

HOWARD COUNTY

Capital Project #D-1159

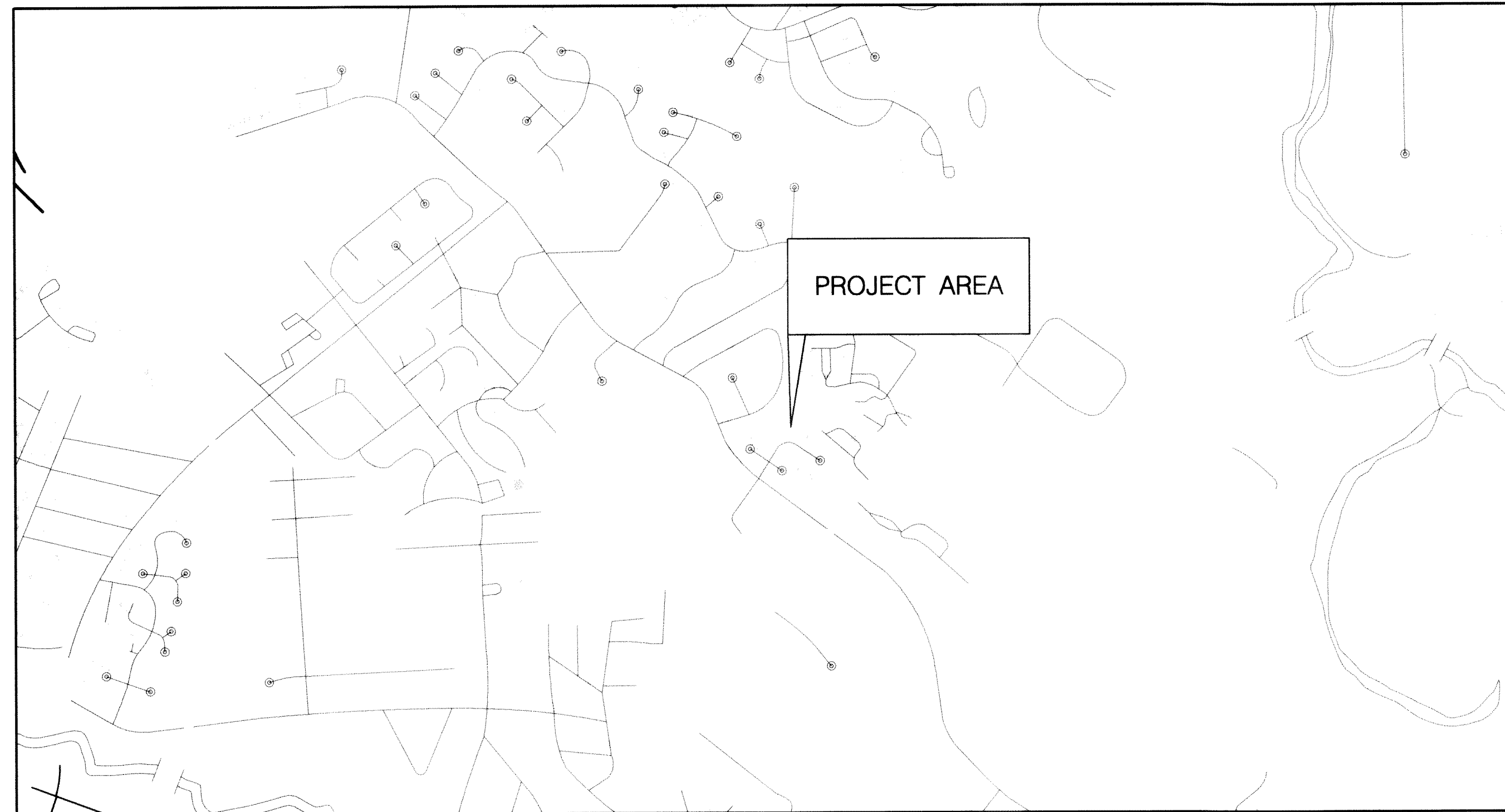
Stratford Downs

Storm Water Management Repair

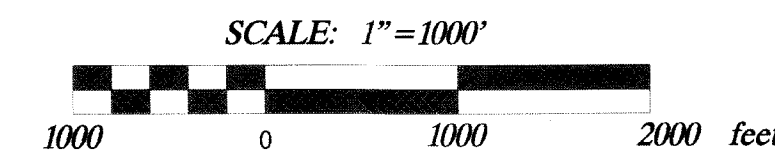
Storm Water Management Division
Bureau Of Enviromental Services

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LEGEND	
PROPOSED MEDIAN BARRIER	
ELECTRICAL HAND BOX - SIGNALS	
FLOW LINE	
STATE, COUNTY OR CITY LINES	
PROPOSED TRAFFIC BARRIER	
EXISTING TRAFFIC BARRIER	
PROPOSED FENCE LINE	
EXISTING FENCE LINE	
RIGHT OF WAY LINE	
EXISTING ROADWAY	
BASE OR SURVEY LINE	
TRAVERSE POINT	
APPROXIMATE LIMITS OF CUT AND/OR FILL	
PROPOSED MAJOR CONTOUR	
PROPOSED MINOR CONTOUR	
LIMIT OF DISTURBANCE	
EXISTING MAJOR CONTOURS	
EXISTING MINOR CONTOURS	
EXISTING PIPE/CULVERT	
EXISTING DROP INLET	
WETLAND	
HEDGE /TREE LINE	
BUSH /TREE	
CONIFEROUS TREE	
LIGHT POLE	



HORIZONTAL DATUM	NAD 83 /91
VERTICAL DATUM	NAVD 88



GENERAL NOTES

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MDSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) WORKING DAYS PRIOR TO ANY WORK BEING DONE.
- THIS PLAN IS PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS /BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- SURVEY OF THIS SITE WAS PERFORMED BY AB CONSULTANTS, INC.-JANUARY 2010.
- THE COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. BENCHMARKS SHOWN HEREON WERE PROVIDED BY AB CONSULTANTS INC.
- ADDITIONAL STORMWATER MANAGEMENT IS NOT REQUIRED FOR THIS PROJECT SINCE THE PROJECT WILL NOT ADD IMPERVIOUS AREA TO THE EXISTING STORMWATER MANAGEMENT FACILITY.
- OBSTRUCTIONS SHOWN ON THIS DRAWING ARE FOR THE CONVENIENCE OF THE CONTRACTOR ONLY AND MCCORMICK TAYLOR DOES NOT WARRANT OR GUARANTEE THE CORRECTNESS OR COMPLETENESS OF THE INFORMATION GIVEN. THE CONTRACTOR MUST VERIFY SUCH INFORMATION TO HIS OWN SATISFACTION.
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. THE HOWARD COUNTY DOES NOT GUARANTEE THE COMPLETENESS OR THE CORRECTNESS OF THE SHOWN INFORMATION.
- THE CONTRACTORS SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO THE CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY. ALL UTILITIES SHALL HAVE A CLEARANCE BY A MINIMUM OF 6 INCHES VERTICALLY AND A MINIMUM OF 5 FEET HORIZONTALLY.
- SHOULD THE CONTRACTOR DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY MCCORMICK TAYLOR IMMEDIATELY TO RESOLVE THE SITUATION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- THE CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- SITE DEVELOPMENT DETAILS ARE REFERENCED FROM THE AS-BUILT PLANS FOR STRATFORD DOWNS (F-88-35).

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

John K. Robertson 7/19/10
HOWARD SCD DATE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.

LICENSE NO. 25819, EXPIRATION DATE: 2/25/2011

DESIGN CERTIFICATION

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

7-7-2010 DATE
Chris Brooks DESIGNER'S SIGNATURE

MARYLAND REGISTRATION NUMBER 25819
CHRIS BROOKS, P.E. PRINTED NAME

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND 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.

7/19/10 DATE
Howard E. Saltzman OWNER/DEVELOPER SIGNATURE

Howard E. Saltzman, Chief, Stormwater Management Division
PRINTED NAME AND TITLE

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>Howard E. Saltzman</i> 7/19/10 DIRECTOR OF PUBLIC WORKS DATE <i>Howard E. Saltzman</i> 7/19/10 CHIEF, STORMWATER MANAGEMENT DIVISION DATE	McCormick & Taylor Engineers & Planners Since 1946 509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662-7400	Howard County MARYLAND Storm Water Management Division Bureau of Environmental Services 6751 Columbia Gateway Drive, Suite 514 Columbia, Maryland 21046-3143 (410) 313-6444		DES: WC	ALH	AS-BUILT	5/27/11	HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR CAPITAL PROJECT D-1159 TITLE SHEET	SCALE AS SHOWN
				DRN: MR	CHK: CB	DATE: 7/7/10	BY		NO.

CONSTRUCTION TRAFFIC SHALL USE CAUTION WHEN ENTERING AND EXITING THE WORK AREA. CHILDREN, PEDESTRIAN AND VEHICLE TRAFFIC MAY CONFLICT WITH EQUIPMENT INGRESS AND EGRESS.



DRAINAGE STRUCTURE SCHEDULE					
NO.	STATION	TC /TG	INV. OUT	REMARKS	
MH-1	1+58	241.00 240.88	236.14 236.02	SEE SHEET 8 OF 9	
MH-2	1+34	237.50 238.08	230.73 230.75	SEE SHEET 8 OF 9	
MH-3	0+21	242.00 243.73	236.10 236.30	SEE SHEET 8 OF 9	
IN-1	2+02	237.76 237.91	229.60 229.57	SEE SHEET 8 OF 9; NO CONCRETE GUTTERS	

PIPE SCHEDULE				
FROM	TO	SIZE (IN.)	TYPE	LENGTH (L.F.)
MH-1	OUTFALL	15	HDPE	26.8
MH-1	MH-2	24	HDPE	101.7
MH-3	MH-2	18	HDPE	136.2
MH-2	IN-1	30	HDPE	72.9

ORANGE CONSTRUCTION FENCE (OCF)			
FROM	TO	QTY (LF)	REMARKS
0+07	2+43	980	

CLASS 1 RIPRAP OUTFALL PROTECTION				
STATION	WIDTH (FT)	LENGTH (FT)	DEPTH (IN)	QUANTITY (SY)
1+70	2	24	12	1.8
1+73	4	4	12	0.2

57 STONE (FOREBAY)		
FROM	TO	C.Y.
1+49	1+91	3

GABION BASKET		
FROM	TO	C.Y.
1+49	1+91	13

PERFORATED UNDERDRAIN		
SIZE (IN.)	TYPE	LENGTH (L.F.)
6	PVC	330
4	PVC	50

*Cost Of Stone Incidental To Cost Of Pipe.

SAND FILTER QUANTITY		
ITEM	QUANTITY (CY)	REMARKS
FINE AGGREGATE SAND	461	ASTM C33
NO. 7 STONE	62	4"
NO. 57 STONE	185	12"
NO. 2 STONE	93	6"

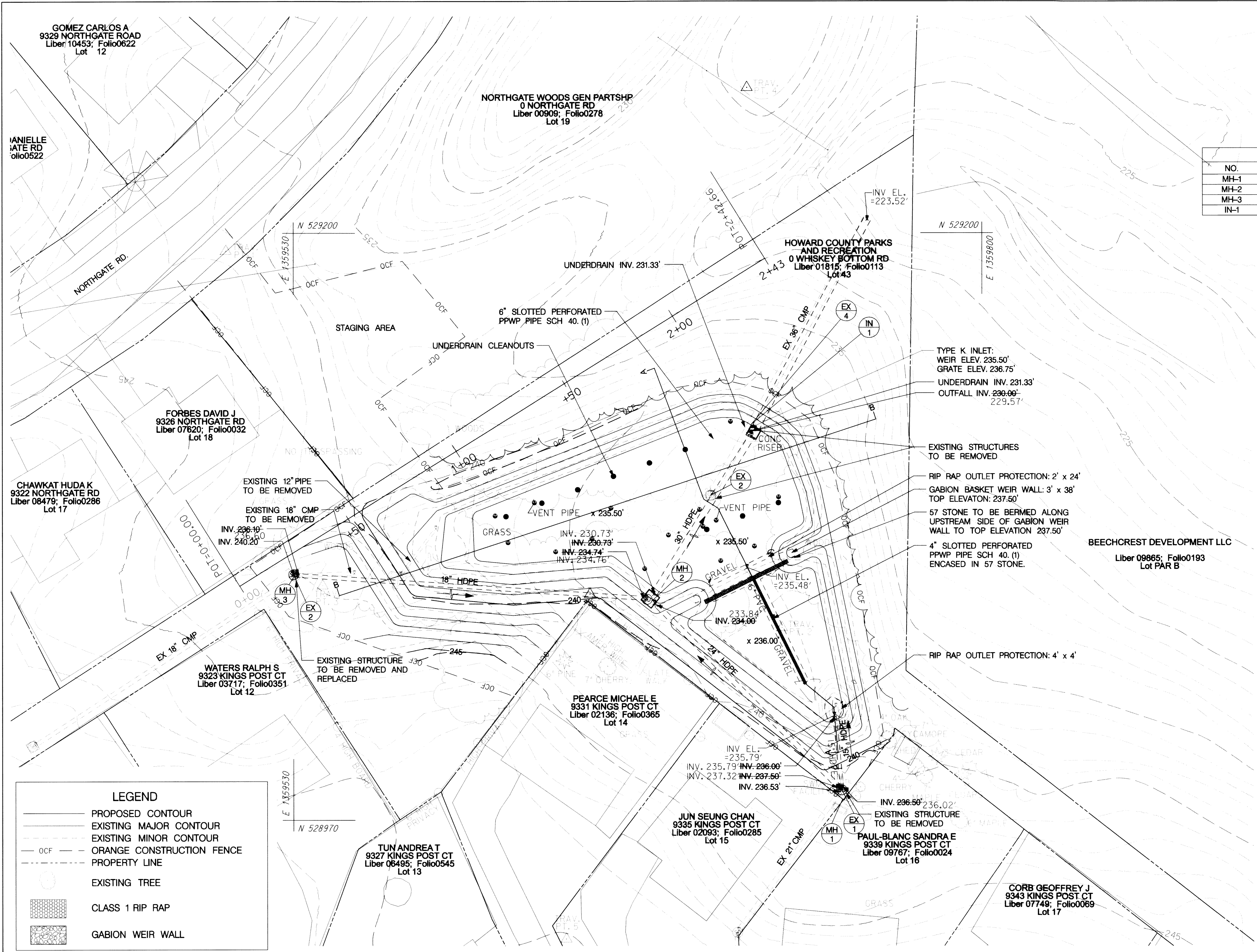
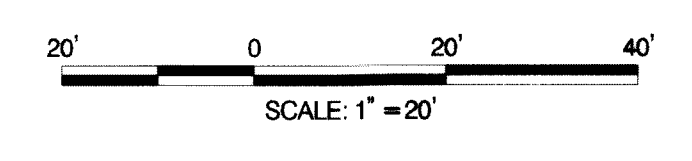
BIOSOIL	
QUANTITY (CY)	REMARKS
68	4" DEPTH

TOPSOIL	
QUANTITY (CY)	REMARKS
190	4" DEPTH

SOIL STABILIZATION MATTING	
QUANTITY (SY)	REMARKS
2312	BIODEGRADABLE NON WOVEN

NOTES:

- PERFORATED PIPE SHALL THE FOLLOWING SPECIFICATIONS
SLOT WIDTH: 1/8" (3mm)
TOTAL COMBINED SLOT LENGTH: MAX 2" (50mm)
DISTANCE BETWEEN SLOTS: MIN. 1" (25mm) OC
PERFORATED PIPE SHALL CONFORM TO AASHTO M 304
- SEE SHEET 3 OF 9 FOR STAKE OUT INFORMATION
- SEE SHEET 4 OF 9 FOR TYPICAL DETAILS
- UNDERDRAIN CLEANOUTS SHALL CONSIST OF 6" DIAMETER PPWP SCH. 40 PIPE WITH A SCREW TOP ELEV SET 6" ABOVE GROUND LEVEL.
- ALL SLOPES TO BE COVERED WITH BIODEGRADABLE NON WOVEN SOIL MATTING BEFORE INSTALLATION OF SAND FILTER MEDIA.



LEGEND	
	PROPOSED CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	ORANGE CONSTRUCTION FENCE
	PROPERTY LINE
	EXISTING TREE
	CLASS 1 RIP RAP
	GABION WEIR WALL

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

John R. Roberts DATE: 7/10/10

HOWARD SCD

McCormick Taylor
Engineers & Planners Since 1946

509 South Exeter Street
4th Floor
Baltimore, Maryland 21202
(410) 662-7400

Howard County
MARYLAND

Storm Water Management Division
Bureau of Environmental Services
6751 Columbia Gateway Drive, Suite 514
Columbia, Maryland 21046-3143
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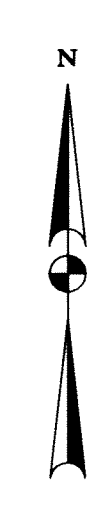
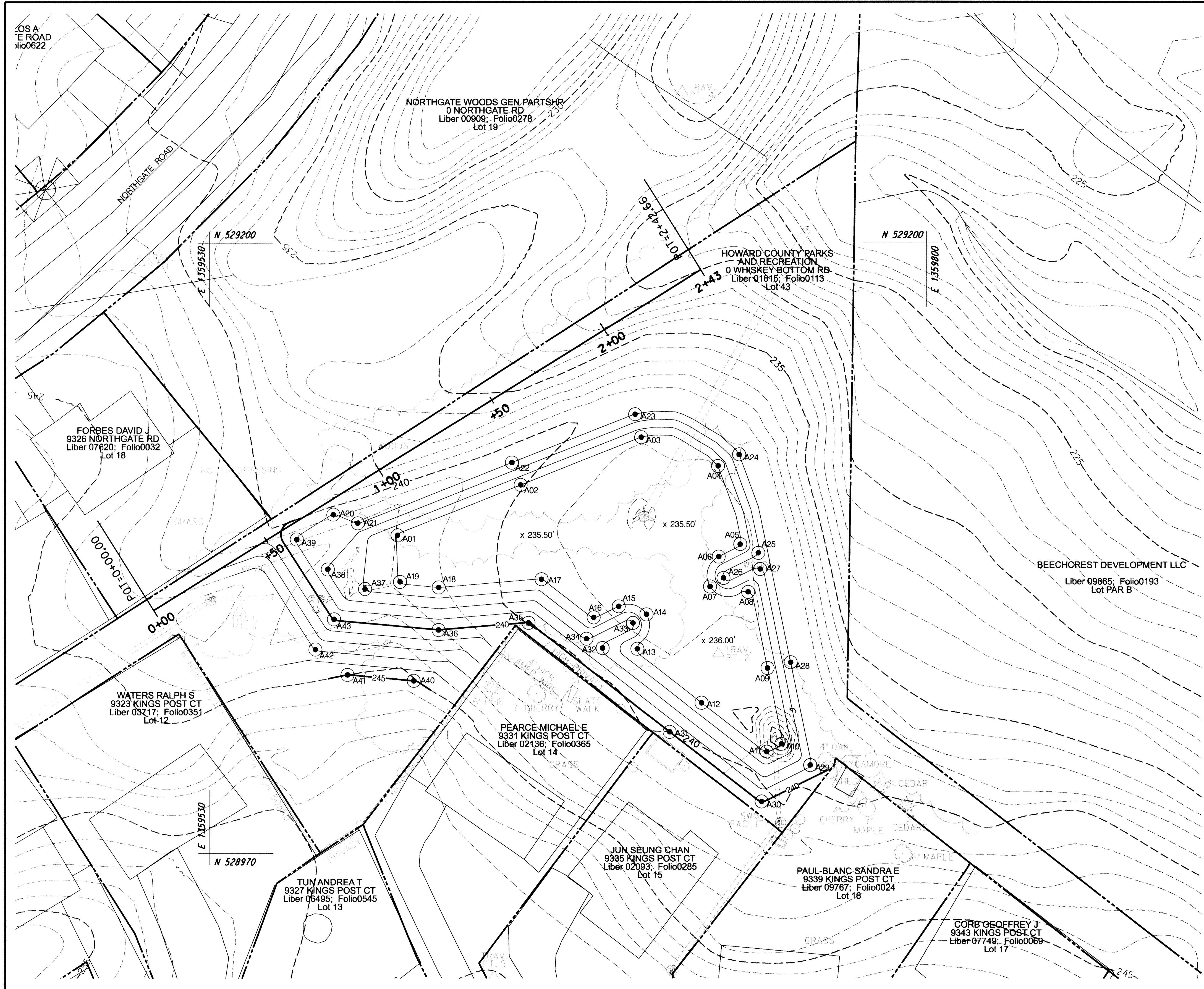
DES: WC	ALH	AS-BUILT	5/27/11
DRN: MR			
CHK: CB			
DATE: 7/7/10	BY	NO.	REVISION

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR CAPITAL PROJECT D-1159

SITE PLAN

SCALE: 1" = 20'

SHEET 2 OF 9



POND GEOMETRY STAKEOUT				
POINT	STATION	OFFSET	NORTHING	EASTING
A01	0+92.92	24.50	529089.99	1359600.74
A02	1+42.32	32.95	529108.94	1359647.12
A03	1+90.34	41.73	529126.90	1359692.52
A04	2+09.05	66.27	529115.97	1359721.38
A05	2+00.60	95.68	529086.55	1359729.76
A06	1+91.22	95.40	529081.82	1359721.65
A07	1+82.48	103.24	529070.54	1359718.38
A08	1+93.56	112.55	529068.50	1359732.72
A09	1+84.56	140.81	529039.76	1359740.02
A10	1+73.92	167.74	529011.28	1359745.24
A11	1+67.62	167.29	529008.32	1359739.66
A12	1+56.60	138.65	529026.80	1359715.15
A13	1+46.86	108.68	529047.08	1359691.03
A14	1+56.64	99.46	529060.08	1359694.45
A15	1+49.40	91.38	529063.11	1359684.04
A16	1+39.17	89.93	529058.92	1359674.59
A17	1+30.14	67.31	529073.35	1359654.96
A18	0+95.63	49.42	529070.28	1359616.21
A19	0+84.38	39.94	529072.36	1359601.65
A20	0+76.55	5.08	529097.80	1359576.56
A21	0+82.62	12.68	529094.57	1359585.74
A22	1+43.93	24.10	529117.31	1359643.81
A23	1+93.00	33.14	529135.60	1359690.23
A24	2+18.13	66.78	529120.34	1359729.36
A25	2+04.63	102.09	529083.23	1359736.57
A26	1+88.48	103.19	529073.76	1359723.45
A27	2+01.98	107.66	529077.11	1359737.27
A28	1+93.10	143.58	529041.92	1359748.74
A29	1+78.88	180.27	529003.27	1359756.08
A30	1+56.08	182.26	528989.52	1359737.78
A31	1+40.62	141.56	529015.88	1359703.13
A32	1+35.92	101.54	529047.36	1359677.97
A33	1+50.63	99.53	529056.84	1359689.39
A34	1+32.63	95.33	529050.88	1359671.90
A35	1+17.28	78.70	529056.88	1359650.07
A36	0+87.08	63.02	529054.21	1359616.15
A37	0+71.79	35.23	529069.71	1359588.47
A38	0+63.84	21.57	529077.09	1359574.50
A39	0+59.96	5.78	529088.44	1359562.86
A40	0+68.97	74.38	529034.99	1359606.79
A41	0+48.98	59.27	529037.23	1359581.83
A42	0+43.88	44.78	529046.84	1359569.84
A43	0+55.82	38.78	529058.25	1359576.80

CONSTRUCTION BASELINE CONTROL COORDINATES					
POINT	STATION	OFFSET	NORTHING	EASTING	REMARKS
POO	0+00.00	0.00	529061.63	1359508.92	CONSTRUCTION BASELINE
POT-1	0+64.91	-114.40	529192.97	1359503.54	
POT-2	1+71.77	126.33	529045.28	1359721.28	
POT-3	0+27.65	17.05	529061.79	1359541.40	
POT-4			529189.99	1359714.85	
POT-5	0+35.53	185.00	528923.43	1359626.92	
POI	2+42.66	0.00	529189.99	1359714.85	CONSTRUCTION BASELINE

LEGEND

- PROPOSED MAJOR CONTOUR
- - - PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- - - EXISTING MINOR CONTOUR
- EXISTING TREE

NOTE:
IT IS NOT REQUIRED TO STAKE OUT ALL POINTS AS SHOWN FOR CONSTRUCTION. THE CONTRACTOR MAY CHOOSE AT HIS DISCRETION WHICH POINTS ARE NECESSARY TO PROPERLY GRADE THE FACILITY.

20' 0 20' 40'
SCALE: 1" = 20'

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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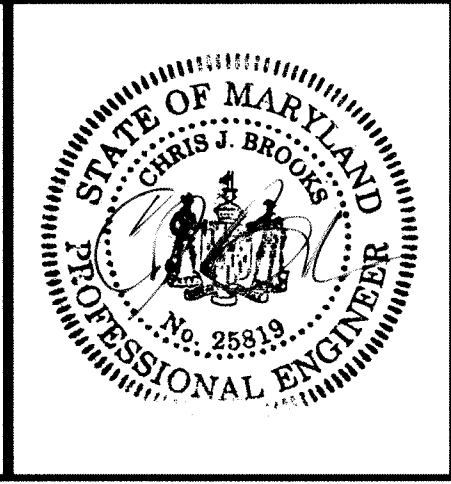
John K. Roberts 7/26/10
DATE

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Howard County
MARYLAND

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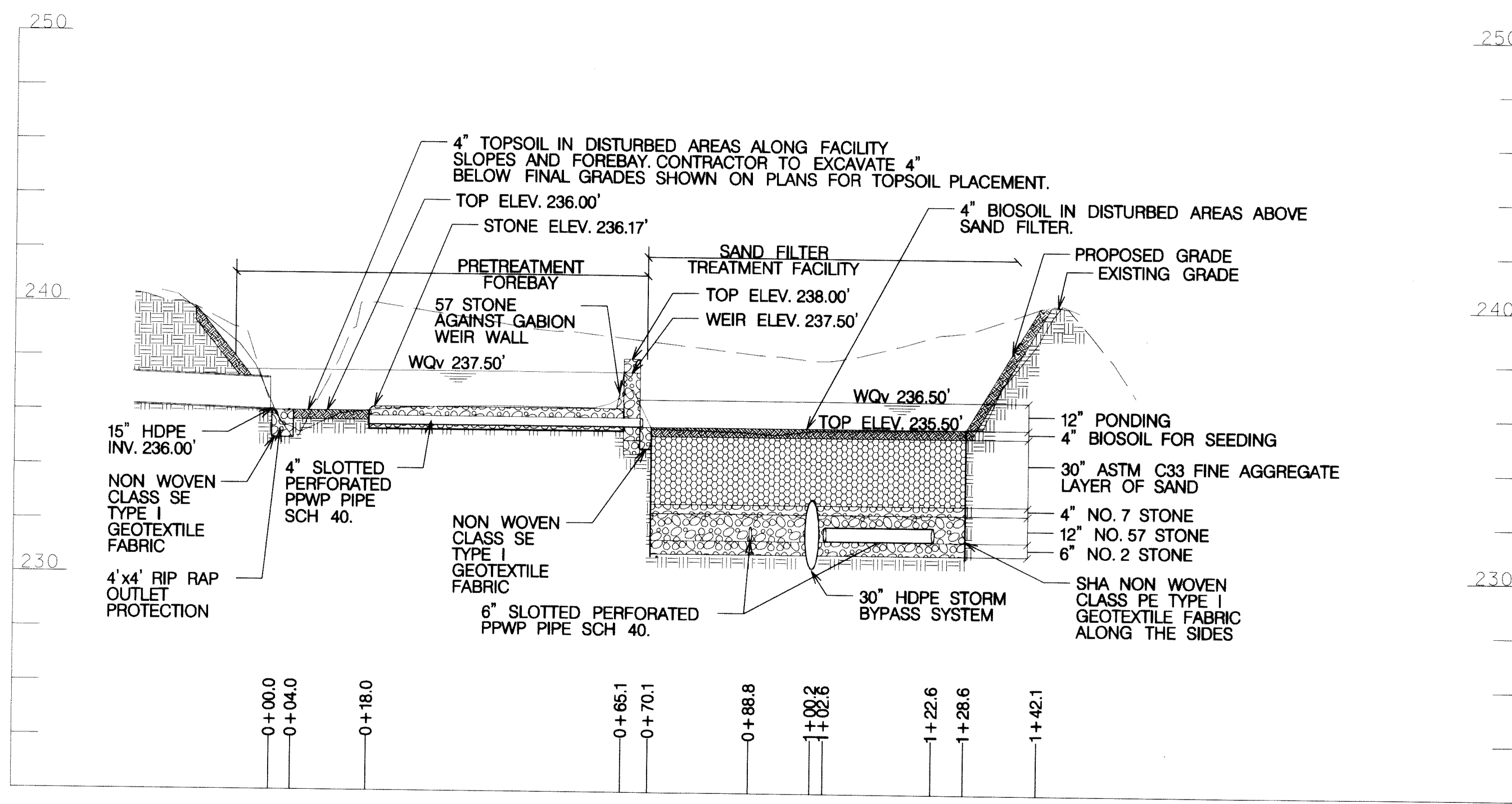


DES: WC					
DRN: MR					
CHK: CB					
DATE: 7/7/10	BY	NO.	REVISION	DATE	

**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159**

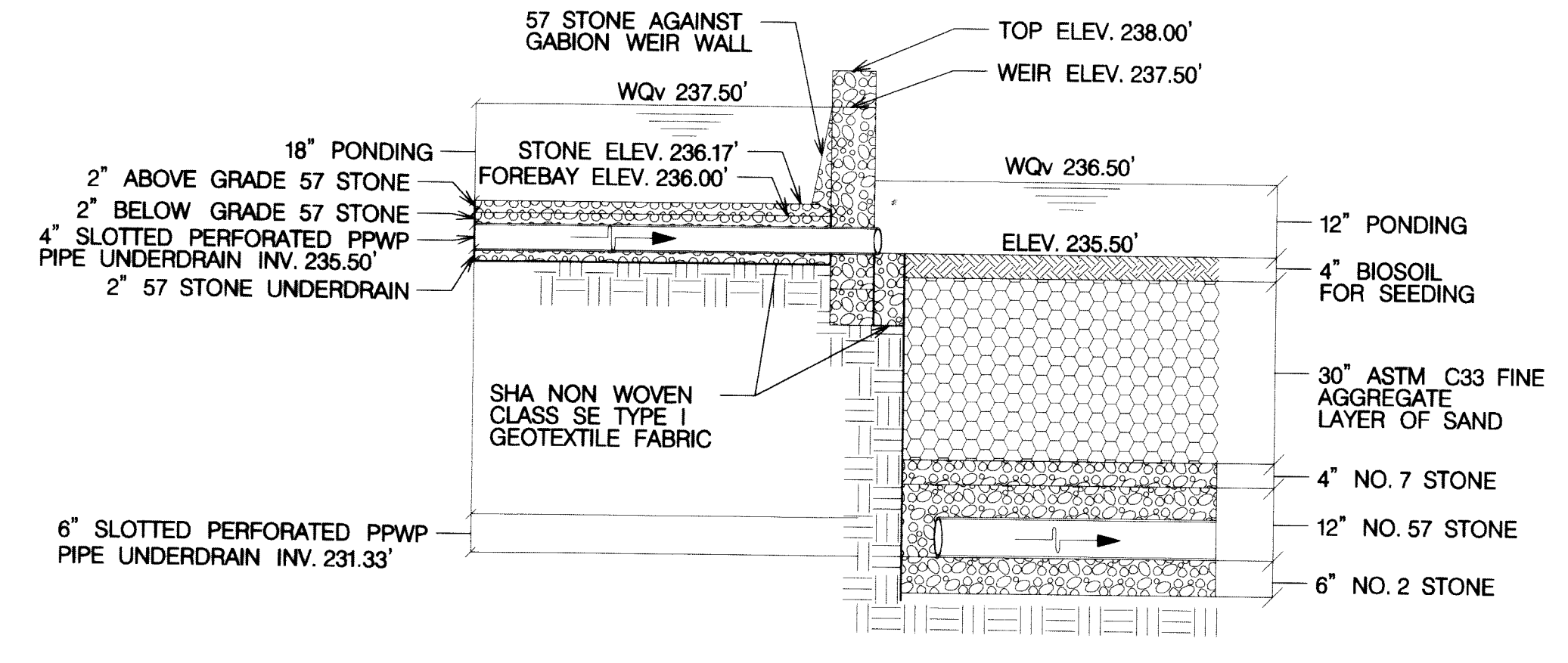
GEOMETRY SHEET

SCALE
1" = 20'
SHEET
3 OF 9

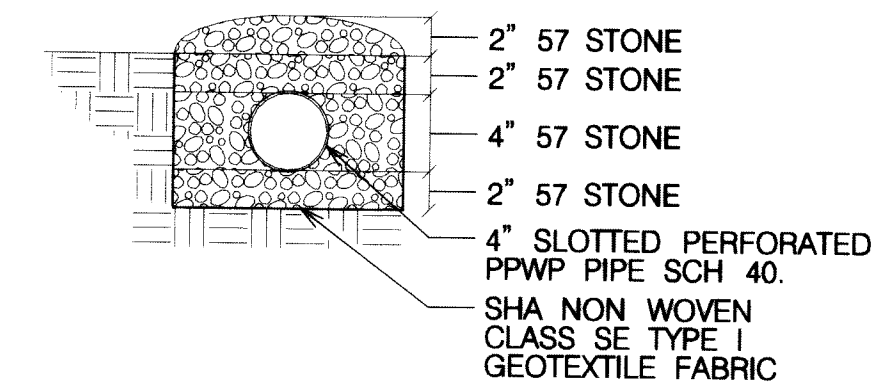


SECTION A-A - SAND FILTER FACILITY

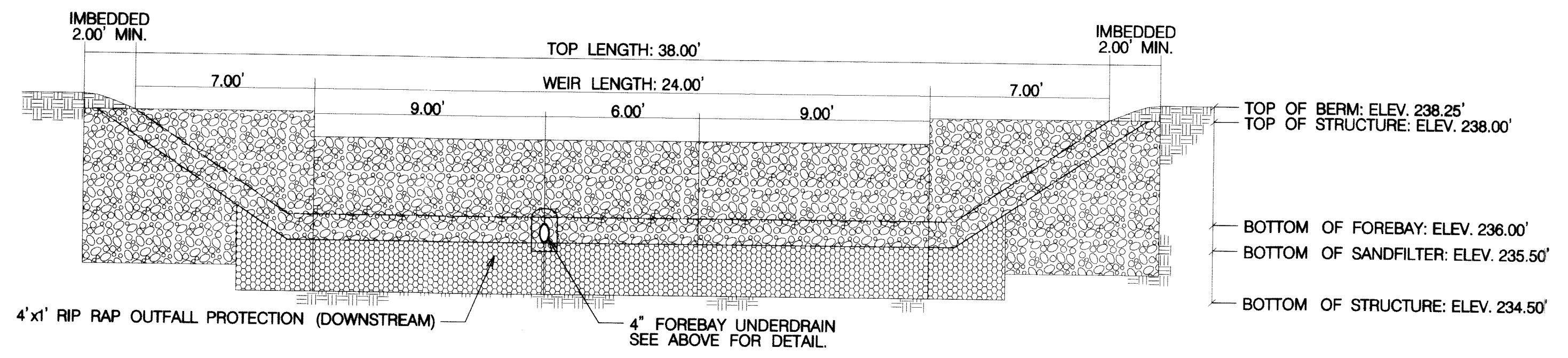
SCALE: HORZ. 1" = 2'
VERT. 1" = 4'



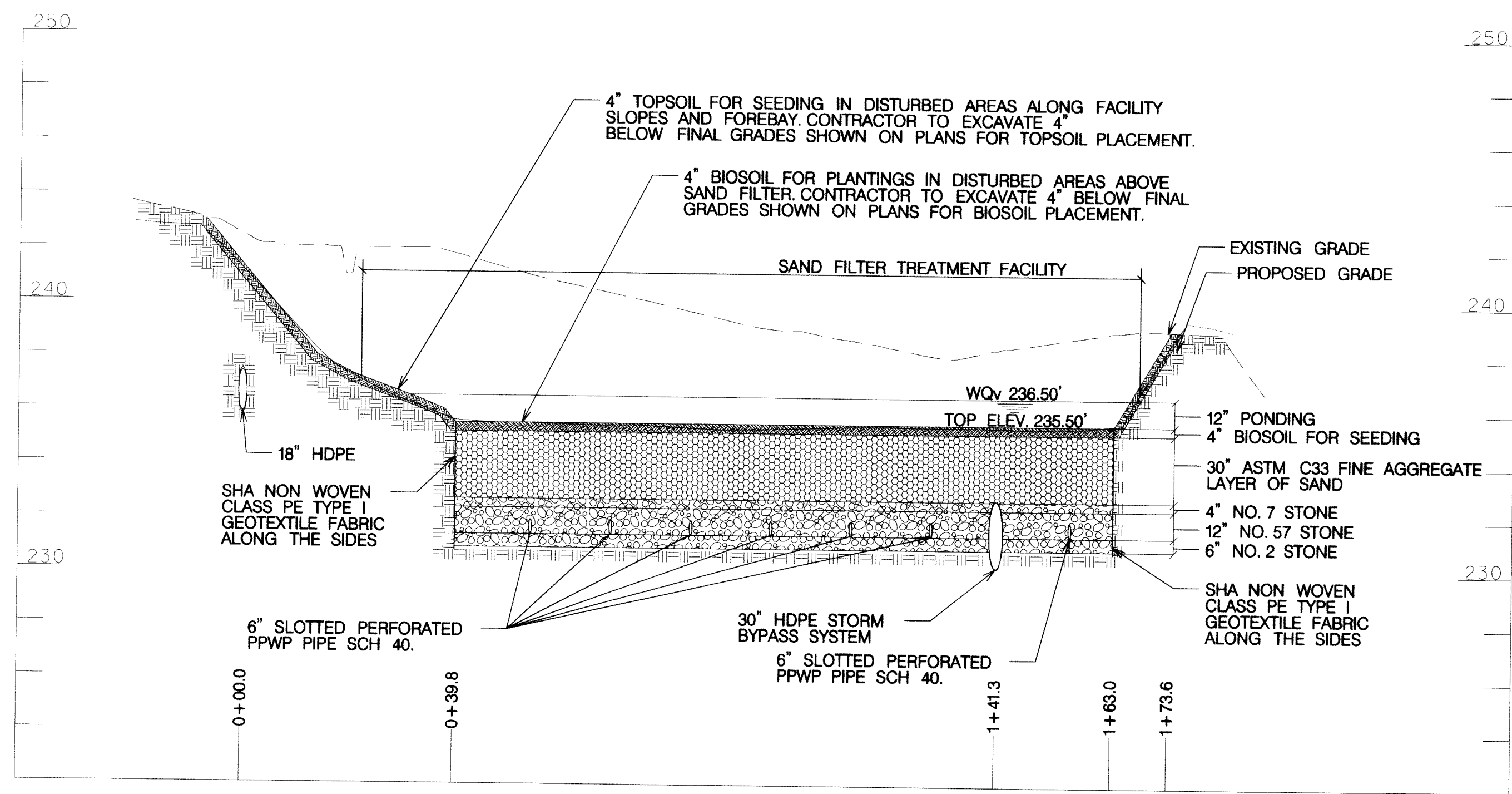
ENLARGED UNDERDRAIN PROFILE
SCALE: HORZ. 1" = 10'
VERT. 1" = 2'



FOREBAY UNDERDRAIN DETAIL
SCALE: HORZ. 1" = 10'
VERT. 1" = 10'



GABION BASKET WEIR WALL PROFILE
SCALE: HORZ. 1" = 4'
VERT. 1" = 2'



PROFILE B-B - SAND FILTER FACILITY

SCALE: HORZ. 1" = 2'
VERT. 1" = 4'

NOTES

1. FOR ALL DISTURBED AREAS, REGARDLESS OF SLOPE, FOUR (4) INCHES OF TOPSOIL OR BIOSOIL SHALL BE USED, AS SPECIFIED.
2. SAND FILTER SHALL NOT BE PLACED IN SERVICE UNTIL ALL OF THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED. HEAVY EQUIPMENT AND TRAFFIC SHALL BE RESTRICTED FROM THE PROPOSED SAND FILTER LOCATION TO MINIMIZE COMPACTION OF THE SOIL.
3. THE SANDFILTER AND FOREBAYS SHALL BE SEEDED AS SPECIFIED UNDER EROSION AND SEDIMENT CONTROL - GENERAL NOTES, PAGE 6 OF 9.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

John R. Roberts 7/22/10
DATE

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Since 1946

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CHK: CB			
DATE: 7/7/10	BY	NO.	REVISION

**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159**

TYPICAL DETAILS AND CROSS SECTIONS

SCALE AS SHOWN
SHEET 4 OF 9

SUPER SILT FENCE (SSF)			
FROM	TO	QTY (LF)	REMARKS
0+67.1	0+67.2	35	
0+92.8	1+13.6	70	
0+94.8	1+14.8	21	
0+79.7	0+83.2	28	
0+82.0	0+82.4	11	
0+84.4	0+84.9	8	
1+73.0	1+90.0	190	

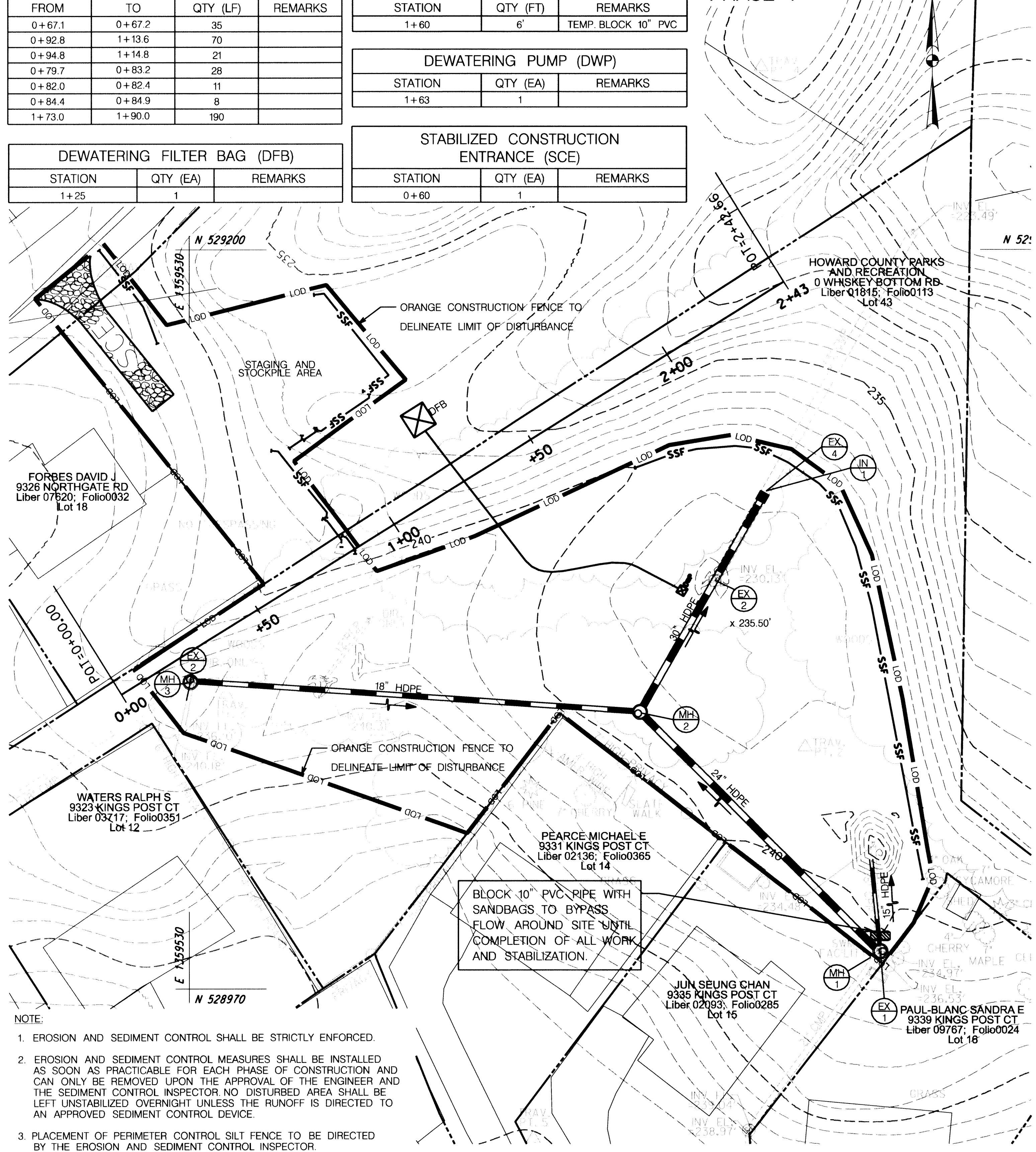
SANDBAG DIVERSION (SBD)		
STATION	QTY (FT)	REMARKS
1+60	6'	TEMP. BLOCK 10" PVC

DEWATERING PUMP (DWP)		
STATION	QTY (EA)	REMARKS
1+63	1	

DEWATERING FILTER BAG (DFB)		
STATION	QTY (EA)	REMARKS
1+25	1	

STABILIZED CONSTRUCTION ENTRANCE (SCE)		
STATION	QTY (EA)	REMARKS
0+60	1	

PHASE 1



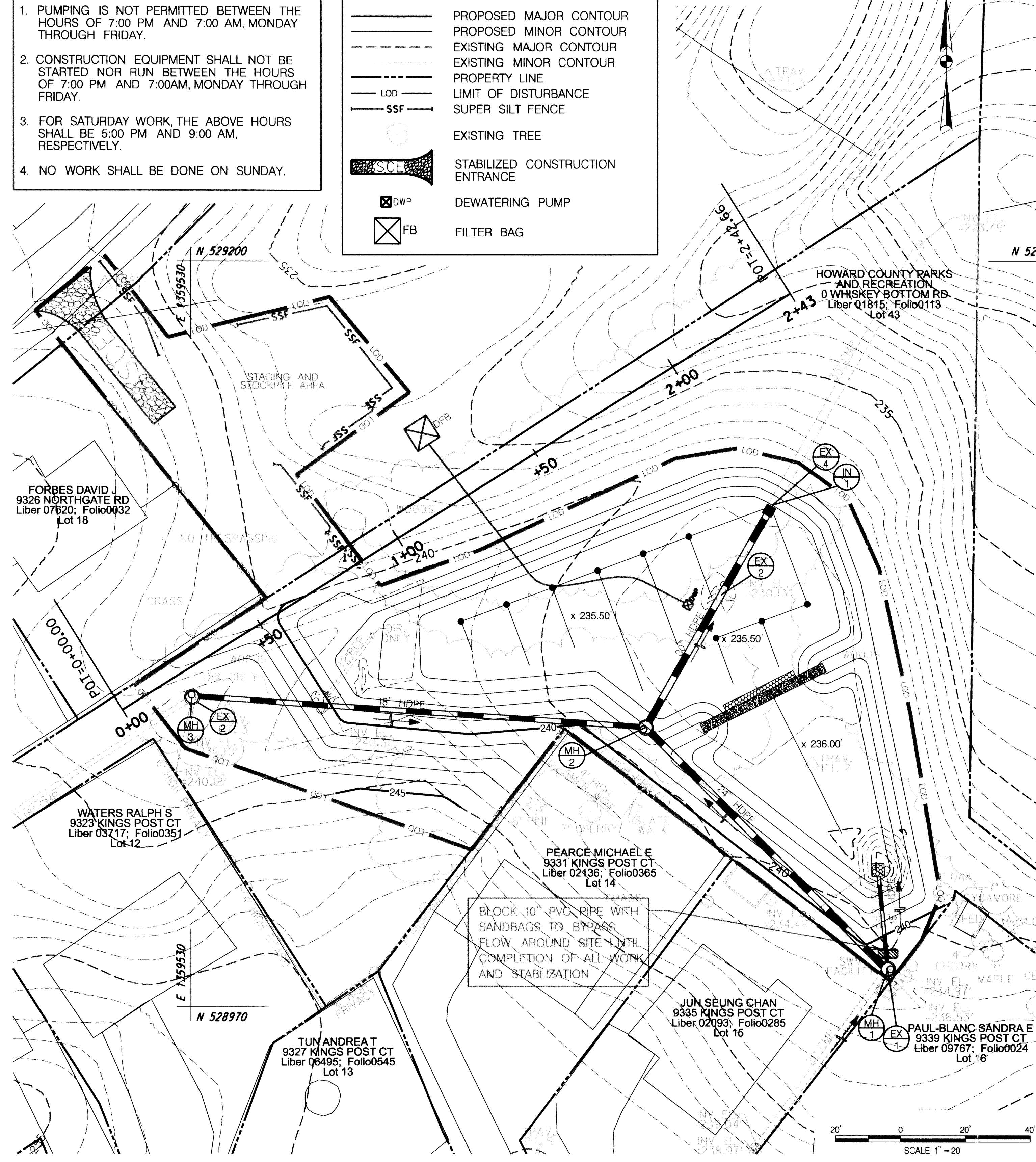
- NOTE:
1. EROSION AND SEDIMENT CONTROL SHALL BE STRICTLY ENFORCED.
 2. EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AS SOON AS PRACTICABLE FOR EACH PHASE OF CONSTRUCTION AND CAN ONLY BE REMOVED UPON THE APPROVAL OF THE ENGINEER AND THE SEDIMENT CONTROL INSPECTOR. NO DISTURBED AREA SHALL BE LEFT UNSTABILIZED OVERNIGHT UNLESS THE RUNOFF IS DIRECTED TO AN APPROVED SEDIMENT CONTROL DEVICE.
 3. PLACEMENT OF PERIMETER CONTROL SILT FENCE TO BE DIRECTED BY THE EROSION AND SEDIMENT CONTROL INSPECTOR.

- TIME RESTRICTION NOTES:
1. PUMPING IS NOT PERMITTED BETWEEN THE HOURS OF 7:00 PM AND 7:00 AM, MONDAY THROUGH FRIDAY.
 2. CONSTRUCTION EQUIPMENT SHALL NOT BE STARTED NOR RUN BETWEEN THE HOURS OF 7:00 PM AND 7:00AM, MONDAY THROUGH FRIDAY.
 3. FOR SATURDAY WORK, THE ABOVE HOURS SHALL BE 5:00 PM AND 9:00 AM, RESPECTIVELY.
 4. NO WORK SHALL BE DONE ON SUNDAY.

LEGEND

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- PROPERTY LINE
- LDD
- LIMIT OF DISTURBANCE
- SSF
- SUPER SILT FENCE
- EXISTING TREE
- SCE
- STABILIZED CONSTRUCTION ENTRANCE
- DWP
- DEWATERING PUMP
- FB
- FILTER BAG

PHASE 2



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

John R. Klotter
HOWARD SCD

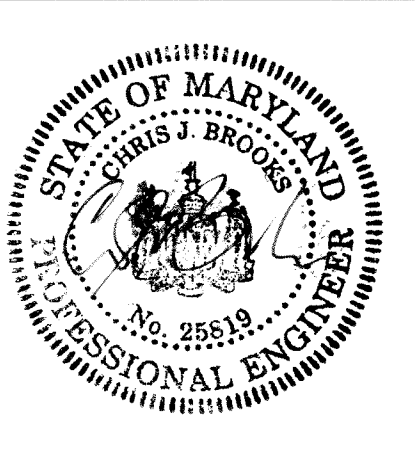
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Howard County
MARYLAND

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DATE: 7/7/10	BY	NO.	REVISION	DATE

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159

**EROSION AND SEDIMENT CONTROL PLAN
PHASE 1 & 2**

SCALE: 1" = 20'

SHEET 5 OF 9

EROSION AND SEDIMENT CONTROL – GENERAL NOTES

HOWARD SOIL CONSERVATION DISTRICT TEMPORARY SEEDING NOTES

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE RE-DISTURBED 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 600 LBS/ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT.).

SEEDING: – FOR PERIODS MARCH 1 – APRIL 30 AND FROM AUGUST 15 – OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.). FOR THE PERIOD MAY 1 – AUGUST 14, SEED WITH 3 LBS / ACRE OF WEEPING LOVEGRASS (.07 LBS/1000 FT.). FOR THE PERIOD NOVEMBER 16 – FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS/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/ACRE (70 TO 90 LBS/1000 SQ. FT.) OF UNROTTED WEED-FREE, SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL. NO ASPHALT EMULSION SHALL BE USED FOR ANCHORING. ONLY A NON-TOXIC, LATEX BACKING MATERIAL IS ALLOWED.

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

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT.
2. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST FIVE (5) DAYS PRIOR TO THE START OF WORK. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1880 A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY CONSTRUCTION. THE CONTRACTOR SHALL ALSO NOTIFY THE MARYLAND DEPARTMENT OF ENVIRONMENT INSPECTOR AT (301) 665-2850, FIVE (5) DAYS BEFORE ANY LAND DISTURBING ACTIVITY.
3. THE CONTRACTOR SHALL COORDINATE AN ON-SITE PRE-CONSTRUCTION MEETING WHICH SHALL INCLUDE, BUT NOT BE LIMITED TO, THE COUNTY PROJECT MANAGER, THE ENGINEER, AND A HOWARD COUNTY INSPECTOR. (1 DAY)
4. ORANGE HIGH VISIBILITY FENCE SHALL BE MANUALLY INSTALLED WHERE INDICATED ON THE PLANS. THIS SHALL BE COMPLETED BY AND INSPECTED FOLLOWING THE PRECONSTRUCTION MEETING. PLACE A W11-10(1), TRUCKS ENTERING HIGHWAY (SYMBOL) (30" X 30"), SIGN IN EACH DIRECTION ON NORTH GATE ROAD SIGNS ARE TO BE PLACED 450 FEET IN ADVANCE OF THE CONSTRUCTION ENTRANCE, AS PER THE MD MUTCD. (1 DAY)
5. PHASE 1: INSTALL SCE AND PERIMETER EROSION SEDIMENT CONTROLS INCLUDING SILT FENCE, DEWATERING PUMP, AND DEWATERING FILTER BAG. LAY/CONSTRUCT ALL STORMDRAIN PIPE, MANHOLES, AND INLETS. THIS THIS SHOULD BE COMPLETED DURING A THREE (3) DAY DRY FORECAST. UPON INSTALLATION, BLOCK THE 10" PVC PIPE AT THE UPSTREAM END AS NOTED. (3 DAY)
6. PHASE 2:
 - EXCAVATE AND GRADE BMP. CONSTRUCT STABILIZED MAINTENANCE ENTRANCE AND GABION WEIR WALL. (5 DAY)
 - EXCAVATE SAND FILTER BED. STABILIZE ALL AREAS DRAINING TO THE SAND FILTER WITH TOPSOIL, SEED, AND BIODEGRADABLE NON WOVEN SOIL MATTING. INSTALL FILTER MEDIA AND UNDERDRAIN (INCLUDING CLEAN OUTS), WORKING WEST TO EAST IN IN ORDER TO AVOID DRIVING ON THE MEDIA TO MINIMIZE COMPACTION. DEWATER AREA TO FILTER BAG AS NECESSARY. (5 DAY)
 - INSTALL RIPRAP OUTLET PROTECTION, REMOVE SCE AND RESTORE SLOPE AS NOTED. (3 DAY)
7. ONCE ALL AREAS ARE FULLY STABILIZED, REMOVE THE DOWNSTREAM SEDIMENT CONTROLS AND STABILIZE ANY REMAINING DISTURBED AREAS. UNBLOCK THE 10" PIPE TO PUT THE BMP INTO PERMANENT SERVICE. (1 DAY)

HOWARD SOIL CONSERVATION DISTRICT 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/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 600 LBS/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/ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SQ. FT.).
2. **ACCEPTABLE** – APPLY 2 TONS/ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SQ. FT.) AND 1000 LBS/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 – APRIL 30, AND AUGUST 1 – OCTOBER 15, SEED WITH 60 LBS / ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 – JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS/ACRE (.05 LBS/100 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 – FEBRUARY 28, PROTECT SITE BY: **OPTION 1** – TWO 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. NO ASPHALT EMULSION SHALL BE USED FOR ANCHORING. ONLY A NON-TOXIC, LATEX TACKING MATERIAL IS ALLOWED.

MAINTENANCE – INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

HOWARD COUNTY CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
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 AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, 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 SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING (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	0.68 ACRES
AREA DISTURBED	0.68 ACRES
AREA TO BE ROOFED OR PAVED	0.00 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.68 ACRES
TOTAL CUT	1737 CY
TOTAL FILL	3 CY
OFF SITE WASTE/BORROW AREA LOCATION	SEE NOTE 12
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 LENGTH OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED BY THE END OF EACH WORK DAY, WHICHEVER IS SHORTER.
12. OFFSITE WASTE / BORROW SITE SHALL HAVE AN APPROVED SEDIMENT CONTROL PLAN.

STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE

TO PROVIDE A SUITABLE, SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

CONDITIONS WHERE PRACTICE APPLIES

- I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - B. THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
 - D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
- II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

- A. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1-1/2" IN DIAMETER.
- B. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
- C. WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTURBED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

- A. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION* VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

- A. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 1. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 2. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 3. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 4. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME AS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST, AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- B. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION* VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION

- A. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- B. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" – 8" HIGHER IN ELEVATION.
- C. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" – 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- D. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

**REVIEWED FOR HOWARD SCD
AND MEETS TECHNICAL REQUIREMENTS**

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

John P. Rhett
HOWARD SCD

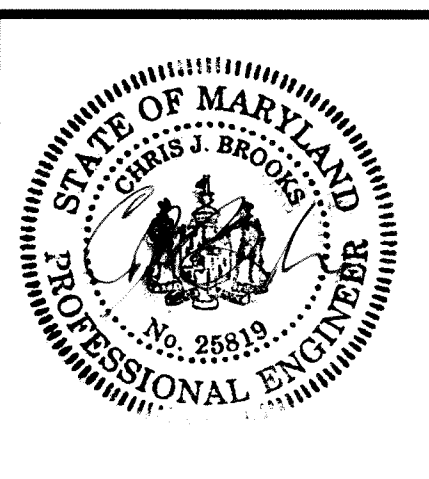
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**Howard County
MARYLAND**

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(410) 313-6444

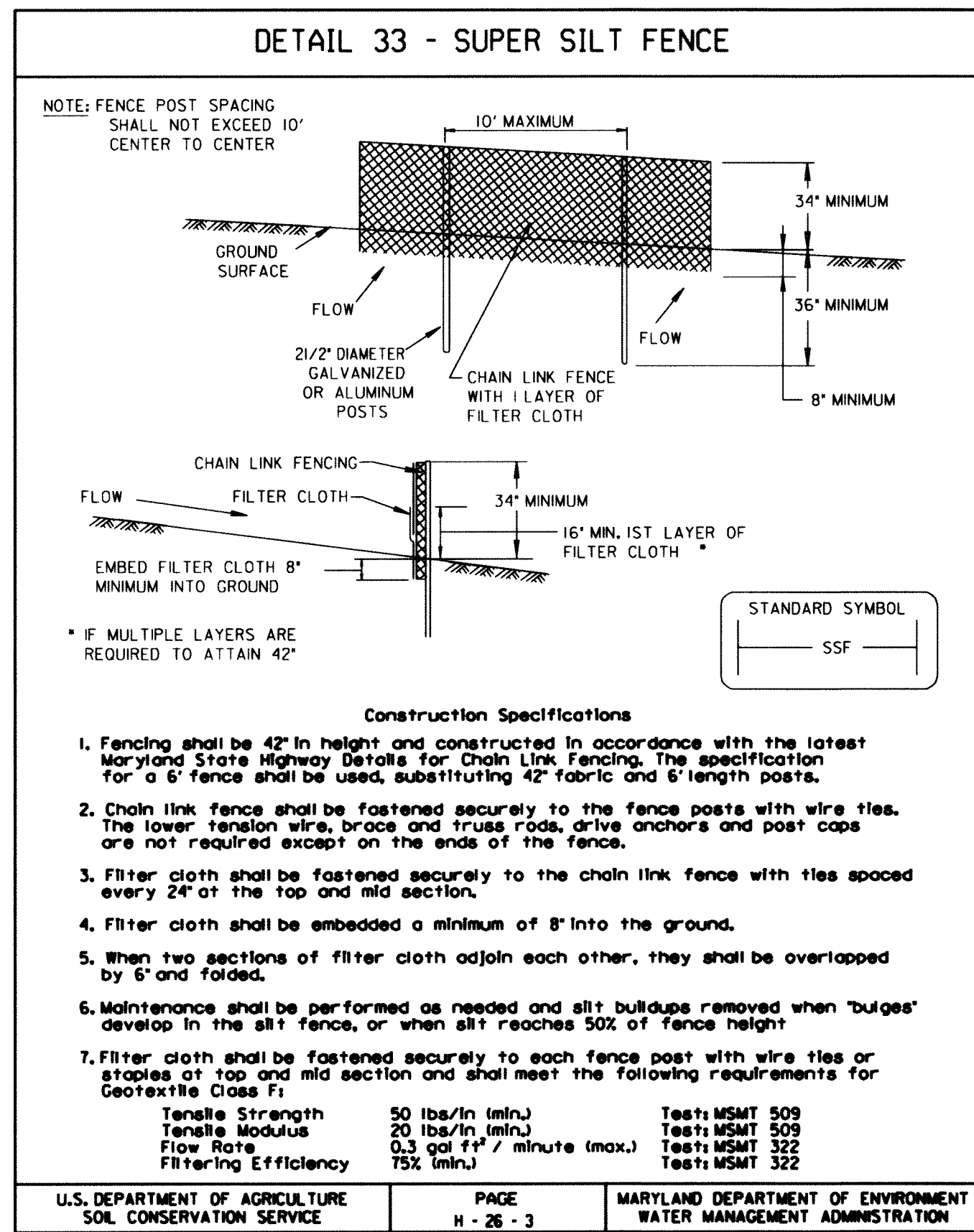


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**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159**

**EROSION AND SEDIMENT
CONTROL NOTES**

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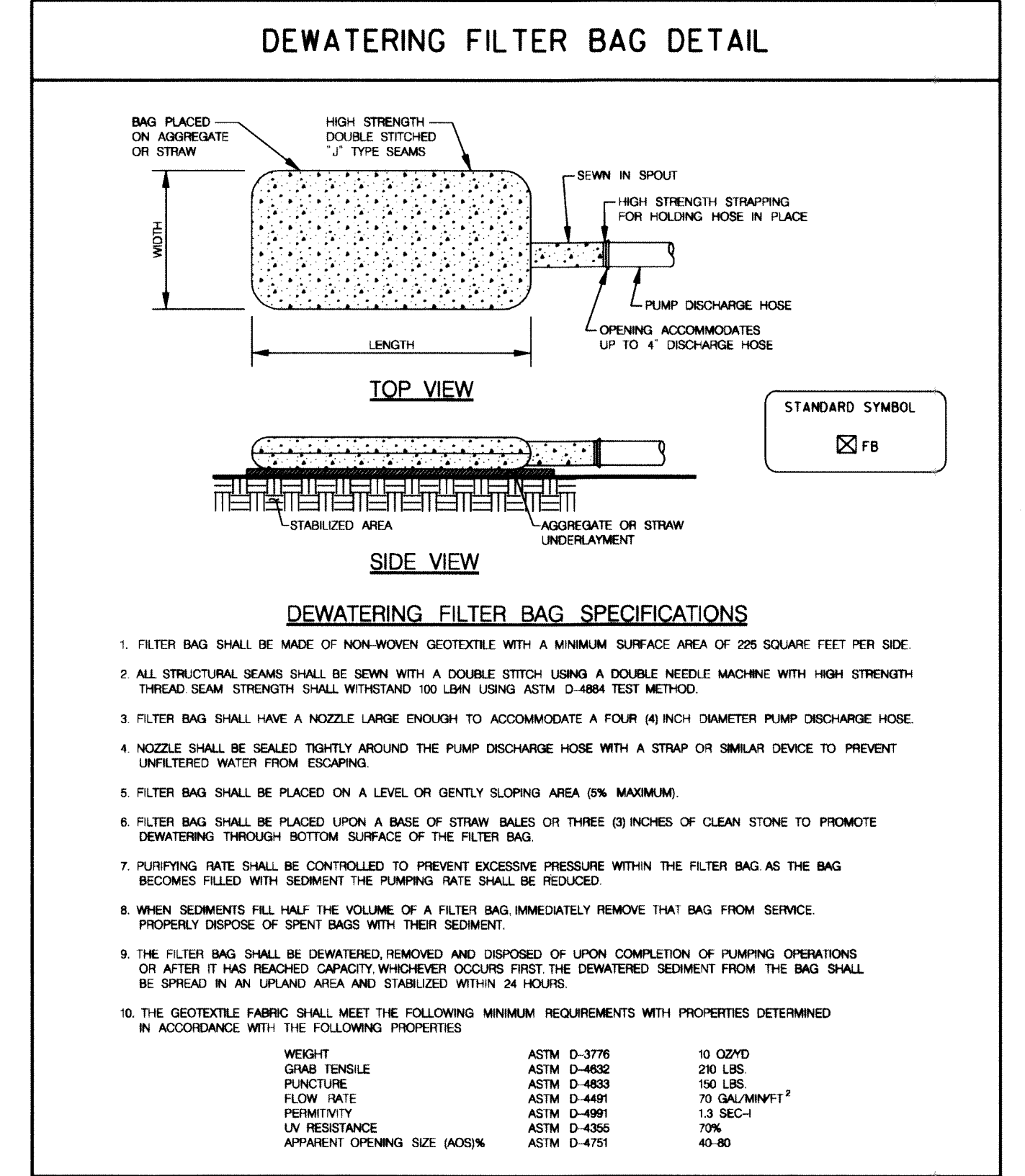
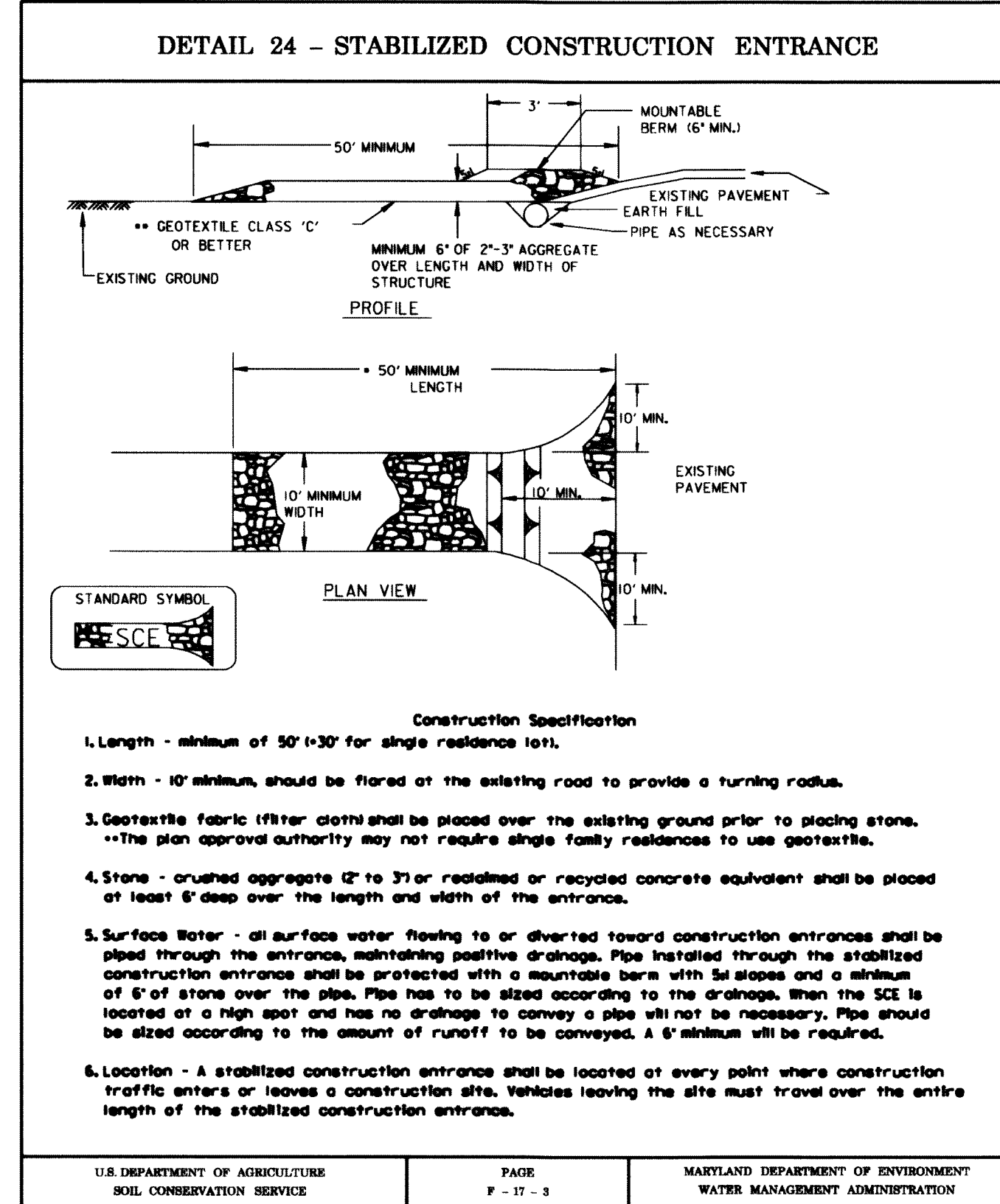


DETAIL 33 - SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10%	Unlimited	Unlimited
10 - 20%	10% - 5%	200 feet	1,500 feet
20 - 33%	5% - 3%	100 feet	1,000 feet
33 - 50%	3% - 2%	100 feet	500 feet
50% +	2% +	50 feet	250 feet

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE PAGE H - 26 - 3A MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

John R. Roberts
HOWARD SCD DATE 7/26/16

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MARYLAND

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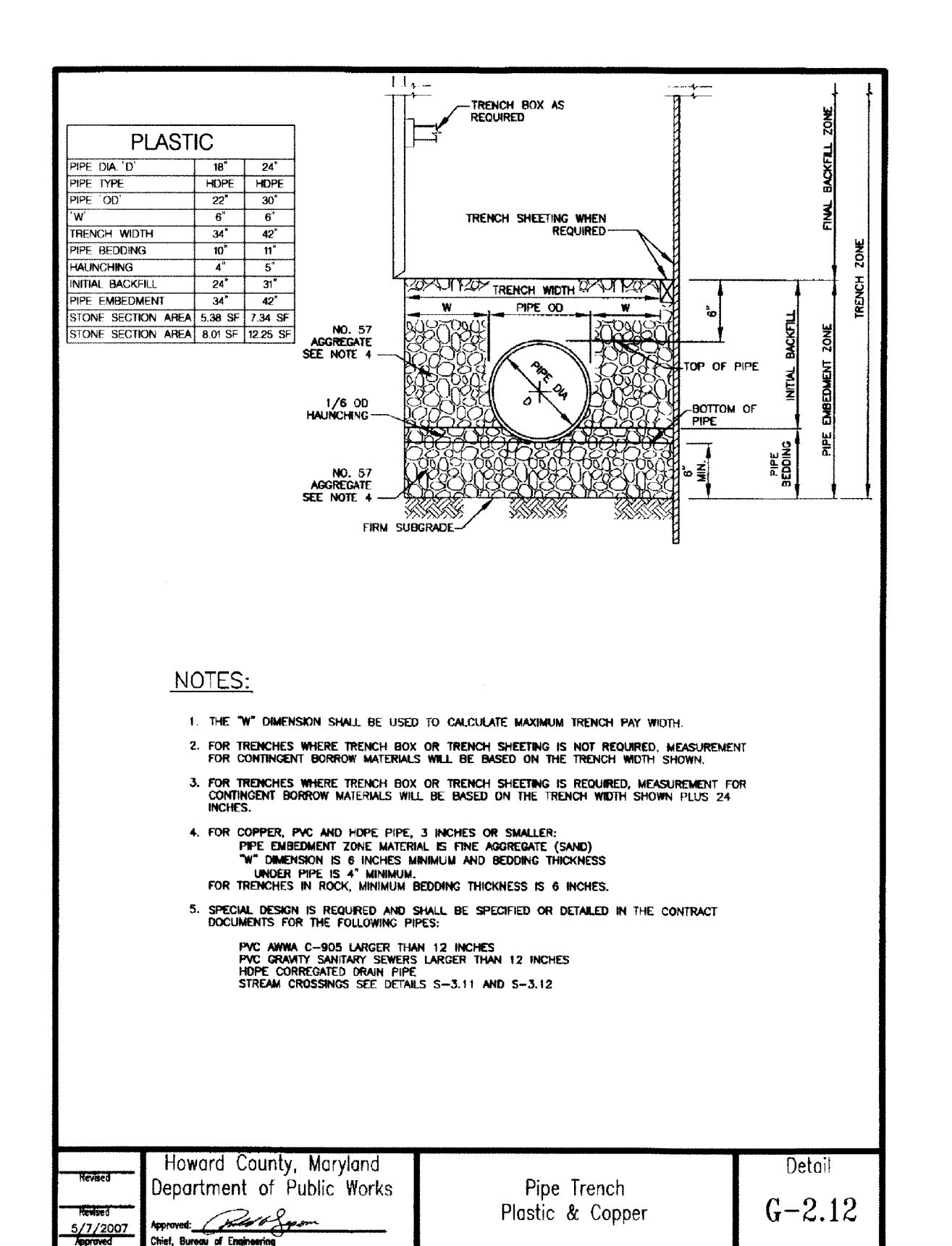
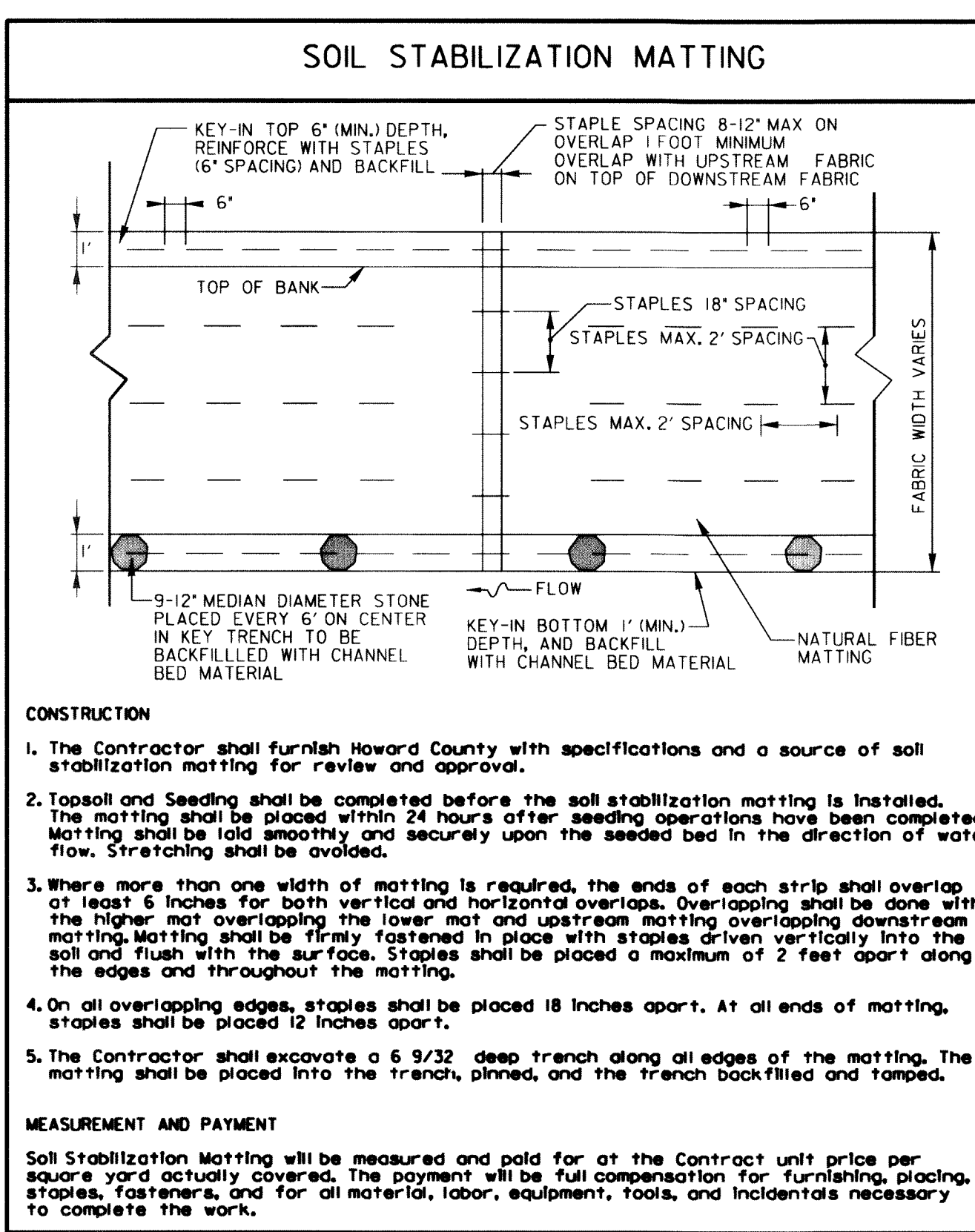
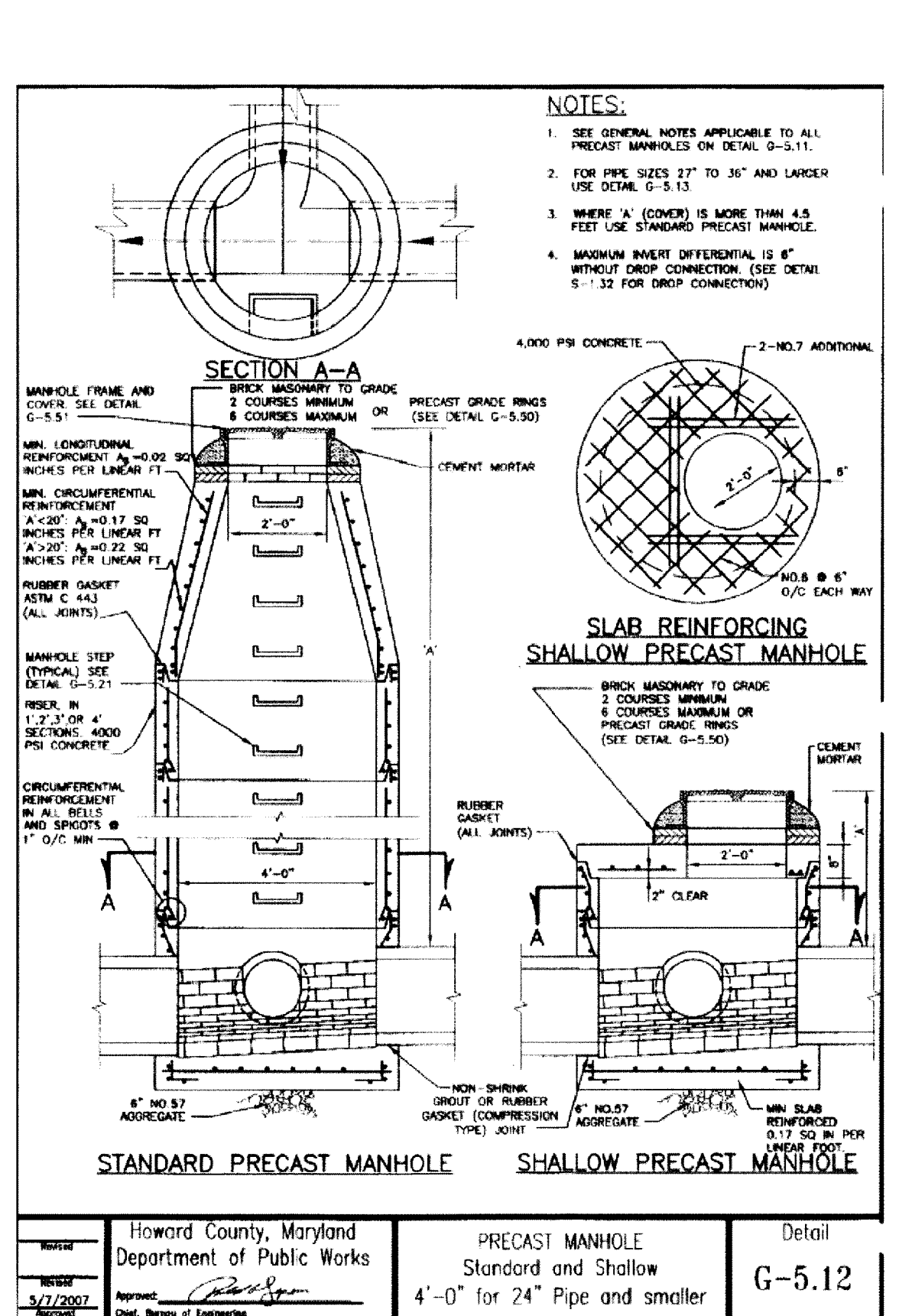
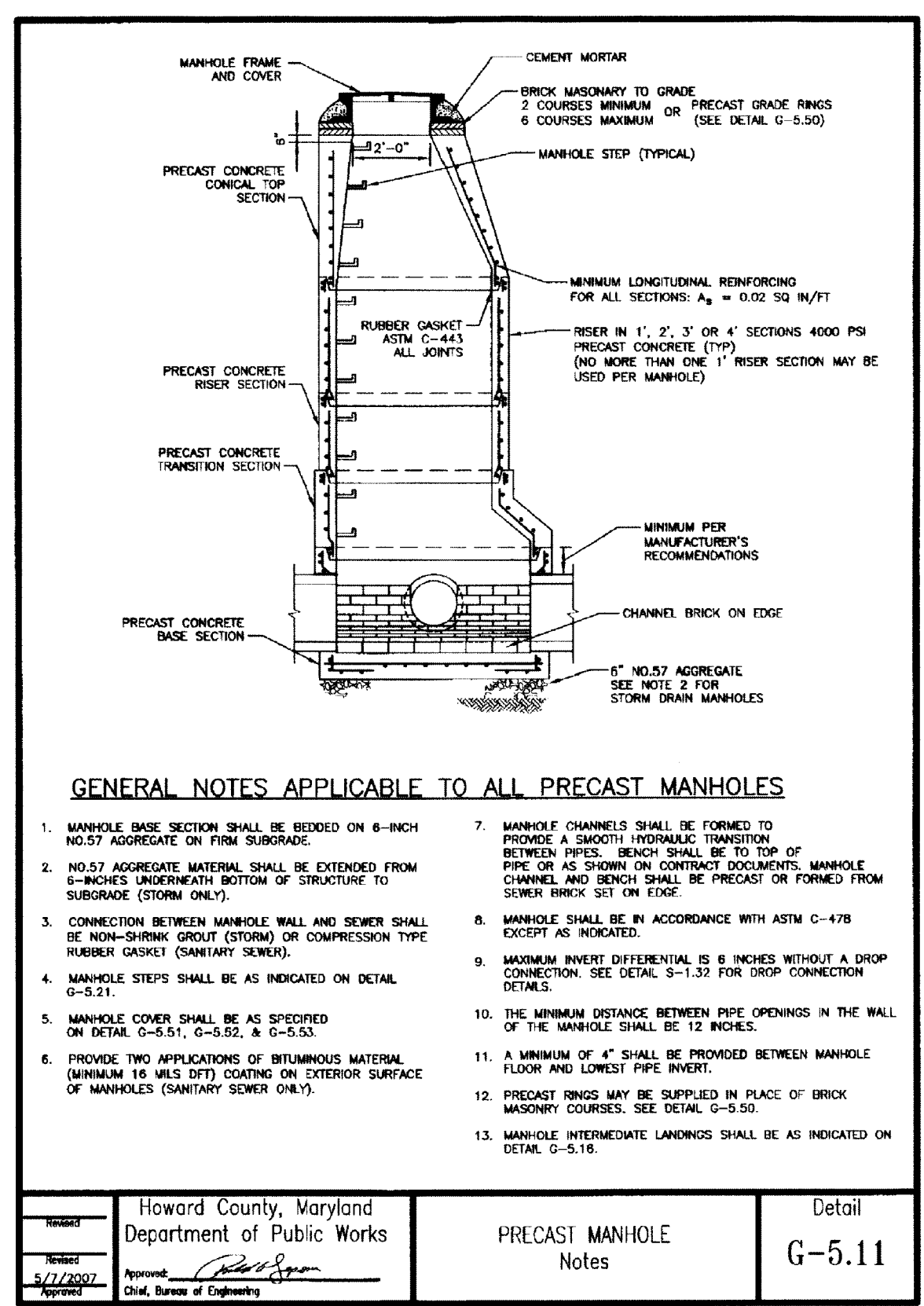
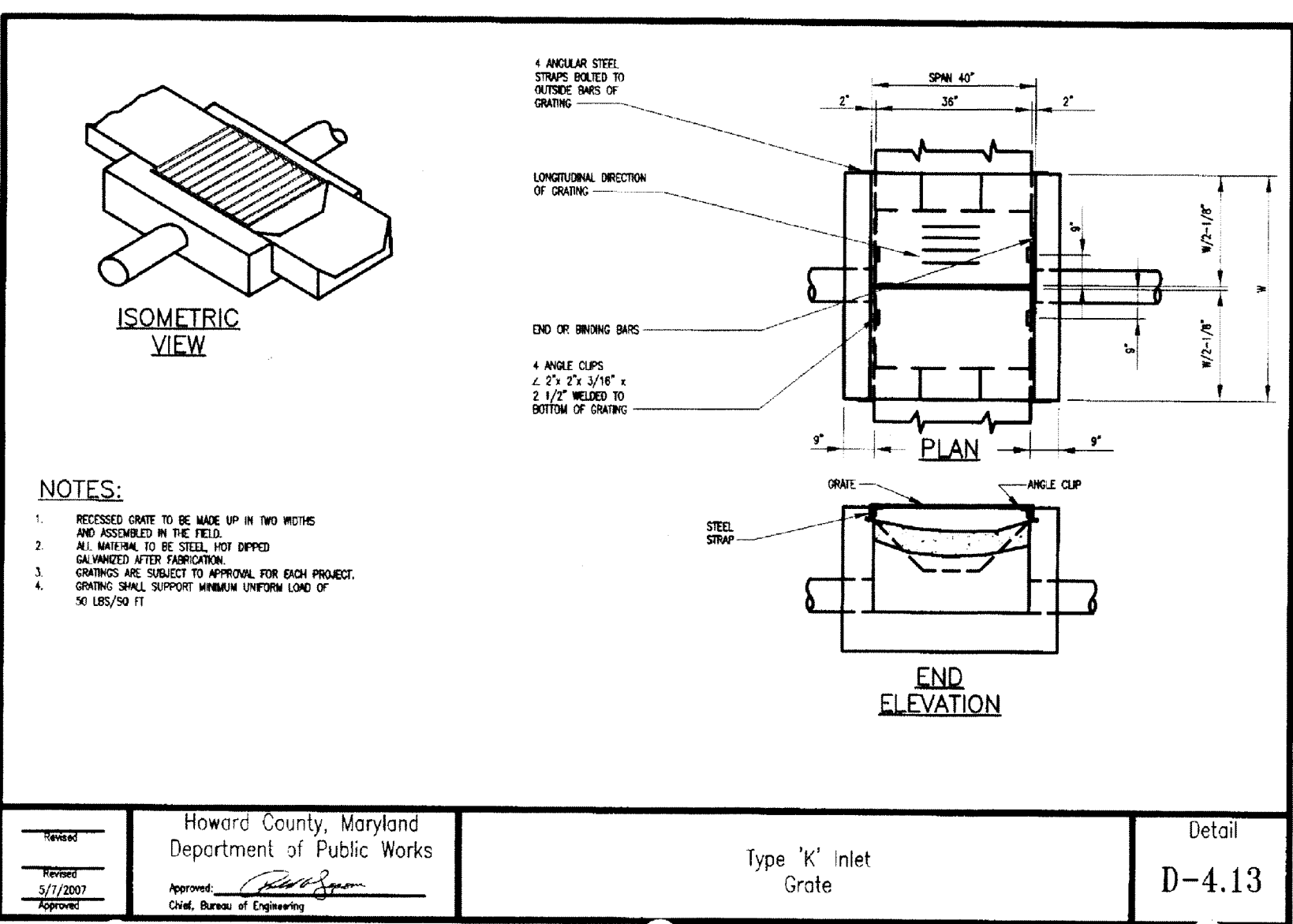
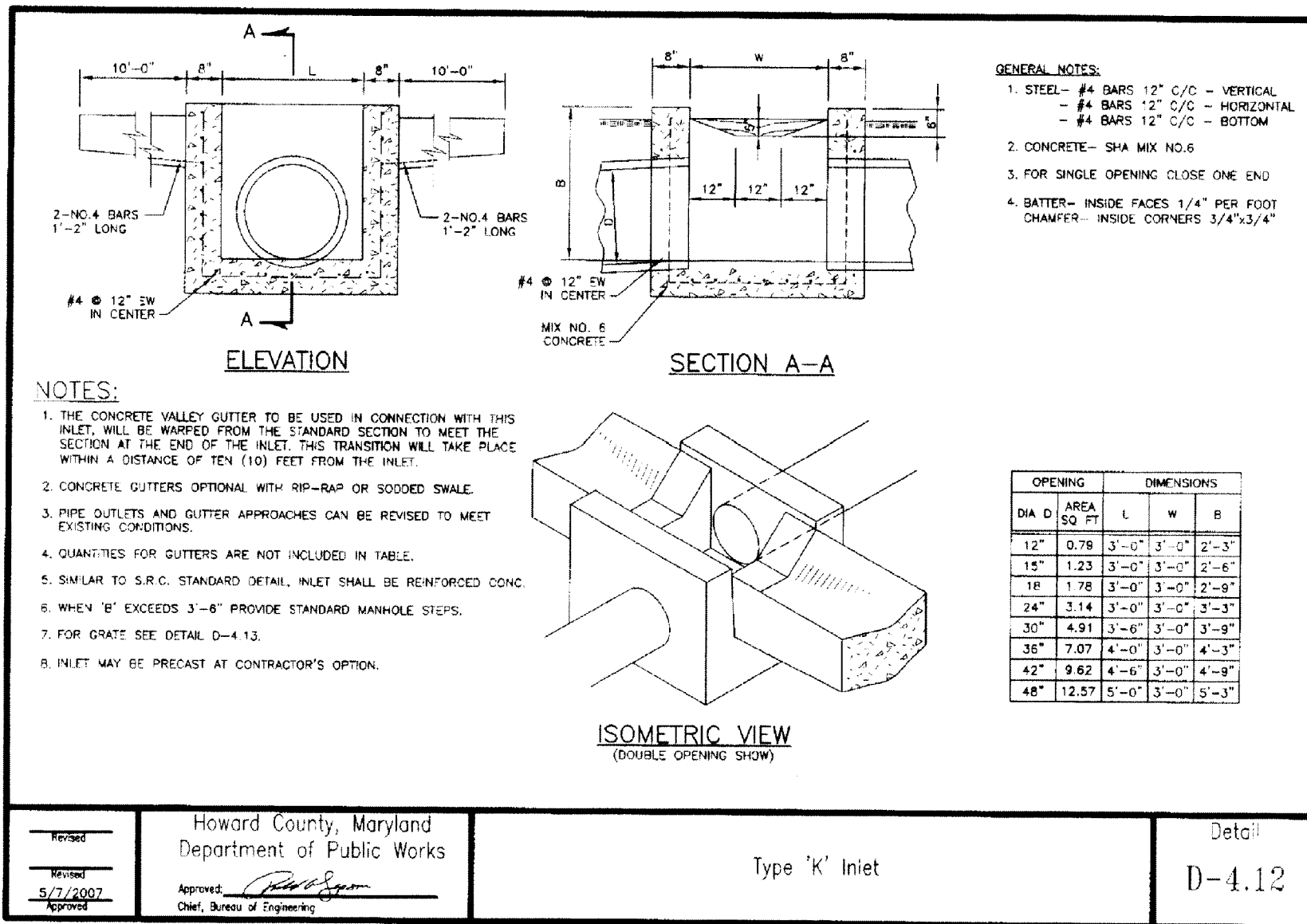


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BY	NO.	REVISION	DATE		

**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159**

DETAIL SHEET

SCALE
NOT TO SCALE
SHEET
7 OF 9



STANDARD AND SPECIFICATION FOR BIORETENTION SOIL MIXTURE (BSM)

BSM SHALL BE A HOMOGENEOUS MIX FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 IN. AND SHALL BE FREE FROM ANY PARTS OF BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, MUGWORT, NUTSEDGE, POISON IVY, CANADIAN THISTLE, TEARHUMB, PHRAGMITES, OR OTHER NOXIOUS WEEDS AS SPECIFIED IN COMAR 15.08.0105.

BSM SHALL BE A BLENDED MIXTURE OF SAND, MULCH, AND PLANTING SOIL AS FOLLOWS:

- SAND: THE SAND SHALL COMPOSE 50 PERCENT BY VOLUME OF THE BSM. THE SAND SHALL BE FINE AGGREGATE SECTION 901.
- MULCH: THE MULCH SHALL COMPOSE 20 PERCENT BY VOLUME OF THE BSM. THE MULCH SHALL BE DOUBLE SHREDDED HARDWOOD BARK CONSISTING OF THE BARK FROM HARDWOOD TREES WHICH HAS BEEN MILLED AND SCREENED TO A MAXIMUM 2 IN. PARTICLE SIZE AND PROVIDE A UNIFORM TEXTURE FREE FROM SAWDUST, TOXIC SUBSTANCES AND FOREIGN MATERIALS AND SHALL BE AGED AT LEAST 6 MONTHS.
- PLANTING SOIL: THE PLANTING SOIL SHALL COMPOSE 30 PERCENT BY VOLUME OF THE BSM. THE PLANTING SOIL SHALL BE A NATURAL OR PLANTING SOIL SHALL HAVE AN ORGANIC CONTENT BETWEEN 1.5 TO 10 PERCENT BY WEIGHT WHEN TESTED AS SPECIFIED IN T 194.

GRADING ANALYSIS SHALL BE AS FOLLOWS:

SEIVE SIZE	MINIMUM PERCENT PASSING BY WEIGHT
2 IN.	100
NO. 4	90
NO. 10	80

PLANTING SOIL SHALL BE ANALYZED FOR SAND, SILT, AND CLAY AS SPECIFIED IN T 88. THE TEXTURAL ANALYSIS SHALL BE AS FOLLOWS:

SOIL PARTICLE SIZES, MM	PERCENT PASSING BY WEIGHT
SAND (2.0-0.050)	50-85
SILT (0.050-0.002)	5-45
CLAY (LESS THAN 0.002)	5-10

THE BSM SHALL HAVE A PH VALUE NOT LESS THAN 5.5 AND NOT MORE THAN 7.5 AND SHALL MEET THE FOLLOWING NUTRIENT CRITERIA WHEN AS SPECIFIED BY THE UNIVERSITY OF DELAWARE COLLEGE OF AGRICULTURE AND NATURAL RESOURCES SOIL TESTING PROGRAM:

NUTRIENT	LIMIT, PPM
MAGNESIUM	MIN. 35
PHOSPHOROUS (PHOSPHATE)	MIN 75
POTASSIUM	MIN. 85
SULUBLE SALTS	NOT TO EXCEED 300

AMENDMENTS: ANY BSM NOT MEETING THE NUTRIENT REQUIREMENTS SHALL BE AMENDED BY THE PRODUCER. ALL AMENDMENTS SHALL BE MIXED UNIFORMLY INTO THE BSM AS FOLLOWS:

- THE PH SHALL BE CORRECTED WITH THE RECOMMENDED AMOUNT OF DOLOMITIC LIMESTONE OR SULFUR (90%).
- MAGNESIUM SHALL BE CORRECTED WITH THE RECOMMENDED AMOUNT OF DOLOMITIC LIMESTONE.
- PHOSPHORUS SHALL BE CORRECTED WITH THE RECOMMENDED AMOUNT OF 5-20-20 FERTILIZER.
- POTASSIUM SHALL BE CORRECTED WITH THE RECOMMENDED AMOUNT OF 0-0-60 FERTILIZER.

THE USE OF ANY OTHER AMENDMENT MATERIALS IS PROHIBITED. THE ADDITION OF MATERIAL TO CORRECT ANY OTHER NUTRIENT DEFICIENCIES IS PROHIBITED.

ADDITIONAL REQUIREMENTS: BSM SHALL HAVE A MINIMUM ORGANIC CONTENT NO LESS THAN 1.5 PERCENT BY WEIGHT WHEN TESTED AS SPECIFIED IN T 194. BSM SHALL BE ANALYZED FOR SAND, SILT, AND CLAY AS SPECIFIED IN T 88. THE TEXTURAL ANALYSIS SHALL BE AS FOLLOWS:

SOIL PARTICLE SIZES, MM	PERCENT PASSING BY WEIGHT
SAND (2.0-0.050)	55-85
SILT (0.050-0.002)	0-20
CLAY (LESS THAN 0.002)	1-5

THE ADDITION OF MATERIALS TO THE BSM STOCKPILE TO CORRECT TEXTURAL ANALYSIS DEFICIENCIES IS PROHIBITED.

BSM THAT FAILS TO MEET THE MINIMUM REQUIREMENTS SHALL BE REPLACED AT NO ADDITIONAL COST.

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

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

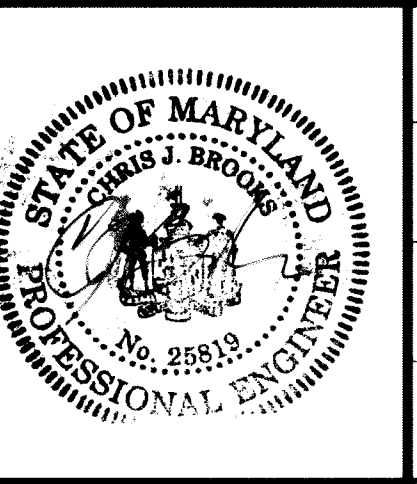
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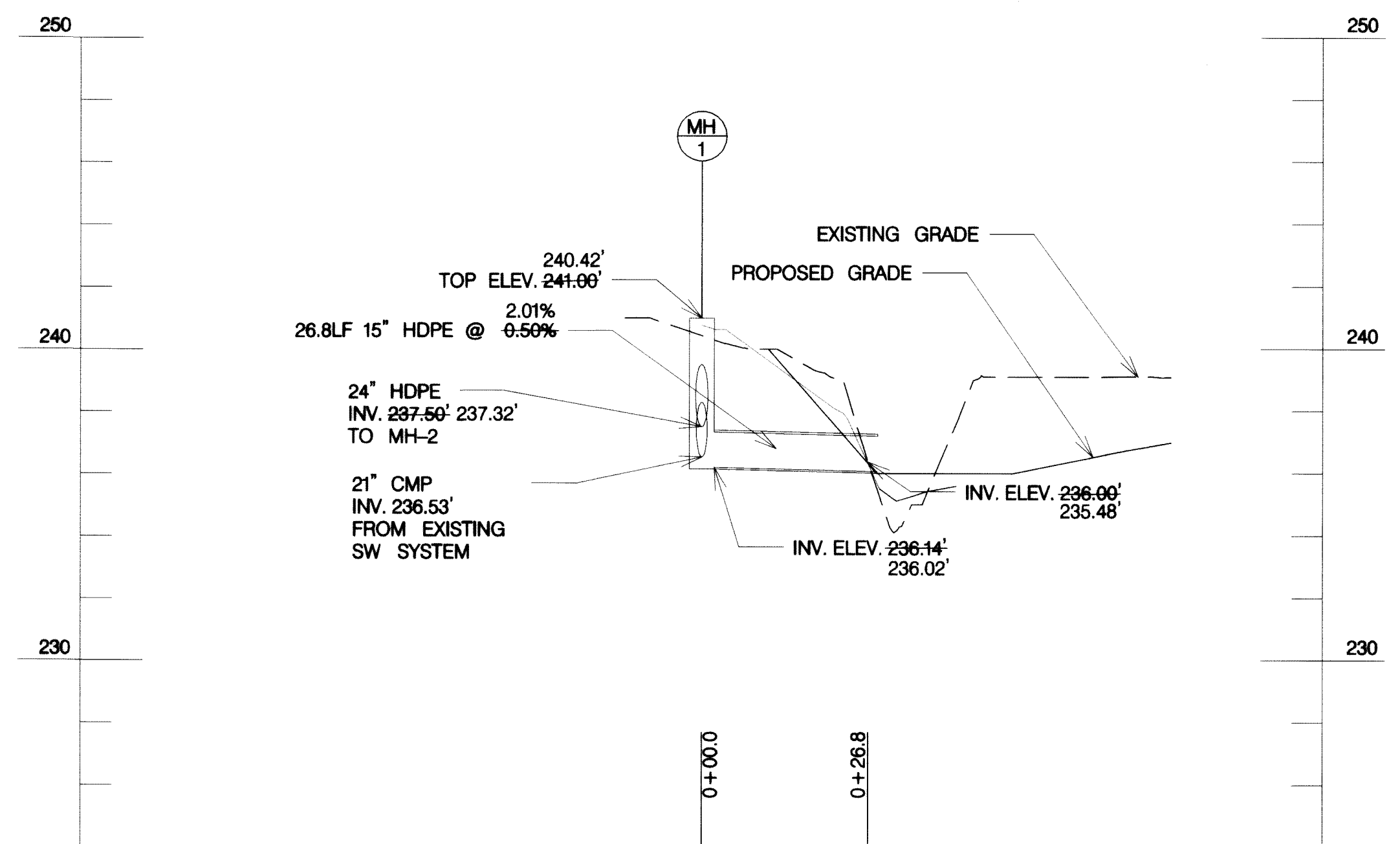
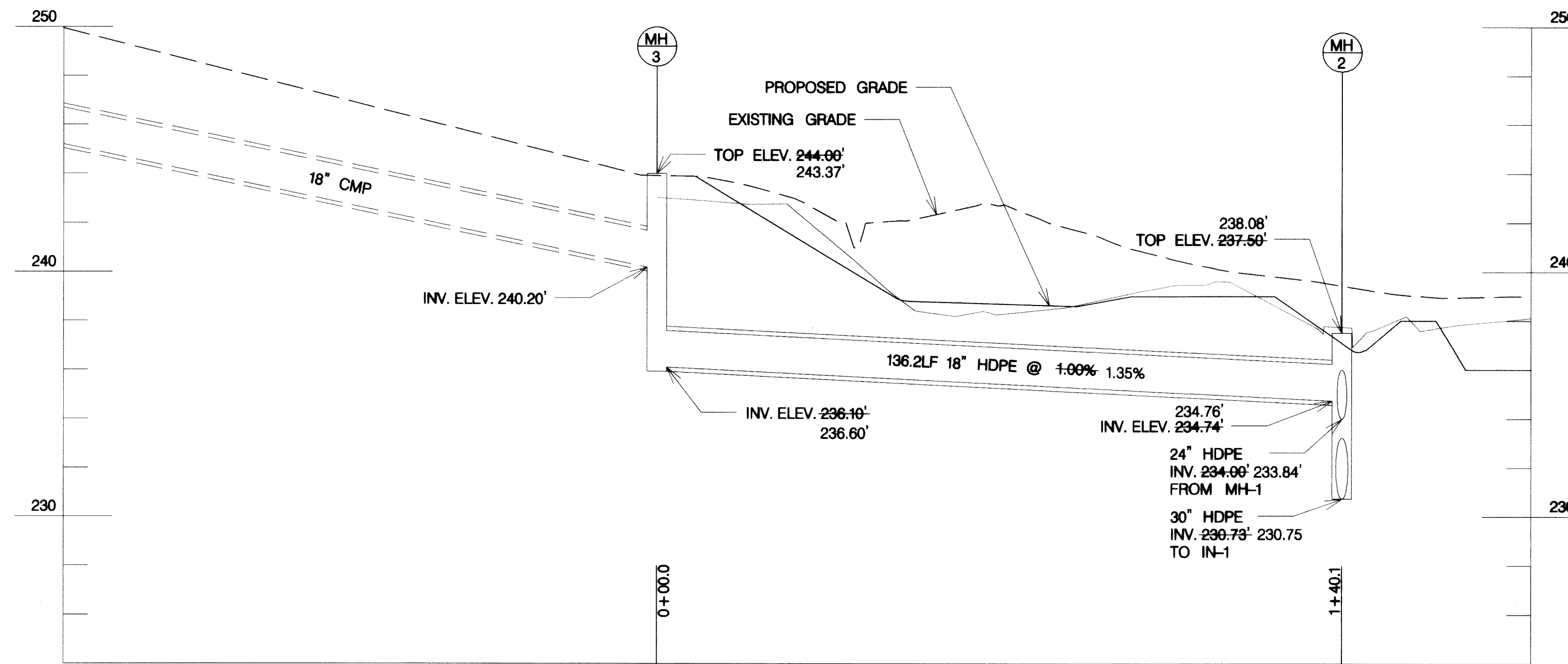
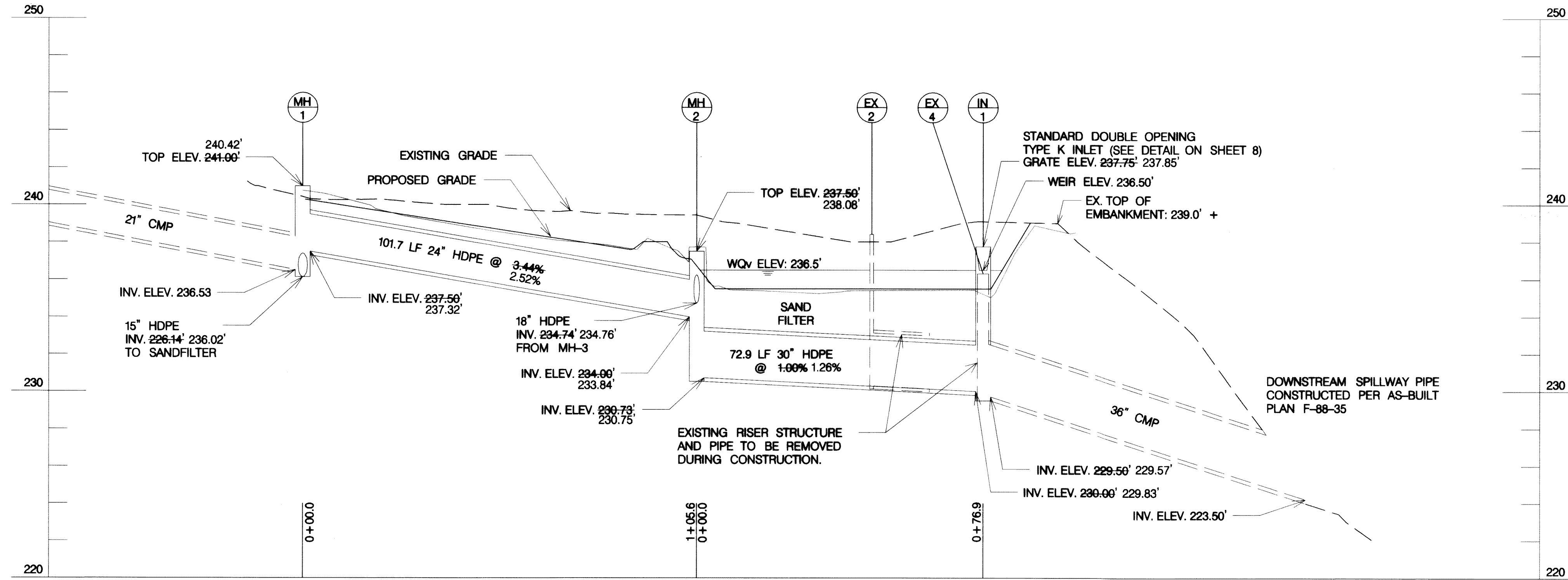


DES: WC					
DRN: MR					
CHK: CB					
DATE: 7/7/10	BY	NO.	REVISION	DATE	

**HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION
STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR
CAPITAL PROJECT D-1159**

DETAIL SHEET

SHEET 8 OF 9



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS
 THIS DEVELOPMENT IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT
John R. Roberts 7/20/10
 HOWARD SCD DATE

McCormick Taylor
 Engineers & Planners Since 1946
 509 South Exeter Street
 4th Floor
 Baltimore, Maryland 21202
 (410) 662-7400

Howard County
 MARYLAND
 Storm Water Management Division
 Bureau of Environmental Services
 6751 Columbia Gateway Drive, Suite 514
 Columbia, Maryland 21046-3143
 (410) 313-6444



DES: WC	ALH	AS-BUILT	5/27/11
DRN: MR			
CHK: CB			
DATE: 7/7/10	BY	NO.	REVISION

HOWARD COUNTY STORMWATER MANAGEMENT EVALUATION STRATFORD DOWNS STORMWATER MANAGEMENT REPAIR CAPITAL PROJECT D-1159
PIPE PROFILE

SCALE
 SHEET
 9 OF 9