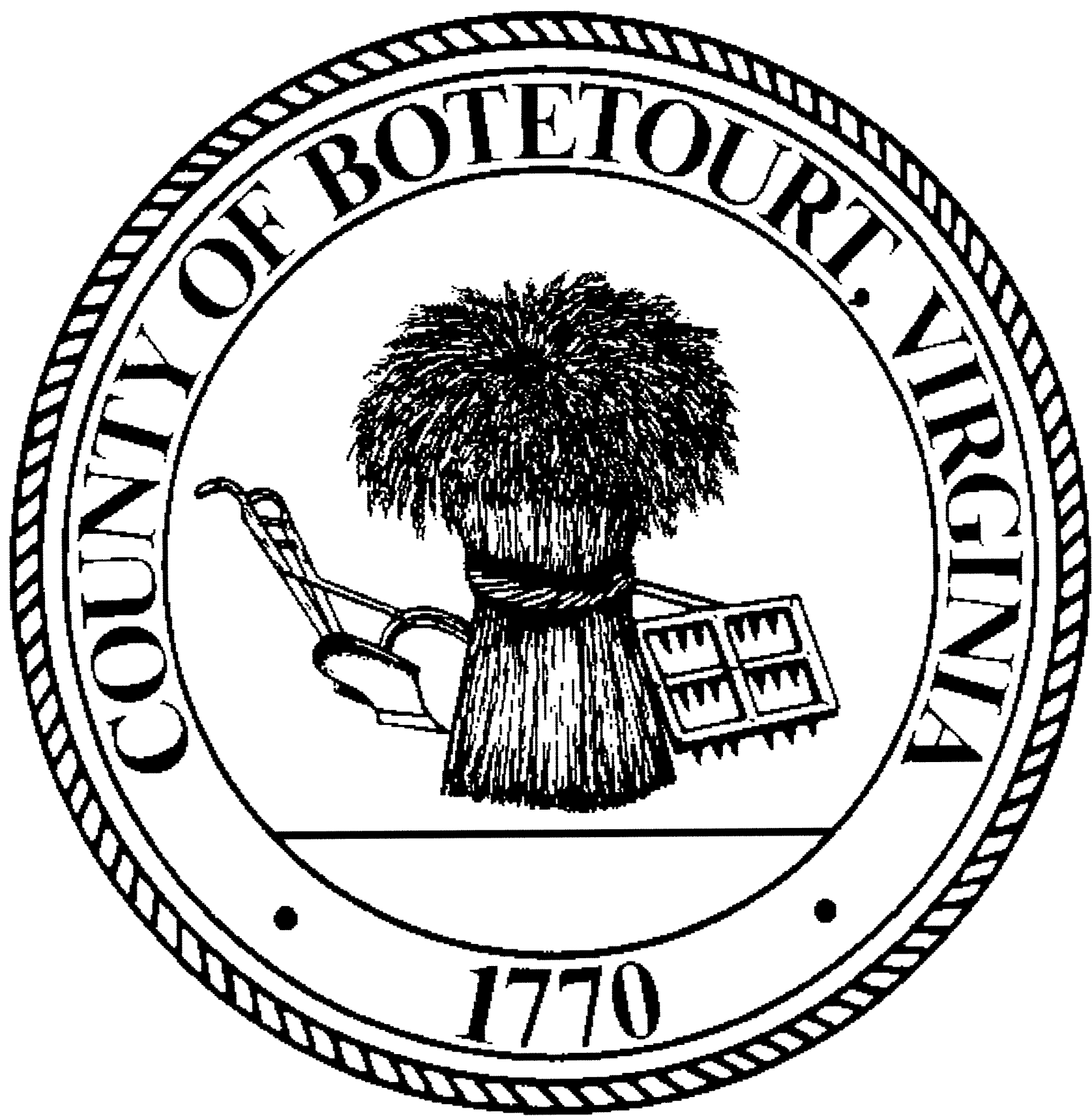
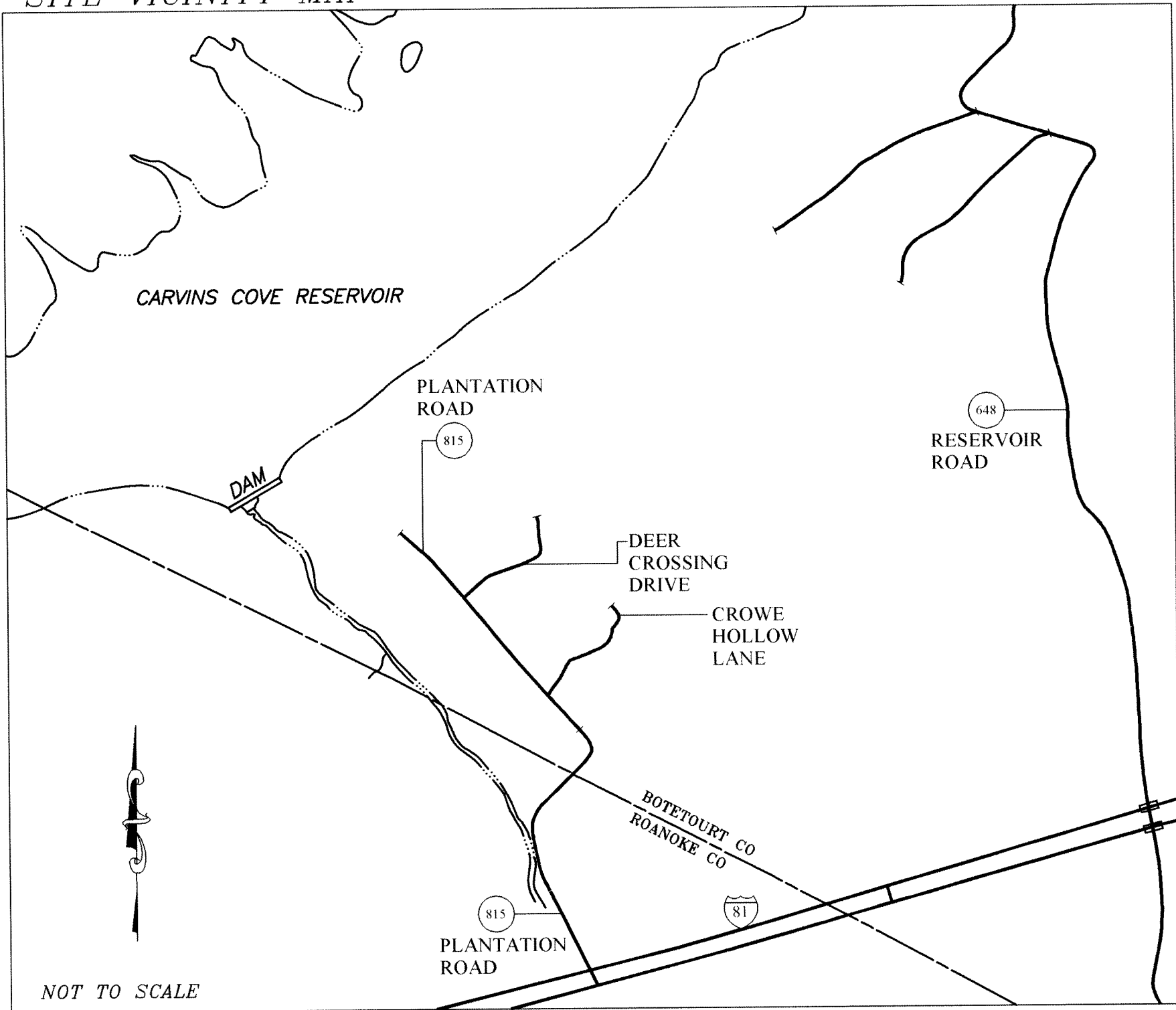


PLANTATION ROAD SEWER EXTENSION

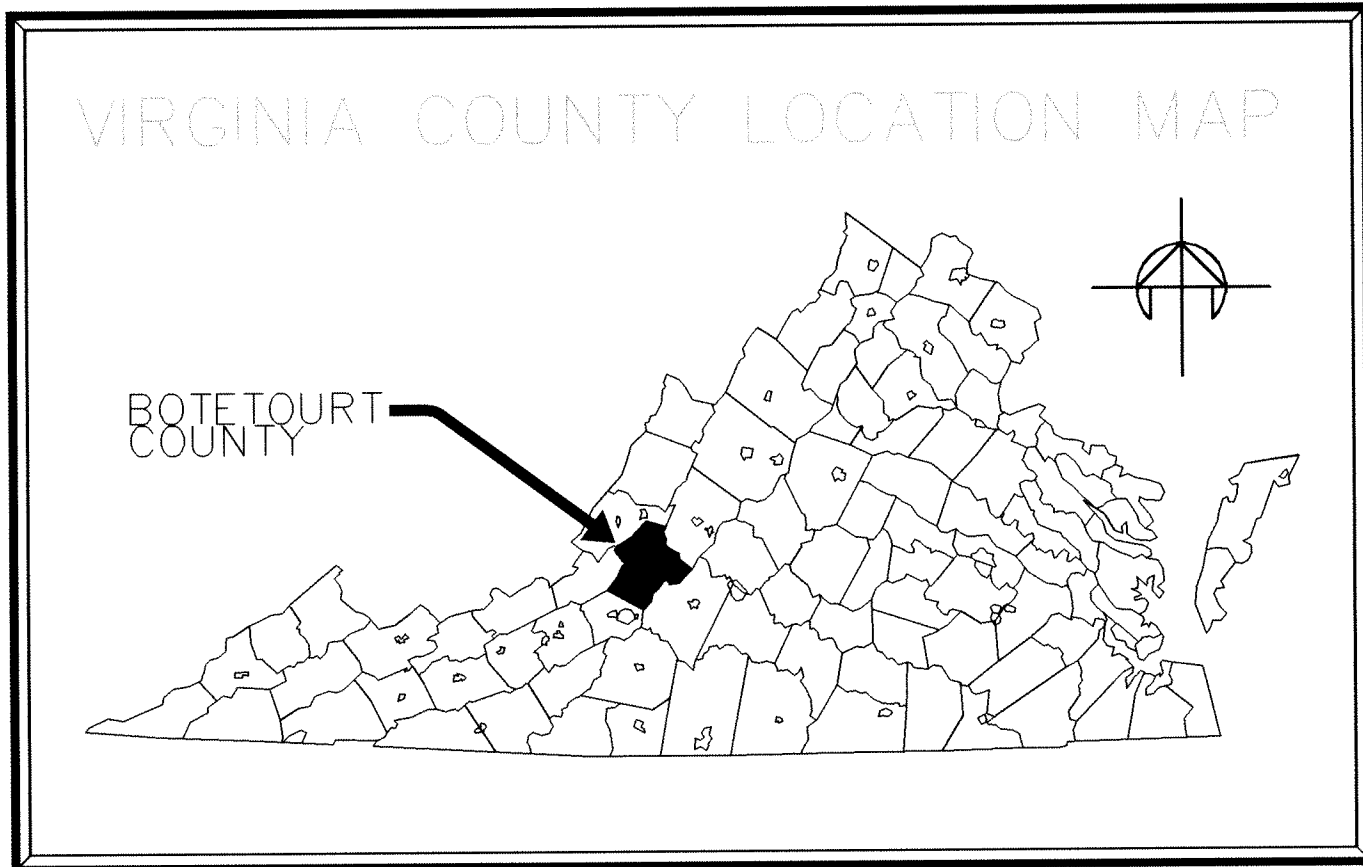


SITE VICINITY MAP



SHEET LIST:

- 1 TITLE SHEET
- 2 SHEET INDEX
- 3 PLAN AND PROFILE BASELINE A
- 4 PLAN AND PROFILE BASELINE A & D
- 5 PLAN AND PROFILE BASELINE B & C
- 6 SOIL EROSION AND SEDIMENT CONTROL DETAILS
- 7 SANITARY SEWER DETAILS
- 8 SANITARY SEWER DETAILS AND GENERAL NOTES



REVISIONS

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PLANTATION ROAD SEWER EXTENSION

TITLE SHEET

AMSTERDAM DISTRICT – BOTETOURT CO., VA

COMMONWEALTH OF VIRGINIA

David S. Givens

DAVID S. GIVENS

No. 033971

2-18-2003

PROFESSIONAL ENGINEER

BOTETOURT COUNTY

PUBLIC FACILITIES & PROGRAMS

30 WEST BACK STREET, NUMBER 4

FINCASTLE, VA 24090

PH: 540-473-8316

FAX: 540-473-8360

COMMONWEALTH OF VIRGINIA

COUNTY OF BOTETOURT

1776

DESIGNED

KRS

DRAWN

DSG

CHECKED

KRS

PROJECT NUMBER

DATE

FEB., 2003

SCALE

NTS

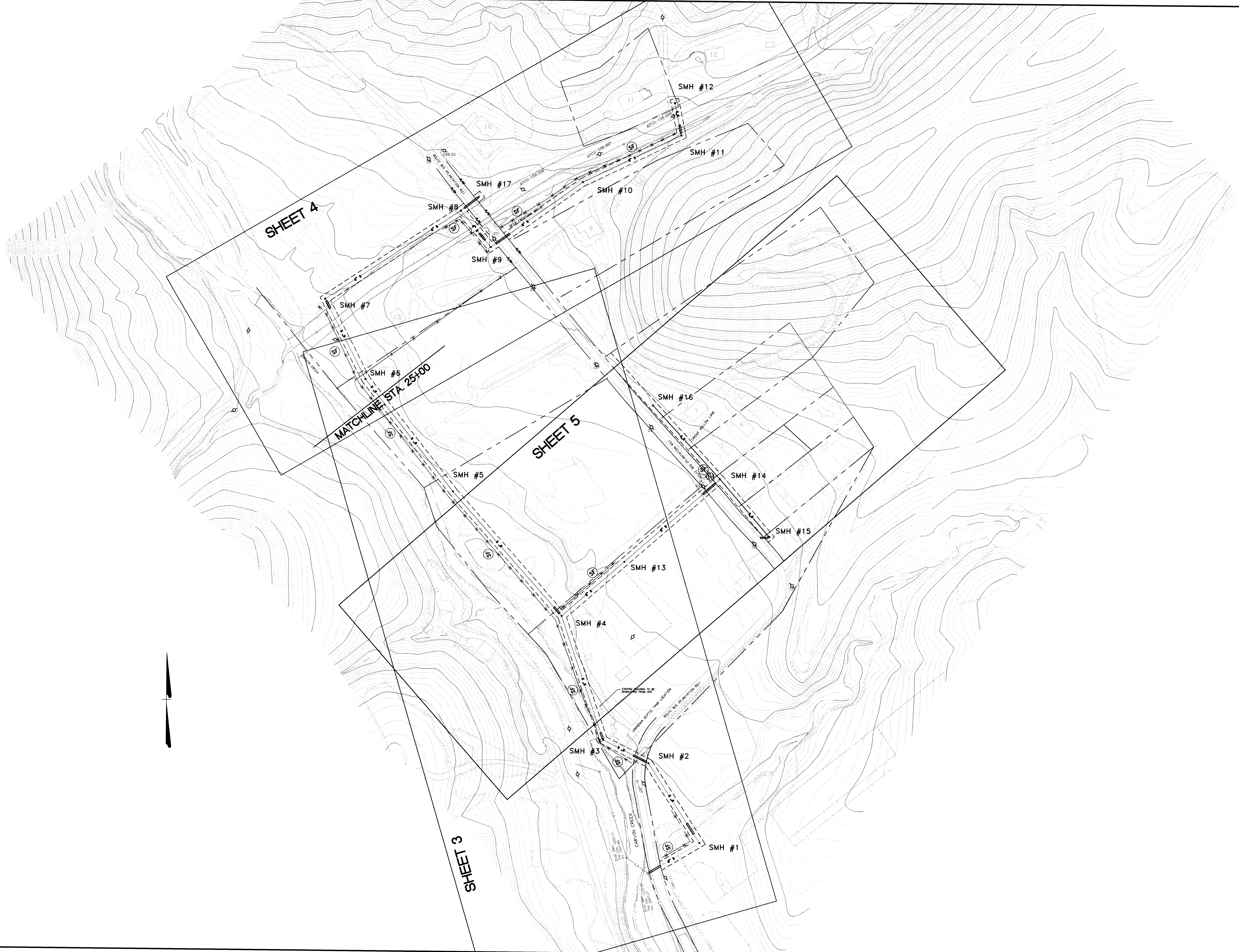
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TITLE.dwg

SHEET

1

OF 8 SHEETS



REVISIONS

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△

PLANTATION ROAD SEWER EXTENSION

SHEET INDEX

AMSTERDAM DISTRICT – BOTETOURT CO., VA

COMMONWEALTH OF VIRGINIA

DAVID S. GIVENS

No. 033971

2-18-2003

PROFESSIONAL ENGINEER

BOTETOURT COUNTY

PUBLIC FACILITIES & PROGRAMS

30 WEST BACK STREET, NUMBER 4

FINCASTLE, VA 24090

PH: 540-472-8316

FX: 540-472-8560

COMMONWEALTH OF VIRGINIA

COUNTY OF BOTETOURT

DESIGNED KRS

DRAWN DSG

CHECKED KRS

PROJECT NUMBER

DATE FEB., 2003

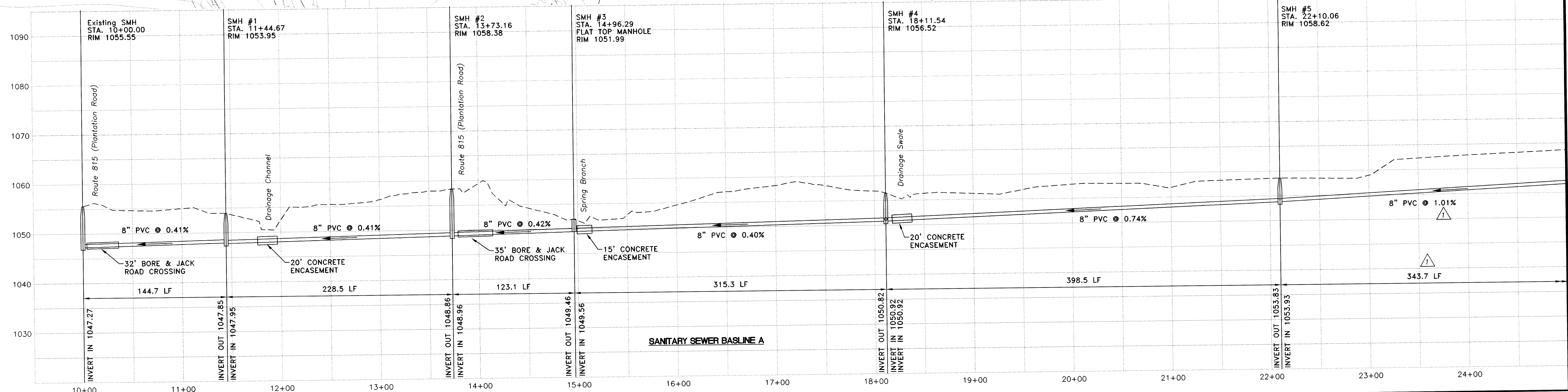
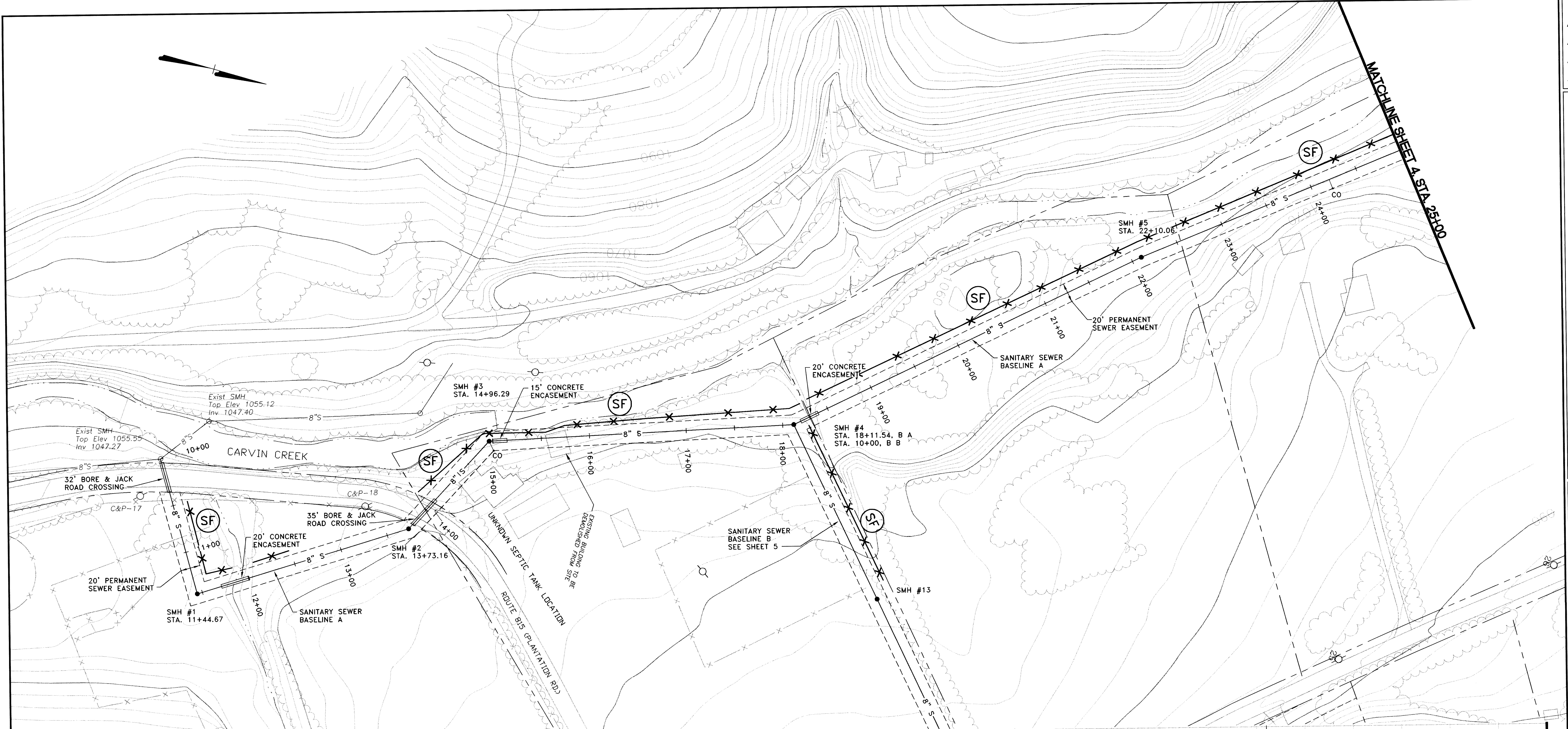
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CADD-FILE PTRSEW.dwg

SHEET

2

OF 8 SHEETS



REVISIONS

▲

JUNE 4, 2003

▲

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▲

PLANTATION ROAD SEWER EXTENSION

PLAN AND PROFILE

BASILINE A

AMSTERDAM DISTRICT - BOTETOURT CO., VA

COMMONWEALTH OF VIRGINIA

DAVID S. GIVENS

No. 033971

PROFESSIONAL ENGINEER

BOTETOURT COUNTY

PUBLIC FACILITIES & PROGRAMS

30 WEST BACK STREET, NUMBER 4

FINCASTLE, VA 24090

Ph: 540-473-8316

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DESIGNED

KRS

DRAWN

DSG

CHECKED

KRS

PROJECT NUMBER

DATE

FEB., 2003

SCALE

1"=50'

CADD-FILE

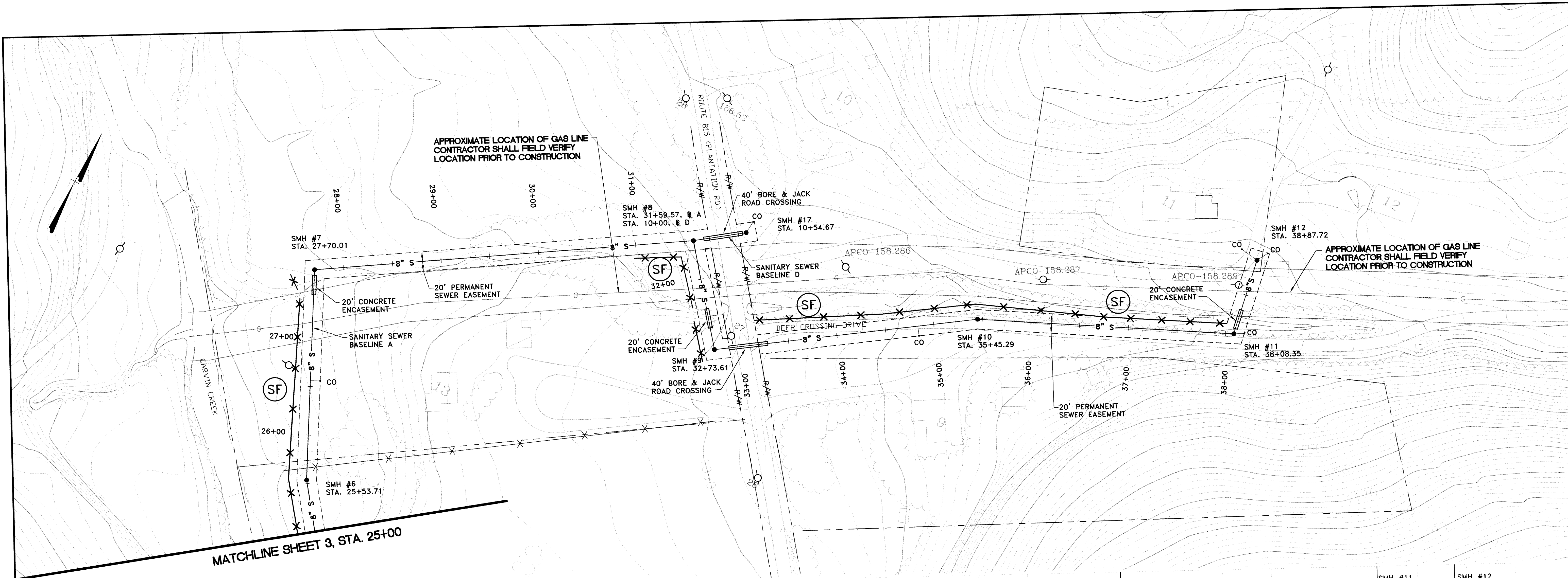
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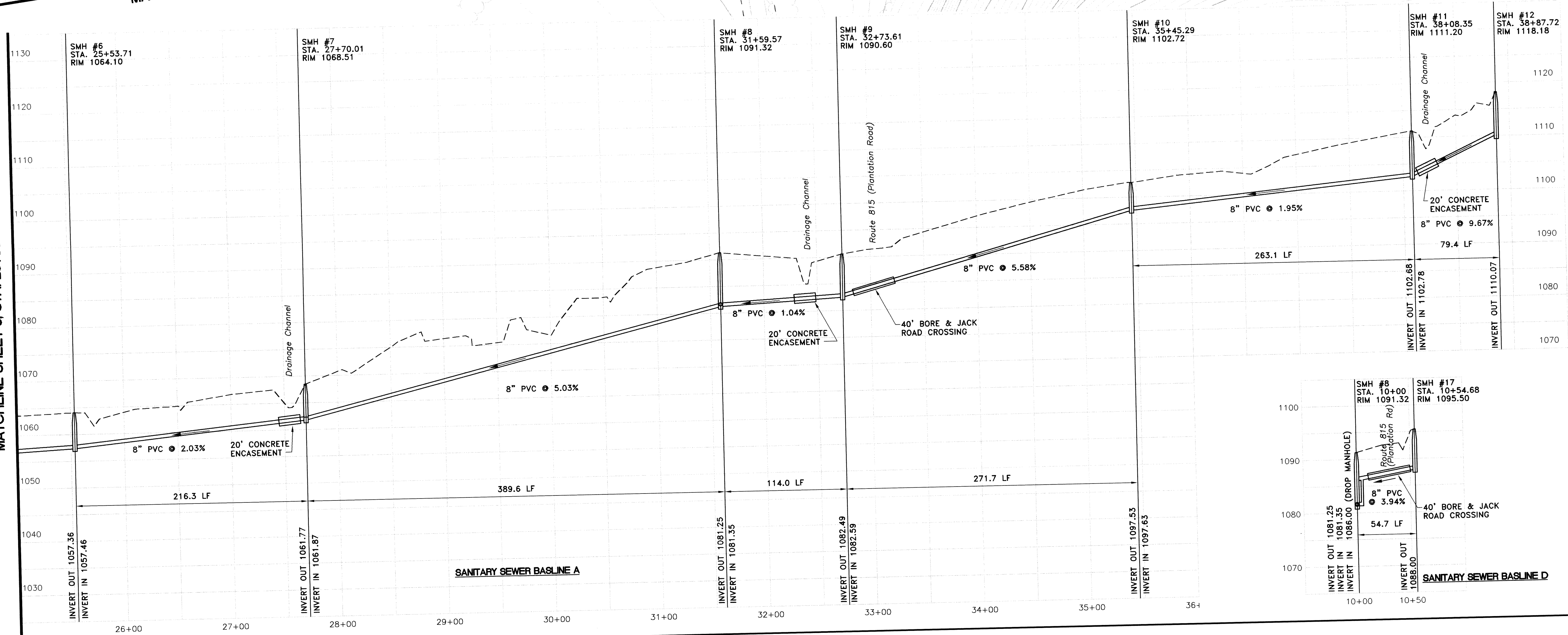
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OF 8 SHEETS

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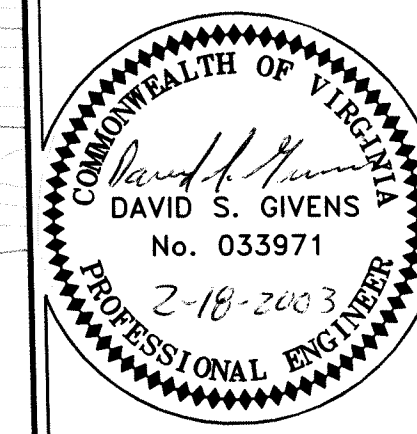


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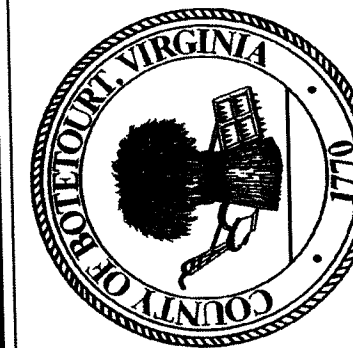


REVISIONS

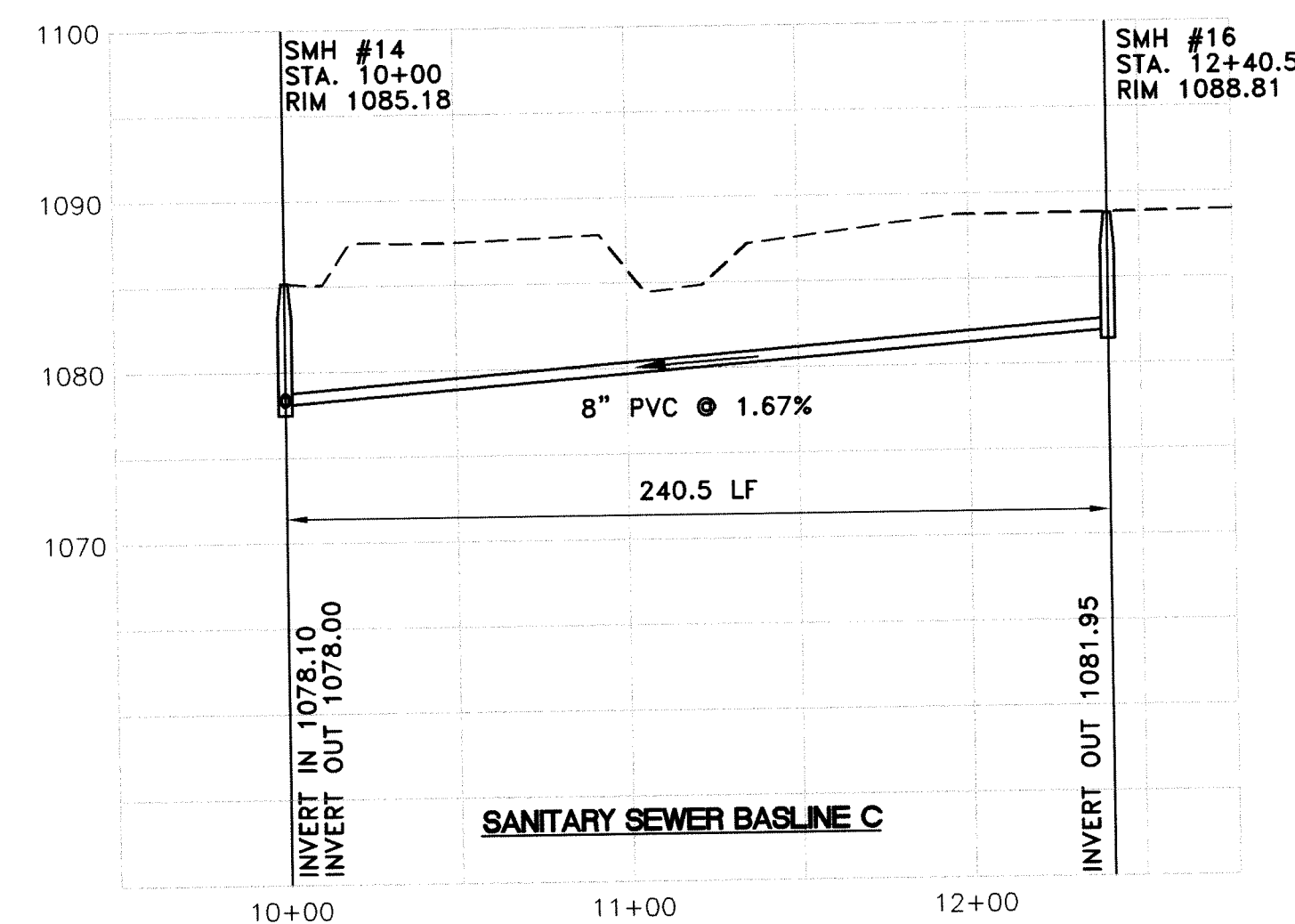
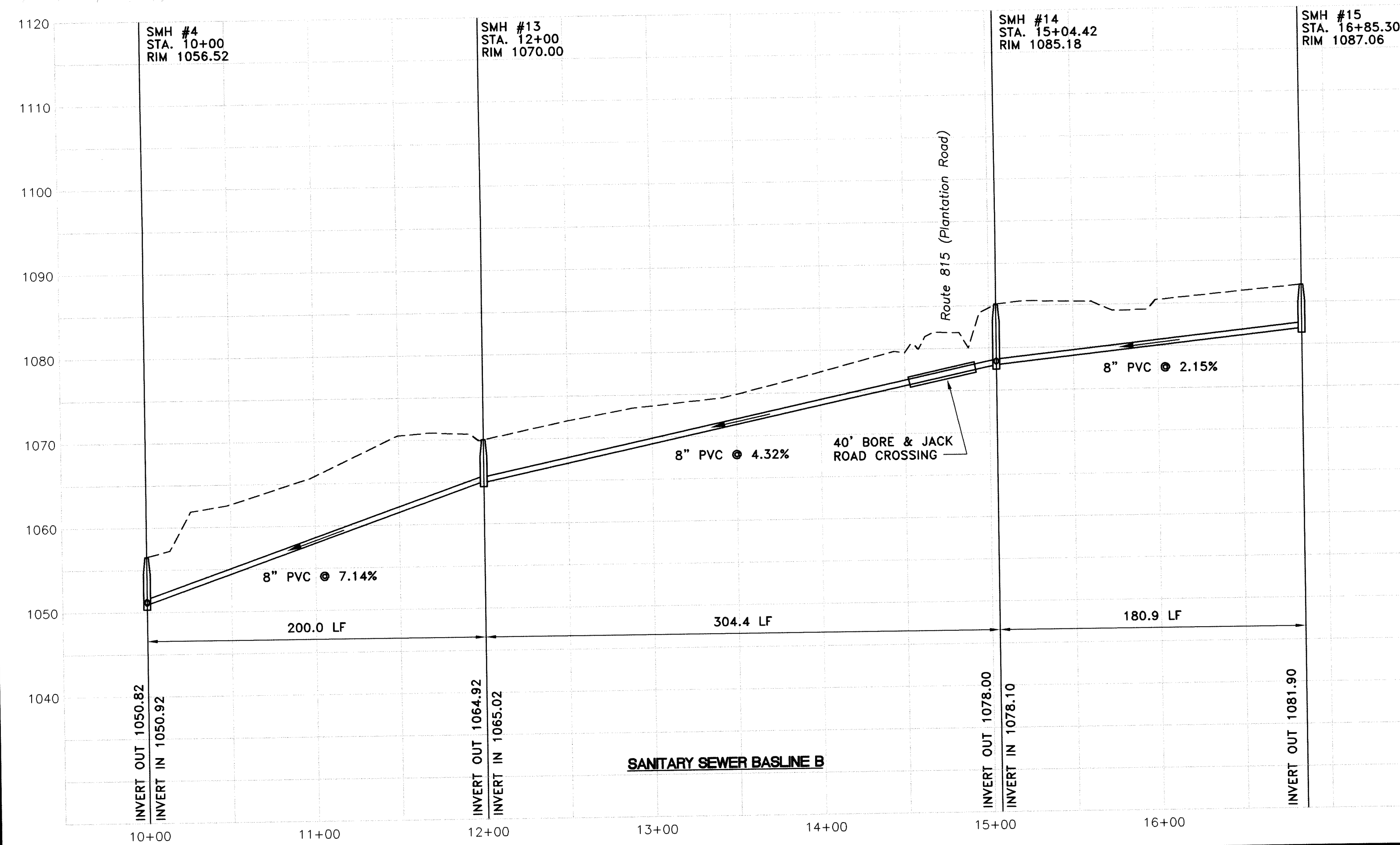
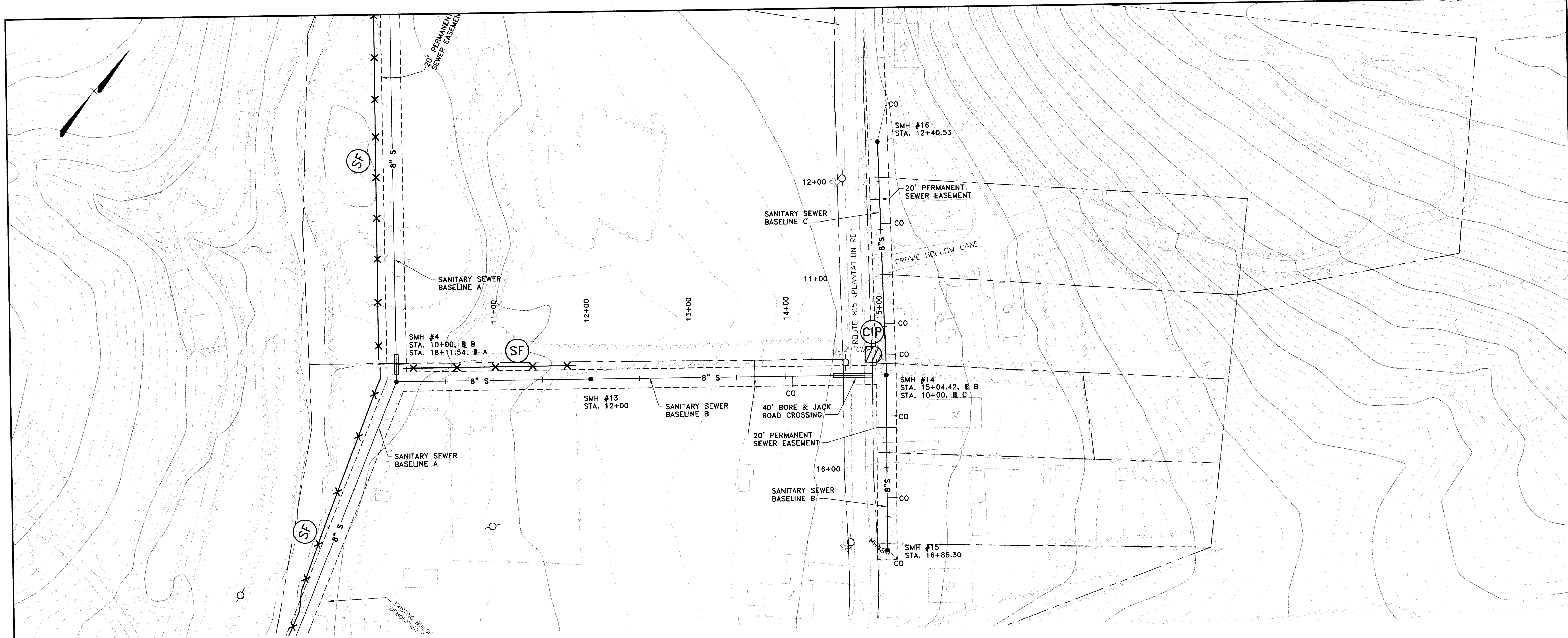
PLANTATION ROAD SEWER EXTENSION
PLAN AND PROFILE
BASELINE A & D
AMSTERDAM DISTRICT - BOTETOURT CO., VA



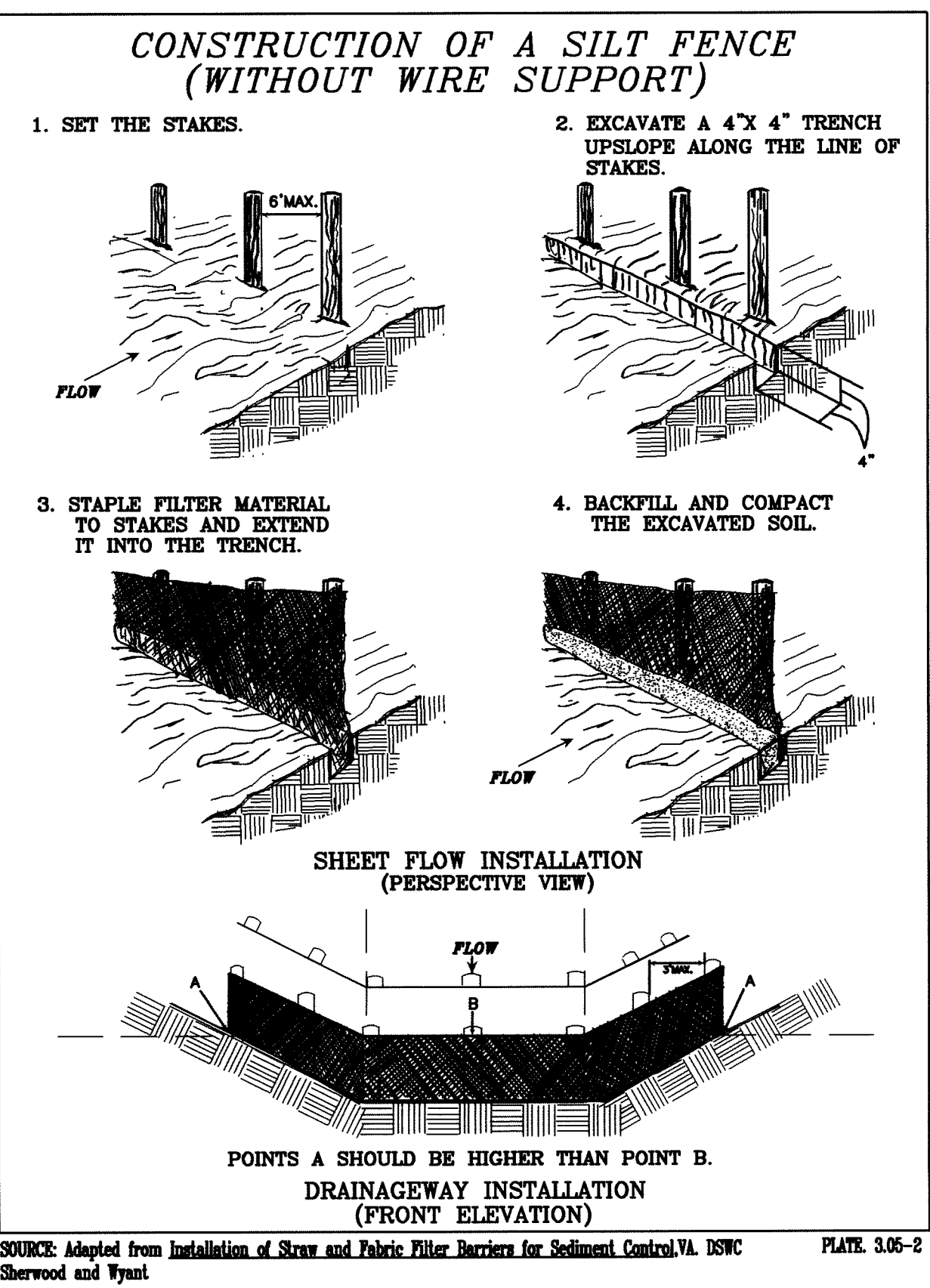
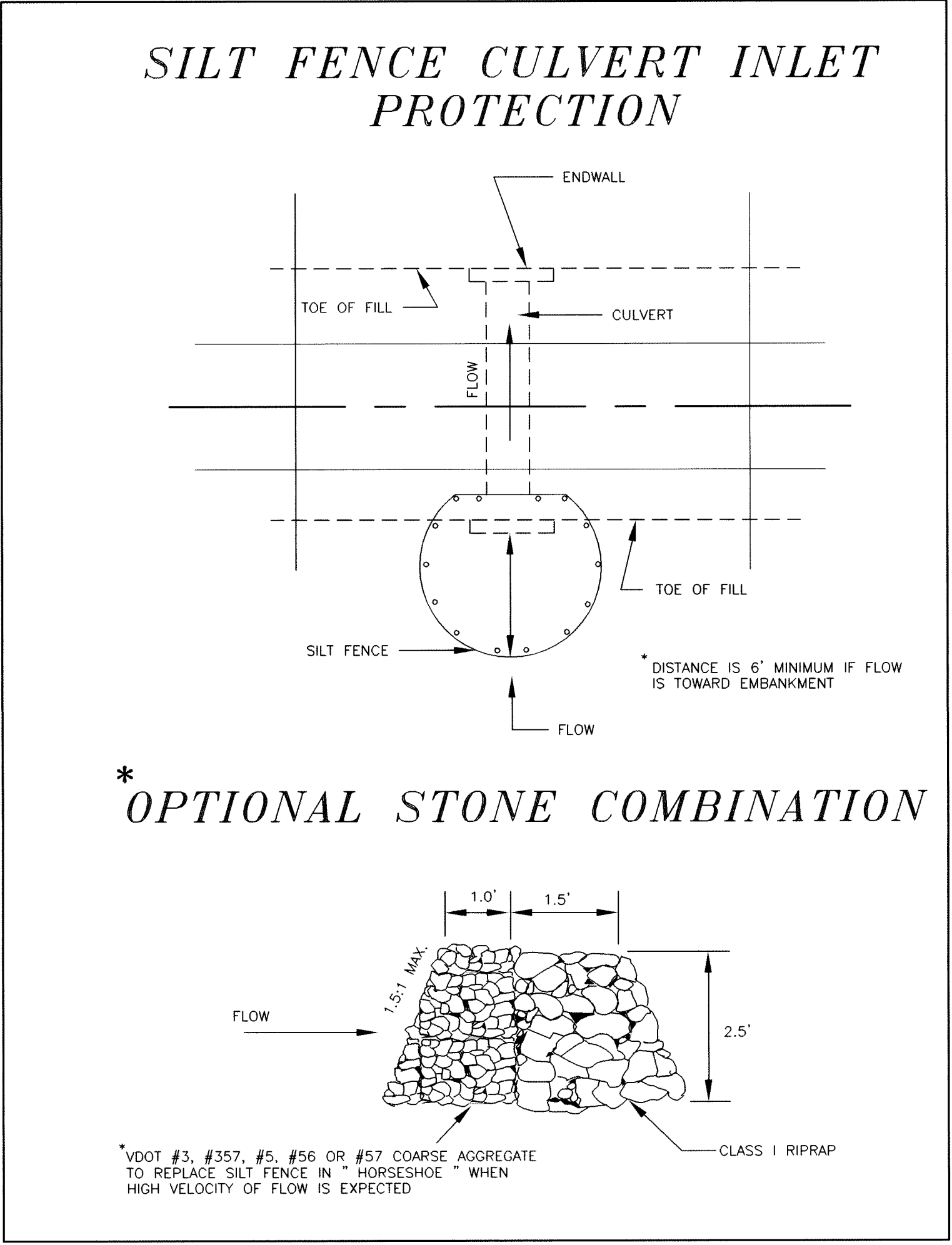
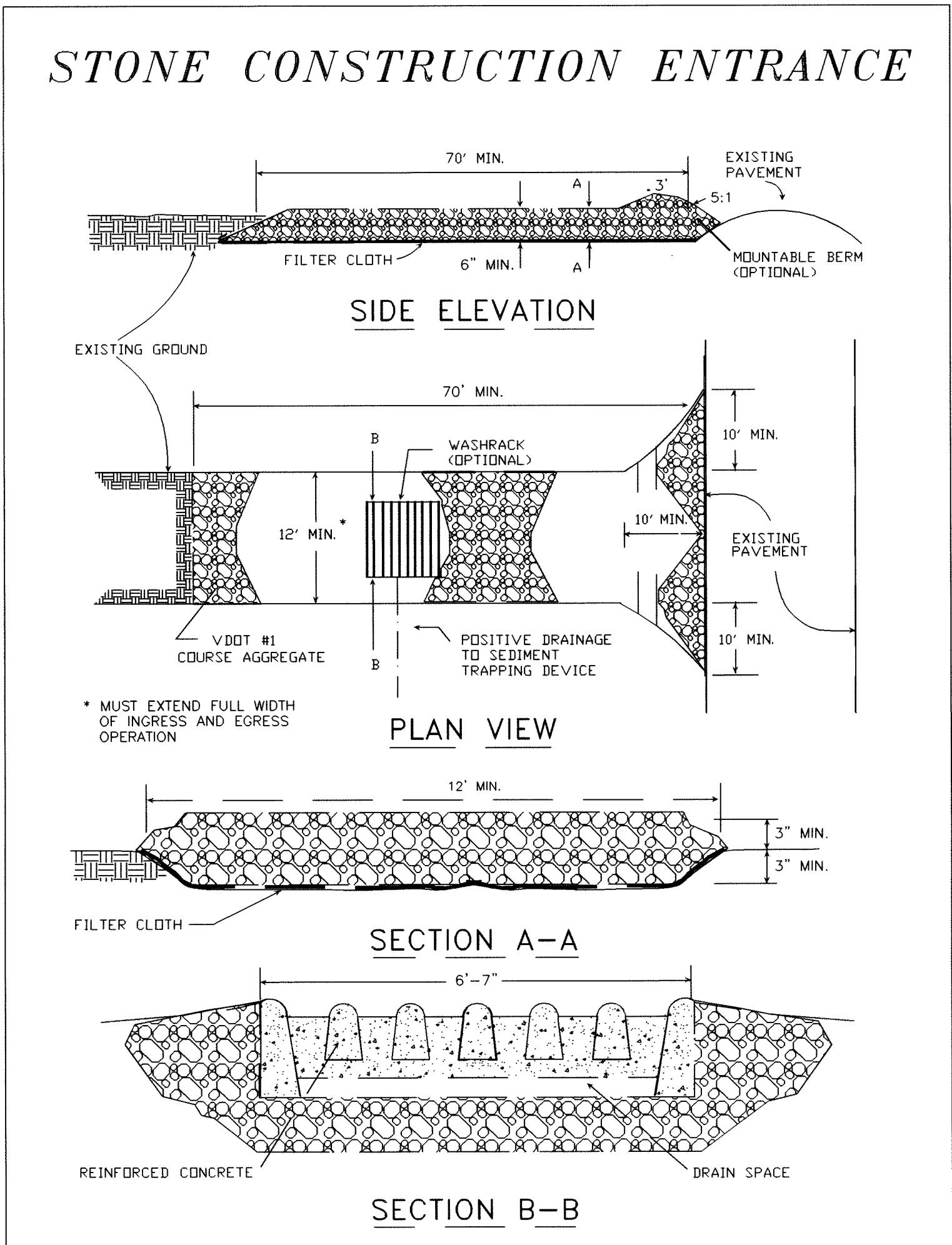
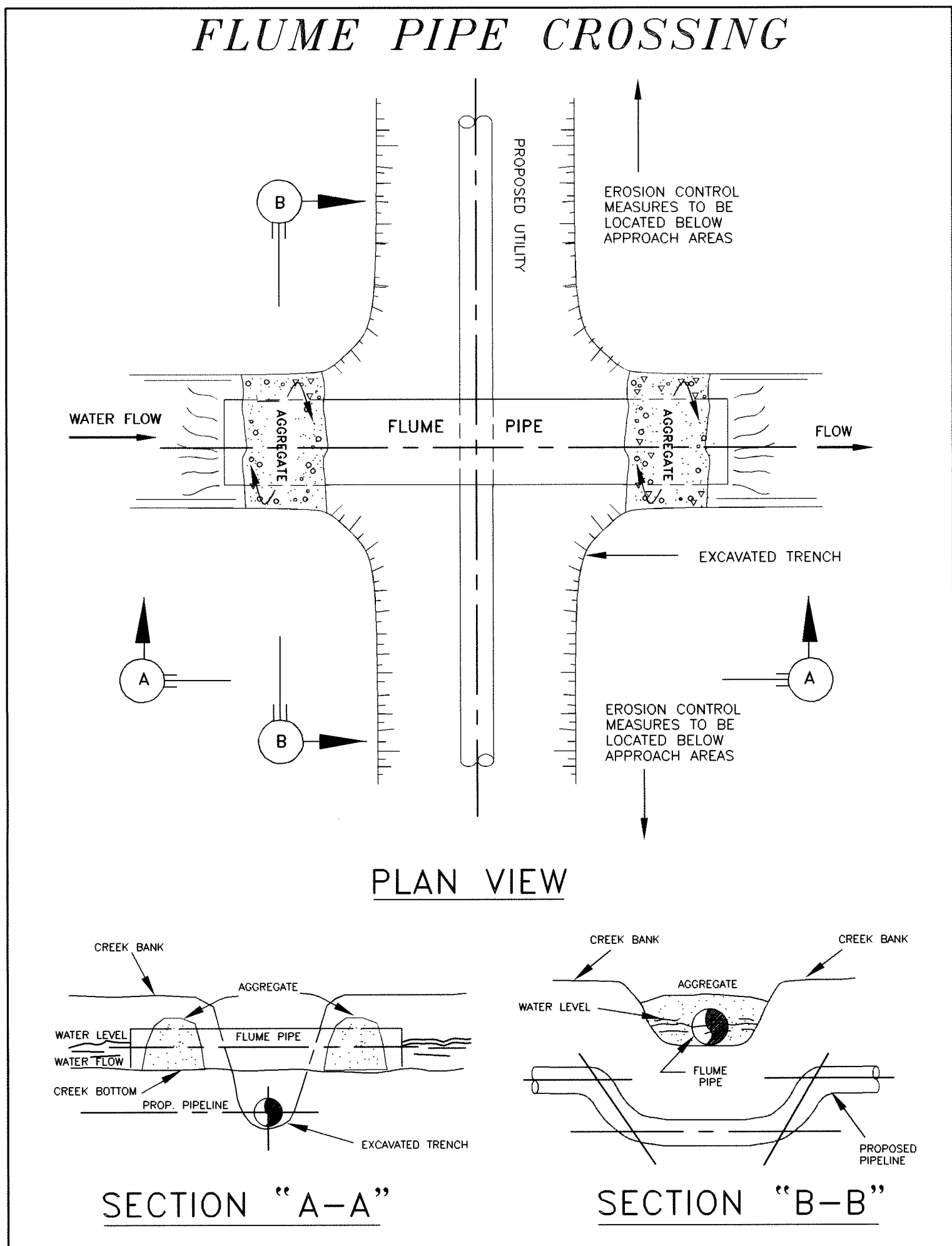
BOTETOURT COUNTY
PUBLIC FACILITIES & PROGRAMS
30 WEST BACK STREET, NUMBER 4
FINCASTLE, VA 24090
PH: 540-453-5353
FX: 540-473-8360



DESIGNED KRS
DRAWN DSG
CHECKED KRS
PROJECT NUMBER
DATE FEB., 2003
SCALE 1"=50'
CADD-FILE PTRSEW.dwg
SHEET



REVISIONS △ △ △ △	
PLANTATION ROAD SEWER EXTENSION PLAN AND PROFILE BASELINE B & C AMSTERDAM DISTRICT - BOTETOURT CO., VA	
BOTETOURT COUNTY PUBLIC FACILITIES & PROGRAMS 30 WEST BACK STREET, NUMBER 4 FINGERSH, VA 24090 PH: 540-475-8316 FX: 540-475-8360	
DESIGNED KRS DRAWN DSG CHECKED KRS PROJECT NUMBER DATE FEB., 2003 SCALE 1"=50' CADD-FILE PTRSEW.dwg SHEET	
5 OF 8 SHEETS	



GENERAL NOTES:

1. CONTRACTOR SHALL OBTAIN AND MAINTAIN COMPLIANCE WITH BOTETOURT COUNTY ISSUED LAND DISTURBING PERMIT. ALL FEES FOR LDP ISSUED BY BOTETOURT COUNTY SHALL BE WAIVED.
2. CONTRACTOR SHALL POST AN E&S BOND IN THE AMOUNT OF \$20,000 TO BE HELD BY THE BOTETOURT COUNTY E&S PROGRAM ADMINISTRATOR.
3. INSTALL UTILITY STREAM CROSSING AT ANY CHANNEL OR DRAINAGE WAY WHICH CURRENTLY IS CARRYING WATER.
4. CONTRACTOR SHALL BE RESPONSIBLE FOR INSTALLING A CONSTRUCTION ENTRANCE AT ANY STAGING OR STORAGE AREA AND SHALL ALSO BE RESPONSIBLE FOR RESTABILIZING AND DISTURBED AREAS WITH PERMANENT VEGETATION.

PS PERMANENT SEEDING MIXTURE

TYPE A	TYPE B (SLOPES 3:1 OR STEEPER)
15 OCTOBER TO 1 FEBRUARY K-31 FESCUE @ 5 LB / 1000 SF BORZY WINTER RYE @ 1/2 LB/1000 SF	15 MARCH TO 1 MAY CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB/1000 SF RED TOP @ 1/8 LB / 1000 SF
1 FEBRUARY TO 1 JUNE K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF	15 AUGUST TO 1 OCTOBER CROWN VETCH @ 1/2 LB / 1000 SF PERENNIAL RYEGRASS @ 1/2 LB/1000 SF RED TOP @ 1/8 LB / 1000 SF
1 JUNE TO 1 SEPTEMBER K-31 FESCUE @ 5 LB / 1000 SF GERMAN MILLET @ 1/2 LB / 1000 SF	
1 SEPTEMBER TO 15 OCTOBER K-31 FESCUE @ 5 LB / 1000 SF ANNUAL RYE @ 1/2 LB / 1000 SF	

LIME: 140 LB / 1000 SF PULVERIZED AGRICULTURAL LIMESTONE

FERTILIZER: 5-20-10 @ 25 LB / 1000 SF
38-0-0 @ 7 LB / 1000 SF

MULCH: REQUIRED, SHALL BE USED OVER ALL SEEDED AREAS AND SHALL BE APPLIED IN ACCORDANCE WITH SECTION 1.75 OF THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION.

SOIL CONDITIONING: INCORPORATION OF LIME AND FERTILIZER, SELECTION OF CERTIFIED SEED, MULCHING, MAINTENANCE OF NEW SEEDLINGS, AND RESEEDING SHALL BE IN ACCORDANCE WITH SPECIFICATIONS CONTAINED WITHIN THE VIRGINIA SOIL EROSION AND SEDIMENT CONTROL HANDBOOK, LATEST EDITION. ADDITIONAL SEEDING TO BE PERFORMED AS REQUIRED BY THE INSPECTOR.

SEED APPLICATION: APPLY SEED UNIFORMLY WITH A CYCLONE SEEDER, DRILL, CULTIPACKER SEEDER, OR HYDROSEEDER ON A FIRM, FRIABLE, SEEDBED. MAXIMUM SEEDING DEPTH SHALL BE 1/4 INCH.

TOTAL DISTURBED AREA = 2.5 Acres

General Erosion and Sediment Control Notes, Botetourt County, Va.

- ES-1: Unless otherwise indicated, all vegetative and structural erosion and sediment control practices will be constructed and maintained according to minimum standards and specifications of the Virginia Erosion and Sediment Control Handbook, latest edition, and Virginia Regulations VR 625-02-00 Erosion and Sediment Control Regulations.
- ES-2: The plan approving authority must be notified one week prior to the onsite preconstruction conference, one week prior to the commencement of land disturbing activity, and one week prior to the final inspection.
- ES-3: All erosion and sediment control measures are to be placed prior to or as the first step in clearing.
- ES-4: A copy of the approved erosion and sediment control plan & narrative, as well as a copy of the Land Disturbing Permit, shall be maintained on the site at all times. The Erosion and Sediment Control Administrator will deliver these materials at the onsite preconstruction conference.
- ES-5: 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-6: 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-7: All disturbed areas are to drain to approved sediment control measures at all times during the land disturbing activities and during site development until final stabilization is achieved.
- ES-8: During dewatering operations, water will be pumped into an approved filtering device.
- ES-9: The contractor shall inspect all erosion control measures periodically and after each runoff-producing rainfall event. Any necessary repairs or cleanup to maintain the effectiveness of the erosion control devices shall be made immediately. An inspection report must be filed with the Botetourt County Erosion & Sediment Control Administrator once every two weeks, beginning with commencement of the land disturbing activity, and within 48 hours of any runoff-producing rainfall event. Failure to submit a report will be grounds for immediate revocation of the Land Disturbing Permit. Reports must be postmarked within 24 hours of the deadline. A standard inspection report form will be supplied, which should be copied as necessary. This provision in no way waives the right of Botetourt County personnel to conduct site inspections, nor does it deny the right of the permittee(s) to accompany the inspector(s).

REVISIONS

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PLANTATION ROAD SEWER EXTENSION

SOIL EROSION AND SEDIMENT CONTROL DETAILS

AMSTERDAM DISTRICT - BOTETOURT CO., VA

COMMONWEALTH OF VIRGINIA

DAVID S. GIVENS

No. 033971

2-18-2003

PROFESSIONAL ENGINEER

BOTETOURT COUNTY

PUBLIC FACILITIES & PROGRAMS

30 WEST BACK STREET, NUMBER 4

FINCASTLE, VA 24090

PH: 540-473-8316

FX: 540-473-8360

DESIGNED KRS

DRAWN DSG

CHECKED KRS

PROJECT NUMBER

DATE FEB., 2003

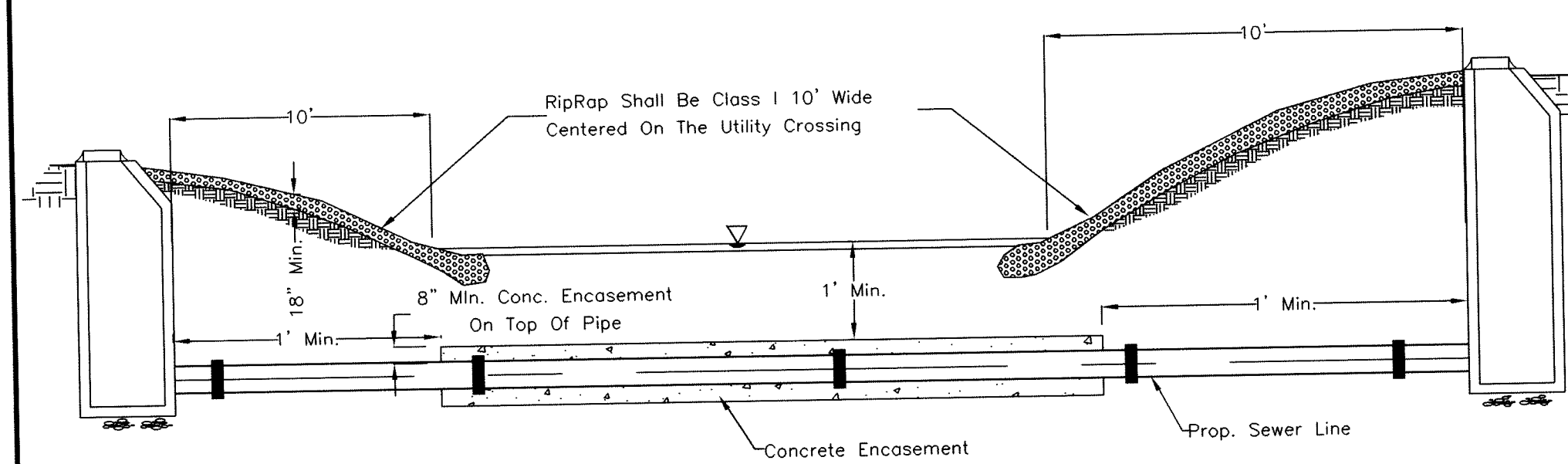
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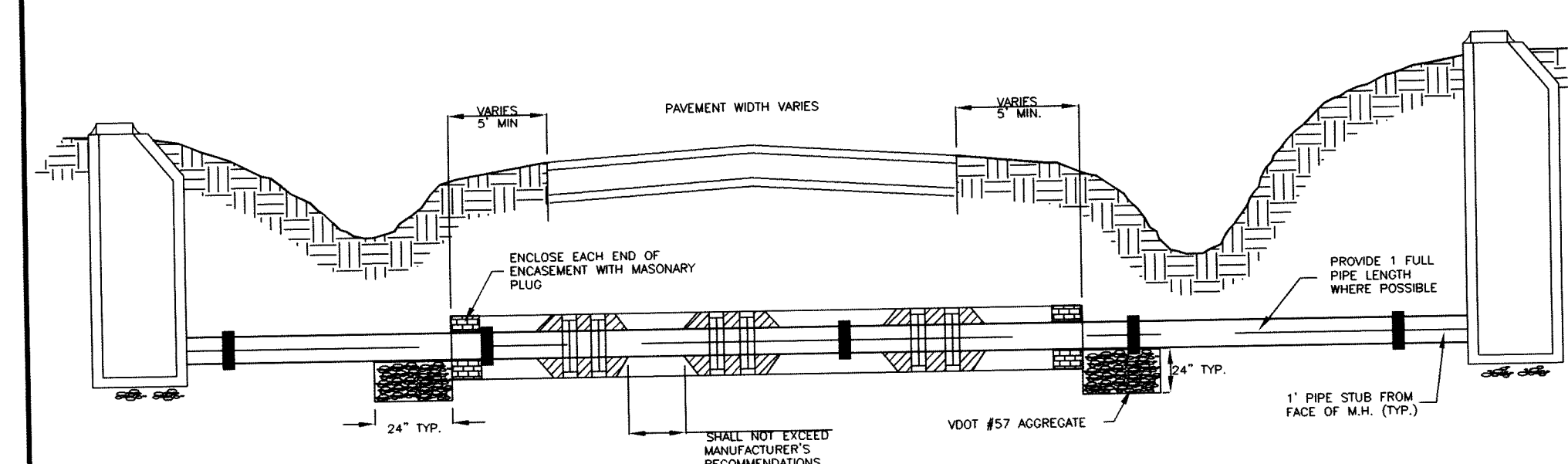
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6

OF 8 SHEETS

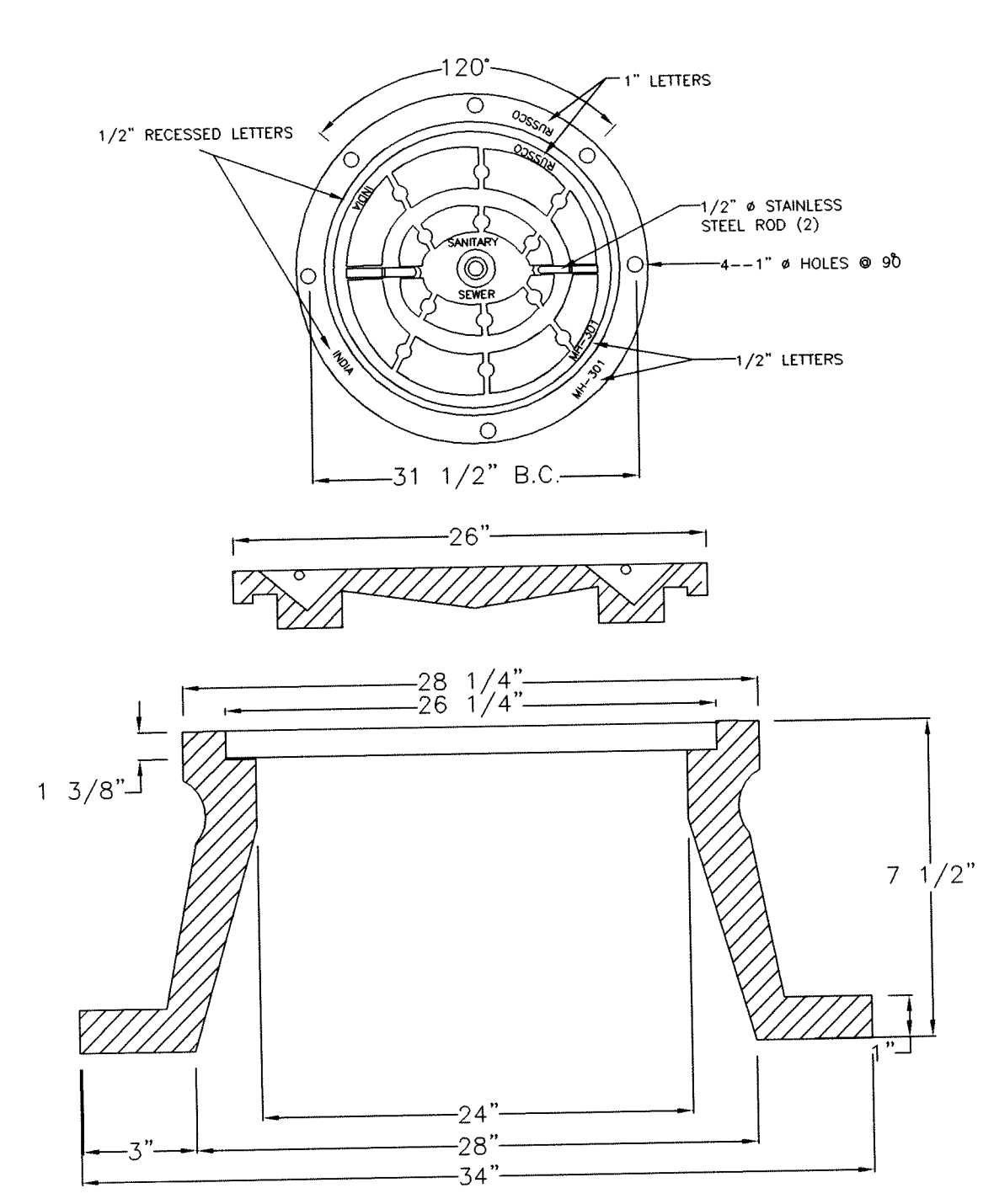


ENCASED CREEK CROSSING-SEWER

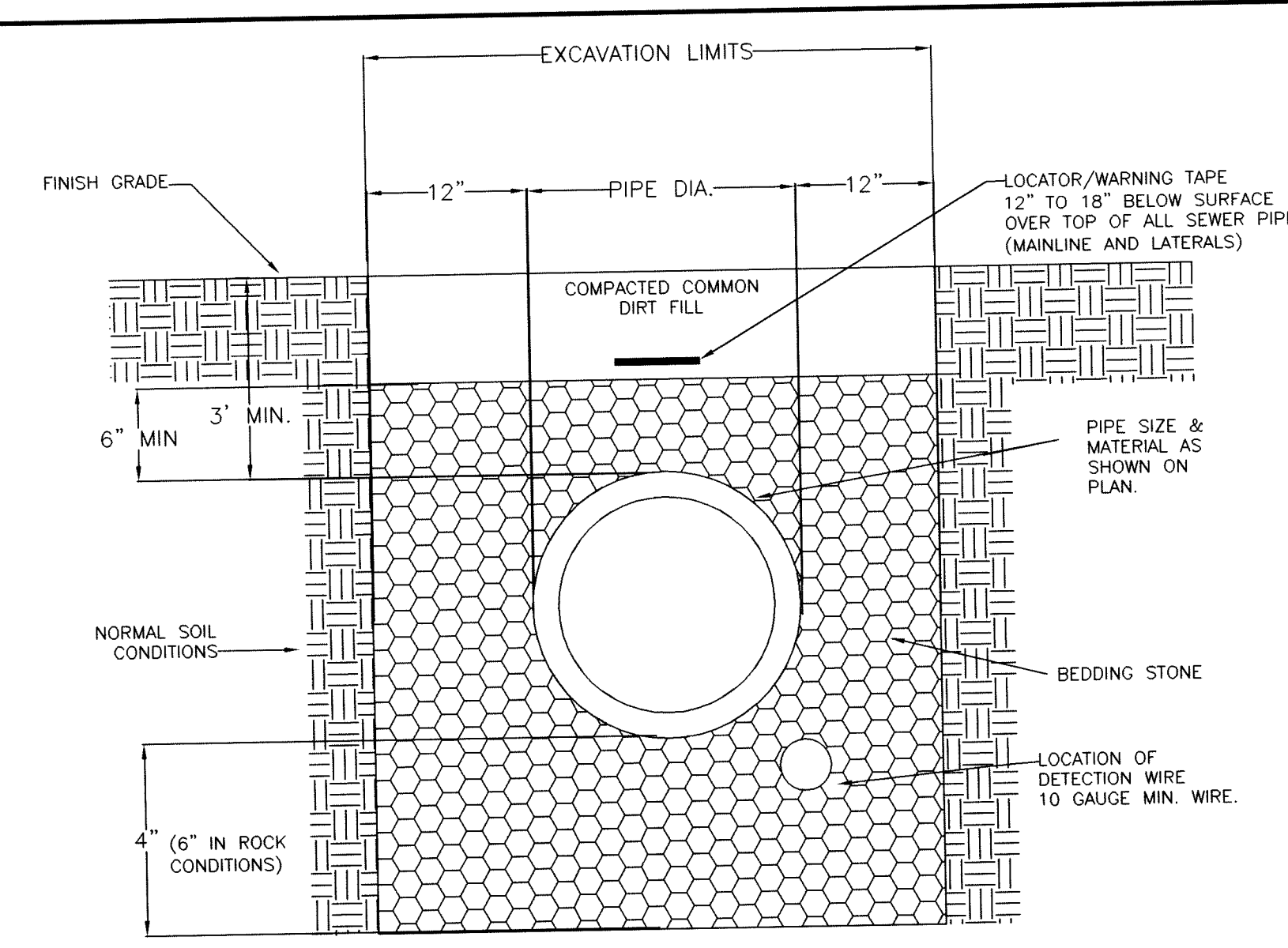


- NOTES:
- 1) SLOPE ENGAGEMENT TO MATCH SLOPE OF ENGASED SEWER AS SHOWN ON PLANS.
 - 2) STEEL ENGAGEMENT PIPE SHALL CONFORM TO THE REQUIREMENTS OF ASTM A138 FOR THE CLASS AND THICKNESS SPECIFIED AND SHALL HAVE BEVELED EDGES SUITABLE FOR FIELD WELDING. WALL THICKNESS OF PIPE SHALL BE 1/4" MIN.
 - 3) CARRIER PIPE SHALL BE FLANGED DUCTILE IRON.
 - 4) CARRIER PIPE SHALL BE LINED WITH TAR PAPER AT MASONRY PLUG.
 - 5) MASONRY PLUG SHALL BE OF WATERTIGHT CONNECTION WITH A WEEP HOLE FOR DRAINAGE.
 - 6) FOR OPEN CUT INSTALLATION:
 - A. CONTRACTOR SHALL REPLACE CUT MATERIAL WITH APPROVED CRUSHED AGGREGATE AND SHALL ACHIEVE 95% COMPACTION PER VDOT REQUIREMENTS.
 - B. CONTRACTOR SHALL MATCH EXISTING PAVEMENT CROSS SECTION AND SHALL REPLACE PAVEMENT AND SURFACE TO ORIGINAL CONDITION OR BETTER.
 - 7) FOR JACK AND BORE INSTALLATIONS:
 - A. CONTRACTOR SHALL FIELD VERIFY LOCATION OF BORE PIT AND CONFIRM WITH ENGINEER BEFORE PROCEEDING WITH ENGAGEMENT INSTALLATION.

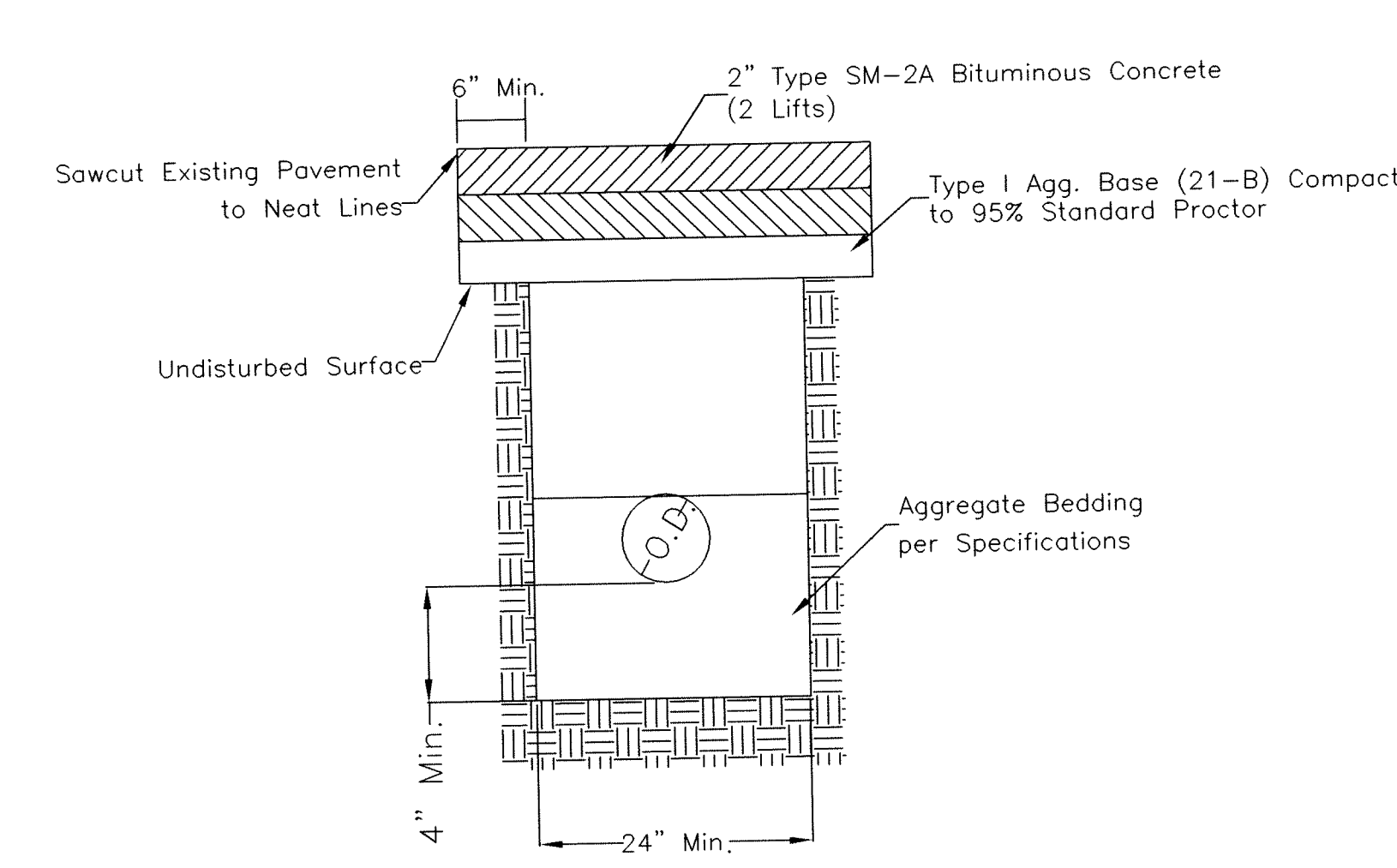
ENCASED ROAD CROSSING-SEWER
NOT TO SCALE



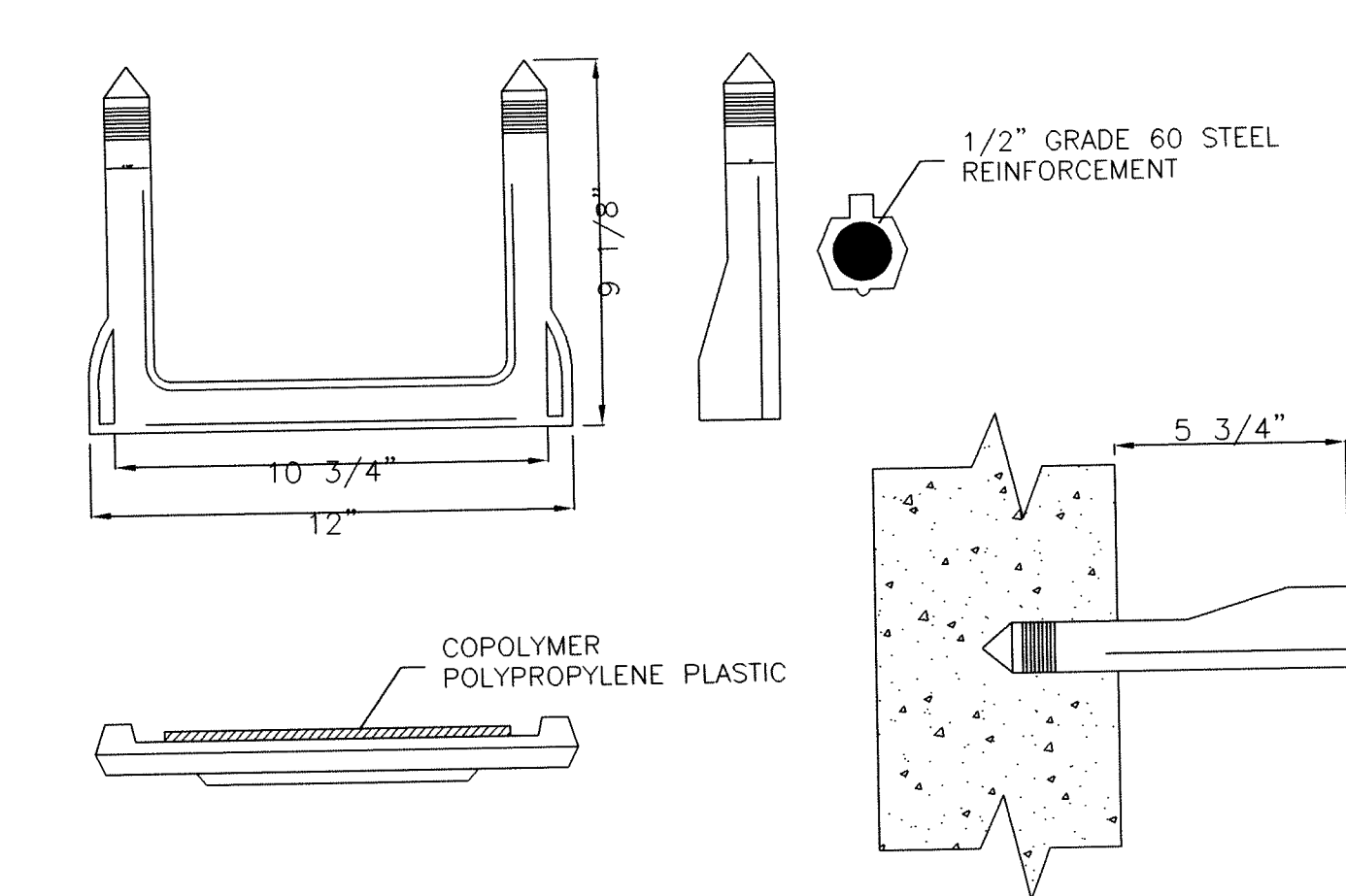
MANHOLE FRAME & COVER
(RUSSEL PIPE & FOUNDRY MH-300)



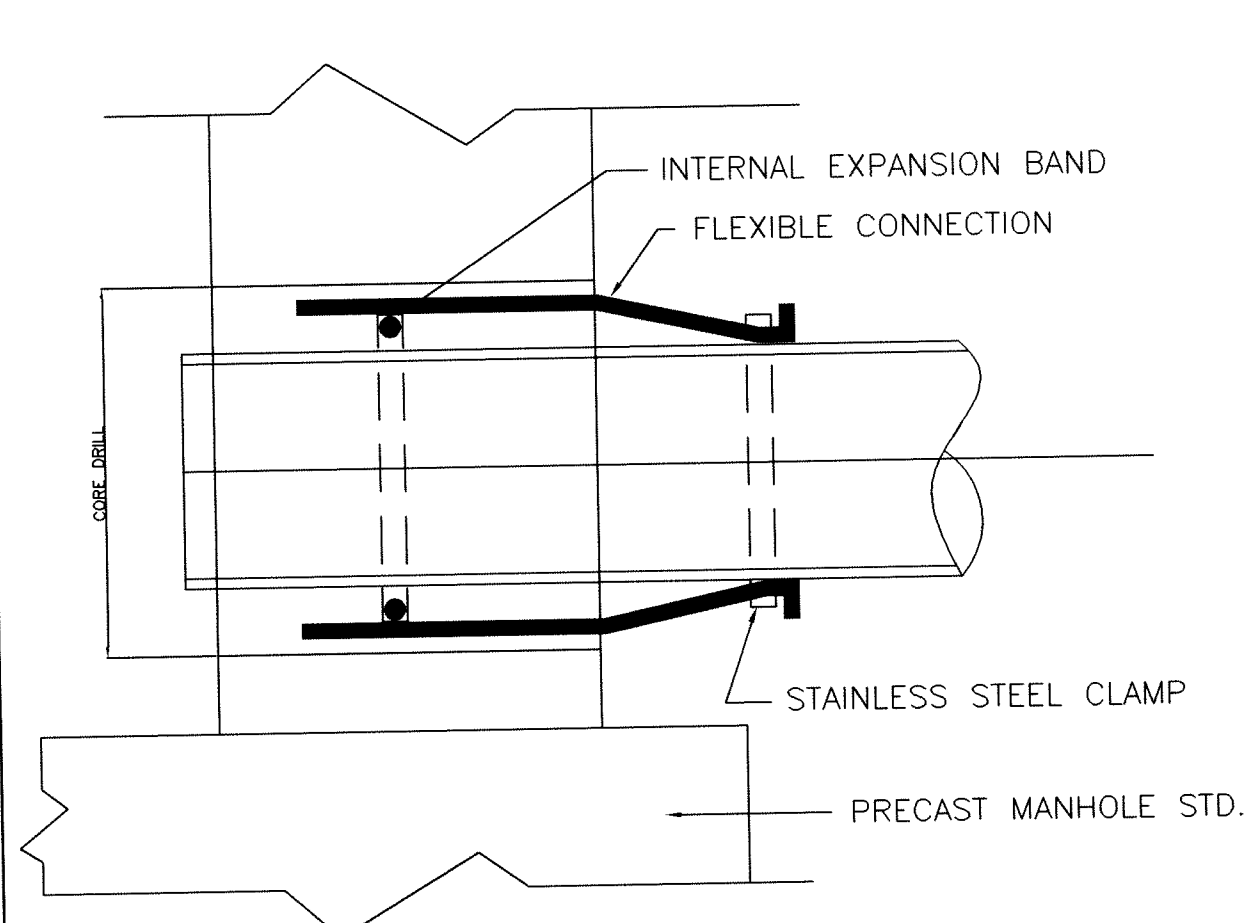
SEWER BEDDING & PROTECTION



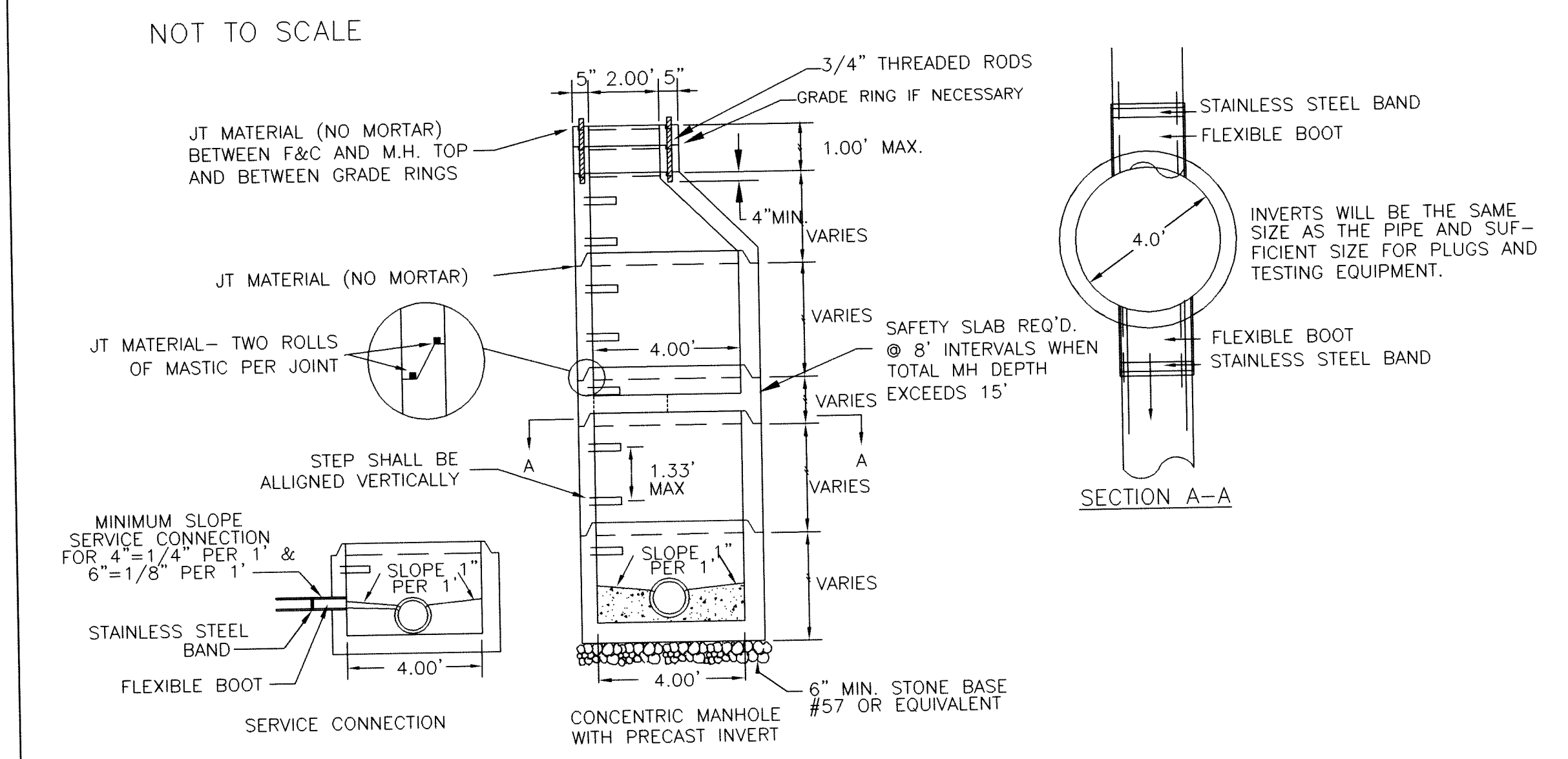
PAVEMENT REMOVAL AND INSTALLATION



STEP DETAIL

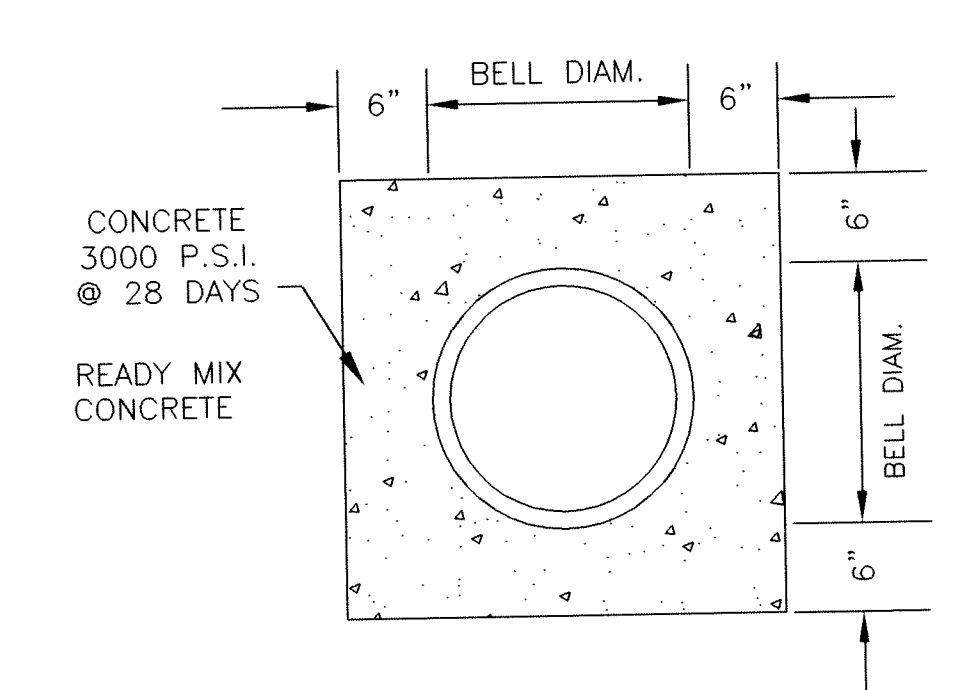


FLEXIBLE CONNECTION



- NOTES:
1. ALL MANHOLE FRAMES AND COVERS SHALL BE RUSSEL PIPE & FOUNDRY MH-301 IN NON-PAVED AREAS REQUIRING WATERTIGHT FRAME & COVERS AND MH-300 IN PAVED AREAS, OR APPROVED EQUAL.
 2. STEPS TO BE VERTICALLY ALIGNED.
 3. THE FRAME AND COVER SHALL BE PROPERLY ALIGNED WITH THE 2 FOOT OPENING OF THE MANHOLE STRUCTURE AND BOLTED IN PLACE.
 4. ALL SAMPLING MANHOLES SHALL BE CONSTRUCTED AS PER MANHOLE DETAILS. WHEN NECESSARY, THE FLAT TOP MANHOLE MAY BE SUBSTITUTED WITH ECCENTRIC OPENING AT STEPS.
 5. JOINT MATERIAL SHALL CONSIST OF TWO (2) ROLLS OF MASTIC PER JOINT. MASTIC SHALL BE PLACED AT THE TOP & BOTTOM OF EACH JOINT.

4' STANDARD MANHOLE
FOR PIPE 15" OR SMALLER



CONCRETE ENCASED PIPE

REVISIONS

PLANTATION ROAD SEWER EXTENSION

SANITARY SEWER DETAILS

AMSTERDAM DISTRICT - BOTETOURT CO., VA

COMMONWEALTH OF VIRGINIA

DAVID S. GIVENS

No. 033971

2-18-2003

PROFESSIONAL ENGINEER

BOTETOURT COUNTY

PUBLIC FACILITIES & PROGRAMS

50 WEST BACK STREET, NUMBER 4

FINCASTLE VA 24090

PH: 540-473-8316

FX: 540-473-8360

DESIGNED KRS

DRAWN DSG

CHECKED KRS

PROJECT NUMBER

DATE FEB., 2003

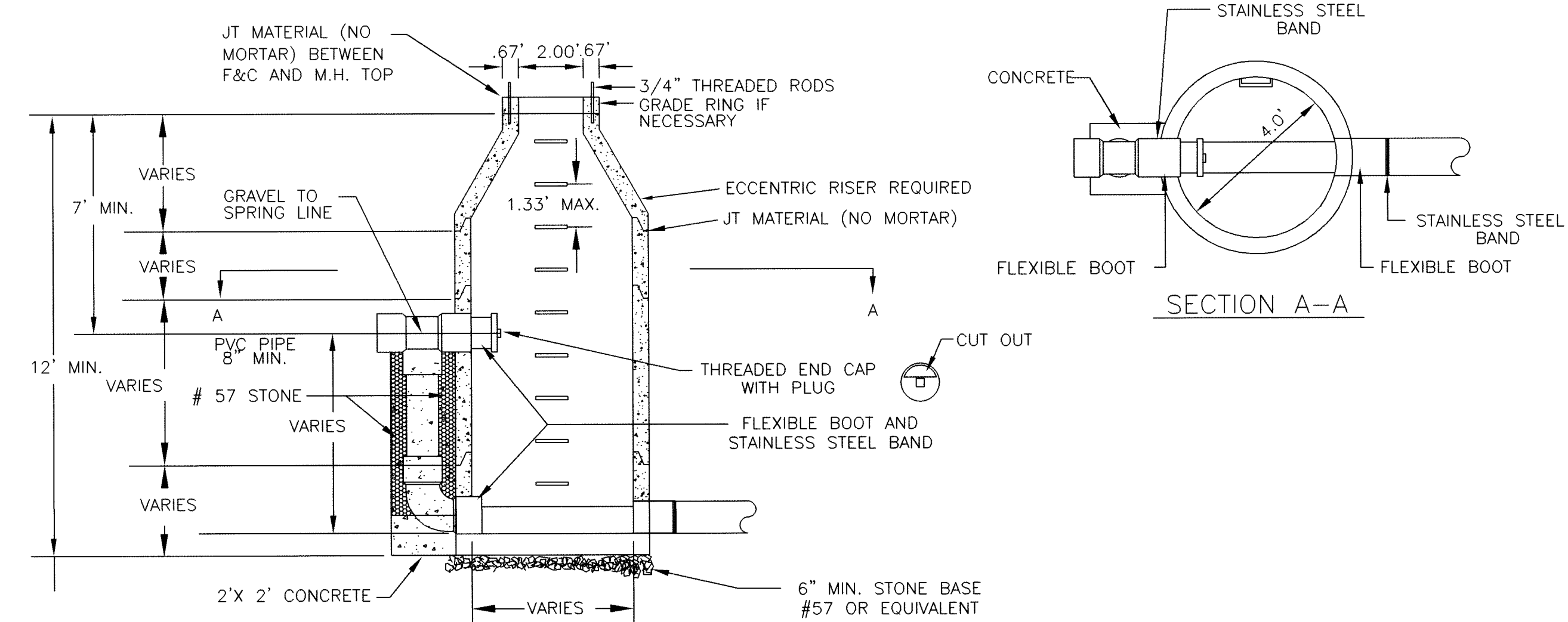
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OF 8 SHEETS



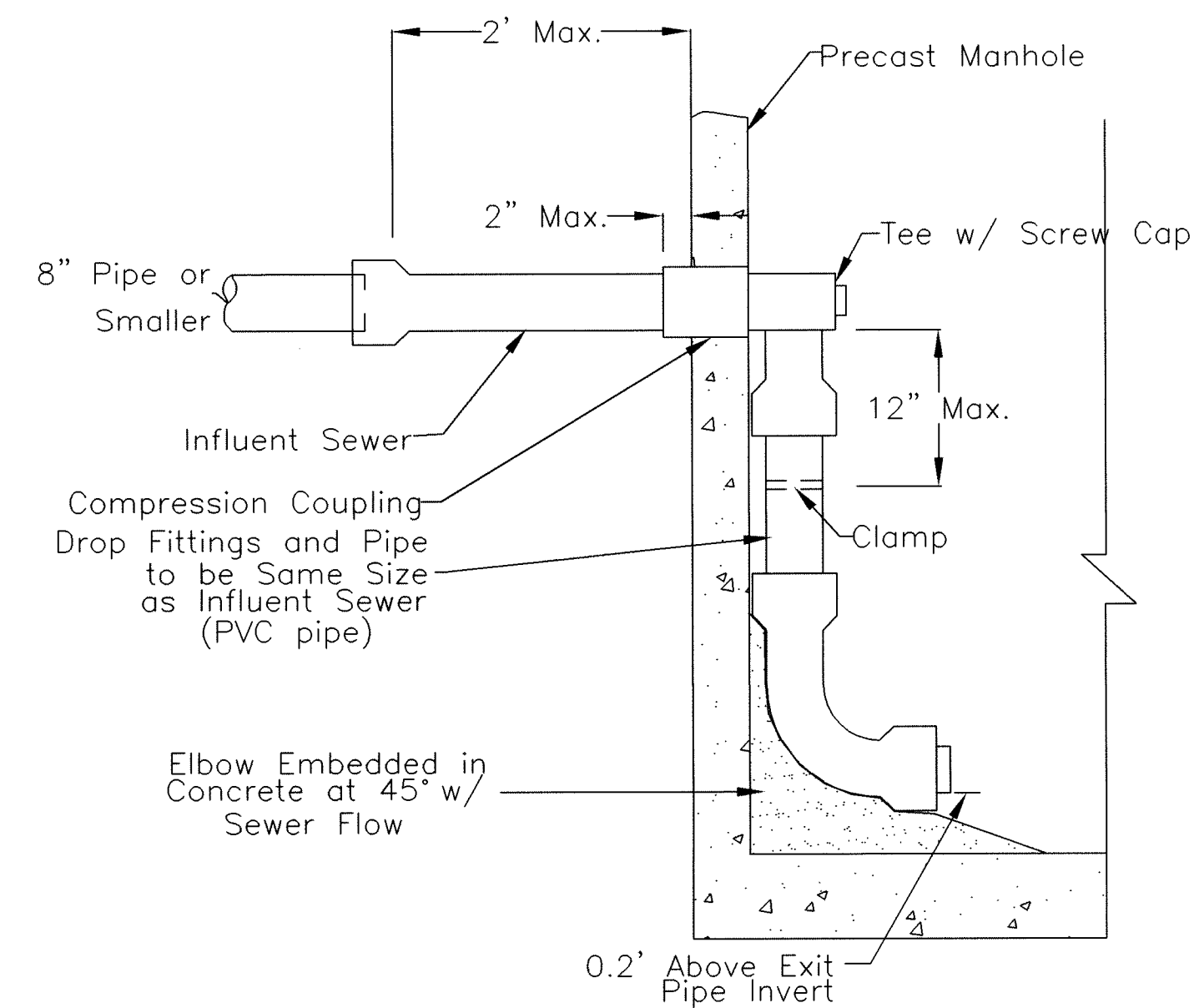
NOTE: REFERENCE DETAIL DRAWINGS IN SPECS FOR DROP CONNECTION USING DUCTILE IRON PIPE.

NOTES:

1. ALL MANHOLE FRAMES AND COVERS SHALL BE RUSSELL PIPE & FOUNDRY MH-301 IN NON-PAVED AREAS REQUIRING WATERTIGHT FRAME & COVERS AND MH-300 IN PAVED AREAS, OR APPROVED EQUAL.
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OUTSIDE DROP MANHOLE FOR USE WITH PVC PIPE

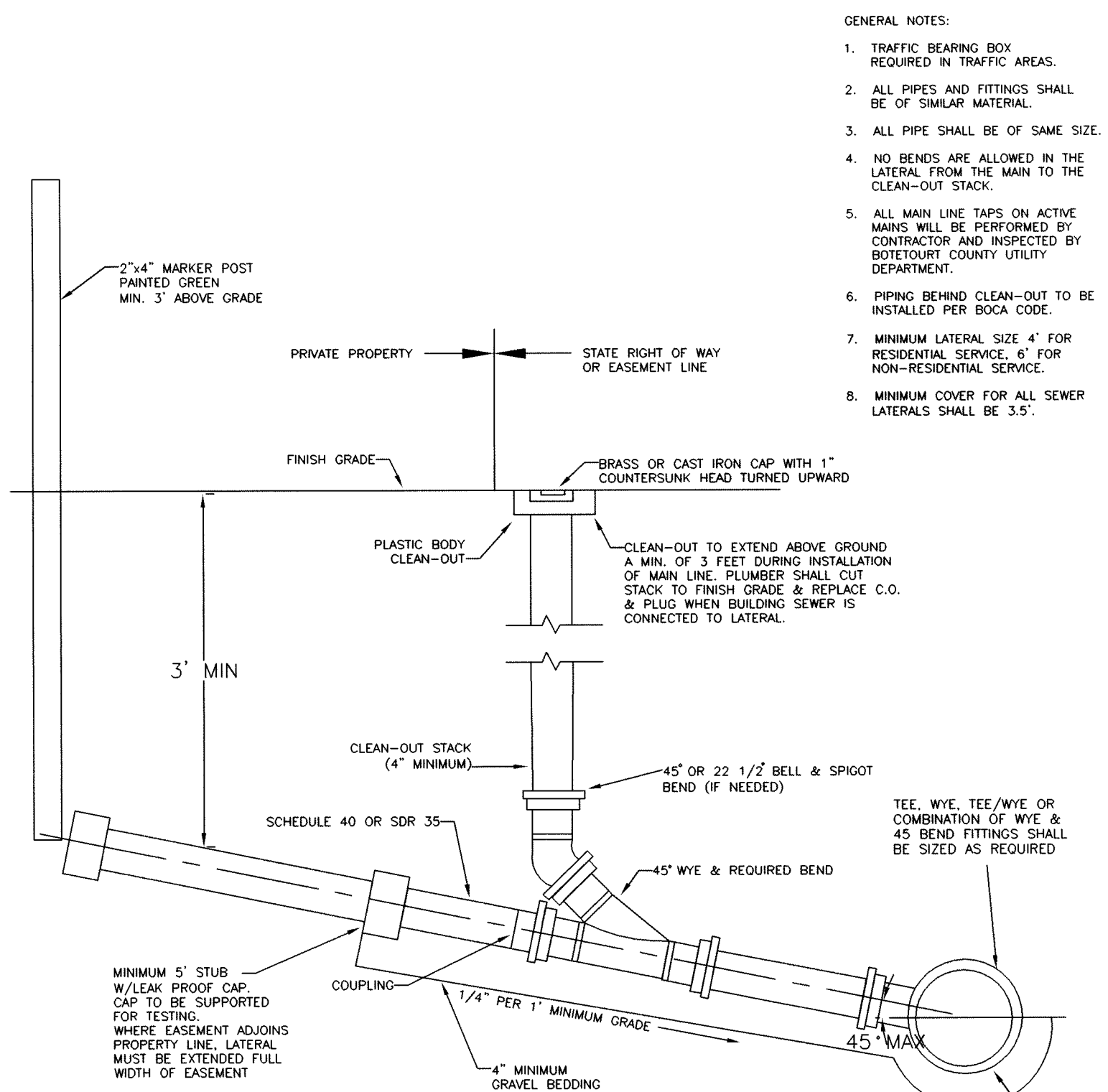
Pipe To Be Placed As Close As Possible To M.H. Wall And To Be Secured With 1 1/2" X 12 Ga. Stainless Steel Clamps, 6' O.C. Max. Anchor to M.H. Wall w/ 2 1/2" Stainless Steel Anchor Bolts



Inside Drop Connection

*Inside Drop Construction Is To Be at Every Location Where The Influent Invert Is Greater Than or Equal To 2'-0" Above Effluent Sewer Invert

INSIDE DROP MANHOLE



SANITARY SEWER LATERAL

GENERAL NOTES:

1. TRAFFIC BEARING BOX REQUIRED IN TRAFFIC AREAS.
2. ALL PIPES AND FITTINGS SHALL BE OF SIMILAR MATERIAL.
3. ALL PIPE SHALL BE OF SAME SIZE.
4. NO BENDS ARE ALLOWED IN THE LATERAL FROM THE MAIN TO THE CLEAN-OUT STACK.
5. ALL MAIN LINE TAPS ON ACTIVE MAINS WILL BE PERFORMED BY CONTRACTOR AND INSPECTED BY BOTETOURT COUNTY UTILITY DEPARTMENT.
6. PIPING BEHIND CLEAN-OUT TO BE INSTALLED PER BOCA CODE.
7. MINIMUM LATERAL SIZE: 4" FOR RESIDENTIAL SERVICE, 6" FOR NON-RESIDENTIAL SERVICE.
8. MINIMUM COVER FOR ALL SEWER LATERALS SHALL BE 3.5'.

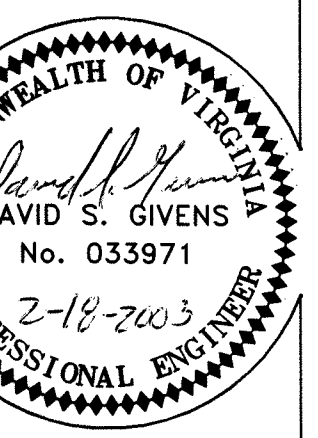
NOTES:

1. CONTRACTOR TO CONTACT MISS UTILITY PRIOR TO COMMENCING WORK
2. CONTRACTOR TO INSTALL MINIMUM 5" GRAVEL CONSTRUCTION ENTRANCE. LOCATION TO BE DETERMINED & APPROVED BY BOTETOURT COUNTY E&S ADMINISTRATOR
3. CONTRACTOR SHALL USE FLUME CROSSING, AS SPECIFIED IN VA. EROSION & SEDIMENT CONTROL HANDBOOK, MOST RECENT ED., MIN. STD. & SPEC. 3.25 "UTILITY STREAM CROSSING"

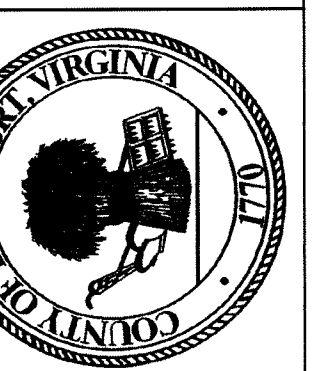
REVISIONS

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PLANTATION ROAD SEWER EXTENSION
SAINTARY SEWER DETAILS
AND GENERAL NOTES
AMSTERDAM DISTRICT - BOTETOURT CO., VA



BOTETOURT COUNTY
PUBLIC FACILITIES & PROGRAMS
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SHEET	8

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