# OWEN BROWN RIDGE RECREATION FACILITIES

**GENERAL NOTES** 

TOPOGRAPHY ON THESE DRAWINGS ARE BASED ON FIELD RUN SURVEY BY SHOWN HEREON DOES NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITY

ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY

DEVIATIONS FROM THESE PLANS AND SPECIFICATIONS WITHOUT PRIOR WRITTEN CONSENT OF THE ENGINEER MAY CAUSE THE WORK TO BE

THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL TAKE PRECAUTIONS TO PROTECT EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S

THE CONTRACTOR SHALL VERIFY THE LOCATIONS OF ALL UTILITIES WITHIN THE LIMITS OF CONSTRUCTION AND MAINTAIN MINIMUM COVER IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL

MIN. COVER OVER WATER MAINS: 3.5'

MIN. COVER OVER SANITARY LINES: 2.5' ABOVE INVERT MIN. COVER OVER STORM DRAIN: 18"

MIN. COVER OVER GAS LINES: (AS PER BGE REQUIREMENTS)

BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE

FOREST CONSERVATION EASEMENTS AND WETLAND LIMITS WERE DERIVED

STORMWATER MANAGEMENT OF QUANTITY AND QUALITY FOR THESE SITES IS PROVIDED BY AN EXISTING REGIONAL FACILITY (F-92-1001)

THE CONTRACTOR SHALL CONTACT THE BUREAU OF ENGINEERING, CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 48 HOURS IN ADVANCE OF THE COMMENCEMENT OF WORK.

BASED ON IN-SITU TESTING OF THE FINISHED SUBGRADE. ANY PAVEMENT THE HOWARD COUNTY MINIMUM STANDARD SHALL FIRST BE APPROVED BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. THE TESTING AND GEOTECHNICAL ENGINEER SHALL BE PROVIDED BY THE OWNER.

ALL FILL SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION TO 95% WITH A MOISURE CONTENT WITHIN 3% OF OPTIMUM BETWEEN 0 AND 3% OF OPTIMUM AS DETERMINED BY ASTM-D-698. FILL UNDER PAVED AREAS, SHALL BE COMPACTED TO 98% PER ASTM-D-698.

ALL TREES 12" IN DIAMETER OR GREATER SHALL REMAIN PROTECTED AND UNDAMAGED AT ALL TIMES UNLESS OTHERWISE INDICATED. AN ATTEMPT WILL BE MADE TO PROTECT ALL OTHER TREES THROUGH FIELD ADJUSTMENTS

THE DEVELOPER IS RESPONSIBLE FOR THE ACQUISITION OF ALL EASEMENTS, RIGHTS, OR RIGHTS-OF-WAYS THAT MAY BE REQUIRED TO COMPLETE THE

CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES AND SAFETY PRECAUTIONS AND PROGRAMS.

THE CONTRACTOR SHALL IMPLEMENT AND MAINTAIN SEDIMENT AND EROSION CONTROL MEASURES AND NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (410) 313-1855. SEE SHEET 5 FOR ADDITIONAL

ALL PROPOSED IMPROVEMENTS WILL BE MAINTAINED BY THE COLUMBIA ASSOCIATION.

PREVIOUS COUNTY FILE NUMBERS: F-95-138, F-92-1001, SDP 98-13,

ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO SUCH ADJUSTMENTS.

ADJUSTMENTS TO THE SEQUENCE OF CONSTRUCTION MUST BE APPROVED BY THE HOWARD COUNTY CONSTRUCTION AND INSPECTION DIVISION PRIOR TO SUCH ADJUSTMENTS.

ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH HOWARD COUNTY SPECIFICATIONS AND STANDARDS.

#### INDEX

NO.	TITLE	REFERENCE
1	TITLE SHEET	C-1
2	GRACIOUS END TOT LOTS AND COURTS PLAN	C-2
3	SOLAR WALK TOT LOT PLAN	C-3
4	PROFILES AND DETAILS	C-4
5	SITE DETAILS AND EROSION CONTROL NOTES AND DETAILS	C-5
6	EROSION CONTROL DETAILS	C-6
7	DRAINAGE AREA MAP	C-7

**BENCH MARK** 

I. PIN WITH PLASTIC CAP ELEV. 358.42 PROPERTY CORNER 2584 PLAT 11958

2. 2599 ELEV. 379.79 PROPERTY CORNER 2599 GATEWAY COMMERCE CENTER **OPEN SPACE PARCELS A-56 AND A-59** 

COLUMBIA, MARYLAND

# **VICINITY MAP** AREA MAP

COLUMBIA, MARYLAND

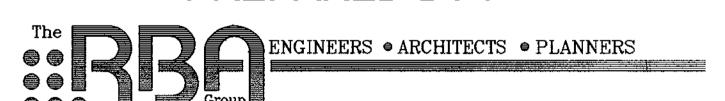
# SITE DEVELOPMENT PLANS

PREPARED FOR:

## COLUMBIA ASSOCIATION

10221 WINCOPIN CIRCLE SUITE 100 COLUMBIA, MD 21044 - 3410

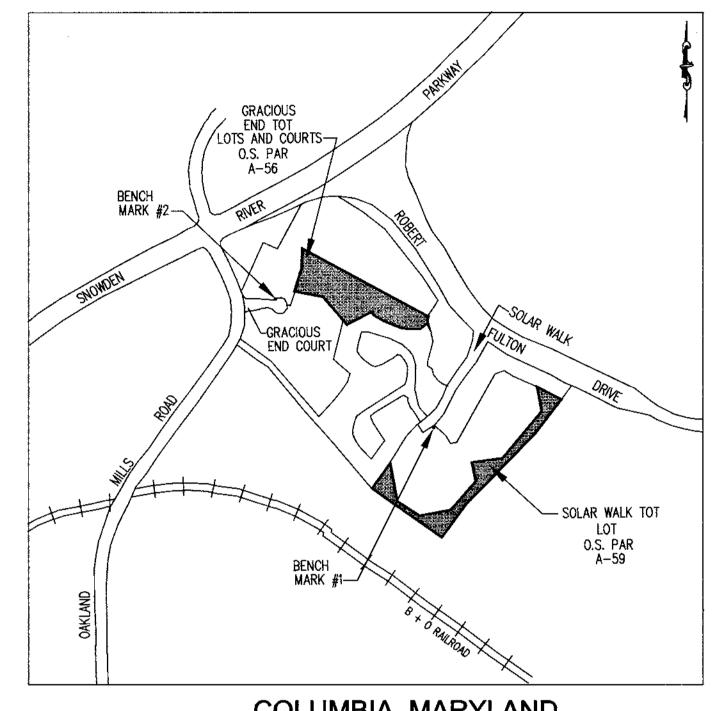
PREPARED BY:



7164 COLUMBIA GATEWAY DRIVE SUITE 205 COLUMBIA, MARYLAND 21046 (410) 312-0966

#### PERMIT INFORMATION CHART ADDRESS CHART SUBDIVISION NAME OT/PARCEL # LOT/PARCEL # GATEWAY COMMERCE CENTER 9105 Gracious End Court A-56 BLOCK NO. CENSUS TRACT ELECTION DIST. 7240 Calm Sunset 11957 11959 WATER CODE SEWER CODE

**AREA MAP** 



COLUMBIA, MARYLAND

SITE ANALYSIS

 TOTAL AREA OF PARCELS A-56 332,081 S.F. OR 7.6235 AC. A-59 110,690 S.F. OR 2.5411 AC.

PROPOSED USE: A-56 TOT LOTS AND ATHLETIC COURTS. A-59: TOT LOT

11,391 S.F.

3. TOTAL LIMITS OF DISTURBANCE: 34,532 S.F.

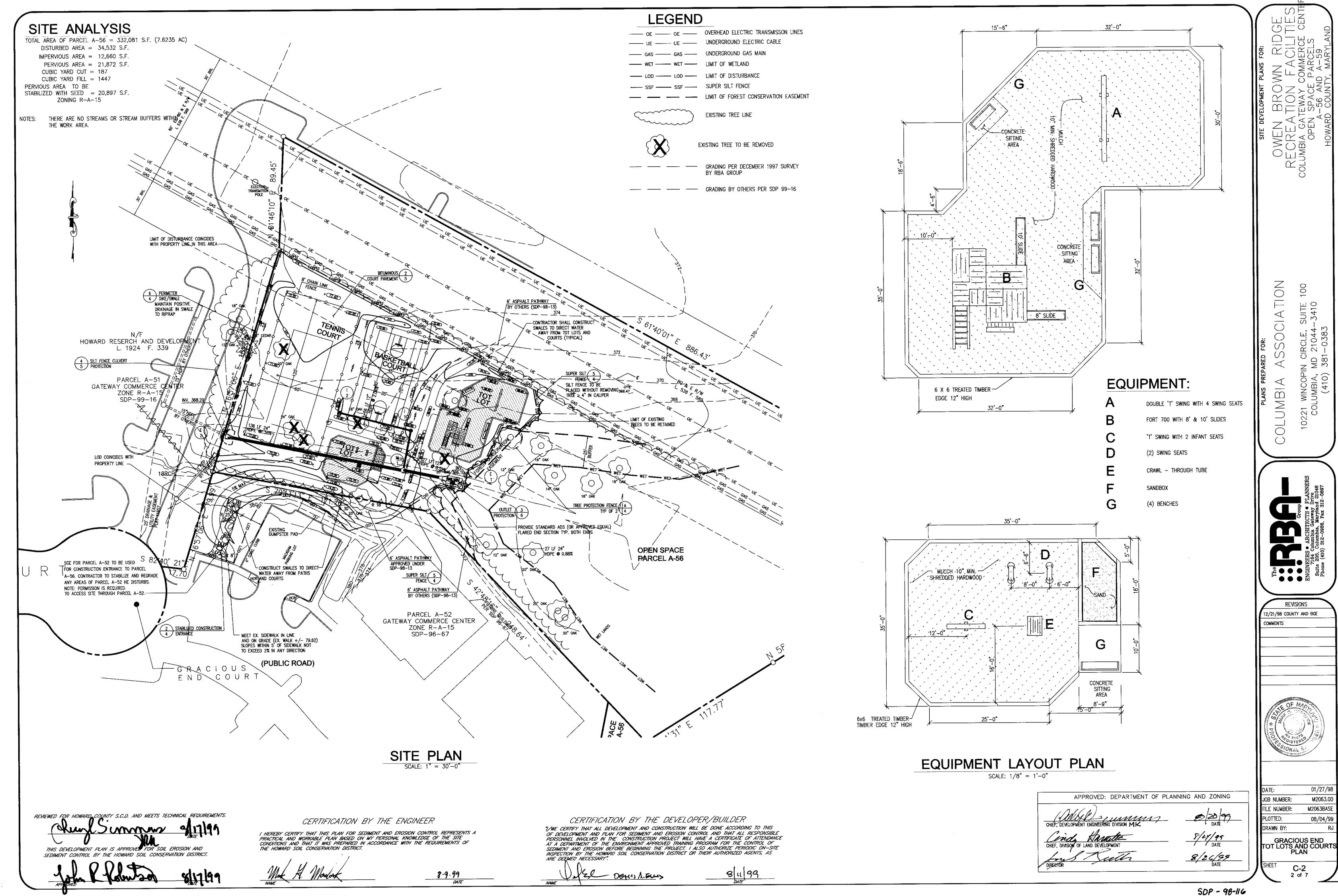
> APPROVED: DEPARTMENT OF PLANNING AND ZONING CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

REVISIONS

12/21/98 COUNTY COMMENT

M12063.00 IOB NUMBER: file Number: 2063CO\ PLOTTED: 8/04/99 DRAWN BY: TITLE SHEET

> C-1 1 of 7



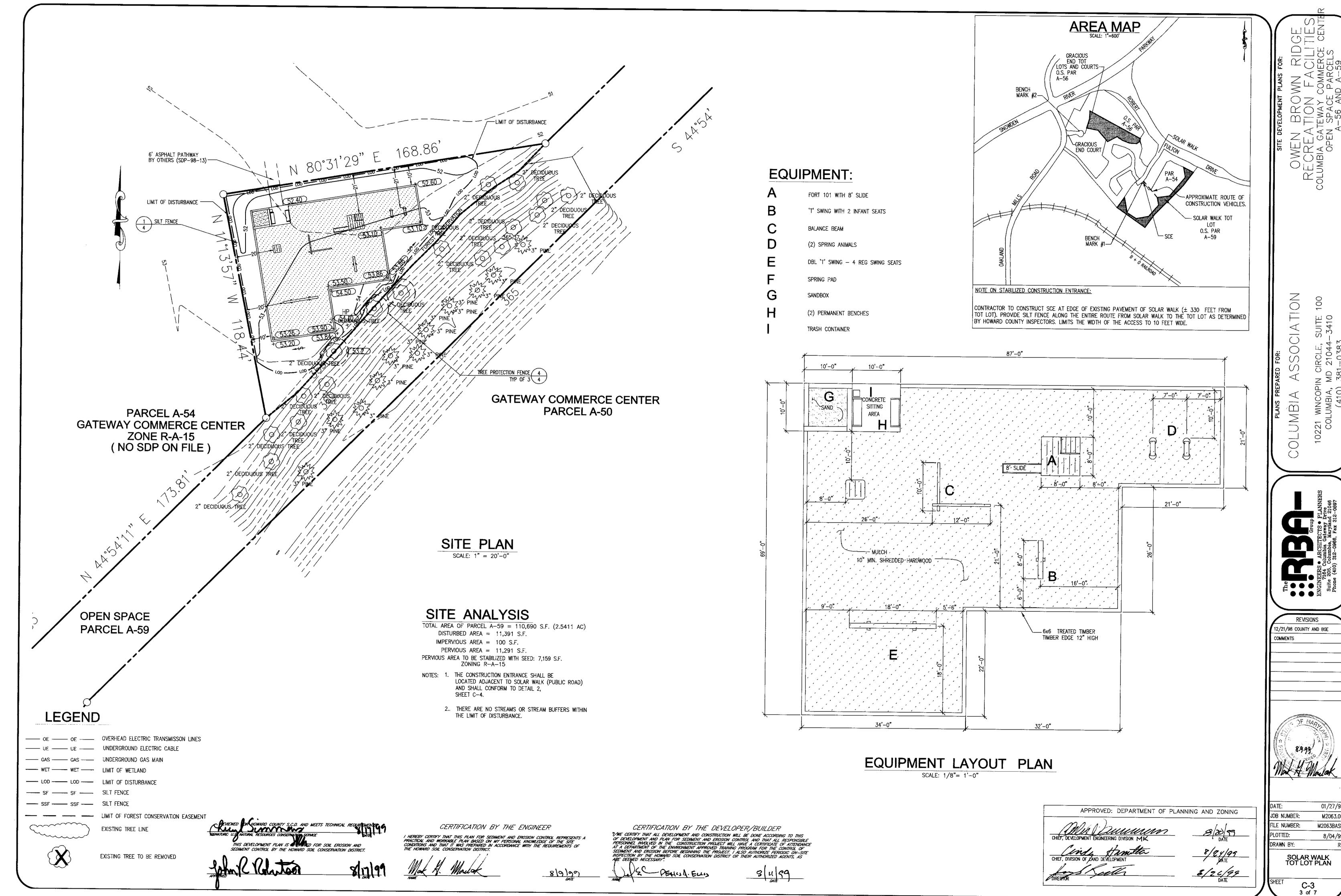
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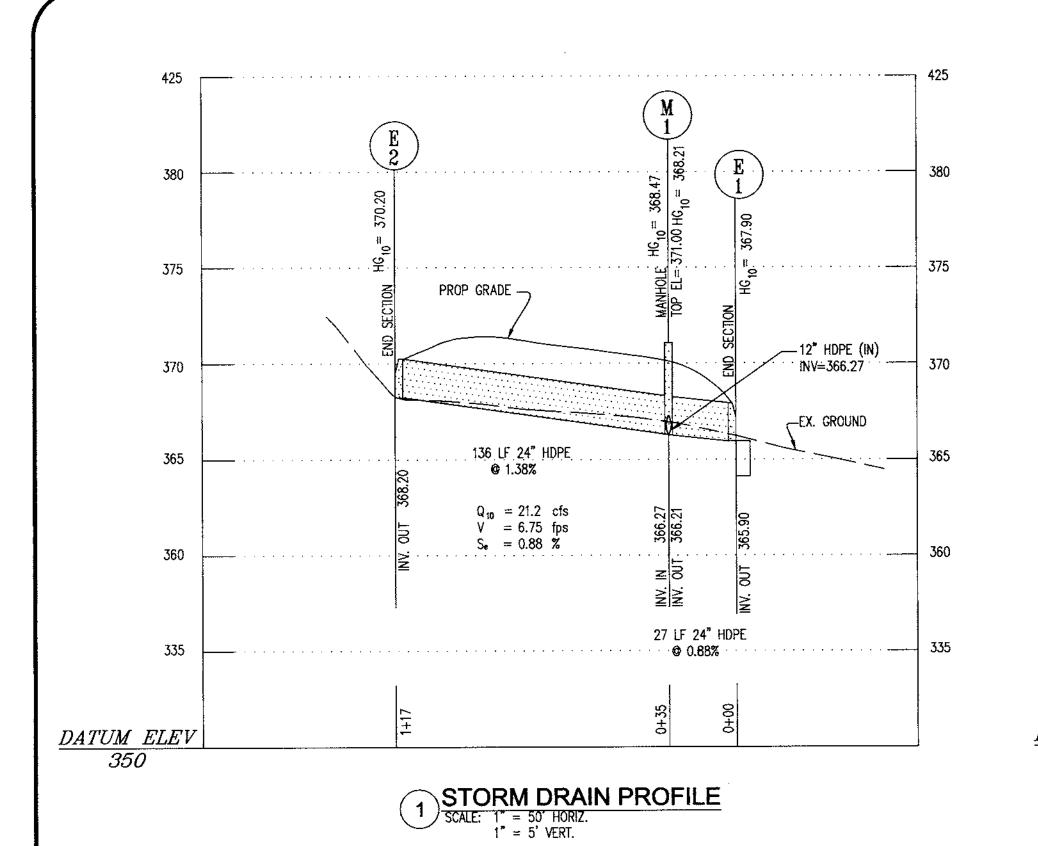
M2063.00

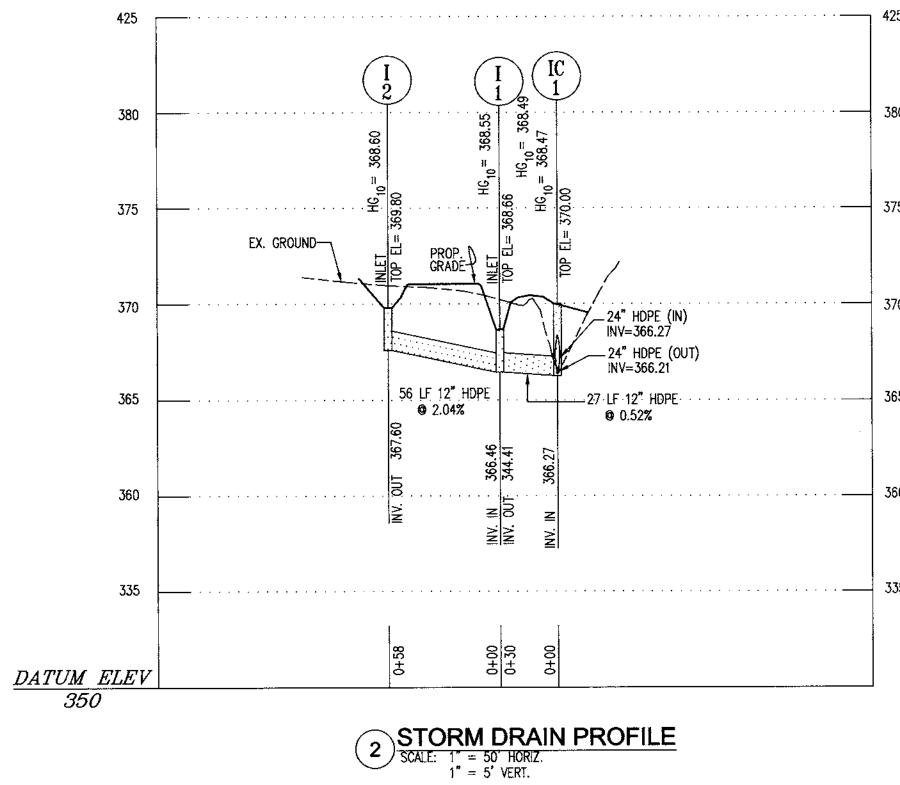
M2063BASE

08/04/99



M2063.00 M2063BASE 8/04/99





	PIPE SCHEDULE	
SIZE	TYPE	LINEAR FOOTAGE
12"	HDPE	83 LF
24*	HDPE	163 LF
24*	HDPE	163 LF

#### NOTES

- 1) ALL HDPE PIPE SHALL BE FITTED WITH GASKETS FOR MANUFACTURER'S SPECIFICATION TO PROVIDE WATERTIGHT SEALS.
- 2) ALL PIPE SHALL BE PROVIDED BY ADVANCED DRAINAGE SYSTEM OR EQUAL.

			STI	RUCTURE SO	CHEDULE	
NUMBER	TYPE	LOCATION		TOP EL	EVATION	REMARKS
		STATION	OFFSET	UPPER	LOWER	
I-1	YARD INLET	SEE	PLAN	368.66	368.66	HOWARD COUNTY DPW STD. SD-4.14
1-2	YARD INLET	SEE	PLAN	369.80	369.80	HOWARD COUNTY DPW STD. SD-4.14
M-1	SHALLOW MANHOLE	SEE	PLAN	371.00	371.00	HOWARD COUNTY DPW STD. G-5.05
E-1	END SECTION	SEE	PLAN	INV =	365.90	ADS END SECTION
E-2	END SECTION	SEE	PLAN	INV=	368.20	ADS END SECTION

#### NOTES

- 1) ALL STRUCTURES ARE HOWARD COUNTY STANDARDS UNLESS NOTED OTHERWISE.
- 2) ELEVATIONS GIVEN ARE TO TOP OF GRATE FOR GRATE INLETS AND TOP OF LID FOR MANHOLES.

3) END SECTIONS TO BE SUPPLIED BY ADS OR EQUIVALENT PIPE MANUFACTURER TO BE COMPATIBLE WITH ADS PIPE.

The Group

OCIATION

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REVISIONS
12/21/98 COUNTY AND
BGE COMMENTS

89.99 Ball

DATE:	12/18/ <del>9</del> 8						
JOB NUMBER:	M2141.00						
FILE NUMBER:	2063PROF						
PLOTTED:	8/04/99						
DRAWN BY: RJ							
PROFILES AND DETAILS							

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION MK

CHIEF, DIVISION OF LAND DEVELOPMENT

DATE

DIRECTOR

DATE

- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES. DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3% B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1. CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC 62). 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.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY HOWARD COUNTY DPW SEDIMENT CONTROL INSPECTOR.

#### SEQUENCE OF CONSTRUCTION Obtain a grading permit and all other necessary permits — Day 1.

- 2. Notify the Howard County Bureau of Licenses, Inspections and Permits at least 48 hours before beginning any work - Day 2-3.
- 3. Install sce's and sediment controls needed for culvert installation Day 4-5.
- 4. Install culvert (at Gracious End Site only) Day 6-7.
- 5. Install perimeter controls Day 8.
- 6. Obtain inspector approval prior to proceeding 2 days.
- 7. Begin clearing and grubbing for construction Day 9-10.
- 8. Grade site maintaining positive drainage at all times Day 11-12.
- 9. Compact subgrade and install courts and tot lot Day 13-20.
- 10. Stabilize all areas with seed and mulch. Day 21.
- 11. Upon stabilization of the approval of the site and Howard County Sediment Control Inspector, remove controls and stabilize in accordance with permanent seeding notes - Day 22-30.

SILT FENCE

SILT FENCE CULVERT INLET PROTECTION

THE HOWARD SOIL CONSERVATION DISTRICT.

#### **TEMPORARY SEEDING NOTES**

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

TOP SOIL SHALL BE ADDED TO A DEPTH OF 4" IN ACCORDANCE WITH WITH SPECIFICATIONS FOR TOPSOILING (THIS SHEET)

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THU NOVEMBER 15. SEED WITH 12 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQUARE FEET). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQUARE FEET) FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28. PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING OR USE SOD.

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

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

#### PERMANENT SEEDING NOTES

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

SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU

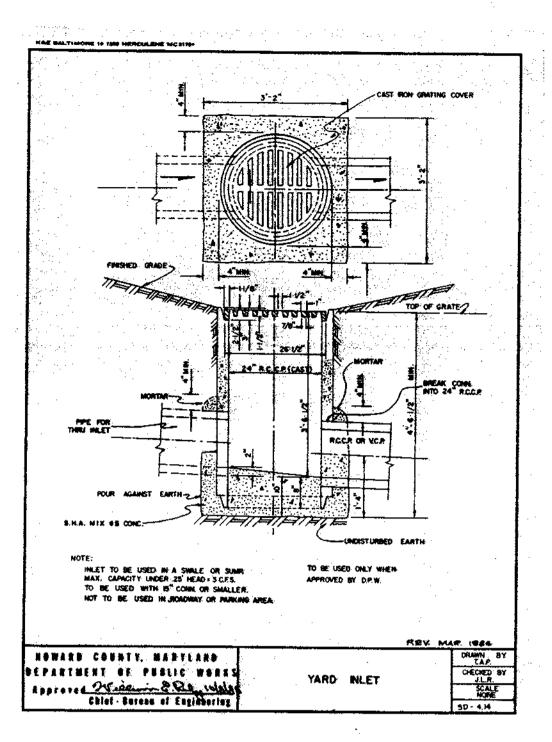
TOP SOIL SHALL BE ADDED TO A DEPTH OF 4" IN ACCORDANCE WITH MD SPECS. WITH FOR TOPSOILING (SEE 1994 MD STANDARDS AND SPECIFICATIONS SECTION 21.0).

OCTOBER 15, SEED WITH 60 LBS PER ACRE (14 LBS/1000 SQUARE FEET) OF KENTUCKY 31 TALL FESCUE, FOR THE PERIOD MAY 1 THRU JULY 31. SEED WITH 50 LBS KENTUCKY 31 TALL FESCUE PER ACRE (.08 LBS/1000 SQUARE FEET) OF WEEPING LOVEGRASS DURING THE PERIOD OF OCTOBER 18 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 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQUARE FEET) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GAL/100 SQ. FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL./1000 SQ. FT.) FOR ANCHORS.

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

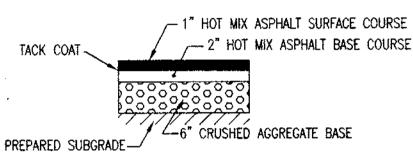


DET. 6 5.51 -SET SLAS ON 1/2" MORTAR SEE GENERAL HOTES APPLICABLE TO ALL BRICK MANHOLES ON "1/2" CEMENT MORTAR WITH 2 COATS
COAL TAR SPORY COATING IS MILE DRY.
(SAN. SWR. ONLY) MIX. Nº 3 CONC. SECTION A-A HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS SHALLOW BRICK MANHOLE Approved Chief - Bureau of Engineering

2 SHALLOW BRICK MANHOLE
SCALE: NIS

- 2" HOT MIX ASPHALT SURFACE COURSE ∠4" CRUSHED AGGREGATE BASE PREPARED SUBGRADE -

PATHWAY PAVEMENT



COURT PAVEMENT

NOTE: CONTRACTOR TO COLOR AND STRIP COURTS AS REQUIRED BY THE COLUMBIA ASSOCIATION.

3 BITUMINOUS PAVEMENT

YARD INLET

### Table 23 Grass and Legume Plant Characteristics

	· .			Italian	<u> </u>		<u> </u>	Kerean	Sericea	Perensiai	Trefoil
Betanical Name	1. (*) 1. (*)	Argestic After	Socale Cereals	Leitus Muliflerus	Lotiene Persone	Mélilotus Alba Officinalia	Sorghum Sudanasa	Coronilla Varia	Lespedeza Etipulacea	Loliom Perenne	Eatus Corniculatis
Germinalies Tim	se <sup>25</sup> / (Days):	5 - 10	4-7	5 - 14	10	4 - 10:	14 - 21	5 - 14	7 - 28	5 - 14	10
Growth Habitat	<b>30</b> 1	P, SL, B	A		В, і	A.	P, L, R		P, L, B	P, S, B	P, L
	Cool	х	x	×	х		x		de jelok	x	x
Seasone	Warm				× ×	x	x	x	x		x
	Dey, Not Droughty	x	×		x	x	<u>,</u>	x	x		. x
	Well Drained	x	x	x	x	x	x	x	x	х	х
Drainse	Moderately Well	x	×	x	x	×	×	У	x	х	×
	Somewhat Poorly Drained	x		x		x		x	x	x	x
	Poorly Drained	x									
	Winter		<b>x</b>	x	x	vi v <sub>i</sub>				x	x
Annual Cover	Summer				×	х		х		<u> </u>	
pH Range		4.0 - 7.5	5.5 - 7.5	5.5 - 7.5	6.5 - 7.5	4.5 - 7.5	5.5 - 7.5	5.5 - 7.5	5.5 - 7.5	5.5 - 7.5	5.0 - 7.5
Flooding Tolerain	ce	X		x	e					X	x
Erodable Areas		X	x	x	<b>x</b>	<b>x</b>	x	x	x	x	х
Waterways and (	Chappels	x									
Shade: Tolerance.				х			x			x	
Foot Traffic		x							<u> </u>		
Playgrounds, Atl	delic Fields,	x	,		)·						
Beautify							x		· ·		х
	High		:		x	41.					
Levels of Maintenance	Medium	x	X	x	x		x		x	×	x
	Low					x	×	х	×	x	×

G-20-15

CERTIFICATION BY THE DEVELOPER/BUILDER "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS OF DEVELOPMENT AND PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS

Growth Habitas: A-Annual, B-Bunch, Bl-Biannual, L-Long Lived, R-Rizomatous or spreads by root stocks, SL-Short Lived, S-Stoliniferous

IL DEHUA-tour

Table 24 Maintenance Fertilization for Permanent Seedings Use Soil Test Results or Rates Shown Below

Seeding Mixture	Туре	lb/ac	lb/1000 sf	Time	Mowing
Tall fescue makes up 70% or more of cover	10-10-10 or 30-10-10	500 400	11.5 9.2	Yearly or as needed. Fall	Not closer than 3" if occasional mowing is desired
Crownvetch Sericea Lespedeza Birdsfoot Trefoil	0- <b>20-0</b>	400	9.2	Spring, the year following establishment and every 4-5 years thereafter	Do not mow crownvetch
Fairly uniform stand of tall fescue and sericea lespedeza, or birdsfoot trefoil	5-10-1 <b>0</b>	500	11.5	Fall the year following establishment and every 4-5 years thereafter	Not required, no closer than 4" in the fall after seed has matured.
Weeping lovegrass & sericea lespedeza fairly uniform plant distribution.	5-10-10	500	11.5	Spring, the year following establishment and every 3-4 years thereafter.	Not required, not closer than 4" in fall after seed has matured.
Red & chewings fescue, Kentucky bluegrass, hard fescue mixtures	20-10-1 <b>0</b>	250	5.8	September, 30 days later.  December, May 20, June 30, if needed.	Mow no closer than 2" for red fescue and K. bluegrass, 3" for fescue.
		100	2.3		

APPROVED: DEPARTMENT OF PLANNING AND ZONING

FILE NUMBER: DRAWN BY:

M2063.00 JOB NUMBER: 2063SED2 8/04/98 SITE DETAILS AND EROSION CONTROL

01/27/98

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

CERTIFICATION BY THE ENGINEER

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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

DEVELOPMENT PLANSAPPROVED FOR SOIL EROSION AND

THE HOWARD SOIL CONSERVATION DISTRICT.

DISTANCE IS 6' MINIMUM IF FLOW

IS TOWARD EMBANKMENT

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ARK DEKMED NECESSARY".

SND - 98-11/2

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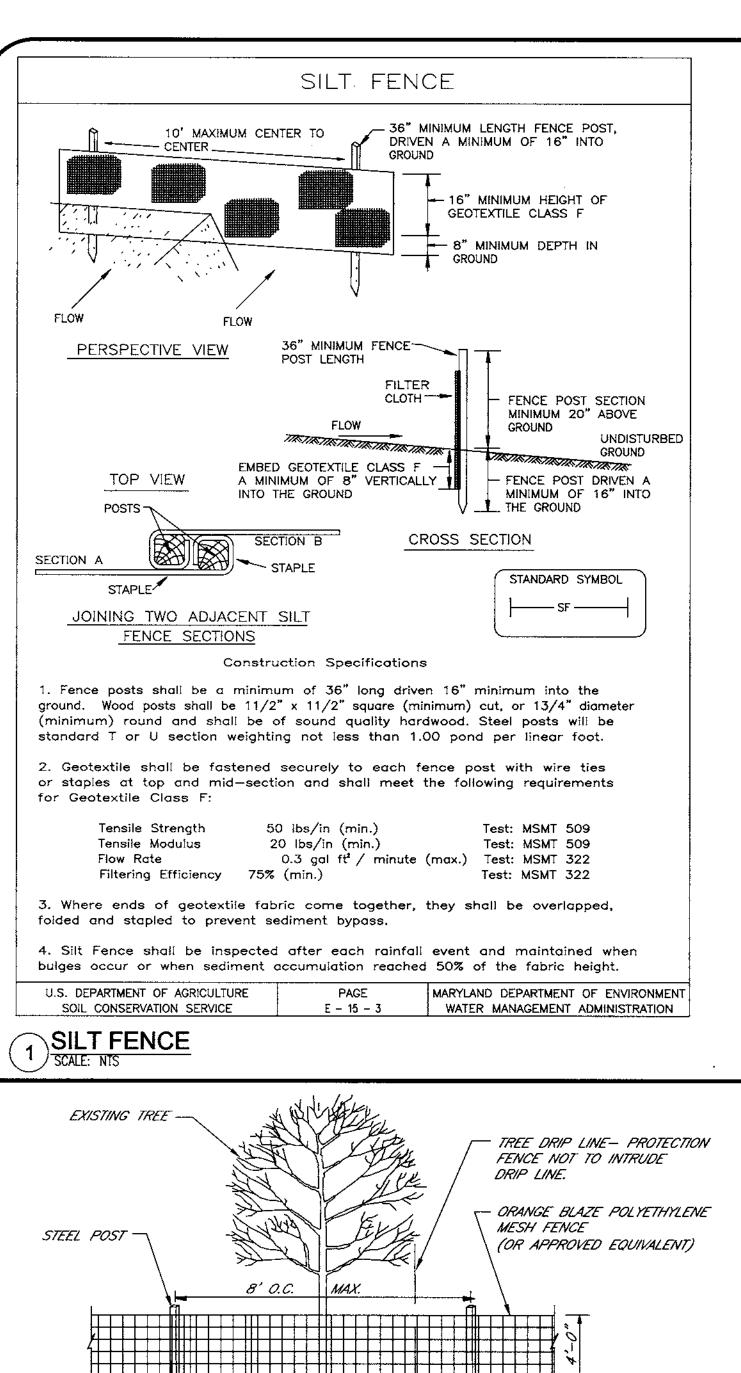
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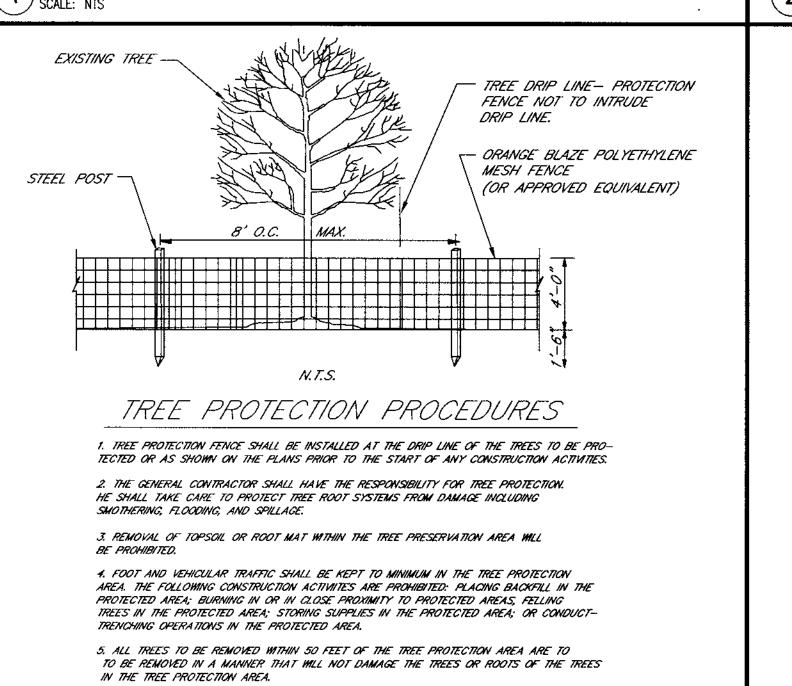
IRCLE, 21044 -038

N CI MD 381

WINCOPI UMBIA, (410)

REVISIONS 12/21/98 COUNTY AND BGE COMMENTS





### TREE PROTECTION FENCE SCALE: NTS

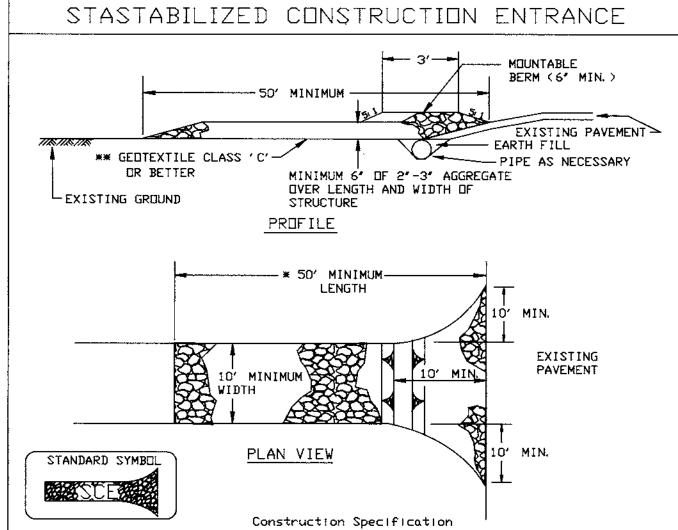
REVIEWED FOR HOWARD COUNTY S.C.D. AND MEETS TECHNICAL REQUIREMENTS. Kuy Simmons L' RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND



#### CERTIFICATION BY THE ENGINEER

I HEREBY CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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.

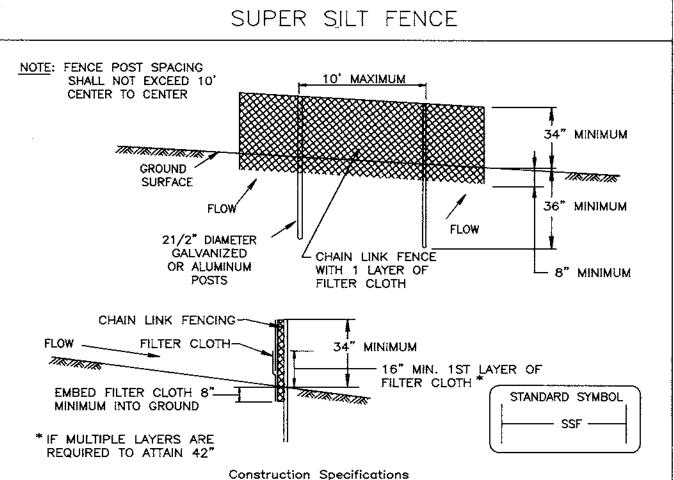


- . Length minimum of 50' (\*30' for single residence lot).
- 2. Width 10' minimum, should be flared at the existing road to provide a turning radius.
- 3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. \*\*The plan approval authority may not require single family residences to use geotextile.
- 4. 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
- 5. 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.

6. 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 MARYLAND DEPARTMENT OF ENVIRONMENT F - 17 - 3 WATER MANAGEMENT ADMINISTRATION SDIL CONSERVATION SERVICE

# 2 STABILIZED CONSTRUCTION ENTRANCE SCALE: NTS



1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped

6. Maintenance shall be performed as needed and silt buildups removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height 7. Filter cloth 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

Tensile Strength Tensile Modulus Flow Rate Filtering Efficiency 75% (min.)

50 lbs/in (min.) 20 lbs/in (min.) 0.3 gal/ft ²/minute (max.)

Test: MSMT 509 Test: MSMT 509 Test: MSMT 322 Test: MSMT 322

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

#### SUPER SILT FENCE

Geotextile Class F:

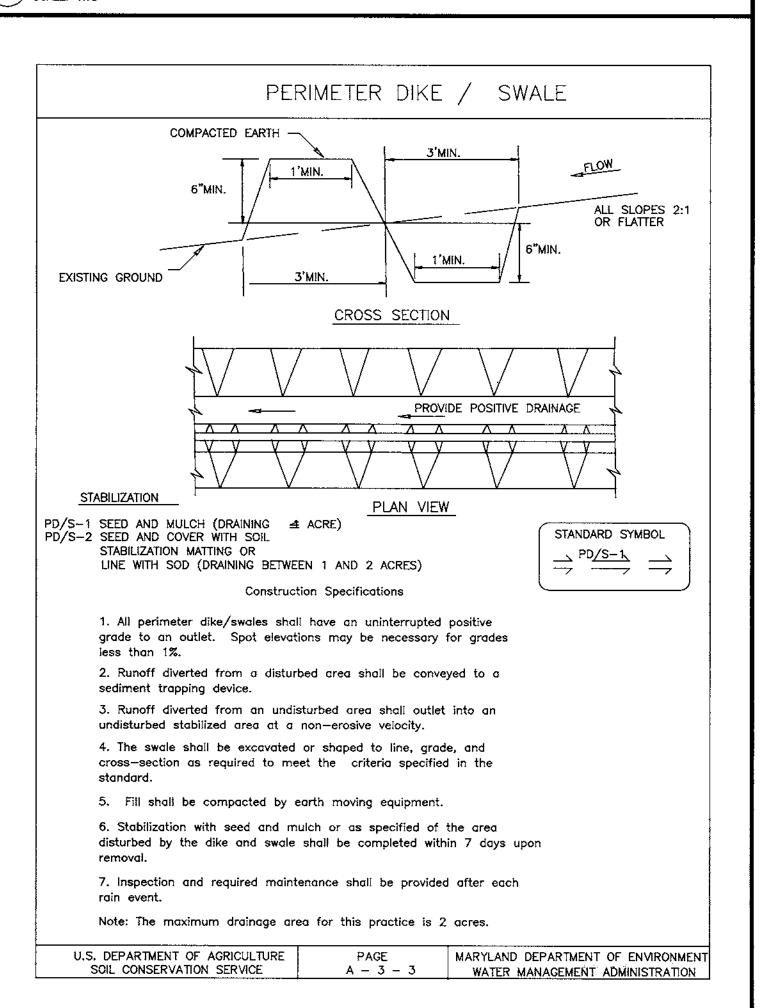
SCALE: NTS

#### CERTIFICATION BY THE DEVELOPER/BUILDER

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS OF DEVELOPMENT AND PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL 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 OR THEIR AUTHORIZED AGENTS, AS ARE DEEMED NVECESSARY". 12 2- DEH 4. Bus

DETAIL 27 - ROCK DUTLET PROTECTION III PLAN VIEW EXISTING STABILIZED TOE WALL LINING 14 MINIMEN WIDTH ELEVATION FILTER FABRIC LINING SHALL BE EMBEDDED A MINIMUM OF 4° AND SHALL EXTEND AT LEAST 6' BEYOND FILTER CLUTH LINING THE EDGE OF THE RIP-RAP SECTION A-A NOTE: FILTER CLOTH SHALL BE GEDTEXTILE CLASS C U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT SDIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION



PERIMETER DIKE/SWALE SCALE: NTS

#### ROCK OUTLET PROTECTION

#### Construction Specifications

1. The subgrade for the filter, rip-rap, or gabion shall be prepared to the required lines and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undisturbed material.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter

3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. Stone for the rip-rap or gabion outlets may be placed by equipment. They shall be constructed to the full course thickness in one operation and in such a manner as to avoid displacement of underlying materials. The stone for rip-rap or gabion outlets shall be delivered and placed in a manner that will ensure that it is reasonably homogeneous with the smaller stones and spalls filling the voids between the larger stones. Rip-rap shall be placed in a manner to prevent damage to the filter blanket or geotextile. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

5. The stone shall be placed so that it blends in with the existing ground. If the stone is placed too high then the flow will be forced out of the channel and scour adjacent to the stone will occur.

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DETAIL 30 - EROSION CONTROL MATTING

CROSS-SECTION 4' OVERLAP OF MATTING STRIPS WHERE TWO OR MORE STRIP WIDTHS ARE REQUIRED, ATTACH STAPLES ON 18" CENTERS STAPLE DUTSIDE — EDGE DF MATTING DN 2' CENTERS STAPLE DUTSIDE EDGE OF MATTING TYPICAL STAPLES NO. 11 U.S. DEPARTMENT OF AGRICULTURE MARYLAND DEPARTMENT OF ENVIRONMENT

SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION EROSION CONTROL MATTING

Construction Specifications
1. Key-in the matting by placing the top ends of the matting in a narrow trench, 6' in depth. Backfill the trench and tamp firmly to conform to the channel cross-section. Secure with a row of staples about 4" down slope from the trench. Spacing between staples is 6".

2. Staple the 4' overlap in the channel center using an 18' spacing between staples.

3. Before stapling the outer edges of the matting, make sure the matting is smooth and in firm contact with the soil.

4. Staples shall be placed 2' apart with 4 rows for each strip, 2 outer rows, and 2 alternating rows down the center.

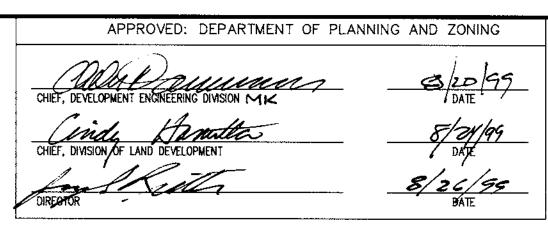
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6' apart in a staggered pattern on either side.

6. The discharge end of the matting liner should be similarly secured with 2 double rows of staples.

Note: If flow will enter from the edge of the matting then the area effected by the flow must be keyed-in.

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EROSION CONTROL MATTING



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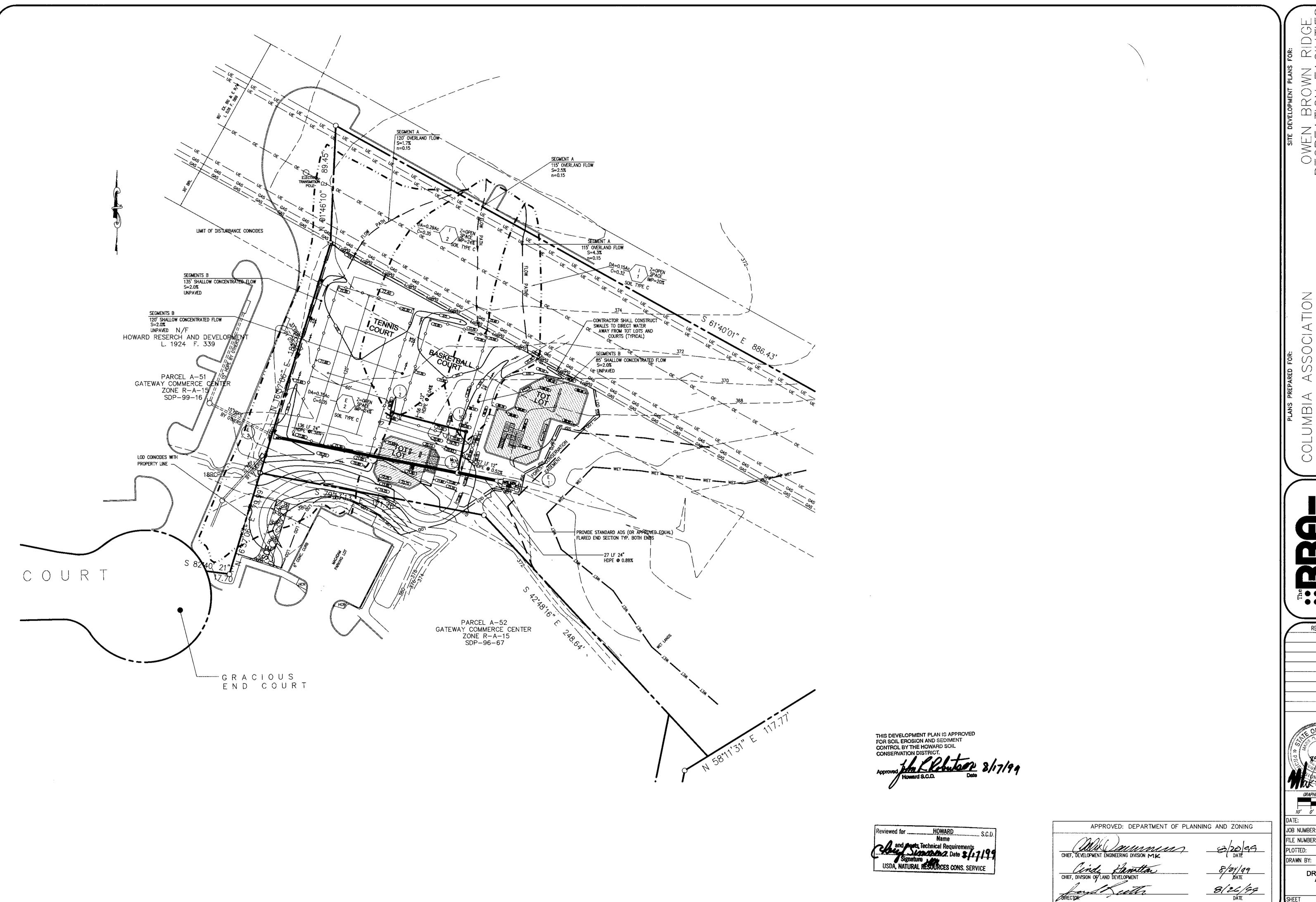
REVISIONS

01/27/98 ATE: OB NUMBER: M2063.00 TLE NUMBER: 2063SEDD PLOTTED: 8/04/98 DRAWN BY:

DETAILS

**EROSION CONTROL** 

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REVISIONS

01/27/98 M2063.00 JOB NUMBER: M2063BASE FILE NUMBER: 8/04/99 PLOTTED:

DRAWN BY: DRAINAGE AREA MAP

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