

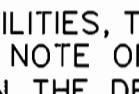
# REPLACEMENT OF EXISTING GORMAN ROAD WATER MAIN CROSSING OF I-95 HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS



CAPITAL PROJECT No. W-8212K

CONTRACT No. 44-3990

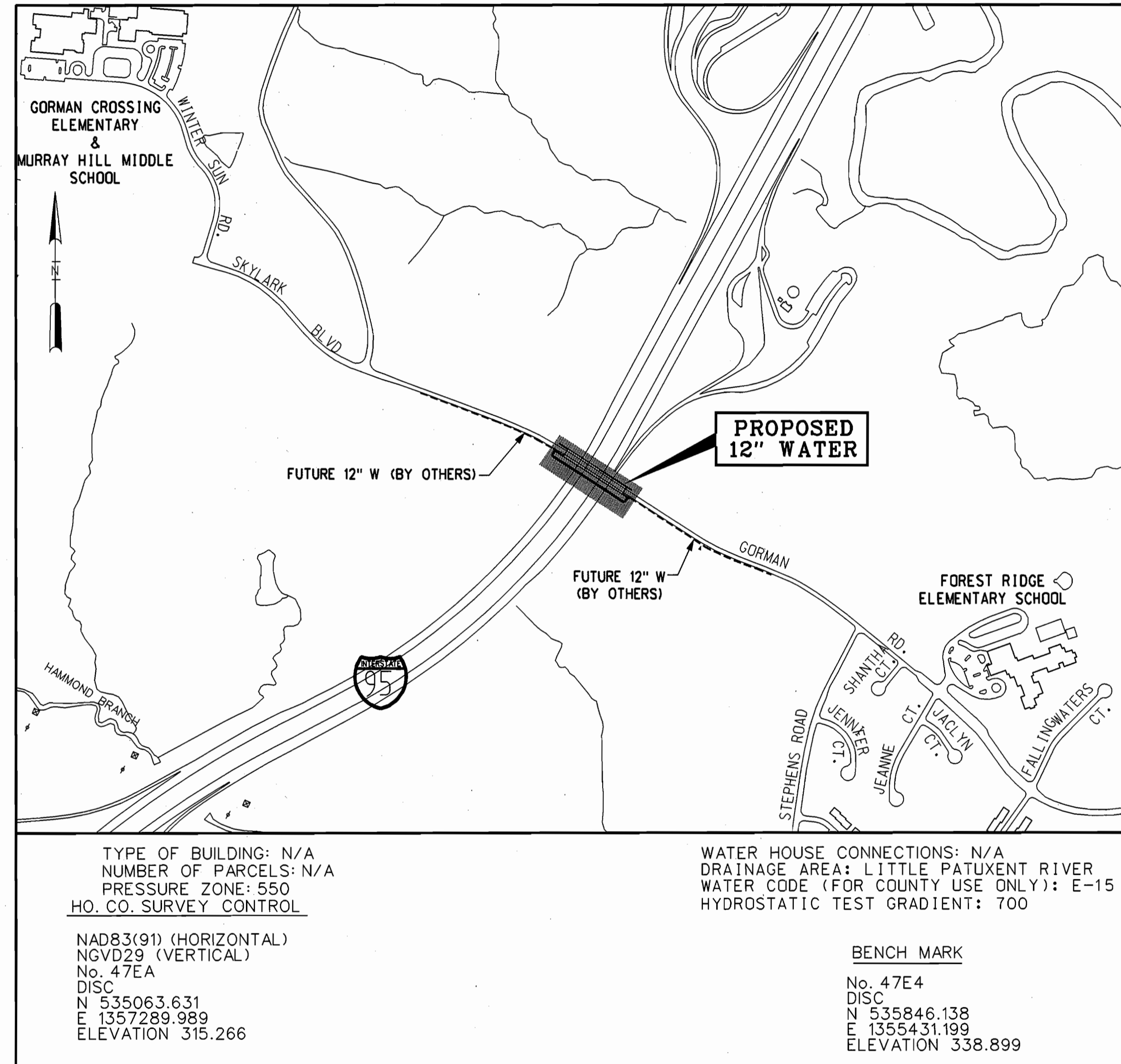
### GENERAL NOTES

1. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
2. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
3. ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA NGVD29
4. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
5. CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 5'-0" MINIMUM OR TUNNEL AS REQUIRED. (THE OWNER HAS CONTACTED THE UTILITY COMPANIES AND HAS MADE ARRANGEMENTS FOR BRACING OF POLES AS SHOWN ON THE DRAWINGS.) IN THE EVENT THE CONTRACTOR'S WORK REQUIRES THE BRACING OF ADDITIONAL POLES, ANY COST INCURRED BY THE OWNER FOR THE BRACING OF ADDITIONAL POLES OR DAMAGES SHALL BE DEDUCTED FROM MONEY OWED THE CONTRACTOR. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO SCHEDULE THE BRACING OF THE POLES.
6. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOLUME IV ON THE JOB.
7. WHERE TEST PITS HAVE BEEN MADE ON EXISTING UTILITIES, THEY ARE NOTED BY THE SYMBOL  AT THE LOCATION OF THE TEST PIT. A NOTE OR NOTES CONTAINING THE RESULTS OF THE TEST PIT OR PITS IS INCLUDED ON THE DRAWINGS. EXISTING UTILITIES IN THE VICINITY OF THE PROPOSED WORK FOR WHICH TEST PITS HAVE NOT BEEN DUG SHALL BE LOCATED BY THE CONTRACTOR TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS AT HIS OWN EXPENSE.
8. CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITY COMPANIES OR AGENCIES AT LEAST FIVE WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:  
 AT&T 1-800-526-2000  
 BG&E (CONTRACTOR SERVICES) 410-850-4620  
 BG&E - UNDERGROUND DAMAGE CONTROL 410-787-9068  
 BUREAU OF UTILITIES (DPW) 410-313-4900  
 BELL ATLANTIC MARYLAND, INC. 1-800-621-9900  
 COLONIAL PIPELINE CO. 410-795-1390  
 MISS UTILITY 1-800-257-7777  
 STATE HIGHWAY ADMINISTRATION 410-531-5533
9. TREES AND SHRUBS ARE TO BE PROTECTED FROM DAMAGE TO THE MAXIMUM EXTENT. TREES AND SHRUBS LOCATED WITHIN THE CONSTRUCTION STRIP ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
10. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR CONSTRUCTION OF THE MAIN.
11. THE CONTRACTOR SHALL NOTIFY THE BUREAU OF HIGHWAYS, HOWARD COUNTY, AT (410) 313-7450 AT LEAST FIVE WORKING DAYS BEFORE ANY OPEN CUT OF ANY COUNTY ROAD OR BORING/JACKING OPERATION IN COUNTY ROADS FOR LAYING WATER MAINS, SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(a) OF THE HOWARD COUNTY CODE.
12. ALL WATER MAINS SHALL BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
13. TOPS OF ALL WATER MAINS SHALL HAVE A MINIMUM OF 3'-6" OF COVER UNLESS OTHERWISE NOTED.
14. VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
15. ALL FITTINGS SHALL BE BUTTRESSED OR ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWINGS.
16. FIRE HYDRANTS SHALL BE SET TO BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE INSTALLED IN ACCORDANCE WITH STANDARD DETAILS. THE SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1000 AND SECTION 1005 OF THE STANDARD SPECIFICATIONS.
17. THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
18. DEFLECTION OF GASKETED PIPE JOINTS SHALL NOT EXCEED 80% OF THE MAXIMUM RECOMMENDED SAFE JOINT DEFLECTION.

INDEX OF SHEETS	
SHEET No.	DESCRIPTION
1	TITLE SHEET
2	12" WATER MAIN PLAN AND PROFILE
3	EROSION & SEDIMENT CONTROL, NOTES & DETAILS

QUANTITIES 				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
12" WATER	L.F.	389	230	CRIFFIN PIPE
12" WATER AND 36" STEEL CASING	L.F.	268	268	BALTIMORE PIPE
BLOW OFF VALVE (W4.13 MODIFIED)	EACH	1	1	KENNEDY HUGHES
NAME OF UTILITY CONTRACTOR: IACOBONI				
CHECKBOX				
AS-BUILT DATE: 8/26/02 				
SURVEY AND DRAFTING DIVISION				




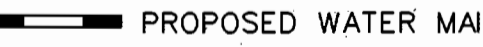






RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
0+00 TO 0+15	15 L.F.	MAC. PAV.
0+15 TO 2+26	211 L.F.	SEEDING
2+26 TO 4+94	268 L.F.	N/A
4+94 TO 6+57	163 L.F.	SEEDING



### LOCATION MAP

SCALE: 1" = 600'

### LEGEND

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li> DECIDUOUS TREE</li> <li> CONIFEROUS TREE</li> <li> TRAVERSE POINT</li> <li> PROPOSED WATER MAIN</li> </ul> | <ul style="list-style-type: none"> <li> EXISTING WATER MAIN</li> <li> EXISTING SEWER</li> <li> EXISTING GAS MAIN</li> <li> EXISTING UNDERGROUND TELEPHONE WIRE</li> <li> EXISTING OVERHEAD SERVICE</li> <li> EXISTING BURIED ELECTRIC</li> </ul> |
|--|--|

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND


*James J. ...*  
DIRECTOR OF PUBLIC WORKS  
1-11-02  
CHIEF, BUREAU OF UTILITIES

*Robert J. ...*  
CHIEF, BUREAU OF ENGINEERING  
1/10/02  
*Oliver ...*  
CHIEF, UTILITY DESIGN DIVISION  
1-7-02



ENGINEERS AND PLANNERS  
10 NORTH PARK DRIVE  
HUNT VALLEY, MD. 21030-1888  
(410) 316-7800



DES: CSC				
DRN:				
CHK: TW				
DATE: NOV. 01	KCI		ASBUILT DATA ADDED TO PLAN	8/26/02
	BY	ND.	REVISION	DATE

TITLE SHEET

TAX MAP NO. 47 BLOCK NO. 9

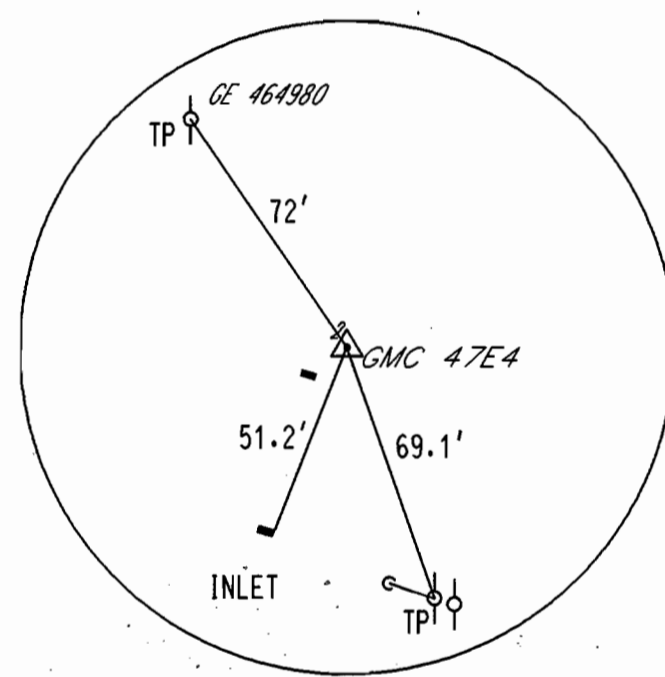
"ASBUILT" 8/26/02  
REPLACEMENT OF THE EXISTING  
GORMAN ROAD  
WATER MAIN CROSSING OF I-95  
CAPITAL PROJECT No. W-8212K  
CONTRACT No. 44-3990  
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN SHEET 1 OF 3

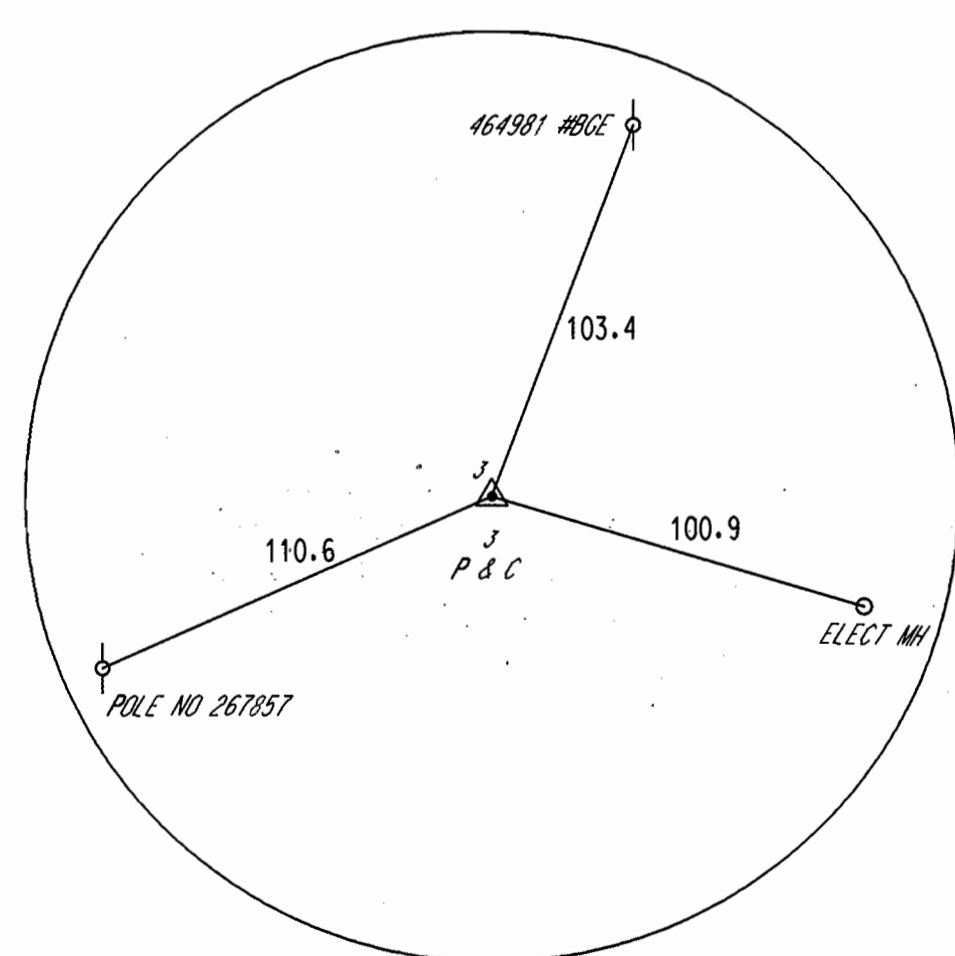
FILE NAME: M:\71999\0199180.2\DRAWINGS

TRAVERSE COORDINATE SCHEDULE			
NUMBER	NORTHING	EASTING	ELEVATION
TRAV. 2 HO.CO.47E4	535846.16	1355431.12	338.89
TRAV. 3	536096.63	1354937.00	349.46
TRAV. 6	536009.91	1355185.90	<del>322.32</del> 321.72

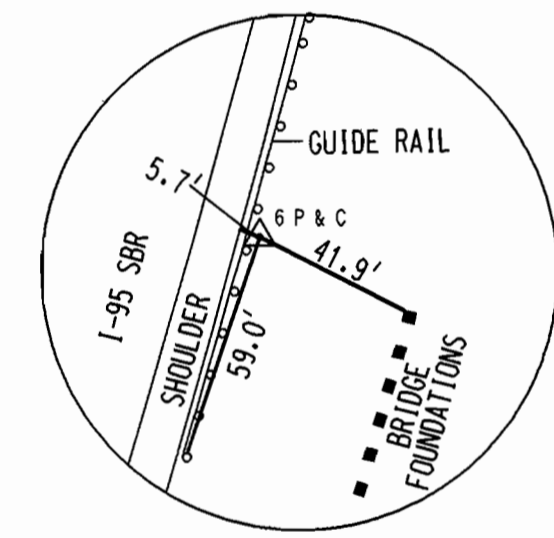
WATER MAIN STAKEOUT COORDINATES SCHEDULE			
STATION	FITTING	NORTHING	EASTING
0+00	12" CAP	536134.78	1354898.68
0+10	45° HB	536130.38	1354907.00
0+65	45° HB	536077.00	1354920.51
2+22	11 1/4" V.B.	535994.13	1355054.66
2+26	END OF SLEEVE	535992.00	1355058.00
4+94	BEGN OF SLEEVE	535844.65	1355282.00
4+98	BLOW OFF	535842.38	1355285.28
5+10	11 1/4" V.B.	535835.77	1355295.29
6+18	45° BEND	535776.33	1355385.00
6+57	12" CAP	535784.00	1355423.00



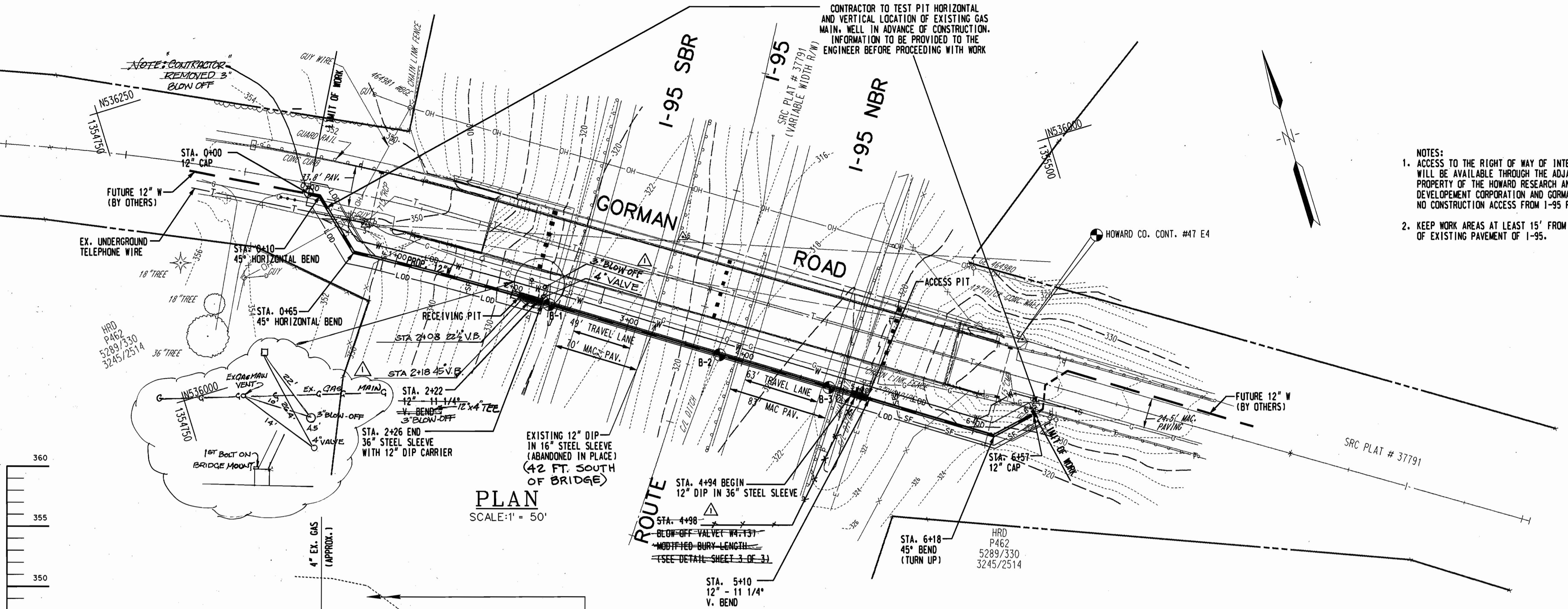
TRAVERSE POINT #2  
(HO.CO.47 E4)



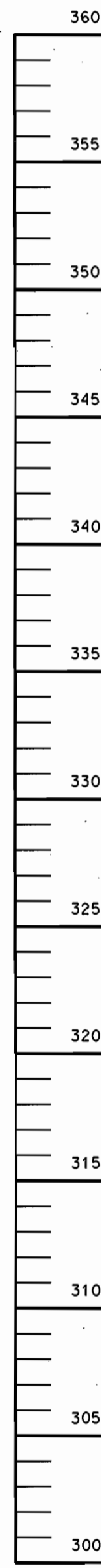
TRAVERSE POINT #3



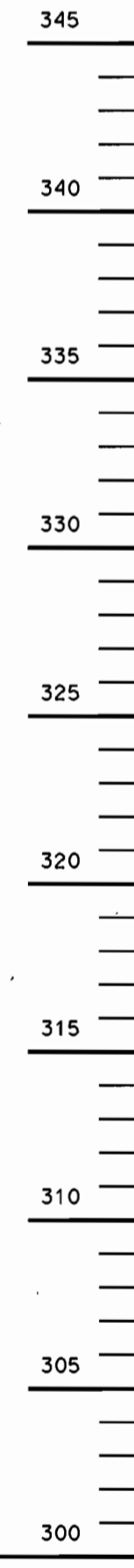
TRAVERSE POINT #6



PLAN  
SCALE: 1" = 50'



PROFILE  
SCALE: HORIZONTAL 1" = 50'  
VERTICAL 1" = 5'



REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
*Jim Mayes* 1/28/02  
DATE  
S.S. NATURAL RESOURCES CONSERVATION SERVICE  
DATE  
THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD COUNTY DISTRICT ENGINEER.  
*John W. Wood* 1/28/02  
DATE  
HOWARD S.C.D.

12" WATER PIPE  
SHA CONTRACT HO. 44-3990

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*Sam J. Chew* 1/28/02  
DIRECTOR OF PUBLIC WORKS  
DATE  
*Robert J. Seaman* 1/10/02  
CHIEF, BUREAU OF ENGINEERING  
DATE  
*Robert J. Seaman* 1-11-02  
CHIEF, BUREAU OF UTILITIES  
DATE  
*Robert J. Seaman* 1-7-02  
CHIEF, UTILITY DESIGN DIVISION  
DATE

ENGINEERS AND PLANNERS  
10 NORTH PARK DRIVE  
HUNT VALLEY, MD. 21030-1888  
(410) 316-7800  
*KCI* TECHNOLOGIES



DES:	CSC	DATE:	NOV. 01
DRN:		BY:	NO.
CHK:	TW	REVISION:	AS BUILT DATA ADDED TO PLAN
DATE:	NOV. 01	DATE:	1/28/02

12" WATER MAIN  
PLAN & PROFILE  
TAX MAP NO. 47 BLOCK NO. 9

REPLACEMENT OF THE EXISTING  
GORMAN ROAD  
WATER MAIN CROSSING OF I-95  
CAPITAL PROJECT No. W-8212K  
CONTRACT No. 44-3990  
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE  
AS SHOWN  
SHEET  
2 OF 3

**PERMANENT SEEDING NOTES**

APPLY TO GRADED OR CLEARED AREAS NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

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

**SOIL AMENDMENTS:** IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE 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 DISK 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 DISK INTO UPPER THREE INCHES OF SOIL.

**SEEDING -** FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS 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 THRU 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/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE 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 SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

**TEMPORARY SEEDING NOTES**

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, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING. IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS:** - APPLY 60 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ FT.). SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FERTILIZER 15 THRU OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 SQ FT.). FOR THE PERIOD NOVEMBER 16 THRU 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 GAL PER ACRE (5 GAL/1000 SQ FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT OR HIGHER, USE 348 GAL 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.

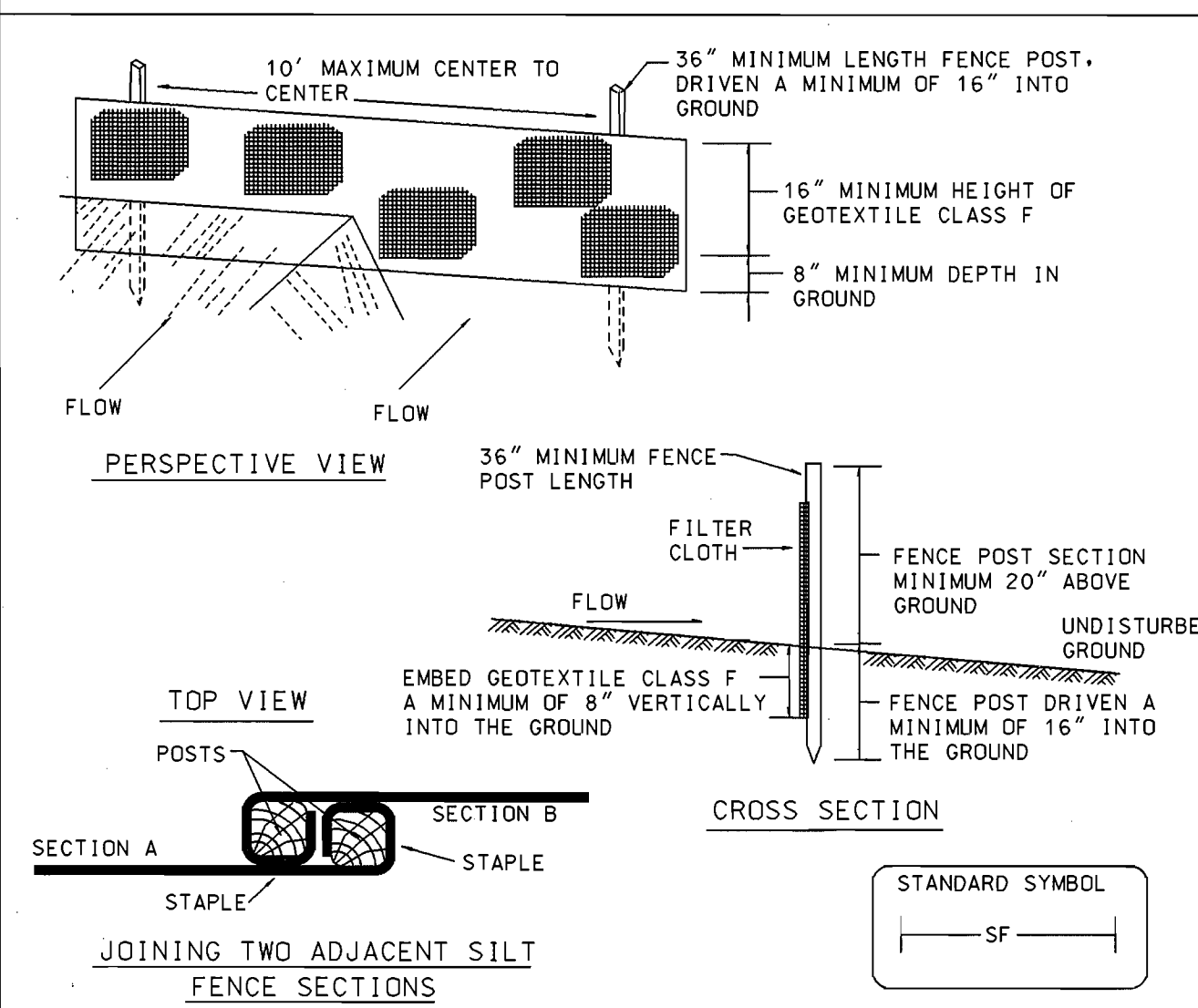
**STANDARD SEDIMENT CONTROL NOTES**

- A MINIMUM OF 24 HOURS MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS, PRIOR TO THE START OF ANY CONSTRUCTION (410-313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH SECTION 219 OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:
  - a) 7 CALENDER 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.
- 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.
- 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. 52), 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.
- 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.
- SITE ANALYSIS:
 

TOTAL AREA OF SITE	N/A	ACRES
AREA DISTURBED	.045	ACRES
AREA TO BE ROOFED OR PAVED	.002	ACRES
AREA TO BE VEGETATIVELY STABILIZED	.043	ACRES
TOTAL CUT	N/A	CU. YDS.
TOTAL FILL	N/A	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	N/A	
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF THE DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- 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.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE (3) PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- CONTRACTOR SHALL PLACE EXCAVATED MATERIALS ON UPHILL SIDE OF TRENCH AND PLACE SILT FENCE ON DOWNHILL SIDE OF TRENCH.

NOTE: SEDIMENT CONTROL TO BE IMPLEMENTED IN ACCORDANCE WITH SECTION 219 OF THE STANDARDS AND SPECIFICATIONS (VOL. IV) OF THE HOWARD COUNTY DESIGN MANUAL AND THIS PLAN.

**DETAIL 22 - SILT FENCE**



**Construction Specifications**

- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" 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 pound per linear foot.
- 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 <sup>2</sup> /minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322
- Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
- 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
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**SILT FENCE**

- Construction Specifications**
- A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:
    - a. The type, size, and spacing of fence posts.
    - b. The type of filter cloth used.
    - c. The method of fastening the filter cloth to the fencing support.
    - d. Accumulated sediment must be removed when it reaches 50% of the height of the fabric.
  - Where ends of filter cloth come together, they shall be overlapped, folded and stapled to prevent sediment bypass.
  - Design computations are not required.
  - All silt fences shall be placed as close to the contour as possible.
  - The area below the fence must be undisturbed or stabilized.
  - Silt Fence Fabric: The fabric shall meet the Filter fabric specifications listed in Table 27.
  - Fence Posts (for fabric coated units): The length shall be a minimum of 36 inches long. Wood posts, 2" x 2", with a minimum cross sectional area of 3.0 square inches will be of sound quality hardwood. Steel posts will be standard T or U section weighing not less than 1.00 pound per linear foot.

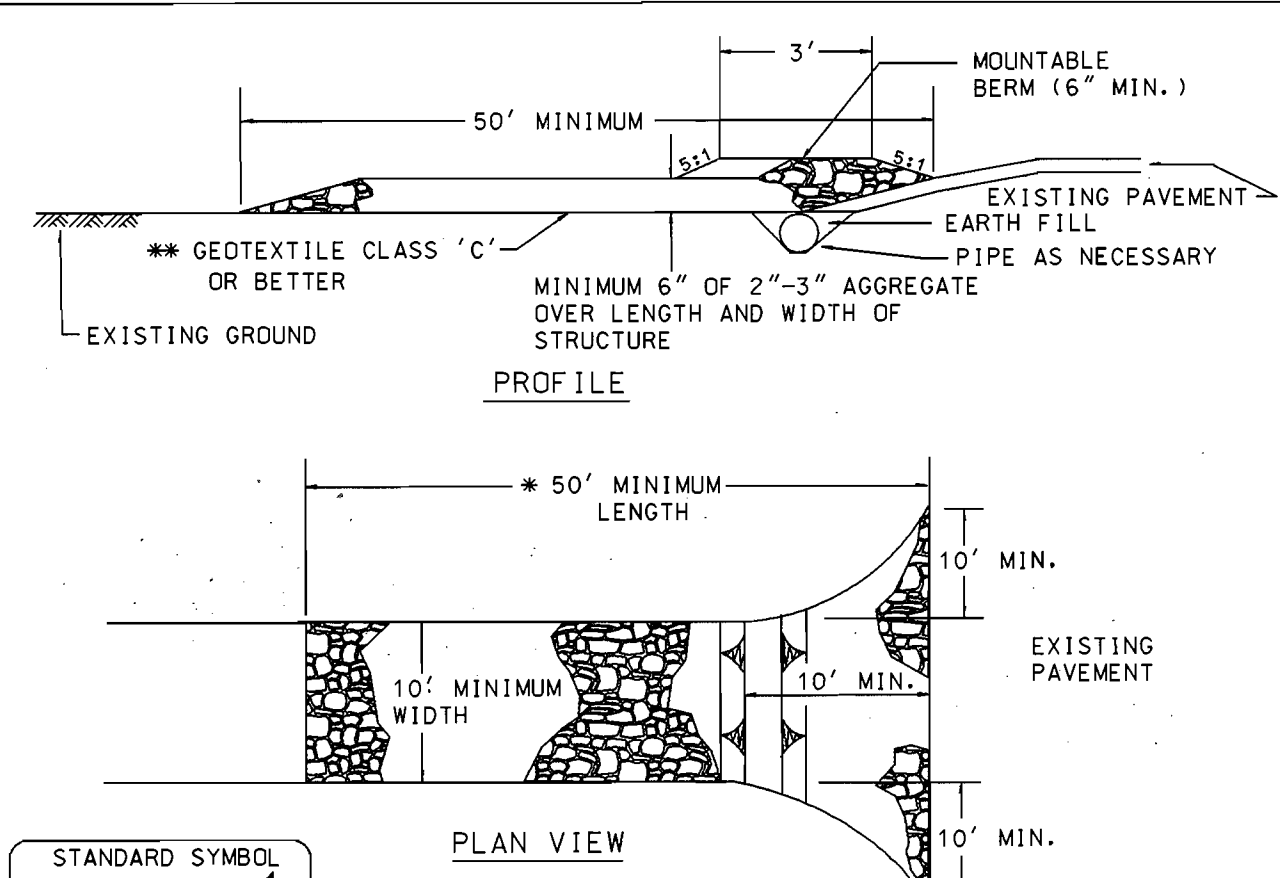
**Silt Fence Design Criteria**

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

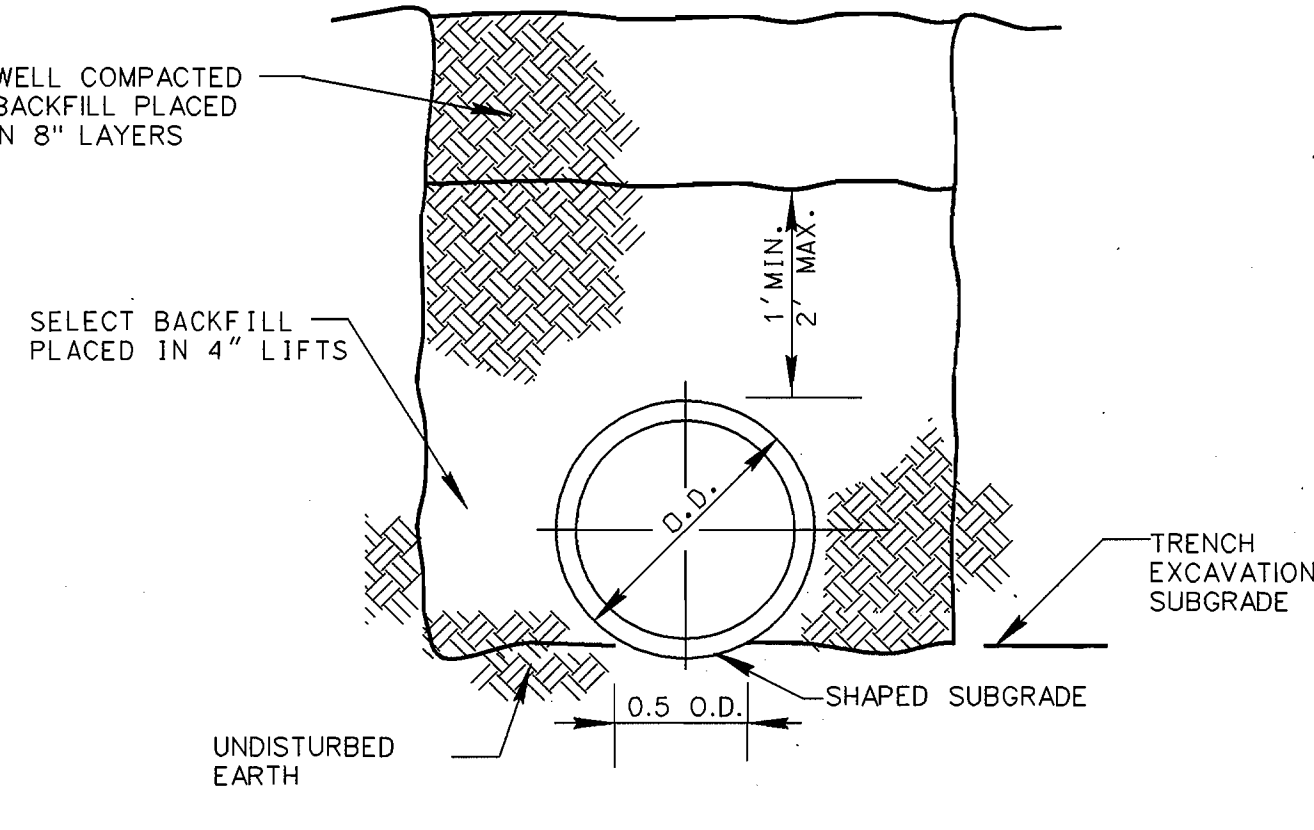
Note: In areas of less than 2% slope and sandy soils (USDA general classification system soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION
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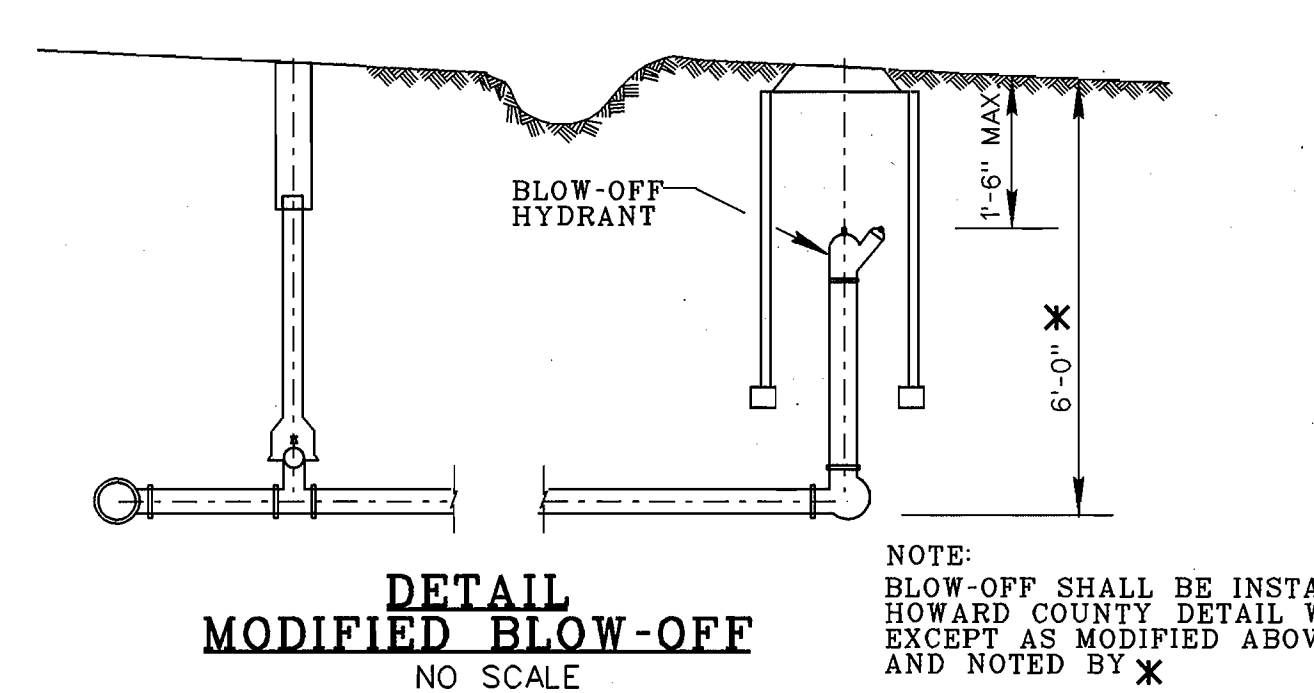
**DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE**



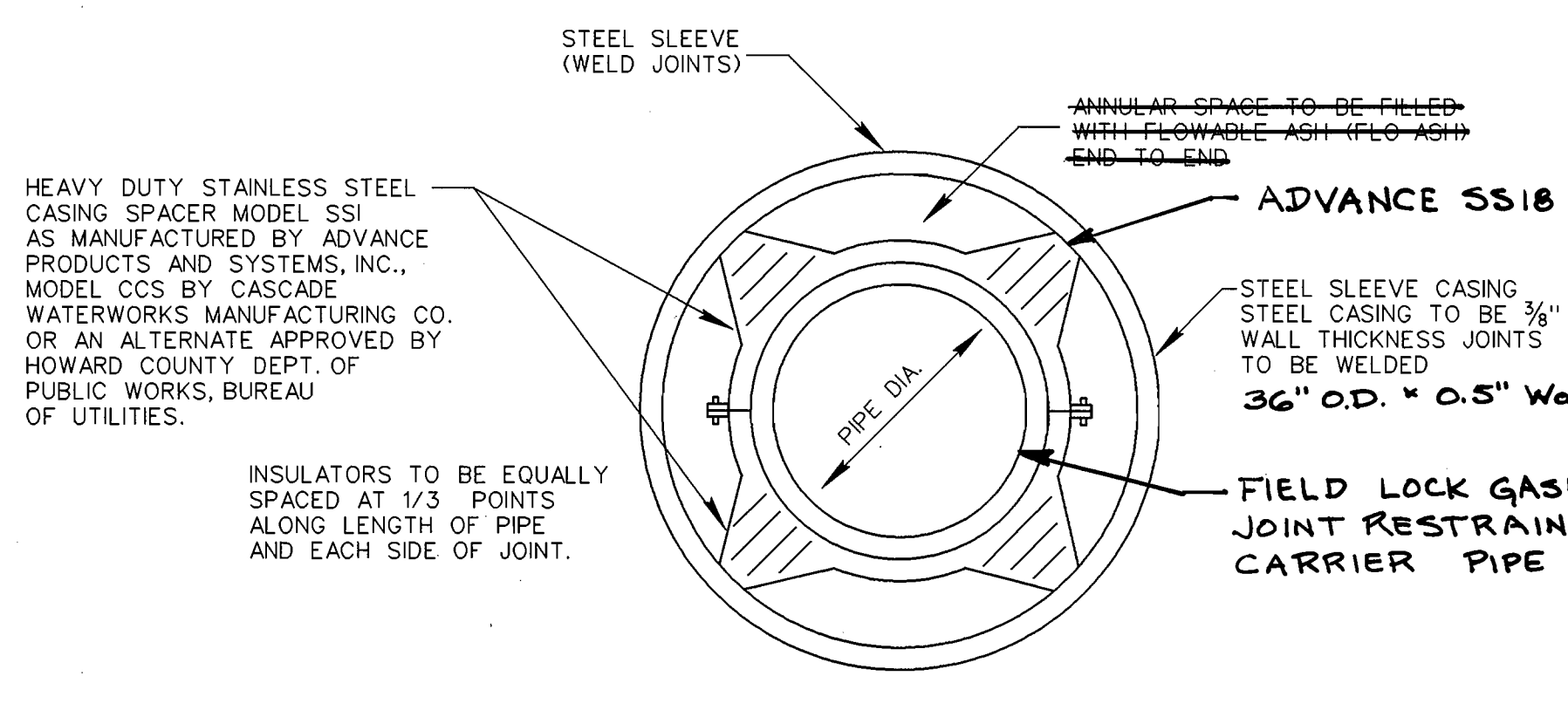
- Length - minimum of 50' (#30' for single residence lot). Construction Specification
  - Width - 10' minimum, should be flared at the existing road to provide a turning radius.
  - Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.
  - Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
  - Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
  - Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.
- |   |                    |   |
|---|--------------------|---|
| U.S. DEPARTMENT OF AGRICULTURE<br>SOIL CONSERVATION SERVICE | PAGE<br>F - 17 - 3 | MARYLAND DEPARTMENT OF ENVIRONMENT<br>WATER MANAGEMENT ADMINISTRATION |
|---|--------------------|---|



**DETAIL TRENCH IN EARTH**  
NO SCALE  
\* BASED ON HOWARD COUNTY STANDARD DETAIL G2.01



**DETAIL MODIFIED BLOW-OFF**  
NO SCALE  
NOTE: BLOW-OFF SHALL BE INSTALLED PER HOWARD COUNTY DETAIL W4.13 EXCEPT AS MODIFIED ABOVE AND NOTED BY \*



**CASING PIPE DETAIL**

**TRAFFIC MAINTENANCE**

FOR TRAFFIC MAINTENANCE REQUIREMENTS SEE SPECIFICATION DOCUMENT D, PARAGRAPH 4.16.

**SEQUENCE OF CONSTRUCTION**

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (1 DAY)
- INSTALL SEDIMENT CONTROL DEVICES (INLET PROTECTION DEVICES) AS SHOWN ON PLAN.
- CLEAR AND GRUB SITE.
- EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE AND STOCKPILE MATERIAL ON UPHILL SIDE OF TRENCH. INSTALL WATER MAIN, BACKFILL TRENCH AND RESTORE SURFACE TO EXISTING CONDITIONS (30 DAYS). TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO 25' OF PIPE LENGTH OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- CLEAN UP CONSTRUCTION SITE. (1 DAY)
- REMOVE SEDIMENT CONTROL DEVICES AFTER PERMISSION IS GRANTED BY THE SEDIMENT CONTROL INSPECTOR. (1 DAY)

**ENGINEER'S CERTIFICATION**

"I/WE CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS 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 SOIL CONSERVATION DISTRICT.

*Timothy W. Wolfe* 12/10/02  
TIMOTHY W. WOLFE DATE

KCI TECHNOLOGIES  
10 NORTH PARK DRIVE  
HUNT VALLEY, MARYLAND 21030

**DEVELOPER'S CERTIFICATION**

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION 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 ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
*Jim M. Myers* 1/28/02  
J.M. MYERS DATE  
CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John A. Robertson* 1/28/02  
PROVED DATE  
HOWARD S.C.D.

*Paul Egan* 1/10/02  
DATE  
BUREAU OF ENGINEERING  
DEPARTMENT OF PUBLIC WORKS

REPLACEMENT OF THE EXISTING GORMAN ROAD WATER MAIN CROSSING OF I-95  
CAPITAL PROJECT No. W-8212K  
CONTRACT No. 44-3990  
ELECTION DISTRICT NO. 6 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN  
SHEET 3 OF 3

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND  
*James J. Shaw* 1/10/02  
DIRECTOR OF PUBLIC WORKS DATE  
*Paul Egan* 1-11-02  
CHIEF, BUREAU OF UTILITIES DATE

*Paul Egan* 1/10/02  
CHIEF, BUREAU OF ENGINEERING DATE  
*Paul Egan* 1-7-02  
CHIEF, UTILITY DESIGN DIVISION DATE

ENGINEERS AND PLANNERS  
10 NORTH PARK DRIVE  
HUNT VALLEY, MD. 21030-1888  
(410) 316-7800



DES: CSC			
DRN:			
CHK: TW			
DATE: NOV-01	DFC	AS BUILT	5/6/03
	BY	NO.	REVISION

EROSION & SEDIMENT CONTROL NOTES & DETAILS  
TAX MAP NO. 47 BLOCK NO. 9