

TROTTER ROAD SOUTH SEWER EXTENSION HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS


CAPITAL PROJECT No. S-6229

CONTRACT No. 30-3863

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	8-INCH SEWER MAIN - PLAN, PROFILE & NOTES
3	SEDIMENT AND EROSION CONTROL - DETAILS AND NOTES

GENERAL NOTES

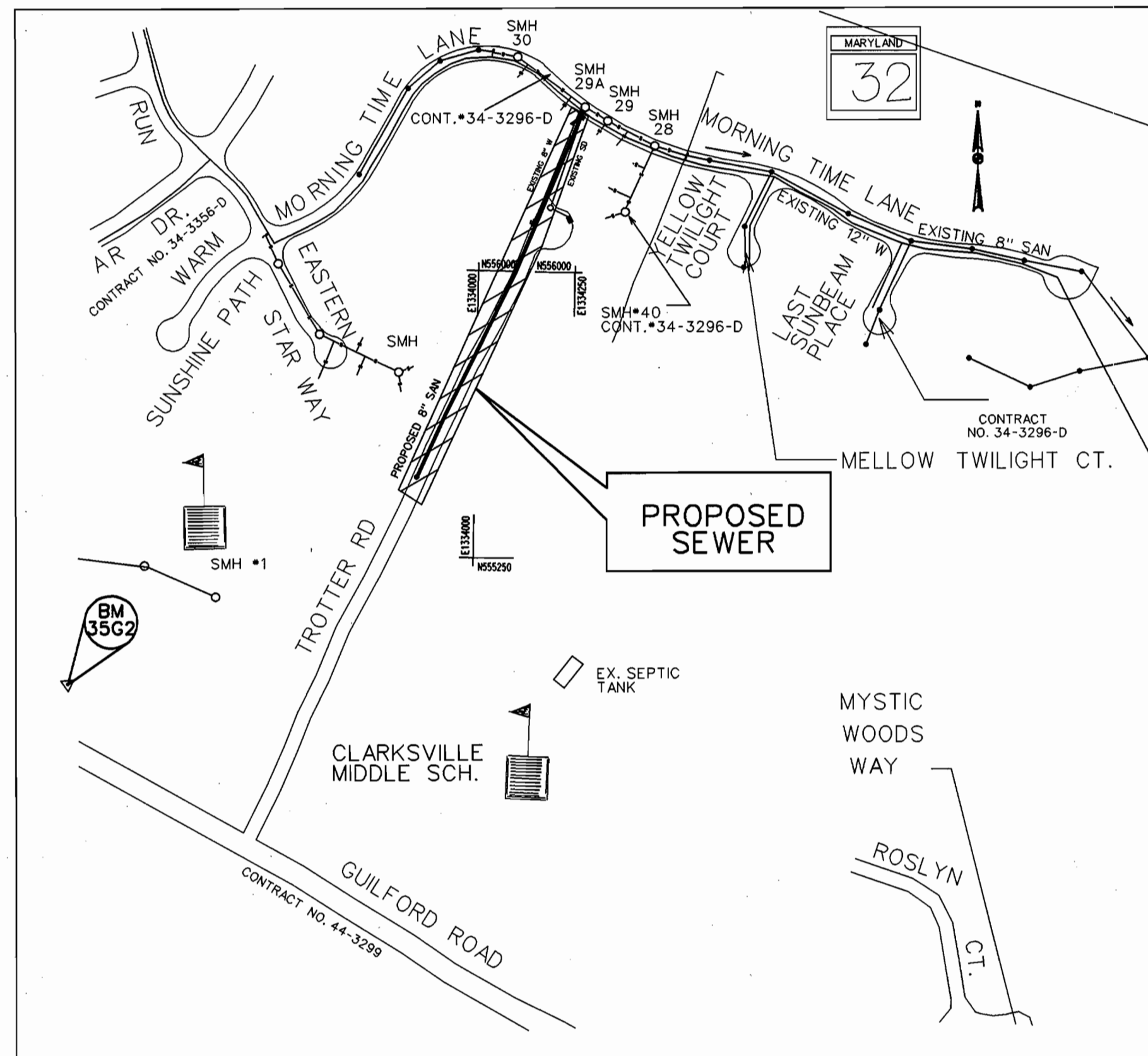
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES AND SERVICES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED SHALL BE REPAIRED IMMEDIATELY TO THE SATISFACTION OF THE ENGINEER AT THE CONTRACTOR EXPENSE.
- ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE COORDINATES, NAD 83.
- ALL VERTICAL CONTROLS ARE BASED ON U.S.G.S. DATA NGVD88
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS UNLESS OTHERWISE NOTED ON THE PLANS.
- CLEAR ALL UTILITIES BY A MINIMUM OF 12". CLEAR ALL POLES BY 2'-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.
- 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.
- 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.
- 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
BGE (CONTRACTOR SERVICES)	410-850-4620
BGE - UNDERGROUND DAMAGE CONTROL	410-787-9088
BUREAU OF UTILITIES (DPW)	410-313-4900
BELL ATLANTIC MARYLAND, INC.	1-800-621-9800
COLONIAL PIPELINE CO.	410-796-1390
MISS UTILITY	1-800-257-7777
STATE HIGHWAY ADMINISTRATION	410-531-5533
- 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.
- 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.
- 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 SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
- ALL SEWER MAINS SHALL BE PVC UNLESS OTHERWISE NOTED.
- ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
- MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52, WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME "8" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
- HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
- THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS BUSINESSES AND COORDINATING HIS WORK ACTIVITIES SO AS NOT TO NEGATIVELY IMPACT CONNECTED CUSTOMERS. THE INSTALLATION OF WATER MAIN SHALL CAUSE A MINIMUM DISTURBANCE TO THE EXISTING BUSINESSES AND NOTIFICATION TO THE BUSINESS OF ANY "INTERRUPTION OF SERVICE" SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COUNTY REQUIRES THAT THE CONTRACTOR NOTIFY EACH BUSINESS AFFECTED BY LETTER OR DOOR TAGS OF THE IMPENDING SERVICE INTERRUPTION AT LEAST 48 HOURS IN ADVANCE OF THE PLANNED INTERRUPTION.

QUANTITIES				
ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" PVC SEWER	LF	1052	1053	UPONOR, IPEX, PLASTIC TRENDS, INC.
4" DIA MH RISER	EA	4	5	FREDERICK PRECAST CONCRETE
4" DIA MH RISER > 6'	VF	18	14.70	FREDERICK PRECAST CONCRETE
4" SHC	LF	227	227	UPONOR, IPEX, PLASTIC TRENDS, INC.
NAME OF UTILITY CONTRACTOR:				CLINT'S CONTRACTORS
CHECKBOX				
AS-BUILT DATE:				10-25-2002
SURVEY AND DRAFTING DIVISION				

RESTORATION SCHEDULE		
LOCATION	DISTANCE	TYPE
SMH 1 TO MH 2	234'	SEED & MULCH
SMH 2 TO MH 4	808'	BITUMINOUS CONCRETE

TRAVERSE SCHEDULE			
LOCATION	NORTHING	EASTING	ELEVATION
TV10	556419.233	1334276.910	430.88
TV9	556213.887	1334179.240	443.09
TV8	555828.641	1334040.120	455.46
TV11	555565.244	1333827.376	461.00



TYPE OF BUILDING: RESIDENTIAL
 NUMBER OF PARCELS: 7
 DRAINAGE AREA: MIDDLE PATUXENT








SEWER CODE FOR COUNTY USE ONLY: 6652500

BENCH MARKS
 HOWARD COUNTY BENCH MARK NO. 35G2
 ALSO KNOWN AS CLARK AZ
 N554965.671 E1332934.904 ELEVATION 477.490
 COORDINATES IN MARYLAND NAD83(91) HORIZONTAL DATUM
 AND NGVD29 VERTICAL DATUM

HO. CO. CONTROL
 HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 31R1
 NAD83(91) (HORIZONTAL)
 NGVD29 (VERTICAL)
 PRESSURE ZONE: 400

VICINITY MAP
SCALE: 1"=600'

LEGEND

	DECIDUOUS TREE	— S — S —	EXISTING SANITARY SEWER
	CONIFEROUS TREE	— W — W —	EXISTING WATER MAIN
	TRAVERSE POINT	— LOD — LOD —	LIMIT OF DISTURBANCE
	PROPOSED SAN. SEWER	— — — — —	PROPERTY LINE
	PROPOSED SEWER MANHOLE	— UC — UC —	RIGHT OF WAY LINE
	PROPOSED SEWER HOUSE CONNECTION	— OH — OH —	UNDERGROUND CABLE/ELECTRIC
	PROPOSED DROP SEWER HOUSE CONNECTION		OVERHEAD CABLE/ELECTRIC

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.

Robert J. Moran 2/14/02
 DIRECTOR OF PUBLIC WORKS DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Jim Mays 2/21/02
 U.S. NATURAL RESOURCES CONSERVATION SERVICE DATE

ENGINEER'S CERTIFICATION

"I/WE 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 SOIL CONSERVATION DISTRICT.

Timothy J. Wolfe 2/13/02
 DATE

KCI TECHNOLOGIES
 10 NORTH PARK DRIVE
 HUNT VALLEY, MARYLAND 21030

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John K. Klotz
 APPROVED DATE
 HOWARD S.C.D. 2/21/02

AS BUILT 11-07-2002

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Jan P. Moran 2/15/02
 DIRECTOR OF PUBLIC WORKS DATE

Robert J. Moran 2/14/02
 CHIEF, BUREAU OF ENGINEERING DATE



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



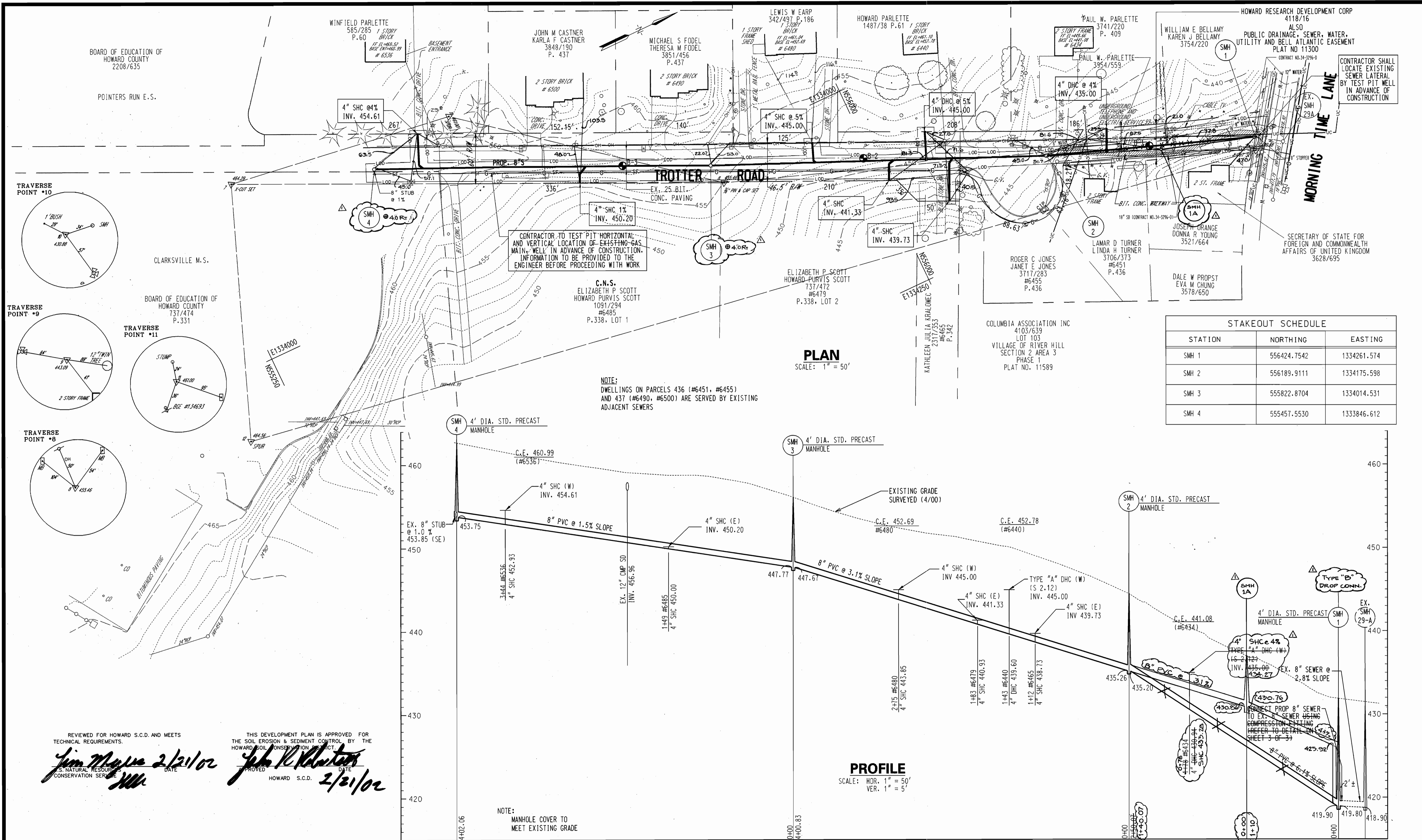
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DATE:	10/01	BY	NO.	REVISION	DATE
		CCB	As-Built		11-07-2002

TITLE SHEET

600' SCALE TAX MAP NO. 35 BLOCK NO. 14/20

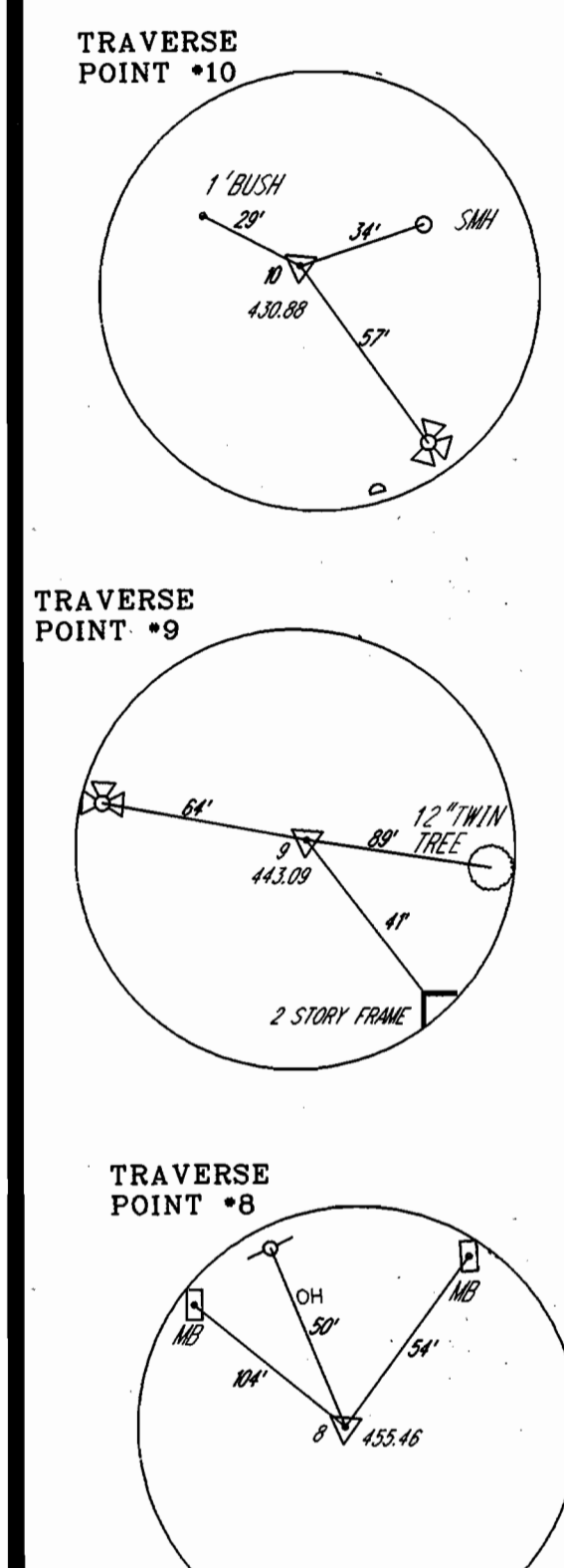
TROTTER ROAD SOUTH SEWER EXTENSION
 CAPITAL PROJECT No. S-6229
 CONTRACT No. 30-3863
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 1 OF 3



STAKEOUT SCHEDULE

STATION	NORTHING	EASTING
SMH 1	556424.7542	1334261.574
SMH 2	556189.9111	1334175.598
SMH 3	555822.8704	1334014.531
SMH 4	555457.5530	1333846.612



REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
Jim Meyer 2/21/02
 S. NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Kauters
 HOWARD S.C.D. 2/21/02

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

John R. Kauters 2/14/02
 CHIEF, BUREAU OF ENGINEERING

John R. Kauters 2-14-02
 CHIEF, UTILITY DESIGN DIVISION

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

KCI
 TECHNOLOGIES



DES: PS				
DRN: PS				
CHK:				
DATE: 10/01	BY: CCB	NO. 1	REVISION: AS-BUILT	DATE: 11-07-2002

**8-INCH SEWER MAIN
 PLAN, PROFILE AND NOTES**

600' SCALE TAX MAP 35 PARCEL 14/20

TROTTER ROAD SOUTH SEWER EXTENSION
 CAPITAL PROJECT No. S-6229
 CONTRACT No. 30-3863
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 2 OF 3

AS BUILT 11-07-2002

FILE NAME - M:\1999\0199180.D7

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 800 LBS PER ACRE 10-10-10 FERTILIZER (4LBS/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 UREA FORM 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 18 GAL/1000 SQ FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED 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 FROM AUGUST 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.

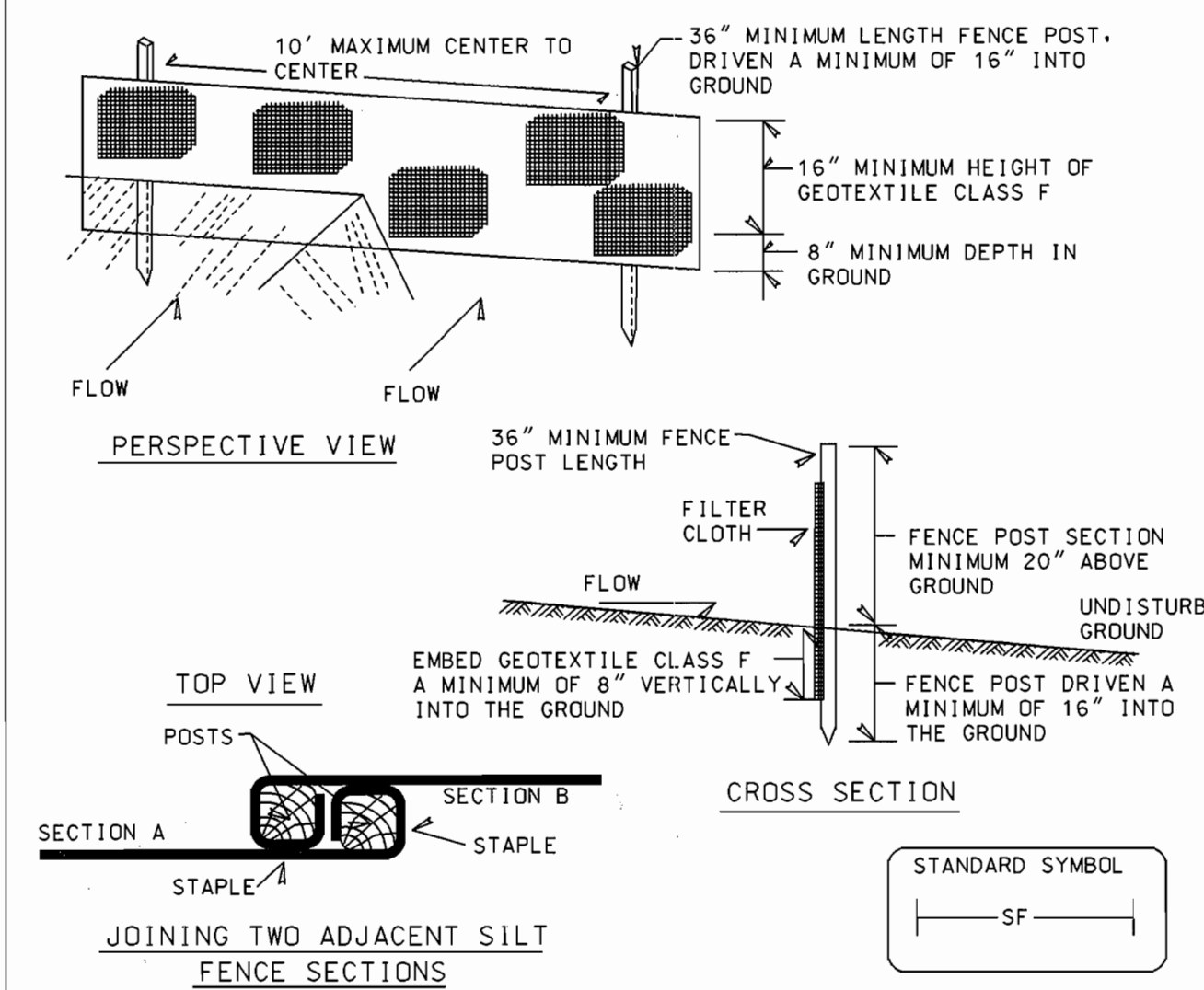
STANDARD SEDIMENT CONTROL NOTES

- 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:
 - 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1,
 - 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. I, 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 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (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	0.24	ACRES
AREA DISTURBED	0.24	ACRES
AREA TO BE ROOFED OR PAVED	0.19	ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.05	ACRES
TOTAL CUT	NA	CU. YDS.
TOTAL FILL	NA	CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	NA	
- 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

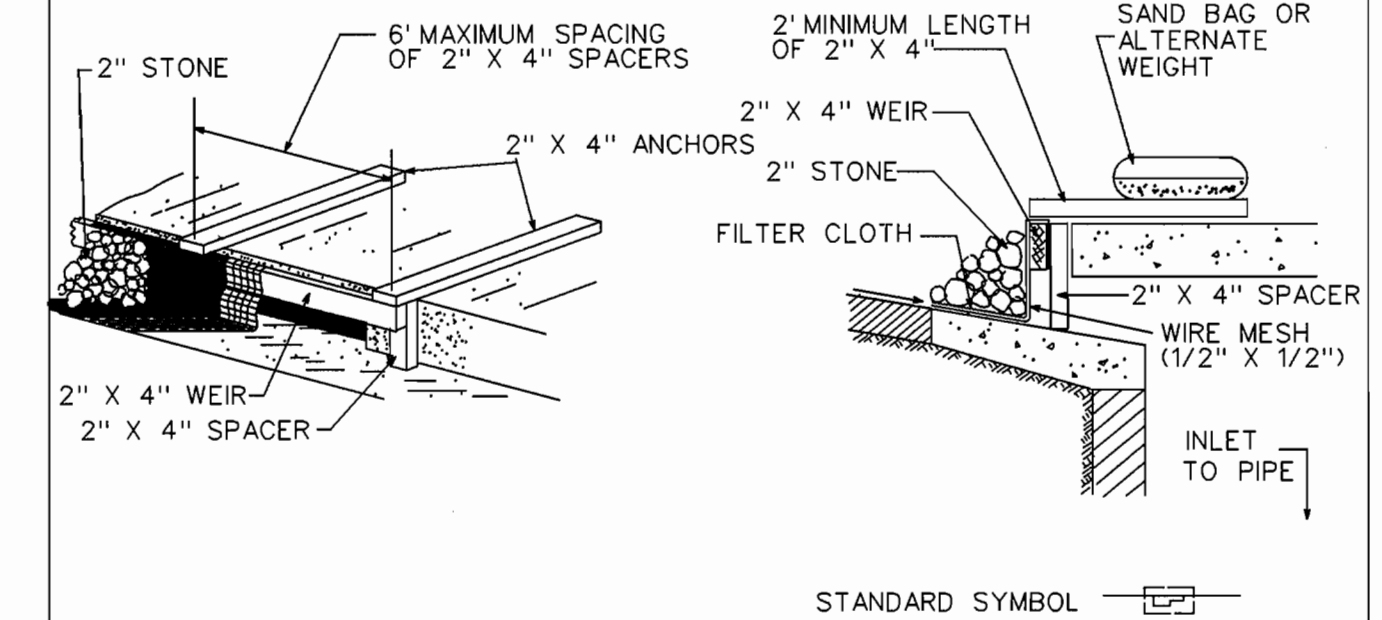


- Construction Specifications**
- Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) cut, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighing not 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 ² /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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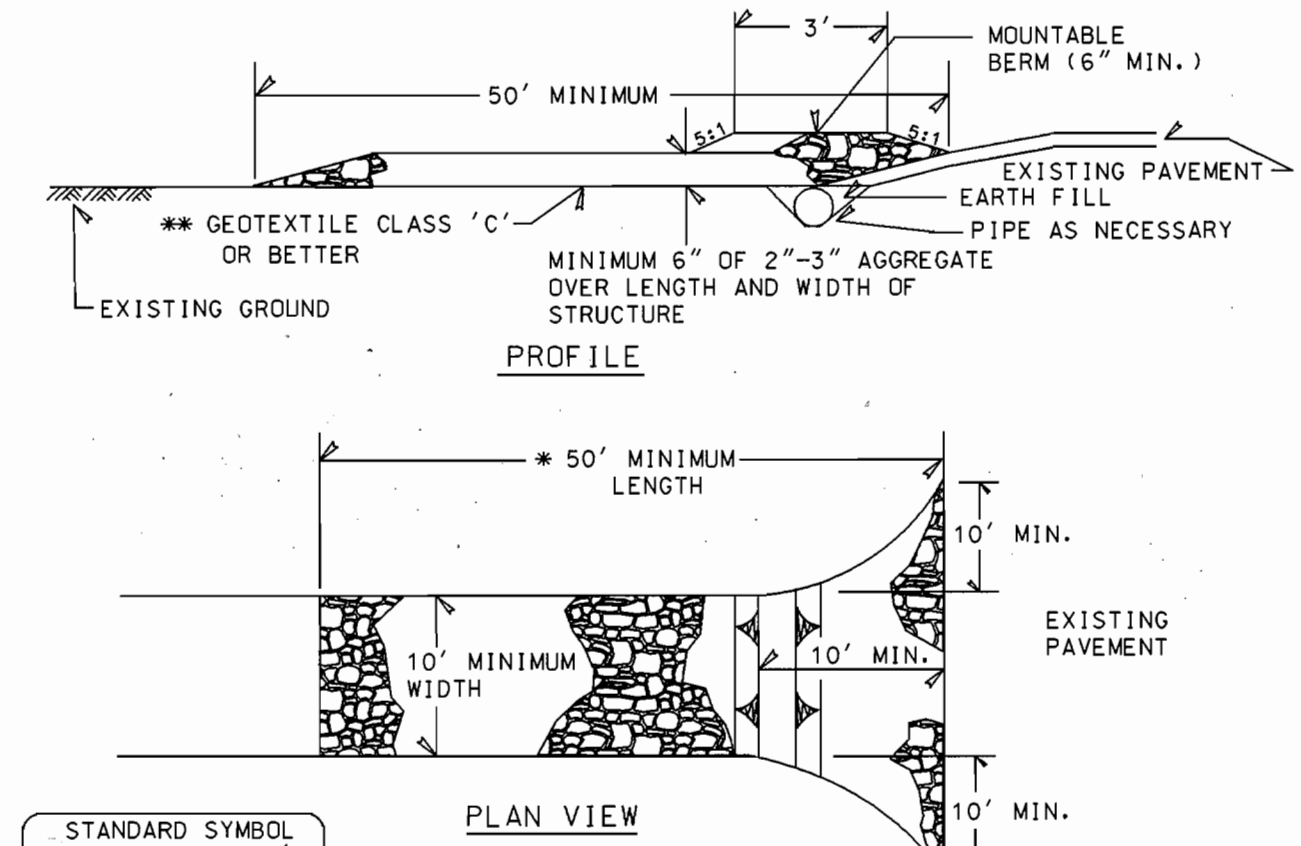
CURB INLET PROTECTION DETAIL



- CONSTRUCTION SPECIFICATIONS**
- I. MATERIALS
- WOODEN FRAME IS TO BE CONSTRUCTED OF 2" X 4" CONSTRUCTION GRADE LUMBER.
 - WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE FOR CURB INLETS, WITH WATER FULLY IMPOUNDED AGAINST IT.
 - FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE; RESISTANT TO SUNLIGHT WITH SIEVE SIZE E-85 TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
 - STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
- II. PROCEDURE
- CURB INLET PROTECTION
 - ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2" X 4" WEIR (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
 - PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SIEVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2" X 4" WEIR.
 - SECURELY NAIL THE 2" X 4" WEIR TO 9" LONG VERTICAL SPACERS TO BE LOCATED BETWEEN THE WEIR AND INLET FACE (MAX. 6" APART).
 - PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTHS OF 2" X 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" X 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
 - THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1" BEYOND BOTH ENDS OF THE THROAT OPENING.
 - FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
 - THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
 - ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND	INLET PROTECTION DETAIL	STANDARD DRAWING IPD-1
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DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Length - minimum of 50' (#30' for single residence lot).
- 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. #400 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.

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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:
 - The type, size, and spacing of fence posts.
 - The type of filter cloth used.
 - The method of fastening the filter cloth to the fencing support.
 - 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 fabricated 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

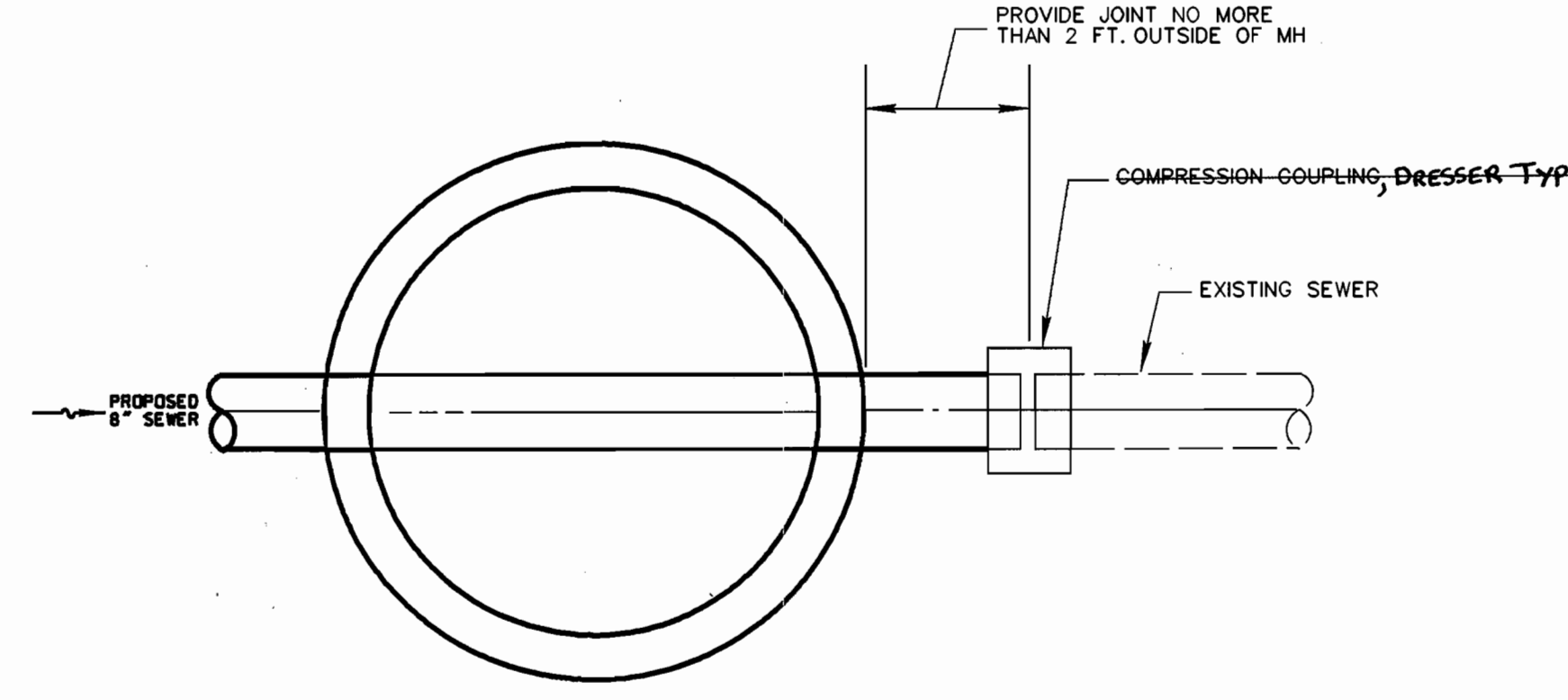
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

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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SEQUENCE OF CONSTRUCTION

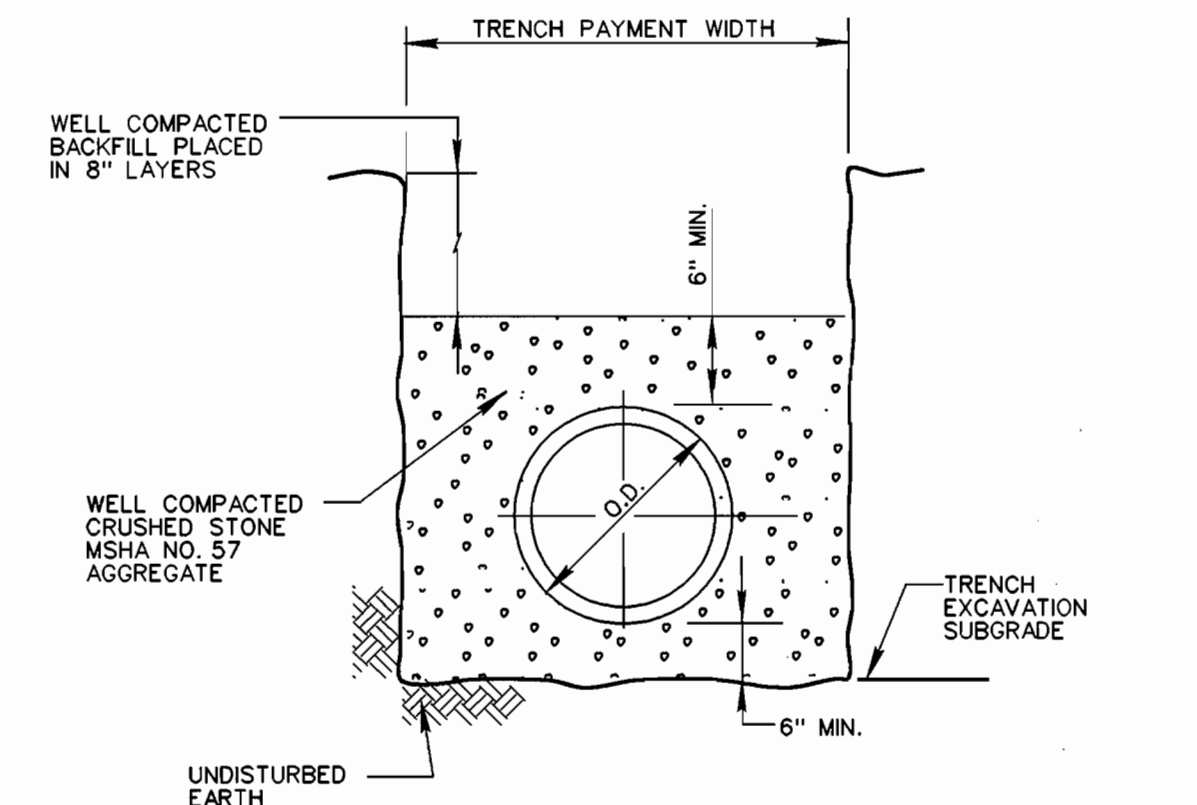
- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (3 DAY)
- INSTALL SEDIMENT CONTROL DEVICES (INLET PROTECTION DEVICES) AS SHOWN ON PLAN.
- EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE. ALL EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF TRENCH. INSTALL SEWER MAIN AND BACKFILL TRENCH AND RESTORE TO EXISTING CONDITIONS (30 DAYS) TRENCHES, FOR THE CONSTRUCTION OF UTILITIES, IS LIMITED TO 25' OF PIPE LENGTH OR THAT WHICH CAN BE BACK FILLED 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)



CONNECTION TO EXISTING SEWER AT SMH 1

NO SCALE

AS BUILT 11-07-2002



TRENCH FOR PVC PIPE AND HIGH DENSITY POLYETHYLENE PIPE

NO SCALE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jan J. Ch... 2/14/02
DIRECTOR OF PUBLIC WORKS
R. J. ... 2-15-02
CHIEF, BUREAU OF UTILITIES

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



DES:	PS				
DRN:	PS				
CHK:					
DATE:	10/01	BY:	NO.	REVISION	DATE
		CCB	AS-BUILT		11-07-02

SEDIMENT AND EROSION CONTROL
DETAILS AND NOTES

600' SCALE TAX MAP NO. 35 BLOCK NO. 14/20

TROTTER ROAD SOUTH SEWER EXTENSION
CAPITAL PROJECT NO. S-6229
CONTRACT No. 30-3863
ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN
SHEET
3 OF 3

FILE NAME: M-171999/0199180.DWG

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 100 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 UREA FORM FERTILIZER (9 LBS/1000 SQ FT.).

2. **ACCEPTABLE** - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ FT.) AND 100 LBS PER ACRE 10-10-10 FERTILIZER (14 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 (0.5 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 (18 GAL/1000 SQ FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED 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 FROM AUGUST 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 (0.7 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 (18 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.

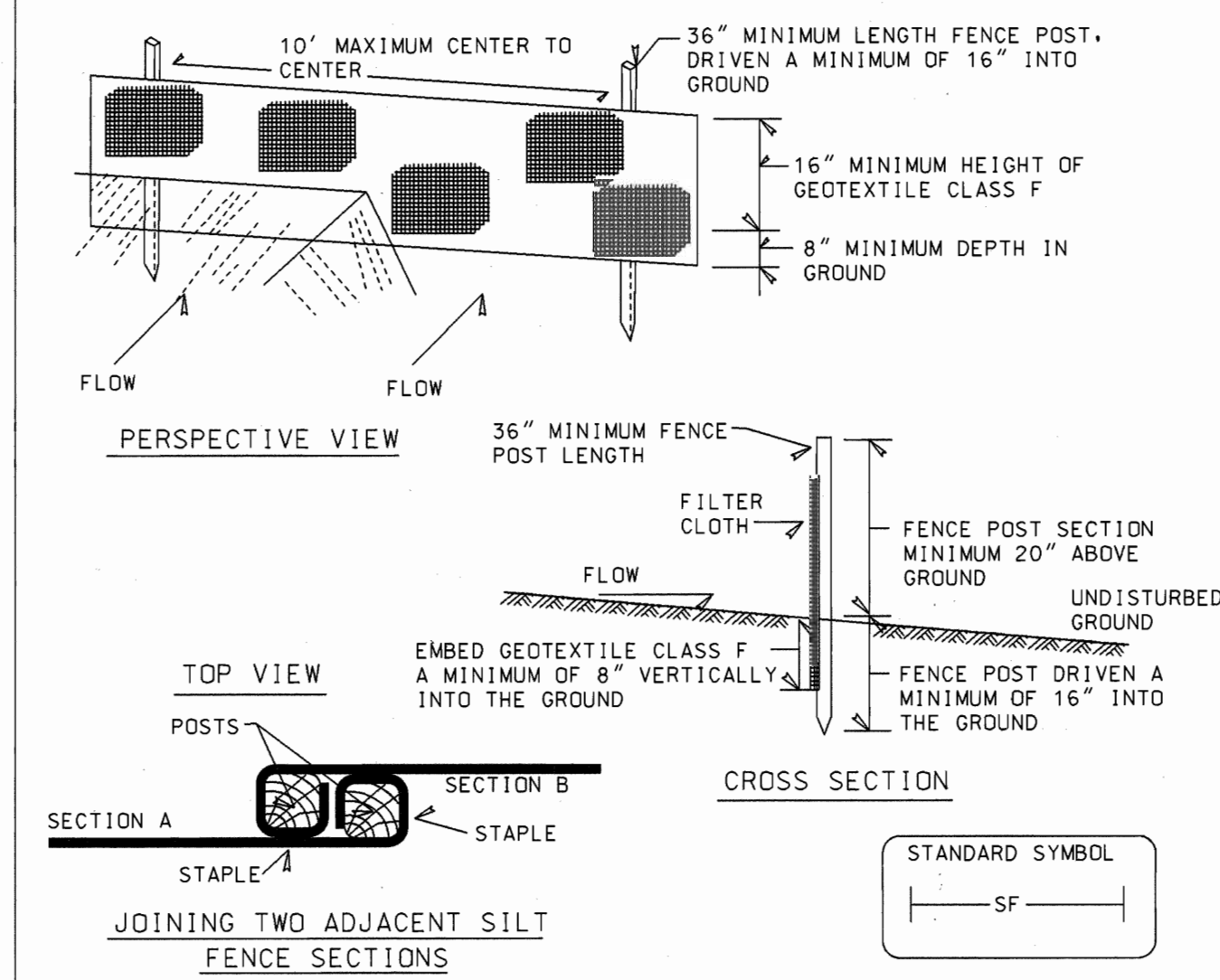
STANDARD SEDIMENT CONTROL NOTES

- 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:
 - 7 CALENDER DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1.
 - 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. I, 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 1991 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	0.24 ACRES
AREA TO BE ROOFED OR PAVED	0.24 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.19 ACRES
TOTAL CUT	NA CU. YDS.
TOTAL FILL	NA CU. YDS.
OFFSITE WASTE/BORROW AREA LOCATION	NA
- 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.

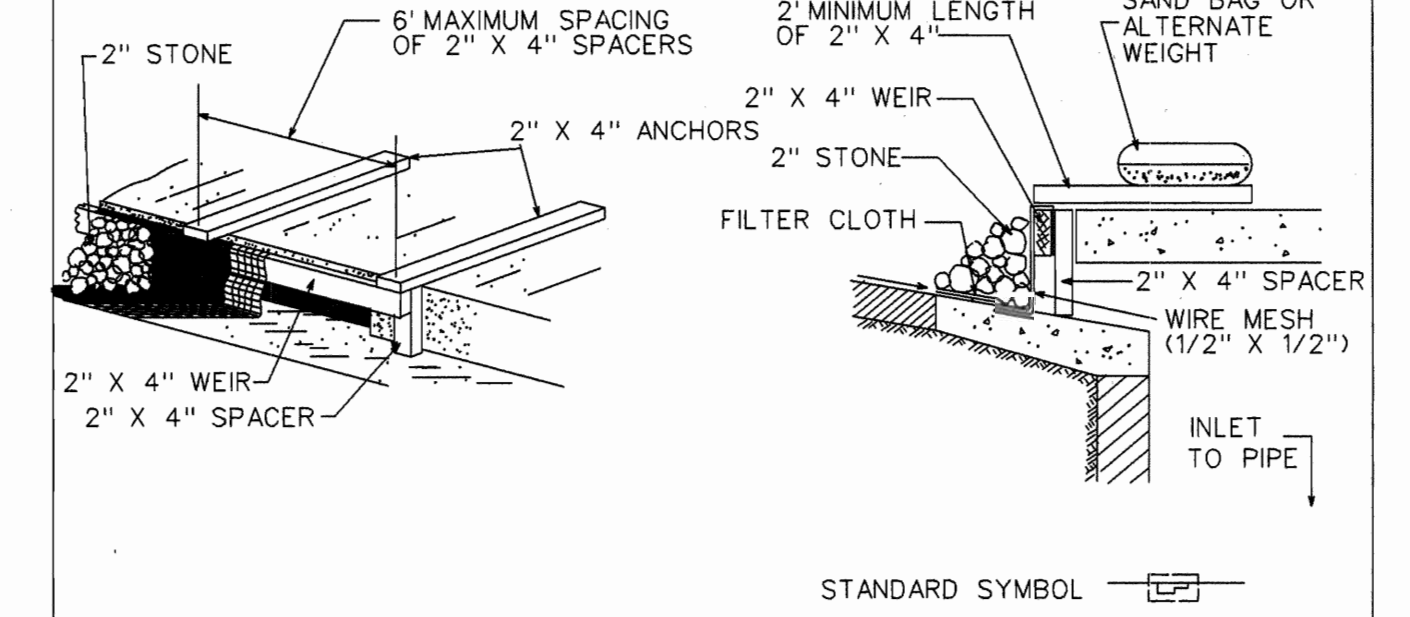
DETAIL 22 - SILT FENCE



- 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 weighting 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 ² /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

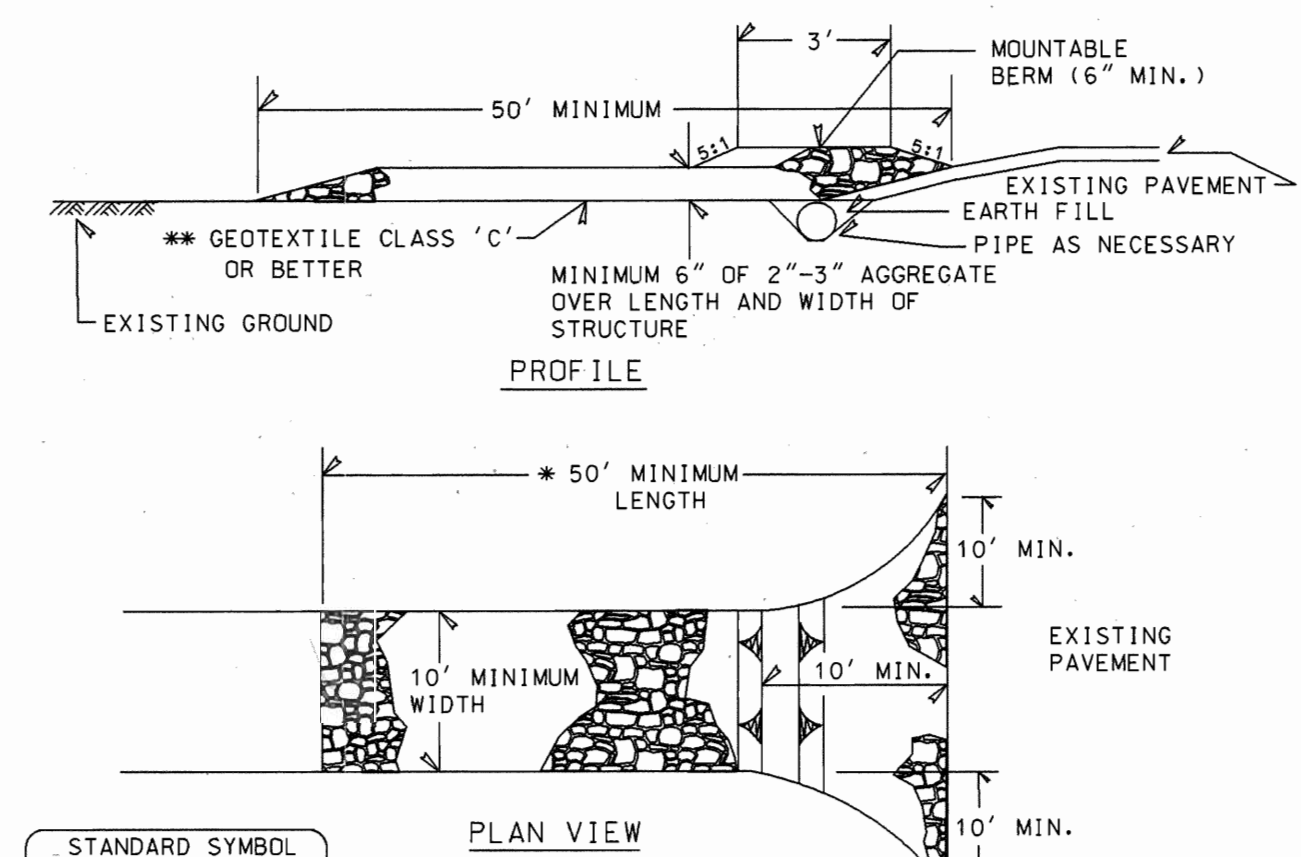
CURB INLET PROTECTION DETAIL



- CONSTRUCTION SPECIFICATIONS**
- MATERIALS**
 - WOODEN FRAME IS TO BE CONSTRUCTED OF 2" X 4" CONSTRUCTION GRADE LUMBER.
 - WIRE MESH MUST BE OF SUFFICIENT STRENGTH TO SUPPORT FILTER FABRIC, AND STONE FOR CURB INLETS, WITH WATER FULLY IMPOUNDED AGAINST IT.
 - FILTER CLOTH MUST BE OF A TYPE APPROVED FOR THIS PURPOSE, RESISTANT TO SUNLIGHT WITH SIEVE SIZE E05, 40-85, TO ALLOW SUFFICIENT PASSAGE OF WATER AND REMOVAL OF SEDIMENT.
 - STONE IS TO BE 2" IN SIZE AND CLEAN, SINCE FINES WOULD CLOG THE CLOTH.
 - PROCEDURE**
 - CURB INLET PROTECTION**
 - ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4") TO THE 2" X 4" WEIR (MEASURING THROAT LENGTH PLUS 2") AS SHOWN ON THE STANDARD DRAWING.
 - PLACE A PIECE OF APPROVED FILTER CLOTH (40-85 SIEVE) OF THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH TO THE 2" X 4" WEIR.
 - SECURELY NAIL THE 2" X 4" WEIR TO 9" LONG VERTICAL SPACERS TO BE LOCATED BETWEEN THE WEIR AND INLET FACE (MAX. 6" APART).
 - PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2" LENGTHS OF 2" X 4") TO THE TOP OF THE WEIR AT SPACER LOCATIONS. THESE 2" X 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.
 - THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1" BEYOND BOTH ENDS OF THE THROAT OPENING.
 - FORM THE WIRE MESH AND FILTER CLOTH TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN 2" STONE OVER THE WIRE MESH AND FILTER FABRIC IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE FILTER CLOTH.
 - THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.
 - ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING TEMPORARY EARTH OR ASPHALT DIKES DIRECTING FLOW INTO INLET.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE COLLEGE PARK, MARYLAND
 INLET PROTECTION DETAIL
 STANDARD DRAWING IPD-1

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



- Length - minimum of 50' (#30' for single residence lot).
- 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 SOIL CONSERVATION SERVICE PAGE F - 17 - 3 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SILT FENCE

Construction Specifications

- A detail of the silt fence shall be shown on the plan, and contain the following minimum requirements:
 - The type, size, and spacing of fence posts.
 - The type of filter cloth used.
 - The method of fastening the filter cloth to the fencing support.
 - 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 fabricated 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 weighting not less than 1.00 pound per linear foot.

Silt Fence Design Criteria

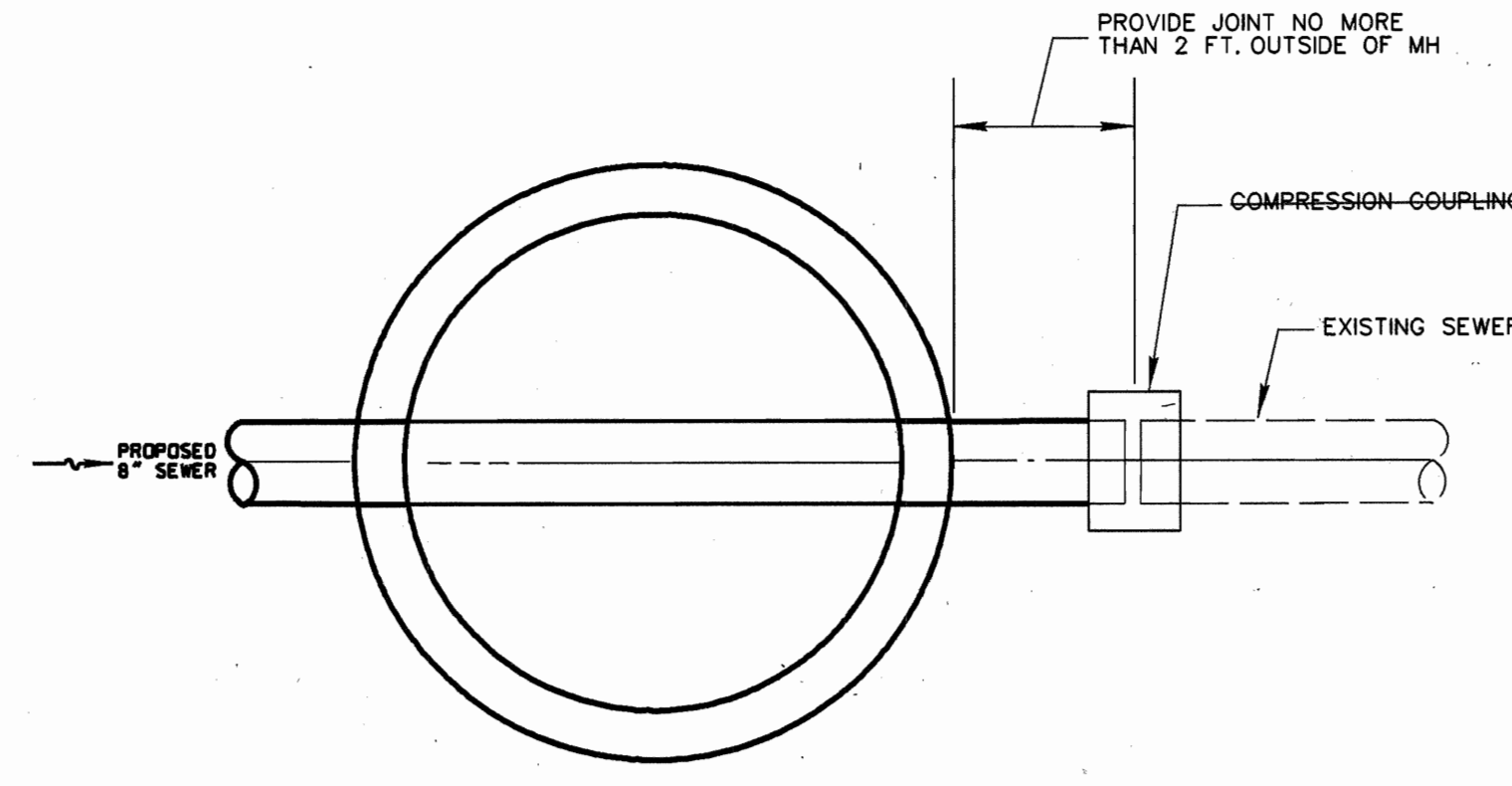
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

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

SEQUENCE OF CONSTRUCTION

- OBTAIN GRADING PERMIT.
- LAYOUT ALIGNMENT AT SITE. (3 DAY)
- INSTALL SEDIMENT CONTROL DEVICES (INLET PROTECTION DEVICES) AS SHOWN ON PLAN.
- EXCAVATE DITCH TO THE GRADE SPECIFIED ON THE PROFILE. ALL EXCAVATED MATERIAL SHALL BE PLACED ON UPHILL SIDE OF TRENCH. INSTALL SEWER MAIN AND BACKFILL TRENCH AND RESTORE TO EXISTING CONDITIONS (30 DAYS) TRENCHES, FOR THE CONSTRUCTION OF UTILITIES, IS LIMITED TO 25' OF PIPE LENGTH OR THAT WHICH CAN BE BACK FILLED 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)



CONNECTION TO EXISTING SEWER AT SMH 1

NO SCALE

TRENCH FOR PVC PIPE AND HIGH DENSITY POLYETHYLENE PIPE

NO SCALE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.
Jim Myers 2/21/02
 U.S. NATURAL RESOURCES CONSERVATION SERVICE
 DATE
 THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY ENGINEERING DIVISION.
John R. Kibbutz
 APPROVED DATE
 HOWARD S.C.D. 2/21/02

AS BUILT 11-07-2002

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Jan J. Ch... 2/14/02
 DIRECTOR OF PUBLIC WORKS
Robert J. Brown 2-15-02
 CHIEF, BUREAU OF UTILITIES
 DATE

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

STATE OF MARYLAND
 PROFESSIONAL ENGINEER

DES:	PS
DRN:	PS
CHK:	
DATE:	10/01
BY:	CCB
NO.:	AS-BUILT
REVISION:	
DATE:	2-07-02

SEDIMENT AND EROSION CONTROL DETAILS AND NOTES

600' SCALE TAX MAP NO. 35 BLOCK NO. 14/20

TROTTER ROAD SOUTH SEWER EXTENSION
 CAPITAL PROJECT No. S-6229
 CONTRACT No. 30-3863
 ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE AS SHOWN
 SHEET 3 OF 13
 FILE NAME - M-1999/0199180.D

TROTTER ROAD SOUTH SEWER EXTENSION HOWARD COUNTY, MARYLAND

DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT No. S-6229
CONTRACT No. 30-3863

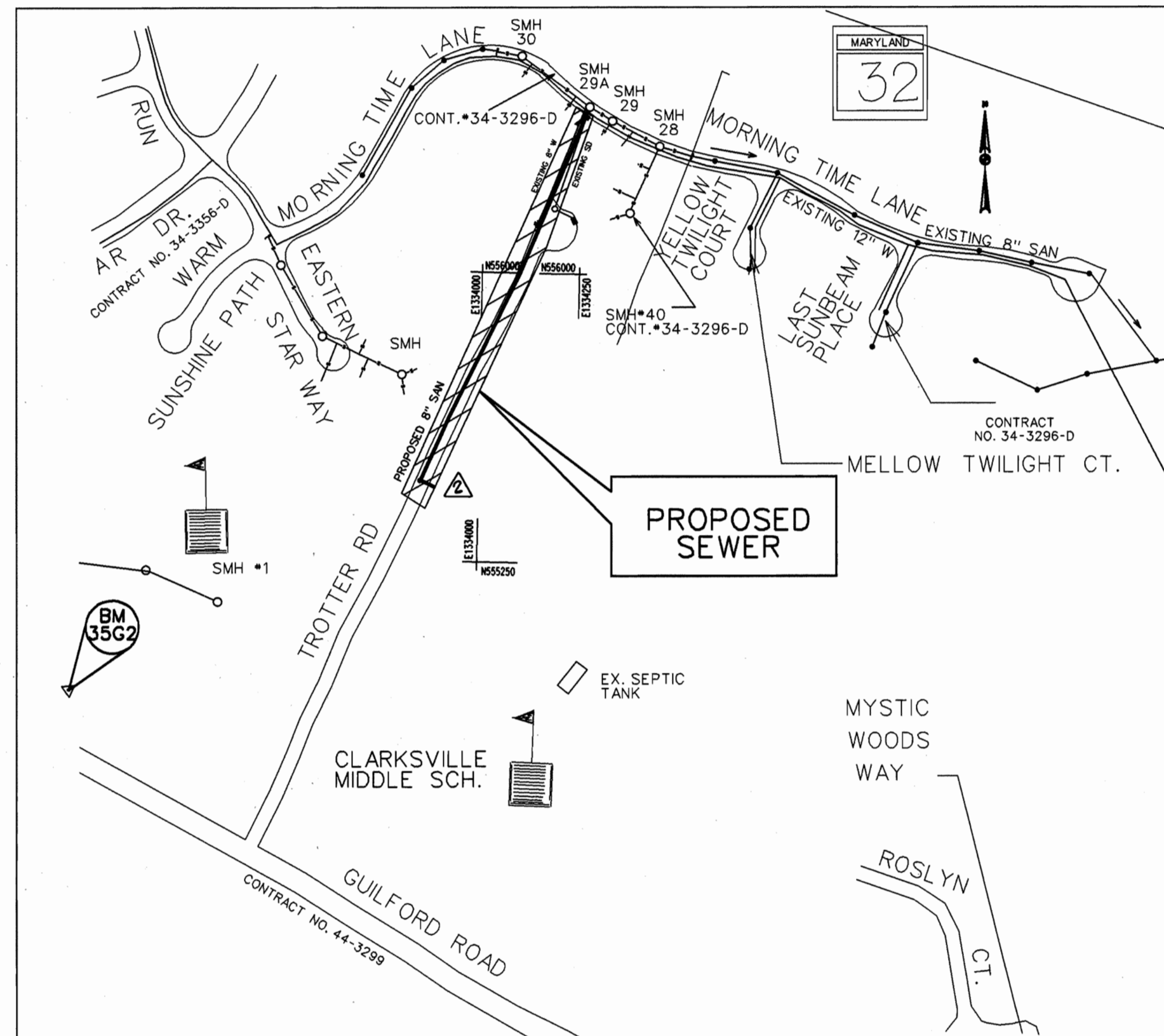
GENERAL NOTES

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 NGVD88
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 2'-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 TO 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:

A&T	1-800-526-2000
B&E (CONTRACTOR SERVICES)	410-850-4620
B&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 SEWER MAINS OR HOUSE CONNECTIONS. THE APPROVAL OF THESE DRAWINGS WILL CONSTITUTE COMPLIANCE WITH DPW REQUIREMENTS PER SECTION 18.114(c) OF THE HOWARD COUNTY CODE.
12. ALL SEWER MAINS SHALL BE PVC UNLESS OTHERWISE NOTED.
13. ALL MANHOLES SHALL BE 4'-0" INSIDE DIAMETER UNLESS OTHERWISE NOTED.
14. MANHOLES DESIGNATED W.T. IN PLAN AND PROFILE SHALL HAVE WATERTIGHT FRAME AND COVER, STANDARD DETAIL G5.52 WHERE WATERTIGHT MANHOLE FRAME AND COVER ARE USED, SET TOP OF FRAME 1'-6" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED ON THE DRAWINGS.
15. HOUSE(S) WITH THE SYMBOL "C.N.S." INDICATES THAT CELLAR CANNOT BE SERVED.
16. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE VARIOUS BUSINESSES AND COORDINATING HIS WORK ACTIVITIES SO AS NOT TO NEGATIVELY IMPACT CONNECTED CUSTOMERS. THE INSTALLATION OF WATER MAIN SHALL CAUSE A MINIMUM DISTURBANCE TO THE EXISTING BUSINESSES AND NOTIFICATION TO THE BUSINESS OF ANY "INTERRUPTION OF SERVICE" SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. THE COUNTY REQUIRES THAT THE CONTRACTOR NOTIFY EACH BUSINESS AFFECTED BY LETTER OR DOOR TAGS OF THE IMPENDING SERVICE INTERRUPTION AT LEAST 48 HOURS IN ADVANCE OF THE PLANNED INTERRUPTION.

LEGEND

	DECIDUOUS TREE		EXISTING SANITARY SEWER
	CONIFEROUS TREE		EXISTING WATER MAIN
	TRAVERSE POINT		LIMIT OF DISTURBANCE
	PROPOSED SAN. SEWER		PROPERTY LINE
	PROPOSED SEWER MANHOLE		RIGHT OF WAY LINE
	PROPOSED SEWER HOUSE CONNECTION		UNDERGROUND CABLE/ELECTRIC
	PROPOSED DROP SEWER HOUSE CONNECTION		OVERHEAD CABLE/ELECTRIC



TYPE OF BUILDING: RESIDENTIAL
NUMBER OF PARCELS: 7
SEWER HOUSE CONNECTIONS: 7
DRAINAGE AREA: MIDDLE PATUXENT

SEWER CODE FOR COUNTY USE ONLY: 6652500

BENCH MARKS
HOWARD COUNTY BENCH MARK NO. 35G2
ALSO KNOWN AS CLARK AZ
N554965.671 E1332934.904 ELEVATION 477.490
COORDINATES IN MARYLAND NAD83(91) HORIZONTAL DATUM
AND NGVD29 VERTICAL DATUM

HO. CO. CONTROL
HOWARD COUNTY GEODETIC SURVEY CONTROL NO. 31R1
NAD83(91) (HORIZONTAL)
NGVD29 (VERTICAL)
PRESSURE ZONE: 400

VICINITY MAP
SCALE: 1"=600'

INDEX OF SHEETS

SHEET No.	DESCRIPTION
1	TITLE SHEET
2	8-INCH SEWER MAIN - PLAN, PROFILE & NOTES
3	SEDIMENT AND EROSION CONTROL - DETAILS AND NOTES

QUANTITIES

ITEM	UNIT	ESTIMATE	AS-BUILT	MATERIAL SUPPLIER
8" PVC SEWER	LF	1075	1053	UPONOR, IPEX, PLASTIC TRENDS, INC.
4" DIA MH RISER	EA	4	5	FREDERICK PRECAST CONG. INC.
4" DIA MH RISER > 6'	VF	18	14.70	FREDERICK PRECAST CONG. INC.
4" SHC	LF	227'		UPONOR, IPEX, PLASTIC TRENDS, INC.
NAME OF UTILITY CONTRACTOR:				CURTIS CONTRACTORS
CHECKBOX				
AS-BUILT DATE:				10-25-2002
SURVEY AND DRAFTING DIVISION				

RESTORATION SCHEDULE

LOCATION	DISTANCE	TYPE
SMH 1 TO MH 2	234'	SEED & MULCH
SMH 2 TO MH 4	808'	BITUMINOUS CONCRETE

TRAVERSE SCHEDULE

LOCATION	NORTHING	EASTING	ELEVATION
TV10	556419.233	1334276.910	430.88
TV9	556213.887	1334179.240	443.09
TV8	555828.641	1334040.120	455.46
TV11	555565.244	1333827.376	461.00

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."

Paul J. Span 2/14/02
BUREAU OF ENGINEERING
DEPARTMENT OF PUBLIC WORKS
DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Jim Meyer 2/21/02
U.S. NATURAL RESOURCES
CONSERVATION SERVICE
DATE

ENGINEER'S CERTIFICATION

"I/WE 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 SOIL CONSERVATION DISTRICT."

Timothy Wolfe 2/13/02
TIMOTHY WOLFE
DATE

KCI TECHNOLOGIES
10 NORTH PARK DRIVE
HUNT VALLEY, MARYLAND 21030

THIS DEVELOPMENT PLAN IS APPROVED FOR THE SOIL EROSION & SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

John C. K... ..
APPROVED
HOWARD S.C.D.
2/21/02

AS BUILT 11-07-2002

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Jan P. Span 2/14/02
DIRECTOR OF PUBLIC WORKS
DATE
Paul J. Span 2-15-02
CHIEF, BUREAU OF ENGINEERING
DATE
Paul J. Span 2-14-02
CHIEF, BUREAU OF UTILITIES
DATE

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



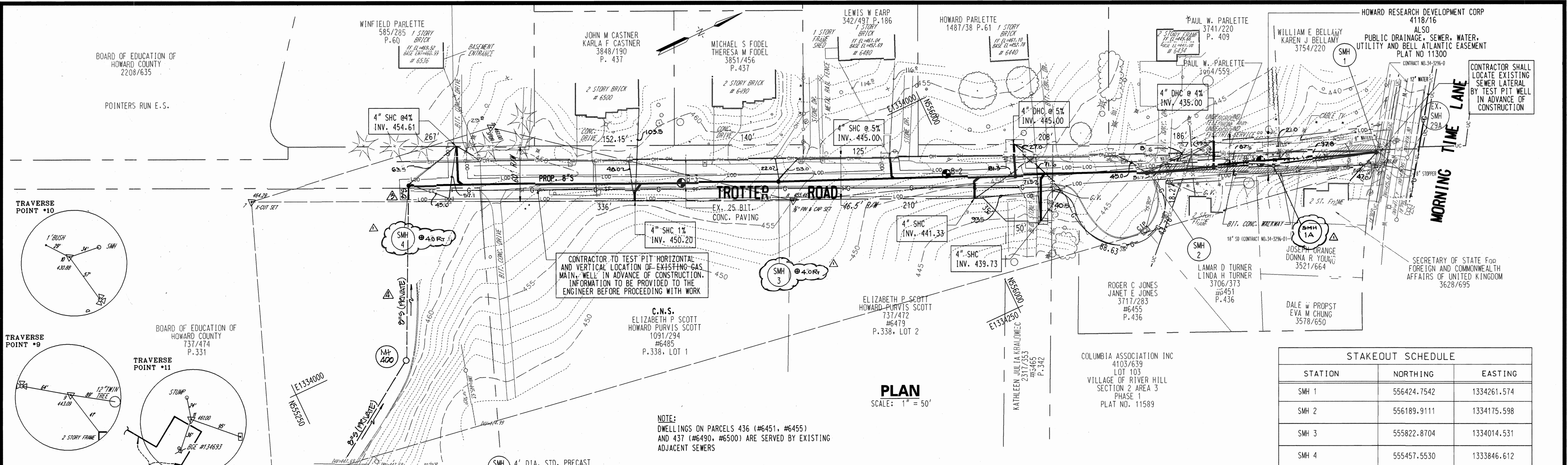
DES:	PS				
DRN:	PS				
CHK:		KCL	Δ	REVISE ESTIMATED QUANTITY OF 8" PVC SEWER	1/23/04
		KCL	Δ	INDICATE 0'S TO R/W LINE OF SOUTH TROTTER ROAD	1/23/04
		CCB	Δ	As-Built	11-07-2002
DATE:	10/01	BY:	NO.	REVISION	DATE

TITLE SHEET

600' SCALE TAX MAP NO. 35 BLOCK NO. 14/20

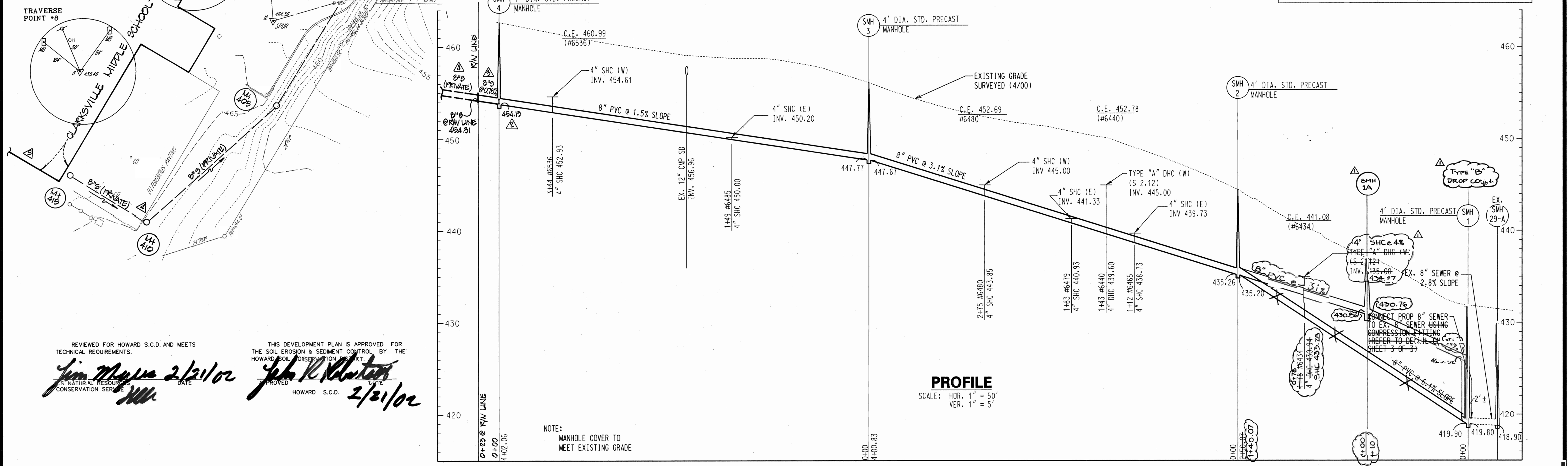
TROTTER ROAD SOUTH SEWER EXTENSION
CAPITAL PROJECT No. S-6229
CONTRACT No. 30-3863
ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN
SHEET
1 OF 3



STAKEOUT SCHEDULE

STATION	NORTHING	EASTING
SMH 1	556424.7542	1334261.574
SMH 2	556189.9111	1334175.598
SMH 3	555822.8704	1334014.531
SMH 4	555457.5530	1333846.612



REVIEWED FOR HOWARD S.C.D. AND MEETS
TECHNICAL REQUIREMENTS.
Jim Mays 2/21/02
S. NATURAL RESOURCES
CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR
THE SOIL EROSION & SEDIMENT CONTROL BY THE
HOWARD SOIL CONSERVATION DISTRICT.
John R. Kauter 2/21/02
APPROVED
HOWARD S.C.D.

AS BUILT 11-07-2002

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Paul R. Sapon 2/14/02
DATE
CHIEF, BUREAU OF ENGINEERING

John R. Kauter 2-14-02
DATE
CHIEF, UTILITY DESIGN DIVISION

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

KCI
TECHNOLOGIES



DES:	PS	BY:	NO.	REVISION	DATE
DRN:	PS	YCC	1	INDICATE CLARKSVILLE MIDDLE SCHOOL	1/23/02
CHK:		YCC	2	INDICATE ON-SITE PRIVATE D/S TO EX. MIDDLE SCHOOL	1/23/02
		YCC	3	INDICATE D/S TO R/W LINE OF SOUTH TROTTER ROAD	1/23/02
		YCC	4	INDICATE "AS-BUILT" INVERT AT EX. SMH #A	1/23/02
DATE:	10/01	CCB	1	AS-BUILT	11-07-2002

**8-INCH SEWER MAIN
PLAN, PROFILE AND NOTES**

600' SCALE TAX MAP 35 PARCEL 14/20

TROTTER ROAD SOUTH SEWER EXTENSION
CAPITAL PROJECT No. S-6229
CONTRACT No. 30-3863
ELECTION DISTRICT NO. 5 HOWARD COUNTY, MARYLAND

SCALE
AS SHOWN

SHEET
2 OF 3

FILE NAME-W:\1999\0199180.D