

SHEET INDEX

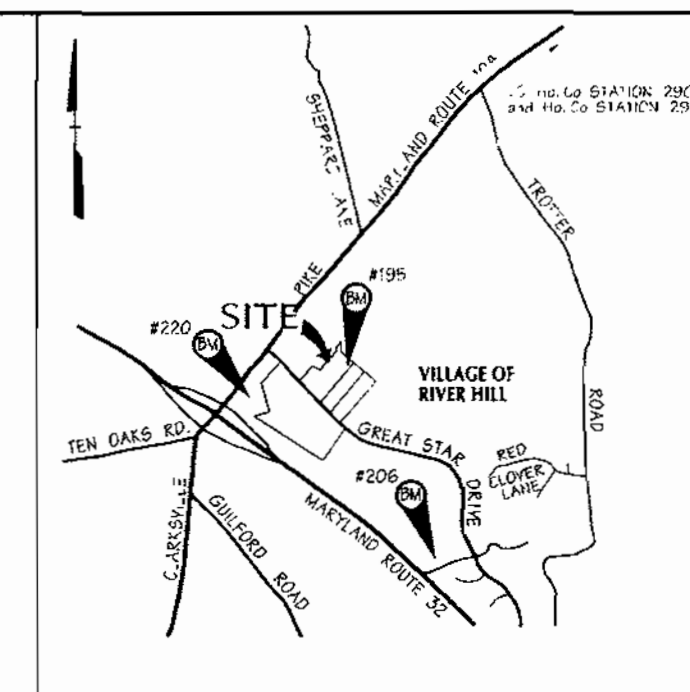
SHEET	DESCRIPTION
1	COVER SHEET
2	SITE PLAN
3	SITE PLAN
4	GRADING PLAN
5	GRADING PLAN
6	SITE DETAILS & PAVING LEGEND
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9	SEWER PROFILES
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11	EROSION & SEDIMENT CONTROL DETAILS
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13	LANDSCAPE PLAN
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16	DRAINAGE AREA MAP

SITE DEVELOPMENT PLAN COLUMBIA

VILLAGE OF RIVER HILL

SECTION 4 • AREA 1 • PHASE 1 • PARCEL A-1

5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND



VICINITY MAP
SCALE: 1"=2000'

BENCHMARK

POINT NO.	DESCRIPTION	ELEV.
195	1/2"x1/8" REBAR w/ TRAV. CAP	445.28
206	1/2"x1/8" REBAR w/ TRAV. CAP	374.53
220	1/2"x1/8" REBAR w/ TRAV. CAP	457.14

ADDRESS CHART

BLDG	STREET ADDRESS
1	5801 CLIFFER LAKE
2	5800 CLIFFER LAKE
3	5900 WHALEBOAT DRIVE
4	6000 SAME VOYAGE WAY
GARAGE	
A	5824 PIONEERS COURT
B	5814 PIONEERS COURT
C	5804 PIONEERS COURT
D	5914 WHALEBOAT DRIVE
E	6004 SAME VOYAGE WAY
F	6014 SAME VOYAGE WAY
G	5894 CLIFFER LAKE

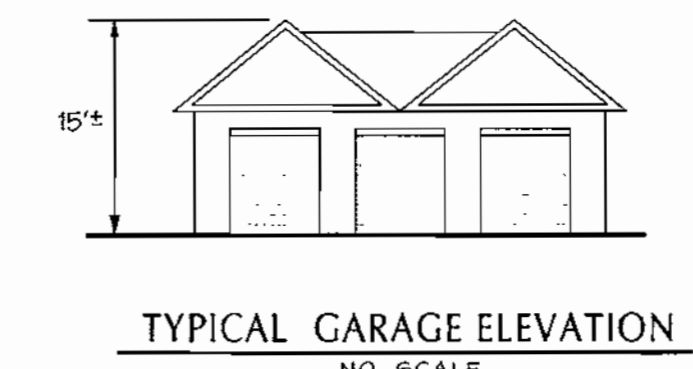
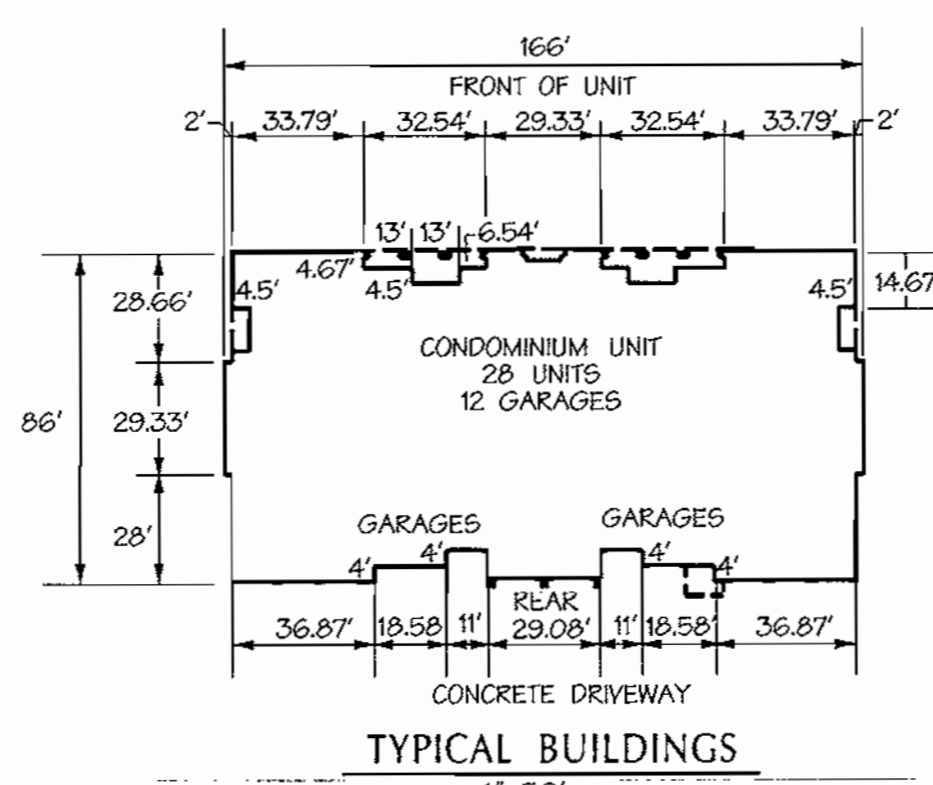
LEGEND

- 10' EXISTING CONTOUR
- 2' EXISTING CONTOURS
- 10' PROPOSED CONTOUR
- 2' PROPOSED CONTOUR
- DEPRESSED CURB R-3.01
- REVERSE CURB & GUTTER R-3.01
- STANDARD CURB & GUTTER R-3.01
- PROPOSED STORM DRAIN
- PROPOSED SEWER
- PROPOSED WATER
- PARKING COUNT
- GARAGE PARKING COUNT
- LIGHTING BY OTHERS
- PROP. PRIVATE ROAD (SEE SHEET 6 FOR PAVING DETAILS)
- CONCRETE WALK R-3.05
- HANDICAP RAMP R-6.12

SITE ANALYSIS:

- Zoning: New Town - Apartments Per FDP Ph. 222-A-1, Part 1
- Project Area: 5.7 Ac. or 248,292 S.F.
- Area of submission: 6.0 Ac. or 261,360 S.F.
- Proposed Use: 4 Story Condominium Buildings
- Area Tabulation

Total units allowed	107 units per FDP PH-222-A-1 Part 1
Total units provided	106 Condominiums (2-28 Unit Bldgs : 2-25 Unit Bldg) w/ 12 Garages
A. Building area coverage	57,200 or 1.3 Ac.
B. Limit of Disturbance	6.0 Ac.
C. Impervious Area	4.1 Ac.
D. Green Area	1.9 Ac.
- Parking Required: 212 sp. (2 sp./1 UN)
- Parking Provided: 214 sp. (2.02 sp./1 UN)
 - 96 sp. (Garage / Driveway)
 - 31 sp. (Private Garages)
 - 87 sp. (Common Parking)



GENERAL NOTES

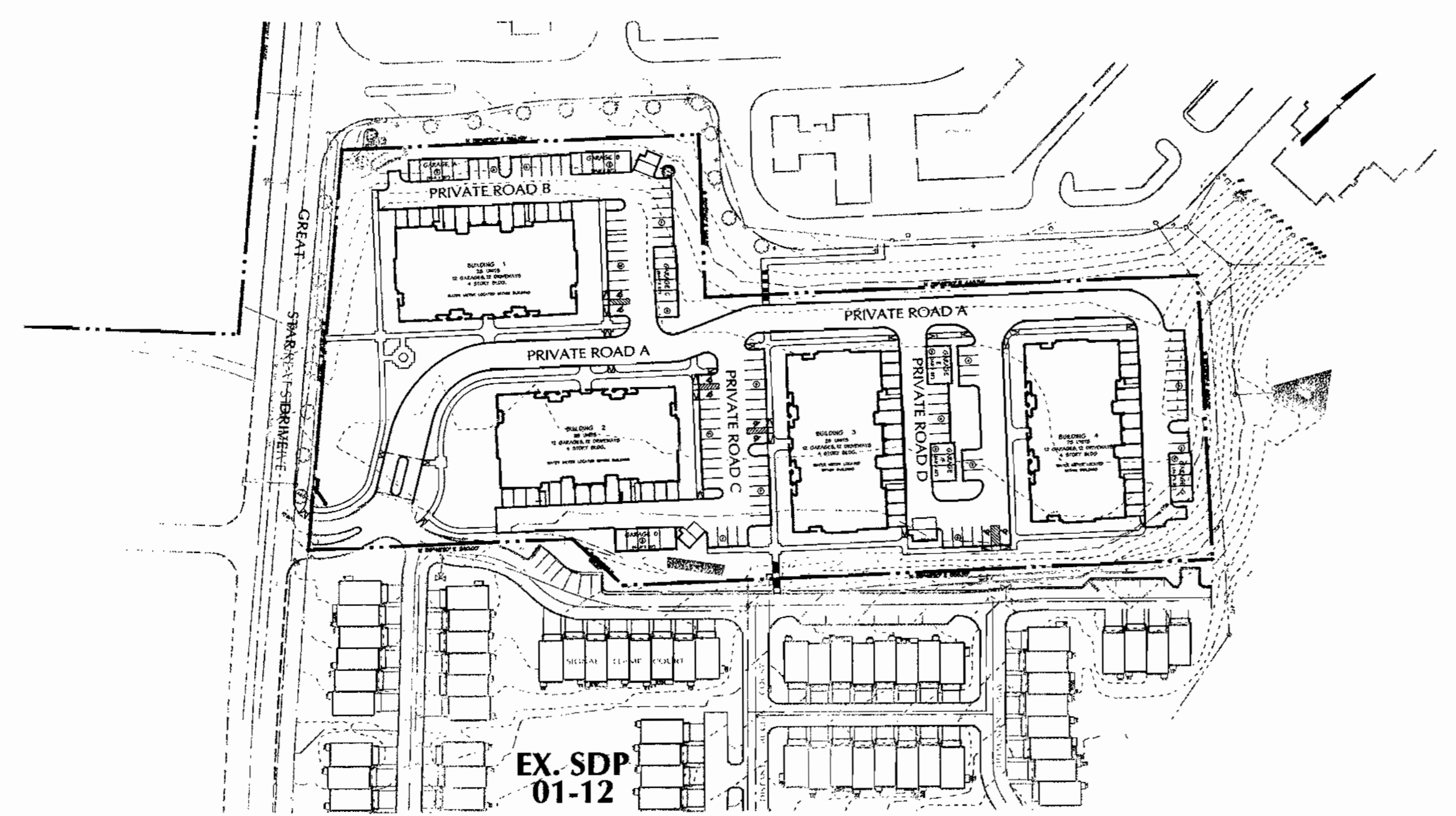
- All construction shall be in accordance with the latest standards and specifications of Howard County.
- The contractor shall notify the Bureau of Engineering/Construction Inspection Division at (410) 313-1880 at least five (5) working days prior to the start of work.
- The contractor shall notify '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 DMW Inc., Dated May 12, 2001. Topography adjacent to YORH 411 Par.A-3 was shown per SDP.0112.
- Coordinates and bearings shown hereon are referred to the Maryland Coordinate system (NAD 83) as projected by Howard County Geodetic Control stations No. 2904 & 2905.
- Stormwater management is provided off-site for quantity and quality per F-96-110. Existing pond #8 provides 1 year peak management and water quality by shallow marsh. Full peak management is provided elsewhere on F-96-110.
- 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 R. Balzer, Inc.
- 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: S-93-21, P-95-10, F-96-89, F-96-110, FDP, Ph. 222-A-1, Part 1.
- All inlets shall be constructed in accordance with Howard County standards or MSHA Standards as specified on this 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 222-A-1 Part 1.
- All on-site roadways and parking areas to be privately maintained.
- All curb radii are five feet unless otherwise labeled. 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 proposed handicap ramps shall be in accordance with the current A.D.A. Standards.
- There is no floodplain on this site.
- Traffic study was prepared by Wells & Associates, dated January 20, 1995 and approved on November 17, 2000.
- Public Water is utilized for this site. Meters will be located inside the building. Public sewer service provided per contract #24-3889.D, #30-3436.D, #34-3436.D and is within the Middle Patuxent drainage area in the Metropolitan District.
- This plan is exempt from Forest Conservation in accordance with Section 16.1202 (1) (i) (iv).
- This property is located within the Metropolitan District.
- There are no slopes greater than 25% greater than 20,000 contiguous S.F.
- All exterior lighting shall comply with Section 134 of the Howard County Zoning Regulations.
- The site is previously graded under F-96-110.
- Garages shall be used for parking purposes in accordance with Section 133.D.2. of the Zoning Regulations and FDP Phase 222-A-1, Part 1 criterion 3B-1.
- FDP criteria (FDP Ph. 222-A-1, Part 1)

a. parking spaces required	214 sp. (2 sp./unit)
b. units allowed on parcels:	
A-1 & B-1	= 215 units
PARCEL B1	= 108 units
Units remaining	= 107
Units provided	= 106
- Tentative allocations were granted with S-93-21 and permanent allocations for 467 units for 1996 and 15 units were granted with F-96-110.
- There will be no trash or recycling collection provided to this area by Howard County. Trash and recycling will be provided privately. All roadways are private.
- All buildings will have an automatic fire protection system.
- There are no historical structures or cemetery sites located on the subject property.
- No clearing, grading, or construction is permitted within the wetlands, stream or their required buffers, except as determined an essential disturbance by D.P.Z. and the H.C.S.C.D. in accordance with section 16.116 (c) of the subdivision Regulations.
- Water meters to be located inside of Buildings 1, 2, 3 & 4.
- FDP setback criteria:

FDP Criteria	(FDP 222-A-1, Part 1)	Apartment Use
Item 6D-1.a.	Setback from public road	30'
Item 6D-1.b.	Setback from property line	40'
Item 6D-1.c.	Distance between parallel buildings	90'
	Distance between buildings, all other situations (Note: 70' between building 1&2 approved by H.R.D.)	40'
Item 6D-1.d.	Distance from parking areas and access drives to building	20'
Item 6D-1.f.	Maximum lot coverage by buildings and structures	30%
Item 7D-1.	Maximum number of apartment units Permitted on Parcels A-1 and D-1	215
Item 8D-1.	Height Limitation	NONE
Item 9D-1.	Parking Requirement Two off-street parking spaces required per unit (2 spaces/unit x 106 units); (162 sq.ft./space)	212
Item 12D-1.	Coverage Requirement Maximum coverage by buildings and structures	30%

Handwritten note: 1/11/02 landscape survey = \$316,150.00 with Developers Agreement

Professional Engr. No. 10551
Date 3/14/02



LOCATION MAP

SCALE: 1"=100'

SHEET 2

SHEET 3

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: [Signature] 3/26/02
 Chief, Division of Land Development: [Signature] 3/26/02
 Director: [Signature] 3/27/02

Date	No.	Revision Description
		COLUMBIA
		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1
		BUILDINGS 1-4
OWNER/DEVELOPER:		CONTRACT PURCHASER:
The Howard Research and Development Company		Bozzuto Homes
10275 Little Patuxent Parkway		6401 Golden Triangle Drive
Columbia, Maryland 21044		Suite 200
		Greenbelt, MD 20770

SUBDIVISION NAME: VILLAGE OF RIVER HILL		SECTION/AREA: 4/1	LOT/PARCEL: A-3
FLAT/ OR L/P: 36	BLOCK: 36	TAX/ZONE MAP: 36	ELECT. DISTRICT: 5
WATER CODE:	SEWER CODE:	CENSUS TRACT: 6095	
TITLE: COVER SHEET			
Des By: MJP	Scale: 1"=100'	Proj. No.: 01043	
Dwn By: BKC	Date: 3/14/02		1 of 16
Chk By:	Approved:		

LEGEND

- 10' EXISTING CONTOUR
- 2' EXISTING CONTOUR
- 10' PROPOSED CONTOUR
- 2' PROPOSED CONTOUR
- DEPRESSED CURB R-3.01
- REVERSED CURB & GUTTER R-3.01
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- LIGHTING BY OTHERS
- PROP. PRIVATE ROAD (SEE SHEET 6 FOR PAVING DETAILS)
- CONCRETE WALK R-3.05
- HANDICAP RAMP R-6.12

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
John P. ... 2/6/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION & DATE
... .. 2/26/02
 CHIEF, DIVISION OF LAND DEVELOPMENT & DATE
... .. 3/27/02
 DIRECTOR DATE

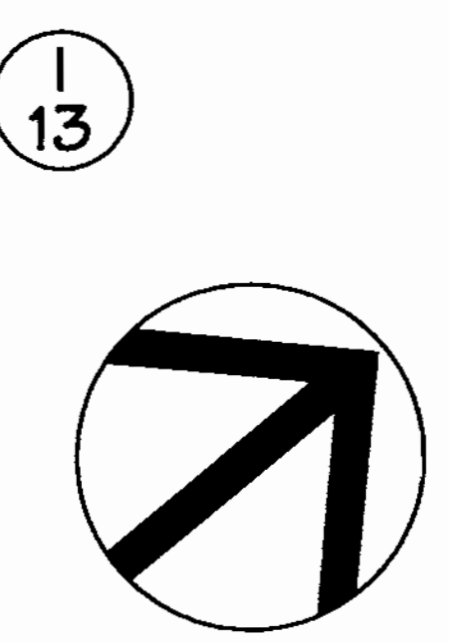
Date	No.	Revision Description
		COLUMBIA
VILLAGE OF RIVER HILL		
SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4		
OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044		CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770

DMW
 Daft McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3312
 Fax 296-4705

A Team of Land Planners,
Landscape Architects,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

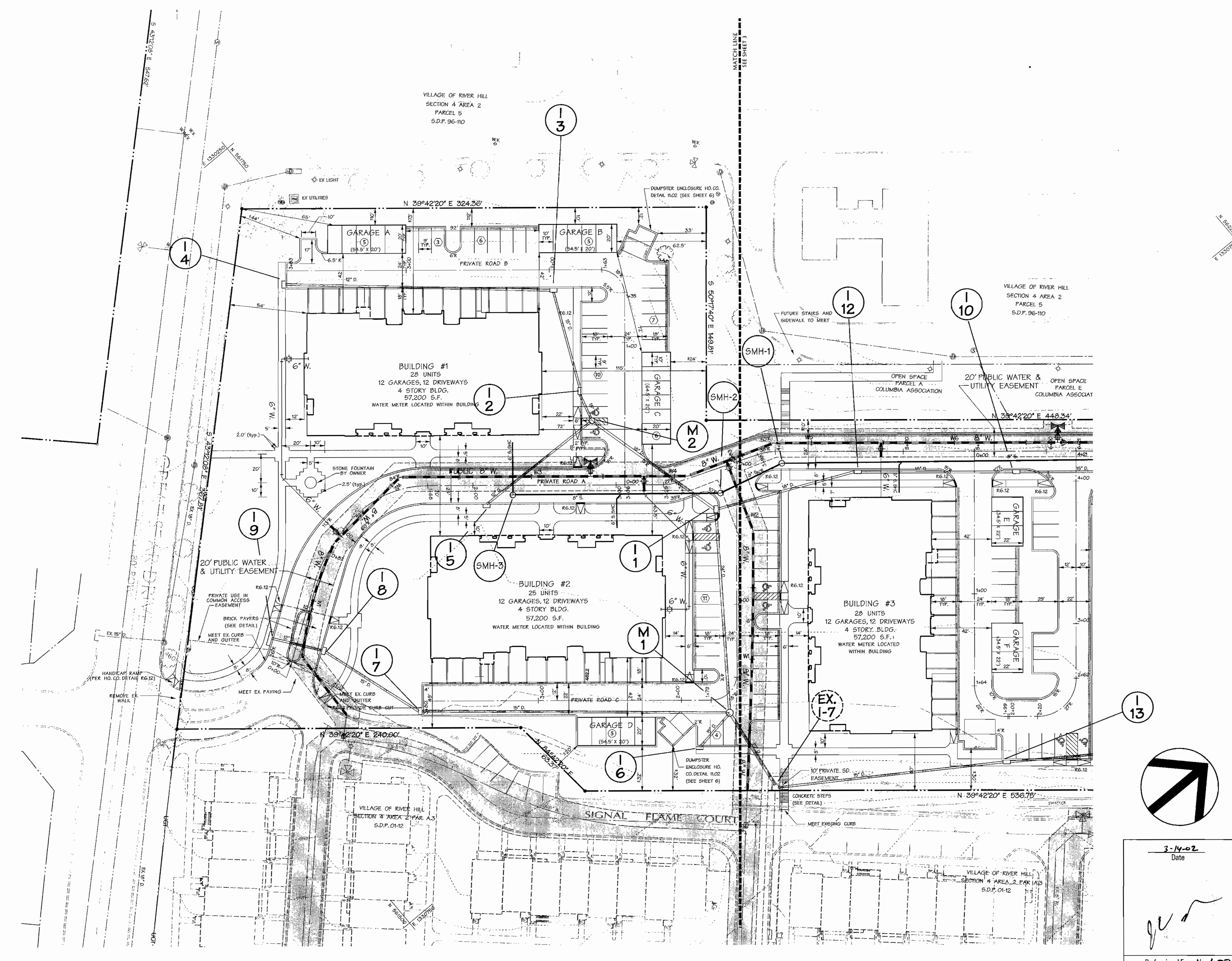
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SITE PLAN

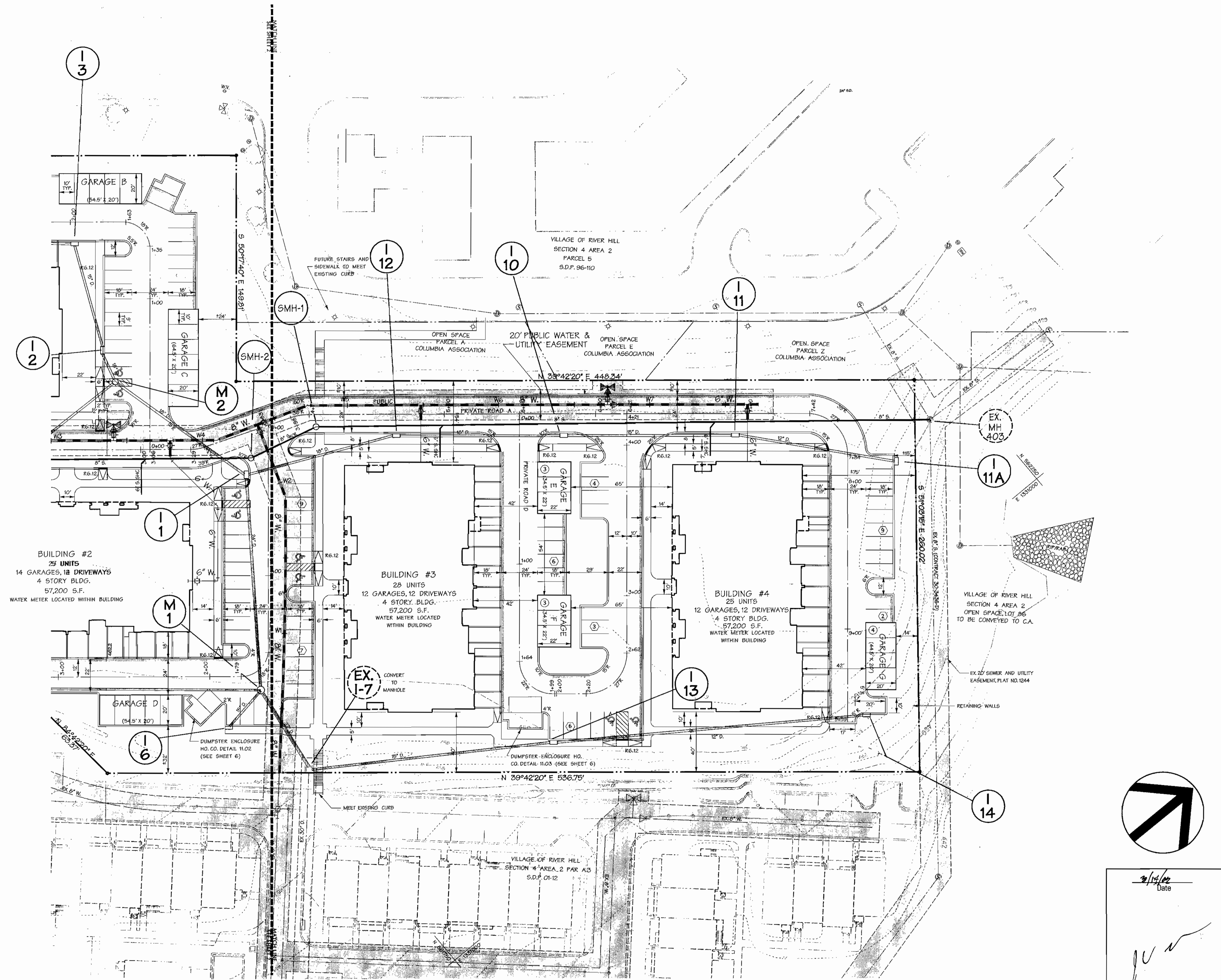
Des By	MJP	Scale	1"=30'	Proj. No.	01043
Drn By	BKC	Date	2/14/02	2 of 16	
Chk By		Approved			



3-14-02
Date

Professional Engr. No. 6057





- LEGEND**
- 10' EXISTING CONTOUR
 - 2' EXISTING CONTOURS
 - 10' PROPOSED CONTOUR
 - 372 2' PROPOSED CONTOUR
 - DEPRESSED CURB R-3.01
 - REVERSE CURB & GUTTER R-3.01
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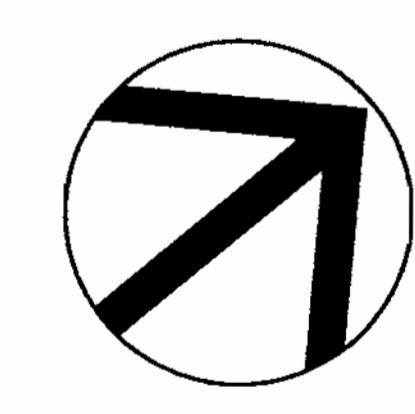
APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 3/26/02
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 3/26/02
 DIRECTOR *[Signature]* 3/27/02

Date	No.	Revision Description
		COLUMBIA
		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4
		OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044
		CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770

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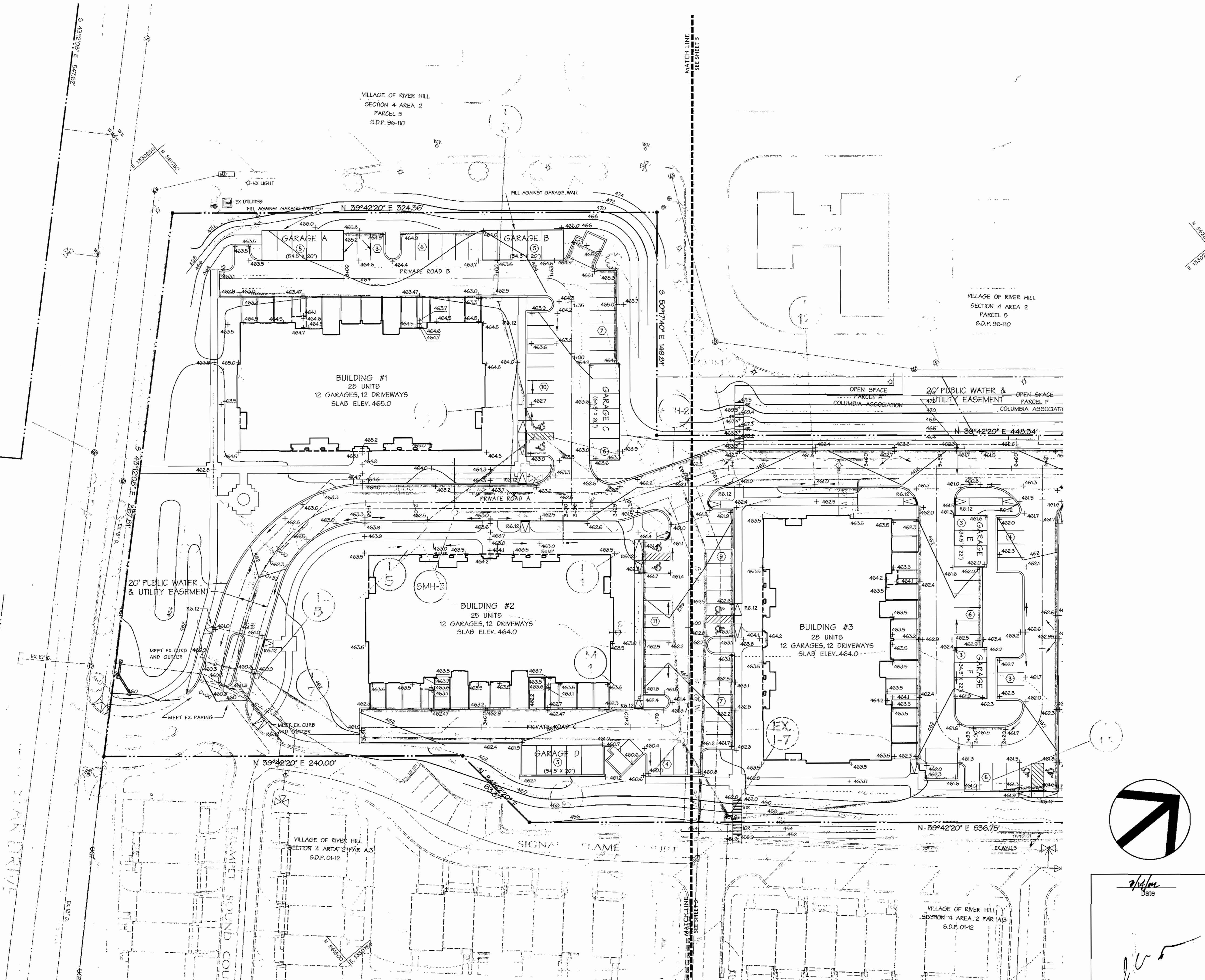
A Team of Land Planners,
 Landscape Architects,
 Golf Course Architects,
 Engineers, Surveyors &
 Environmental Professionals



[Signature]
 Date 3/14/02

TITLE **SITE PLAN**

Des By MJP	Scale 1"=30'	Proj No. 01043
Dirn By BKC	Date 3/14/02	3 of 16
Chk By	Approved	



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 2/6/02 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 2/26/02 DATE
 DIRECTOR *[Signature]* 3/27/02 DATE

Date	No.	Revision Description
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		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4
		OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044
		CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770

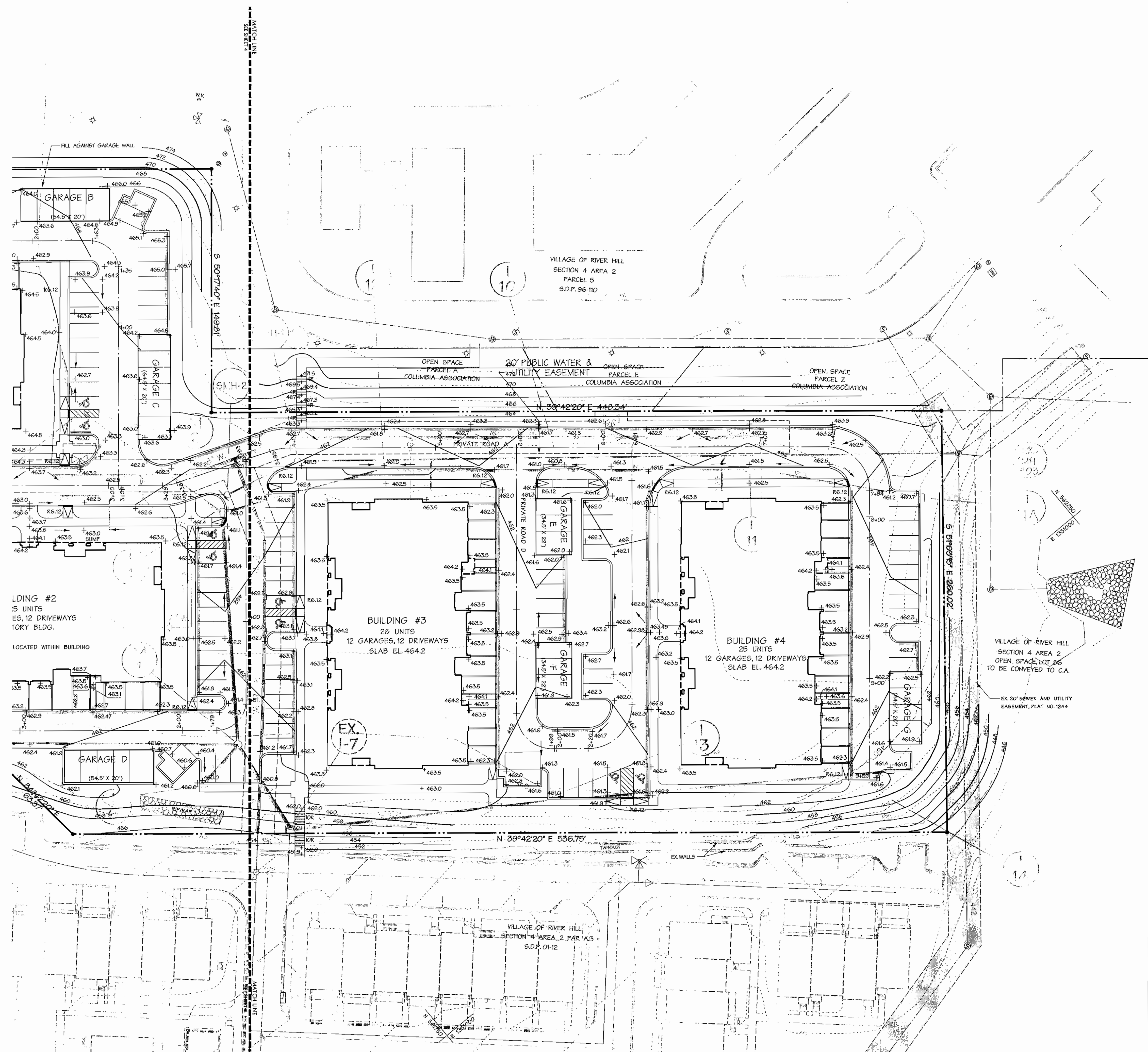
DMW
 Daft McCusker-Walker, Inc.
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 Towson, Maryland 21286
 (410) 296-3339
 Fax 296-4705

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 Landscape Architects,
 Golf Course Architects,
 Engineers, Surveyors &
 Environmental Professionals

[Signature]
 Date 2/14/02

Professional Engr. No. 10591

TITLE GRADING PLAN		
Des By	MJP	Scale 1"=30'
Drn By	BKC	Date <u>2/14/02</u>
Proj. No.	01043	
Chk By	Approved	4 of 16

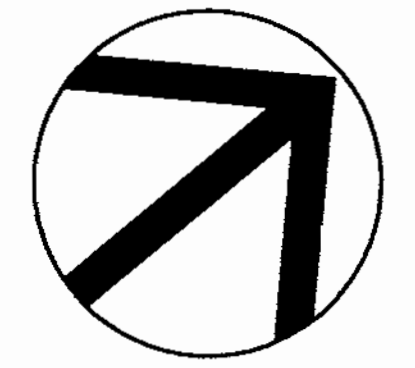


APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[Signature] 2/20/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 3/26/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 3/27/02
 DIRECTOR DATE

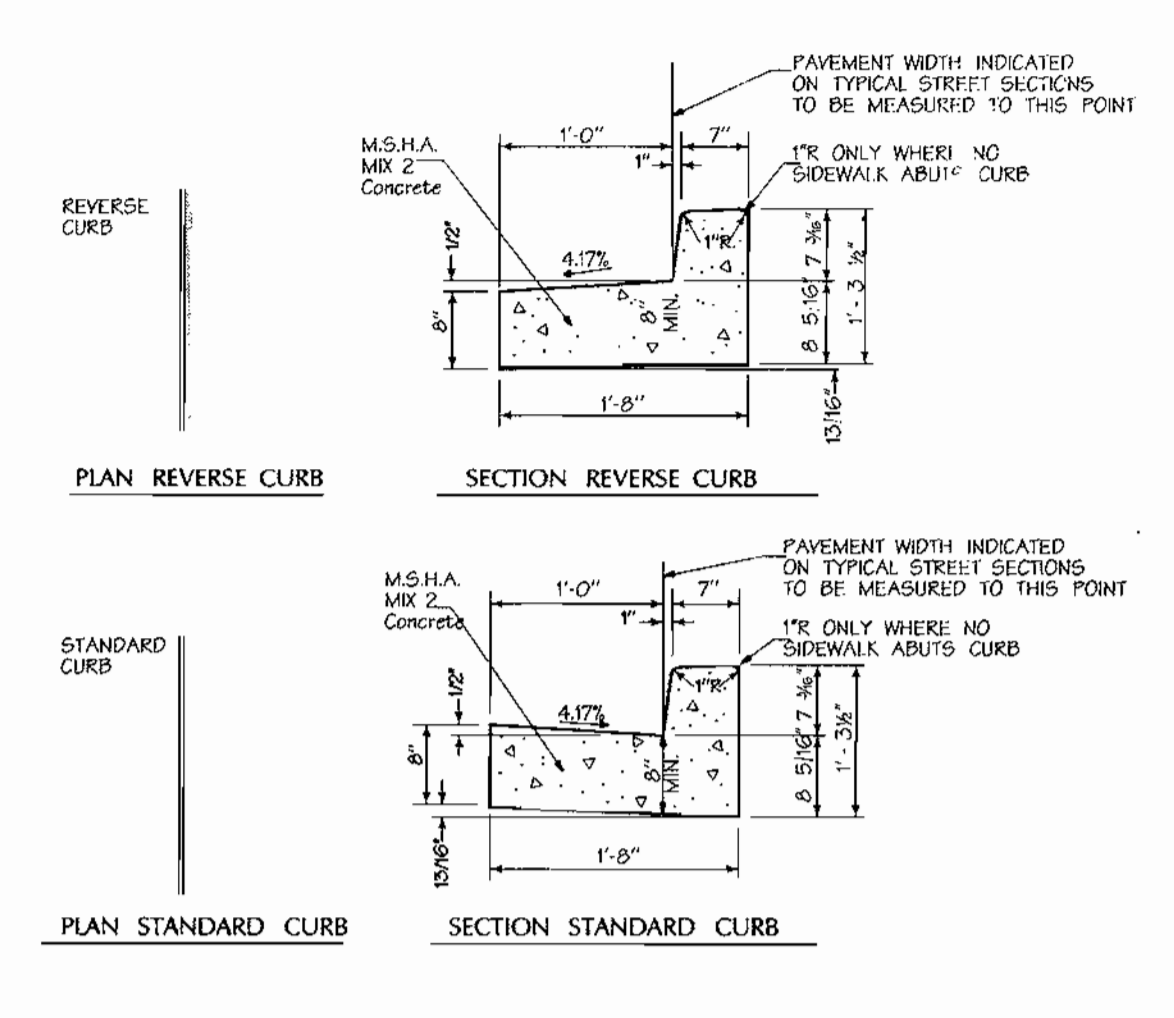
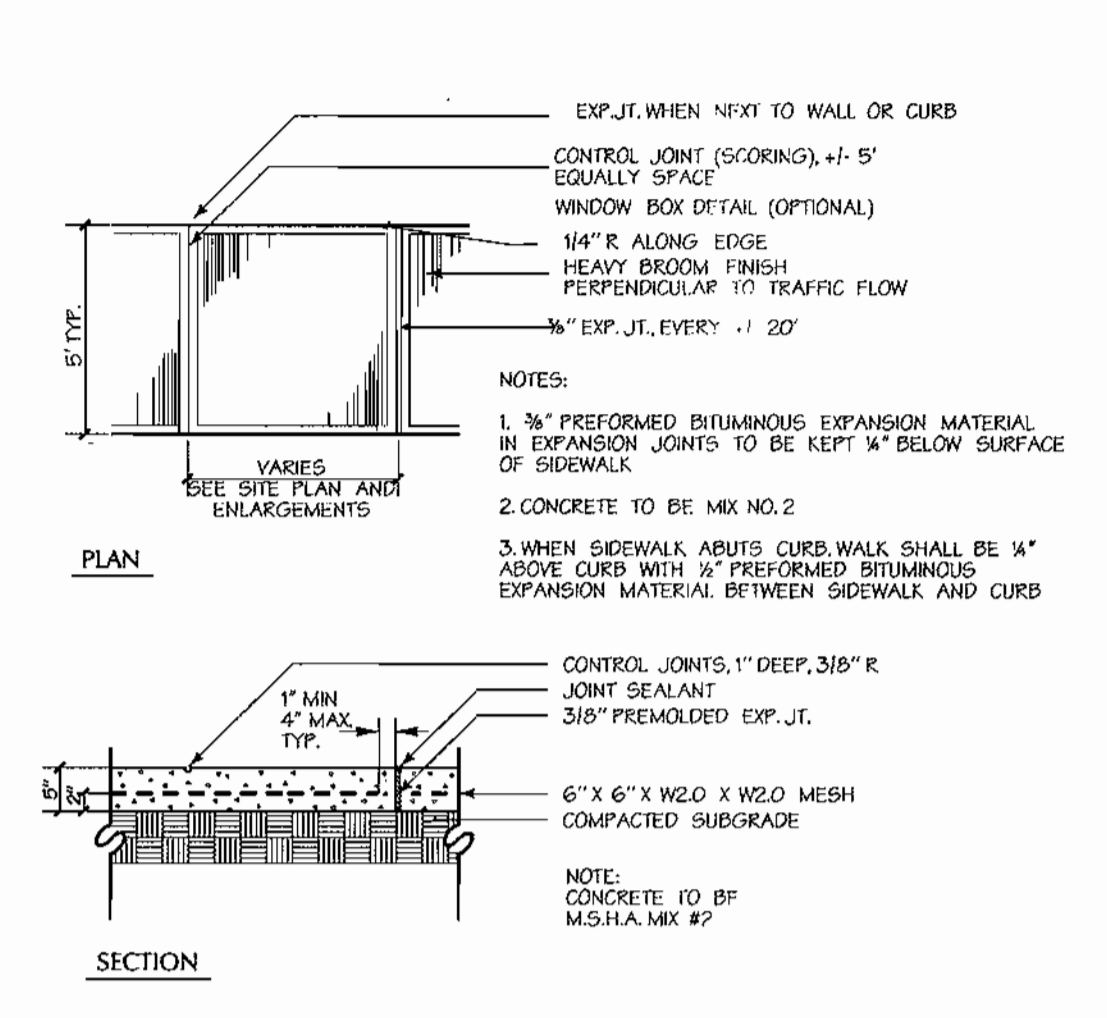
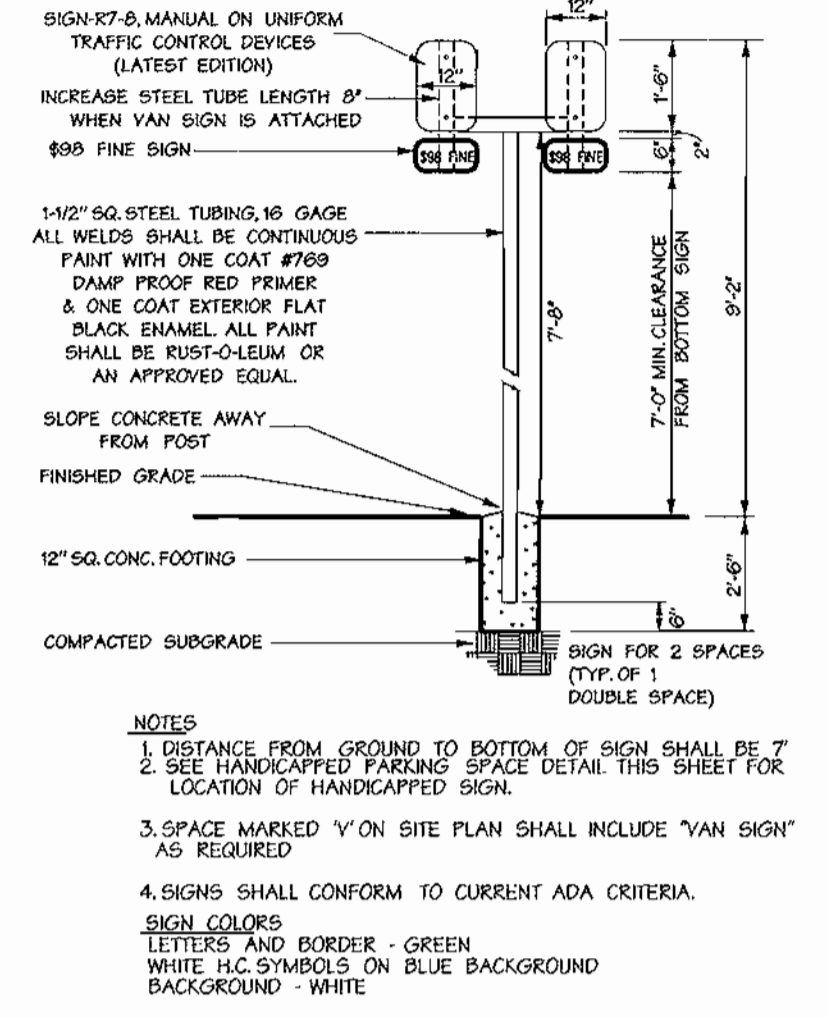
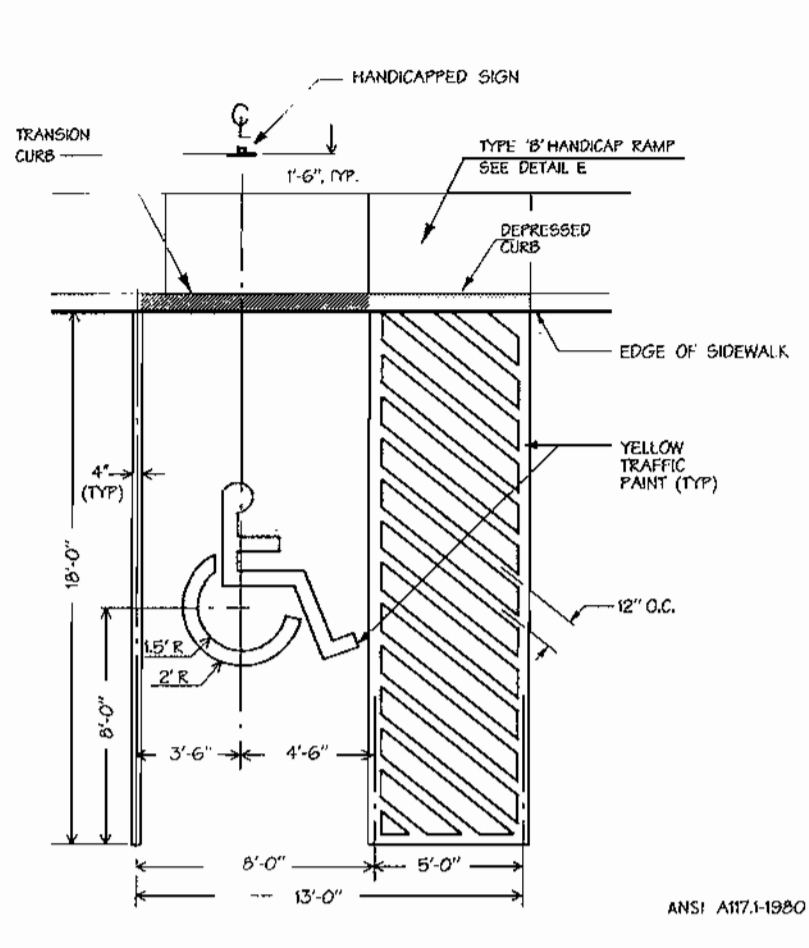
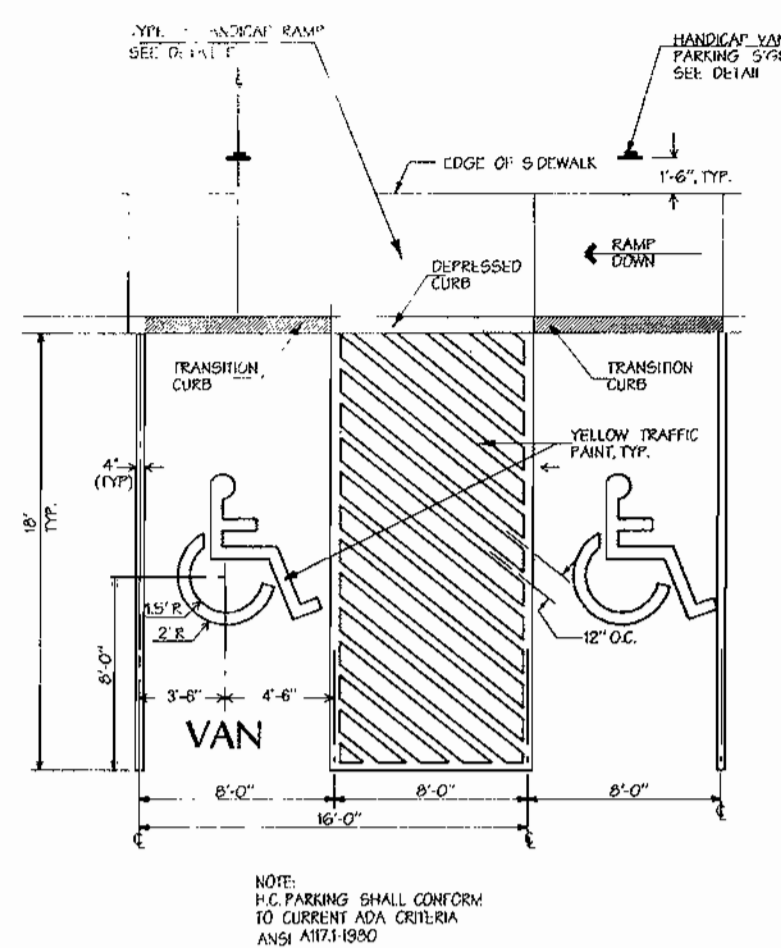
Date No. Revision Description
 COLUMBIA
VILLAGE OF RIVER HILL
 SECTION 4 AREA 1 PARCEL A-1
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 OWNER/DEVELOPER: The Howard Research and Development Company
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044
 CONTRACT PURCHASER: Bozzuto Homes
 6401 Golden Triangle Drive
 Suite 200
 Greenbelt, MD 20770

DMW
 Dan McCune-Walker, Inc.
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 (410) 296-3333
 Fax 296-4705
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 Golf Course Architects,
 Engineers, Surveyors &
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2/14/02
 Date
[Signature]
 Professional Engr. No. 19551

TITLE
GRADING PLAN
 Des By MJP Scale 1"=30' Proj. No. 01043
 Dwn By BKC Date 2/14/02 5 of 16
 Chk By Approved



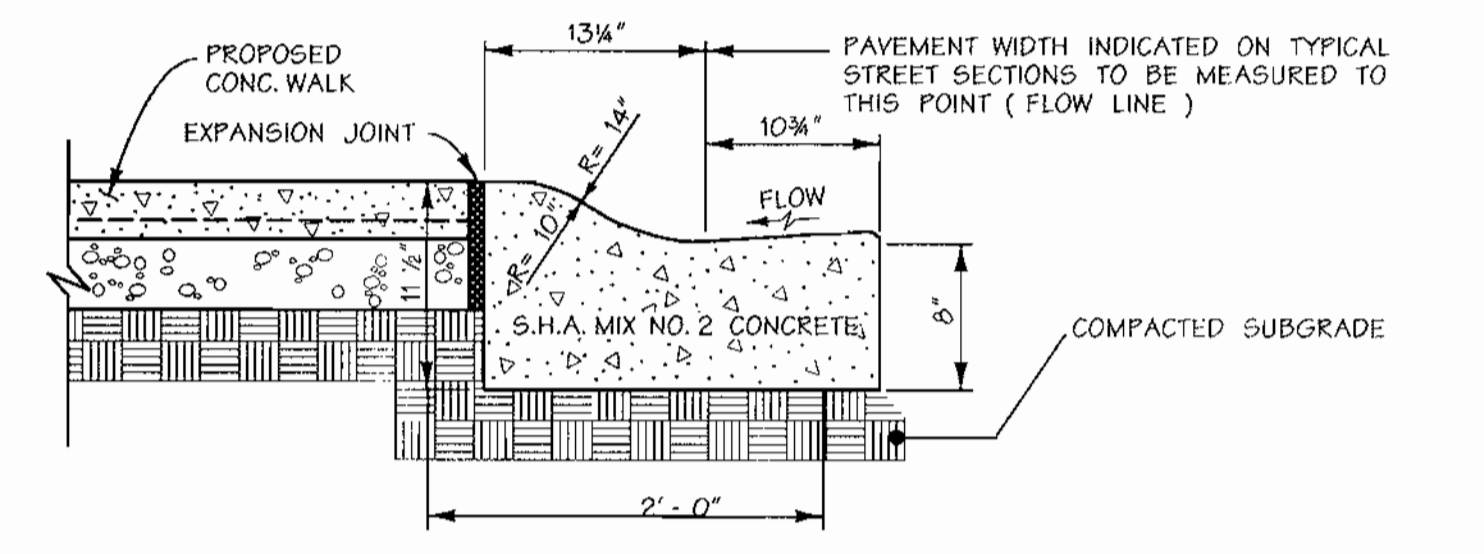
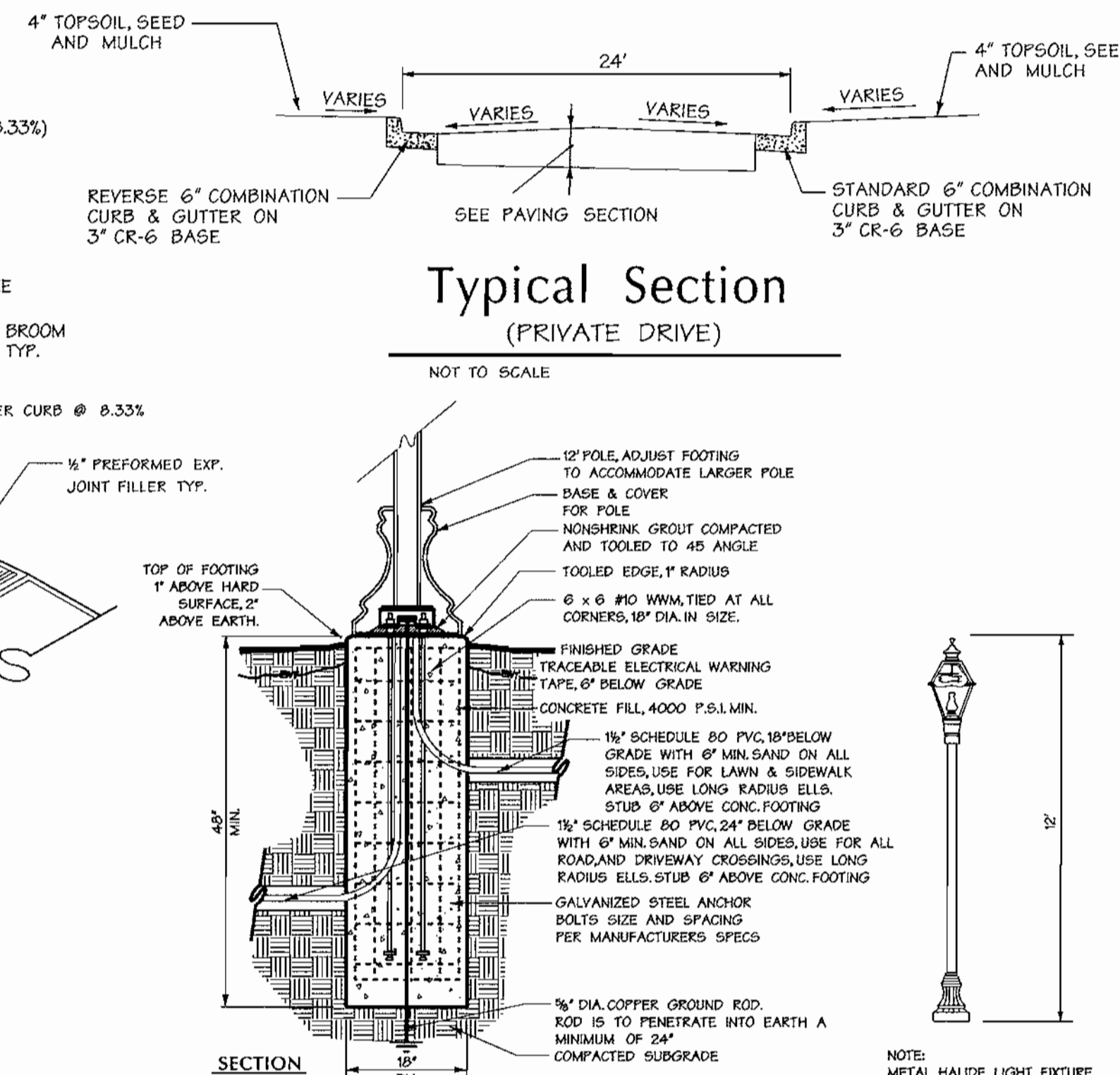
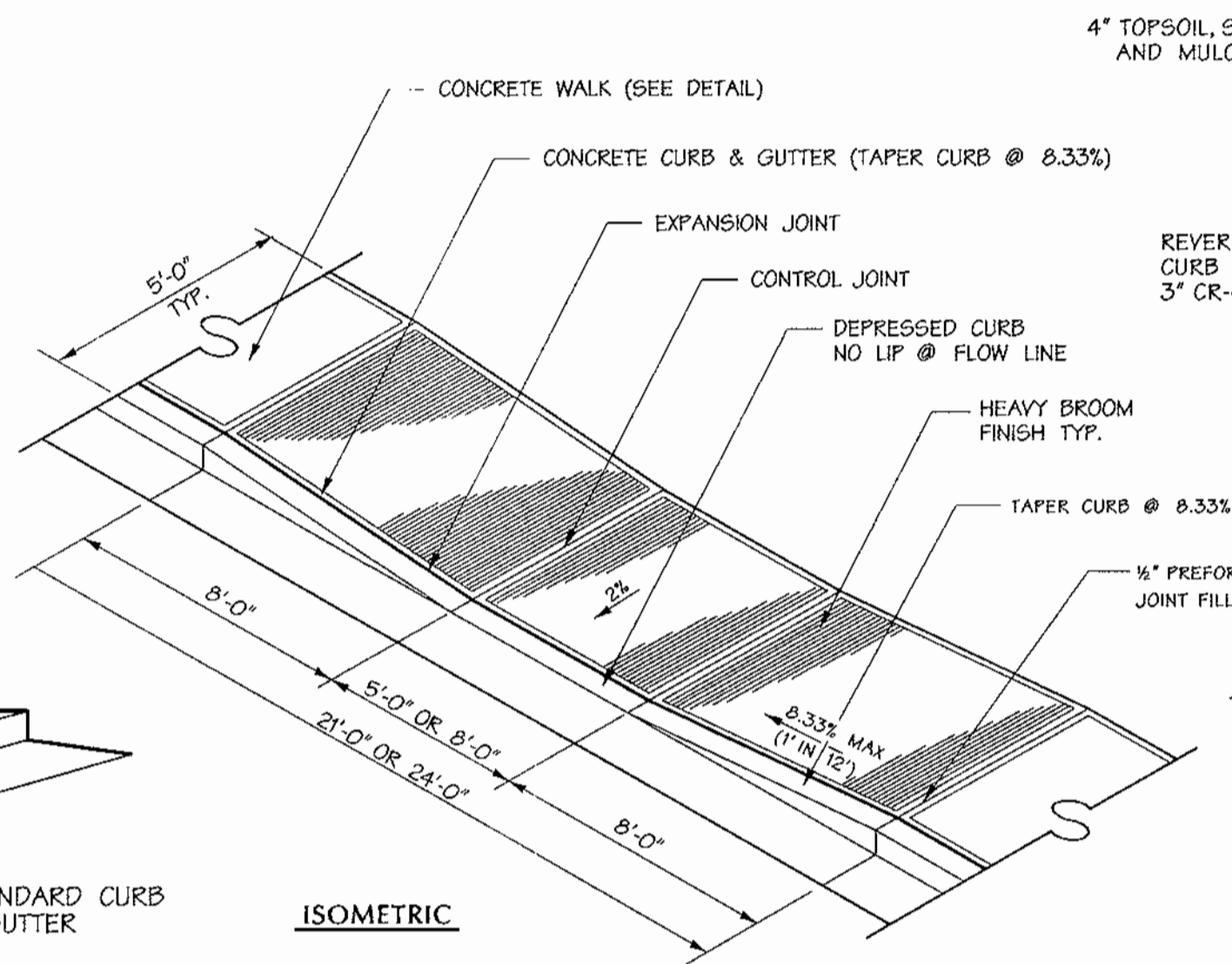
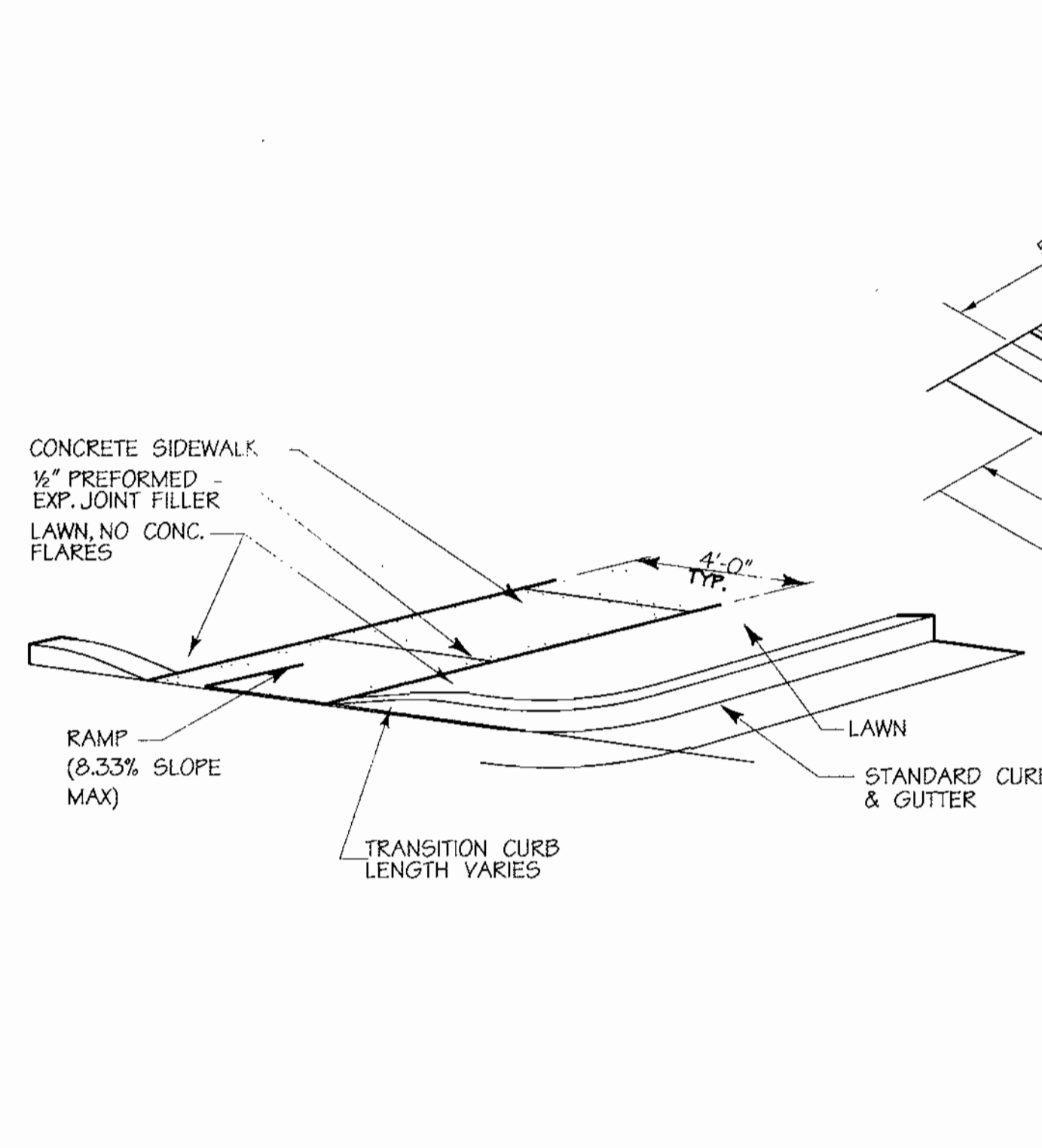
Handicap Parking: Van & Standard
Not To Scale

Handicap Parking Space
Not To Scale

Handicap Parking Signs
Not To Scale

Concrete Walk
Not To Scale

Concrete Curb, Typical (R3.01)
Not To Scale

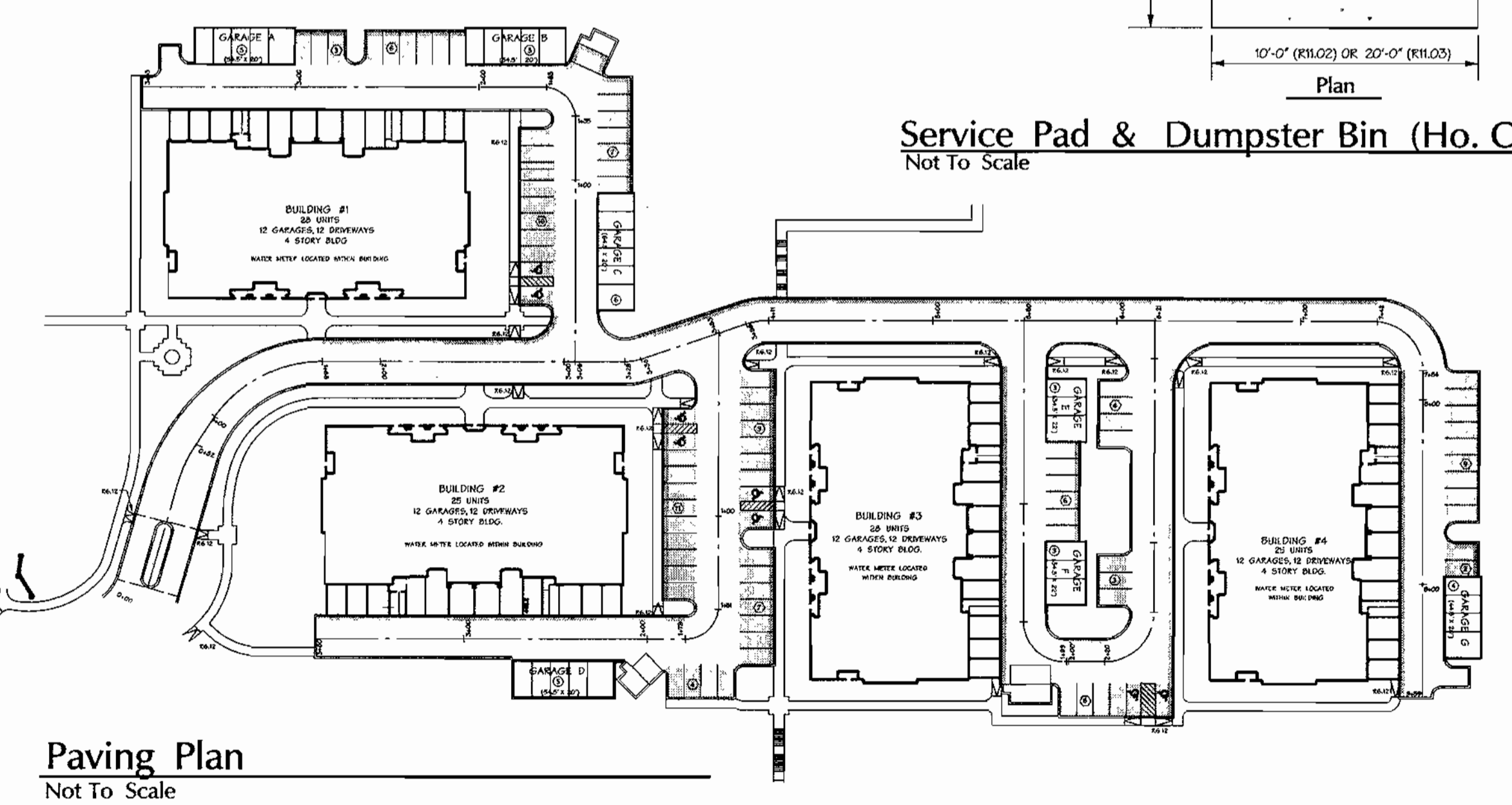
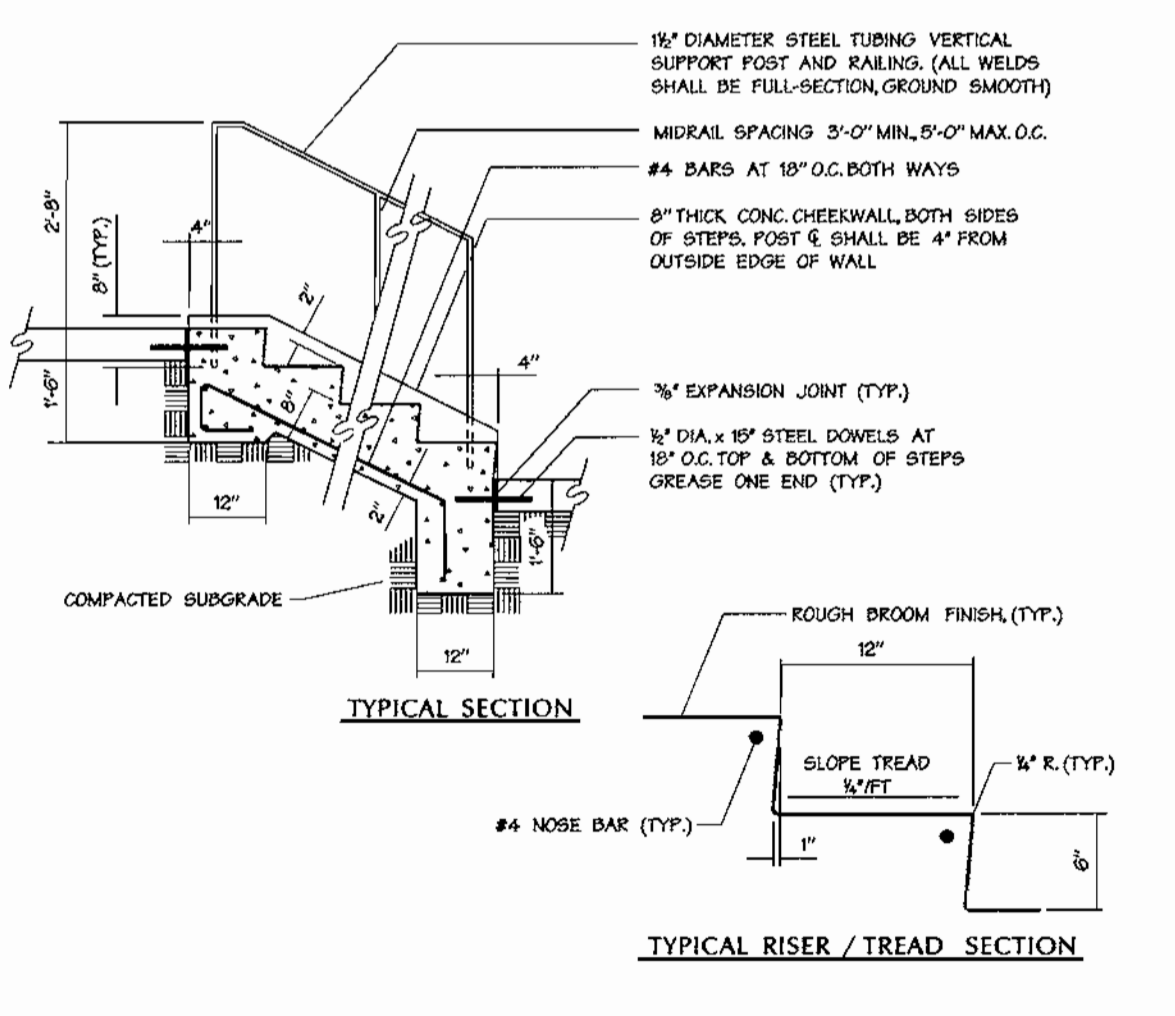
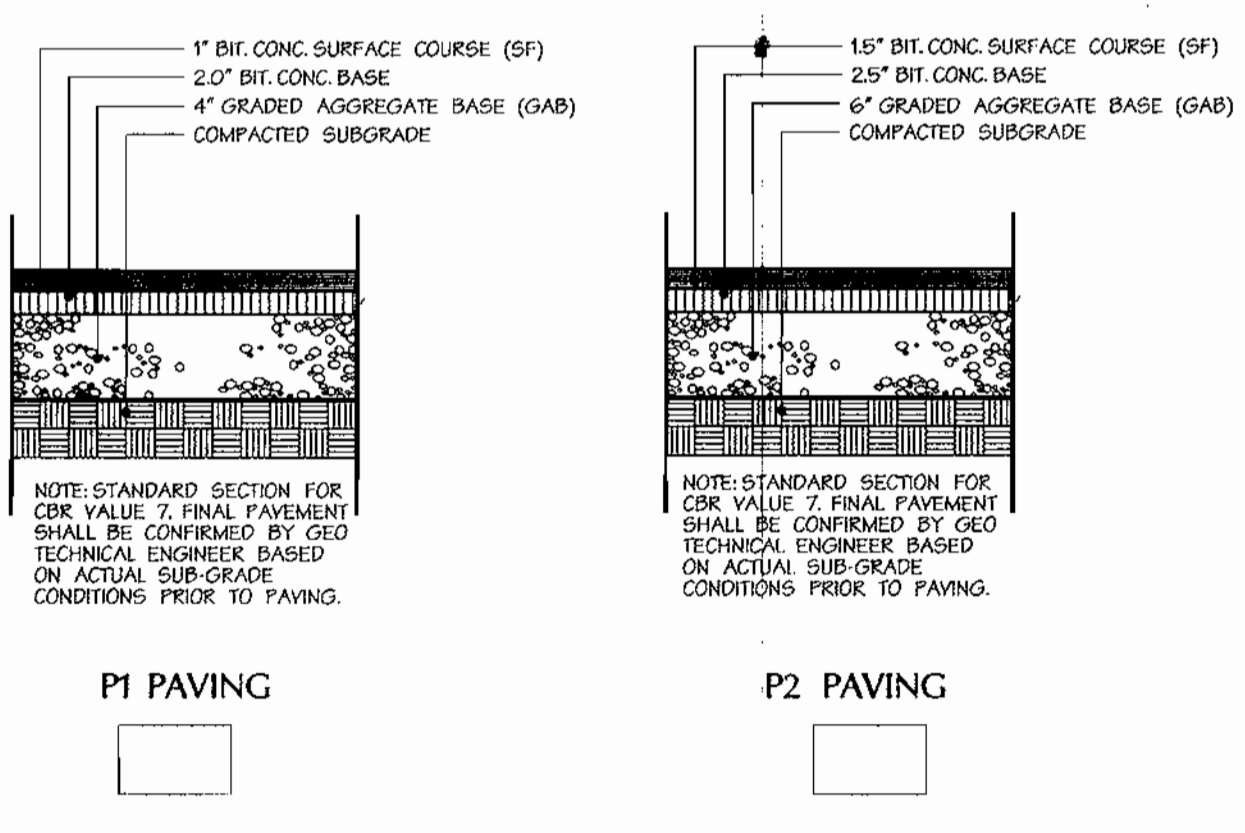


Ramp Detail R6.12
Not To Scale

Type "B" Handicap Ramp
Not To Scale

Light Detail
Not To Scale

Depressed Curb
Not To Scale



Service Pad & Dumpster Bin (Ho. Co. Detail 11.02/11.03)
Not To Scale

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 2-7-02

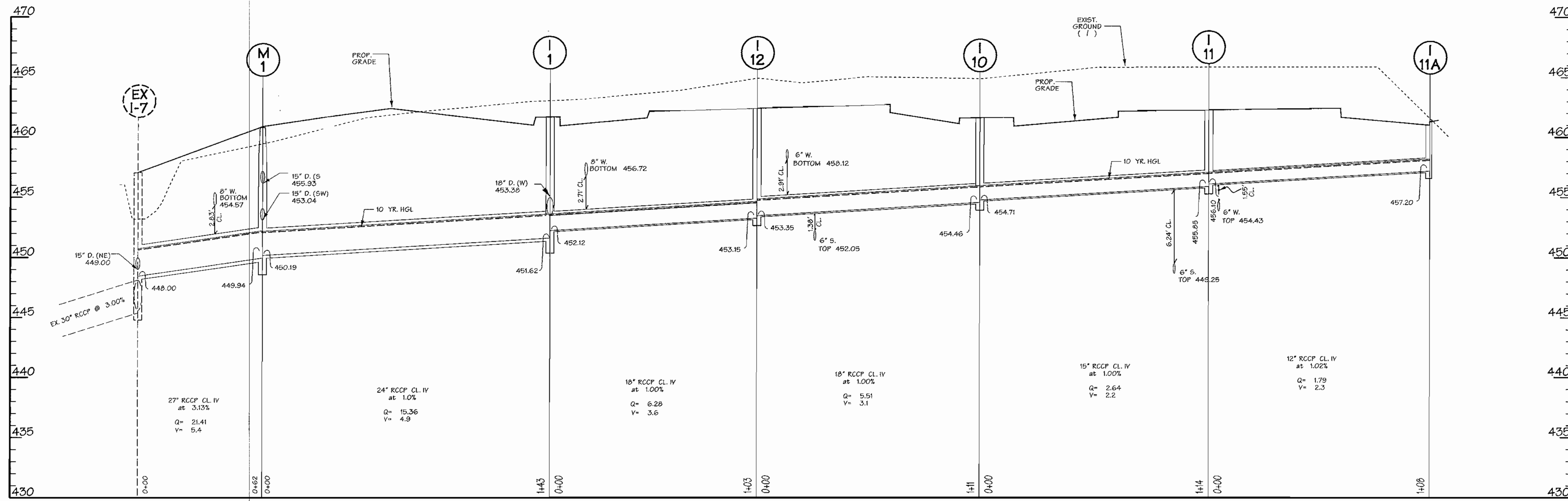
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: [Signature] 2/2/02 DATE
 Chief, Division of Land Development: [Signature] 2/26/02 DATE
 Director: [Signature] 2/27/02 DATE

Revision Description
 COLUMBIA
VILLAGE OF RIVER HILL
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 BUILDINGS 1-4
 OWNER/DEVELOPER: The Howard Research and Development Company
 CONTRACT PURCHASER: Bozzuto Homes
 10275 Little Patuxent Parkway Suite 200
 Columbia, Maryland 21044 6401 Golden Triangle Drive Greenbelt, MD 20770

DMW
 Date: McConc-Walker, Inc.
 200 East Pennsylvania Avenue
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 (410) 296-3329
 Fax 296-4705
 A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

TITLE
SITE DETAILS AND PAVING LEGEND

Des By: MJP Scale: AS SHOWN Proj. No.: 01043
 Dwn By: BKC Date: 2/19/02
 Chk By: Approved 6 of 16



STORM DRAIN PROFILE

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

PIPE SCHEDULE

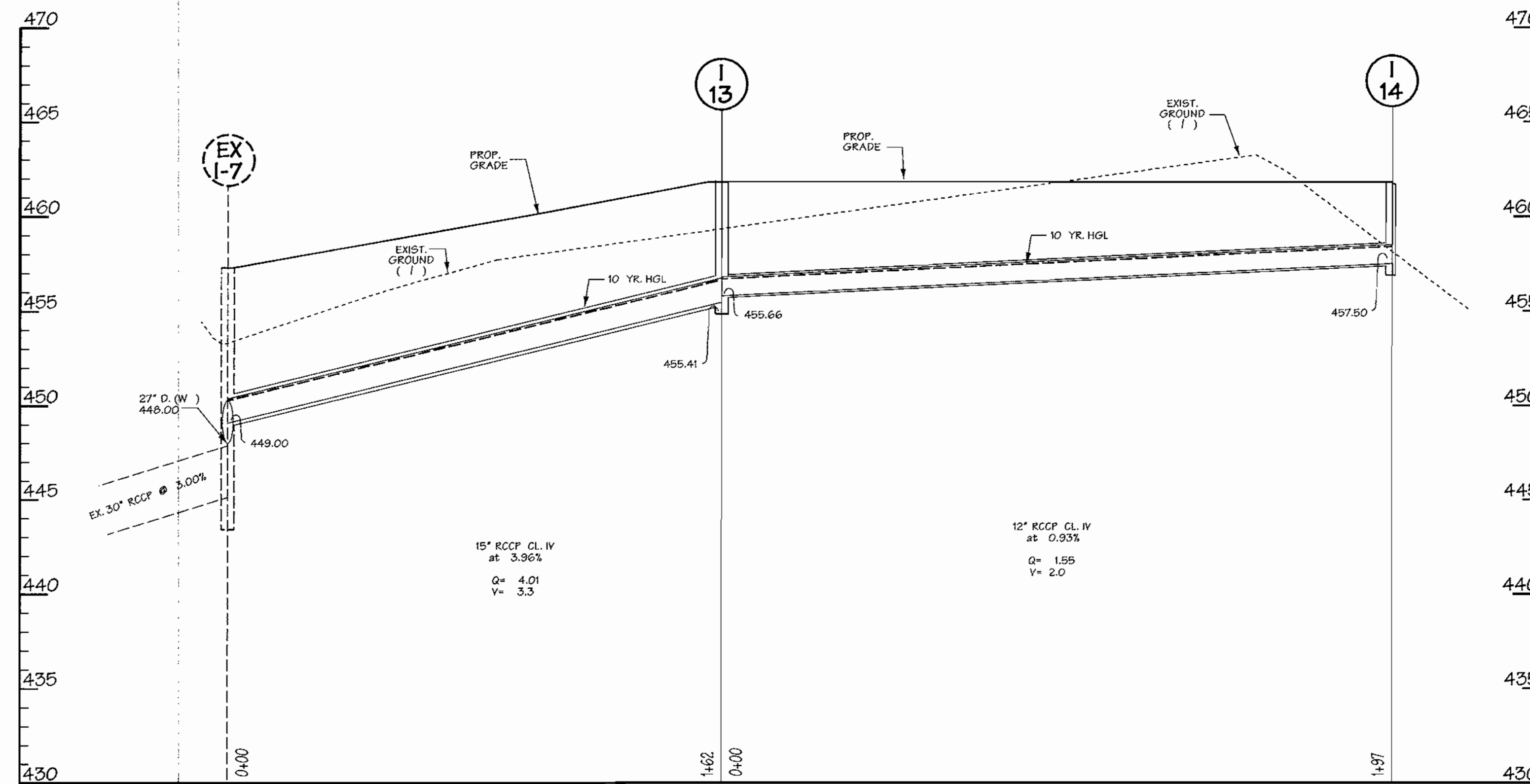
SIZE	CATEGORY	L (ft)
12"	RCCP. CL. IV.	627
15"	RCCP. CL. IV.	677
18"	RCCP. CL. IV.	342
24"	RCCP. CL. IV.	143
27"	RCCP. CL. IV.	62

STRUCTURE SCHEDULE

NO.	TYPE	INV. OUT	TOP ELEV.	REMARKS
I-1	A-5, WIDTH=3.0 FT	451.62	461.5	HO CO STD. SD 4.01
I-10	A-5, WIDTH=2.5 FT	455.46	461.3	HO CO STD. SD 4.01
I-11	A-5, WIDTH=2.5 FT	455.85	462.0	HO CO STD. SD 4.01
I-11A	A-5, WIDTH=2.5 FT	457.20	461.2	HO CO STD. SD 4.01
I-12	A-5, WIDTH=2.5 FT	453.15	461.5	HO CO STD. SD 4.01
I-13	A-5, WIDTH=2.5 FT	455.41	461.5	HO CO STD. SD 4.01
I-14	A-5, WIDTH=2.5 FT	457.50	461.9	HO CO STD. SD 4.01
M-1	STD. MANHOLE D=5'	449.94	460.8	HO CO STD. G 5.13
EX. I-7	MODIFIED MANHOLE*	*	*	*

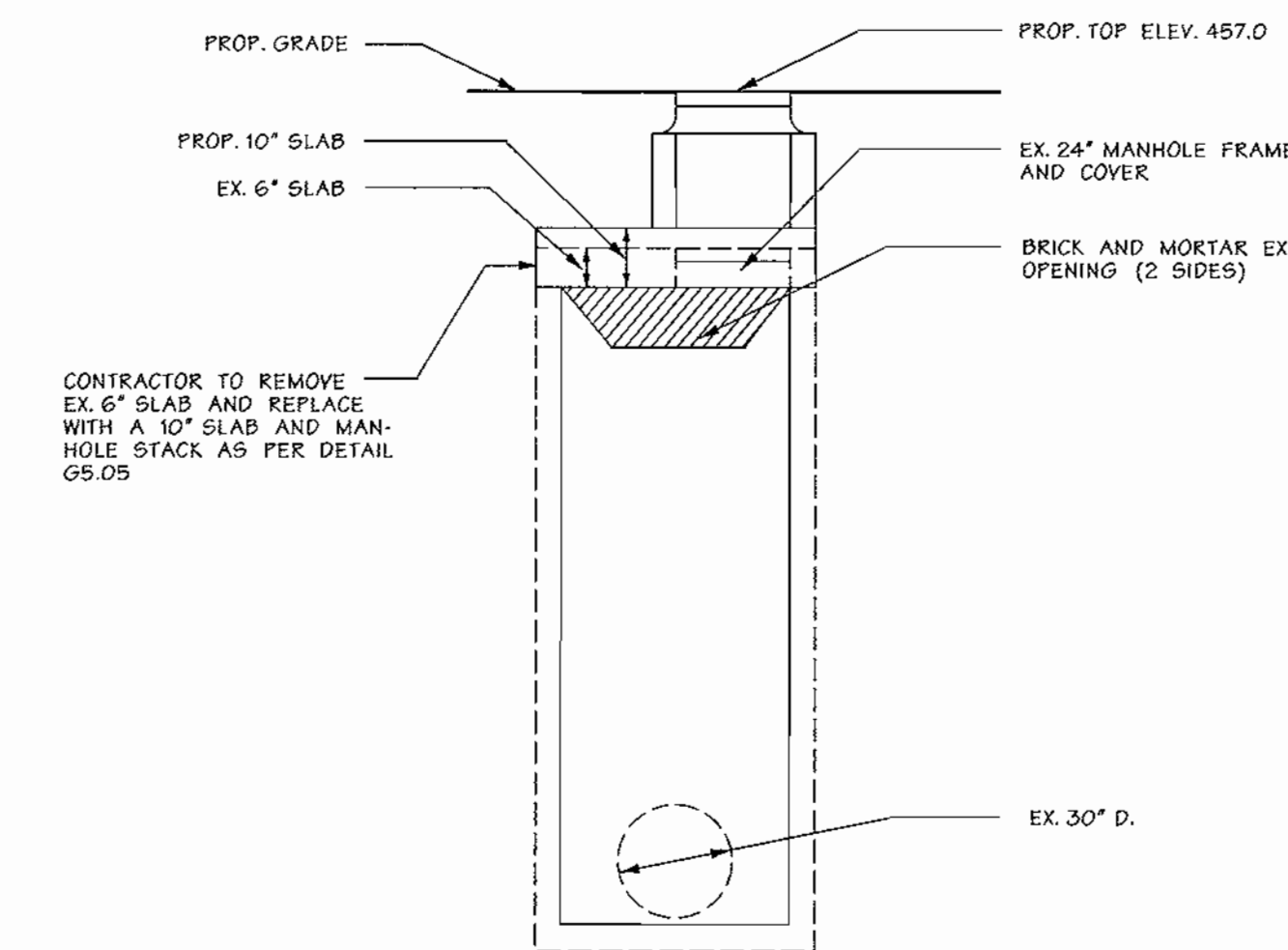
*SEE DETAIL ON THIS SHEET.

NOTE:
All crossing elevations are labeled at the outside of the pipe.



STORM DRAIN PROFILE

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



Ex. I-7 Modification Detail

Not To Scale

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02

APPROVED:
[Signature] 3/2/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 3/2/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 3/2/02
DIRECTOR DATE

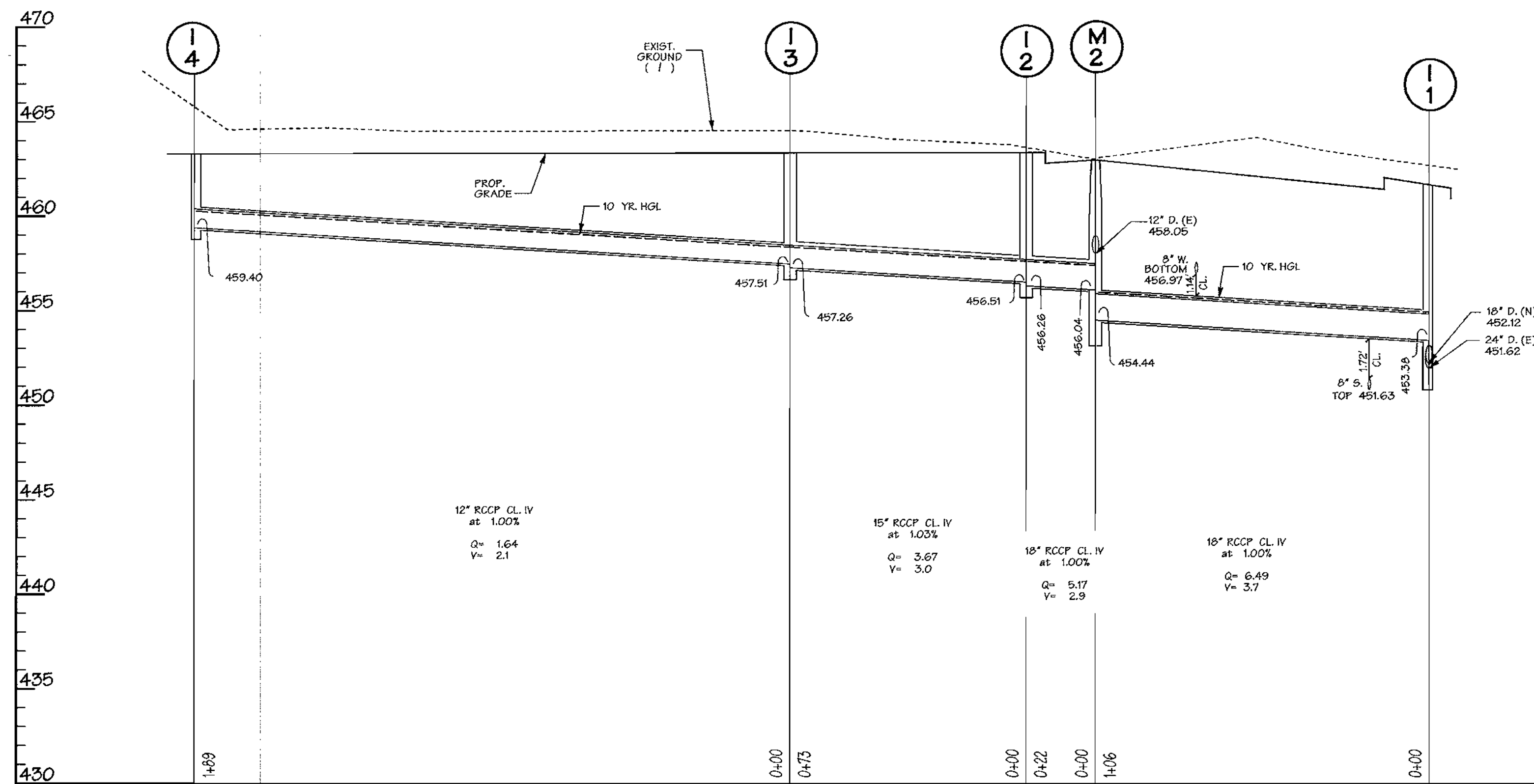
Date No. Revision Description
COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 1 PARCEL A-1
BUILDINGS 1-4
OWNER/DEVELOPER: The Howard Research and Development Company
10275 Little Patuxent Parkway
Columbia, Maryland 21044
CONTRACT PURCHASER: Bozzuto Homes
6401 Golden Triangle Drive
Suite 200
Greenbelt, MD 20770

DMW
Datt-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4706
A Team of Land Planners,
Landscape Architects,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE
STORM DRAIN PROFILE

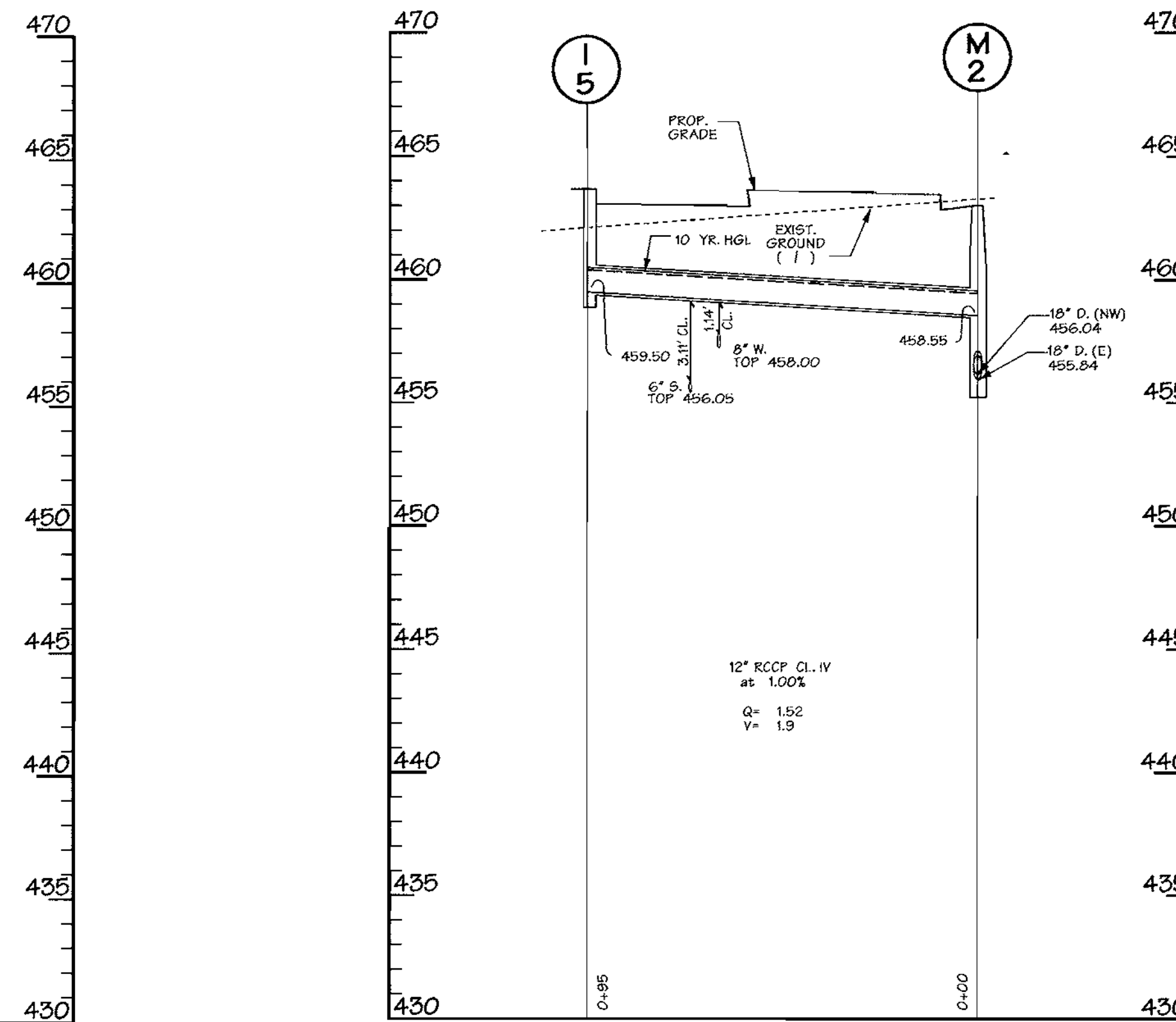
Des By LL Scale AS SHOWN Proj. No. 01043
Dwn By ADL Date 3/14/02
Chk By Approved

Professional Engr. No. [Signature]
Date [Signature]



STORM DRAIN PROFILE

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



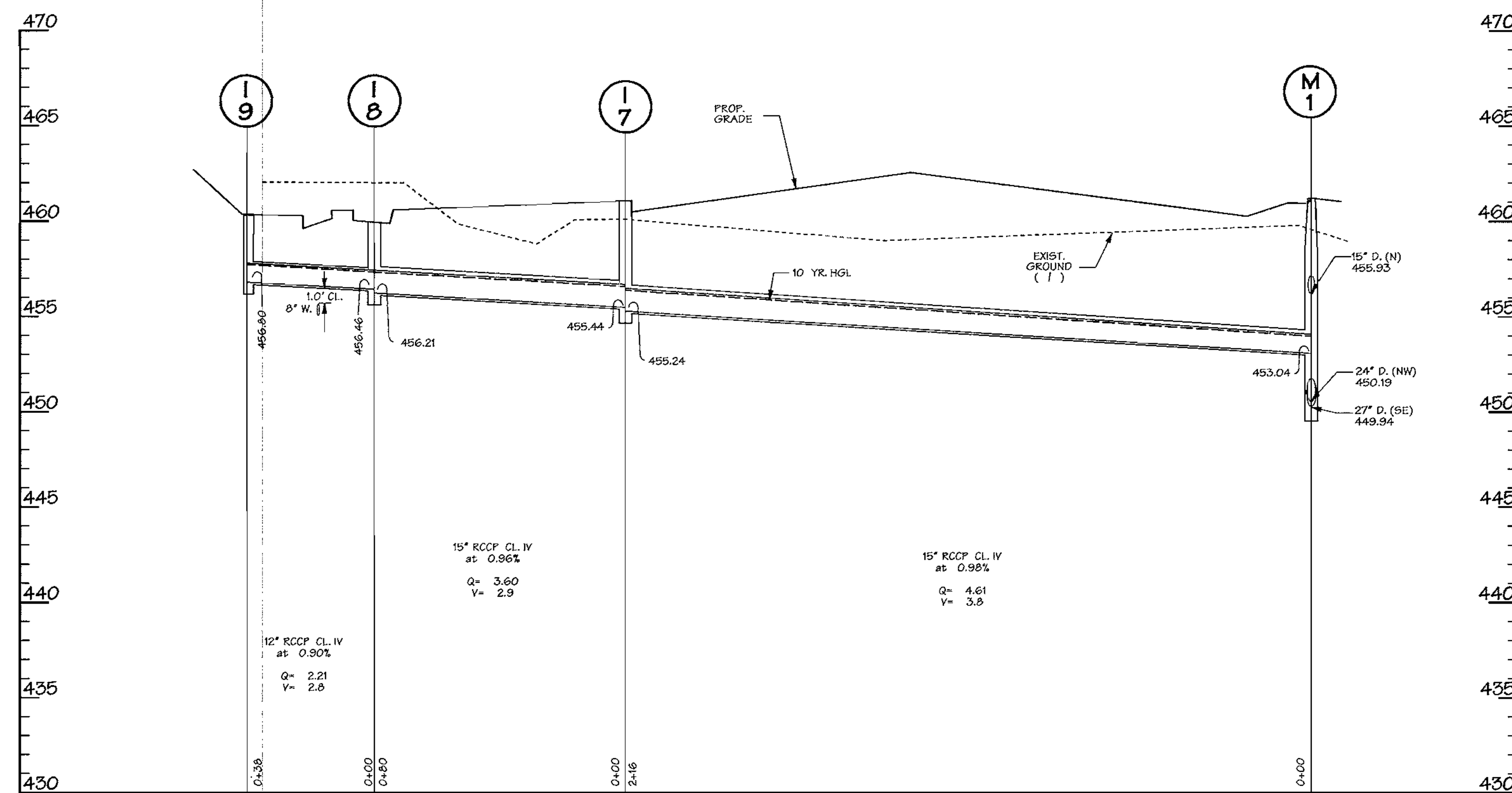
STORM DRAIN PROFILE

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

STRUCTURE SCHEDULE

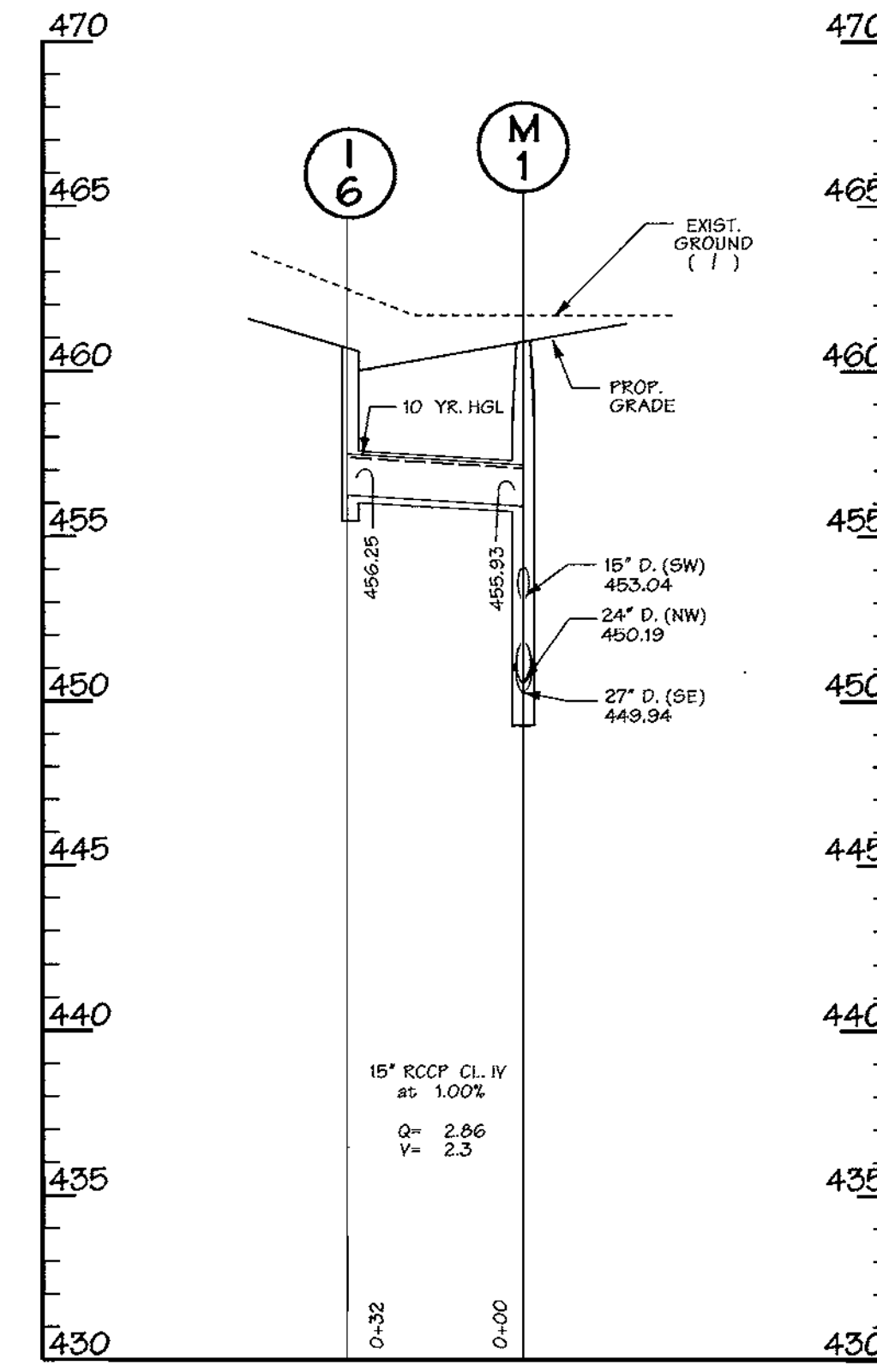
NO.	TYPE	INV. OUT	TOP ELEV.	REMARKS
I-2	A-5, WIDTH=2.5 FT	456.26	463.2	HO CO STD. SD 4.01
I-3	A-5, WIDTH=2.5 FT	457.26	463.4	HO CO STD. SD 4.01
I-4	A-5, WIDTH=2.5 FT	459.40	463.4	HO CO STD. SD 4.01
I-5	A-5, WIDTH=2.5 FT	459.50	463.0	HO CO STD. SD 4.01
I-6	A-5, WIDTH=2.5 FT	456.25	460.5	HO CO STD. SD 4.01
I-7	A-5, WIDTH=2.5 FT	455.24	460.5	HO CO STD. SD 4.01
I-8	A-5, WIDTH=2.5 FT	456.21	460.9	HO CO STD. SD 4.01
I-9	A-10, WIDTH=2.5 FT	456.80	460.8	HO CO STD. SD 4.02
M-2	STD. MANHOLE, D=4'	455.84	463.0	HO CO STD. G 5.12

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02



STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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

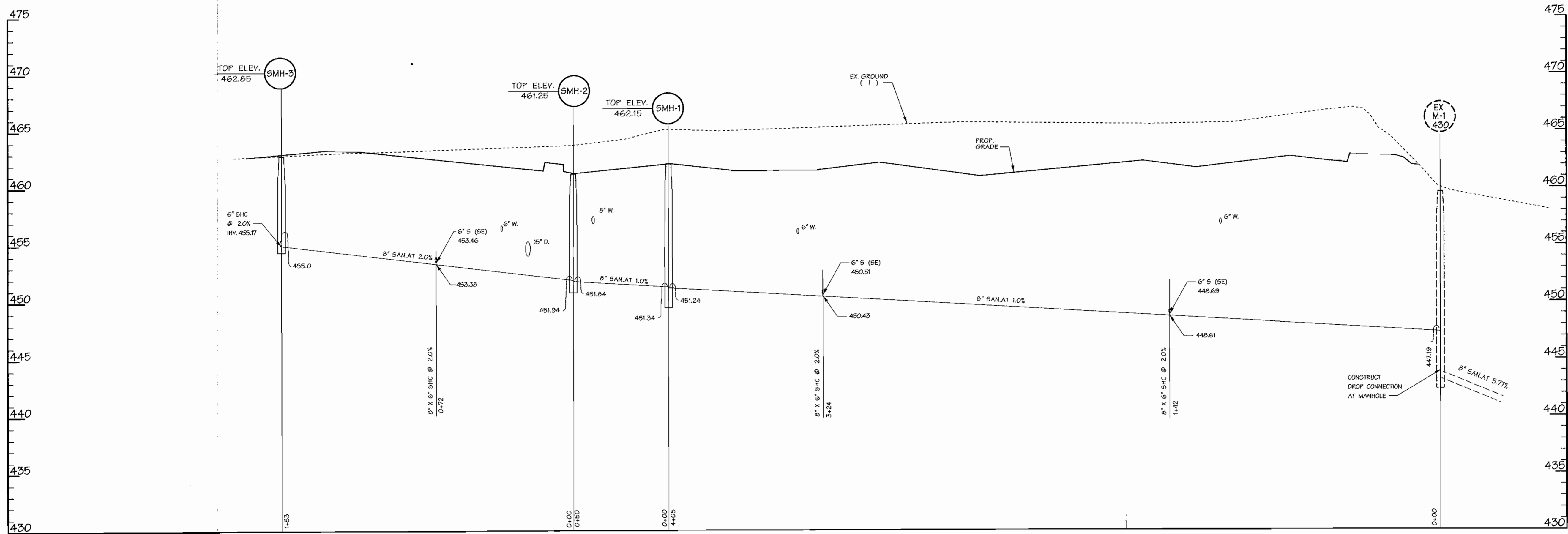
APPROVED:
[Signature] 3/22/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 3/26/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 3/27/02
DIRECTOR DATE

Revision Description
COLUMBIA
VILLAGE OF RIVER HILL
SECTION 4 AREA 1 PARCEL A-1
BUILDINGS 1-4
OWNER/DEVELOPER: The Howard Research and Development Company
CONTRACT PURCHASER: Bozzuto Homes
10275 Little Patuxent Parkway
Columbia, Maryland 21044
6401 Golden Triangle Drive
Greenbelt, MD 20770

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Duff, McCune, Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4706
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TITLE
STORM DRAIN PROFILE

Des By I.L. Scale AS SHOWN Proj. No. 01043
Dwn By ADL Date 2/19/02
Chk By Approved
Professional Engr. No. 10551



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

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 3/20/02
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 3/26/02
 DIRECTOR *[Signature]* 3/27/02

Date	No.	Revision Description
		COLUMBIA
		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4
OWNER/DEVELOPER:		CONTRACT PURCHASER:
The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044		Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770

DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705

*A Team of Land Planners,
 Landscape Architects,
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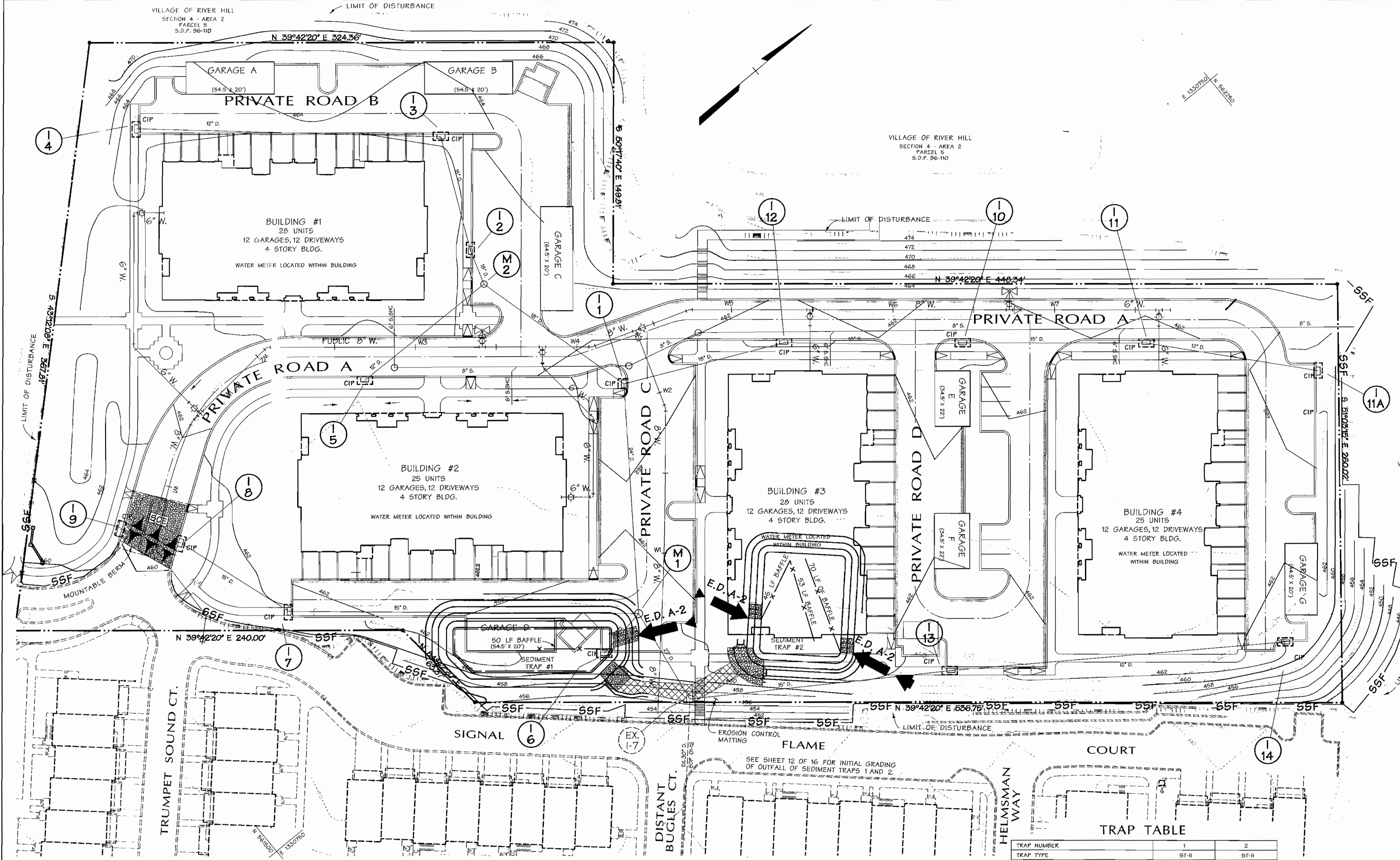
[Signature]
 Date 3/19/02
 Professional Engr. No. *[Signature]*

TITLE			
SEWER PROFILE			
Des By	MJP	Scale	AS SHOWN
Drn By	BKC	Date	3/19/02
Proj. No.	01043	Page	9 of 16
Chk By	Approved		

VILLAGE OF RIVER HILL
SECTION 4 - AREA 2
PARCEL 5
S.D.P. 96-110

LEGEND

- SSF Silt Fence
- Earth Dike
- Limit of Disturbance
- G.M.I.P. GABION MATRESS INFLOW PROTECTION
- RPS REMOVABLE MOUNTABLE BERM
- CIP INLET PROTECTION
- MOUNTABLE BERM
- STABILIZED CONSTRUCTION ENTRANCE
- EROSION CONTROL MATTING



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
William 3/20/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Andy 3/26/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
James 3/27/02
 DIRECTOR DATE

Date	No.	Revision Description
		COLUMBIA
		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1
		BUILDINGS 1-4
		OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 210
		CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Suite 200 Greenbelt 2077

DMW
Dart, McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4705

From: Lu
As: Archt.
Eng. Survey
Professi

EROSION CONTROL PLAN
SEDIMENT CONTROL PLAN

TITLE

Des By: M.J.F. Scale: 3/8" = 1'-0"
 Dwn By: B.K.C. Date: 3/19/02
 Chk By: Professional Engr. No. 1042

SITE DATA

TOTAL AREA: 248,503± SF - 5.70± Ac.
 TOTAL DISTURBED AREA: 272,571± SF - 6.26± Ac.
 TOTAL IMPERVIOUS AREA: 137,243± SF - 3.15± Ac.
 AREA TO VEG. STAB.: 135,228± SF - 3.11± Ac.
 CUT: 6500 CY
 FILL: 6500 CY

TRAP TABLE

TRAP NUMBER	1	2
TRAP TYPE	ST-II	ST-II
EXISTING DRAINAGE AREA: ACRES	3.25	2.15
INTERIM DRAINAGE AREA: ACRES	4.40	1.00
PROPOSED DRAINAGE AREA: ACRES	4.40	1.00
STORAGE REQUIRED: CUBIC FEET	WET: 7,920 DRY: 7,920 TOTAL: 15,840	3,870 3,870 7,740
STORAGE PROVIDED: CUBIC FEET	WET: 8,048 DRY: 8,887 TOTAL: 16,935	3,870 3,870 7,747
EXISTING GROUND ELEVATION	454.50	458.50
TOP EMBANKMENT ELEVATION	455.00	459.00
WEIR CREST ELEVATION	454.00	458.00
WET STORAGE ELEVATION	452.00	457.06
CLEANOUT ELEVATION	451.00	456.75
BOTTOM ELEVATION	449.50	456.00
DEPTH OF CHANNEL (a)	N/A	N/A
OUTLET WIDTH (b)	16'-0"	9'-0"
BOTTOM DIMENSION	26'-96"	50'-63"
TRAP SIDESLOPES	2:1	2:1
TRAP DEPTH	WET: 2.5 DRY: 2.5 TOTAL: 5.0	1.06 0.94 2.0
BARREL DIAMETER	N/A	N/A
RISER DIAMETER	N/A	N/A
WET STORAGE ZONE ELEVATION	449.50-452.00	456.00-457.06
DRY STORAGE ZONE ELEVATION	452.00-454.00	457.06-458.00

REVIEWED FOR HOWARD S.D. AND MEETS TECHNICAL REQUIREMENTS

John Myers 3/19/02
 U.S.D. NATURAL RESOURCES SERVICE DATE

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

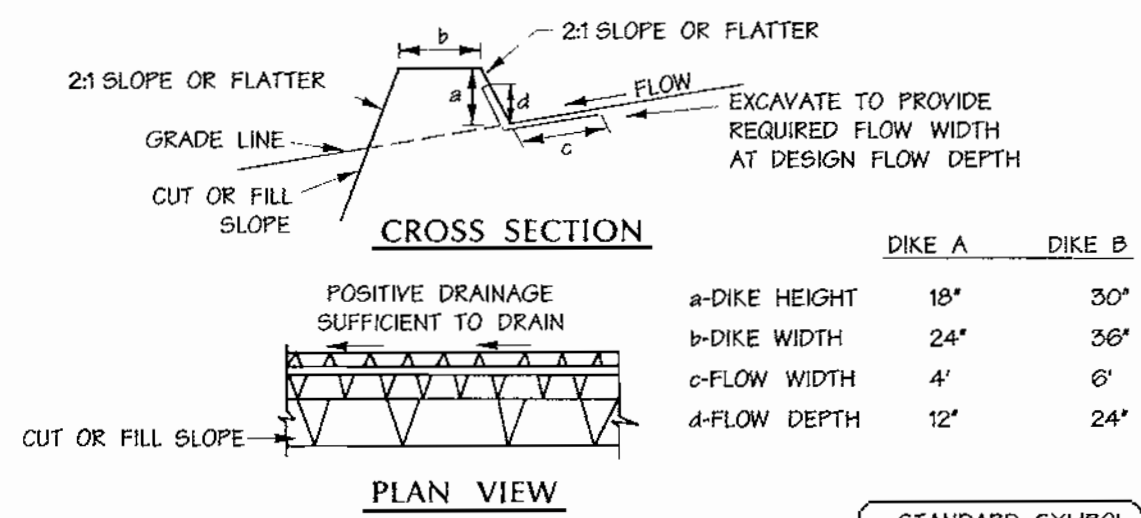
John Robertson 3/19/02
 HOWARD S.D. DATE

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."

John W. Ranscher, Jr. 3/19/02
 SIGNATURE OF DEVELOPER DATE
 PRINT NAME BELOW SIGNATURE

ENGINEER'S CERTIFICATE:
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

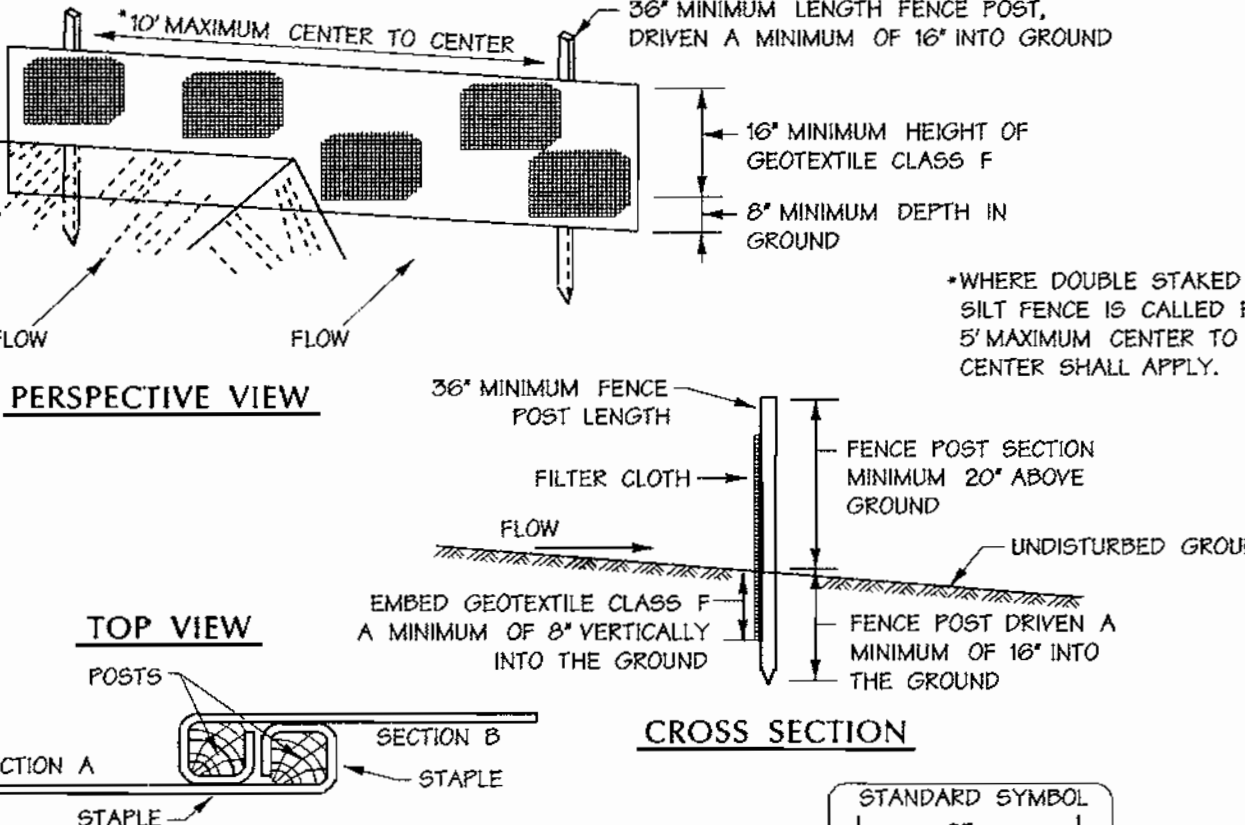
John W. Ranscher, Jr. 3/19/02
 SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE



- 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 (S-1095).
- 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.
- 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.
 - FOURTEEN DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPPING BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE "HOWARD COUNTY DESIGN MANUAL," STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 5), SODS (SEC. 5A), TEMPORARY SEEDINGS (SEC. 5B), AND MULCHING (SEC. 5C). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

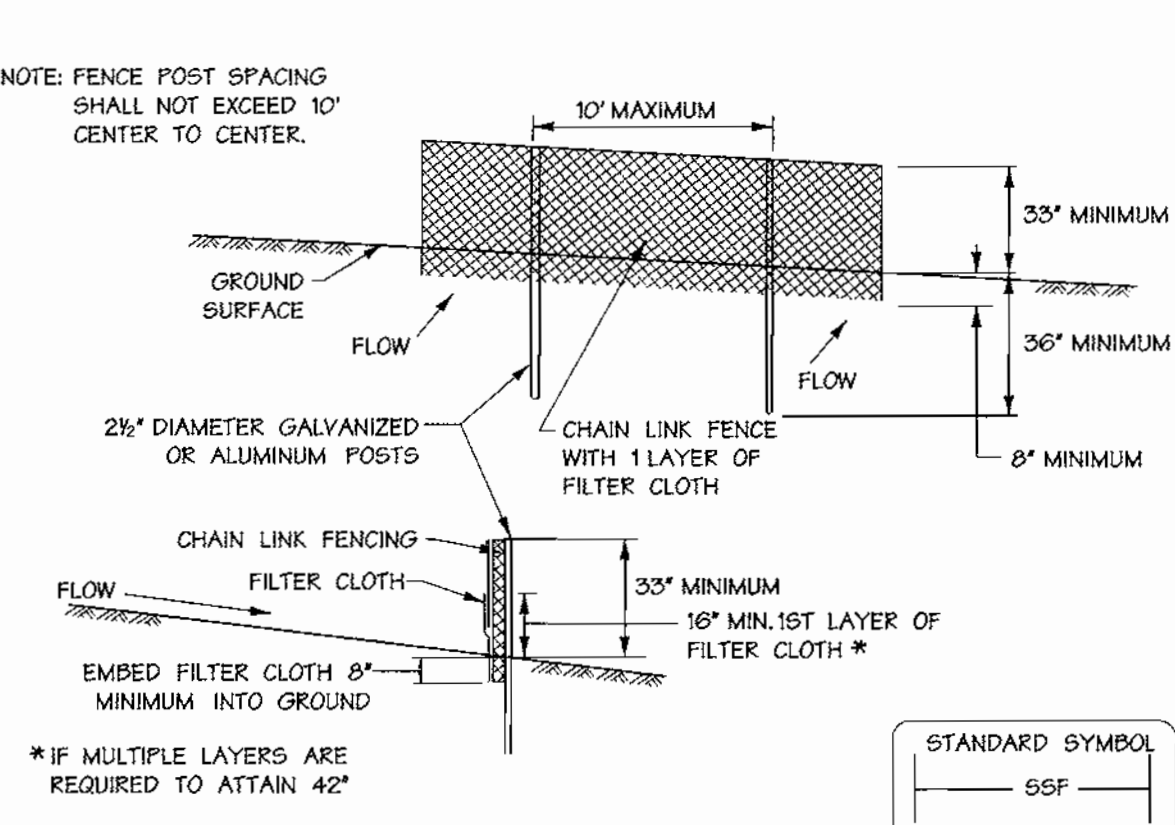
TOTAL AREA OF SITE	5.7 ACRES
AREA DISTURBED	6.0 ACRES
AREA TO BE ROOFED OR PAVED	4.1 ACRES
AREA TO BE VEGETATIVELY STABILIZED	1.9 ACRES
TOTAL CUT	5830 CUBIC YARDS
TOTAL FILL	5040 CUBIC YARDS
OFF-SITE WASTE/BORROW AREA LOCATION WASTE =	

- ALL TEMPORARY EARTH DIKES SHALL HAVE UNINTERRUPTED POSITIVE GRADE TO AN OUTLET. SPOT ELEVATIONS MAY BE NECESSARY FOR GRADES LESS THAN 1%.
- RUNOFF DIVERTED FROM A DISTURBED AREA SHALL BE CONVEYED TO A SEDIMENT TRAPPING DEVICE.
- RUNOFF DIVERTED FROM AN UNDISTURBED AREA SHALL OUTLET DIRECTLY INTO AN UNDISTURBED, STABILIZED AREA AT A NON-EROSIVE VELOCITY.
- ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONAL MATERIAL SHALL BE REMOVED AND DISPOSED OF SO AS NOT TO INTERFERE WITH THE PROPER FUNCTIONING OF THE DIKE.
- THE DIKE SHALL BE EXCAVATED OR SHAPED TO LINE GRADE AND CROSS SECTION AS REQUIRED TO MEET THE CRITERIA SPECIFIED HEREIN AND BE FREE OF BANK PROJECTIONS OR OTHER IRREGULARITIES WHICH WILL IMPED NORMAL FLOW.
- FILL SHALL BE COMPACTED BY EARTH MOVING EQUIPMENT.
- ALL EARTH REMOVED AND NOT NEEDED FOR CONSTRUCTION SHALL BE PLACED SO THAT IT WILL NOT INTERFERE WITH THE FUNCTIONING OF THE DIKE.
- INSPECTION AND MAINTENANCE MUST BE PROVIDED PERIODICALLY AND AFTER EACH RAIN EVENT.

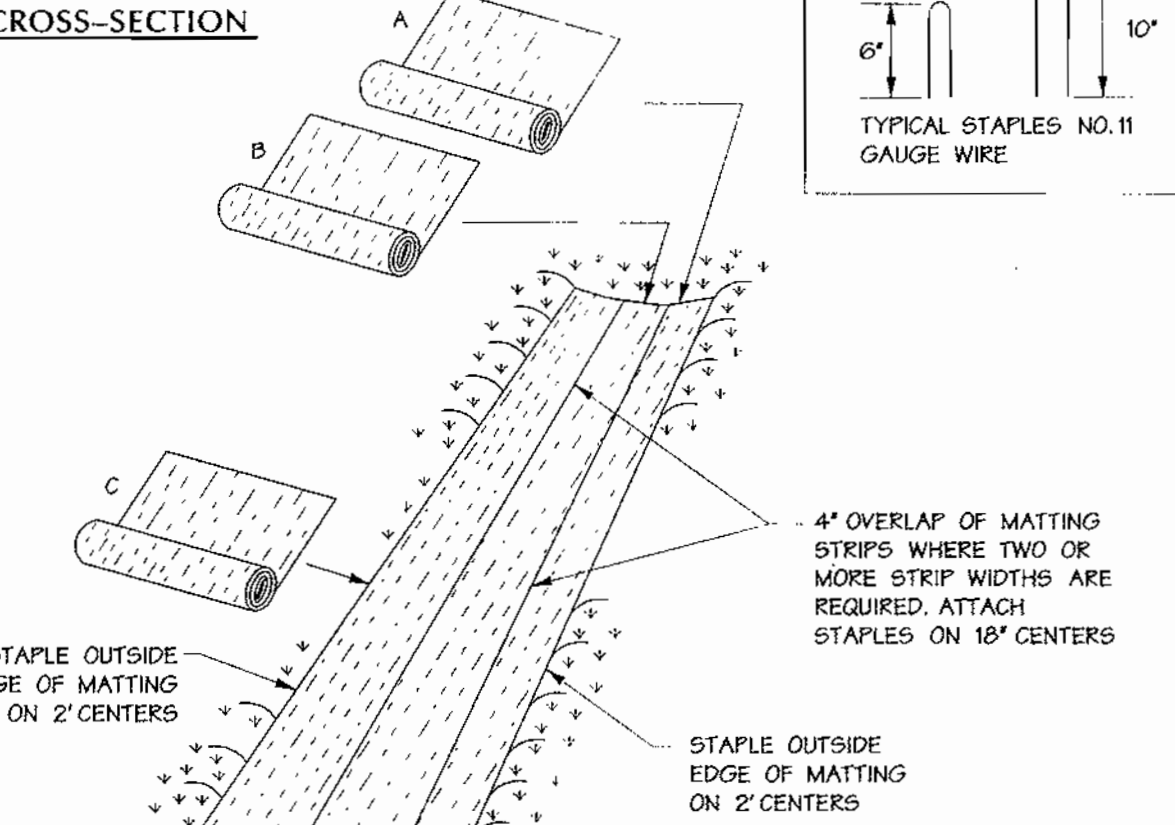


- FENCE POSTS SHALL BE A MINIMUM OF 36" LONG DRIVEN 16" MINIMUM INTO THE GROUND. WOOD POSTS SHALL BE 1 1/2" x 1 1/2" SQUARE (MINIMUM) CUT, OR 1 1/2" DIAMETER (MINIMUM) ROUND AND SHALL BE OF SOUND QUALITY HARDWOOD. STEEL POSTS WILL BE STANDARD T OR U SECTION WEIGHING NOT LESS THAN 100 POUND PER LINEAR FOOT.
- GEOTEXTILE SHALL BE FASTENED SECURELY TO EACH FENCE POST WITH WIRE TIES OR STAPLES AT TOP AND MID-SECTION AND SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

TENSILE STRENGTH	50 LBS/IN (MIN)	TEST: MSMT 509
TENSILE MODULUS	2.0 LBS/IN (MIN)	TEST: MSMT 509
FLOW RATE	0.3 GAL FT/MIN (MAX)	TEST: MSMT 322
FILTERING EFFICIENCY	75% (MIN)	TEST: MSMT 322
- WHERE ENDS OF GEOTEXTILE FABRIC COME TOGETHER, THEY SHALL BE OVERLAPPED, FOLDED AND STAPLED TO PREVENT SEDIMENT BYPASS.
- SILT FENCE SHALL BE INSPECTED AFTER EACH RAINFALL EVENT AND MAINTAINED WHEN BULGES OCCUR OR WHEN SEDIMENT ACCUMULATION REACHED 50% OF THE FABRIC HEIGHT.



- FENCING SHALL BE 42 INCHES IN HEIGHT AND CONSTRUCTED IN ACCORDANCE WITH THE LATEST MARYLAND STATE HIGHWAY (SHA) DETAILS FOR CHAIN LINK FENCING. THE SPECIFICATION FOR A 6" FENCE SHALL BE USED, SUBSTITUTING 42" FABRIC AND 6" LENGTH POSTS.
- THE POSTS DO NOT NEED TO BE SET IN CONCRETE.
- CHAIN LINK FENCE SHALL BE FASTENED SECURELY TO THE FENCE POSTS WITH WIRE TIES OR STAPLES. THE LOWER TENSION WIRE, BRACE AND TRUSS RODS, DRIVE ANCHORS AND POST CAPS ARE NOT REQUIRED EXCEPT ON THE ENDS OF THE FENCE. THE CHAIN LINK FENCING SHALL BE SIX (6) GAUGE OR HEAVIER.
- FILTER CLOTH SHALL BE FASTENED SECURELY TO THE CHAIN LINK FENCE WITH TIES SPACED EVERY 24" AT THE TOP AND MID SECTION.
- FILTER CLOTH SHALL BE EMBEDDED A MINIMUM OF 8" INTO THE GROUND.
- WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER, THEY SHALL BE OVERLAPPED BY 6" AND FOLDED.
- MAINTENANCE SHALL BE PERFORMED AS NEEDED AND SILT BUILDUPS REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE, OR WHEN SILT REACHES 50% OF FENCE HEIGHT.



- KEY-IN THE MATTING BY PLACING THE TOP ENDS OF THE MATTING IN A NARROW TRENCH, 6" DEPTH. BACKFILL THE TRENCH AND TAMP FIRMLY TO CONFORM TO THE CHANNEL CROSS-SECTION. SECURE WITH A ROW OF STAPLES ABOUT 4" DOWN SLOPE FROM THE TRENCH. SPACING BETWEEN STAPLES IN 6".
- STAPLE THE 4" OVERLAP IN THE CHANNEL CENTER USING AN 18" SPACING BETWEEN STAPLES.
- BEFORE STAPLING THE OUTER EDGES OF THE MATTING, MAKE SURE THE MATTING IS SMOOTH AND IN FIRM CONTACT WITH THE SOIL.
- STAPLES SHALL BE PLACED 2' APART WITH 4 ROWS FOR EACH STRIP, 2 OUTER ROWS, AND 2 ALTERNATING ROWS DOWN THE CENTER.
- WHERE ONE ROLL OF MATTING ENDS AND ANOTHER BEGINS, THE END OF THE TOP STRIP SHALL OVERLAP THE UPPER END OF THE LOWER STRIP BY 4", SHIP-LAP FASHION. REINFORCE THE OVERLAP WITH A DOUBLE ROW OF STAPLES SPACED 6" APART IN A STAGGERED PATTERN ON EITHER SIDE.
- THE DISCHARGE END OF THE MATTING LINER SHOULD BE SIMILARLY SECURED WITH 2 DOUBLE ROWS OF STAPLES.
- NOTE: IF FLOW WILL ENTER FROM THE EDGE OF THE MATTING THEN THE AREA EFFECTED BY THE FLOW MUST BE KEYED-IN.

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
A-1-6

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

HOWARD COUNTY SEDIMENT CONTROL GENERAL NOTES

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

U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
G-22-2

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

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.

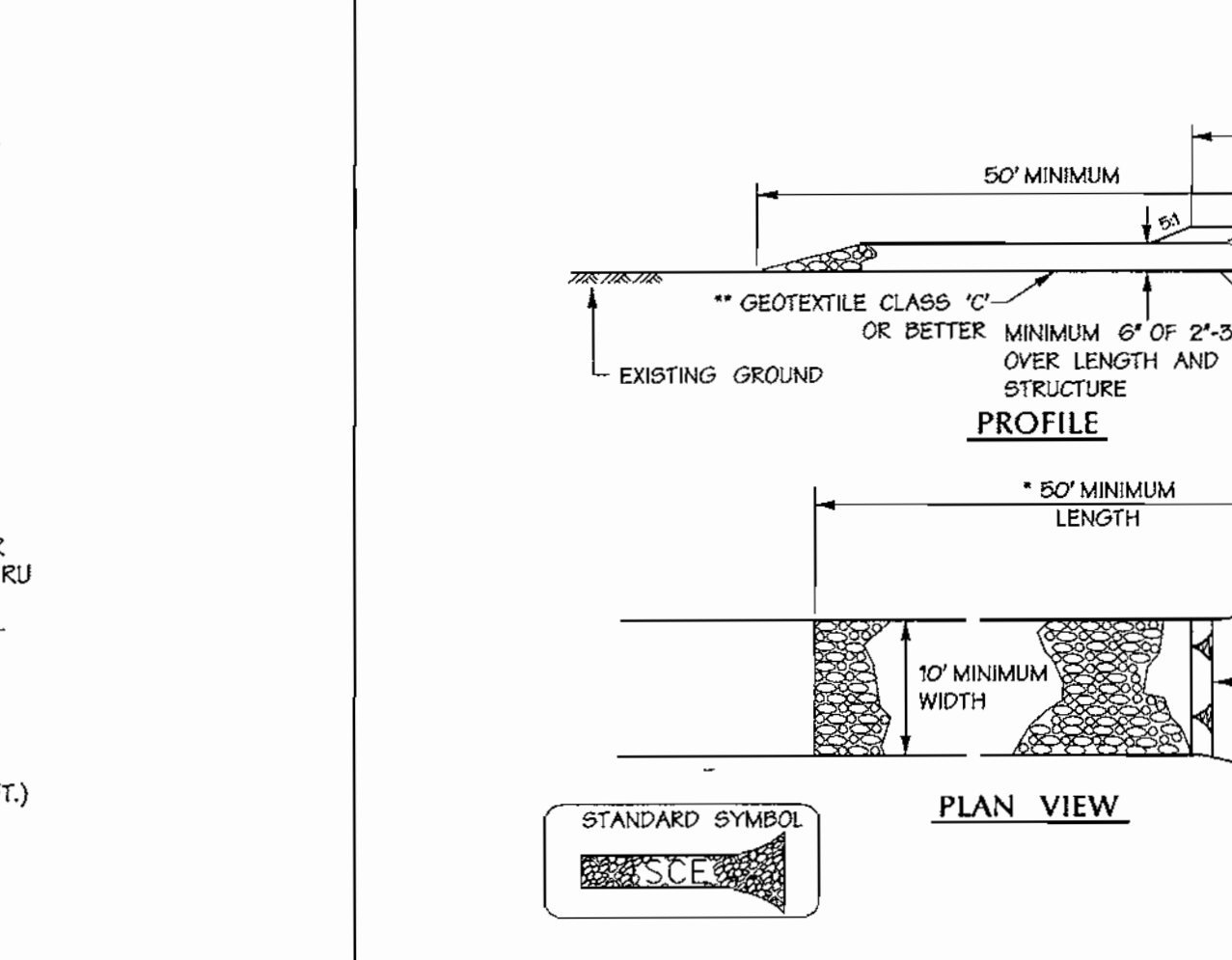
SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- 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.).
- ACCEPTABLE - 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.

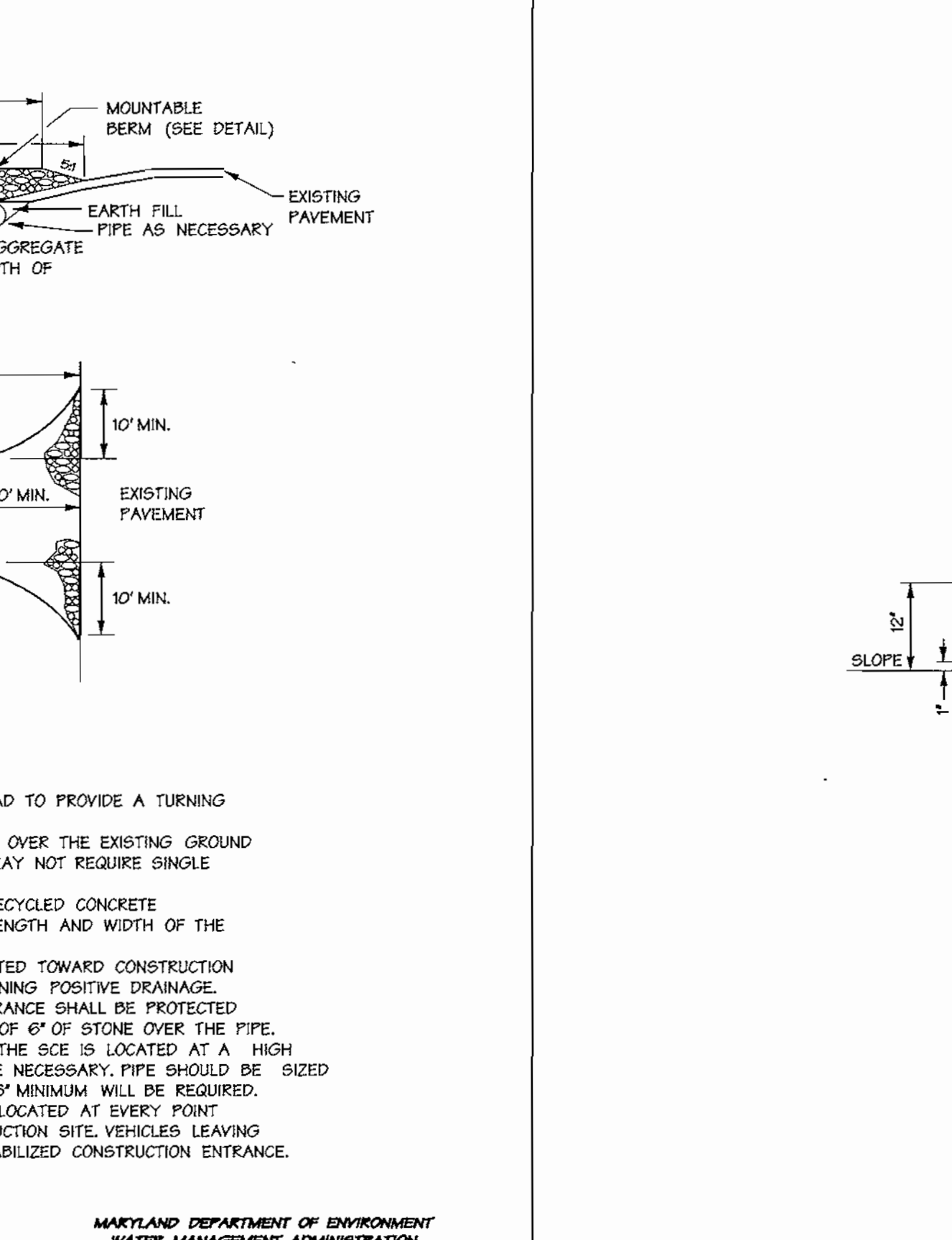
SEEDING - FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS/1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31 SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (25 LBS/1000 SQ.FT.) OF WEEPING LOVEGRASS. 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 SOD. OPTION (3) - SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

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

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



- LENGTH - MINIMUM OF 50' (20' FOR SINGLE RESIDENCE LOT).
- WIDTH - 10' MINIMUM, SHOULD BE FLARED AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- GEOTEXTILE FABRIC CLASS C (FILTER CLOTH) SHALL BE PLACED OVER THE EXISTING GROUND PRIOR TO PLACING STONE. THE PLAN APPROVAL AUTHORITY MAY NOT REQUIRE SINGLE FAMILY RESIDENCES TO USE GEOTEXTILE.
- STONE - CRUSHED AGGREGATE (2" TO 3") OR RECLAIMED OR RECYCLED CONCRETE EQUIVALENT SHALL BE PLACED AT LEAST 6" DEEP OVER THE LENGTH AND WIDTH OF THE ENTRANCE.
- SURFACE WATER - ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED THROUGH THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PIPE INSTALLED THROUGH THE STABILIZED CONSTRUCTION ENTRANCE SHALL BE PROTECTED WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 6" OF STONE OVER THE PIPE. PIPE HAS TO BE SIZED ACCORDING TO THE DRAINAGE. WHEN THE SEE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY A PIPE WILL NOT BE NECESSARY. PIPE SHOULD BE SIZED ACCORDING TO THE AMOUNT OF RUNOFF TO BE CONVEYED. A 6" MINIMUM WILL BE REQUIRED.
- LOCATION - A STABILIZED CONSTRUCTION ENTRANCE SHALL BE LOCATED AT EVERY POINT WHERE CONSTRUCTION TRAFFIC ENTERS OR LEAVES A CONSTRUCTION SITE. VEHICLES LEAVING THE SITE MUST TRAVEL OVER THE ENTIRE LENGTH OF THE STABILIZED CONSTRUCTION ENTRANCE.



U.S. DEPARTMENT OF AGRICULTURE
SOIL CONSERVATION SERVICE
F-17-3

MARYLAND DEPARTMENT OF ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE: 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
CHIEF DEVELOPMENT ENGINEERING DIVISION
CHIEF, DIVISION OF LAND DEVELOPMENT
DIRECTOR

DATE: 3/28/02
DATE: 3/28/02
DATE: 3/27/02

Date	No.	Revision Description
		COLUMBIA

TEMPORARY AND PERMANENT SEEDING NOTES

STABILIZED CONSTRUCTION ENTRANCE

MOUNTABLE BITUMINOUS CURB DIVERSION

NOT TO SCALE

NOT TO SCALE

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

U.S.D.A. NATURAL RESOURCES CONSERVATION SERVICE
DATE: 3/19/02

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

HOWARD S.C.D. DATE: 3/19/02

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.

SIGNATURE OF DEVELOPER: [Signature]
PRINT NAME BELOW SIGNATURE: Clark W. [Name]
DATE: 3/19/02

ENGINEER'S CERTIFICATE:
I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE): John W. Ramachin, S.E.
DATE: 3/19/02

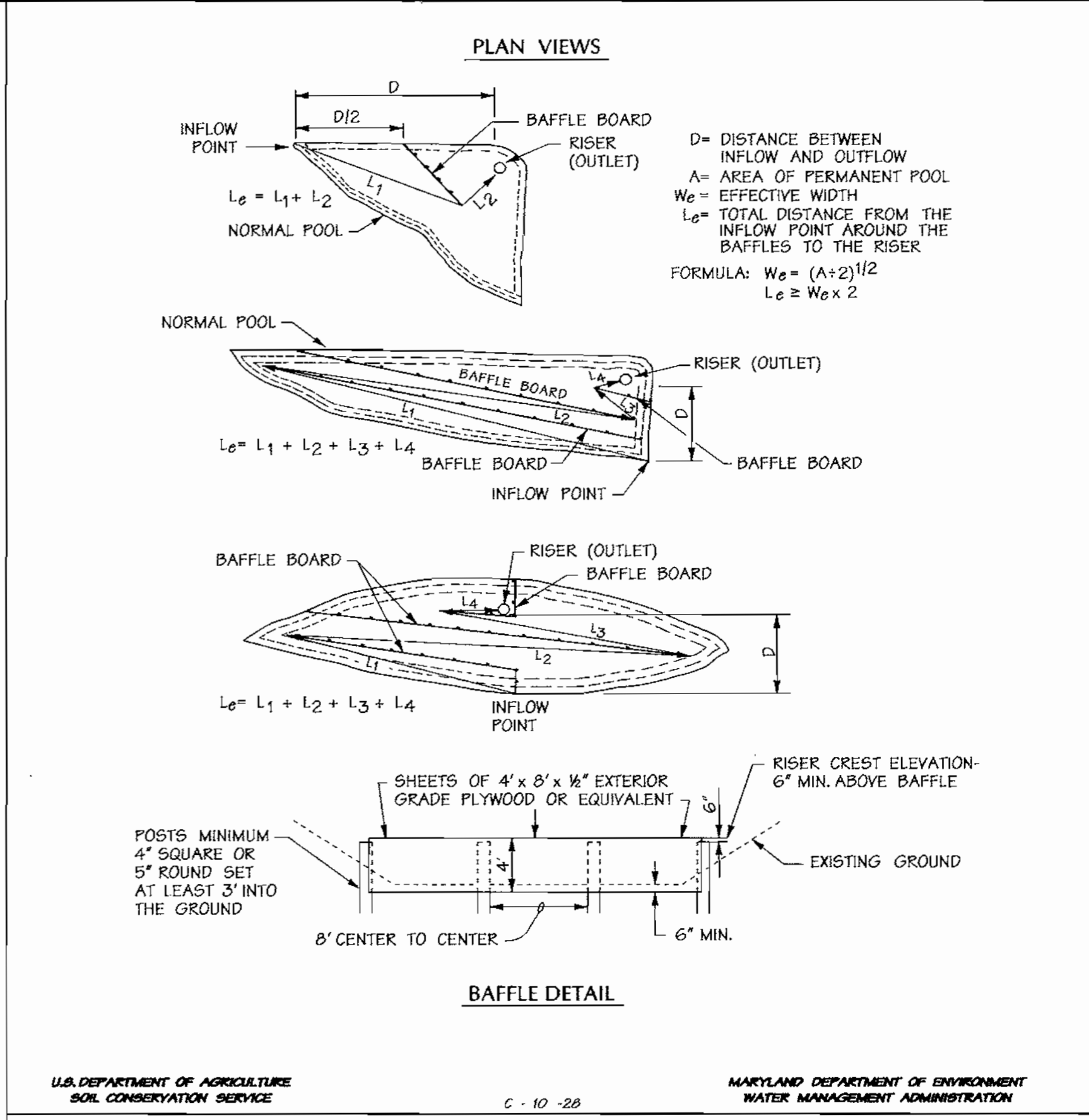
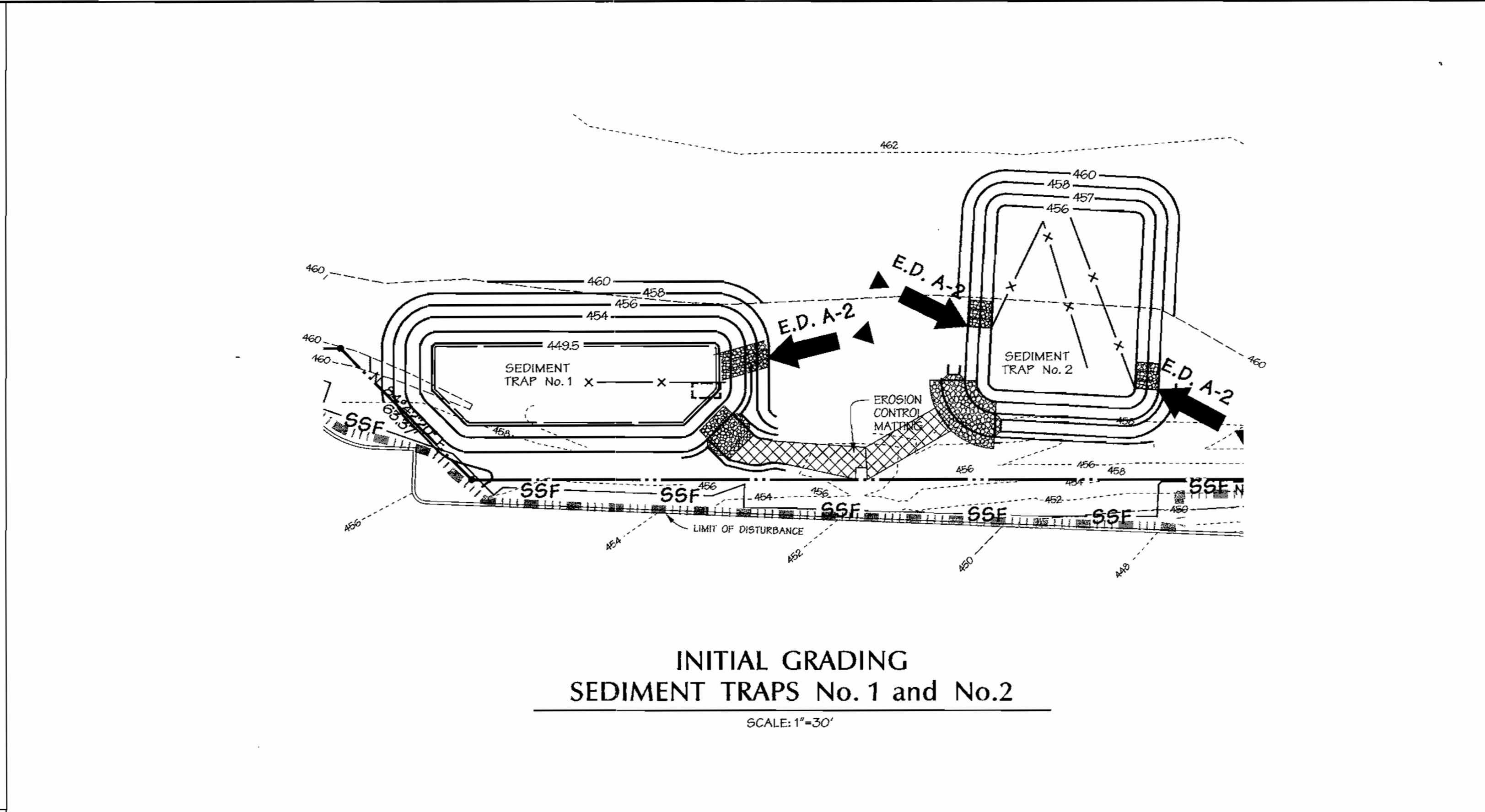
Professional Engr. No. [Number]

DMW
Daft-McCune-Walker, Inc.
200 East Pennsylvania Avenue
Thousand, Maryland 21188
(410) 296-3333
Fax 296-4706

A Team of Land Planners,
Landscape Architects,
Golf Course Architects,
Engineers, Surveyors &
Environmental Professionals

TITLE: EROSION and SEDIMENT CONTROL DETAILS			
Des By	MJP	Scale	As Shown
Proj. No.	01043		
Dwn By	BKC	Date	3/19/02
Chk By	[Signature]	Approved	
		11 of 16	

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 CONSTRUCTION OF SEDIMENT TRAP #1 & #2 PER INITIAL TRAP GRADING DETAIL THIS SHEET. CONSTRUCT OUTFALL FOR SEDIMENT TRAP No. 1 AS INDICATED. INSTALL EARTH DIKE, SUPER SILT FENCE AND EROSION CONTROL MATTING ALONG SOUTHEAST PROPERTY LINE.	7
3. CLEAR AND GRUB FOR AND INSTALL REMAINING SEDIMENT CONTROL MEASURES	14
4. WITH PERMISSION TO PROCEED FROM THE SEDIMENT CONTROL INSPECTOR, CLEAR, GRUB AND MASS GRADE SITE. PROVIDE DUST CONTROL PER CURRENT SPECIFICATIONS.	14
5. PROVIDE TEMPORARY SITE STABILIZATION AND BEGIN BUILDING FOUNDATION EXCAVATION AND ROUGH GRADING, EXCEPT IN AREA OF SEDIMENT TRAP.	30
6. INSTALL UTILITIES, PLACE INLET PROTECTION AT ALL INLETS. USE EXTREME CARE WORKING IN AREA OF WATER QUALITY FACILITY TO AVOID DEPOSITION OF SPOIL INTO THIS AREA.	45
7. FINE GRADE AND CONSTRUCT ROADS AND PARKING. STABILIZE ALL AREAS IMMEDIATELY AFTER COMPLETION.	45
8. CONSTRUCT SIDEWALKS AND INSTALL SURFACE PAVING FOR SITE	30
9. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT TRAP #2 AND CONSTRUCT REMAINING BUILDINGS.	14
10. FINE GRADE AND STABILIZE DISTURBED AREAS ONSITE IN ACCORDANCE WITH CURRENT STANDARDS AND SPECIFICATIONS.	10
11. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE SEDIMENT TRAP NO. 1, FINE GRADE AND STABILIZE AREA. SUPER SILT FENCE IN THIS AREA SHALL REMAIN UNTIL SUCH TIME AS AREA IS STABILIZED.	7
12. WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL MEASURES AND STABILIZE ALL REMAINING DISTURBED AREAS ONSITE.	14



Sequence of Construction

210 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 unacceptably 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 material 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 continuing 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-SCS 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 an agronomist or soil scientist and approved by the appropriate approval authority. Regardless, topsoil shall not be mixture of contrasting textures and shall contain less than 2% by volume of cinders, stones, pebbles, coarse fragments, gravel sticks, roots, trash, and other materials larger than 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 clays, around 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.

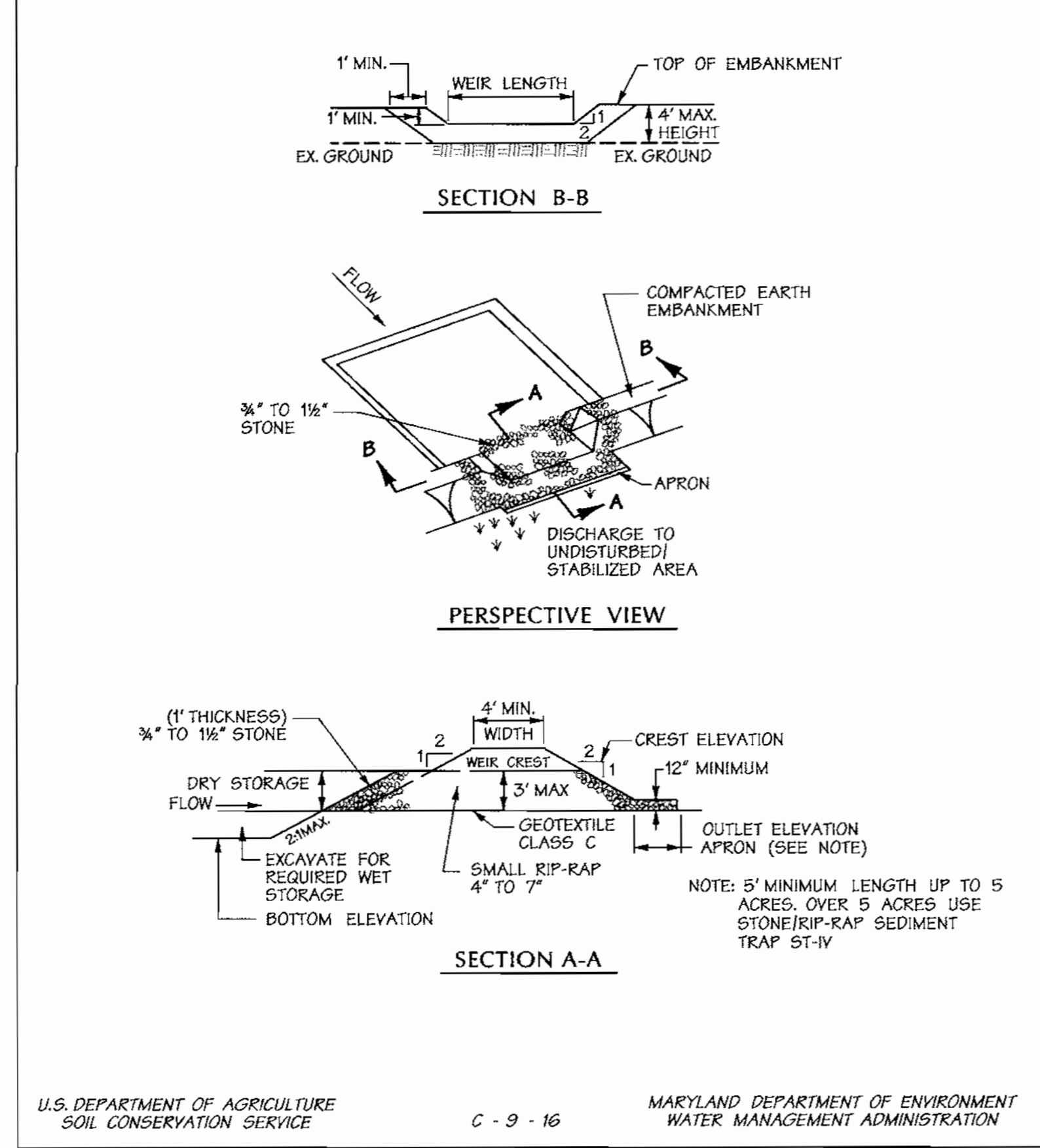
- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 200 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting Topsoil specifications, obtain test results dictating 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 salts content greater than 500 parts per million shall not be used.
 - 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 200 Vegetative Stabilization - Section I - 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, silt fence and sediment traps and basins.
- Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4% - 8% 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 seeding or sodding can proceed with a minimum of additional soil preparation and tillage. Any irregularities in the surface resulting from topsoiling or other operations shall be corrected in order to prevent the formation of depressions or water pockets.
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.



CONSTRUCTION SPECIFICATIONS

- THE AREA UNDER EMBANKMENT SHALL BE CLEARED, GRUBBED AND STRIPPED OF ANY VEGETATION AND ROOT MAT. THE POOL AREA SHALL BE CLEARED.
- THE FILL MATERIAL FOR THE EMBANKMENT SHALL BE FREE OF ROOTS OR OTHER WOODY VEGETATION AS WELL AS OVER-SIZED STONES, ROCKS, ORGANIC MATERIAL OR OTHER OBJECTIONABLE MATERIAL. THE EMBANKMENT SHALL BE COMPACTED BY TRAVELING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED. MAXIMUM HEIGHT OF EMBANKMENT SHALL BE 4'. MEASURED AT CENTERLINE OF EMBANKMENT.
- ALL CUT AND FILL SLOPES SHALL BE 2:1 OR FLATTER.
- ELEVATION OF THE TOP OF ANY DIKE DIRECTING WATER INTO TRAP MUST EQUAL OR EXCEED THE HEIGHT OF TRAP EMBANKMENT.
- STORAGE AREA PROVIDED SHALL BE FIGURED BY COMPUTING THE VOLUME MEASURED FROM TOP OF EXCAVATION. (FOR STORAGE REQUIREMENTS SEE TABLE 3.)
- GEOTEXTILE CLASS C SHALL BE PLACED OVER THE BOTTOM AND SIDES OF THE OUTLET CHANNEL PRIOR TO PLACEMENT OF STONE. SECTION OF FABRIC MUST OVERLAP AT LEAST 1' WITH SECTION NEAREST THE ENTRANCE PLACED ON TOP. FABRIC SHALL BE EMBEDDED AT LEAST 6" INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
- 4" - 7" STONE SHALL BE USED TO CONSTRUCT THE WEIR AND 4" - 12" OR CLASS 1 RIP-RAP SHALL BE USED TO CONSTRUCT THE OUTLET CHANNEL.
- OUTLET - AN OUTLET SHALL INCLUDE A MEANS OF CONVEYING THE DISCHARGE IN AN EROSION FREE MANNER TO AN EXISTING STABLE CHANNEL PROTECTION AGAINST SCOUR AT THE DISCHARGE POINT SHALL BE PROVIDED AS NECESSARY.
- OUTLET CHANNEL MUST HAVE POSITIVE DRAINAGE FORM THE TRAP.
- SEDIMENT SHALL BE REMOVED AND TRAP RESTORED TO ITS ORIGINAL DIMENSIONS WHEN THE SEDIMENT HAS ACCUMULATED TO 1/2 OF THE WET STORAGE DEPTH OF THE TRAP (900 CF/AC). REMOVED SEDIMENT SHALL BE DEPOSITED IN A SUITABLE AREA AND IN SUCH A MANNER THAT IT WILL NOT ESCAPE.
- THE STRUCTURE SHALL BE INSPECTED PERIODICALLY AFTER EACH RAIN AND REPAIRED AS NEEDED.
- CONSTRUCTION OF TRAPS SHALL BE CARRIED OUT IN SUCH A MANNER THAT SEDIMENT POLLUTION IS ABATED. ONCE CONSTRUCTED, THE TOP AND OUTSIDE FACE OF THE EMBANKMENT SHALL BE STABILIZED WITH SEED AND MULCH. POINTS OF CONCENTRATED INFLOW SHALL BE PROTECTED IN ACCORDANCE WITH GRADE STABILIZATION STRUCTURE CRITERIA. THE REMAINDER OF THE INTERIOR SLOPES SHOULD BE STABILIZED (ONE TIME) WITH SEED AND MULCH UPON TRAP COMPLETION AND MONITORED AND MAINTAINED EROSION FREE DURING THE LIFE OF THE TRAP.
- THE STRUCTURE SHALL BE DEWATERED BY APPROVED METHODS, REMOVED AND THE AREA STABILIZED WHEN THE DRAINAGE AREA HAS BEEN PROPERLY STABILIZED.

APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING

[Signature] 2/7/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 2/26/02
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 2/27/02
DIRECTOR DATE

Date	No.	Revision Description
COLUMBIA		
VILLAGE OF RIVER HILL		
SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4		
OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044	CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770	

DMW
Dawn McCune-Walker, Inc.
200 East Pennsylvania Avenue
Towson, Maryland 21286
(410) 296-3333
Fax 296-4706

A Team of Land Planners, Landscape Architects, Golf Course Architects, Engineers, Surveyors & Environmental Professionals

TITLE
EROSION and SEDIMENT CONTROL DETAILS

Des By	MJP	Scale	As Shown	Proj. No.	01043
Dm By	BKC	Date	01/07/02	12 of 16	
Chk By		Approved			

Professional Engr. No. *[Signature]*

Top Soil Specifications

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

[Signature] 2/19/02
U.S.D. NATURAL RESOURCES CONSERVATION SERVICE DATE

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

[Signature] 3/19/02
HOWARD S.C.D. DATE

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."

[Signature] 2/14/02
SIGNATURE OF DEVELOPER DATE

[Signature] 2/19/02
SIGNATURE OF ENGINEER (PRINT NAME BELOW SIGNATURE) DATE

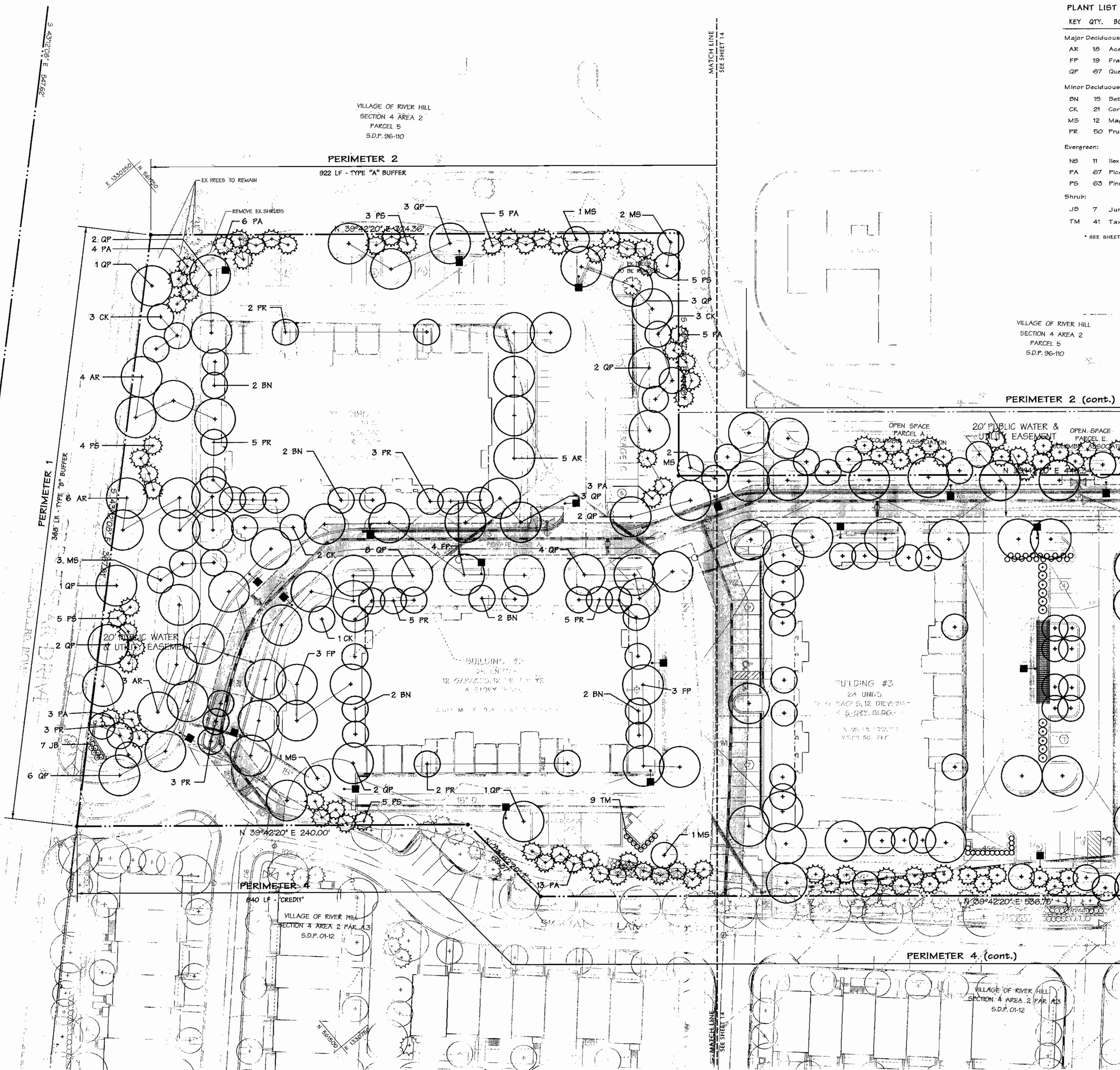
ENGINEERS CERTIFICATE:
"I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

[Signature] 2/19/02
Professional Engr. No. *[Signature]*

PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
Major Deciduous Tree:						
AR	18	Acer rubrum 'Octa'	Red Maple	1"-3 1/2" Cal.	PA	Full
FP	19	Fraxinus pennsylvanica 'Marshall's Seedless'	Marshall's Seedless Ash	1"-3 1/2" Cal.		Full
QP	67	Quercus phellos	Willow Oak	1"-3 1/2" Cal.	F	Full
Minor Deciduous Tree:						
BN	15	Betula Nigra 'Herit'	Heritage Riv. Birch	2"-2 1/2" Cal.	BA	Full
CK	21	Cornus kousa	Kousa Dogwood	2"-2 1/2" Cal.	PA	Full
MS	12	Magnolia soulangeana	Saucer Magnolia	2"-2 1/2" Cal.	PA	Full
PR	50	Prunus serotina 'K. Zan'	Kwanzan Cherry	1"-2 1/2" Cal.	PA	Full
Evergreen:						
NS	11	Ilex x 'Nelle Steven'	Nelle Stevens Holly	9' Ht.	B&B	
PA	67	Picea abies excelsa	Norway Spruce	7' 9" Ht.	B&B	
PS	63	Pinus strobus	White Pine	7' 9" Ht.	B&B	
Shrub:						
JB	7	Juniperus hor. 'allis 'Blue Chip'	Blue Chip Juniper	24" Ht.	Contain	
TM	41	Taxus x medi. 'okii'	Upright Yew	24" Ht.	Contain	

* SEE SHEET 15 FOR FOUNDATION PLANTING



VILLAGE OF RIVER HILL
SECTION 4 AREA 2
PARCEL 5
S.D.P. 96-110

PERIMETER 2 (cont.)

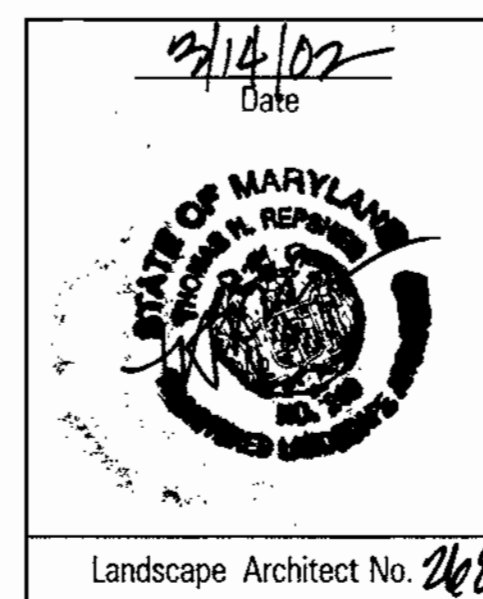
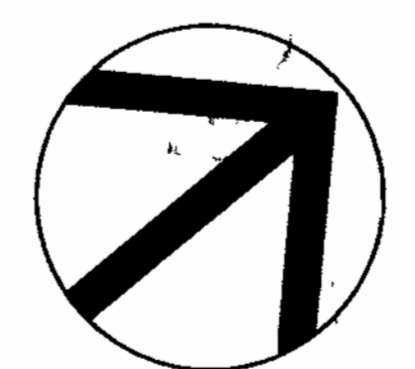
PERIMETER 4 (cont.)

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02

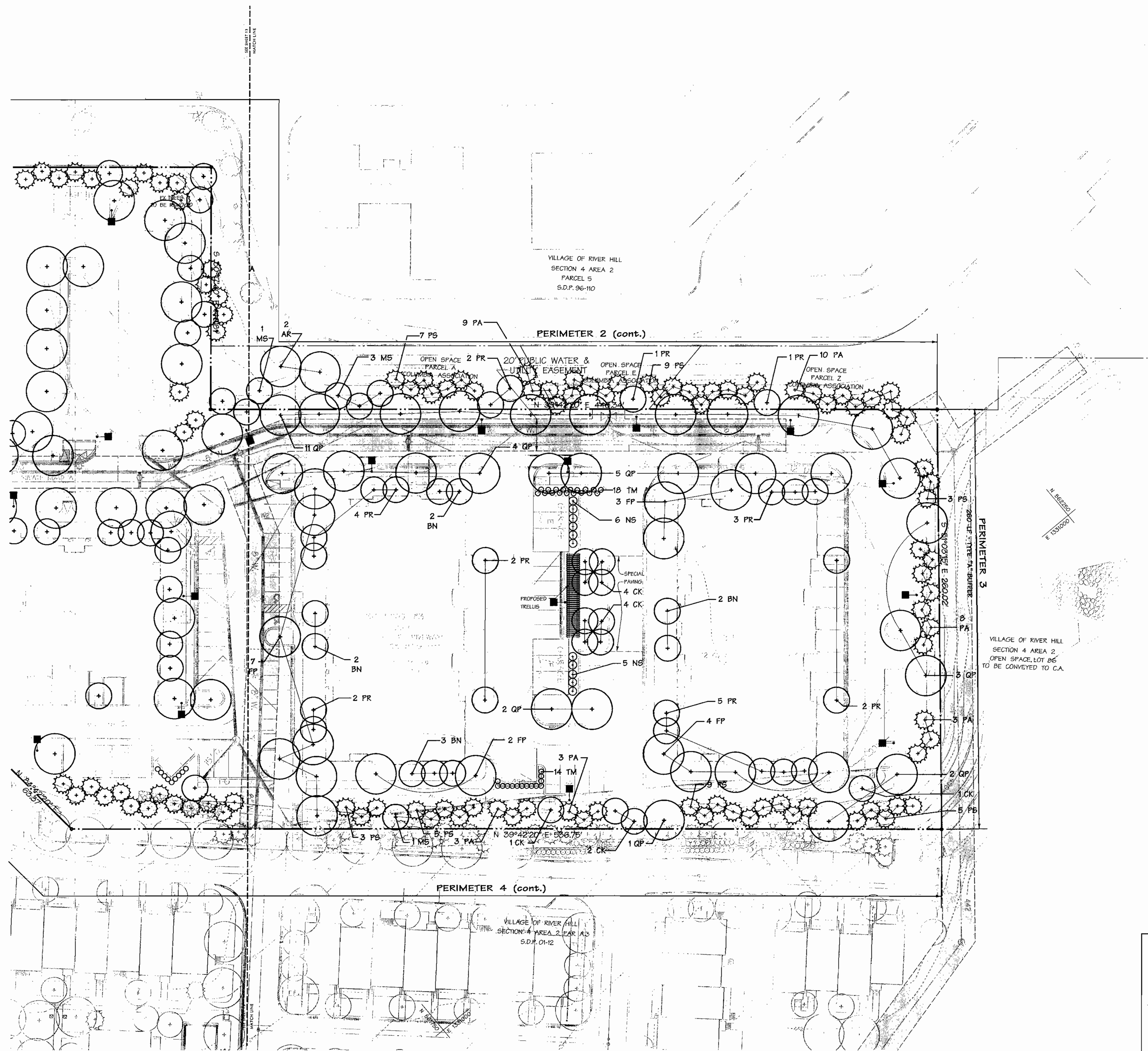
APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 [Signature] 3/2/02 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 3/2/02 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 3/2/02 DATE
 DIRECTOR

Revision Description
 COLUMBIA
VILLAGE OF RIVER HILL
 SECTION 4 AREA 1 PARCEL A-1
 BUILDINGS 1-4
 OWNER/DEVELOPER: The Howard Research and Development Company
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044
 CONTRACT PURCHASER: Bozzuto Homes
 6401 Golaen Triangle Drive
 Suite 200
 Greenbelt, MD 20776

DMW
 Daft-McCune-Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4705
 A Team of Land Planning, Landscape Architecture, Golf Course Architecture, Engineering, Surveying, Environmental Professionals.



TITLE
LANDSCAPE PLAN
 Des By: MJP Scale: 1"=30' Proj. No. 01047
 Dwn By: B.K.C. Date: 2/14/02
 Chk By: Approved
 Landscape Architect No. 260
 13 of 16



E 130°00'00"
1 AR

N 80°00'00"
E 130°00'00"

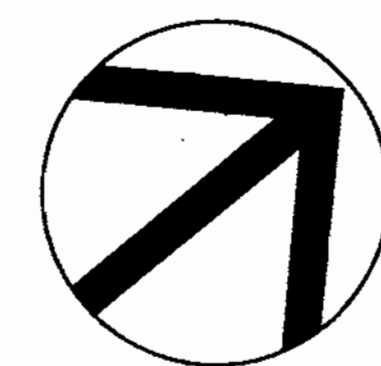
APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
Chad Dammann 3/20/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Linda Harshbarger 3/20/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Ray S. Hunt 3/27/02
 DIRECTOR DATE

Date	No.	Revision Description
		COLUMBIA
		VILLAGE OF RIVER HILL
		SECTION 4 AREA 1 PARCEL A-1 BUILDINGS 1-4
		OWNER/DEVELOPER: The Howard Research and Development Company 10275 Little Patuxent Parkway Columbia, Maryland 21044
		CONTRACT PURCHASER: Bozzuto Homes 6401 Golden Triangle Drive Suite 200 Greenbelt, MD 20770

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3/14/02
Date



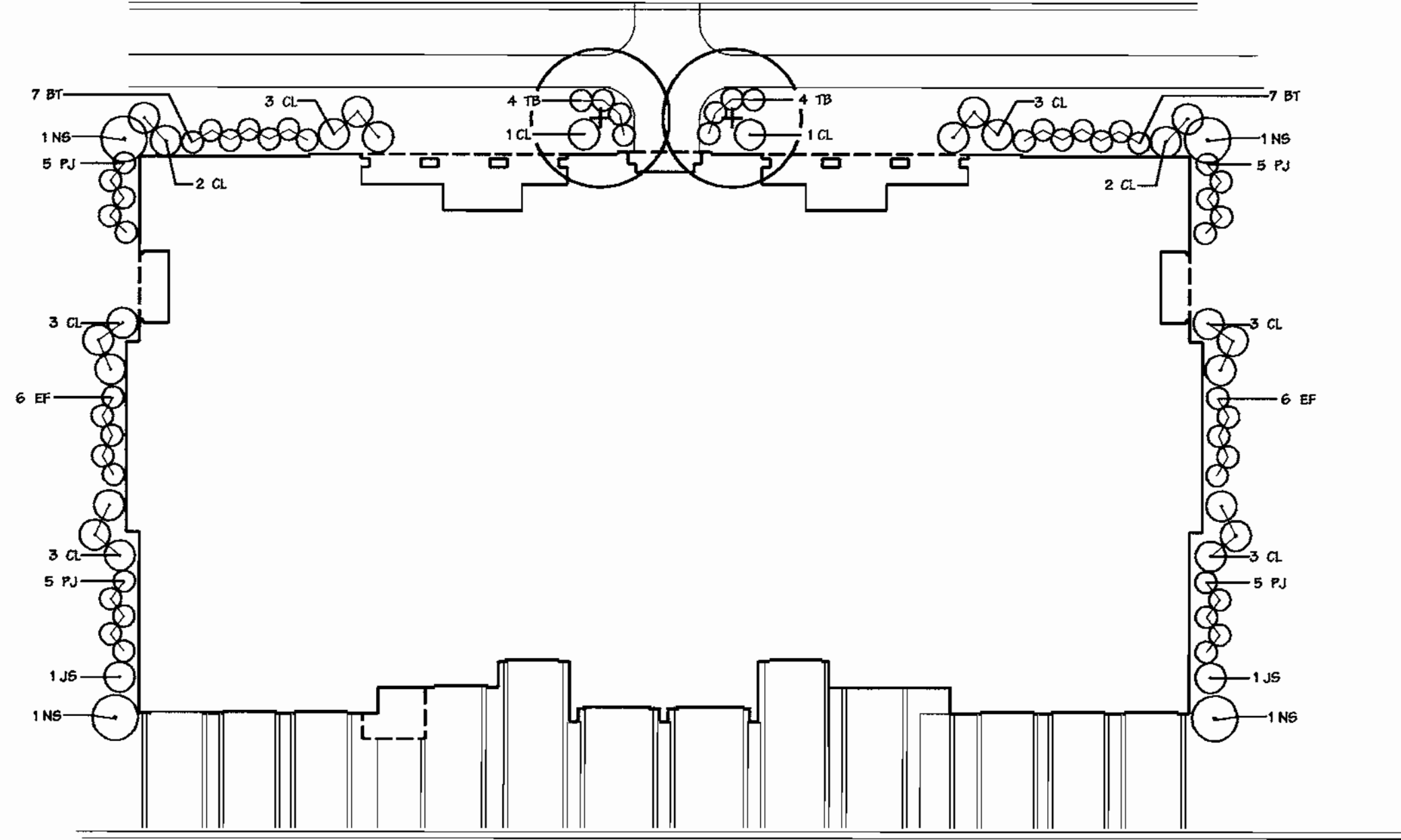
TITLE: **LANDSCAPE PLAN**

Des By	MJP	Scale	1"=30'	Proj. No.	01043
Drn By	BKC	Date	3/14/02		
Chk By		Approved			14 of 16

Landscape Architect No. 160

PLANT LIST

KEY	QTY.	BOTANICAL NAME	COMMON NAME	SIZE	CONDITION	REMARKS
Shrubs						
BT	14	Berberis thunbergii 'atropurpurea'	Purple Japanese Barberry	24"-30" HT.	Container	
CL	22	Prunus lauro, 'Otto Luyken'	Otto Luyken Laurel	24"-30" HT.	Container	
EF	12	Euonymus fort. 'Emerald n Gold'	Emerald n Gold Euonymus	18"-24" HT.	Container	
JS	2	Juniperus ch. 'Spartan'	Spartan Juniper	24"-30" HT.	Container	
NB	2	Ilex x. 'Nelle Stevens'	Nelle Stevens Holly	36"-48" HT.	Container	
PJ	20	Pieris Japonica	Japanese Pieris	24"-30" HT.	Container	
TB	8	Taxus baccata repandens	Spreading Yew	18"-24" HT.	Container	



TYPICAL BUILDING LANDSCAPING
SCALE: 1"=20'

SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES		LANDSCAPE CALCULATIONS
	PERIMETER 1 500' LF. OF LANDSCAPE TYPE 'B'	PERIMETER 2 400' LF. OF LANDSCAPE TYPE 'A'	PERIMETER 3 200' LF. OF LANDSCAPE TYPE 'A'	PERIMETER 4 100' LF. OF LANDSCAPE TYPE 'A'	
LANDSCAPE TYPE: FRONTAGE/PERIMETER					1 SHADE TREE @ 50' LF = 7 SHADE TREES 1 EVERGREEN @ 40' LF = 9 EVERGREENS 1 SHADE TREE @ 50' LF (40' TYPE 'B') = 19 SHADE TREES 1 SHRUB @ 4' LF = 127 SHADE TREES 1 SHADE TREE @ 50' LF = 4 SHADE TREES
CREDIT FOR EXISTING VEGETATION (DESCRIBE BELOW IF NEEDED)	N/A				
CREDIT FOR BIRM (DESCRIBE BELOW IF NEEDED)	N/A				
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS					30 9 127
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES OTHER TREES (2:1 SUBSTITUTION) SHRUBS (DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)					26* 17 0 22

*8 EVERGREEN TREES SUBSTITUTED FOR 4 SHADE TREES AND 22 EVERGREEN TREES ARE SUBSTITUTED FOR 127 SHRUBS

General Planting Notes

- All plant material to meet A.A.N. Standards.
- Landscape Contractor to follow landscape specification guidelines for Baltimore Washington Metro area approved by LCAAW.
- No substitutions to be made without consent of Landscape Architect or Owner.
- All beds to be topped with three inches of hardwood mulch.
- Landscape Contractor to verify location of utilities with Owner before planting.
- Landscape Architect/Owner shall select, verify and/or approve all plant material. At Owner's discretion specimen and other plant material will be selected.
- Landscape Contractor shall coordinate plant bed filling operations and plant material installation with General Contractor and Utilities Contractor. At the time of final inspection, with acceptance, all electric, water, and drainage as well as all plant materials, shall remain undamaged. Likewise, Landscape Contractor and Utilities Contractor shall coordinate efforts to ensure that surface utilities are at the proper elevation relative to final grades.
- Contractor shall notify Miss Utility 72 hours prior to construction.
- The owner, tenant, and/or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Ho. Co. Code per the new town alternative compliance method. Financial surety for the required landscaping in the amount of \$36,150.00 must be posted as part of the developer's agreement. (30 shade, 61 evergreen)
- Developer's/Builder's Certificate

I hereby 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 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: JOHN RENNER JR.
BOZZUTO HOMES

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

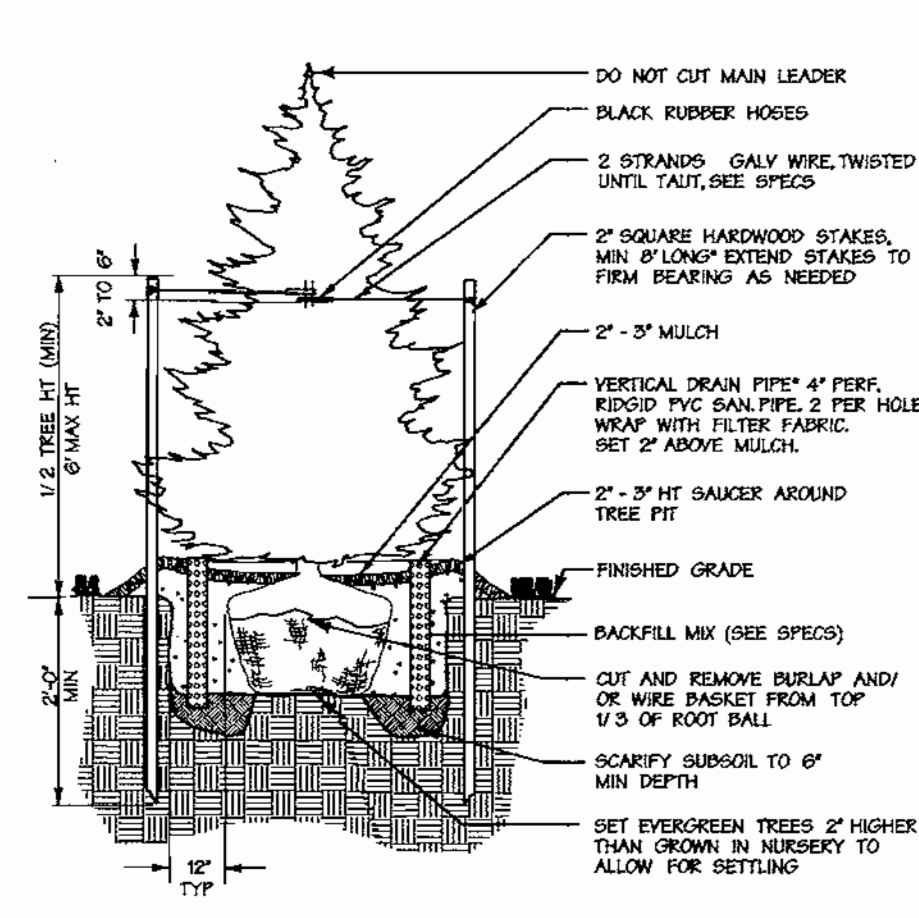
NUMBER OF PARKING SPACES	80
NUMBER OF TREES REQUIRED @ 1/20 PKG. SPACES	5
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTION)	5
NUMBER OF ISLANDS REQUIRED @ 1 PER 20 PKG. SP.	5
NUMBER OF ISLANDS PROVIDED @ 1 PER 20 PKG. SP.	5

DUMPSTER WALL ENCLOSURE

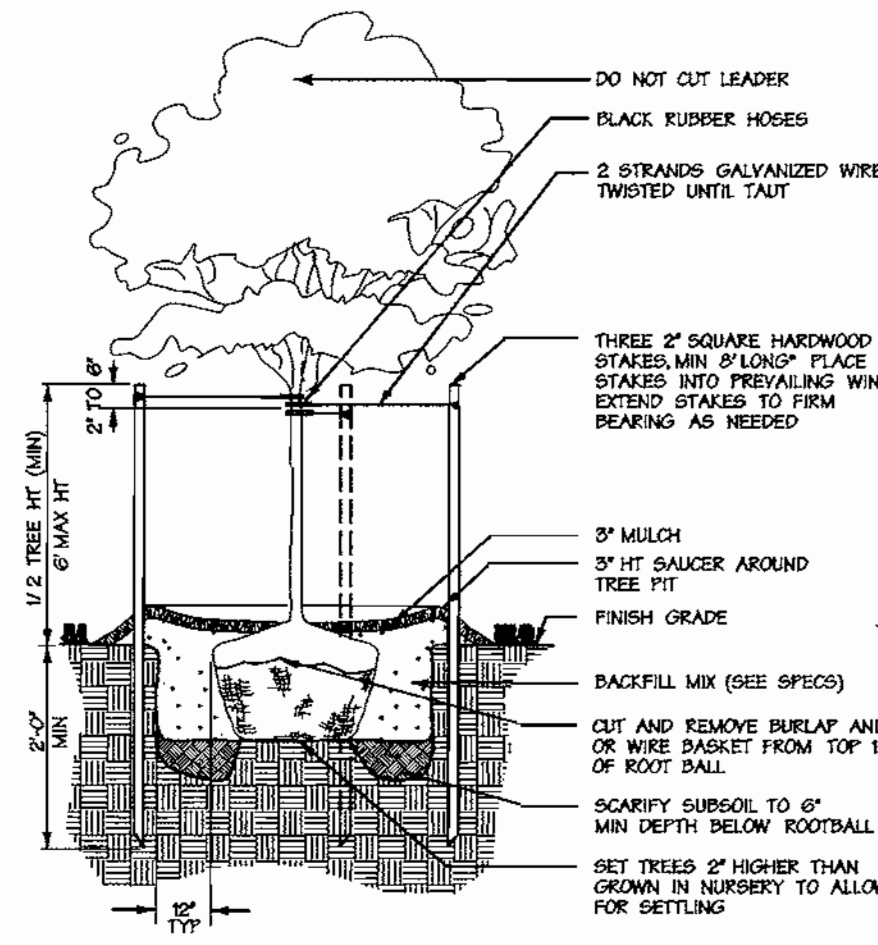
110 LINEAR FEET x 820	\$2200
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SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

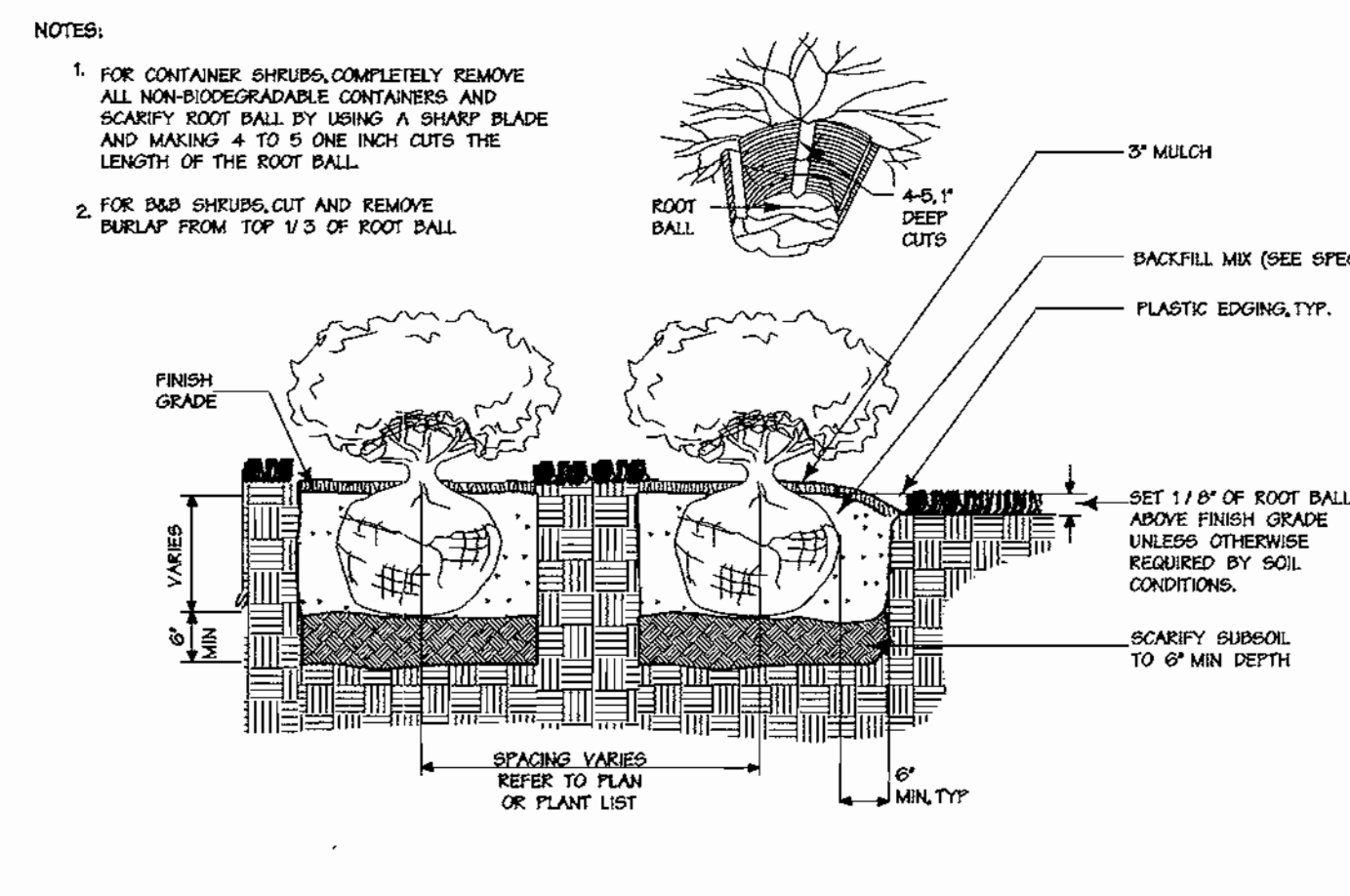
NUMBER OF DWELLING UNITS	107
NUMBER OF TREES REQUIRED @ 1/3 DU APTS	36
NUMBER OF TREES PROVIDED SHADE TREES	36



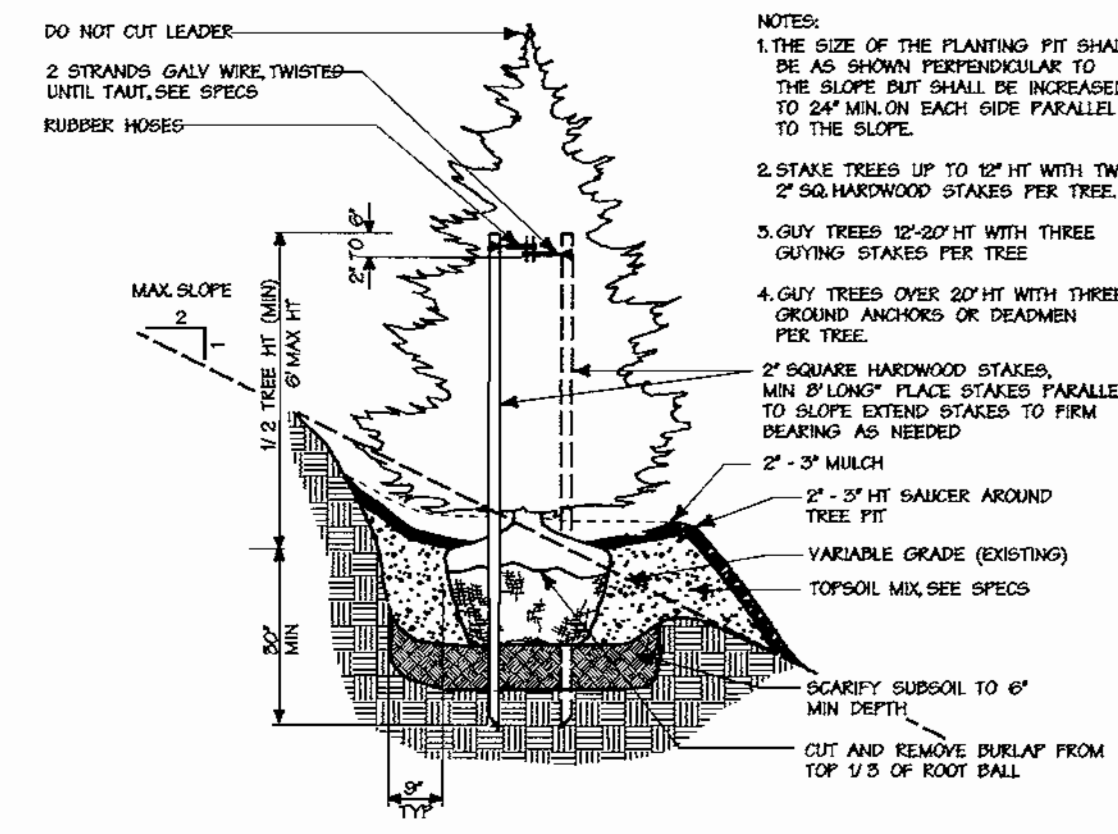
EVERGREEN TREE PLANTING
NOT TO SCALE



TREE PLANTING 2 1/2 - 3" CALIPER
NOT TO SCALE



SHRUB PLANTING
NOT TO SCALE



EVERGREEN TREE PLANTING ON SLOPE
NOT TO SCALE

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 2-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
 Chief, Development Engineering Division: [Signature] 3/2/02 DATE
 Chief, Division of Land Development: [Signature] 3/26/02 DATE
 Director: [Signature] 3/27/02 DATE

Date No. Revision Description

COLUMBIA

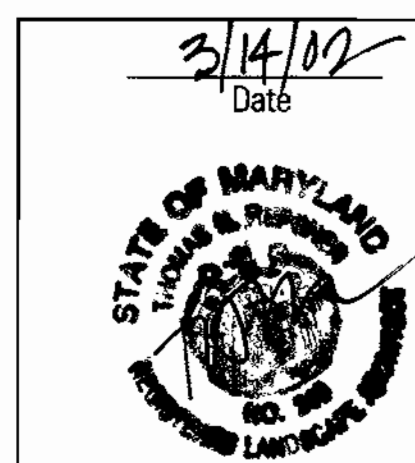
VILLAGE OF RIVER HILL

SECTION 4 AREA 1 PARCEL A-1
BUILDINGS 1-4

OWNER/DEVELOPER: The Howard Research and Development Company
 10275 Little Patuxent Parkway
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TITLE
LANDSCAPE DETAILS

Des By MJP Scale AS SHOWN Proj. No. 01043
 Dm By BKC Date 1/14/02
 Chk By Approved 15 of 16

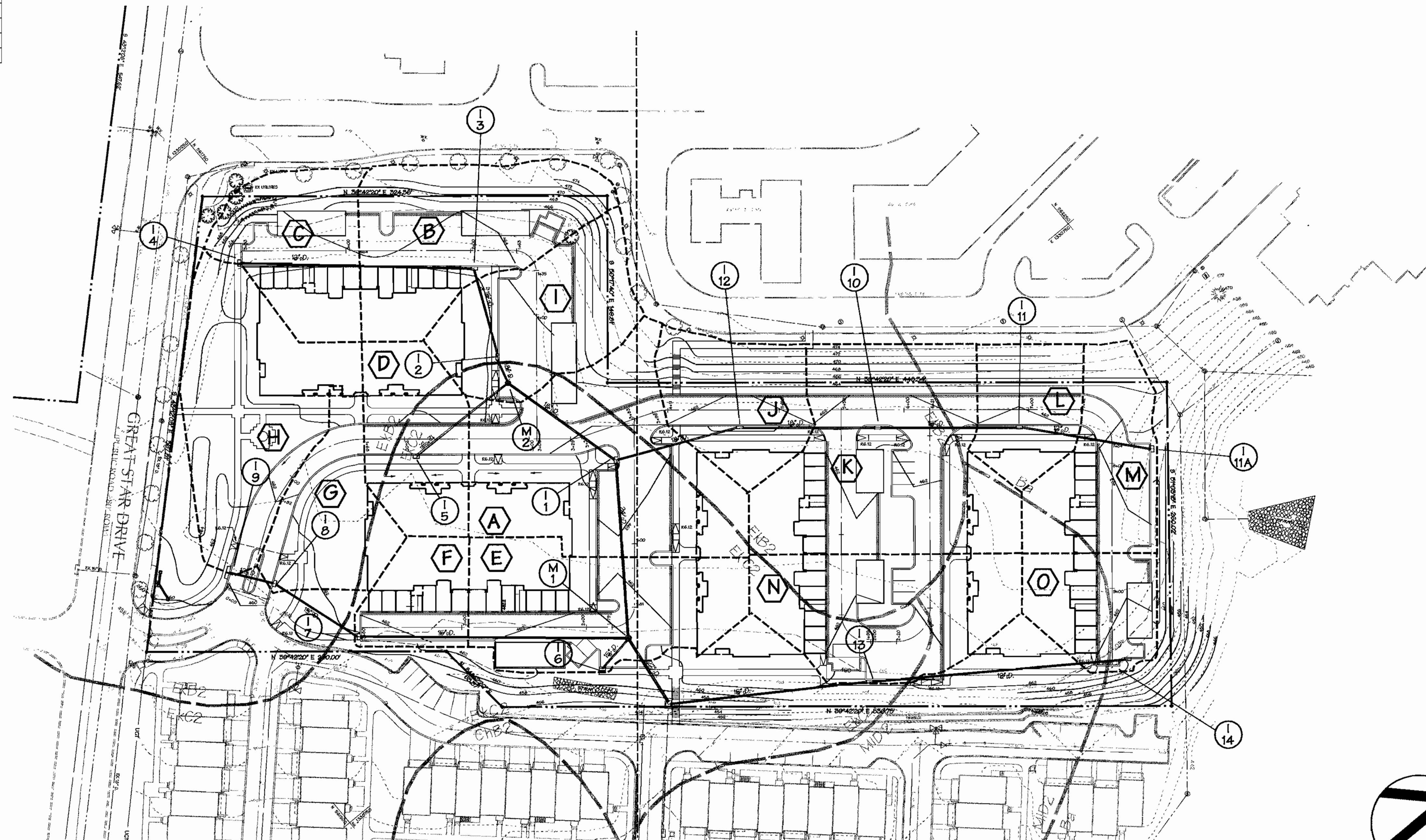
Landscape Architect No. 660

DRAINAGE AREAS

AREA	ACRES		COEFF. "C"	CA	IMP
	Sub.	Total			
A	0.63	.65	.41	60%	
B	0.46	.61	.28	54%	
C	0.29	.67	.19	62%	
D	0.26	.69	.18	65%	
E	0.45	.75	.34	73%	
F	0.15	.90	.13	93%	
G	0.24	.70	.17	67%	
H	0.52	.50	.26	40%	
I	0.36	.58	.21	50%	
J	0.26	.49	.13	38%	
K	0.64	.61	.39	54%	
L	0.20	.58	.12	50%	
M	0.30	.70	.21	67%	
N	0.42	.81	.34	81%	
O	0.20	.91	.18	95%	

SOIL LEGEND

SYMBOL	NAME	SLOPE	SEPTIC	EROSION
Ba	Baile Silt Loam		Severe	
ChB2	Chester Silt Loam	3% - 8%	Slight	Moderately eroded
EK2	Elioak silt loam	3% - 8%	Severe	Moderately eroded
EK2	Elioak silt loam	8% - 15%	Severe	Moderately eroded
MID2	Manor Loam	15% - 25%	Severe	Moderately eroded

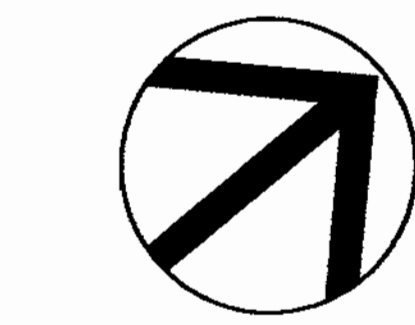


APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 4-7-02

APPROVED: HOWARD COUNTY DEPT. OF PLANNING & ZONING
[Signature] 3/26/02
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
[Signature] 3/26/02
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 3/27/02
 DIRECTOR DATE

Date No. Revision Description
 COLUMBIA
VILLAGE OF RIVER HILL
 SECTION 4 AREA 1 PARCEL A-1
 BUILDINGS 1-4
OWNER/DEVELOPER: The Howard Research and Development Company
 10275 Little Patuxent Parkway
 Columbia, Maryland 21044
CONTRACT PURCHASER: Bozzuto Homes
 6401 Golden Triangle Drive
 Suite 200
 Greenbelt, MD 20770

DMW
 Daft McCune Walker, Inc.
 200 East Pennsylvania Avenue
 Towson, Maryland 21286
 (410) 296-3333
 Fax 296-4706
 A Team of Land Planners,
 Landscape Architects,
 Golf Course Architects,
 Engineers, Surveyors &
 Environmental Professionals



[Signature]
 Date
 Professional Engr. No. *[Signature]*

TITLE
DRAINAGE AREA MAP
 Des By MJP Scale 1"=50' Proj. No. 01043
 Dm By B.K.C. Date 2/19/02
 Chk By Approved
16 of 16