Construction Notes

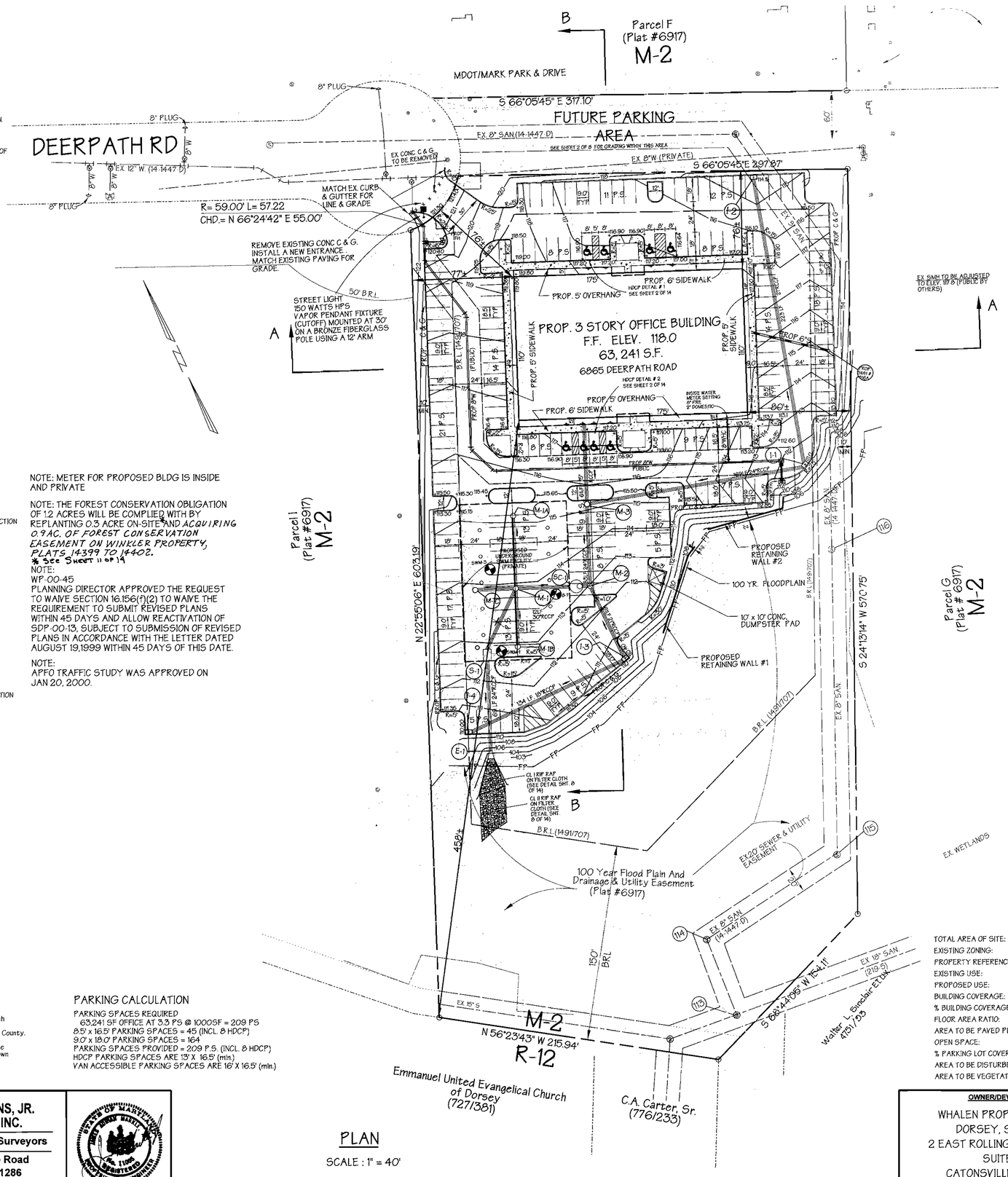
1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410 313 1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
14. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
15. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
16. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
17. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
18. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
19. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
20. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
21. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
22. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
23. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY PREPARED BY G. W. STEPHENS JR. & ASSOCIATES DATED MARCH 1998.
24. OUTDOOR LIGHTING WILL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
25. 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.
26. WATER IS PUBLIC.
27. SEWER IS PUBLIC.
28. EXISTING UTILITIES ARE BASED ON SURVEY PREPARED BY GWS.
29. PROPOSED SIDEWALK IS 5" THICK, CONCRETE (MIX NO. 2) ON 4" CRUSHER RUN BASE.

NOTE: METER FOR PROPOSED BLDG IS INSIDE AND PRIVATE

NOTE: THE FOREST CONSERVATION OBLIGATION OF 1.2 ACRES WILL BE COMPLIED WITH BY REPLANTING 0.3 ACRE ON-SITE AND ACQUIRING 0.9 AC. OF FOREST CONSERVATION EASEMENT ON WINKLER PROPERTY, PLATS 14399 TO 14402.
* See Sheet 11 of 14

NOTE:
WP-00-45
PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.156(f)(2) TO WAIVE THE REQUIREMENT TO SUBMIT REVISED PLANS WITHIN 45 DAYS AND ALLOW REACTIVATION OF SDP-00-13, SUBJECT TO SUBMISSION OF REVISED PLANS IN ACCORDANCE WITH THE LETTER DATED AUGUST 19,1999 WITHIN 45 DAYS OF THIS DATE.

NOTE:
APFO TRAFFIC STUDY WAS APPROVED ON JAN 20, 2000.

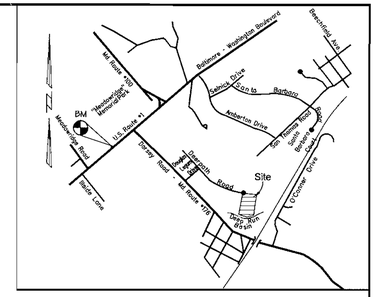


PLAN

SCALE : 1" = 40'

Legend

- Ex. 2' Contours — 394
- Ex. 10' Contours — 395
- Prop. 2' Contours — 394
- Prop. 10' Contours — 395
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop Water
- Concrete Paving
- Light Duty Paving (F-3)
- Wetlands — W — W — W — W
- Flood Plain — FP — FP — FP — FP
- Ex. Conc. C&G to be Removed
- Proposed Reverse Conc. Curb & Gutter
- Ex. Trees
- Street Light



LOCATION MAP

SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV 59.6633

DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

SHEET INDEX

SHEET 1 OF 14	SITE PLAN
SHEET 2 OF 14	SITE & HANDICAP DETAILS
SHEET 3 OF 14	STORM DRAIN & SEWER PROFILES
SHEET 4 OF 14	STORMCEPTOR PLAN
SHEET 5 OF 14	SEDIMENT CONTROL PLAN
SHEET 6 OF 14	SEDIMENT CONTROL NOTES AND DETAILS
SHEET 7 OF 14	STORMWATER MANAGEMENT DRAINAGE AREA MAPS
SHEET 8 OF 14	STORMWATER MANAGEMENT PLANS & PROFILES
SHEET 9 OF 14	STORMWATER MANAGEMENT NOTES AND DETAILS
SHEET 10 OF 14	LANDSCAPE PLAN
SHEET 11 OF 14	FOREST CONSERVATION PLAN
SHEET 12 OF 14	FOREST CONSERVATION PLAN
SHEET 13 OF 14	RETAINING WALL PROFILES & DETAILS
SHEET 14 OF 14	RETAINING WALL NOTES & DETAILS

SITE DATA

TOTAL AREA OF SITE:	4.87297 AC
EXISTING ZONING:	M-2 (SEE AA-87-06)
PROPERTY REFERENCE:	L-1300, F-547
EXISTING USE:	VACANT
PROPOSED USE:	OFFICE
BUILDING COVERAGE:	19,250 SF OR 0.44 AC
% BUILDING COVERAGE:	9.0%
FLOOR AREA RATIO:	0.27
AREA TO BE PAVED PLUS BUILDING AREA:	2.35 AC
OPEN SPACE:	0.15 AC
% PARKING LOT COVERAGE:	39%
AREA TO BE DISTURBED:	3.25 AC OR 141,570 S.F.
AREA TO BE VEGETATIVELY STABILIZED:	0.75 AC

PARKING CALCULATION

PARKING SPACES REQUIRED
63,241 SF OFFICE AT 3.3 PS @ 1000SF = 209 PS
8.5' x 16.5' PARKING SPACES = 45 (INCL. 8 HDCP)
9.0' x 18.0' PARKING SPACES = 164
PARKING SPACES PROVIDED = 209 P.S. (INCL. 8 HDCP)
HDCP PARKING SPACES ARE 13' X 16.5' (min.)
VAN ACCESSIBLE PARKING SPACES ARE 16' X 16.5' (min.)

NOTE:
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/25/00

PLAN NUMBER

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/25/00

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
19391	6		37,43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — No. 11068 — REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS
11/15/99 - REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations).

SITE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 1 OF 14

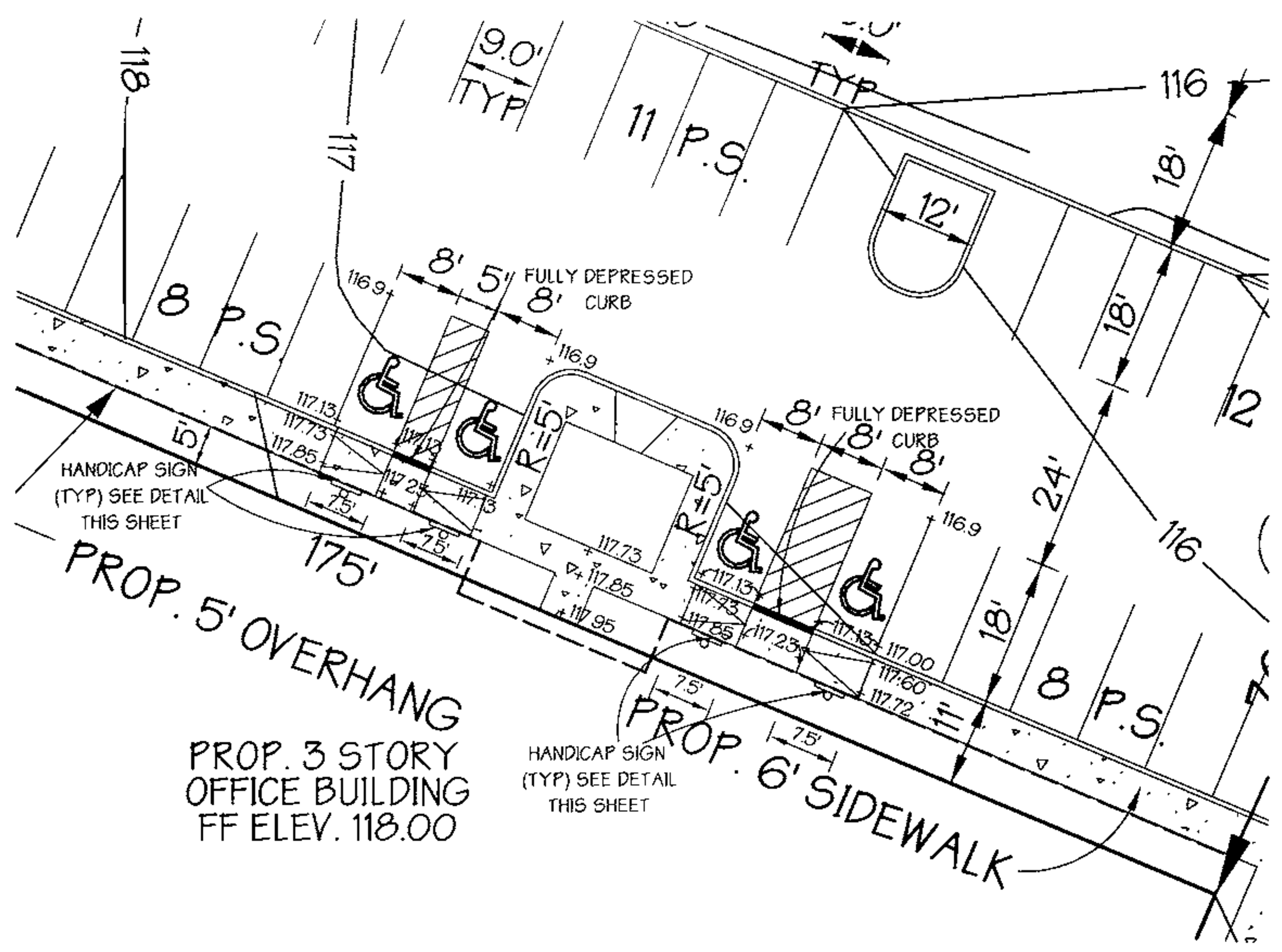
SDP-00-13
SCALE: AS SHOWN
FEBRUARY 17, 2000

FILENAME: 8779SITEPLAN.501

P.N. 8779

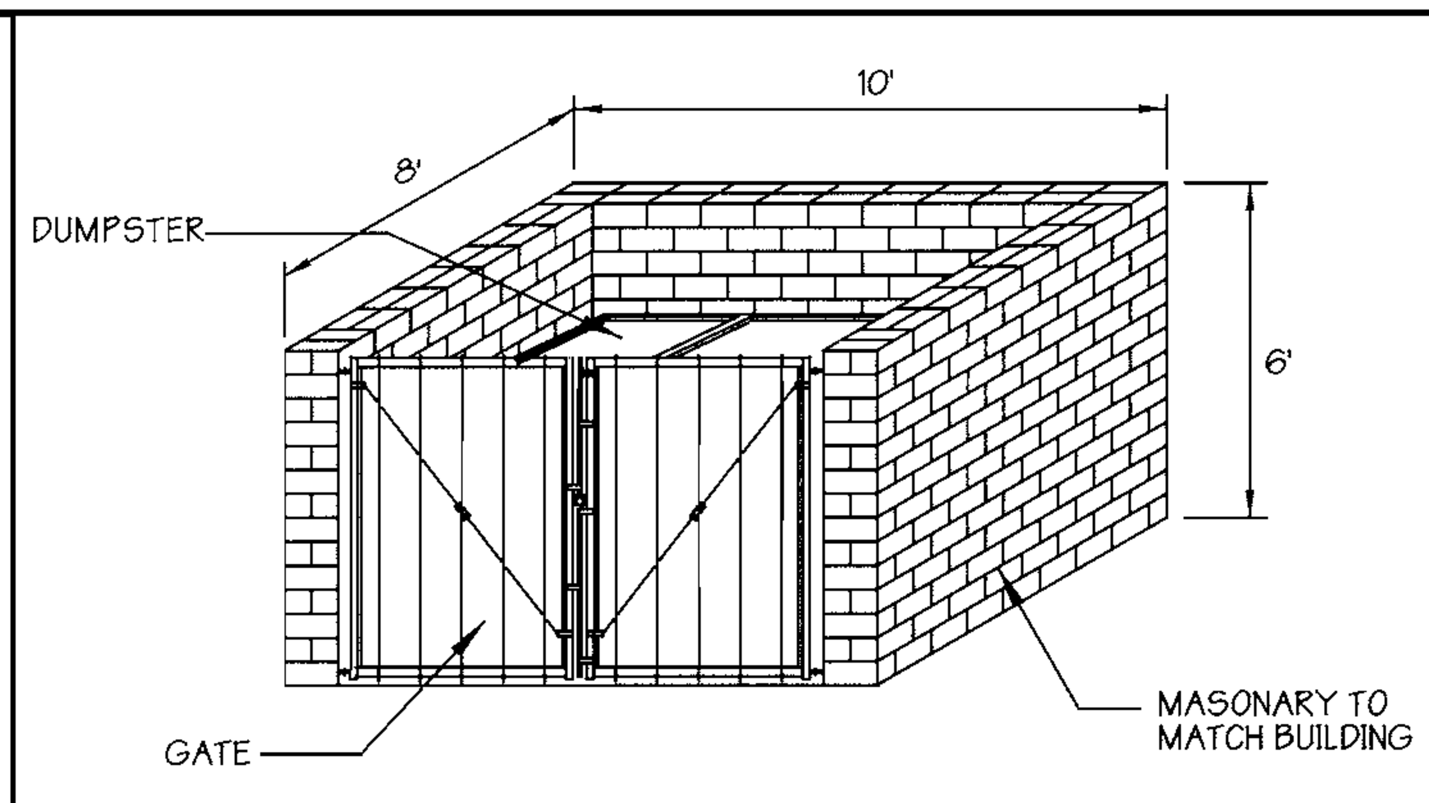
SDP-00-13

\cadfiles\8779\siteplan.501 Jul 13, 2000 13:54:49



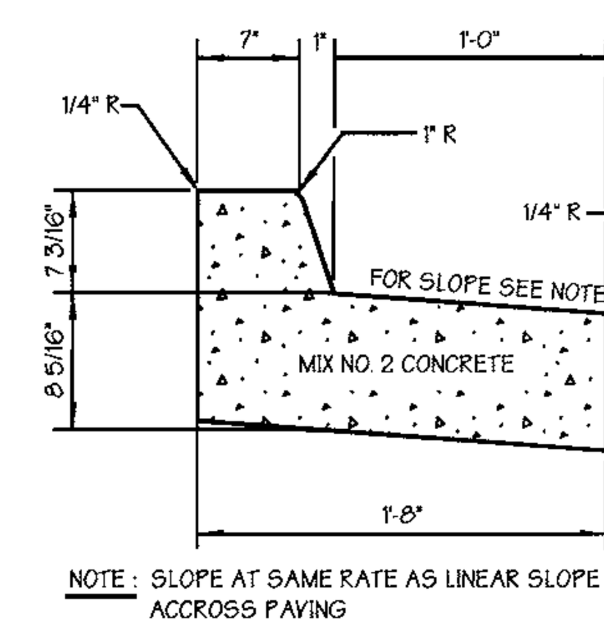
HANDICAP DETAIL # 1

SCALE : 1" = 20'



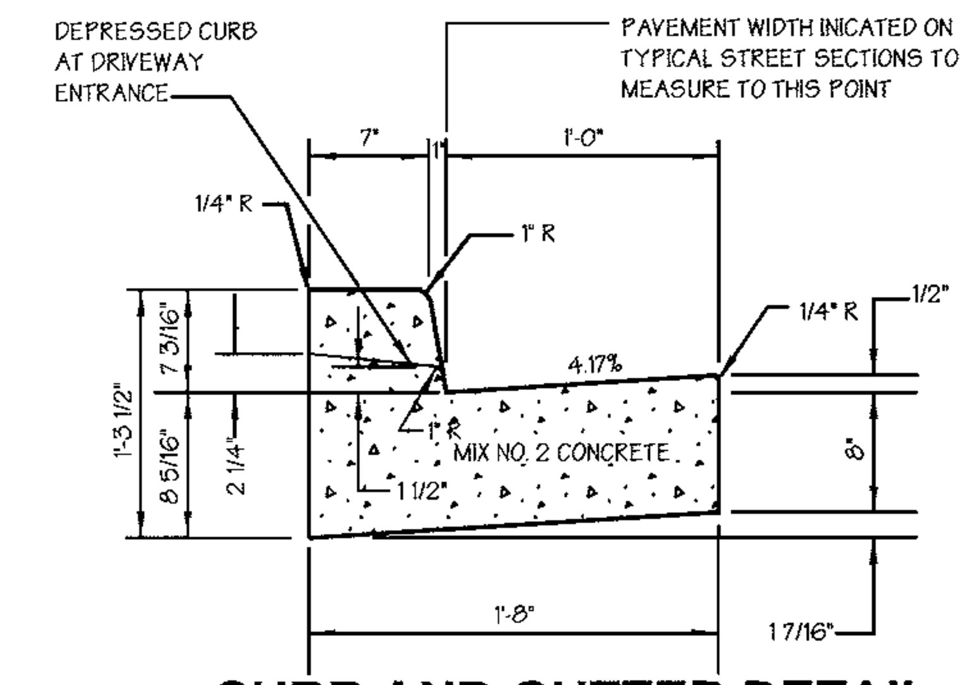
Dumpster Enclosure Detail

NOT TO SCALE



REVERSE SLOPE CURB AND GUTTER

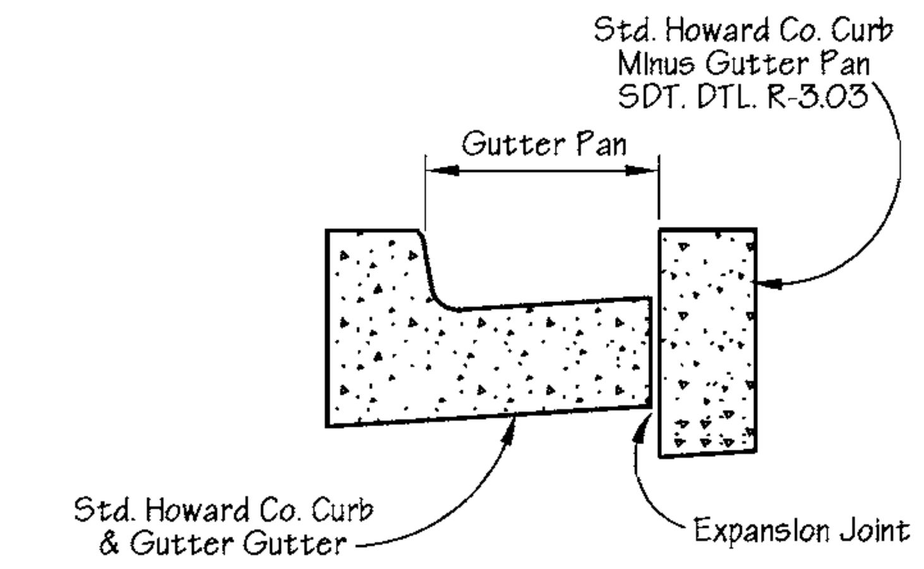
NOT TO SCALE



CURB AND GUTTER DETAIL

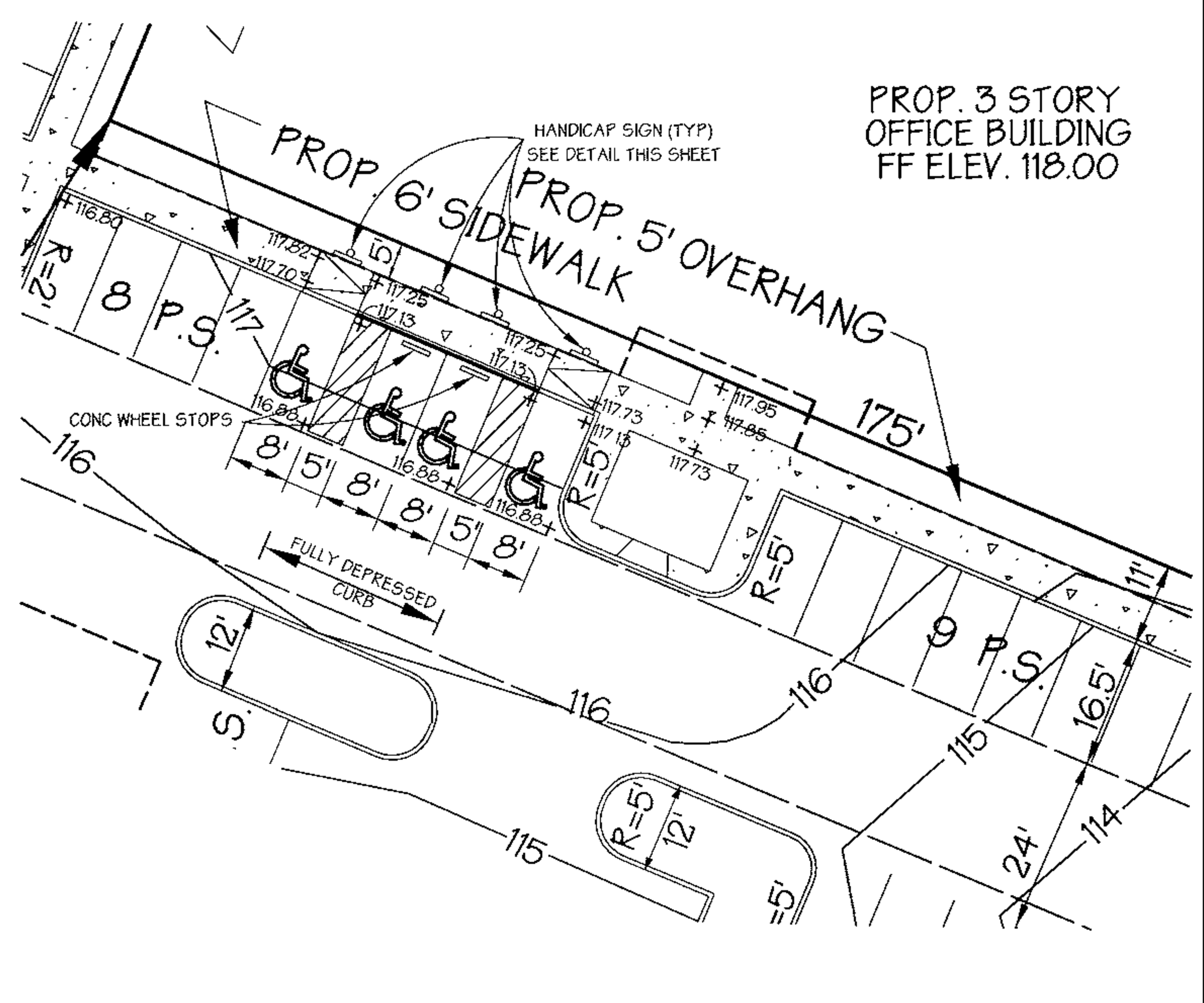
NOT TO SCALE

SEE HO. CO. STD. DTL. R-3.01



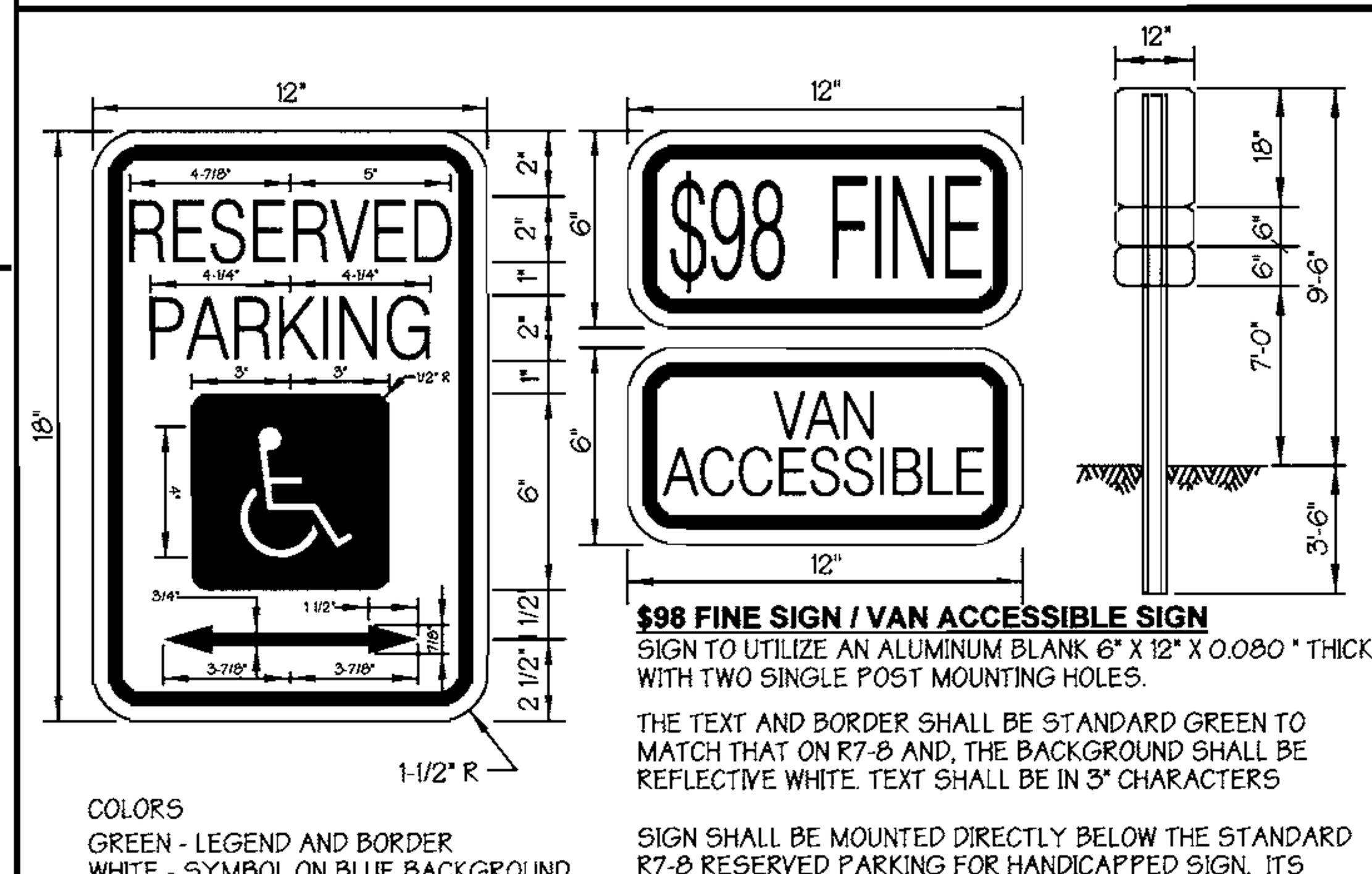
Curb Opening Detail

NOT TO SCALE



HANDICAP DETAIL # 2

SCALE : 1" = 20'



$98 FINE SIGN / VAN ACCESSIBLE SIGN

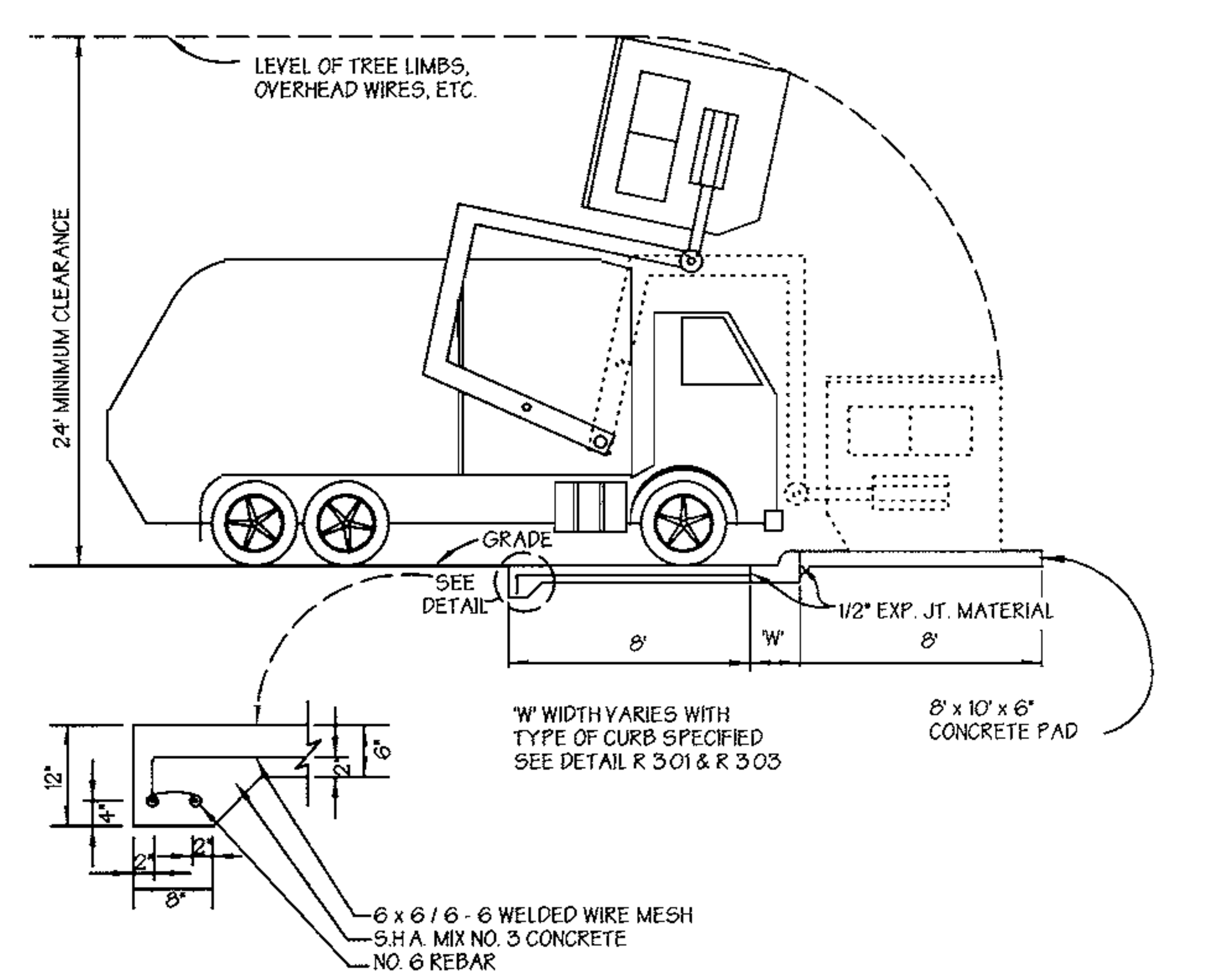
SIGN TO UTILIZE AN ALUMINUM BLANK 6" X 12" X 0.080 " THICK WITH TWO SINGLE POST MOUNTING HOLES.

THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS

SIGN SHALL BE MOUNTED DIRECTLY BELOW THE STANDARD R7-8 RESERVED PARKING FOR HANDICAPPED SIGN. ITS BOTTOM EDGE SHALL BE NO LESS THAN 7 FEET ABOVE GROUND. IF THE SIGN IS PLACED AGAINST A BUILDING, STRUCTURE, OR OTHER LOCATION WHERE VEHICLE OF PEDESTRIAN TRAFFIC IS NOT OBSTRUCTED THE BOTOM EDGE OF THE SIGN SHALL BE AT LEAST 6 FEET BUT NOT MORE THAN 10 FEET ABOVE GROUND.

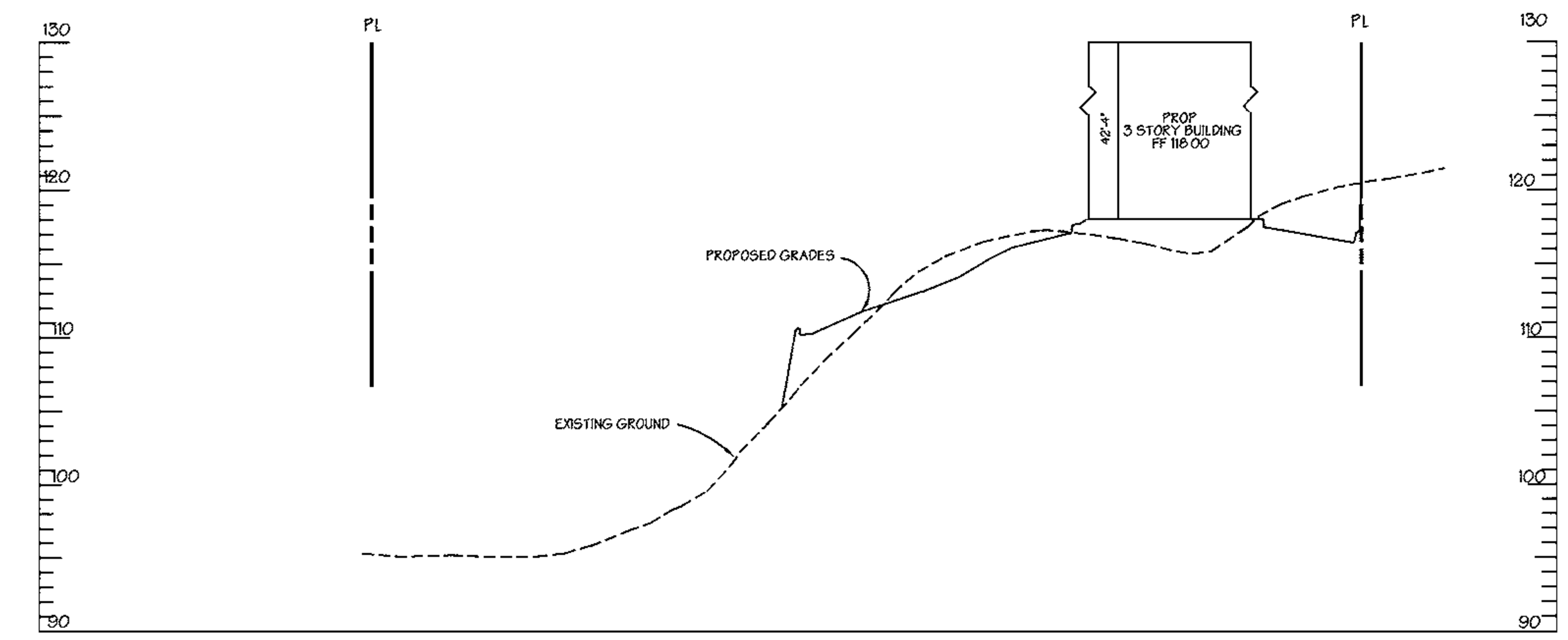
HANDICAPPED SIGN DETAIL

NOT TO SCALE



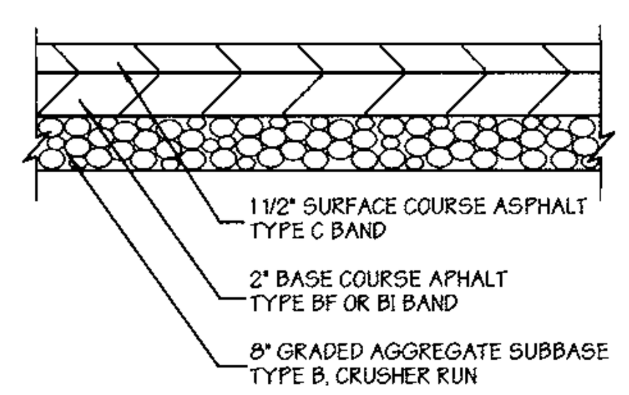
Solid Waste Service Pad

NOT TO SCALE



SECTION B-B

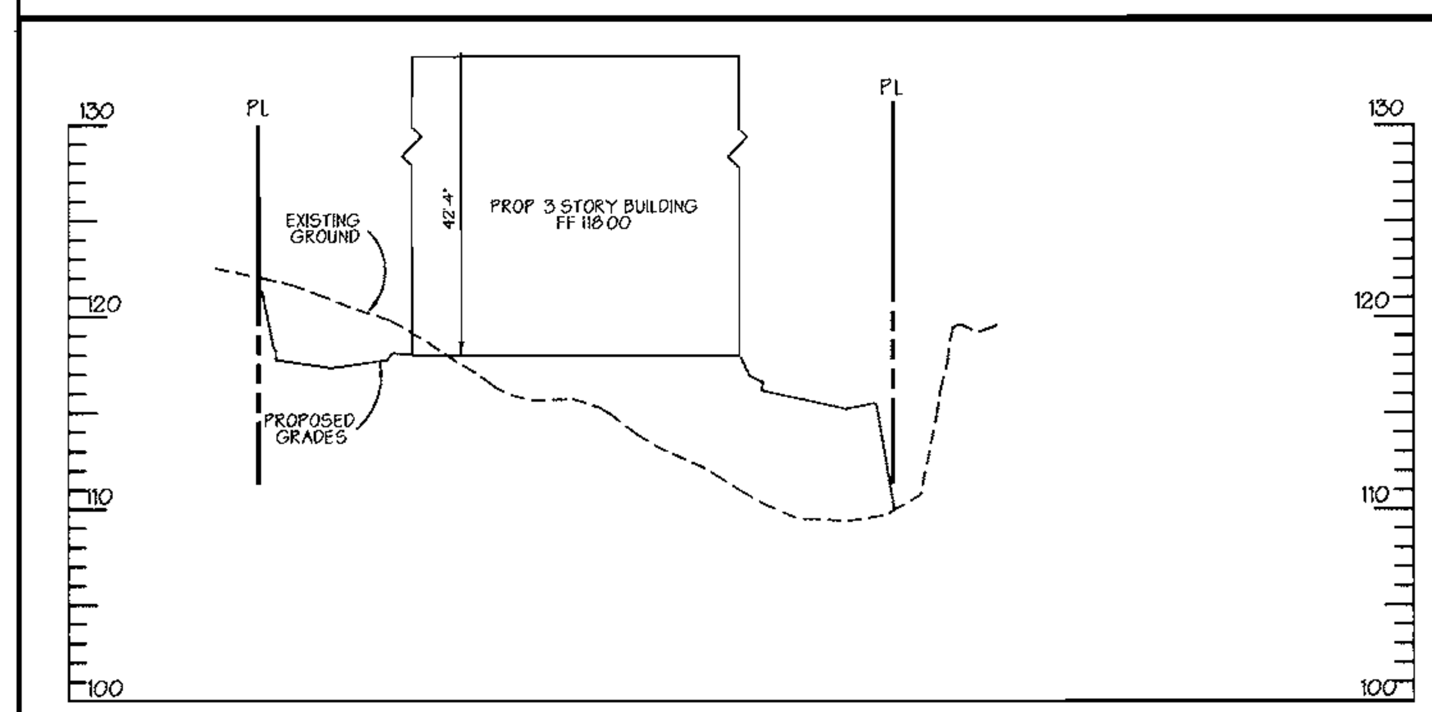
SCALE: HORZ.:1"=100' VERT.:1" =10'



(LIGHT DUTY PAVING)

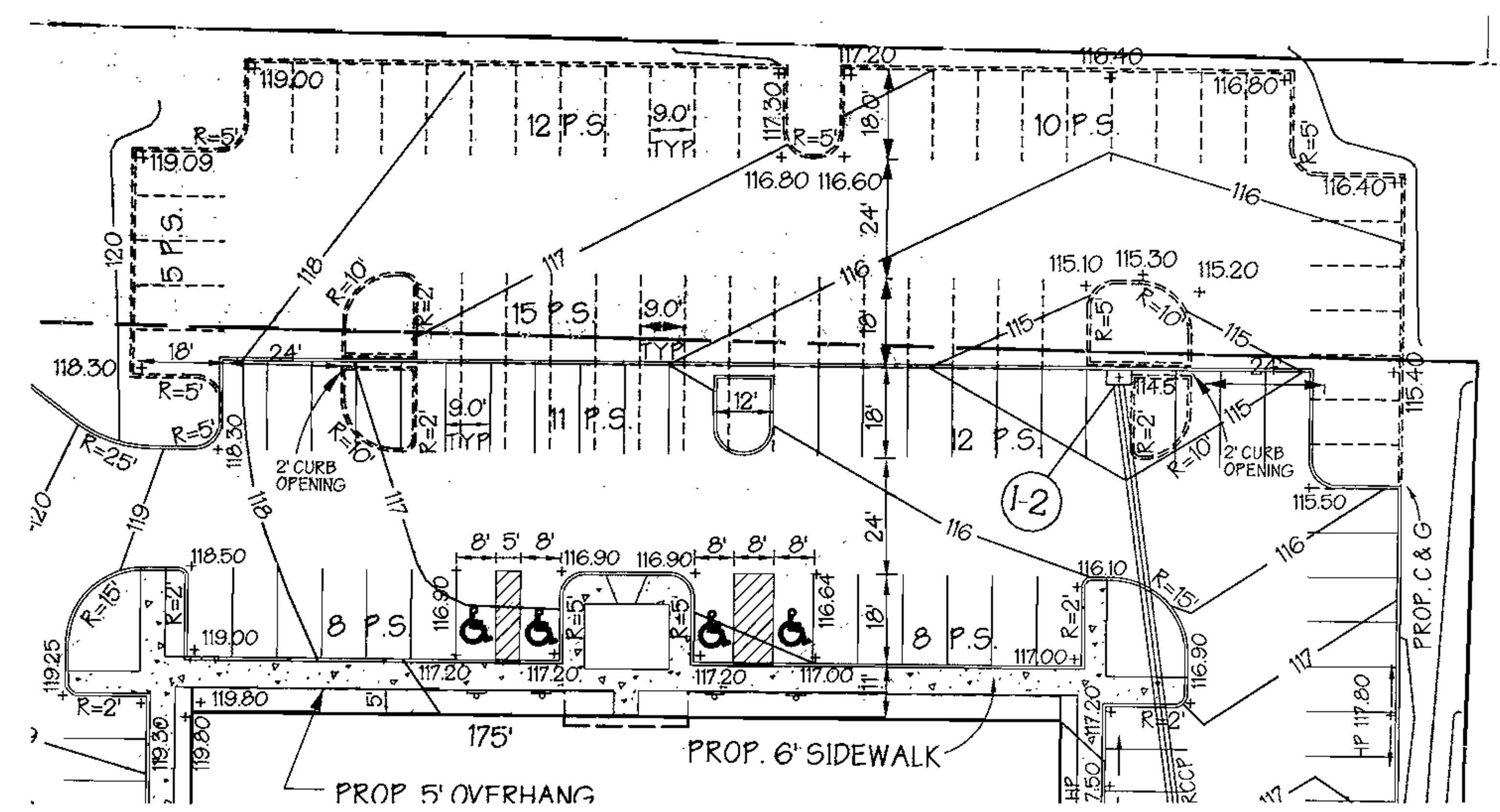
P-1 Pavement Section

NOT TO SCALE



SECTION A-A

SCALE: HORZ.:1"=100' VERT.:1" =10'



FUTURE PARKING AREA

SCALE: 1"=30'

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL #	DEERPATH ROAD 6865

SUBDIVISION NAME			SECTION NAME		PARCEL #
DORSEY BUSSINESS CENTER			1		H
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

Civil Engineers and land Surveyors

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Towson, Maryland 21286
(410) 825-8120

OWNER/DEVELOPER

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2 EAST ROLLING CROSSROADS
SUITE 251
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(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS

11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations)

SITE & HANDICAP DETAILS
FOR
DORSEY BUSSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT : 1
HOWARD CO., MARYLAND

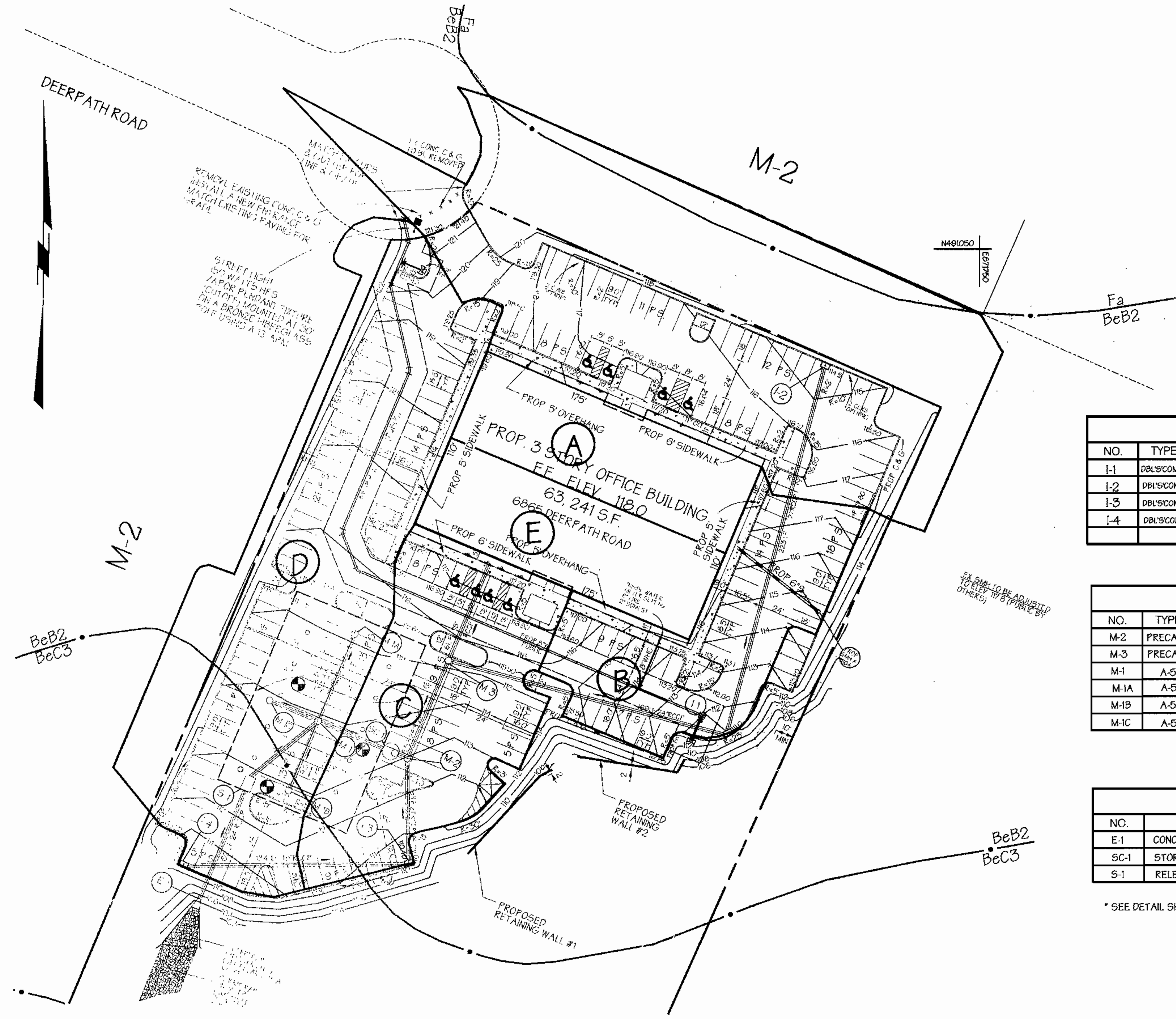
SHT. 2 OF 14

SDP-00-13
SCALE : As Shown
DATE: FEB. 17, 2000

PN 8779

FILENAME: 8779HC20DETAILS.S01

SDP-00-13



DRAINAGE AREA MAP

SCALE: 1"= 50'

AREA	ACRAGE (AC)	'C'	% IMP
A	1.31	0.73	72.5
B	0.35	0.92	94.3
C	0.43	0.89	90.7
D	0.99	0.63	57.6
E	0.22	0.96	100.0

INLET SCHEDULE

NO.	TYPE	INV. OUT	TOP ELEV.	Q (c.f.s.)	REMARKS
I-1	DBL'S'COMB	106.80	111.0	11.60	SD 4.34
I-2	DBL'S'COMB	110.50	114.5	9.37	SD 4.34
I-3	DBL'S'COMB	105.13	110.40	9.32	SD 4.34
I-4	DBL'S'COMB	106.00	110.00	6.05	SD 4.34

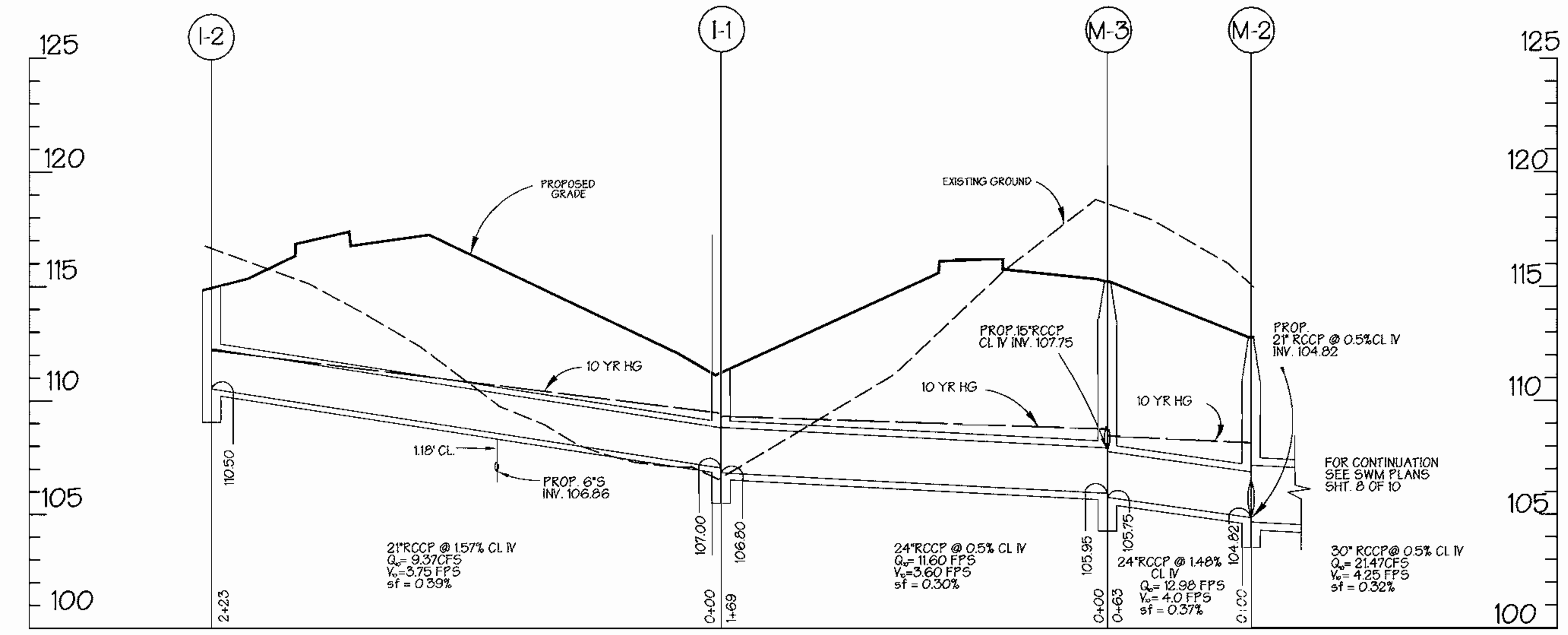
MANHOLE SCHEDULE

NO.	TYPE	SIZE	INV. OUT	TOP ELEV	REMARKS
M-2	PRECAST	48"	104.62	113.0	G 5.13
M-3	PRECAST	48"	105.75	115.0	G 5.12
M-1	A-5	—	105.75	113.90	SD 4.01 MODIFIED *
M-1A	A-5	—	—	115.25	SD 4.01 MODIFIED *
M-1B	A-5	—	—	112.90	SD 4.01 MODIFIED *
M-1C	A-5	—	—	113.90	SD 4.01 MODIFIED *

STRUCTURE SCHEDULE

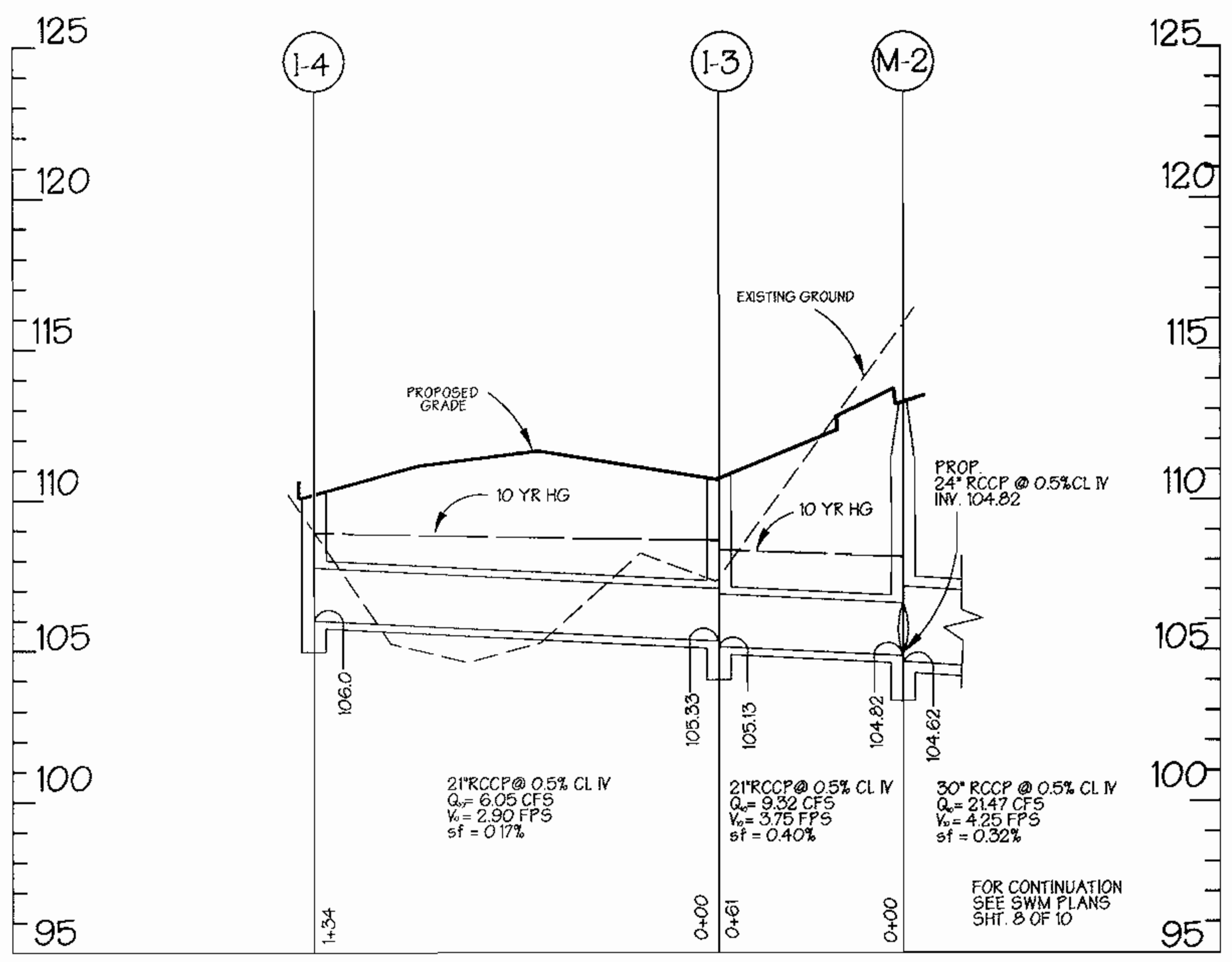
NO.	TYPE	SIZE	INV. OUT	TOP ELEV	REMARKS
E-1	CONC. END SECTION	24"	102.00	—	S.D. 5.11
SC-1	STORMCEPTOR	—	104.46	113.25	STC 3600 *
S-1	RELEASE STRUCTURE	—	102.75	112.60	— *

* SEE DETAIL SHEET 8 AND 9 OF 10



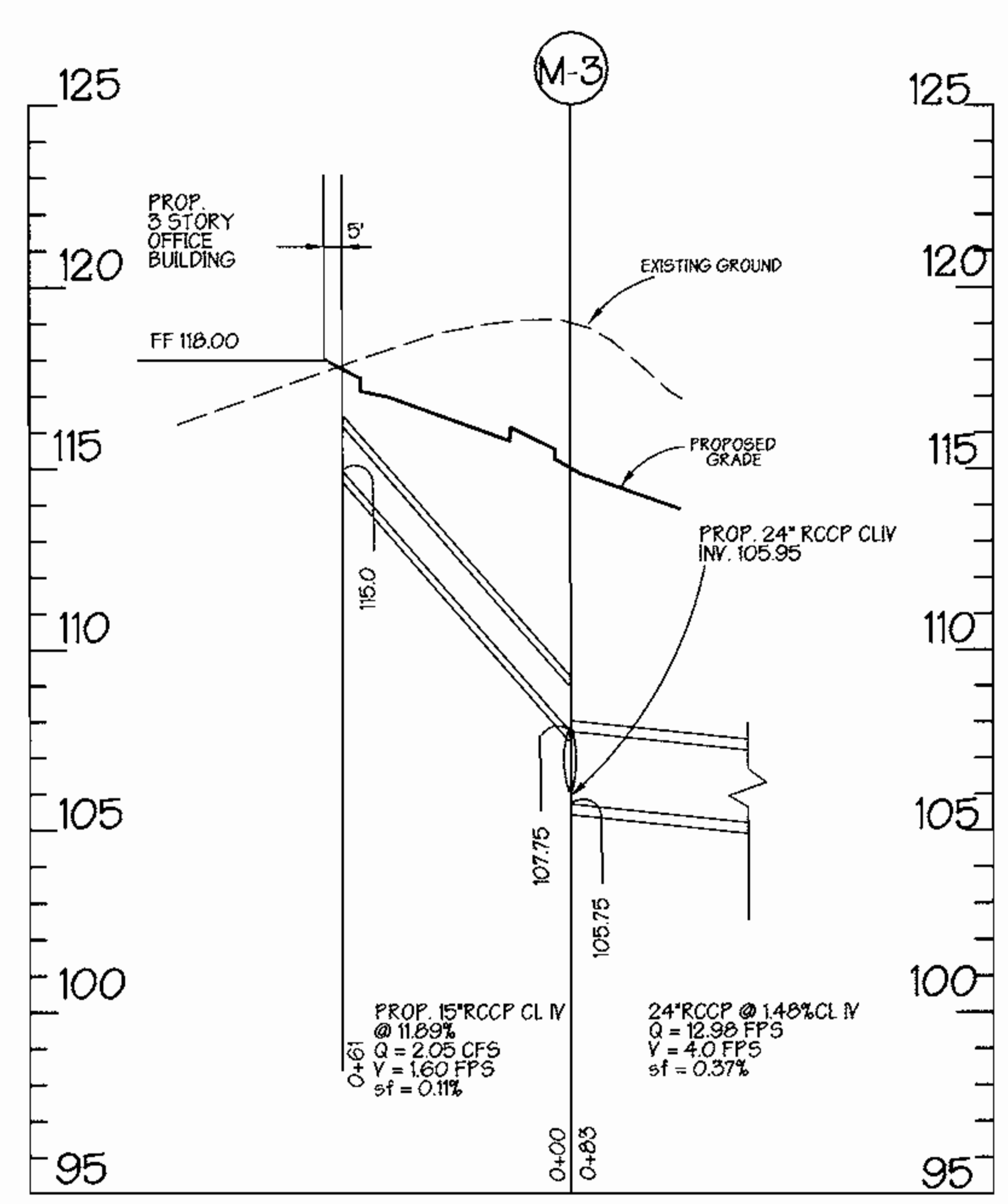
STORM DRAIN PROFILE

SCALE: HORZ.: 1"=50' VERT. 1"=5'



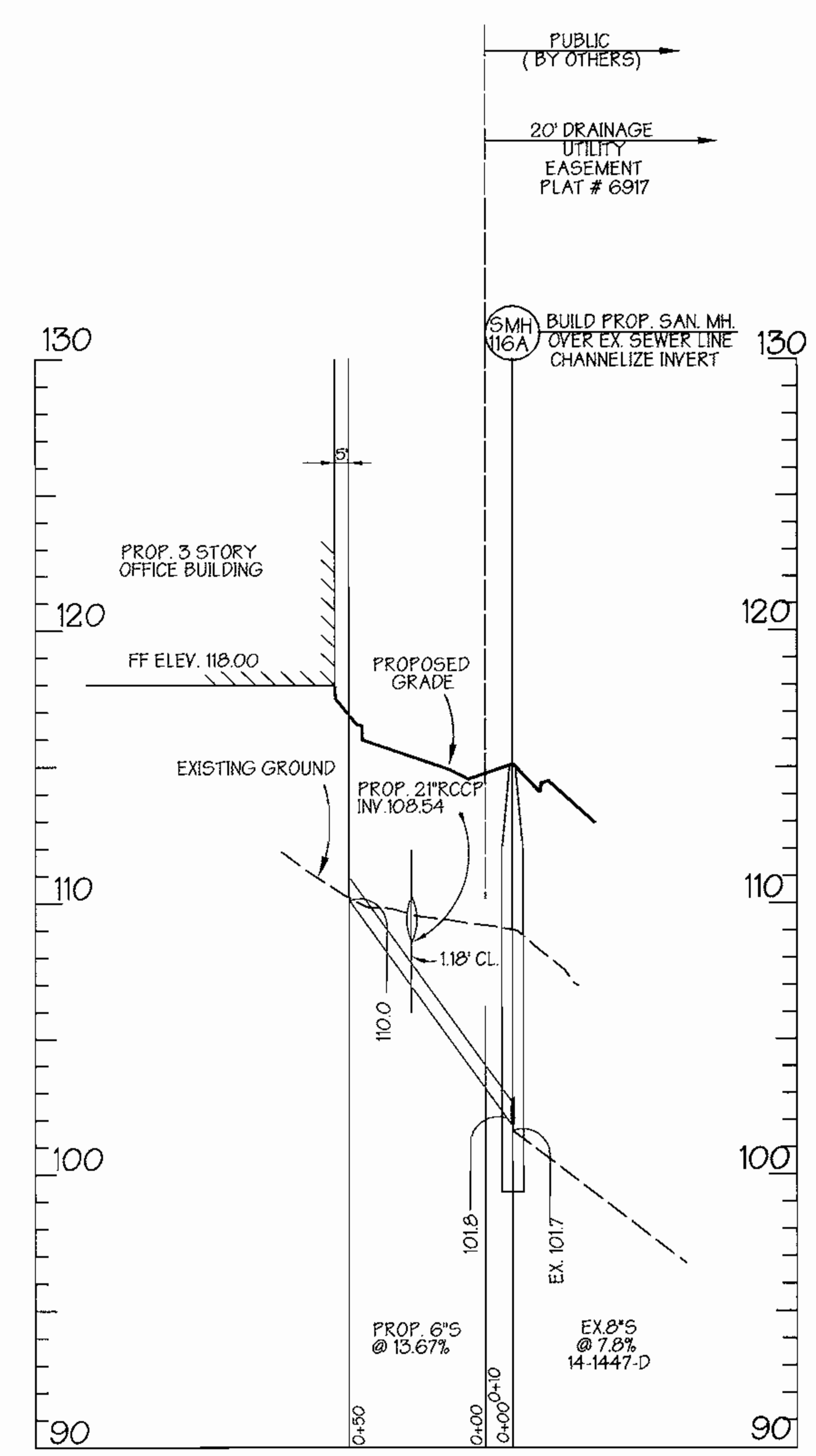
STORM DRAIN PROFILE

SCALE: HORZ.: 1"=50' VERT. 1"=5'



STORM DRAIN PROFILE

SCALE: HORZ.: 1"=50' VERT. 1"=5'



SANITARY SEWER PROFILE

SCALE: HORZ.: 1"=50' VERT. 1"=5'

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

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APPROVED: Howard County Department of Planning and Zoning

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CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

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PARCEL H	DEERPATH ROAD 6865

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DORSEY BUSSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
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WATER CODE B-01 — SEWER CODE 2220000

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DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS

11/15/99 - REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations)

STORM DRAIN & SEWER PROFILES
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

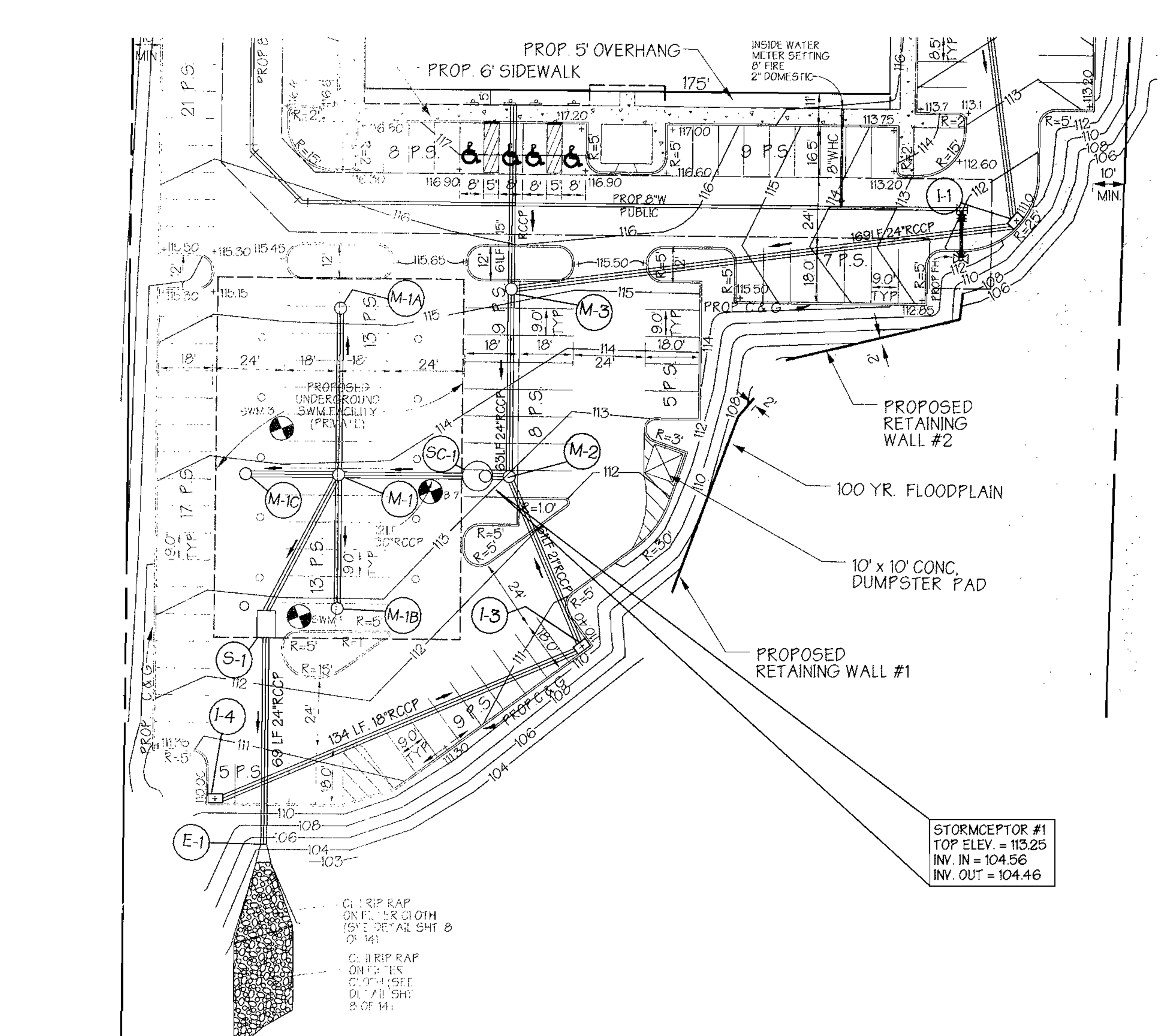
SHEET 3 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

FILENAME: 8779STORM&SEWERPROFILE.S01

PN: 8779

SDP-00-13



PLAN
SCALE: 1" = 30'

1.0 Installation Procedures

1.1 Concrete Stormceptor® Installation

The installation of the concrete Stormceptor® should conform in general to state highway or local specifications for the construction of manholes. Selected sections of a general specification that are applicable are summarized in the following sections

Excavation

Excavation for the installation of the Stormceptor® should conform to state highway or local specifications. Topsoil that is removed during the excavation for the Stormceptor® should be stockpiled in designated areas and should not be mixed with subsoil or other materials. Topsoil stockpiles, and the general site preparation for the installation of the Stormceptor® should conform to state highway or local specifications.

The Stormceptor® should not be installed on frozen ground. Excavation should extend a minimum of 12 inches from the precast concrete surfaces plus an allowance for shoring and bracing where required. If the bottom of the excavation provides an unsuitable foundation additional excavation may be required.

In areas with a high water table, continuous dewatering should be provided to ensure that the excavation is stable and free of water.

Leveling

A 6 to 12 inch layer of granular material (conforming to local or state highway backfill specifications) should be installed, compacted, and leveled at the bottom of the excavation to the proper elevation for the installation of the interceptor base.

Backfilling

Backfill material should conform to state highway or local specifications. Generally, backfill material should be placed in uniform layers not exceeding 12 inches in depth. Each layer should be compacted to 95% of the maximum dry density. Backfill is not to contain topsoil.

Stormceptor® Construction Sequence

The concrete Stormceptor® is installed in sections in the following sequence :

1. aggregate base
2. base slab
3. treatment chamber section(s)
4. transition slab (if required)
5. by-pass section
6. connect inlet and outlet pipes
7. transition slab
8. maintenance access way
9. frame and access cover

The precast base should be placed level at the specified grade. The entire base should be in contact with the underlying compacted granular material. Subsequent sections, complete with joint seals, should be installed in accordance with the precast concrete manufacturer's recommendations.

Adjustment of the Stormceptor® can be performed by lifting the upper sections free of the excavated area, re-leveling the base, and re-installing the sections. Damaged sections and gaskets should be replaced. Once the Stormceptor® has been constructed, the lift holes should be plugged with mortar.

Down Pipe and Riser Pipe

Once the by-pass section has been attached to the treatment chamber the down pipe and riser pipe can be attached. To install these pipes a worker enters the treatment chamber through the central access way in the by-pass section.

STC 900, STC 1200, STC 1800

The inlet pipe (pipe with the tee at the end) is installed by coating the outside of the end of the pipe with quick dry PVC cement and pushing the pipe into the coupling provided on the underside of the by-pass section. The tee must be oriented such that water which enters the treatment chamber is directed tangentially around the inside walls of the chamber

The outlet riser pipe (straight pipe without the tee) is installed in a similar fashion using the quick dry PVC cement and coupling provided underneath the by-pass section near the downstream pipe.

STC 2400, STC 3600, STC 4800, STC 6000, STC 7200

The inlet pipe (pipe with the tee at the end) is installed by coating the outside of the end of the pipe with lubricant and pushing the pipe into the pressure coupling provided on the underside of the by-pass section. The tee must be oriented such that water which enters the treatment chamber is directed tangentially around the inside walls of the chamber.

The outlet riser pipe (straight pipe without the tee) is installed in a similar fashion using pipe lubricant and a pressure coupling provided underneath the by-pass section near the downstream pipe.

Inlet and Outlet Pipes

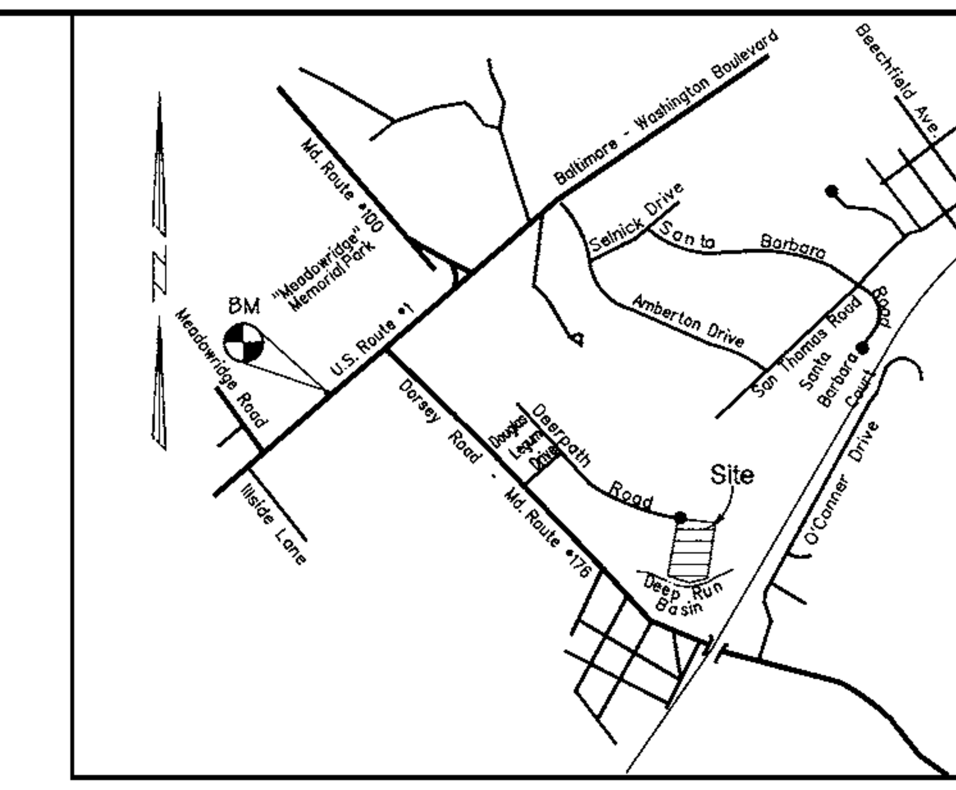
Inlet and outlet pipes should be securely set into the by-pass chamber using grout or approved pipe seals so that the structure is watertight. Kor-N-Seal® boots are normally used and installed at the precast concrete plant prior to shipping. The Kor-N-Seal® boots are applicable for pipes with an outside diameter up to 46 inches. Stormceptor Corporation should be notified if the pipe is to be grouted in the field at the time of ordering (i.e. Kor-N-Seal® boots will not be used) since the boots are generally included in the price quotations.

Installation of the Kor-N-Seal® boots should follow the manufacturer's recommendations. As previously mentioned, the boots will already be attached to the Stormceptor® at the concrete plant. Accordingly, the following procedure should be followed to attach the inlet and outlet pipes to the Stormceptor® in the field :

1. Center the pipe in the boot opening
2. Lubricate the outside of the pipe and/or inside of the boot if the pipe outside diameter is the same as the inside diameter of the boot
3. Position the pipe clamp in the groove of the boot with the screw at the top
4. Tighten the pipe clamp screw to 60 inch pounds
5. On minimum outside diameter installations lift the boot such that it contacts the bottom of the pipe while tightening the pipe clamp to ensure even contraction of the rubber.
6. Move the pipe horizontally and/or vertically to bring it to grade

Frame and Cover Installation

Precast concrete adjustment units should be installed to set the frame and cover at the required elevation. The adjustment units should be laid in a full bed of mortar with successive units being joined using sealant recommended by the manufacturer. Frames for the cover should be set in a full bed of mortar at the elevation specified.



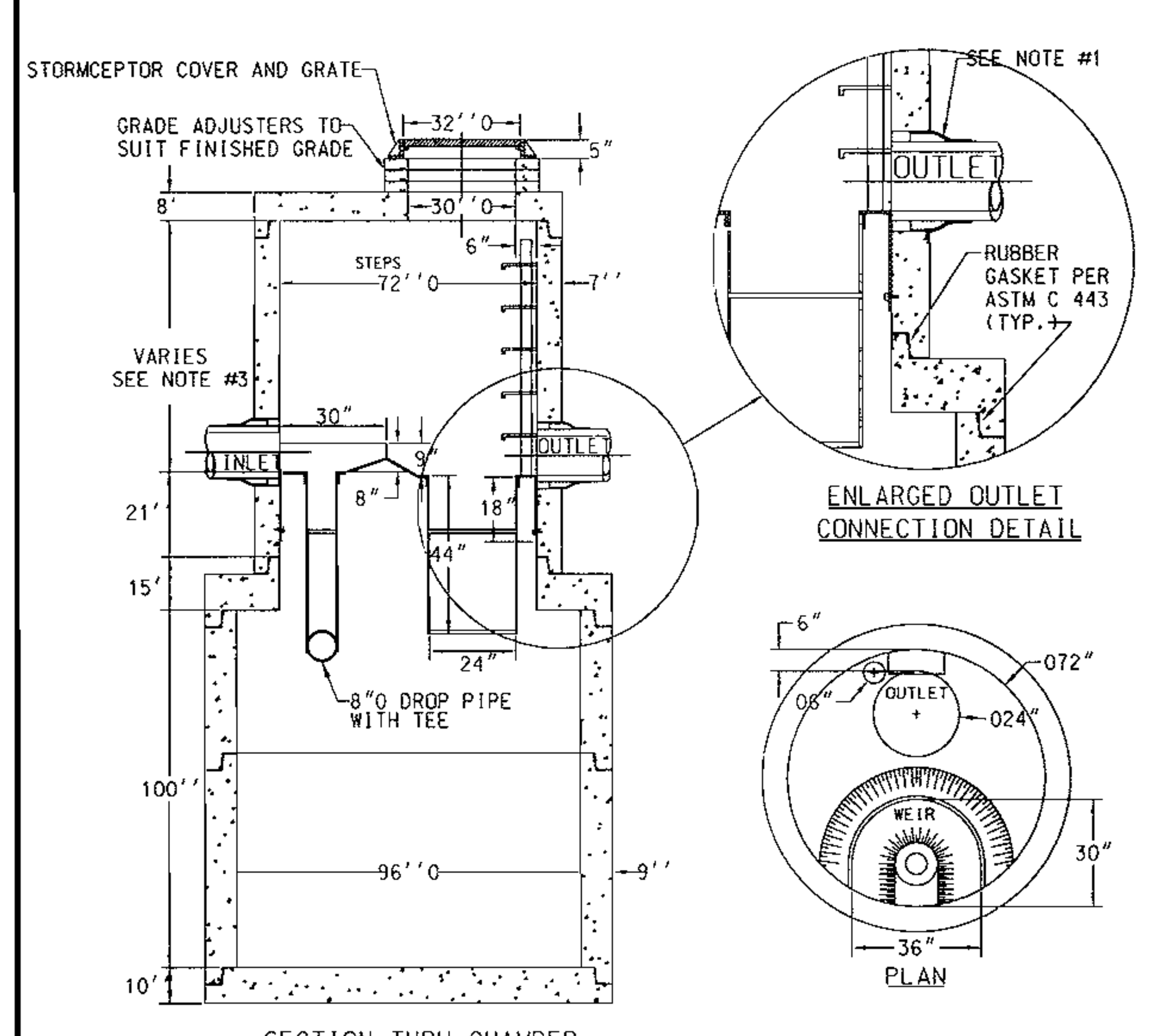
LOCATION MAP
SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV.59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

STC 3600 Precast Concrete Stormceptor[y]

(3600 US Gallon Capacity)
(Disc Design)
IMPERVIOUS AREA = 2.35 Ac ±



NOTE :
1. FLEXIBLE CONNECTIONS ARE RECOMMENDED AT THE INLET AND OUTLET WHERE APPLICABLE.
2. COVER TO BE POSITIONED OVER OUTLET AND VENT PIPE
3. THIS IS A GENERAL ARRANGEMENT DRAWING. CONSULT LOCAL REPRESENTATIVE FOR SPECIAL CONDITIONS.
4. INLET DROP PIPE WILL BE EITHER 8"O OR 12"O WITH A 8"O ORIFICE PLATE
5. ALL CONCRETE JOINTS HAVE RUBBER GASKETS THAT CONFORM TO ASTM C 443
6. U.S. PATENT NO. 4,985,148

DESIGN SPECIFICATIONS
1. ASTM C 478
2. BASE WEIGHT = 11.28 TONS

STC-3600
65
REVISED 10/96

Concrete Stormceptor ® Order Request Form *

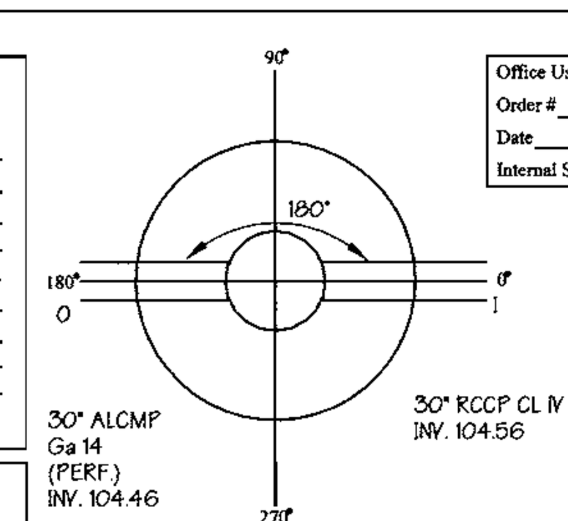
Contractor Information

Name
Address
City
State
Zip Code
Contract
Phone
Fax

Office Use Only
Order #
Date
Internal Sale

Owner Information

Name WHALEN PROPERTIES, L.L.C.
Phone (410) 747-2900
Fax (410) 747-2902



Please draw orientation of inlet and outlet pipes on diagram along with pipe diameter (in.) and invert elevation (ft.). Clearly mark inlet pipes with an I and outlet pipes with an O and provide the inlet/outlet pipe angle in degrees.

Stormceptor® Model

900	[ ]	3600	[X]
1200	[ ]	4800	[ ]
1800	[ ]	6000	[ ]
2400	[ ]	7200	[ ]

Insert Size

22"	[ ]
32"	[ ]
44"	[X]
Custom	

Manhole Number	SC-1
Top Elevation (ft)	113.25
Inlet Pipe Invert (ft)	104.56
Outlet Pipe Invert (ft)	104.46
Pipe Type : RCCP/ALCMP	
Pipe Inside Diameter (in) [ID] RCCP	30.0
Pipe Outside Diameter (in) [OD] RCCP	37.05

Project Name DORSEY BUSSINESS CENTER
Approximate time frame until required delivery (weeks)
Delivery Address: Street
City State Zip Code
Designer Company
Designer Contract Phone Fax

Please fax this order to stormceptor at (301) 762-4190
For Technical Assistance Please Call Stormceptor Corporation at (301) 762 - 8361 or toll free at 1 (800) 762 - 4703

ALL LIFTING APPARATUS TO BE PROVIDED BY THE INSTALLATION CONTRACTOR

* TO BE INCLUDED ON SWM PLAN BY DESIGNER

OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE

1. The Stormceptor water quality structure shall be periodically inspected and cleaned to maintain operation and function. The owner shall inspect the Stormceptor unit yearly at a minimum, utilizing the Stormceptor Inspection Monitoring Form. Inspections shall be done by using a clear Plexiglass tube ("sludge judge") to extract a water column sample. When the sediment depths exceed the level specified in Table 6 of the Stormceptor Technical Muaual, the unit must be cleaned.
2. The Stormceptor water quality structure shall be checked and cleaned immediately after petrolum spills. The owner shall contract the appropriate regulatory agencies.
3. The maintenance of the Stormceptor unit shall be done using a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons and other materials in the unit. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
4. The inlet and outlet pipes shall be checked for any obstructions at least once every six months. If obstructions are found the owner shall have them removed. Structural parts of the Stormceptor unit shall be repaired as needed.
5. The owner shall retain and make the Stormceptor Inspection/ Monitoring Forms available to the Howard County Officials upon their request.

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

~~APPROVED: HOWARD SOIL CONSERVATION DISTRICT~~

~~PLAN NUMBER DATE~~

~~Reviewed for Howard SCD and meets Technical Requirements~~

~~USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE~~

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00
DIRECTOR — DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

ENGINEER CERTIFICATION:
I certify that this plan for erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.
Engineer ________ Date 7/13/00
Name JAMES A. MARKLE JR. PE # 11005

DEVELOPER CERTIFICATION:
I/We certify that all development and construction will be done according to this plan, and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.
Developer ________ Date 07/13/00
Name STEPHEN W. WHALEN Jr.

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

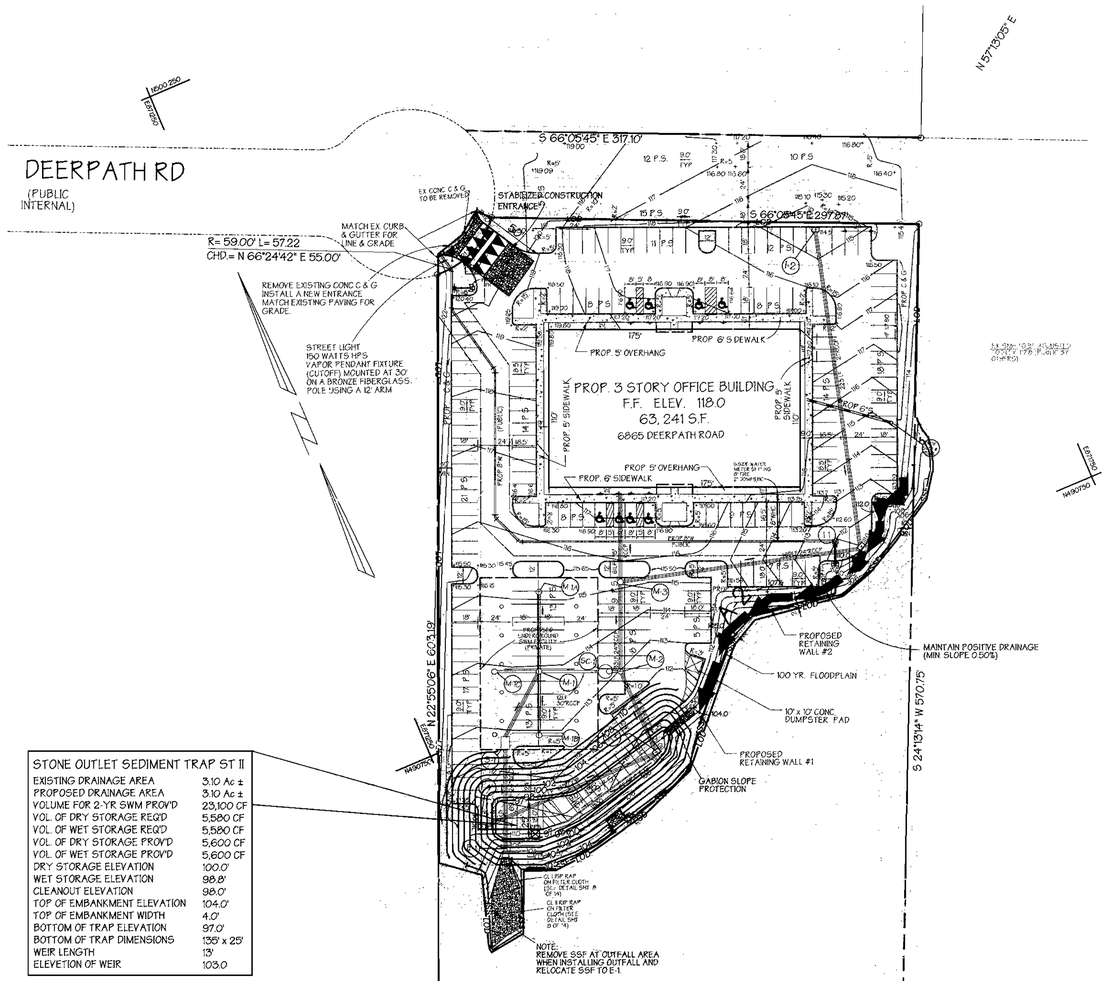
DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.
REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

STORMCEPTOR PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 4 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000



PLAN

SCALE: 1" = 50'

STONE OUTLET SEDIMENT TRAP ST II	
EXISTING DRAINAGE AREA	3.10 Ac ±
PROPOSED DRAINAGE AREA	3.10 Ac ±
VOLUME FOR 2-YR SWM PROV'D	23,100 CF
VOL. OF DRY STORAGE REQ'D	5,580 CF
VOL. OF WET STORAGE REQ'D	5,580 CF
VOL. OF DRY STORAGE PROV'D	5,600 CF
VOL. OF WET STORAGE PROV'D	5,600 CF
DRY STORAGE ELEVATION	100.0'
WET STORAGE ELEVATION	98.8'
CLEANOUT ELEVATION	98.0'
TOP OF EMBANKMENT ELEVATION	104.0'
TOP OF EMBANKMENT WIDTH	4.0'
BOTTOM OF TRAP ELEVATION	97.0'
BOTTOM OF TRAP DIMENSIONS	139' x 25'
WEIR LENGTH	13'
ELEVETION OF WEIR	103.0

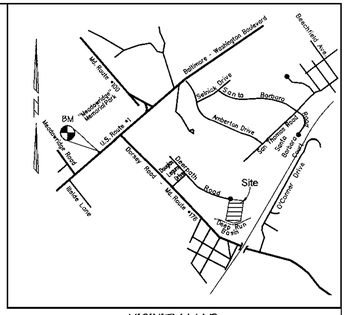
SEQUENCE OF OPERATIONS

1. OBTAIN GRADING PERMIT.
2. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS BEFORE BEGINNING WORK. (1 DAY)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
4. INSTALL ALL SEDIMENT CONTROL DEVICES. (5 DAYS)
5. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN GRADING OPERATIONS. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL DEVICES. (10 DAYS)
6. BEGIN BUILDING FOOTINGS AND BUILDING CONSTRUCTION. (4 DAYS)
7. BEGIN UNDERGROUND STORM WATER MANAGEMENT CONSTRUCTION (SEE APPROVED STORM WATER MANAGEMENT PLANS). INSTALL UTILITIES. UTILITIES IN TRAP AREA TO BE INSTALLED WHEN TRAP IS REMOVED. PROVIDE INLET PROTECTION WHERE NECESSARY. NOTIFY THE ENGINEER IN CHARGE (410) 825-8120, SO THAT HE OR SHE MAY COMPLETE THE AS-BUILT SURVEY AND STUDY AND, SUBMIT TO THE APPROPRIATE AGENCIES WITHIN 30 DAYS. (14 DAYS)
8. FINE GRADE AND INSTALL CURB & GUTTER AND STONE BASE EXCEPT FOR TRAP AREA. INSTALL RETAINING WALLS #1 AND #2. WHEN STONE BASE IS INSTALLED AND SITE IS STABILIZED, WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE TRAP AND EARTH DIKE. GRADE THIS AREA INSTALL REMAINING UTILITIES, CURB & GUTTER AND STONE BASE AND STABILIZE. (24 DAYS)
9. PAVE ALL AREAS, COMPLETE LANDSCAPING AND STABILIZE. (10 DAYS)
10. AFTER ALL AREAS ARE PERMANENTLY STABILIZED, AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL MEASURES. STABILIZE ANY AREA AFFECTED BY THIS PROCESS. (5 DAYS)

LIMIT OF DISTURBANCE = 3.25 Ac ± OR 141,570 SF

Legend

- Ex. 2' Contours — 394
- Ex. 10' Contours — 395
- Prop. 2' Contours — 394
- Prop. 10' Contours — 395
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop Water
- Concrete Paving
- Light Duty Paving (P-3)
- Wetlands — W W W W
- Flood Plain — FP FP FP
- Ex. Conc. C&G to be Removed
- Proposed Reverse Conc. c & g
- Ex. Trees
- Limit of Disturbance — LOD
- Silt Fence — SF
- Stabilized Construction Entrance — S.C.E.
- Gabion Slope Protection
- Earth Dike — A-2
- Removable Pumping Station (RPS)



VICINITY MAP

SCALE: 1" = 2000'

BENCHMARK :

HUB # 371A ELEV 59.6633

DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 15' FROM R/W LINE.

NOTE:
APPLICATION TRACKING NUMBER: 199964884
N.E.W.W. DIVISION NUMBER: 99-NT-0206
PROJECT: PROPOSED CONTRUCTION OF STORMWATER OUTFALL IN THE 100-YR FLOODPLAIN OF THE DEEP RUN LOCATED AT DEERPATH ROAD IN HALETHORPE, HOWARD COUNTY, MARYLAND

INLET PROTECTION

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION 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 E-16-1 (OR AS MAY BE AMENDED).

* STORM DRAINS TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL.

NOTE:
THIS PLAN IS TO BE USED FOR THE INSTALLATION AND MAINTENANCE OF THE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES ONLY. SEE SITE PLAN FOR MORE SPECIFIC DETAILS.

NOTE:
EARTH QUANTITIES ARE PROVIDED FOR THE CONVIENANCE OF THE CONTRACTOR ONLY. CONTRACTOR IS ADVISED TO PERFORM HIS OWN ANALYSIS PRIOR TO PLACING A BID ON THIS ITEM.

NOTE:
FOR SEDIMENT CONTROL NOTES AND DETAILS, SEE SHEET 6 OF 10.

NOTE:
ANY AREA NEEDED FOR TEMPORARY STOCKPILE WILL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE AND UPSTREAM FROM A SEDIMENT CONTROL MEASURE, BUT LOCATED SUCH AS NOT TO IMPEDE UPON THE MEASURE.

NOTE:
SPOT ELEVATIONS ALONG A-2 DIKE ARE FOR PROPOSED CONDITIONS.

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

APPROVED/HOWARD SOIL CONSERVATION DISTRICT — 7/25/00 DATE

PLAN NUMBER

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — 7/25/00 DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/7/00 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 9/1/00 DATE

DIRECTOR — 9/6/00 DATE

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX ZONE MAP	ELECT. DIST.	CENSUS TRACT
19391	6		37.43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

SEDIMENT & EROSION CONTROL PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 5 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

F.N. 8779

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

ENGINEER CERTIFICATION:
* I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personal knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion.

Signature of Engineer — Date 7/13/00
Print Name JAMES A. HARKLE, JR. PE # 11005

DEVELOPER CERTIFICATION:
* I certify that all development and/or construction will be done according to these plans, and that any responsible personel 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard Soil Conservation District.

Signature of Developer — Date 07/13/00
Print Name STEPHEN W. WHALEN, Jr.

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.F./K.U.
DRAWN BY: H.C.
CHECKED BY: B.F.

REVISIONS
11/15/99 - REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

FILENAME: 8779SEDIMENTNOTES.SO1

SDP-00-13

Stabilization Specifications

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 areas Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory Soil samples may be taken for engineering purposes may also be used for chemical analysis

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

v. Soil Amendments : Use only one of the following schedules

I. Preferred Apply 2 tons per acre dolomitic limestone (92 lbs. / 100 s f.) and 600 lbs. per acre 10-10-10 fertilizer (14 lbs / 100 s f.) Before seeding, harrow or disc into upper three inches of soil At time of seeding, apply 400 lbs per acre 30 0 0 auriform fertilizer (9 lbs / 100 s f)

II. Acceptable Apply 2 tons per acre dolomitic limestone (92lbs / 1000 s f.) and 1000 lbs. per acre 10 10-10 fertilizer (23 lbs / 1000 s f) before seeding, harrow or disc upper three inches of soil.

C. Seedbed Preparation

i. Temporary Seeding

a. Seedbed preparation shall consist of loosening soil to a depth of suitable agricultural or construction equipment, such as disc 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 not 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 in this job

ii. Inoculant - The inoculant for treating legume seed in the seed mixture shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species Inoculants shall not be used later 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 degrees F can weaken bacteria and make inoculant less effective

NOTE: SEED TAGS SHALL BE MADE AVAILABLE TO THE INSPECTOR TO VERIFY TYPE AND RATE OF SEED USED.

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 rates amounts will not exceed the following: nitrogen; maximum of 100 lbs per acre total soluble nitrogen, P205 (phosphorus): 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 material 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 of the seeding season, mulch alone shall 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 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 tool 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 the crests of banks. The remainder of area should appear uniform after binder application Synthetic binders - such as Acrylic DLR (Argo-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 3000 feet long

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.

A. Seed Mixtures Permanent Seeding

I. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26 If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintainance areas, see Sections IV Sod and V Turfgrass

II. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

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.

A. Seed Mixtures - Permanent Seeding

i. select one or more off the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from figure 5) and enter them in Permanent Seeding Summary below, along with application rates and seeding dates Seeding depths can be estimated using Table 26. If this Summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, dunes or for special purposes such as wildlife or asthetic treatment may be found in USDA-SCS Technical Field Office Guide, Section 342 - Critical Area Planting. For special lawn maintainance areas, see Sections IV Sod and V Turfgrass.

II. For sites having disturbed areas over 5 acres, the rates shownon this table shall be deleted and the rates recommended by the testing agency shall be written in.

iii. For areas recieving low maintenance, apply ureaform fertilizer (46-0-0) at 3-1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil ammendments shown in the table below, to be performed at the time of seeding

Section IV - Sod: To provide quick cover on disturbed areas (2:1 grade or steeper).

A. General specifications

I. Class of turfgrass sod shall be Maryland or Virginia State Certified or Approval. 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 its 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.

vi. Site Preparation : Fertilizer and Lime application rates will be determined by soil test. Under unusual circumstances where there is insufficent time for a complete soil test, fertilizer and lime may be applied in amounts shown under vi-b, below

a. Prior to sodding, the surface will be cleared of all trash, debris, and of all roots,brush, wire, grade stakes and other objects that would interfere with planting, fertilizing, or maintenance operations.

b. Where soil is acid or composted of heavy clays, ground limestone will be spread at the rate of 2 tons per acre(100 lbs / 1000 s.f.). In all soils 1000 lbs. per acre (25 lbs. / 1000 s.f.) of 10-10-10 fertilizer or equivalent will be uniformly applied and mixed into the top thre inches of soil with the required time.

c. All areas recieving sod will be uniformly fine graded. Hard packed earth will be scarified prior to placement of sod.

24.0 MATERIALS SPECIFICATIONS

Table 27 Geotextile Fabrics

CLASS	APPARENT OPENING SIZE MM. MAX.	GRAB TENSILE STRENGTH LB. MIN.	BURST STRENGTH PSI. MIN.
A	0.30 **	250	500
B	0.60	200	320
C	0.30	200	320
D	0.60	90	145
E	0.30	90	145
F (SILT FENCE)	0.40-0.80*	90	190

* US Std. Sieve CW-02215 ** 0.50 MM. MAX. FOR SUPER SILT FENCE

The properties shall be determined in accordance with the following procedures:

- Apparent opening size MSMT 323
- Grab tensile strength ASTM D 1682: 4 x 8" specimen, 1x2" clamps, 12" /min strain rate in both principal directions of geotextile fabric.
- Burst strength ASTM D 3786

The fabric shall be inert to commonly encountered chemicals and hydrocarbons, and will be rot and mildew resistant. It shall be manufactured from fibers consisting of long chain synthetic polymers, and composed of a minimum of 85% by weight of polyolephins, polyesters, or polymides. The geotextile fabric shall resist deterioration from ultraviolet exposure.

In addition, Classes A through E shall have a 0.01 cm./sec. minimum permeability when tested in accordance with MSMT 507, and an apparent minimum elongation of 20 percent (20%) when tested in accordance with the grab tensile strength requirements listed above.

Silt Fence
Class F geotextile fabrics for silt fence have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modules when tested in accordance with MSMT 509. The material shall also have a 0.3 gal./ft.²/min flow rate and seventy-five percent (75%) minimum filtering efficiency when tested in accordance with MSMT 322

Geotextile fabrics used in the construction of silt fence shall resist deterioration from ultraviolet exposure. The fabric shall contain sufficient amounts of ultraviolet ray inhibitors and stabilizers to provide a minimum of 12 months of expected usable construction life at a temperature range of 0 to 120 degrees F.

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 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, provides a reliable means of consumer protection and assures 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 use 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 3 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 lb./1000 square feet. One or more cultivars may be blended.

iv. Kentucky Bluegrass/Fine Fescue - Shade 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 and 60 - 70%. Seeding rate: 1 1/2 - 3 lbs./1000 square feet. A minimum of 3 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 of seeding

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

Central MD: March 1-May 15, August 15-October 15 (Hardiness Zones - 6b)

Southern MD, Eastern Shore: March 1-May 15, August 15-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, reestablish 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 originally 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

Table 25 - Permanent Seeding for Low Maintenance Areas   HARDINESS ZONE 6b

MIX	SEED MIX (USE CERTIFIED MATERIAL IF AVAILABLE)	PLANTING RATE LBS/AC	PLANTING RATE 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	8/15-10/15	8/15-11/15	NOTES
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	
2	KENTUCK BLUEGRASS (50%) CREEPING RED FESCUE OR A HARD FESCUE (40%) REDTOP (10%)	150	3.4	MOIST TO MODERATELY DRY TO DRY	5b		X			X			B
					6a		X			X			
					6b	X					X		
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	
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		
5	TALL FESCUE (85%) OR PERENNIAL RYEGRASS (50%) PLUS CROWNVETCH OR FLATPEA	110 20 20 20	2.5 .46 .46 .46	MOIST TO DRY	5b		X			X			E
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
6	WEEPING LOVEGRASS (17%) SERECIA LESPEDEZA (83%)	4 20	.09 .46	DRY TO VERY DRY	6a	X		X					F
					7a	X		X					
					7b	X		X					
7	TALL FESCUE (83%) WEEPING LOVEGRASS (2%) PLUS SERECIA LESPEDEZA (15%)	110 3 20	2.5 .07 .46	DRY TO VERY DRY	5b		X		X	X			G
					6a		X		X	X			
					6b	X		X			X		
					7a	X		X				X	
					7b	X		X				X	
8	REED CANARYGRASS (75%) REDTOP (6%) PLUS BIRDSFOOT TREEFOIL (19%)	40 3 10	.92 .07 .23	WET TO MODERATELY DRY	5b		X			X			H
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
9	TALL FESCUE (86%) POA TRIVIALIS (7%) BIRDSFOOT TREEFOIL (7%)	125 10 10	2.9 .23 .23	WET TO MODERATELY DRY	5b		X			X			I
					6a		X			X			
					6b	X					X		
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3.4 .69	WET TO DRY	5b		X			X			J
					6a		X			X			
					6b	X					X		
					7a	X						X	
					7b	X						X	
11	HARD FESCUE (100%)	75	1.7	MOIST TO DRY	5b		X			X			K
					6a		X			X			
					6b	X					X		
					7a	X						X	

NOTES
A. USED BY SHA ON SLOPED AREAS ADD A LEGUME FOR SLOPES > THAN 3:1
B. USED IN MEDIAN AREAS BY SHA SHADE TOLERANT.
C. POPULAR MIX - PRODUCES PERMANENT GROUNDCOVER QUICKLY. BLUEGRASS THICKENS STAND
D. BEST USE ON SHADY SLOPES NOT ON POORLY DRAINED CLAYS.
E. USE ON LOW MAINTENANCE, STEEP SLOPES USE TALL FESCUE IN DRAUGHTY CONDITIONS CROWN VETCH BEST FOR 5b 6a, 6b
F. SUITABLE FOR SEEDING IN MID-SUMMER.
G. WEEPING LOVEGRASS MAY BE SEEDED WITH TALL FESCUE IN MID-SUMMER SERECIA LESPEDEZA IS BEST SUITED FOR ZONES 7a AND 7b
H. USE ON POORLY DRAINED SOILS - DITCHES OR WATERWAYS. BIRDSFOOT TREEFOILS BEST FOR ZONES 5b, 6a, ABOVE 2,000 FEET
I. USE IN AREAS OF MOIST SHADE. POA TRIVIALIS THRIVES IN WET SHADY AREAS
J. TALL FESCUE MAY BE SEEDED ALONE. THE HARD FESCUE PROVIDES BETTER SHADE TOLERANCE AND PRODUCES A BETTER STAND
K. LOW FERTILITY GRASS. REQUIRES INFREQUENT MOWING GOOD COMPANION FOR WILDFLOWERS

PERMANENT SEEDING RATES

FERTILIZER RATE			LIME RATE
(10 20 20) N 90LB/AC (2.0 LB/1000 S.F.)	P205 175 LB/AC (4.0 LB/1000 S.F.)	K20 175 LB/AC (4.0 LB/1000 S.F.)	2 TONS/AC (100 LB/1000 S.F.)

NOTE
FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES THE RATES SHOWN ABOVE FOR PERMANENT SEEDING SHALL BE DELETED AND THE RATES RECOMMENDED BY THE SOIL TESTING AGENCY SHALL BE USED. SOIL TESTING SHALL BE PERFORMED AT THE TIME OF FINE GRADING AND THE RESULTS SHALL BE FURNISHED TO THE SEDIMENT CONTROL INSPECTOR.

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 GREATER THAN 3:1,
   B) 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
4. IF REQUIRED BY SEDIMENT CONTROL INSPECTOR 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 ALONE 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 4.87297 ACRES
   AREA DISTURBED 3.25 ACRES
   AREA TO BE ROOFED OR PAVED 2.35 ACRES
   AREA TO BE VEGETATIVELY STABILIZED 0.75 ACRES
   TOTAL CUT 7,070 C.Y.
   TOTAL FILL 4544 C.Y. (INCLUDES 15% COMPACTION)
   OFFSITE WASTE/BORROW AREA LOCATION : EXCESS CUT SHALL BE TAKEN TO A SITE WITH AN OPEN GRADING PERMIT.
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 CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 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.

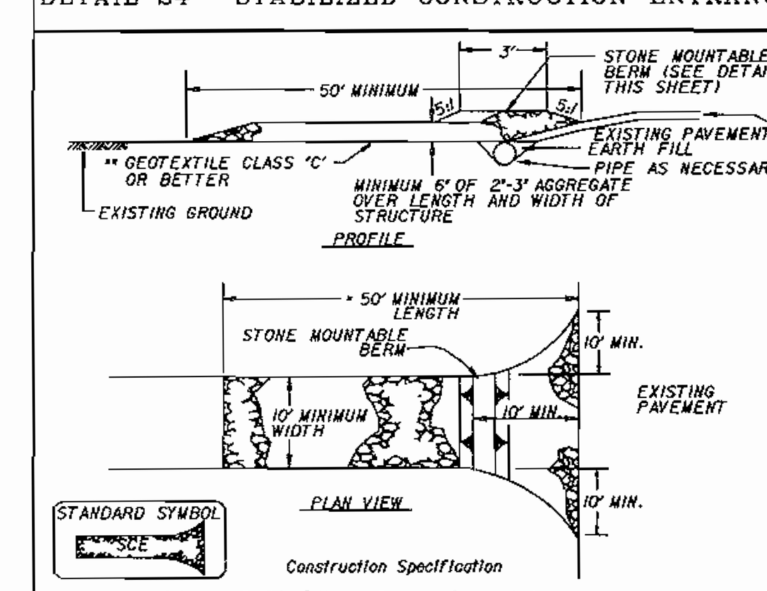
Table 26 - Temporary Seeding Rates, Depths, and Dates   HARDINESS ZONE 6b

SPECIES	MINIMUM SEEDING RATES PER ACRE	MINIMUM SEEDING RATES 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:						BY			BY			BY
BARLEY	2.5 B.U (122 lbs.)	2.80	1-2	X	-	10/15	X	-	10/15	X	-	10/1
OATS	3 B.U. (96 lbs.)	2.21	1-2	X	-	-	X			X		
RYE	2.5 B.U. (140 lbs.)	3.22	1-2	X	-	X	X	-	X	X		X
BARLEY OR RYE PLUS FOXTAIL MILLET	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	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	50 lbs.	1.15	1/2	-	X	-	-	X			X	

TEMPORARY SEEDING RATES

FERTILIZER RATE	LIME RATE
(10-10-10) 600 LB/AC (15 LB/1000 S.F.)	2 TONS/AC (100LB/1000 S.F)

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



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.

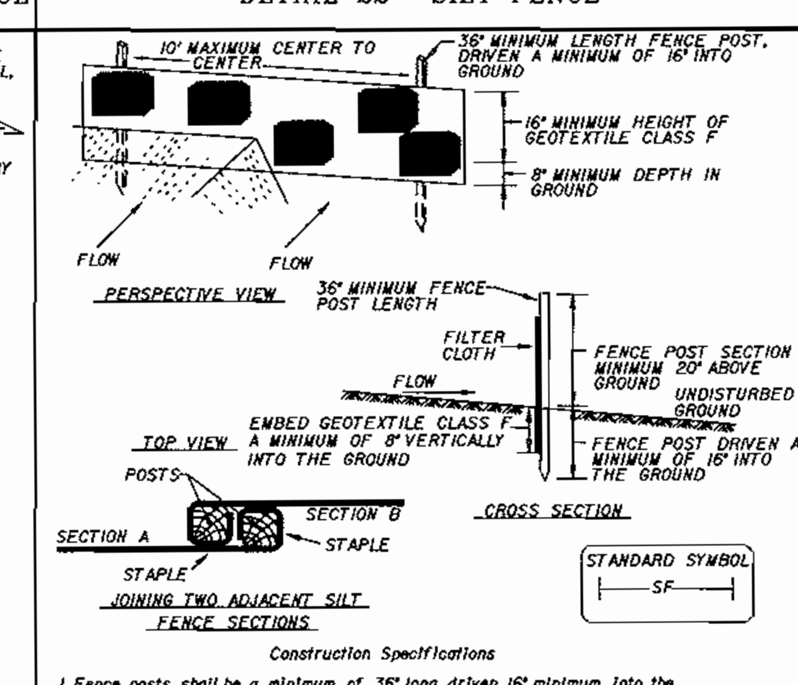
4. Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 22 - SILT FENCE



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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SILT FENCE

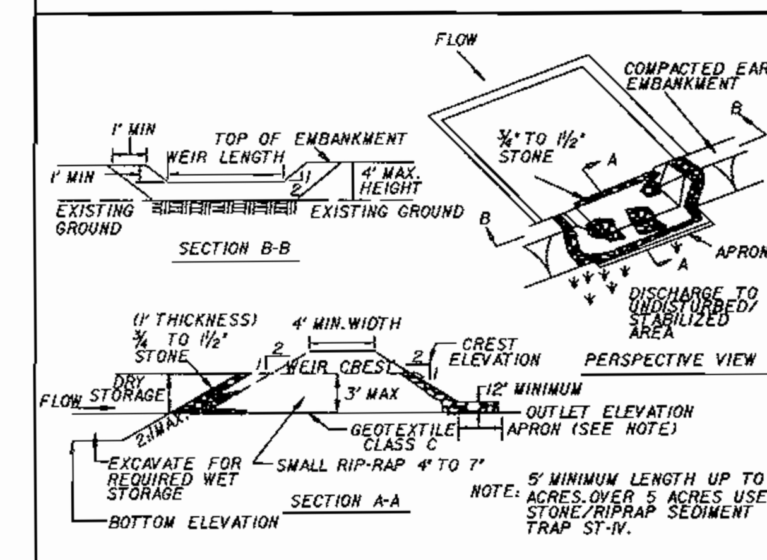
Silt Fence Design Criteria

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

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of ¾" to 1½" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STONE OUTLET SEDIMENT TRAP - ST II

6. The structure shall be inspected periodically and after each rain and repairs made as needed.

7. Construction of traps shall be carried out in such a manner that sediment pollution is abated. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. Points of concentration inflow shall be protected in accordance with Grade Stabilization Structure criteria. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon trap completion and monitored and maintained erosion free during the life of the trap.

8. The structure shall be dewatered by approved methods, removed and the area stabilized when the drainage area has been properly stabilized.

9. Refer to Section D for specifications concerning trap dewatering.

10. Minimum trap depth shall be measured from the weir elevation.

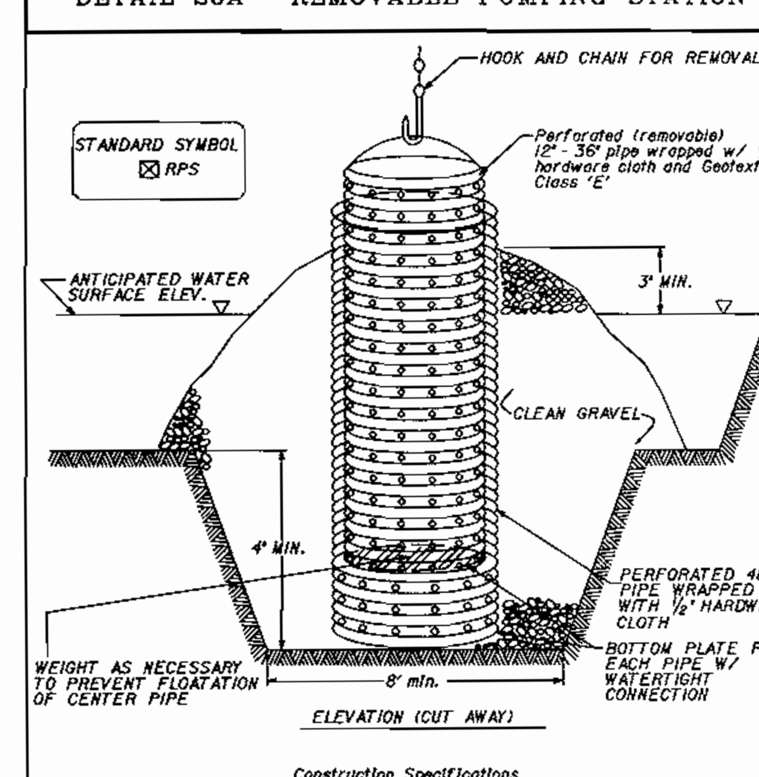
11. The elevation of the top of any dike directing water into the trap must equal or exceed the elevation of the trap embankment.

12. Geotextile Class C shall be placed over the bottom and sides of the outlet channel prior to the placement of stone. Sections of filter cloth must overlap at least 1' with the section nearest the entrance placed on top. The filter cloth shall be embedded at least 6" into existing ground at the entrance of the outlet channel.

13. Outlet - An outlet shall be provided, including a means of conveying the discharge in an erosion free manner to an existing stable channel.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C - 9 - 10	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 20A - REMOVABLE PUMPING STATION



Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with ½" hardware cloth to prevent backfill material from entering the perforations.

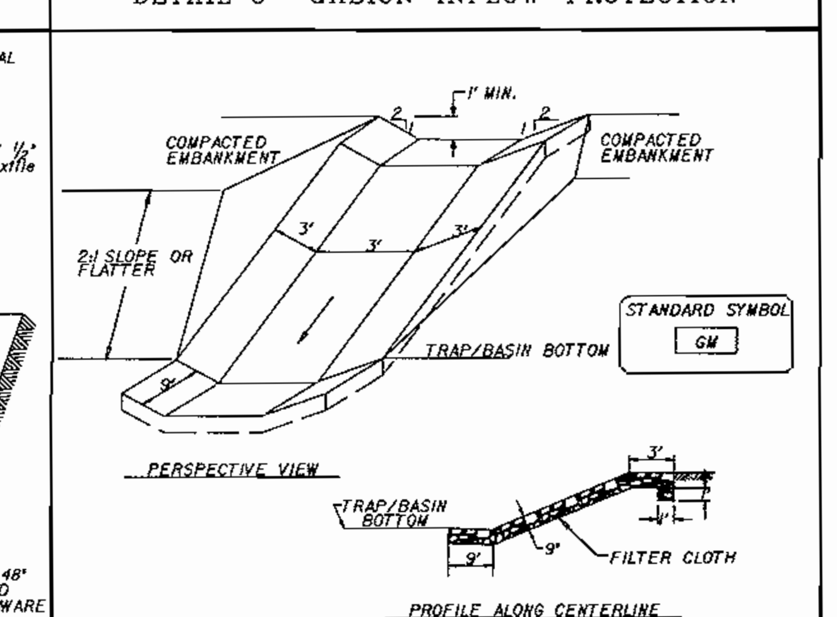
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating a corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be ½" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with ½" hardware cloth first, then wrapped again with Geotextile Class E.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE D - 12 - 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 6 - GABION INFLOW PROTECTION



Construction Specifications

1. Gabion inflow protection shall be constructed of 9' x 3' x 9" gabion baskets forming a trapezoidal cross section 1' deep, with 2:1 side slopes, and a 3' bottom width.

2. Geotextile Class C shall be installed under all gabion baskets.

3. The stone used to fill the gabion baskets shall be 4" - 7".

4. Gabions shall be installed in accordance with manufacturers recommendations.

5. Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B - 7 - 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE 7/25/00

PLAN NUMBER

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE 7/25/00

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/1/00

DIRECTOR DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME		SECTION NAME		PARCEL #	
DORSEY BUSINESS CENTER		1		H	
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE	B-01	SEWER CODE	2220000		

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND ... No. 11069 REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.F./K.U.
DRAWN BY: H.C.
CHECKED BY: B.F.
REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations)

SEDIMENT & EROSION CONTROL NOTES AND DETAILS FOR DORSEY BUSINESS CENTER PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 6 OF 14

SDP-00-13
SCALE: NONE
FEB. 17, 2000

PN 8779

FILENAME: 8779SEDIMENTNOTES.S01

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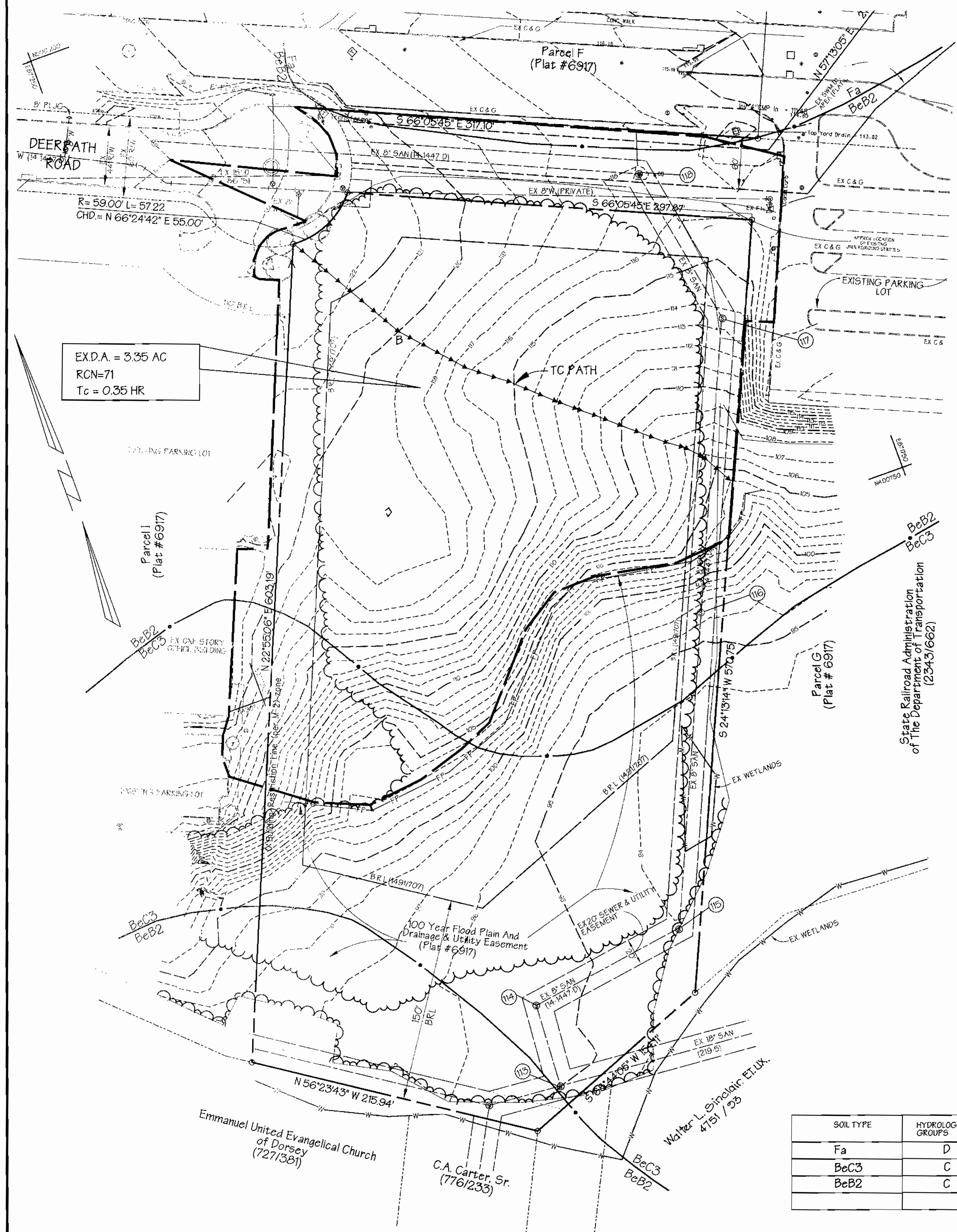
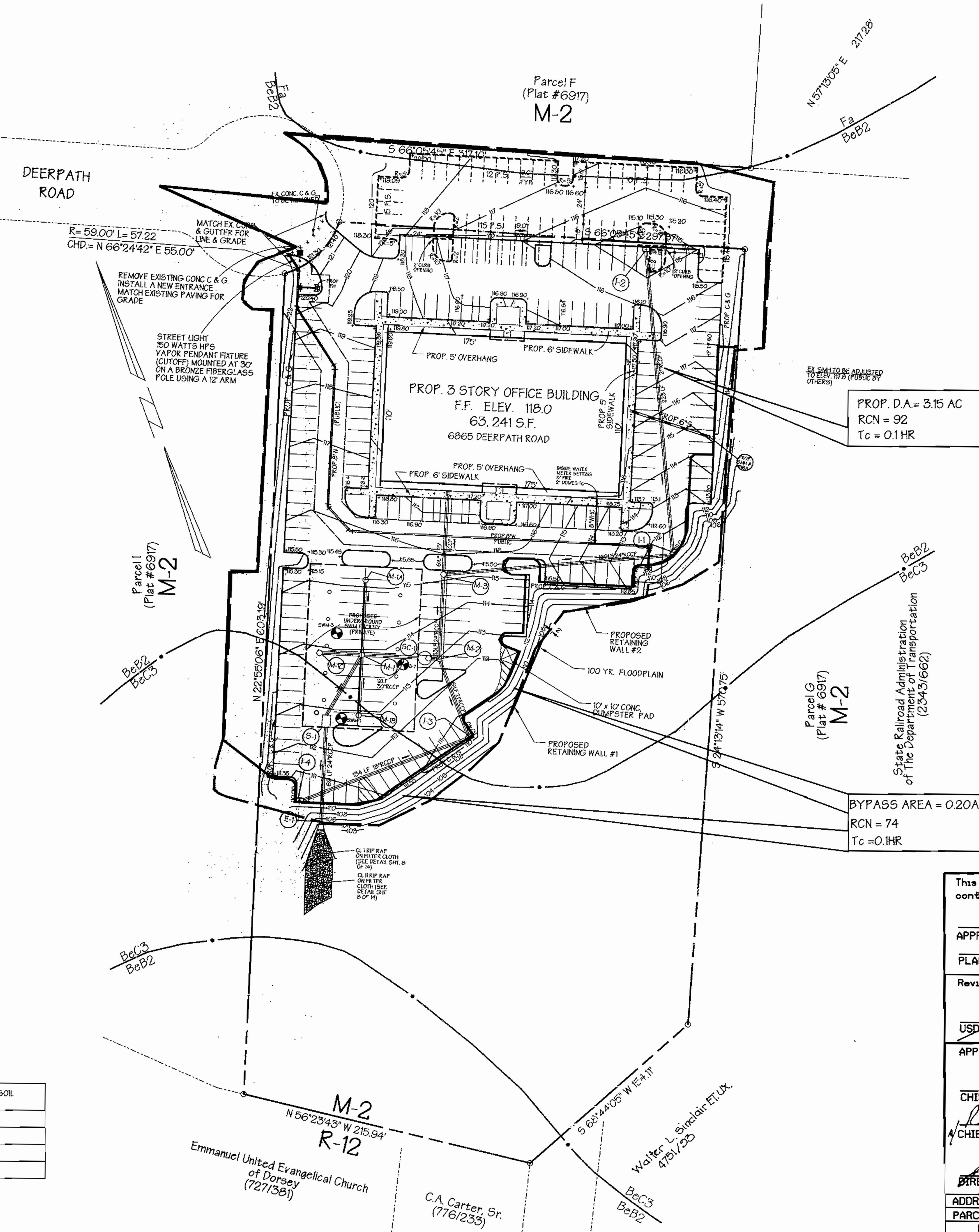
SDP-00-13



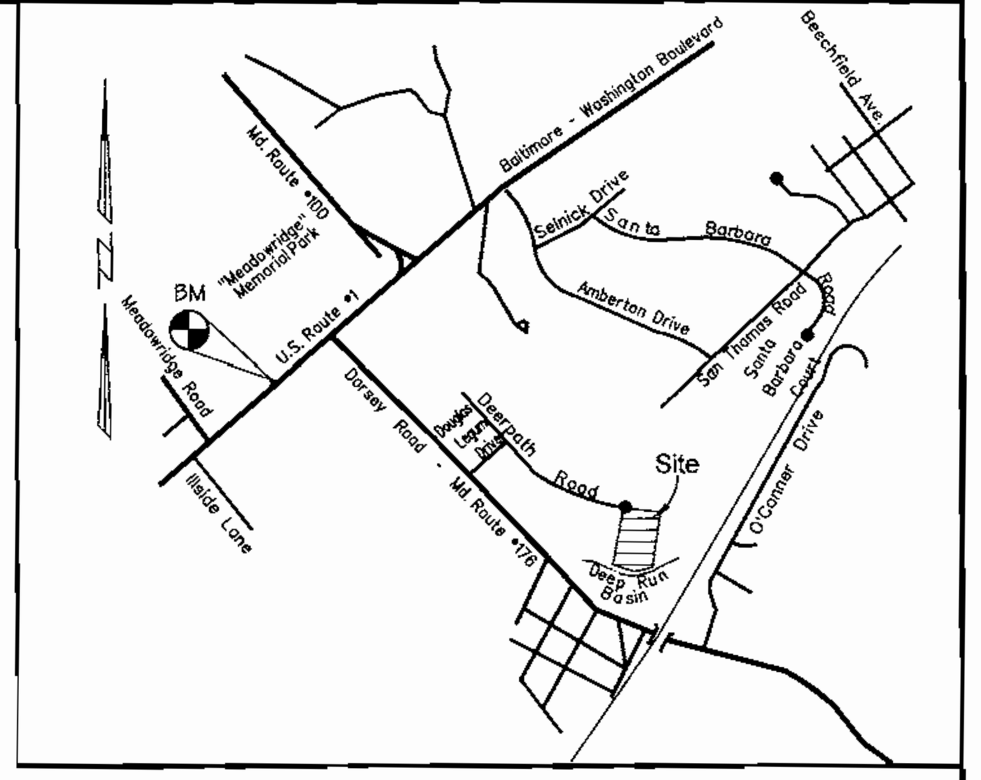
EXISTING DRAINAGE AREA MAP

SCALE : 1" =50'



PROPOSED DRAINAGE AREA MAP

SCALE : 1" =50'



LOCATION MAP

SCALE 1" = 2000'

BENCHMARK:

HUB # 371A ELEV.59.6633

DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

SOIL TYPE	HYDROLOGIC SOIL GROUPS
Fa	D
BeC3	C
BeB2	C

LEGEND:

- TIME OF CONCENTRATION PATHS
- EXISTING DRAINAGE AREA
- SOIL LINES
- PROPOSED DRAINAGE AREA

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/1/00

DIRECTOR DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL *
DORSEY BUSSINESS CENTER	1	H

PLAT *	BLOCK *	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37/43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

PREPARED BY :

GWS

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.

Civil Engineers and land Surveyors

1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — No. 11005 — REGISTERED PROFESSIONAL ENGINEER

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS

11/15/99
-REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

STORMWATER MANAGEMENT
DRAINAGE AREA MAP
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 7 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

FILENAME: 8779SITEPLAN.S01

PN: 8779

\micro\8779swmdrainagearea.s01 Jul. 13. 2000 14:16:11

SDP-00-13

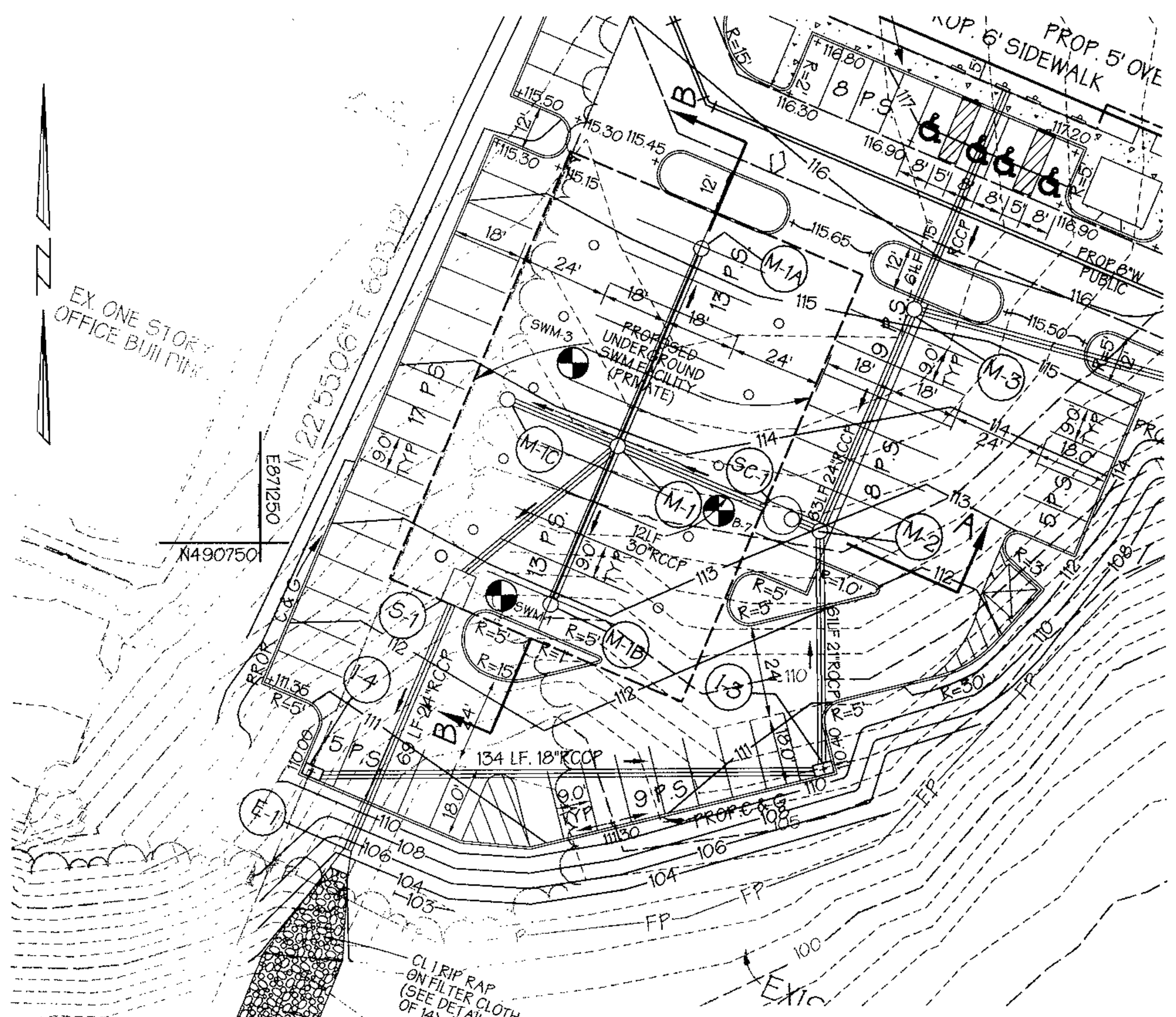
NOTE:
NO TREES, SHRUBS OR OTHER WOODY VEGETATION WILL BE ALLOWED WITHIN 50' OF THE INLET STRUCTURE IN THE POOL AREA AND NOT ALLOWED WITHIN 20' FROM THE TOE OF THE EMBANKMENT.

NOTE:
THE CONSTRUCTION MAY REQUIRE A PERMIT FROM THE ARMY CORPS OF ENGINEERS, THE WATER RESOURCES ADMINISTRATION AND/OR HOWARD COUNTY. IT IS THE RESPONSIBILITY OF THE LANDOWNER TO CONTACT THESE THREE AGENCIES TO DETERMINE IF THE PROJECT REQUIRES A PERMIT:

U.S. ARMY CORPS OF ENGINEERS - (410) 962-3620
WRA NON-TIDAL WETLANDS AND WATERWAYS DIVISION - (410) 974-3841
HOWARD COUNTY - (410) 887-3980

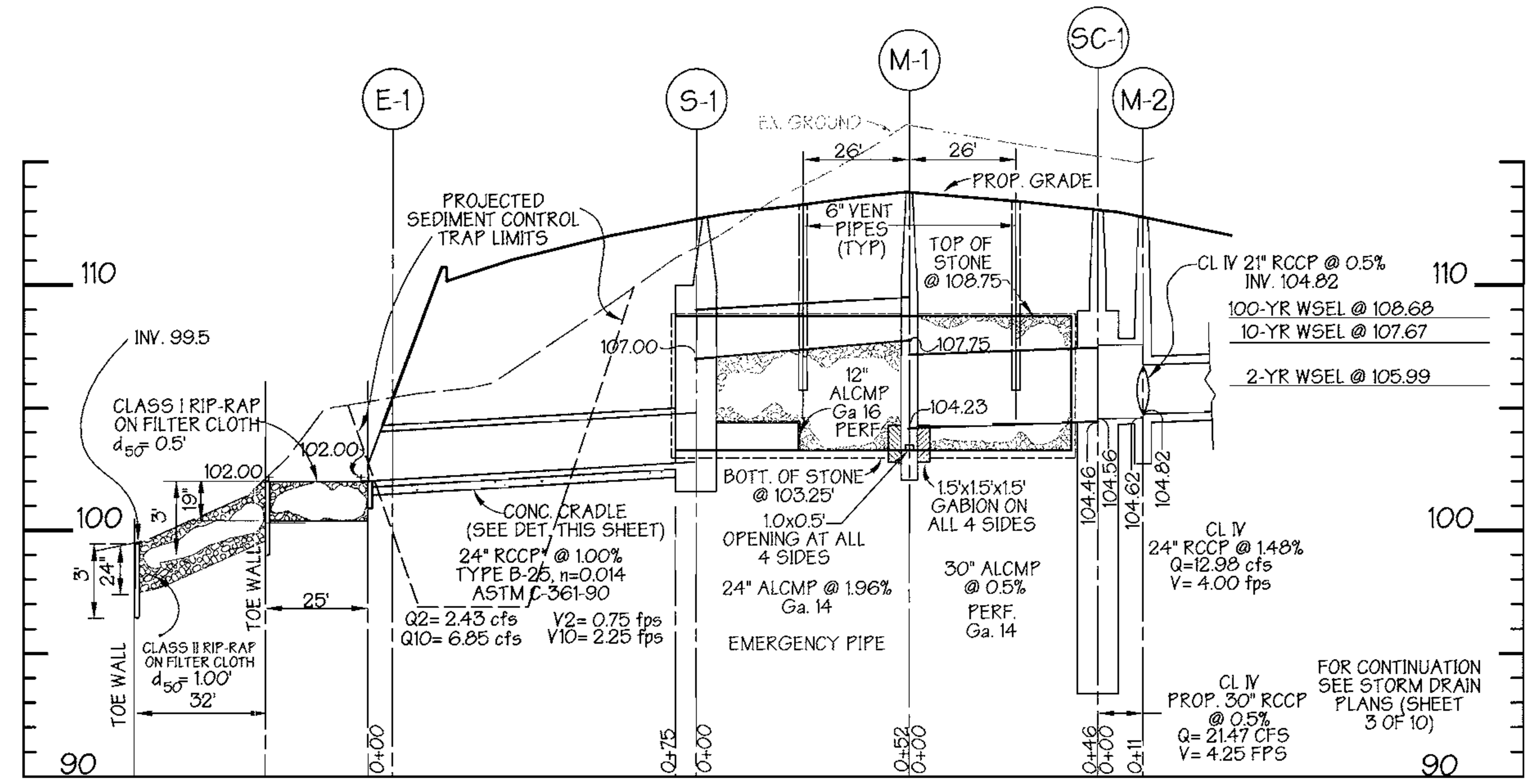
NOTE:
IF REQUIRED BY THE SEDIMENT CONTROL INSPECTOR FENCING SHALL BE INSTALLED TO PREVENT ACCESS TO THE BASIN BY CHILDREN

NOTE:
THIS STORMWATER MANAGEMENT FACILITY IS DESIGNED TO MEET OR EXCEED ALL APPLICABLE REQUIREMENTS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE SOIL CONSERVATION DISTRICT. MAINTENANCE OF THIS FACILITY WILL BE THE RESPONSIBILITY OF THE OWNER.
(THE SWM FACILITY IS PRIVATE).

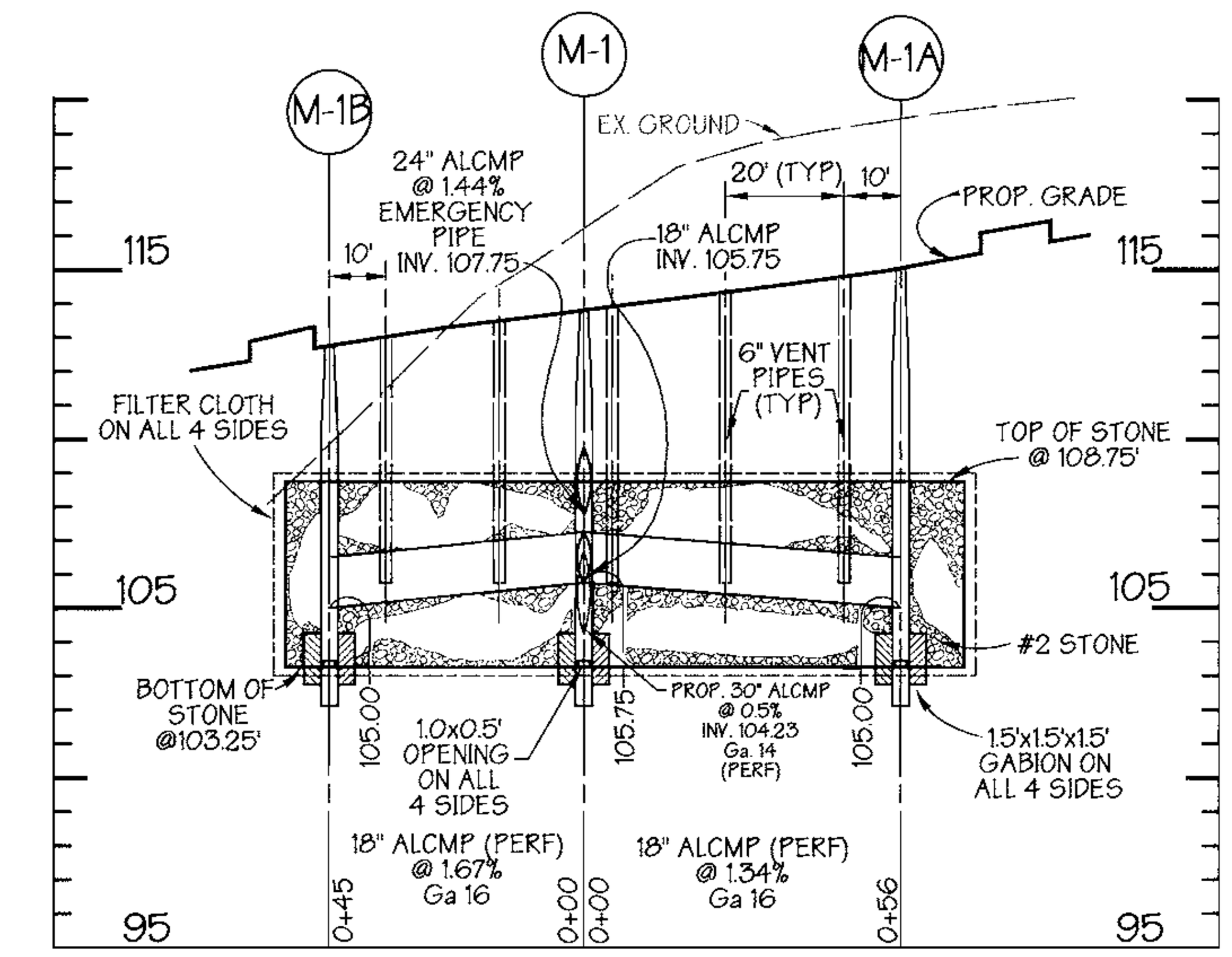


PLAN

SCALE: 1"=30'

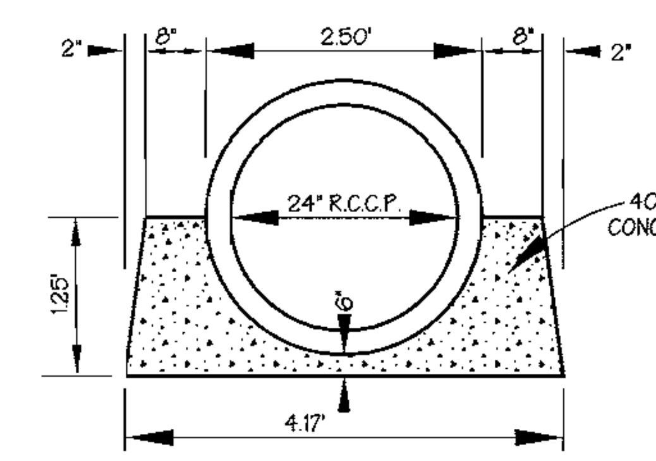


SECTION A-A
VERT: 1"=5'
HORIZ: 1"=30'



SECTION B-B
VERT: 1"=5'
HORIZ: 1"=30'

*NOTE: STORMWATER MANAGEMENT OUTLET PIPE WILL BE THE SAME MATERIAL AS CONTROL STRUCTURE.

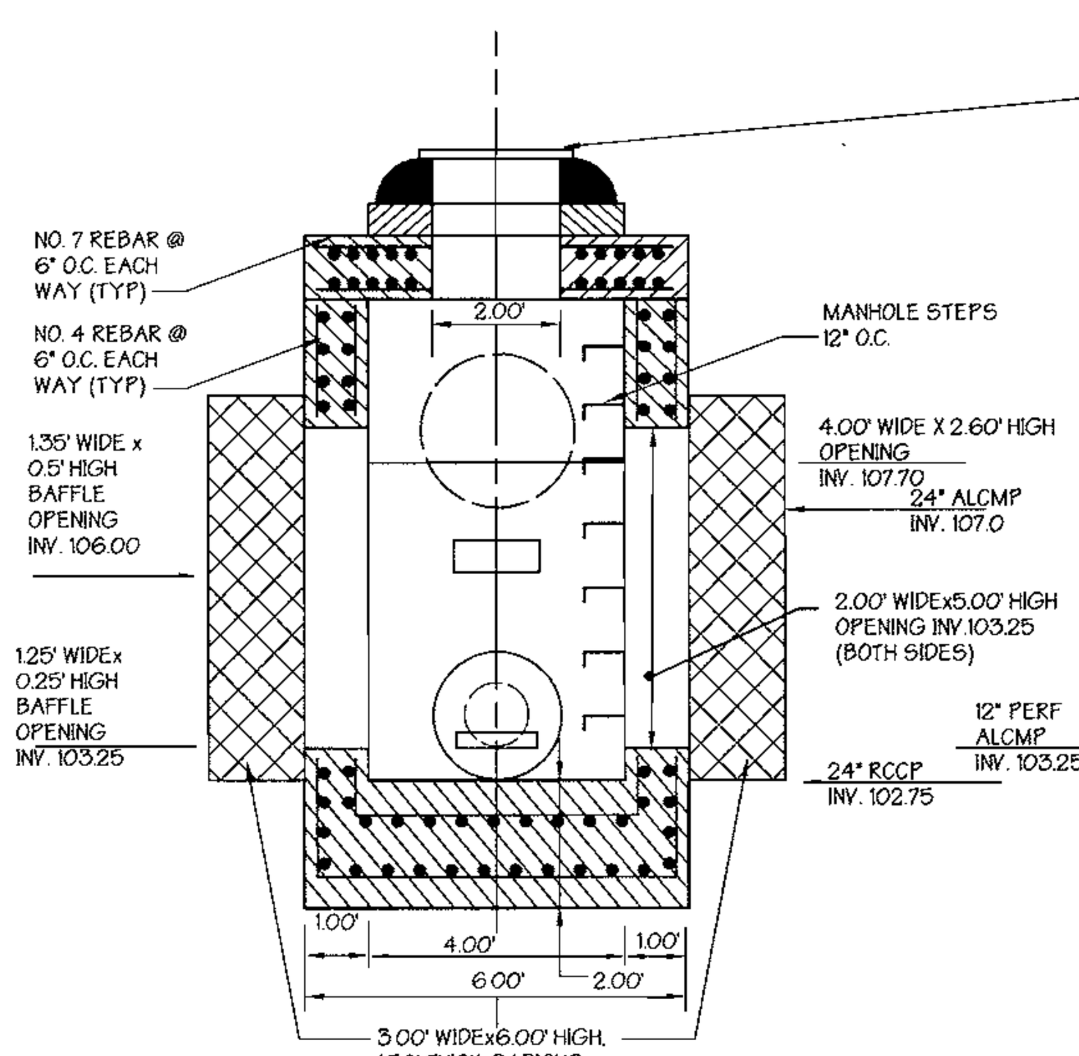


CONCRETE CRADLE

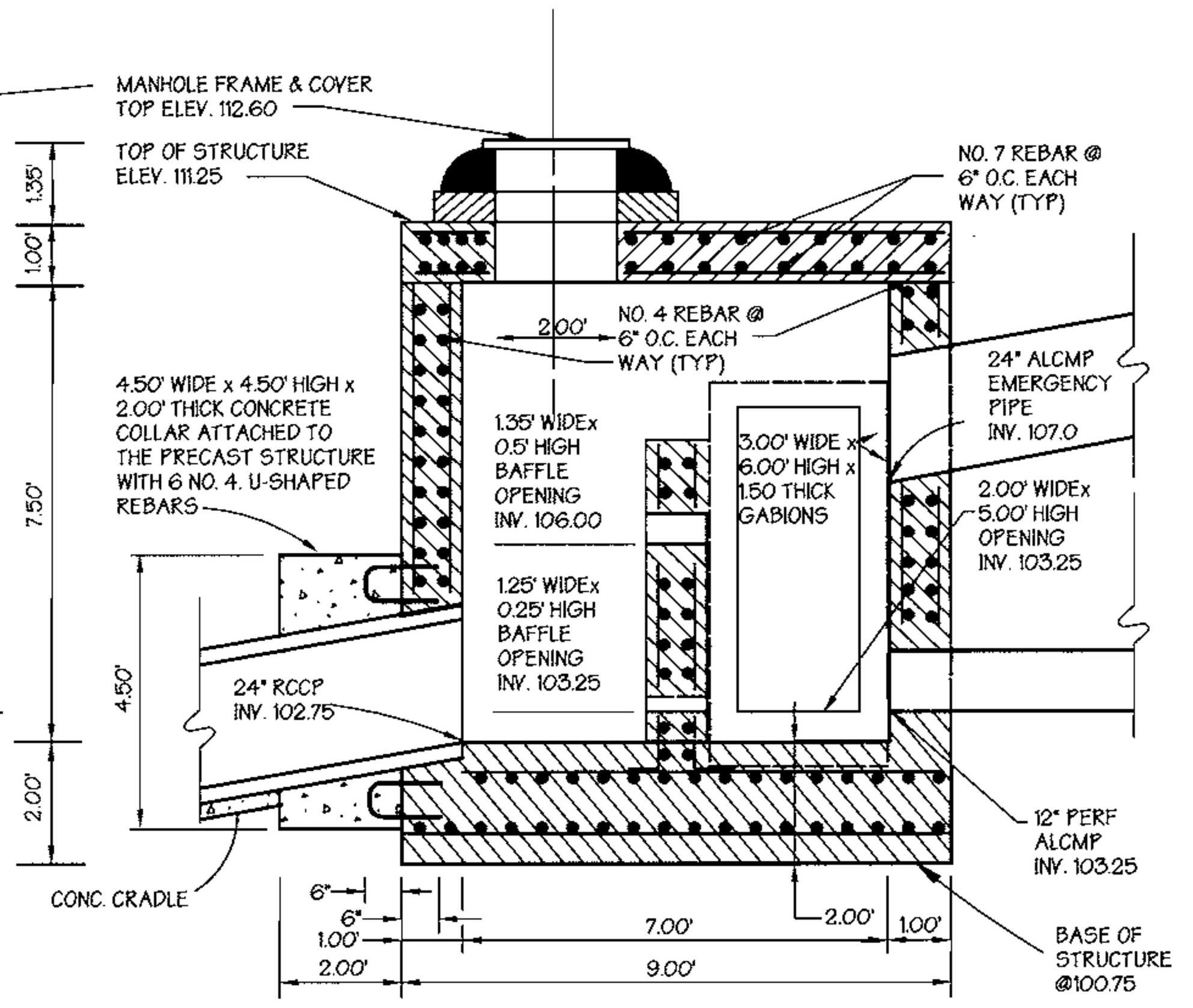
NOT TO SCALE

POND SPECIFICATIONS FOR STORMWATER MANAGEMENT		
DESCRIPTION		DATA
STRUCTURE CLASSIFICATION		A (PRIVATE)
STORAGE X HEIGHT PRODUCT		(1.035 AC. FT.) (5.5 FT.) = 5.69AC. FT.^{2}
WATERSHED AREA TO THE POND		3.15 AC.
POND TYPE		UNDERGROUND STONE STORAGE
FREEBOARD	REQUIRED/ PROVIDED	N/A
IMPERVIOUS AREA		2.35 AC.
TOP OF STONES		108.75

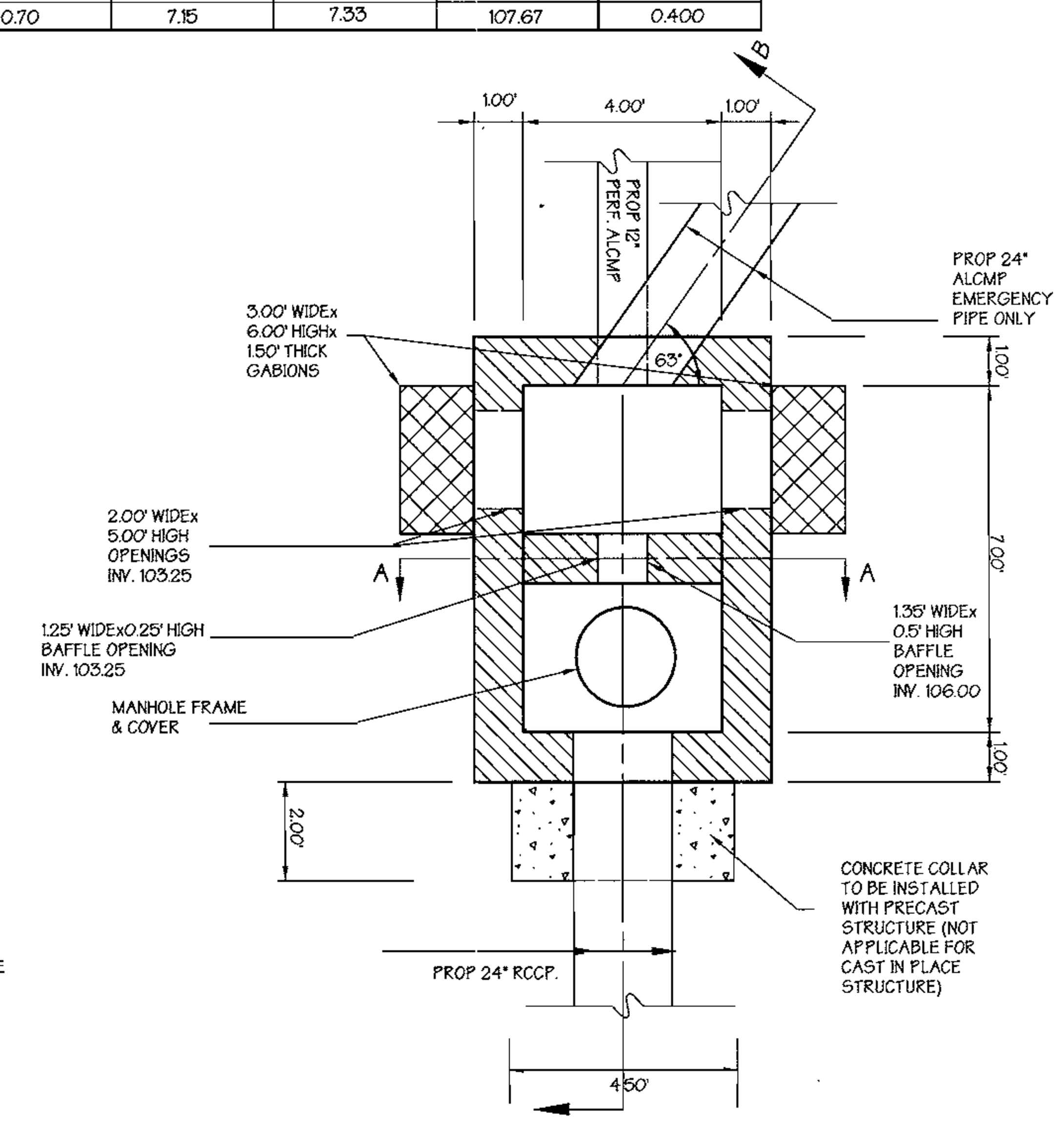
POND SUMMARY							
DESIGN STORM	FACILITY INFLOW (CFS)	FACILITY DISCHARGE (CFS)	BYPASS DISCHARGE (CFS)	TOTAL DISCHARGE (CFS)	TOTAL ALLOWABLE DISCHARGE (CFS)	WATER SURFACE ELEVATION (FT.)	STORAGE VOLUME PROVIDED (AC. FT)
2 YR	10.54	2.43	0.30	2.59	2.73	105.99	0.249
10 YR	77.55	6.85	0.70	7.15	7.33	107.67	0.400



SECTION A-A



SECTION B-B



PLAN

RELEASE STRUCTURE

SCALE: 1"=3'

RELEASE STRUCTURE NOTES

1. STRUCTURE TO BE CAST-IN-PLACE REINFORCED CONCRETE WITH 3 500 P.S.I.(MIN.) COMPRESSIVE STRENGHT @ 28 DAYS. DESIGN OF PRECAST CONC. STRUCTURE SHALL BE PROVIDED BY MANUFACTURER.
2. ALL REINFORCING TO BE CONTINUOUS THROUGHOUT STRUCTURE.
3. ALL REINFORCING TO HAVE 1' 6" MIN. OVERLAPS.
4. TWO (2) INCH COVER MINIMUM FOR ALL REBARS IN WALLS AND THREE (3) INCHES FOR THE BASE.
5. PROVIDE ADDITIONAL # 4 REBARS ALONG THE PERIMETER OF ALL OPENNINGS WITH THE AREA OF STEEL EQUAL TO OR GREATER THAN THE AREA OF STEEL "REMOVED" DUE TO OPENING.
6. SHOP DRAWINGS FOR PRECAST CONCRETE RISERS WITH SUPPORTING STRUCTURAL COMPUTATIONS (SIGNED AND SEALED BY A MD. REGISTERED ENGINEER) MEETING A.S.T.M. REQUIREMENTS FOR PRECAST STRUCTURES MUST BE SUBMITTED TO THE ENGINEER, AND THE APPROVING AGENCY FOR APPROVAL PRIOR TO FABRICATION. IF ANY STRUCTURE DIMENSIONS VARY FROM WHAT WAS ORIGINALLY REVIEWED/ APPROVED, THEN THE HYDRAULICS, FLOTATION AND STRUCTURAL INTEGRITY OF THE STRUCTURE WILL HAVE TO BE RE-ANALYZED.
7. ALL EXPOSED CORNERS OF CONCRETE SHALL BE CHAMFERED WITH 3/4" X 3/4" MILLED CHAMFER STRIPS.

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER — DATE 7/25/00

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/25/00

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

A/CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

AS-BUILT CERTIFICATION:

I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meet the approved plans and specifications

Signature — P.E. # — Date:

Certify means to state or declare a professional opinion based upon on-site inspections and material tests which are conducted during construction. The on-site inspections and material tests are those inspections and tests deemed sufficient and appropriate by commonly accepted engineering standards. Certify does not mean or imply a guarantee by the engineer nor does an engineer's certification relieve any other party from meeting requirements imposed by contract, employment, or other means, including meeting commonly accepted industry practices.

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME			SECTION NAME		PARCEL #
DORSEY BUSSINESS CENTER			1		H
PLAT #	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37/43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY:

GWS

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

ENGINEER CERTIFICATION:
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personel knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."

Signature of Engineer — Date 7/13/00
Print Name JAMES A. MARKLE, JR. — PE # 11005

DEVELOPER CERTIFICATION:
"I certify that all development and/or construction will be done according to these plans, and that any responsible personel 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard soil Conservation District."

Signature of Developer — Date 07/13/00
Print Name STEPHEN W. WHALEN, Jr.

CONSULTANTS HAZARD CLASS CERTIFICATION:
I certify that this pond meets all requirements for hazard class (A) B or C. (requirements as stated in the soil conservation service - maryland standards and specifications for pond, code 378, november 1992). All necessary investigations and computations have been performed to verify this finding. A copy of said information has been supplied to howard county soil conservation district.

Engineer — Date: 7/13/00
Name JAMES A. MARKLE JR.

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C./P.T.
CHECKED BY: T.H.

REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

STORM WATER MANAGEMENT
PLAN AND PROFILES
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 8 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

FILENAME: 8779SWMPLANPROFILES.S01

PN: 8779

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SDP-00-13

POND CONSTRUCTION SPECIFICATIONS

These specifications are appropriate to all ponds within the scope of the Standard practice MD-378. All references to ASTM and AASHTO specifications apply to the most recent version.

SITE PREPARATION

Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed, and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.

Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences rubbish, and other objectionable material unless otherwise designated on the plans. Trees, brush, and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.

All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

EARTH FILL

MATERIAL - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", frozen or other objectionable materials. Fill material for the center of the embankment and cut off trench shall conform to United Soil Classification GC, SC, CH, or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

PLACEMENT - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in a maximum 8" thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.

COMPACTION - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber tired or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that the water can be squeezed out.

Minimum required density shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

STRUCTURE BACKFILL

Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure

PIPE CONDUITS All pipes shall be circular in cross section.

REINFORCED CONCRETE PIPE - All pipe to be circular in cross section

All the following criteria shall apply for reinforced concrete pipe :

1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM Designation C-361.

2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high slump concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the

3. Laying Pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with recommendations of the manufacturer of the material. After the joints are sealed for the entire line, the bedding shall be placed so that all spaces under the pipe are filled. Care shall be exercised to prevent any deviation from the original line and grade of the pipe. The first joint must be located within 2 feet from the riser.

4. Backfilling shall conform to "Structure Backfill."

5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

PERFORATED PIPE

Bituminous coated corrugated metal pipe (BCCMP) shall conform to the requirements of AASHTO M36 (pipe should be specified to be fully bituminous coated in accordance with AASHTO M190). Perforated pipe is TYPE III. Pipe shall have CLASS 2 perforations 3/8" in diameter.

CONCRETE

Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 918 (Portland Cement Concrete Mixture), Mix No. 3

REINFORCING STEEL IN CONCRETE STRUCTURES

Reinforcing steel shall be ASTM A 615, Grade 60 Steel angles and anchor bars shall be ASTM 1-36.

ROCK RIP-RAP

Rock riprap shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 905.

The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 919.12.

CARE OF WATER DURING CONSTRUCTION

All work on permanent structures shall be carried out in areas free from water. The contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works. The contractor shall also furnish, install, operate, and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the placing and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to sumps from which water shall be pumped.

STABILIZATION

All borrow areas shall be graded to provide proper drainage and left in a sightly condition. All exposed surfaces of the embankment, spillway, spoil and borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.

Stormwater management facility will be stabilized with permanent slope seeding as follows:

1. Seedbed Preparation - loosen upper 3 inches of soil by raking, discing or other acceptable means before seeding.
2. Soil Amendments - apply 2 tons per acre Dolomitic Limestone (92 lbs./1000sq. ft.), 600 lbs. per acre 10-10-10 fertilizer (14 lbs./1000 sq. ft.), and 400 lbs. per acre of 30-0-0 Ureaform Fertilizer (9.2 lbs./1000 sq. ft.). Harrow or disc lime and fertilizer into upper 3 inches of soil. At time of seeding, apply 400 lbs. (9.2 lbs./1000 sq. ft.) of 30-0-0 Ureaform Fertilizer and 500 lbs. per acre (11.5 lbs./1000 sq. ft.), of 10-0-0 fertilizer.
3. Seeding - for the period March 1 through April 30 seed with 40 lbs. per acre Kentucky 31 Tall Fescue, and 15 lbs. per acre inoculated Crown Vetch. For the period May 1 through July 31 seed with 60 lbs. per acre Kentucky 31 Tall Fescue and 2 lbs. per acre inoculated Weeping Lovegrass. For the period August 1 through October 15 seed with 40 lbs. per acre Kentucky 31 Tall Fesue, and 20 lbs. per acre inoculated Interstate Serica Lespedeza. For the period October 16 through February 28 protect the site by Option (1): 2 tons per acre of well anchored straw. For the period May 1 through February 28 inoculated Crown Vetch shall be applied during the subsequent period of March 1 through April 30 at the rate of 15 lbs. per acre.
4. Mulching - apply 1.5 to 2 tons per acre of un-rotted small grain straw immediately after seeding. Anchor mulch immediately after application using 218 gallons per acre of emulsified ashphalt. On flat areas of slope 8 feet or higher, use 348 gallons per acre of anchoring.
5. Maintenance - inspect all seeded areas and make needed repairs, replacements and re-seeding.

EROSION AND SEDIMENT CONTROL

Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

PERMANENT SLOPE SEEDING

After spreading 4" topsoil, seed with a mixture of 30% inoculated Crown Vetch and 70% Kentucky 31 Tall Fescue applied at a rate of 60 lbs./ acre; 10-20-20 fertilizer shall be applied at a rate of 25 lbs./1000 sq. ft.; lime at a rate of 92 lbs / 1000 s.f.; mulch area with unweathered small grain straw at a rate of 1.5 Tons/acre; anchor with a rapid curing asphalt (RC-70, R-250 or RC-800 at a rate of 0.1 gal./S.Y.

FILTER CLOTH

Filter cloth shall meet or exceed the requirements in Section 20.25-5 of the Baltimore County Standard Specifications and Details for Construction. Durable filter fabrics for drainage purposes are not limited to Mirafi 1405, DuPont TYPAC No. 3341 or 3401.
Filter cloth shall be protected from punching or tearing. Any damage other than an occasional small hole shall be repaired by placing another small piece of filter cloth over the damaged area or by replacing the cloth section. All overlaps shall be a minimum of one foot.

GABIONS

Gabions shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standard Specifications for Construction and Materials, Section 312 and must be Cl. IV, PVC coated.

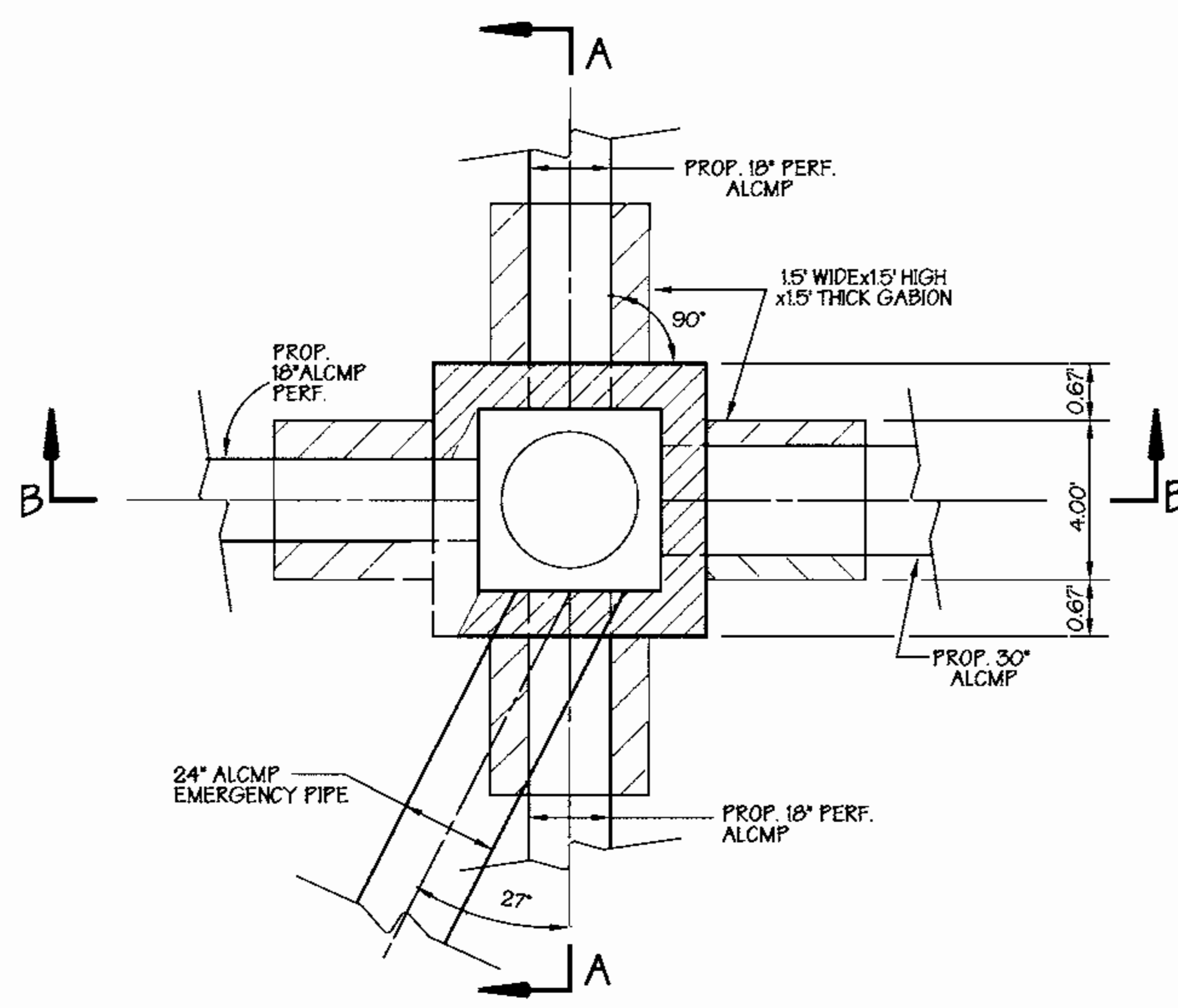
OUTFALL PROTECTION

Subgrade for riprap or gabion outfalls shall be prepared to the required line and grades. Any fill required in the subgrade shall be compacted to a density of approximately that of the surrounding undistrubed material. All rock or gravel shall conform to the specified grading limits when installed in the riprap or gabion. All stone shall be delivered and placed in a manner that will insure the stone in place shall be reasonably homgeneous with the larger rocks uniformly distributed and firmly in contact one to another, with the smaller rocks filling the voids between the larger rocks. Stone for outfalls may be placed by equipment. Riprap or gabion outlets shall be constructed to full course thickness in one operation and in such a manner as to avoid any displacement of underying materials. The contractor shall avoid damage to the filter blanket or cloth during placement of riprap. Hand placement shall be required as needed to prevent damage to the permanent works. Filter cloth shall be placed under all riprap and gabions.

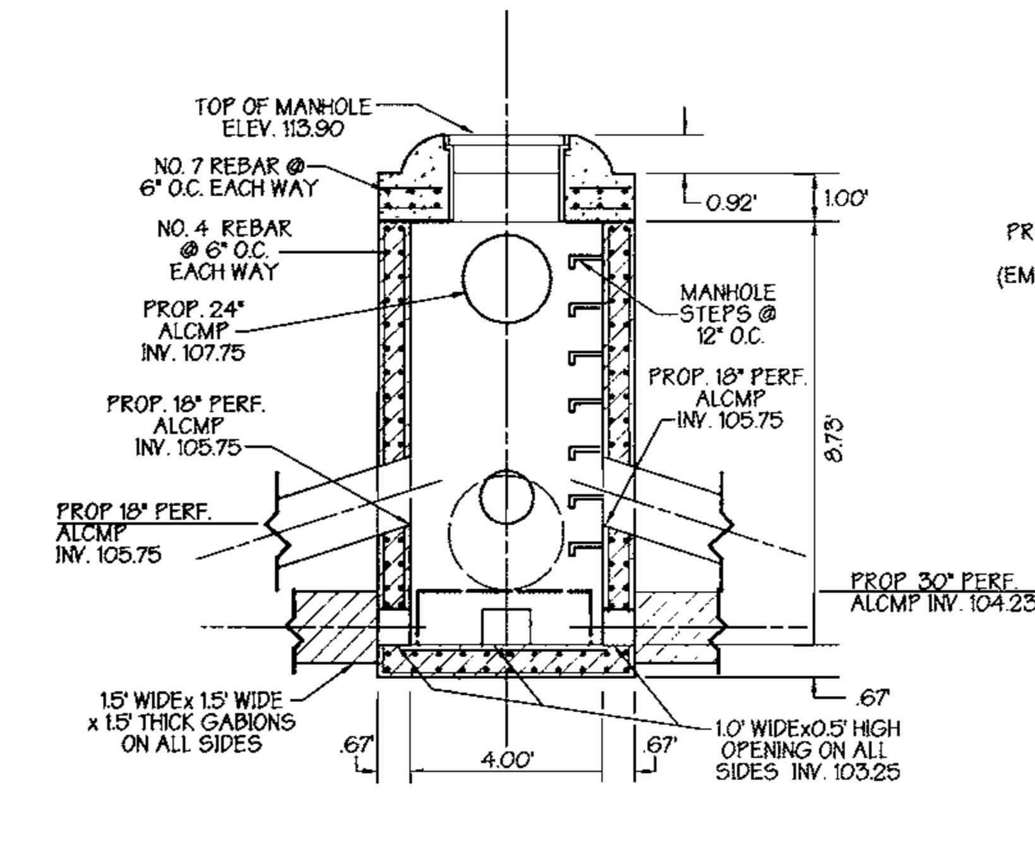
OPERATION AND MAINENCE SCHEDULE FOR STORMWATER MANAGEMENT UNDERGROUND FACILITY.

1. REMOVAL OF ACCUMULATED PAPER, TRASH, AND DEBRIS AS NECESSARY.

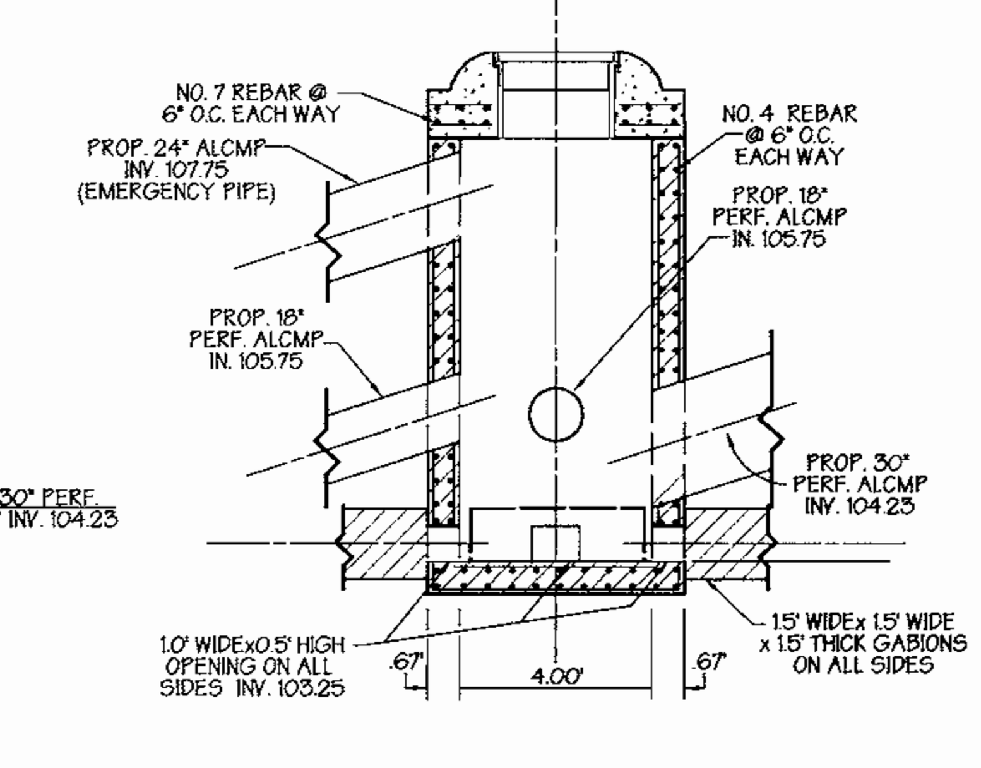
2. ANNUAL INSPECTIONS AND REPAIR OF THE STRUCTURE.



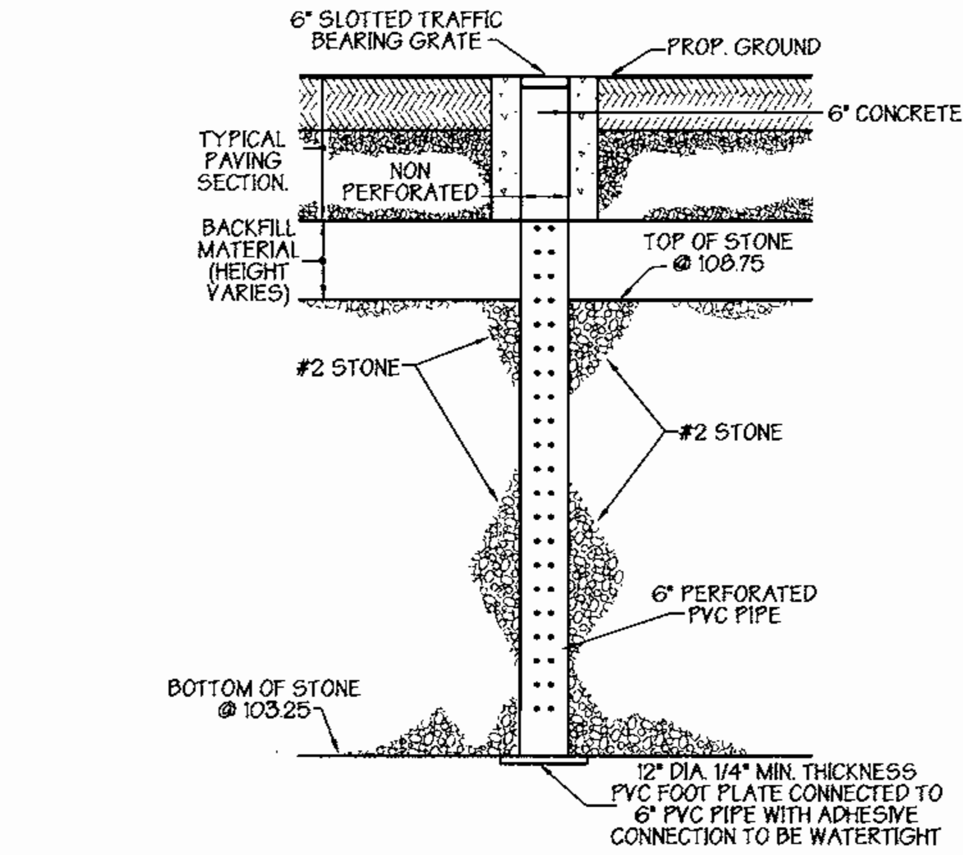
DETAIL MANHOLE M-1
N.T.S.



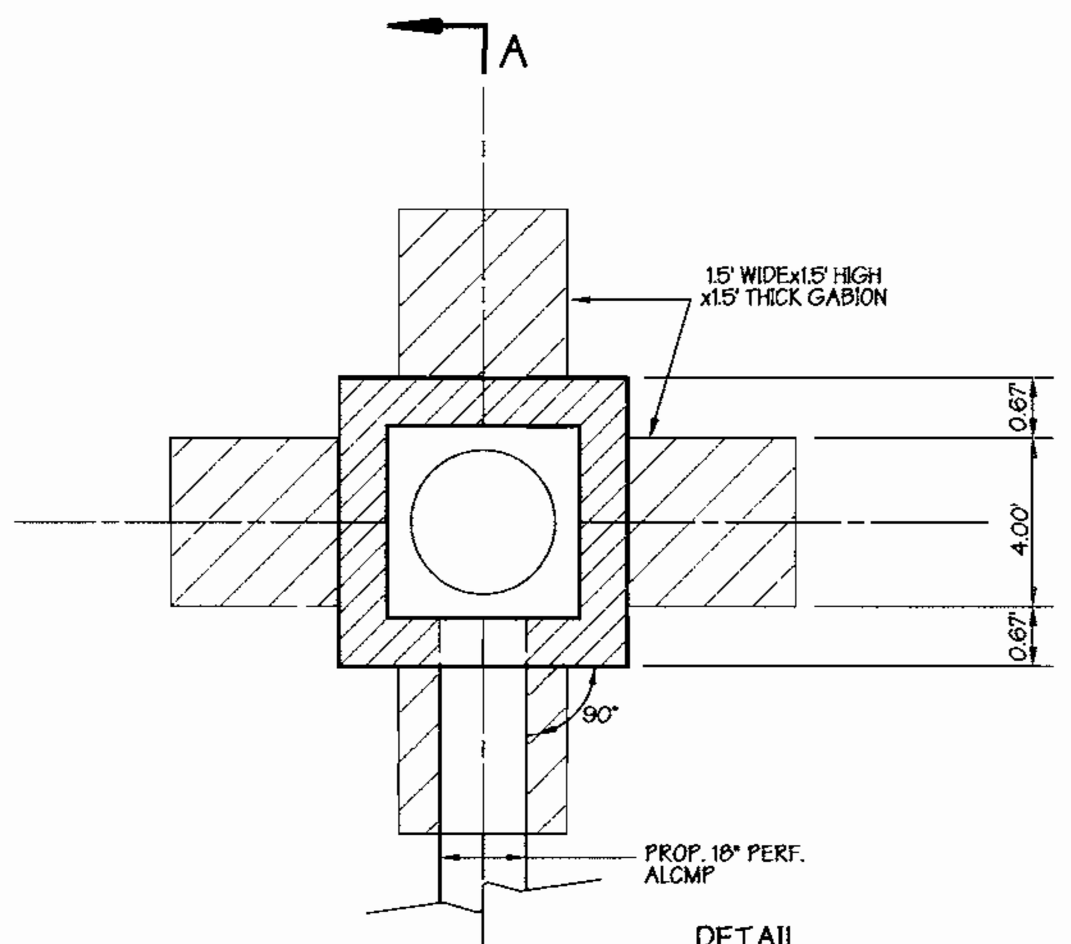
SECTION A-A
N.T.S.



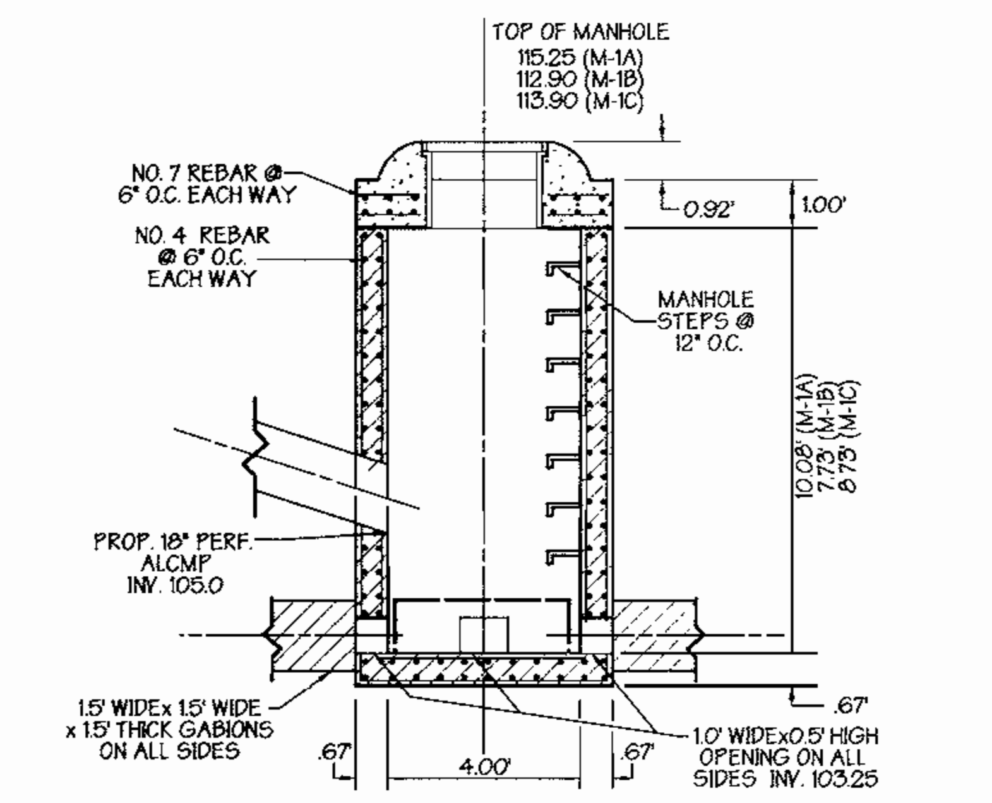
SECTION B-B
N.T.S.



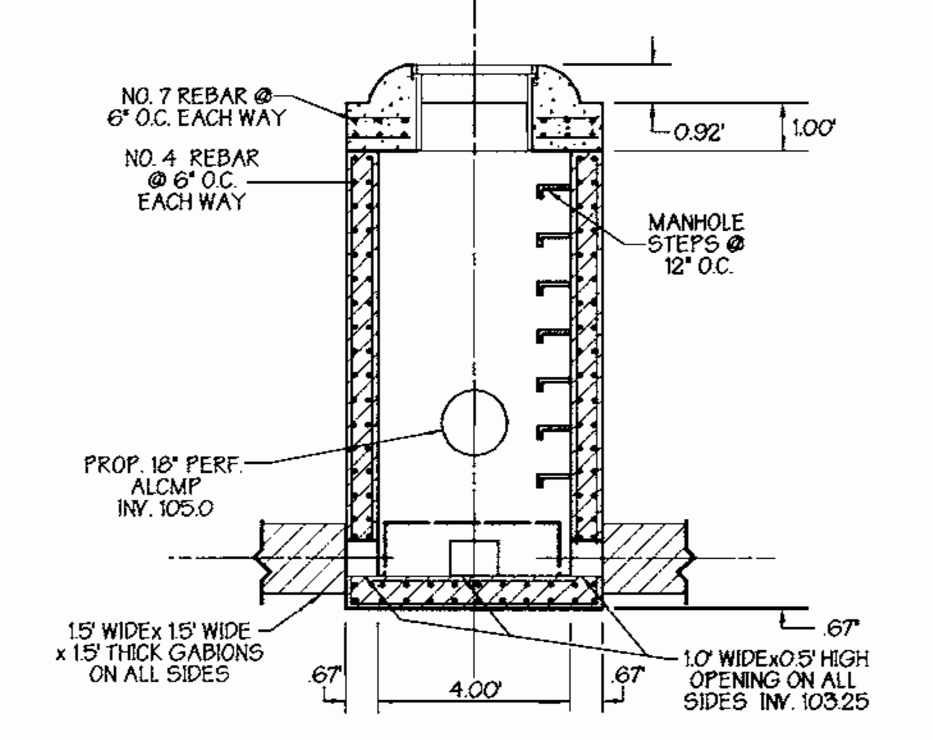
OBSERVATION WELL
N.T.S.



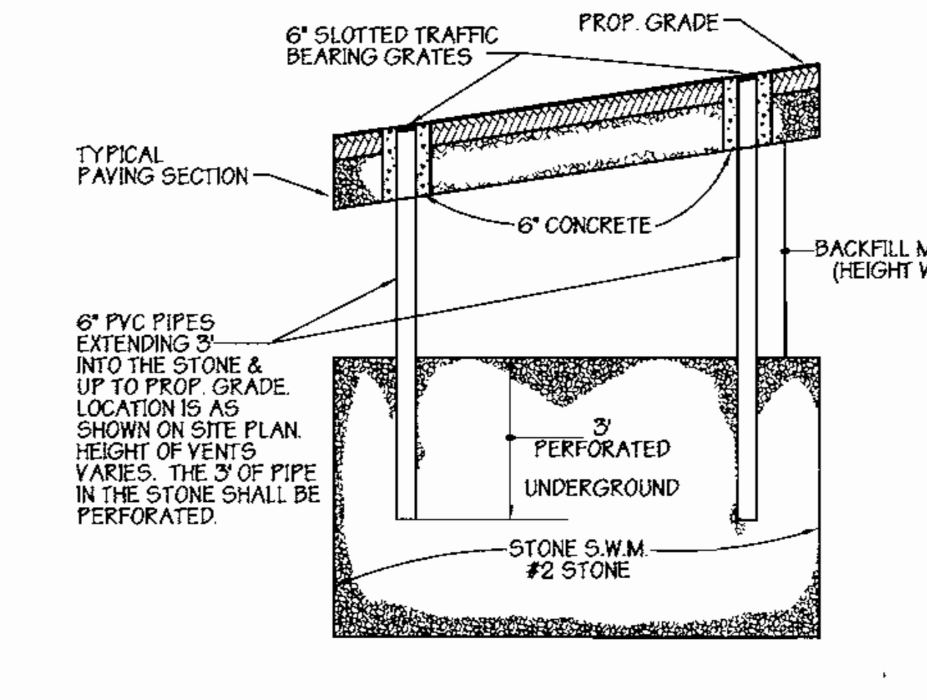
DETAIL MANHOLE M-1A & M-1B & M-1C
N.T.S.



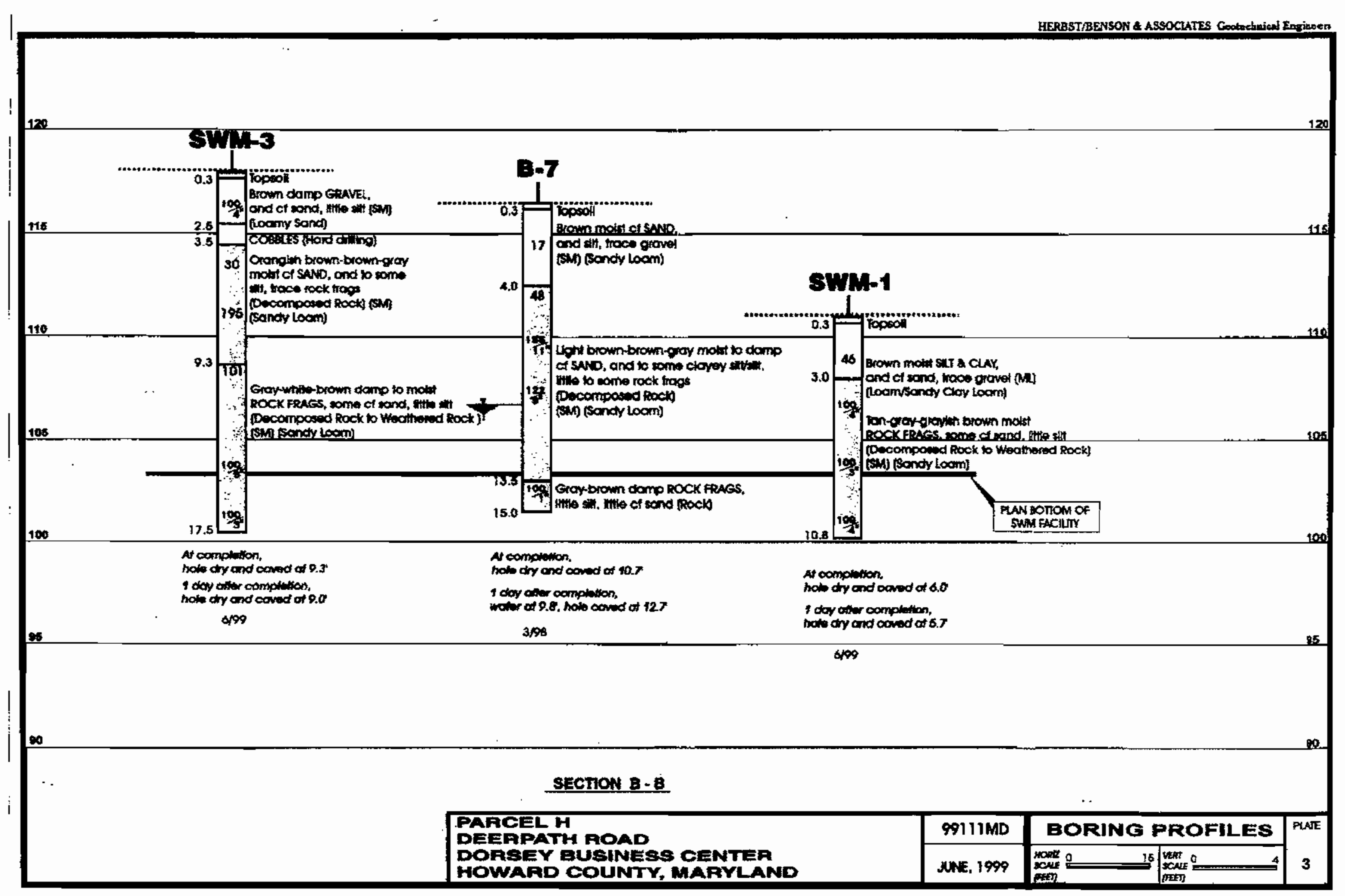
SECTION A-A
N.T.S.



SECTION B-B
N.T.S.



DETAIL - 6" PVC VENTS PIPES
N.T.S.



Concerning the proposed SWM facility, and referring to PLATE 3, BORING PROFILES, an examination of the boring logs discloses the presence of decomposed to weathered rock at the planned base of the facility. The very dense disintegrated to weathered rock has low permeability as confirmed by the presence of perched water several feet above the plan pond bottom during the spring season of 1998. Given the presence of very dense disintegrated to weathered rock at and below the planned base of the facility, storm water disposal by infiltration practice is not recommended for the storm water management facility.

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/?/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	6865 DEERPATH ROAD

SUBDIVISION NAME		SECTION NAME		PARCEL *	
DORSEY BUSINESS CENTER		1			
PLAT *	BLOCK *	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37/43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

ENGINEER CERTIFICATION:
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personel knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Signature of Engineer ______ Date 7/13/00
Print Name JAMES A. MARKLE JR. PE # 11005

DEVELOPER CERTIFICATION:
"I certify that all development and/or construction will be done according to these plans, and that any responsible personel 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard soil Conservation District."
Signature of Developer ______ Date 07/13/00
Print Name STEPHEN W. WHALEN, JR

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: P.T.
CHECKED BY: K.U.
REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

STORMWATER MANAGEMENT NOTES & DETAILS
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD
SHEET 9 OF 14
SDP-00-13
SCALE: NONE
FEB.17, 2000

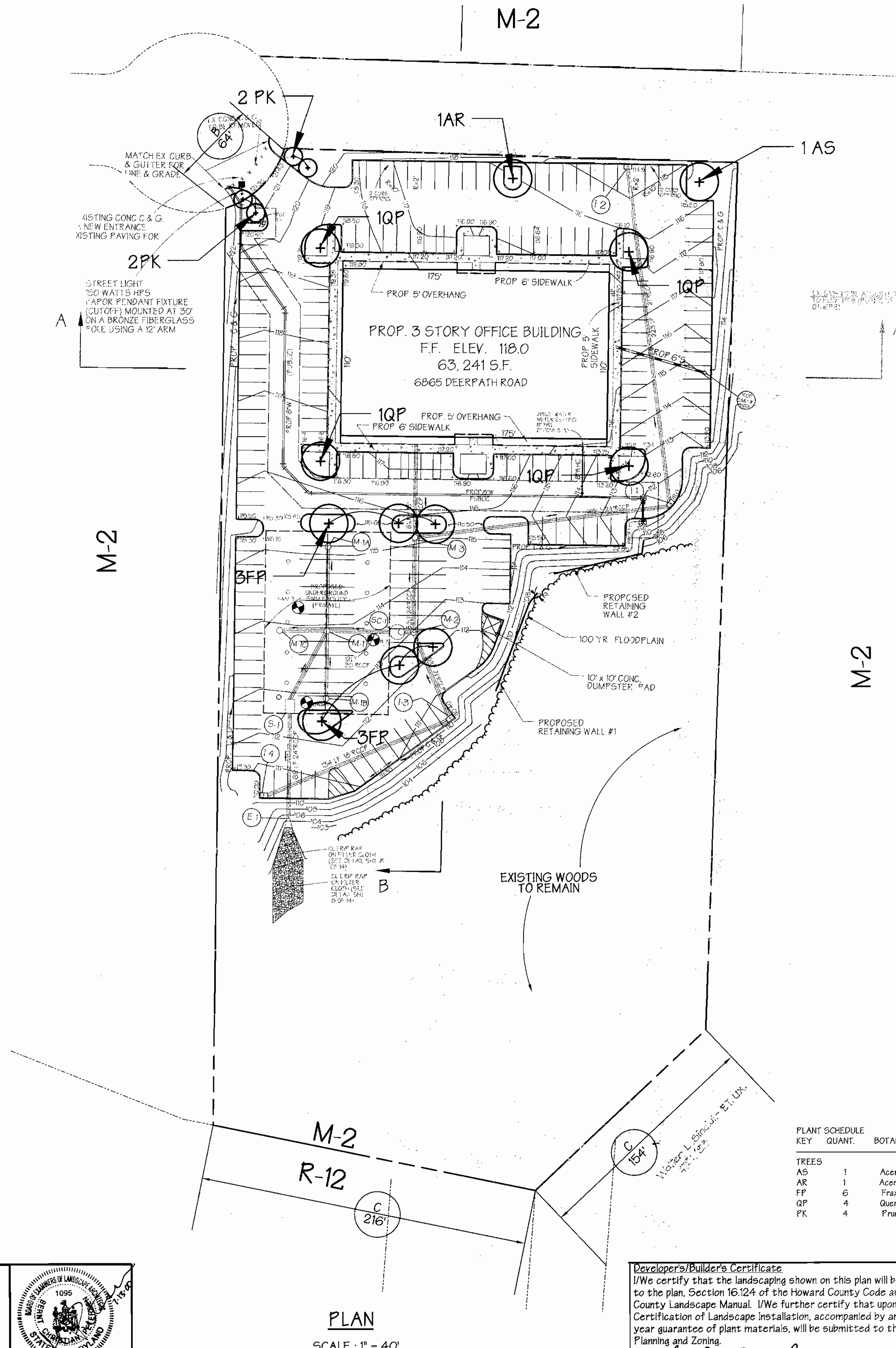
FILENAME: 8779SWMNOTESDETAILS.S01
PN 8779
...\micro\8779swmnotesdetails.s01 Jul. 13, 2000 14:21:05

SDP-00-13

NOTE:
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $4,200.00.

NOTE:
THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED 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.

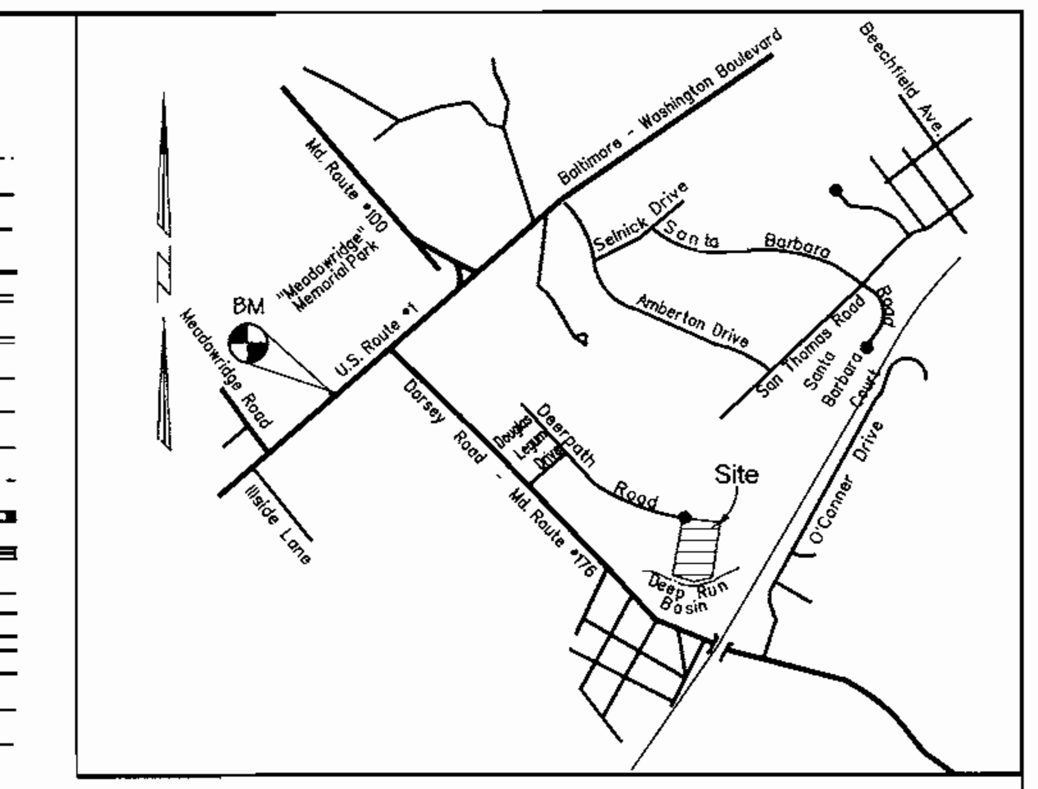


PLAN

SCALE : 1" = 40'

Legend

Ex. 2' Contours
Ex. 10' Contours
Prop. 2' Contours
Prop. 10' Contours
Ex. Curb & Gutter
Prop. Curb & Gutter
Bldg. Restriction Line
Ex. Sanitary
Ex. Storm Drain
Ex. Water
Prop. Sanitary
Prop. Storm Drain
Prop Water
Concrete Paving
Light Duty Paving (P-3)
Wetlands
Flood Plain
Ex. Conc. C&G to be Removed
Proposed Reverse Conc. Curb & Gutter
Ex.Trees



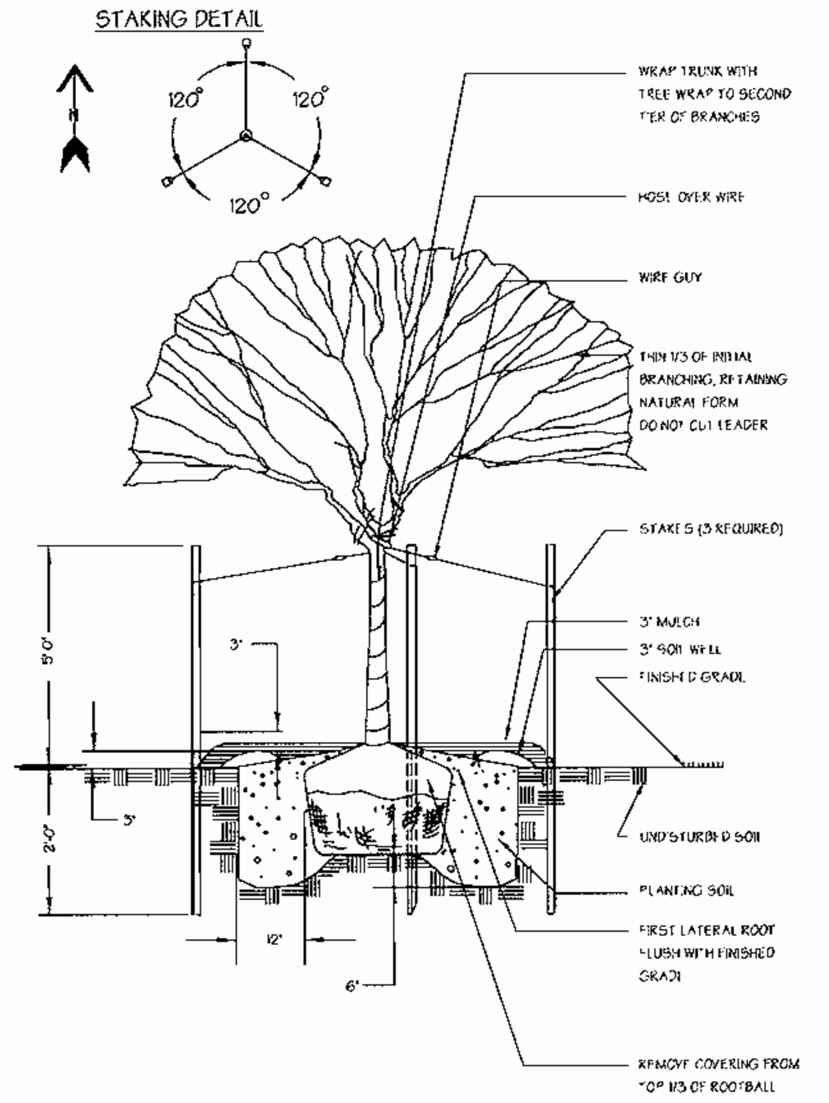
LOCATION MAP

SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV 59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

STAKING DETAIL



Tree Planting Detail

NOT TO SCALE

PLANTING NOTES
PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK. ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS. ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS
ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN

CHANGES MAY IMPACT REQUIRED CERTIFICATION
PLANT TYPES (DECIDUOUS TREES, EVERGREEN, ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST HOWARD COUNTY LANDSCAPE MANUAL. ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE SPECIFICATIONS
LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA, INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS. A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS
CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS

CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS

NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL
FINANCIAL SURETY FOR THE REQUIRED 14 LANDSCAPE TREES, IN THE AMOUNT OF $4200.00, IS PART OF THE DEVELOPER'S AGREEMENT

SCHEDULE A
PERIMETER LANDSCAPE EDGE

	ROADWAYS	PERIMETER PROPERTIES
Landscape Type	B	C
Linear Feet of Roadway Frontage Perimeter	64'	370'
Credit for existing Vegetation, (Yes, No Linear Feet)	NO	370'
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	NO	NO
Number of Plants Required Shade Trees Evergreen Trees (1:1) Shrubs (10:1)	 1 2	0
Number of Plants Provided Shade Trees Evergreen Trees (1:1) Other Trees (2:1 sub.) Shrubs (10:1 sub.)	 1 0 4	
Comments:		

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	209
Number of Trees Required	11
Number of Trees Provided	11
Shade Trees Other Trees (2:1 sub.)	11

Number of landscaped Islands req. 11
Number of landscaped Islands provided 11

LANDSCAPING COST ESTIMATE

SHADE TREES - 12 X $300.00 = $3600.00
FLOWERING TREES - 4 X $150.00 = $600.00

TOTAL = $4200.00

PLANT SCHEDULE

KEY	QUANT.	BOTANICAL NAME / COMMON NAME	SIZE / COND.	SPACING	REMARKS
TREES					
AS	1	Acer saccharum 'Green Mountain' / Green Mountain Sugar Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	fullcrown
AR	1	Acer rubrum 'October Glory' / October Glory Red Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
FP	6	Fraxinus pennsylvanica 'Patmore' / Patmore Green Ash	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
QP	4	Quercus phellos / Willow Oak	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
PK	4	Prunus serrulata 'Kwanzan' / Kwanzan Cherry	1 1/2 -2" cal. / B&B	15' o.c. as shown	matched

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/1/00

DIRECTOR DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME		SECTION NAME		PARCEL *	
DORSEY BUSINESS CENTER		1		H	
PLAT *	BLOCK *	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE	B-01	SEWER CODE	2220000		

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

Developer's/Builder's Certificate
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and 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.

Name Date 07/13/00

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.P.
DRAWN BY: H.C.
CHECKED BY: B.P.
REVISIONS
11/15/99
-REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

LANDSCAPE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 10 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

PN: 8779

FILENAME: 8779LANDSCAPE.PLAN.S01

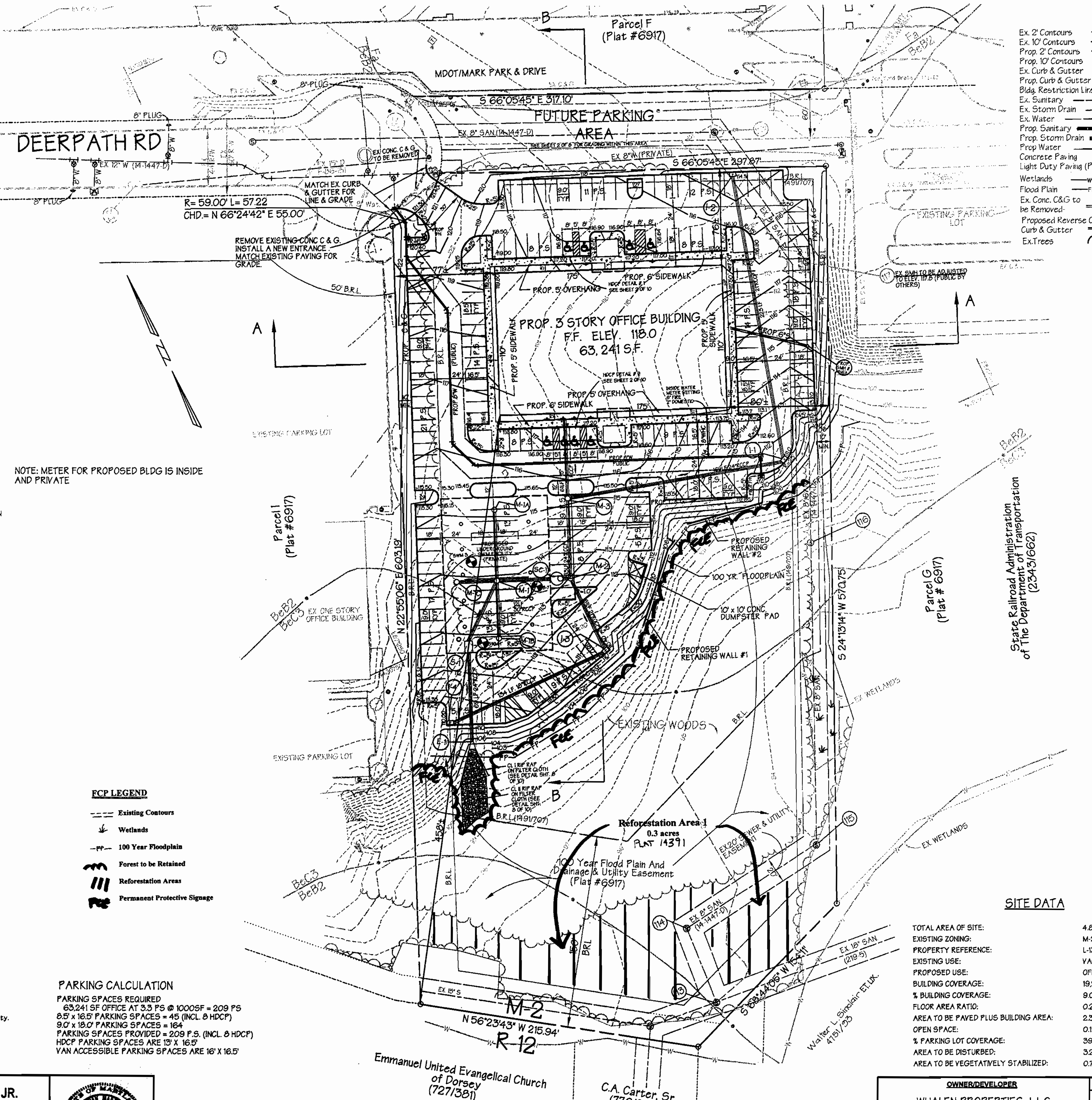
SDP-00-13

Construction Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
14. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
15. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
16. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
17. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
18. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
19. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
20. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
21. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
22. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
23. A SEPARATE PERMIT IS REQUIRED FOR THE PROPOSED RETAINING WALL.
24. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY PREPARED BY G. W.STEPHENS JR. & ASSOCIATES DATED MARCH 1998.
25. OUTDOOR LIGHTING WILL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
26. 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.
27. WATER IS PUBLIC.
28. SEWER IS PUBLIC.
29. EXISTING UTILITIES ARE BASED ON SURVEY PREPARED BY GWS
30. PROPOSED SIDEWALK IS 5" THICK, CONCRETE (MIX NO. 2) ON 4" CRUSHER RUN BASE.

NOTE:

The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

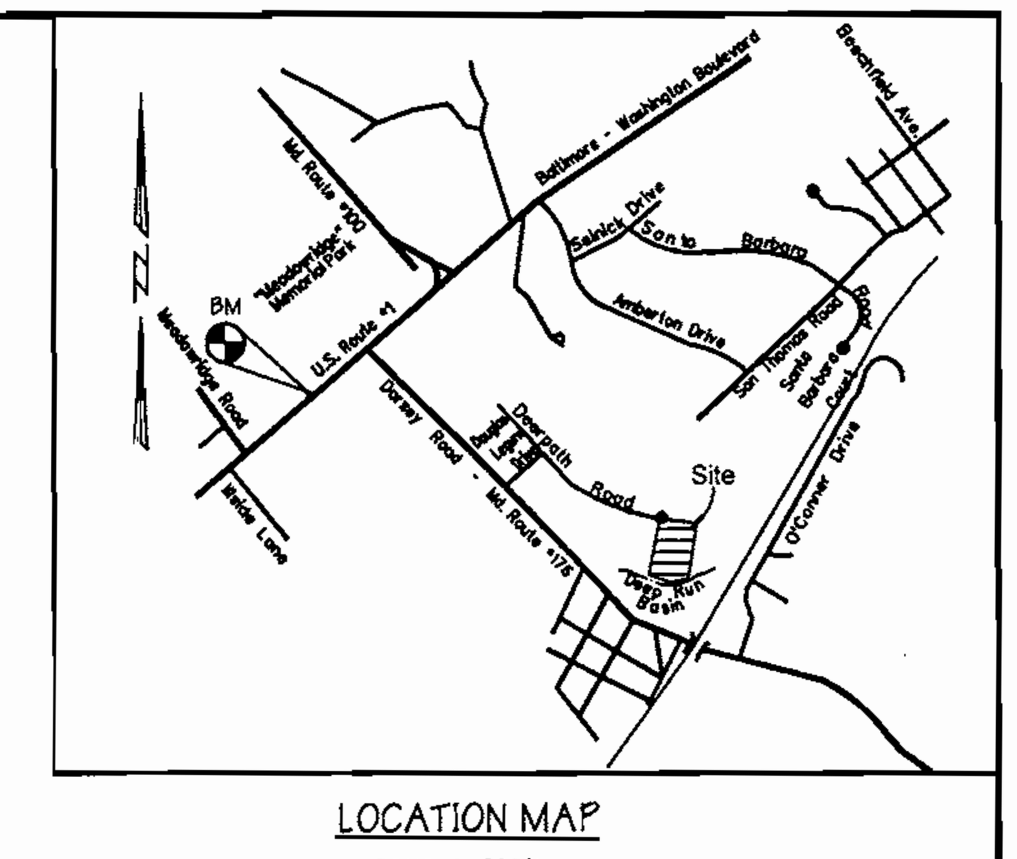


PLAN

SCALE : 1" = 40'

Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours
- Prop. 10' Contours
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop Water
- Concrete Paving
- Light Duty Paving (P-3)
- Wetlands
- Flood Plain
- Ex. Conc. C&G to be Removed
- Proposed Reverse Conc. Curb & Gutter
- Ex.Trees



LOCATION MAP

SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV.59.6633

DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

See Sheet 2 for FCP Notes, Planting Specifications and Details

PARKING CALCULATION

PARKING SPACES REQUIRED
63,241 SF OFFICE AT 3.3 PS @ 1000SF = 209 PS
8.5' x 16.5' PARKING SPACES = 45 (INCL. 8 HDCP)
9.0' x 18.0' PARKING SPACES = 164
PARKING SPACES PROVIDED = 209 P.S. (INCL. 8 HDCP)
HDCP PARKING SPACES ARE 13' X 16.5'
VAN ACCESSIBLE PARKING SPACES ARE 16' X 16.5'

SITE DATA

TOTAL AREA OF SITE:	4.87297 AC
EXISTING ZONING:	M-2 (SEE AA-87-06)
PROPERTY REFERENCE:	L-1300, F-547
EXISTING USE:	VACANT
PROPOSED USE:	OFFICE
BUILDING COVERAGE:	19,250 SF OR 0.44 AC
% BUILDING COVERAGE:	9.0%
FLOOR AREA RATIO:	0.27
AREA TO BE PAVED PLUS BUILDING AREA:	2.35 AC
OPEN SPACE:	0.15 AC
% PARKING LOT COVERAGE:	39%
AREA TO BE DISTURBED:	3.25 AC OR 141,570 S.F.
AREA TO BE VEGETATIVELY STABILIZED:	0.75 AC

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME			SECTION NAME		PARCEL #
DORSEY BUSINESS CENTER			1		H
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — REGISTERED PROFESSIONAL ENGINEER

Sheet 1 of 2

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B2
John F. Canoles

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: V.Z./K.U.
DRAWN BY: H.C.
CHECKED BY: V.Z.

REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations).

FOREST CONSERVATION PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 11 OF 14

SDP-00-13
SCALE: AS SHOWN
FEBRUARY 16, 2000

PN: 8779

FILENAME: 8779SITEPLAN.S01

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SDP-00-13

Planting Schedule

Afforestation Area (0.3 acres)

Qty.	Species	Size	Spacing
25	Acer rubrum - Red maple	2-3 whip	**
25	Fraxinus pennsylvanica - Green ash	2-3' whip	**
15	Platanus occidentalis - Sycamore	2-3' whip	**
15	Quercus palustris - Pin oak	2-3' whip	**
15	Cornus amomum - Silky dogwood	2-3' b.t.	**
10	Viburnum dentatum - Arrowwood	2-3'b.t.	**

Key:

** Plantings to be spaced on 11 foot centers, no shelters required - plantings should be installed in rows to facilitate future maintenance. Where possible rows should be made along contour.

b.t. - branched transplant

Planting Notes:

1. Multiflora rose control must be performed as part of this planting plan.

2. Bareroot plant material may be used to offset the cost of multiflora rose removal and maintenance. If bareroot material is used it must be planted in March-April and an anti-desiccant gel should be utilized to protect root systems. Container grown stock may be used.

3. Plants should be flagged to aid on location during maintenance. Plantings should also be planted in grid pattern to facilitate maintenance and removal of invasive and exotic species.

Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season and once each in the spring and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

Planting/Soil Specifications

1. Planting of nursery stock shall take place between March 15th and April 30th. Container stock may be planted September 1-October 30.
2. A twelve (12) inch layer of topsoil shall be spread over all afforestation areas impacted by site grading to ensure a suitable planting area. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
3. All bareroot planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.
4. Plants shall be installed so that the top of root mass is level with the top of existing grade. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part plant fibre or equivalent.
5. Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications.
6. A two (2) inch layer of hardwood mulch shall be placed over the root area of all plantings.
7. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.
8. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

1. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
2. Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Devices shown on Sheet 2 of the Forest Conservation Plan.
3. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

1. Maintenance of plantings shall last for a period of 24 months.
2. All plant material shall be watered twice a month during the 1st growing season. Watering may be more or less frequent depending on weather conditions. During second growing season, once a month during May-September, if needed.
3. Invasive exotics and noxious weeds will be removed from reforestation areas. Old field successional species will be retained.
4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
5. Dead branches will be pruned from plantings.

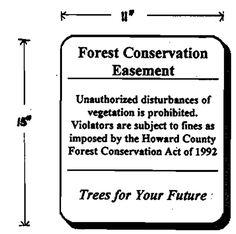
Guarantee Requirements

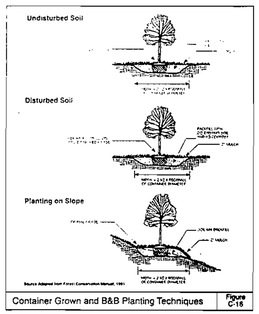
1. After one growing season, plant material shall be maintained at 90% survival threshold. A 75 percent survival rate of forestation plantings will be required at the end of the 24 month maintenance period. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season.
2. The contractor will not be liable for plant loss due to theft or vandalism.

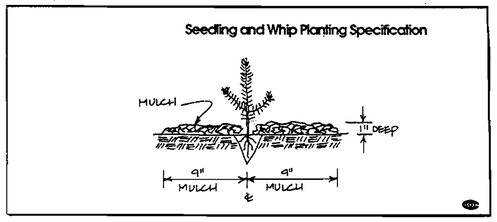
Surety for Reforestation

1. The developer shall post a surety (bond, letter of credit) to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the County, the bond shall be released.

Permanent Protective Signage







FCP NOTES

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
5. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
6. Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
7. Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
8. The reforestation obligation of 1.2 acres will be met by a combination of onsite planting and fee-in-lieu payment. Onsite planting will consist of 0.3 acres of planting within the 100 year floodplain.

FOREST DATA

	Acres
Gross Area:	4.9
Net Tract Area (NTA):	2.8
Existing Forest (NTA):	2.1
Reforestation Threshold:	0.4
Forest to be Cleared (NTA):	2.1
Forest to be Retained in FCE:	0.0
Reforestation Required:	1.2
Onsite Reforestation Proposed:	0.3
Outstanding Reforestation Obligation:	0.9
Fee-in-lieu Cost:	$11,761.20

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER ____ DATE ____

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE ____ DATE ____

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION ____ DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT Richard Blood ____ DATE 9/1/00

DIRECTOR ____ DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX/ZONE MAP	ELECT. DIST.	CENSUS TRACT
(4391)	6		37.4S	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

Sheet 2 of 2

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

REVISIONS

FOREST CONSERVATION PLAN

FOR

DORSEY BUSINESS CENTER

PARCEL 'H-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 12 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — No. 11887 — REGISTERED PROFESSIONAL ENGINEER

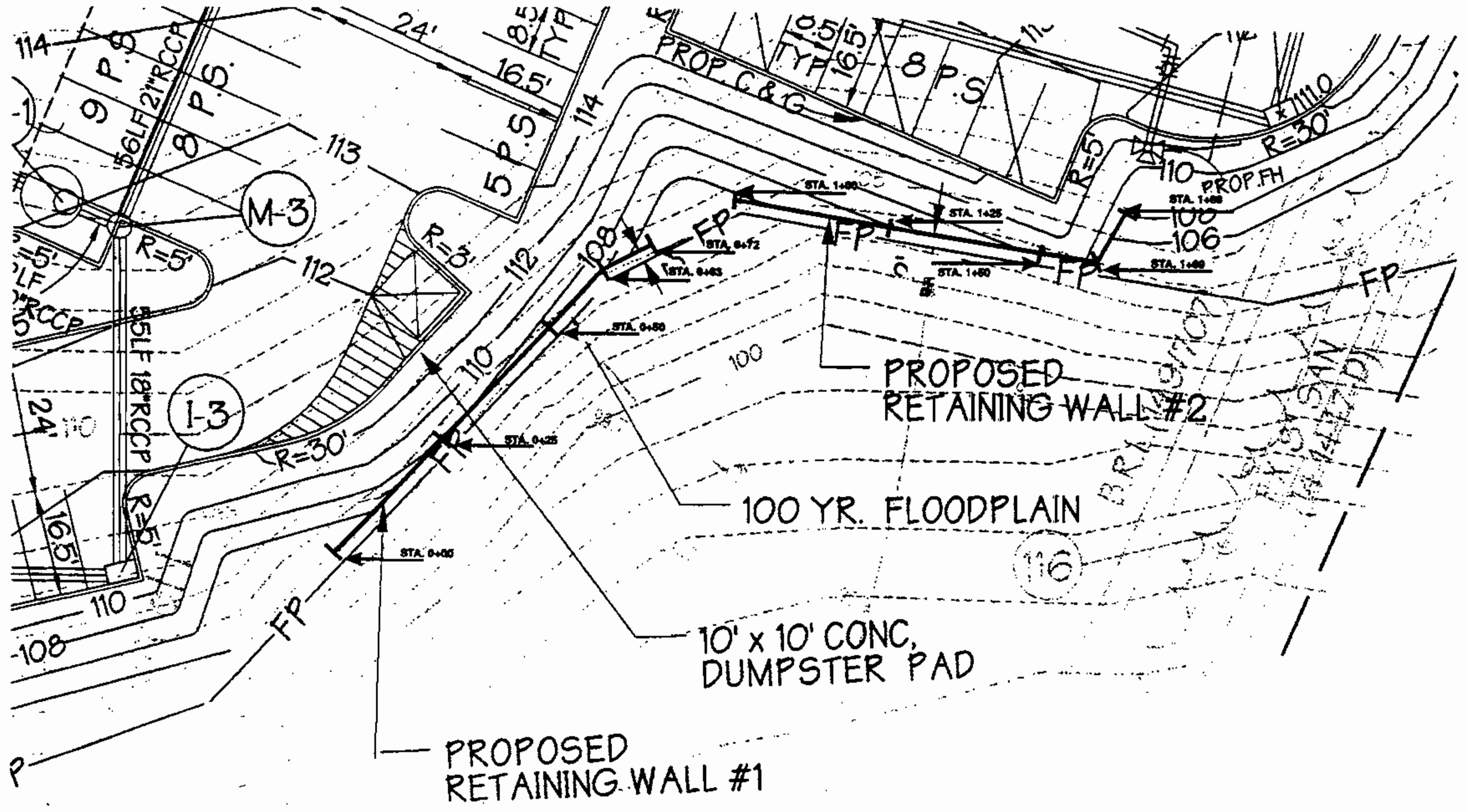
Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044D2
John P. Canales

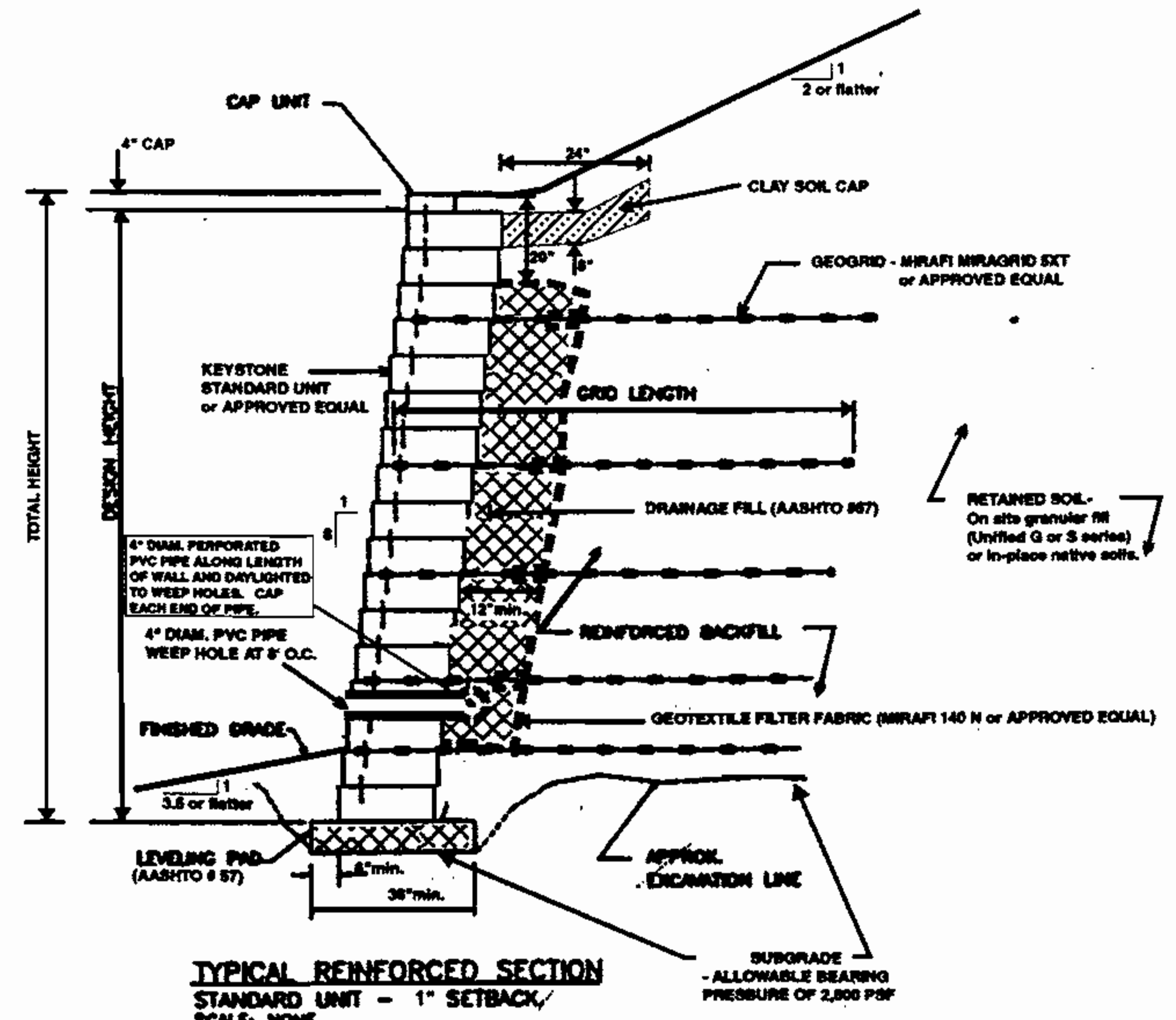
FILENAME: 8779STORMCEPTORPLAN.SO1

FN: 8779

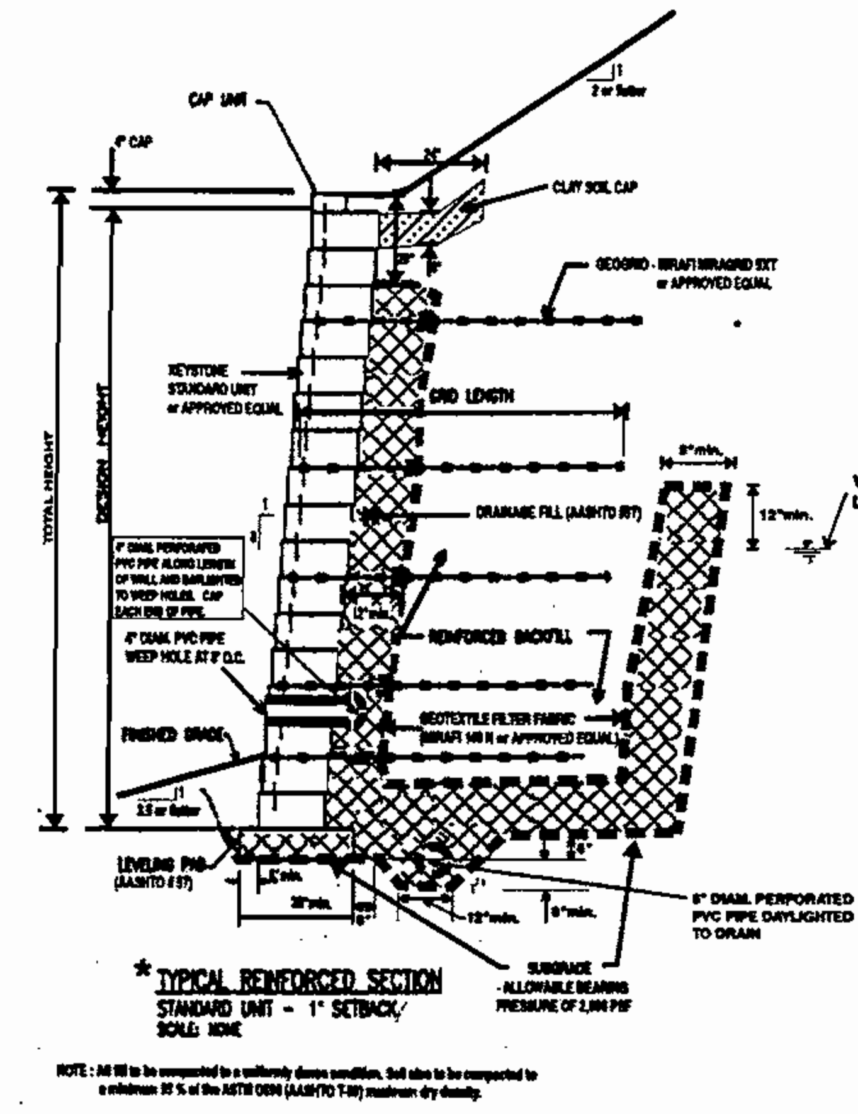
SDP-00-13



0 20 SCALE (FEET)

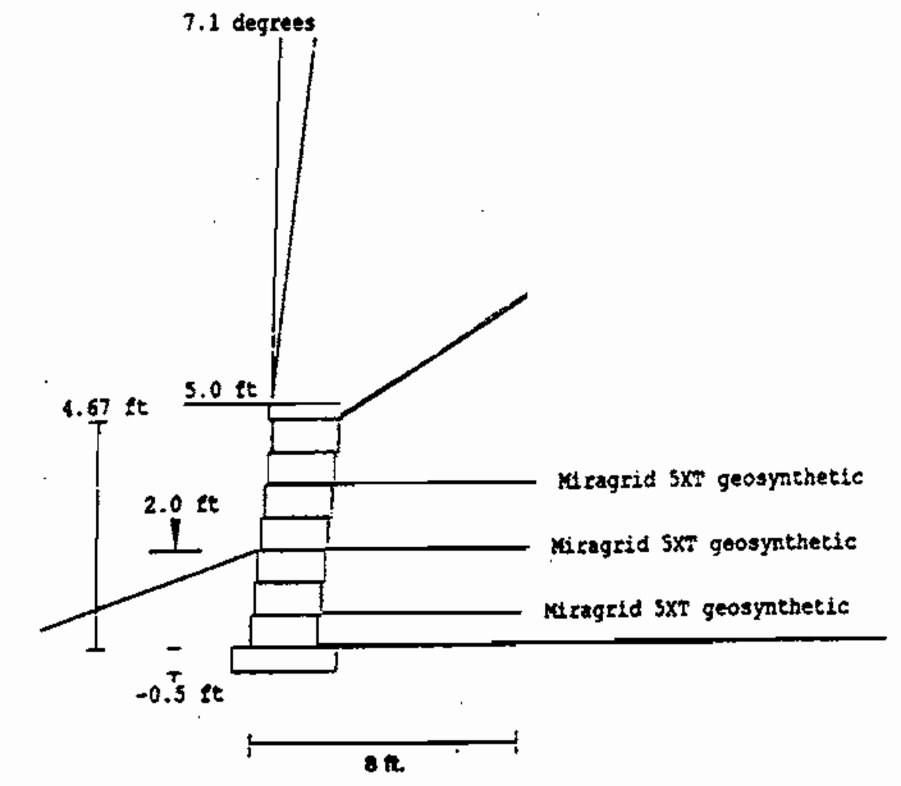


TYPICAL REINFORCED SECTION
STANDARD UNIT - 1" SETBACK
SCALE: NONE

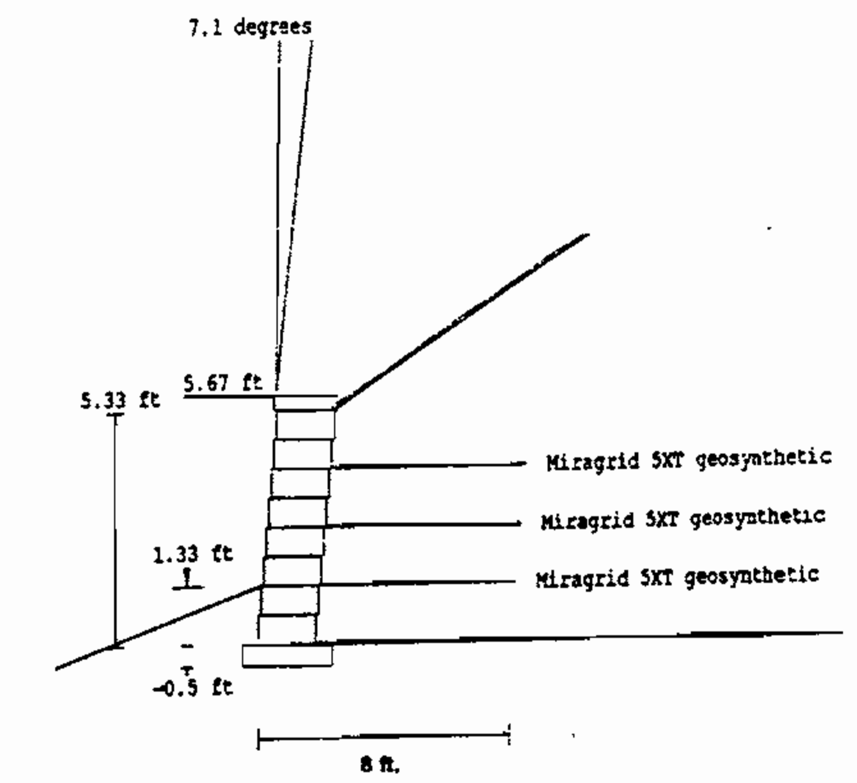


* TYPICAL REINFORCED SECTION
STANDARD UNIT - 1" SETBACK
SCALE: NONE

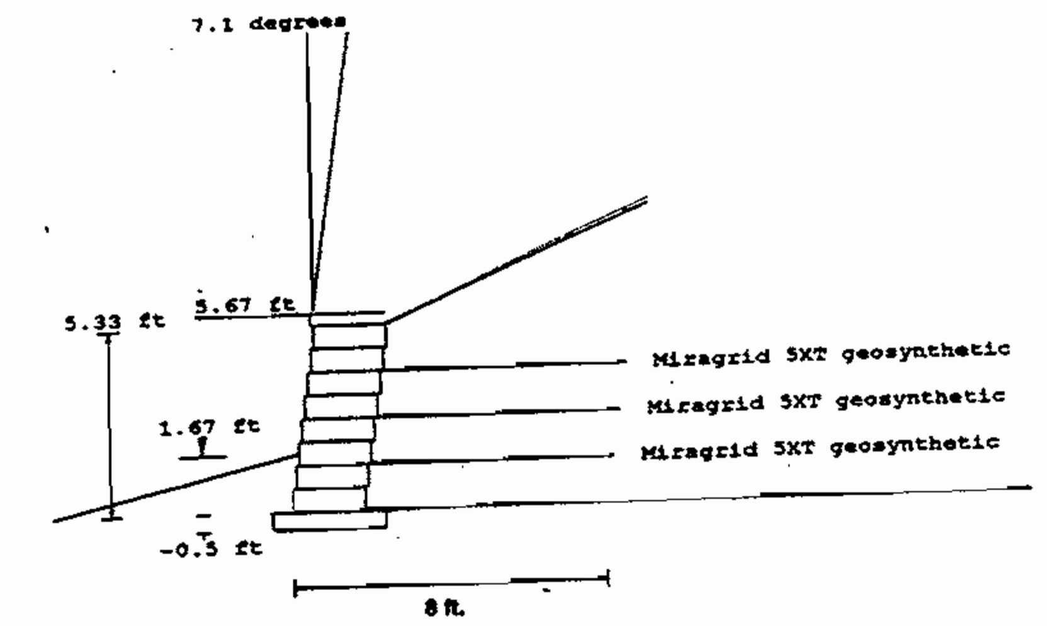
*Use this section if groundwater is encountered at the time of construction.



SECTION A

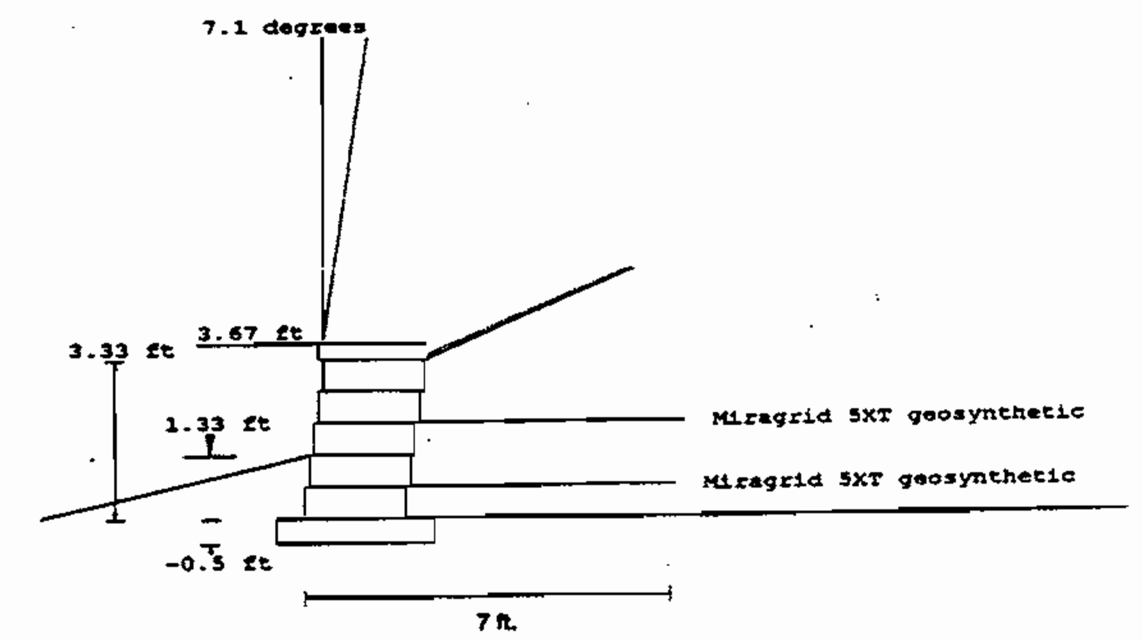


SECTION B

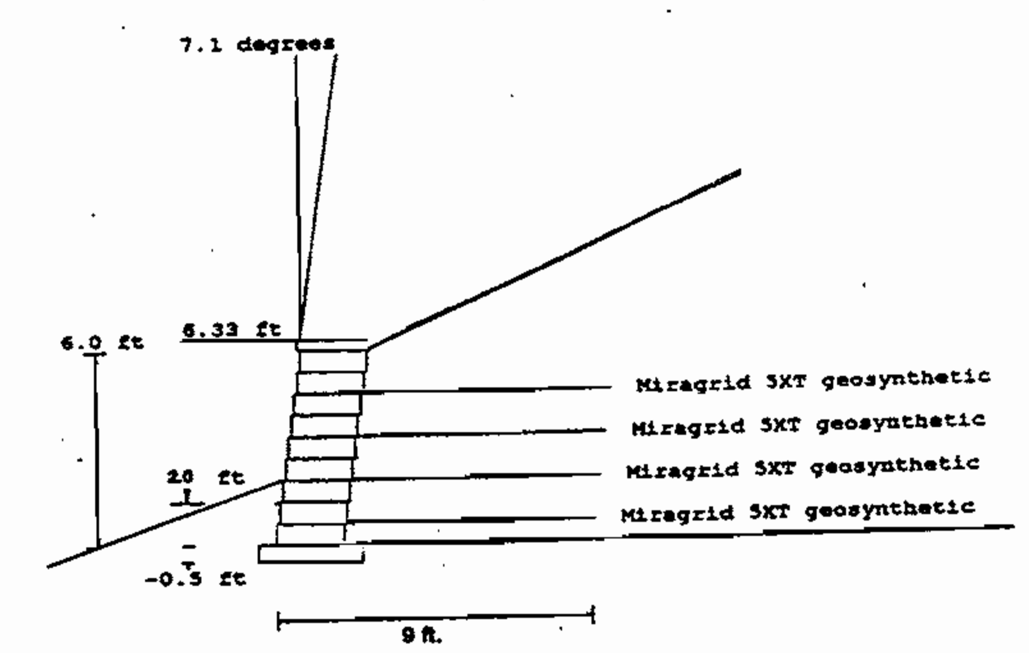


SECTION D

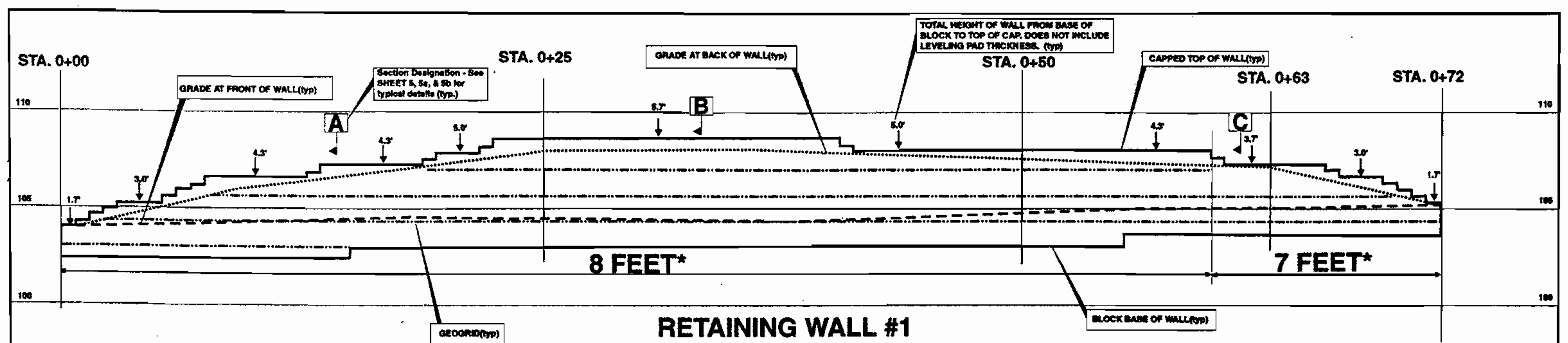
NOTE : Basic details taken from KEYSTONE Retaining Wall Systems Design Manual dated 1994. Details modified by the Geotechnical Engineer as deemed appropriate for this project.



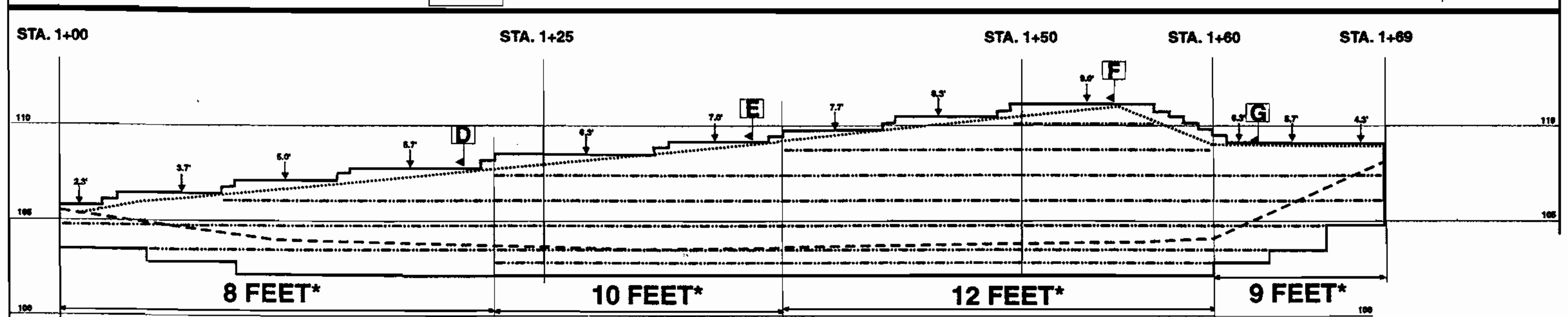
SECTION C



SECTION G

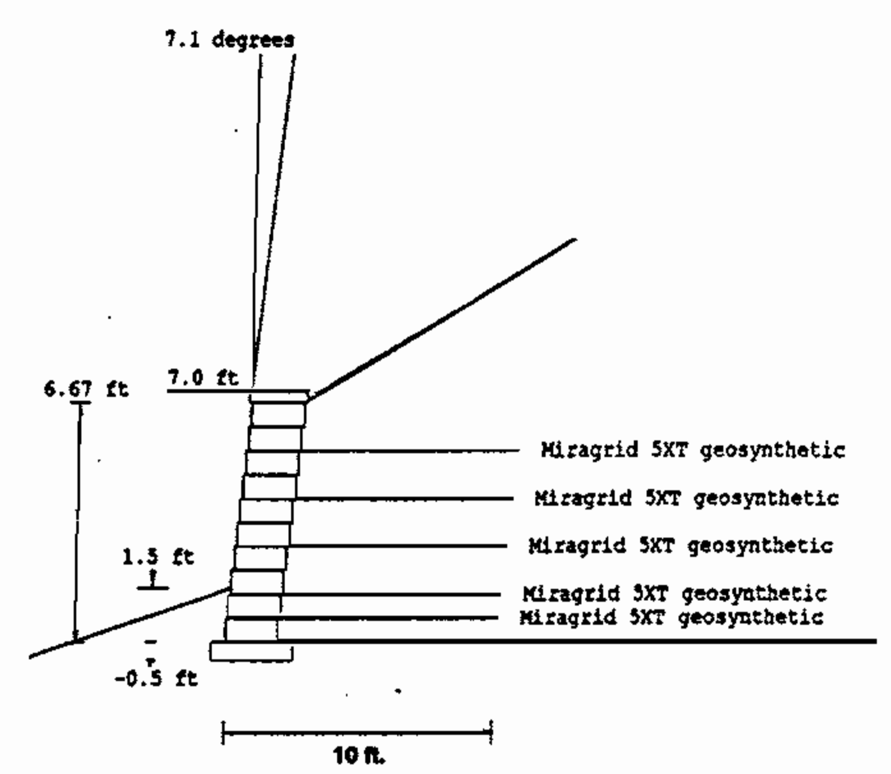


RETAINING WALL #1

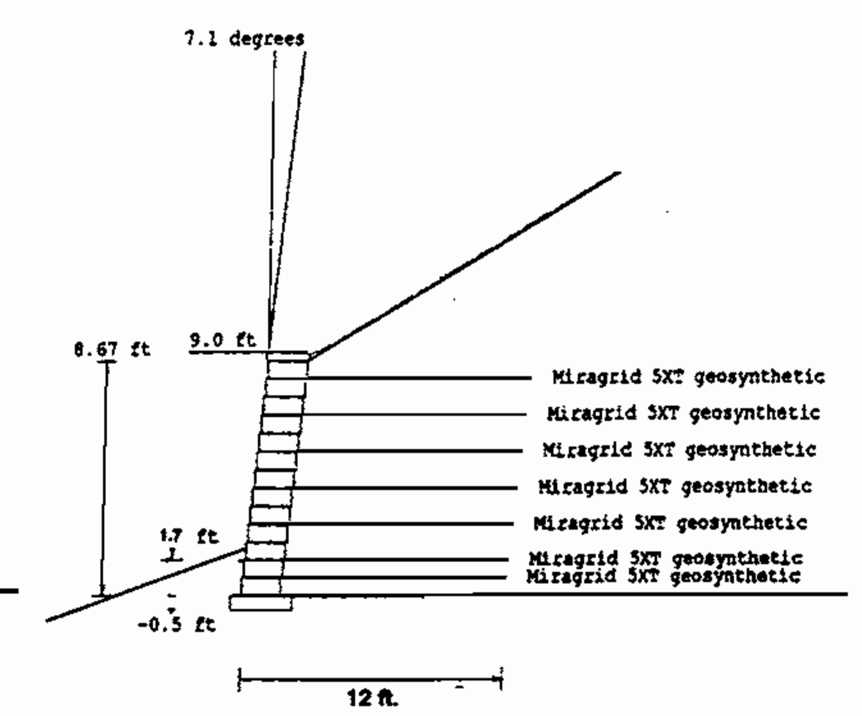


RETAINING WALL #2

* "X" FEET - LENGTH OF GEOGRID BACK FROM FACE OF WALL



SECTION E



SECTION F

NO SCALE

0 5 SCALE (FEET)

APPROVED: Howard County Department of Planning and Zoning			
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE 8/7/00		
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE 8/1/00		
DIRECTOR	DATE 9/6/00		

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME		SECTION NAME		PARCEL #
DORSEY BUSSINESS CENTER		1		H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE B-01			SEWER CODE 2220000		

RETAINING WALL PROFILES AND DETAILS
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT : 1
HOWARD CO., MARYLAND

SHT. 13 OF 14

SDP-00-13
SCALE : As Shown
DATE: FEB. 17, 2000

PN 8779

PREPARED BY :

GWS
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

HERBST/BENSON & ASSOCIATES Geotechnical Engineers
414 Main Street Reisterstown, Maryland 21136
Tel #1-800-800-0275, Fax #410-526-7268

STATE OF MARYLAND – PROFESSIONAL ENGINEER – REGISTERED

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: G.R.S.
DRAWN BY: H.C.
CHECKED BY: G.R.S.

FILENAME: 8779retainingwallprofiles&details.s01

SDP-00-13

PART 1: GENERAL

1.01 Description

A. This w ork shall consist of furnishing and construction of a KEYSTONE Retaining Wall System or approved EQUAL in accordance w ith these specifications and in reasonably close conformity w ith these specifications and w ith the lines, grades, design, and dimensions show n on the plans.

1.02 Certification

A. Contractor shall submit a Manufacturer's certification, prior to start of w ork, that the retaining w all system components meet the requirements of this specification.

i) The contractor's submittal package shall include but not limited to actual test results for tension/creep, durability/aging, construction damage, geogrid/facing connection, pullout, and quality control.

B. The engineering designs, techniques, and material evaluations shall be in accordance w ith the KEYSTONE Design Manual,1994, NCMA Design Guidelines For Segmental Retaining Walls,1997 or the AASHTO Standard Specifications for Highw ay Bridges, 1993, w hichever is applicable.

PART 2: PRODUCTS

2.01 Definitions

A. Structural Geogrid - a structural element formed by a regular netw ork of integrally connected tensile elements w ith apertures of sufficient size to allow interlocking w ith surrounding soil, rock, or earth and function primarily as reinforcement.

B. Modular Unit - a concrete retaining w all element machine made from portland cement, w ater, and aggregates.

C. Unit Fill - drainage aggregate w hich is placed w ithin and immediately behind the modular concrete units.

D. Reinforced Backfill - compacted soil w hich is placed w ithin the reinforced soil volume as outlined on the plans.

2.02 Modular Concrete Retaining Wall Units

A. Modular concrete units shall conform to the follow ing architectural requirements:

face color - standard manufacturers' color or custom color as specified by the Ow ner.

face finish - sculptured rock face in angular multiplaner configuration. Other face finishes w ill not be allow ed w ithout w ritten approval of ow ner.

bond configuration - running w ith bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.

exposed surfaces of units shall be free of chips, cracks or other imperfections w hen view ed from a distance of 10 feet under diffused lighting.

B. Modular concrete units shall conform to the follow ing material requirements:

1. Cement - Materials shall conform to the follow ing applicable specifications.

a. Portland Cement - ASTM C 150

b. Modified Portland Cement - Portland cement conforming to ASTM C 150, modified as follow s. Limestone - calcium carbonate, w ith a minimum 85 % content, may be added to the cement, provided these requirements of C 150 as modified are met; (1) limitation on insoluble residue 1.5 %; (2) limitation on air content of mortar - volume percent, 22% maximum; and (3) limitations of loss of ignition - 7 %

c. Blended Cements - ASTM C 618

d. Pozzolans - ASTM C 618

e. Blast Furnace Slag Cement - ASTM C 989

2. Aggregates - aggregates shall conform to the follow ing specifications, as applicable.

a. Normal Weight Aggregates - ASTM C 33

b. Lightw eight Aggregates - ASTM C 331

3. Other Constituents - Air entraining agents, coloring pigments, integral w ater repellents, finely ground silica, and other constituents shall be previously established as suitable for use in modular concrete retaining w all units and shall conform to applicable ASTM standards or, shall be show n by test or experience to be not detrimental to the durability of the modular concrete units or any material customarily used in retaining w all construction.

C. Modular concrete units shall conform to the follow ing structural and geometric requirements:

compressive strength = 3000 psi minimum;

absorption = 8 % maximum (6% in northern states) for standard w eight aggregates;

unit depth - 20 inches minimum;

unit w idth to height ratio = 2.25: 1;

unit w eight - 90 lbs/unit minimum for standard w eight aggregates

inter-unit shear strength - 1500 plf minimum at 2 psi normal pressure;

geogrid/unit peak connection strength -1000 plf minimum at 2 psi normal force

maximum horizontal gap betw een erected units shall be - 1/2 inch.

D. Modular concrete units shall conform to the follow ing constructability requirements:

vertical setback = 1/8"± per course (near vertical) or 1"± per course per the design draw ings;
alignment and grid positioning mechanism - fiberglass pins, tw o per unit minimum.

2.03 Shear Connectors

A. Strength of shear connectors betw een vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F. Shear connectors shall be 1/2 inch diameter thermoset isopthalic polyester resin-pultruded fiberglass reinforcement rods. Connectors shall have a minimum flexural strength of 128,000 psi and short beam shear of 6,400 psi.

B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.04 Base Leveling Pad Material

A. Material shall consist of a compacted crushed stone base as show n on the construction draw ings. The leveling pad shall be a minimum of 6 inches thick.

2.05 Unit Fill

A. Unit fill shall consist of clean crushed stone conforming to the gradation of AASHTO #57 aggregate.

B. One cubic foot, minimum, of drain fill shall be used for each square foot of w all face. Drain fill shall be placed w ithin cores of, betw een, and behind units to meet this requirement.

2.06 Reinforced Backfill

A. Reinforced backfill shall be free of debris and meet the follow ing gradation requirements:

Sieve Size	Percent Passing
3/4 inch	100
No. 4	100-20
No. 40	0-60
No. 200	0-35

Plasticity Index (PI) <5 and liquid limit <36.

B. Material can be site excavated soils w here the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the backfill or in the reinforced soil mass.

C. Contractor shall submit reinforced fill sample and laboratory test results to the Engineer for approval prior to the use of any proposed reinforced fill material.

2.07 Geogrid

A. Geogrid to consist of Mirafi MIRAGRID 5XT or approved equal or stronger geogrid. Geogrid properties to be determine as follow s:

Ta , Allow able Tensile Design Load, shall be determined as follow s:
Ta = Tcr /(FD*FC*FS)
Ta shall be evaluated based on a 75 year design life.

Tcr , Creep Limited Tensile Load
Tcr shall be determined from 10,000 hour creep testing performed in accordance w ith ASTM D5262.

FD , Factor for Durability/Aging
FD shall be determined from polymer specific durability testing covering the range of expected soil environments.

FC , Factor for Construction Damage
FC shall be determined from product specific construction damage testing performed in accordance w ith GRI-GG4. Test results shall be provided for each product to be used w ith project specific or more severe soil type.

FS , Overall Factor of Safety
FS shall be 1.5 unless otherw ise noted.

The maximum design tensile load of the geogrid shall not exceed the laboratory tested ultimate strength of the geogrid/facing unit connection as limited by the "Hinge Height" divided by a factor of safety of 1.5. The connection strength testing and computation procedures shall be in accordance w ith NCMA test methods.

Soil Interaction Coefficient, CI
CI values shall be determined per GRI:GG5 at a maximum 0.75 inch displacement.

Manufacturing Quality Control

The geogrid manufacturer shall have a manufacturing quality control program that includes QC testing for each 40,000 SF of production, each lot, or each production day. The QC testing shall include:
Tensile Modulus
Specific Gravity
Melt Flow Index (PP&HDPE)
Molecular Weight (PETP)

PART 3 EXECUTION

3.01 Excavation

A. Contractor shall excavate to the lines and grades show n on the construction draw ings. Engineer or his designated representative shall inspect the excavation and approve prior to placement of leveling material or fill soils.

B. Over-excavation of deleterious soils and replacement w ith suitable fill w ill be paid at unit cost rates.

3.02 Base Leveling Pad

A. Leveling pad material(s) shall be placed to the lines and grades show n on the construction draw ings, to a minimum thickness of 6 inches.

B. Soil leveling pad materials shall be compacted to a minimum of 95 % standard or 90 % modified Proctor.

C. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 KEYSTONE Unit Installation

A. First course of units shall be placed on the leveling pad, and alignment and level checked. Pins or molded surfaces of modular concrete units shall be used for alignment control.

B. Position vertically adjacent modular concrete units as recommended by the Manufacturer.

C. Maximum stacked vertical height of w all units, prior to w all drain fill and backfill placement and compaction, shall not exceed tw o courses.

D. Whole, or cut, units on curves and corners to shall be erected w ith running bond approximately centered on units above and below.

E. Cap units shall be glued to underlaying units w ith an adhesive recommended by the manufacturer.

3.04 Structural Geogrid Installation

A. Geogrid shall be oriented w ith the highest strength axis perpendicular to the w all alignment.

B. Geogrid reinforcement shall be placed at the elevations and to the extent show n on the construction draw ings or as directed by the Engineer.

C. The geogrid shall be laid horizontally on compacted backfill. Place the next course of modular concrete units over geogrid. The geogrid shall be pulled taut, and anchored prior to backfill placement on the geogrid.

D. Geogrid reinforcements shall be continuous throughout their embedment lengths. Spliced connections betw een shorter pieces of geogrid is not allow ed unless pre-approved by the Architect/Engineer prior to construction.

3.05 Reinforced Backfill Placement

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid .

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 8 inches w here hand compaction is used, or 12 inches w here heavy compaction equipment is used.

C. Reinforced backfill shall be compacted to 95 % of the maximum density as determined by ASTM D695 . The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be w ithin 2 percentage points dry of optimum.

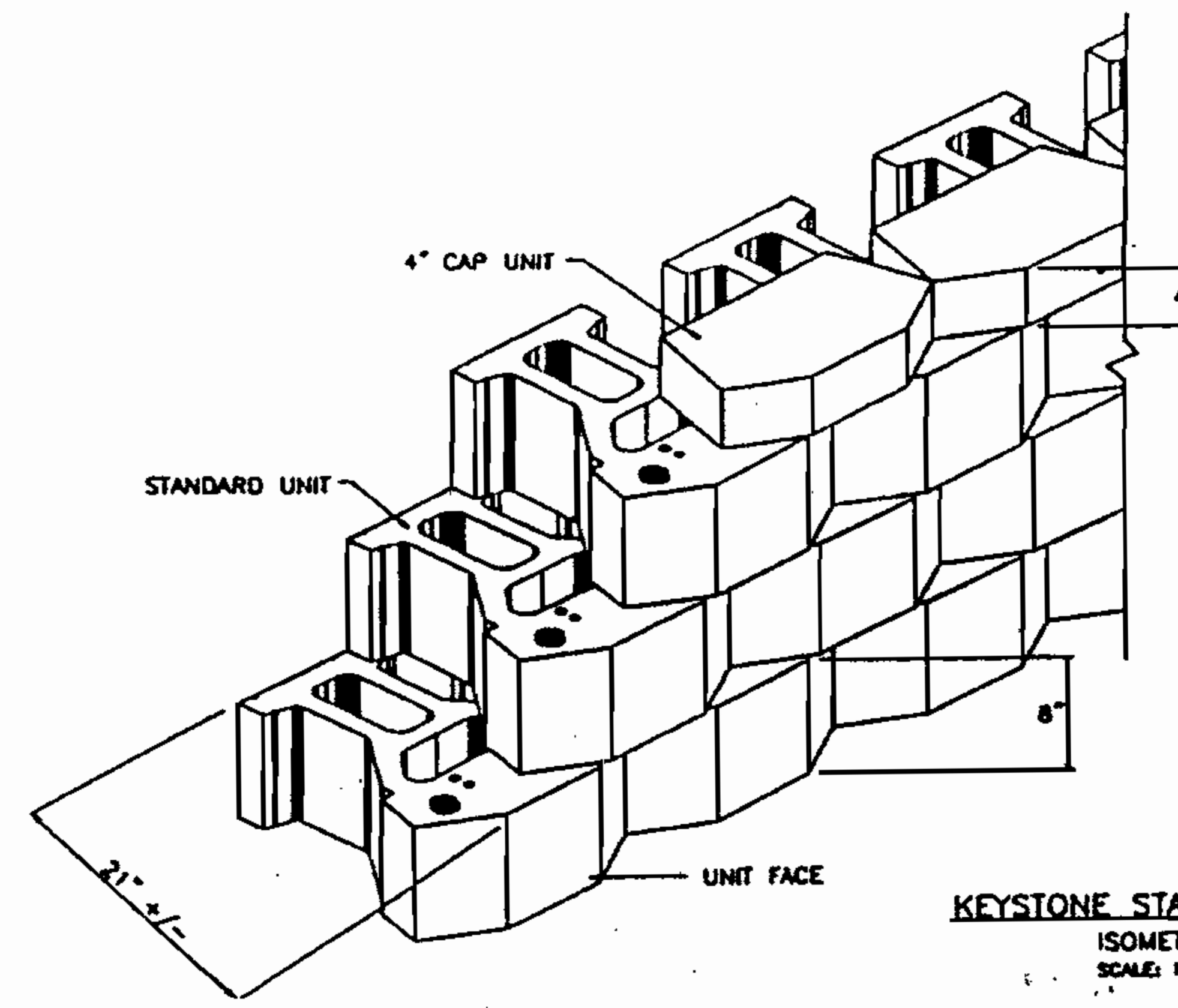
D. Only lightw eight hand-operated equipment shall be allow ed w ithin 3 feet from the tail of the modular concrete unit.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid . Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid .

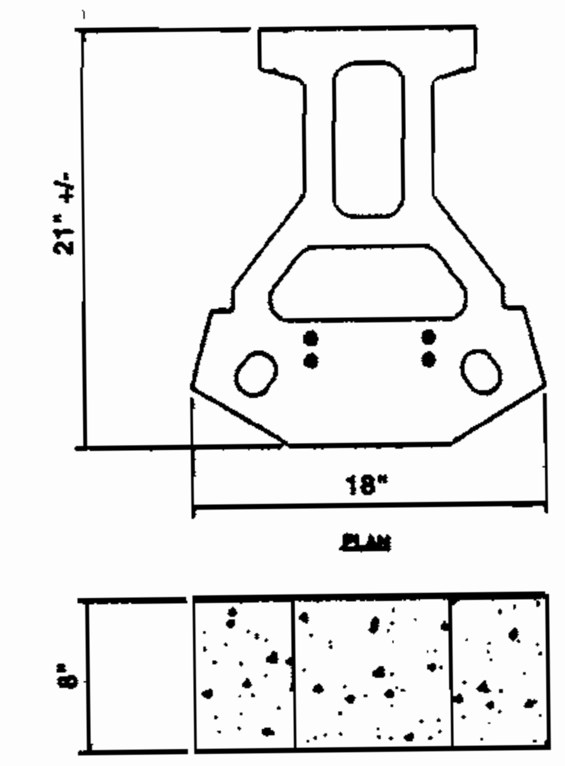
F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill aw ay from the w all units to direct runoff aw ay from w all face. The Contractor shall not allow surface runoff from adjacent areas to enter the w all construction site.

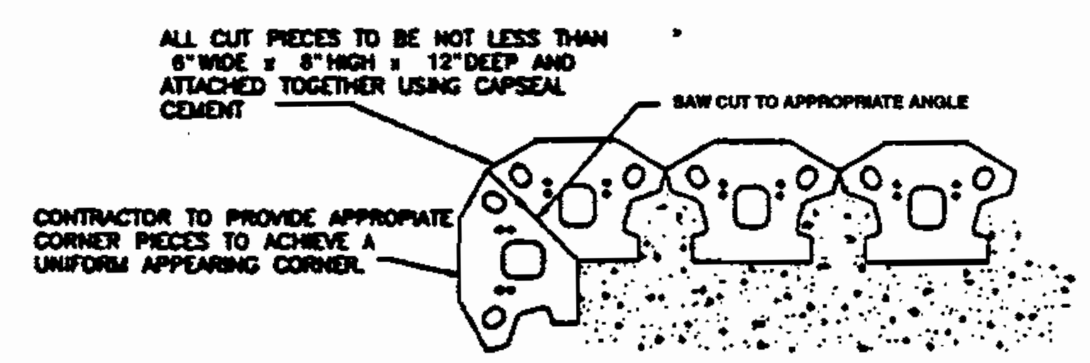
End of Specification



KEYSTONE STANDARD UNIT
ISOMETRIC
SCALE: NONE

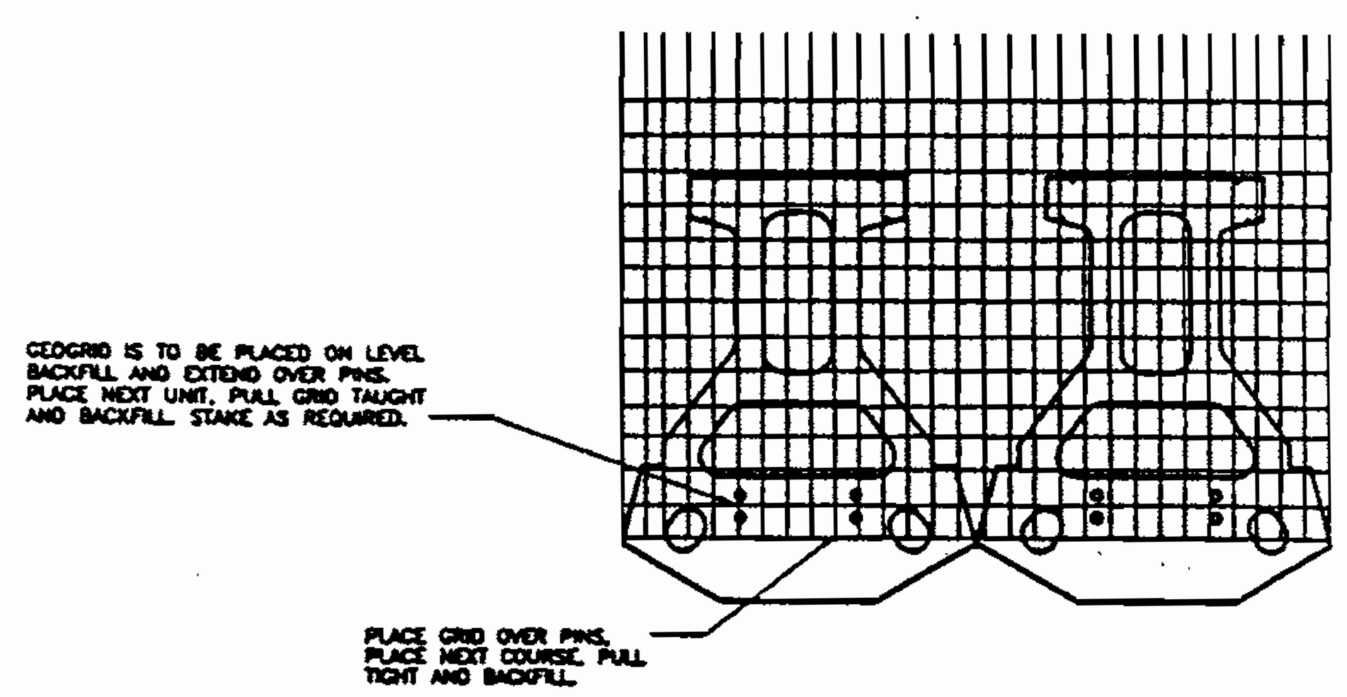


KEYSTONE STANDARD UNIT
SCALE: NONE

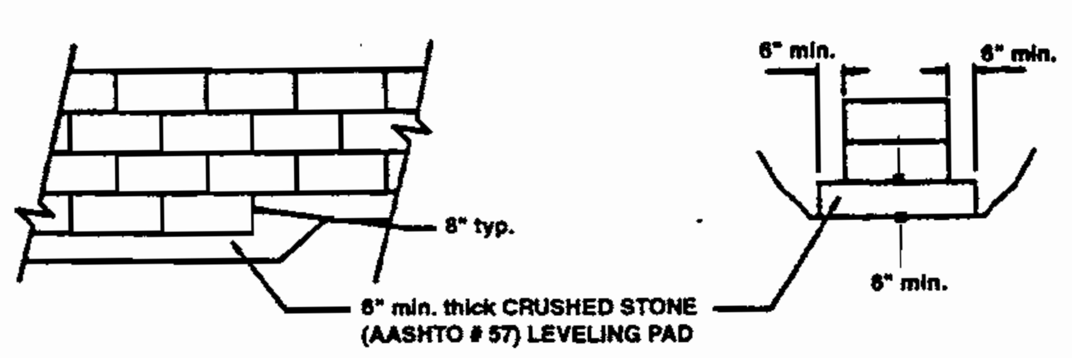


TYPICAL CORNER DETAIL

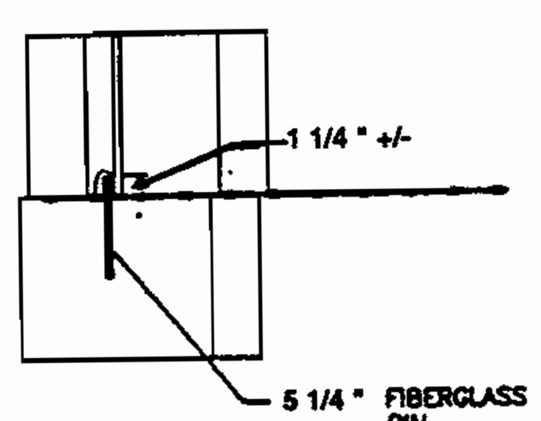
PLAN
SCALE: NONE



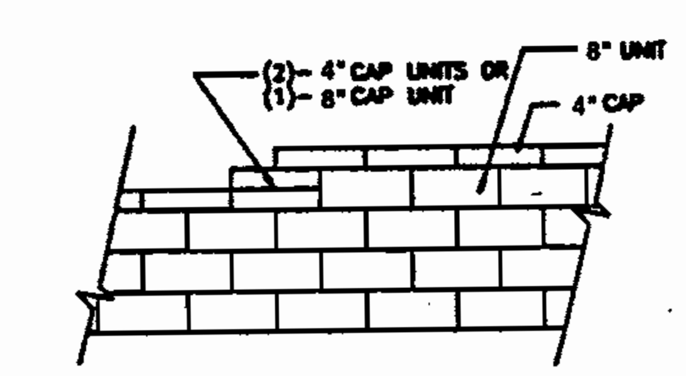
KEYSTONE STANDARD UNIT
GRID/PIN CONNECTION
SCALE: NONE



LEVELING PAD AND STEP DETAILS
SCALE: NONE



KEYSTONE STANDARD UNIT
GRID CONNECTION
SCALE: NONE



TOP OF WALL STEPS
SCALE: NONE

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

HERBST/BENSON & ASSOCIATES Geotechnical Engineers
414 Main Street Reisterstown, Maryland 21136
Tel #1-800-800-0275, Fax #410-526-7268

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: G.R.S.
DRAWN BY: H.C.
CHECKED BY: G.R.S.

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00
DIRECTOR — DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD #6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

RETAINING WALL NOTES AND DETAILS
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT : 1
HOWARD CO., MARYLAND
SHT. 14 OF 14 SDP-00-13
SDP-00-13
SCALE : As Shown
DATE: FEB. 17, 2000

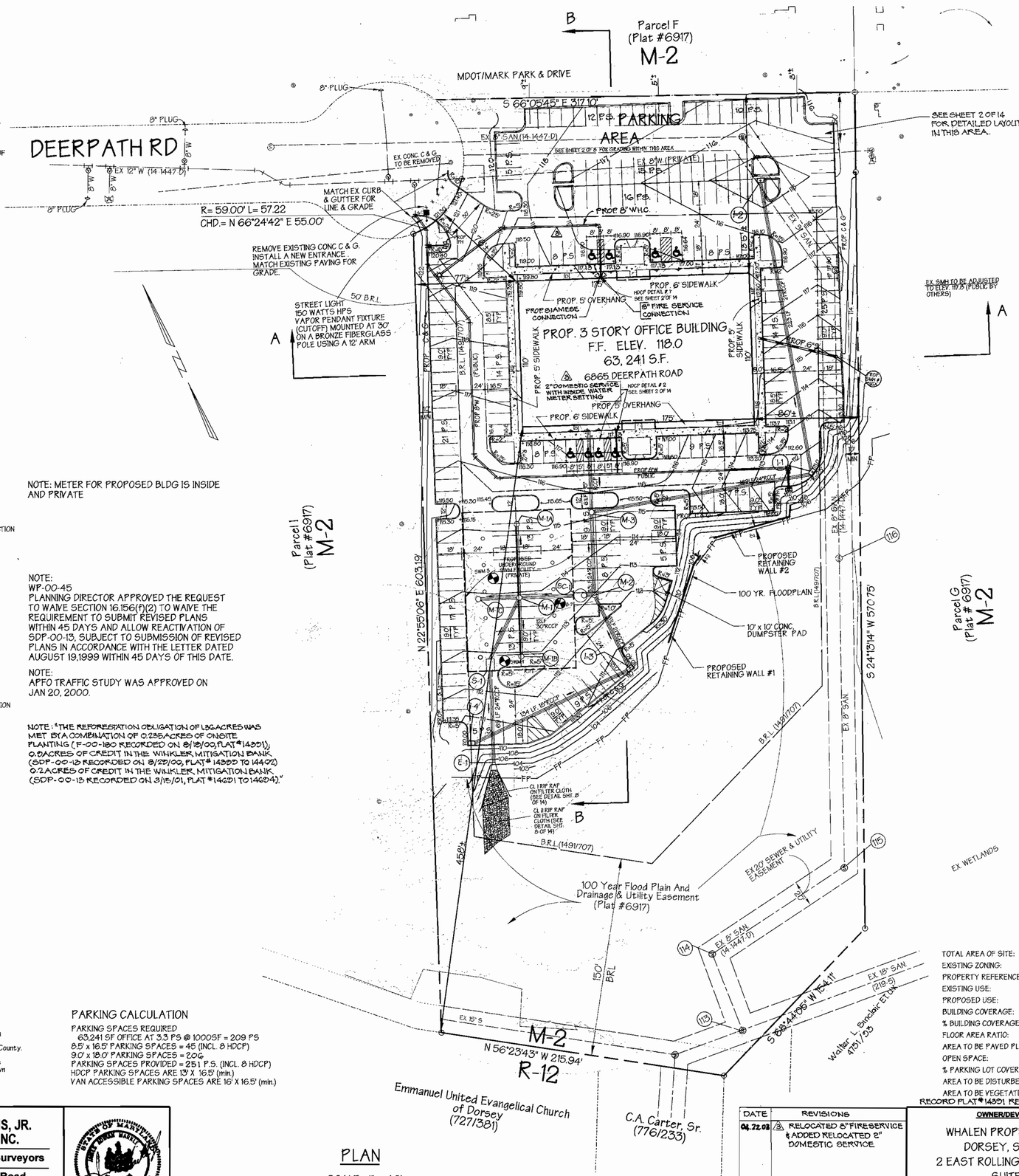
FILENAME: 8779retainingwallnotes&details.s01

\8779retainingwallnotes&details Feb. 17, 2000 10:36:10

Construction Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
14. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
15. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
16. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
17. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
18. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
19. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
20. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
21. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
22. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
23. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY PREPARED BY G. W.STEPHENS JR. & ASSOCIATES DATED MARCH 1998.
24. OUTDOOR LIGHTING WILL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
25. 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. 37IA WAS USED FOR THIS PROJECT.
26. WATER IS PUBLIC.
27. SEWER IS PUBLIC.
28. EXISTING UTILITIES ARE BASED ON SURVEY PREPARED BY GWS
29. PROPOSED SIDEWALK IS 5" THICK, CONCRETE (MIX NO. 2) ON 4" CRUSHER RUN BASE.

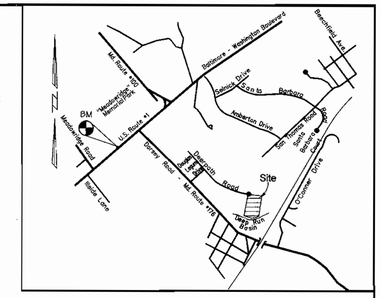
NOTE:
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.



PLAN
SCALE : 1" = 40'

Legend

- Ex. 2' Contours — 394
- Ex. 10' Contours — 395
- Prop. 2' Contours — 394
- Prop. 10' Contours — 395
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop Water
- Concrete Paving
- Light Duty Paving (P-3)
- Wetlands — W
- Flood Plain — FP
- Ex. Conc. C&G to be Removed
- Proposed Reverse Conc. Curb & Gutter
- Ex. Trees
- Street Light



LOCATION MAP
SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV. 59.6633
DISC SET ON TOP OF CONCRETE(3" DEEP) COLUMN, 2.47' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

SHEET INDEX

SHEET 1 OF 14	SITE PLAN
SHEET 2 OF 14	SITE & HANDICAP DETAILS
SHEET 3 OF 14	STORM DRAIN & SEWER PROFILES
SHEET 4 OF 14	STORMCEPTOR PLAN
SHEET 5 OF 14	SEDIMENT CONTROL PLAN
SHEET 6 OF 14	SEDIMENT CONTROL NOTES AND DETAILS
SHEET 7 OF 14	STORMWATER MANAGEMENT DRAINAGE AREA MAPS
SHEET 8 OF 14	STORMWATER MANAGEMENT PLANS & PROFILES
SHEET 9 OF 14	STORMWATER MANAGEMENT NOTES AND DETAILS
SHEET 10 OF 14	LANDSCAPE PLAN
SHEET 11 OF 14	FOREST CONSERVATION PLAN
SHEET 12 OF 14	FOREST CONSERVATION PLAN
SHEET 13 OF 14	RETAINING WALL PROFILES & DETAILS
SHEET 14 OF 14	RETAINING WALL NOTES & DETAILS

SITE DATA

TOTAL AREA OF SITE:	4.87297 AC
EXISTING ZONING:	M-2 (SEE AA-87-06)
PROPERTY REFERENCE:	L-1300, F-547
EXISTING USE:	VACANT
PROPOSED USE:	OFFICE
BUILDING COVERAGE:	19,250 SF OR 0.44 AC
% BUILDING COVERAGE:	9.0%
FLOOR AREA RATIO:	0.27
AREA TO BE PAVED PLUS BUILDING AREA:	2.35 AC
OPEN SPACE:	0.15 AC
% PARKING LOT COVERAGE:	39%
AREA TO BE DISTURBED:	3.25 AC OR 141,570 S.F.
AREA TO BE VEGETATIVELY STABILIZED:	0.75 AC

RECORD PLAT # 14391 RECORDED ON 08/18/00 (F-00-180)

PARKING CALCULATION

PARKING SPACES REQUIRED
63,241 SF OFFICE AT 3.3 PS @ 1000SF = 209 PS
8.5' x 16.5' PARKING SPACES = 45 (INCL. 8 HDCP)
9.0' x 18.0' PARKING SPACES = 206
PARKING SPACES PROVIDED = 251 P.S. (INCL. 8 HDCP)
HDCP PARKING SPACES ARE 13' X 16.5' (min.)
VAN ACCESSIBLE PARKING SPACES ARE 16' X 16.5' (min.)

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — DATE 7/25/00
PLAN NUMBER

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/25/00

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/1/00
DIRECTOR — DATE 8/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL #	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL
DORSEY BUSINESS CENTER	1	H

PLAT	BLOCK	ZONE	TAX MAP / ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37.43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

DATE	REVISIONS
04.22.03	3 RELOCATED 8" FIRE SERVICE & ADDED RELOCATED 2" DOMESTIC SERVICE.

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS
11/15/99 - REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations).
11/01/00 ADDED ADDITIONAL PARKING AREA

SITE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 1 OF 14

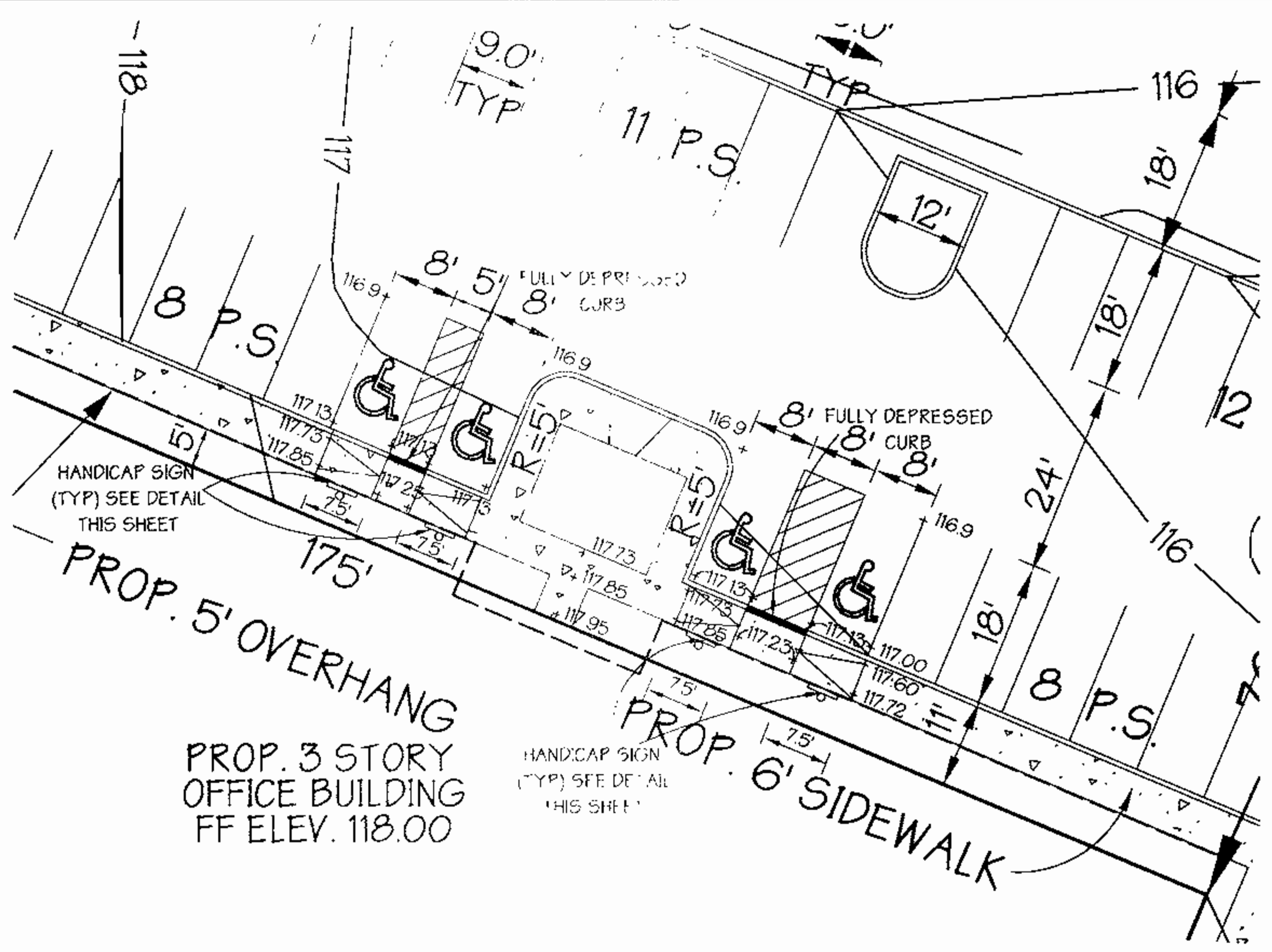
SDP-00-13
SCALE: AS SHOWN
FEBRUARY 17, 2000

PREPARED BY :
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

FILENAME: 8779SITEPLAN.501

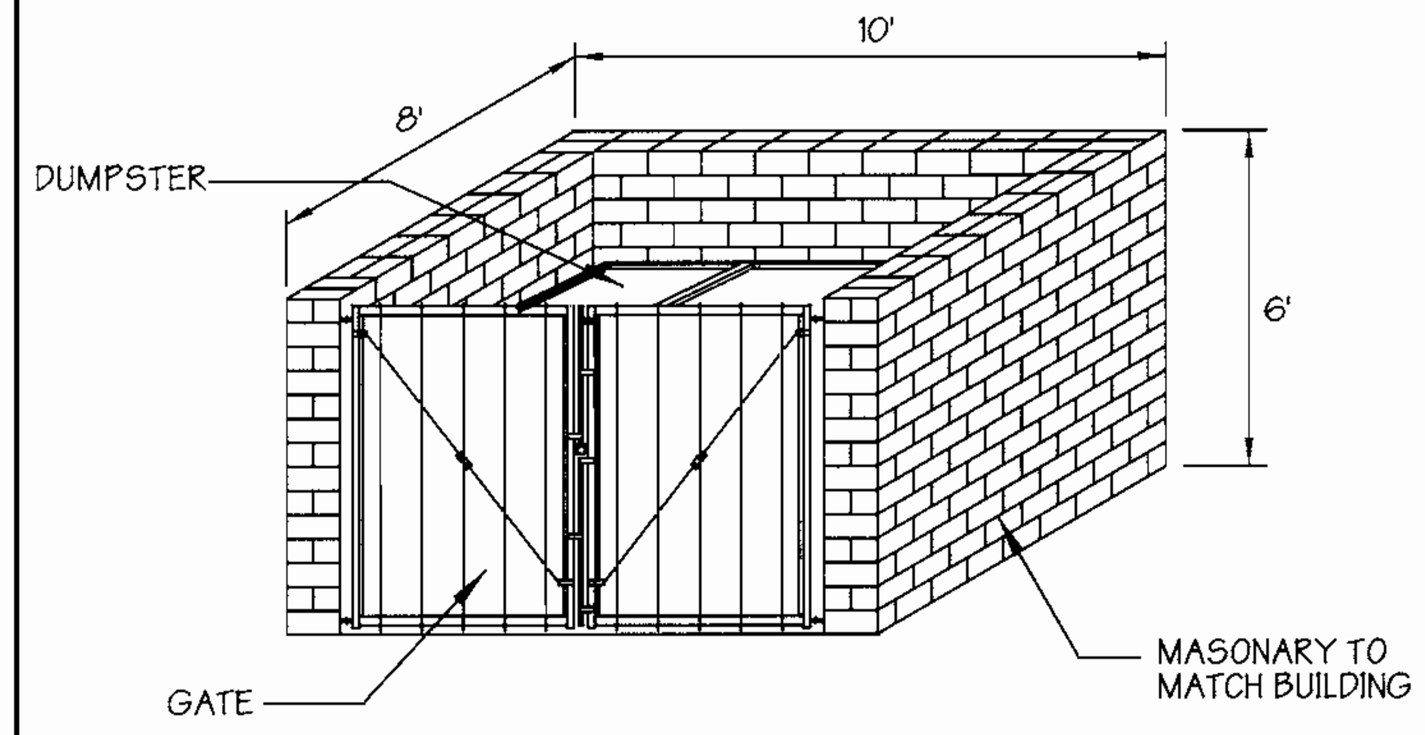
FN 8779

SDP-00-13



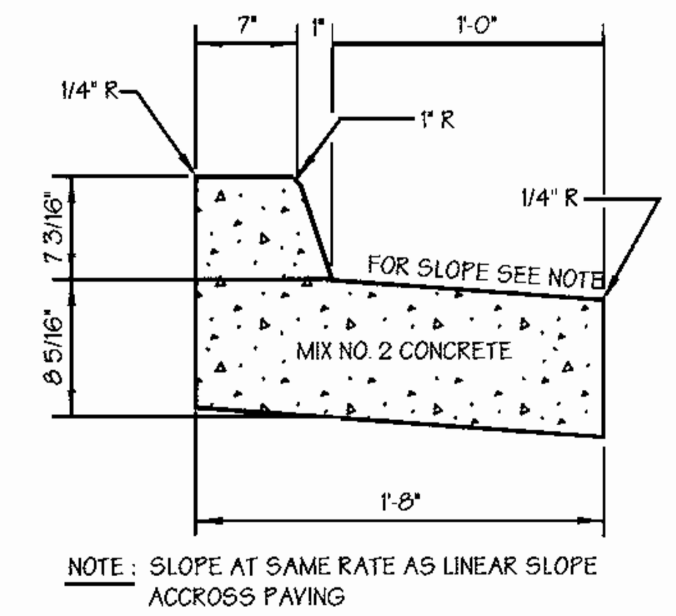
HANDICAP DETAIL # 1

SCALE : 1" = 20'



Dumpster Enclosure Detail

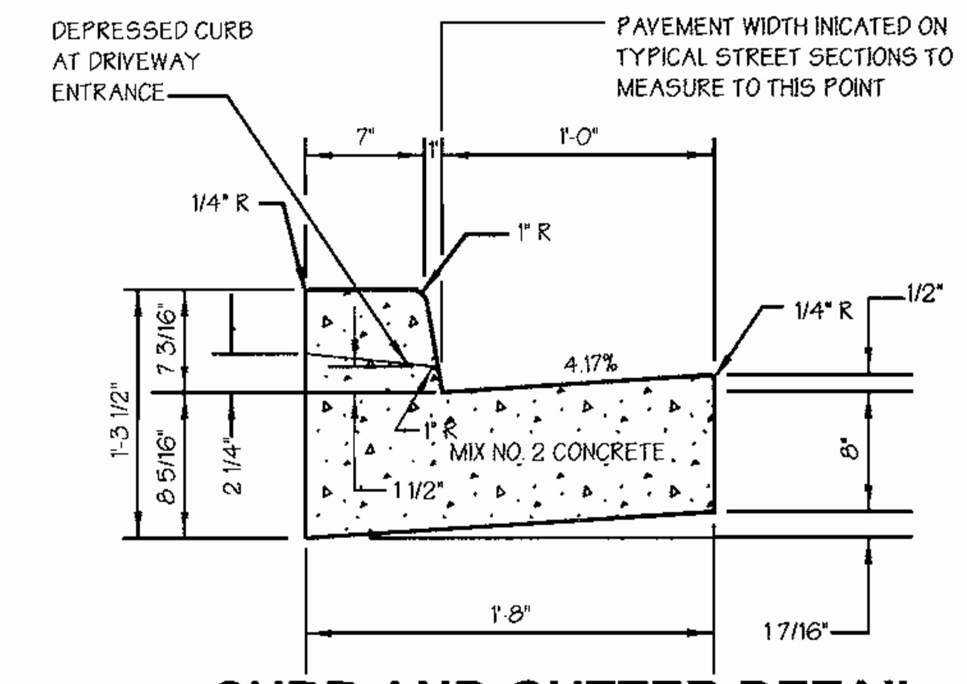
NOT TO SCALE



NOTE : SLOPE AT SAME RATE AS LINEAR SLOPE ACCROSS PAVING

REVERSE SLOPE CURB AND GUTTER

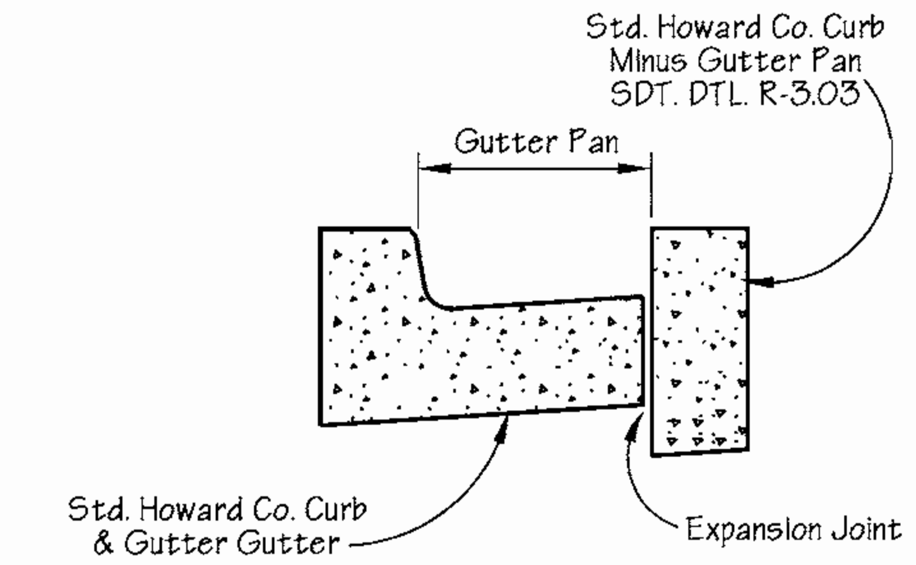
NOT TO SCALE



CURB AND GUTTER DETAIL

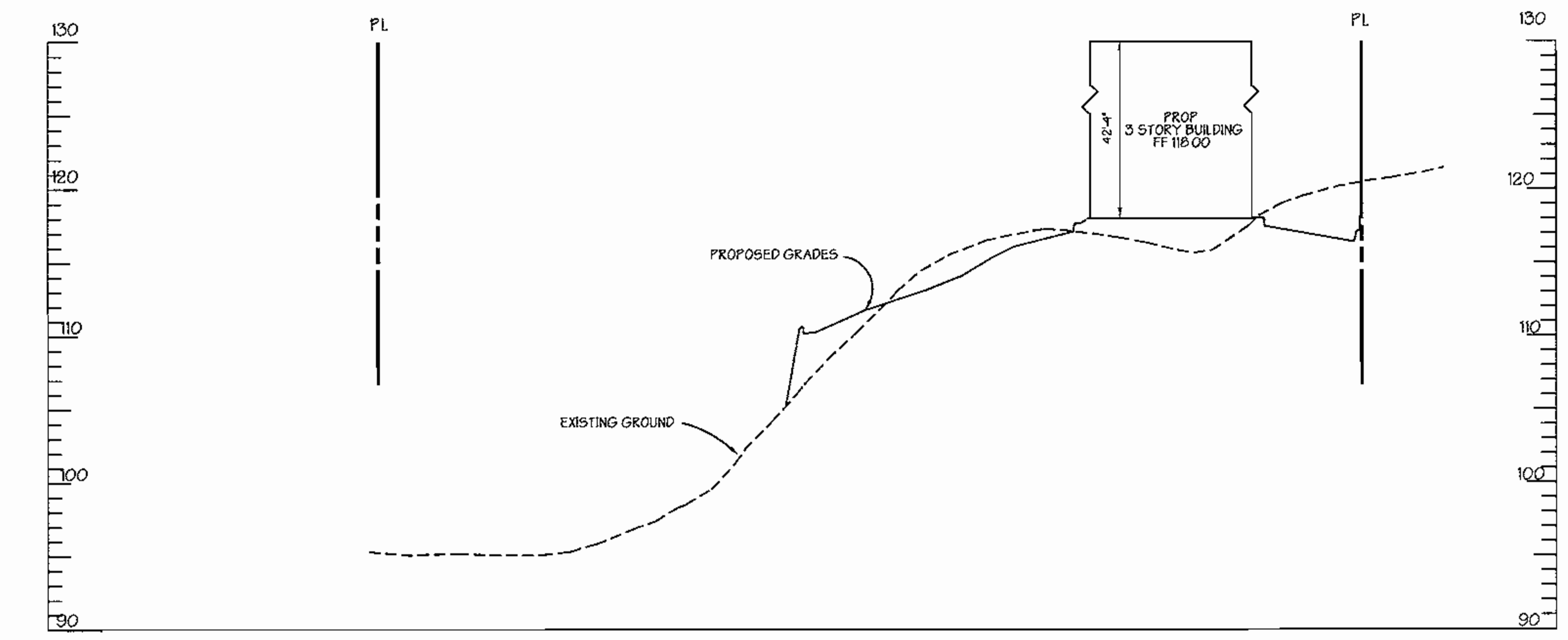
NOT TO SCALE

SEE HO. CO. STD DTL. R-3.01



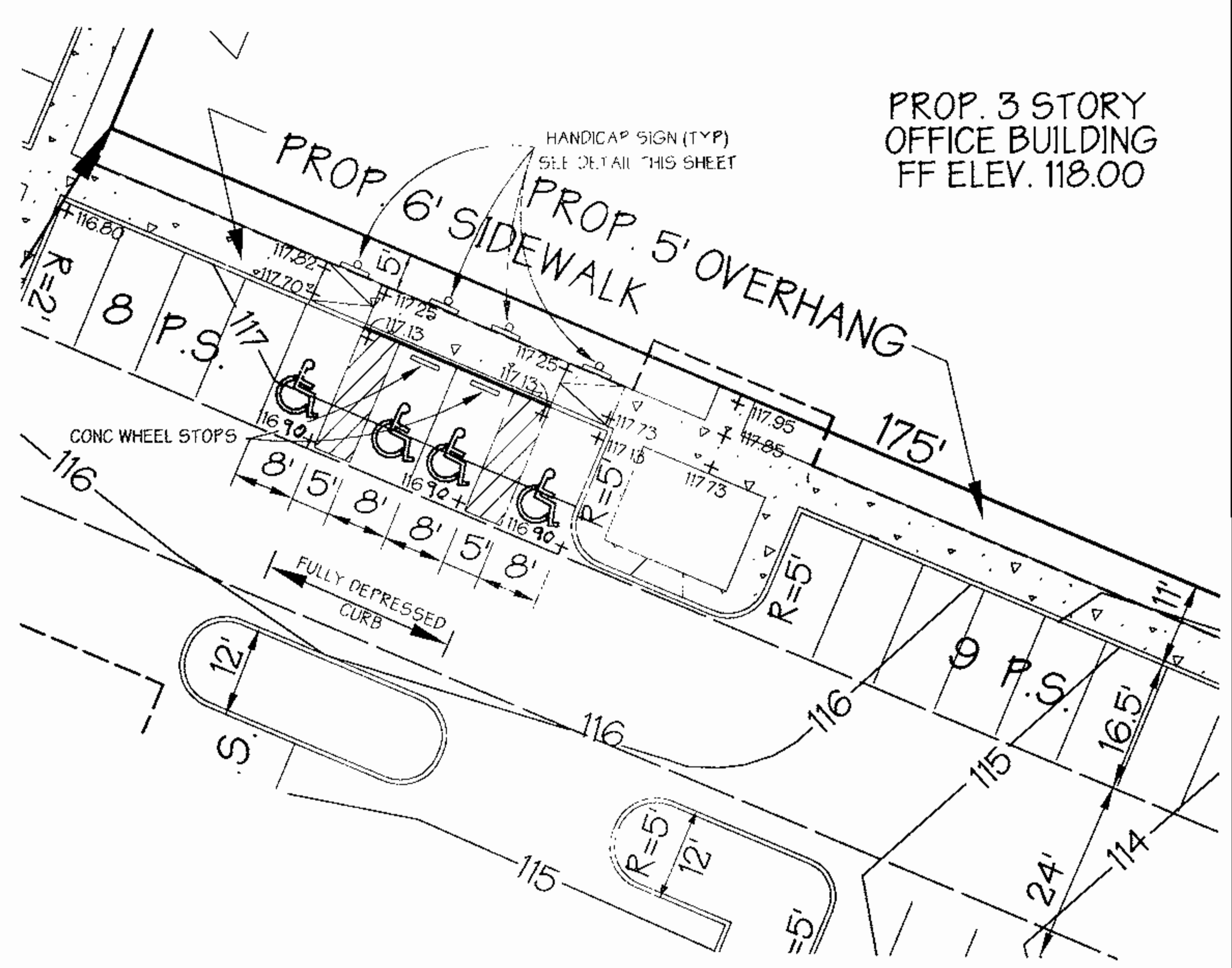
Curb Opening Detail

NOT TO SCALE



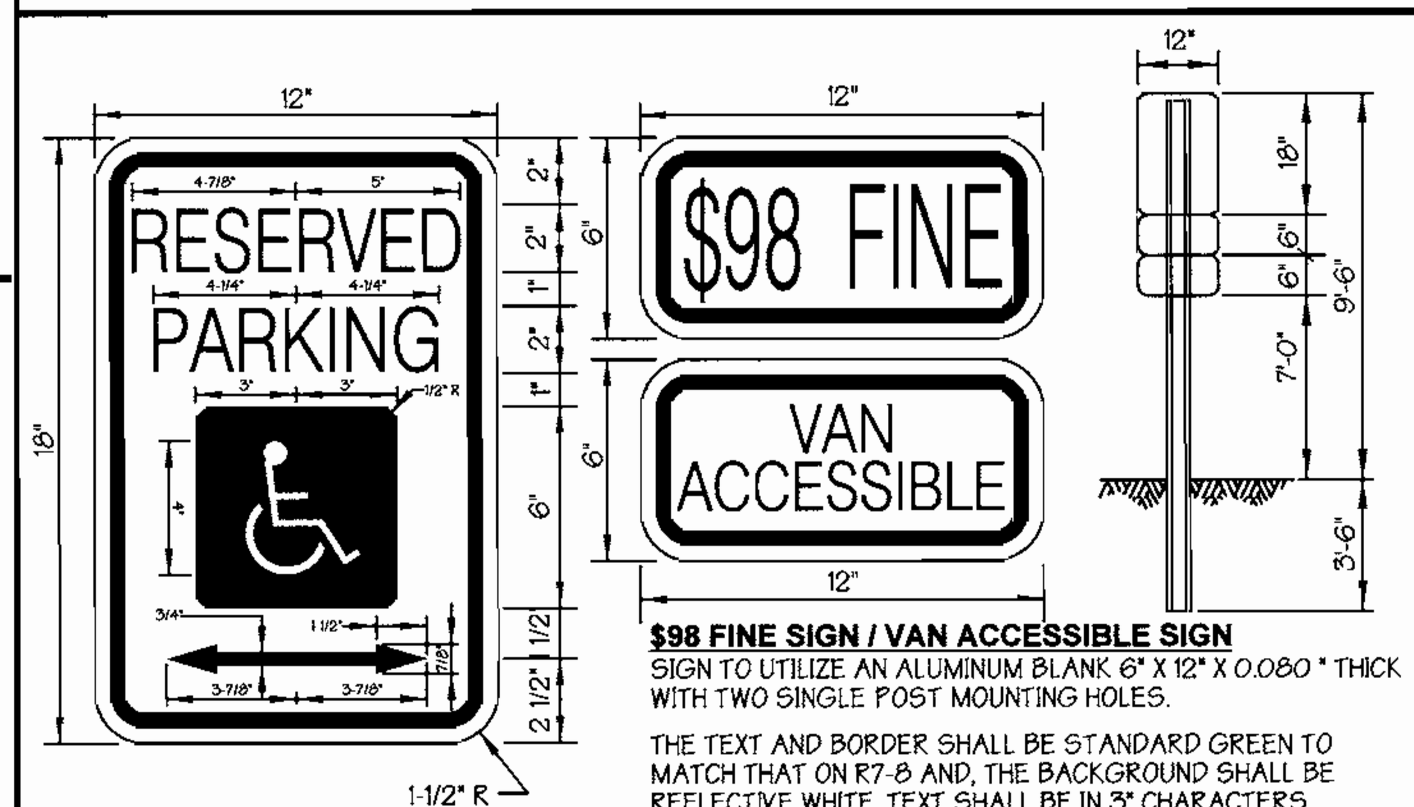
SECTION B-B

SCALE: HORZ.:1"=100' VERT.:1" =10'



HANDICAP DETAIL # 2

SCALE : 1" = 20'



COLORS
GREEN - LEGEND AND BORDER
WHITE - SYMBOL ON BLUE BACKGROUND
WHITE - BACKGROUND

$98 FINE SIGN / VAN ACCESSIBLE SIGN

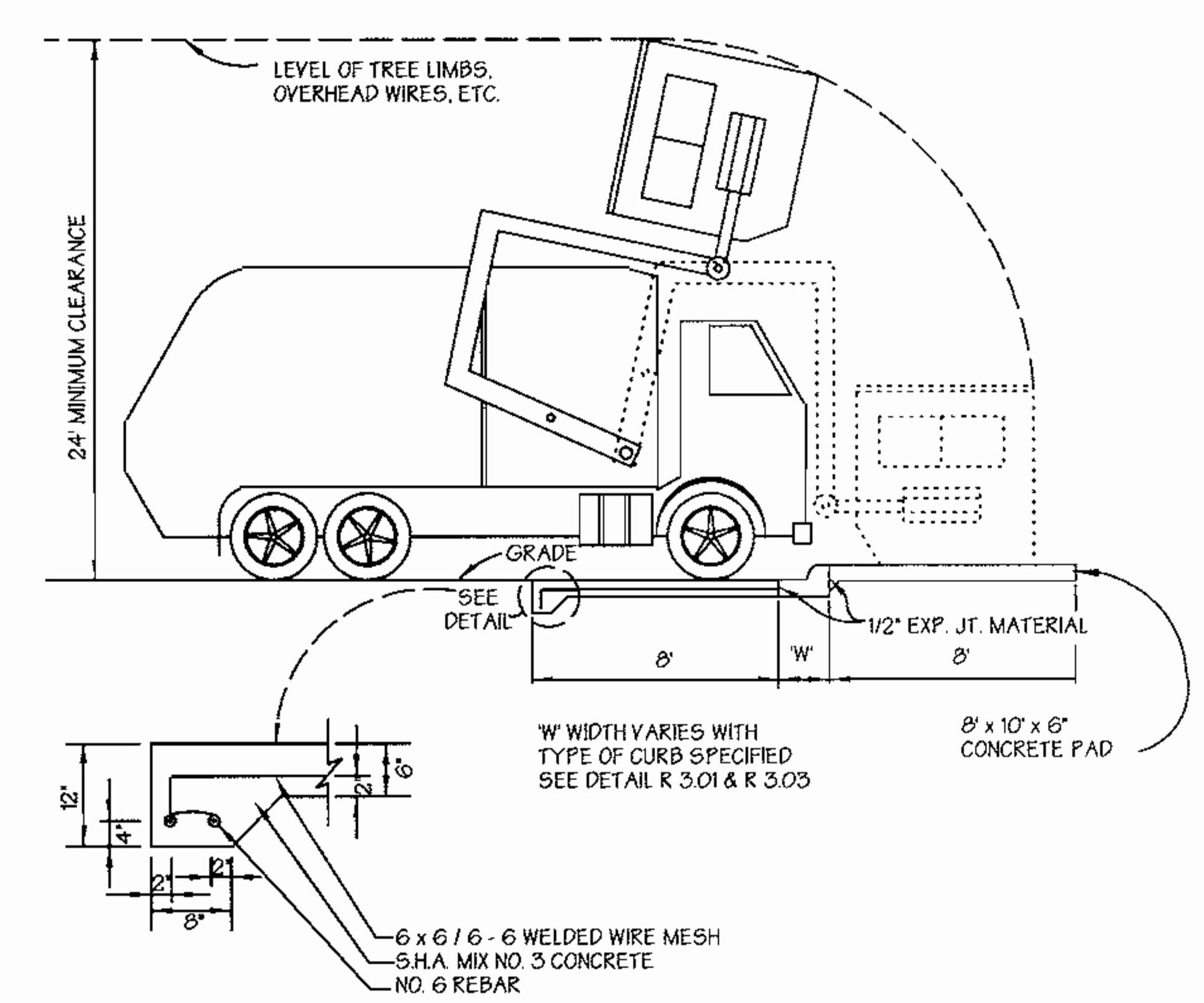
SIGN TO UTILIZE AN ALUMINUM BLANK 6" X 12" X 0.080 " THICK WITH TWO SINGLE POST MOUNTING HOLES.

THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND, THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS

SIGN SHALL BE MOUNTED DIRECTLY BELOW THE STANDARD R7-8 RESERVED PARKING FOR HANDICAPPED SIGN. ITS BOTTOM EDGE SHALL BE NO LESS THAN 7 FEET ABOVE GROUND. IF THE SIGN IS PLACED AGAINST A BUILDING, STRUCTURE, OR OTHER LOCATION WHERE VEHICLE OF PEDESTRIAN TRAFFIC IS NOT OBSTRUCTED THE BOTOM EDGE OF THE SIGN SHALL BE AT LEAST 6 FEET BUT NOT MORE THAN 10 FEET ABOVE GROUND.

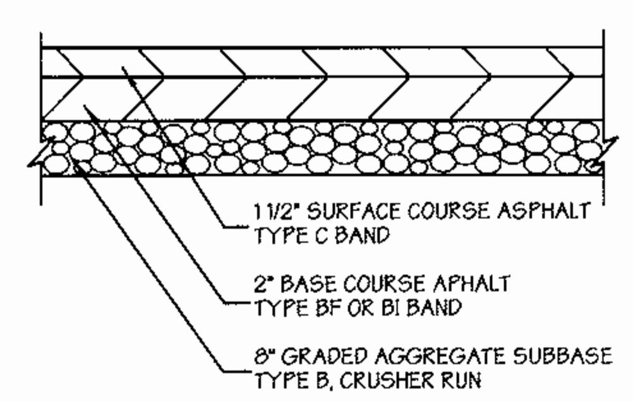
HANDICAPPED SIGN DETAIL

NOT TO SCALE



Solid Waste Service Pad

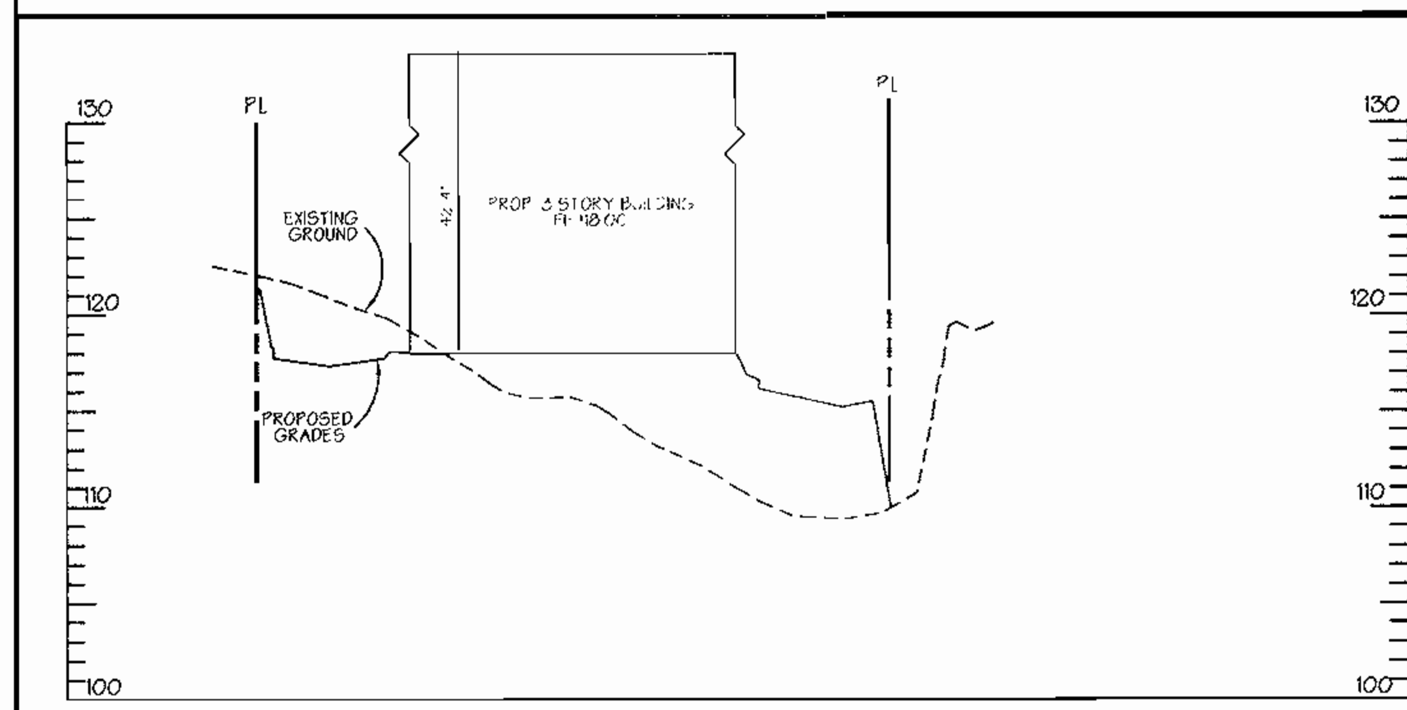
NOT TO SCALE



(LIGHT DUTY PAVING)

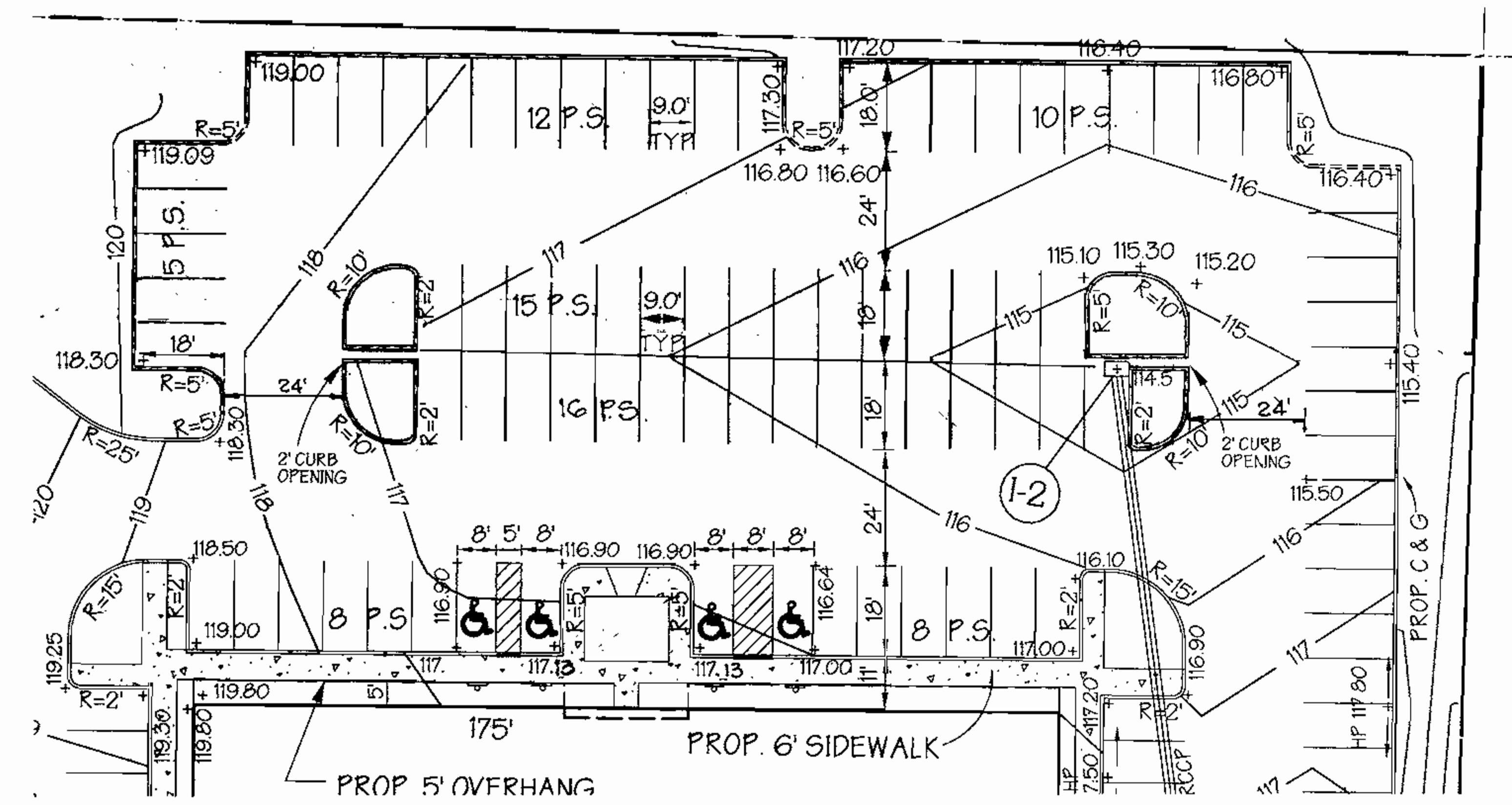
P-1 Pavement Section

NOT TO SCALE



SECTION A-A

SCALE: HORZ.:1"=100' VERT.:1" =10'



PARKING AREA

SCALE: 1"=30'

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/2/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL *
DORSEY BUSSINESS CENTER	1	H

PLAT *	BLOCK *	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37.43	1	6069.01

WATER CODE	B-01	SEWER CODE	2220000

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS
11/5/99 - REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations)
11/01/00 - ADDED ADDITIONAL PARKING AREA & REV. H.C. SPOT ELEVATIONS.

SITE & HANDICAP DETAILS
FOR
DORSEY BUSSINESS CENTER
PARCEL 'H'-1

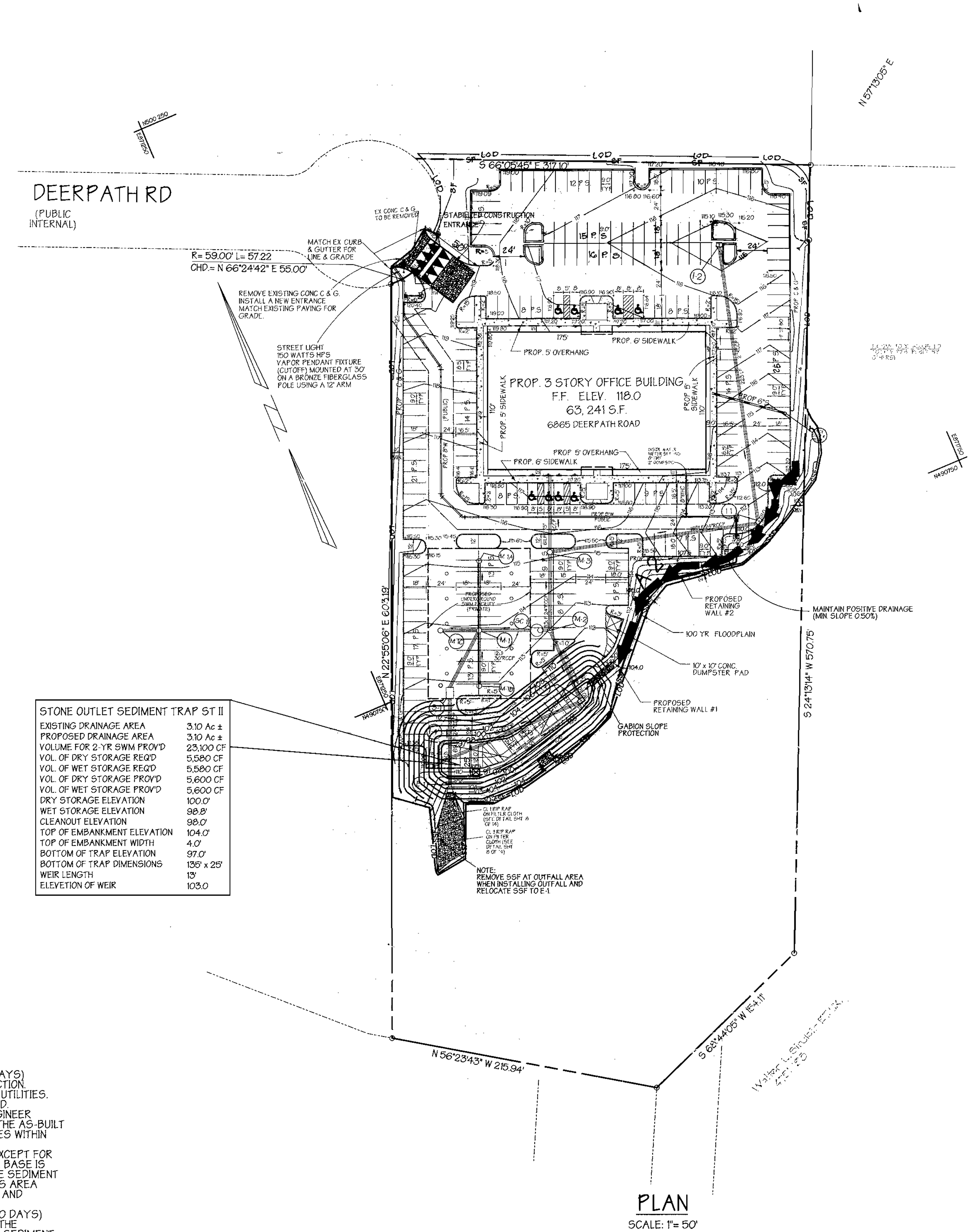
ELECTION DISTRICT : 1
HOWARD CO., MARYLAND

SHT. 2 OF 14

SDP-00-13
SCALE : As Shown
DATE: FEB. 17, 2000

FILENAME: 8779HC200ETAILS.S01

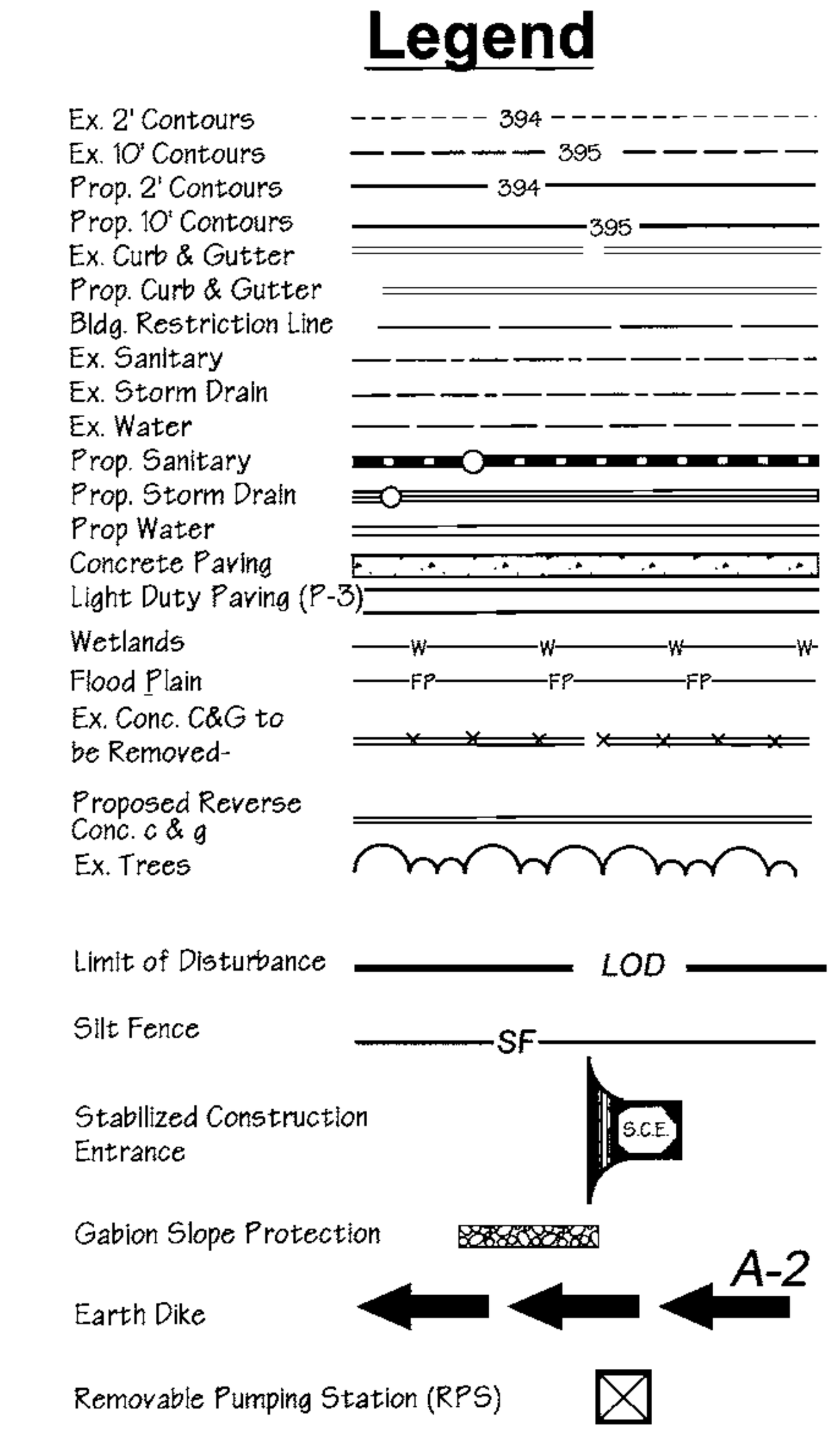
SDP-00-13

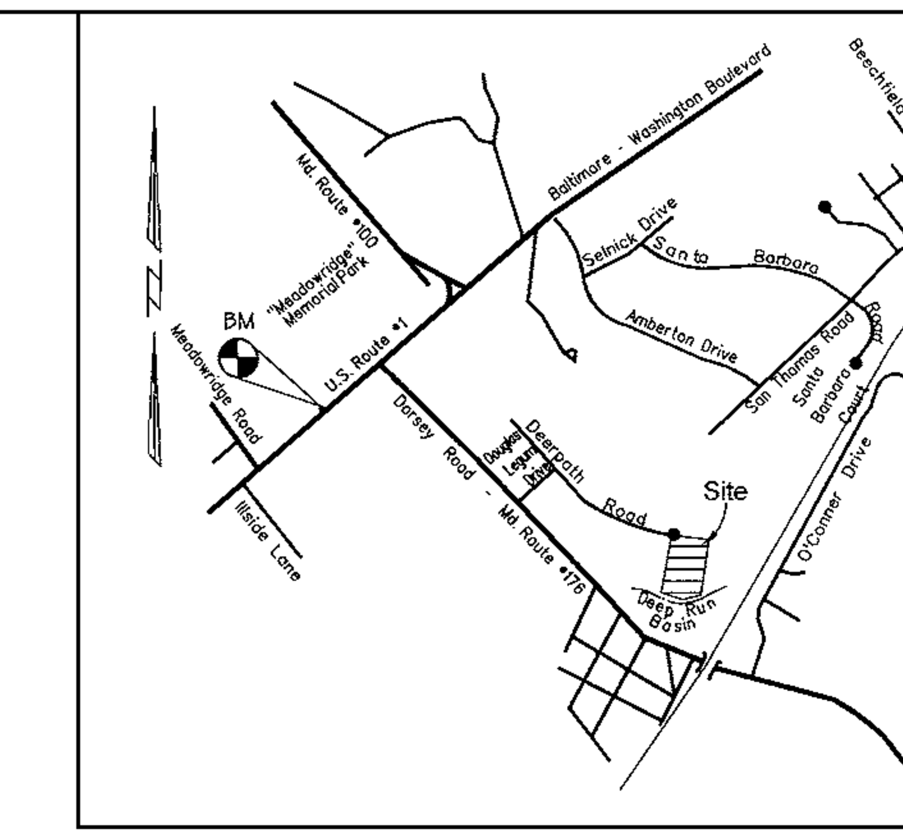


STONE OUTLET SEDIMENT TRAP ST II	
EXISTING DRAINAGE AREA	3.10 Ac ±
PROPOSED DRAINAGE AREA	3.10 Ac ±
VOLUME FOR 2-YR SWM PROV'D	23,100 CF
VOL. OF DRY STORAGE REQ'D	5,580 CF
VOL. OF WET STORAGE REQ'D	5,580 CF
VOL. OF DRY STORAGE PROV'D	5,600 CF
VOL. OF WET STORAGE PROV'D	5,600 CF
DRY STORAGE ELEVATION	100.0'
WET STORAGE ELEVATION	98.8'
CLEANOUT ELEVATION	98.0'
TOP OF EMBANKMENT ELEVATION	104.0'
TOP OF EMBANKMENT WIDTH	4.0'
BOTTOM OF TRAP ELEVATION	97.0'
BOTTOM OF TRAP DIMENSIONS	135' x 25'
WEIR LENGTH	13'
ELEVETION OF WEIR	103.0

PLAN
SCALE: 1"= 50'

Legend





VICINITY MAP
SCALE: 1" = 2000'

BENCHMARK :

HUB # 371A ELEV.59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

NOTE:
APPLICATION TRACKING NUMBER: 199964884
N.T.W.W. DIVISION NUMBER: 99-NT-0306
PROJECT: PROPOSED CONTRUCTION OF STORMWATER OUTFALL IN THE 100-YR FLOODPLAIN OF THE DEEP RUN LOCATED AT DEERPATH ROAD IN HALETHORPE, HOWARD COUNTY, MARYLAND

SEQUENCE OF OPERATIONS

1. OBTAIN GRADING PERMIT.
2. NOTIFY THE HOWARD COUNTY DEPARTMENT OF PERMITS AND LICENSES 48 HOURS BEFORE BEGINNING WORK. (1 DAY)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. (1 DAY)
4. INSTALL ALL SEDIMENT CONTROL DEVICES (3 DAYS)
5. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, BEGIN GRADING OPERATIONS. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT CONTROL DEVICES. (10 DAYS)
6. BEGIN BUILDING FOOTINGS AND BUILDING CONSTRUCTION. (4 DAYS)
7. BEGIN UNDERGROUND STORM WATER MANAGEMENT CONSTRUCTION. (SEE APPROVED STORM WATER MANAGEMENT PLANS). INSTALL UTILITIES. UTILITIES IN TRAP AREA TO BE INSTALLED WHEN TRAP IS REMOVED. PROVIDE INLET PROTECTION WHERE NECESSARY. NOTIFY THE ENGINEER IN CHARGE (410) 825 8120, SO THAT HE OR SHE MAY COMPLETE THE AS-BUILT SURVEY AND STUDY AND, SUBMIT TO THE APPROPRIATE AGENCIES WITHIN 30 DAYS. (14 DAYS)
8. FINE GRADE AND INSTALL CURB & GUTTER AND STONE BASE EXCEPT FOR TRAP AREA. INSTALL RETAINING WALLS #1 AND #2. WHEN STONE BASE IS INSTALLED AND SITE IS STABILIZED, WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE TRAP AND EARTH DIKE. GRADE THIS AREA INSTALL REMAINING UTILITIES, CURB & GUTTER AND STONE BASE AND STABILIZE. (24 DAYS)
9. PAVE ALL AREAS, COMPLETE LANDSCAPING AND STABILIZE. (10 DAYS)
10. AFTER ALL AREAS ARE PERMANENTLY STABILIZED, AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR REMOVE ALL SEDIMENT CONTROL MEASURES. STABILIZE ANY AREA AFFECTED BY THIS PROCESS. (5 DAYS)

LIMIT OF DISTURBANCE = 3.25 Ac ± OR 141,570 SF (ADDITIONAL AREA INCLUDED)

INLET PROTECTION

THE CONTRACTOR IS REQUIRED TO INSTALL INLET PROTECTION 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 E-16-1 (OR AS MAY BE AMENDED).

* STORM DRAINS TO BE FLUSHED PRIOR TO TRAPPING DEVICE REMOVAL.

NOTE:
THIS PLAN IS TO BE USED FOR THE INSTALLATION AND MAINTENANCE OF THE SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES ONLY. SEE SITE PLAN FOR MORE SPECIFIC DETAILS.

NOTE:
EARTH QUANTITIES ARE PROVIDED FOR THE CONVIENANCE OF THE CONTRACTOR ONLY CONTRACTOR IS ADVISED TO PERFORM HIS OWN ANALYSIS PRIOR TO PLACING A BID ON THIS ITEM.

NOTE:
FOR SEDIMENT CONTROL NOTES AND DETAILS, SEE SHEET 6 OF 10.

NOTE:
ANY AREA NEEDED FOR TEMPORARY STOCKPILE WILL BE LOCATED WITHIN THE LIMITS OF DISTURBANCE AND UPSTREAM FROM A SEDIMENT CONTROL MEASURE, BUT LOCATED SUCH AS NOT TO IMPEDE UPON THE MEASURE.

NOTE:
SPOT ELEVATIONS ALONG A-2 DIKE ARE FOR PROPOSED CONDITIONS.

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — 7/25/00
PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE 7/25/00

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00
A/CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00
DIRECTOR — DATE 9/6/00

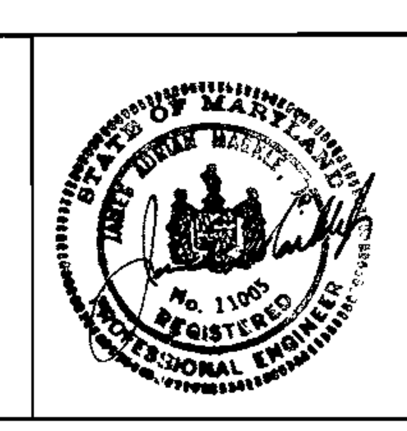
ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME		SECTION NAME		PARCEL *
DORSEY BUSINESS CENTER		1		H

PLAT *	BLOCK *	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120



ENGINEER CERTIFICATION:
"I certify that this plan for pond construction, erosion and sediment control represents a practical and workable plan based on my personel knowledge of the site conditions. This plan was prepared in accordance with the requirements of the Howard Soil Conservation District. I have notified the developer that he/she must engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion."
Signature of Engineer — Date 7/13/00
Print Name JAMES A. HARKLE JR. PE # 11005

DEVELOPER CERTIFICATION:
"I certify that all development and/or construction will be done according to these plans, and that any responsible personel 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 shall engage a registered professional engineer to supervise pond construction and provide the Howard Soil Conservation District with an "as-built" plan of the pond within 30 days of completion. I also authorize periodic on-site inspections by the Howard soil Conservation District."
Signature of Developer — Date 07/13/00
Print Name STEPHEN W. WHALEN, Jr.

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.F./K.U.
DRAWN BY: H.C.
CHECKED BY: B.F.
REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)
11/01/00 - ADDED ADDITIONAL PARKING AREA.

SEDIMENT & EROSION CONTROL PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

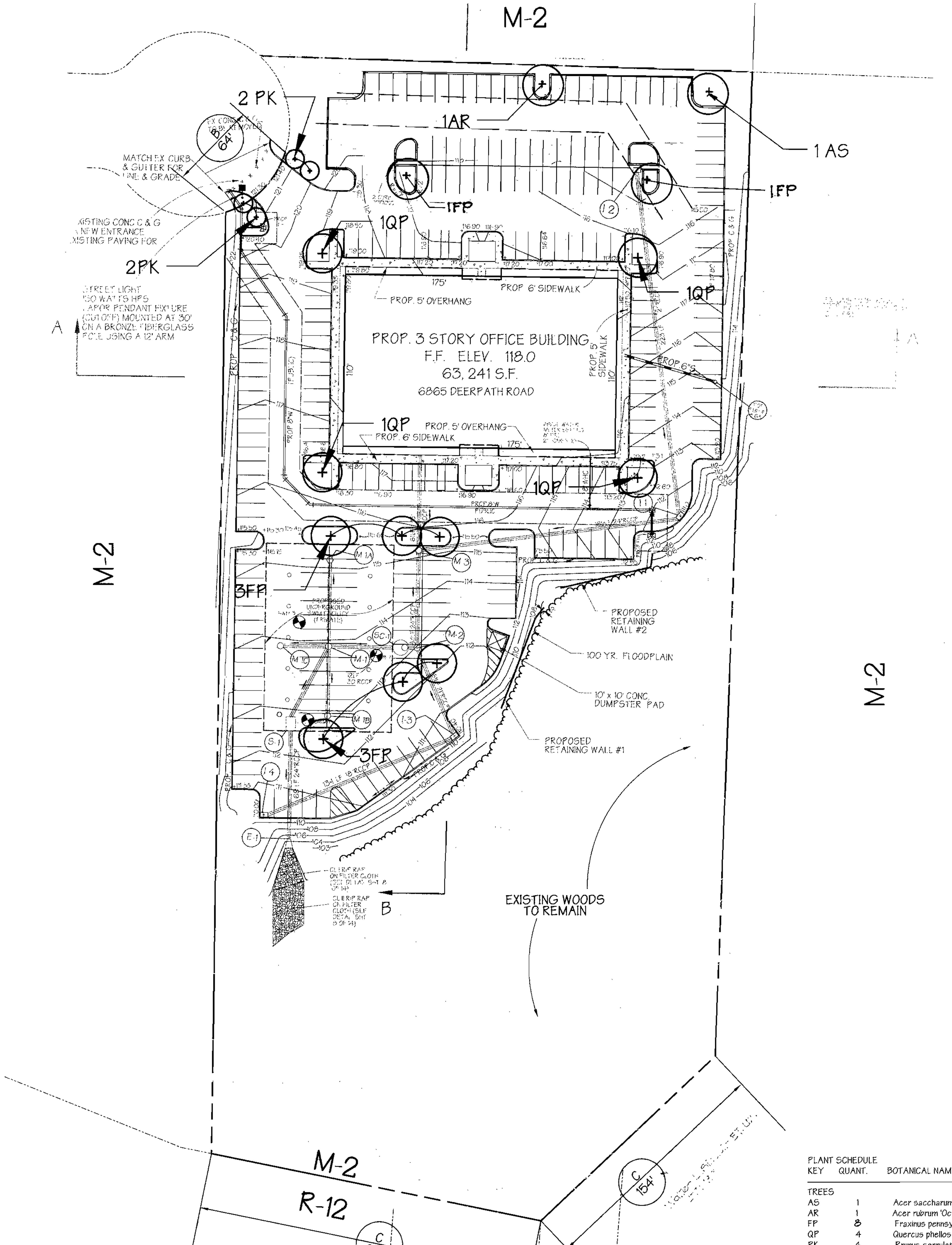
ELECTION DISTRICT: 1
HOWARD COUNTY, MD
SHEET 5 OF 14
SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

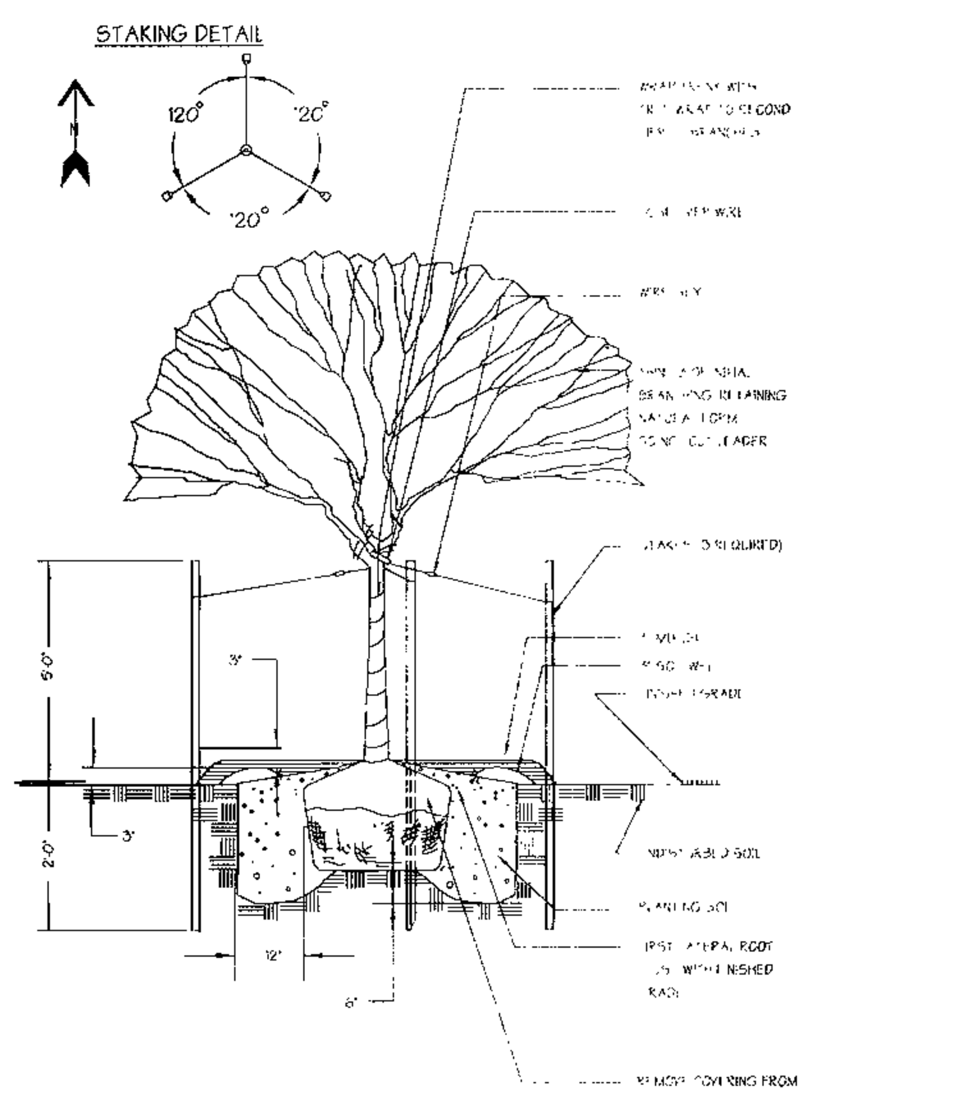
FILENAME: 8779SEDIMENTNOTES.S01
PN: 8779
SDP-00-13

NOTE:
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $4,200.00.

NOTE:
THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED 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





Tree Planting Detail

NOT TO SCALE

PLANTING NOTES

PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK. ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS. ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS

ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN

CHANGES MAY IMPACT REQUIRED CERTIFICATION

PLANT TYPES (DECIDUOUS TREES, EVERGREEN, ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST HOWARD COUNTY LANDSCAPE MANUAL. ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT

LANDSCAPE SPECIFICATIONS

LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS. A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT

SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS

CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS

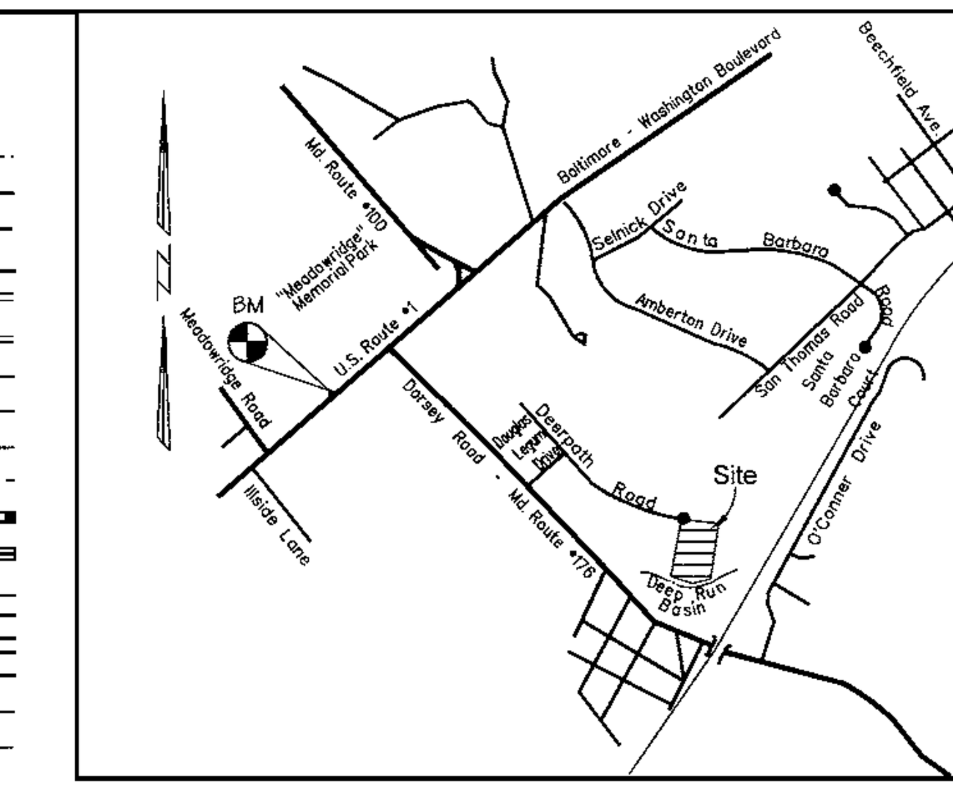
CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS

NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL
FINANCIAL SURETY FOR THE REQUIRED 14 LANDSCAPE TREES, IN THE AMOUNT OF $4200.00, IS PART OF THE DEVELOPER'S AGREEMENT

Legend

Ex. 2' Contours
Ex. 10' Contours
Prop. 2' Contours
Prop. 10' Contours
Ex. Curb & Gutter
Prop. Curb & Gutter
Bldg. Restriction Line
Ex. Sanitary
Ex. Storm Drain
Ex. Water
Prop. Sanitary
Prop. Storm Drain
Prop Water
Concrete Paving
Light Duty Paving (P-3)
Wetlands
Flood Plain
Ex. Conc. C&G to be Removed-
Proposed Reverse Conc. Curb & Gutter
Ex.Trees



LOCATION MAP
SCALE 1" = 2000'

BENCHMARK:

HUB # 371A ELEV 59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 15' FROM R/W LINE.

SCHEDULE A PERIMETER LANDSCAPE EDGE		
	ROADWAYS	PERIMETER PROPERTIES
Landscape Type	B	C
Linear Feet of Roadway Frontage Perimeter	64'	370'
Credit for existing Vegetation, (Yes, No Linear Feet)	NO	370'
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	NO	NO
Number of Plants Required Shade Trees Evergreen Trees (1:1) Shrubs (10:1)	1 2	0
Number of Plants Provided Shade Trees Evergreen Trees (1:1) Other Trees (2:1 sub.) Shrubs (10:1 sub.)	1 0 4	
Comments:		

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
Number of Parking Spaces	251
Number of Trees Required	13
Number of Trees Provided	13
Shade Trees Other Trees (2:1 sub.)	13

Number of landscaped Islands req. 13
Number of landscaped Islands provided 13

LANDSCAPING COST ESTIMATE

SHADE TREES - 12 X $300.00 = $3600.00
FLOWERING TREES - 4 X $150.00 = $600.00
TOTAL = $4200.00

NOTE: "LANDSCAPING SURETY IN THE AMOUNT OF $600.00 WILL BE POSTED AS PART OF THE BUILDER'S GRADING PERMIT."

PLANT SCHEDULE

KEY	QUANT.	BOTANICAL NAME / COMMON NAME	SIZE / COND.	SPACING	REMARKS
TREES					
AS	1	Acer saccharum 'Green Mountain' / Green Mountain Sugar Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	fullcrown
AR	1	Acer rubrum 'October Glory' / October Glory Red Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
FP	8	Fraxinus pennsylvanica 'Patmore' / Patmore Green Ash	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
QP	4	Quercus phellos / Willow Oak	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
PK	4	Prunus serrulata 'Kwanzan' / Kwanzan Cherry	1 1/2 -2" cal. / B&B	15' o.c. as shown	matched

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT

PLAN NUMBER DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/1/00

DIRECTOR DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL #	DEERPATH ROAD 6865

SUBDIVISION NAME			SECTION NAME		PARCEL #
DORSEY BUSINESS CENTER			1		H
PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37.43	1	6069.01
WATER CODE	B-01		SEWER CODE	2220000	

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

Developer's/Builder's Certificate
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and 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.
Name Date 07/13/00

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.P.
DRAWN BY: H.C.
CHECKED BY: B.P.
REVISIONS
11/15/99
-REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

LANDSCAPE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 10 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

PN: 8779

FILENAME: 8779LANDSCAPEPLAN.S01

\cad\micro\8779\landscape.s01 Jul. 13, 2000 14:26:24

SDP-00-13

Planting Schedule

Afforestation Area (0.3 acres)

Qty.	Species	Size	Spacing
25	Acer rubrum - Red maple	2-3 whip	**
25	Fraxinus pennsylvanica - Green ash	2-3' whip	**
15	Platanus occidentalis - Sycamore	2-3' whip	**
15	Quercus palustris - Pin oak	2-3' whip	**
15	Cornus amomum - Silky dogwood	2-3' b.t.	**
10	Viburnum dentatum - Arrowwood	2-3'b.t.	**

Key:

** Plantings to be spaced on 11 foot centers, no shelters required - plantings should be installed in rows to facilitate future maintenance. Where possible rows should be made along contour.

b.t. - branched transplant

Planting Notes:

1. Multiflora rose control must be performed as part of this planting plan.

2. Bareroot plant material may be used to offset the cost of multiflora rose removal and maintenance. If bareroot material is used it must be planted in March-April and an anti-desiccant gel should be utilized to protect root systems. Container grown stock may be used.

3. Plants should be flagged to aid on location during maintenance. Plantings should also be planted in grid pattern to facilitate maintenance and removal of invasive and exotic species.

Multiflora Rose Control Note

Multiflora rose is prevalent in certain areas to be afforested. Prior to planting all multiflora rose shall be removed. Removal of the rose may be performed with mowing and herbicide treatments. Physical removal of all top growth following by a periodic herbicide treatment of stump sprouts is recommended. Native tree and shrub species occurring within the rose thickets should be retained wherever possible. Herbicides treatments shall occur on 2 month intervals during the first growing season and once each in the sprisg and fall for subsequent years. Herbicide used shall be made specifically to address woody plant material and shall be applied as per manufacturers specifications. Care should be taken not to spray planted trees or naturally occurring native tree/shrub seedlings. It is recommended that initiation of rose removal begin at least six months prior to planting.

Planting/Soil Specifications

1. Planting of nursery stock shall take place between March 15th and April 30th. Container stock may be planted September 1-October 30.
2. A twelve (12) inch layer of topsoil shall be spread over all afforestation areas impacted by site grading to ensure a suitable planting area. Disturbed areas shall be seeded and stabilized as per general construction plan for project. Planting areas not impacted by site grading shall have no additional topsoil installed.
3. All bareroot planting stock shall have their root systems dipped into an anti-desiccant gel prior to planting.
4. Plants shall be installed so that the top of root mass is level with the top of existing grade. Backfill in the planting pits shall consist of 3 parts existing soil to 1 part pine fines or equivalent.
5. Fertilizer shall consist of Agriform 22-8-2, or equivalent, applied as per manufacturer's specifications.
6. A two (2) inch layer of hardwood mulch shall be placed over the root areas of all plantings.
7. Plant material shall be transported to the site in a tarped or covered truck. Plants shall be kept moist prior to planting.
8. All non-organic debris associated with the planting operation shall be removed from the site by the contractor.

Sequence of Construction

1. Plants shall be installed as per Plant Schedule and the Planting/Soil Specifications for the project.
2. Upon completion of the planting, signage shall be installed as per the Forest Retention Area Protection Devices shown on Sheet 2 of the Forest Conservation Plan.
3. Plantings shall be maintained and guaranteed in accordance with the Maintenance and Guarantee requirements for project.

Maintenance of Plantings

1. Maintenance of plantings shall last for a period of 24 months.
2. All plant material shall be watered twice a month during the 1st growing season. Watering may be more or less frequent depending on weather conditions. During second growing season, once a month during May-September, if needed.
3. Invasive exotics and noxious weeds will be removed from reforestation areas. Old field successional species will be retained.
4. Plants will be examined a minimum two times during the growing season for serious plant pests and diseases. Serious problems will be treated with the appropriate agent.
5. Dead branches will be pruned from plantings.

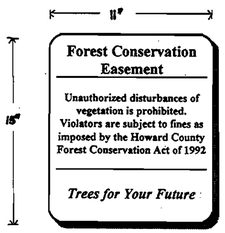
Guarantee Requirements

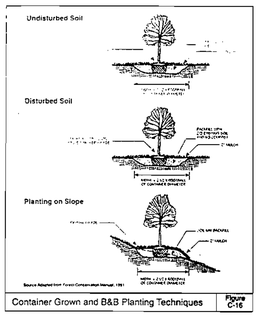
1. After one growing season, plant material shall be maintained at 90% survival threshold. A 75 percent survival rate of forestation plantings will be required at the end of the 24 month maintenance period. All plant material below the 75 percent threshold will be replaced at the beginning of the next growing season.
2. The contractor will not be liable for plant loss due to theft or vandalism.

Surety for Reforestation

1. The developer shall post a surety (bond, letter of credit) to ensure that reforestation plantings are completed. Upon acceptance of the plantings by the County, the bond shall be released.

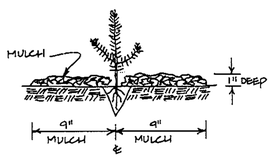
Permanent Protective Signage





Container Grown and B&B Planting Techniques | Figure C-16

Seedling and Whip Planting Specification



FCP NOTES

1. Any Forest Conservation Easement (FCE) area shown hereon is subject to protective covenants which may be found in the Land Records of Howard County which restrict the disturbance and use of these areas.
2. Forested areas occurring outside of the FCE shall not be considered part of the FCE and shall not be subject to protective land covenants.
3. Limits of disturbance shall be restricted to areas outside the limit of temporary fencing or the FCE boundary, whichever is greater.
4. There shall be no clearing, grading, construction or disturbance of vegetation in the Forest Conservation Easement, except as permitted by Howard County DPZ.
5. No stockpiles, parking areas, equipment cleaning areas, etc. shall occur within areas designated as Forest Conservation Easements.
6. Temporary fencing shall be used to protect forest resources during construction. The fencing shall be placed along all FCE boundaries which occur within 15 feet of the proposed limits of disturbance.
7. Permanent signage shall be placed 50-100' apart along the boundaries of all areas included in Forest Conservation Easements.
8. * THE REFORESTATION OBLIGATION OF 1.36 ACRES WAS MET BY A COMBINATION OF 0.235 ACRES OF ON-SITE PLANTING (F-00-180 RECORDED ON 8/18/00, PLAT #14391); 0.3 ACRES OF CREDIT IN THE WINKLER MITIGATION BANK (SDP-00-13 RECORDED ON 8/23/00, PLAT #14388 TO 14402) AND 0.2 ACRES OF CREDIT IN THE WINKLER MITIGATION BANK (SDP-00-13 RECORDED ON 8/15/01, PLAT #14391 TO 14394).

FOREST DATA

	Acres
Gross Area:	5.3
Net Tract Area (NTA):	3.2
Existing Forest (NTA):	2.1
Reforestation Threshold:	0.48
Forest to be Cleared (NTA):	2.1
Forest to be Retained in FCE:	0.0
Reforestation Required:	1.36
Onsite Reforestation Proposed:	0.235
Outstanding Reforestation Obligation:	1.1

OUTSTANDING REFORESTATION OBLIGATION MET THROUGH 1.1 ACRES OF CREDIT IN THE WINKLER MITIGATION BANK

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — PLAN NUMBER — DATE

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/7/00

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/1/00

DIRECTOR — DATE 9/6/00

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX MAP /ZONE	ELECT. DIST.	CENSUS TRACT
(139)	6		37,43	1	6069.01

WATER CODE B-01 — SEWER CODE 2220000

Sheet 2 of 2

PREPARED BY:

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

Eco-Science Professionals, Inc.
CONSULTING ECOLOGISTS
P.O. Box 5006 Glen Arm, MD 21057 (410) 592-6752

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WDCP93MD0610044B2
John F. Caudeo

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

REVISIONS
2/23/01 REVISED FOREST DATA

FOREST CONSERVATION PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 12 OF 14

SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

FILENAME: 8779STORMCEPTORPLAN.S01

F'N: 8779

SDP-00-13

Construction Notes

1. THE CONTRACTOR SHALL NOTIFY THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS CONSTRUCTION INSPECTION DIVISION AT 410-313-1880 AT LEAST 24 HOURS PRIOR TO STARTING ANY OF THE WORK SHOWN HEREON.
2. ALL PLAN DIMENSIONS ARE GIVEN TO FACE OF CURB UNLESS OTHERWISE NOTED. SEE ARCHITECTURAL DRAWINGS FOR EXACT BUILDING DIMENSIONS.
3. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN ANY SCALED DIMENSIONS AND THE FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.
4. CONTRACTOR SHALL MEET ALL EXISTING IMPROVEMENTS SMOOTHLY FOR LINE, GRADE AND FINISH.
5. ALL WORK SHOWN ON THESE PLANS SHALL BE COMPLETED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND OF THE MARYLAND STATE HIGHWAY ADMINISTRATION AND THE HOWARD COUNTY PLUMBING CODE, UNLESS OTHERWISE NOTED.
6. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THIS PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THE RESPONSIBILITY TO PERFORM SUCH WORK. THE COST OF SUCH WORK SHALL BE INCLUDED IN THE BASE BID.
7. THE CONTRACTOR SHALL INSPECT THE SITE TO DETERMINE IF ANY TREES, PAVING, ETC. ARE TO BE REMOVED PRIOR TO PLACING A BID ON SUCH ITEMS.
8. THE LOCATIONS OF EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE ONLY AND ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR ONLY. THE LOCATIONS ARE TAKEN FROM EXISTING RECORDS AND DO NOT REPRESENT FIELD-VERIFIED LOCATIONS. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 A MINIMUM OF 5 WORKING DAYS PRIOR TO DIGGING. THE CONTRACTOR SHALL CONFIRM TO HIS OWN SATISFACTION THE LOCATION OF ALL UTILITIES PRIOR TO ANY EXCAVATION OR PLACEMENT OF MATERIALS. IF ANY CONFLICT IS FOUND BETWEEN UNDERGROUND UTILITIES AND THE PROPOSED LOCATION OF ANY CONSTRUCTION, THE CONTRACTOR SHALL CONTACT G. W. STEPHENS AND THE OWNER OF THE UTILITY IMMEDIATELY. ANY DAMAGE OR DISRUPTION OF SERVICE SHALL BE AT THE EXPENSE OF THE CONTRACTOR. RELOCATION OF ANY EXISTING UTILITIES, IF NECESSARY, SHALL BE AT THE EXPENSE OF THE OWNER. THE CONTRACTOR SHALL COORDINATE RELOCATION OF THESE FACILITIES, IF NECESSARY.
9. CONTRACTOR SHALL PROTECT ALL EXISTING TREES OUTSIDE THE LIMIT OF DISTURBANCE AT ALL TIMES DURING CONSTRUCTION.
10. CONTRACTOR SHALL PROTECT ALL EXISTING IMPROVEMENTS NOT SCHEDULED FOR REMOVAL OR DEMOLITION. COST OF REPAIR TO EXISTING IMPROVEMENTS SHALL BE INCLUDED IN THE BASE BID. ALL EXISTING SITE FEATURES NOT BEING RETAINED SHALL BE REMOVED AND DISPOSED OF AT AN APPROVED LOCATION. ANY DAMAGE TO OFFSITE ROADS, RIGHTS OF WAY, OR ADJACENT PROPERTY SHALL BE REPAIRED IMMEDIATELY AT THE EXPENSE OF THE CONTRACTOR.
11. THE CONTRACTOR SHALL CLEAR THE PROJECT SITE OF ALL TREES, PAVING, STRUCTURES, ETC. WITHIN THE CONSTRUCTION AREA UNLESS OTHERWISE NOTED ON THE PLAN.
12. ONLY SUITABLE MATERIAL SHALL BE USED AS FILL AND ALL FILL SHALL BE PLACED AND COMPACTED AS SPECIFIED IN THE SOILS REPORT PREPARED FOR THIS SITE OR AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER. ALL 2:1 SLOPES SHOWN HEREON, EXCEPTING THOSE ASSOCIATED WITH LANDSCAPE BERMING, ALL GRADING UNDER PROPOSED PAVING, AND ALL FILL AND COMPACTION SHALL BE APPROVED BY A GEOTECHNICAL ENGINEER.
13. MAXIMUM SLOPE SHALL BE 2 HORIZONTALLY TO 1 VERTICALLY.
14. CONTRACTOR SHALL PLACE A WITNESS POST AT THE TERMINUS OF ALL UTILITY STUBS.
15. ALL UTILITIES INSTALLED SHALL RECEIVE FULL TRENCH COMPACTION.
16. CONTRACTOR SHALL PROVIDE A MINIMUM OF 1 FOOT OF PROTECTIVE FILL OVER STORM DRAIN PIPES DURING CONSTRUCTION.
17. CONTRACTOR SHALL PROVIDE ALL PAVEMENT MARKINGS AND SIGNAGE FOR HANDICAP PARKING SPACES INDICATED HEREON IN ACCORDANCE WITH ALL APPLICABLE CODES. ALL PAVEMENT MARKINGS TO BE TRAFFIC WHITE.
18. ALL HANDICAPPED FACILITIES TO BE CONSTRUCTED IN ACCORDANCE WITH THE "DESIGN OF BARRIER FREE FACILITIES" AND THE MARYLAND BUILDING CODE FOR THE HANDICAPPED AND AGED, LATEST EDITION.
19. ALL TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNAGE SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES." ALL STREET AND REGULATORY SIGNS SHALL BE INSTALLED PRIOR TO INSTALLATION OF FINISHED PAVING.
20. THE CONTRACTOR SHALL REPLACE ANY EXISTING BITUMINOUS PAVING OR SUB-BASE WHICH IS DAMAGED OR REMOVED DURING CONSTRUCTION. ALL EXCAVATED AREAS SHALL BE BACKFILLED AND IN ACCORDANCE WITH THE SOILS REPORT AND/OR AS DIRECTED BY GEOTECHNICAL ENGINEER. ANY AREAS TO BE PAVED WHICH EXHIBIT UNSTABLE SUBGRADE CONDITIONS SHALL BE EXCAVATED TO BEARING SOIL, REFILLED AND COMPACTED.
21. ALL AREAS NOT BEING PAVED OR RECEIVING BUILDING COVERAGE SHALL BE STABILIZED IN ACCORDANCE WITH THE PLANS APPROVED BY THE HOWARD SOIL CONSERVATION DISTRICT.
22. PREFORMED ELASTOMERIC COMPRESSION JOINT MATERIAL SHALL BE INSTALLED AT ALL MEETINGS OF EXISTING AND PROPOSED CONCRETE PAVING AND SIDEWALKS.
23. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY PREPARED BY G. W.STEPHENS JR. & ASSOCIATES DATED MARCH 1998.
24. OUTDOOR LIGHTING WILL COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
25. 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.
26. WATER IS PUBLIC.
27. SEWER IS PUBLIC.
28. EXISTING UTILITIES ARE BASED ON SURVEY PREPARED BY GWS
29. PROPOSED SIDEWALK IS 5" THICK, CONCRETE (MIX NO. 2) ON 4" CRUSHER RUN BASE.

NOTE:

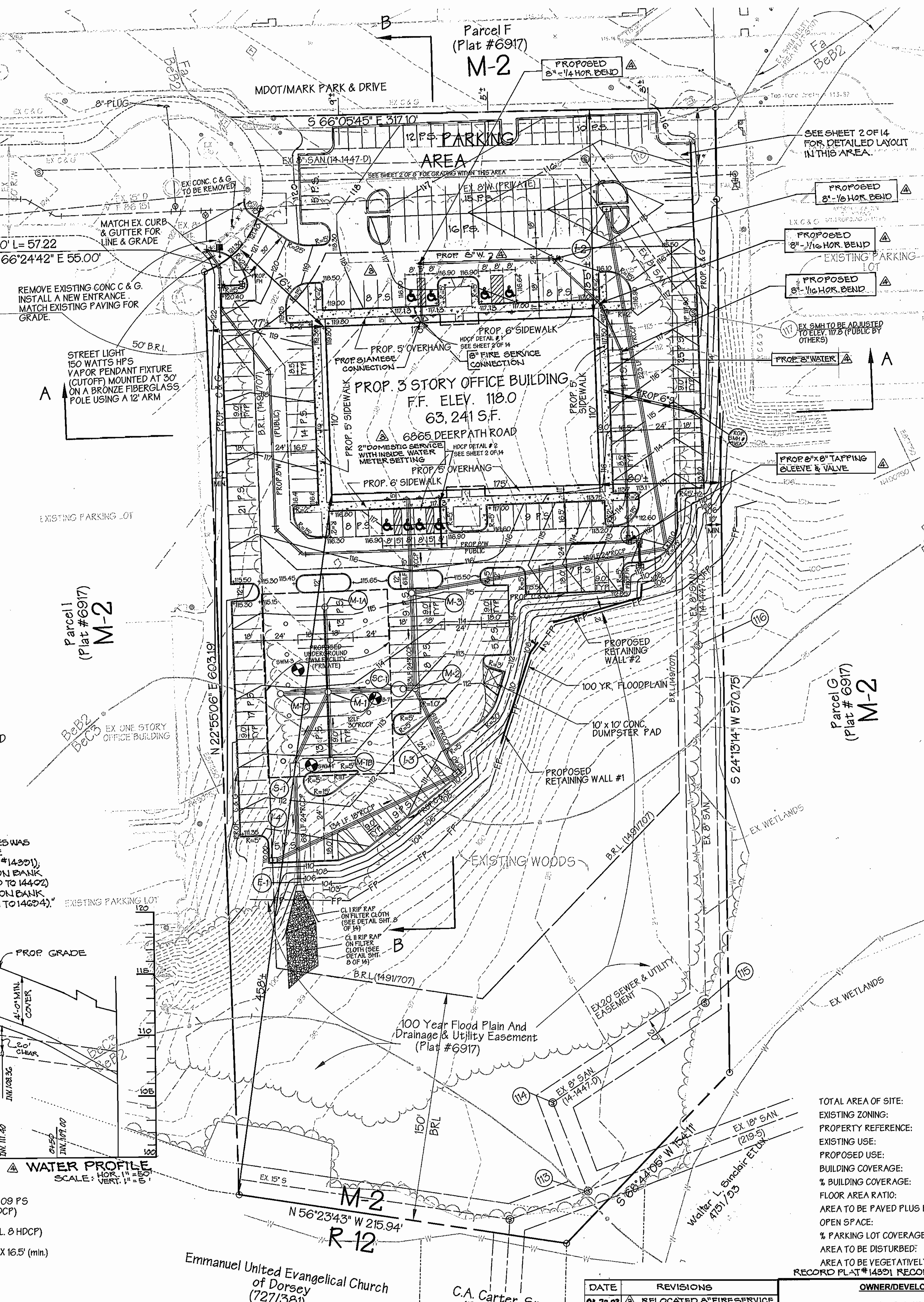
The owner shall provide a separate and independent sewer connection for each tenant or occupant of any building, shown on this site development plan who will discharge non-domestic waste to the public sewerage system if each separate and independent sewer connection shall include a standard manhole and other waste pretreatment devices as required and approved by Howard County. Waste lines on the interior of the building shall be designed, constructed or modified such that non-domestic waste will be discharged to the separate and independent sewer connection. No tenant or occupant of any building shown on this site development plan shall discharge regulated non-domestic waste to the public sewerage system prior to installation of the separate and independent sewer connection and related interior waste lines. The above statement shall apply to all initial and future occupants or tenants.

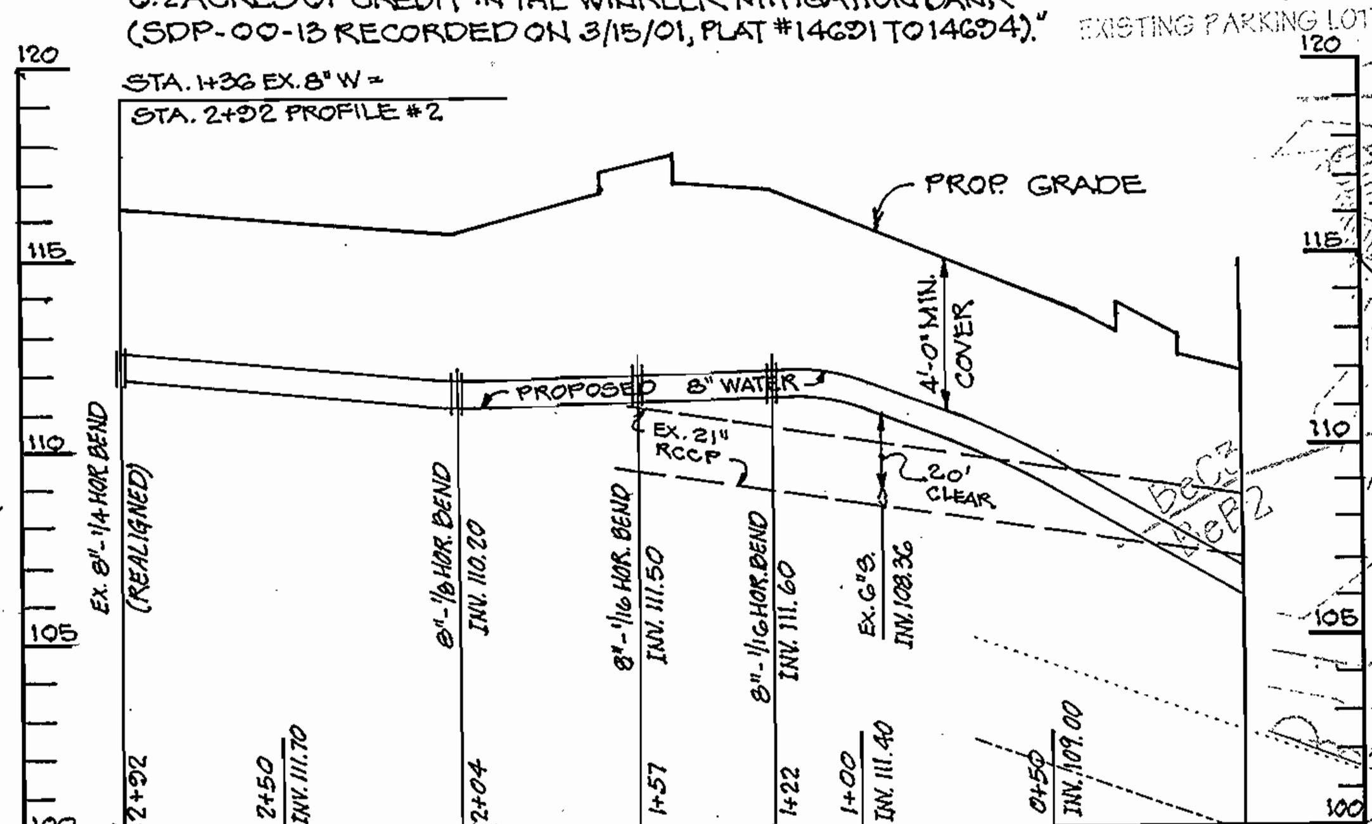
NOTE: METER FOR PROPOSED BLDG IS INSIDE AND PRIVATE

NOTE:
WP-00-45
PLANNING DIRECTOR APPROVED THE REQUEST TO WAIVE SECTION 16.156(f)(2) TO WAIVE THE REQUIREMENT TO SUBMIT REVISED PLANS WITHIN 45 DAYS AND ALLOW REACTIVATION OF SDP-00-13, SUBJECT TO SUBMISSION OF REVISED PLANS IN ACCORDANCE WITH THE LETTER DATED AUGUST 19,1999 WITHIN 45 DAYS OF THIS DATE.

NOTE:
APFO TRAFFIC STUDY WAS APPROVED ON JAN 20, 2000.

NOTE: "THE REFORESTATION OBLIGATION OF 1.36ACRES WAS MET BY A COMBINATION OF 0.235ACRES OF ON-SITE PLANTING (F-00-180 RECORDED ON 8/18/00, PLAT#14391); 0.9ACRES OF CREDIT IN THE WINKLER MITIGATION BANK (SDP-00-13 RECORDED ON 8/29/00, PLAT# 14399 TO 14402) 0.2ACRES OF CREDIT IN THE WINKLER MITIGATION BANK (SDP-00-13 RECORDED ON 3/15/01, PLAT #14691 TO 14694)."





⚠4 WATER PROFILE
SCALE: HOR. 1" = 50' VERT. 1" = 5'

PARKING CALCULATION

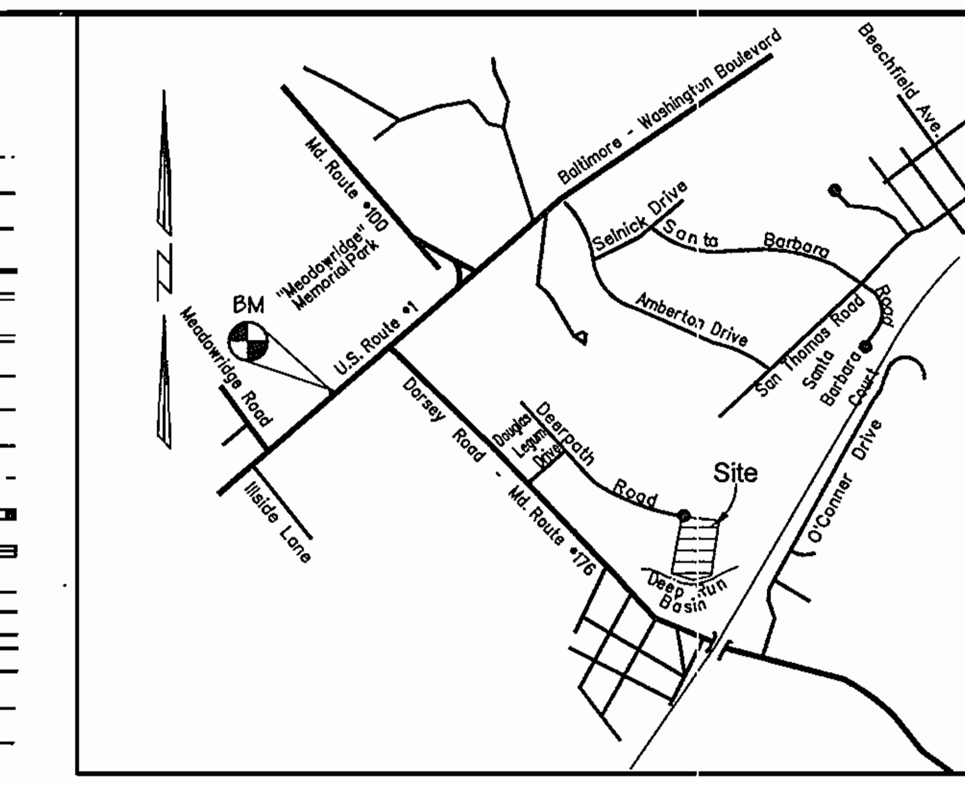
PARKING SPACES REQUIRED
63,241 SF OFFICE AT 3.3 PS @ 1000SF = 209 PS
8.5' x 16.5' PARKING SPACES = 45 (INCL. 8 HDCP)
9.0' x 18.0' PARKING SPACES = 206
PARKING SPACES PROVIDED = 251 P.S. (INCL. 8 HDCP)
HDCP PARKING SPACES ARE 13' X 16.5' (min.)
VAN ACCESSIBLE PARKING SPACES ARE 16' X 16.5' (min.)

PLAN

SCALE : 1" = 40'

Legend

- Ex. 2' Contours
- Ex. 10' Contours
- Prop. 2' Contours
- Prop. 10' Contours
- Ex. Curb & Gutter
- Prop. Curb & Gutter
- Bldg. Restriction Line
- Ex. Sanitary
- Ex. Storm Drain
- Ex. Water
- Prop. Sanitary
- Prop. Storm Drain
- Prop Water
- Concrete Paving
- Light Duty Paving (P-3)
- Wetlands
- Flood Plain
- Ex. Conc. C&G to be Removed-
- Proposed Reverse Conc. Curb & Gutter
- Ex.Trees
- Street Light



LOCATION MAP

SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV.59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 247' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

SHEET INDEX

SHEET 1 OF 14	SITE PLAN
SHEET 2 OF 14	SITE & HANDICAP DETAILS
SHEET 3 OF 14	STORM DRAIN & SEWER PROFILES
SHEET 4 OF 14	STORMCEPTOR PLAN
SHEET 5 OF 14	SEDIMENT CONTROL PLAN
SHEET 6 OF 14	SEDIMENT CONTROL NOTES AND DETAILS
SHEET 7 OF 14	STORMWATER MANAGEMENT DRAINAGE AREA MAPS
SHEET 8 OF 14	STORMWATER MANAGEMENT PLANS & PROFILES
SHEET 9 OF 14	STORMWATER MANAGEMENT NOTES AND DETAILS
SHEET 10 OF 14	LANDSCAPE PLAN
SHEET 11 OF 14	FOREST CONSERVATION PLAN
SHEET 12 OF 14	FOREST CONSERVATION PLAN
SHEET 13 OF 14	RETAINING WALL PROFILES & DETAILS
SHEET 14 OF 14	RETAINING WALL NOTES & DETAILS

SITE DATA

TOTAL AREA OF SITE:	4.87297 AC
EXISTING ZONING:	M-2 (SEE AA-87-06)
PROPERTY REFERENCE:	L-1300, F-547
EXISTING USE:	VACANT
PROPOSED USE:	OFFICE
BUILDING COVERAGE:	19,250 SF OR 0.44 AC
% BUILDING COVERAGE:	9.0%
FLOOR AREA RATIO:	0.27
AREA TO BE PAVED PLUS BUILDING AREA:	2.35 AC
OPEN SPACE:	0.15 AC
% PARKING LOT COVERAGE:	39%
AREA TO BE DISTURBED:	3.25 AC OR 141,570 S.F.
AREA TO BE VEGETATIVELY STABILIZED:	0.75 AC

RECORD PLAT#14391 RECORDED ON 08/18/00 (F-00-180)

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT — 7/25/00 DATE

PLAN NUMBER

Reviewed for Howard SCD and meets Technical Requirements

USDA-NATURAL RESOURCES CONSERVATION SERVICE — 7/25/00 DATE

APPROVED: Howard County Department of Planning and Zoning

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/7/00 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 9/1/00 DATE

DIRECTOR — 9/6/00 DATE

ADDRESS CHART

PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01

WATER CODE B-01 — SEWER CODE 2220000

DATE	REVISIONS
04.22.03	⚠3 RELOCATED 8" FIRESERVICE & ADDED RELOCATED 2" DOMESTIC SERVICE
05/10/06	⚠4 ADDED 8" FIRE SERVICE S.E. SIDE OF BUILDING, ABANDONED 8" BRANCH

OWNER/DEVELOPER

WHALEN PROPERTIES, L.L.C.,
DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: K.U.
DRAWN BY: H.C.
CHECKED BY: T.H.

REVISIONS
11/15/99
- REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS (Section 133, Zoning Regulations).
11/01/00
ADDED ADDITIONAL PARKING AREA

SITE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD

SHEET 1 OF 14

SDP-00-13
SCALE: AS SHOWN
FEBRUARY 17, 2000

PN: 8779

PREPARED BY :

GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

STATE OF MARYLAND — No. 11005 REGISTERED PROFESSIONAL ENGINEER

FILENAME: 8779SITEPLAN.S01

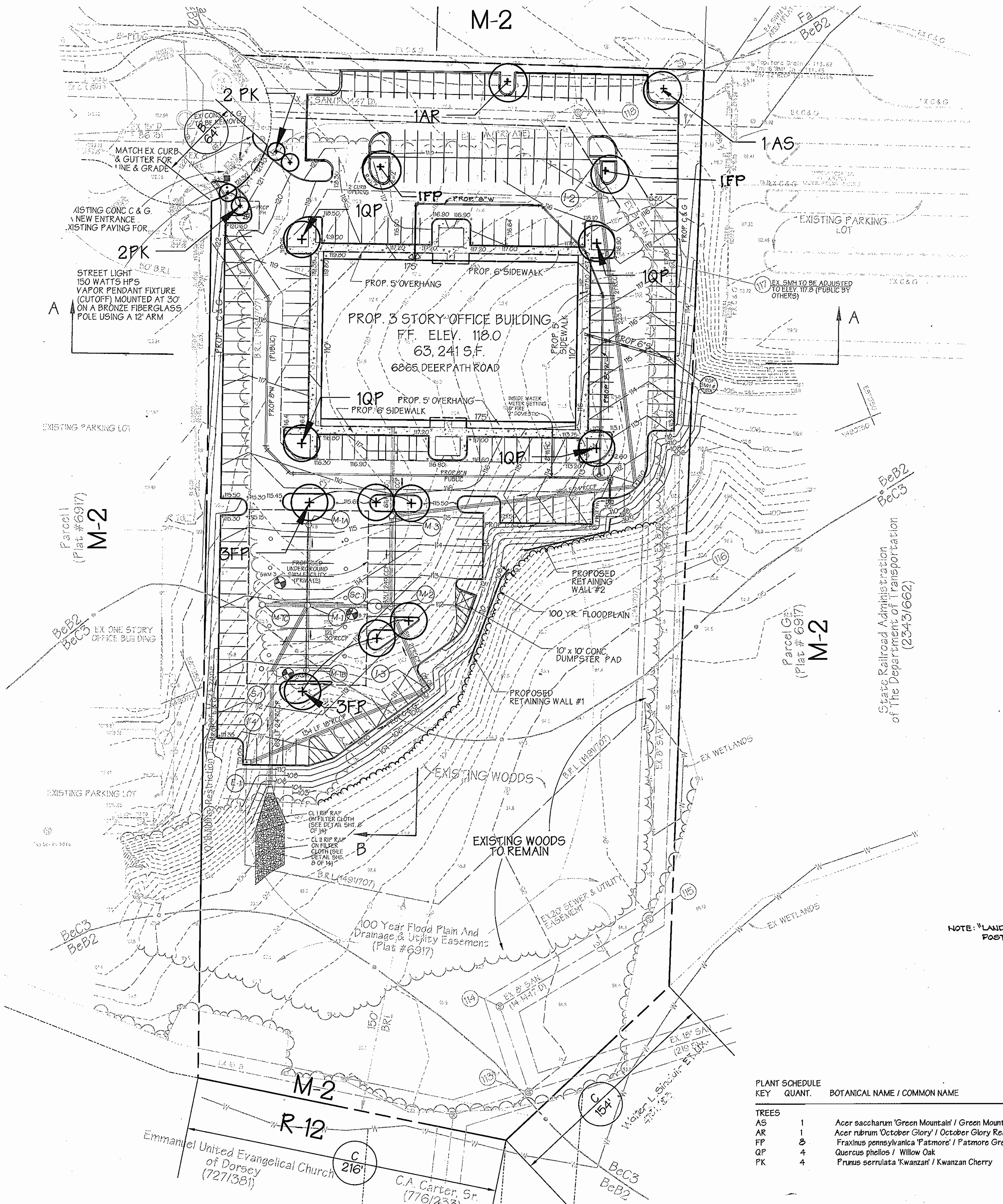
SDP-00-13

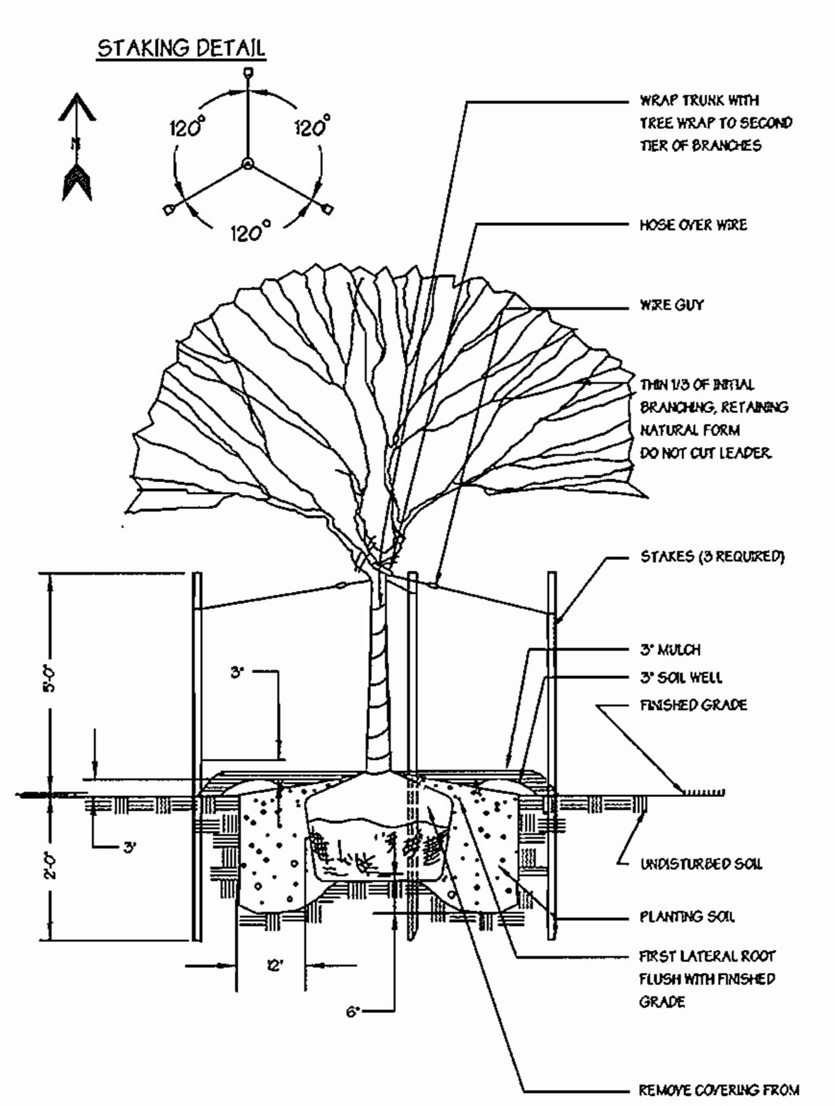
...\cad\micro\8779siteplan.s01 Jul. 13, 2000 13:54:49

NOTE:
THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF $4,200.00.

NOTE:
THE OWNER, TENANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED 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.





Tree Planting Detail

NOT TO SCALE

PLANTING NOTES
PLANT LOCATIONS SHALL BE FIELD ADJUSTED TO AVOID UTILITIES. CONTRACTOR IS RESPONSIBLE FOR LOCATING UTILITIES PRIOR TO START OF WORK. ALL TREES AND SHRUBS SHALL BE MULCHED TO A MINIMUM OF 18" BEYOND THE EDGE OF THE ROOT BALL. SHRUBS MASSES SHALL BE PLANTED IN CONTINUOUS MULCH BEDS. ALL WIRE, PLASTIC AND TWINE TIES SHALL BE REMOVED FROM TOP OF THE ROOT BALL.

PLANT STANDARDS
ALL NURSERY STOCK SHALL BE TOP QUALITY AND IN ACCORDANCE WITH THE AMERICAN ASSOCIATION OF NURSERYMEN, INC., "AMERICAN STANDARDS FOR NURSERY STOCK", LATEST EDITION. INFERIOR NURSERY STOCK WILL BE SUBJECT TO REJECTION BY THE LANDSCAPE ARCHITECT. BARE-ROOT SHALL NOT BE ALLOWED FOR ANY TREE DEFINED AS MAJOR DECIDUOUS, MINOR DECIDUOUS OR EVERGREEN

CHANGES MAY IMPACT REQUIRED CERTIFICATION
PLANT TYPES (DECIDUOUS TREES, EVERGREEN, ETC.), QUANTITIES, SPACING, LOCATION, AND SPECIES SHOWN ON THE APPROVED LANDSCAPE PLAN ARE BASED ON REQUIREMENTS STATED IN THE LATEST HOWARD COUNTY LANDSCAPE MANUAL ANY CHANGE IN THESE ITEMS MAY AFFECT THE REQUIRED APPROVAL AND CERTIFICATION OF THE INSTALLED PLANTING. OWNER IS REQUIRED TO ARRANGE AND PAY FOR CERTIFICATION BY LANDSCAPE ARCHITECT.

LANDSCAPE SPECIFICATIONS
LANDSCAPE SPECIFICATION SHALL CONFORM TO LCA LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREA, INCLUDING PLANTING PROCEDURES AND SOIL PREPARATION FOR SHRUBS AND PERENNIAL BEDS. A ONE-YEAR WARRANTY PERIOD SHALL BE REQUIRED. MAINTENANCE REQUIRED TO HONOR THE ONE YEAR WARRANTY SHALL BE PERFORMED AS PART OF THIS CONTRACT.

SPECIAL PROVISIONS TO LCA STANDARD SPECIFICATIONS
CONTRACTOR IS ENCOURAGED TO PERFORM SOIL TESTING. TEST RESULTS SHALL BE SUBMITTED 30 DAYS BEFORE PLANTING. FAILURE TO PERFORM TESTING WILL NOT VOID GUARANTEE PROVISIONS.

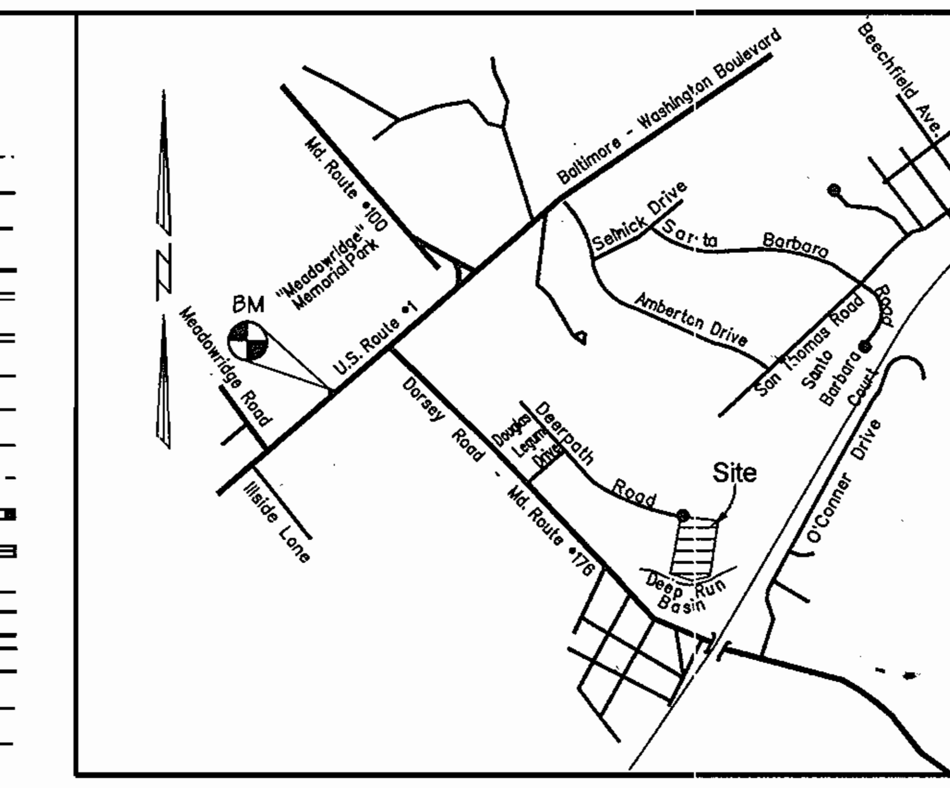
CONTRACTOR SHALL REVIEW AND TEST SUBSOIL DRAINAGE CHARACTERISTICS 30 DAYS PRIOR TO PLANTING AND NOTIFY OWNER UNACCEPTABLE CONDITIONS.

NO EXCEPTIONS TO THE GUARANTEE PROVISIONS ARE ALLOWED UNLESS AGREED TO IN WRITING PRIOR TO PLANTING.

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.
FINANCIAL SURETY FOR THE REQUIRED 14 LANDSCAPE TREES, IN THE AMOUNT OF $4200.00, IS PART OF THE DEVELOPER'S AGREEMENT.

Legend

Ex. 2' Contours
Ex. 10' Contours
Prop. 2' Contours
Prop. 10' Contours
Ex. Curb & Gutter
Prop. Curb & Gutter
Bldg. Restriction Line
Ex. Sanitary
Ex. Storm Drain
Ex. Water
Prop. Sanitary
Prop. Storm Drain
Prop Water
Concrete Paving
Light Duty Paving (P-3)
Wetlands
Flood Plain
Ex. Conc. C&G to be Removed-
Proposed Reverse Conc. Curb & Gutter
Ex.Trees



LOCATION MAP
SCALE: 1" = 2000'

BENCHMARK:

HUB # 371A ELEV.59.6633
DISC SET ON TOP OF CONCRETE(3' DEEP) COLUMN, 24.7' NORTH EAST FROM MAIN ENTRANCE OF CEMETERY ON NORTH SIDE OF US ROUTE 1, 1.5' FROM R/W LINE.

SCHEDULE A
PERIMETER LANDSCAPE EDGE

	ROADWAYS	PERIMETER PROPERTIES
Landscape Type	B	C
Linear Feet of Roadway Frontage Perimeter	64'	370'
Credit for existing Vegetation, (Yes, No Linear Feet)	NO	370'
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	NO	NO
Number of Plants Required Shade Trees Evergreen Trees (1:1) Shrubs (10:1)	 1 2	0
Number of Plants Provided Shade Trees Evergreen Trees (1:1) Other Trees (2:1 sub.) Shrubs (10:1 sub.)	 1 0 4	
Comments:		

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	251
Number of Trees Required	13
Number of Trees Provided	13
Shade Trees	13
Other Trees (2:1 sub.)	

Number of landscaped islands req. 13
Number of landscaped islands provided 13

LANDSCAPING COST ESTIMATE

SHADE TREES - 12 X $300.00 = $3600.00
FLOWERING TREES - 4 X $150.00 = $600.00

TOTAL = $4200.00

NOTE: "LANDSCAPING SURETY IN THE AMOUNT OF $600.00 WILL BE POSTED AS PART OF THE BUILDER'S GRADING PERMIT."

PLANT SCHEDULE

KEY	QUANT.	BOTANICAL NAME / COMMON NAME	SIZE / COND.	SPACING	REMARKS
TREES					
AS	1	Acer saccharum 'Green Mountain' / Green Mountain Sugar Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	fullcrown
AR	1	Acer rubrum 'October Glory' / October Glory Red Maple	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
FP	8	Fraxinus pennsylvanica 'Patmore' / Patmore Green Ash	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
QP	4	Quercus phellos / Willow Oak	2-2 1/2" cal. / B&B	25' o.c. as shown	full crown
PK	4	Prunus serrulata 'Kwanzan' / Kwanzan Cherry	1 1/2 -2" cal. / B&B	15' o.c. as shown	matched

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

APPROVED: HOWARD SOIL CONSERVATION DISTRICT
PLAN NUMBER DATE

Reviewed for Howard SCD and meets Technical Requirements
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: Howard County Department of Planning and Zoning
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 8/7/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE 9/1/00
DIRECTOR DATE 9/6/00

ADDRESS CHART	
PARCEL NO.	STREET ADDRESS
PARCEL H	DEERPATH ROAD 6865

SUBDIVISION NAME	SECTION NAME	PARCEL #
DORSEY BUSINESS CENTER	1	H

PLAT #	BLOCK #	ZONE	TAX /ZONE MAP	ELECT. DIST.	CENSUS TRACT
14391	6		37,43	1	6069.01

WATER CODE B-01 SEWER CODE 2220000

LANDSCAPE PLAN
FOR
DORSEY BUSINESS CENTER
PARCEL 'H'-1

ELECTION DISTRICT: 1
HOWARD COUNTY, MD
SHEET 10 OF 14
SDP-00-13
SCALE: AS SHOWN
FEB. 17, 2000

PREPARED BY:
GEORGE W. STEPHENS, JR. AND ASSOCIATES, INC.
Civil Engineers and land Surveyors
1020 Cromwell Bridge Road
Towson, Maryland 21286
(410) 825-8120

PLAN
SCALE : 1" = 40'

Developer's/Builder's Certificate
I/We certify that the landscaping shown on this plan will be done according to the plan, Section 16.124 of the Howard County Code and 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.
Name Date 07/13/00

OWNER/DEVELOPER
WHALEN PROPERTIES, L.L.C., DORSEY, SERIES XIV
2 EAST ROLLING CROSSROADS
SUITE 251
CATONSVILLE, MD 21228
(410) 747-2900

DESIGNED BY: B.P.
DRAWN BY: H.C.
CHECKED BY: B.P.
REVISIONS
5/10/06 ADDED 8" FIRE SERVICE S.E. SIDE OF BUILDING
11/15/99
-REVISED PARKING LAYOUT TO COMPLY WITH PARKING REGS. (Section 133, Zoning Regulations)

FILENAME: 8779LANDSCAPEPLAN.S01
PN: 8779
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SDP-00-13