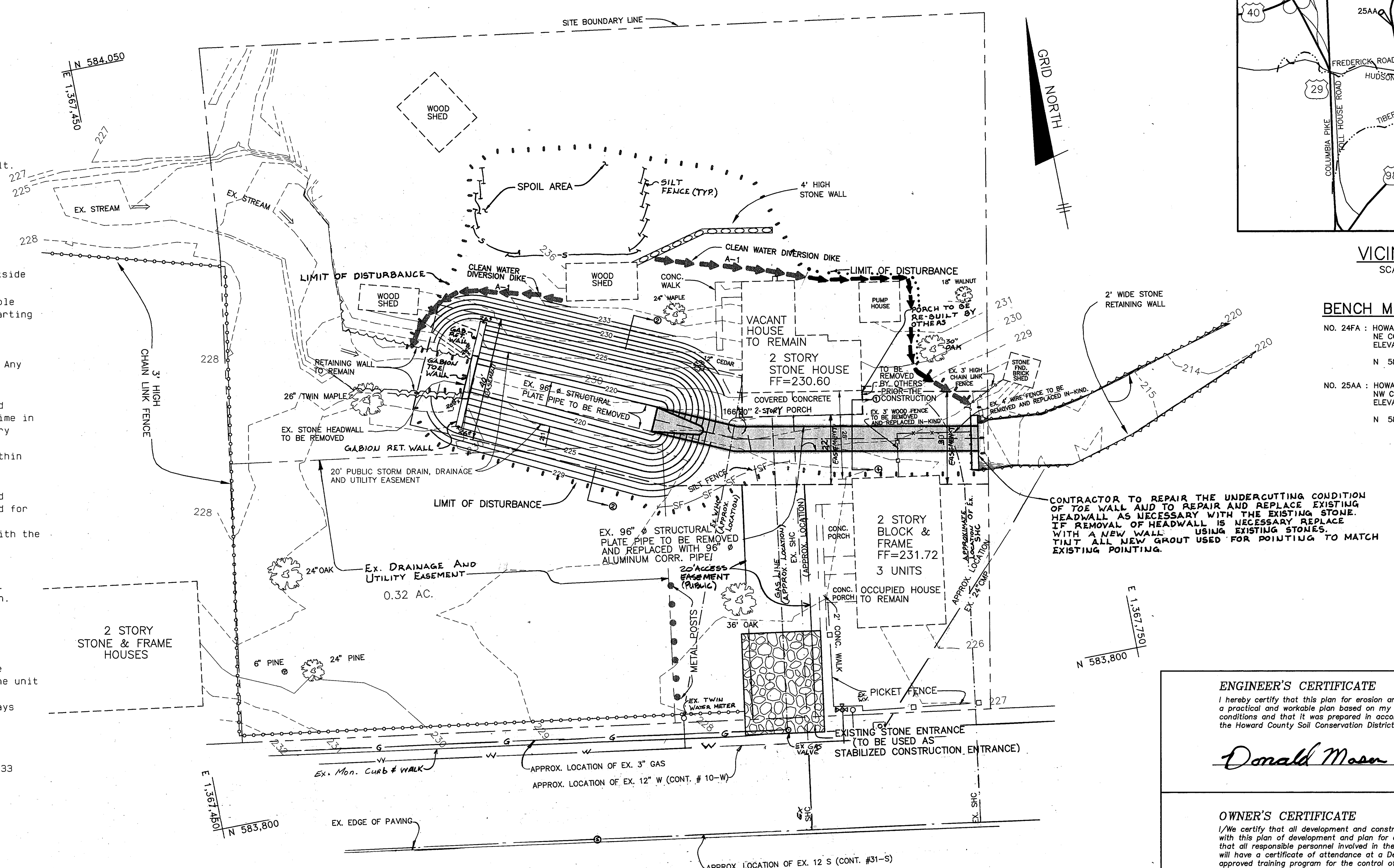
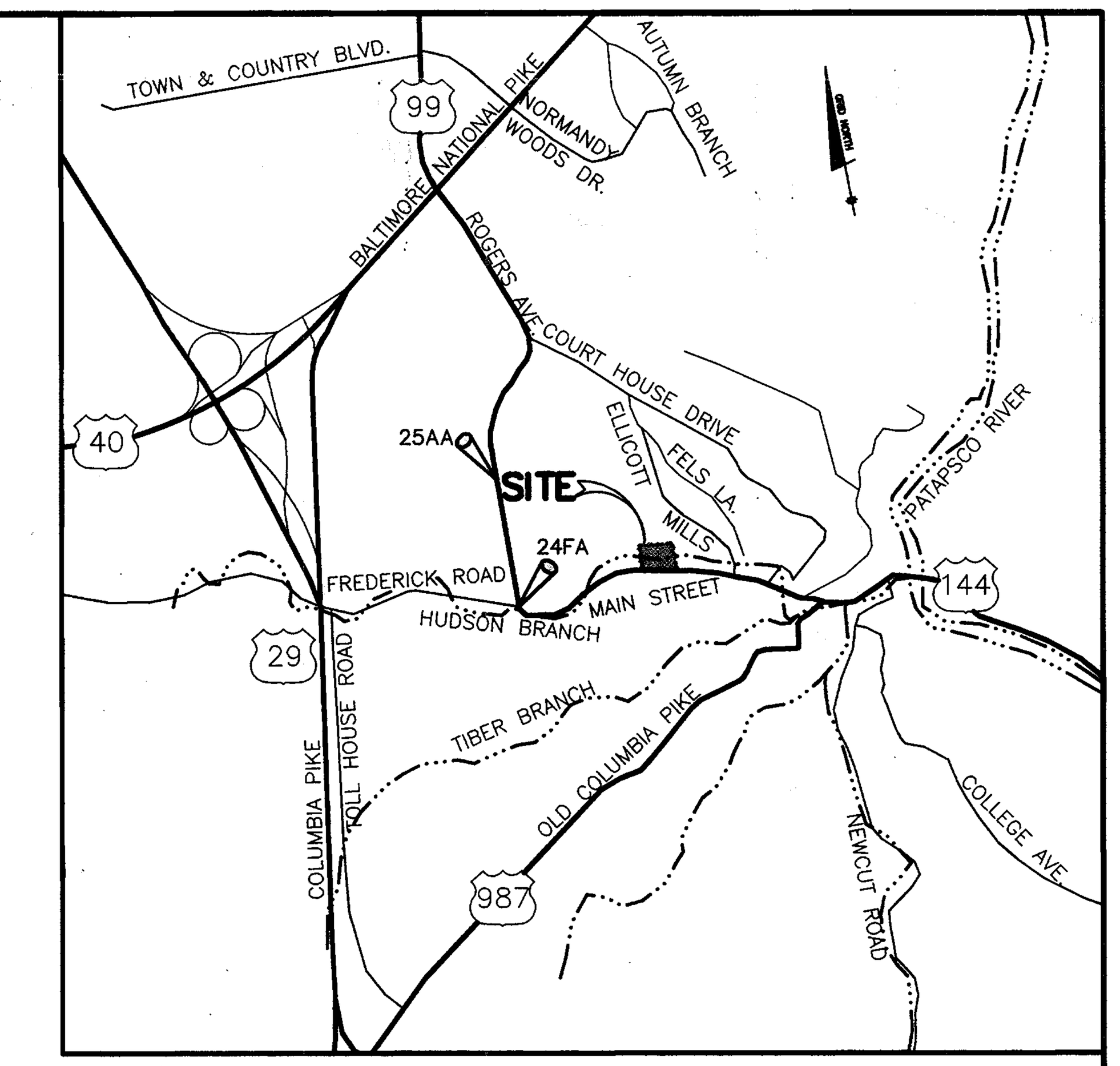
GENERAL NOTES

1. All construction shall be in accordance with the latest standards and specifications in Howard County, plus MSHA standards and specifications, if applicable.
2. The contractor shall notify the Department of Public Works/Division of Construction Inspection at (410) 313-1870 at least (five) 5 working days prior to the start of work.
3. The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
4. Project Background:
   Location: Tax Maps 25 - Parcel 260
   Zoning: R-ED
   Total Tract Area: 1.27 Ac.+/-
   Number of Proposed Lots: N/A
   Date Sketch Plan Approved: N/A
   DPZ Reference #: N/A
   Date Preliminary Plan Denied: N/A
   DPZ Reference #: N/A
   Date Preliminary Equivalent Sketch Plan Approved: N/A
   DPZ Reference #: N/A
5. Traffic control devices, markings and signing shall be in accordance with the most current edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
6. The contours shown hereon have been taken from field run topographic surveys at 1' interval. The topography was prepared by TSA Group, Inc. dated Feb. 29, 1996.
7. Howard County monuments 24FA and 25AA were used for horizontal and vertical control datum (NAD 83).
8. Water and Sewer for this subdivision is public.
9. The contractor shall be responsible for the restoration of the existing driveway damages during construction.
10. Trees are to be protected from damage to maximum extent possible. Trees located outside the construction strip are not to be removed or damaged by the contractor.
11. The existing utilities and obstructions shown on the plans are from the best available records and shall be verified by the contractor to his own satisfaction before starting construction. Neither the engineer nor the Howard County Department of Public Works warrant or guarantee the completeness or correctness of the information shown.
12. The contractor shall take all necessary precautions to protect existing utilities. Any damage due to the contractor's negligence shall be repaired immediately at the contractor's expense. Clear all utilities by a minimum of six (6) inches.
13. Test pits shall be dug at all utility crossings to determine existing horizontal and vertical alignment of utilities. Test pits shall be dug a sufficient amount of time in advance of the construction or trenching operation, in order to allow for necessary adjustments.
14. All utility poles must be cleared by five (5) feet. If the construction work is within five (5) feet of a utility pole, the pole must be braced.
15. All pipe elevations shown are invert elevations; Unless specified otherwise.
16. Contractor shall remove trees, stumps and roots along line of excavation as directed by the engineer. Payment for such removal shall be included in the unit price bid for furnishing and laying storm drain pipe.
17. Existing water house connections and sewer house connections that are in conflict with the proposed storm drainage shall be adjusted by the contractor.
18. For details not shown on the drawings, and for materials and construction methods, the contractor shall abide by the Howard County Design Manual, Volume IV, "Standard Specifications and Details for Construction" and the Special Provisions. In the event of any discrepancy between these two sources, the latter shall govern.
19. Existing fences, signs and shrubs disturbed by the work shall be reconstructed or replaced in kind.
20. All slopes and/or disturbed areas shall receive 2-inch depth of topsoil and sodding, except where otherwise indicated on the plans or as directed by the engineer.
21. The contractor shall locate existing utilities a minimum of two (2) weeks in advance of construction operations in vicinity of utilities. Cost shall be included in the unit prices bid for storm drain items.
22. The contractor shall notify the following utilities or agencies at least five (5) days before starting work shown hereon:
    Miss Utility 1-800-257-7777
    Baltimore Gas & Electric Co., Underground Electrical Distribution Engineering Damage Control 234-6313
    Baltimore Gas & Electric Co., Underground Gas Distribution Engineering 234-5533
    Chesapeake and Potomac Telephone Co. 725-9976
    Colonial Pipeline Company 781-4641
    Howard County Bureau of Utilities 313-4900
    Howard County Bureau of Construction Inspection 792-7272
    Howard County Traffic Division 313-2430
    Howard County Surveying and Drafting Division 313-2417
23. Contractor shall have the pipe manufacturer's representative on site to inspect the installation of the pipe and certify that it was installed properly.
24. The existing structures should be photographed in detail by the contractor immediately before, during and immediately after construction.
25. The buildings should be inspected by the contractor both before and after construction. During the construction, contractor should periodically check the horizontal and vertical movement of existing structures. Any movement of the existing structures, construction must be stopped immediately and the engineer shall be notified.
26. The boundary line shown on this plan is not a surveyed boundary.
27. CONTRACTOR TO RESTRICT PARKING 25' IN BOTH DIRECTIONS FROM S.C.E.
28. GAS LINES MAY BE PRESENT ON THE SITE. CONTRACTOR MUST CALL "MISS UTILITY" TO LOCATE ALL GAS LINES.
29. CLEAN WATER DIVERSION DIKES ARE TO BE LEFT IN PLACE UNTIL SLOPES ARE WELL STABILIZED.





VICINITY MAP
SCALE 1" = 2000'

BENCH MARK:

NO. 24FA : HOWARD COUNTY CONC. MONUMENT LOCATED AT THE NE CORNER OF ROGERS AVE. AND FREDERICK RD. ELEVATION = 263.815
N 583751.4079 E 1366091.8553

NO. 25AA : HOWARD COUNTY CONC. MONUMENT LOCATED AT THE NW CORNER OF ROGERS AVE. AND PATAPSCO RIVER RD. ELEVATION = 308.539
N 585307.1722 E 1366070.9705

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.

Donald Mason 3/21/97
Date

OWNER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this project will have a certificate of attendance at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Owner — 3/26/97 Date

NO.	DATE	REVISION
1	3/97	REV. PER COUNTY COMMENTS
2	5/97	REV. PER COMMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
DIRECTOR OF PUBLIC WORKS — 6/5/97 DATE
CHIEF, BUREAU OF HIGHWAYS — 6-5-97 DATE
CHIEF, BUREAU OF ENGINEERING — 6/3/97 DATE
CHIEF, TRANSPORTATION AND WATERSHED DIVISION — 6/3/97 DATE

APPROVED: THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
HOWARD SOIL CONSERVATION DISTRICT — 6/9/97 DATE

APPROVED: REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.
NATURAL RESOURCES CONSERVATION SERVICE — 6/9/97 DATE

Plotted: March 21, 1997
Acad Dwg: 704451

NOTE: 48" HIGH TEMP. SAFETY FENCE SHALL BE INSTALLED AROUND THE LIMIT OF CONSTRUCTION AREA DURING AND AFTER WORKING HOURS. WARNING SIGNS MUST BE POSTED.

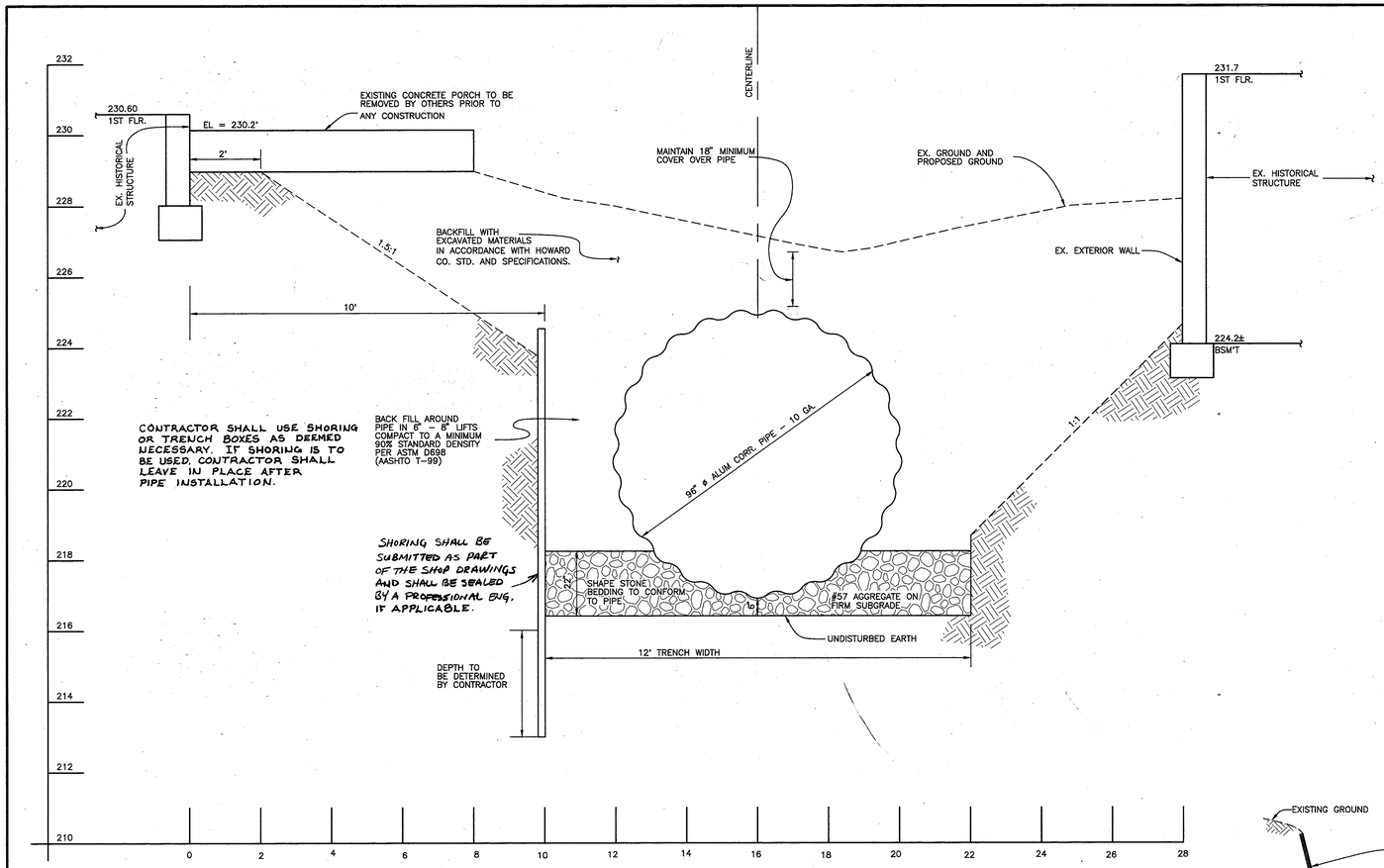
C1077K01

THIS PROJECT HAS BEEN AUTHORIZED UNDER NATIONWIDE PERMIT NO. 3. THE PERMIT NO. IS 199661706 / 96-NT-0066

OWNER/DEVELOPER:
ELLICOTT CITY PROPERTIES, INC.
C/O BARBARA SCHULTE, PRESIDENT
4555 ILCHESTER ROAD
ELLICOTT CITY, MD. 21043
(410) 788-5058

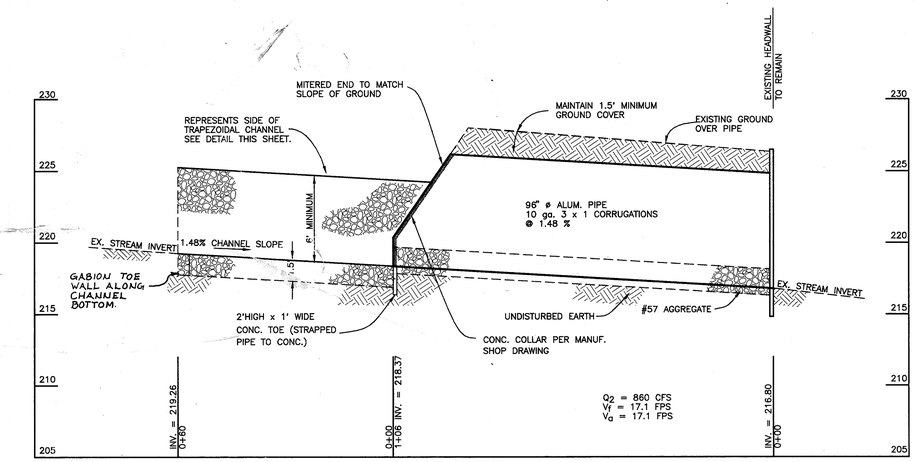
PROJECT: CAPITAL PROJECT D-1119
LOCATION: TAX MAP 25 - PARCEL 260, 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TITLE: REPLACEMENT OF THE MAIN STREET CULVERT ON THE HUDSON BRANCH
DATE: NOV., 1996 — PROJECT NO. 0873
Design: CAM — Draft: JMC — SCALE: 1"=20' — DRAWING 1 OF 3

D-1077-01 D1077_01



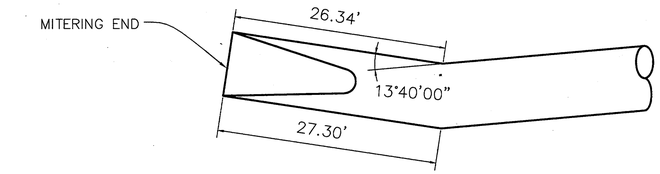
X-SECTION - ① TYPICAL PIPE INSTALLATION SECTION

SCALE: HORIZONTAL 1" = 2'
VERTICAL 1" = 2'



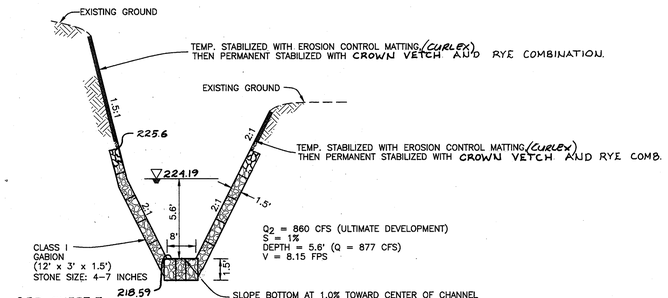
CULVERT PROFILE

96" ø ALUMINUM CORRUGATED PIPE
3 x 1 CORRUGATIONS, 10 ga.
SCALE: 1" = 5' VERT.
1" = 20' HORIZ.



96" ø PIPE ANGLE DETAIL

NOT TO SCALE



SECTION ②

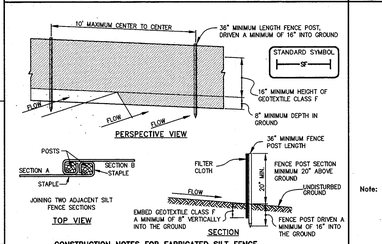
TYPICAL OPEN CHANNEL SECTION WITH GABION

SCALE: 1" = 5' VERT.
1" = 20' HORIZ.

NOTES:

1.) THE REMOVAL/INSTALLATION OF THE PIPE THAT IS NOT DIRECTLY BETWEEN THE TWO (2) EXISTING STRUCTURES MAY BE LAID BACK TO A FLATTER SLOPE TO ELIMINATE SHORING. THIS SHALL BE DETERMINED BY THE CONTRACTOR.
2.) CONTRACTOR SHALL HAVE THE PIPE MANUFACTURER ON-SITE DURING INSTALLATION TO ENSURE THAT THE PIPE IS PROPERLY BEDDED, CONNECTED, HANDLED, AND BACKFILLED.
3.) PIPE MATERIAL SHALL BE 10 GA. 3 x 1 CORRUGATED ALUMINUM PIPE - 96" DIAMETER AS MANUFACTURED BY CONTECH CONSTRUCTION PRODUCTS, INC. OR EQUAL
4.) INSTALLATION OF THE PIPE SHALL BE IN 20 FOOT SECTIONS AND CONNECTED WITH CONTECH MANUFACTURED HUGGER BANDS OR EQUAL. SEE SEQUENCE OF CONSTRUCTION #10 FOR GASKET SPECIFICATIONS (SHEET 3 OF 3).
5.) GROUT AROUND PIPE AT THE EXISTING STONE HEADWALL (DOWN STREAM). TINTING THE NEW GROUT WHEN POINTING TO MATCH EXISTING GROUT.
6.) MITER THE PROPOSED 96" ø PIPE AT THE UPSTREAM END OF PIPE.
7.) SHORING IS TO BE LEFT IN PLACE TO AVOID GROUND MOVEMENT DURING REMOVAL (IF APPLICABLE).

DETAIL 22 - SILT FENCE



CONSTRUCTION NOTES FOR FABRICATED SILT FENCE

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pond per linear foot.
2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E - 15 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SILT FENCE

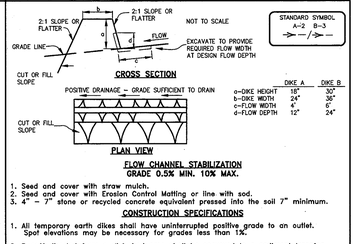
SILT FENCE DESIGN CRITERIA

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE E - 15 - 3A | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 1 - EARTH DIKE



FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum.

CONSTRUCTION SPECIFICATIONS

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.
2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.
3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.
4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.
5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.
6. Fill shall be compacted by earth moving equipment.
7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.
8. Inspection and maintenance must be provided periodically and after each rain event.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE | PAGE A - 1 - 6 | MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

DIRECTOR OF PUBLIC WORKS — DATE 6/5/97
CHIEF, BUREAU OF HIGHWAYS — DATE 6-5-97
CHIEF, BUREAU OF ENGINEERING — DATE 6/3/97
CHIEF, TRANSPORTATION AND WATERSHED DIVISION — DATE 6/3/97

APPROVED: THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT — DATE 6/9/97

APPROVED: REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.

NATURAL RESOURCES CONSERVATION SERVICE — DATE 6/9/97

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.

Donald Mason — 3/21/97 Date

OWNER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this project will have a certificate of attendance at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

Signature of Owner — 3/26/97 Date

NO.	DATE	REVISION
1	3/97	REV. PER COUNTY COMMENTS
2	5/97	REV. PER COMMENTS.

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

STATE OF MARYLAND — DONALD MASON — No. 21662 — REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER:
ELLICOTT CITY PROPERTIES, INC.
C/O BARBARA SCHULTE, PRESIDENT
4555 ILCHESTER ROAD
ELLICOTT CITY, MD. 21043
(410) 788-5025

PROJECT: CAPITAL PROJECT D-1119
LOCATION: TAX MAP 25 - PARCEL 260, 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND
TITLE: PROFILES AND DETAILS
DATE: NOVEMBER, 1996
PROJECT NO. 0873
Design: CAM | Draft: JMC
SCALE: AS SHOWN
DRAWING 2 OF 3

Plotted: March 21, 1997
Acad Dwg: 7044S2

D1077-02

SEDIMENT CONTROL NOTES

1. A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION, (313–1850).
2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT "MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL", REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	1.27±	ACRES
AREA DISTURBED	0.33	ACRES
AREA TO BE ROOFED OR PAVED	0.00	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.10	ACRES
TOTAL CUT	3,208	CU YDS
TOTAL FILL	0.00	CU YDS
OFFSITE WASTE/BORROW AREA LOCATION	SPOIL ON SITE	

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDBED PREPARATION

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ON OF THE FOLLOWING SCHEDULES:

1. PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10–10–10 FERTILIZER (14 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30–0–0– UREAFORM FERTILIZER (9 LBS/1000 SQ FT).
2. ACCEPTABLE – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10–10–10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

TEMPORARY SEEDBED PREPARATION

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE A SHORT–TERM VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10–10–10 FERTILIZER (14 LBS/1000 SQ FT).

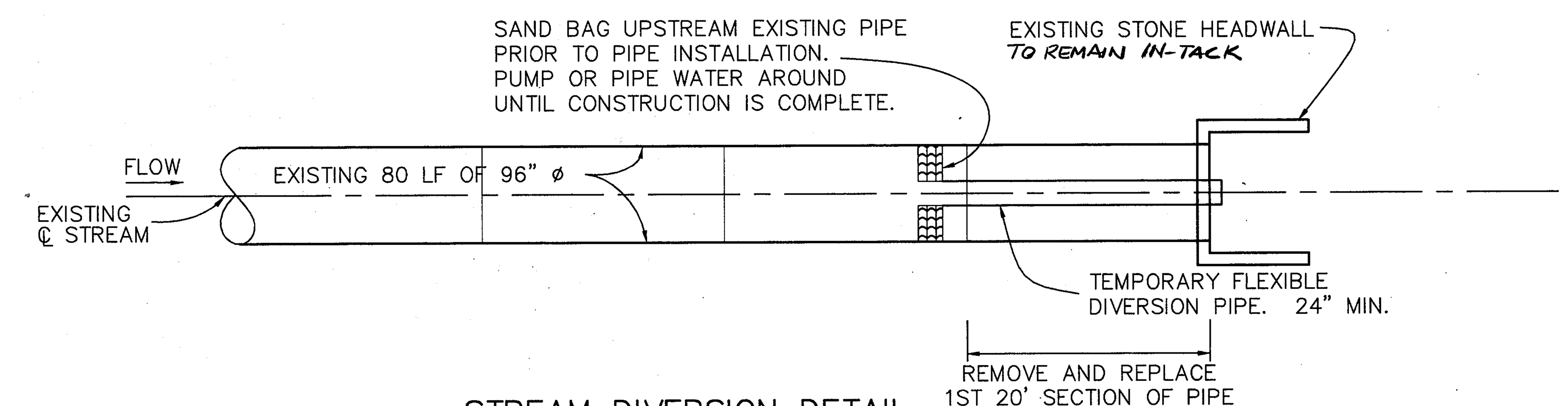
SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2–1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT). FOR THE PERIOD MAY 1 THROUGH AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING: APPLY 1–1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

REFER TO THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR RATE AND METHODS NOT COVERED.

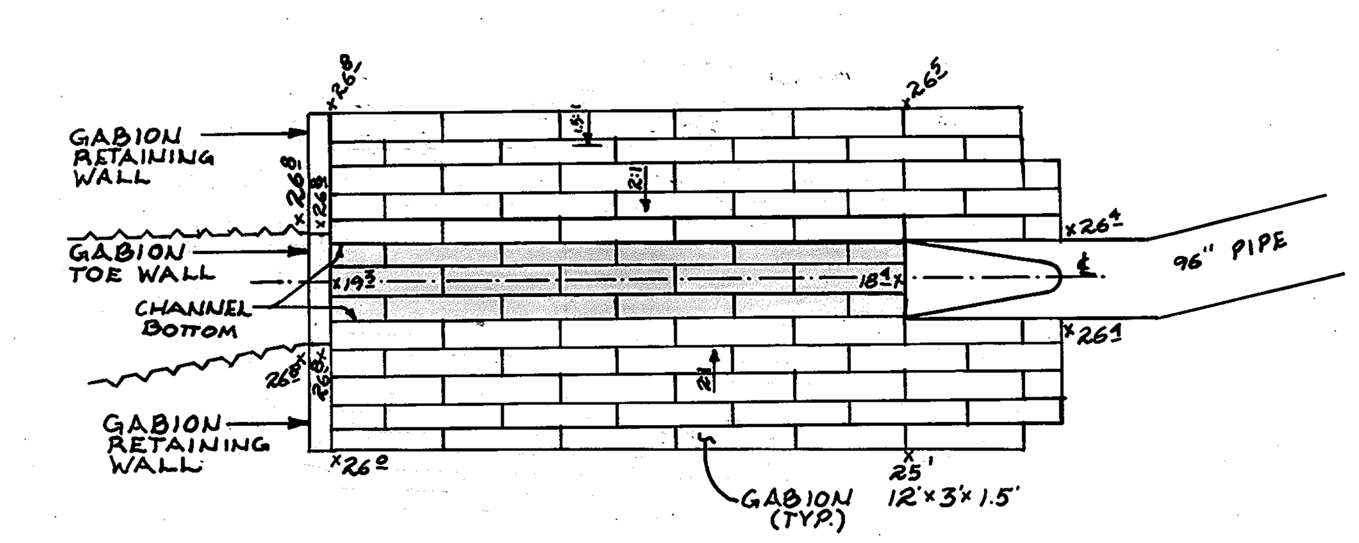
SEQUENCE OF CONSTRUCTION TO REMOVE THE 96" DIAMETER STORM DRAIN CULVERT AND REPLACE WITH A 96" DIAMETER CULVERT.

1. OBTAIN PERMITS. DAY 1
2. FIELD VERIFY ALL EXISTING UTILITY LOCATION AND DEPTH. DAY 2-3
3. REMOVE EXISTING COVERED PORCH PRIOR TO ANY CONSTRUCTION. (SAVE AND STORE ALL USEABLE MATERIALS FOR RESTORATION OF THE PORCH PER OWNER'S INSTRUCTION.) DAY 4-6
4. WORK SHOULD BE PERFORMED DURING THE DRY SEASON WHEN WATER LEVEL IN THE STREAM IS MINIMAL. NOTE THAT THIS STREAM IS A CLASS I AND ITS RESTRICTION FOR CONSTRUCTION IS FROM MARCH 1 TO JUNE 15. CONTRACTOR MUST TAKE PRECAUTION TO ENSURE THE FLOW AND THE INTEGRITY OF THE STREAM.
5. THE STREAM BASE FLOW SHALL REMAIN FLOWING THROUGH THE PIPE AT ALL TIMES. PRIOR TO REMOVAL AND INSTALLATION FIRST 20 FOOT SECTION OF 96 INCH DIAMETER PIPE, A SAND BAG DIKE SHALL BE PLACED IMMEDIATELY UPSTREAM WITH A FLEXIBLE PIPE TO PASS THE IMPOUNDED WATER. IF THE BASE FLOW IS HEAVY, A DEWATERING PUMP SHALL BE USED TO BY–PASS THE WATER. DAY 7
6. ALL PIPE WORK SHALL BE DONE IN 20 FOOT SECTIONS ONE AT A TIME.
7. BEGIN AT THE DOWNSTREAM STONE HEADWALL.
8. USE METAL SHEATHING TO SUPPORT TRENCH BETWEEN HISTORICAL STRUCTURES IF NECESSARY. EXTREME CAUTION SHOULD BE TAKEN NOT TO DISTURB THE FOUNDATION OR STRUCTURAL INTEGRITY OF THE BUILDINGS.
9. REMOVE 20 FEET OF 96" CMP. PREPARE TRENCH BOTTOM AND INSTALL 6 INCHES OF #57 STONE IN BOTTOM OF TRENCH. SHAPE STONE TO CONTOUR OF PIPE INVERT. DAY 7-9
10. INSTALL NEW 96" DIAMETER 10 GA ALUMINUM CORRUGATED PIPE AS MANUFACTURED BY CONTECH CONSTRUCTION PRODUCTS, INC. THE REPLACEMENT PIPE SHALL BE INSTALLED IN 20 FOOT SECTIONS AND CONSIST OF 106 LINEAR FEET. DAY 10-12
11. COMPACT #57 STONE AROUND THE INVERT OF THE PIPE APPROXIMATELY 16 INCHES THICK. DAY 12
12. THE NEXT 20 FOOT PIPE SECTION SHALL BE INSTALLED. START OVER WITH #6 ABOVE. DAY 13-15
13. ONCE THE SECOND 20 FOOT PIPE SECTION IS INSTALLED THE TWO (2) PIPES SHALL BE CONNECTED WITH 9–C CORRUGATED BAND 24" WIDE WITH A 12" X 3/8" FLAT NEOPRENE GASKET (ASTM D–1056, GRADE SCE–43–L) AS MANUFACTURED BY CONTECH CONSTRUCTION PRODUCTS, INC. THE BANDS SHALL BE ATTACHED USING 7/16" GALVANIZED RODS (ASTM A–307) GRADE A, CAST IRON LUGS AND ASTM A–563 GRADE C NUTS. DAY 15
14. AS SOON AS EACH PIPE CONNECTION IS MADE, THE SAND BAG DIKE SHALL BE REMOVED IN ORDER NOT TO IMPOUND AND DELAY THE STREAM FLOW. DAY 15
15. THE ABOVE PROCEDURE SHALL BE PERFORMED FOR THE REMAINING 3 –20 FOOT SECTIONS FOR A TOTAL OF 106 LINEAR FEET. DAY 16 -20
16. THE REMAINING 86 LINEAR FEET OF 96 INCH CMP SHALL BE REMOVED ENTIRELY. THE TOP HALF PORTION OF THE EXISTING PIPE SHOULD BE REMOVED. THE BOTTOM SHALL REMAIN TO ALLOW THE STREAM FLOW TO CONTINUE. DAY 21-22
17. PRIOR TO REMOVING THE BOTTOM HALF OF THE EXISTING 96" PIPE, THE STREAM SHALL BE SAND BAGGED (2' MIN.) AT THE UPSTREAM EXISTING HEADWALL AND A FLEXIBLE 24" MIN. PIPE INSTALLED TO ALLOW THE STREAM BASE FLOW TO PASS. THIS SHALL REMAIN IN PLACE UNTIL THE TRAPEZOIDAL CHANNEL IS GRADED AND LINED WITH STONE. DAY 23
18. GROUT SHALL BE USED AROUND THE PIPE CIRCUMFERENCE ON DOWNSTREAM PIPE END WHERE THE EXISTING STONE HEADWALL AND PIPE MEET. TINT NEW GROUT WHEN POINTING TO MATCH THE EXISTING GROUT.
19. GRADE A TRAPEZOIDAL CHANNEL WITHIN THE EXISTING STREAM WHERE THE 96" PIPE WAS REMOVED FROM. THE BOTTOM WIDTH SHALL BE AT LEAST 8 FEET WIDE WITH SIDE SLOPES OF 2:1 (SEE DETAIL). THE DEPTH SHALL BE A MINIMUM OF 5.6 +/– FEET WIDE AND SLOPE BOTTOM TOWARD CENTER. DAY 24-26
20. LINE BOTTOM AND SIDES OF TRAPEZOIDAL CHANNEL WITH GABION AND EROSION CONTROL MATTING AS SHOWN IN THE CHANNEL DETAIL (SHEET 2 OF 3). STABILIZED AND PERMANENT SEED[illegible] THE CHANNEL WITH TALL FESUE. DAY 27-31
21. STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE SEEDING NOTES. DAY 32
22. REMOVE STREAM SAND BAGGING AND EROSION & SEDIMENT DEVICES WITH APPROVAL OF SEDIMENT CONTROL INSPECTOR. DAY 33
23. RESTORE THE CONSTRUCTION AREA IN–KIND. DAY 34



STREAM DIVERSION DETAIL
PLAN VIEW
NOT TO SCALE

NOTES:
1.) SAND BAG HEIGHT SHALL BE A MINIMUM OF 2'.
2.) ONCE THE 20 FOOT PIPE SECTION IS INSTALLED THE FLEXIBLE PIPE CAN BE LAID IN THE NEW PIPE AND ALLOWED TO DISCHARGE DOWNSTREAM.
3.) THE EXISTING 96" ø PIPE SHALL BE REMOVED AND REPLACED STARTING AT THE DOWNSTREAM HEADWALL.



GABION - PLAN VIEW
SCALE: 1"=20'

ENGINEER'S CERTIFICATE

I hereby certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard County Soil Conservation District.

Donald Mason 3/21/97
Date

OWNER'S CERTIFICATE

I/We certify that all development and construction will be done in accordance with this plan of development and plan for erosion and sediment control and that all responsible personnel involved in the construction of this project will have a certificate of attendance at a Department of the Environment approved training program for the control of sediment and erosion before beginning the project. I also authorize periodic onsite inspection by the Howard County Soil Conservation District or their authorized agents, as are deemed necessary.

[signature] 3/26/97
Signature of Owner Date

NO.	DATE	REVISION
1	3/97	REV. PER COUNTY COMMENTS

TSA GROUP, INC.
planning • architecture • engineering
8480 Baltimore National Pike • Ellicott City, Maryland 21043 • (410) 465-6105

STATE OF MARYLAND · DONALD ALAN MASON · No. 21443 · REGISTERED · PROFESSIONAL ENGINEER

OWNER/DEVELOPER:
ELLICOTT CITY PROPERTIES, INC.
C/O BARBARA SCHULTE, PRESIDENT
4555 ILCHESTER ROAD
ELLICOTT CITY, MD. 21043
(410) 788–5025

PROJECT: CAPITAL PROJECT D–1119

LOCATION: TAX MAP 25 – PARCEL 260, 2ND ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: NOTES AND DETAILS

Design: CAM	Draft: JMC	DATE: NOVEMBER, 1996	PROJECT NO. 0873
		SCALE: AS SHOWN	DRAWING 3 OF 3

D1077_03

APPROVED: *HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.*

[signature] 6/5/97
DIRECTOR OF PUBLIC WORKS *DATE*

[signature] 6-5-97
CHIEF, BUREAU OF HIGHWAYS *DATE*

[signature] 6/3/97
CHIEF, BUREAU OF ENGINEERING *DATE*

[signature] 6/3/97
CHIEF, TRANSPORTATION AND WATERSHED DIVISION *DATE*

APPROVED: *THIS DEVELOPMENT IS APPROVED FOR EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.*

John R Robertson 6/9/97
HOWARD SOIL CONSERVATION DISTRICT *DATE*

APPROVED: *REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS.*

Cheryl Simmons 6/9/97
NATURAL RESOURCES CONSERVATION SERVICE *DATE*

Plotted: March 21, 1997
Acad Dwg: 7044S3