

# HOWARD COUNTY

## Capital Project D-1141

# Howard County Center For the Arts Water Quality Improvement Project

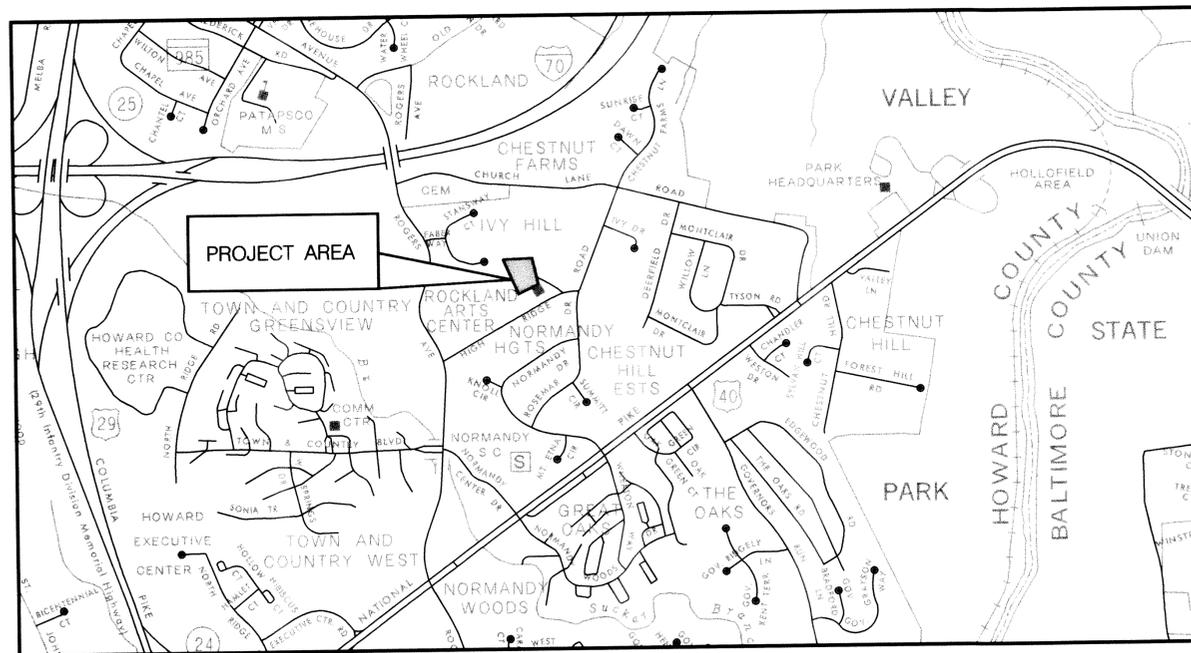
Storm Water Management Division  
Bureau Of Environmental Services

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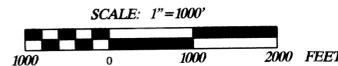
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### LEGEND

PROPOSED MEDIAN BARRIER	
ELECTRICAL HAND BOX - SIGNALS	
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	
GRADING ELEVATION CONTOURS (5')	
GRADING ELEVATION CONTOURS (1')	
LIMIT OF DISTURBANCE	
EXISTING GROUND CONTOURS (5')	
EXISTING GROUND CONTOURS (1')	
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 MSHA 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. MAY 2008
- WETLANDS WERE DELINEATED BY McCORMICK TAYLOR APRIL 2008.
- 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.
- 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.
- A JOINT PERMIT APPLICATION HAS BEEN SUBMITTED TO THE MARYLAND DEPARTMENT OF THE ENVIRONMENT FOR THIS PROJECT. (TRACKING NUMBER XXX)
- THE EXISTING INFORMATION SHOWN ON THESE PLANS WAS TAKEN FROM THE BEST AVAILABLE SOURCES AND SHALL BE VERIFIED BEFORE STARTING CONSTRUCTION. 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 HSS'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 HSS DISCOVER DISCREPANCIES BETWEEN THE PLANS AND FIELD CONDITIONS, HSS SHALL NOTIFY McCORMICK TAYLOR IMMEDIATELY TO RESOLVE THE SITUATION.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- HSS IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- THE CONTRACTOR SHALL TAKE PRE-CONSTRUCTION PHOTOS TO DOCUMENT THE EXISTING CONDITIONS OF THE PARKING LOT AND WORK AREA PRIOR TO ANY DISTURBANCE.

### DESIGN 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

12/15/08  
DATE

DESIGNER'S SIGNATURE

MARYLAND  
REGISTRATION  
NUMBER

25819

CHRIS J. BROOKS  
PRINTED NAME

### OWNER'S/DEVELOPER'S CERTIFICATION

I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND/OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY 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.

12-17-08  
DATE

OWNER/DEVELOPER SIGNATURE

PRINTED NAME AND TITLE

DEPARTMENT OF PUBLIC WORKS  
HOWARD COUNTY, MARYLAND

DIRECTOR OF PUBLIC WORKS DATE 12-17-08  
  
CHIEF, BUREAU OF ENVIRONMENTAL SERVICES DATE 12-18-08  
CHIEF, STORMWATER MANAGEMENT DIVISION

**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

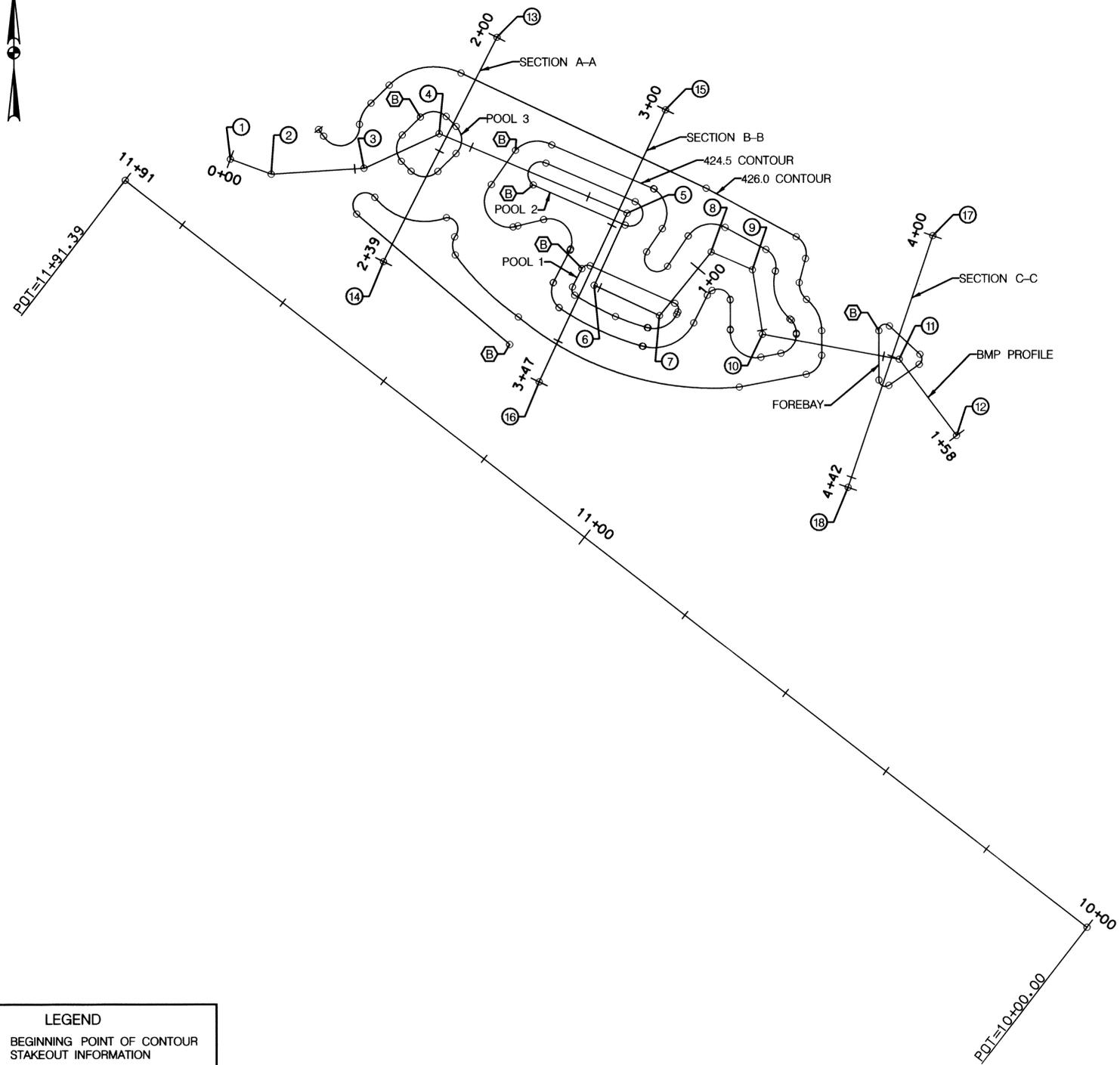
DES: AH	AH	AS BUILT	8/26/09
DRN: MR			
CHK: CB			
DATE: 12/3/08	BY	NO.	REVISION
			DATE

HOWARD COUNTY  
CAPITAL PROJECT D-1141  
HOWARD COUNTY CENTER FOR THE ARTS  
WATER QUALITY IMPROVEMENT PROJECT

TITLE SHEET

SCALE  
NOT TO  
SCALE

SHEET  
1 OF 9



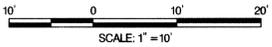
LEGEND	
Ⓟ	BEGINNING POINT OF CONTOUR STAKEOUT INFORMATION
②	POINT NUMBER

CONTOUR STAKEOUT INFORMATION			
LOCATION	STATION*	NORTHING	EASTING
FOREBAY CONTOUR 424	0+00.00	592245.3785	1367238.4803
	0+07.72	592237.6562	1367238.4803
	0+09.89	592236.8316	1367240.0460
	0+15.70	592240.1182	1367244.8367
	0+17.50	592241.6765	1367244.9504
	0+24.03	592246.1123	1367240.1598
POOL 1 CONTOUR 423	0+00.00	592255.2173	1367191.7556
	0+03.25	592252.3368	1367190.2610
	0+04.72	592251.0344	1367190.6089
	0+11.96	592247.6707	1367197.0123
	0+17.41	592245.9334	1367202.0207
	0+22.94	592248.0086	1367206.6722
	0+23.36	592248.3883	1367206.8608
	0+24.97	592249.7469	1367206.3715
	0+39.55	592255.6705	1367193.0495
	0+00.00	592268.3094	1367184.1017
POOL 2 CONTOUR 423	0+15.78	592262.0073	1367198.5699
	0+22.06	592265.6792	1367200.1564
	0+37.36	592271.7445	1367186.1183
POOL 3 CONTOUR 423	0+00.00	592278.9767	1367166.3416
	0+04.00	592276.1764	1367163.4852
	0+08.55	592272.0538	1367163.3320
	0+10.74	592270.4896	1367164.8594
	0+15.42	592270.4638	1367169.0858
	0+19.42	592273.2642	1367171.9421
	0+24.14	592277.5066	1367171.9841
	0+26.35	592279.0836	1367170.4271
	0+00.00	592268.3764	1367177.5065
	0+10.59	592261.7365	1367180.9072
CONTOUR 424.5	0+15.54	592262.8932	1367185.7186
	0+23.39	592258.324	1367189.9877
	0+29.33	592253.0494	1367187.2510
	0+33.62	592249.067	1367188.1405
	0+48.24	592243.0425	1367201.2188
	0+57.90	592246.6741	1367209.3591
	0+62.72	592250.9962	1367211.5057
	0+63.81	592251.7557	1367212.2496
	0+67.61	592250.3296	1367215.0880
	0+72.44	592245.5012	1367215.0880
	0+79.98	592241.2633	1367219.9037
	0+83.19	592241.8777	1367223.0545
	0+87.32	592245.0049	1367225.4803
	0+89.86	592247.0407	1367224.7167
	0+98.48	592254.7613	1367222.2015
	1+02.48	592258.1689	1367220.7255
	1+09.78	592261.6342	1367214.3009
	1+16.26	592260.3252	1367208.4979
	1+22.00	592255.5861	1367205.2561
	1+28.29	592257.8445	1367201.9546
	1+32.67	592261.4594	1367204.4274
	1+39.75	592267.6472	1367203.1649
	1+57.32	592274.6217	1367187.0381
	1+63.54	592273.7779	1367181.3101
	1+70.14	592268.3764	1367177.5065

\*NOTE: CONTOUR STAKEOUT POINTS PROCEED IN A COUNTER CLOCKWISE DIRECTION AROUND CONTOUR, AT POINT Ⓟ.

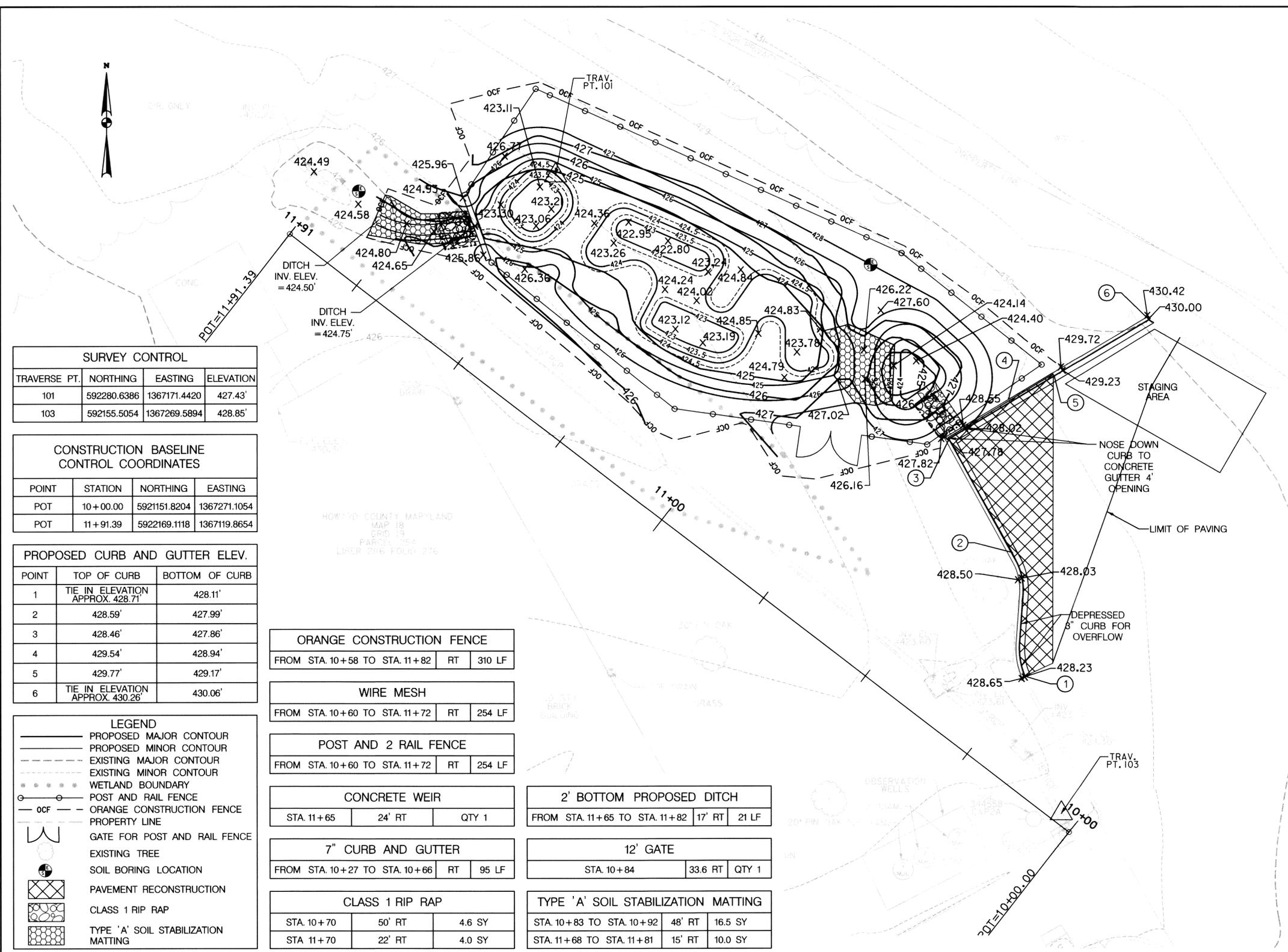
CONTOUR STAKEOUT INFORMATION			
LOCATION	STATION*	NORTHING	EASTING
CONTOUR 426	0+00.00	592243.3199	1367180.34
	0+31.57	592263.7749	1367156.288
	0+37.90	592266.3991	1367159.145
	0+50.42	592263.2133	1367170.417
	0+54.59	592260.2197	1367171.711
	0+57.58	592257.3665	1367171.796
	0+71.54	592247.6257	1367181.712
	1+08.95	592236.5965	1367216.49
	1+19.68	592238.5785	1367227.035
	1+23.84	592241.5268	1367229.48
	1+27.69	592245.3785	1367229.48
	1+33.34	592250.2751	1367227.087
	1+36.33	592252.9482	1367225.952
	1+40.24	592256.7279	1367226.964
	1+44.26	592260.1439	1367225.49
	1+60.32	592267.7698	1367211.352
	2+02.95	592285.8597	1367172.748
	2+15.16	592283.9752	1367161.441
2+19.16	592281.1749	1367158.585	
2+23.04	592277.8643	1367156.748	
2+31.31	592276.0091	1367151.138	
2+32.61	592277.0487	1367150.347	

BMP BASELINE CONTROL COORDINATES				
LOCATION	POINT NO.	STATION	NORTHING	EASTING
BMP PROFILE	1	POT 0+00.00	592272.4024	1367136.4409
	2	PI 0+06.89	592270.0219	1367142.9023
	3	PI 0+21.50	592270.9571	1367157.4830
	4	PI 0+34.54	592276.3944	1367169.3386
	5	PI 0+66.66	592263.8612	1367198.9114
	6	PI 0+79.07	592252.5953	1367193.7010
	7	PI 0+90.41	592247.8073	1367203.9811
	8	PI 1+03.32	592257.8058	1367212.1488
	9	PI 1+10.39	592254.9893	1367218.6266
	10	PI 1+20.64	592244.8501	1367220.1757
	11	PI 1+42.55	592240.907	1367241.7216
	12	POT 1+57.53	592228.9371	1367250.7343
BMP SECTION AA	13	POT 2+00.00	592291.4854	1367178.4377
	14	POT 2+39.46	592256.3458	1367160.4941
BMP SECTION BB	15	POT 3+00.00	592280.0837	1367204.9793
BMP SECTION CC	16	POT 3+47.08	592237.4676	1367184.9796
	17	POT 4+00.00	592260.271	1367247.0346
	18	POT 4+41.67	592220.8324	1367233.5769



 Engineers & Planners Since 1946 509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662-7400	 MARYLAND Storm Water Management Division Bureau of Environmental Services 6751 Columbia Gateway Drive, Suite 514 Columbia, Maryland 21046-3143	DES: AH				<b>HOWARD COUNTY</b> <b>CAPITAL PROJECT D-1141</b> <b>HOWARD COUNTY CENTER FOR THE ARTS</b> <b>WATER QUALITY IMPROVEMENT PROJECT</b>  <b>GEOMETRY PLAN</b>	SCALE
		DRN: MR					1" = 10'
		CHK: CB					SHEET
		DATE: 12/3/08	BY	NO.	REVISION	DATE	2 OF 9

CONSTRUCTION TRAFFIC SHALL USE EXTREME CAUTION WHEN ENTERING AND EXITING THE WORK AREA. CHILDREN, PEDESTRIAN AND VEHICLE TRAFFIC FROM ON SITE DAYCARE FACILITY MAY CONFLICT WITH EQUIPMENT INGRESS AND EGRESS.



SURVEY CONTROL			
TRAVERSE PT.	NORTHING	EASTING	ELEVATION
101	592280.6386	1367171.4420	427.43'
103	592155.5054	1367269.5894	428.85'

CONSTRUCTION BASELINE CONTROL COORDINATES			
POINT	STATION	NORTHING	EASTING
POT	10+00.00	5921151.8204	1367271.1054
POT	11+91.39	5922169.1118	1367119.8654

PROPOSED CURB AND GUTTER ELEV.		
POINT	TOP OF CURB	BOTTOM OF CURB
1	TIE IN ELEVATION APPROX. 428.71	428.11'
2	428.59'	427.99'
3	428.46'	427.86'
4	429.54'	428.94'
5	429.77'	429.17'
6	TIE IN ELEVATION APPROX. 430.26	430.06'

ORANGE CONSTRUCTION FENCE			
FROM	TO	RT	LF
FROM STA. 10+58	TO STA. 11+82	RT	310 LF

WIRE MESH			
FROM	TO	RT	LF
FROM STA. 10+60	TO STA. 11+72	RT	254 LF

POST AND 2 RAIL FENCE			
FROM	TO	RT	LF
FROM STA. 10+60	TO STA. 11+72	RT	254 LF

CONCRETE WEIR			
STA.	RT	QTY	
STA. 11+65	24' RT	QTY 1	

2' BOTTOM PROPOSED DITCH			
FROM	TO	RT	LF
FROM STA. 11+65	TO STA. 11+82	17' RT	21 LF

7" CURB AND GUTTER			
FROM	TO	RT	LF
FROM STA. 10+27	TO STA. 10+66	RT	95 LF

12' GATE			
STA.	RT	QTY	
STA. 10+84	33.6 RT	QTY 1	

CLASS 1 RIP RAP			
STA.	RT	SY	
STA. 10+70	50' RT	4.6 SY	
STA. 11+70	22' RT	4.0 SY	

TYPE 'A' SOIL STABILIZATION MATTING			
STA.	RT	SY	
STA. 10+83	TO STA. 10+92	48' RT	16.5 SY
STA. 11+68	TO STA. 11+81	15' RT	10.0 SY

**LEGEND**

- PROPOSED MAJOR CONTOUR
- PROPOSED MINOR CONTOUR
- EXISTING MAJOR CONTOUR
- EXISTING MINOR CONTOUR
- WETLAND BOUNDARY
- POST AND RAIL FENCE
- ORANGE CONSTRUCTION FENCE
- PROPERTY LINE
- GATE FOR POST AND RAIL FENCE
- EXISTING TREE
- SOIL BORING LOCATION
- PAVEMENT RECONSTRUCTION
- CLASS 1 RIP RAP
- TYPE 'A' SOIL STABILIZATION MATTING

**PAVEMENT LEGEND**

- ① 2.0" HOT MIX ASPHALT 9.5 mm FOR SURFACE, PG 64-22, LEVEL-2
- ② 4.0" HOT MIX ASPHALT SUPERPAVE 19.0 mm FOR BASE, PG 64-22, LEVEL-2
- ③ 6.0" GRADED AGGREGATE BASE

**NOTES:**

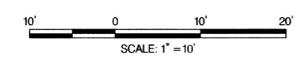
SEE SHEET 2 FOR STAKEOUT INFORMATION AND DETAILS.

SAWCUT EXISTING PAVEMENT AND RECONSTRUCT PAVEMENT TO TIE THE PROPOSED CURB AND GUTTER TO THE EXISTING PAVEMENT.

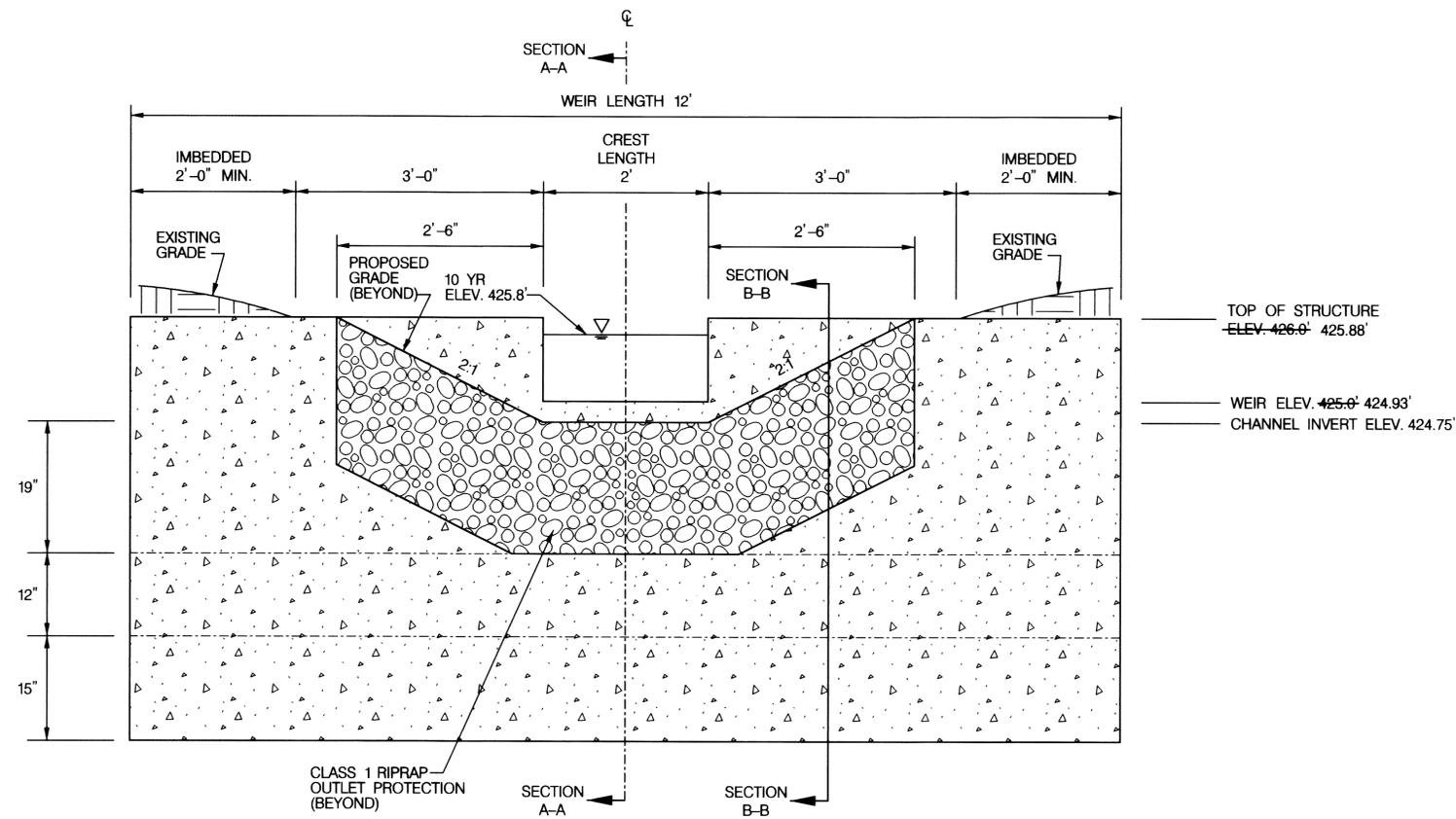
ANY PAVEMENT ON SITE THAT IS DAMAGED AS A RESULT OF THIS PROJECT WILL BE REPAIRED TO A CONDITION AT LEAST AS GOOD AS IN PRE-CONSTRUCTION CONDITIONS.

TO PROVIDE PROPER DRAINAGE OF THE SHALLOW WETLAND, THE EXISTING YARD INLET MUST REMAIN FREE OF DEBRIS AND OVERGROWTH. PROPER MAINTENANCE OF THIS INLET IS REQUIRED.

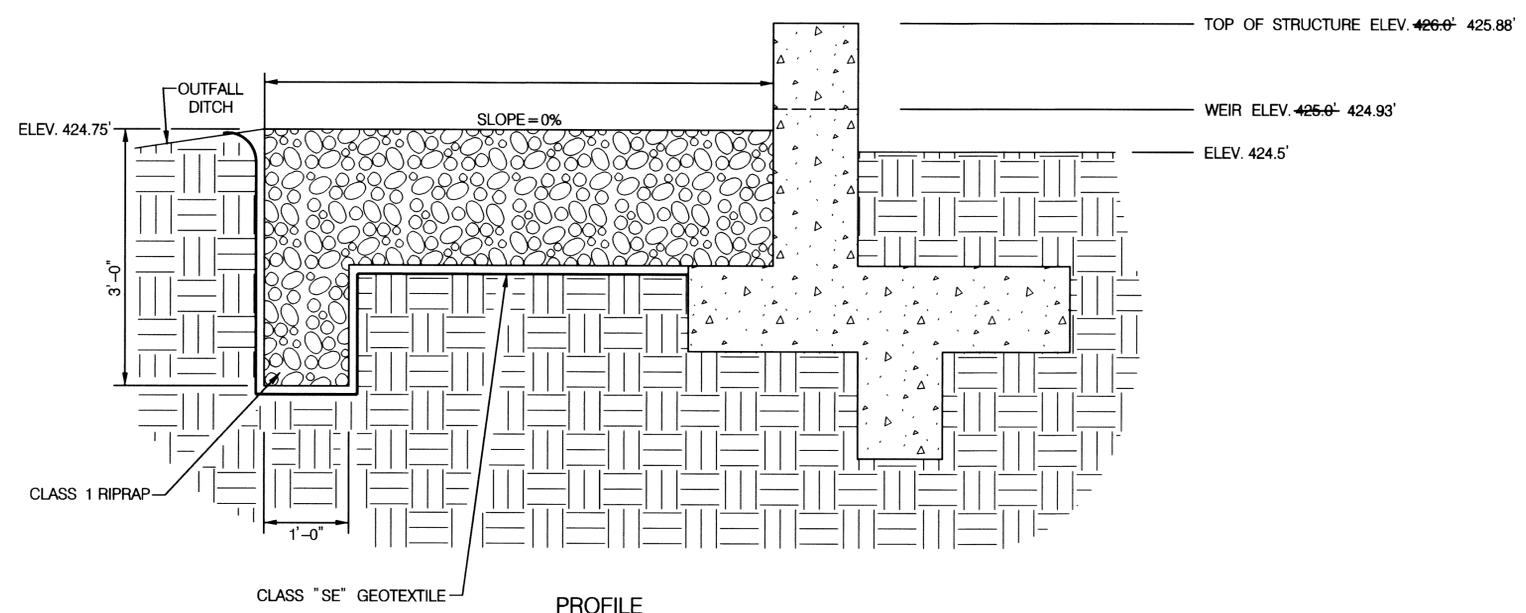
LOCUST POSTS ARE TO BE USED IN THE CONSTRUCTION OF THE POST AND RAIL FENCE.



<p><b>McCormick Taylor</b> Engineers &amp; Planners Since 1946</p> <p>509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662-7400</p>	<p><b>Howard County</b> MARYLAND</p> <p>Storm Water Management Division Bureau of Environmental Services 6751 Columbia Gateway Drive, Suite 514 Columbia, Maryland 21046-3143</p>	DES: AH	AS-BUILT	8/26/09	<p><b>HOWARD COUNTY</b> CAPITAL PROJECT D-1141 HOWARD COUNTY CENTER FOR THE ARTS WATER QUALITY IMPROVEMENT PROJECT</p> <p><b>SITE PLAN</b></p>	SCALE
		DRN: MR				1" = 10'
CHK: CB					SHEET	
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ELEVATION



PROFILE

TOP OF STRUCTURE  
ELEV. 426.0' 425.88'

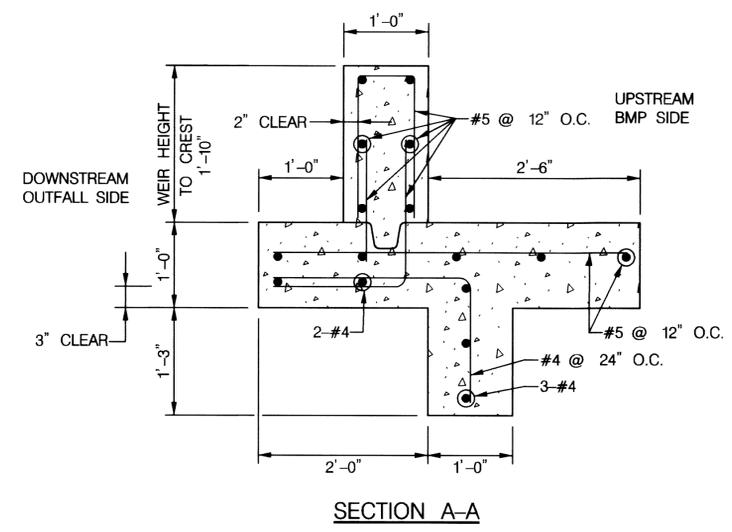
WEIR ELEV. 425.0' 424.93'

CHANNEL INVERT ELEV. 424.75'

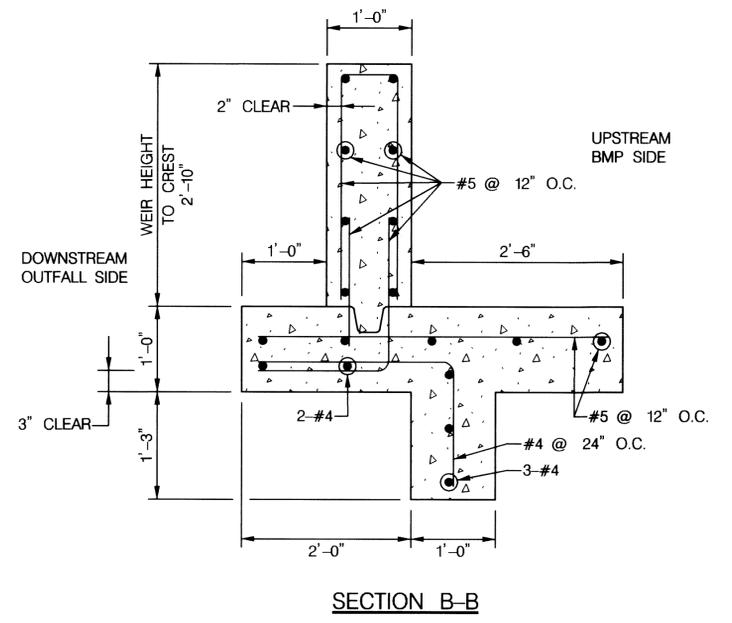
TOP OF STRUCTURE ELEV. 426.0' 425.88'

WEIR ELEV. 425.0' 424.93'

ELEV. 424.5'

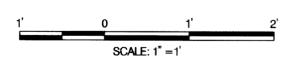


SECTION A-A



SECTION B-B

- WEIR WALL NOTES:
- 28 DAY SPECIFIED COMPRESSIVE STRENGTH SHALL BE  $f'_c=3500$  PSI
  - REINFORCING TO CONFORM TO ASTM A615 GRADE 60.
  - STATION AND OFFSET FOR WEIR WALL STRUCTURE IS MEASURED TO GEOMETRIC CENTER OF STRUCTURE.



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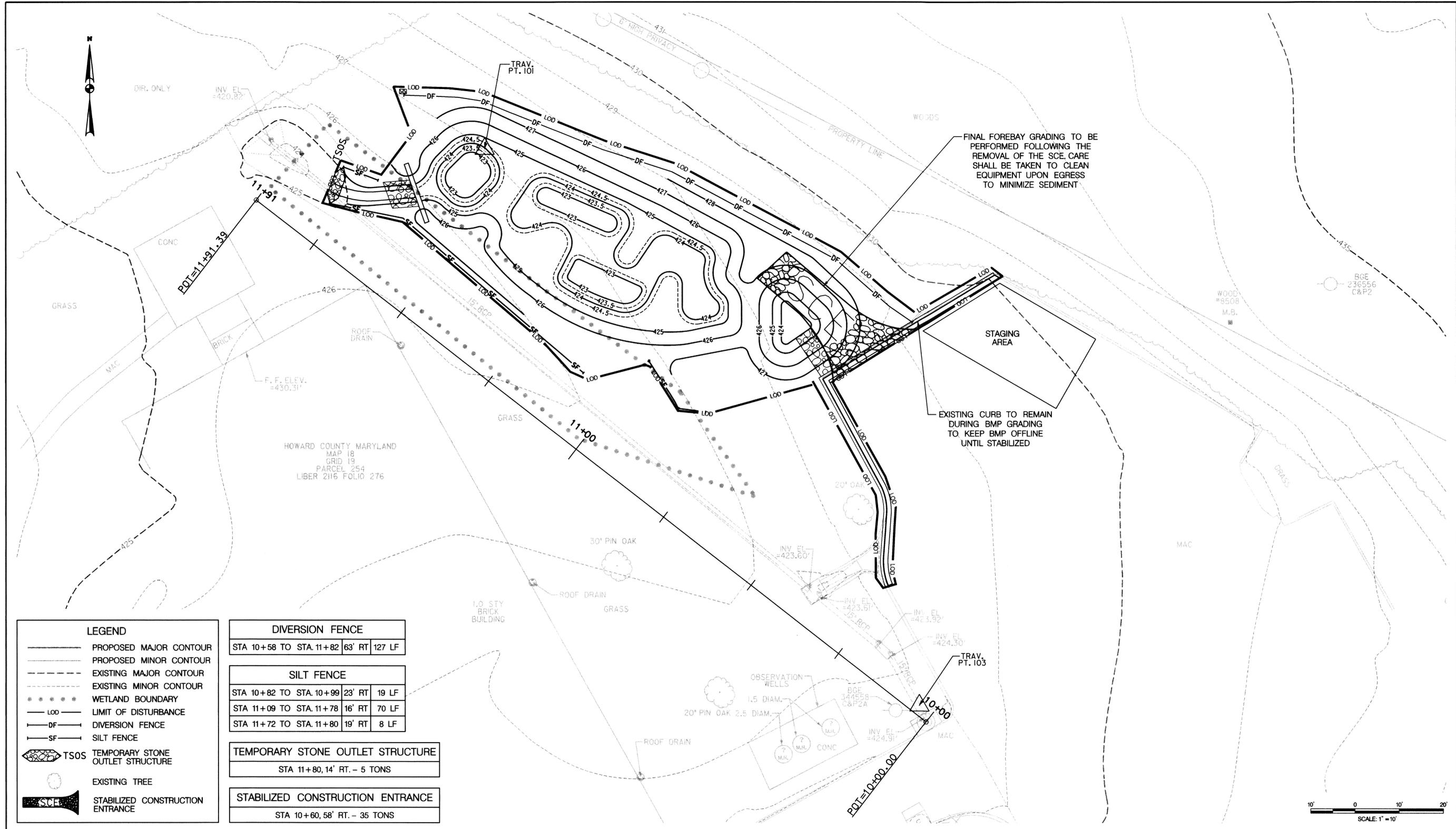


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**WEIR DETAILS**

SCALE  
1" = 1'  
SHEET  
4 OF 9



LEGEND	
	PROPOSED MAJOR CONTOUR
	PROPOSED MINOR CONTOUR
	EXISTING MAJOR CONTOUR
	EXISTING MINOR CONTOUR
	WETLAND BOUNDARY
	LIMIT OF DISTURBANCE
	DIVERSION FENCE
	SILT FENCE
	TSOS TEMPORARY STONE OUTLET STRUCTURE
	EXISTING TREE
	STABILIZED CONSTRUCTION ENTRANCE

DIVERSION FENCE	
STA 10+58 TO STA. 11+82	63' RT 127 LF

SILT FENCE	
STA 10+82 TO STA. 10+99	23' RT 19 LF
STA 11+09 TO STA. 11+78	16' RT 70 LF
STA 11+72 TO STA. 11+80	19' RT 8 LF

TEMPORARY STONE OUTLET STRUCTURE	
STA 11+80, 14' RT.	- 5 TONS

STABILIZED CONSTRUCTION ENTRANCE	
STA 10+60, 58' RT.	- 35 TONS

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**EROSION AND SEDIMENT CONTROL PLAN**

SCALE  
 1" = 10'  
 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. 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.
2. ORANGE HIGH VISIBILITY FENCE SHALL BE MANUALLY INSTALLED WHERE INDICATED ON THE PLANS. THIS SHALL BE COMPLETED BY AND INSPECTED AT THE PRECONSTRUCTION MEETING.
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 REPRESENTATIVE FROM THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
4. PLACE A W11-10(1), TRUCKS ENTERING HIGHWAY (SYMBOL) (30" X 30"), SIGN IN EACH DIRECTION ON HIGHRISE RD. SIGNS ARE TO BE PLACED 450 FEET IN ADVANCE OF THE CONSTRUCTION ENTRANCE, AS PER THE MD MUTCD.
5. CONSTRUCT THE FOLLOWING PERIMETER CONTROLS AS SHOWN ON THE PLAN: STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, DIVERSION FENCE AND TSOS. CLEARING ONLY THE AREA NEEDED TO INSTALL THE E&S CONTROLS.
6. GRADE BMP. CONSTRUCT WEIR, REMOVE SCE TO CONSTRUCT FOREBAY. STABILIZE AND PLANT AREA AS SHOWN ON PLANS. CONTRACTOR TO ENSURE THAT NO SEDIMENT BE TRACKED OFF SITE.
7. CONSTRUCT NEW CURB TO DIVERT RUNOFF TO BMP.
8. WHEN AREAS ARE FULLY STABILIZED REMOVE THE REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ANY DISTURBED AREAS.

## HOWARD SOIL CONSERVATION DISTRICT PERMANANT 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 (0.05 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	0.11 ACRES
AREA DISTURBED	0.11 ACRES
AREA TO BE ROOFED OR PAVED	0 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.11 ACRES
TOTAL CUT	260 CU. YDS.
TOTAL FILL	1 CU YDS.
OFF SITE WASTE/BORROW AREA LOCATION	TO BE DETERMINED
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.

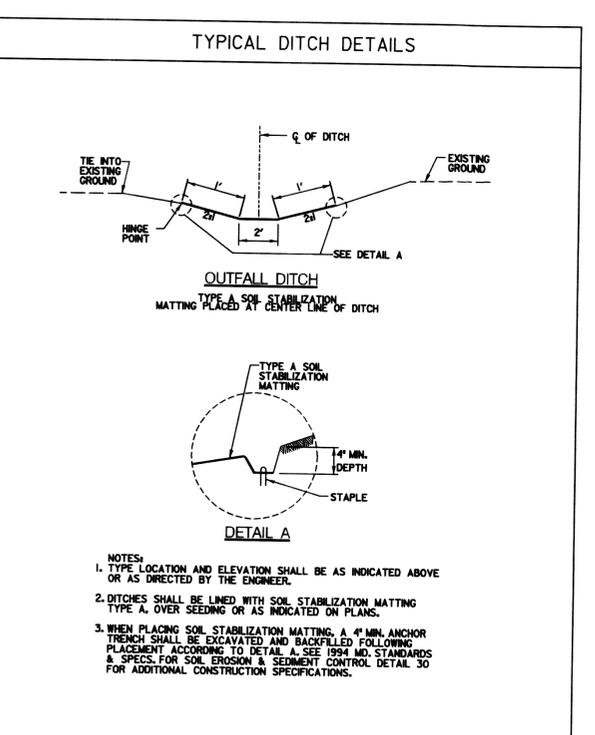
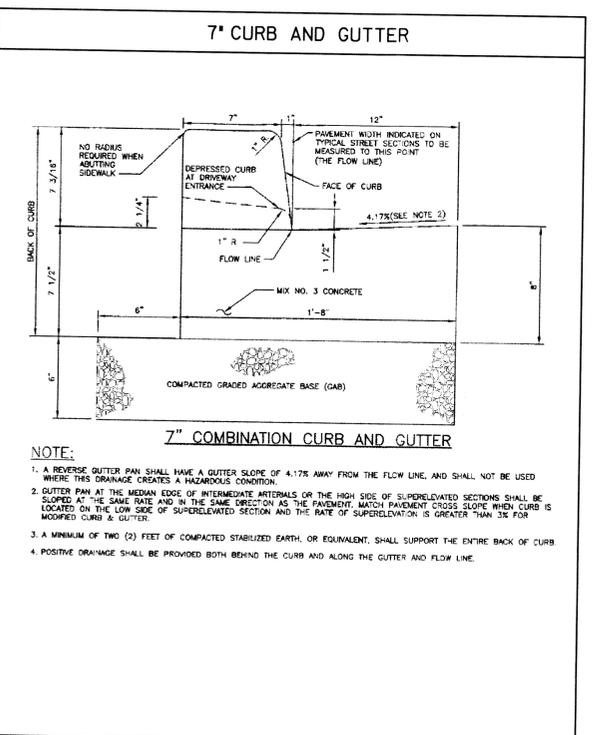
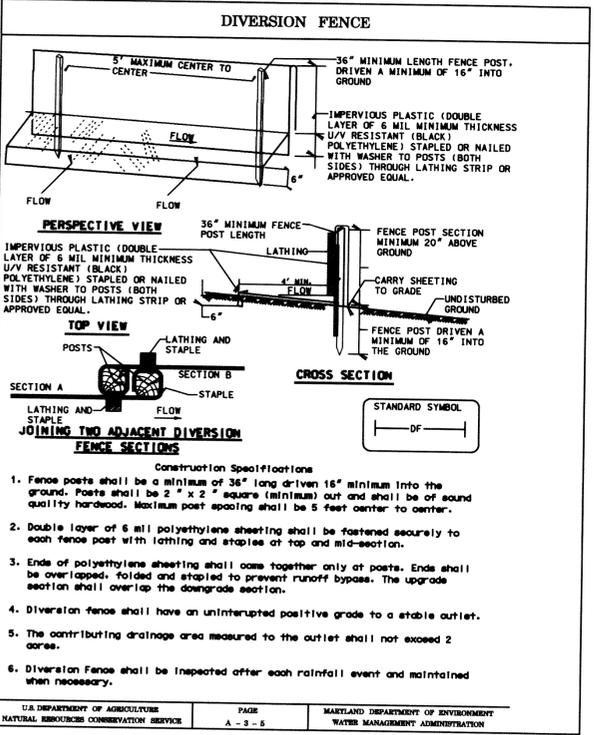
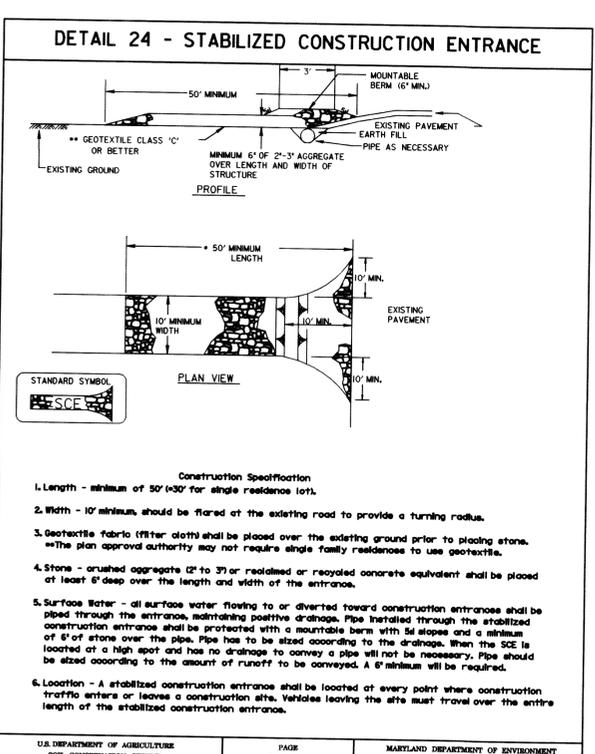
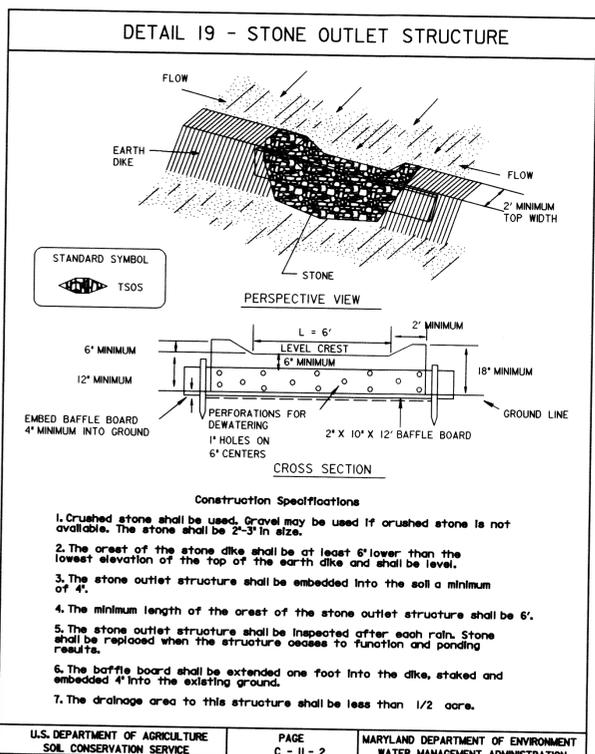
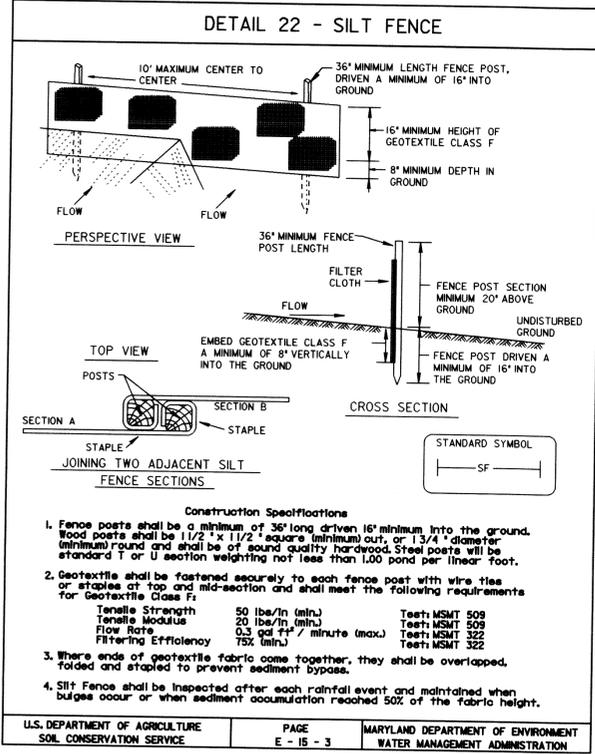
NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST, AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY, MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- 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.

 Engineers & Planners Since 1946 509 South Exeter Street 4th Floor Baltimore, Maryland 21202 (410) 662-7400	 Storm Water Management Division Bureau of Environmental Services 6751 Columbia Gateway Drive, Suite 514 Columbia, Maryland 21046-3143	DES: AH				HOWARD COUNTY CAPITAL PROJECT D-1141 HOWARD COUNTY CENTER FOR THE ARTS WATER QUALITY IMPROVEMENT PROJECT <b>EROSION AND SEDIMENT                  CONTROL NOTES</b>	SCALE
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		BY	NO.	REVISION	DATE		



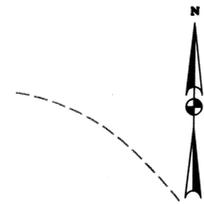
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HOWARD COUNTY  
CAPITAL PROJECT D-1141  
HOWARD COUNTY CENTER FOR THE ARTS  
WATER QUALITY IMPROVEMENT PROJECT  
**EROSION AND SEDIMENT  
CONTROL DETAIL SHEET**

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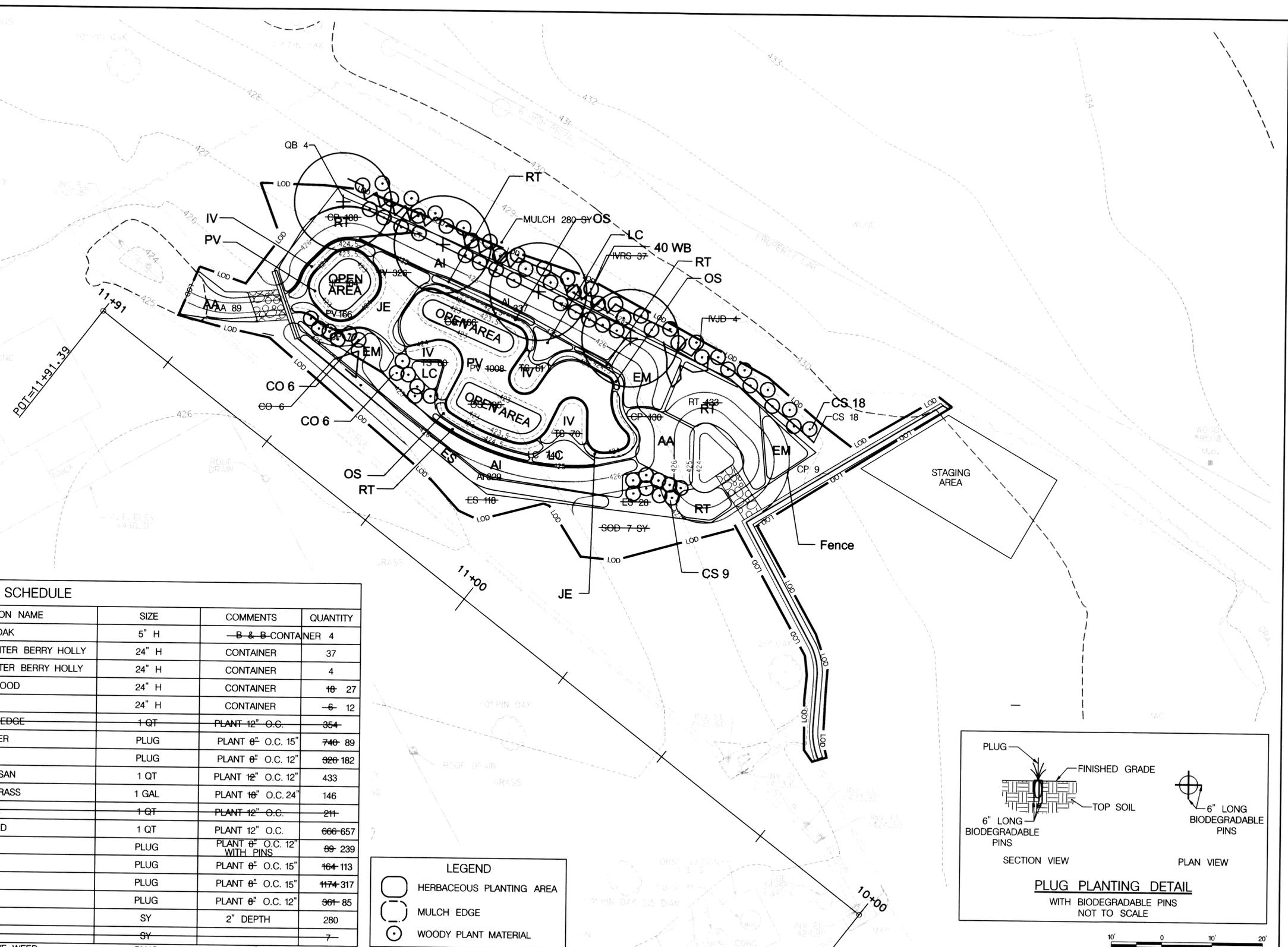


**CONSTRUCTION NOTES:**

- MULCH ALL AREAS WITHIN THE DELINEATED MULCH BOUNDARY.
- USE TWO 6" BIODEGRADABLE PINS AT EACH AGROSTIS ALBA PLUG TOGETHER AT 90 DEGREES. SEE PLANTING DETAIL ON THIS SHEET.

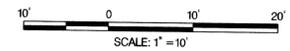
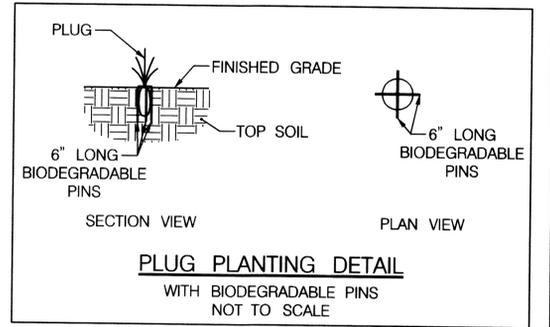
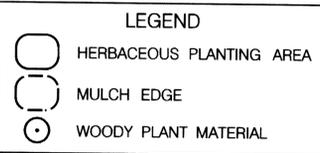
**LANDSCAPE MAINTENANCE NOTES:**

- PERIODICALLY WATER PLANT MATERIAL UPON INSTALLATION AS NEEDED UNTIL PLANTS ARE ESTABLISHED.
- REPLACE PLANT MATERIAL THAT DOES NOT SURVIVE AFTER ONE YEAR FROM INSTALLATION.
- ADD MULCH TO MULCHED AREAS ANNUALLY.
- REMOVE ANY TREE STAKES AND/OR GUY WIRES AND PLANT LABELS OR FLAGS WITHIN 6 MONTHS OF PLANTING INSTALLATION.
- TRIM ERAGROSTIS SPECTABILIS BACK EACH EARLY SPRING, PRIOR TO NEW SPRING GROWTH.
- MOW TURF GRASS DURING GROWING SEASON AS NEEDED.
- REMOVE INVASIVE OR NON-INDIGENOUS SPECIES THAT COLONIZE WITHIN THE FACILITY.
- REMOVE ANY WOODY PLANT MATERIAL FROM WITHIN THE HERBACEOUS PLANTING AREAS.
- REMOVE LITTER AND DEBRIS ACCUMULATION AS NEEDED.



**PLANTING SCHEDULE**

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	COMMENTS	QUANTITY
QB	QUERCUS BICOLOR	SWAMP WHITE OAK	5" H	B & B CONTAINER	4
IVRS	ILEX VERTICILLATA "RED SPRITE"	RED SPRITE WINTER BERRY HOLLY	24" H	CONTAINER	37
IVJD	ILEX VERTICILLATA "JIM DANDY"	JIM DANDY WINTER BERRY HOLLY	24" H	CONTAINER	4
CS	CORNUS SERICEA	REDTWIG DOGWOOD	24" H	CONTAINER	27
CO	CEPHALANTHUS OCCIDENTALIS	BUTTON BUSH	24" H	CONTAINER	12
GP	CAREX PENNSYLVANICA	PENNSYLVANIA SEDGE	1 QT	PLANT 12" O.C.	354
LC	LOBELIA CARDINALIS	CARDINAL FLOWER	PLUG	PLANT 8" O.C. 15"	89
IV	IRIS VERSICOLOR	BLUE FLAG IRIS	PLUG	PLANT 8" O.C. 12"	182
RT	RUDBECKIA TRILOBUM	BLACK-EYED SUSAN	1 QT	PLANT 12" O.C. 12"	433
ES	ERAGROSTIS SPECTABILIS	PURPLE LOVE GRASS	1 GAL	PLANT 18" O.C. 24"	146
FS	CAREX STRICTA	TUSSUCK SEDGE	1 QT	PLANT 12" O.C.	211
AI	ASCLEPIAS INCARNATA	SWAMP MILKWEED	1 QT	PLANT 12" O.C.	657
AA	AGROSTIS ALBA	RED TOP	PLUG	PLANT 8" O.C. 12" WITH PINS	239
JE	JUNCUS EFFUSUS	SOFT RUSH	PLUG	PLANT 8" O.C. 15"	113
PV	PELTANDRA VIRGINICA	ARROW ARUM	PLUG	PLANT 8" O.C. 15"	317
OS	ONOCLEA SENSIBILIS	SENSITIVE FERN	PLUG	PLANT 8" O.C. 12"	85
MULCH	SHREDDED HARDWOOD BARK MULCHING		SY	2" DEPTH	280
SOB	SOB		SY		7
EM	EUPATORIUM MACULATUM	SPOTTED JOE-PYE WEED	PLUG	PLANT 18" O.C.	77



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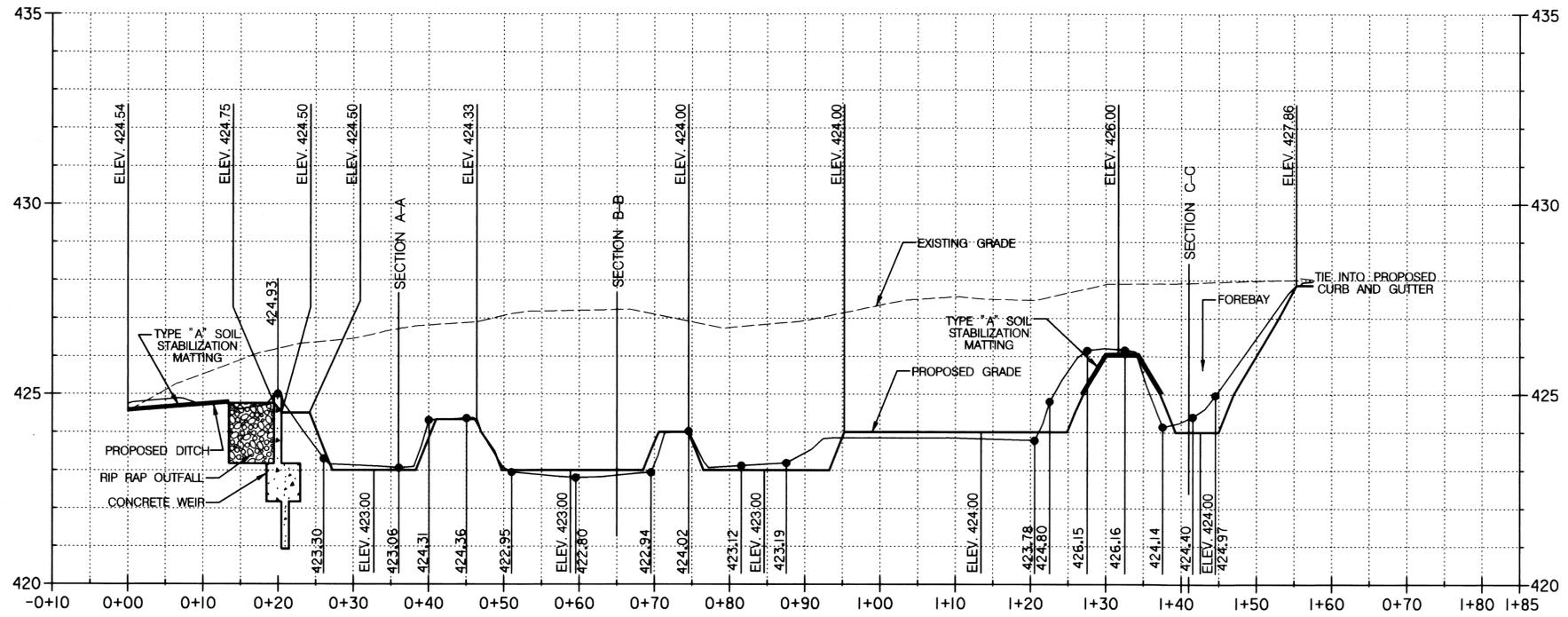


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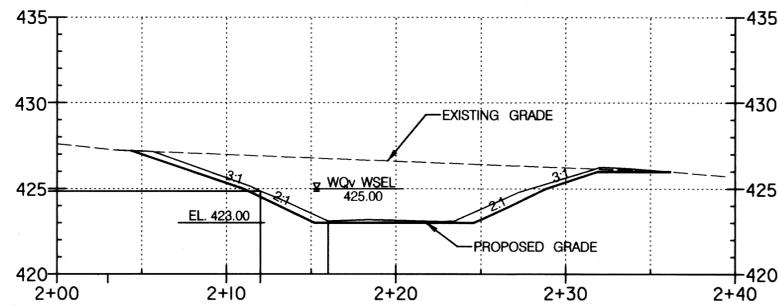
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**WATER QUALITY IMPROVEMENT PROJECT**

**LANDSCAPING PLAN**

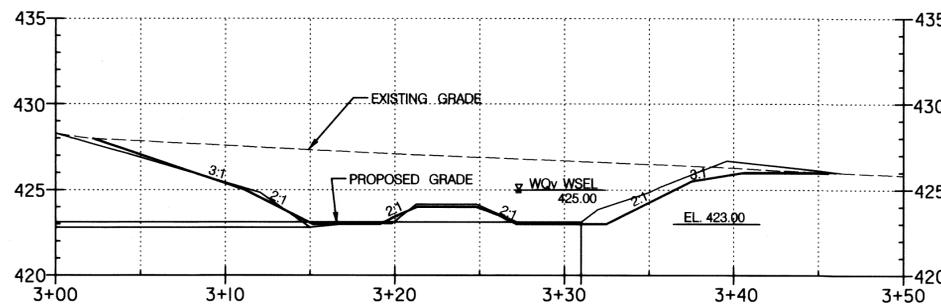
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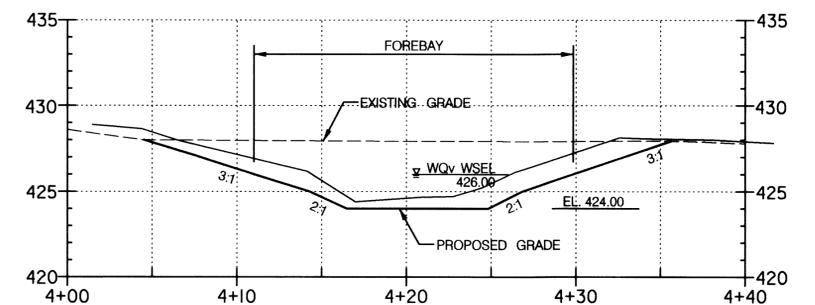
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 HORIZONTAL SCALE: 1"=10'



**CROSS SECTION A-A**  
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**CROSS SECTION B-B**  
 SCALE: 1"=5'

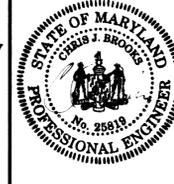


**CROSS SECTION C-C**  
 SCALE: 1"=5'

LEGEND	
---	EXISTING GRADE
—	PROPOSED GRADE

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**WATER QUALITY IMPROVEMENT PROJECT**  
**CROSS SECTIONS AND PROFILE**

SCALE  
 AS SHOWN  
 SHEET  
 9 OF 9