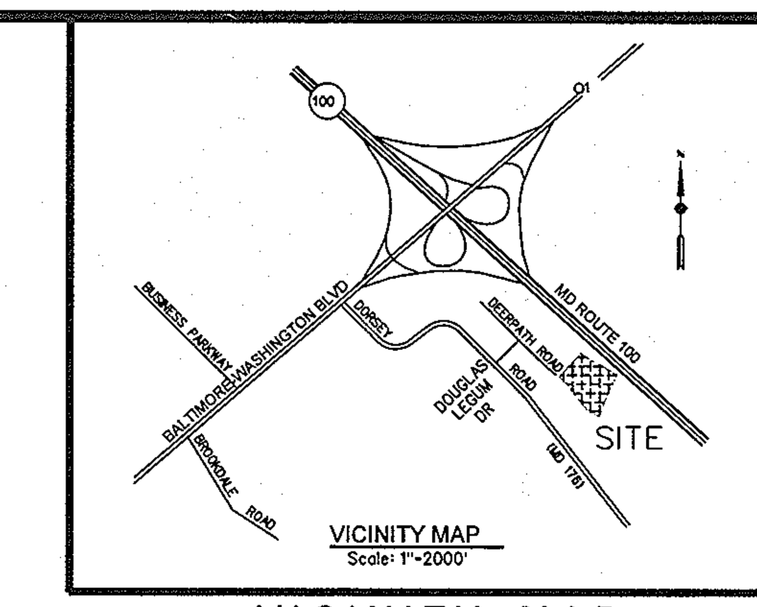
SITE DEVELOPMENT PLAN
DORSEY BUSINESS PARK
PARCEL E
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE : 1" = 2,000'

BENCHMARK:
Howard County Geodetic Control No.: 371A - Elev.: 195.76
Station is a 3/4" Iron Rod with a 4" Stamped aluminum cap.
West side of Route 1, between edge of paving and iron fence,
247' N. of CL main entrance of Meadowridge Memorial Park.

LEGEND

PROPERTY LINE	
FENCE LINE	WOOD FENCE / C.L.FENCE
CURB/CURB & GUTTER	
CONCRETE/CONCRETE WALK	
HOUSE/BUILDING	
WATER LINE, METER, VALVE, FIRE HYDRANT	WM / EX 8"W / WV / FH
SANITARY SEWER LINE, MANHOLE	
STORM DRAIN LINE, MANHOLE	
STORM DRAIN INLETS	
TELEPHONE LINE, MANHOLE	
ELECTRIC LINE, MANHOLE, HANDBOX	
GAS LINE, VALVE	
CONDUIT LINE/STRUCTURE	
OVERHEAD UTILITY LINE	
UTILITY POLE, LIGHT	
TRAFFIC SIGN, PARKING METER	
CONTOURS	130 / 128
TREES	
PROPOSED FIRE HYDRANT	
PROPOSED GAS	—G—
PROPOSED ELECTRIC	—E—
PROPOSED SANITARY	—S—
PROPOSED WATER	—W—
PROPOSED STORM DRAIN	

General Construction Notes

ANY DAMAGE TO OFF-SITE RIGHTS OF WAY, PUBLIC ROADS, OR ADJACENT PROPERTIES SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

THE CONTRACTOR SHALL MAINTAIN A TWO-FOOT MINIMUM BENCH BEHIND ALL PROPOSED CURB AND GUTTER IN ALL FILL AREAS.

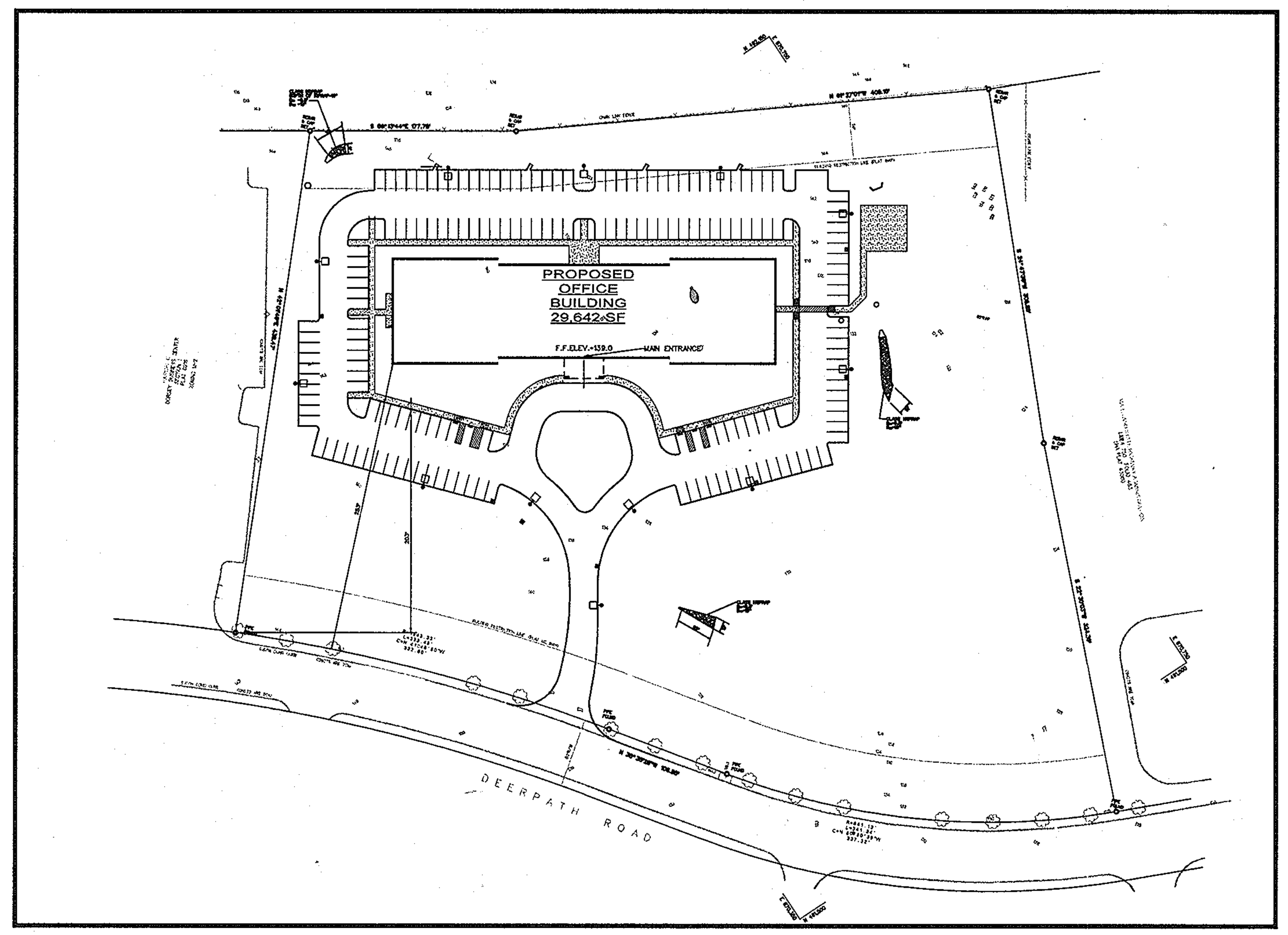
SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL AREAS SHALL BE ROLLED TO A MINIMUM DEGREE OF COMPACTION OF 95% OF THE DRY UNIT WEIGHT AS DETERMINED BY ASTM D-698 SPECIFICATIONS, 8" LIFTS MAXIMUM. A SOILS ENGINEER'S REPORT HAS BEEN PREPARED AND IS AVAILABLE FOR REVIEW IN THE ENGINEER'S OFFICE. HOWEVER, THE CONTRACTOR SHALL USE ANY INFORMATION IN THE REPORT AT HIS OWN RISK.

REFER TO THE DEMOLITION PLAN FOR EXISTING UTILITIES TO BE REMOVED OR ABANDONED IN PLACE.

PATCH EXISTING PAVEMENT AT ALL UTILITY CUTS TO MATCH EXISTING PAVEMENT.

CONTRACTOR SHALL PROVIDE POSITIVE DRAINAGE IN GRASS AND PAVED AREAS DURING ALL PHASES OF CONSTRUCTION AND FINISHED GRADES.

ALL AREAS SHALL HAVE A MINIMUM 2% SLOPE AWAY FROM THE BUILDING AND TO THE CURB LINE, UNLESS OTHERWISE NOTED.



Plan
SCALE: 1"= 100'

General Utility Notes

ALL WATER MAINS SHALL HAVE A STANDARD MINIMUM COVER OF 4.0 FEET WITH THE EXCEPTION OF CROSSINGS WHERE MINIMUM COVER OF 3.0 FEET WILL BE ALLOWED, WITH A MINIMUM OF 0.5 FEET CLEAR OF OTHER UTILITIES, EXCEPT SANITARY SEWER.

CONTRACTOR SHALL FURNISH THE OWNER A LETTER CERTIFYING THAT ALL WATER LINES HAVE BEEN STERILIZED BY METHODS OUTLINED BY THE LOCAL PLUMBING CODE.

CONTRACTOR SHALL FURNISH THE OWNER A LETTER CERTIFYING THAT PRESSURE TESTS HAVE BEEN SATISFACTORILY MADE AND A LETTER FROM THE LOCAL FIRE DEPARTMENT INDICATING THAT THE PRESSURE TEST FOR FIRE LINES HAVE BEEN SATISFACTORILY COMPLETED.

AT ALL WATER OVER SANITARY SEWER CROSSINGS THE MINIMUM CLEAR DISTANCE SHALL BE 12 INCHES.

ALL OF THE LOCAL AUTHORITIES STANDARD SPECIFICATIONS ON MINIMUM COVER, BUTTRESSES, ANCHORS, AND OTHER APPROPRIATE LOCAL CONSTRUCTION STANDARDS AND REQUIREMENTS FOR STERILIZING AND PRESSURE TESTING OF THE WATER SYSTEM SHALL APPLY.

ALL UTILITIES IN PAVED AREAS SHALL HAVE FULL TRENCH COMPACTION.

ALL SANITARY SEWER LINES LEAVING A BUILDING SHALL HAVE A MINIMUM COVER OF 30 INCHES BELOW PROPOSED GRADES.

ANY NEW UTILITIES TO BE INSTALLED THROUGH EXISTING ITEMS TO REMAIN MUST BE PATCHED TO EQUAL THE EXISTING CONDITIONS IN ACCORDANCE WITH THE SPECIFICATIONS.

PROPOSED ROOF DRAINS SHALL HAVE A MINIMUM SLOPE OF 2%, UNLESS OTHERWISE NOTED.

General Traffic Notes

ALL OPEN EXCAVATIONS AND TRENCHES SHALL BE PLATED AT THE END OF EACH WORK DAY WITH "STEEL PLATES AHEAD" WARNING SIGNS DISPLAYED IN ADVANCE.

THE CONTRACTOR MUST MAINTAIN ONE (1) TEN FOOT (10') LANE FOR TRAFFIC DURING WORKING HOURS FOR EACH DIRECTION OF TRAVEL OR PROVIDE A TWO-MAN FLAGGING OPERATION EQUIPPED WITH "SLOW / STOP" PADDLES.

IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO SUPPLY, INSTALL, AND MAINTAIN ALL TRAFFIC CONTROL EQUIPMENT.

THE CONTRACTOR SHALL MAINTAIN A MINIMUM FOUR FOOT (4') WIDE PEDESTRIAN FOOTWAY OR AN APPROPRIATE PEDESTRIAN DETOUR.

General Notes

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
2. 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.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
5. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY DUVALL ASSOCIATES DATED 2-6-98.
7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NO. 371A WAS USED FOR THIS PROJECT.
8. WATER IS PUBLIC (CONTRACT NO. 44-3688-D). DRAINAGE AREA: PATAPSCO.
9. SEWER IS PRIVATE.
10. EXISTING REGIONAL RETENTION POND-PRIVATELY OWNED AND MAINTAINED BY HOWARD COUNTY.
11. EXISTING UTILITIES ARE BASED ON SURVEYED INFORMATION AND RECORD DRAWINGS. THE CONTRACTOR SHALL LOCATE AND IDENTIFY ALL UTILITIES TO HIS OWN SATISFACTION PRIOR TO STARTING ANY CONSTRUCTION.
12. THERE IS NO FLOODPLAIN ON THIS SITE.
13. THERE ARE NO WETLANDS ON THIS SITE.
14. NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
15. PROJECT BACKGROUND INFORMATION: SEE TITLE BLOCK.
16. THE CONTRACTOR OR DEVELOPER SHALL CONTACT THE CONSTRUCTION INSPECTION DIVISION 24 HOURS IN ADVANCE OF COMMENCEMENT OF WORK AT (410) 313-1880.

SITE ANALYSIS

TOTAL PROJECT AREA: 8.35 Ac.
PROPOSED DEVELOPMENT AREA: 5.88 Ac.
EXISTING SWM FACILITY EASEMENT: 2.47 Ac.
AREA OF PLAN SUBMISSION: 5.2 Ac.
LIMIT OF DISTURBANCE: 5.2 Ac.
PRESENT ZONING: M-2
PROPOSED USE: MEDICAL OFFICE BUILDING(ADMINISTRATION)
FLOOR SPACE - ONE STORY: 29,642 SQ.FT. FOOTPRINT
EMPLOYEES PER SHIFT: 80
PARKING SPACES REQUIRED: 5 SPACES / 1000 S.F.
PARKING SPACES PROVIDED: 172 INCLUDING 6 HANDICAPPED
OPEN SPACE ON SITE: 0.10 Ac. 20 % GRASS
PROPOSED BUILDING COVERAGE = 31,500 SQ.FT.

SHEET INDEX

STATE OF MARYLAND
PROFESSIONAL ENGINEER
14860

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

[illegible] 6/18/98
Signature of Developer MARTIN J. STORCK Date
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.
Cheryl Simmons 6/18/98
USDA-Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
John R Robertson 6/18/98
Howard SCD Date

APPROVED: DEPT. OF PLANNING AND ZONING
[illegible] 6/23/98
Chief, Development Engineering Division Date
Cindy Hamilton 6/23/98
Chief, Division of Land Development Date
[illegible] 6/23/98
Director Date

Rev./ Date	Descrition

~~Approved : Howard County Health Department for Public Water and Sewerage Systemes.~~
~~Health Officer Date~~

Address Chart					
Lot/Parcel 289			Street Address		
Parcel E			6820 Deerpath Road		
Subdivision Name Dorsey Business Center			Section/Area		Parcel E
Plat No. 6916	Block No. 6	Zone M-2	Tax/Zone Map 37/43	Elec. Dist. 1st	Census Track 6012
Water Code 801			Sewer Code 22800000; 2220000		

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

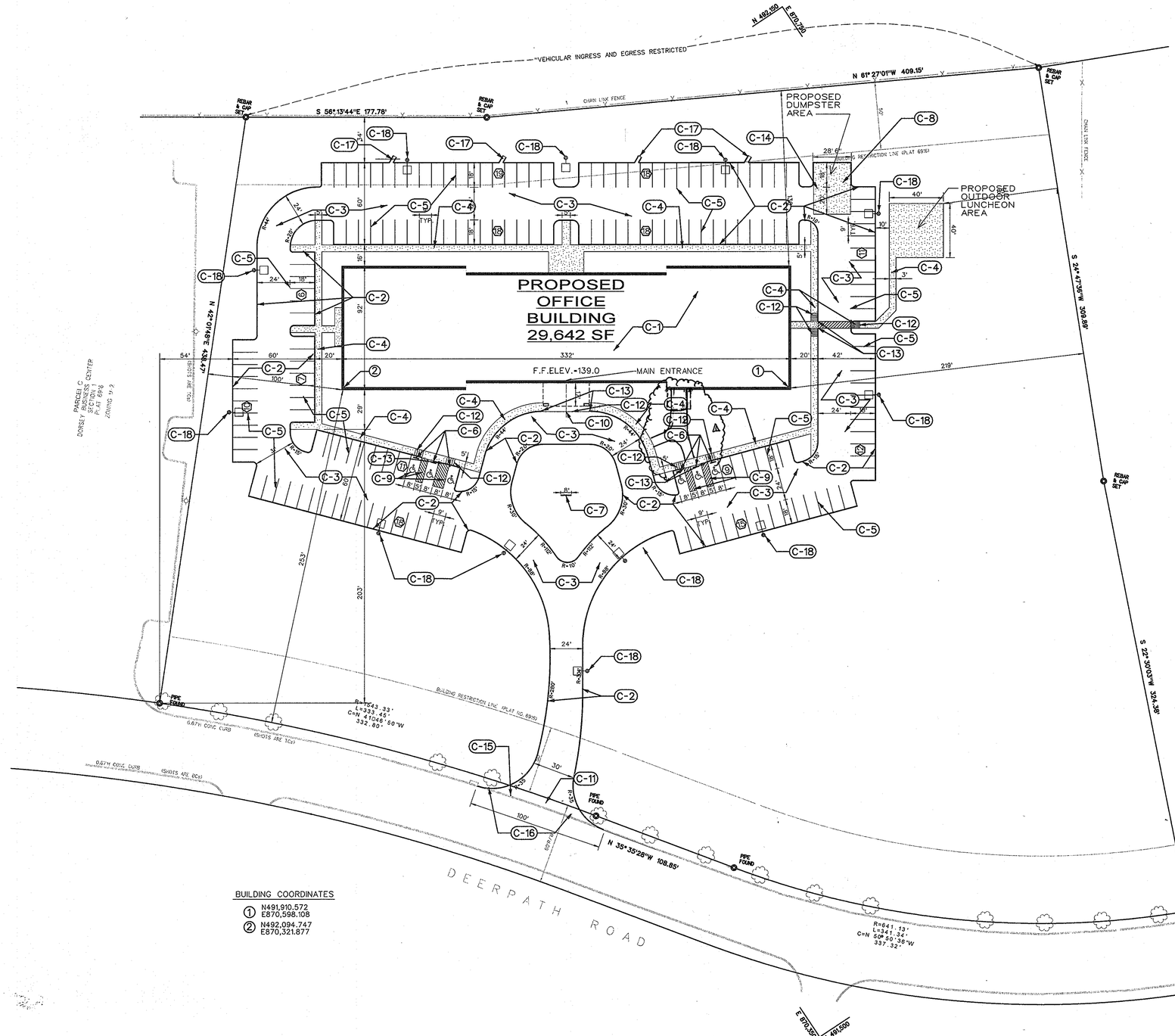
DORSEY BUSINESS PARK - PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
TITLE SHEET

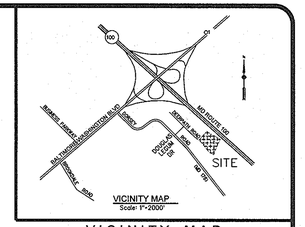
SHEET 1 OF 11
SCALE: 1" =
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\ti01deer.dgn
DATE: 04-Mar-98 09:53

SDP 98-104





VICINITY MAP
SCALE : 1" - 2,000'

BENCHMARK:
Howard County Geodetic Control No.: 37IA - Elev.: 195.76
Station is a ¾" Iron Rod with a 4" Stamped aluminum cap.
West side of Route 1, between edge of paving and iron fence,
247' N. of CL main entrance of Meadowridge Memorial Park.

SITE GENERAL NOTES:

1. ZONING : M-2
2. SETBACKS (COUNTY)
   BUILDING
   FROM EXTERNAL PUBLIC STREET RIGHT-OF-WAY 50'
   FROM INTERNAL PUBLIC STREET RIGHT-OF-WAY 50'
   FROM ANY RESIDENTIAL DISTRICT 150'
   PARKING
   FROM EXTERNAL PUBLIC STREET RIGHT-OF-WAY 30'
   FROM INTERNAL PUBLIC STREET RIGHT-OF-WAY 10'
3. SETBACKS (COVENANTS)
   BUILDING
   FRONT 50'
   SIDE 30'
   REAR 30'
4. HEIGHT LIMITATIONS (COUNTY) 50'
   ADDITIONAL HEIGHT - FOR EVERY 1' ADDED TO BUILDING HEIGHT ADD 2' TO SETBACK - (MAX. 100' HEIGHT)
5. PARKING (9' x 18' STALLS)
   REQUIRED - MEDICAL OFFICE USE - 5 SPACES PER 1000 SF OF BUILDING (29,642sf / 1000sf) x 5 SPACES - 148 SPACES
   PROVIDED 172 SPACES
6. HANDICAPPED PARKING
   REQUIRED - 151 TO 200 PARKING SPACES PROVIDED YIELDS 6 H.C. SPACES
   PROVIDED 6 SPACES
7. ORGANIC FILL IS PRESENT ON SITE. GEOTECHNICAL SERVICES WILL BE REQUIRED DURING CONSTRUCTION.
8. PRIVATE STORM DRAIN EASEMENT IS PRESENT ON SITE. THIS DRAINAGE WILL NEED TO BE ADDRESSED.
9. A REGIONAL STORM WATER MANAGEMENT POND WILL BE UTILIZED FOR THIS SITE.
10. FOREST CONSERVATION WILL BE ADDRESSED PER HOWARD COUNTY AND STATE REQUIREMENTS FOR LAND DISTURBANCES OVER 40,000 sf.
11. THIS PROJECT DOES NOT LIE WITHIN THE FLOODPLAIN AREA.
12. SITE LIGHTING TO BE PROVIDED BY OTHERS, SEE ARCHITECTURAL PLANS.
13. DUMPSTER ENCLOSURE BY OTHERS, SEE ARCHITECTURAL PLANS.
14. SDP 98-104, DORSEY BUSINESS CENTER, PARCEL 'E', CONTRACT NO. 14-1447-D, DORSEY BUSINESS CENTER, PHASE 1, ROAD CONTRACT F-86-151
15. CURB RADIUS ARE 5' UNLESS OTHERWISE NOTED.

Construction Notes:

C-1 CONSTRUCT 29,642 SQ.FT. BUILDING, BY OTHERS. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

C-2 INSTALL NEW CONCRETE CURB AND GUTTER PER DETAIL ON SHEET 9 OF 11.

C-3 INSTALL NEW BITUMINOUS CONCRETE PAVING PER DETAIL ON SHEET 9 OF 11.

C-4 INSTALL NEW CONCRETE WALK PER DETAIL ON SHEET 9 OF 11.

C-5 PROVIDE 4" WIDTH PAVEMENT MARKINGS AS INDICATED ON PLAN. USE TWO COATS OF ALKYD TYPE TRAFFIC LANE MARKING PAINT. USE WHITE UNLESS OTHERWISE DIRECTED.

C-6 INSTALL NEW HANDICAP PARKING SIGNS. PER DETAIL ON SHEET 9 OF 11.

C-7 INSTALL NEW 8'-0" LONG, FREE STANDING SIGN. REFER TO ARCHITECTURAL DRAWINGS FOR DETAILS.

C-8 INSTALL NEW TRASH ENCLOSURE. SEE ARCHITECTURAL DRAWINGS FOR DETAILS.

C-9 PROVIDE HANDICAP PARKING SPACE STRIPING AND SYMBOLS.

C-10 INSTALL DEPRESSED CURB.

C-11 EXISTING POLE TO BE RELOCATED, BY UTILITY COMPANY.

C-12 INSTALL HANDICAP RAMP. SLOPE SHALL NOT EXCEED 5%. SURFACE TEXTURE SHALL BE A HEAVY BROOM TRAVERSE TO SLOPE OF RAMP.

C-13 INSTALL NOSE DOWN CURB

C-14 INSTALL CONCRETE PAVEMENT PER DETAIL ON SHEET 9 OF 11.

C-15 EXISTING CURB TO BE REMOVED FOR PROPOSED ENTRANCE.

C-16 INSTALL COMMERCIAL ENTRANCE PER HOWARD COUNTY DETAIL R-610.

C-17 INSTALL CURB OPENINGS (SHA MD 460.02).

C-18 INSTALL SITE LIGHT, SEE ARCHITECTURAL PLANS, FOR TYPE & DETAIL.

⚠ REVISION BY CENTURY ENGINEERING 10710 GILROY ROAD HUNT VALLEY MD 21031 443 629 2400

SEAL FOR REV #1 ONLY

PROFESSIONAL ENGINEER NO. 10251 JOHN M. RANOCCHIA, SR. STATE OF MARYLAND 9-20-11

STATE OF MARYLAND TOWNSEND LOOKINGBILL PROFESSIONAL ENGINEER 14550

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer MARTIN J. STORCK Date 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service — Date 6/15/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 6/15/98 ⚠

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 6/22/98
Chief, Division of Land Development — Date 6/22/98
Director — Date 6/23/98

Rev./ Date	Description
9/16/11	NEW ENTRANCES CANOPY & WALKWAY PER CEI

Approved Howard County Health Department for Public Water and Sewerage Systems.

Health Officer — Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road
Subdivision Name: Dorsey Business Center	Section/Area
Parcel E	

Plat No.	Block No.	Zone	Tax/Zone Map 37/43	Elec. Dist.	Census Track
6910	6	M-2		1st	6012

Water Code 801 — Sewer Code 22800000: 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK - PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

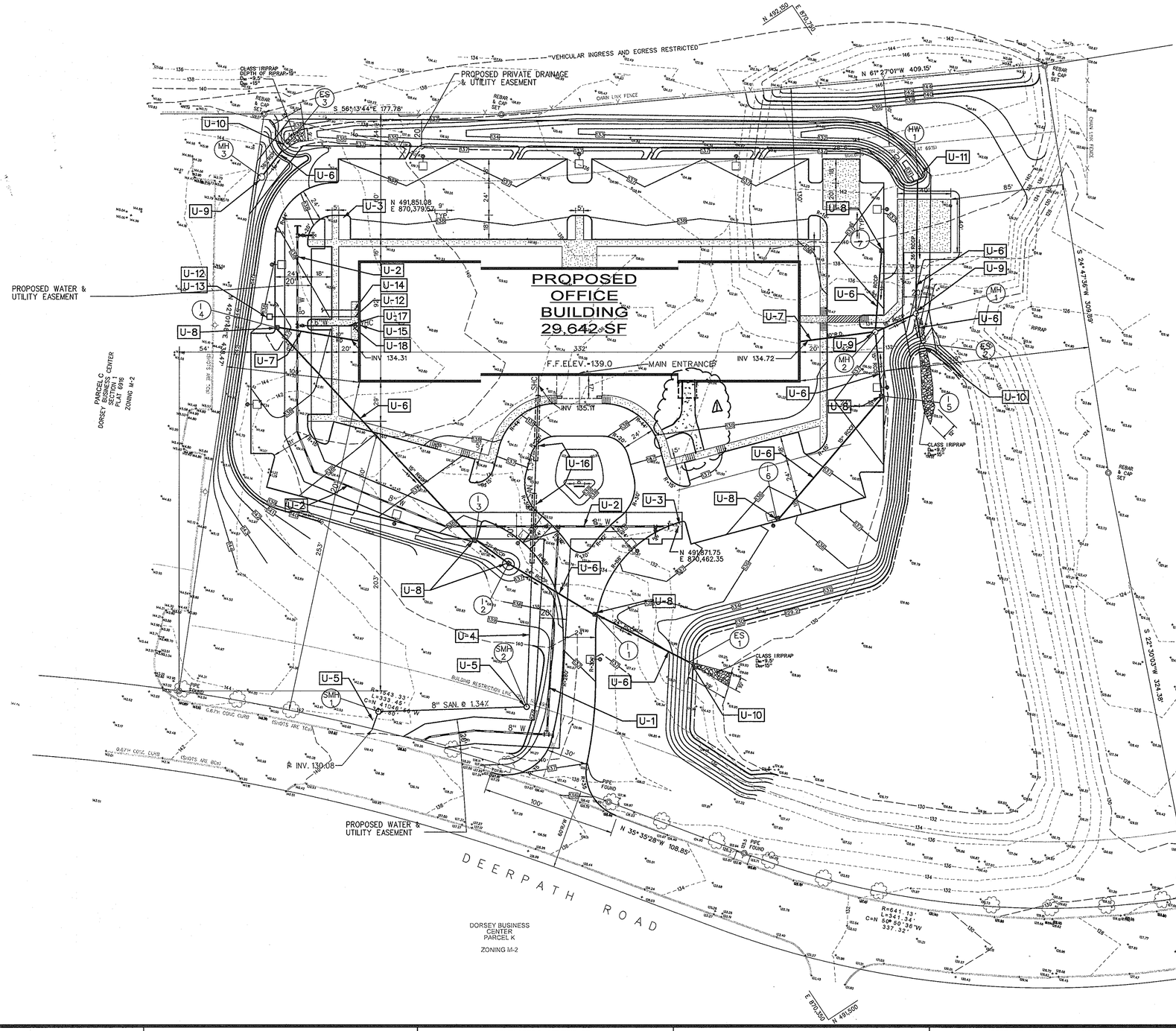
SITE PLAN

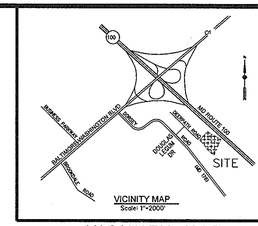
SHEET 2 OF 11
SCALE: 1" - 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\st01deer.dgn
DATE: 04-Mar-98 09:36

SDP 98-104





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Station is a ¾" Iron Rod with a 4" Stamped aluminum cap.
West side of Route 1, between edge of paving and iron fence,
247'N. of CL main entrance of Meadowridge Memorial Park.

Utility Notes:

U-1 INSTALL 8" WATER CONNECT AT EXISTING STUB AT PROPERTY LINE.
U-2 INSTALL 8" WATER.
U-3 INSTALL FIRE HYDRANT.
U-4 INSTALL 8" SANITARY LINE. CONNECT TO EXISTING STUB AT PROPERTY LINE
U-5 INSTALL SANITARY MANHOLE.
U-6 INSTALL STORM DRAIN LINE. SIZE AS SHOWN ON PLAN.
U-7 INSTALL 10" ROOF DRAIN.
U-8 INSTALL INLET.
U-9 INSTALL STORM DRAIN MANHOLE.
U-10 INSTALL END SECTION.
U-11 INSTALL HEADWALL.
U-12 INSTALL ELECTRIC SERVICE TO TRANSFORMER. COORDINATE WITH BGE.
U-13 INSTALL TRANSFORMER AND CONCRETE PAD.
U-14 GAS SERVICE BETWEEN BUILDING AND MAIN SHALL BE INSTALLED BY BGE. CONTRACTOR SHALL COORDINATE WITH BGE.
U-15 PROVIDE CONNECTION FOR WATER SERVICE. INTERIOR METER PRIVATE BY PLUMBER. REFER TO MECHANICAL PLANS FOR COORDINATION
U-16 PROVIDE CONCRETE ENCASEMENT PER HOWARD COUNTY STD DETAIL G-2.02 TO LIMITS SHOWN
U-17 INSTALL 6" LINE AND SERVICE VALVE.
U-18 INSTALL SIAMESE FIRE DEPARTMENT CONNECTION. REFER TO SHEET M-1 FOR LOCATION.

STRUCTURE SCHEDULE

STRUCTURE NO.	DESCRIPTION	INVERT (IN)	INVERT (OUT)	TOP ELEVATION	COORDINATES N	COORDINATES E
I-1	TYPE DOUBLE 'S' COMBINATION INLET SD4.34	129.72	129.52	135.60	491,851.08	870,373.06
I-2	TYPE 'D' PRECAST INLET SD4.39 ***	130.35	130.10	134.70*	491,918.94	870,340.50
I-3	TYPE DOUBLE 'S' COMBINATION INLET SD4.34 (DEPRESSED)	130.99	130.49	135.30	491,947.96	870,329.03
I-4	TYPE DOUBLE 'S' COMBINATION INLET SD4.34	133.52	133.10	136.60	491,162.84	870,294.56
I-5	TYPE 'S' COMBINATION INLET SD4.32	131.11	130.91	136.06	491,868.44	870,642.73
I-6	TYPE DOUBLE 'S' COMBINATION INLET SD4.34	N/A	131.70	135.20	491,835.15	870,527.17
I-7	TYPE DOUBLE 'S' COMBINATION INLET SD4.34	N/A	132.56	136.06	491,959.60	870,703.50
MH-1	5' DIA. PRECAST MANHOLE G5.13	WEST 130.27 NORTH 129.53	129.33	136.00	491,905.93	870,698.73
MH-2	4' DIA. PRECAST MANHOLE G5.12	NORTH 132.26 WEST 132.43 SOUTH 130.67	130.42	137.23	491,911.30	870,665.71
MH-3	5' DIA. PRECAST MANHOLE G5.13	137.22	137.02	+/- 144.40 (SET IN FIELD)	492,263.51	870,347.44
HW-1	TYPE 'E' HEADWALL SD 5.11	130.85	N/A	135.35	491,988.59	870,755.28
ES-1	END SECTION SD 5.51	N/A	129.14	N/A	491,782.43	870,412.32
ES-2	END SECTION SD 5.51	N/A	129.23	N/A	491,885.13	870,689.81
ES-3	END SECTION SD 5.51	N/A	136.87	N/A	492,271.76	870,371.98
SMH-1**	48" PRECAST MANHOLE	130.28	130.23	+/- 142.50 (SET IN FIELD)	491,880.30	870,197.58
SMH-2**	48" PRECAST MANHOLE	131.85	131.75	+/- 140.80 (SET IN FIELD)	491,821.67	870,291.99

* SIDE OPENING ELEVATION
** SANITARY SEWER MANHOLE
*** OPENINGS ON 4 SIDES

△ REVISION BY CENTURY ENGINEERING 10710 GILROY ROAD HUNT VALLEY MD 21031 443 539 2400

SEAL FOR REVISION #1 ONLY

PROFESSIONAL ENGINEER NO. 10951 JOHN F. RANOCCHIA JR. STATE OF MARYLAND 9-20-11

STATE OF MARYLAND DONOVAN LOOMIS JR. 12550 PROFESSIONAL ENGINEER

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Signature of Developer: MATTHEW J. STOICK Date 6/10/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service. Date 6/11/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD Date 6/11/98 △

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division Date 6/23/98
Chief, Division of Land Development Date 6/23/98
Director Date 6/23/98

Rev./ Date	Description
9/16/11	NEW ENTRANCE W/ CANOPY & WALKWAY EXCEPT

Approved Howard County Health Department for Public Water and Sewerage Systems.

Health Officer Date

Address Chart	
Lot/Parcel 289	Street Address
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Subdivision Name: Dorsey Business Center	Section/Area
Parcel: E	
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DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

UTILITY PLAN

SHEET 3 OF 11
SCALE: 1" - 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
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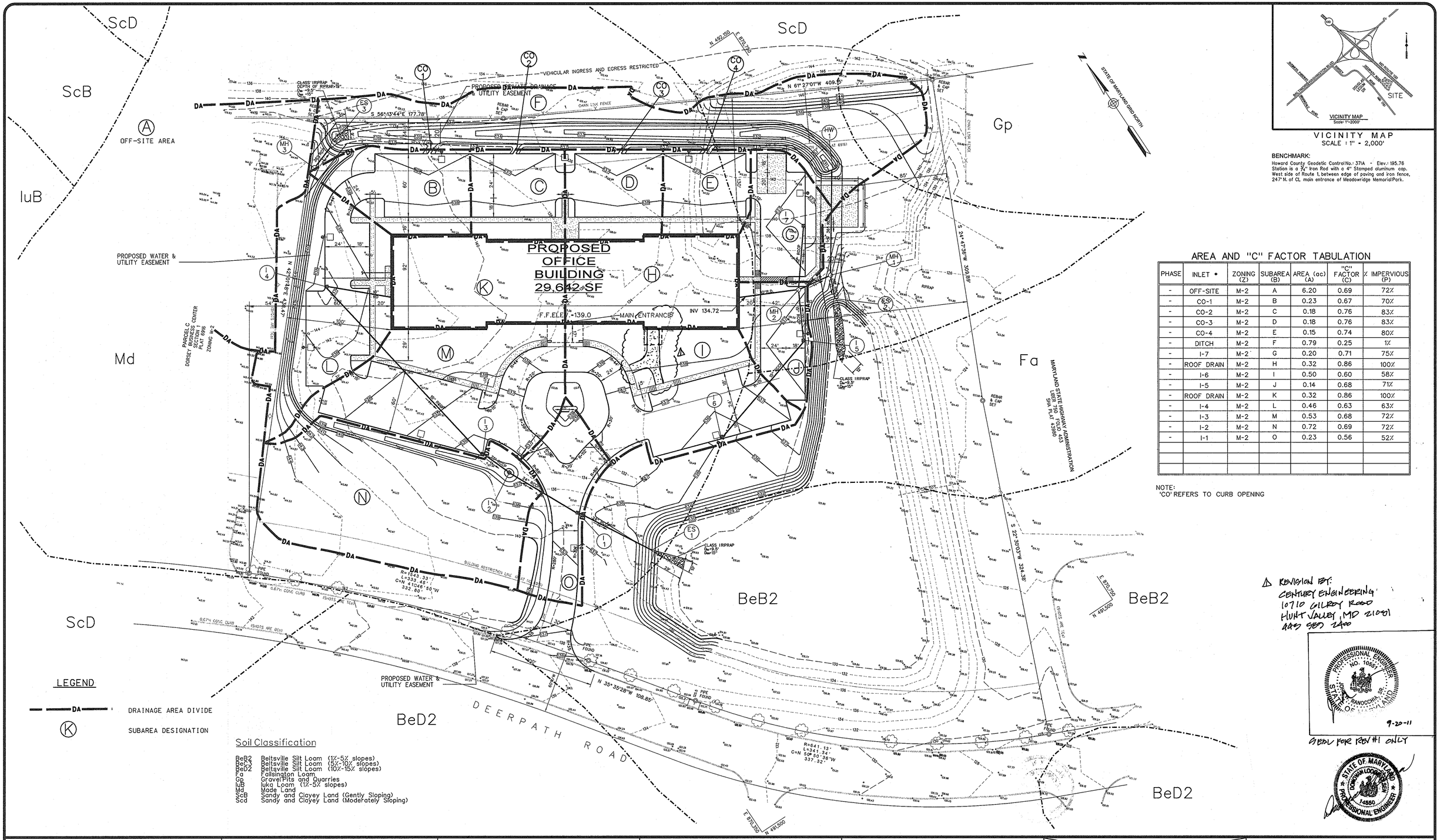

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AREA AND "C" FACTOR TABULATION

PHASE	INLET •	ZONING (Z)	SUBAREA (B)	AREA (ac) (A)	"C" FACTOR (C)	% IMPERVIOUS (P)
-	OFF-SITE	M-2	A	6.20	0.69	72%
-	CO-1	M-2	B	0.23	0.67	70%
-	CO-2	M-2	C	0.18	0.76	83%
-	CO-3	M-2	D	0.18	0.76	83%
-	CO-4	M-2	E	0.15	0.74	80%
-	DITCH	M-2	F	0.79	0.25	1%
-	I-7	M-2	G	0.20	0.71	75%
-	ROOF DRAIN	M-2	H	0.32	0.86	100%
-	I-6	M-2	I	0.50	0.60	58%
-	I-5	M-2	J	0.14	0.68	71%
-	ROOF DRAIN	M-2	K	0.32	0.86	100%
-	I-4	M-2	L	0.46	0.63	63%
-	I-3	M-2	M	0.53	0.68	72%
-	I-2	M-2	N	0.72	0.69	72%
-	I-1	M-2	O	0.23	0.56	52%

NOTE:
'CO' REFERS TO CURB OPENING

LEGEND

DA — DRAINAGE AREA DIVIDE

(K) SUBAREA DESIGNATION

Soil Classification

BeB2	Beltsville Silt Loam (1%-5% slopes)
BeC2	Beltsville Silt Loam (5%-10% slopes)
BeD2	Beltsville Silt Loam (10%-15% slopes)
Fa	Fallsington Loam
Gp	Gravel Pits and Quarries
IuB	Iuka Loam (1%-5% slopes)
Md	Made Land
ScB	Sandy and Clayey Land (Gently Sloping)
ScD	Sandy and Clayey Land (Moderately Sloping)

△ REVISION BY:
CENTURY ENGINEERING
10710 GILROY ROAD
HUNT VALLEY, MD 21031
(443) 987-2400

9-20-11
ORIG. FOR REV #1 ONLY

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: MARTIN J. STARCK Date 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service — Date 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 6/18/98

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 6/23/98
Chief, Division of Land Development — Date 6/23/98
Director — Date 6/23/98

Rev./ Date	Description
△ 9/16/11	NEW ENTRANCE W/ CANOPY, WALKWAY PER CEI

Approved: Howard County Health Department for Public Water and Sewerage Systems.

Health Officer — Date

Address Chart					
Lot/Parcel 289		Street Address			
Parcel E		6820 Deerpath Road			
Subdivision Name		Section/Area		Parcel	
Dorsey Business Center				E	
Plat No.	Block No.	Zone	Tax/Zone Map 37/43	Elec. Dist. 1st	Census Track 6012
6910	6	M-2			
Water Code		Sewer Code			
801		22800000; 2220000			

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

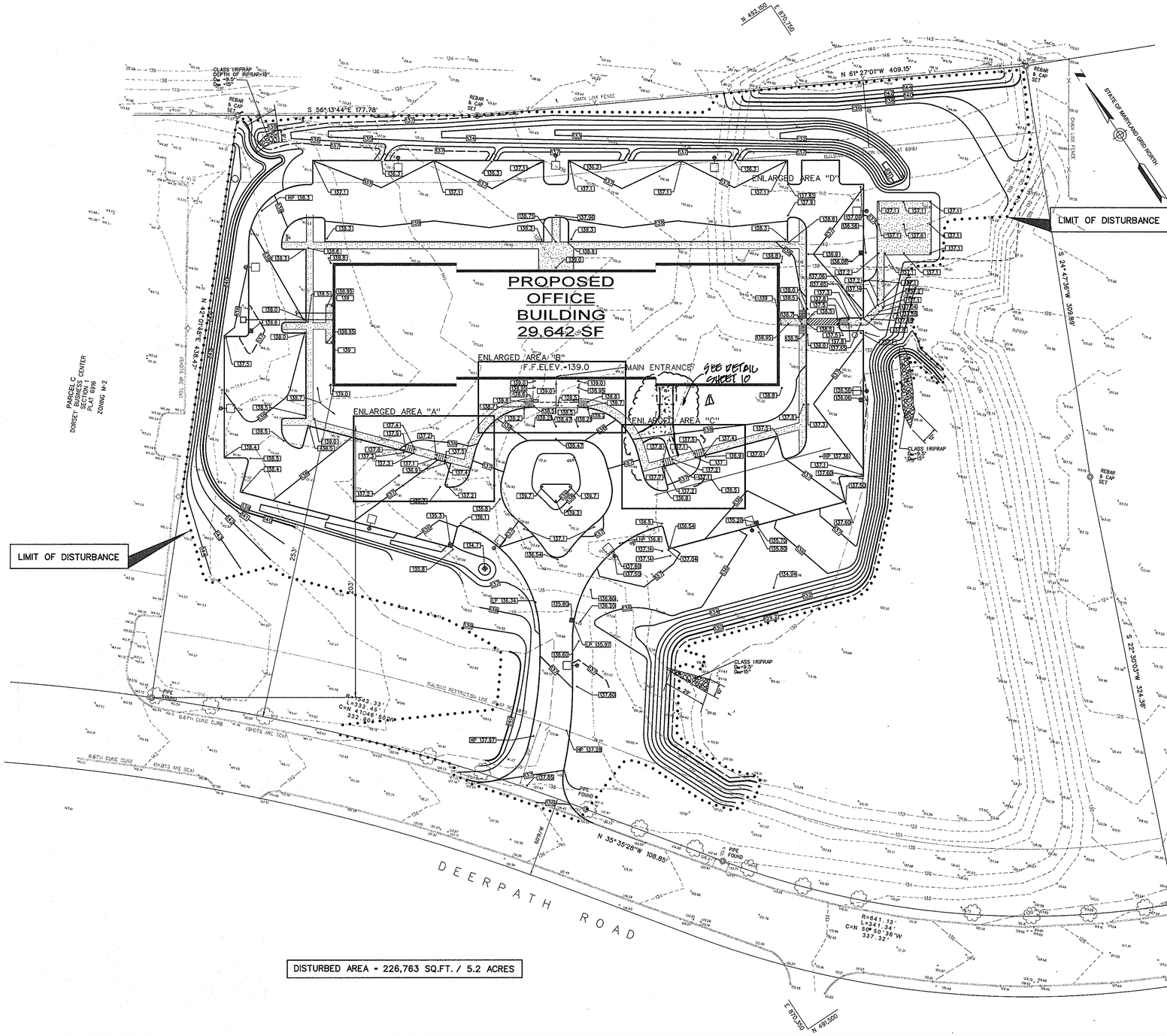
STORM DRAIN-DRAINAGE AREA MAP

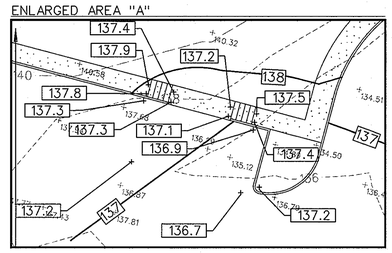
SHEET 3A OF 11
SCALE: 1" - 40'
JOB NO. 61-1811

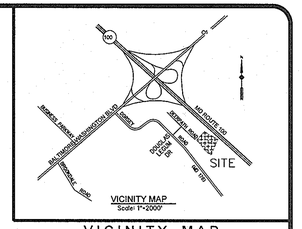
DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\sddadeer.dgn
DATE: 14-May-98 14:00

SDP 98-104

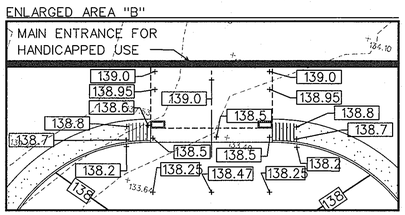




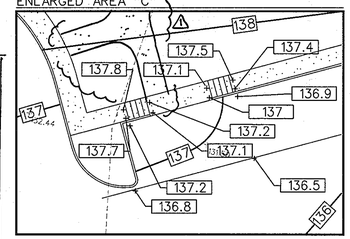


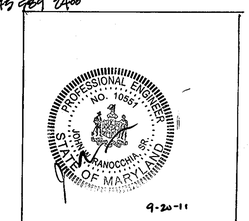
VICINITY MAP
SCALE : 1" - 2,000'

BENCHMARK:
Howard County Geodetic Control No.: 37IA - Elev.: 195.76
Station is a ¾" Iron Rod with a 4" Stamped aluminum cap.
West side of Route 1, between edge of paving and iron fence,
247' N. of CL main entrance of Meadowridge Memorial Park.

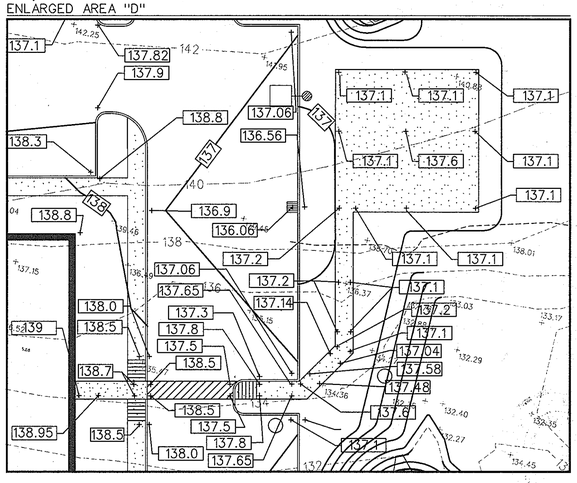


⚠ REVISION #1:
CENTURY ENGINEERING
10710 GILROY RD
HUNT VALLEY, MD 21031
445 6869 2400





SEAL FOR REVISION #1 ONLY



STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

ENGINEERS CERTIFICATE:
"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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."
Signature of Engineer — Date 6/25/98
Print name below signature: DONOVAN L. OLSEN

DEVELOPER'S CERTIFICATE:
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
Signature of Developer — Date 6/18/98
Print name below signature: MARTIN J. STECK

Review for HOWARD SCD and meets Technical Requirements.
USDA-Natural Resources Conservation Service — Date 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD — Date 6/18/98

APPROVED: DEPT. OF PLANNING AND ZONING
Chief, Development Engineering Division — Date 6/23/98
Chief, Division of Land Development — Date 6/23/98
Director — Date 6/23/98

Rev./ Date	Description
9/16/11	⚠ REV ENTRANCE & CANOPY & WALKWAY BY CEI

Approved Howard County Health Department for Public Water and Sewerage Systems.
Health Officer — Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name	Section/Area	Parcel
Dorsey Business Center	1st	E

Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6	M-2	Map 37/43	1st	6012

Water Code 801 — Sewer Code 22800000; 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK – PARCEL E

DEERPATH ROAD, HOWARD COUNTY, MD.

GRADING PLAN

SHEET 4 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\pc01deer.dgn
DATE: 04-Mar-98 10:20

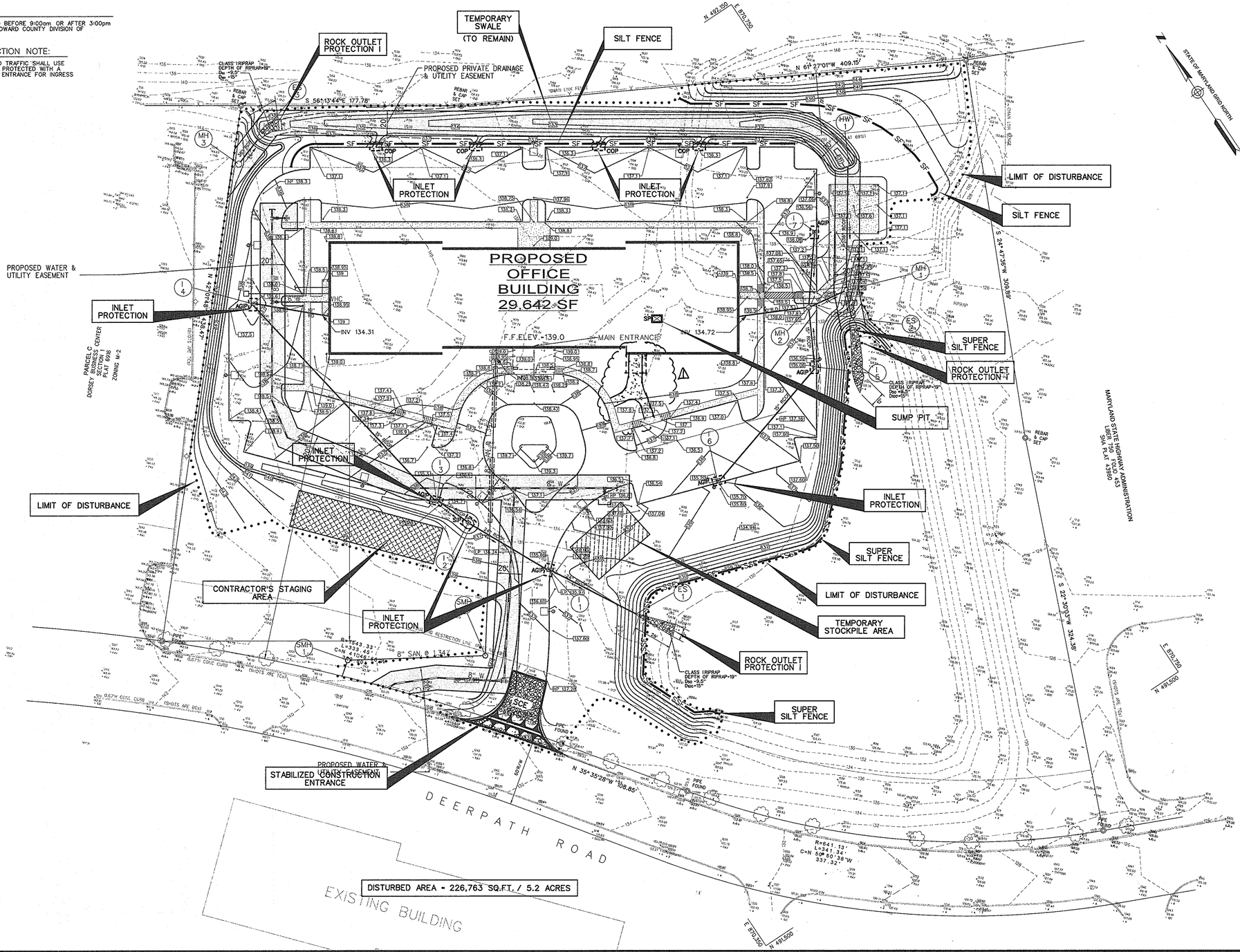
SDP 98-104

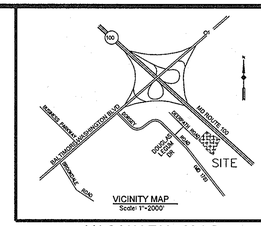
TRAFFIC NOTE:

ANY TRAVEL LANE CLOSED BEFORE 9:00am OR AFTER 3:00pm MUST BE APPROVED BY HOWARD COUNTY DIVISION OF TRAFFIC ENGINEERING.

ENTRANCE RESTRICTION NOTE:

ALL CONSTRCTION RELATED TRAFFIC SHALL USE ONLY THE SITE ENTRANCE PROTECTED WITH A STABILIZED CONSTRUCTION ENTRANCE FOR INGRESS AND EGRESS PURPOSES.





VICINITY MAP
SCALE : 1" = 2,000'

BENCHMARK:

Howard County Geodetic Control No.: 37IA - Elev.: 195.76
Station is a 3½" Iron Rod with a 4" Stamped duminum cap.
West side of Route 1, between edge of paving and iron fence, 247'N. of CL main entrance of Meadowridge Memorial Park.

Utility Notes:

A) CONTRACTOR SHOULD OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWNSLOPE) THE TRENCH.

B) PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.

C) ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

Inlet Protection Note:

THE CONTRACTOR IS REQUIRED TO INSTALL INLET POTECTION ON ALL STORM DRAIN INLETS WITH THE EXCEPTION OF THE FOLLOWING:

1) ANY INLET OUTFALLING DIRECTLY INTO A SEDIMENT TRAPPING DEVICE.
2) INLETS ON PRIVATE OR PUBLIC PAVED ROADWAYS OPEN TO THE PUBLIC.

ALL INLET PROTECTION WILL BE INSTALLED AS DIRECTED BY THE INSPECTOR IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL, PAGE C-18-1 (OR AS MAY BE AMENDED). THE REMOVAL OF ANY INLET PROTECTION DEVICES WILL REQUIRE APPROVAL FROM THE INSPECTOR.
*STORM DRAINS TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL.

Sequence of Operations

1. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS (410-992-2437) AT LEAST 48 HOURS PRIOR TO BEGINNG WORK.
2. CLEAR AND GRUB FOR STABILIZED CONSTRUCTION ENTRANCE,SILT FENCE, SUPER SILT FENCE, ROCK OUTLET PROTECTION I, TEMPORARY SWALE (AT REAR OF NEW BUILDING) AND PROPOSED PIPE FROM END SECTION ES-2 TO HEADWALL HW-1 AND PROPOSED PIPES FROM END SECTION ES-3 TO MANHOLE MH-3 (REMOVING A PORTION OF THE EXISTING 36" CMP). TEMPORARY SWALE SHALL BE IMMEDIATELY STABILIZED WITH EROSION CONTROL/SOIL STABILIZATION MATTING.
3. INSTALL THE AFOREMENTIONED SEDIMENT CONTROL MEASURES AND PROPOSED PIPES/STRUCTURES
4. NOTIFY HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS, UPON COMPLETION OF SAID INSTALLATION.
5. WITH THE APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, CLEAR AND GRUB REMAINDER OF SITE.
6. BEGIN GRADING OPERATIONS AND EXCAVATION FOR BUILDING FOUNDATION. INSTALL SUMP PIT TO DEWATER BUILDING SITE, PUMPING FILTERED WATER INTO EXISTING POND. REMOVE AND RESET PREVIOUSLY INSTALLED SUPER FENCE AS REQUIRED TO ACCOMODATE GRADING AROUND EGDE OF EXISTNG POND.
7. CONSTRUCT PAVEMENT SUBBASE AND INSTALL CURB & GUTTER, INSTALL CURB OPENINGS AT NORTH EDGE OF PARKING LOT AND CURB OPENING PROTECTION. EXCAVATE PROPOSED DITCH AT FRONT OF NEW BUILDING, STABILIZING IMMEDIATELY WITH SOIL STABILIZATION MATTING.
8. STABILIZE ANY REMAINING DISTURBED AREAS.
9. UPON STABILIZATION OF SITE AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ANY REMAINING SEDIMENT CONTROL MEASURES AND STABILIZE THOSE AREAS DISTURBED BY THIS PROCESS: WITH THE EXCEPTION OF THE PREVIOUSLY INSTALLED TEMPORARY SWALE, PROPOSED PIPES (INSTALLED DURING THE SEDIMENT CONTROL PHASE) AND ROCK OUTLET PROTECTIONS, WHICH SHALL REMAIN IN PLACE AS PERMANENT FEATURES.

⚠ REVISION BY: CENTURY ENGINEERING
10710 GILROY ROAD
HUNT VALLEY MD 21031
443 901 2240

Legend

- EXISTING CONTOUR
- PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- SF — SILT FENCE
- SSF — SUPER SILT FENCE
- LIMITS OF DISTURBANCE
- CONTRACTOR'S STAGING AREA
- SCE — STABILIZED CONSTRUCTION ENTRANCE
- TEMPORARY STOCKPILE AREA
- MOUNTABLE BERM
- SP — SUMP PIT
- A-2 — TEMPORARY SWALE
- PROP. RCCP — PROPOSED STORM DRAIN
- AGIP — AT GRADE INLET PROTECTION
- SIP — STANDARD INLET PROTECTION
- COP — CURB OPENING PROTECTION

JOHN W. RANOCCHIA, JR. No. 10552 PROFESSIONAL ENGINEER STATE OF MARYLAND
9-20-11
SEAL FOR REV. #1 ONLY

STATE OF MARYLAND DONALD LOOKINGBILL JR. No. 14550 PROFESSIONAL ENGINEER

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

ENGINEERS CERTIFICATE:

"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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date 6/15/98
Print name below signature
DONOVAN L. OLSEN

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Signature of Developer MARTIN J. STOLCK — Date 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service — Date 6/16/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 6/16/98 ⚠

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 6/22/98
Chief, Division of Land Development — Date 6/23/98
Director — Date 6/23/98

Rev./ Date	Description
9/16/11	REV. ENTRANCE W/ CANOPY & HEDGEROW PER CEC

Approved Howard County Health Department for Public Water and Sewerage Systemes.

Health Officer — Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name	Section/Area	Parcel
Dorsey Business Center		E

Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6	M-2	Map 37/43	1st	6015

Water Code	Sewer Code
801	22800000: 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM,MD. 21093

DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
EROSION & SEDIMENT CONTROL PLAN

SHEET 5 OF 11 — DATE: 17 MARCH 1998
SCALE: 1" = 40' — 1st ELECTION DISTRICT
JOB NO. 61-1811

FILE: h:\projects\1811\es01deer.dgn
DATE: 6-Mar-98 16:40

SDP 98-104

19.0 STANDARDS AND SPECIFICATIONS FOR LAND GRADING

Definition

Reshaping of the existing land surface in accordance with a plan as determined by engineering survey and layout.

Purpose

The purpose of a land grading specification is to provide for erosion control and vegetative establishment on those areas where the existing land surface is to be reshaped by grading according to plan.

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and cut and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the area(s) to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

1. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded areas.

2. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mowing steep slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.

3. Reverse benches shall be provided whenever the vertical (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

a. Benches shall be a minimum of six feet wide to provide for ease of maintenance.

b. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanies by appropriate design and computations.

c. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary swale.

4. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designed structure, except where:

a. The face of the slope is or shall be stabilized, and the face of all graded slopes shall be protect from surface runoff until they are stabilized.

b. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.

c. The face of the slope will be protected by special erosion control materials, to include, but not limited to: approved vegetative stabilization practices (see Section G), rip-rap or other approved stabilization methods.

5. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps cut at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carried to a suitable outlet.

6. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

7. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence or other related damages.

8. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

9. Stockpiles, borrow areas, and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specification.

10. All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

20.0 STANDARD AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

Definition

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

Purpose

Vegetative Stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and runoff to downstream areas, and improving wildlife habitat and visual resources.

Conditions Where Practice Applies

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary soil stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding of lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

Effects on Water Quality and Quantity

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration, evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.

Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.

Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION I - VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation

i. Install erosion and sediment control structures (either temporary or permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.

ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.

iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.

B. Soil Amendments (Fertilizer and Lime Specifications)

i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.

ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable State fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.

iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98-100% will pass through a #20 mesh sieve.

iv. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

C. Seedbed Preparation

i. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disk harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.

b. Apply fertilizer and lime as prescribed on the plans.

c. Incorporate lime and fertilizer into the top 3 - 5" of soil by disking or other suitable means.

ii. Permanent Seeding

a. Minimum soil conditions required for permanent vegetative establishment:

1. Soil pH shall be between 6.0 and 7.0.
2. Soluble salts shall be less than 500 parts per million (ppm).
3. The soil shall contain less than 40% clay but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedeza is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
4. Soil shall contain 1.5% minimum organic matter by weight.
5. Soil must contain sufficient pore space to permit adequate root penetration.
6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil

b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3 - 5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.

c. Apply soil amendments as per soil test or as included on the plans.

d. Mix soil amendments into the top 3 - 5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1 - 3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.

D. Seed Specifications

i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.

Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.

ii. Inoculant - The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used alter than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75-80$\frac{33}{64}$F can weaken bacteria and make the inoculant less effective.

E. Methods of Seeding

i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeder, or a cultipacker seeder.

a. If fertilizer is being applied at the time of seeding, the application rate amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous): 200/lbs/ac.; K20 (potassium): 200 lbs/ac.

b. Lime - Use only ground agricultural limestone (up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.

c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.

ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.

a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 25 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.

a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.

b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.

F. Mulch Specifications (In order of preference)

i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonably bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.

ii. Wood Cellulose Fiber Mulch (WCFM)

a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.

b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.

c. WCFM, including dye, shall contain no germination or growth inhibiting factors.

d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch materials shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.

e. WCFM material shall contain no elements or compounds at concentration levels that will be phyto-toxic.

f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm., diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.

Note: Only sterile straw mulch should be used in areas where one species of grass is desired.

G. Mulching Seeded Areas - Mulch shall be applied to all seeded areas immediately after seeding.

i. If grading is completed outside for the seeding season, mulch along should be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.

ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.

iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.

H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:

i. A mulch anchoring tools is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.

ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.

iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and on crests of banks. The remainder of area should appear uniform after binder application. Synthetic binders--such as Acrylic DLR (Agro-Tack), DCA-70, Petroset, Terra Tax II, Terra Tack AR, or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.

iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer s recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.

I. Incremental Stabilization - Cut Slopes

i. All cut slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.

ii. Construction sequence (Refer to Figure 3 below):

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.

b. Perform phase 1 excavation, dress, and stabilize.

c. Perform phase 2 excavation, dress, and stabilize. Overseed phase 1 areas as necessary.

d. Perform final phase excavation, dress, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun, the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

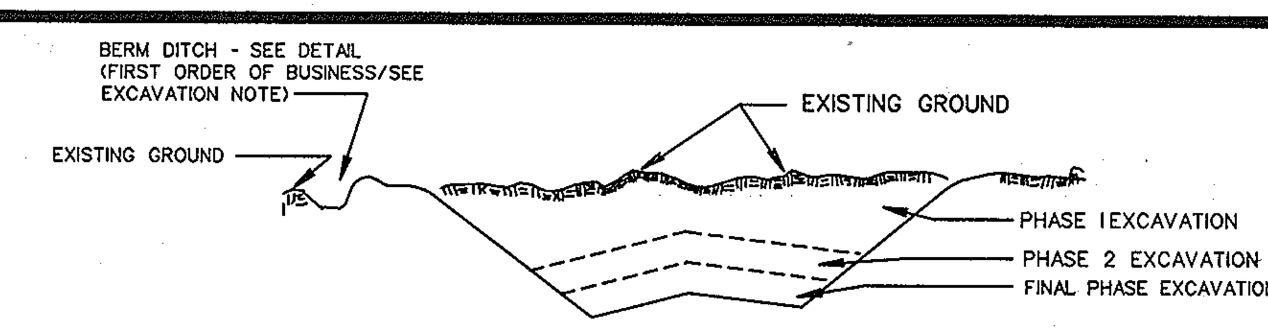


Figure 4 Incremental Stabilization - Cut

J. Incremental Stabilization of Embankments - Fill Slopes

i. Embankments shall be constructed in lifts as prescribed on the plans.

ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15' or when the grading operation ceases as prescribed in the plans.

iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.

iv. Construction Sequence: Refer to Figure 4 (below).

a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct Slope Silt Fence on low side of ill as shown in Figure 5, unless other methods shown on the plans address this area.

b. Place phase 1 embankment, dress, and stabilize.

c. Place phase 2 embankment, dress, and stabilize.

d. Place final phase embankment, dress, and stabilize. Overseed previously seeded areas as necessary.

Note: Once excavation has begun, the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

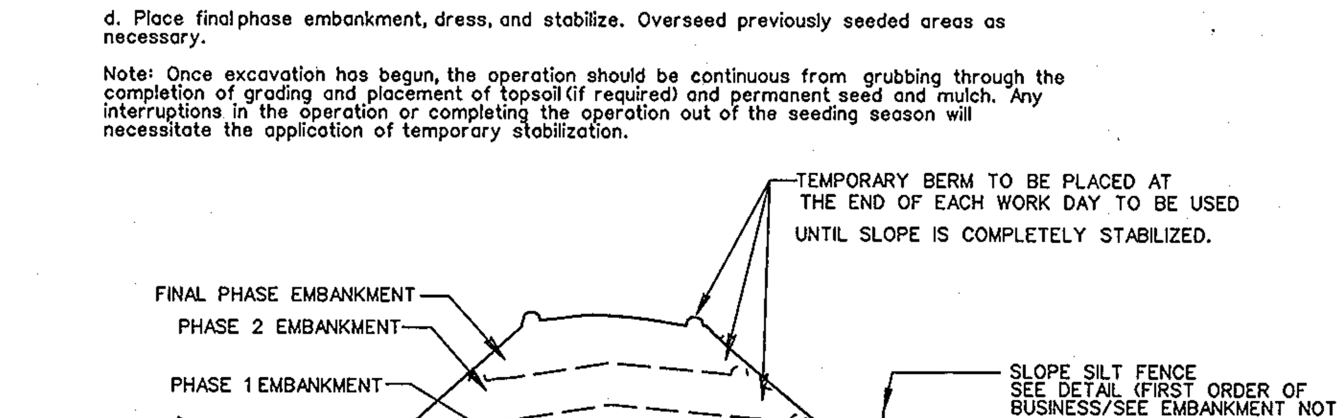


Figure 5 Incremental Stabilization - Fill

SECTION II - TEMPORARY SEEDING

Vegetation - annual grass or grain used to provide cover on disturbed areas for up to 12 months. For longer duration of vegetative cover, Permanent Seeding is required.

SECTION III - PERMANENT SEEDING

Seeding grass and legumes to establish ground cover for a minimum period of one year on disturbed areas generally receiving low maintenance.

SECTION IV - SOD

Sod - to provide quick cover on disturbed areas (2:1 grade or flatter)

A. General Specifications

i. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approved. Sod labels shall be made available to the job foreman and inspector.

ii. Sod shall be machine cut at a uniform soil thickness of 3/4", plus or minus 1/4", at the time of cutting. Measurement for thickness shall exclude top growth and thatch. Individual pieces of sod shall be cut to the suppliers width and length. Maximum allowable deviation from standard widths and lengths shall be 5 percent. Broken pads and torn or uneven ends will not be acceptable.

iii. Standard size sections of sod shall be strong enough to support their own weight and retain their size and shape when suspended vertically with a firm grasp on the upper 10 percent of the section.

iv. Sod shall not be harvested or transplanted when moisture content (excessively dry or wet) may adversely affect it survival.

v. Sod shall be harvested, delivered, and installed within a period of 36 hours. Sod not transplanted within this period shall be approved by an agronomist or soil scientist prior to its installation.

B. Sod Installation

i. During periods of excessively high temperature or in areas having dry subsoil, the subsoil shall be lightly irrigated immediately prior to laying the sod.

ii. The first row of sod shall be laid in a straight line with subsequent rows placed parallel to and tightly wedged against each other. Lateral joints shall be staggered to promote more uniform growth and strength. Ensure that sod is not stretched or overlapped and that all joints are butted tight in order to prevent voids which would cause air drying of the roots.

iii. Wherever possible, sod shall be laid with the long edges parallel to the contour and with staggering joints. Sod shall be rolled and tamped, pegged or otherwise secured to prevent slippage on slopes and to ensure solid contact between sod roots and the underlying soil surface.

iv. Sod shall be watered immediately following rolling or tamping until the underside of the new sod pad and soil surface below the sod are thoroughly wet. The operations of laying, tamping and irrigating for any piece of sod shall be completed within eight hours.

C. Sod Maintenance

i. In the absence of adequate rainfall, watering shall be performed daily or as often as necessary during the first week and in sufficient quantities to maintain moist soil to a depth of 4". Watering should be done during the heat of the day to prevent wilting.

ii. After the first week, sod watering is required as necessary to maintain adequate moisture content.

iii. The first mowing of sod should not be attempted until the sod is firmly rooted. No more than 1/3 of the grass leaf shall be removed by the initial cutting or subsequent cuttings. Grass height shall be maintained between 2" and 3" unless otherwise specified.

SECTION IV - TURFGRASS ESTABLISHMENT

Areas where turfgrass may be desired include lawns, parks, playgrounds, and commercial sites which will receive a medium to high level of maintenance. Areas to receive seed shall be tilled by disking or other approved methods to a depth of 2 to 4 inches, leveled and raked to prepare a proper seedbed. Stones and debris over 1-1/2 inches in diameter shall be removed. The resulting seedbed shall be in such condition that future mowing of grasses will pose no difficulty.

Note: Choose certified material. Certified material is the best guarantee of cultivar purity. The certification program of the Maryland Department of Agriculture, Turf and Seed Section, provide a reliable means of consumer protection and assure a pure genetic line.

A. Turfgrass Mixtures

i. Kentucky Bluegrass - Full sun mixture - For use in areas that receive intensive management. Irrigation required in the areas of Central Maryland and Eastern Shore. Recommended Certified Kentucky Bluegrass Cultivars Seeding Rate: 1.5 to 2.0 pounds/1000 square feet. A minimum of three bluegrass cultivars should be chosen ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

ii. Kentucky Bluegrass/Perennial Rye - Full sun mixture - For sue in full sun areas where rapid establishment is necessary and when turf will receive medium to intensive management. Certified Perennial Ryegrass Cultivars/Certified Kentucky Bluegrass Seeding Rate: 2 pounds mixture/1000 square feet. A minimum of three Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from 10% to 35% of the mixture by weight.

iii. Tall Fescue/Kentucky Bluegrass - Full sun mixture - For use in drought-prone areas and/or for areas receiving low to medium management in full sun to medium shade. Recommended mixture includes: certified Tall Fescue Cultivars 95 - 100%; certified Kentucky Bluegrass Cultivars 0 - 5%. Seeding rate: 5 to 8 pounds/1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue - Shad Mixture - For use in areas with shade in bluegrass lawns. For establishment in high quality, intensively managed turf area. Mixture includes: certified Kentucky Bluegrass Cultivars 30 - 40% and certified Fine Fescue 60 - 70%. Seeding rate: 1.5 to 3.0 pounds/1000 square feet. A minimum of three Kentucky Bluegrass Cultivars must be chosen, with each cultivar ranging from a minimum of 10% to a maximum of 35% of the mixture by weight.

Note Turfgrass varieties should be selected from those listed in the most current University of Maryland Publication, Agronomy Mimeo #77, Turfgrass Cultivar Recommendations for Maryland .

B. Ideal Times for Seeding

Western Maryland: March 15 to June 1 and August 1 to October 1 (Hardiness Zones - 5b, 6a)

Central Maryland: March 1 to May 15 and August 15 to October 15 ((Hardiness Zones - 6b)

Southern Maryland and Eastern Shore: March 1 to May 15 and August 15 to October 15 ((Hardiness Zones - 7a, 7b)

C. Irrigation

If soil moisture is deficient, supply new seedings with adequate water for plant growth (1/2" - 1" every 3 to 4 days depending on soil texture) until they are firmly established. This is especially true when seedings are made late in the planting season in abnormally dry or hot seasons or on adverse sites.

D. Repairs and Maintenance

Inspect all seeded areas for failures and make necessary repairs, replacements, and reseedings within the planting season.

i. Once the vegetation is established, the site shall have 95% groundcover to be considered adequately stabilized.

ii. If the stand provides less than 40% ground coverage, re-establish following original lime, fertilizer, seedbed preparation and seeding recommendations.

iii. If the stand provides between 40% and 94% ground coverage, overseeding and fertilizing using half of the rates original applied may be necessary.

iv. Maintenance fertilizer rates for permanent seedings are shown in Table 24. For lawns and other medium to high maintenance turfgrass areas, refer to the University of Maryland publication, Lawn Care in Maryland, Bulletin No. 171.

21.0 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 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 Experiment Station.

II. Topsoil Specifications - Soil to be used as topsoil must meet the following:

i. 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 1½" in diameter.

ii. Topsoil must be free of plants or plant parts such as bermuda grass, quackgrass, Johnsongrass, nutsedge, poison ivy, thistle, or others as specified.

iii. 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 distributed uniformly over the designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites having disturbed areas under 5 acres:

i. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

III. For sites having disturbed areas over 5 acres:

i. On soil meeting Topsoil specifications, obtain test results dictating fertilized and lime amendments required to bring the soil into compliance with the following:

a. 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.

b. Organic content of topsoil shall be not less than 1.5 percent by weight.

c. Topsoil having soluble salt content greater than 500 parts per million shall not be used.

d. 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 has 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 authority, may be used in lieu of natural topsoil.

ii. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

i. 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.

ii. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

iii. 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.

iv. 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 may otherwise be detrimental to proper grading and seedbed preparation.

VI. Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:

i. Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribe amendments and for sites having disturbed areas under 5 acres shall conform to the following requirements:

a. Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.

b. Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a Ph of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.

c. Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.

iv. Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guideline Specifications, Soil Preparation and Sodding. MD-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

Table 25–Permanent Seeding for Low Maintenance Areas

	MIX	SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE)	PLANTING LBS/AC.	PLANTING LBS/1000 SQ.FT.	SITE CONDITIONS	USDA HARDINESS ZONES	3/1-5/15	3/15-6/1	5/16-8/14	6/2-7/31	8/1-10/1	8/15-10/1	8/15-10/15	
SECOND CHOICE	1	TALL FESCUE (75%), CANADA BLUEGRASS (10%), KENTUCKY BLUEGRASS (10%), REDTOP (5%)	150	3.4	MOIST TO DRY	5b		X			X			A
						6a		X			X			
						6b	X					X		
						7a	X						X	
						7b	X						X	
FIRST CHOICE	3	TALL FESCUE (85%), PERENNIAL RYEGRASS (10%), KENTUCKY BLUEGRASS (5%)	125 15 10	2.9 .34 .23	MOIST TO DRY	5b		X			X			C
						6a		X			X			
						6b	X					X		
						7a	X						X	
						7b	X						X	
THIRD CHOICE	4	RED FESCUE OR CHEWINGS FESCUE (80%) PERENNIAL RYEGRASS (20%)	60 60 15	.92 .92 .34	MOIST TO DRY	5b		X			X			D
						6a		X			X			
						6b	X					X		

A - USED BY SHA ON SLOPED AREAS. ADD A LEGUME FOR SLOPES > 3:1.
C - POPULAR MIX - PRODUCES PERMANENT GROUNDCOVER QUICKLY. BLUEGRASS THICKENS STAND.
D - BEST USE ON SHADY SLOPES NOT ON POORLY DRAINED CLAYS.

NOTE: PROJECT SITE IS LOCATED IN HARDINESS ZONE 6b.

Table 26–Temporary Seeding Rates, Depths, and Dates

SPECIES	MINIMUM SEEDING RATES[36] PER ACRE	MINIMUM SEEDING RATES[36] LBS/1000 SQ.FT.	PLANTING DEPTH INCHES	7a and 7b 2/1-4/30	7a and 7b 5/1-8/14	7a and 7b 8/15-11/30	6b 3/1-4/30	6b 5/1-8/14	6b 8/15-11/15	6a and 5b 3/15-5/31	6a and 5b 6/1-7/31	6a and 5b 8/1-10/31
CHOOSE ONE:												
BARLEY	2.5 BU.(122lbs)	2.80	1-2	X	-	BY 10/15	X	-	BY 10/15	X	-	BY 10/1
OATS	3 BU.(96 lbs)	2.21	1-2	X	-	-	X	-	-	X	-	-
RYE [39]	2.5 BU. (140lbs)	3.22	1-2	X	-	X	X	-	X	X	-	X
BARLEY OR RYE PLUS FOXTAIL MILLET[40]	150 lbs	3.45	1	X X	X X	10/15 X	X X	X X	10/15 X	X X	X X	10/1 X
WEEPING LOVEGRASS[41]	4 lbs	.09	1/4-1/2	-	X	-	-	X	-	-	X	-
ANNUAL RYEGRASS	50 lbs	1.15	1/4-1/2	X	-	11/1	X	-	11/1	X	-	8/15
MILLET[42]	50 lbs	1.15	1/2	-	X	-	-	X	-	-	X	-

HARDINESS ZONES[37] AND SEEDING DATES[38]

36 APPLICABLE ON SLOPES OF 3:1 OR FLATTER
37 REFER TO FIGURE A - ADOPTED FROM USDA, ARS MISCELLANEOUS PUBLICATION #1475, JANUARY 1990
38 BETWEEN FALL AND SPRING SEEDING DATES, USE MULCH ONLY IF GROUND IS FROZED AND RESEED WHEN THAWED
39 MAY BE USED AS A NURSE CROP FOR LATE FALL / EARLY WINTER PERMANENT SEEDINGS, ADD 56 LBS./AC. TO THE PERMANENT SEEDING MIXTURE
40 MARYLAND STATE HIGHWAY ADMINISTRATION TEMPORARY SEED MIX
41 MAY BE USED AS A NURSE CROP FOR MID-SUMMER PERMANENT SEEDINGS. ADD 2 LBS./AC. TO PERMANENT SEED MIX
42 MAY BE USED AS A NURSE CROP FOR MID-SUMMER PERMANENT SEEDINGS. ADD 10 LBS./AC. TO THE PERMANENT SEEDING MIX.

NOTE: PROJECT SITE IS LOCATED IN HARDINESS ZONE 6b.

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 1994 MARYLAND STANDARDS AND SPECIFICATIONS 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 steeper 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 7 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 SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch along shall 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 - 8.35 Acres
Area Disturbed - 5.21 Acres
Area to be roofed or paved - 2.55 Acres
Area to be vegetatively stabilized - 2.66 Acres
Total Cut - 13,300 Cu.Yds.
Total Fill - 13,300 Cu.Yds.
Offsite waste/borrow area location: N/A

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 lengths or that which shall be back-filled and stabilized within one working day, whichever is shorter.

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 or 218 gal. per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gal. per acre (8 gal/1000 sq.ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

STATE OF MARYLAND DONOVAN LOOMIS OLSEN 14550 PROFESSIONAL ENGINEER

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

ENGINEERS CERTIFICATE:

"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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Signature of Engineer — Date 6/15/98
Print name below signature: DONOVAN L. OLSEN

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — Date 6/10/98
Print name below signature: MARTIN J. STORCK

Review for HOWARD SCD and meets Technical Requirements.
USDA-Natural Resources Conservation Service — Date 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD — Date 6/18/98

APPROVED: DEPT. OF PLANNING AND ZONING
Chief, Development Engineering Division — Date 6/23/98
Chief, Division of Land Development — Date 6/23/98
Director — Date 6/23/98

Rev./ Date	Descrition

Approved : Howard County Health Department for Public Water and Sewerage Systemes.
Health Officer — Date

Address Chart

Lot/Parcel 289			Street Address		
Parcel E			6820 Deerpath Road		
Subdivision Name Dorsey Business Center			Section/Area		Parcel E
Plat No. 6916	Block No. 6	Zone M-2	Tax/Zone Map 37/43	Elec. Dist. 1st	Census Track 6012
Water Code 801			Sewer Code 22800000; 2220000		

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

EROSION & SEDIMENT CONTROL NOTES

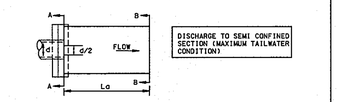
SHEET 6 OF 11 — DATE: 17 MARCH 1998
SCALE: 1" = 40' — 1st ELECTION DISTRICT
JOB NO. 61-1811

FILE: h:\projects\1811\ds01deer.dgn
DATE: 9-Mar-98 08:02

SDP 98–104

Rock Outlet Protection i

NOT TO SCALE



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.

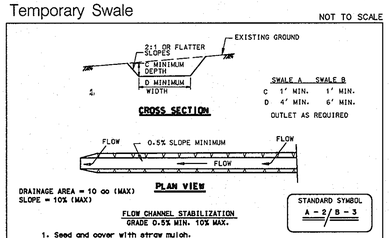
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile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

Temporary Swale

NOT TO SCALE



1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4"-1" stone or recycled concrete equivalent pressed into soil in a minimum 7" layer.

Construction Specifications

1. All temporary swales shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the swale.

5. The swale shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

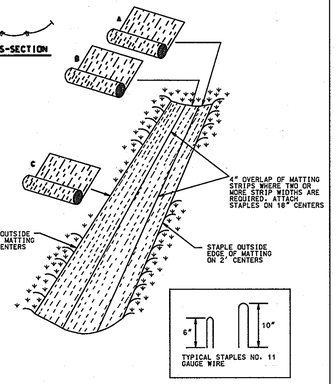
6. Fill, if necessary, shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the swale.

8. Inspection and maintenance must be provided periodically and after each rain event.

Erosion Control Matting

NOT TO SCALE



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.

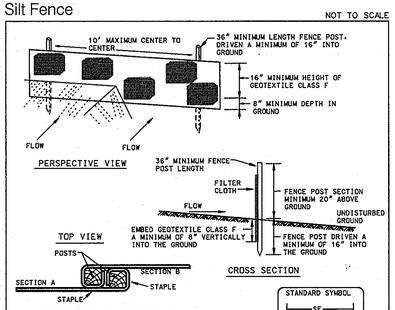
5. Where one roll of matting ends and another begins, the end of the top strip shall overlap the upper end of the lower strip by 4", shiplap fashion. Reinforce the overlap with a double row of staples spaced 6" apart in a staggered pattern on either side.

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 than the area effected by the flow must be keyed-in.

Silt Fence

NOT TO SCALE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 1½" x 1½" square (minimum) cut, or 1¾" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

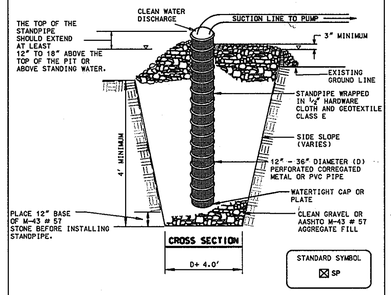
Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

Sump Pit

NOT TO SCALE



Construction Specifications

1. Pit dimensions are variable, with the minimum diameter being 2 times the standpipe diameter.

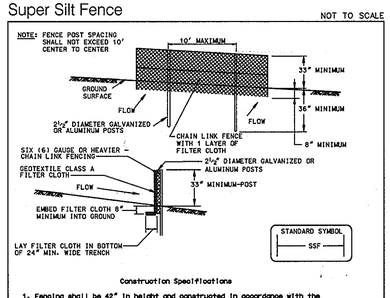
2. The standpipe should be constructed by perforating a 12" to 24" diameter corrugated or PVC pipe. Then wrapping with ½" hardware cloth and Geotextile Class E. The perforations shall be ½" x 6" slits or 1" diameter holes.

3. A base of filter material consisting of clean gravel or #57 stone should be placed in the pit to a depth of 12". After installing the standpipe, the pit surrounding the standpipe should then be backfilled with the same filter material.

4. The standpipe should extend 12" to 18" above the lip of the pit or riser crest elevation (basin dewatering only) and the filter material should extend 3" minimum above the anticipated standing water elevation.

Super Silt Fence

NOT TO SCALE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42 inch fabric and 6 foot length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.

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

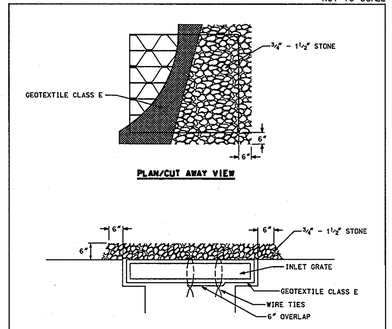
5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. 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.

At Grade Inlet Protection

NOT TO SCALE



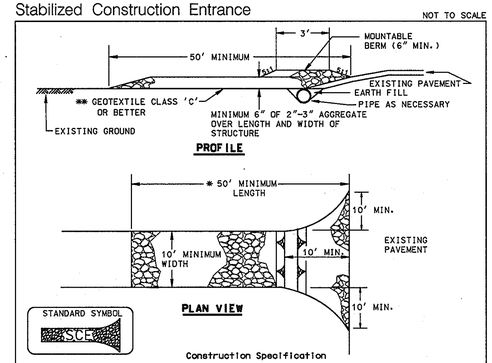
Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.

2. Place ¾" to 1½" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

Stabilized Construction Entrance

NOT TO SCALE



Construction Specification

1. 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.

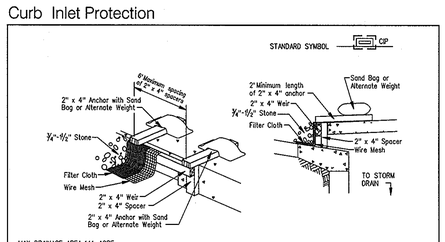
3. Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.

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 entrance.

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.

Curb Inlet Protection



CONSTRUCTION SPECIFICATIONS

1. ATTACH A CONTINUOUS PIECE OF WIRE MESH (30" MIN. WIDTH BY THROAT LENGTH PLUS 4') TO THE 2" X 4" WEIR (MEASURING THROAT LENGTH PLUS 2') AS SHOWN ON THE STANDARD DRAWING.

2. PLACE A CONTINUOUS PIECE OF GEOTEXTILE CLASS E THE SAME DIMENSIONS AS THE WIRE MESH OVER THE WIRE MESH AND SECURELY ATTACH IT TO THE 2" X 4" WEIR.

3. SECURELY NAIL THE 2" X 4" WEIR TO A 9" LONG VERTICAL SPACER TO BE LOCATED BETWEEN THE WEIR AND THE INLET FACE (MAX. 4' APART).

4. PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL (MINIMUM 2' LENGTHS OF 2" X 4" TO THE TOP OF THE WEIR AT SPACER LOCATIONS). THESE 2" X 4" ANCHORS SHALL EXTEND ACROSS THE INLET TOP AND BE HELD IN PLACE BY SANDBAGS OR ALTERNATE WEIGHT.

5. THE ASSEMBLY SHALL BE PLACED SO THAT THE END SPACERS ARE A MINIMUM 1' BEYOND BOTH ENDS OF THE THROAT OPENING.

6. FORM THEV½" x½" WIRE MESH AND THE GEOTEXTILE FABRIC TO THE CONCRETE GUTTER AND AGAINST THE FACE OF CURB ON BOTH SIDES OF THE INLET. PLACE CLEAN ¾"x1½" STONE OVER THE WIRE MESH AND GEOTEXTILE IN SUCH A MANNER AS TO PREVENT WATER FROM ENTERING THE INLET UNDER OR AROUND THE GEOTEXTILE.

7. THIS TYPE OF PROTECTION MUST BE INSPECTED FREQUENTLY AND THE FILTER CLOTH AND STONE REPLACED WHEN CLOGGED WITH SEDIMENT.

8. ASSURE THAT STORM FLOW DOES NOT BYPASS INLET BY INSTALLING A TEMPORARY EARTH OR ASPHALT DIKE GO DIRECT FLOW TO THE INLET.

Standard Inlet Protection

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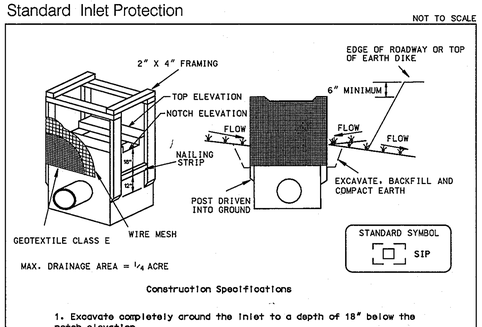


Construction Specifications

1. Excavate completely around the inlet to a depth of 18" below the notch elevation.

2. Drive the 2" x 4" construction grade lumber posts 1' into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.

3. Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.

4. Stretch the Geotextile Class E tightly over the wire mesh with the geotxtile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.

5. Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sides.

6. If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.

7. The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

ENGINEERS CERTIFICATE:

"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 and that it was prepared in accordance with the requirements of the Howard Soil Conservation District."

Donnivan L. Osteen — 6/15/98
Signature of Engineer — Date
Print name below signature
DONNIVAN L. OSTEEN

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Martin J Stack — 6/18/98
Signature of Developer — Date
Print name below signature
MARTIN J STACK

Review for HOWARD SCD and meets Technical Requirements.

Cheryl Simmons — 6/17/98
USDA-Natural Resources Conservation Service — Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

John L. Robertson — 6/18/98
Howard SCD — Date

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — 6/23/98 Date
Chief, Division of Land Development — 6/23/98 Date
Director — 6/23/98 Date

Rev./ Date	Description

Approved Howard County Health Department for Public Water and Sewerage Systemes.

Health Officer — Date

Address Chart					
Lot/Parcel 289		Street Address			
Parcel E		6820 Deerpath Road			
Subdivision Name Dorsey Business Center			Section/Area		Parcel E
Plat No. 6910	Block No. 6	Zone M-2	Tax/Zone Map 37/43	Elec. Dist. 1st	Census Track 6012
Water Code 801			Sewer Code 22800000: 2220000		

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK - PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
EROSION AND SEDIMENT DETAILS

SHEET 7 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\ds02deer.dgn
DATE: 9-Mar-98 08:05

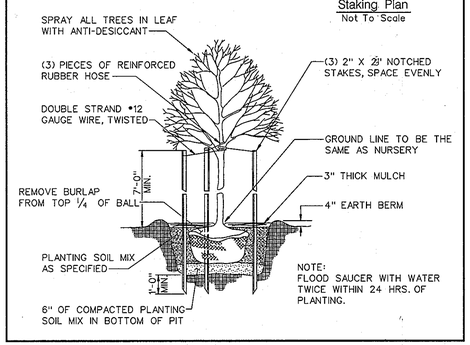
SDP 98-104

PLANT LIST

KEY	QTY.	BOTANICAL/COMMON NAME	SIZ	ROOT	REMARKS
MAJOR TREES					
QP	16	QUERCUS PALUSTRIS 'SOVEREIGN'/ PIN OAK	2½" CAL	B+B	BRANCHING 7' ABOVE FINISHED GRADE
AR	12	ACER RUBRUM 'FRANKSRED'/ RED SUNSET MAPLE	2½" CAL	B+B	"
ZS	4	ZELKOVA SERRATA 'GREEN VASE'/ GREEN VASE ZELKOVA	2½" CAL	B+B	"
SJ	3	SOPHORA JAPONICA 'REGENT'/ PAGODA TREE	2½" CAL.	B+B	"
EVERGREEN TREES					
PA	7	PICEA ABIES / NORWAY SPRUCE	8'	B+B	-
PS	34	PINUS STROBUS / WHITE PINE	8'	B+B	-
MINOR TREES					
CC	8	CERCIS CANADENSIS / EASTERN REDBUD	1½" CAL.	B+B	-
AP	3	PYRUS CALLERYANA 'ARISTOCRAT'/ ARISTOCRAT PEAR	"	B+B	
KP	13	KOELRUETERIA PANICULATA/ GOLDENRAIN TREE	"	B+B	
CF	2	CORNUS KOUSA CHINENSIS/KOUSA DOGWOOD	"	B+B	
SHRUBS					
LP	11	LAGERSTROEMIA 'TUSKEGEE'/ TUSKEGEE CRAPEMYRTLE (BRIGHT PINK)	24-30" HT.	B+B/CONT.	-
MS	48	MISCANTHUS 'PURPURASCENS'/ MAIDEN GRASS	1 GAL.	CONT.	-
CL	64	PRUNUS LAUROCERASUS 'OTTO LUYKEN' OTTO LUYKEN CHERRY LAUREL	18-24" HT.	B+B/ CONT.	-
VD	57	VIBURNUM XPRAGENSE / PRAGUE VIBURNUN	24-36" HT.	B+B/ CONT.	-
HH	90	ILEX CRENATA 'HELLERI'/ HELLERI HOLLY	15-18" HT.	"	
GROUNDCOVERS					
LM	± 2000	LIRIOPE MUSCARI 'BIG BLUE' / LILYTURF	2"	P.P	8" O.C.
PERENNIALS					
CY	170	COREOPSIS VERTICILLATA 'ZAGREB'/ ZAGREB COREOPSIS	1 GAL.	CONT.	2' O.C.
EEW	350	ECHINACEA 'WHITE SWAN' / CONEFLOWER	1 GAL.	CONT.	2' O.C.
SD	80	SEDUM SPECTABLE 'BRILLIANT'/ BRILLIANT SEDUM	"	"	"
BULBS					
DD	∓ 260	NARCISSUS 'ALBA' / DAFFODILS	-	BULB	RANDOM

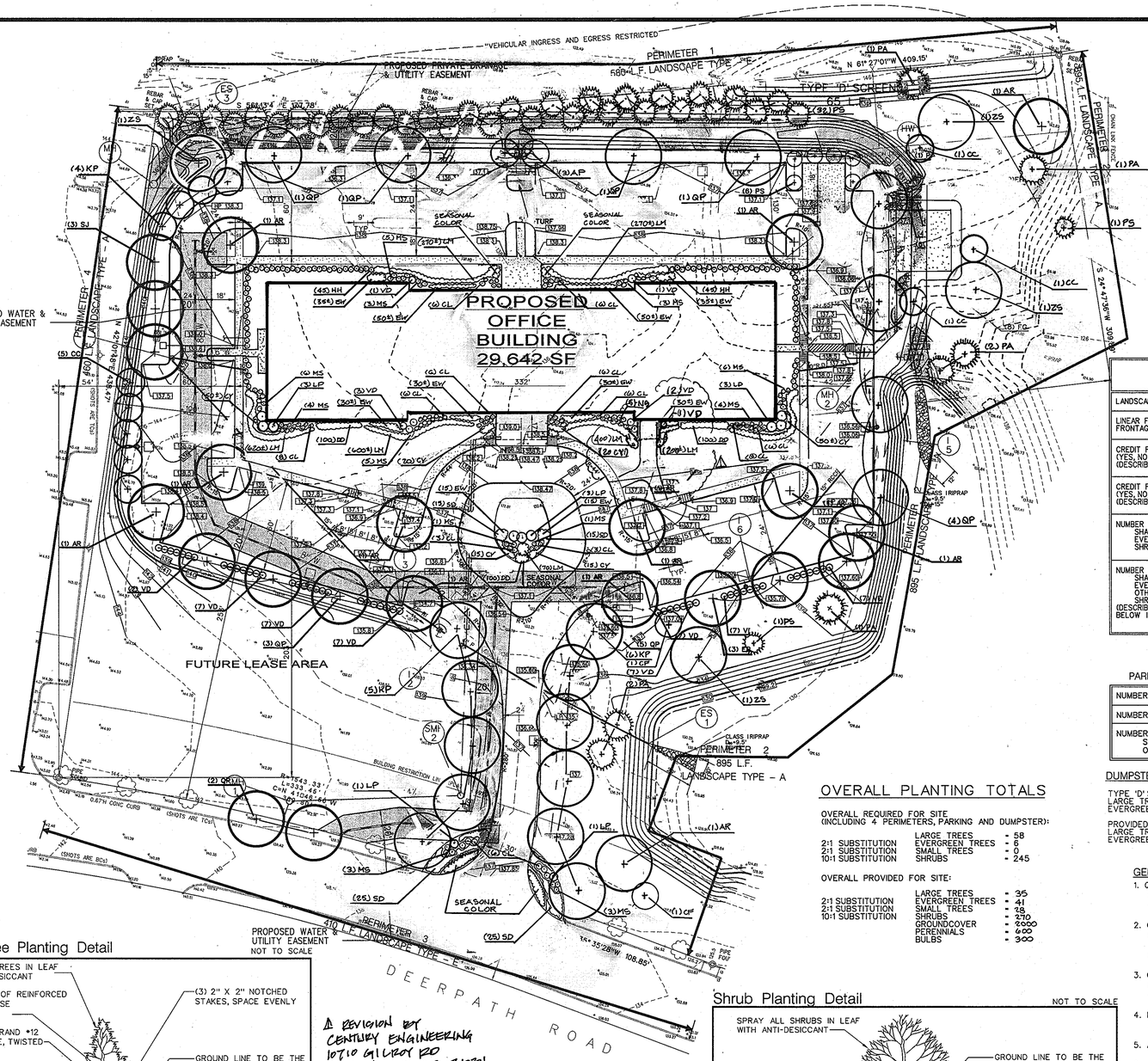
Tree Planting Detail

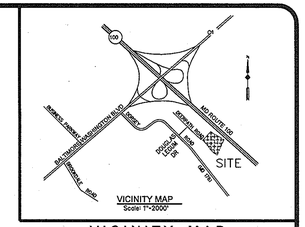
NOT TO SCALE



Staking Plan
Not To Scale

NOTES :
1. REFER TO THIS SHEET FOR GENERAL NOTES AND DETAILS.
2. FOREST CONSERVATION REQUIRMENTS WILL BE MET THROUGH "DECLARATION OF INTENT" LETTER AS PREVIOUSLY AGREED UPON BY HOWARD COUNTY PLANNING.
3. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
4. FINANCIAL SURETY FOR REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $7,300.
5. THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

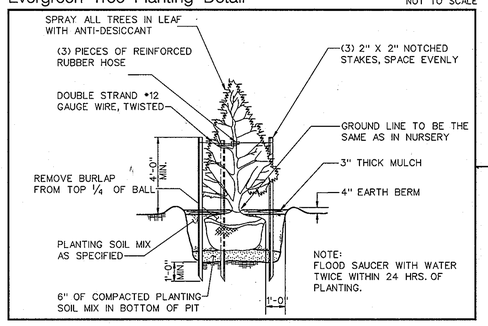




VICINITY MAP
SCALE : 1" = 2,000'

BENCHMARK:
Howard County Geodetic Control No.: 37IA - Elev.: 195.76
Station is a ¾" Iron Rod with a 4" Stamped aluminum cap. West side of Route 1, between edge of paving and iron fence, 247' N. of CL main entrance of Meadowridge Memorial Park.

Evergreen Tree Planting Detail



Δ REVISION BY CENTURY ENGINEERING
10710 GILROY RD
HUNT VALLEY MD 21031
443 689 2400

Shrub Planting Detail

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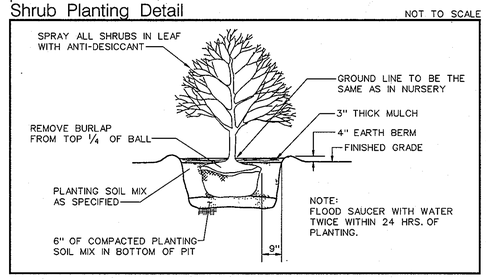


SCHEDULE A
PERIMETER LANDSCAPE EDGE

CATEGORY	PERIMETER 1	PERIMETER 2	PERIMETER 3	PERIMETER 4
LANDSCAPE TYPE	E	A	E	A
LINEAR FEET OF ROADWAY FRONTAGE / PERIMETER	580 L.F.	895 L.F.	410 L.F.	460 L.F.
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A
CREDIT FOR WALL, FENCE OR BEAM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	N/A	N/A	N/A	N/A
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	14 0 160	14 0 0	11 0 102	8 0 0
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION) (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	4 33-16 3-1 0	9 8-4 5-2 0	8 0 11-5 57-6	4 0 9-4 0

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

NUMBER OF PARKING SPACES	180
NUMBER OF TREES REQUIRED	9
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	10 0

DUMPSTER SCREENING REQUIREMENTS

TYPE 'D' SCREEN - 65 LF
LARGE TREES - 1
EVERGREEN TREES - 6

PROVIDED-
LARGE TREES - 1
EVERGREEN TREES - 6

OVERALL PLANTING TOTALS

OVERALL REQUIRED FOR SITE (INCLUDING 4 PERIMETERS, PARKING AND DUMPSTER):

2:1 SUBSTITUTION	LARGE TREES	- 58
2:1 SUBSTITUTION	EVERGREEN TREES	- 8
2:1 SUBSTITUTION	SMALL TREES	- 0
10:1 SUBSTITUTION	SHRUBS	- 245

OVERALL PROVIDED FOR SITE:

2:1 SUBSTITUTION	LARGE TREES	- 35
2:1 SUBSTITUTION	EVERGREEN TREES	- 41
2:1 SUBSTITUTION	SMALL TREES	- 28
10:1 SUBSTITUTION	SHRUBS	- 270
	GROUNDCOVER	- 2000
	PERENNIALS	- 600
	BULBS	- 300

Legend:

- PROPOSED MAJOR SHADE TREE
- PROPOSED MINOR TREE
- PROPOSED EVERGREEN TREE
- PROPOSED LARGE SHRUB
- PROPOSED SMALL SHRUB
- PROPOSED GROUNDCOVER
- PROPOSED PERENNIALS
- SEASONAL ANNUALS

GENERAL PLANTING NOTES:

1. QUALITY AND SIZE OF PLANTS, SPREAD OF ROOTS, AND SIZE OF BALLS SHALL BE IN ACCORDANCE WITH THE STANDARDS OF THE AMERICAN ASSOCIATOIN OF NURSERYMEN, "AMERICAN STANDARDS FOR NURSERY STOCK".
2. CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANTS MATERIALS FOR A PERIOD OF ONE YEAR AFTER INSTALLATION IS COMPLETE AND APPROVED. AT THE END OF ONE YEAR ALL PLANT MATERIAL WHICH IS DEAD OR DYING SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE AS ORIGINALLY SPECIFIED.
3. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO UTILITIES AND MAY MAKE MINOR ADJUSTMENTS IN SPACING AND/OR LOCATION OF PLANT MATERIALS. CONTRACTOR TO VERIFY 'AS BUILT' LOCATION OF ALL UTILITIES.
4. NO SUBSTITUTIONS SHALL BE MADE WITHOUT THE APPROVAL OF THE LANDSCAPE ARCHITECT.
5. ALL AREAS NOT STABILIZED IN PAVING OR PLANT MATERIALS SHALL BE SODDED.
6. ALL SHADE TREES SHALL BRANCH A MIN. OF 7'-0" ABOVE GROUND LEVEL. TREEES SHALL BE PLANTED AND STAKED IN ACCORDANCE WITH THE PLANTING DETAIL SHOWN.
7. PLANTING SOIL MIX: 2/3 EXISTING SOIL (WITH ALL STONES OR DEBRIS 2" OR LARGER REMOVED), 1/3 PEAT HUMUS, COMPOSTED SLUDGE OR OTHER ORGANIC MATERIAL.
8. ALL GROUND COVER AND SHRUB BEDS SHALL RECIEVE 3" TOPSOIL THOROUGHLY WORKED INTO THE TOP 6" OF EXISTING SOIL. ALL BEDS TO BE MULCHED 3" DEEP WHEN PLANT INSTALLATION IS COMPLETE.
9. ALL EXTERIOR LIGHTING SHALL CONFORM TO SECTION 134 OF THE ZONING REGULATIONS.

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S/BUILDERS CERTIFICATE:

"I/We certify that the landscaping on this plan will be done according to the plan, Section 16.124 of the Howard County Landscape manual. I/We further certify that upon completion a Certification of Landscape Installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Signature of Developer/Builder — Date

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer MARTIN J. STOLCH Date 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

Soil Conservationist, USDA-Natural Resources Conservation Service — Date 6/19/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 6/19/98

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date 6/23/98
Chief, Division of Land Development — Date 6/23/98
Director — Date 6/23/98

Rev./ Date	Description
6/12/98	DUMPSTER SCREENING
11/13/98	PER APPROVED REDLINED REV. 10/20/98
	HO. CO.
7/16/11	NEW ENTRANCE & CANOPY & WALKWAY REVISED

Approved Howard County Health Department for Public Water and Sewerage Systems.

Health Officer — Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name			Section/Area	Parcel
Dorsey Business Center			M-2	E
Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6		Map 37/43	1st	6032
Water Code			Sewer Code	
801			22800000; 2220000	

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK - PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

LANDSCAPE PLAN & DETAILS

SHEET 8 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

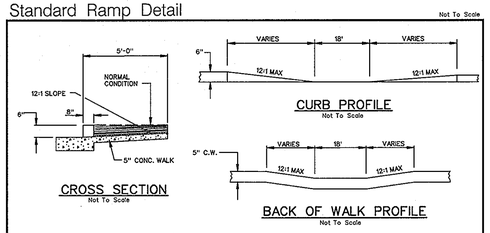
DATE: 17 MARCH 1998
1st ELECTION DISTRICT

SDP 98-104

FILE: h:\projects\1811\ls01deer.dgn
DATE: 05-Mar-98 09:43

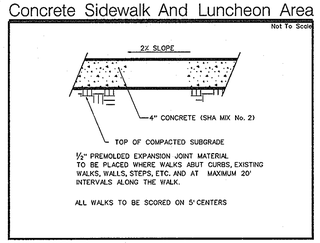
Standard Ramp Detail

Not To Scale



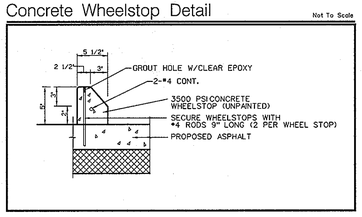
Concrete Sidewalk And Luncheon Area Detail

Not To Scale



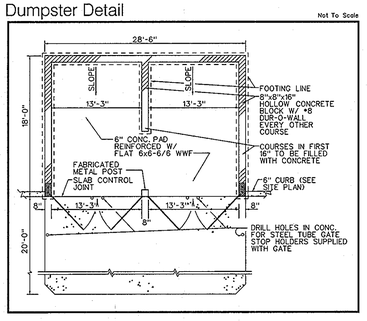
Concrete Wheelstop Detail

Not To Scale



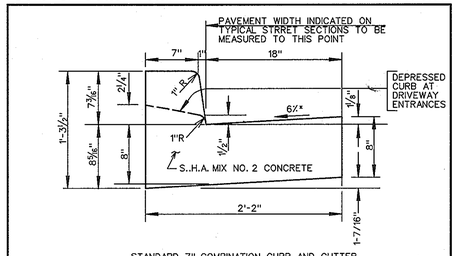
Dumpster Detail

Not To Scale



Curb & Gutter Detail

Not To Scale

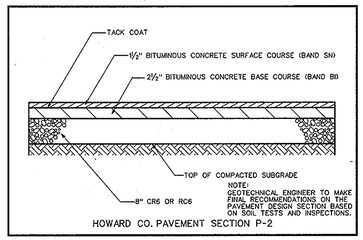


STANDARD 7" COMBINATION CURB AND GUTTER

*GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

Bituminous Paving Section

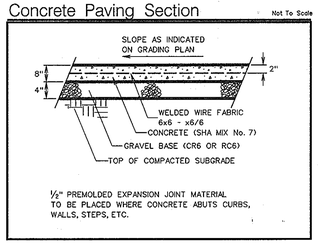
Not To Scale



HOWARD CO. PAVEMENT SECTION P-2

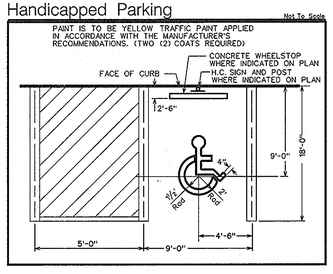
Concrete Paving Section

Not To Scale



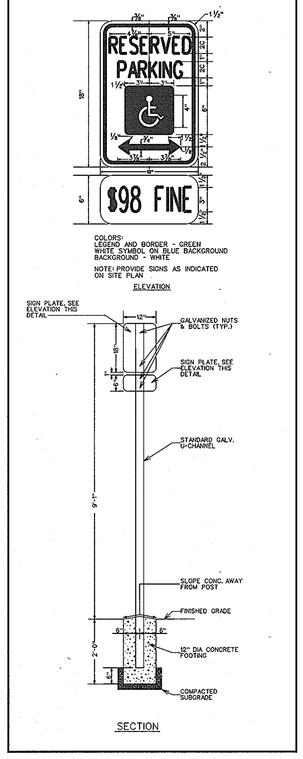
Handicapped Parking

Not To Scale



Handicapped Sign and Post

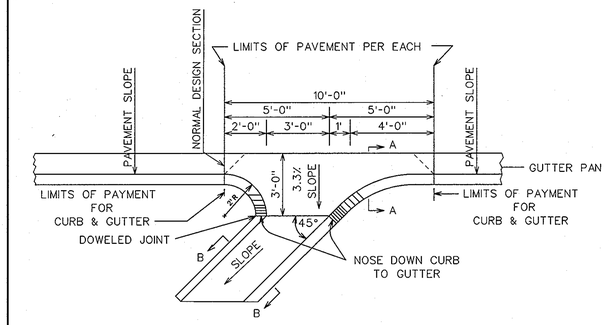
Not To Scale

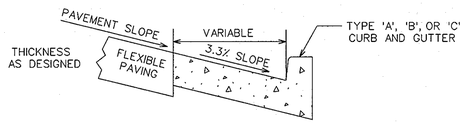


SECTION

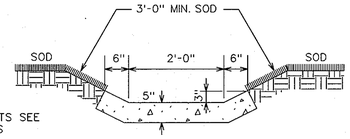
Standard Curb Opening and Gutter Detail

Not To Scale



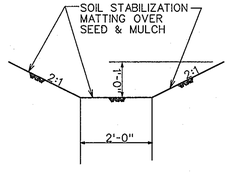


SECTION A-A



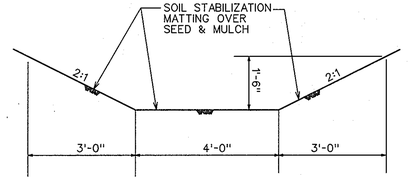
NOTE: FOR DETAIL OF JOINTS SEE LONGITUTIONAL TIE DEVICES STANDARD MD-571.61

SECTION B-B



Typical Section– Ditch at Front of New Building

Scale -½" = 1'-0"



Typical Section– Ditch at Rear of New Building

Scale -½" = 1'-0"

NOTE:
PROPOSED DITCH AT REAR OF NEW BUILDING SHALL BE EXCAVATED DURING SEDIMENT CONTROL PHASE AS A TEMPORARY SWALE (SEE SEDIMENT CONTROL PLAN AND DETAILS), BUT SHALL REMAIN IN PLACE AS A PERMANENT FEATURE AFTER SITE CONSTRUCTION IS COMPLETED

STATE OF MARYLAND · TOWNN LOOMIS · 12880 · PROFESSIONAL ENGINEER

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:

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Signature of Developer: MARTIN J STARK Date: 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service — Date: 6/14/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date: 6/14/98

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date: 6/23/98
Chief, Division of Land Development — Date: 6/23/98
Director

Rev./ Date	Description

Approved Howard County Health Department for Public Water and Sewerage Systems.

Health Officer — Date:

Address Chart

Lot/Parcel 289		Street Address		
Parcel E		6820 Deerpath Road		
Subdivision Name: Dorsey Business Center		Section/Area		Parcel: E
Plat No.: 6912	Block No.: 6	Zone: M-2	Tax/Zone Map: 37/43	Elec. Dist.: 1st	Census Track: 6012
Water Code: 801		Sewer Code: 22800000; 2220000		

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

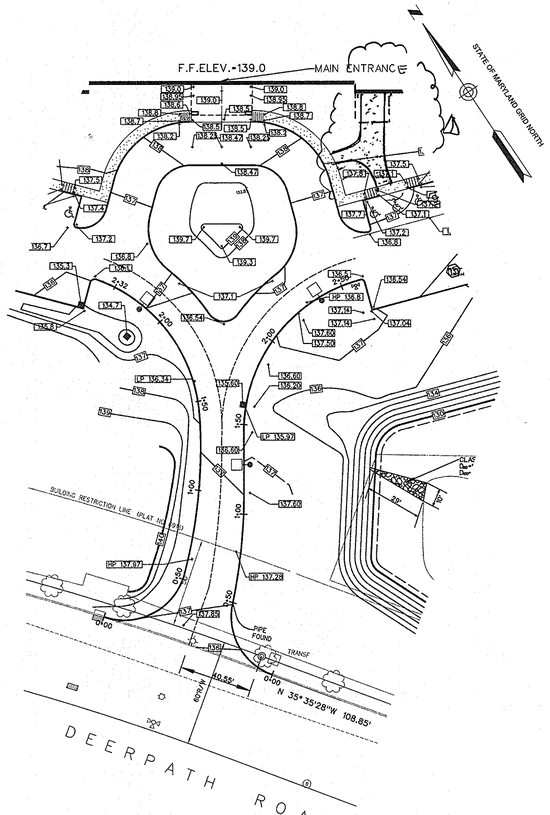
DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
SITE DETAILS

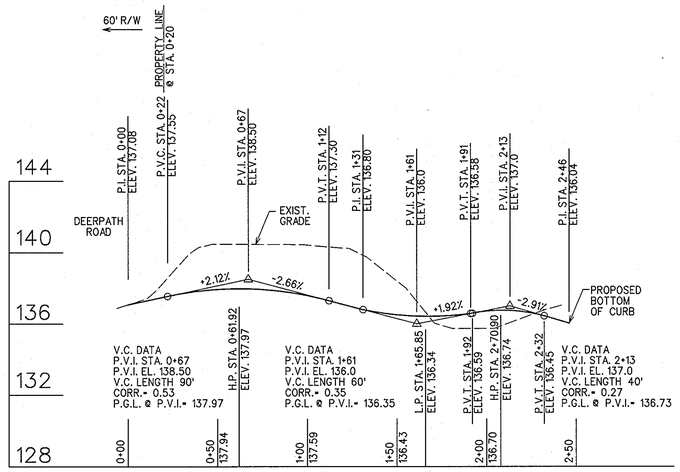
SHEET 9 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\dc01deer.dgn
DATE: 9-Mar-98 08:21

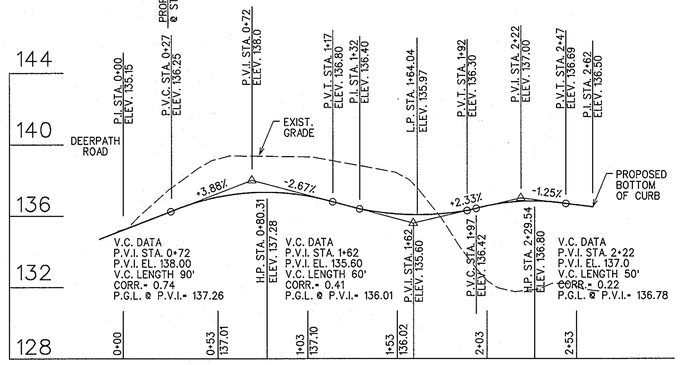
SDP 98-104





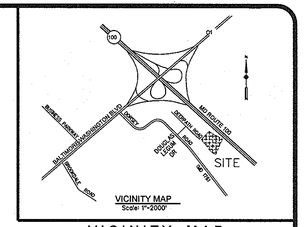
WEST GUTTERLINE PROFILE

SCALE: 1"-40' HORIZ.
1"-4' VERT.



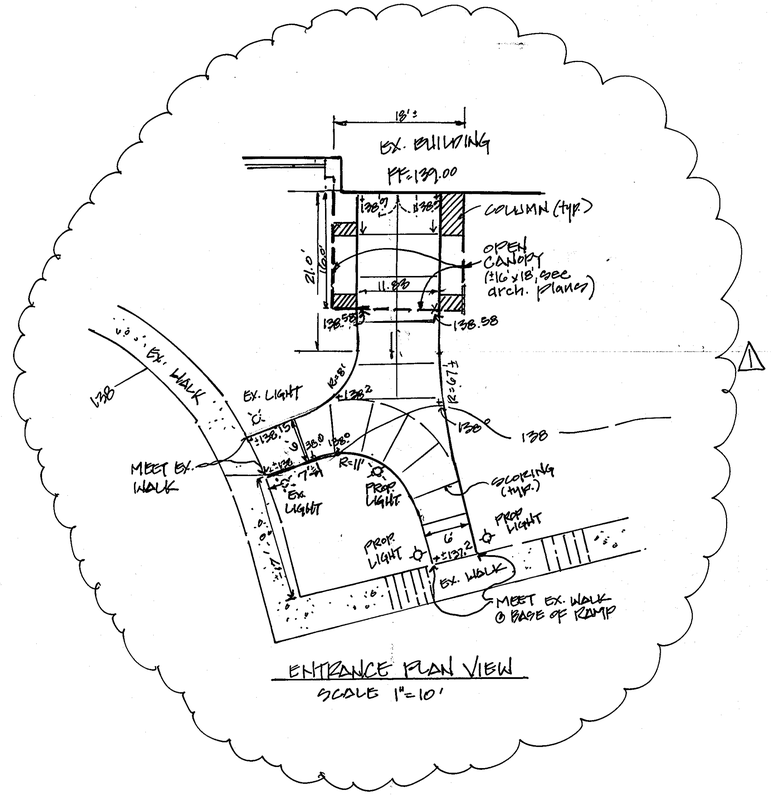
EAST GUTTERLINE PROFILE

SCALE: 1"-40' HORIZ.
1"-4' VERT.



VICINITY MAP
SCALE : 1" - 2,000'

BENCHMARK:
Howard County Geodetic Control No.: 37IA - Elev.: 195.76
Station is a 3/4" iron Rod with a 4" Stamped aluminum cap.
West side of Route 1, between edge of paving and iron fence,
247' N. of CL main entrance of Meadowridge Memorial Park.



ENTRANCE PLAN VIEW
SCALE 1"=10'

SEAL FOR REV. #1 ONLY

PROFESSIONAL ENGINEER NO. 10551 STATE OF MARYLAND
9-20-11

STATE OF MARYLAND CHRISTOPHER LOOMIS 22550 PROFESSIONAL ENGINEER

Δ REVISION BY:
CENTURY ENGINEERING
10710 GILROY ROAD
HUNT VALLEY MD 21031
443 629 2400

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:
"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."
Signature of Developer: MARTIN J. STARK Date 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.
USDA-Natural Resources Conservation Service Date 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.
Howard SCD Date 6/18/98 Δ

APPROVED: DEPT. OF PLANNING AND ZONING
Chief, Development Engineering Division Date 6/23/98
Chief, Division of Land Development Date 6/23/98
Director Date 6/23/98

Rev./ Date	Description
9/16/11	NEW ENTRANCE W/ CANOPY & WALKWAY BY CEC

Approved Howard County Health Department for Public Water and Sewerage Systems.
Health Officer Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name	Section/Area	Parcel
Dorsey Business Center		E

Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6	M-2	Map 37/43	1st	6012

Water Code	Sewer Code
801	22800000; 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM,MD. 21093

DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.

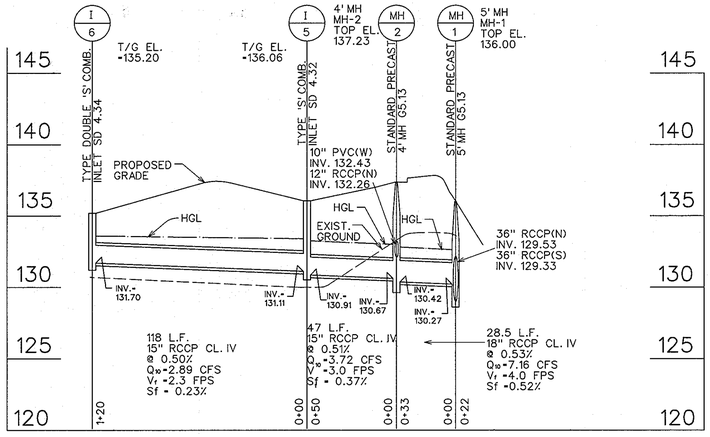
ENTRANCE ROAD PLAN & PROFILE

SHEET 10 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

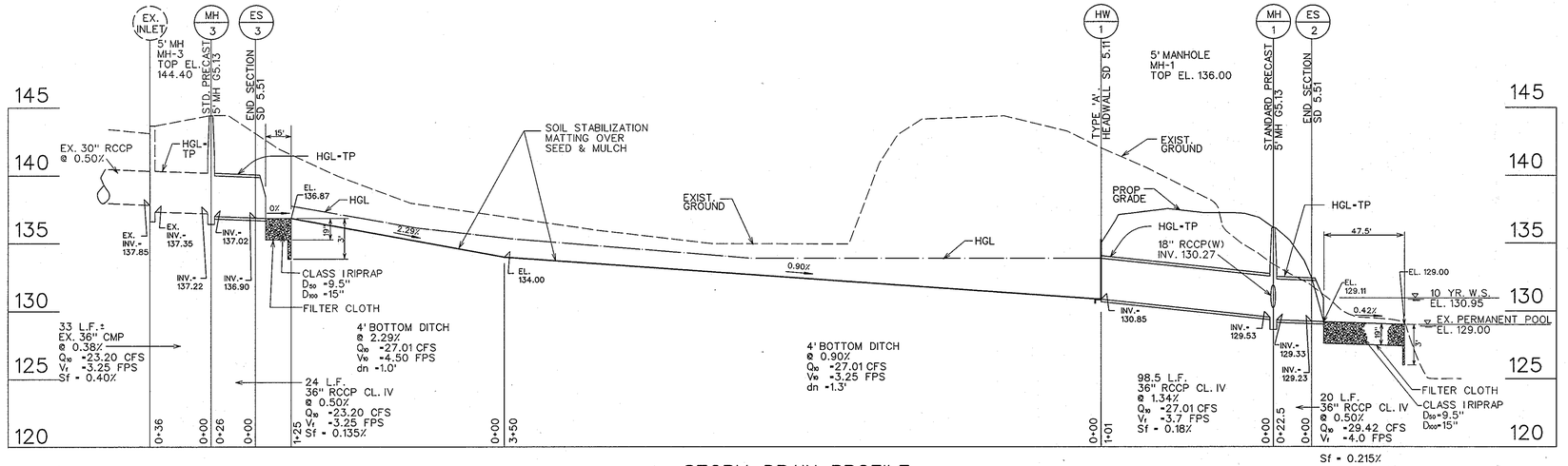
FILE: h:\projects\1811\rp01deer.dgn
DATE: 05-Mar-98 10:30

SDP 98-104



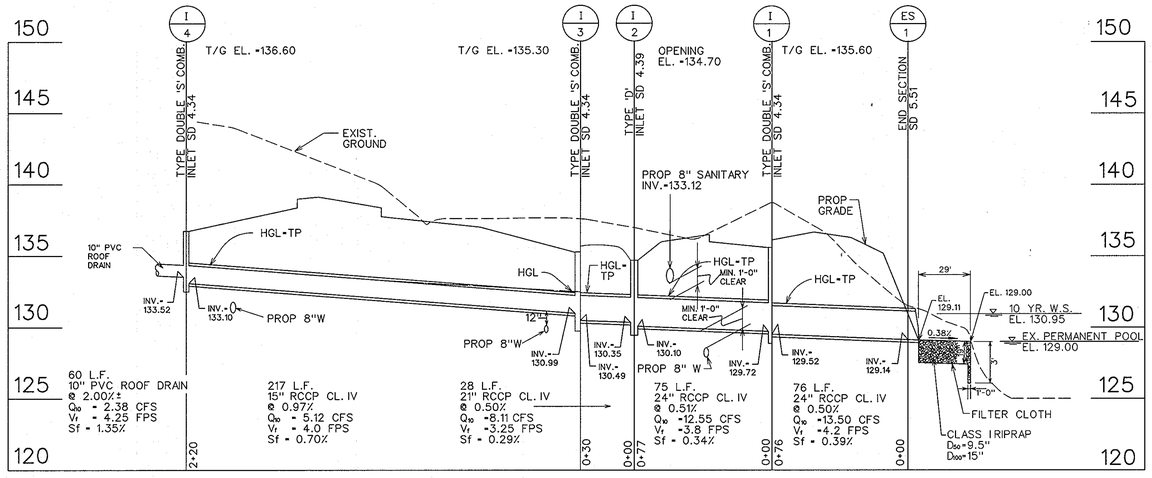
STORM DRAIN PROFILE

SCALE: 1"=40' HORIZ.
1"=5' VERT.



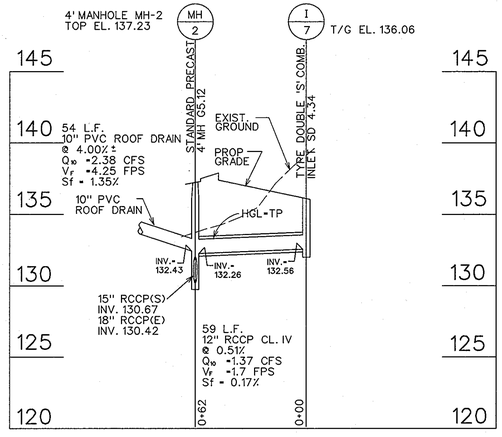
STORM DRAIN PROFILE

SCALE: 1"=40' HORIZ.
1"=5' VERT.



STORM DRAIN PROFILE

SCALE: 1"=40' HORIZ.
1"=5' VERT.



STORM DRAIN PROFILE

SCALE: 1"=40' HORIZ.
1"=5' VERT.

NOTE:
SEE SHEET 3 OF 11 FOR STRUCTURES SCHEDULE

STATE OF MARYLAND — TOMMY LOOMIS — 14550 — PROFESSIONAL ENGINEER

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer [signature] Date 6/18/98
Print name below signature MARTIN J. STOECK

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service [signature] Date 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

[signature] Howard SCD Date 6/18/98

APPROVED: DEPT. OF PLANNING AND ZONING

[signature] Chief, Development Engineering Division Date 6/23/98
[signature] Chief, Division of Land Development Date 6/23/98
[signature] Director Date 6/23/98

Rev./ Date	Description

Approved Howard County Health Department for Public Water and Sewerage Systems.

Health Officer Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name	Section/Area	Parcel
Dorsey Business Center		E

Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6	M-2	Map 37/43	1st	6012

Water Code	Sewer Code
801	22800000; 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

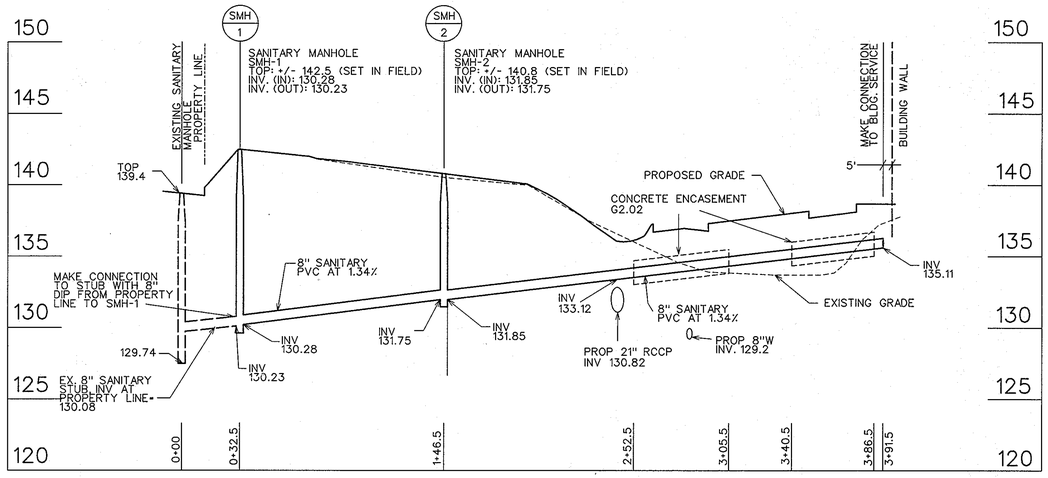
DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
UTILITY PROFILES

SHEET 11 OF 11
SCALE: 1" = 40'
JOB NO. 61-1811

DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\pp01deer.dgn
DATE: 14-May-98 10:56

SDP 98-104



SANITARY SEWER PROFILE

SCALE: 1"=40' HORIZ.
1"=5' VERT.

NOTE:
SEE SHEET 3 OF 11 FOR STRUCTURES SCHEDULE

STATE OF MARYLAND — DONNAN LOCKHART PFEIFFER — 14550 — PROFESSIONAL ENGINEER

STV Incorporated
engineers / architects / planners / scientists / construction managers
21 Governor's Court Baltimore, MD 21244-2722 (410) 944-9112

DEVELOPER'S CERTIFICATE:

"I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: MARTIN J STORCK Date: 6/18/98
Print name below signature

Review for HOWARD SCD and meets Technical Requirements.

USDA-Natural Resources Conservation Service — Date: 6/18/98

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date: 6/18/98

APPROVED: DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division — Date: 6/23/98
Chief, Division of Land Development — Date: 6/23/98
Director — Date: 6/23/98

Rev./ Date	Description

Approved - Howard County Health Department for Public Water and Sewerage Systems.

Health Officer — Date

Address Chart

Lot/Parcel 289	Street Address
Parcel E	6820 Deerpath Road

Subdivision Name	Section/Area	Parcel
Dorsey Business Center	1st	E

Plat No.	Block No.	Zone	Tax/Zone	Elec. Dist.	Census Track
6916	6	M-2	Map 37#43	1st	6012

Water Code: 801
Sewer Code: 22800000; 2220000

OWNER: ASSOCIATION OF MARYLAND HOSPITALS AND HEALTH SYSTEMS

DEVELOPER: P.F. OBRECHT
15 W. AYLESBURY ROAD
TIMONIUM, MD. 21093

DORSEY BUSINESS PARK – PARCEL E
DEERPATH ROAD, HOWARD COUNTY, MD.
UTILITY PROFILES

SHEET 11A OF 11
SCALE: 1" = 40'
JOB NO. 61-1811
DATE: 17 MARCH 1998
1st ELECTION DISTRICT

FILE: h:\projects\1811\pp02deer.dgn
DATE: 14-May-98 10:52

SDP 98-104