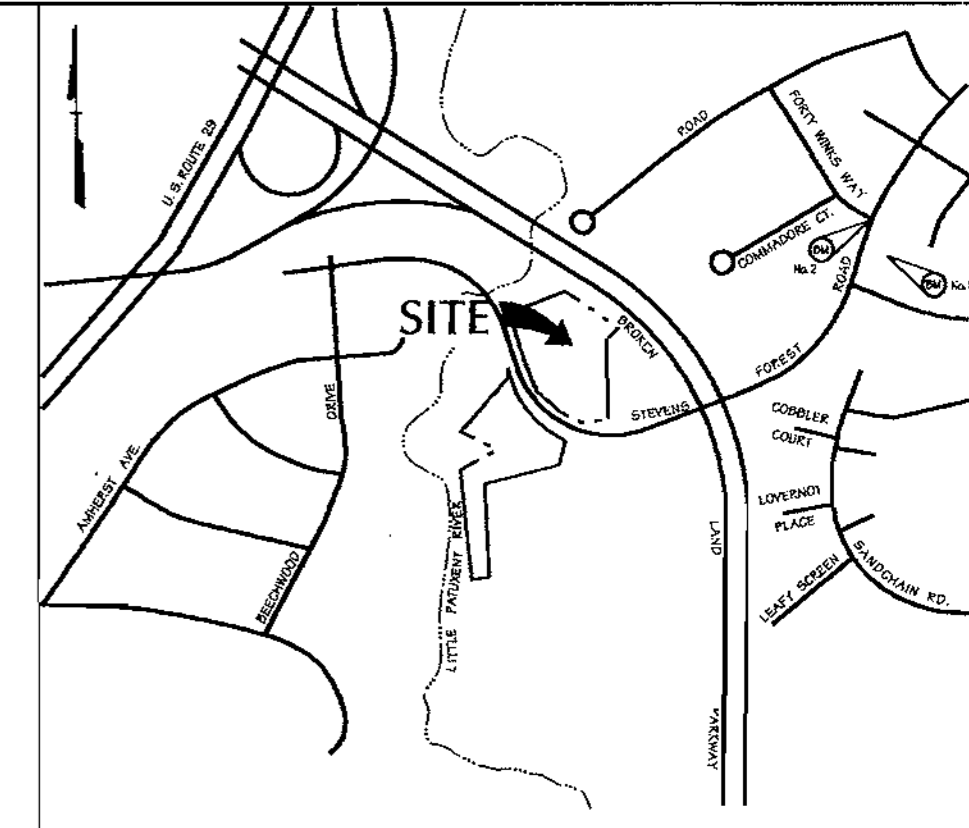


SHEET INDEX

SHEET	DESCRIPTION
1	COVER SHEET
2	SITE DEVELOPMENT PLAN
3	LAYOUT PLAN
4	GRADING PLAN
5	SITE DETAILS
6	SITE DETAILS
7	SWM PLAN VIEW
8	SWM DRAINAGE AREA MAP (EXISTING)
9	SWM DRAINAGE AREA MAP (PROPOSED)
10	SWM PROFILES
11	SWM DETAILS
12	SWM DETAILS (POND SPECS)
13	STORM DRAINAGE AREA MAP
14	STORM DRAIN PROFILES
15	WATER, SEWER & RAIN DRAIN PROFILES
16	EROSION & SEDIMENT CONTROL PLAN VIEW
17	EROSION & SEDIMENT CONTROL PLAN VIEW
18	EROSION & SEDIMENT CONTROL DETAILS
19	EROSION & SEDIMENT CONTROL DETAILS
20	LANDSCAPE PLAN
21	LANDSCAPE PLAN
22	RETAINING WALL DETAILS
23	RETAINING WALL DETAILS



LOCATION MAP

SCALE: 1" = 1000'

BENCHMARK DESCRIPTION

36 HA	N 555116.609	E 1354381.451	ELEVATION 292.938
36 EA	N 556986.794	E 1354535.254	ELEVATION 365.577

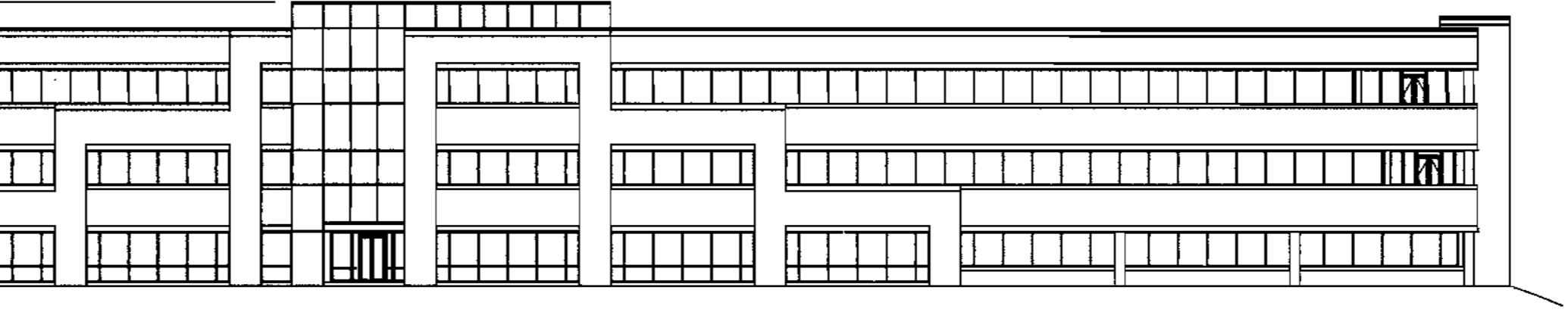
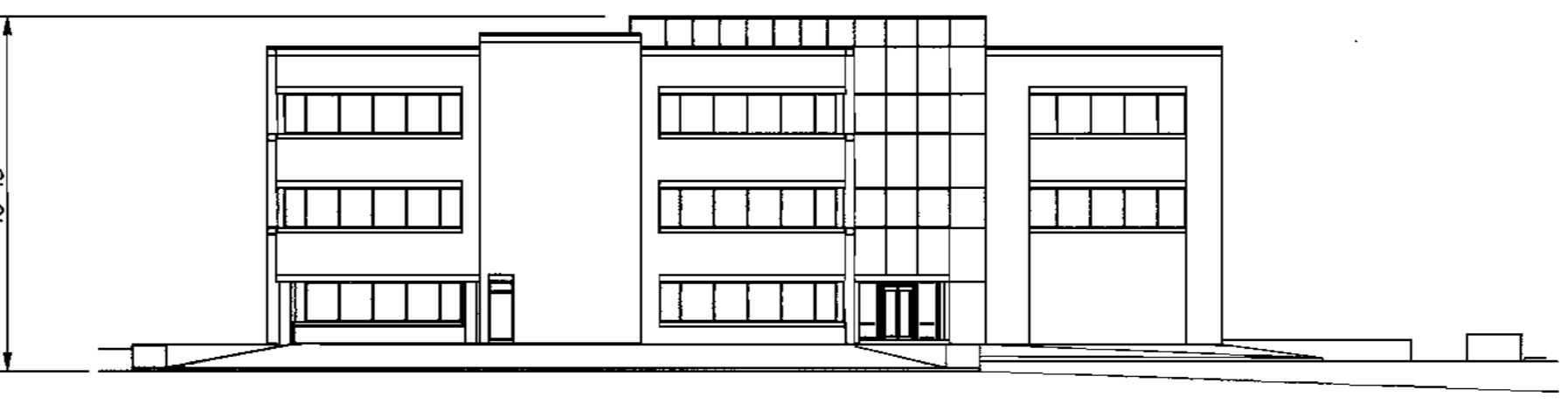
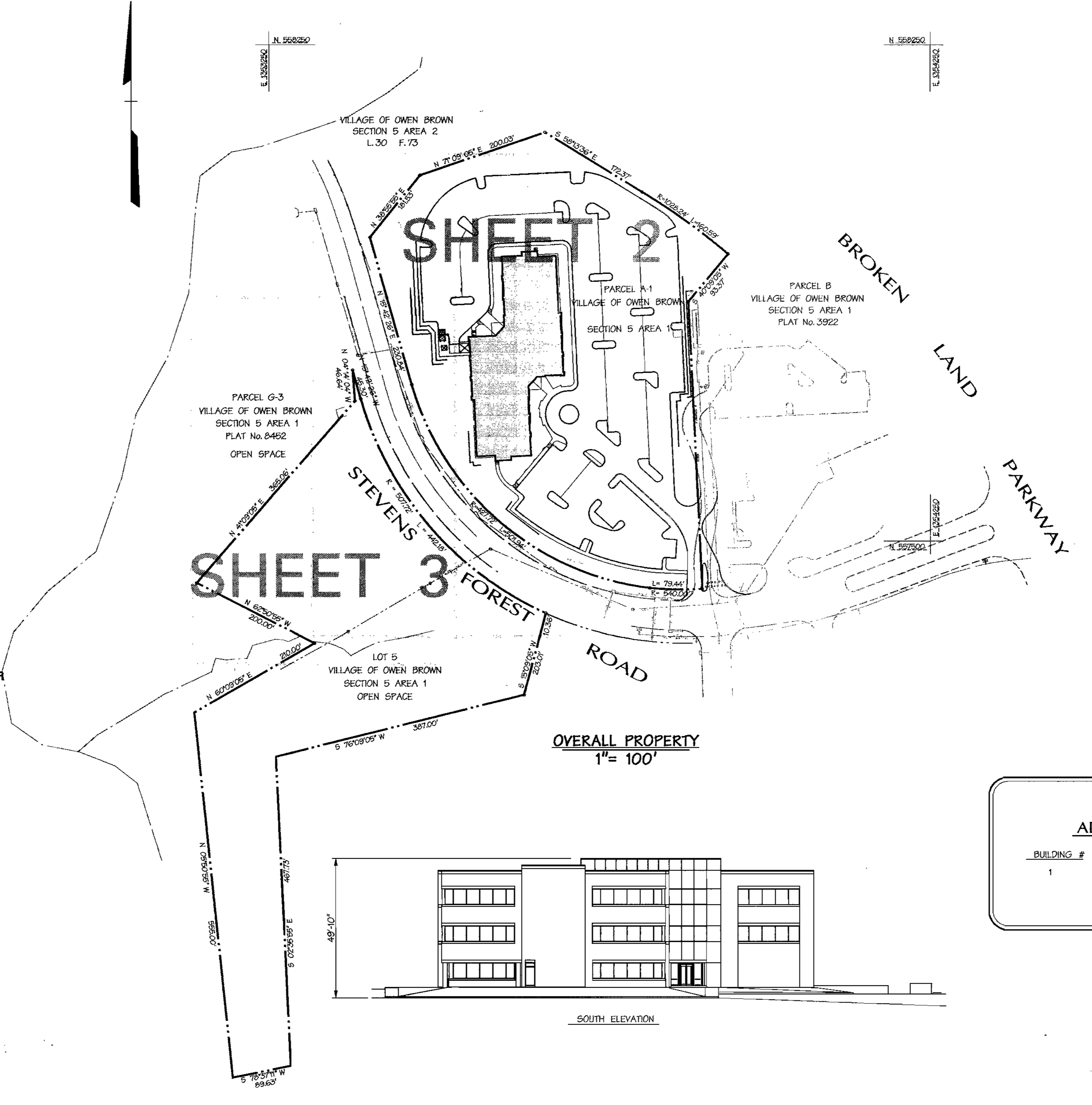
GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSHA standards and specifications, if applicable.
- The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1820 at least five (5) working days prior to the start of work.
- The contractor shall notify 'Miss Utility' at 1-800-257-7777 at least 48 hours prior to any excavation work.
- Traffic control devices, markings, and signing shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD). All street and regulatory signs shall be in place prior to the placement of any asphalt.
- All plan dimensions are to the face of curb unless otherwise noted.
- Topography was field run surveyed by Daft-McCune and Walker Inc. on December, 1999.
- Coordinates and bearings shown hereon are referred to the Maryland Coordinate system (NAD 83) as projected by Howard County Geodetic Control stations No. 36HA & 38EA.
- Storm water management is provided off-site by extended detention facilities for quantity and quality. Stevens Forest Green LLLP is responsible for maintenance of the facility.
- Storm water management facilities are privately maintained.
- No wetlands exist within the limits of disturbance.
- The existing utilities were located from available records and field survey prepared by Daft-McCune-Walker, Inc. The contractor must dig test pits, by hand, at all utility crossings and connection points at least 5 days prior to starting work to verify exact location.
- The Soils analysis report was prepared by Herbert J. Benson & Assoc. dated March 30, 2000 & May 9, 2000.
- Handicap parking details shall be in accordance with the 'Maryland Building Code for the Handicapped', Section 5.01-7.05.
- Any damage to County owned right-of-way to be corrected at the contractor's expense.
- All sidewalks shall be cross sloped at 1/4 inch per foot.
- Trench bedding for storm drainage structures shall be in accordance with Howard County Standard G2.01.
- Department of Planning and Zoning reference file numbers: FDP 149-A-11 & RECORDED PLAT 9689 RECORDED 12-07-90, F-01-79.
- All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on the structure schedule.
- All materials and construction is to be in accordance with the Howard County Design Manual Volume IV.
- The building setback restrictions from the property lines and right-of-way lines of any public road shall be in accordance with FDP Phase 149-A-11.
- All on-site driveways and parking areas to be privately maintained.
- All curb radii are five feet unless otherwise labeled and all curbs to be 6" in height.
- All equipment and tools shall be placed as not to interfere with vehicular or pedestrian movement unless specified.
- The contractor shall be responsible for any damage to existing property which may occur as a result of his negligence in the execution of the work.
- All paving areas indicated are private.
- All proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
- There is no floodplain on this site and offsite Flood Plain was obtained from THE RECORD PLAT 1619.
- Traffic study was prepared by Lee Cunningham & Assoc. dated April, 2000.
- Public Water is utilized for this site.
- This plan is exempt from Forest Conservation in accordance with Section 16-1202 (b) (1) (iv).
- This property is located within the Metropolitan District.
- All exterior lighting shall comply with Section 134 of the Howard County Zoning Regulations.
- Electric, Gas, Cable, and Telephone lines designed by others.
- There are no known cemeteries or burialgrounds on this site.

SITE ANALYSIS :

- Zoning: New Town-Employment (Per FDP Ph. 149-A-11)
- Total Project Area 10.43± Ac. or 454,330 sq. ft.
- Proposed Use: Commercial office buildings and parking.
- Area Tabulation
 

Total commercial building area	88,808	sf
building	First Floor: 29,050 SF , Second Floor: 29,999 SF Third Floor: 29,765 SF	
A. Limit of Disturbance	7.08±	Ac.
B. Area of Plan Submission	10.43±	Ac. Includes Parcel A-1 to Lot 5
C. Impervious Area	3.85±	Ac.
D. Green Area	3.23±	Ac.
- Parking Required 81,000 SF NET AREA @ 2.0/1000 = 162 sp.  
75% @ 9' WIDTH = 122 sp.
- Parking Provided 133 @ 9' WIDTH ; 192 @ 8 1/2' WIDTH SP. (Inc 10 HC)
- Open Space Data: N/A
- Building Coverage of Site: 0.67± Acres and 12% of Gross Area (Parcel A-1)



BUILDING ELEVATIONS

NOT TO SCALE

ADDRESS CHART

BUILDING #	STREET ADDRESS
1	6350 Stevens Forest Road

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DATE 9-6-2000

KS/RA

APPROVED: <i>Charles Williams</i>	2/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy Hamilton</i>	2/9/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>James S. Butler</i>	2/12/01
DIRECTOR	DATE

COLUMBIA  
Stevens Forest Green  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATRICK PARKWAY  
COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, LLLP  
C/O THE GREANEY & SMITH GROUP  
925 FELL STREET  
BALTIMORE, MD 21231

DMW  
Daft - McCune - Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

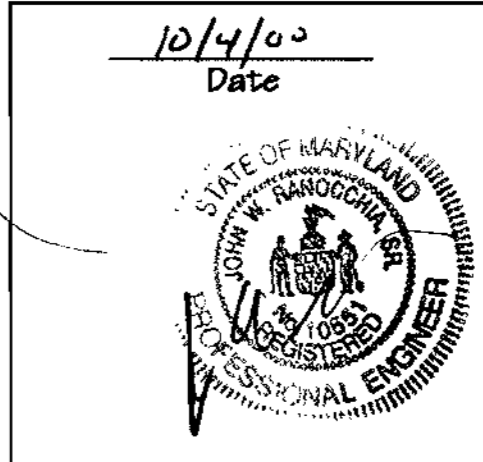
300 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705

SUBDIVISION NAME: Village of Owen Brown	SECTION AREA: Section 5 Area 1	LOT/PARCEL #: Lot 5 Parcel A-1
PLAT OR LIE/BLOCK ZONE: 9689, 1619, 17, 18	TAX/ZONE MAP/ELECT. DISTRICT: 36	CENSUS TRACT: 606102
WATER CODE: ...	SEWER CODE: 5450000	

TITLE: COVER SHEET

Drn By: ADL	Scale: 1"=100'	Proj. No. 99136.B2
Des By: ADL	Date: 9-20-00	
Chk By: RLH	Approved:	1 of 23

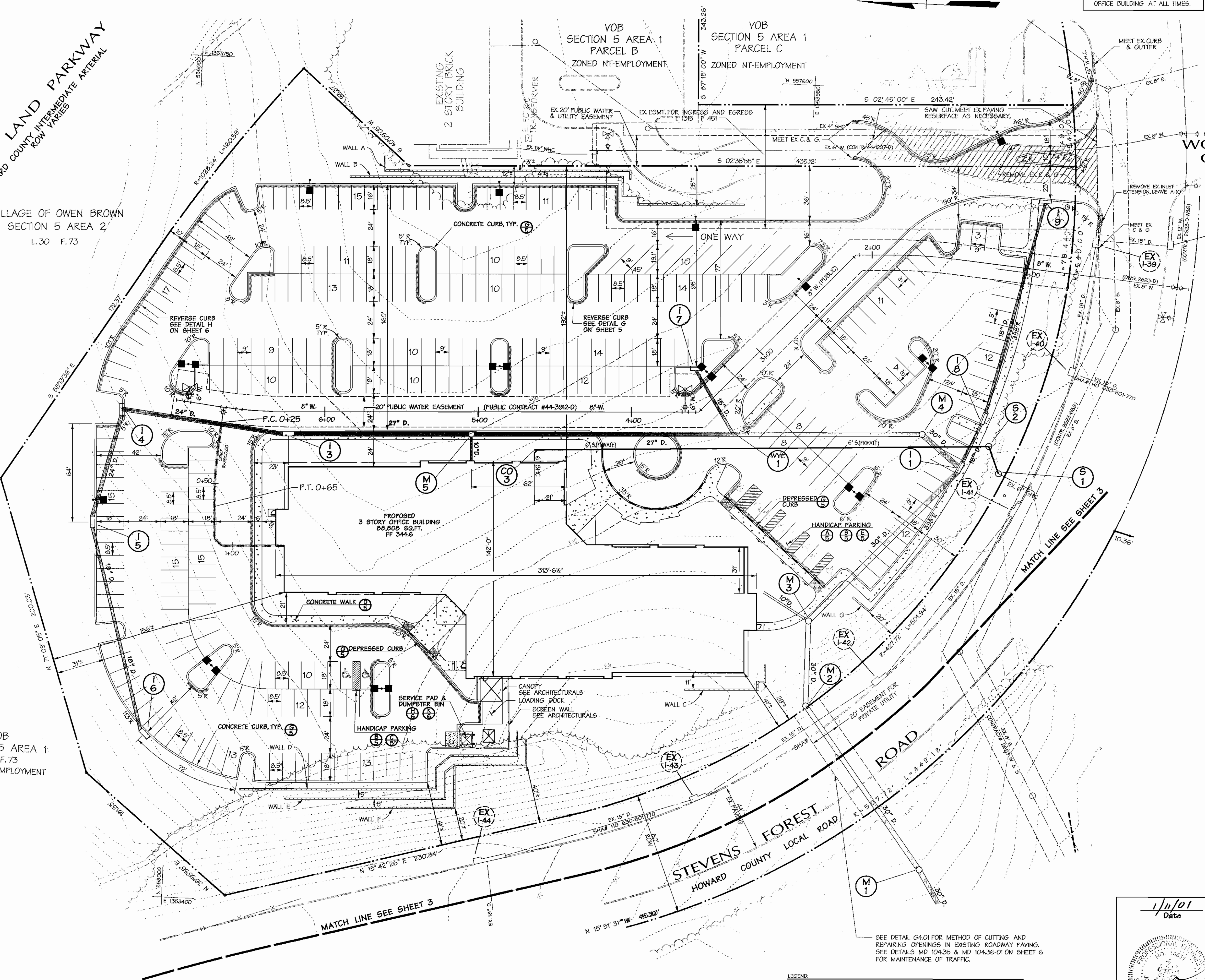
Professional Engr. No. 1959



**BROKEN LAND PARKWAY**  
HOWARD COUNTY INTERMEDIATE ARTERIAL  
ROW VARIES

VILLAGE OF OWEN BROWN  
SECTION 5 AREA 2  
L.30 F.73

VOB SECTION 5 AREA 1  
L.30, F.73  
ZONED NT-EMPLOYMENT



MAINTAIN ACCESS TO EX.2 STORY OFFICE BUILDING AT ALL TIMES.

**LEGEND**

- EX MAJOR CONTOURS
- EX MINOR CONTOURS
- PROP. STORM DRAIN = 15" RCCP CL. IV
- PROP. SEWER = 6" S.
- PROP. WATER = 6" W.
- EX STORM DRAIN = EX 2" RCP
- EX SEWER = EX 8" S.
- EX WATER = EX 8" W.
- PARKING COUNT LABELS = 10
- STANDARD CURB
- REVERSE CURB
- HANDICAP SYMBOLS
- HANDICAP RAMPS
- MANHOLE & INLET LABELS
- EX MANHOLE & INLET LABELS
- DETAIL CALL OUTS
- PROP. LIGHT FIXTURE
- DEPRESSED CURB
- RETAINING WALL
- ELECTRICAL TRANSFORMER (BY OTHERS)
- STEEP SLOPES (>=15%)
- STEEP SLOPES (>=25%)
- EX PAVING TO BE REMOVED

NOTE: SEE SHEETS 22 & 23 FOR RETAINING WALL DETAILS

APPROVED: [Signature]  
DATE: 9-6-2000  
13/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
[Signature] 2/2/01	DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION	
[Signature] 2/9/01	DATE
CHIEF, DIVISION OF LAND DEVELOPMENT	
[Signature] 2/12/01	DATE
DIRECTOR	
Date	No. Revision Description

**COLUMBIA Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATRICK PARKWAY  
COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
C/O THE GREANEY & SMITH GROUP  
925 FELL STREET  
BALTIMORE, MD 21231

**DMW**  
Daft · McCune · Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705

1/11/01  
Date

Professional Engr. No. 0551



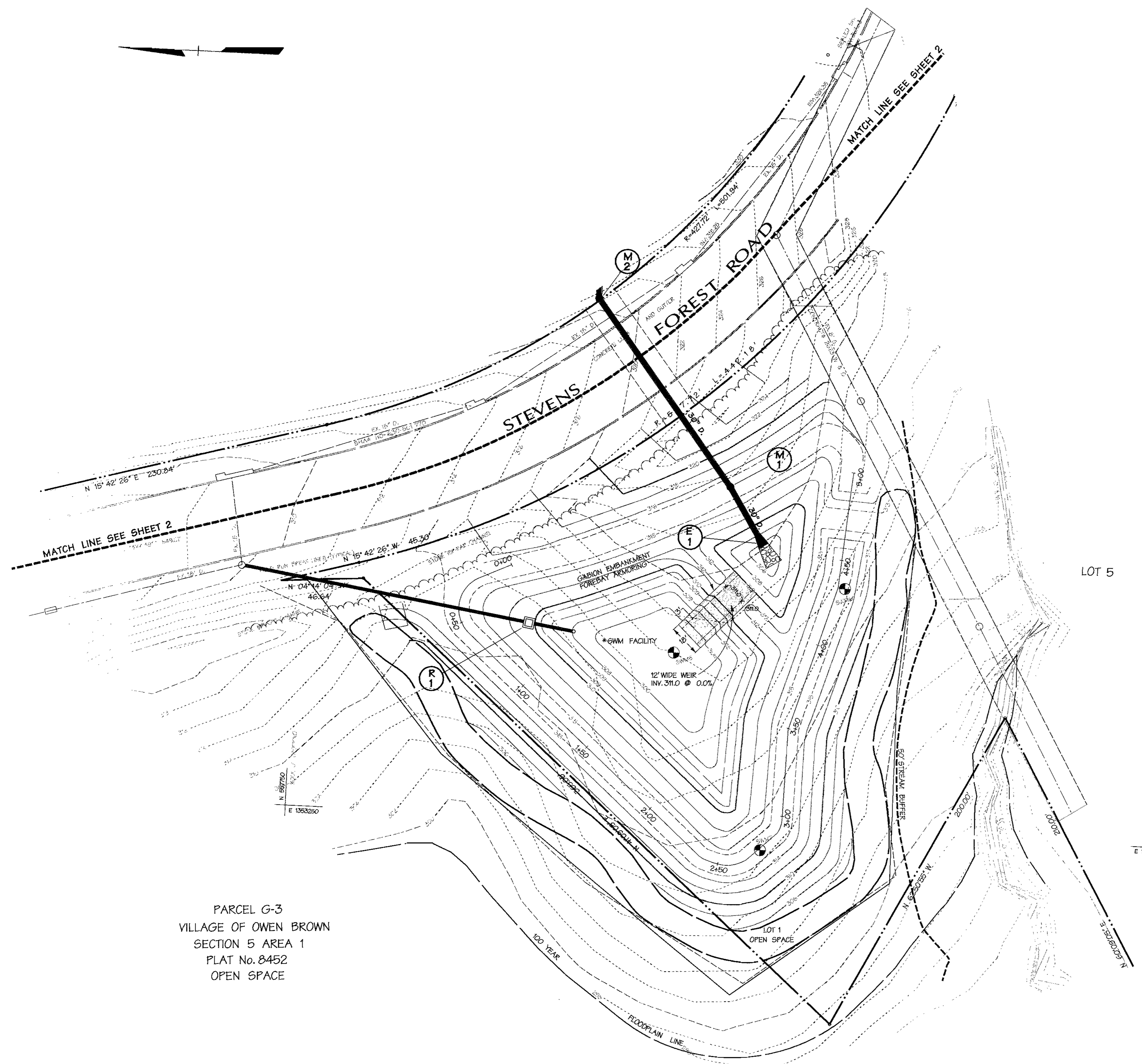
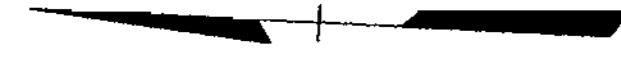
LEGEND:  
Sign Legend:  
① - Proposed Sign Support and Sign Identification

Sign Legend:  
① STOP R1=30" X 30"

NOTE: THE AREA FOR CONTIGUOUS SLOPE OF 25% OR STEEPER IS 17,860 SQ. FT.

**SITE PLAN**

Drn By: ADL	Scale: 1"=30'	Proj. No. 99136.B2
Des By: RLH	Date: 1-05-01	
Chk By:	Approved:	2 of 23



PARCEL G-3  
VILLAGE OF OWEN BROWN  
SECTION 5 AREA 1  
PLAT No. 8452  
OPEN SPACE

LOT 5

E 1363500  
N 1977850

E 1363250  
N 1977850

\* SEE SHEET 7 FOR DETAILED 6MM  
PLAN VIEW.

APPROVED  
DATE 9-6-2000  
19/RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>W.D. Dunning</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/2/01 DATE
<i>Cindy Hamaker</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/9/01 DATE
<i>James P. Smith</i> DIRECTOR	2/12/01 DATE

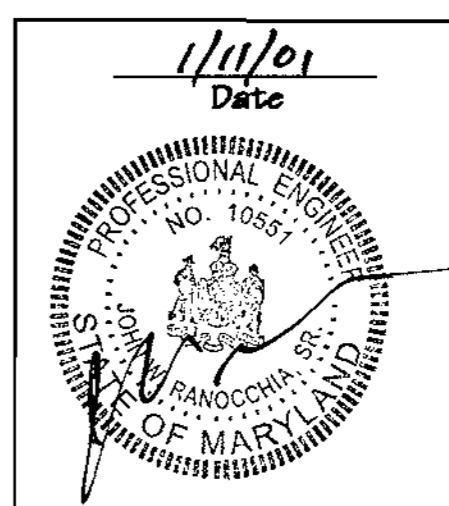
Date	No.	Revision Description

**COLUMBIA  
Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

<b>OWNER</b> THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 LITTLE PATURNT PARKWAY COLUMBIA, MD 21044	<b>DEVELOPER</b> STEVENS FOREST GREEN, L.L.P. C/O THE OREANEY & SMITH GROUP 925 FELL STREET BALTIMORE, MD 21231
---	---

**DMW**  
Daft · McCune · Walker, Inc.  
A Team of Land Planners,  
Landscape Architects,  
Engineers, Surveyors &  
Environmental Professionals

200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705



SITE PLAN

Des By: ADL	Scale: 1"=30'	Proj. No. 99136.B2
Des By: RLH	Date: 9-20-00	3 of 23
Chk By:	Approved:	

Professional Engr. No. 10551

**BROKEN LAND PARKWAY**  
 HOWARD COUNTY INTERMEDIATE ARTERIAL  
 ROW VARIES

VILLAGE OF OWEN BROWN  
 SECTION 5 AREA 2  
 L.30 F.73

VOB  
 SECTION 5 AREA 1  
 PARCEL B  
 ZONED NT-EMPLOYMENT

VOB  
 SECTION 5 AREA 1  
 PARCEL C  
 ZONED NT-EMPLOYMENT

**WOODSIDE COURT**

SEE SHEET 2 FOR LEGEND

E 1363750  
 N 187280

APPROVED  
 DATE 9-6-2000  
 K/L

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*W.D. Dorman* 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

*Cindy Hamata* 2/9/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT

*James J. Scott* 2/12/01  
 DIRECTOR

Revision Description

**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 10275 LITTLE PATUXENT PARKWAY  
 COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, LLLP  
 C/O THE CREANEY & SMITH GROUP  
 325 FELL STREET  
 BALTIMORE, MD 21231

**DMW**  
**Daft · McCune · Walker, Inc.**  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

1/11/01  
 Date

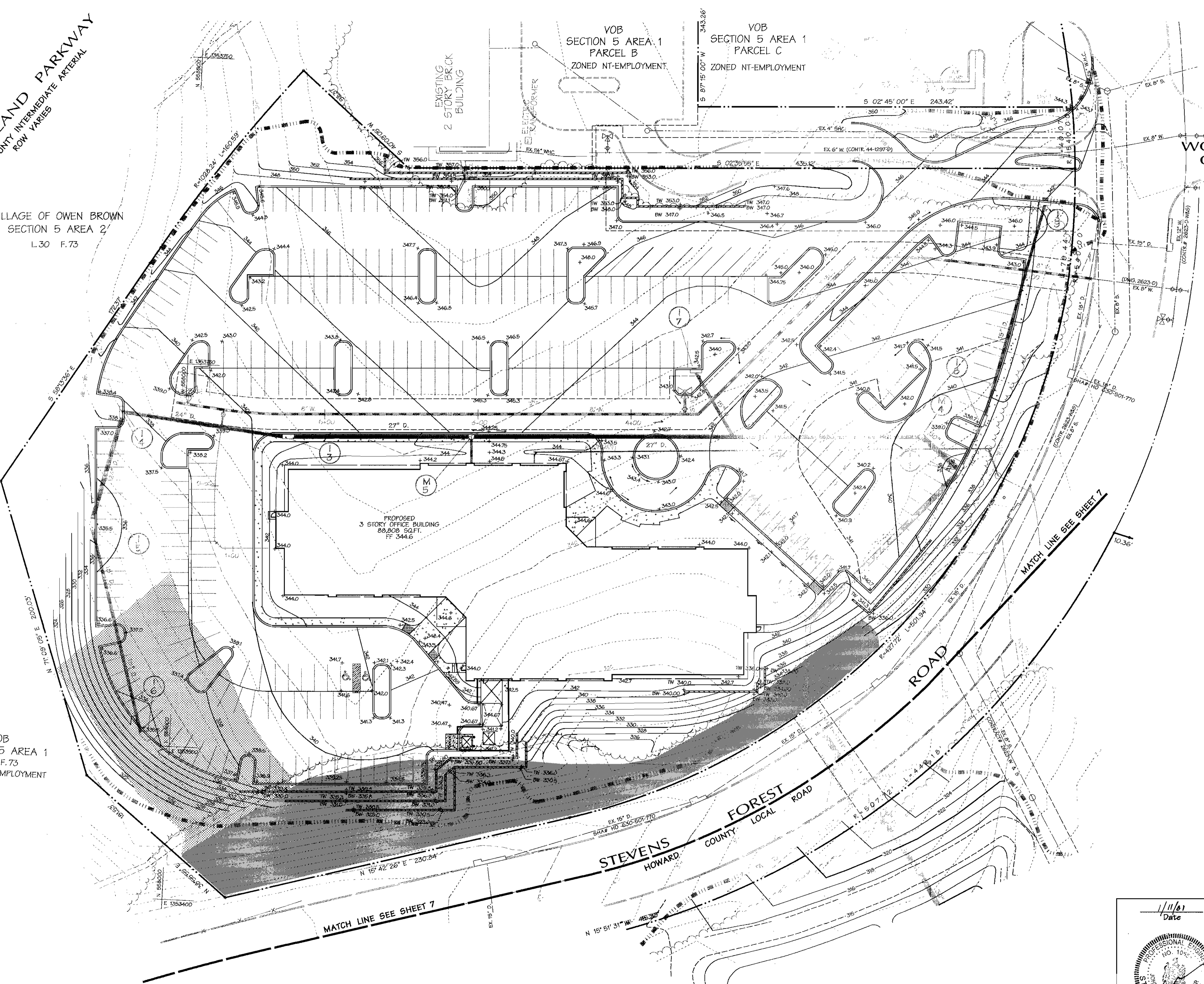
Professional Engr. No. 10531

**GRADING PLAN**

Drn By: ADL Scale: 1"=30' Proj. No. 89136.B2  
 Des By: DA Date: 1-05-01  
 Chk By: Approved: 4 of 23

SDP-00-142

The Jan 11 09:20:52 2001/09/15/08/142/00-09-27/85/004.dwg

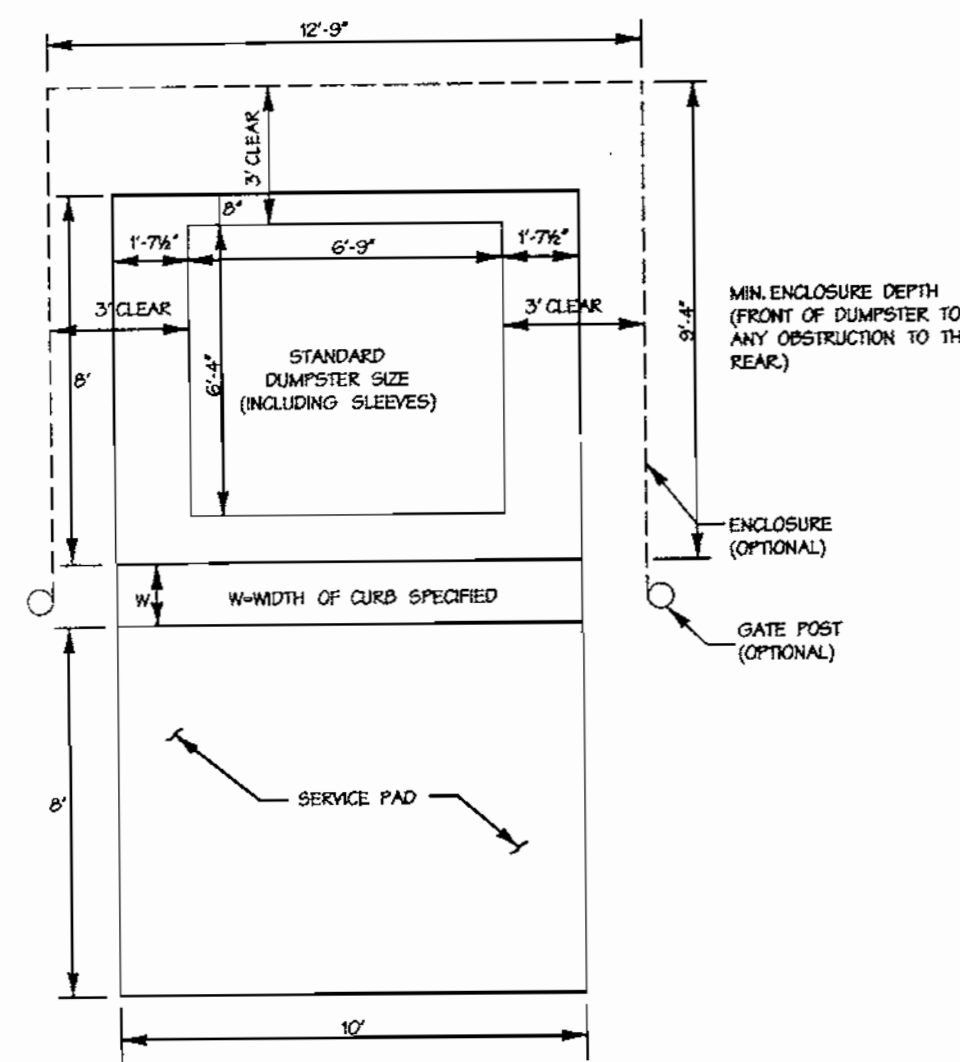


VOB  
 SECTION 5 AREA 1  
 L.30, F.73  
 ZONED NT-EMPLOYMENT

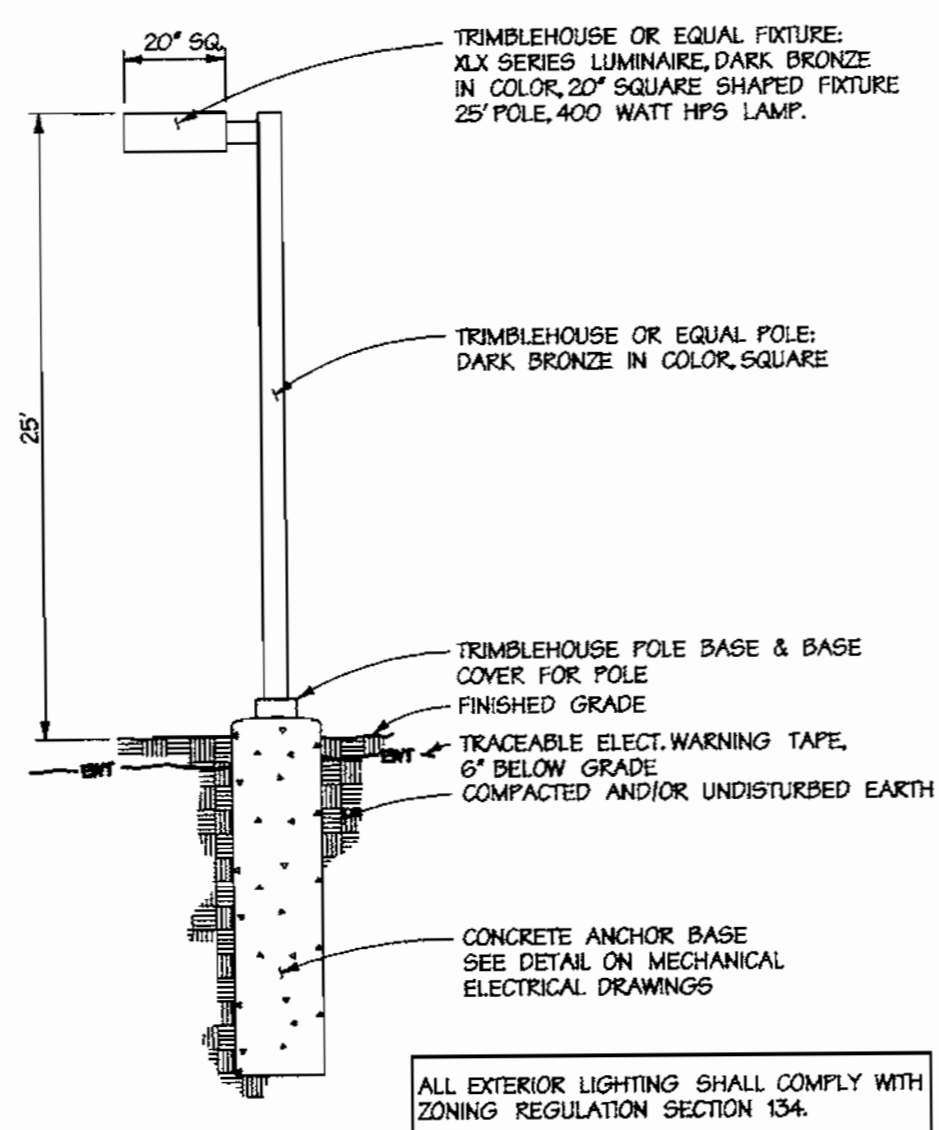
MATCH LINE SEE SHEET 7

MATCH LINE SEE SHEET 7

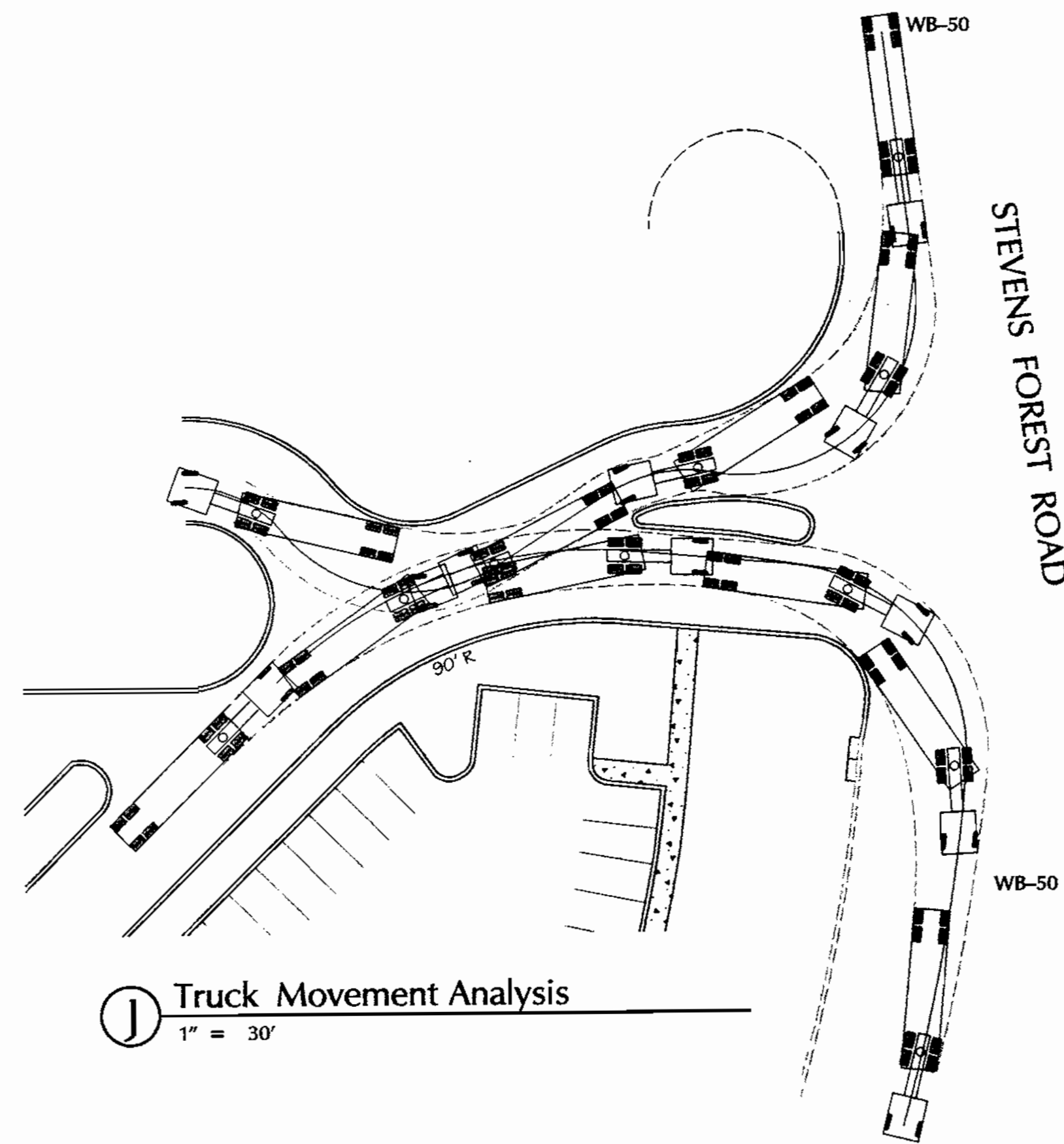




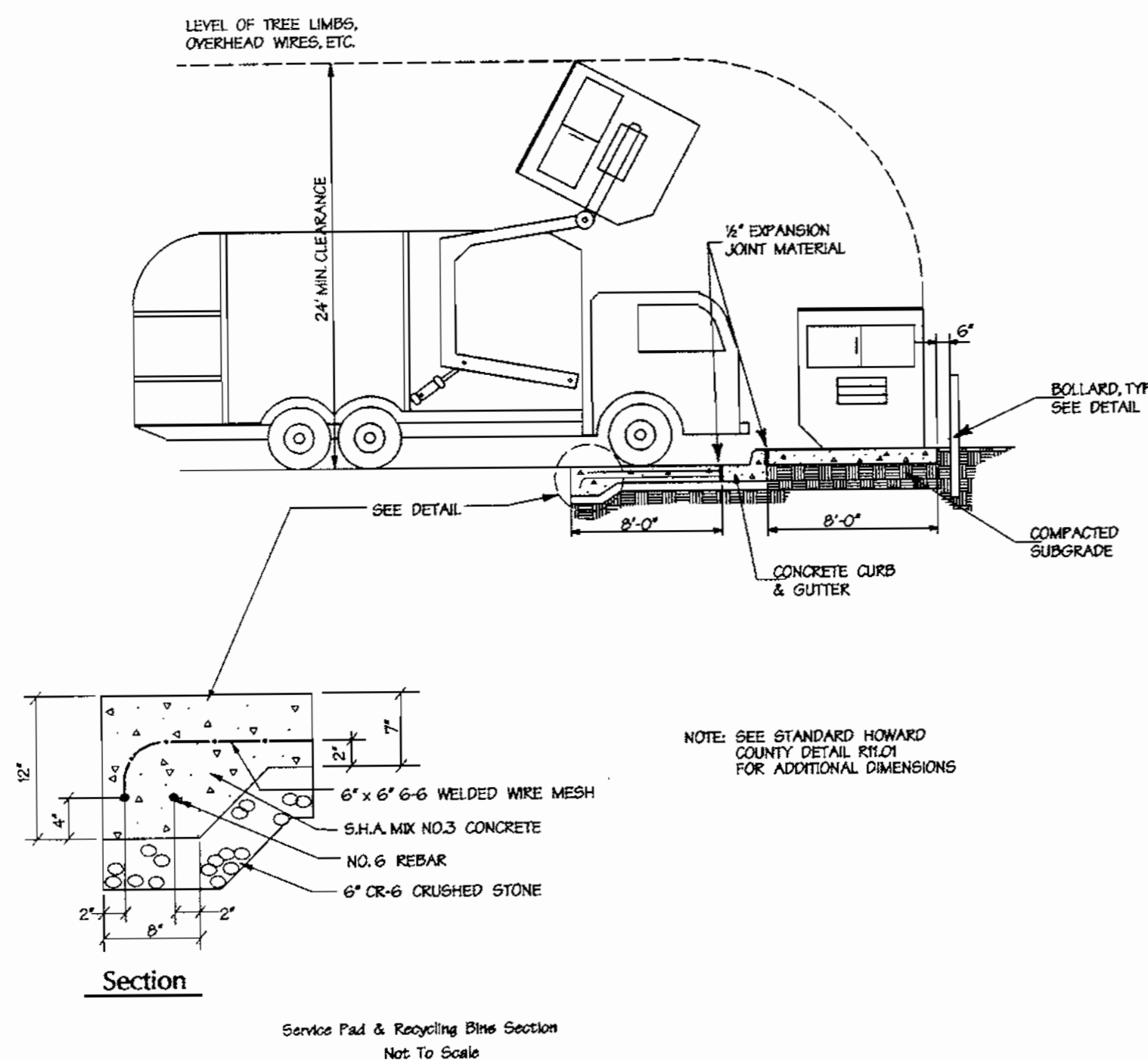
**H** Dumpster Enclosure  
Not To Scale



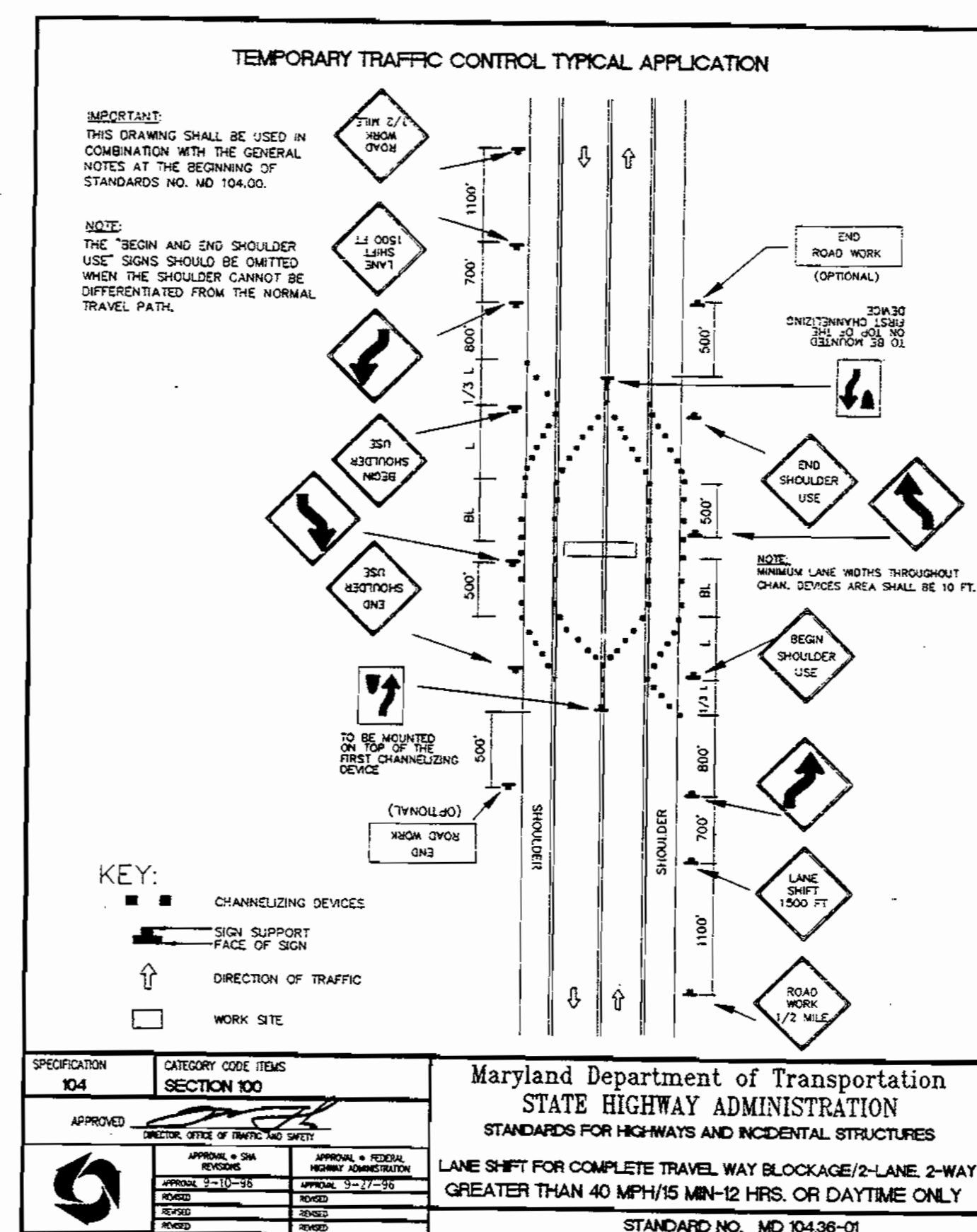
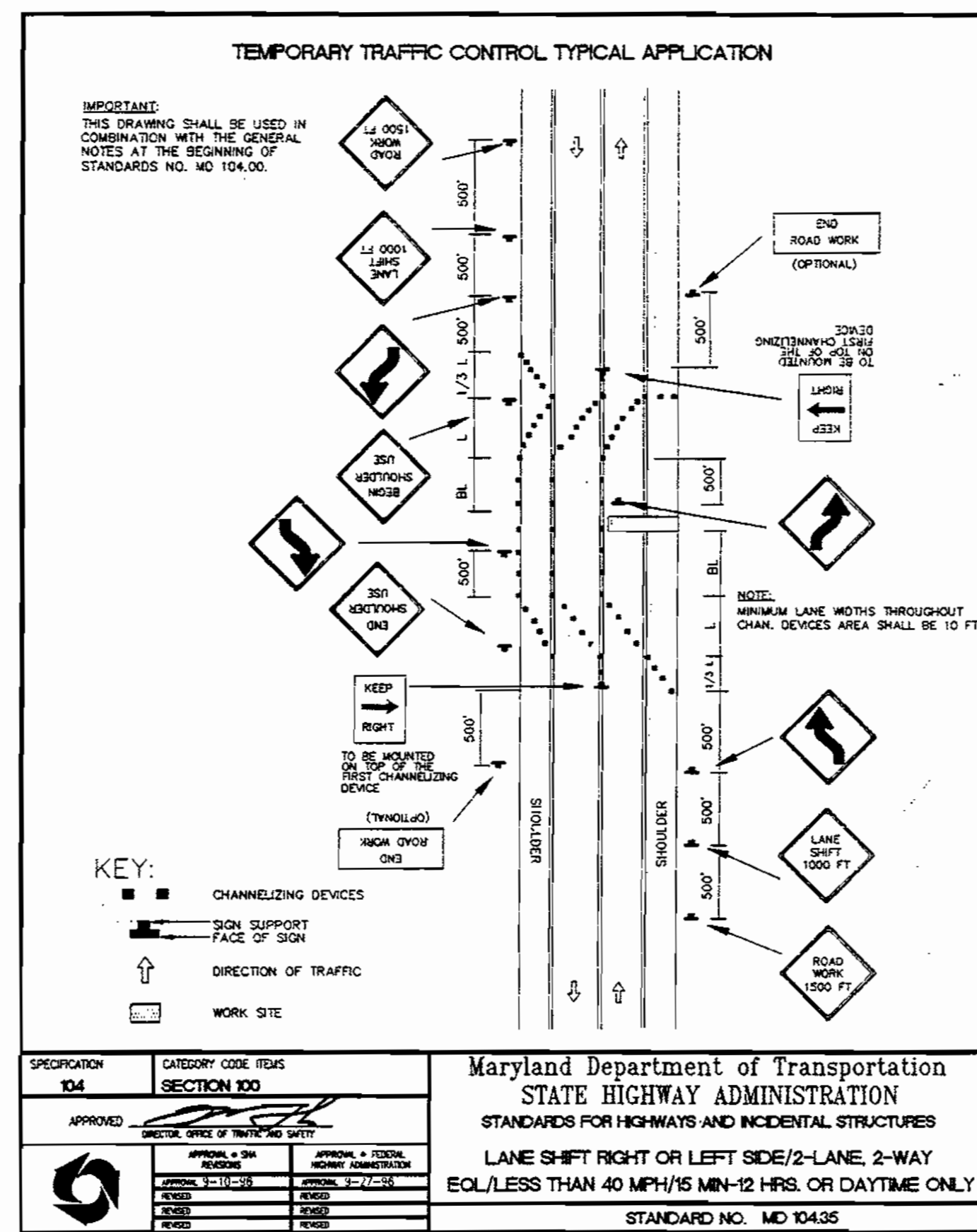
**I** Sharp Cut off Area Light  
Not To Scale



**J** Truck Movement Analysis  
1" = 30'



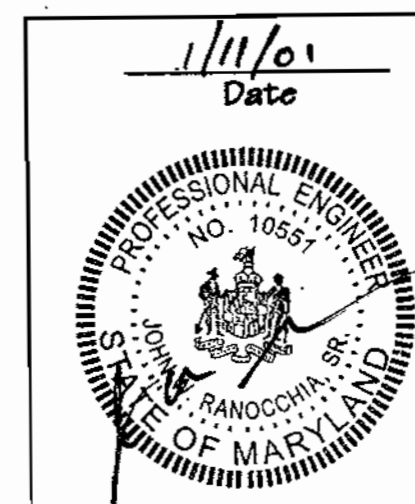
**K** Service Pad & Dumpster Bin  
Not To Scale



APPROVED  
PLANNED DEPT.  
of HOWARD COUNTY  
DATE: 9-6-2000  
KJ/LB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 Chief, Development Engineering Division: *Chris Drummey* 2/2/01  
 Chief, Division of Land Development: *Andy Hamstra* 2/9/01  
 Director: *James P. Roth* 2/13/01

Revision Description  
**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5  
 OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 ENGINEERS, SURVEYORS & ENVIRONMENTAL PROFESSIONALS: DMW  
 10275 LITTLE PATRIENT PARKWAY, COLUMBIA, MD 21044  
 325 TELL STREET, BALTIMORE, MD 21231



**DMW**  
 Daft - McCune - Walker, Inc.  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
 200 East Pennsylvania Avenue, Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

SITE DETAILS

Drn By: KDE Scale: AS SHOWN Proj. No. 99136.B2  
 Des By: RLH Date: 7-21-00  
 Chk By: Approved: 6 of 23

SWM POND  
DESIGN FLOW SUMMARY PROPOSED CONDITIONS

	2-YEAR	10 YEAR	10 YEAR CLOGGED	100 YEAR CLOGGED	5 YEAR CLOGGED
Existing D.P. (cfs) - Allowable Release	0.42	2.75	N/A	N/A	N/A
Developed Inflow (cfs)	15.05	28.19	26.78	40.86	20.17
Developed Outflow (cfs)	0.15	1.40	13.60	26.11	8.30
Developed Outflow D.P. (cfs)	0.40	1.72	14.74	29.00	8.84
Water Surface Elevation	310.80	311.81	313.14	313.54	312.89
Water Quality Storage (ac. ft.)	0.519	0.519	N/A	N/A	N/A
Quantity Storage (ac. ft.)	0.700	1.050	0.430	0.500	0.400
Total Storage (ac. ft.)	1.219	1.569	0.430	0.500	0.400

EXTENDED DETENTION  
DRY POND

Structure Type  
Water Quality Type  
Structure Classification

Storage Height Product 2 year  
Storage Height Product 10 year  
Storage Height Product 100 year Clogged  
Storage Height Product 100 year Clogged  
Watershed Area to Facility  
Level of Management Required  
Level of Management Provided  
Minimum Top Width Provided  
Maximum Height of Fill  
Floodboard Required \*  
Floodboard Provided

4.65
5.66
7.47
7.71
0.0092 SQ MILES
2.10
2.10
12'
7.2'
1.0'
1.46'

\*ACTIVE EMERGENCY SPILLWAY PROVIDED

PARCEL G-3  
VILLAGE OF OWEN BROWN  
SECTION 5 AREA 1  
PLAT No. 8452  
OPEN SPACE

STORMWATER MANAGEMENT  
EXTENDED DETENTION DRY  
POND FACILITY

12' MAINTENANCE BENCH  
AND ACCESS WAY

THIS POND HAS A HAZARD  
CLASSIFICATION OF 'A'

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL  
CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS  
FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT  
CONTROL.

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE  
DATE: 2/1/01

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND  
SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL  
CONSERVATION DISTRICT.

APPROVED: HOWARD SOIL CONSERVATION DISTRICT  
DATE: 2/1/01  
PLAN NUMBER

DEVELOPERS CERTIFICATE:

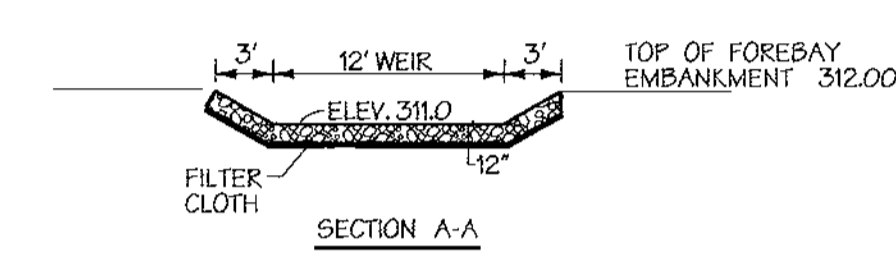
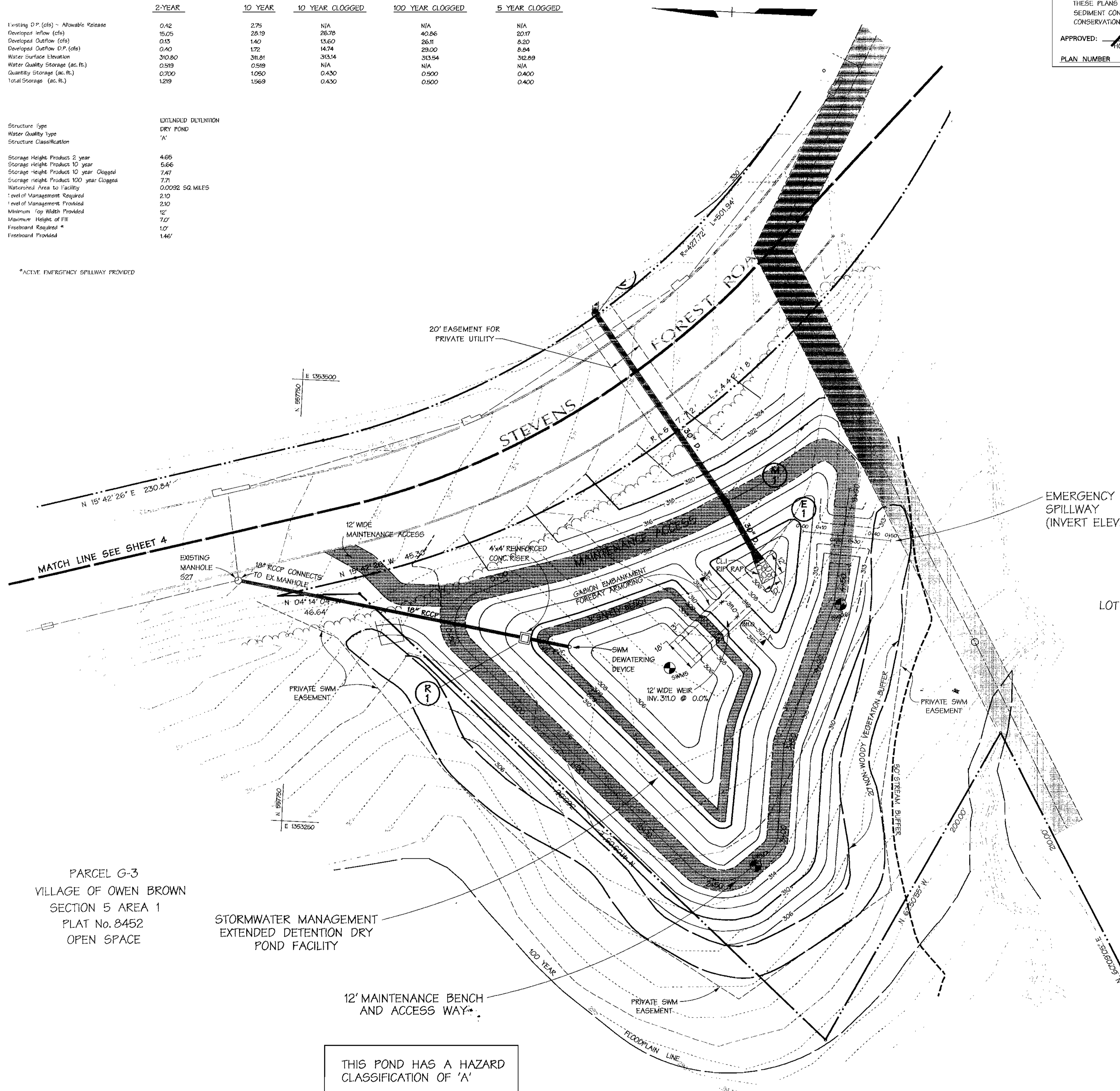
I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING  
TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION  
PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF ENVIRONMENT  
APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND 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: CRAIG M. SMITH  
DATE: 1-09-01

ENGINEERS CERTIFICATE:

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: John W. Rauscher, Jr.  
DATE: 1/11/01



GABION FOREBAY EMBANKMENT ARMORING DETAIL  
SCALE: 1" = 10'

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

Chief, Development Engineering Division: 2/3/01  
Chief, Division of Land Development: 2/9/01  
Director: 2/12/01

DATE: No. Revision Description

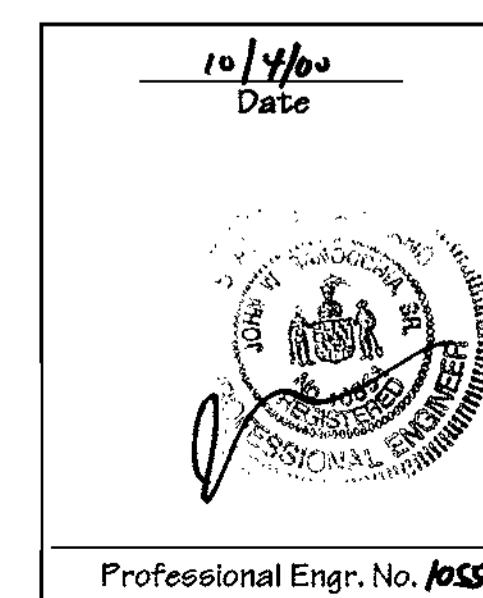
**COLUMBIA**  
Stevens Forest Green  
Section 5 Area 1 Parcel A-1 & Lot 5

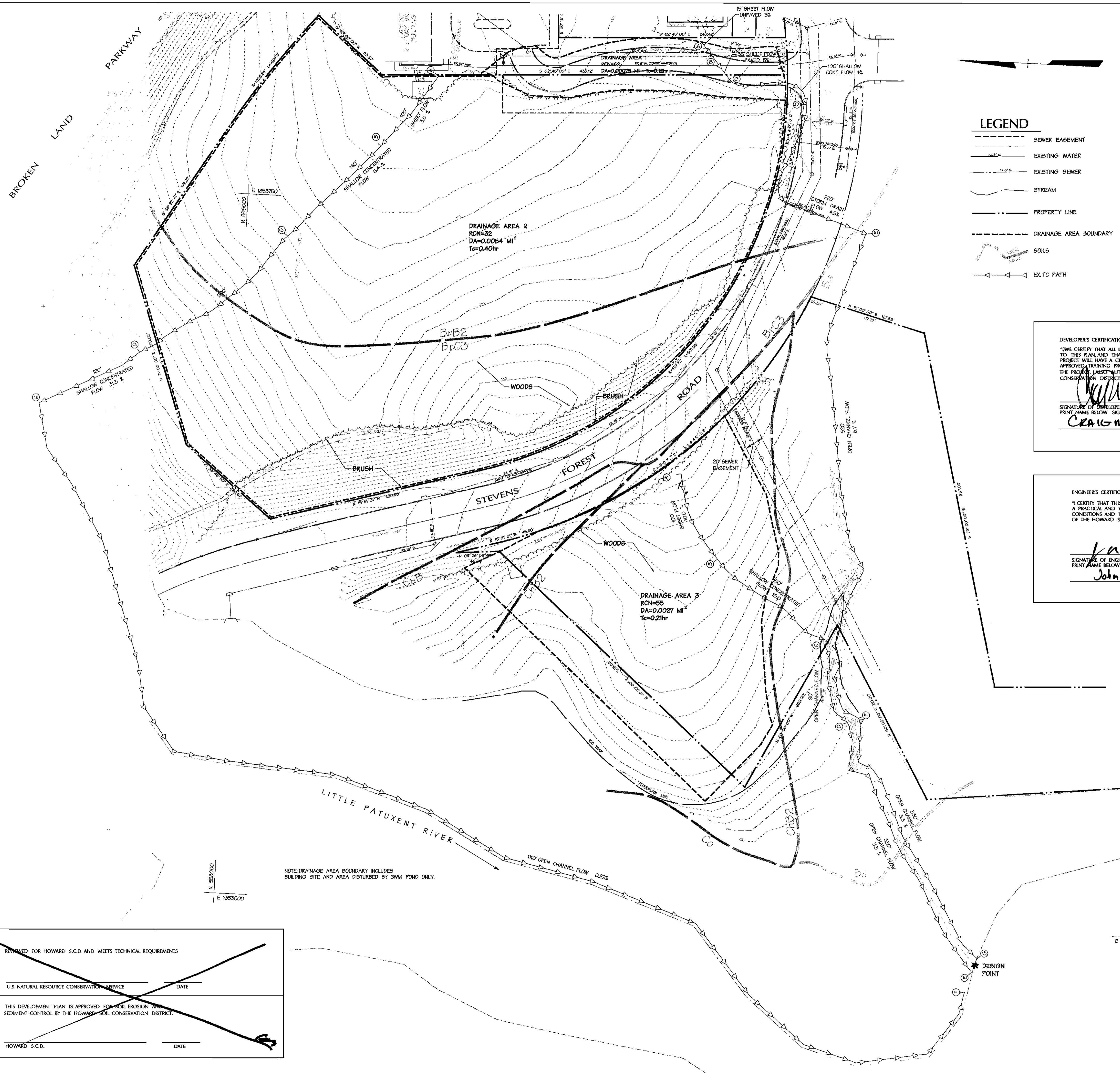
OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
DEVELOPER: STEVENS FOREST GREEN, L.L.P.

**DMW**  
Daft - McCune - Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

STORMWATER  
PLAN VIEW

Drn By: Scale: 1" = 30'  
Des By: MRT Date: 9-20-00 Proj. No. 99136.B2  
Chk By: RLH Approved: 7 of 23





- LEGEND**
- SEWER EASEMENT
  - EXISTING WATER
  - EXISTING SEWER
  - STREAM
  - PROPERTY LINE
  - DRAINAGE AREA BOUNDARY
  - SOILS
  - EX.TC PATH

DEVELOPER'S 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/WE DO NOT AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*[Signature]* 10/9/01  
 SIGNATURE OF DEVELOPER DATE  
 PRINT NAME BELOW SIGNATURE  
**CRAIG M. SMITH**

ENGINEER'S 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."

*[Signature]* 7/26/00  
 SIGNATURE OF ENGINEER DATE  
 PRINT NAME BELOW SIGNATURE  
**John W. Ranocchia, Sr.**

**APPROVED**  
 PLANNING BOARD  
 OF HOWARD COUNTY  
 DATE 9-6-2000  
 K/BB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*[Signature]* 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 2/9/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/12/01  
 DIRECTOR DATE

Date	No.	Revision Description

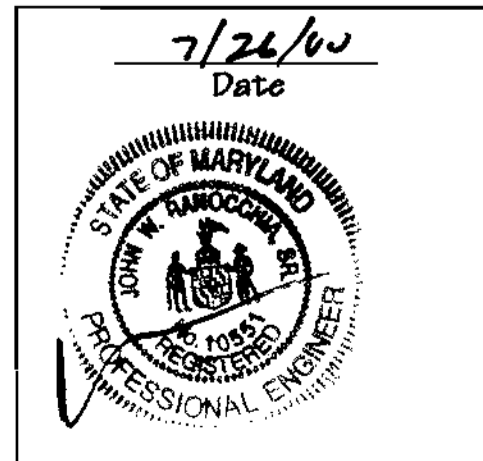
**COLUMBIA Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD 21044  
 925 FELL STREET BALTIMORE, MD 21231

**DMW**  
 Daft · McCune · Walker, Inc.  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
 200 East Pennsylvania Avenue Towson, Maryland 21286  
 410 296 3333  
 410 296 4705

**STORMWATER MANAGEMENT DRAINAGE AREA MAP EXISTING CONDITIONS**

Des By: KDE / ADL Scale: 1"=50' Proj. No. 99136.B2  
 Des By: MRT Date: 7-21-00  
 Chk By: Approved: 8 of 23



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

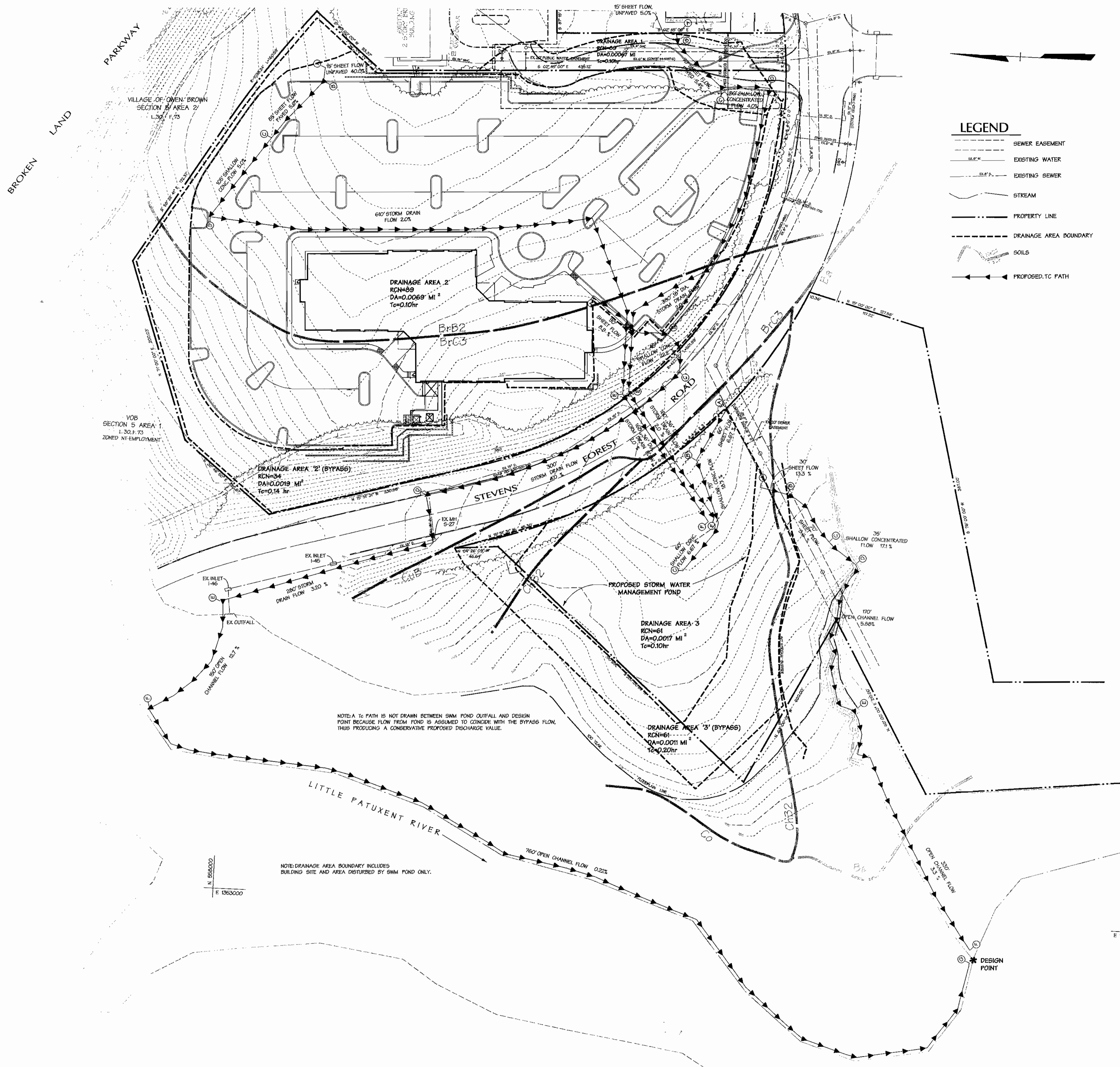
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

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

HOWARD S.C.D. DATE

NOTE: DRAINAGE AREA BOUNDARY INCLUDES BUILDING SITE AND AREA DISTURBED BY GWM POND ONLY.





- LEGEND**
- SEWER EASEMENT
  - EXISTING WATER
  - EXISTING SEWER
  - STREAM
  - PROPERTY LINE
  - DRAINAGE AREA BOUNDARY
  - SOILS
  - PROPOSED TC PATH

E 1363750  
N 1874000

N 1874000  
E 1363000

NOTE: A TC PATH IS NOT DRAWN BETWEEN SHM POND OUTFALL AND DESIGN POINT BECAUSE FLOW FROM POND IS ASSUMED TO CONDUCE WITH THE BYPASS FLOW, THUS PRODUCING A CONSERVATIVE PROPOSED DISCHARGE VALUE.

NOTE: DRAINAGE AREA BOUNDARY INCLUDES BUILDING SITE AND AREA DISTURBED BY SHM POND ONLY.

DEVELOPER'S CERTIFICATION:  
"I 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."  
*Craig M. Smith* 1-09-01  
SIGNATURE OF DEVELOPER DATE  
PRINT NAME BELOW SIGNATURE

ENGINEER'S 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."  
*John V. Rouschka, S.* 7/26/00  
SIGNATURE OF ENGINEER DATE  
PRINT NAME BELOW SIGNATURE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS  
*Jim Myers / G.S.* 2/1/01  
U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Robert J. ...* 2/1/01  
HOWARD S.C.D. DATE

APPROVED  
of HOWARD COUNTY  
DATE: 9-6-2000  
15/25

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>...</i>	2/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Cindy ...</i>	2/9/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>...</i>	2/12/01
DIRECTOR	DATE

**COLUMBIA**  
**Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATUXENT PARKWAY  
COLUMBIA, MD 21044

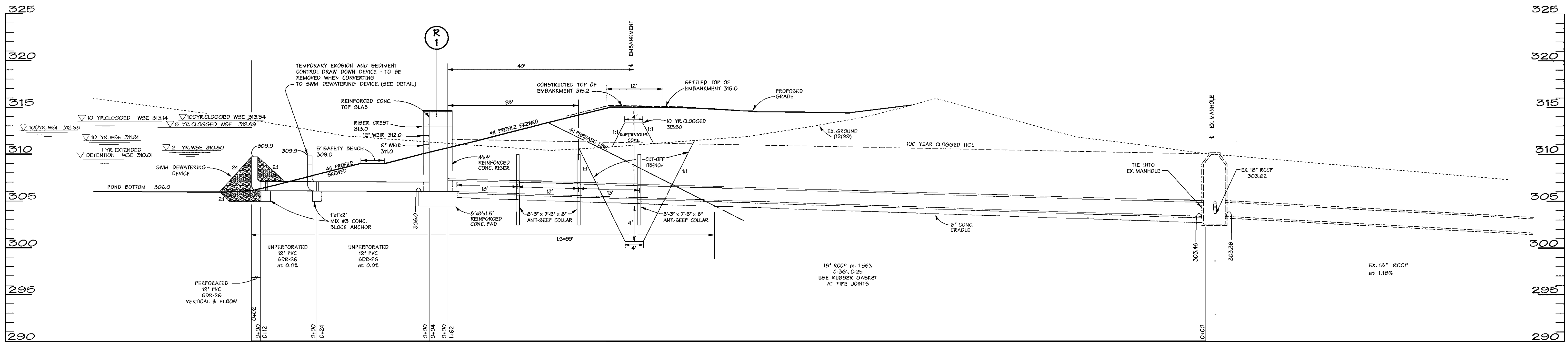
DEVELOPER: STEVENS FOREST GREEN, LLP  
C/O THE CREAMY & SMITH GROUP  
925 FELL STREET  
BALTIMORE, MD 21231

**DMW**  
Daft · McCune · Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705

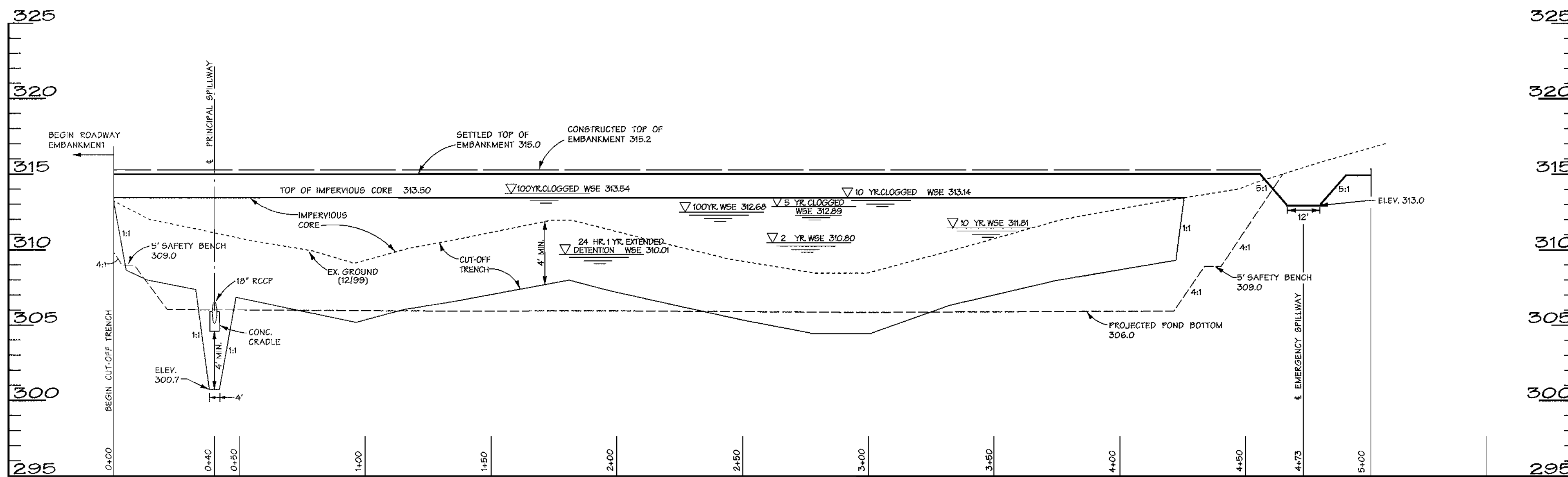
**STORMWATER MANAGEMENT DRAINAGE AREA MAP PROPOSED CONDITIONS**

Drn By: KDE	Scale: 1" = 50'	Proj. No. 99136.B2
Des By: MRT	Date: 7-21-00	9 of 23
Chk By:	Approved:	

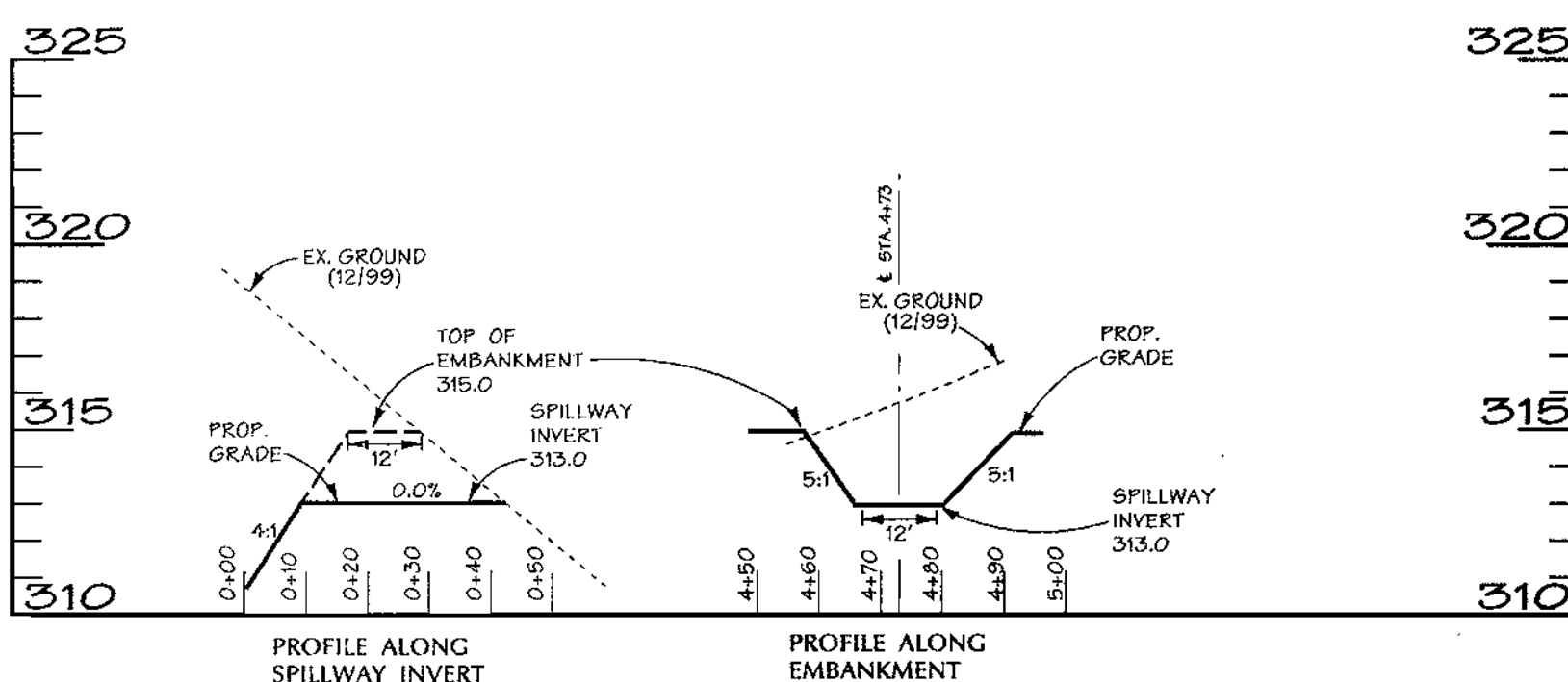
7/26/00  
Date  
Professional Engr. No. 10557



**RISER / BARREL PROFILE**  
 SCALE: 1" = 10' HORIZ.  
 1" = 5' VERT.



**PROFILE ALONG EMBANKMENT**  
 SCALE: 1" = 30' HORIZ.  
 1" = 5' VERT.



**EMERGENCY SPILLWAY PROFILES**  
 SCALE: 1" = 30' HORIZ.  
 1" = 5' VERT.

APPROVED  
 PLANNING & ZONING  
 DATE 9-6-2000  
 15/RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John W. Ramachia, Sr.</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/2/01 DATE
<i>Craig M. Smith</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/9/01 DATE
<i>John W. Ramachia, Sr.</i> DIRECTOR	2/12/01 DATE
Date	No.
Revision Description	

**ENGINEERS CERTIFICATE:**  
 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.

*John W. Ramachia, Sr.* 10/1/00  
 SIGNATURE OF ENGINEER DATE  
 PRINT NAME BELOW SIGNATURE

**DEVELOPERS CERTIFICATE:**  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

*Craig M. Smith* 1.09.01  
 SIGNATURE OF DEVELOPER DATE  
 PRINT NAME BELOW SIGNATURE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Jim Munn, Jr.* 2/1/01  
 U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

*John W. Ramachia, Sr.* 2/1/01  
 APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

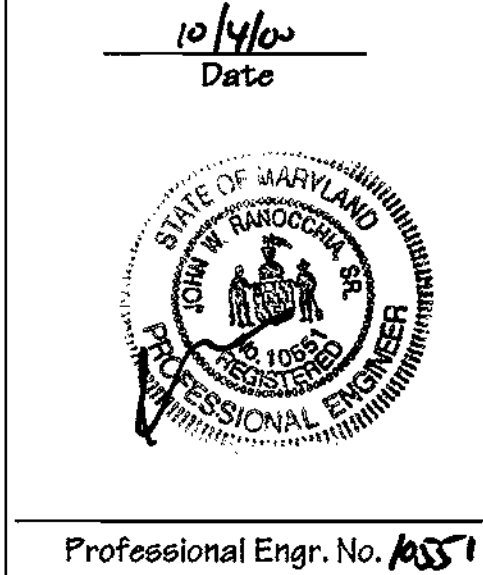
**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 10275 LITTLE PATENT PARKWAY  
 COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 C/O THE CREANEY & SMITH GROUP  
 925 FELL STREET  
 BALTIMORE, MD 21231

**DMW**  
**Daft - McCune - Walker, Inc.**  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

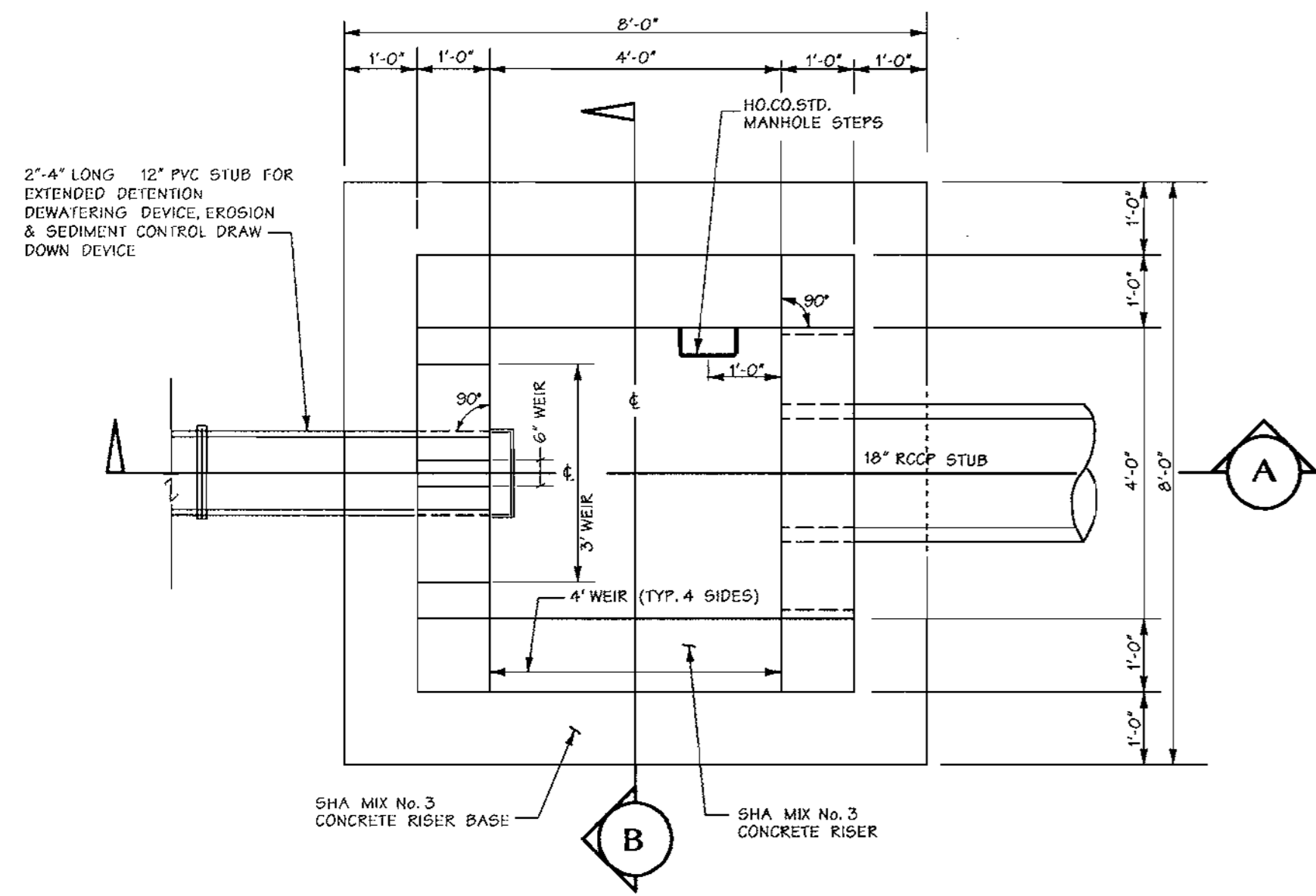
200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705



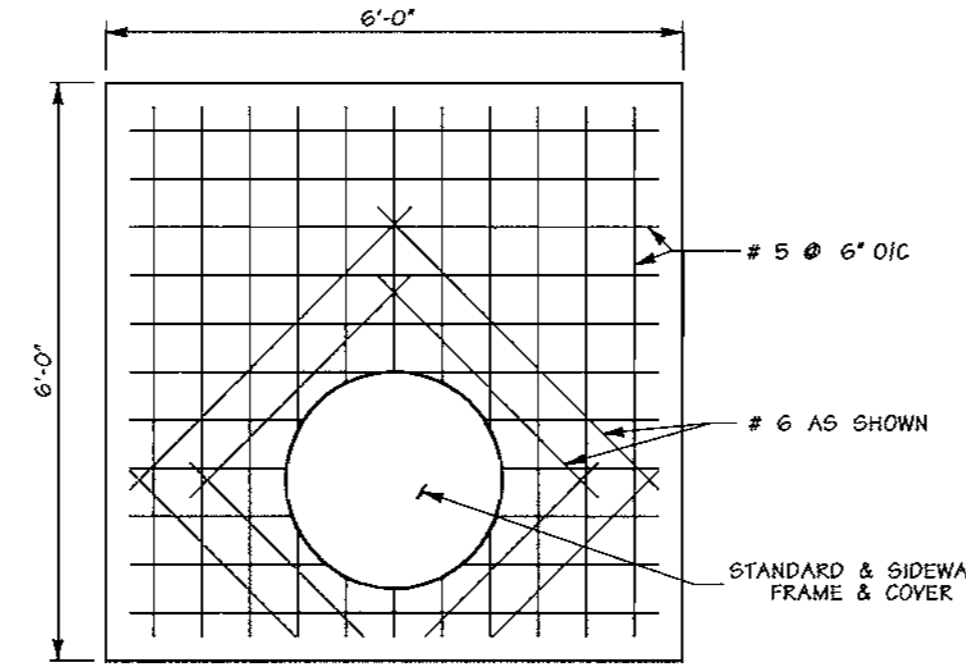
**STORMWATER MANAGEMENT PROFILES**

Drn By: KDE Scale: AS SHOWN Proj. No. 99136.B2  
 Des By: MRT Date: 9-20-00  
 Chk By: RLW Approved: 10 of 23

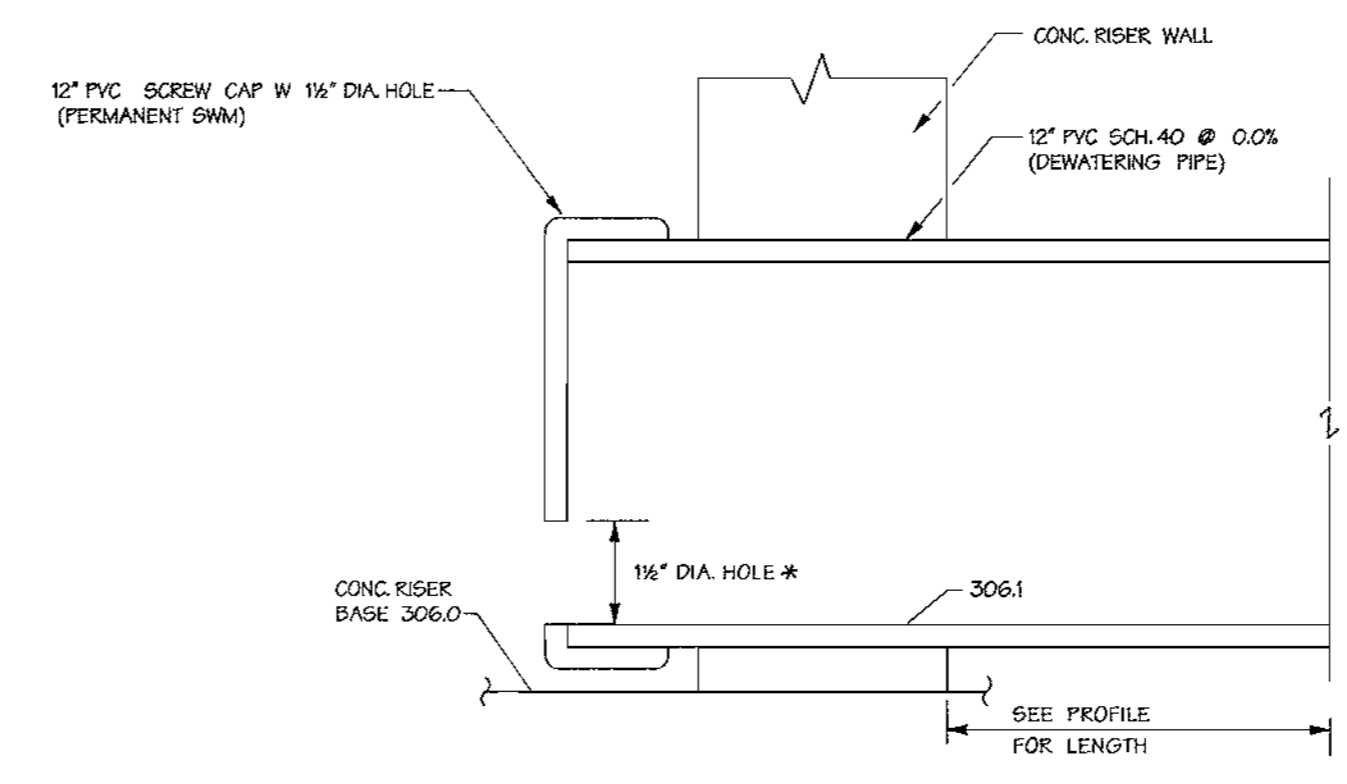
Professional Engr. No. AS51



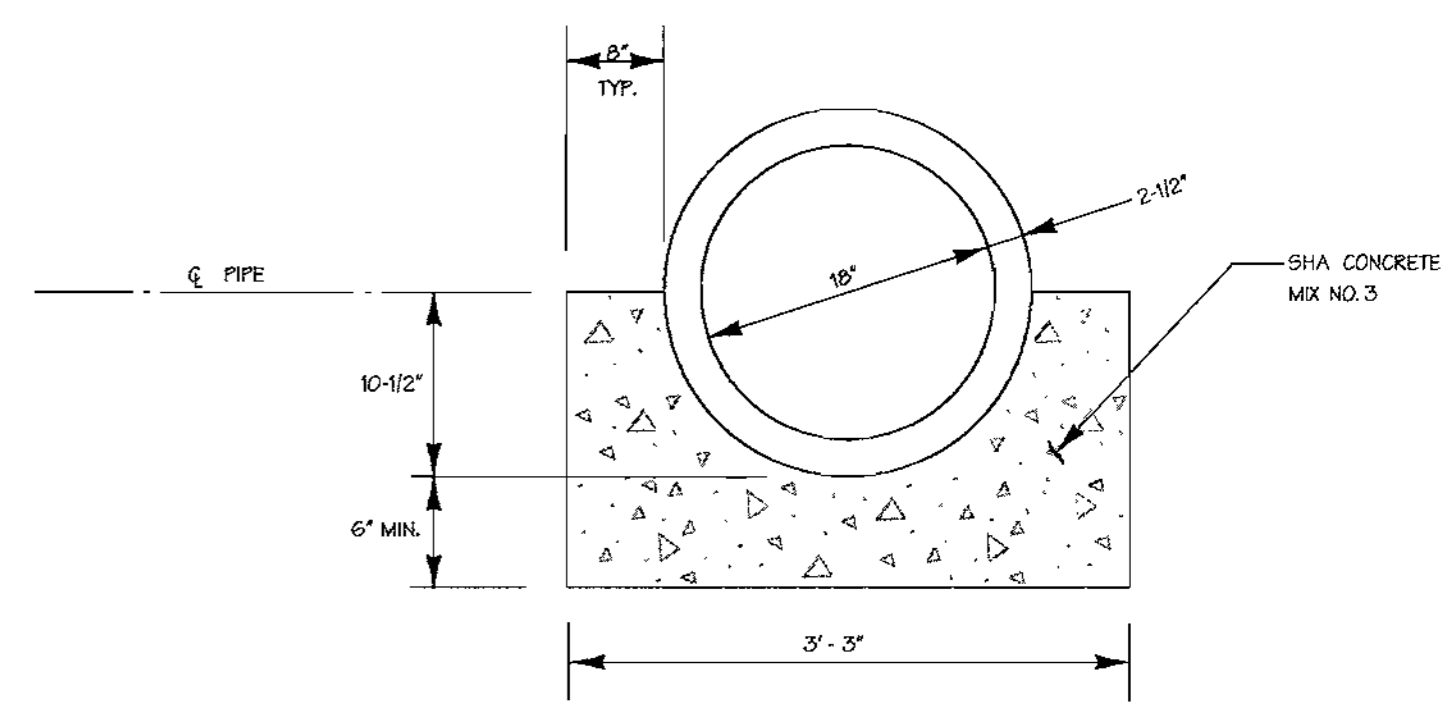
R-1 RISER PLAN (TOP SLAB AND TRASH RACK REMOVED)  
Scale: 1/2" = 1'-0"  
CAST IN PLACE



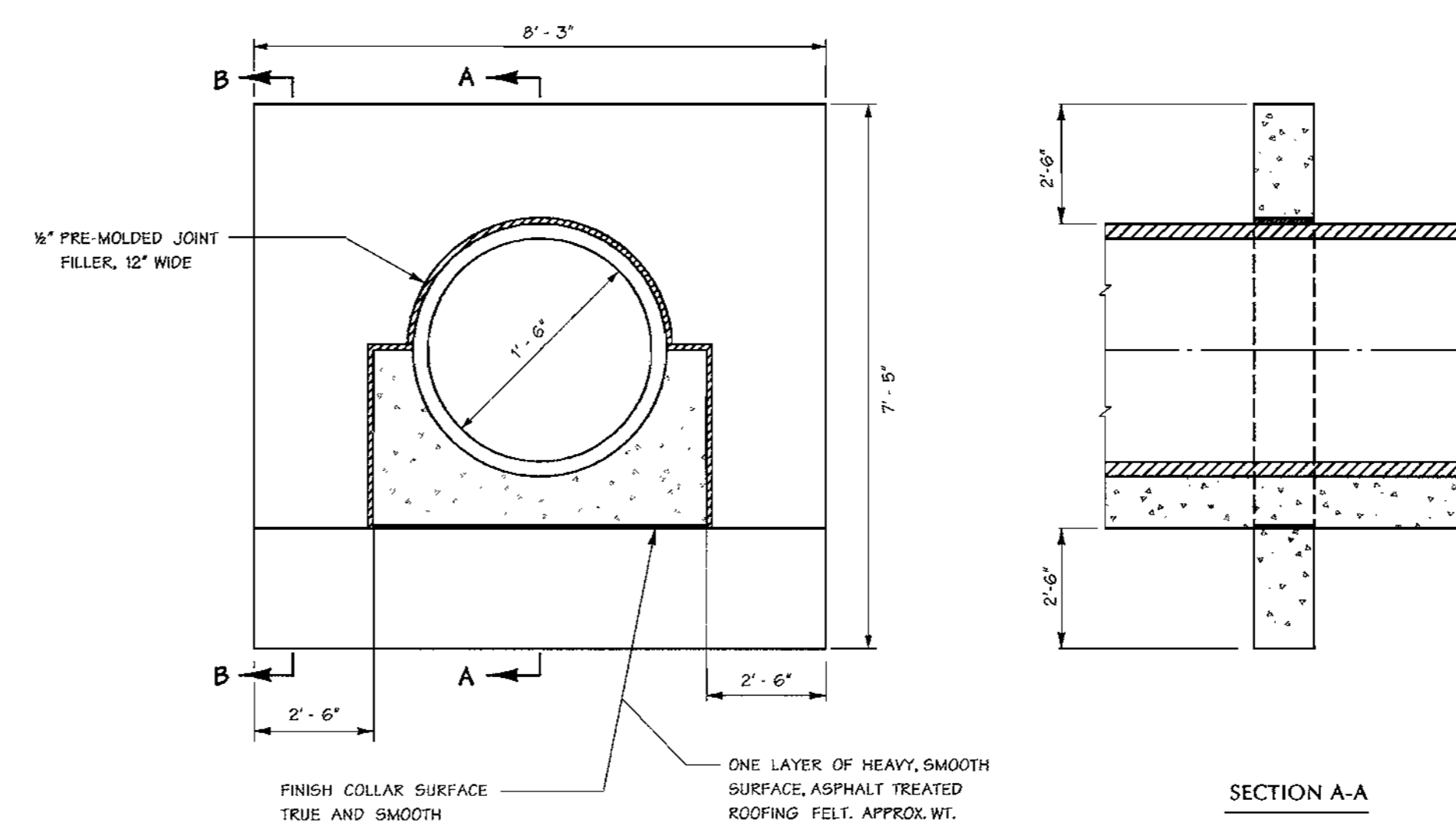
TOP SLAB  
Scale: 1/2" = 1'-0"  
CAST IN PLACE



CONTROL PLATE DETAIL  
NTS

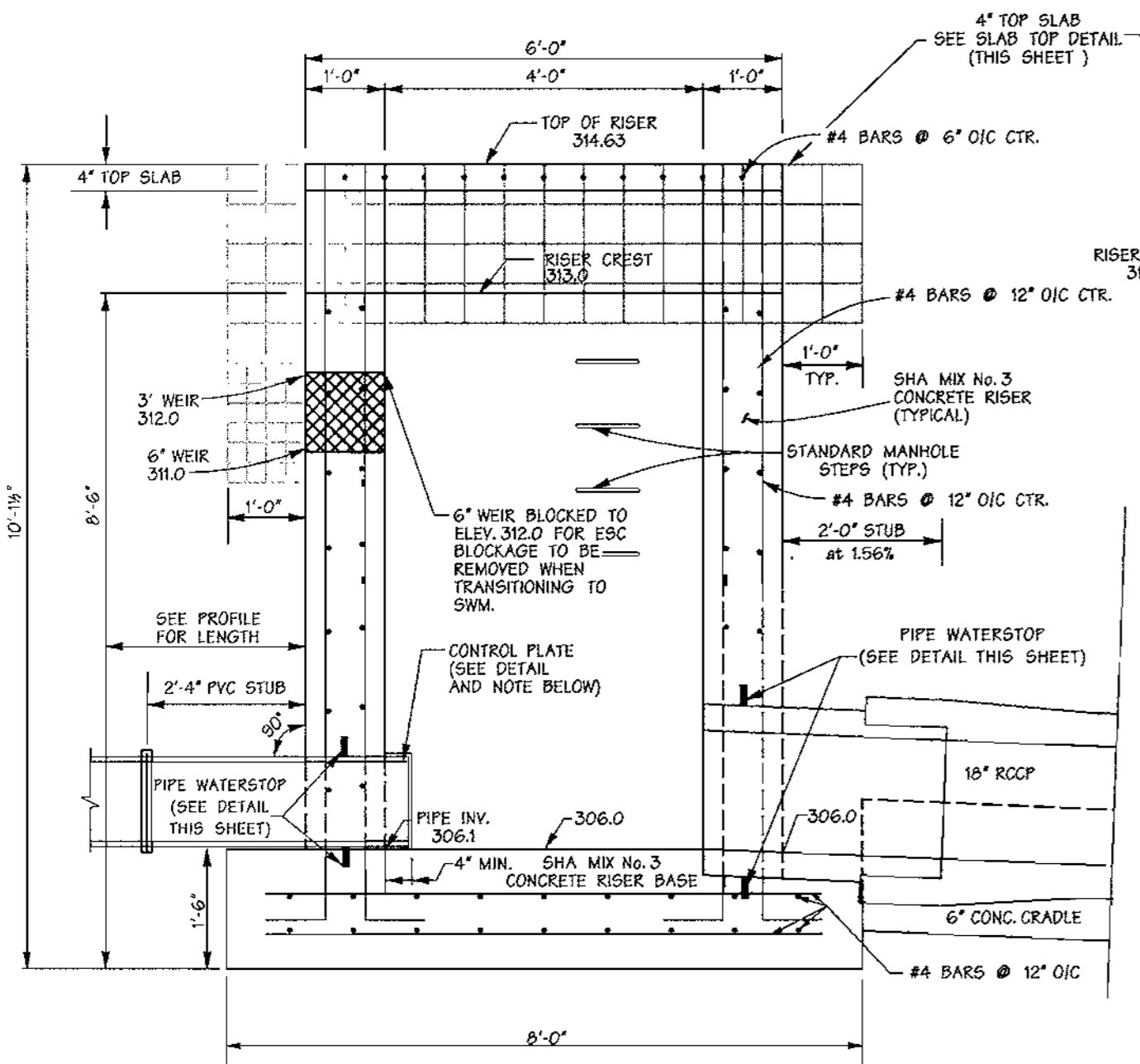


CONCRETE CRADLE DETAIL  
NTS

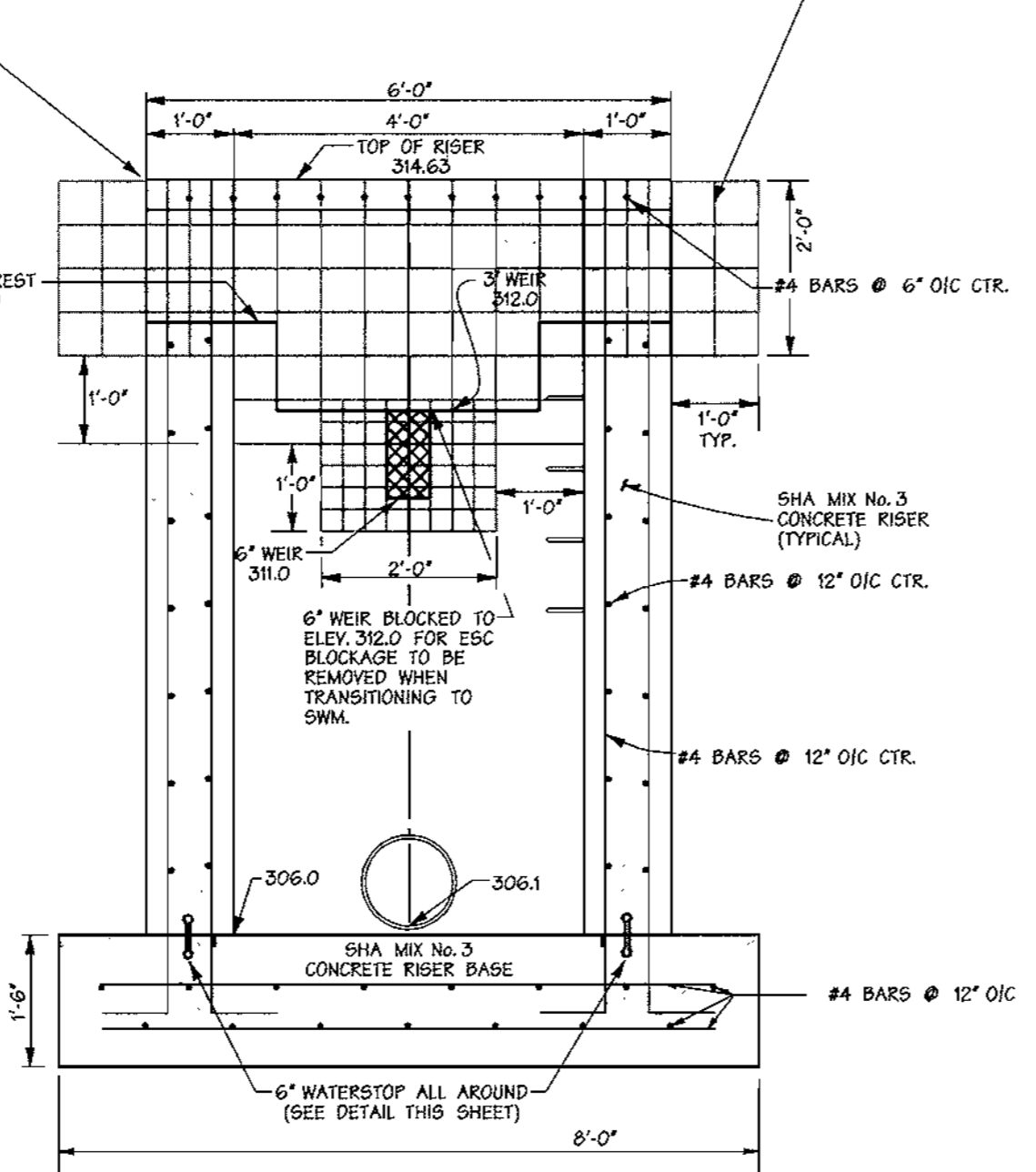


SECTION A-A

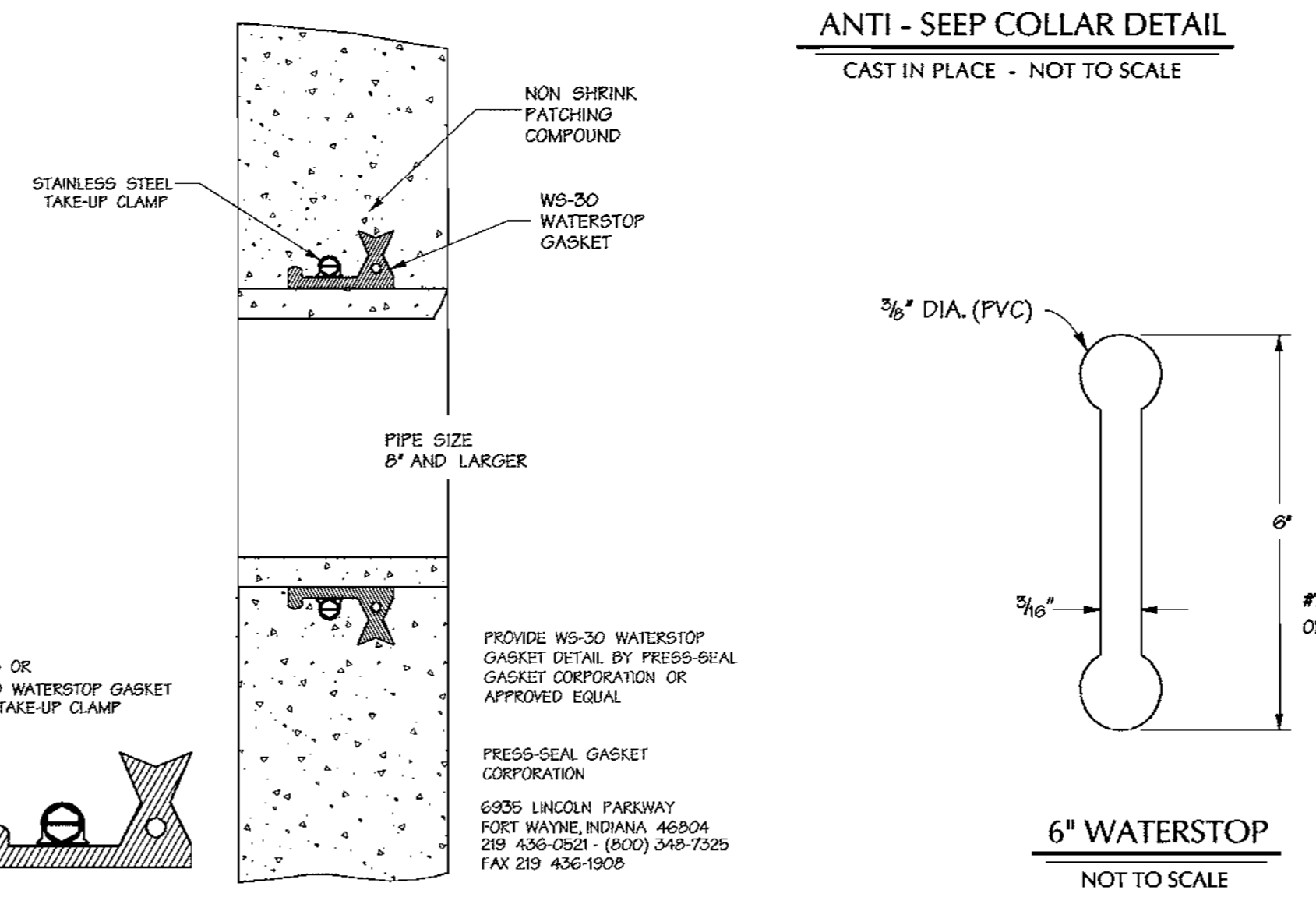
SECTION B-B (SHOWING STEEL)



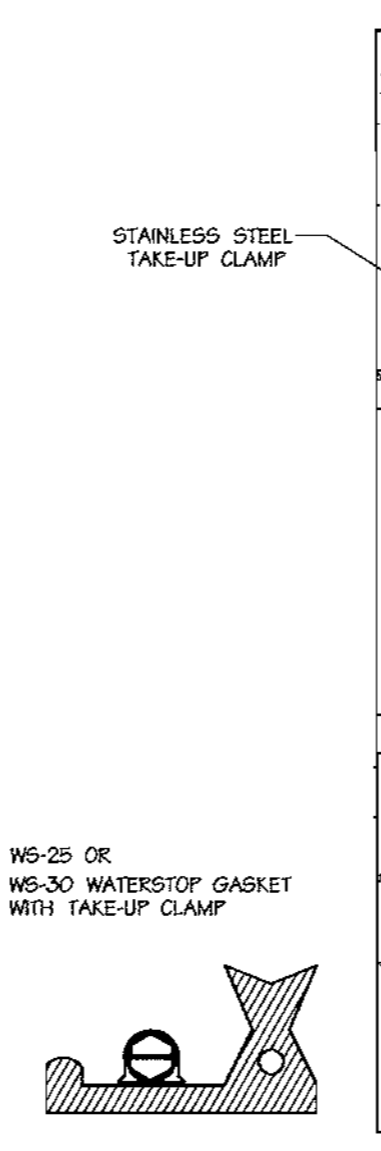
SECTION A



SECTION B



ANTI-SEEP COLLAR DETAIL  
CAST IN PLACE - NOT TO SCALE



PIPE WATER STOP DETAIL  
NOT TO SCALE

R-1 RISER DETAIL FOR POND  
Scale: 1/2" = 1'-0"  
CAST IN PLACE

APPROVED  
DATE 9-6-00  
12/2/00

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John W. Rancucha, Jr.</i>	2/2/01
CHEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Carole M. Smith</i>	2/9/01
CHEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>John W. Rancucha, Jr.</i>	2/12/01
DIRECTOR	DATE

**COLUMBIA**  
**Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD 21044	DEVELOPER STEVENS FOREST GREEN, LLLP C/O THE CREANEY & SMITH GROUP 925 FELL STREET BALTIMORE, MD 21231
---	--

**DMW**  
**Daft · McCune · Walker, Inc.**  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705

10/14/00  
Date

Professional Engr. No. 16551

**STORMWATER MANAGEMENT DETAILS**

Drn By: KDE	Scale: AS SHOWN	Proj. No. 99136.B2
Des By: MRT	Date: 9-20-00	
Chk By: RLH	Approved:	11 of 23

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION AND SEDIMENT CONTROL.

*Jim Myers* 2/1/01  
U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE DATE

THESE PLANS FOR SMALL POND CONSTRUCTION SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF HOWARD SOIL CONSERVATION DISTRICT.

*Carole M. Smith* 2/1/01  
APPROVED: HOWARD SOIL CONSERVATION DISTRICT DATE

PLAN NUMBER

**DEVELOPERS CERTIFICATE:**

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF 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.

*Carole M. Smith* 1.09.01  
SIGNATURE OF DEVELOPER PRINT NAME BELOW SIGNATURE DATE

**ENGINEERS CERTIFICATE:**

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.

*John W. Rancucha, Jr.* 10/14/00  
SIGNATURE OF ENGINEER PRINT NAME BELOW SIGNATURE DATE



SOILS TABLE

BrC3
BrB2

WOODSIDE COURT

DRAINAGE AREAS

DRAINAGE AREA	AREA (AC)	"C" FACTOR	% IMPERVIOUS
A	0.58	0.91	95
B	0.76	0.91	95
C	0.20	0.91	95
D	0.31	0.91	95
E	0.68	0.91	95
F	0.44	0.91	95
G	-	-	-
H	0.29	0.91	95
I	0.20	0.91	95
J	1.13	0.91	95
K	0.38	0.75	95

APPROVED  
 DATE 9-6-2000  
 15/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John Danahy</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/2/01 DATE
<i>Cindy Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/9/01 DATE
<i>Angela Smith</i> DIRECTOR	2/12/01 DATE

**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 12225 LITTLE PATENT PARKWAY  
 COLUMBIA, MD 21044

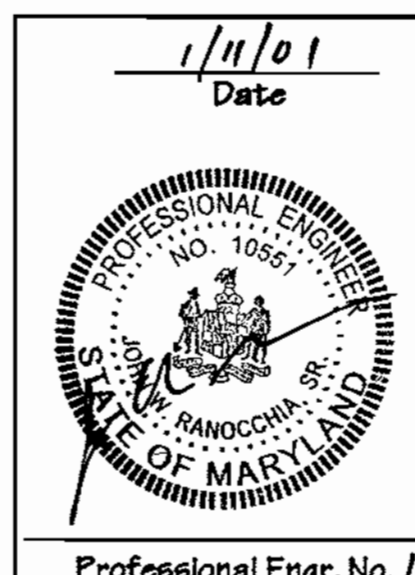
DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 C/O THE GREANEY & SMITH GROUP  
 925 FELL STREET  
 BALTIMORE, MD 21201

**DMW**  
 Daft · McCune · Walker, Inc.  
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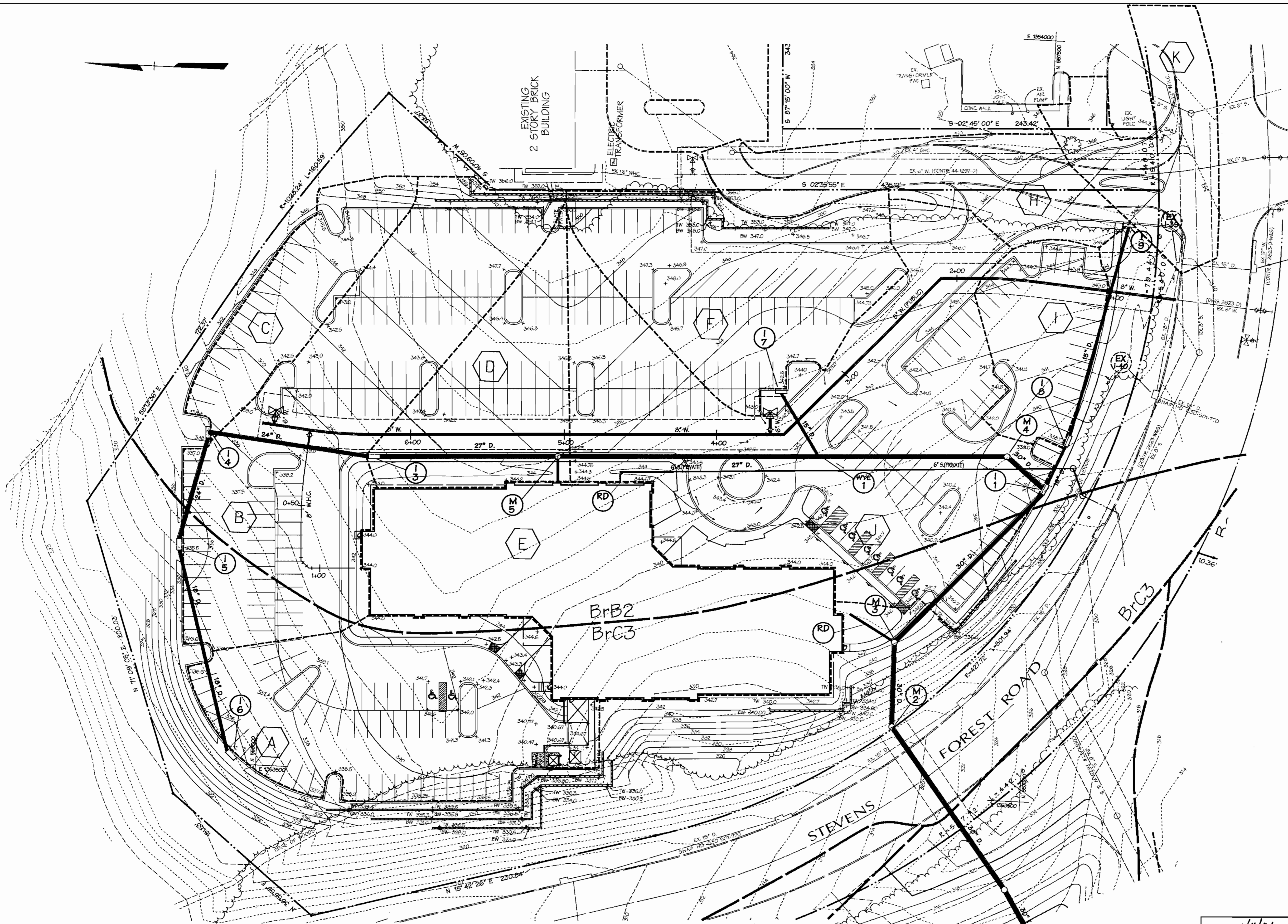
200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

STORM DRAIN DRAINAGE AREA MAP

Drn By: ADL	Scale: 1"=30'	Proj. No. 99136.B2
Des By: SDG	Date: 1-05-01	
Chk By:	Approved:	13 of 23



Professional Engr. No. 10557



DEVELOPER'S CERTIFICATION:  
 "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." ALSO AUTHORIZES PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Signature: *Craig M. Smith*  
 DATE: 1/09/01

ENGINEER'S 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."

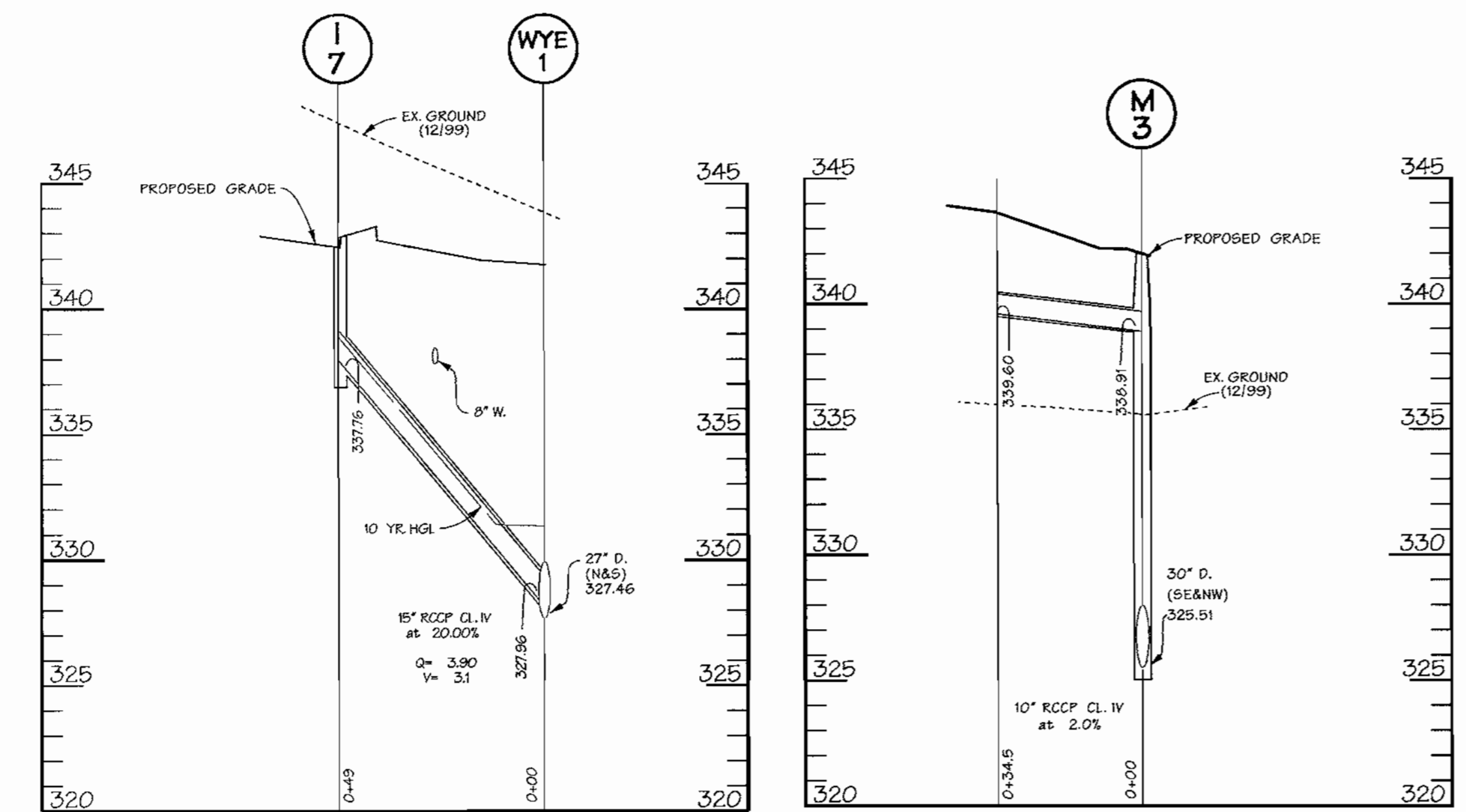
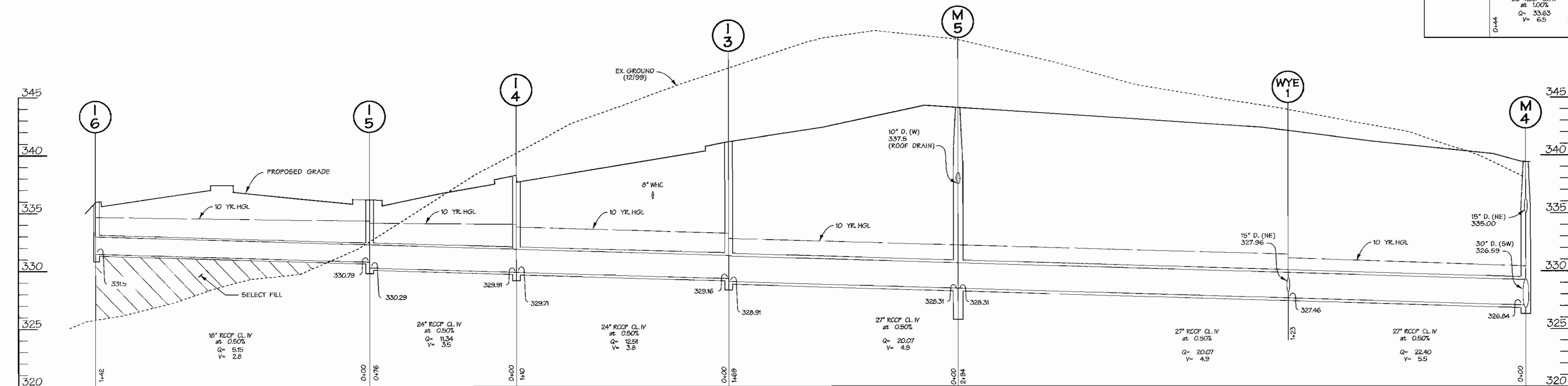
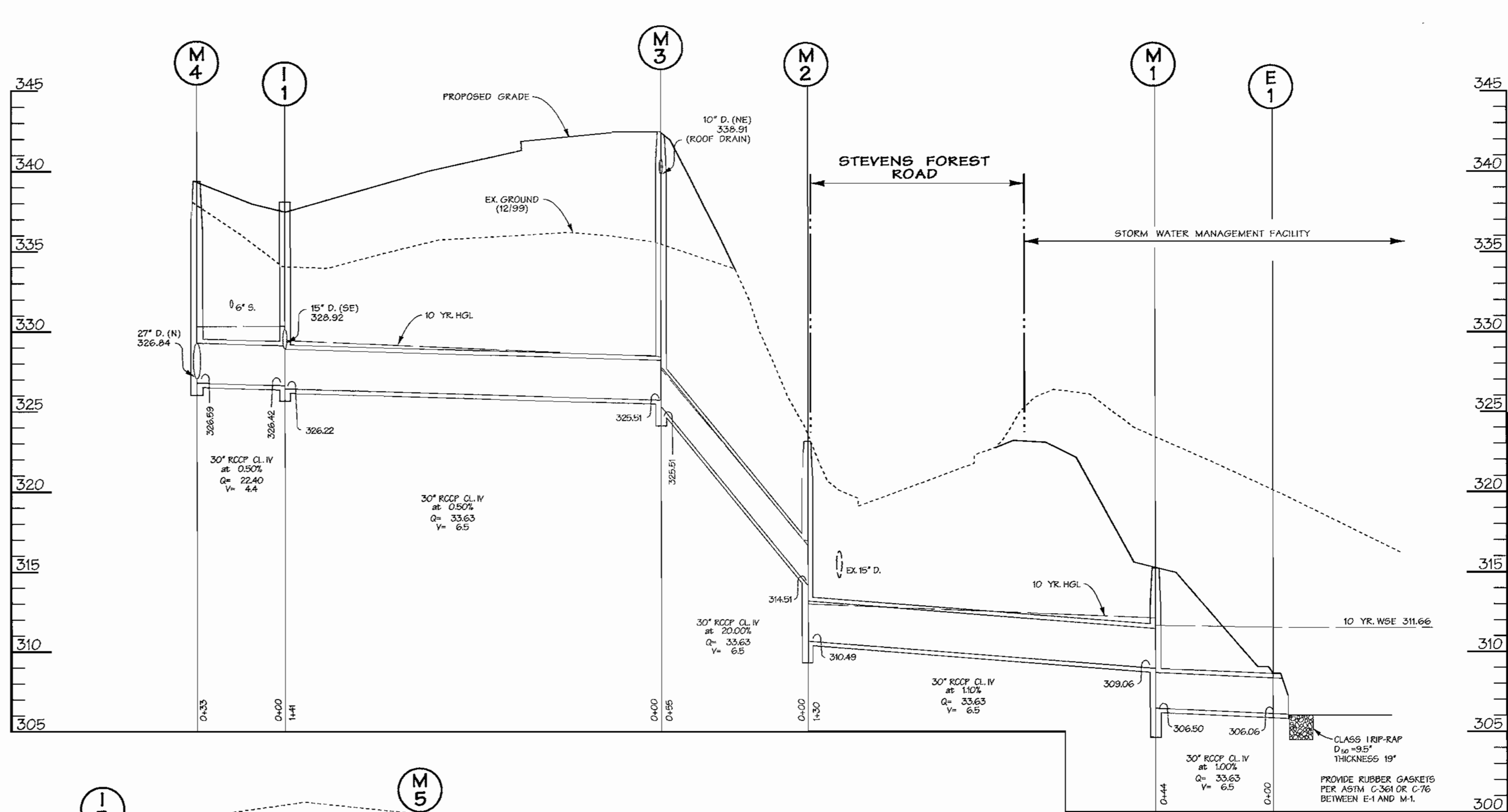
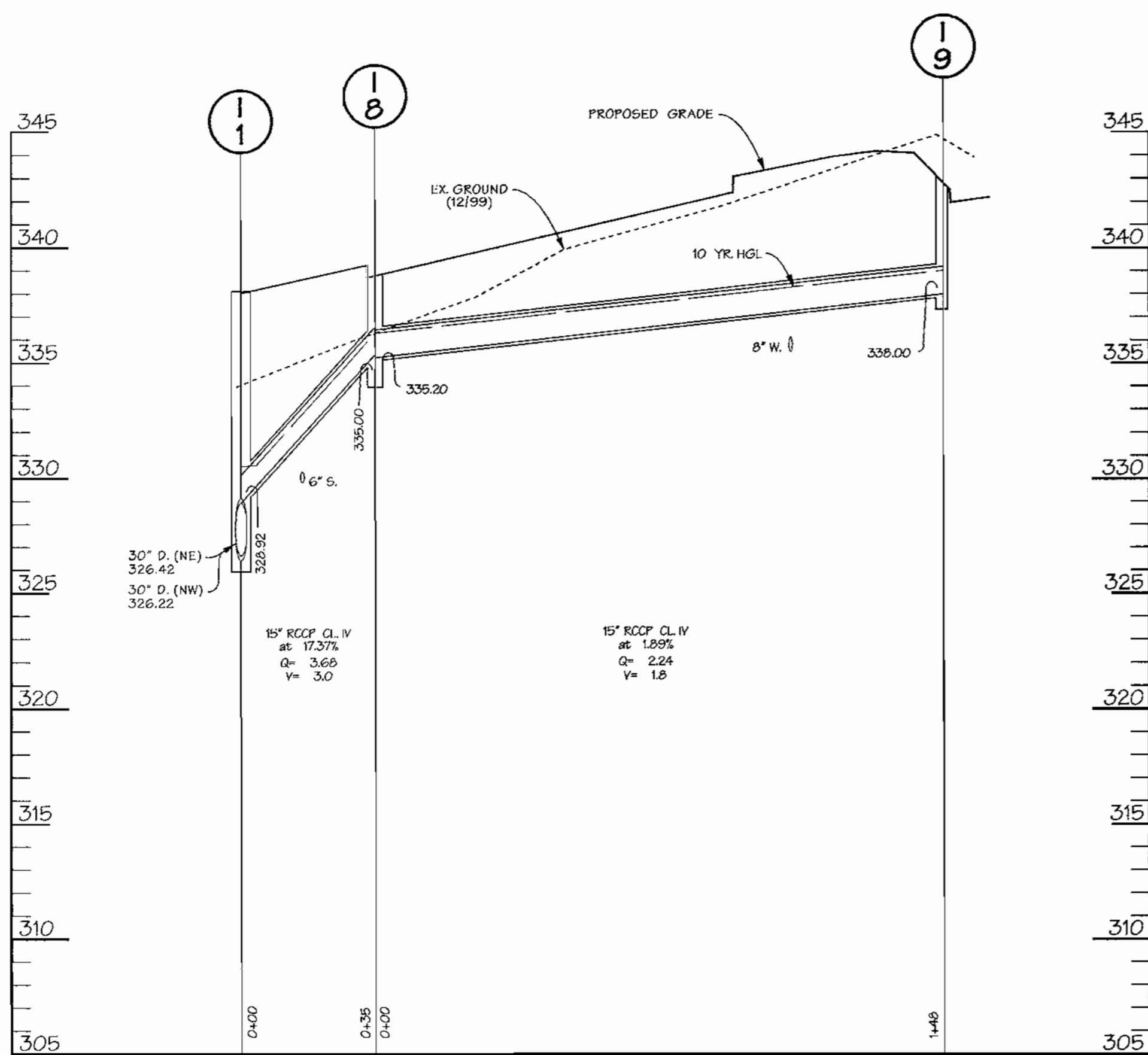
Signature: \_\_\_\_\_  
 DATE: \_\_\_\_\_

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

U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE

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

HOWARD S.C.D. DATE



**STORM DRAIN PROFILES**

SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

**MANHOLE SCHEDULE**

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	LOCATION
M1		5'	306.50	315.20	N 597,507.18 E 1,353,442.02
M2		5'	310.49	322.55	N 597,586.30 E 1,353,545.17
M3		5'	325.31	342.0	N 597,587.21 E 1,353,600.61
M4		5'	326.59	339.30	N 597,519.06 E 1,353,725.84
M5		5'	328.31	344.65	N 597,812.84 E 1,353,711.73

**INLET SCHEDULE**

NO.	TYPE	Q	INV. OUT	*TOP ELEV.	WIDTH	LOCATION
I-1	A-10	4.24	326.22	336.10	2'-6"	SEE PLAN
I-3	A-10	1.66	328.91	341.20	2'-6"	SEE PLAN
I-4	A-5	1.07	329.71	338.30	3'-0"	SEE PLAN
I-5	A-10	4.08	330.29	336.00	3'-0"	SEE PLAN
I-6	A-10	3.11	331.90	336.10	2'-6"	SEE PLAN
I-7	A-10	2.36	337.96	343.00	2'-6"	SEE PLAN
I-8	A-5	0.86	335.00	339.20	2'-6"	SEE PLAN
I-9	A-10	1.23	338.00	336.10	2'-6"	SEE PLAN

\* TOP ELEV. = TC AT 4' OF INLET

**STRUCTURE SCHEDULE**

NO.	TYPE	SIZE	INV. OUT	TOP ELEV.	LOCATION
WYE-1	WYE	15x27	327.46	---	---
E-1	END SECTION	30"	306.00	---	N 597,503.18 E 1,353,398.57

DATE: 9-6-2000  
K/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
 [Signature] 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 [Signature] 2/9/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 2/12/01  
 DIRECTOR

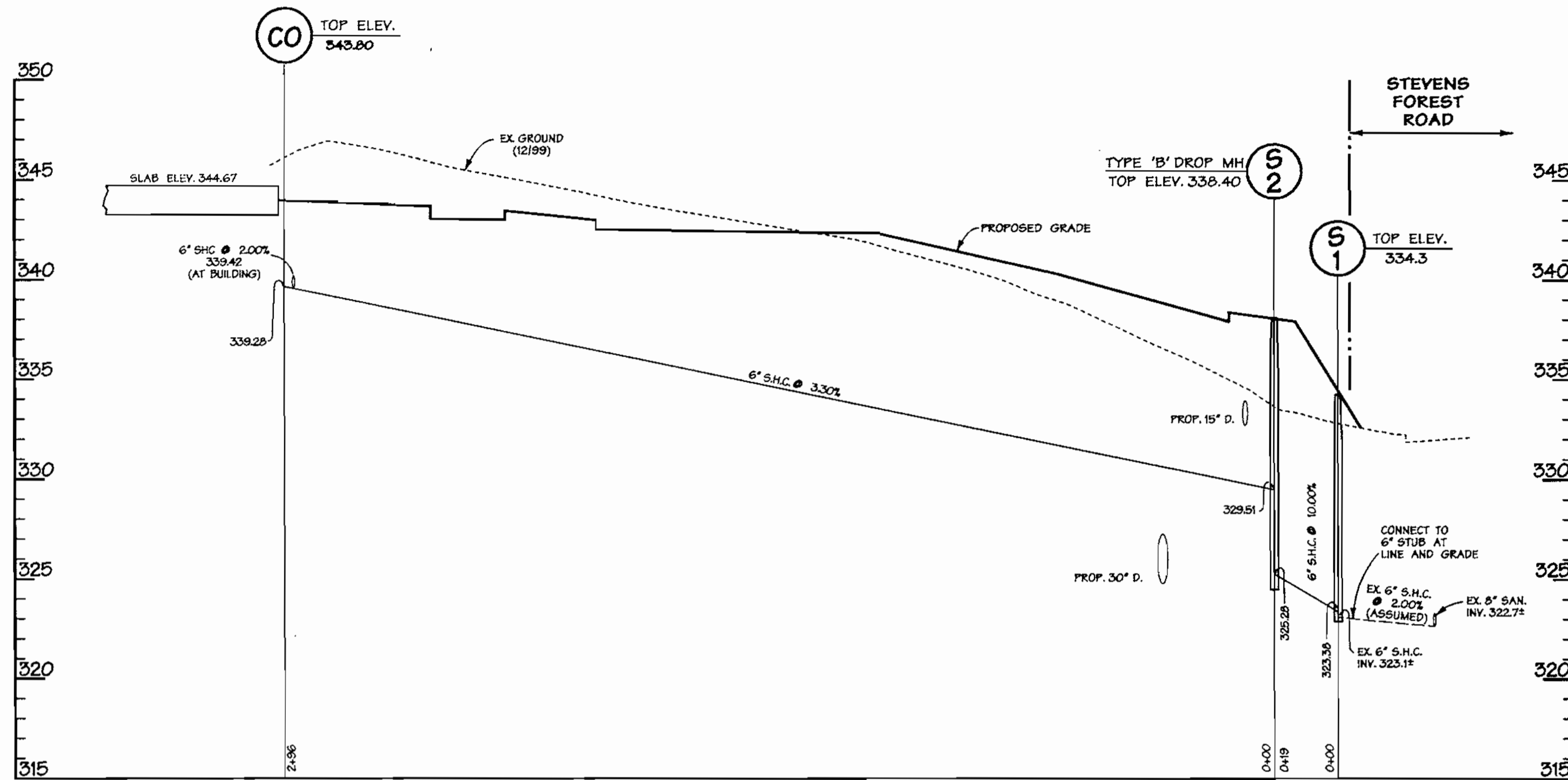
**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5  
 OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 10275 LITTLE PATURNT PARKWAY  
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 C/O THE CREANEY & SMITH GROUP  
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 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

1/1/01  
 Date  
 PROFESSIONAL ENGINEER  
 STATE OF MARYLAND  
 No. 10551

**STORM DRAIN PROFILES**

Drn By: WHJ/MSS Scale: 1"=30' Proj. No. 99136.B2  
 Des By: RLN Date: 1-05-01  
 Chk By: Approved: 14 of 23

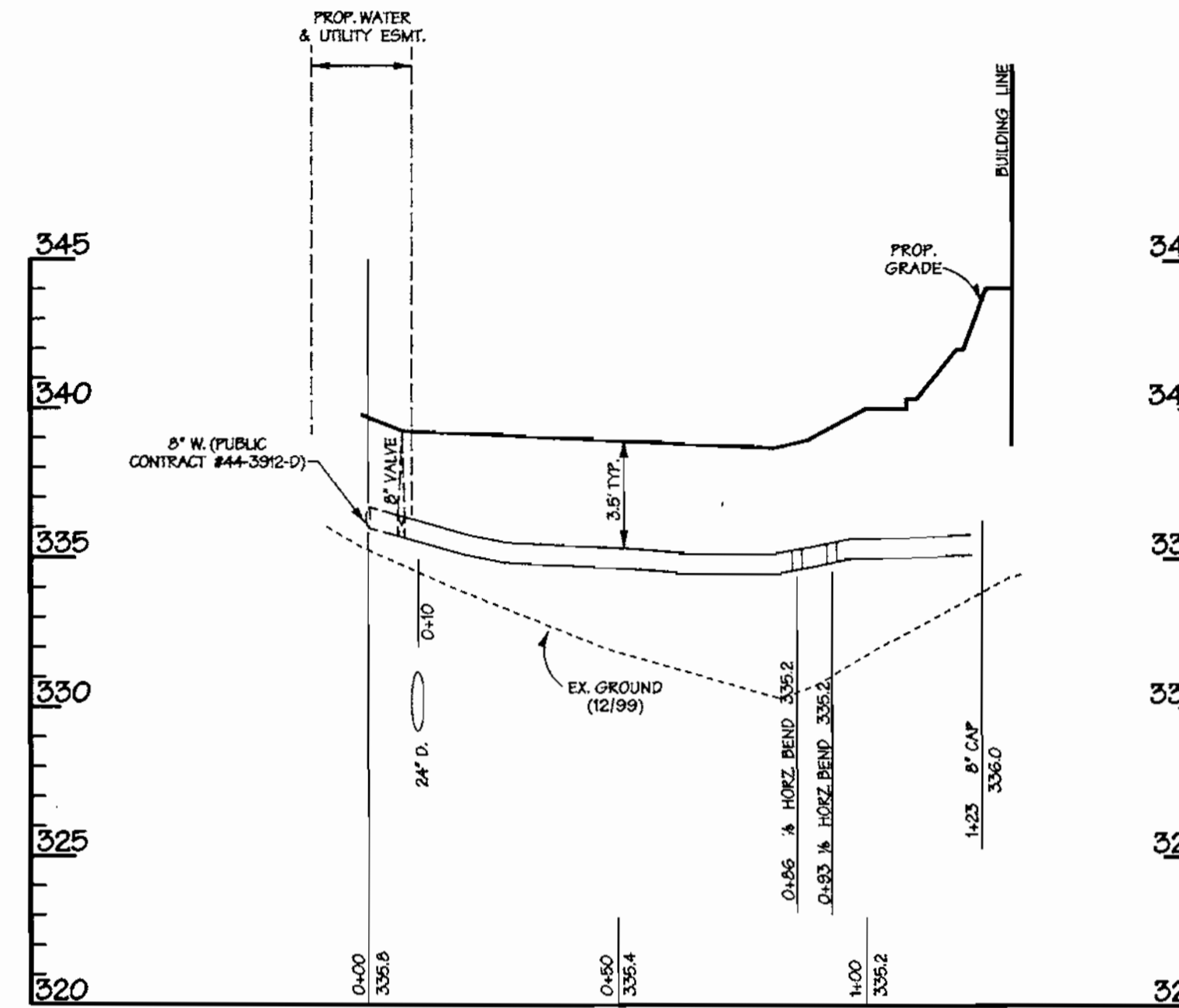


**PRIVATE SEWER PROFILE**

SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

**MANHOLE SCHEDULE**

NO.	LOCATION
S-1	N 557,468.14 ± E 1,353,702.76 ±
S-2	N 557,475.29 E 1,353,720.27
CO	N 557,770.62 E 1,353,703.45

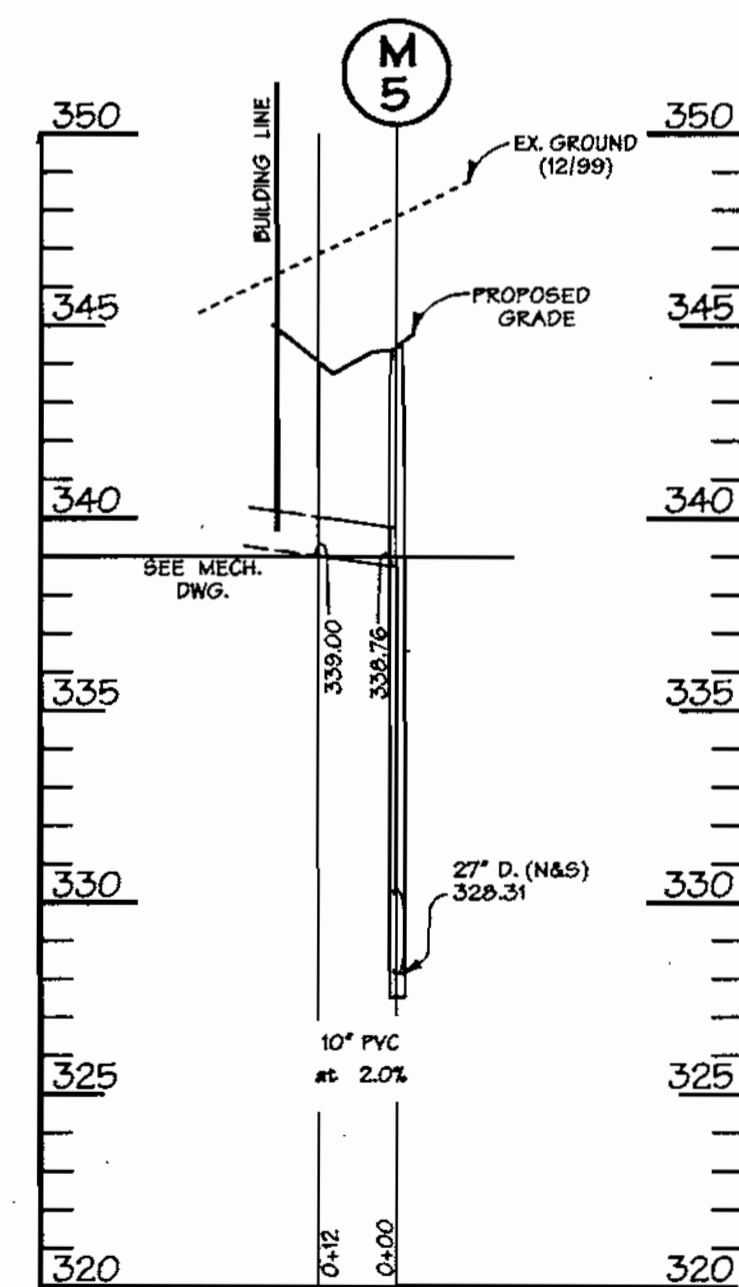


**PRIVATE WATER LINE PROFILE**

SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

**LOCATION TABLE**

STATION	STRUCTURE	NORTH	EAST
PC 0+25	BEGN CRIMP	N 557977.17	E 1353696.67
PT 0+65	END CRIMP	N 557978.04	E 1353696.41
0+86	8"-118 H.B.	N 557,977.04	E 1,353,635.64
0+93	8"-118 H.B.	N 557,976.81	E 1,353,630.88
1+23	8"- CAP	N 557,941.69	E 1,353,632.33



**PRIVATE ROOF DRAIN PROFILE**

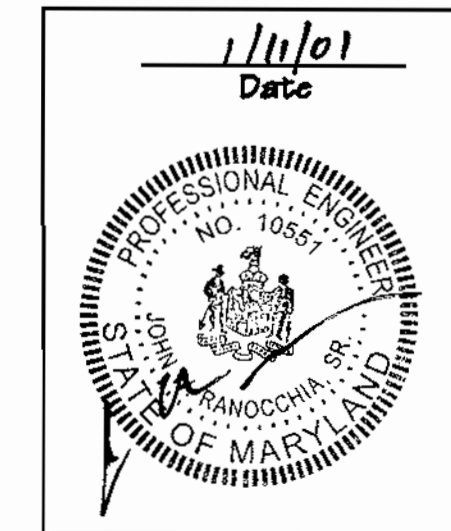
SCALE: HORIZ. 1"=30'  
VERT. 1"=5'

APPROVED  
DATE 9-6-2000  
KLB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
*John Dunning* 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION, HCS DATE  
*Guido Hamilton* 2/7/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Joseph J. Scott* 2/2/01  
 DIRECTOR DATE

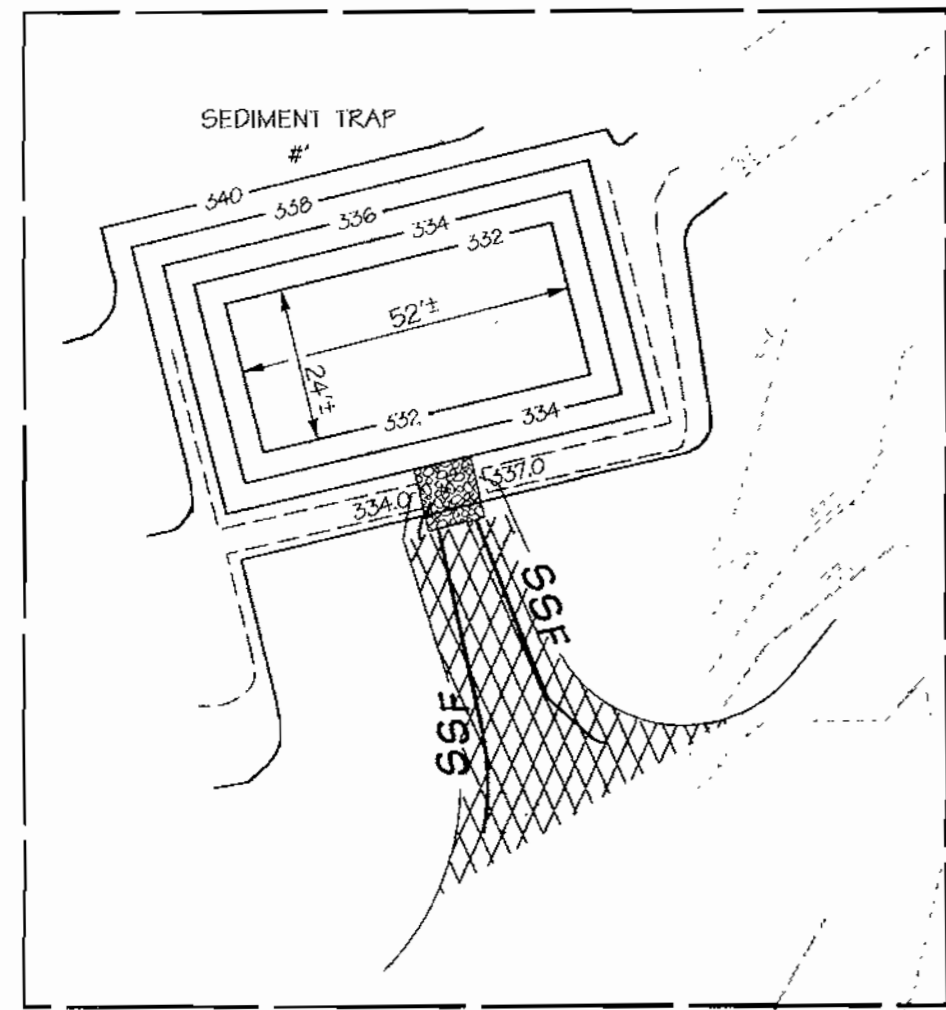
**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5  
 OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 C/O THE CREANEY & SMITH GROUP  
 925 FELL STREET  
 COLUMBIA, MD 21044

**DMW**  
 Daft - McCune - Walker, Inc.  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
 300 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 286 3333  
 Fax 286 4705

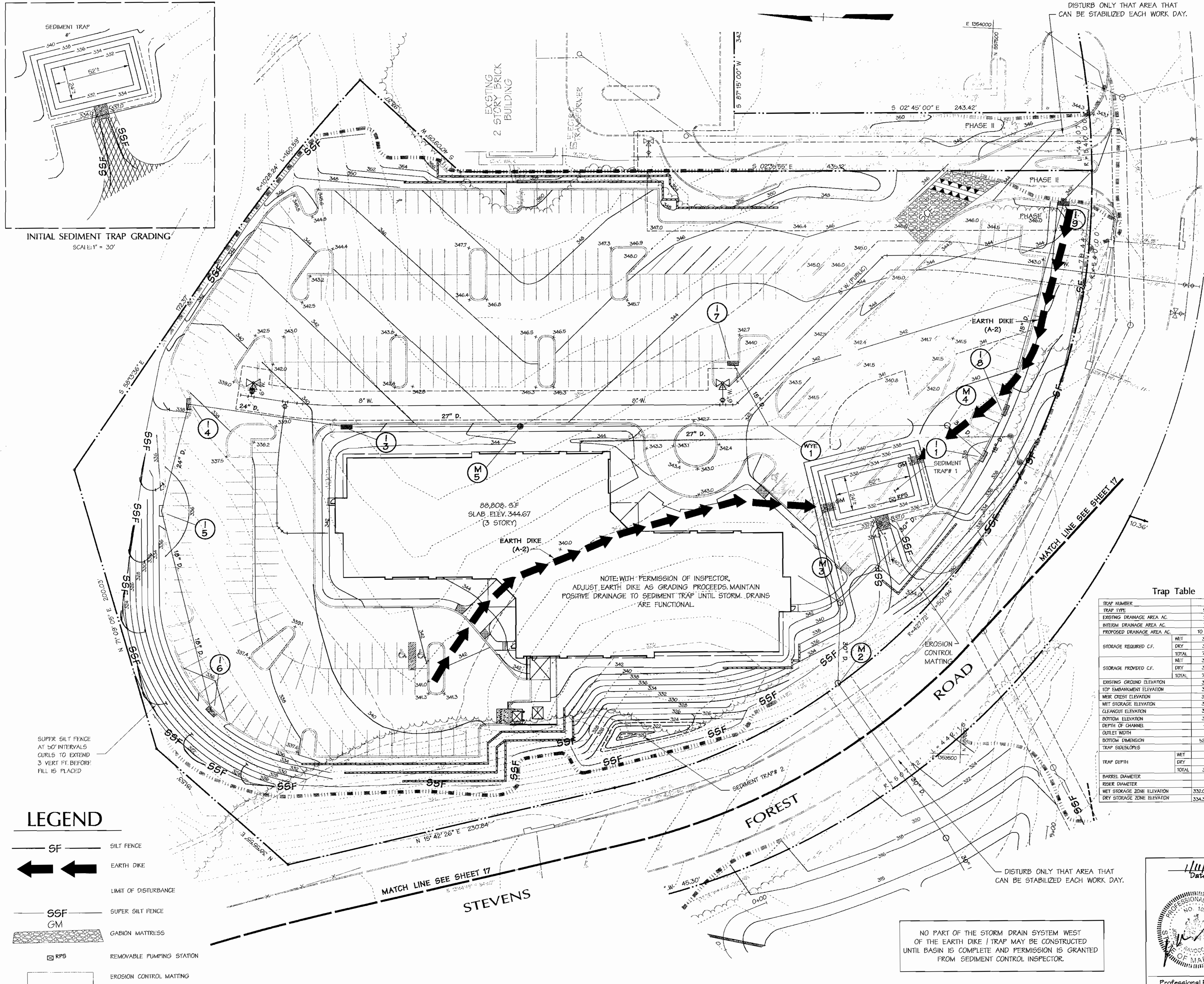


**SEWER, WATER & ROOF DRAIN PROFILES**

Drn By: ADL/KMF Scale: 1"=30' Proj. No. 99136.B2  
 Des By: SDS Date: 1-05-01  
 Chk By: Approved: 15 of 23



INITIAL SEDIMENT TRAP GRADING  
SCALE: 1" = 30'



NOTE: WITH PERMISSION OF INSPECTOR, ADJUST EARTH DIKE AS GRADING PROCEEDS. MAINTAIN POSITIVE DRAINAGE TO SEDIMENT TRAP UNTIL STORM DRAINS ARE FUNCTIONAL.

DISTURB ONLY THAT AREA THAT CAN BE STABILIZED EACH WORK DAY.

DEVELOPER'S 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."  
DATE: 1.09.01  
SIGNATURE OF DEVELOPER: CRAIG M. SMITH

ENGINEER'S 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."  
DATE: 1/6/01  
SIGNATURE OF ENGINEER: John W. Ramoche, S

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS  
DATE: 2/1/01  
U.S. NATIONAL RESOURCE CONSERVATION SERVICE: Jim Myers / JCS

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
DATE: 2/1/01  
HOWARD S.C.D.: [Signature]

TOTAL DISTURBED AREA = 7,080 ±

DATE: 9-6-2000  
15/R/S

Trap Table

TRAP NUMBER	1	2
TRAP TYPE	9' x 6'	SSF
EXISTING DRAINAGE AREA AC.	210	10
INTERIM DRAINAGE AREA AC.	153	10
PROPOSED DRAINAGE AREA AC.	TO BASIN	---
STORAGE REQUIRED C.F.	WET: 3780	1800
	DRY: 3780	1800
TOTAL	7560	3600
STORAGE PROVIDED C.F.	WET: 3900	2248
	DRY: 3900	3294
TOTAL	7800	5542
EXISTING GROUND ELEVATION	337.0	328.0
TOP EMBANKMENT ELEVATION	337.0	326.75
WEIR CREST ELEVATION	326.0	324.5
WET STORAGE ELEVATION	334.3	324.0
CLEAROUT ELEVATION	333.2	---
BOTTOM ELEVATION	332.0	319.0
DEPTH OF CHANNEL	---	---
OUTLET WIDTH	9'	---
BOTTOM DIMENSION	52" x 24"	---
TRAP SLOPES	2:1	2:1
TRAP DEPTH	WET: 16"	5:0"
	DRY: 14"	2:0"
	TOTAL: 3:00"	7:0"
BARREL DIAMETER	N/A	N/A
RISER DIAMETER	N/A	N/A
WET STORAGE ZONE ELEVATION	332.0 - 334.3	319.0-324.0
DRY STORAGE ZONE ELEVATION	334.3 - 336.0	324.0-326.0

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING  
DATE: 2/2/01  
Cindy Hamster, CHIEF, DIVISION OF LAND DEVELOPMENT  
DATE: 2/4/01  
[Signature], DIRECTOR  
DATE: 2/12/01

Revision Description  
COLUMBIA Stevens Forest Green  
Section 5 Area 1 Parcel A-1 & Lot 5  
OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
200 EAST PENNSYLVANIA AVENUE, TOWSON, MARYLAND 21286  
410 296 3333, FAX 296 4705

DMW Daft - McCune - Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals  
200 East Pennsylvania Avenue, Towson, Maryland 21286  
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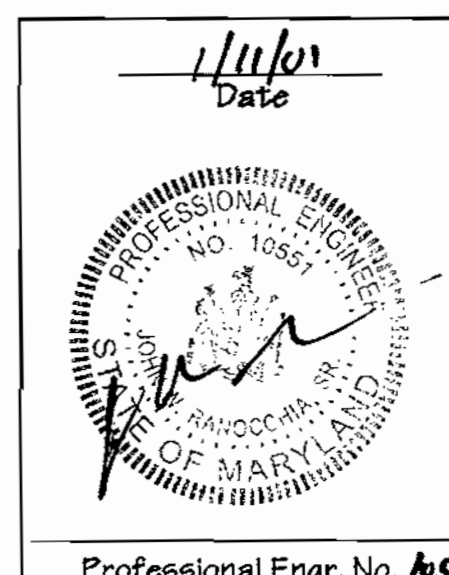
SEDIMENT EROSION & CONTROL PLAN

Drn By: ADL Scale: 1"=30' Proj. No. 99136.B2  
Des By: SDG Date: 1-05-01  
Chk By: Approved: 16 of 23

LEGEND

- SF SILT FENCE
- ←← EARTH DIKE
- LIMIT OF DISTURBANCE
- SSF SUPER SILT FENCE
- GM GABION MATTRESS
- RPS REMOVABLE PUMPING STATION
- EROSION CONTROL MATTING

NO PART OF THE STORM DRAIN SYSTEM WEST OF THE EARTH DIKE / TRAP MAY BE CONSTRUCTED UNTIL BASIN IS COMPLETE AND PERMISSION IS GRANTED FROM SEDIMENT CONTROL INSPECTOR.





SEDIMENT CONTROL BASIN TABLE	
BASIN NUMBER	1
EXISTING DRAINAGE AREA AC.	2.0
INTERIM DRAINAGE AREA AC.	2.0
PROPOSED DRAINAGE AREA AC.	5.95
STORAGE: REQUIRED C.F.	
WET	10.830
DRY	10.830
TOTAL	21.660
STORAGE: PROVIDED C.F.	
WET	10.992
DRY	11.996
TOTAL	22.988
EXISTING GROUND ELEV.	312
TOP EMBANKMENT ELEV.	312.0
EMERGENCY SPILLWAY CREST ELEV.	313.0
RISER CREST ELEV.	312.0
WET STORAGE ELEV.	308.6
CLEANOUT ELEV.	307.5
BOTTOM ELEV.	305.0
Q INTO BASIN (C.F.S.) 10 YR. CLOGGED	26.78
Q OUT BASIN (C.F.S.) 10 YR. CLOGGED	13.60
Q OUT EMERGENCY SPILLWAY (RHS)	1.63
V OUT EMERGENCY SPILLWAY	0.15
BASIN DEPTH	
WET	2.6'
DRY	1.3'
TOTAL	3.9'
DESIGN HIGHWATER 10 YR. CLOGGED	313.4
FREELBOARD PROVIDED	1.94
BARREL DIAMETER	18"
RISER DIMENSIONS	4' X 4'
EMERGENCY SPILLWAY WIDTH	12"
WET STORAGE ZONE ELEV.	306.0-308.6
DRY STORAGE ZONE ELEV.	308.6-309.9
BOTTOM DIMENSIONS	66' X 40'
EXISTING 2 YR. Q	0.42
PROPOSED 2 YR. Q	0.42

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

*[Signature]* 2/1/01  
HOWARD S.C.D.

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

*[Signature]* 2/1/01  
JIM MYERS / C.S.  
U.S. NATURAL RESOURCE CONSERVATION SERVICE

DEVELOPER'S 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/AM(S) AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

*[Signature]* 1.09.01  
DATE

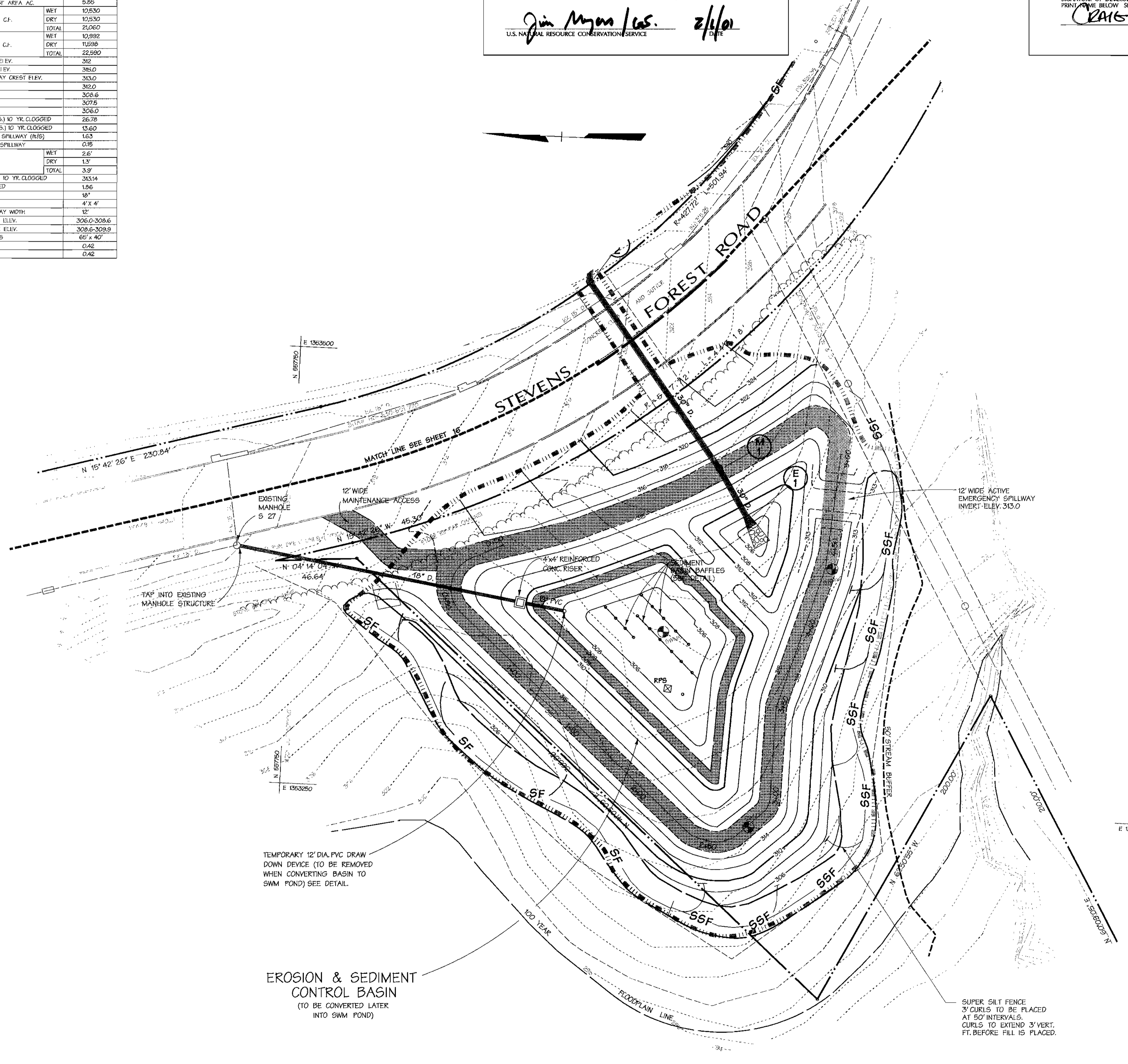
CRAIS M. SMITH  
SIGNATURE OF DEVELOPER  
PRINT NAME BELOW SIGNATURE

ENGINEER'S 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."

*[Signature]* 10/14/00  
DATE

John W. Ramoche, Jr.  
SIGNATURE OF ENGINEER  
PRINT NAME BELOW SIGNATURE



SEE SHEET 16 FOR LEGEND

APPROVED  
FOR THE BOARD OF  
PLANNING & ZONING  
DATE 9-6-2000  
K/RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*[Signature]* 2/2/01  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*[Signature]* 2/9/01  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*[Signature]* 2/12/01  
DIRECTOR DATE

Date	No.	Revision Description

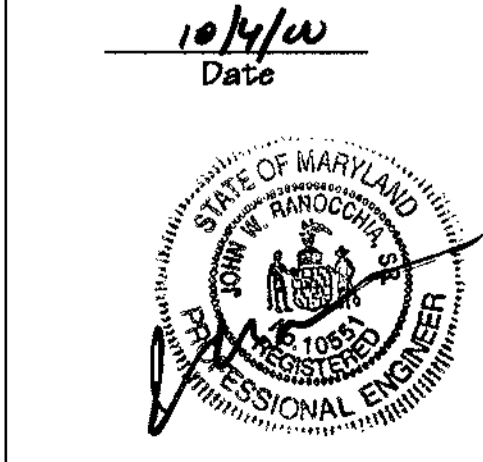
**COLUMBIA**  
Stevens Forest Green  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATRICK PARKWAY  
COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
C/O THE CREANEY & SMITH GROUP  
925 FELL STREET  
BALTIMORE, MD 21231

**DMW**  
Daft · McCune · Walker, Inc.  
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200 East Pennsylvania Avenue  
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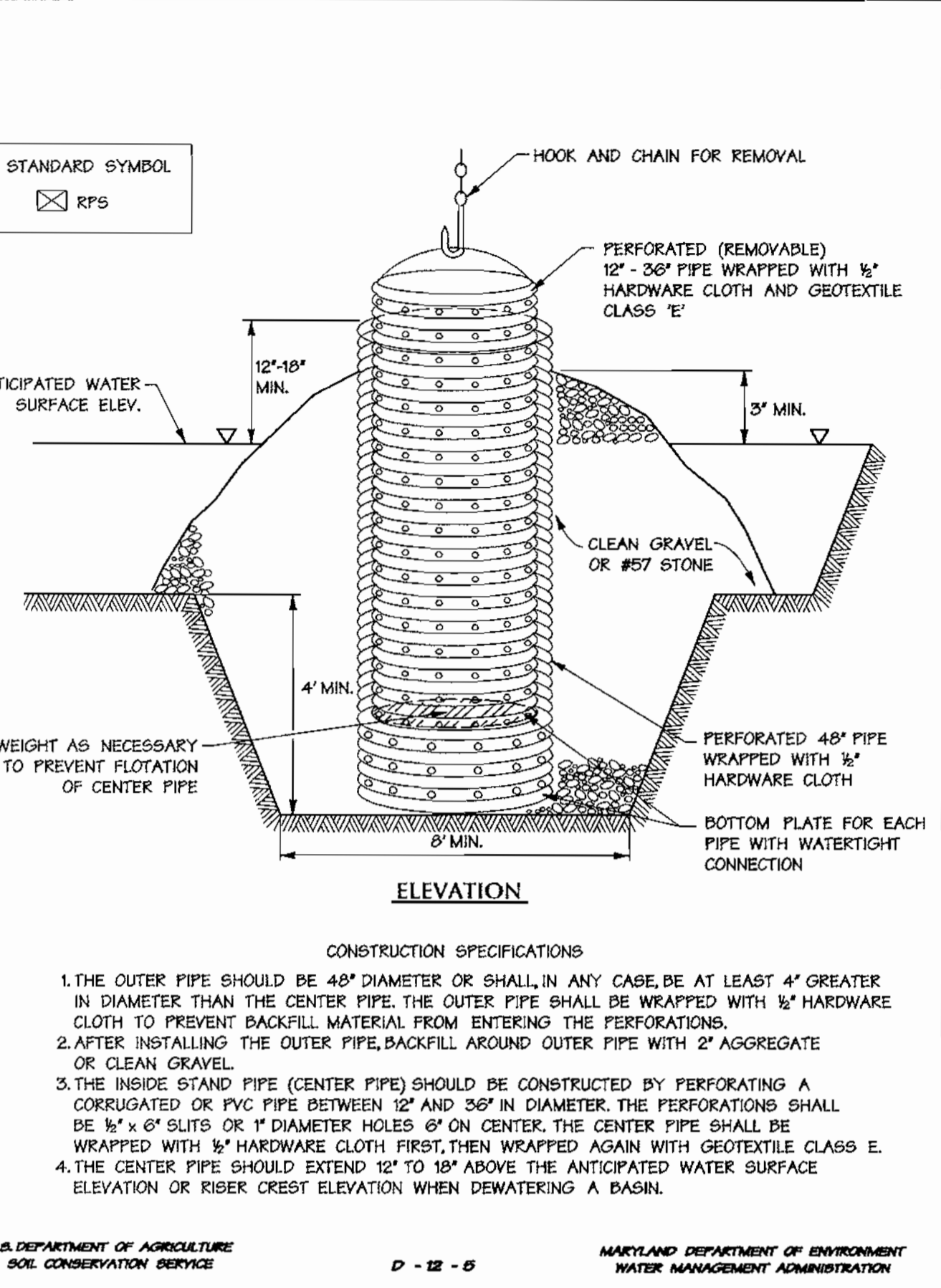
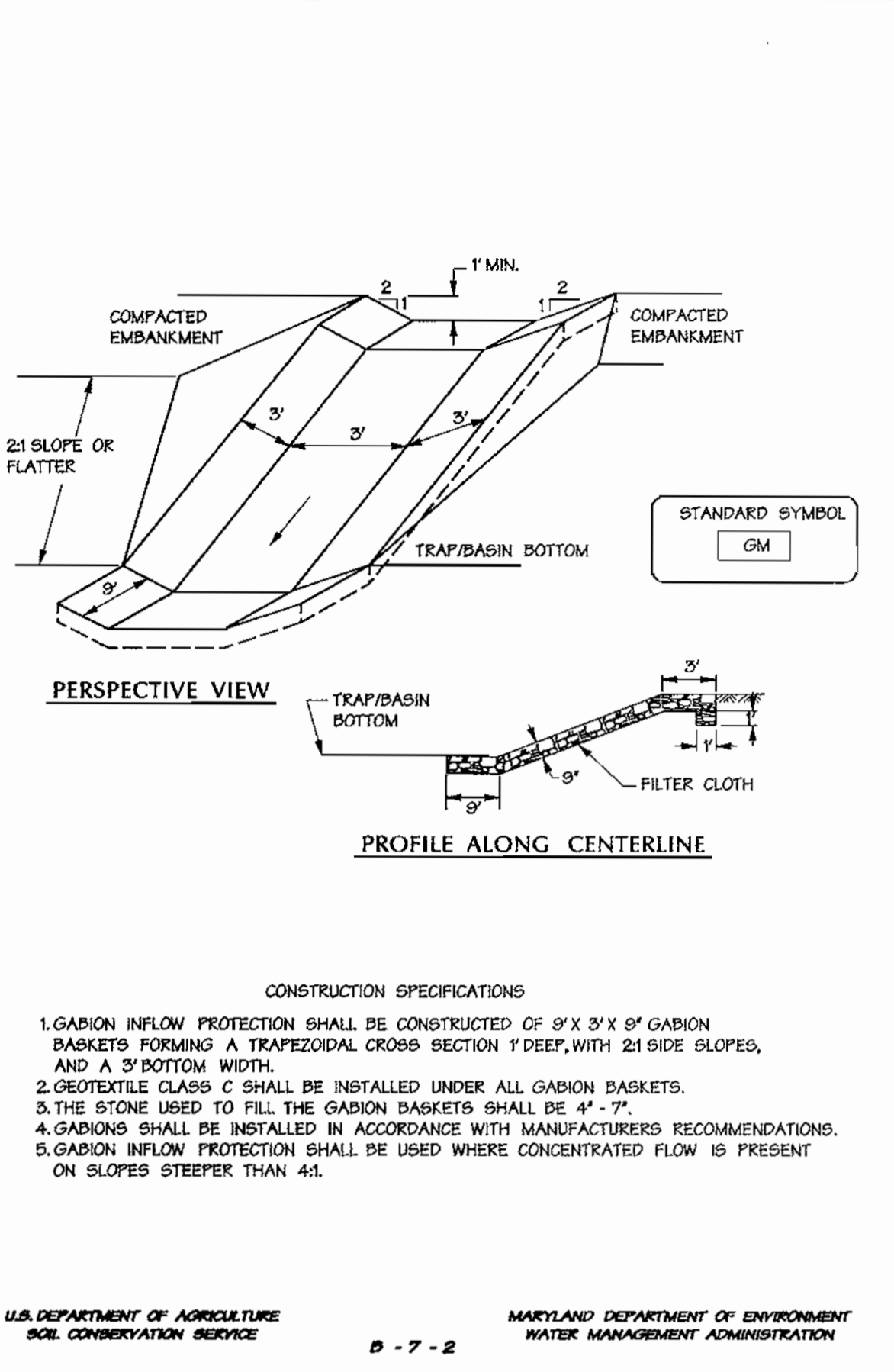
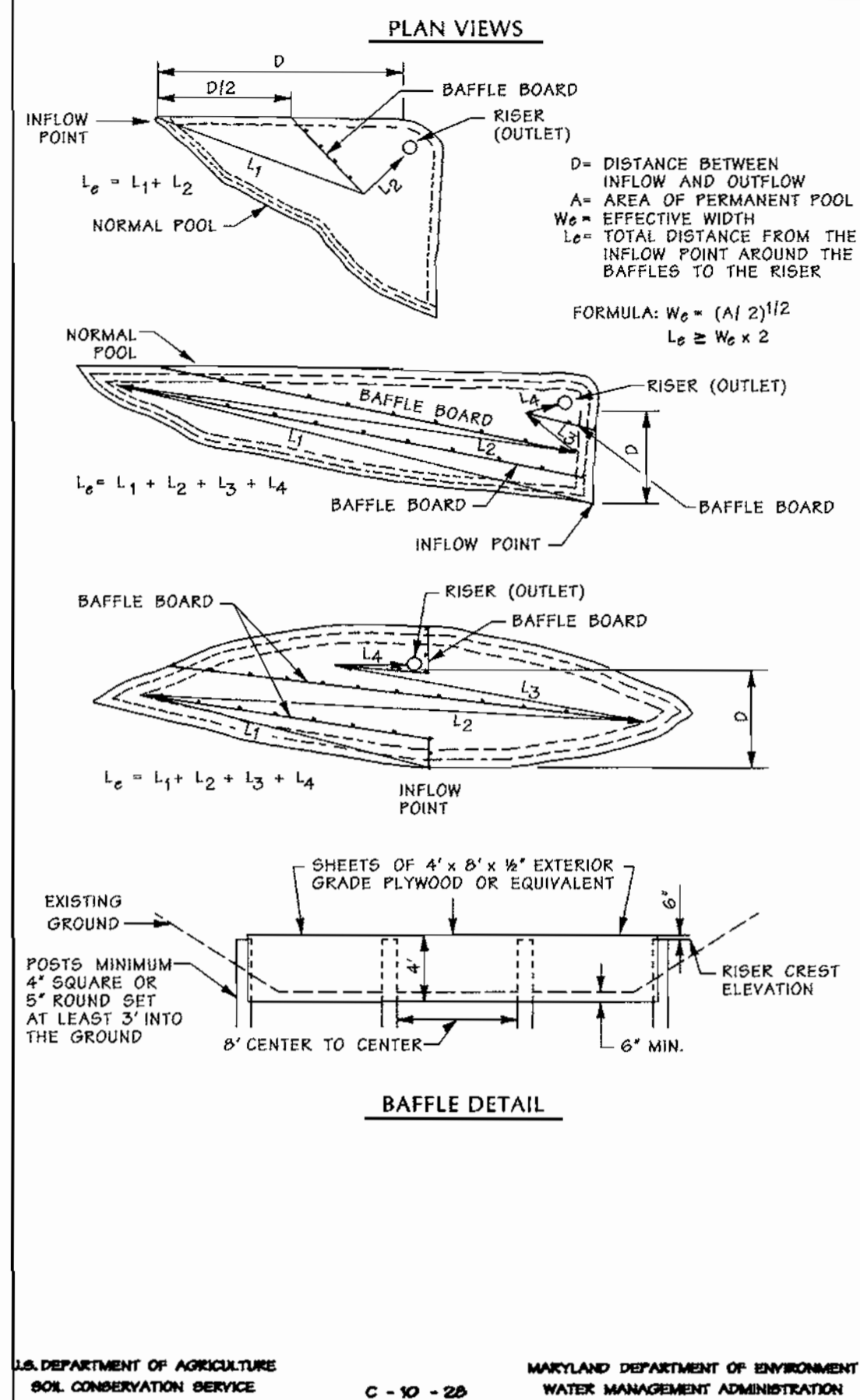


**EROSION & SEDIMENT CONTROL PLAN**

Drn By: KDE / ADL Scale: 1"=30' Proj. No. 99136.B2  
Des By: SDS Date: 9-20-00  
Chk By: RLH Approved: 17 of 23

STEVENS FOREST GREEN SEQUENCE OF CONSTRUCTION

SEQUENCE	NO. OF DAYS
1. OBTAIN A GRADING PERMIT AND NOTIFY ALL APPROPRIATE AGENCIES 48 HOURS PRIOR TO BEGINNING ANY WORK.	7
2. CLEAR AND GRUB FOR AND CONSTRUCT SEDIMENT TRAP #1 PER INITIAL TRAP GRADING DETAIL ON SHEET.	7
3. CLEAR AND GRUB FOR AND INSTALL PERIMETER SEDIMENT CONTROL MEASURES FOR PHASE 1 ONLY.	14
4. WITH PERMISSION TO PROCEED FROM THE SEDIMENT CONTROL INSPECTOR, CLEAR, GRUB AND MASS GRADE SITE. INSTALL EARTH DIKES AND CONSTRUCT SEDIMENT BASIN #1. WITH PERMISSION FROM THE INSPECTOR CONSTRUCT RETAINING WALLS ADJUST TRAP GRADING AS SHOWN ON ESC SHEET. PROVIDE DUST CONTROL PER CURRENT SPECIFICATIONS.	30
5. PROVIDE TEMPORARY SITE STABILIZATION AND CONSTRUCT STORM DRAINS AND PROPOSED 30" STORM DRAIN ACROSS STEVENS FOREST ROAD. ACTIVATE DRAINS INTO BASIN AS SOON AS FEASIBLE.	45
6. BEGIN BUILDING CONSTRUCTION AND INSTALL REMAINDER OF UTILITIES. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT TRAP AND EARTH DIKES AND MASS GRADE REMAINDER OF PARKING AREA.	45
7. FINE GRADE AND CONSTRUCT ROADS AND PARKING. STABILIZE ALL AREAS IMMEDIATELY UPON COMPLETION. CONSTRUCT PHASE II (NEW ENTRANCE) AFTER PARKING LOT HAS BEEN STABILIZED AND WITH PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR.	45
8. CONSTRUCT SIDEWALKS AND INSTALL SURFACE PAVING FOR SITE. FLUSH STORM DRAIN SYSTEM INTO BASIN.	14
9. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, CONVERT SEDIMENT BASIN INTO PERMANENT STORMWATER MANAGEMENT FACILITY.	14
10. FINE GRADE AND STABILIZE DISTURBED AREAS ON SITE IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS.	14
11. WITH PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND STABILIZE ALL REMAINING DISTURBED AREAS ON SITE.	14



Sequence of Construction

Sediment Basin Baffles

Gabion Inflow Protection

Removable Pumping Station

**21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL**

**Definition**  
 Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

**Purpose**  
 To provide a suitable soil medium for vegetative growth. Soils of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

**Conditions Where Practice Applies**

- This practice is limited to areas having 2:1 or flatter slopes where:
  - The texture of the exposed subsoil parent materials is not adequate to produce vegetative growth.
  - The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish containing supplies of moisture and plant nutrients.
  - The original soil to be vegetated contains material toxic to plant growth.
  - The soil is so acidic that treatment with limestone is not feasible.
- For the purpose of these Standards and Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

**Construction and Material Specifications**

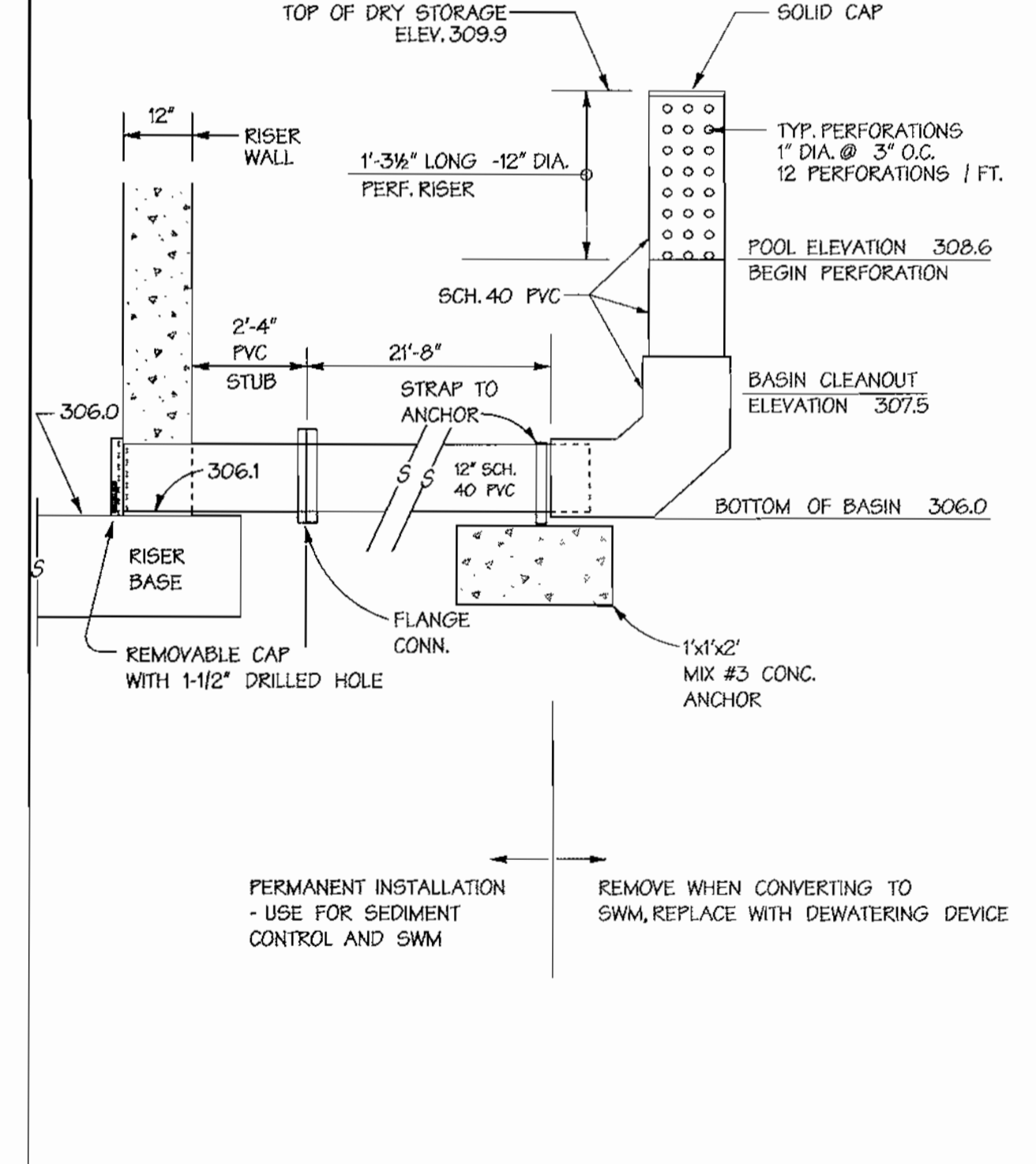
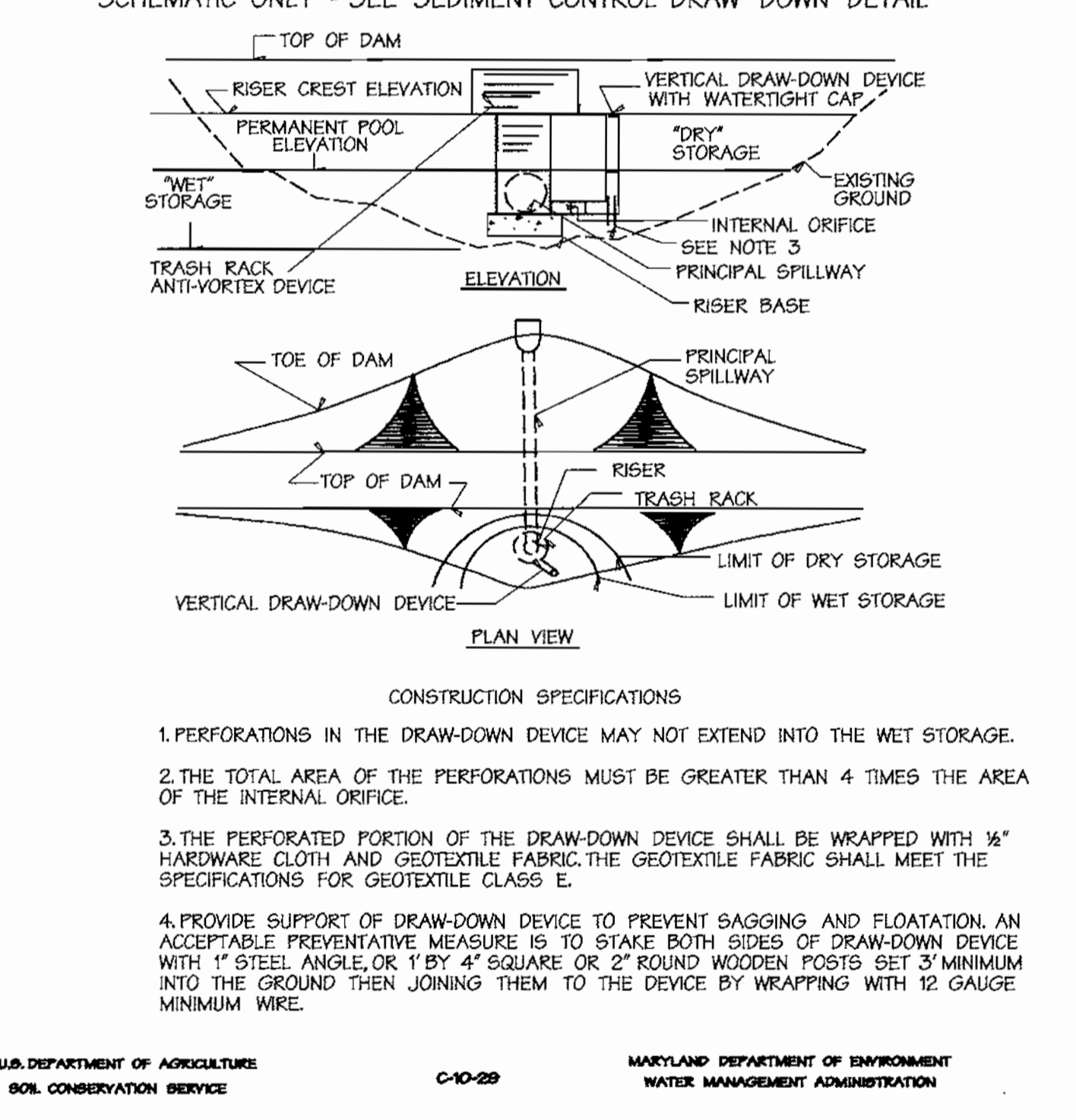
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the soil survey published by USDA NRCS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
  - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand. Other soils may be used if recommended by a soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be a mixture of contrasting textures and shall contain less than 5% by volume of cinders, stones, coarse fragments, gravel sticks, roots, trash, and other materials larger than 1 1/2 inch in diameter.
  - Topsoil must be free of plants or plant parts such as Bermuda grass, quackgrass, Johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
  - Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
- For sites having disturbed areas under 5 acres:
  - Place topsoil (if required) and apply soil amendments as specified in 21.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
  - On soil meeting topsoil specifications, obtain test results indicating fertilizer and lime amendments required to bring the soil into compliance with the following:
    - pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
    - Organic contents of topsoil shall be not less than 1.5 percent by weight.
    - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
  - or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.

**Note:** Topsoil substitutes or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appropriate approval authority, may be used in lieu of natural topsoil.

- Place topsoil (if required) and apply soil amendments as specified in 21.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.

**V. Topsoil Application**

- When topsoiling, maintain needed erosion and sediment control practices such as diversions, Grade Stabilization Structures, Earth Dikes, Slope Silt Fence and Sediment Traps and Basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained at least 4% higher in elevation.
- Topsoil shall be uniformly distributed in a 4% - 8% layer and lightly compacted to a minimum thickness of 4%. Spreading shall be performed in such a manner that sodding or seeding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seeded preparation.



**DUST CONTROL SPECIFICATIONS**

**TEMPORARY METHODS:**

- MULCHES - SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
- VEGETATIVE COVER - SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
- TILLAGE - TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12 INCHES APART, SPRING-TOOTHED HARROWS, AND SIMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
- IRRIGATION - THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THE RUNOFF BEGINS TO FLOW.
- BARRIERS - SOLID BOARD FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
- CALCIUM CHLORIDE - APPLY AT A RATE THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

**PERMANENT METHODS:**

- PERMANENT VEGETATION - SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SO2. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
- TOPSOILING - COVERING WITH LESS EROSION SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
- STONE - COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

Basin Schematic and Sediment Control Draw-Down

Sediment Control Draw-Down

Dust Control Specifications

Top Soil Specifications

**DEVELOPER'S CERTIFICATION:**

"I 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."

1.09.01

**SIGNATURE OF DEVELOPER**  
 PRINT NAME BELOW SIGNATURE  
 CRAIG M. SMITH

**ENGINEER'S 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."

10/14/00

**SIGNATURE OF ENGINEER**  
 PRINT NAME BELOW SIGNATURE  
 John W. Ramonchick, Jr.

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

2/1/01

**SIGNATURE OF REVIEWER**  
 PRINT NAME BELOW SIGNATURE  
 Jim Myron / es.

2/1/01

U.S. NATIONAL RESOURCE CONSERVATION SERVICE

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

2/1/01

HOWARD S.C.D.

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DATE: 9-6-2000

1/20

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

DATE: 2/2/01

DATE: 2/4/01

DATE: 2/12/01

**COLUMBIA**  
 Stevens Forest Green  
 Section 5 Area 1 Parcel A-1 & Lot 5

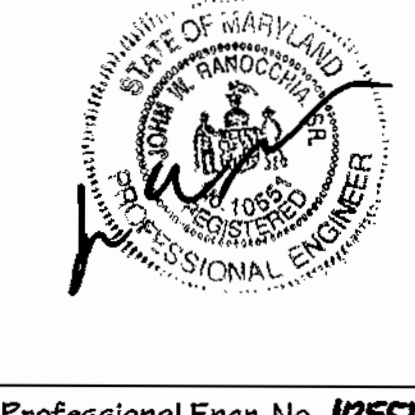
OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.

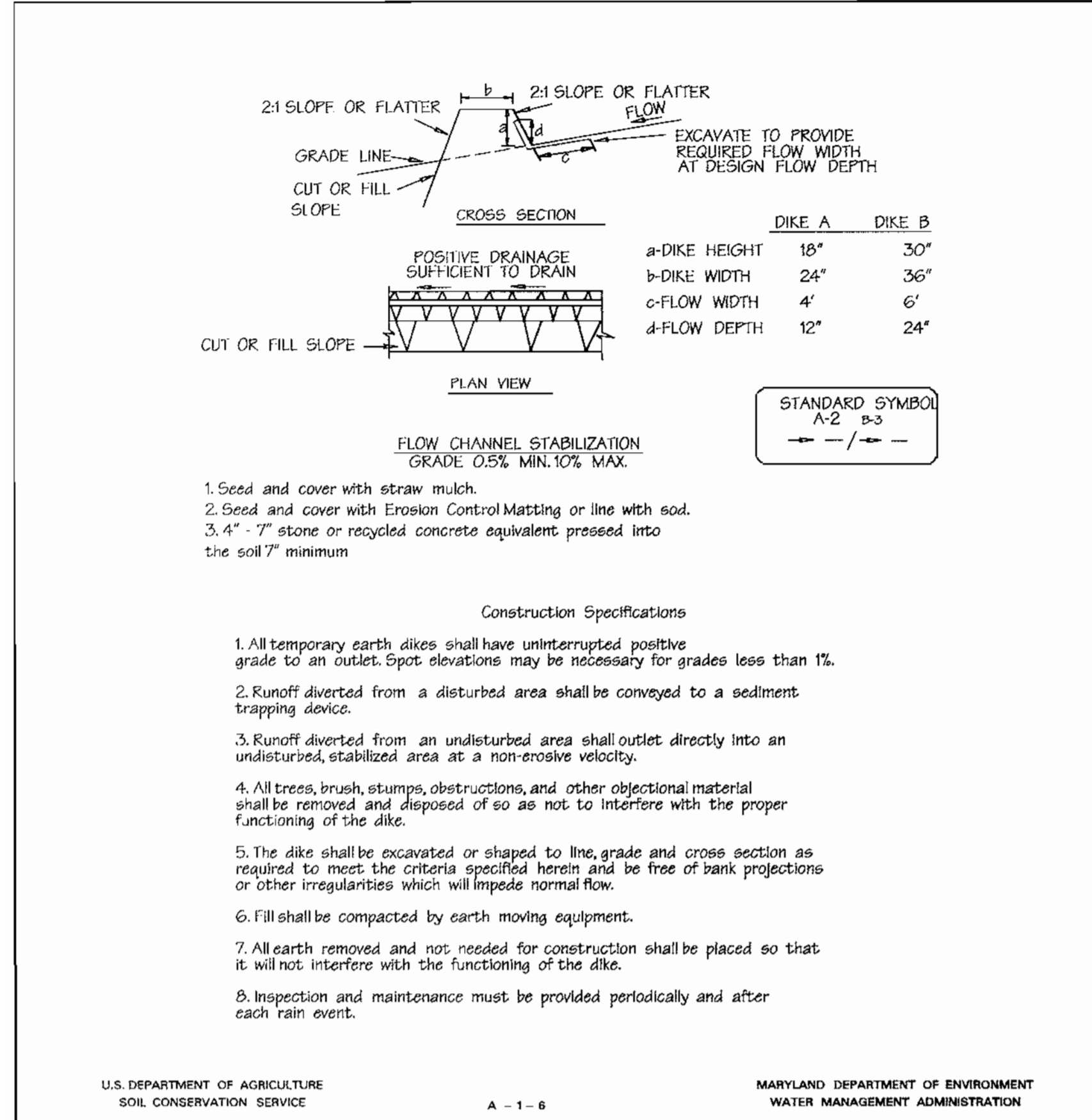
**DMW**  
 Daft · McCune · Walker, Inc.  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

**SEDIMENT EROSION & CONTROL DETAILS**

Drn By: ADL / KDE Scale: AS SHOWN Proj. No. 99136.B2  
 Des By: SDS Date: 9-20-00  
 Chk By: RLH Approved: 18 of 23





1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (303-1993).

2. ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THEREOF.

3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN:

A. SEVEN CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1.

B. FOURTEEN DAYS AS TO ALL OTHER DISTURBED AREAS ON THE PROJECT SITE.

4. ALL SEDIMENT TRAP BASINS SHALL BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1 CHAPTER 12 OF THE "HOWARD COUNTY DESIGN MANUAL", STORM DRAINAGE.

5. ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL" FOR PERMANENT SEEDINGS (SEC. 9), SOGS (SEC. 9A), TEMPORARY SEEDINGS (SEC. 50), AND MULCHING (SEC. 50). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS ARE OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

7. SITE ANALYSIS:

TOTAL AREA OR SITE	10.43 ACRES (INCLUDES PARCEL A-1 & LOT 5)
AREA DISTURBED	7.08 ACRES
AREA TO BE ADDED OR PAVED	3.96 ACRES
AREA TO BE VEGETATIVELY STABILIZED	3.23 ACRES
TOTAL CUT	23,275 CUBIC YARDS
TOTAL FILL	23,275 CUBIC YARDS
OFF-SITE WASTE/BORROW AREA LOCATION WASTE	= 0

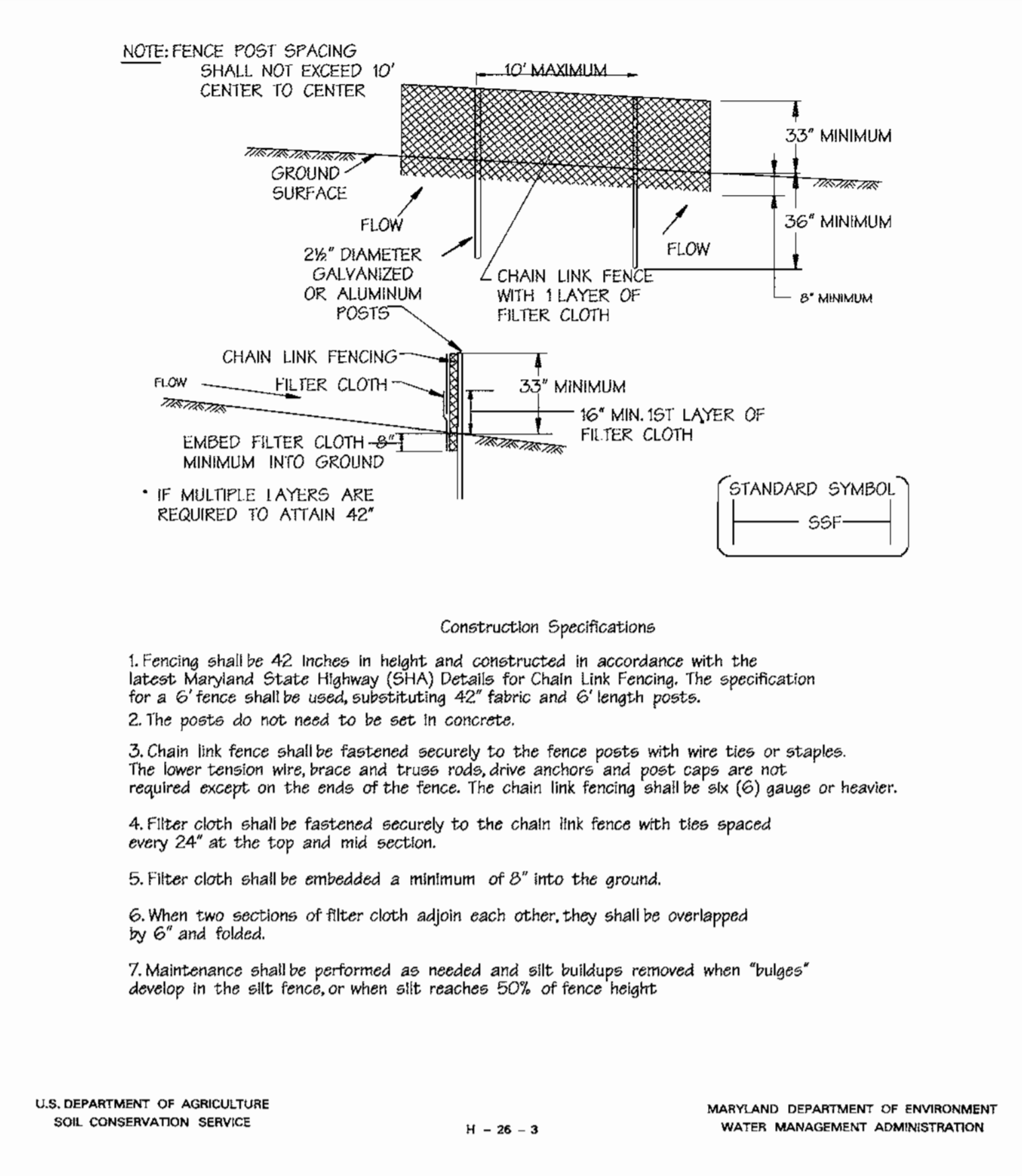
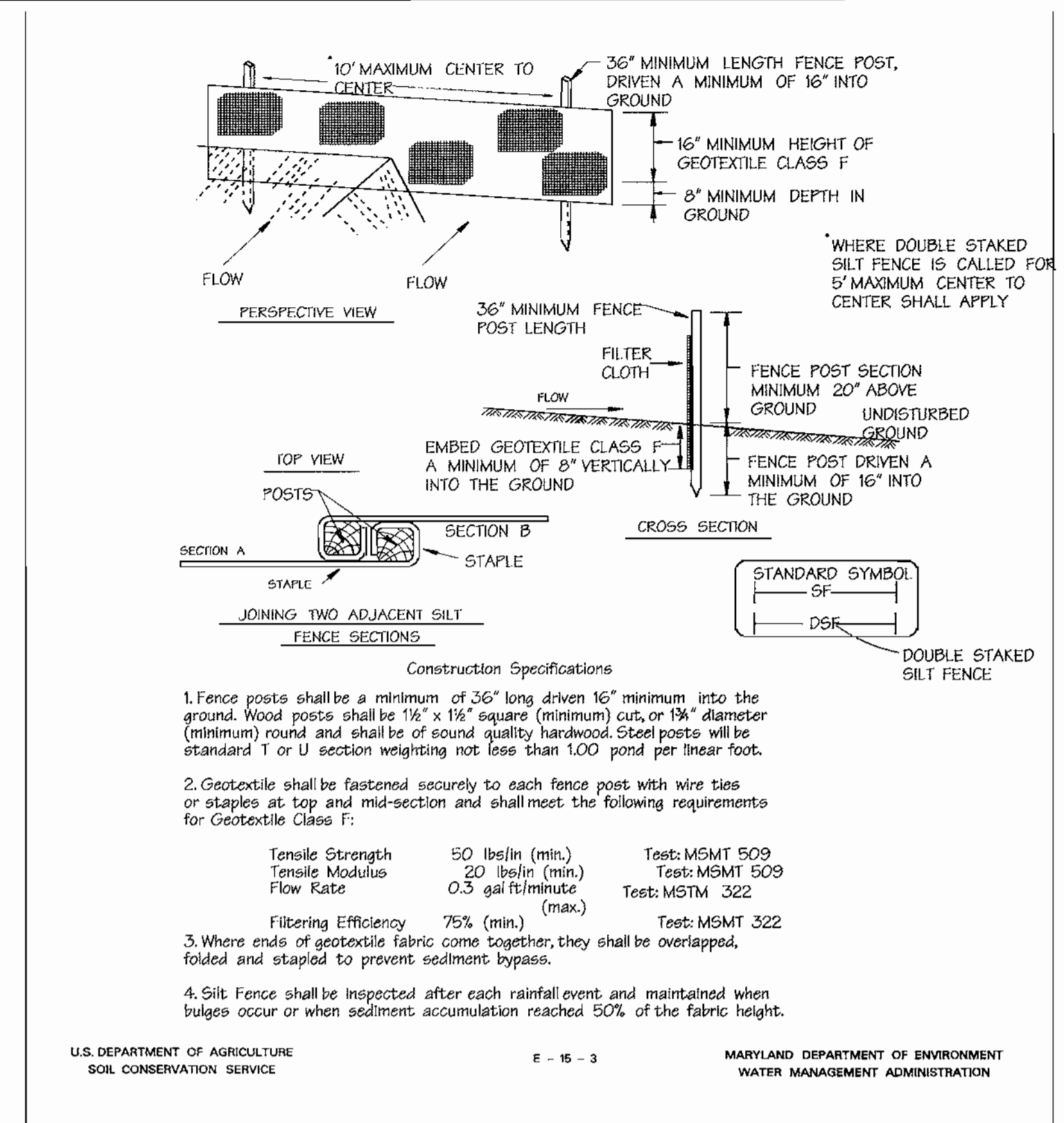
8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY 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 BARRIELED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

12. TEMPORARY SWM IS PROVIDED BY THE SEDIMENT BASIN.



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE A - 1 - 6 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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

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

**Earth Dike** Not to Scale

**Howard County Sediment Control General Notes**

**Silt Fence** Not to Scale

**Super Silt Fence** Not to Scale

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

**SEEDBED PREPARATION** - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS** - IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

1. PREFERRED - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS/1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS./1000 SQ.FT.)

2. ACCEPTABLE - APPLY 2 TONS PER ACRES DOLOMITIC LIMESTONE (92 LBS./1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS./1000 SQ.FT.) BEFORE SEEDING. HARROW OR DISK INTO UPPER THREE INCHES OF SOIL.

**SEEDING** - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (.05 LBS./1000 SQ.FT.) OF WEeping LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY OPTION (1) - 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) - USE SOG, OPTION (3) - SEED WITH 60 LBS./ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

**MULCHING** - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GALLONS PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 340 GALLONS PER ACRE (8 GAL./1000 SQ.FT.) FOR ANCHORING.

**MAINTENANCE** - INSPECT ALL SEEDING AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDING.

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

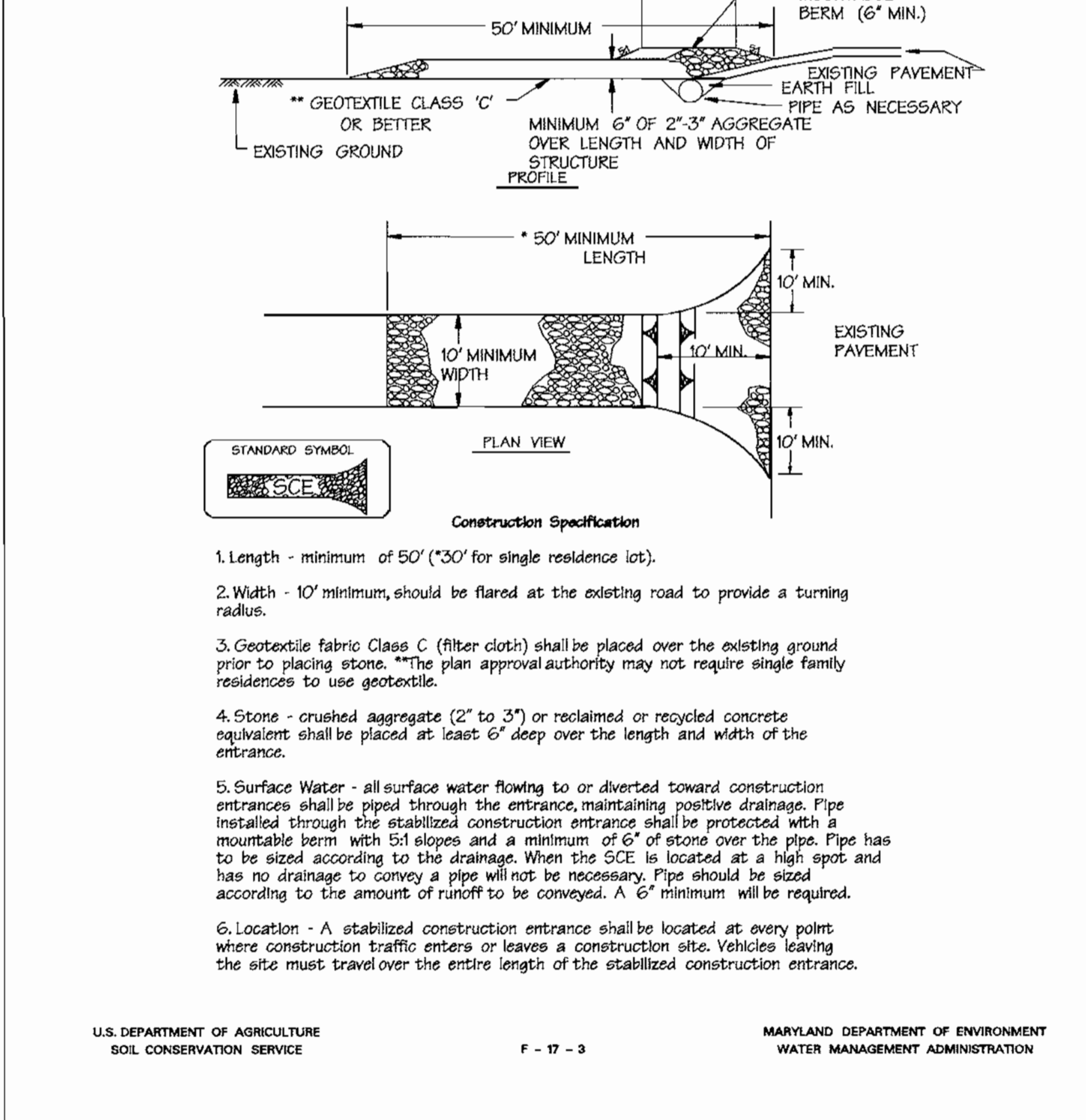
**SEEDBED PREPARATION** - LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

**SOIL AMENDMENTS** - APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ.FT.)

**SEEDING** - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 15 OCTOBER 15, SEED WITH 2-1/2 BUSHEL PER ACRE OF ANNUAL RYE (32 LBS./1000 SQ.FT.) FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEeping LOVEGRASS (0.7 LBS./1000 SQ.FT.) FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOG.

**MULCHING** - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ.FT.) OF UNROTTED WEEP FESCUE STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 210 GAL. PER ACRE (5 GAL./1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FT. OR HIGHER, USE 340 GAL. PER ACRE (8 GAL./1000 SQ.FT.) FOR ANCHORING.

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



**Table 26 Stone Size**

NUMBER	SIZE RANGE	D <sub>50</sub>	D <sub>100</sub>	AASHTO	WEIGHT
NUMBER 57*	3/8" - 1 1/4"	1/2"	1 1/4"	M-43	N/A
NUMBER 1	2" - 3"	2 1/2"	3"	M-43	N/A
RIP RAP**	4" - 7"	5 1/4"	7"	N/A	N/A
CLASS I	N/A	9.5"	15"	N/A	150lb max.
CLASS II	N/A	16"	24"	N/A	700lb max.
CLASS III	N/A	23"	34"	N/A	2000lb max.

**Table 27 Geotextile Fabrics**

CLASS	AFFARENT 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

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

- Apparent opening size MSMT 323
- Grab tensile strength ASTM D 1682-4x3" specimen, 1/2" 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 polypropylene, polyethylene or polyamides. The geotextile 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 shall have a 50 lb./in. minimum tensile strength and a 20 lb./in. minimum tensile modulus when tested in accordance with MSMT 509. The material shall also have a 0.5 gal./ft.<sup>2</sup>/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.

**Temporary and Permanent Seeding Notes**

**Stabilized Construction Entrance** Not to Scale

**Geotextile Material Specifications** Not To Scale

**Super Silt Fence** Not to Scale

DEVELOPER'S CERTIFICATION:  
 "I 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 COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING AND ZONING."

10/9/01  
 SIGNATURE OF DEVELOPER  
 PRINT NAME BELOW  
 CRAIG M. SMITH

ENGINEER'S 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 COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING AND ZONING."

1/11/01  
 SIGNATURE OF ENGINEER  
 PRINT NAME BELOW  
 John W. Roach, Sr.

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

1/11/01  
 SIGNATURE OF REVIEWER  
 PRINT NAME BELOW  
 DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD COUNTY DEPARTMENT OF ENVIRONMENT AND PLANNING AND ZONING.

1/11/01  
 SIGNATURE OF APPROVER  
 PRINT NAME BELOW  
 DATE

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

CHEF, DEVELOPMENT ENGINEERS DIVISION  
 DATE 2/2/01

CHEF, DIVISION OF LAND DEVELOPMENT  
 DATE 2/9/01

DIRECTOR  
 DATE 2/12/01

DATE No. Revision Description

**COLUMBIA Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 10275 LITTLE PATRURENT PARKWAY  
 COLUMBIA, MD 21044

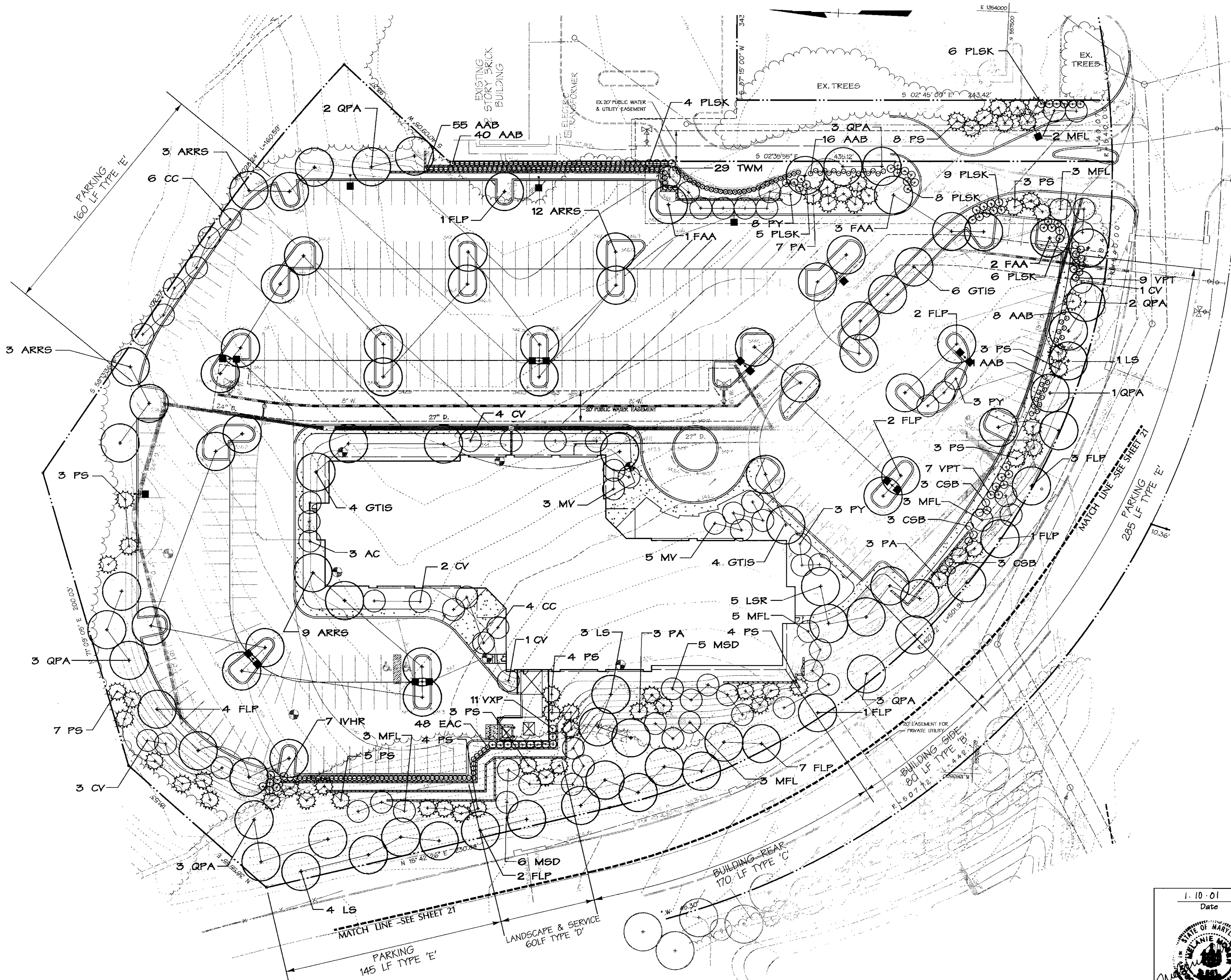
DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 C/O THE OREANEY & SMITH GROUP  
 325 FELL STREET  
 BALTIMORE, MD 21231

**DMW**  
 Daft - McCune - Walker, Inc.  
 A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705

**SEDIMENT EROSION & CONTROL DETAILS**

Drn By: ADL / KDE Scale: 1"=30'  
 Des By: SDS Date: 1-05-01  
 Chk By: Approved: 19 of 23

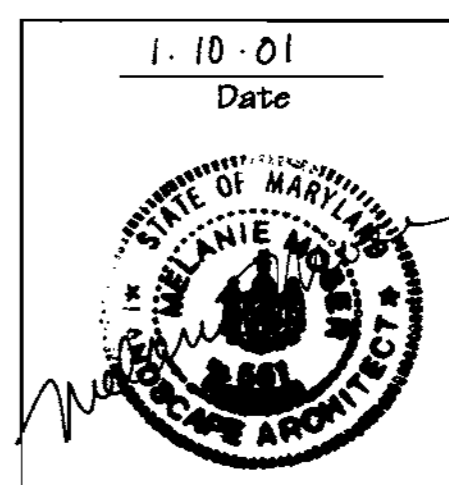


DATE 9-6-2000  
KJA

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>Chris D...</i>	2/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Andy Hamster</i>	2/9/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>Paul S...</i>	2/12/01
DIRECTOR	DATE

Section 5 Area 1 Parcel A-1 & Lot 5  
**COLUMBIA Stevens Forest Green**  
 OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 10225 LITTLE PATRIDENT PARKWAY  
 COLUMBIA, MD 21044  
 920 FELL STREET  
 BALTIMORE, MD 21231

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 200 East Pennsylvania Avenue  
 Towson, Maryland 21286  
 410 296 3333  
 Fax 296 4705



**LANDSCAPE PLAN**

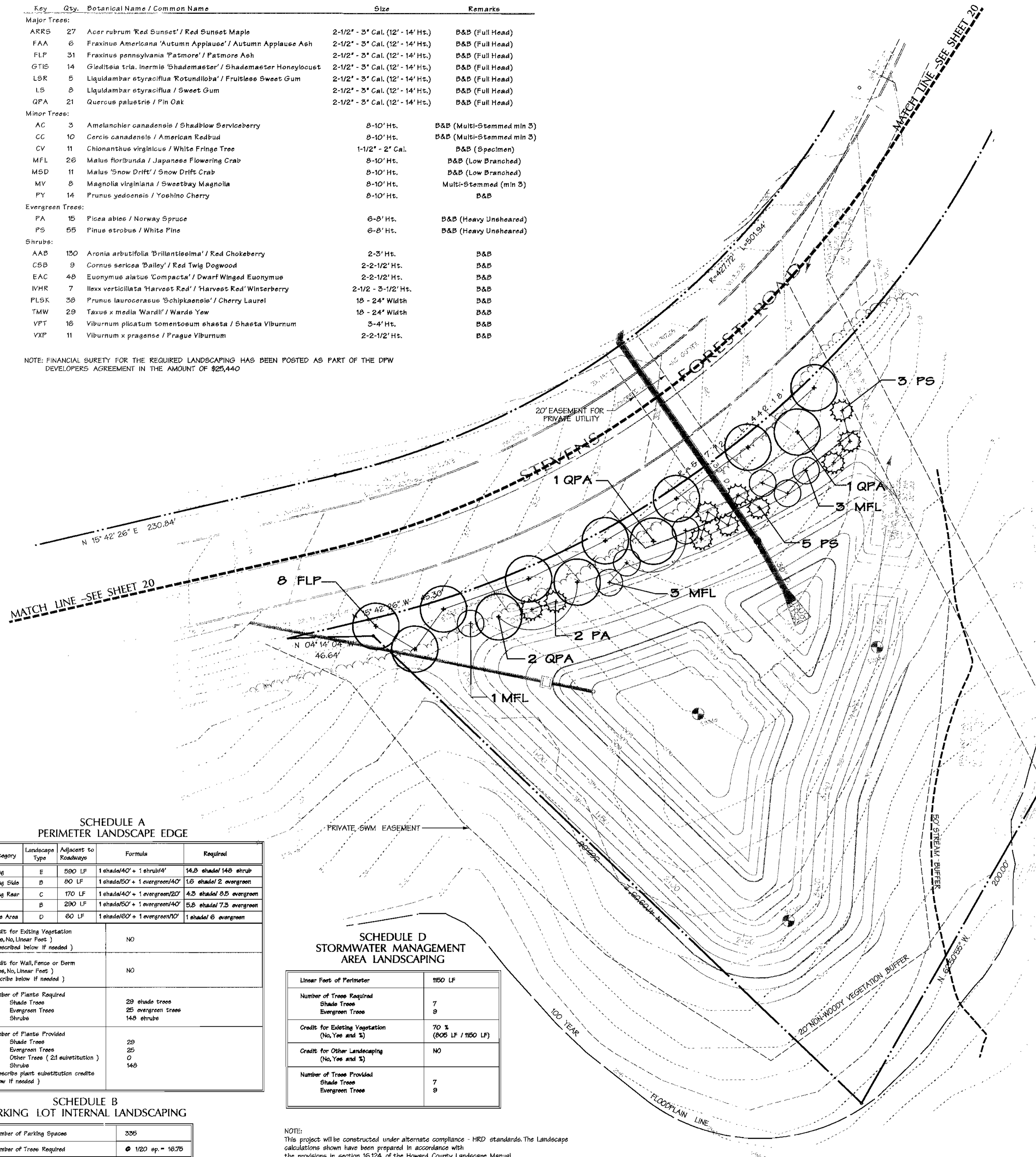
NOTE:  
 SEE LANDSCAPE SCHEDULES AND NOTES ON SHEET 21

Drn By: FDK	Scale: 1"=30'	Proj. No. 99136.B2
Des By: FFB	Date: 1-05-01	
Chk By: FFB	Approved:	<b>20 of 23</b>

PLANT LIST

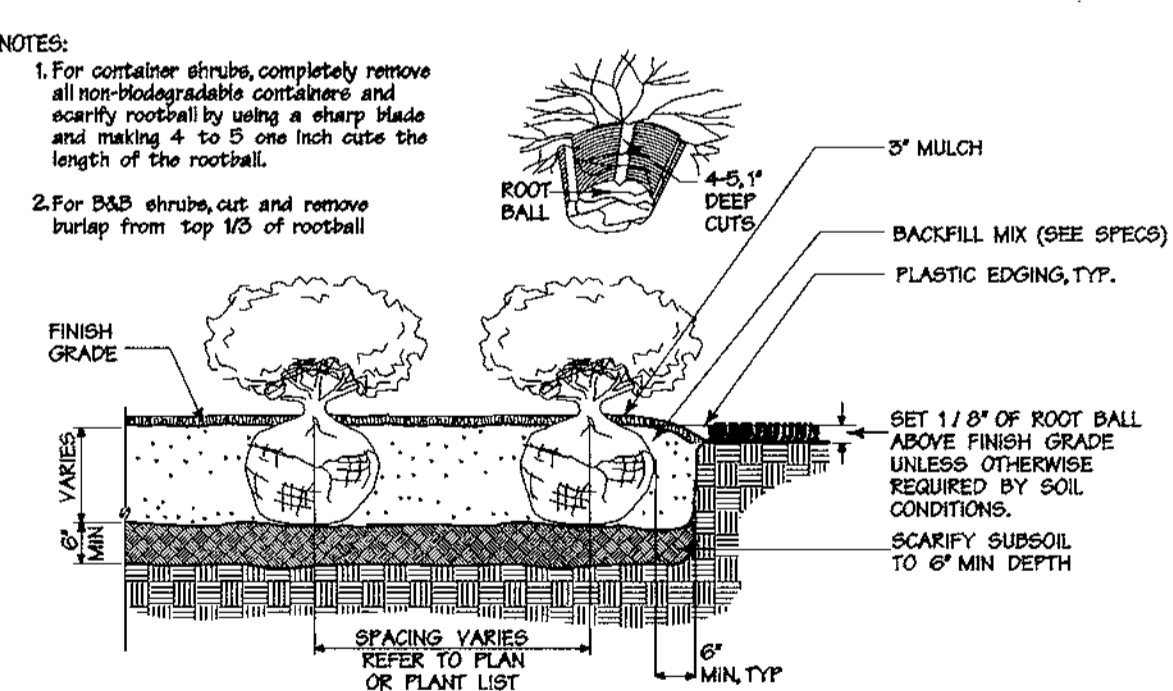
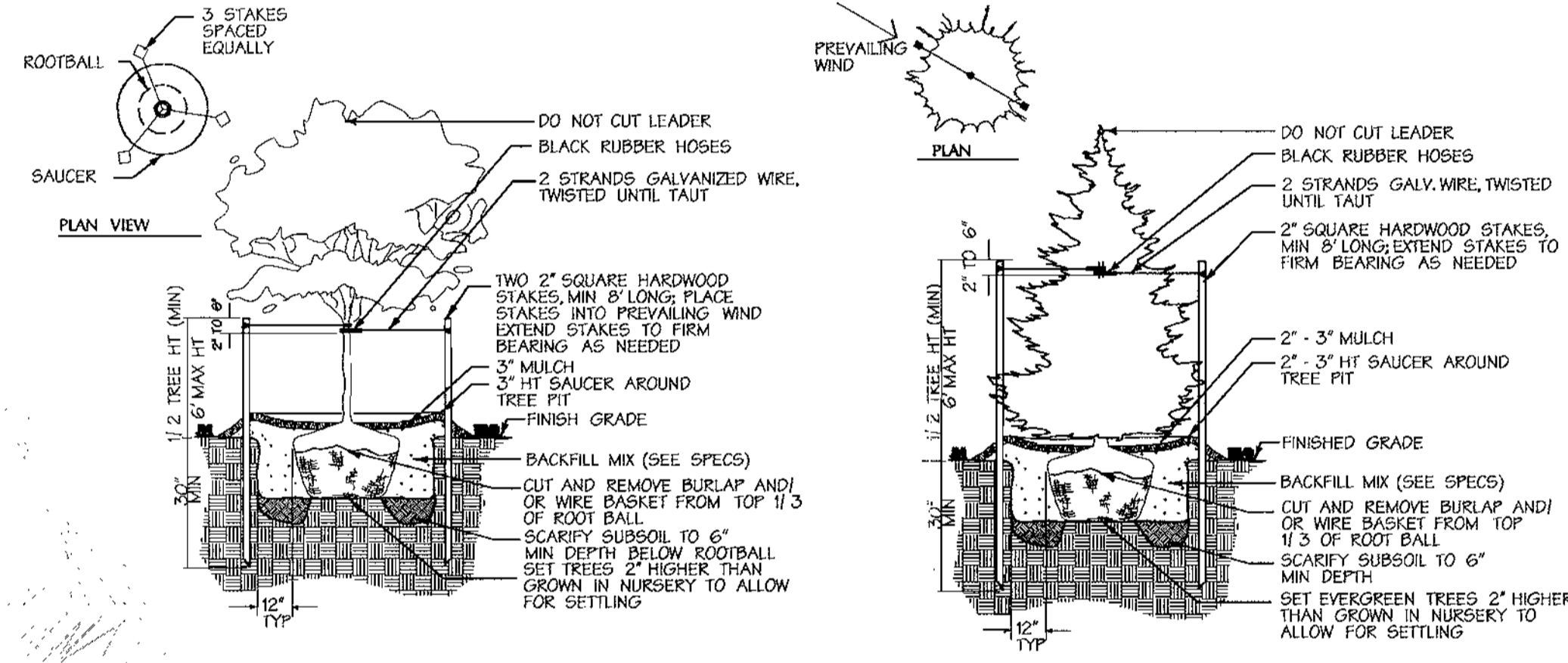
Key	Qty	Botanical Name / Common Name	Size	Remarks
<b>Major Trees:</b>				
ARKS	27	Acer rubrum 'Red Sunset' / Red Sunset Maple	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
FAA	6	Fraxinus Americana 'Autumn Applause' / Autumn Applause Ash	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
FLP	31	Fraxinus pennsylvanica 'Patmore' / Patmore Ash	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
GTIS	14	Gleditsia tria. Inermis 'Shademaster' / Shademaster Honeylocust	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
LSR	5	Liquidambar styraciflua 'Rotundiloba' / Fruitless Sweet Gum	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
LS	8	Liquidambar styraciflua / Sweet Gum	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
QPA	21	Quercus palustris / Pin Oak	2-1/2" - 3" Cal. (12' - 14' Ht.)	D&B (Full Head)
<b>Minor Trees:</b>				
AC	3	Amelanchier canadensis / Shadblow Serviceberry	8-10' Ht.	D&B (Multi-Stemmed min 3)
CC	10	Cercis canadensis / American Redbud	8-10' Ht.	D&B (Multi-Stemmed min 3)
CV	11	Chionanthus virginicus / White Fringe Tree	1-1/2" - 2" Cal.	D&B (Specimen)
MFL	26	Malus floribunda / Japanese Flowering Crab	8-10' Ht.	D&B (Low Branched)
MSD	11	Malus 'Snow Drift' / Snow Drift Crab	8-10' Ht.	D&B (Low Branched)
MY	8	Magnolia virginiana / Sweetbay Magnolia	8-10' Ht.	Multi-Stemmed (min 3)
PY	14	Prunus yedoensis / Yoshino Cherry	8-10' Ht.	D&B
<b>Evergreen Trees:</b>				
PA	15	Picea abies / Norway Spruce	6-8' Ht.	D&B (Heavy Unsheared)
PS	55	Pinus strobus / White Pine	6-8' Ht.	D&B (Heavy Unsheared)
<b>Shrubs:</b>				
AAB	130	Aronia arbutifolia 'Brilliantissima' / Red Chokeberry	2-3' Ht.	D&B
CB	9	Cornus sericea 'Daley' / Red Twig Dogwood	2-2-1/2' Ht.	D&B
EAC	48	Euonymus alatus 'Compacta' / Dwarf Winged Euonymus	2-2-1/2' Ht.	D&B
IVR	7	Ilex verticillata 'Harvest Red' / Harvest Red Winterberry	2-1/2" - 3-1/2' Ht.	D&B
PLSK	38	Prunus laurocerasus 'Schipkaensis' / Cherry Laurel	18 - 24' Width	D&B
TMW	29	Taxus x media 'Wardii' / Wards Yew	18 - 24' Width	D&B
VPT	16	Viburnum plicatum tomentosum shaeta / Shaeta Viburnum	3-4' Ht.	D&B
VXP	11	Viburnum x pragnense / Prague Viburnum	2-2-1/2' Ht.	D&B

NOTE: FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPW DEVELOPERS AGREEMENT IN THE AMOUNT OF \$25,440



Landscape Notes

- The contractor shall review architectural/engineering plans to become thoroughly familiar with grading and surface utilities.
- All equipment and tools shall be placed so as not to interfere or hinder the pedestrian and vehicular traffic flow.
- The contractor shall coordinate with lighting and irrigation contractors regarding timing of installation of plant material.
- The contractor shall insure that his work does not interrupt established or projected drainage patterns.
- During planting operations, excess waste materials shall be promptly and frequently removed from the site.
- The contractor is advised of the existence of underground utilities on the site. Their exact location shall be verified in the field with the owner or general contractor prior to the commencement of any digging operations. In the event they are uncovered, the contractor shall be held responsible for all damage to utilities and such damage shall not result in any additional expenses to the owner.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be made by the contractor without additional compensation. No changes of location shall be made without approval of the landscape architect.
- Maintain existing drainage out of planting beds at a minimum 2% slope. All grades, dimensions and existing conditions shall be verified by the contractor on site before construction begins. Any discrepancies shall be brought to the attention of the landscape architect or owner.
- Every possible safeguard shall be taken to protect building surfaces, equipment, and furnishings. The contractor shall be responsible for any damage or injury to person or property which may occur as a result of his negligence in the execution of the work.
- In the event of variation between quantities shown on the plant list and the plans, the plans shall control. The contractor is responsible for verifying all plant quantities prior to the commencement of work. All discrepancies shall be reported to the landscape architect for clarification prior to adding. The contractor shall furnish plant material in sizes as specified in plant list.
- The contractor shall stake all material located on the site for review and/or adjustment by the landscape architect prior to planting. All locations are to be approved by the landscape architect before excavation.
- Plants shall conform to current "American Standards for Nursery Stock" by American Association of Nurserymen (AAN), particularly with regard to size, growth, size of ball, and density of branch structure. Plant material shall be tagged at the source by the landscape architect unless this requirement is specifically waived.
- All plants (D&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the landscape architect or agent in charge.
- Any material and/or work may be rejected by the landscape architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- No substitutions shall be made without written consent of the owner or landscape architect.
- The landscape architect or owner shall have the right, at any stage of the operations, to reject any and all work and material which, in his opinion, does not meet the requirements of these plans and specifications.
- The contractor shall be wholly responsible for stability and conditions of all trees and shrubs and shall be legally liable for any damage caused by instability of any plant materials.
- All proposed trees to be installed either entirely in or entirely out of planting beds. Planting bed lines are not to be obstructed. Mulch shall have been shredded within the last six months.
- All planting beds adjacent to lawn, sod, or seeded areas shall be spade edged.
- Maintenance shall begin after each plant has been installed and shall continue until 90 days after final acceptance by the architect or owner representative. Maintenance includes mowing of turf, watering, pruning, weeding, fertilizing, mulching, replacement of sick or dead plants, and any other care necessary for the proper growth of the plant material. The contractor must be able to provide continued maintenance if requested by the owner.
- Upon completion of all landscaping, an acceptance of the work shall be held. The contractor shall notify the landscape architect or owner for scheduling the inspection at least seven (7) days prior to the anticipated inspection date.
- All trees and shrubs shall be guaranteed for 12 months from the date of acceptance.
- The contractor is responsible for testing project soils. The contractor is to provide a certified soils report to the owner. The contractor shall verify that the soils on site are acceptable for the proper growth of the proposed plant material. Should the contractor find poor soil conditions, the contractor shall be required to provide soil amendments as necessary. These amendments shall include, but not be limited to, fertilizers, lime, and topsoil. Proper planting soils must be verified prior to planting of materials.
- PLANTING MIX:
  - Planting mix shall be prepared at approved on-site staging area using approved on-site existing soil. Mix minimum quantities of 20 cubic yards or sufficient mix for entire job if less than 20 cubic yards is required.
  - Thoroughly mixed in the following proportions for tree and shrub planting mix:
    - 50% existing soil
    - 20% sharp sand
    - 30% wood residuals
    - 4.5 lbs treble superphosphate
    - 5 lbs dolomite limestone (eliminate for acid loving plants)
  - For bed planting, shrubs and groundcover spaces 24 inches or closer, incorporate the following ingredients per 20 sq ft and incorporate into top 8 inches of existing soils by rototilling or similar method of incorporation:
    - 2 cu sharp sand
    - 3 cu organic material
    - 4.5 lbs treble superphosphate
    - 5 lbs dolomite limestone (eliminate for acid loving plants)
- The contractor shall dispose of stumps and major roots of all plants to be removed. Any depressions caused by removal operations shall be refilled with fertile, friable soil placed and compacted so as to reestablish proper grade for new planting and/or lawn areas.
- The contractor shall insure adequate vertical drainage in all plant beds and planters.



NOTES:  
 1. For container shrubs, completely remove all non-biodegradable containers and securely rootball by using a sharp blade and making 4 to 5 one inch cuts the length of the rootball.  
 2. For D&B shrubs, cut and remove burlap from top 1/3 of rootball.

DATE 9-6-2000  
 K/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

*Chris Hammit* 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*David Hammit* 2/9/11  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Joseph Smith* 2/2/01  
 DIRECTOR DATE

Date No. Revision Description

**COLUMBIA**  
**Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 10275 LITTLE PATENT PARKWAY  
 COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 C/O THE CREANEY & SMITH GROUP  
 925 FELL STREET  
 BALTIMORE, MD 21231

SCHEDULE A PERIMETER LANDSCAPE EDGE

Category	Landscape Type	Adjacent to Roadway	Formula	Required
Parking	E	500 LF	1 shade/40' + 1 shrub/4'	14.5 shade/ 148 shrub
Building Side	B	80 LF	1 shade/50' + 1 evergreen/40'	1.6 shade/ 2 evergreen
Building Rear	C	170 LF	1 shade/40' + 1 evergreen/20'	4.3 shade/ 8.5 evergreen
SWM	B	290 LF	1 shade/50' + 1 evergreen/40'	5.8 shade/ 7.3 evergreen
Service Area	D	60 LF	1 shade/50' + 1 evergreen/20'	1 shade/ 6 evergreen

Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed) NO

Credit for Wall, Fence or Berm (Yes, No, Linear Feet) (Describe below if needed) NO

Number of Plants Required  
 Shade Trees: 29  
 Evergreen Trees: 25  
 Shrubs: 148

Number of Plants Provided  
 Shade Trees: 29  
 Evergreen Trees: 25  
 Other Trees (21 substitution): 0  
 Shrubs: 148

(Describe plant substitution credits below if needed)

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces	335
Number of Trees Required	● 1/20 sp. = 167B
Number of Trees Provided Shade Trees Other Trees (21 substitution)	17
Number of Islands Required ● 1/20 sp.	17
Number of Islands Provided	17

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING

Linear Feet of Perimeter	1150 LF
Number of Trees Required Shade Trees Evergreen Trees	7 9
Credit for Existing Vegetation (No, Yes and %)	70 % (800 LF / 1150 LF)
Credit for Other Landscaping (No, Yes and %)	NO
Number of Trees Provided Shade Trees Evergreen Trees	7 9

NOTE: This project will be constructed under alternate compliance - HRD standards. The Landscape calculations shown have been prepared in accordance with the provisions in section 16.124 of the Howard County Landscape Manual for bonding purposes only.

Bonding Amounts: 55 shade trees @ \$500  
 34 evergreen trees @ \$150  
 148 shrubs @ \$50  
 Total: \$25,440

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: *Craig M. Smith* DATE: 1-09-01

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

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 COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

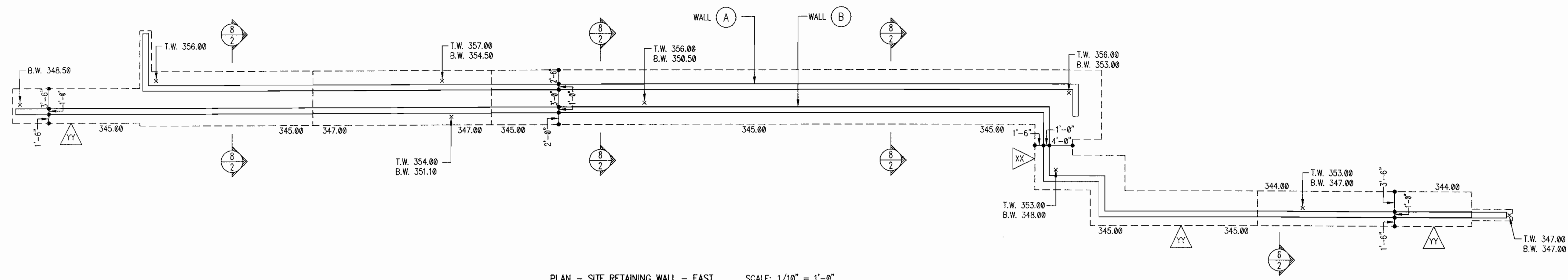
9-29-00  
 Date

*Melanie*

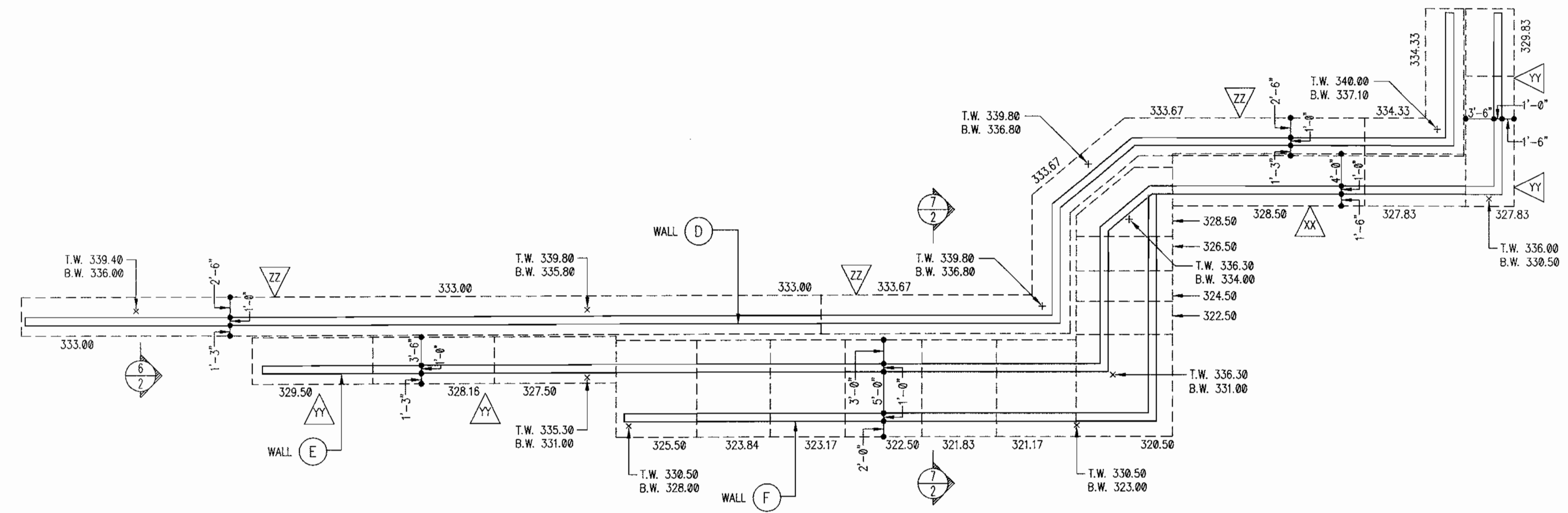
LANDSCAPE ARCHITECT No. 551

LANDSCAPE PLAN & DETAILS

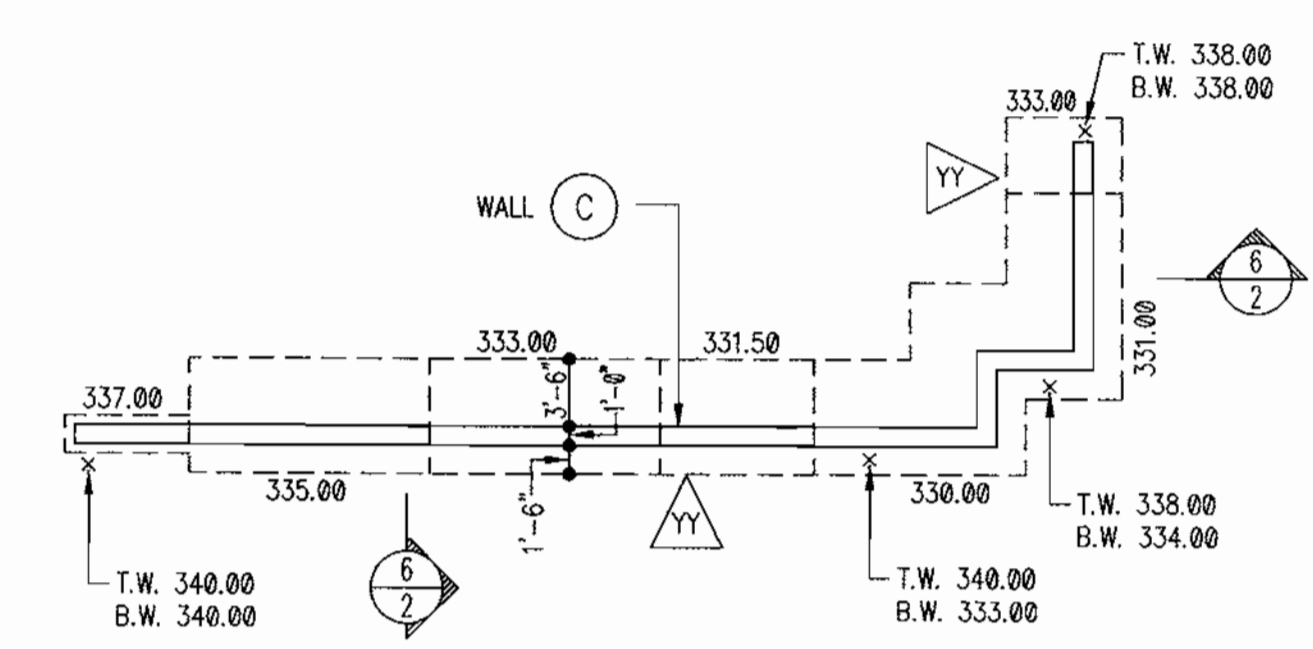
Drn By: FDK	Scale: 1" = 30'	Proj. No. 09136.B2
Des By: FPB	Date: 9-20-00	21 of 23
Chk By: FPB	Approved:	



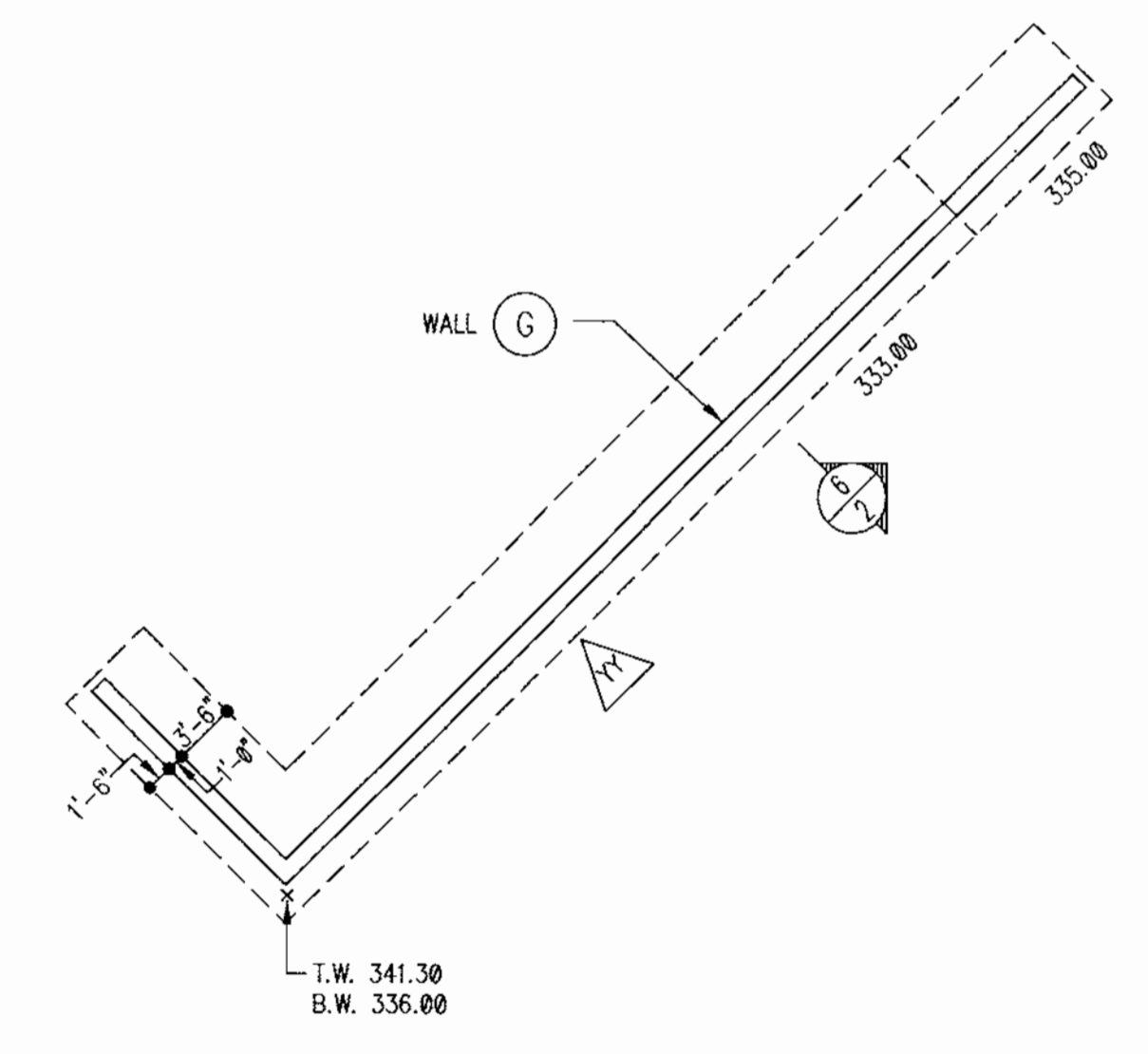
PLAN - SITE RETAINING WALL - EAST SCALE: 1/10" = 1'-0"



PLAN - SITE RETAINING WALL - WEST SCALE: 1/10" = 1'-0"



PLAN - SITE RETAINING WALL - SOUTH SCALE: 1/10" = 1'-0"



PLAN - SITE RETAINING WALL - SOUTH SCALE: 1/10" = 1'-0"



PLAN - SITE RETAINING WALLS SCALE: 1" = 10'-0"

- SEE CIVIL DRAWINGS AS PREPARED BY DAFT, McCUNE, WALKER, INC. FOR EXACT DIMENSIONS FOR WALL LENGTH, LOCATION AND FINAL GRADES. ALL TOP OF WALL AND BOTTOM OF WALL ELEVATIONS SHALL BE VERIFIED AND COORDINATED WITH CIVIL DRAWINGS.
- REINFORCED CONCRETE ( $f_c = 4000$  PSI) RETAINING WALL INDICATED ON PLAN AND IN SCHEDULE THUS:  $\triangle$
- DESIGN SOIL PARAMETERS USED FOR RETAINING WALL DESIGN AS FURNISHED BY THE HERBST / BENSON ASSOC. INC. ARE AS FOLLOWS:  
 $\gamma = 130$  PCF  
 $\phi = 30^\circ$   
 $ka = 0.33$   
 EQUIVALENT ACTIVE FLUID PRESSURE = 43.0 PCF  
 SOIL BEARING VALUE = 3000 PSF
- PROVIDE RAILING AT TOP OF WALL PER THE REQUIREMENTS OF BOCA - 1996 . SUBMIT SIGNED AND SEALED SHOP DRAWINGS PREPARED BY MARYLAND PROFESSIONAL ENGINEER FOR REVIEW .
- WALL TYPES ARE INDICATED ON PLAN THUS:  
 $\square$  REINFORCED CONCRETE RETAINING WALLS ( $f_c = 4000$  PSI)
- ELEVATION BOTTOM OF FOOTING IS SHOWN ON PLAN.
- ASSUMED SOIL BEARING VALUE = 3000 PSF AND SHALL BE FIELD VERIFIED BY A REGISTERED MARYLAND GEOTECHNICAL ENGINEER.

APPROVED  
 PLANNING  
 &  
 ZONING  
 DATE 9-6-2000  
 K/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING  
 Chief, Development Engineering Division DATE 2/12/01  
 Chief, Division of Land Development DATE 2/9/01  
 Director DATE 2/12/01

Date No.	Revision Description
	Stevens Forest Green
	OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 LITTLE PATUMENT PARKWAY COLUMBIA, MD. 21044
	DEVELOPER: STEVENS FOREST GREEN, L.L.P. C/O THE CREANEY & SMITH GROUP 925 FELL STREET BALTIMORE, MD. 21231

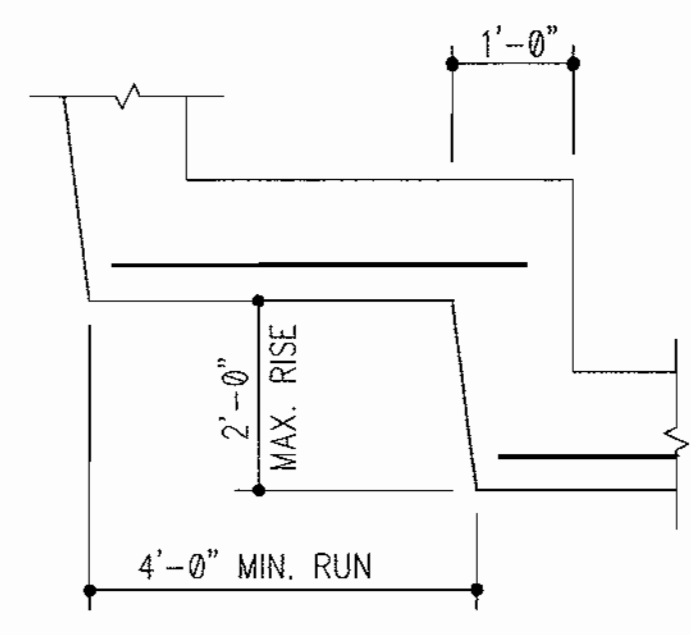
**MIC**  
 MORABITO CONSULTANTS INC.  
 STRUCTURAL ENGINEERS  
 2506 SAINT PAUL STREET  
 BALTIMORE, MARYLAND 21218-4689  
 (410) 467-2377  
 FAX (410) 467-4132  
 www.morabitoconsultants.com  
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**DMW**  
 Daft McCune Walker, Inc.  
 A Team of Land Planners, 200 East Pennsylvania Avenue  
 Landscape Architects, Towson, Maryland 21286  
 Engineers, Surveyors & Environmental Professionals 410 296 3333  
 Fax 296 4705

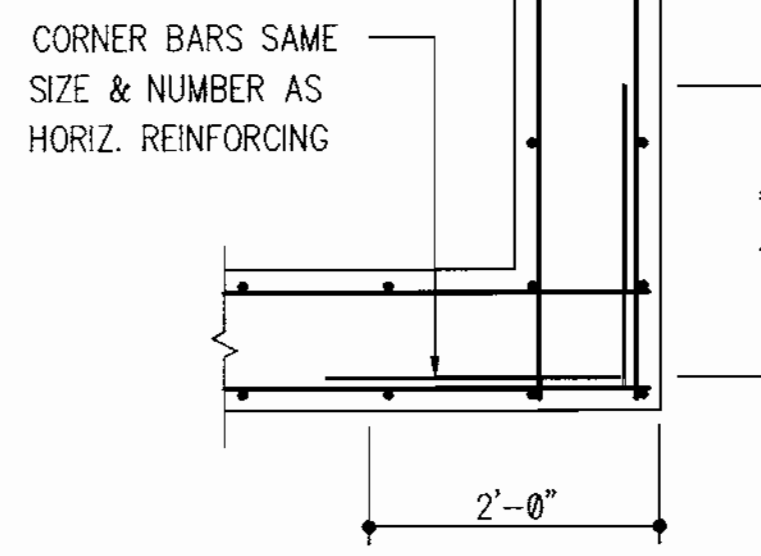
PLAN - SITE  
 RETAINING WALLS

Date \_\_\_\_\_  
  
 Professional Engineer No. \_\_\_\_\_

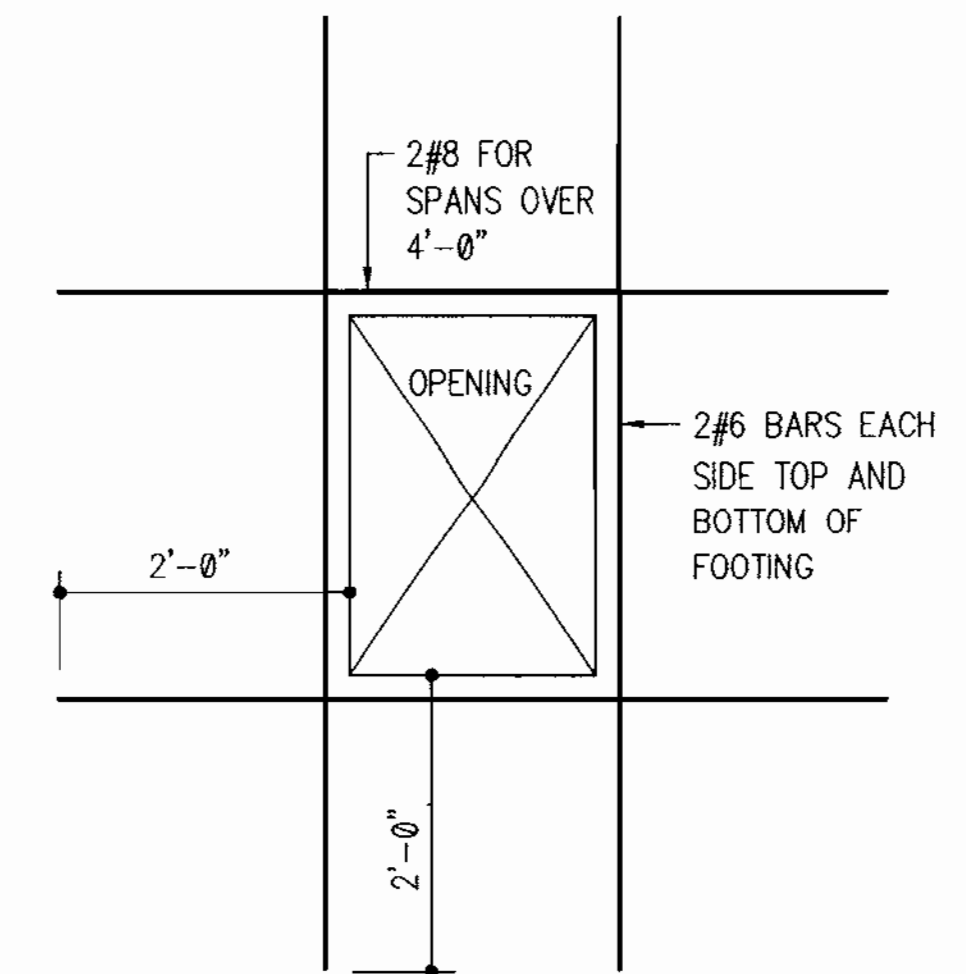
Drn By: A.S.F.	Scale: 1"=10'-0"	PROJ. NO. 00043
Des By: F.J.M.	Date: 7-21-00	
Professional Engineer No. _____	Chk By: F.J.M.	Approved: _____



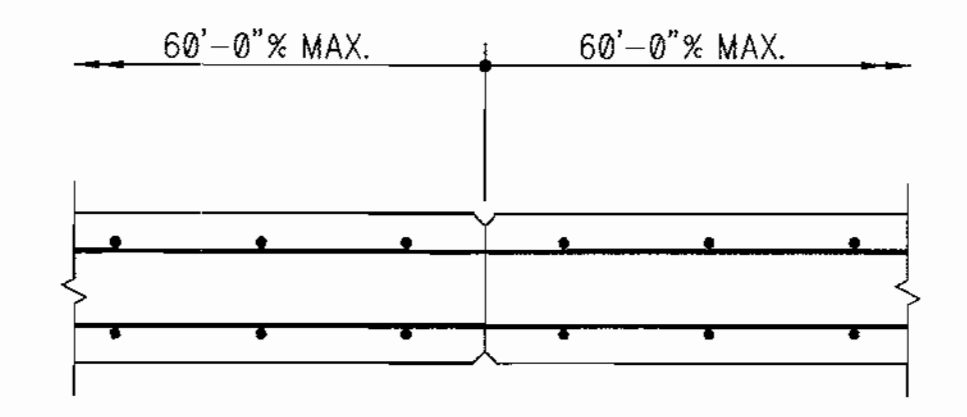
• SEE SECTION FOR SIZE OF REINF. BARS



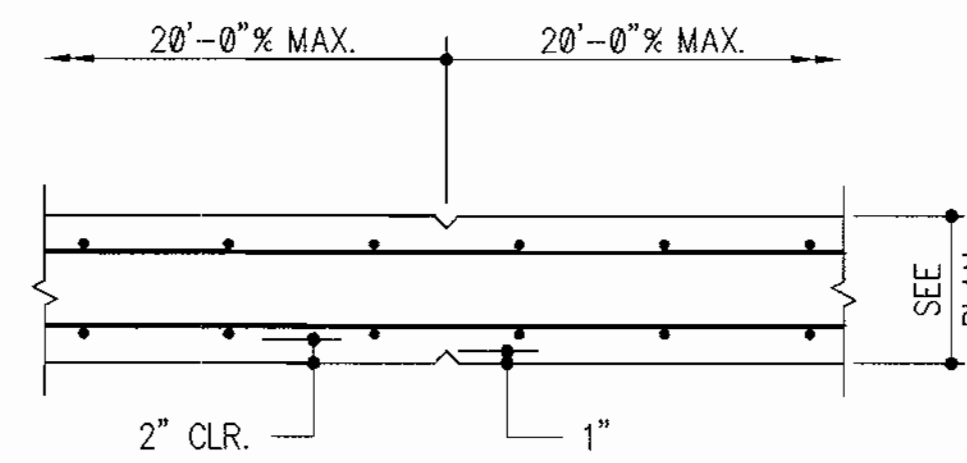
2 TYP. CORNER BARS



3 TYP. OPENING IN CONCRETE WALL



4 CONSTRUCTION JOINT IN CONCRETE WALLS



5 CONTROL JOINT IN CONCRETE WALLS

**GENERAL NOTES**

**CONTROLLED FILL AND BACKFILL:** SAMPLES OF ALL MATERIALS THAT THE CONTRACTOR PROPOSES TO USE FOR COMPACTED FILL SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER AND STRUCTURAL ENGINEER. COMPACTED FILL SHALL CONSIST OF LOCAL MATERIAL FREE OF DELETERIOUS MATTER AND CLASSIFIED CL, SC, GC, GM, OR SM PER ASTM D-2487. THE CONTROL OF THE MOISTURE FOR PLACING THE FILL WILL BE BASED ON THE RESULTS OF COMPACTION TESTS PER ASTM D-698. ALL COMPACTED FILL SHALL HAVE A DENSITY OF AT LEAST 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY AS DETERMINED BY ASTM D-698. PRIOR TO PLACEMENT OF ANY FILL, THE SITE SHALL BE STRIPPED OF ALL TOPSOIL, VEGETATION, ROCKS, AND ORGANIC MATERIALS AND THE EXPOSED SUBGRADE SHALL BE COMPACTED IN PLACE TO A COMPACTED DENSITY OF 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. FILL MATERIAL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND SHALL BE MOVED, SPREAD AND PLACED IN SUCH A WAY AS TO PRODUCE A UNIFORM THICKNESS OF MATERIAL AFTER PLACING. EACH LAYER OF FILL SHALL BE COMPACTED WITH A MINIMUM OF 6 COMPLETE PASSES ON ALL PORTIONS OF THE SURFACE OF EACH LIFT OF FILL BY RUBBER-TIRED ROLLERS, SHEEPS-FOOT ROLLERS OR OTHER MECHANICAL EQUIPMENT APPROVED BY THE GEOTECHNICAL ENGINEER AND THE STRUCTURAL ENGINEER. COMPACTED FILL PLACED WITHIN 4 FEET OF STRUCTURES AND PIPES SHOULD BE PLACED IN HORIZONTAL LIFTS NOT TO EXCEED 4 INCHES THICKNESS AND COMPACTED WITH HAND TAMMERS OR LIGHT COMPACTION EQUIPMENT TO THE SAME STANDARD. HEAVY COMPACTION EQUIPMENT SHOULD NOT BE ALLOWED WITHIN 4 FEET OF STRUCTURES UNLESS A MINIMUM 2 FEET DEPTH OF FILL COVERS THE STRUCTURES. WHENEVER IN PLACE DENSITIES ARE FOUND BELOW ACCEPTABLE LIMITS, ADDITIONAL ROLLING TO PRODUCE THE SPECIFIED DENSITIES SHALL BE REQUIRED. THE CONTRACTOR SHALL TAKE ALL MEASURES REQUIRED TO PROVIDE FOR FREE DRAINAGE OF THE SITE AND TO PREVENT FLOODING OF WATER. SEDIMENT CONTROL MEASURES SHALL BE MAINTAINED AT ALL TIMES. PLACING OF FILL CONTAINING ORGANIC MATTER, PLACING OF FILL WITH MOISTURE CONTENT TOO HIGH OR TOO LOW FOR PROPER COMPACTION, PLACING OF FILL WHEN FREE WATER IS STANDING ON THE EXISTING FILL SURFACE, PLACING OF FILL IN A FROZEN CONDITION OR ON TOP OF FROZEN WATER WILL NOT BE PERMITTED. THE SOILS ENGINEER SHALL SUPERVISE THE PLACING OF THE COMPACTED FILL AND ALL THE MATERIAL AND EQUIPMENT USED FOR THIS PURPOSE AND SHALL MAKE SUCH SOILS TESTS AS MAY BE REQUIRED FOR THE COMPLETION OF THE WORK PERFORMING AT LEAST 15 PLACE DENSITY TESTS DURING EACH EIGHT HOUR SHIFT.

**FOUNDATIONS-SPREAD FOOTINGS:** BOTTOM OF ALL FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW ORIGINAL GRADE OR PLACED IN APPROVED COMPACTED FILL. BOTTOM OF ALL EXTERIOR FOOTINGS SHALL BE A MINIMUM OF 2'-0" BELOW FINISHED GRADE. A SOIL BEARING CAPACITY OF 3000 PSF WAS USED IN THE FOUNDATION DESIGN, AND MUST BE FIELD VERIFIED BY A REGISTERED GEOTECHNICAL ENGINEER. IF SOIL OF THIS BEARING CAPACITY IS NOT ENCOUNTERED AT THE ELEVATIONS INDICATED ON THE CONTRACT DRAWINGS, FOOTINGS SHALL BE LOWERED OR INCREASED IN SIZE AS DIRECTED BY THE STRUCTURAL ENGINEER. ELEVATIONS SHOWN ON PLAN ARE TO THE BOTTOM OF THE FOOTINGS.

**CONCRETE:** ALL CONCRETE WORK SHALL CONFORM TO ALL THE PROVISIONS OF THE "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS" (ACI 308-88) AND TO THE "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE" (ACI 318-88). ALL STRUCTURAL CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI UNLESS NOTED OTHERWISE. ADDITIONALLY, THE CONCRETE SHALL CONFORM TO ALL THE PROVISIONS OF "RECOMMENDED PRACTICE FOR HOT WEATHER CONCRETING" (ACI 306-92) AND "RECOMMENDED PRACTICE FOR COLD WEATHER CONCRETING" (ACI 306-88). ALL FORMWORK SHALL BE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE "FORMWORK FOR CONCRETE" SPECIAL PUBLICATION NO. 4 AND ACI'S "STANDARD RECOMMENDED PRACTICE FOR CONCRETE FORMWORK" (ACI-347-LATEST EDITION). ALL CONCRETE EXPOSED TO THE WEATHER SHALL HAVE AN AIR ENTRAINMENT OF 6% ± 1%. NO ADMIXTURES CONTAINING CALCIUM CHLORIDE SHALL BE PERMITTED. THE MAXIMUM SLUMP OF ALL CONCRETE SHALL BE 4". FLOOR SLABS SHALL BE FINISHED TO A MINIMUM FLATNESS F-NUMBER F1 = 20 AND A MINIMUM LEVELNESS F-NUMBER F1 = 17 IN ANY DIRECTION. ALL CONCRETE SHALL BE CURED WITH LIQUID SEALING COMPOUND CONFORMING TO ASTM C-209, TYPE I AND FEDERAL SPECIFICATION IT-C-1000 OR OTHER APPROVED METHOD WHICH IS COMPLETE WITH FLOORING ADHESIVES AND OTHER SURFACE TREATMENTS. ALL CONCRETE LEFT EXPOSED AT THE COMPLETION OF THE PROJECT SHALL BE TREATED WITH A CLEAR, PENETRATING ACRYLIC BASE POLYMER CAPABLE OF PREVENTING INFILTRATION OF WATER BORNE CHLORIDES SUCH AS CONSPEC #1 BY CONSPEC MARKETING & MANUFACTURING COMPANY OR APPROVED EQUAL. LOADS GREATER THAN THE DESIGN LIVE LOADS SHALL NOT BE PLACED ON THE STRUCTURE. A CONCRETE STRUCTURE MAY NOT SUPPORT ITS DESIGN LIVE LOAD FOR 28 DAYS. CONTRACTOR SHALL SUPPORT ADJACENT STRUCTURES, UTILITIES, AND EXCAVATIONS AS REQUIRED FOR COMPLETION OF WORK. ONE SET OF COMPRESSIVE TEST CYLINDERS FOR EACH 100 CUBIC YARDS POURED, BUT NOT LESS THAN ONE SET FOR EACH DAY'S POUR AND EACH CLASS OF CONCRETE, ALONG WITH SLUMP TESTS SHALL BE PERFORMED BY A TESTING LABORATORY APPROVED BY THE STRUCTURAL ENGINEER.

**REINFORCING STEEL:** REINFORCING STEEL SHALL BE DEFORMED BARS IN ACCORDANCE WITH ASTM A-615. BONDS ARE TO BE FABRICATED AS PER DETAILS. PLACE MAIN REINFORCING STEEL SO AS TO PROVIDE 3" MINIMUM COVER FOR FOUNDATIONS POURED ON EARTH, 2" MINIMUM COVER FOR BEAMS AND COLUMNS, 3/4" MINIMUM COVER FOR SLABS AND 1 1/2" FOR ALL REBAR IN EXPOSED CONCRETE (EXCEPT AS OTHERWISE DETAILED). ALL BEAM AND SLAB STEEL SHALL HAVE A MINIMUM EXTENSION INTO THE SUPPORTS IN ACCORDANCE WITH THE LATEST ADDITION OF THE ACI CODE. PROVIDE ACCESSORIES AND BAR SUPPORTS IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES (ACI 315-88). WELDED WIRE FABRIC SHALL CONFORM TO ASTM A-185, GRADE 68 UNLESS OTHERWISE NOTED. WIRE REINFORCING SHALL BE PLACED AT MID-DEPTH OF SLABS ON GRADE AND DRAPED OVER SUPPORTS IN CONCRETE SLABS ON CENTERING. END LAPS OF ALL WIRE REINFORCING SHALL BE LAPPED 8" MINIMUM. CONCRETE ENGINEERED REINFORCING FIBERS SHALL BE POLYPROPYLENE, COLLATED, FIBRILLATED FIBERS FROM FIREBRESH, INC. INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.

**SHOP DRAWINGS:** SHOP DRAWINGS FOR ALL STRUCTURAL ELEMENTS SHOWN ON THE CONTRACT DOCUMENTS MUST BE SUBMITTED BY GENERAL CONTRACTOR AND REVIEWED BY THE ENGINEER. ALL CONTRACTOR MODIFICATIONS (INCLUDING PRODUCTS SUBSTITUTIONS) MUST BE IDENTIFIED IN WRITING AS A PROPOSED "AS EQUAL" CHANGES AT TIME OF SUBMISSION. IF A CONTRACTOR OR OWNER FAILS TO SUBMIT THE SHOP DRAWINGS OR FAILS TO FOLLOW THE ABOVE "AS EQUAL" PROCEDURE, THE FIRM MORABITO CONSULTANTS, INC. WILL NOT BE RESPONSIBLE FOR THE STRUCTURAL CERTIFICATION AND DESIGN OF THE PROJECT. SHOP DRAWINGS ARE REVIEWED BY THE ENGINEER AS A CONVENIENCE TO THE CONTRACTOR AND ARE NOT A CONTRACT DOCUMENT.

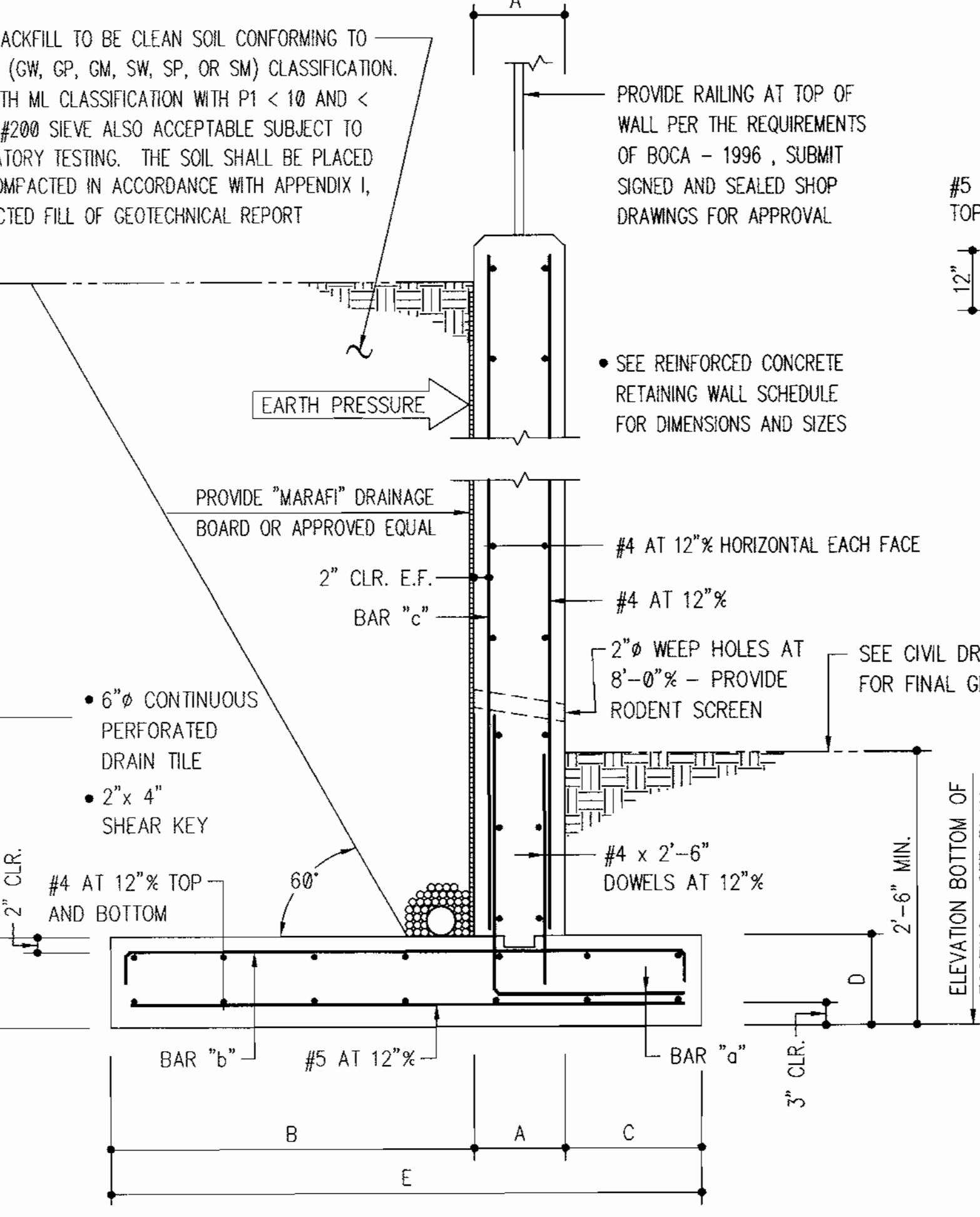
**INSPECTION:** ALL WORK SPECIFIED HEREIN SHALL BE INSPECTED IN ACCORDANCE WITH THE BUILDING CODE AND ALL LOCAL ORDINANCES. THE OWNER OR CONTRACTOR SHALL HIRE AN EXPERIENCED QUALIFIED INSPECTOR TO PERFORM ALL REQUIRED INSPECTION WORK. INSPECTION SHALL CONSIST OF VISUAL OBSERVATIONS OF MATERIALS, EQUIPMENT OR CONSTRUCTION WORK FOR THE PURPOSE OF ASCERTAINING THAT THE WORK IS IN SUBSTANTIAL CONFORMANCE WITH THE CONTRACT DOCUMENTS AND WITH THE DESIGN INTENT. THE ENGINEER WILL NOT PERFORM THE REQUIRED INSPECTION AS PART OF THIS PRESENT CONTRACT WITH THE ARCHITECT/OWNER. UNDER THIS PRESENT CONTRACT, THE ENGINEER MAY VISIT THE SITE TO ASCERTAIN GENERAL CONFORMANCE TO THE CONTRACT DOCUMENTS. HOWEVER, SUCH VISITS SHALL NOT BE RELIED UPON BY OTHERS AS ACCEPTANCE OF THE WORK, NOR SHOULD IT BE CONSTRUED TO RELIEVE THE CONTRACTOR IN ANY WAY FROM HIS OBLIGATIONS AND RESPONSIBILITIES UNDER THE "CONSTRUCTION CONTRACT". HOWEVER, IF DESIRED, MORABITO CONSULTANTS, INC. MAY BE HIRED UNDER A SEPARATE CONTRACT TO PERFORM THIS INSPECTION WORK.

**OWNERSHIP OF DOCUMENTS:** THE CONTRACTOR ACKNOWLEDGES THESE PLANS AND SPECIFICATIONS PREPARED BY MORABITO CONSULTANTS, INC. AS INSTRUMENTS OF PROFESSIONAL SERVICE. NEVERTHELESS, THE PLANS AND SPECIFICATIONS PREPARED UNDER THIS AGREEMENT SHALL REMAIN THE PROPERTY OF MORABITO CONSULTANTS, INC. UPON COMPLETION OF THE WORK. THE CONTRACTOR AGREES TO HOLD HARMLESS AND INDEMNIFY MORABITO CONSULTANTS, INC. AGAINST ALL DAMAGES, CLAIMS, AND LOSSES, INCLUDING DEFENSE COSTS, ARISING OUT OF ANY REUSE OF THE PLANS AND SPECIFICATIONS WITHOUT THE WRITTEN AUTHORIZATION OF MORABITO CONSULTANTS, INC.

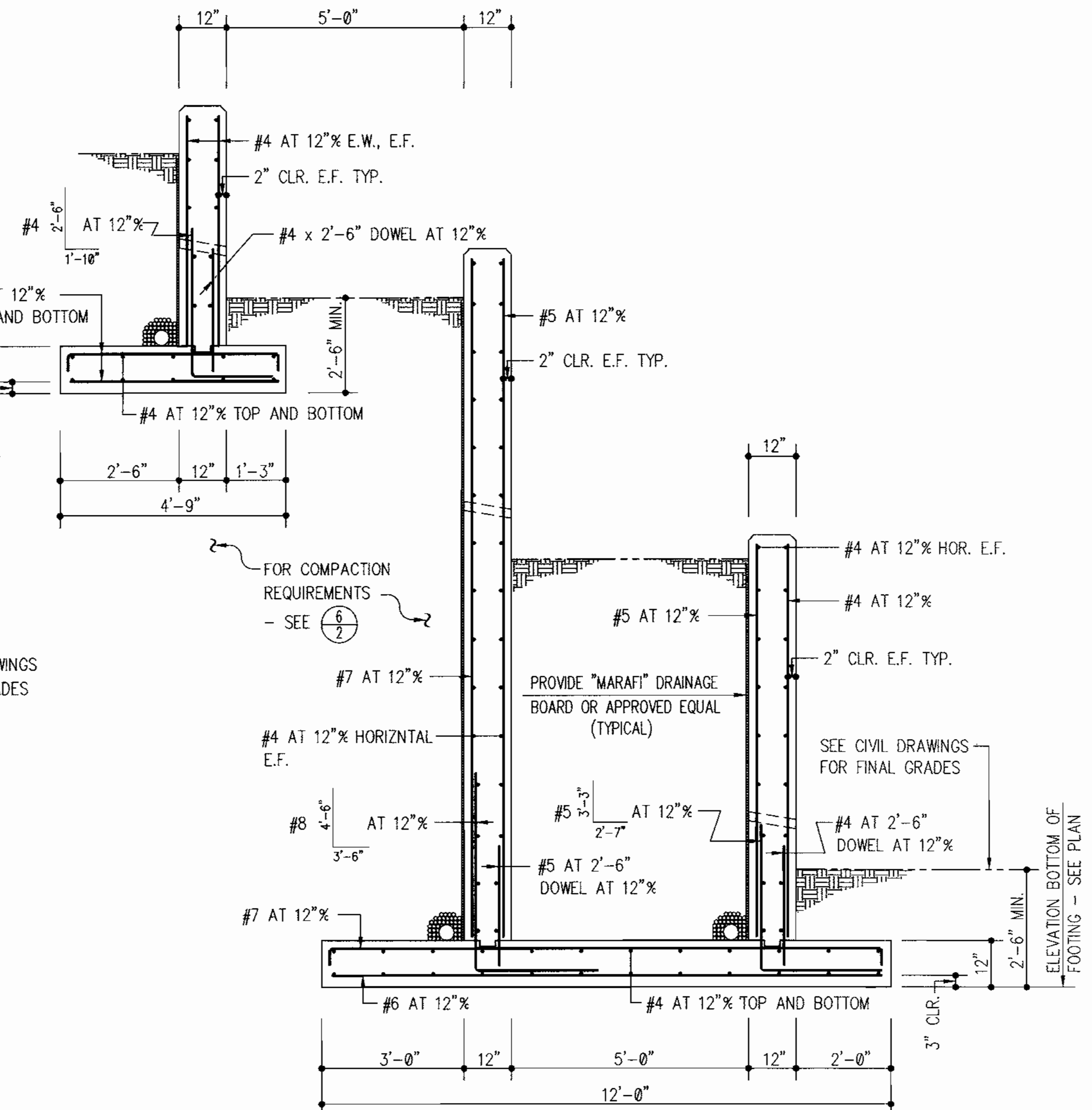
**DESIGN DATA:**  
 fc = 4000 PSI  
 fy = 60,000 PSI  
 S = 150 PCF  
 # = 3#  
 ks = 0.33  
 EQUIVALENT ACTIVE FLUID PRESSURE = 43 PCF  
 SOIL BEARING VALUE = 3000 PSF

REINFORCED CONCRETE RETAINING WALL SCHEDULE									
MARK	WALL	FOOTING			REINFORCING		REMARKS		
		ExD	B	C	BAR "a"	BAR "b"		BAR "c"	
△	1'-0"	4'-9" x 12"	2'-6"	1'-3"	#4-12"	2'-0"	#4-12"	#4-12"	SEE (6/2)
△	1'-0"	6'-0" x 12"	3'-6"	1'-6"	#5-12"	2'-6"	#5-12"	#5-12"	SEE (6/2)
△	1'-0"	6'-6" x 12"	4'-0"	1'-6"	#6-12"	3'-0"	#6-12"	#6-12"	SEE (6/2)

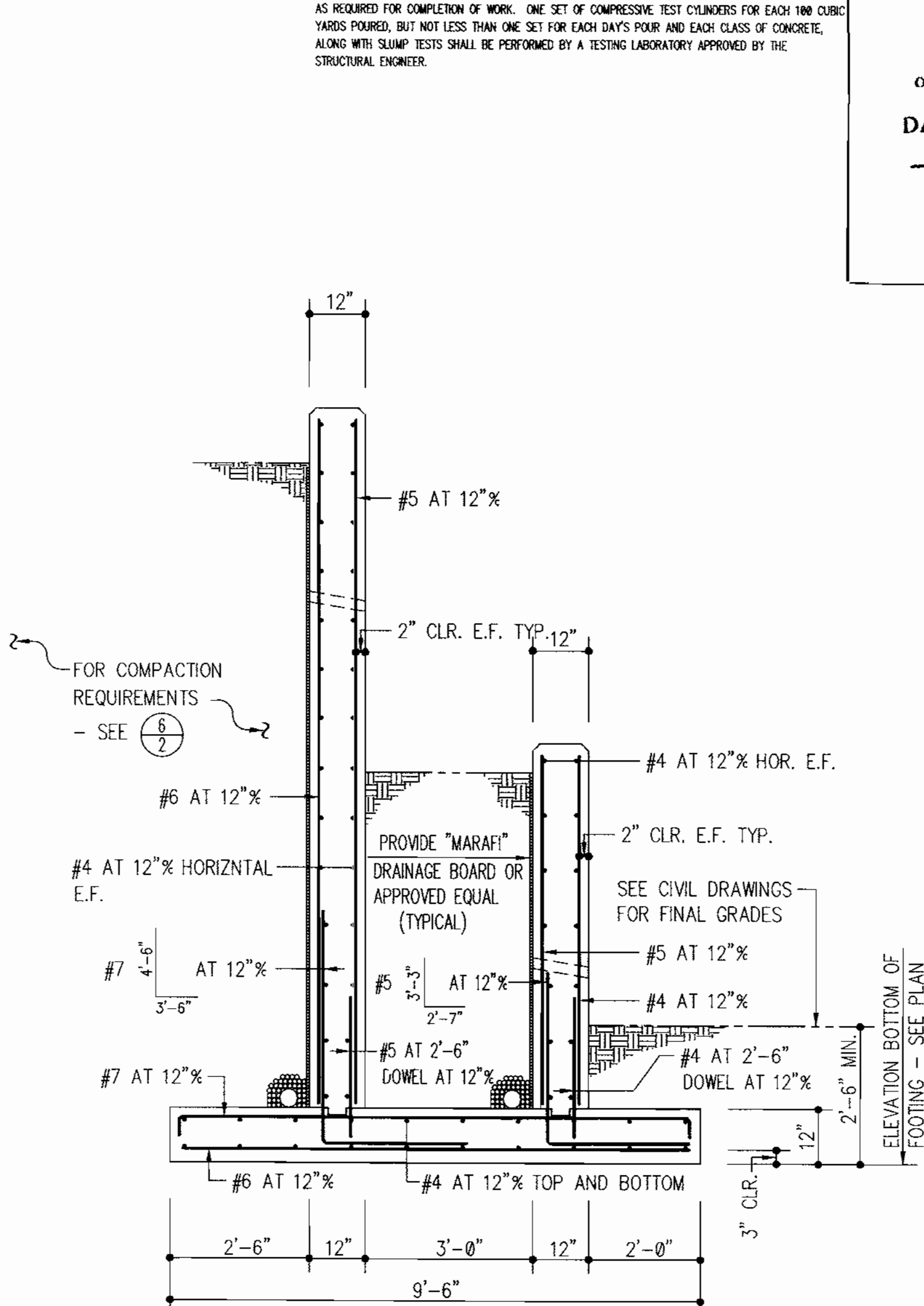
- ALL CONCRETE FOR RETAINING WALLS SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 4000 PSI.
- DO NOT BACKFILL WALLS UNTIL CONCRETE HAS ATTAINED DESIGN STRENGTH.



6 TYPICAL CONCRETE SITE RETAINING WALL



7 TYPICAL CONCRETE SITE RETAINING WALL  
SCALE: 1/2" = 1'-0"



8 TYPICAL CONCRETE SITE RETAINING WALL  
SCALE: 1/2" = 1'-0"

APPROVED  
 PLANNING BOARD  
 of HOWARD COUNTY

DATE 9-6-2000  
 K/RA

Date \_\_\_\_\_  
 Professional Engineer No. \_\_\_\_\_

APPROVED: HOWARD COUNTY DEPT. OF PLANNING AND ZONING

Chief, Development Engineering Division	2/2/01
Chief, Division of Land Development	2/16/01
Director	2/12/01

Date No.	Revision Description
	Stevens Forest Green
	OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MD. 21044
	DEVELOPER: STEVENS FOREST GREEN, L.L.P. C/O THE CREANEY & SMITH GROUP 925 FELL STREET BALTIMORE, MD. 21231

**MIC**

MORABITO CONSULTANTS, INC.  
 STRUCTURAL ENGINEERS

2526 SAINT PAUL STREET  
 BALTIMORE, MARYLAND 21216-4689  
 (410) 467-2377  
 FAX (410) 467-4132  
 www.morabitoconsultants.com

**DMW**

Daft M. Cune Walker, Inc.  
 A Team of Land Planners, 200 East Pennsylvania Avenue  
 Landscape Architects, Towson, Maryland 21286  
 Engineers, Surveyors & Environmental Professionals  
 410 296 3333  
 Fax 296 4705

FOUNDATION DETAILS  
 AND GENERAL NOTES

Drn By: A.S.F.	Scale: 3/4"=1'-0"	PROJ. NO. 00043
Des By: F.J.M.	Date: 7-21-00	
Chk By: F.J.M.	Approved:	23 of 23

**BROKEN LAND PARKWAY**  
HOWARD COUNTY INTERMEDIATE ARTERIAL

VILLAGE OF OWEN BROWN  
SECTION 5 AREA 2  
L.30 F.73

VOB SECTION 5 AREA 1  
L.30, F.73  
ZONED NT-EMPLOYMENT

VOB SECTION 5 AREA 1  
PARCEL B  
ZONED NT-EMPLOYMENT

VOB SECTION 5 AREA 1  
PARCEL C  
ZONED NT-EMPLOYMENT

MAINTAIN ACCESS TO EX. 2 STORY  
OFFICE BUILDING AT ALL TIMES.

**WOODSIDE COURT**

**LEGEND**

EX. MAJOR CONTOURS	---
EX. MINOR CONTOURS	----
PROP. STORM DRAIN	15" RCCP CL. IV
PROP. SEWER	6" S.
PROP. WATER	6" W.
EX. STORM DRAIN	EX. 21" RCCP
EX. SEWER	EX. 8" S.
EX. WATER	EX. 8" W.
PARKING COUNT LABELS	10
STANDARD CURB	---
REVERSE CURB	---
HANDICAP SYMBOLS	♿
HANDICAP RAMPS	▤
MANHOLE & INLET LABELS	M 4
EX. MANHOLE & INLET LABELS	EX 1-38
DETAIL CALL OUTS	Ⓢ
PROP. LIGHT FIXTURE	■
DEPRESSED CURB	---
RETAINING WALL	---
ELECTRICAL TRANSFORMER (BY OTHERS)	⊗
STEEP SLOPES (>=15%)	▨
STEEP SLOPES (>=25%)	▩
EX. PAVING TO BE REMOVED	▨

NOTE: SEE SHEETS 22 & 23 FOR  
RETAINING WALL DETAILS

APPROVED  
DATE: 9-6-2000  
1/2/RS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

<i>John P. ...</i>	2/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Candy ...</i>	2/9/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>...</i>	2/12/01
DIRECTOR	DATE

5-16-01 1 REV. PARKING LOT & STORM DRAIN. REMOVED WALL 'D'.  
7-11-06 2 REV. DIMENSION AT BUILDING CORNER (SW  
7-27-06 3 REV. DIMENSION AT BUILDING CORNER (SW  
corner of Bldg. To Property Line.)

IN THEIR LETTER DATED 6.8.06, DPZ  
DETERMINED THAT THE FOLLOWING  
SETBACK ISSUES TO BE IN SUBSTANTIAL  
COMPLIANCE WITH THE APPROVED SDP  
1) THE AS-BUILT LOCATION OF THE  
EXISTING BUILDING. 2) THE AS-BUILT  
LOCATION OF THE EXISTING  
RETAINING WALL. 3) THE NET  
LEASEABLE AREA OF THE BUILDING.

Revision Description

Date	No.	Description

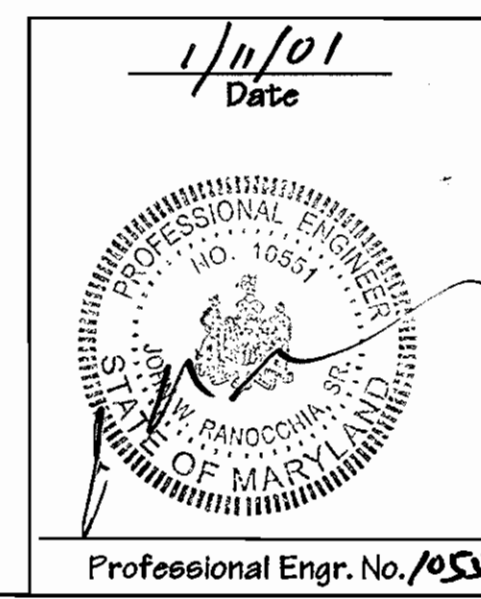
**COLUMBIA**  
**Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATENT PARKWAY  
COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
C/O THE CREANEY & SMITH GROUP  
325 FELL STREET  
BALTIMORE, MD 21231

**DMW**  
**Daft McCune Walker, Inc.**  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705

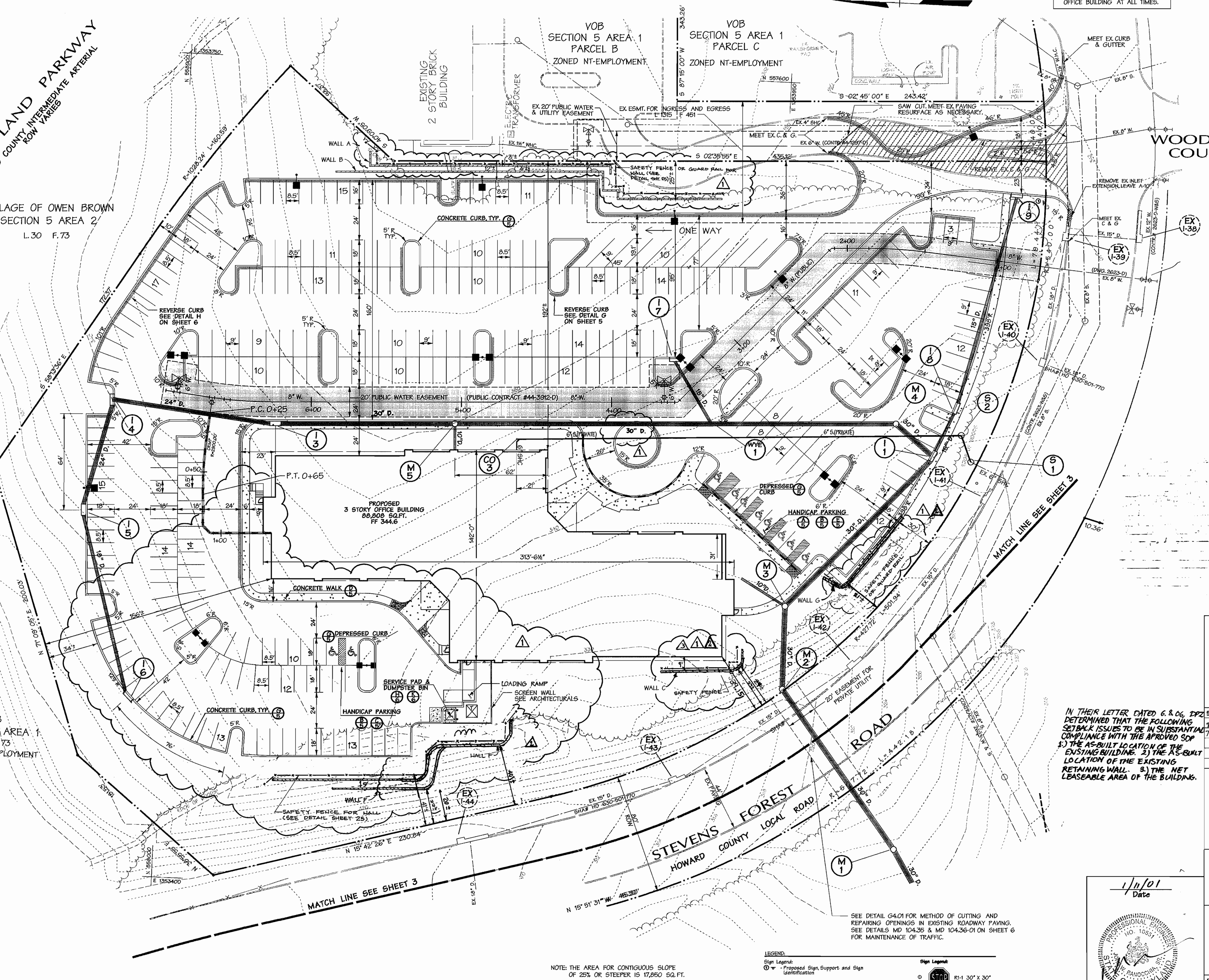


**SITE PLAN**

Dwn By: ADL	Scale: 1"=30'	Proj. No. 99136.B2
Des By: RLH	Date: 1-05-01	2 of 26
Chk By:	Approved:	

SDP-00-142

Fri, Jan 5 10:50:00 AM 2006



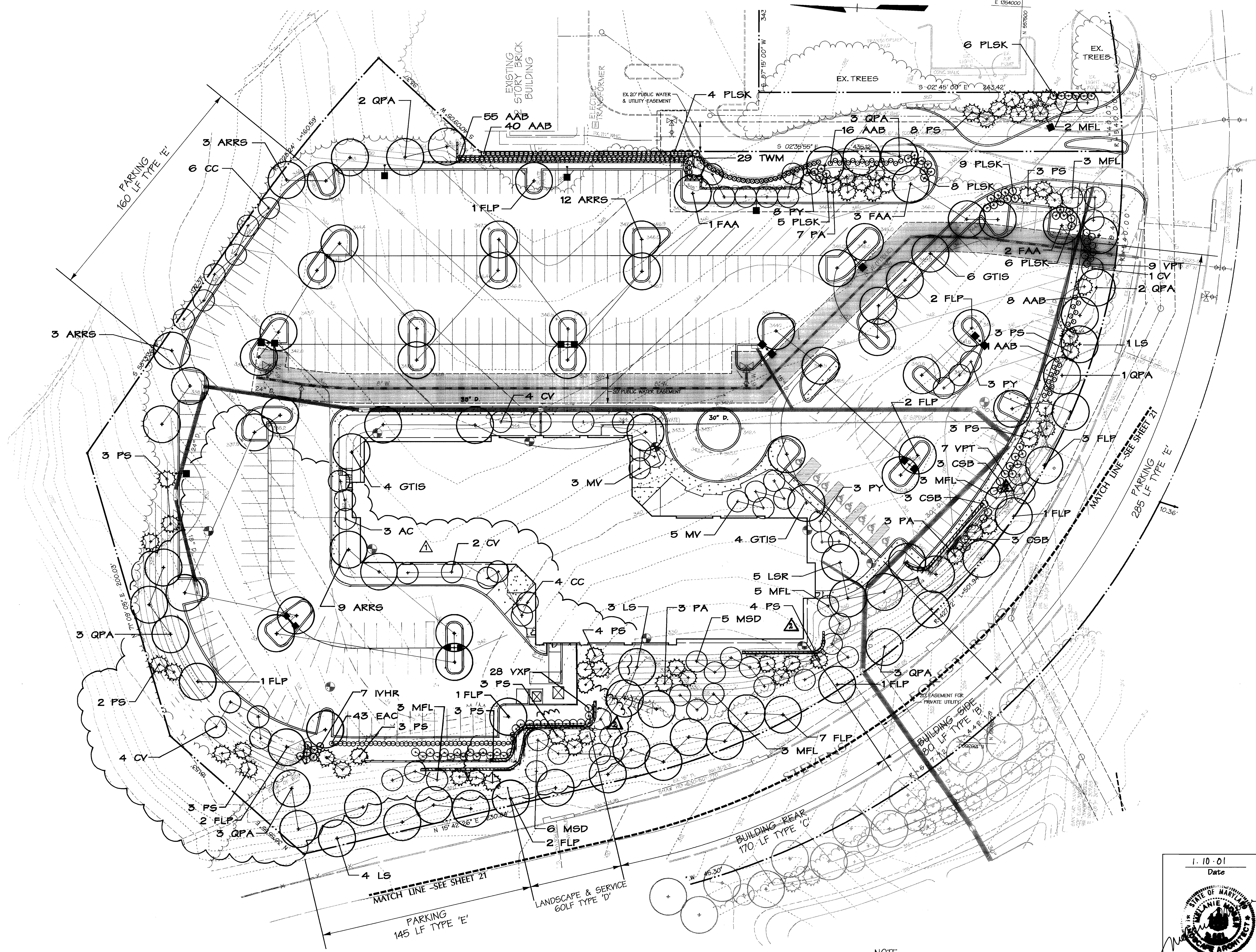
NOTE: THE AREA FOR CONTIGUOUS SLOPE  
OF 25% OR STEEPER IS 17,850 SQ. FT.

**LEGEND**

Sign Legend:	Sign Legend:
Ⓢ - Proposed Sign, Support and Sign Identification	Ⓢ - STOP R1-1 30" x 30"

SEE DETAIL G4.01 FOR METHOD OF CUTTING AND  
REPAIRING OPENINGS IN EXISTING ROADWAY PAVING.  
SEE DETAILS MD 104.35 & MD 104.36-01 ON SHEET 6  
FOR MAINTENANCE OF TRAFFIC.





APPROVED  
DATE: 9-6-2000  
K/L/A

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>John Daneman</i>	2/2/01
CHIEF, DEVELOPMENT ENGINEERING DIVISION	DATE
<i>Candy Hunter</i>	2/9/01
CHIEF, DIVISION OF LAND DEVELOPMENT	DATE
<i>James J. Smith</i>	2/12/01
DIRECTOR	DATE
5-16-01	1 REVISED LANDSCAPING
11-06	2 REV. RETAINING WALLS C.E.F. P. 6.

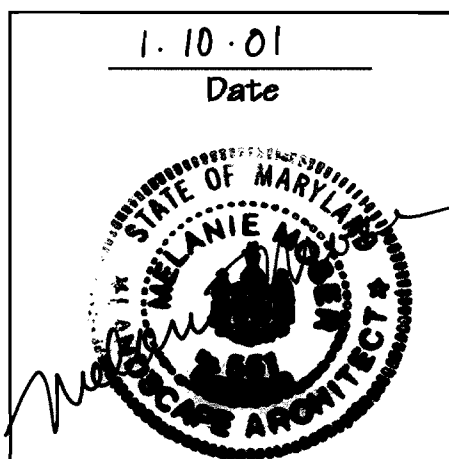
**COLUMBIA Stevens Forest Green**  
Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
10275 LITTLE PATENT PARKWAY  
COLUMBIA, MD 21044

DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
C/O THE CREANEY & SMITH GROUP  
925 FELL STREET  
BALTIMORE, MD 21231

**DMW**  
Daft · McCune · Walker, Inc.  
A Team of Land Planners, Landscape Architects, Engineers, Surveyors & Environmental Professionals

200 East Pennsylvania Avenue  
Towson, Maryland 21286  
410 296 3333  
Fax 296 4705



1-10-01  
Date

Landscape Architect No. 951

Drn By: FDK	Scale: 1"=30'	Proj. No. 99136.B2
Des By: FPB	Date: 1-05-01	
Chk By: FPB	Approved:	

NOTE:  
SEE LANDSCAPE SCHEDULES AND NOTES ON SHEET 21

SOILS TABLE

BrC3
BrB2

WOODSIDE COURT

DRAINAGE AREAS

DRAINAGE AREA	AREA (AC)	"C" FACTOR	% IMPERVIOUS
A	0.58	0.91	95
B	0.76	0.91	95
C	0.20	0.91	95
D	0.31	0.91	95
E	0.68	0.91	95
F	0.44	0.91	95
G	-	-	-
H	0.29	0.91	95
I	0.20	0.91	95
J	1.13	0.91	95
K	0.36	0.75	95

APPROVED  
 HOWARD COUNTY  
 DATE 9-6-2000  
 15/RB

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

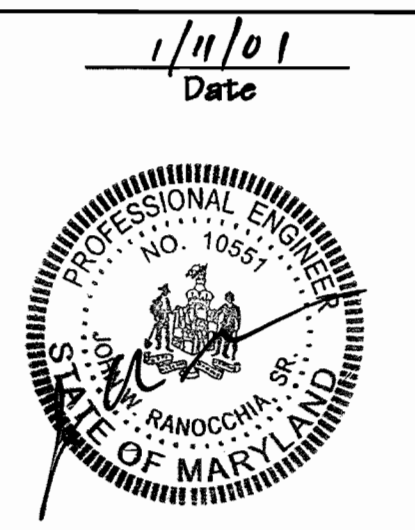
*Alvin Dammann* 2/2/01  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Candy Hamilton* 2/9/01  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Angela Smith* 2/12/01  
 DIRECTOR DATE

Date	No.	Revision Description
5-16-01	1	ADDED NOTE
7-11-05	2	REV RETAINING WALLS C.E.F.P.G.

COLUMBIA  
 Stevens Forest Green  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER: THE HOWARD RESEARCH & DEVELOPMENT CORPORATION  
 DEVELOPER: STEVENS FOREST GREEN, L.L.P.  
 10275 LITTLE PATENT PARKWAY  
 COLUMBIA, MD 21044  
 925 FELL STREET  
 BALTIMORE, MD 21231

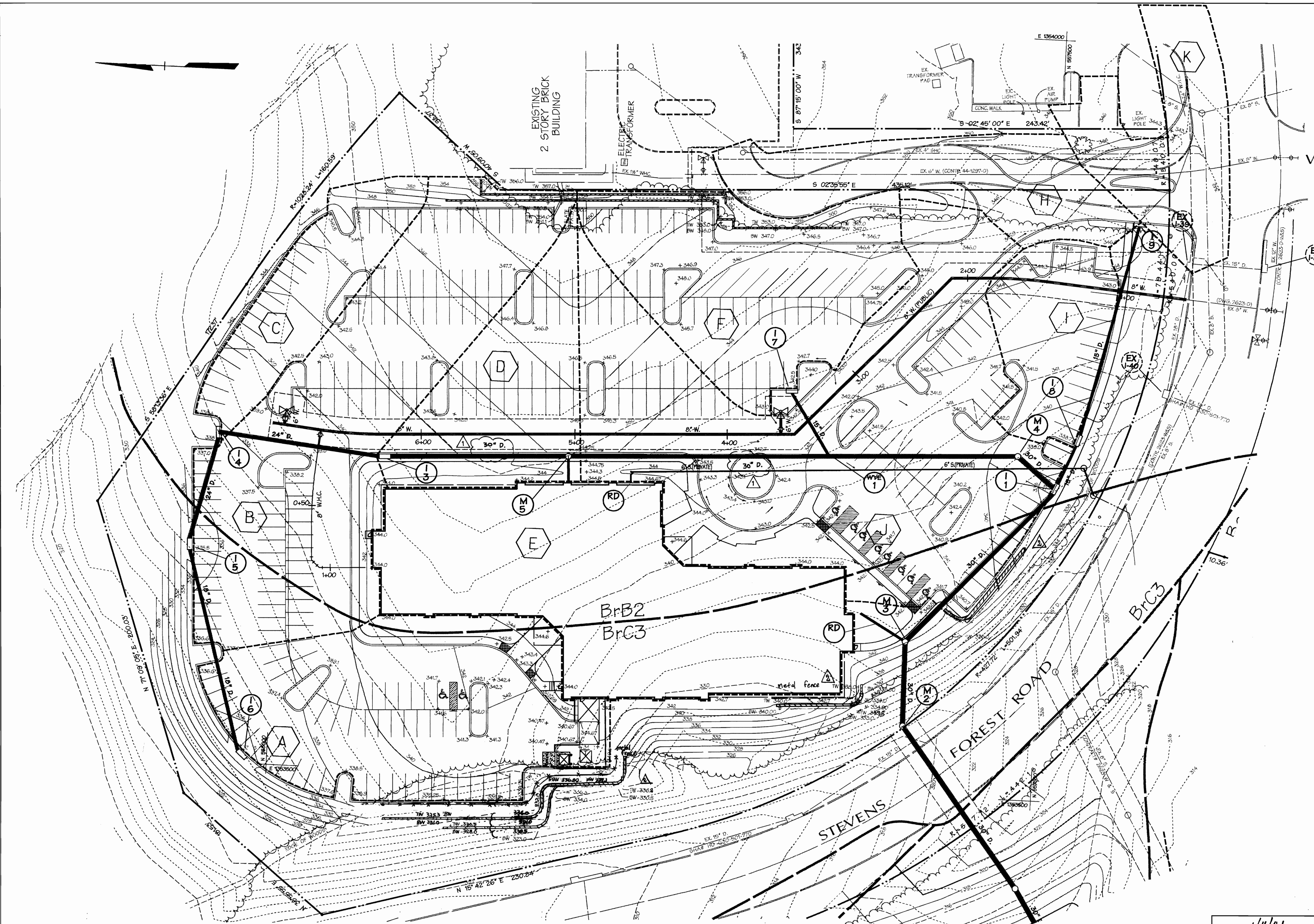
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STORM DRAIN  
 DRAINAGE AREA MAP

Drn By: ADL Scale: 1"=30' Proj. No. 99126.B2  
 Des By: SDS Date: 1-05-01  
 Chk By: Approved: 13 of 26

NOTE:  
 SEE SHEET 2 FOR REVISED PARKING LOT LAYOUT AND SHEET 4 FOR REVISED GRADING.



DEVELOPER'S CERTIFICATION:  
 "WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
 SIGNATURE OF DEVELOPER: *Craig M. Smith*  
 DATE: 1.09.01

ENGINEER'S 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."  
 SIGNATURE OF ENGINEER: \_\_\_\_\_  
 DATE: \_\_\_\_\_

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS  
 U.S. NATURAL RESOURCE CONSERVATION SERVICE DATE: \_\_\_\_\_  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 HOWARD S.C.D. DATE: \_\_\_\_\_

**BROKEN LAND PARKWAY**  
 HOWARD COUNTY INTERMEDIATE ARTERIAL  
 ROW VARIES

VILLAGE OF OWEN BROWN  
 SECTION 5 AREA 2  
 L.30 F.73

VOB SECTION 5 AREA 1  
 PARCEL B  
 ZONED NT-EMPLOYMENT

VOB SECTION 5 AREA 1  
 PARCEL C  
 ZONED NT-EMPLOYMENT

**WOODSIDE COURT**

SEE SHEET 2 FOR LEGEND

E 1353750  
 N 1972820

APPROVED  
 DATE 9-6-2000  
 K/LAS

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING	
<i>W.D. Drumm</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	2/2/01 DATE
<i>Caroly Hamilton</i> CHIEF, DIVISION OF LAND DEVELOPMENT	2/9/01 DATE
<i>James S. Smith</i> DIRECTOR	2/12/01 DATE

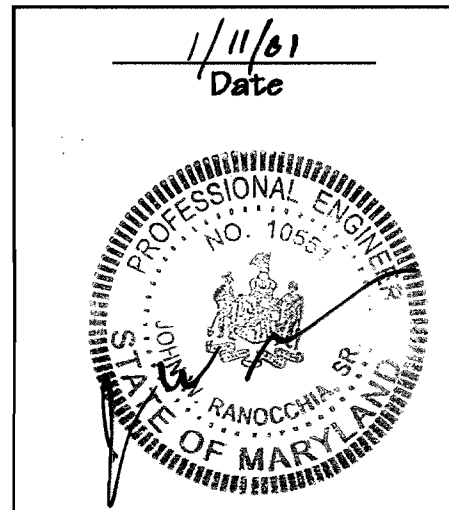
5-16-01	1	REVISED GRADING.	
7-11-06	2	REVISED RETAINING WALLS	C.F.F.G.

**COLUMBIA Stevens Forest Green**  
 Section 5 Area 1 Parcel A-1 & Lot 5

OWNER THE HOWARD RESEARCH & DEVELOPMENT CORPORATION 10275 LITTLE PATRIENT PARKWAY COLUMBIA, MD 21044	DEVELOPER STEVENS FOREST GREEN, L.L.P. C/O THE CREANEY & SMITH GROUP 325 FELL STREET BALTIMORE, MD 21231
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 Fax 296 4705



**GRADING PLAN**

Drn By: ADL	Scale: 1"=30'	Proj. No. 99136.B2
Des By: DA	Date: 1-05-01	
Chk By:	Approved:	