

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 DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:
 - MISS UTILITY 1-800-257-7777
 - BELL ATLANTIC TELEPHONE COMPANY (410) 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900
 - AT&T CABLE LOCATION DIVISION (410) 343-3533
 - BALTIMORE GAS & ELECTRIC (410) 685-0123
 - STATE HIGHWAY ADMINISTRATION (410) 531-5533
 - HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION (410) 313-1880
- PROJECT BACKGROUND:
 - ALL DATA TO INCLUDE HOLLIFIELD ESTATES, LOT 2 (F-99-61, WP-99-39, 10/19/98)
 - LOCATION: SECOND ELECTION DISTRICT - TAX MAP 18 - PARCEL 1
 - ZONING: R-ED
 - NUMBER OF PROPOSED BUILDABLE LOTS: 24
 - NUMBER OF PROPOSED BULK PARCELS: 0
 - NUMBER OF OPEN SPACE LOTS: 2
 - AREA OF PROPOSED BUILDABLE LOTS: 6.01 ACRES ±
 - PROPOSED ROAD DEDICATION: 0.91 ACRES ±
 - TOTAL TRACT AREA: 6.48 ACRES ±
 - DPZ REFERENCE #:
 - 5-96-16 APPROVED ON 8/1/96.
 - P-98-11 APPROVED ON 5/7/98.
 - F-99-61 SUBMITTED ON 10/19/98.
 - WP-99-39 SUBMITTED ON 10/19/98.

* EXCESS RECREATIONAL OPEN SPACE IS BEING DEDICATED IN HOLLIFIELD ESTATES I, SECTION TWO, (F-99-76) FOR THE LOTS IN HOLLIFIELD ESTATES I, SECTION ONE, (F-99-75) HOLLIFIELD ESTATES I, LOT 2 AND FUTURE HOLLIFIELD ESTATES II, (F-00-39).
- TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY BY KINGS AERIAL MAPPING CO., INC. FLOWN ON MARCH 25, 1995.
- HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

STA No. 17FA	N 594,949.55	EL. = 477.52
	E 1,364,629.51	
STA No. 17F7	N 595,830.83	EL. = 470.19
	E 1,363,091.09	
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- WATER AND SEWER ARE PUBLIC, CONTRACT #14-3802-D.
- STORMWATER MANAGEMENT CONTROL IS PROVIDED BY THE METHOD OF EXTENDED DETENTION. THE STORMWATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY AND THE H.O.A. & CONSTRUCTED UNDER HOLLIFIELD ESTATES, SECTION ONE (F-99-75).
- HOUSES NOT CONTROLLED BY THE SWIM POND (F-99-75) TO HAVE DRY WELLS AT SDP STAGE.
- 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.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-99.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- THE FIVE FOREST CONSERVATION RETENTION EASEMENTS TOTALING 10.32 ± ACRES, LOCATED ON OPEN SPACE LOTS 14 AND 46 AND NON-BUILDABLE PARCEL 'C' OF HOLLIFIELD ESTATES I, SECTION ONE, HAVE BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE, FOREST CONSERVATION ACT, FOR THIS SUBDIVISION, (F-99-76); AND HOLLIFIELD ESTATES I, SECTION ONE, (F-99-75). SURPLUS FOREST RETENTION AREAS IN EXCESS OF THE MINIMUM REQUIRED (1.14 ACRES) TO BE CREDITED TO FUTURE HOLLIFIELD ESTATES II, (F-00-39). NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- ALL STORM DRAIN PIPES TO BE HDPE PIPES UNLESS OTHERWISE NOTED.
- WETLAND AND STREAM DELINEATION PERFORMED BY CHESAPEAKE ENVIRONMENTAL MANAGEMENT, INC. DATED FEBRUARY, 1996.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- OPEN SPACE LOT 61 WILL BE CONVEYED TO THE H.O.A. OPEN SPACE LOT 54 WILL BE OWNED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
- ALL EXISTING STRUCTURES TO BE REMOVED.
- THE FOLLOWING RESTRICTIONS SHALL APPLY TO ALL LOTS WHICH HAVE ENCROACHMENTS FOR UTILITY EASEMENTS.
 - ANY STRUCTURE OR PART OF A STRUCTURE SHALL BE A MINIMUM OF 2 FEET FROM THE EASEMENT LINES.
 - NO FOOTER SHALL EXTEND INTO THE EASEMENT.
 - NO DECKS, ADDITIONS OR OTHER IMPROVEMENTS SHALL BE LOCATED WITHIN OR EXTEND OVER THE EASEMENT.
 - THE MINIMUM DISTANCE BETWEEN UNITS IS 15 FEET.
- GRADING PERMITS FOR F-99-75 AND F-99-76 MUST BE ISSUED TO RUN CONCURRENTLY.

ROAD CONSTRUCTION PLANS

HOLLIFIELD ESTATES I

SECTION TWO

LOTS 50 THRU 75

A RESUBDIVISION OF

HOLLIFIELD ESTATES, BULK PARCEL D

SECOND ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

LEGEND

EXISTING CONTOUR _____

PROPOSED CONTOUR _____

SPOT ELEVATION _____

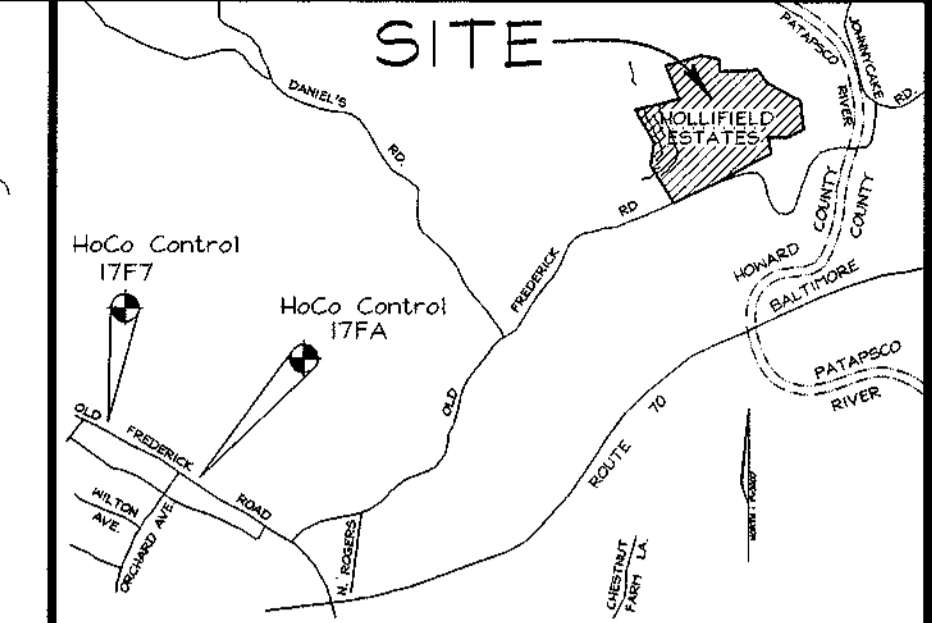
DIRECTION OF FLOW _____

EXISTING TREES TO REMAIN _____

LIGHT POLES _____

POST TOP _____

OVERHEAD _____



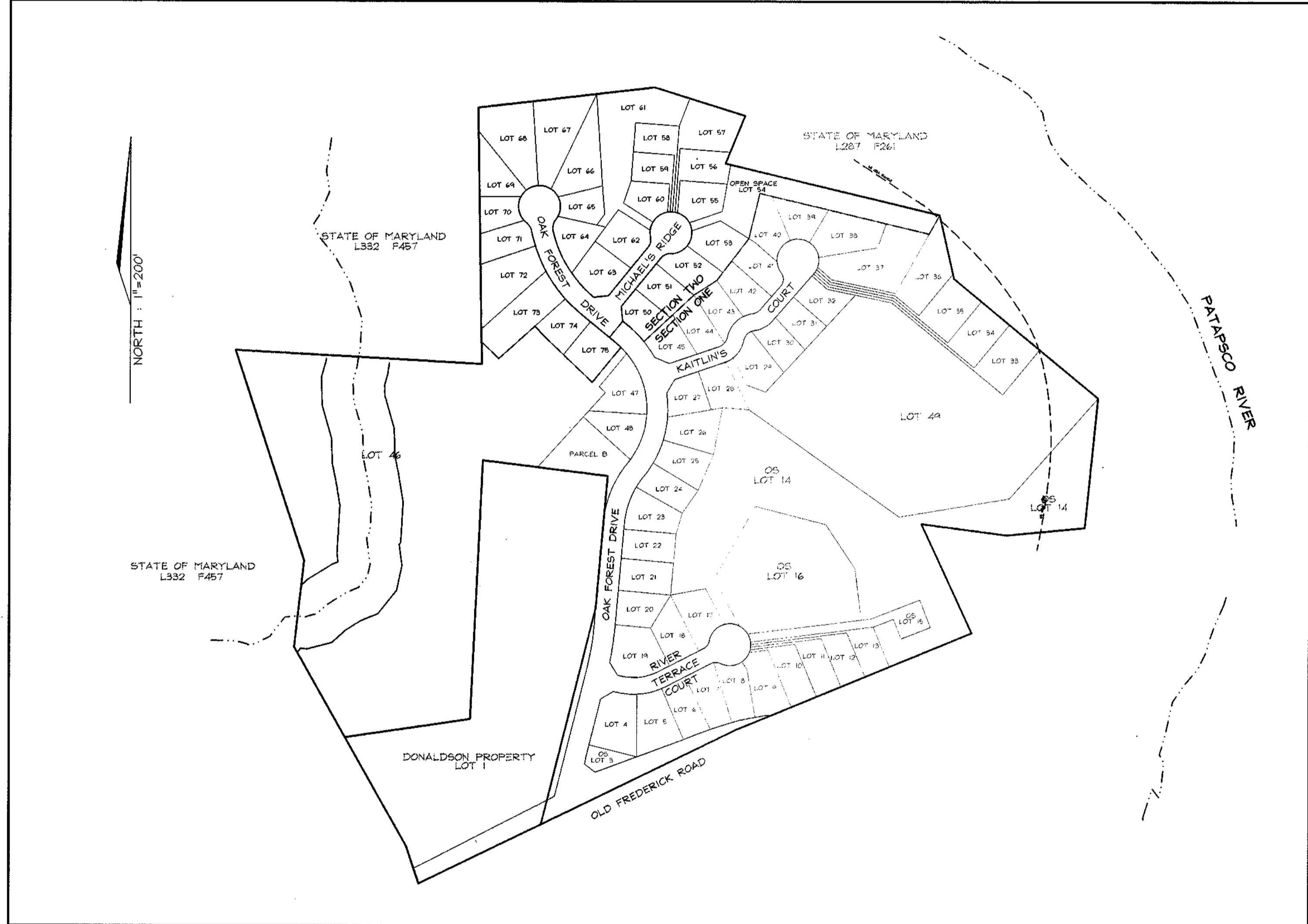
BENCHMARKS

17FA	N594,949.55	E 1,364,629.51	EL.=477.52
17F7	N595,830.83	E 1,363,091.09	EL.=470.19

VICINITY MAP
SCALE: 1"=2000'

SHEET INDEX

DESCRIPTION	SHEET NO.
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Sediment and Erosion Control Details	5 of 10
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Landscape Plan	7 of 10
Drainage Area Map, Existing Conditions	8 of 10
Drainage Area Map, Storm Drainage	9 of 10
Drainage Area Map, Stormwater Management	10 of 10



LOCATION MAP
SCALE: 1"=100'

OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Twin Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 995-0081

NO.	REVISION	DATE
	AS-BUILT CERTIFICATE	
		DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Charles Skirven 3/9/00
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton 4/14/00
CHIEF, DIVISION OF LAND DEVELOPMENT

Robert O'Connell 4/3/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION

COVER SHEET

HOLLIFIELD ESTATES I

SECTION TWO
A RESUBDIVISION OF BULK PARCEL D

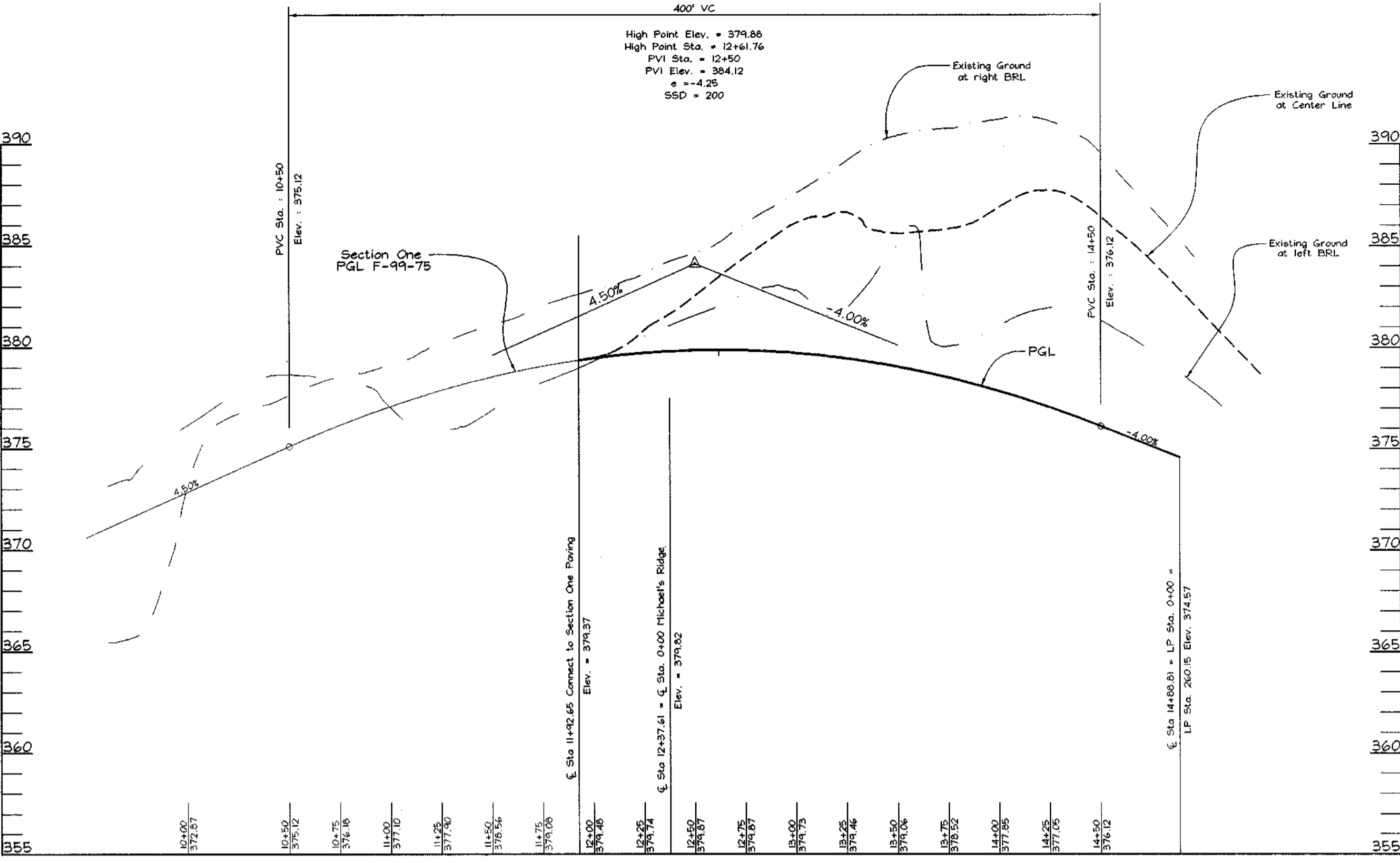
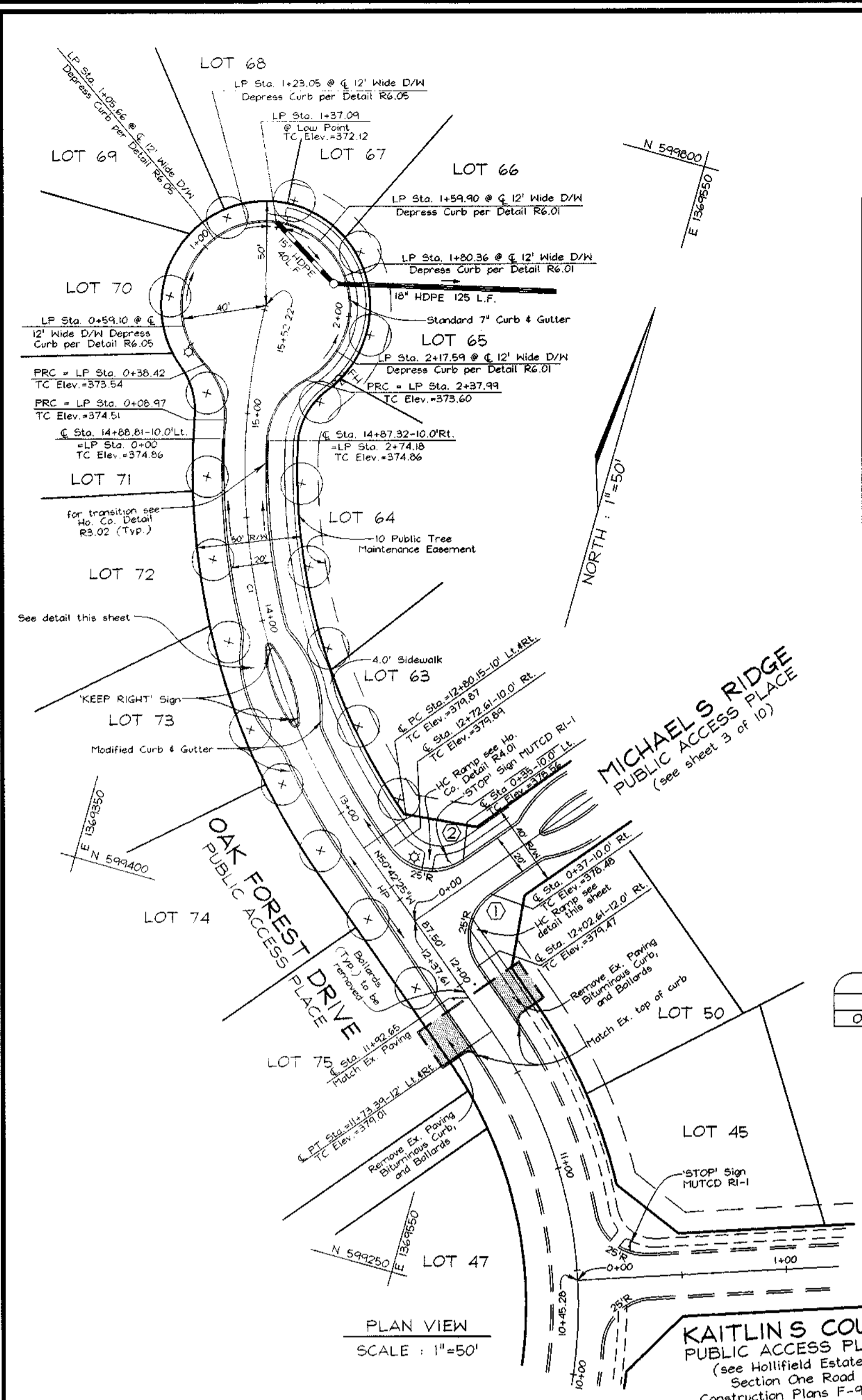
TAX MAP #18 PARCEL 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: RHV
DATE: Oct. 12, 1999
SCALE: As Shown
H.O. NO.: 99-018

1 SHEET OF 10



STREET TREE CALCULATIONS

Street Name	Linear Feet	Required Trees	Provided Trees
Oak Forest Drive	800/40	20	20

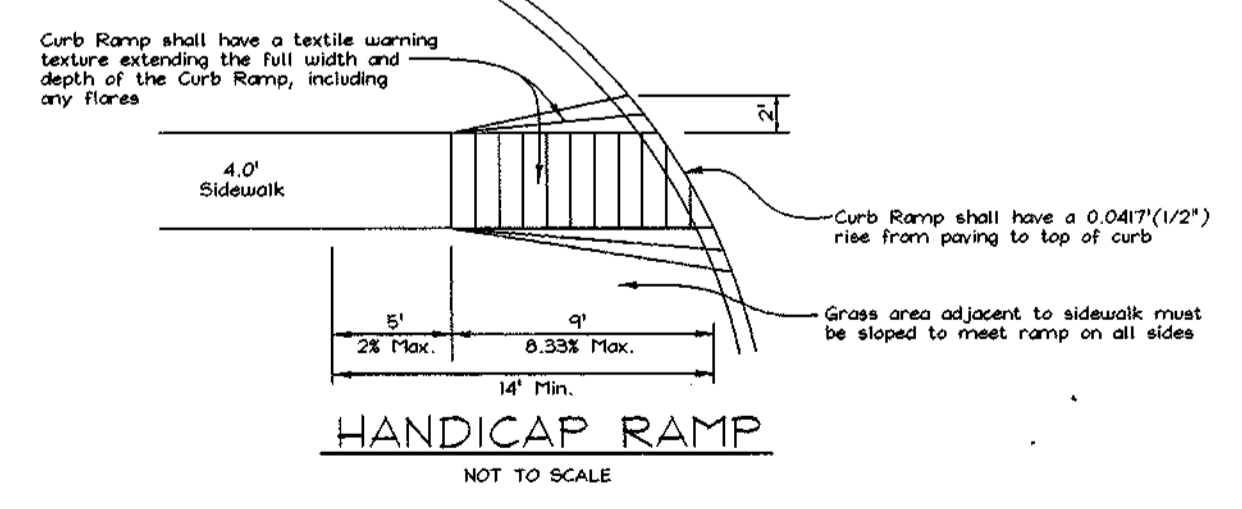
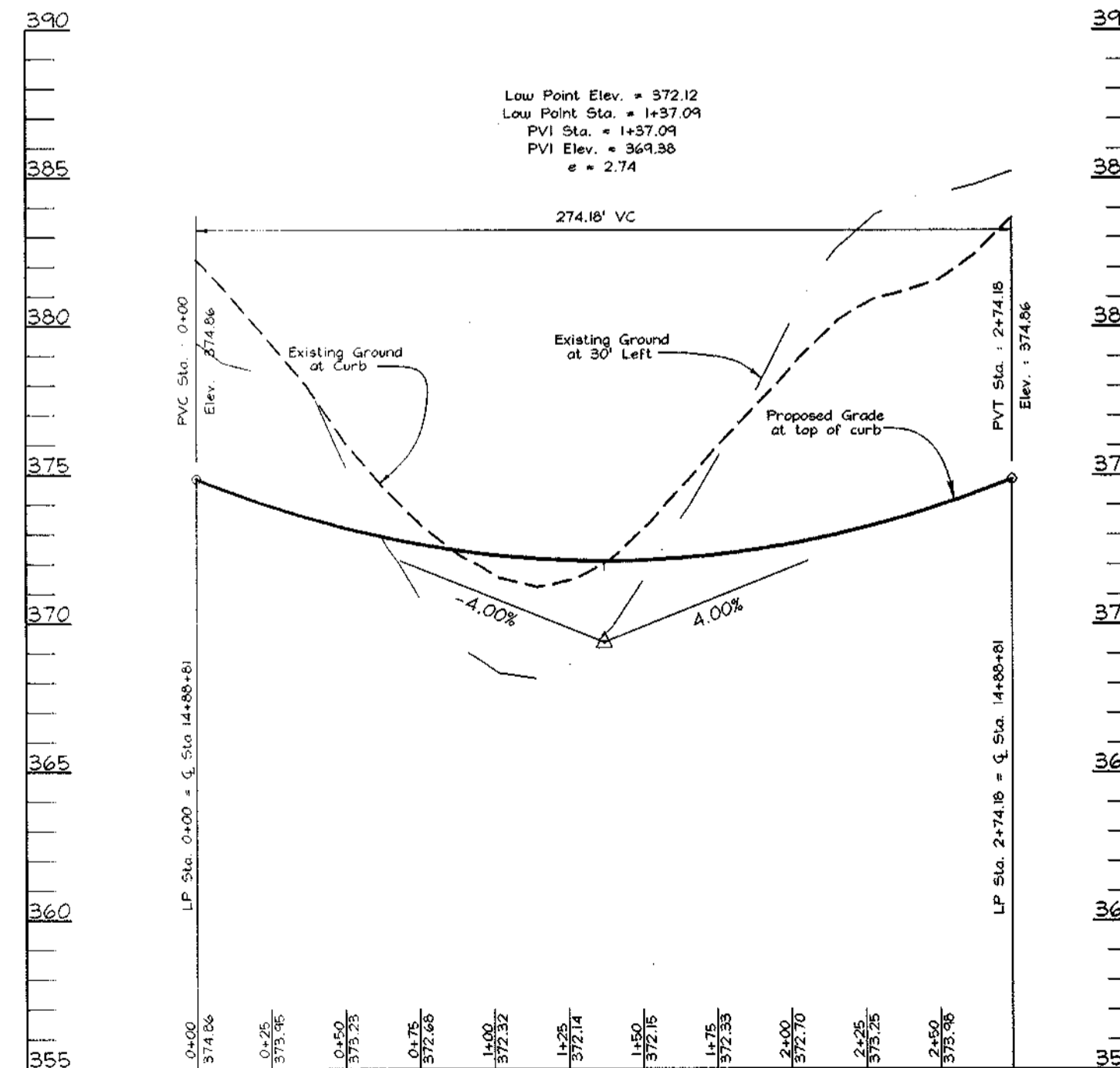
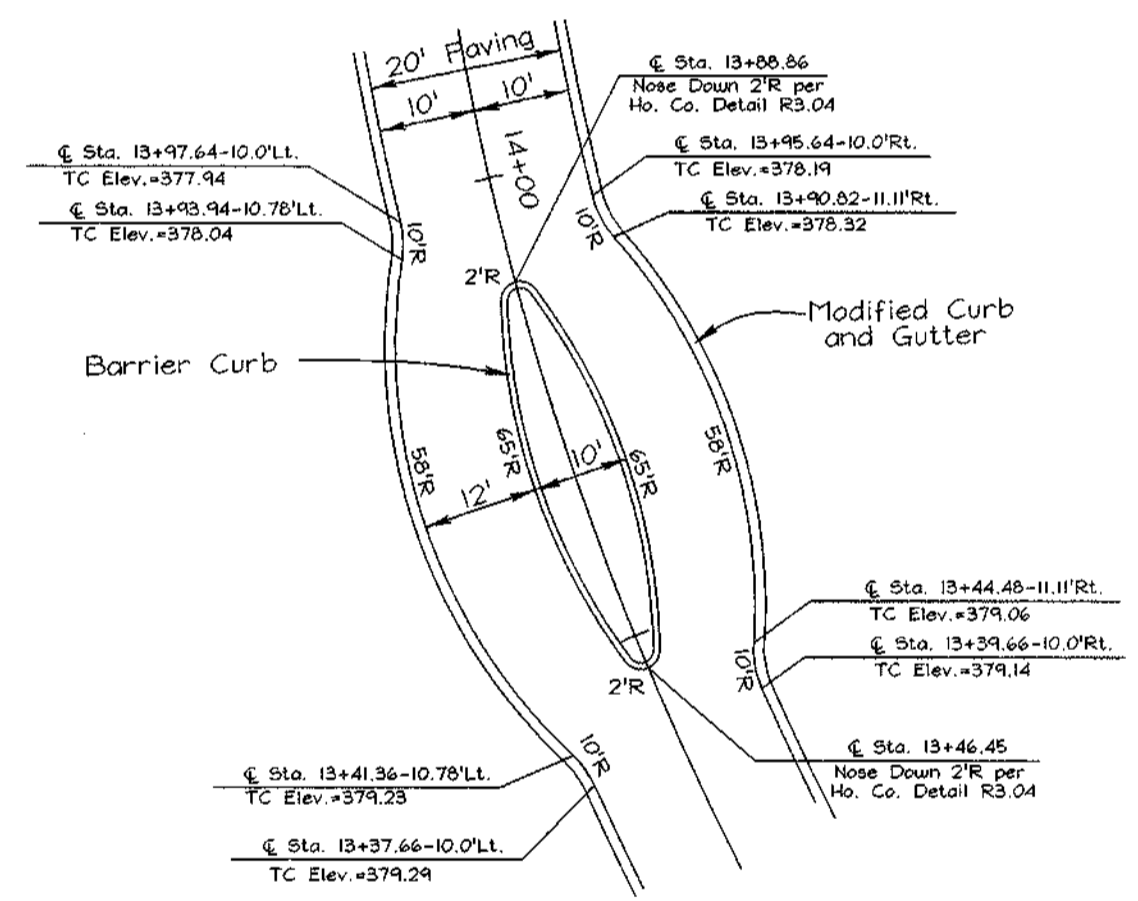
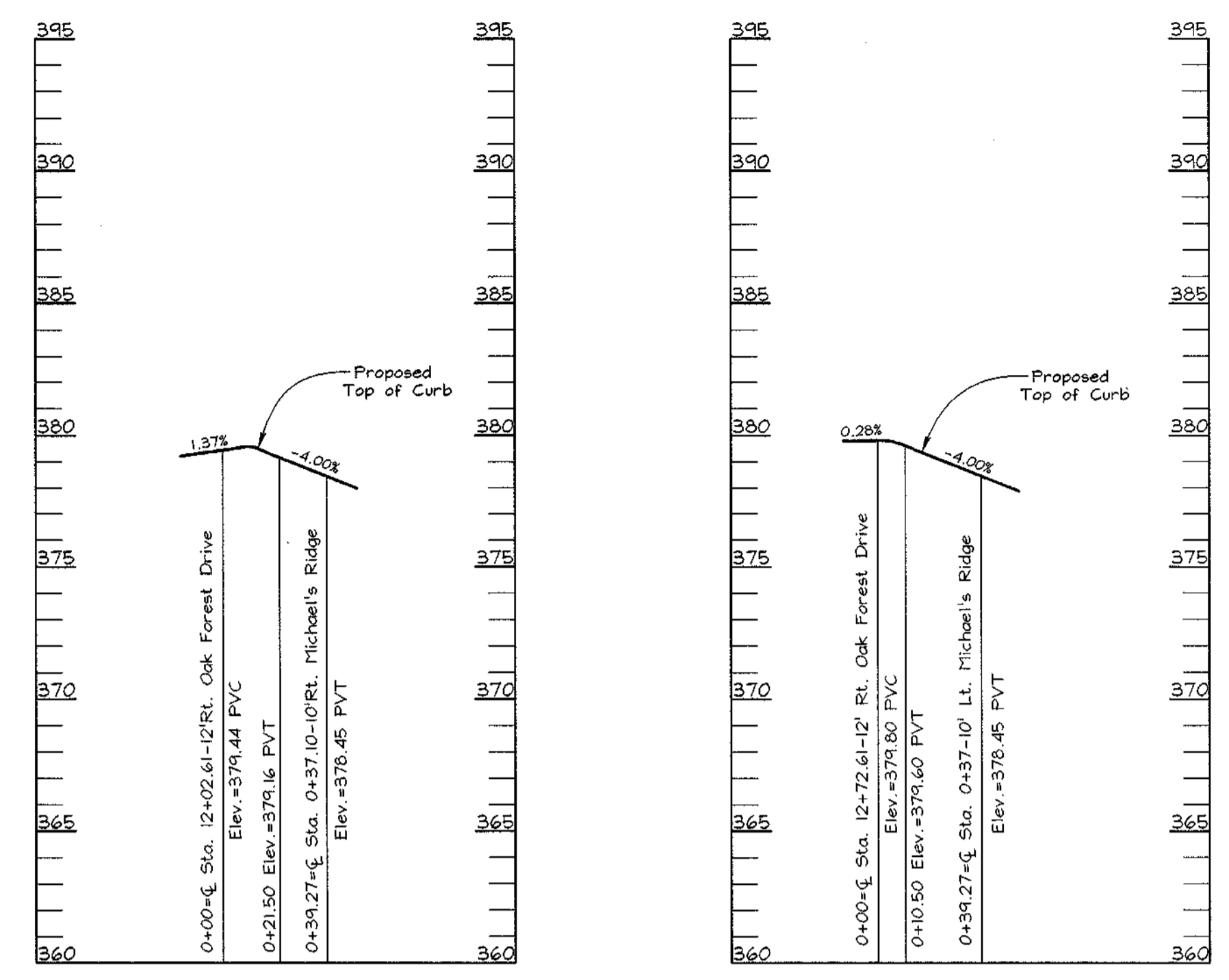
CURVE TABLE

CURVE LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
CI	272.07	316.00	148.11	265.75	152°00'22"EL

STREET LIGHT LOCATION CHART

STREET NAME	CENTERLINE STATION	CENTERLINE OFFSET
Oak Forest Drive	12+62.25	17.26' RL
Oak Forest Drive	LP 0+45.23	5.0' LT

Traditionaire: 100-Watt MPS Vapor, Traditionaire Post Top Fixture mounted on a 1 1/2" black fiberglass pole



NO.	REVISION	DATE

AS-BUILT CERTIFICATE

DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Charles Skirven 3/29/10
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cynthia Houtte 4/12/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 4/13/10
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROAD PLAN AND PROFILES
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

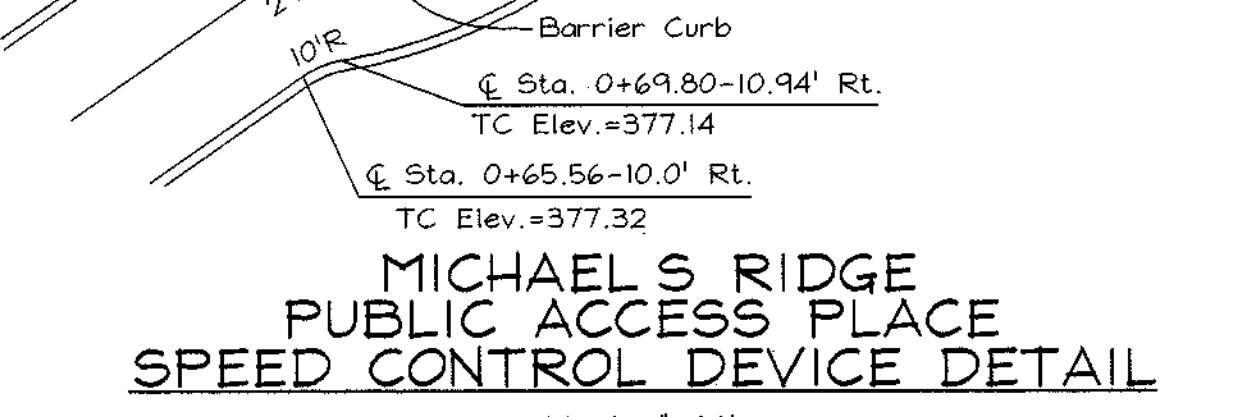
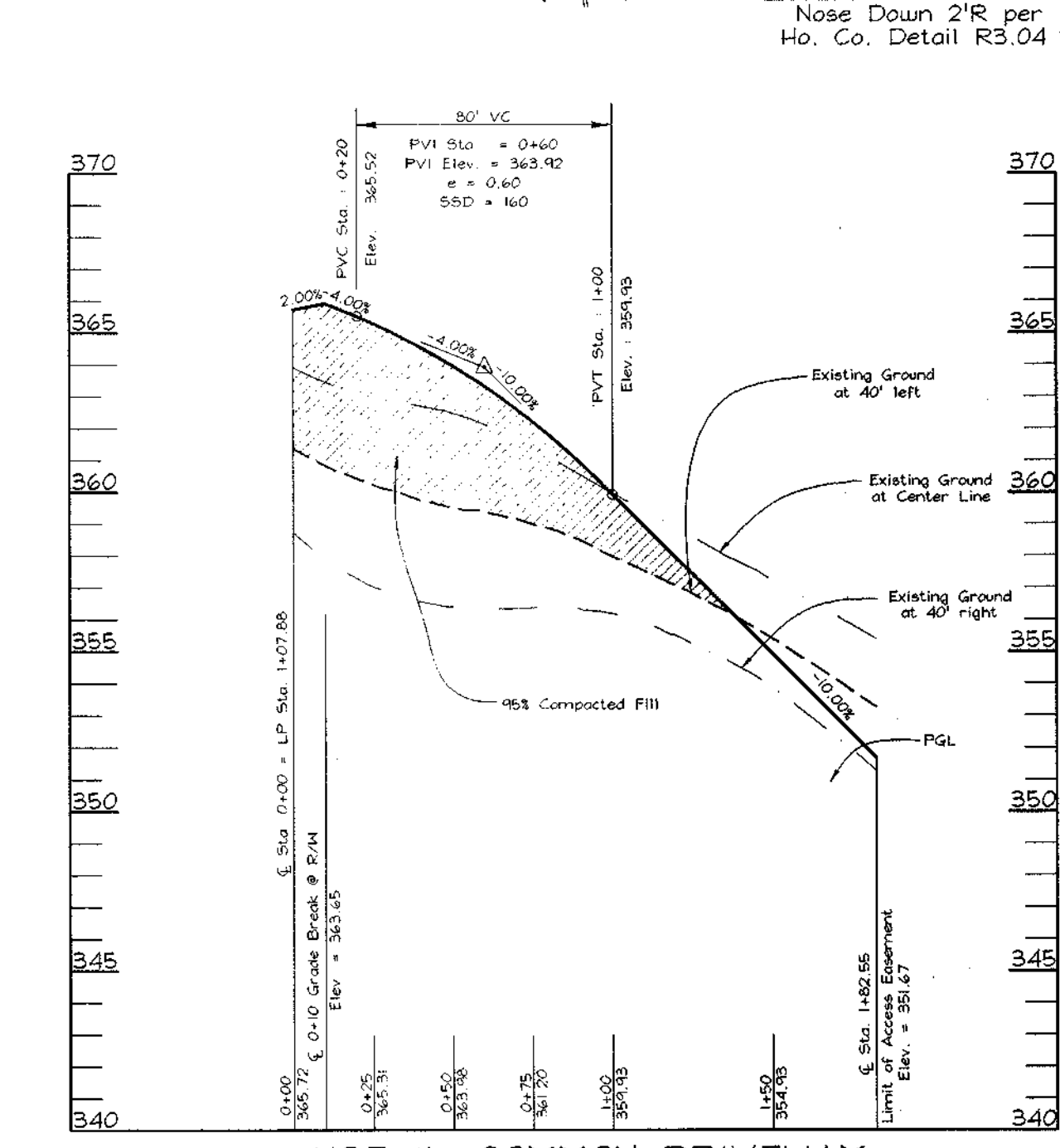
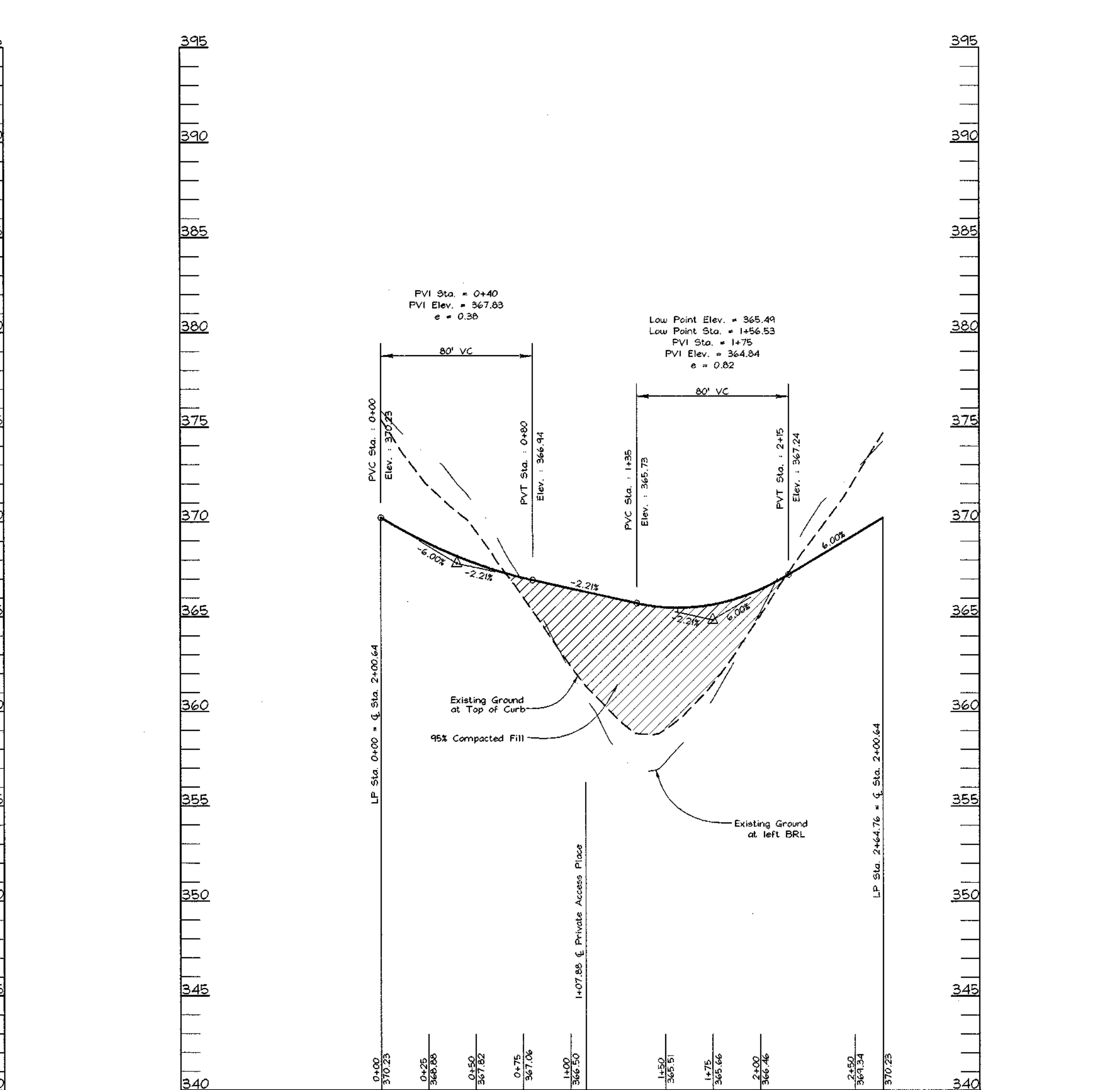
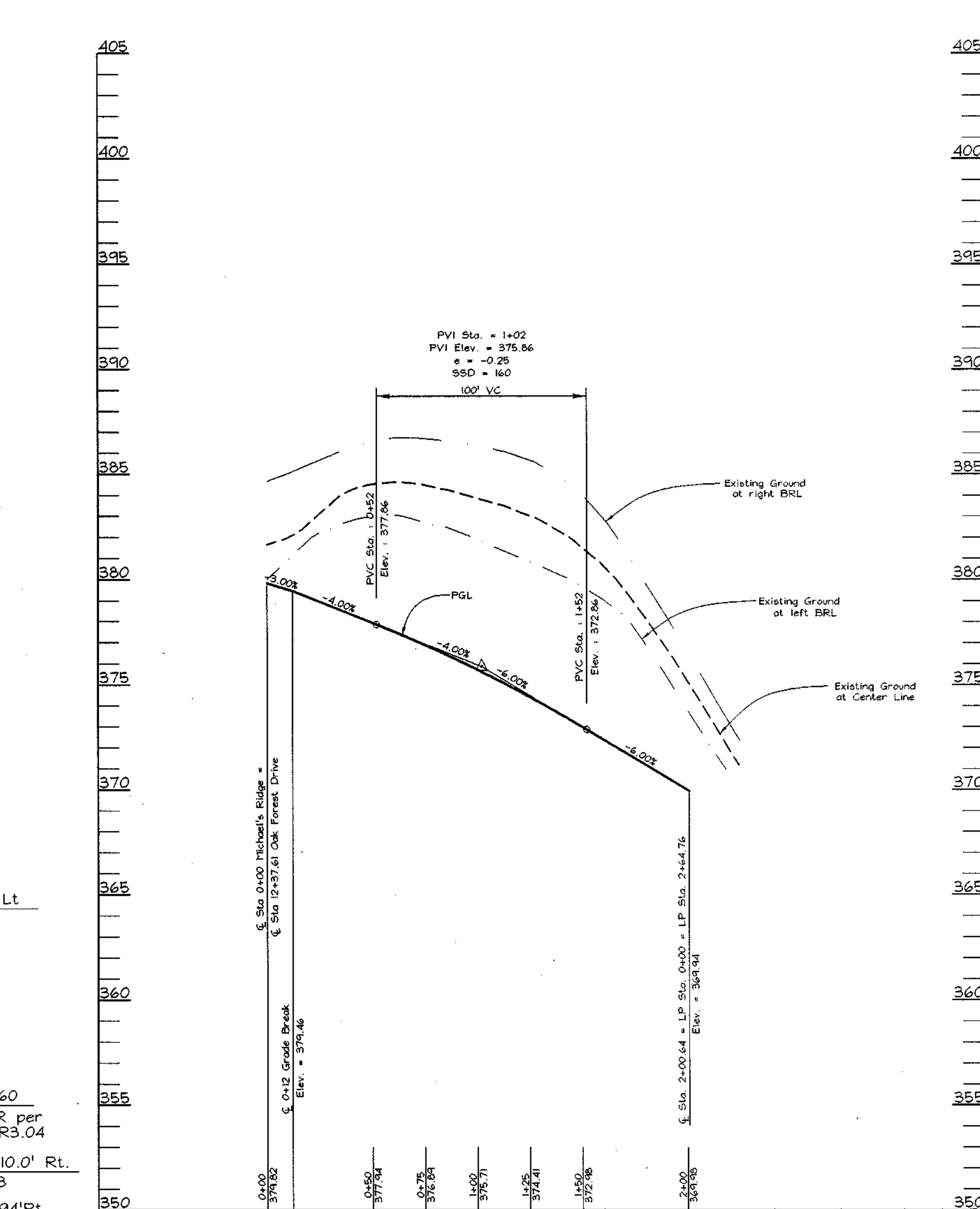
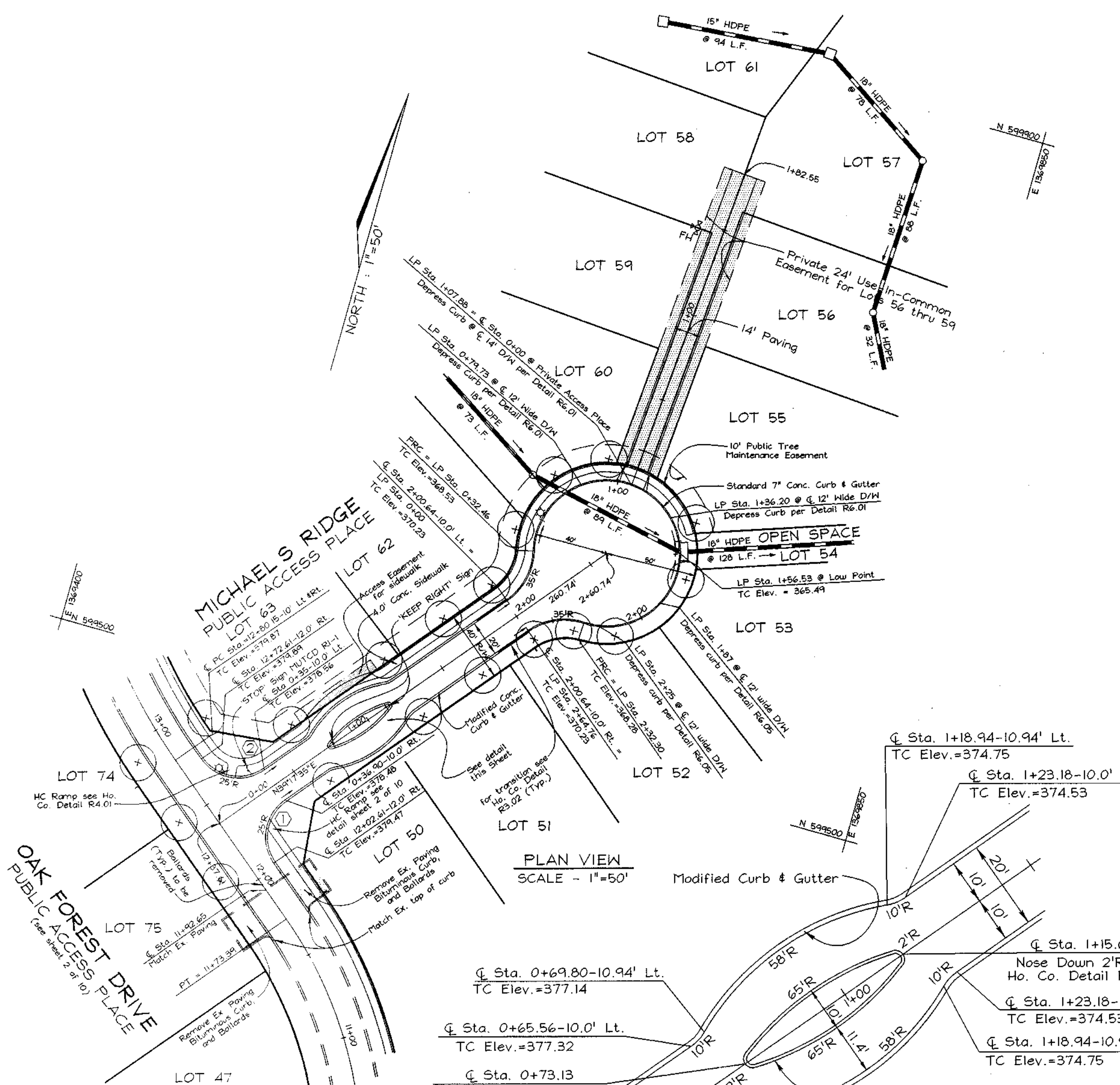
VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS

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OWNER/DEVELOPER
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(410) 995-0081

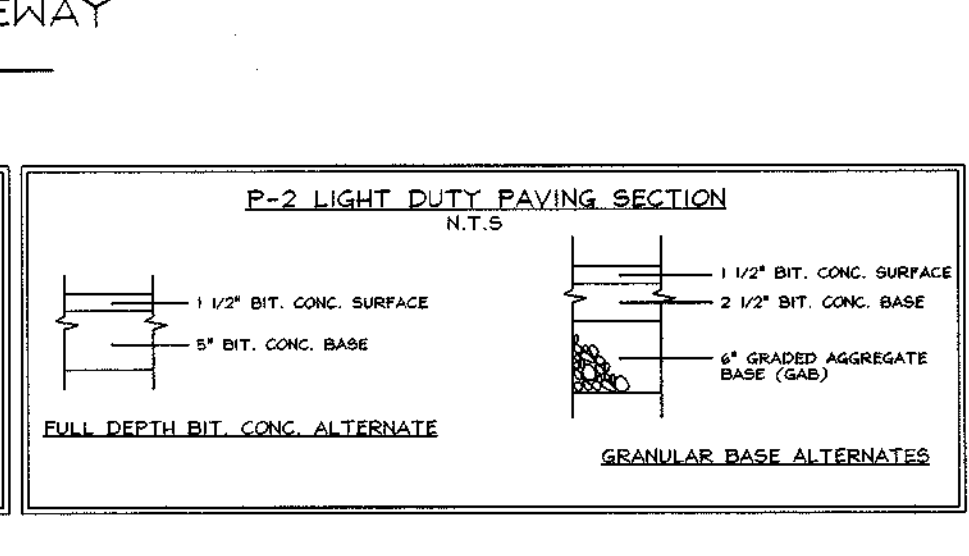
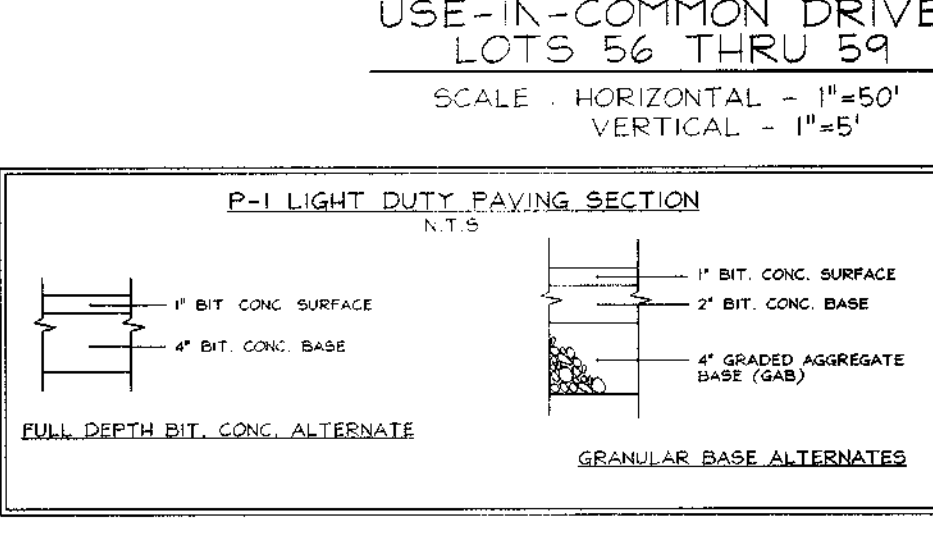
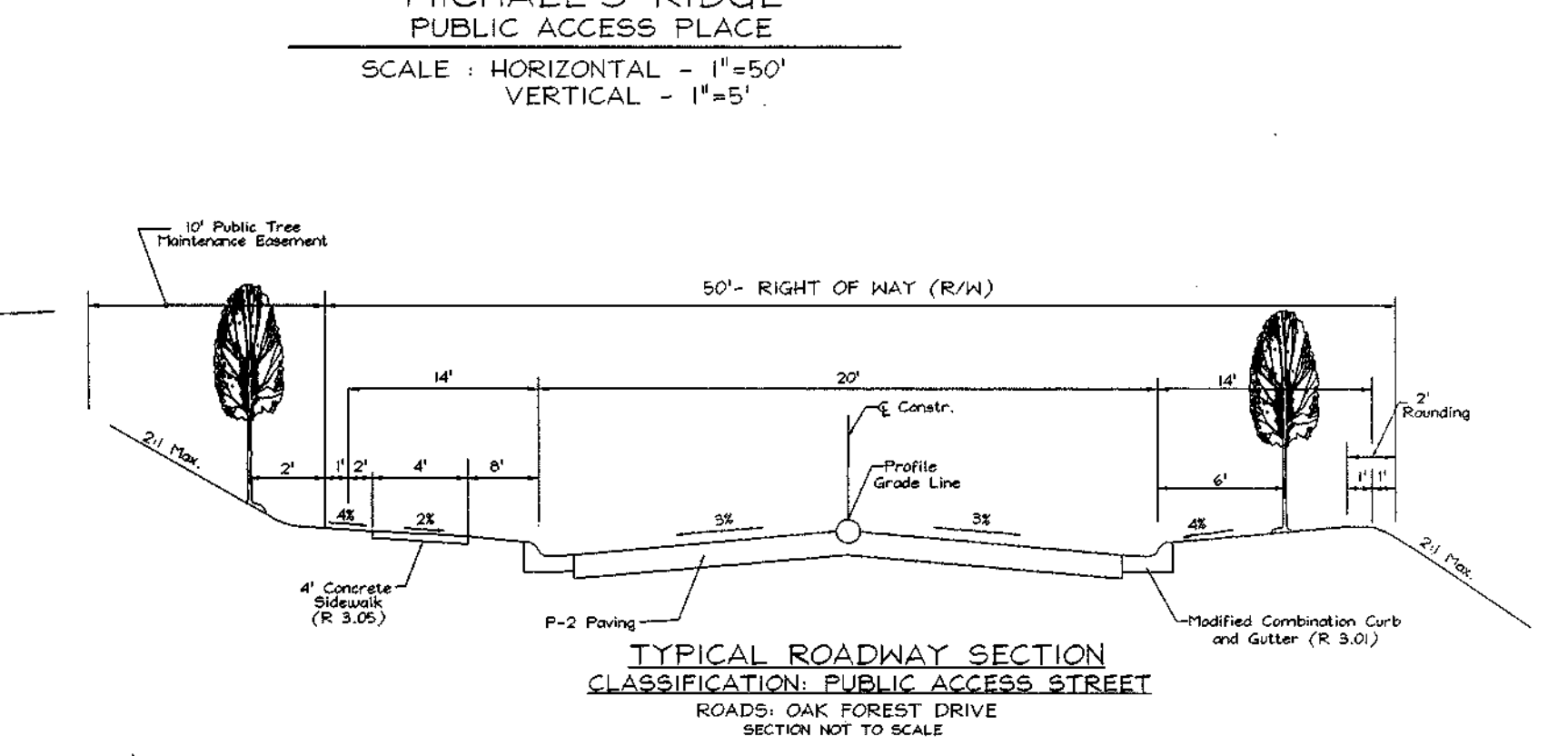
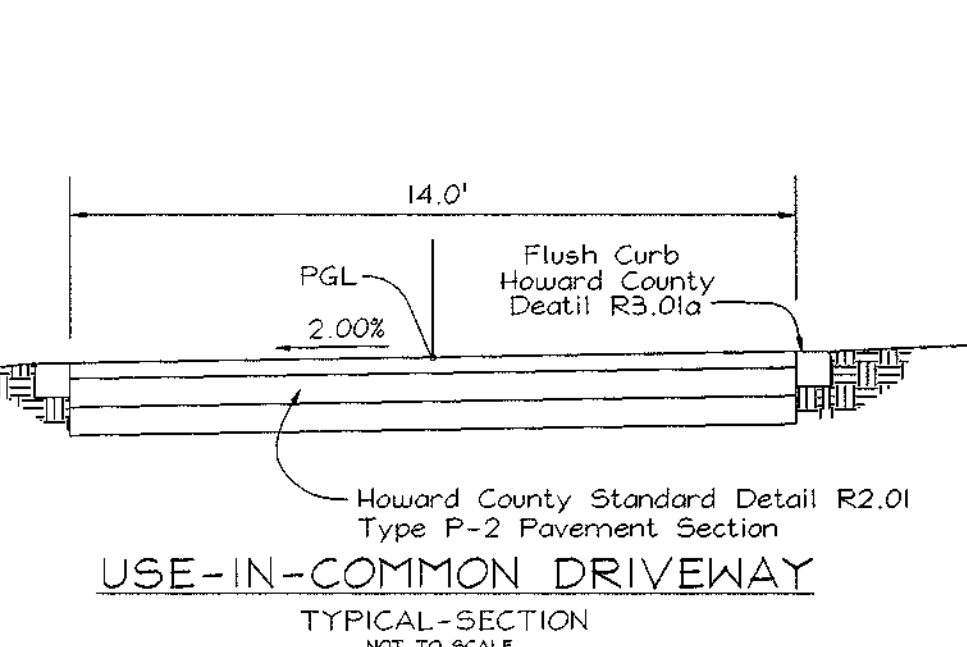
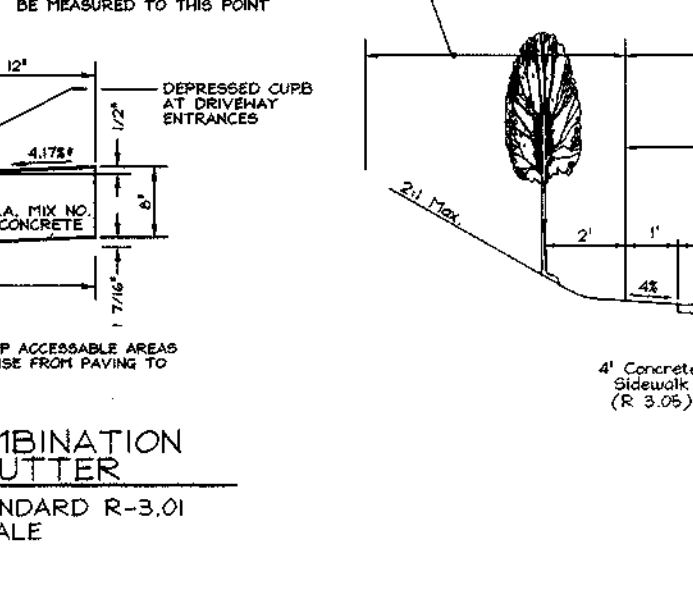
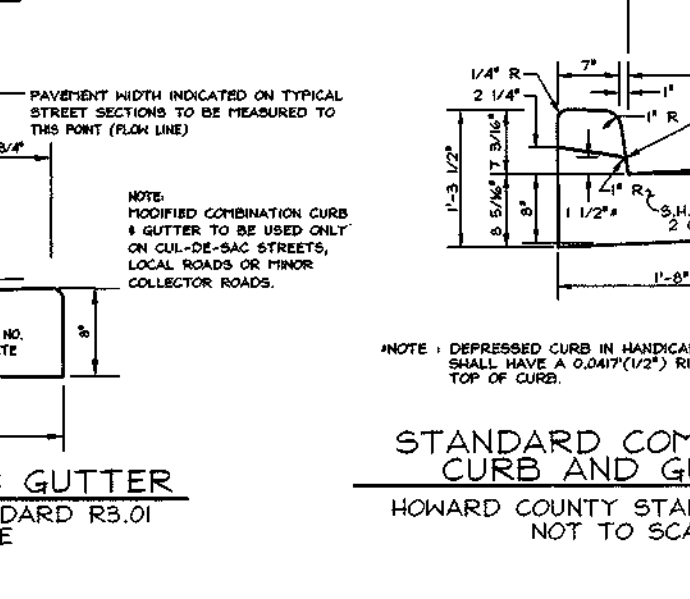
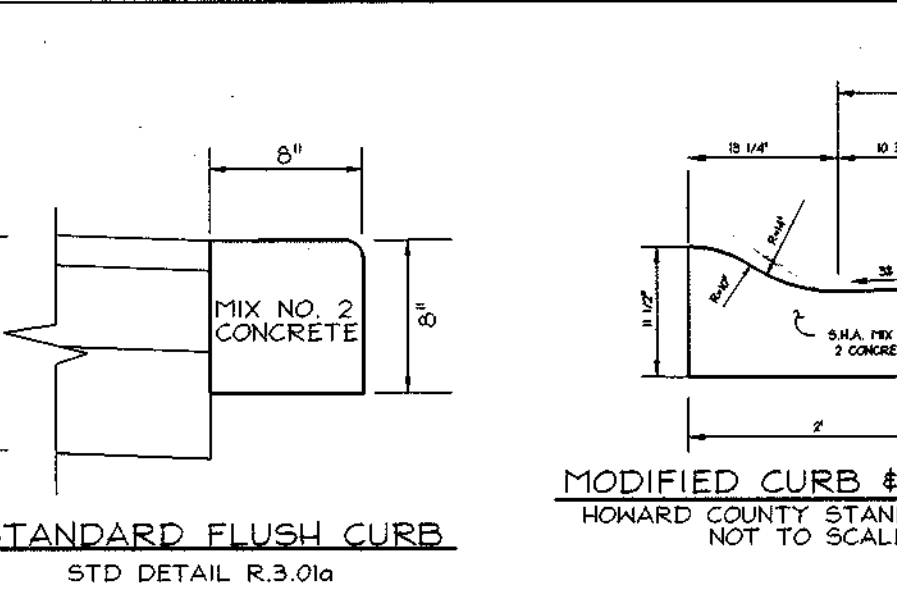
DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: GAH
DATE: Oct. 12, 1999
SCALE: AS SHOWN
W.O. NO.: 99-013

2 SHEET OF 10



STREET NAME	CENTERLINE STATION	CENTERLINE OFFSET
Oak Forest Drive	12+62.85	17.50' RL
Michael's Ridge	LP +245.32	3.0' LL

Street Name	Linear Feet	Required Trees	Provided Trees
Michael's Ridge	547/40	15	15



NO.	REVISION	DATE

AS-BUILT CERTIFICATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard Shil 3/19/00
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton 4/14/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Chris Dammann 4/16/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROAD PLAN AND PROFILES AND MISCELLANEOUS DETAILS
HOLLIFIELD ESTATES I SECTION TWO

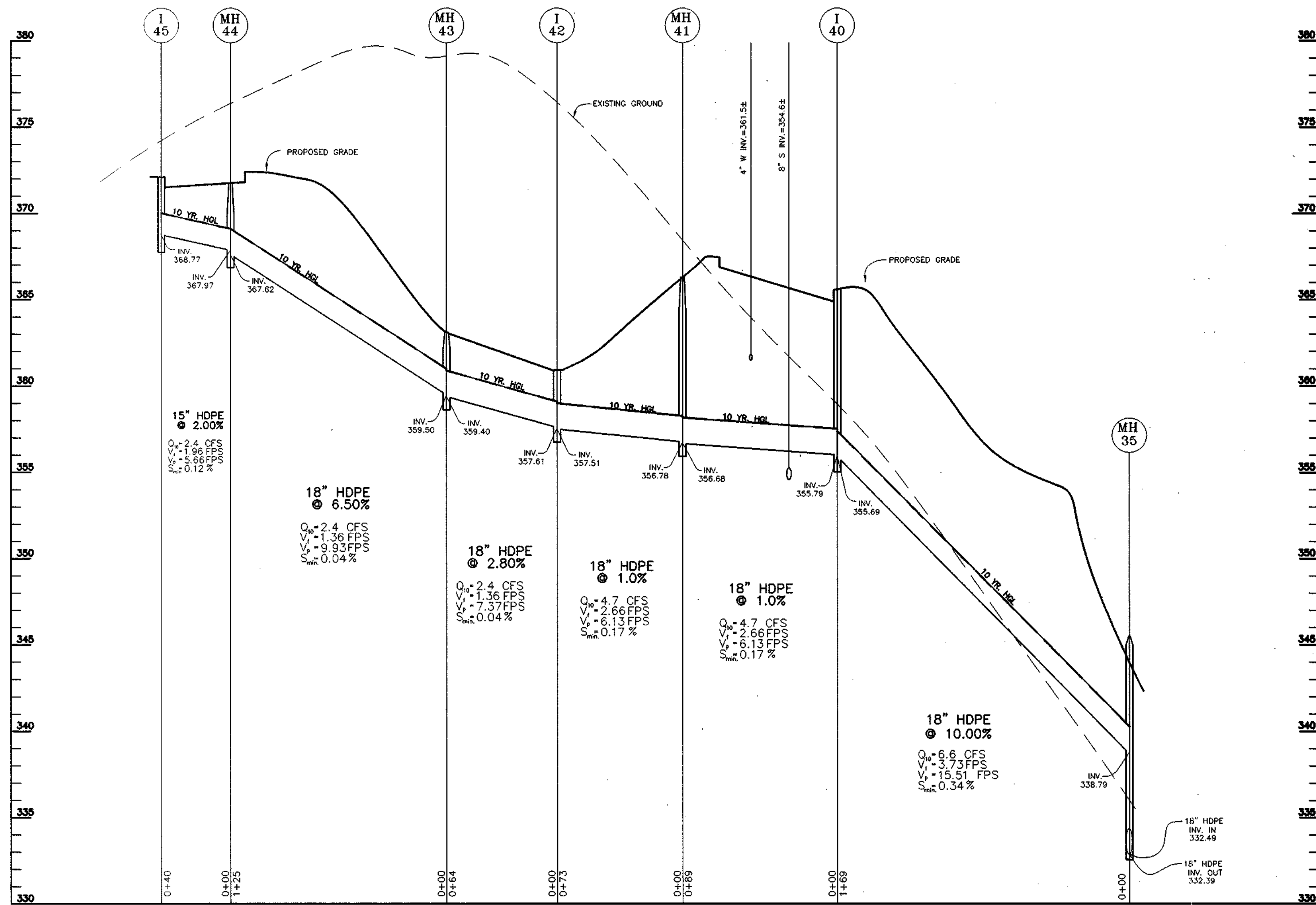
TAX MAP #18 PARCEL 1
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VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

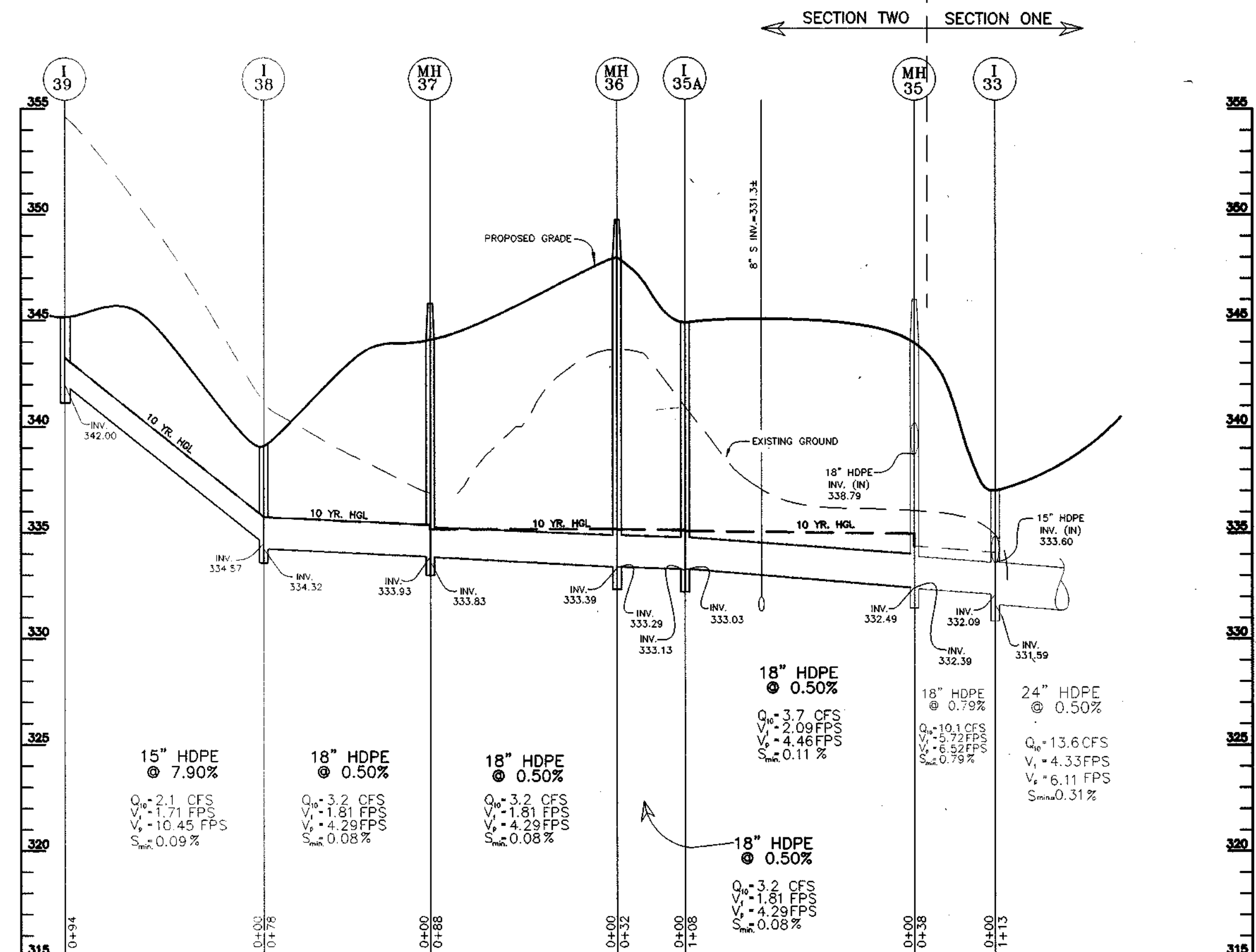
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
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DESIGN BY: GAH
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3 SHEET OF 10



STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.



STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.

OWNER/DEVELOPER
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STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN.	INV. OUT.	LOCATION		REMARKS
					NORTHING	EASTING	
MH-35	4' PRECAST STD. MANHOLE *	345.50	338.79	332.49	N 599604.4006	E 136490.4549	G 5.12
I-35A	PRECAST TYPE 'D' INLET	345.83	333.13	333.03	N 599784.2260	E 136479.6547	SD 4.39 2 SIDES
MH-36	4' PRECAST STD. MANHOLE	349.50	333.39	333.29	N 599784.6630	E 136478.1520	G 5.12
MH-37	4' PRECAST STD. MANHOLE	345.50	333.93	333.83	N 599872.7499	E 136478.7761	G 5.12
I-38	PRECAST TYPE 'D' INLET	339.83	334.57	334.32	N 599995.4780	E 136472.6225	SD 4.39 2 SIDES
I-39	PRECAST TYPE 'D' INLET	345.83	-	342.00	N 599907.5269	E 136463.2855	SD 4.39 2 SIDES
I-40	PRECAST 'A-10' INLET	365.49	355.79	355.69	N 599629.1714	E 1364720.4832	SD 4.41
MH-41	4' PRECAST STD. MANHOLE	366.90	356.78	356.68	N 599647.3407	E 1364629.1016	G 5.12
I-42	YARD INLET	331.00	357.61	357.51	N 599727.9630	E 1364518.6481	SD 4.14
MH-43	PRECAST SHALLOW MANHOLE	332.50	359.50	359.40	N 599727.9630	E 1364518.6481	G 5.12
MH-44	PRECAST SHALLOW MANHOLE	371.85	367.87	367.82	N 599647.9426	E 1364934.7591	G 5.12
I-45	PRECAST 'A-10' INLET	372.12	-	368.77	N 599720.1938	E 1364960.4674	SD 4.41

TOP ELEVATIONS ARE TO CENTERLINE TOP FACE OF CURB FOR TYPE A INLETS, CENTERLINE TOP OF SLAB FOR TYPE D AND CENTERLINE TOP OF GRATE FOR YARD INLETS. STRUCTURE LOCATION COORDINATES ARE TO CENTER OF STRUCTURE.

* GRANITE BLOCK BOTTOM

30.0 DUST CONTROL
Definition
Controlling dust blowing and movement on construction sites and roads.
Purpose
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage health hazards, and improve traffic safety.
Conditions Where Practice Applies
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.
Specifications
Temporary Methods
1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. 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' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. 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 that runoff begins to flow.
5. Barriers - Solid board fences, silt fences, snow fences, burlap fences, straw bales, and similar material can be used to control or curtail soil blowing. Barriers placed at right angles to prevailing currents of air are effective in controlling soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.
Permanent Methods
1. Permanent vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Topsoiling - Covering with less erosive soil materials. See standards for Topsoiling.
3. Stone - Cover surface with crushed stone or coarse gravel.
References
1. Agricultural Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
2. Agricultural Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

"AS-BUILT" CERTIFICATION
I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.
ROBERT H. VOGEL, P.E. NO. 16193 DATE 12/29/99
CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.
Chaf Skirven / 65. 3/24/00 DATE
USDA-NATURAL RESOURCES CONSERVATION SERVICE
THESE PLANS FOR SOIL EROSION AND SEDIMENT CONTROL MEET THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
Robert H. Vogel 3/24/00 DATE
HOWARD SOIL CONSERVATION DISTRICT

ENGINEER'S CERTIFICATE
I HEREBY CERTIFY THAT THIS PLAN FOR 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.
Robert H. Vogel 12/29/99 DATE
SIGNATURE OF ENGINEER
ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE
I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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.
Charles Skirven 12/23/99 DATE
SIGNATURE OF DEVELOPER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Howard Skirven 3/29/00 DATE
CHIEF, BUREAU OF HIGHWAYS

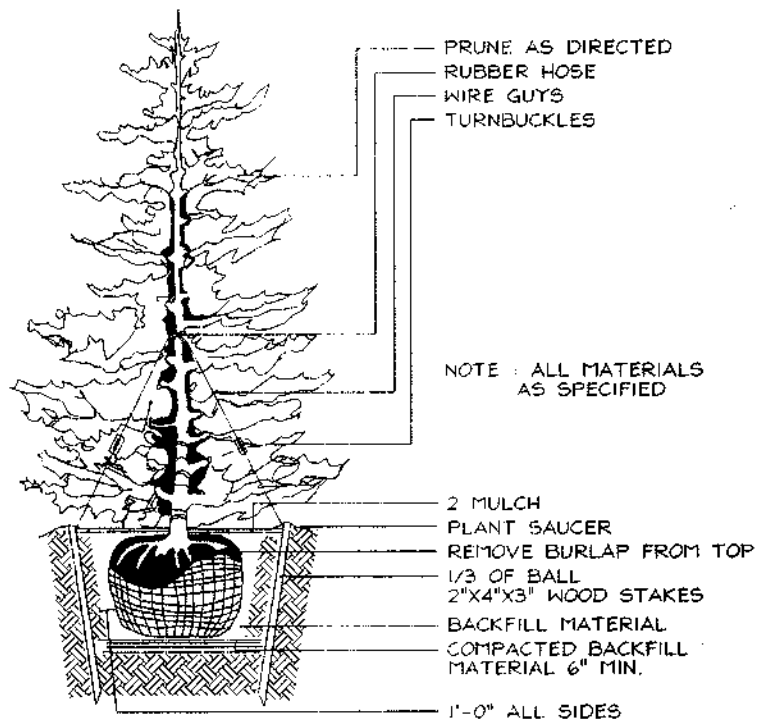
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Conny Hamstra 4/14/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

STORM DRAIN PROFILES
HOLLIFIELD ESTATES I
SECTION TWO
TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

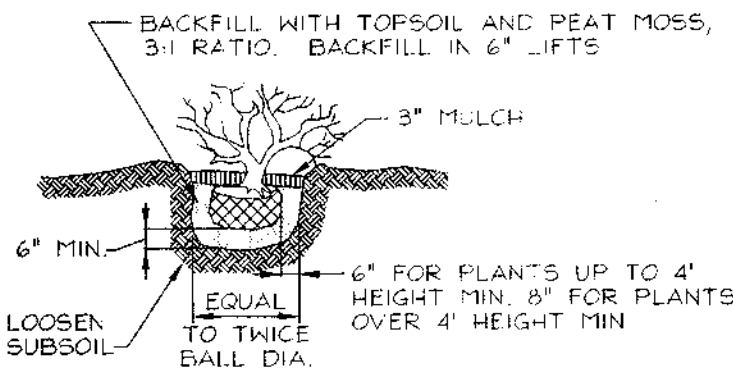
VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3681 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
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DESIGN BY: G.A.H.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
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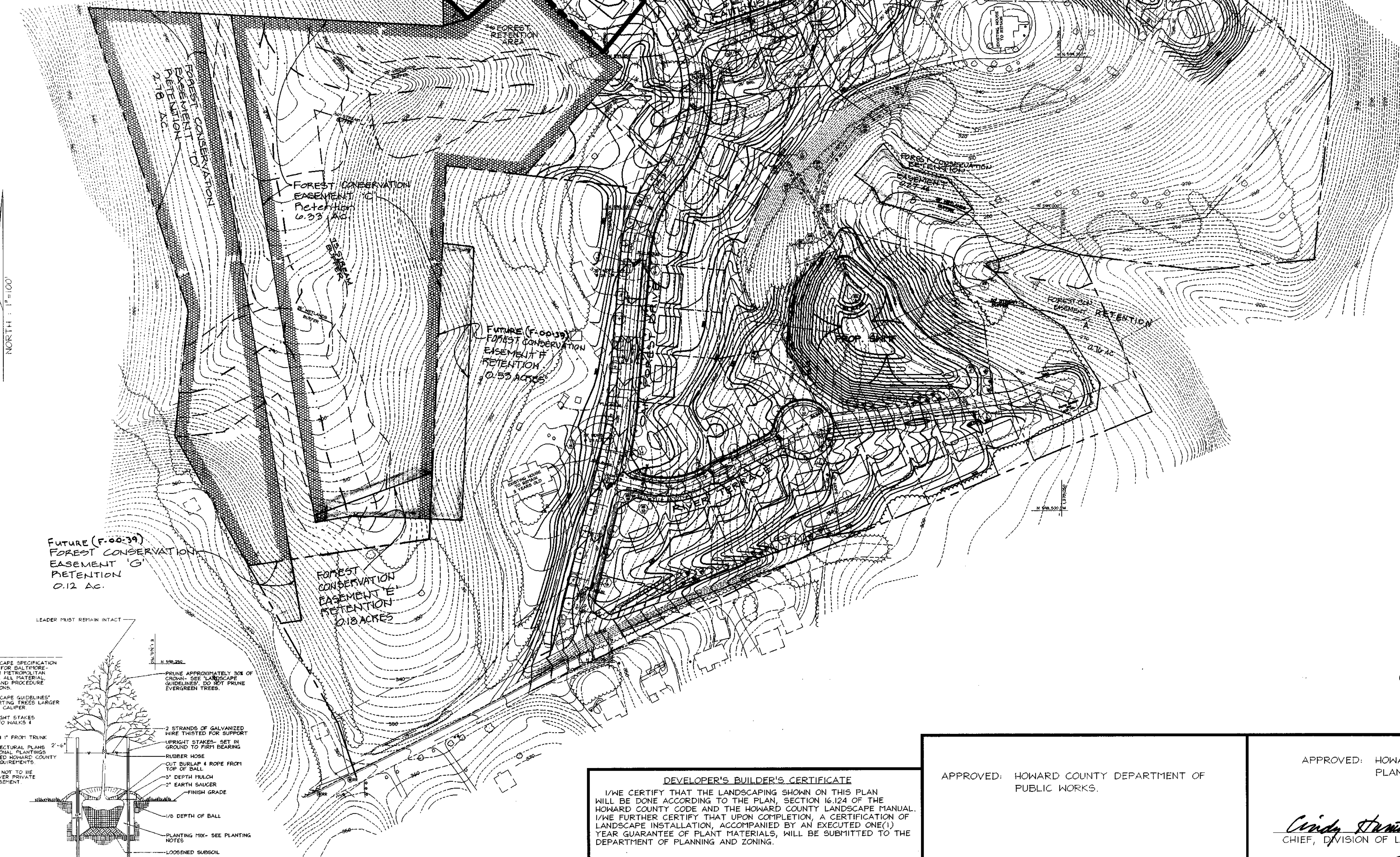
6 SHEET OF 10



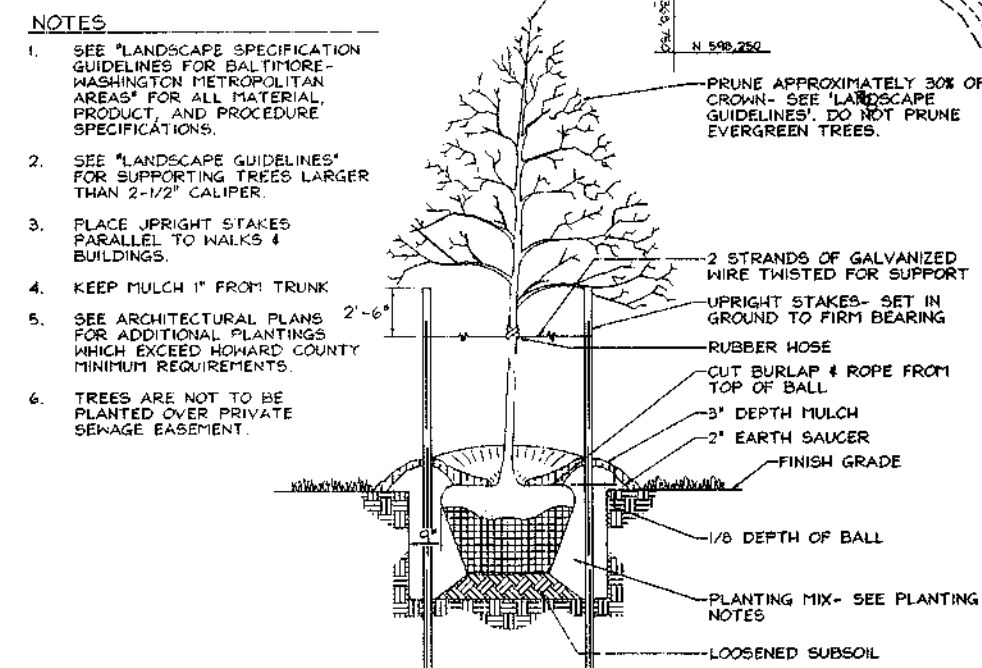
TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



FUTURE (F-00-39) FOREST CONSERVATION EASEMENT 'G' RETENTION 0.12 AC.



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIFER
NOT TO SCALE

STREET TREE CALCULATIONS			
Street Name	Linear Feet	Required Trees	Provided Trees
Oak Forest Drive	800/40	20	20
Michael's Ridge	597/40	15	15
Total Trees		35	35

LANDSCAPE SCHEDULE			
KEY	QUAN.	BOTANICAL NAME	REMARKS
⊙	35	Platanus x Acerifolia London Plane	2 1/2"-3" Cal. 40' o/c

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation	A	
Landscape Type		1650
Linear Feet of Roadway		
Frontage/Perimeter		
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)		Yes 160
Credit for Matt, Fence or Berm (Yes, No, Linear Feet Describe below if needed)		No
Number of Plants Required		160 28
Shade Trees		-
Evergreen Trees		-
Shrubs		-
Number of Plants Provided		28
Shade Trees		-
Evergreen Trees		-
Other Trees (2:1 Substitution)		-
Shrubs (10:1 Substitution)		-
Describe Plant Substitution Credits Below if needed		

* Existing Plants to Remain

GENERAL NOTES

- Financial Surety for the required 28 perimeter landscape trees has been posted as part of the Developer's Agreement in the amount of \$8,400.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

NO.	REVISION	DATE

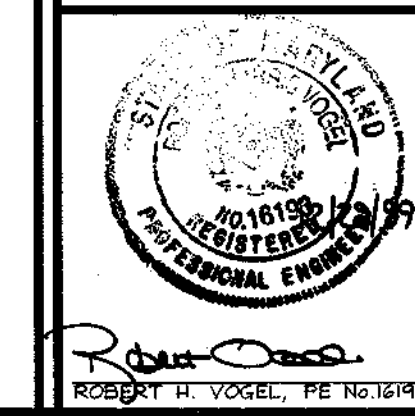
AS-BUILT CERTIFICATE

DATE

LANDSCAPE PLAN
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5628 Fax 410.465.3596



DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: RHV
DATE: Oct. 12, 1999
SCALE: 1"=100'
W.O. NO.: 99-013

7 SHEET OF 10

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(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Robert H. Vogel 12/23/99
SIGNATURE OF DEVELOPER DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

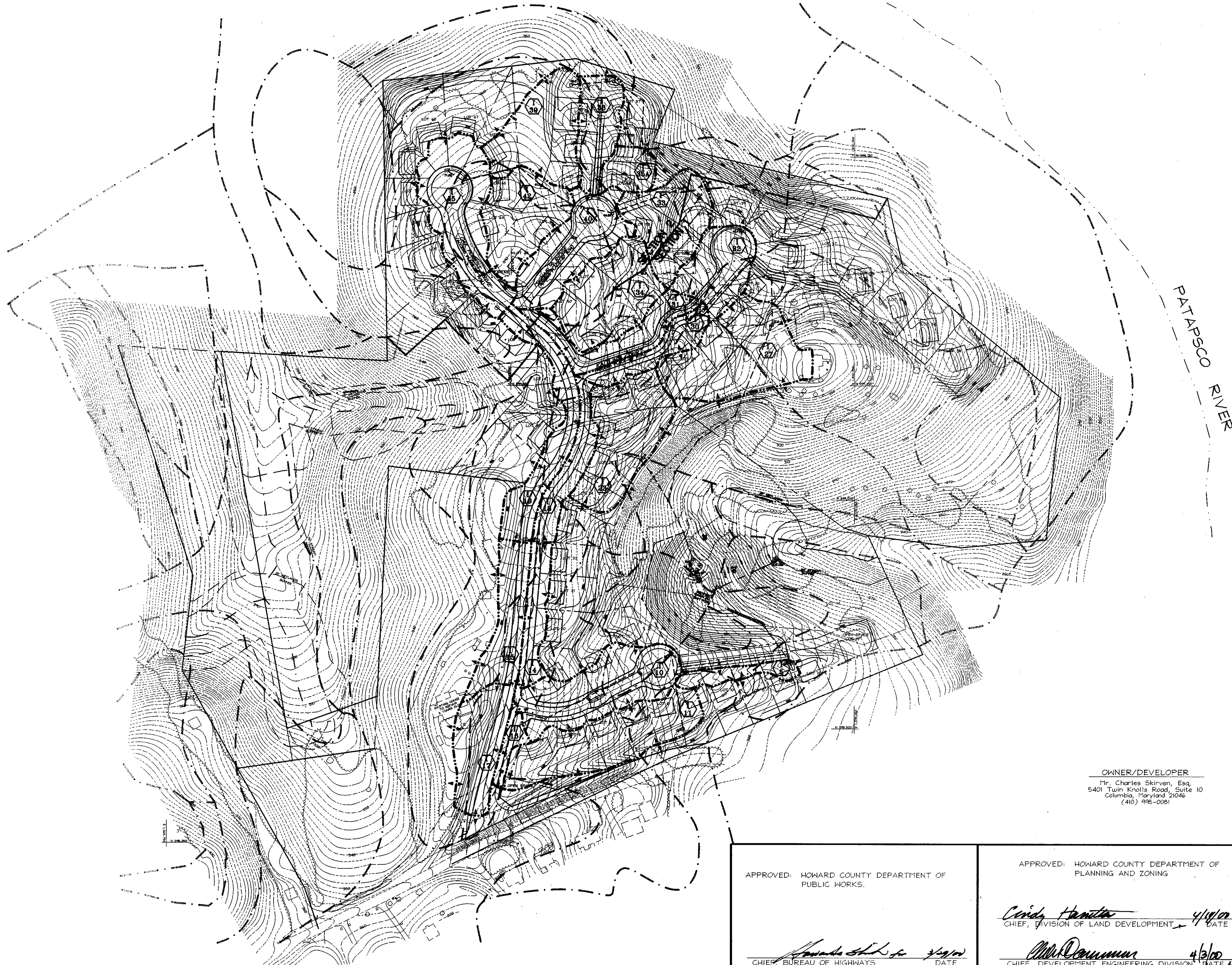
James S. Hill 3/29/01
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hanetta 4/14/01
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 4/3/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

DRAINAGE AREA TABULATIONS					
NO.	AREA	"C"	% IMP.	SOIL TYPES	ZONE
5	0.23 AC	.33	38%	B	R-ED
10	1.01 AC	.33	38%	B	R-ED
11	1.03 AC	.33	38%	B	R-ED
14	0.28 AC	.33	38%	B	R-ED
15	0.50 AC	.33	38%	B	R-ED
16	0.12 AC	.33	38%	B	R-ED
17	0.64 AC	.33	38%	B	R-ED
18	0.37 AC	.34	38%	B/C	R-ED
19	0.67 AC	.32	38%	B/C	R-ED
23	0.91 AC	.33	38%	B/C	R-ED
27	1.09 AC	.34	38%	B/C	R-ED
30	0.35 AC	.34	38%	B/C	R-ED
31	0.53 AC	.35	38%	B/C	R-ED
32	0.54 AC	.33	38%	B	R-ED
33	0.66 AC	.33	38%	B	R-ED
34	0.84 AC	.35	38%	B/C	R-ED
35A	0.23 AC	.33	38%	B	R-ED
38	0.45 AC	.34	38%	B/C	R-ED
39	0.80 AC	.35	38%	B/C	R-ED
40	0.75 AC	.36	38%	B/C	R-ED
42	0.74 AC	.36	38%	B/C	R-ED
45	1.00 AC	.36	38%	B/C	R-ED



PATAPSCO RIVER

NORTH : 1"=100'

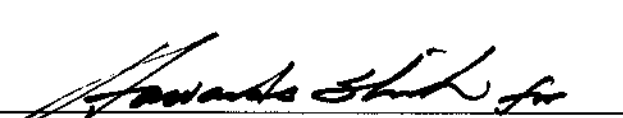
OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Twin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 996-0081



NO.	REVISION	DATE
AS-BUILT CERTIFICATE		
		DATE

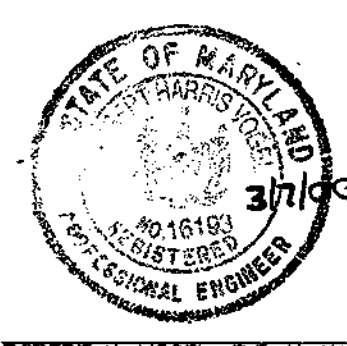
**DRAINAGE AREA MAP
 FOR STORM DRAINAGE
 HOLLIFIELD ESTATES I
 SECTION TWO**

TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**VOGEL &
 ASSOCIATES**
 ENGINEERS SURVEYORS PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3966

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

 CHIEF, BUREAU OF HIGHWAYS DATE 4/29/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 4/19/00

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/13/00



DESIGN BY: GAH
 DRAWN BY: PS
 CHECKED BY: RHV
 DATE: Oct. 12, 1999
 SCALE: 1" = 100'
 H.O. NO.: 99-013

c:\Land Projects\99-013\dwg\Section Two\7025ps09.dwg-GH-12.28.99

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
Ba	Baile Silt Loam	D
BrB2	Brandywine Loam, 5 to 8 percent slopes, moderately eroded	C
BrC2	Brandywine Loam, 8 to 15 percent slopes, moderately eroded	C
ChC2	Chester Silt Loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester Silt Loam, 15 to 25 percent slopes, moderately eroded	B
DeB2	Delanco Silt Loam, 3 to 8 percent slopes, moderately eroded	C
EnC2	Flainborg Loam, 8 to 15 percent slopes, moderately eroded	B
GlC2	Glenns Loam, 8 to 15 percent slopes, moderately eroded	B
GlD2	Glenns Loam, 15 to 25 percent slopes, moderately eroded	B
LeC2	Looper Silt, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor Loam, 3 to 8 percent slopes, moderately eroded	B
MIC3	Manor Loam, 8 to 16 percent slopes, severely eroded	B
MID3	Manor Loam, 15 to 25 percent slopes, severely eroded	B
MIE	Manor Loam, 25 to 45 percent slopes	B
MnF	Manor very stony Loam, 25 to 60 percent slopes	B
MrE	Montalto and Relay Sills, 15 to 45 percent slopes	C
MaD	Montalto and Relay very stony Silt Loams, 3 to 25 percent slopes	C
MaF	Montalto and Relay very stony Silt Loams, 25 to 60 percent slopes	C



PATAPSCO RIVER

NO	REVISION	DATE

AS-BUILT CERTIFICATE

DATE

DRAINAGE AREA MAP
STORM WATER MANAGEMENT
HOLLIFIELD ESTATES I
 SECTION TWO

TAX MAP #18 PARCEL I
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5628 Fax 410.465.3866

DESIGN BY: GAH
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10 SHEET OF 10

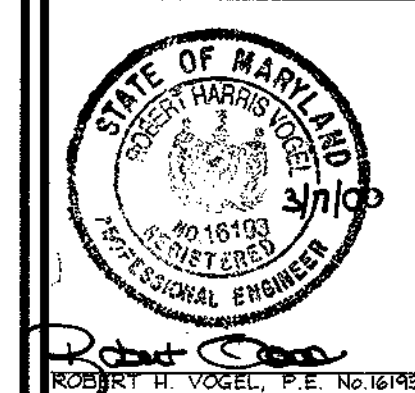
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard Skirven 3/2/00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hewitt 4/14/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 4/2/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



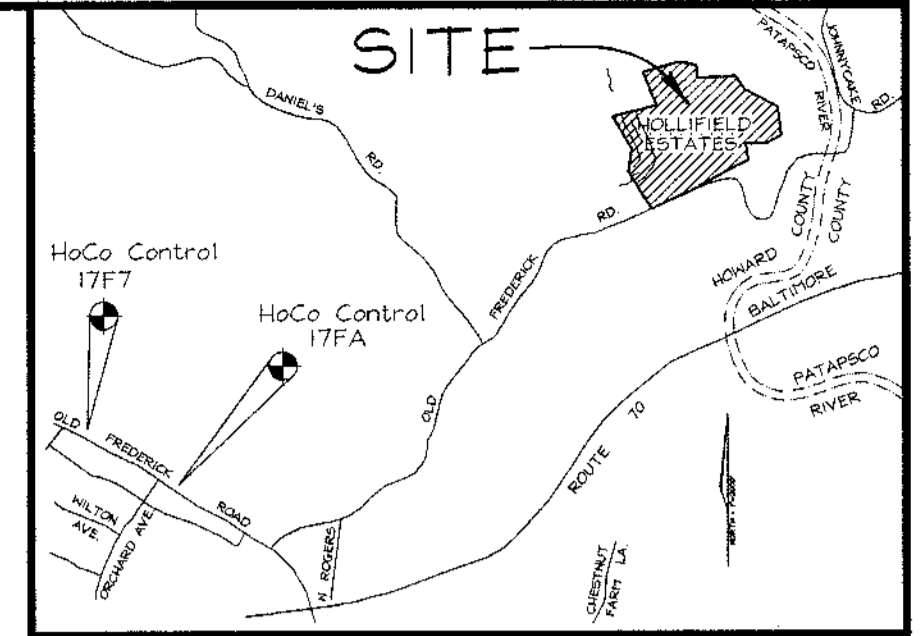
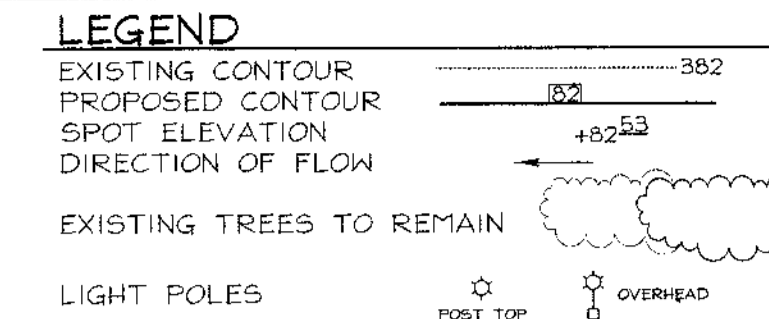
GENERAL NOTES

- 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 DEPARTMENT OF PUBLIC WORKS/CONSTRUCTION INSPECTIONS DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS PRIOR TO ANY EXCAVATION WORK:
 - MISS UTILITY 1-800-257-7777
 - BELL ATLANTIC TELEPHONE COMPANY (410) 725-9976
 - HOWARD COUNTY BUREAU OF UTILITIES (410) 313-4900
 - AT&T CABLE LOCATION DIVISION (410) 343-3633
 - BALTIMORE GAS & ELECTRIC (410) 685-0123
 - STATE HIGHWAY ADMINISTRATION (410) 531-5533
 - HOWARD COUNTY DEPT. OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION (410) 313-1880
- PROJECT BACKGROUND:
 - ALL DATA TO INCLUDE HOLLIFIELD ESTATES, LOT 2 (F-99-61, WP-99-39, 10/19/98)
 - LOCATION: SECOND ELECTION DISTRICT - TAX MAP 18 - PARCEL 1
 - ZONING: R-ED
 - NUMBER OF PROPOSED BUILDABLE LOTS: 24
 - NUMBER OF PROPOSED BULK PARCELS: 0
 - NUMBER OF OPEN SPACE LOTS: 2
 - AREA OF PROPOSED BUILDABLE LOTS: 6.01 ACRES ±
 - PROPOSED ROAD DEDICATION: 0.91 ACRES ±
 - TOTAL TRACT AREA: 8.48 ACRES ±
 - DPZ REFERENCE #:
 - S-96-16 APPROVED ON 8/1/96
 - P-98-11 APPROVED ON 5/7/98
 - F-99-61 SUBMITTED ON 10/19/98
 - WP-99-39 SUBMITTED ON 10/19/98
- * EXCESS RECREATIONAL OPEN SPACE IS BEING DEDICATED IN HOLLIFIELD ESTATES I, SECTION TWO, (F-99-76) FOR THE LOTS IN HOLLIFIELD ESTATES I, SECTION ONE, (F-99-75) HOLLIFIELD ESTATES I, LOT 2 AND FUTURE HOLLIFIELD ESTATES II, (F-00-39).
- TWO FOOT CONTOUR TOPOGRAPHY AND EXISTING CONDITIONS BASED ON AERIAL TOPOGRAPHIC SURVEY BY WINGS AERIAL MAPPING CO., INC. FLOWN ON MARCH 25, 1995.
- HORIZONTAL AND VERTICAL DATUMS BASED ON (NAD'83) MARYLAND STATE COORDINATE SYSTEM AS PROJECTED BY HOWARD COUNTY GEODETIC CONTROL STATIONS.

STA No. 17FA	N 594,949.55	EL. = 477.52
	E 1,364,629.51	
STA No. 17F7	N 595,830.83	EL. = 470.19
	E 1,363,091.09	
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SELECTED SHALL BE IN ACCORDANCE WITH THE LATEST HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS (JUNE 1993)." THE JUNE 1993 POLICY INCLUDES GUIDELINES FOR LATERAL AND LONGITUDINAL PLACEMENT. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- WATER AND SEWER ARE PUBLIC, CONTRACT #14-3802-D.
- STORMWATER MANAGEMENT CONTROL IS PROVIDED BY THE METHOD OF EXTENDED DETENTION. THE STORMWATER MANAGEMENT FACILITY WILL BE PRIVATELY OWNED AND JOINTLY MAINTAINED BY HOWARD COUNTY AND THE H.O.A. & CONSTRUCTED UNDER HOLLIFIELD ESTATES, SECTION ONE (F-99-75).
- HOUSES NOT CONTROLLED BY THE SWM POND (F-99-75) TO HAVE DRY WELLS AT SDP STAGE.
- 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.
- COMPACTION IN FILL AREAS TO BE 95% AS DETERMINED PER AASHTO T-180.
- CONTRACTOR TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES ON SITE PRIOR TO COMMENCING CONSTRUCTION.
- THE FIVE FOREST CONSERVATION RETENTION EASEMENTS TOTALING 10.92 ± ACRES, LOCATED ON OPEN SPACE LOTS 14 AND 46 AND NON-BUILDABLE PARCEL 'C' OF HOLLIFIELD ESTATES I, SECTION ONE, FOREST CONSERVATION ACT, FOR THIS SUBDIVISION, (F-99-76); AND HOLLIFIELD ESTATES I, SECTION ONE, (F-99-75). SURPLUS FOREST RETENTION AREAS IN EXCESS OF THE MINIMUM REQUIRED (1.14 ACRES) TO BE CREDITED TO FUTURE HOLLIFIELD ESTATES II, (F-00-39). NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.
- ALL STORM DRAIN PIPES TO BE HDPE PIPES UNLESS OTHERWISE NOTED.
- WETLAND AND STREAM DELINEATION PERFORMED BY CHESAPEAKE ENVIRONMENTAL MANAGEMENT, INC. INC. DATED FEBRUARY, 1996.
- PROPERTY IS LOCATED WITHIN THE METROPOLITAN DISTRICT.
- OPEN SPACE LOT 61 WILL BE CONVEYED TO THE H.O.A. OPEN SPACE LOT 54 WILL BE OWNED BY HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
- ALL EXISTING STRUCTURES TO BE REMOVED.
- THE FOLLOWING RESTRICTIONS SHALL APPLY TO ALL LOTS WHICH HAVE ENCROACHMENTS FOR UTILITY EASEMENTS:
 - ANY STRUCTURE OR PART OF A STRUCTURE SHALL BE A MINIMUM OF 2 FEET FROM THE EASEMENT LINES.
 - NO FOOTER SHALL EXTEND INTO THE EASEMENT.
 - NO DECKS, ADDITIONS OR OTHER IMPROVEMENTS SHALL BE LOCATED WITHIN OR EXTEND OVER THE EASEMENT.
 - THE MINIMUM DISTANCE BETWEEN UNITS IS 15 FEET.
- GRADING PERMITS FOR F-99-75 AND F-99-76 MUST BE ISSUED TO RUN CONCURRENTLY.

ROAD CONSTRUCTION PLANS HOLLIFIELD ESTATES I

SECTION TWO LOTS 50 THRU 75 A RESUBDIVISION OF HOLLIFIELD ESTATES, BULK PARCEL D SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND



BENCHMARKS

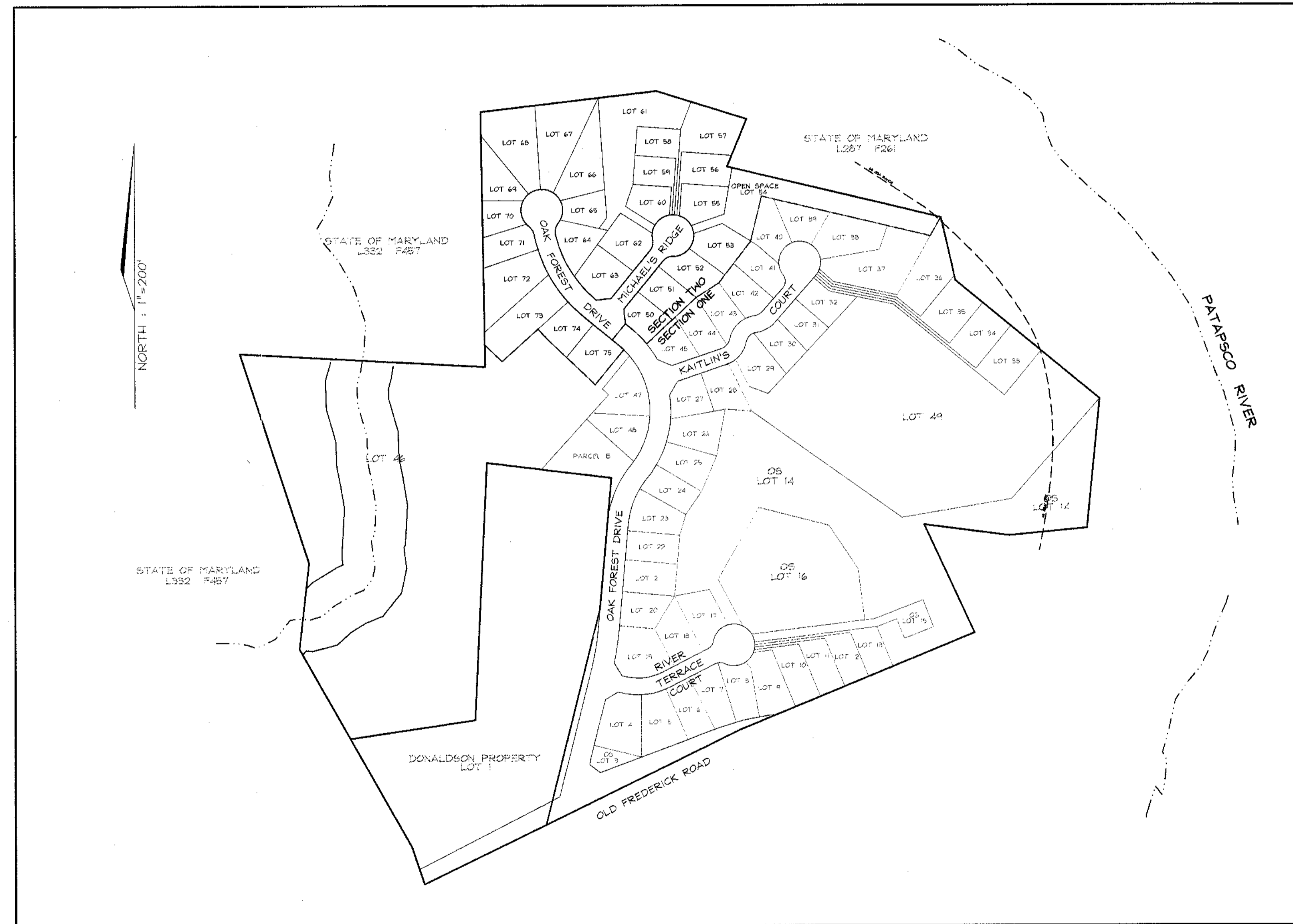
17FA	N594,949.55	E 1,364,629.51	EL. = 477.52
17F7	N595,830.83	E 1,363,091.09	EL. = 470.19

VICINITY MAP

SCALE: 1"=2000'

SHEET INDEX

DESCRIPTION	SHEET NO.
Cover Sheet	1 of 10
Road Plan and Profile	2 of 10
Road Plan and Profile and Typical Sections	3 of 10
Grading, Sediment and Erosion Control Plan	4 of 10
Sediment and Erosion Control Details	5 of 10
Storm Drain Profiles	6 of 10
Landscape Plan	7 of 10
Drainage Area Map, Existing Conditions	8 of 10
Drainage Area Map, Storm Drainage	9 of 10
Drainage Area Map, Stormwater Management	10 of 10



LOCATION MAP
SCALE: 1"=100'

OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Twin Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 995-0061

COVER SHEET
HOLLIFIELD ESTATES I
SECTION TWO
A RESUBDIVISION OF BULK PARCEL D

TAX MAP #18 PARCEL 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: RHW
DATE: Oct. 12, 1999
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1 SHEET OF 10

NO. _____ REVISION _____ DATE _____

AS-BUILT CERTIFICATE

Robert H. Vogel 1/19/05 DATE

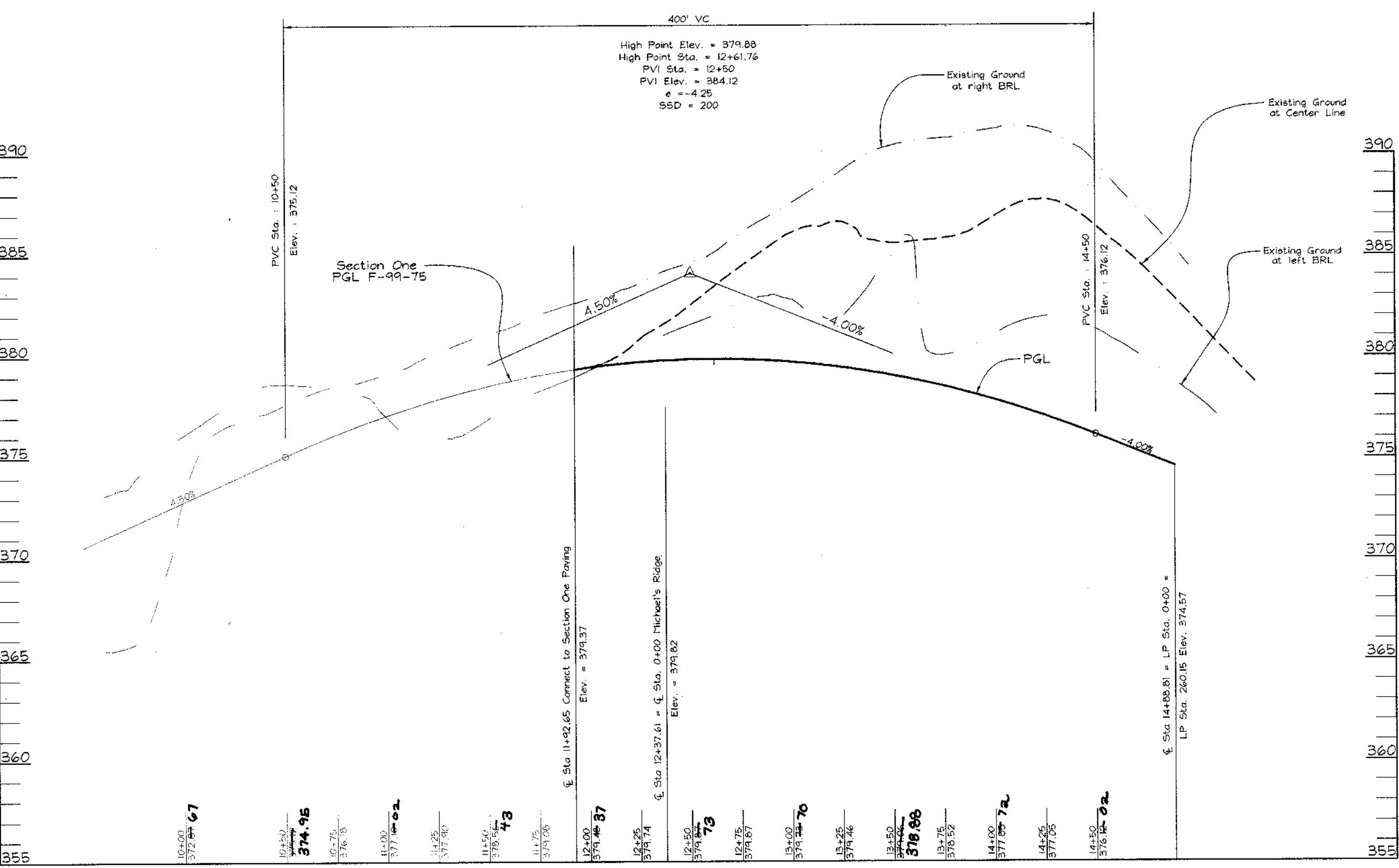
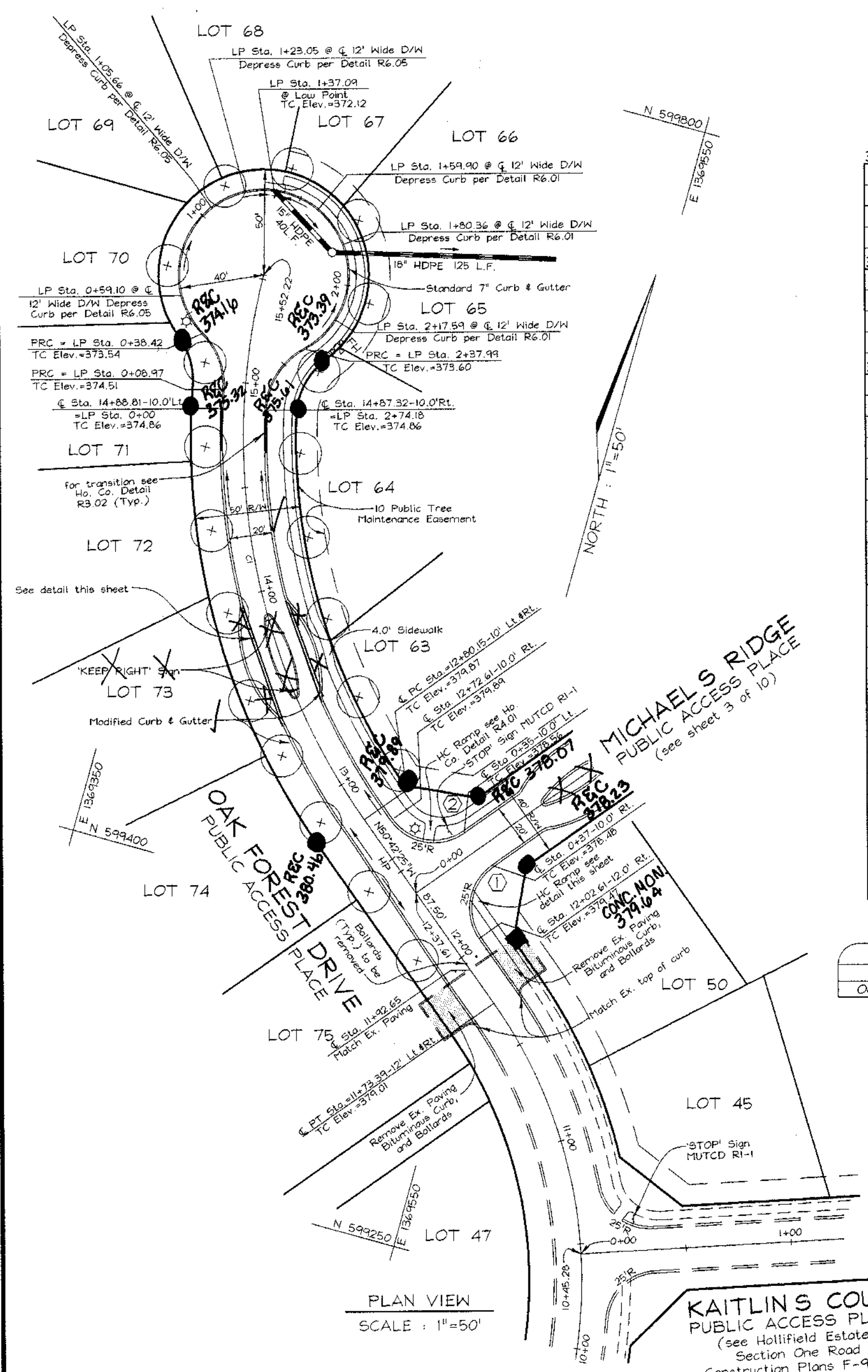
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard Skirven 3/19/00 DATE
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Thomas 4/14/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

John P. ... 4/3/00 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION



STREET TREE CALCULATIONS

Street Name	Linear Feet	Required Trees	Provided Trees
Oak Forest Drive	800/40	20	20

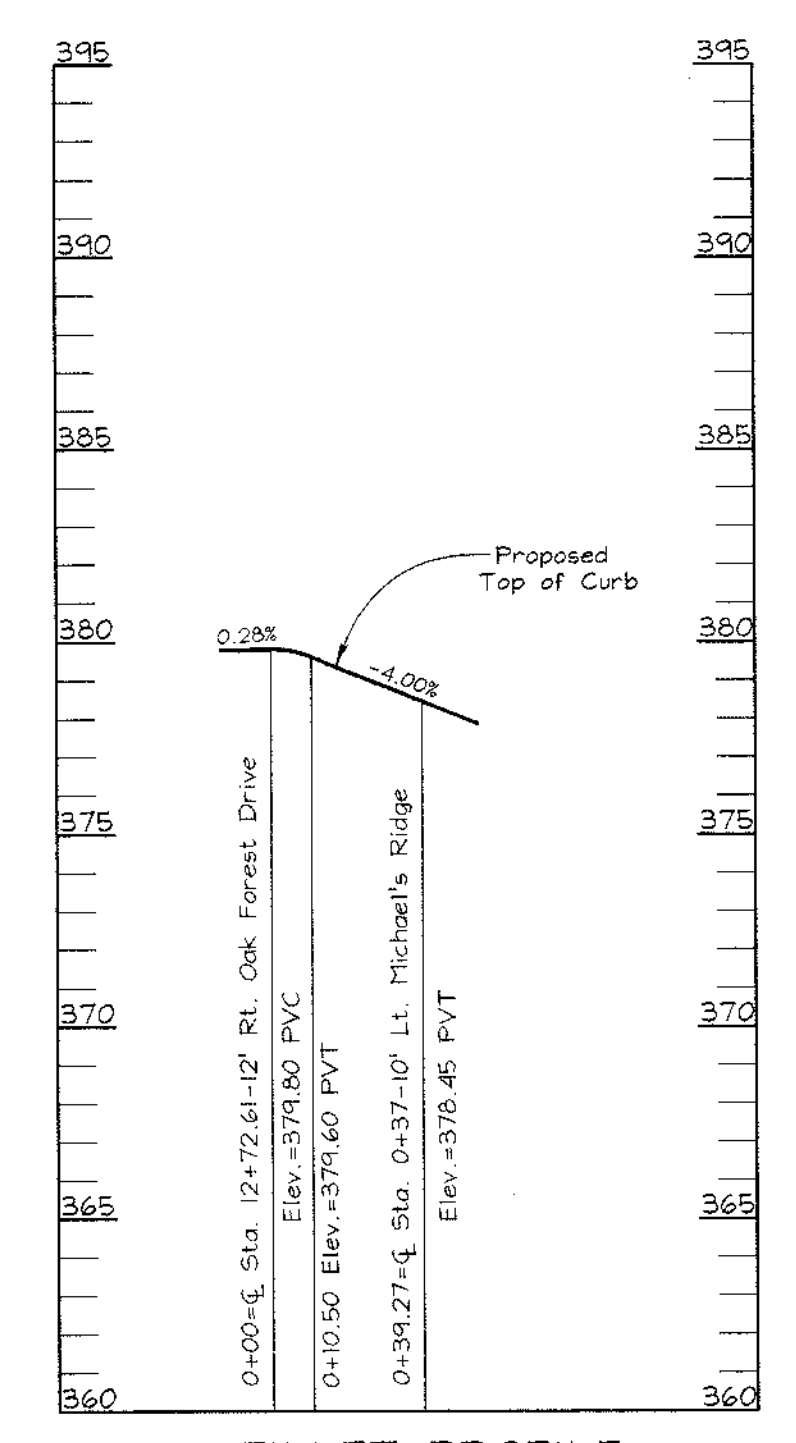
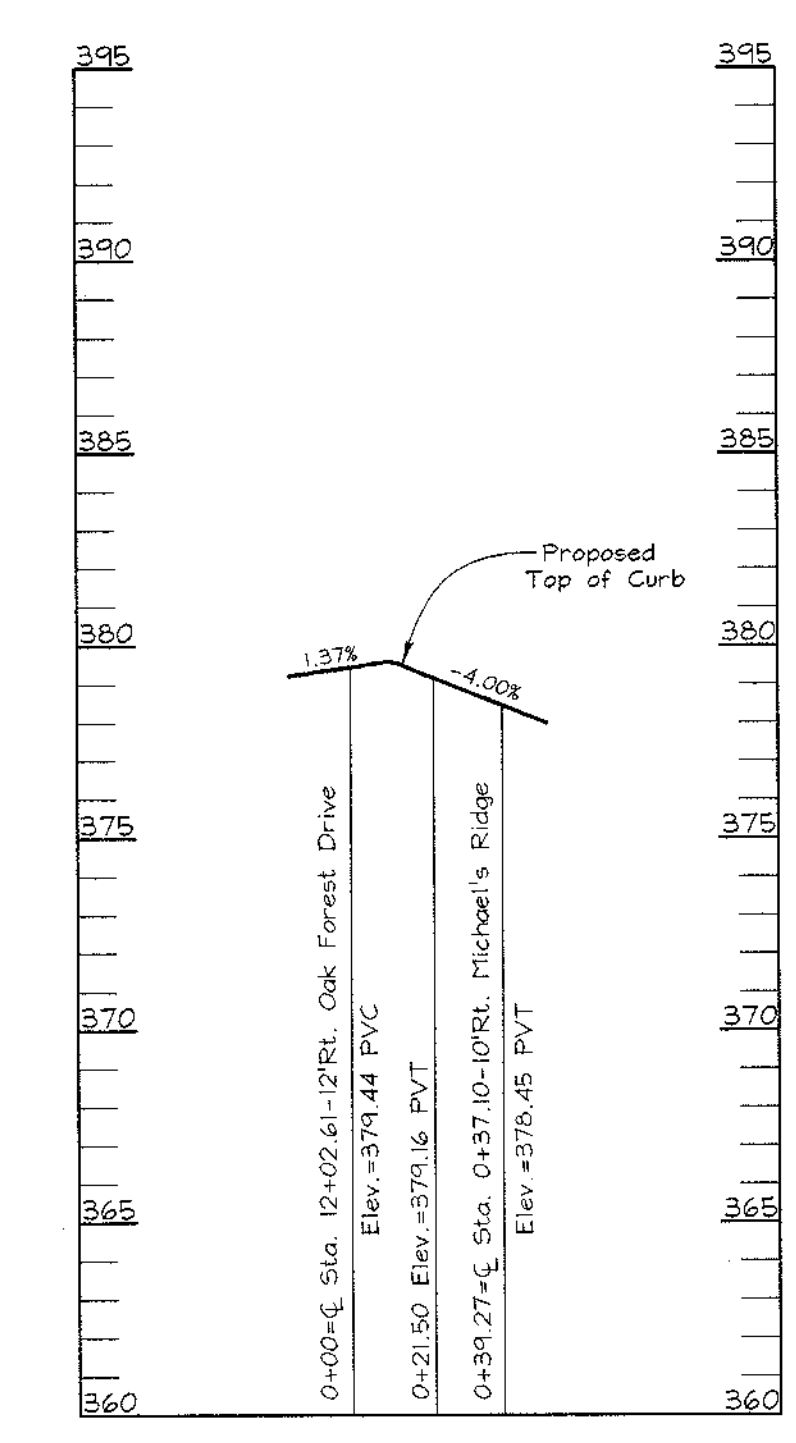
CURVE TABLE

CURVE LENGTH	RADIUS	TANGENT	CHORD	BEARING	DELTA
CI	272.07	316.00	148.11	263.75	152.62/221.41

STREET LIGHT LOCATION CHART

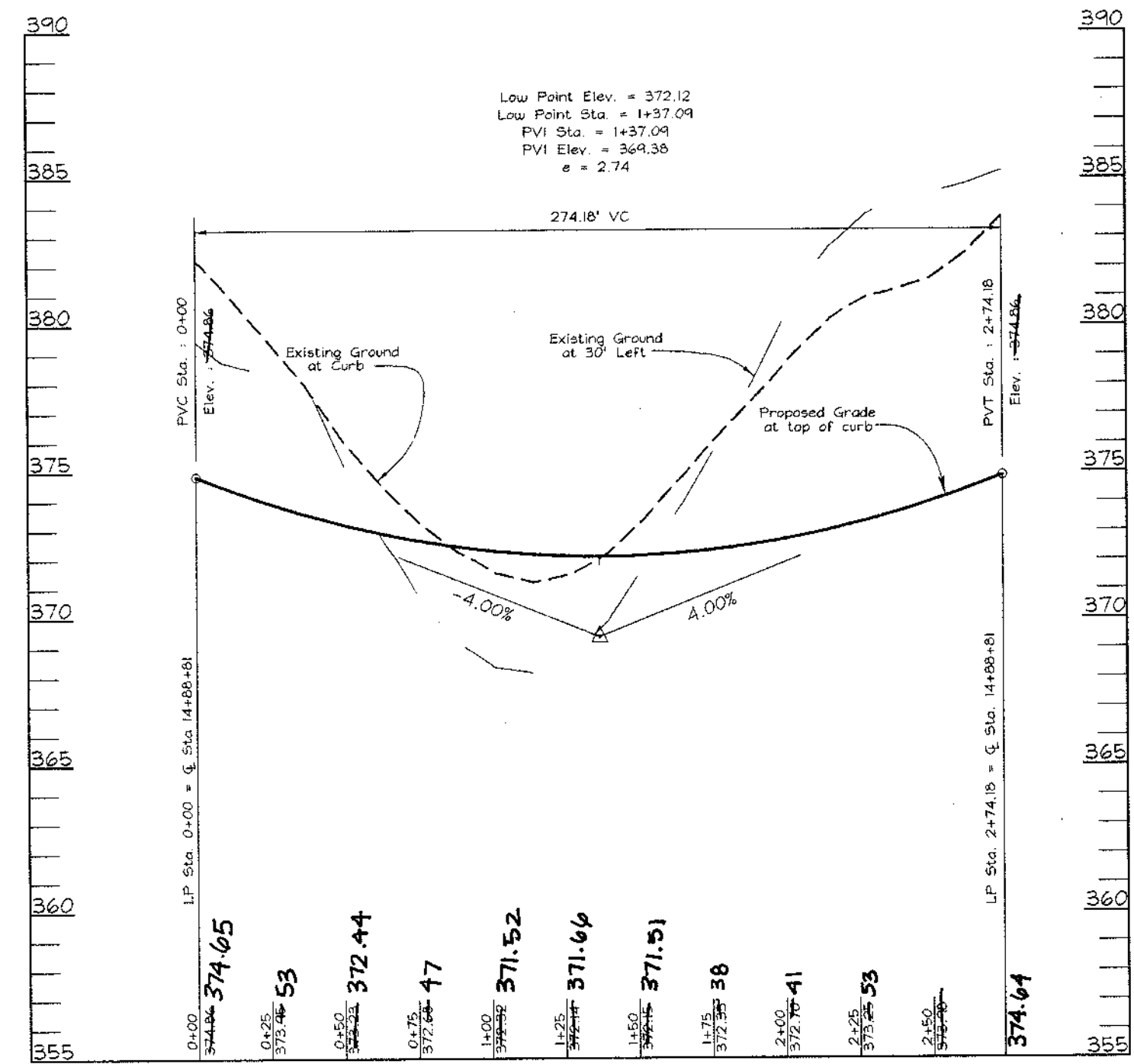
STREET NAME	CENTERLINE STATION	CENTERLINE OFFSET
Oak Forest Drive	12+52.36	17.50' RL
Oak Forest Drive	LP 0+46.23	3.0' Lt.

ROAD PROFILE
OAK FOREST DRIVE
PUBLIC ACCESS PLACE
VERTICAL DESIGN SPEED-30 MPH
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

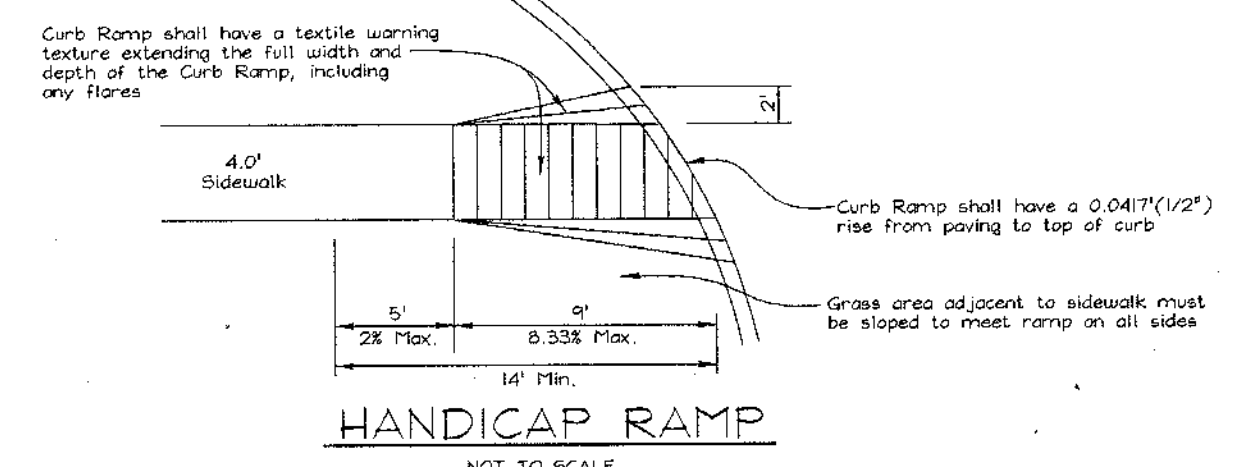


① FILLET PROFILE
MICHAEL'S RIDGE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'

② FILLET PROFILE
MICHAEL'S RIDGE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



LINEAR PROFILE
OAK FOREST DRIVE
PUBLIC ACCESS PLACE
 SCALE: HORIZONTAL - 1"=50'
 VERTICAL - 1"=5'



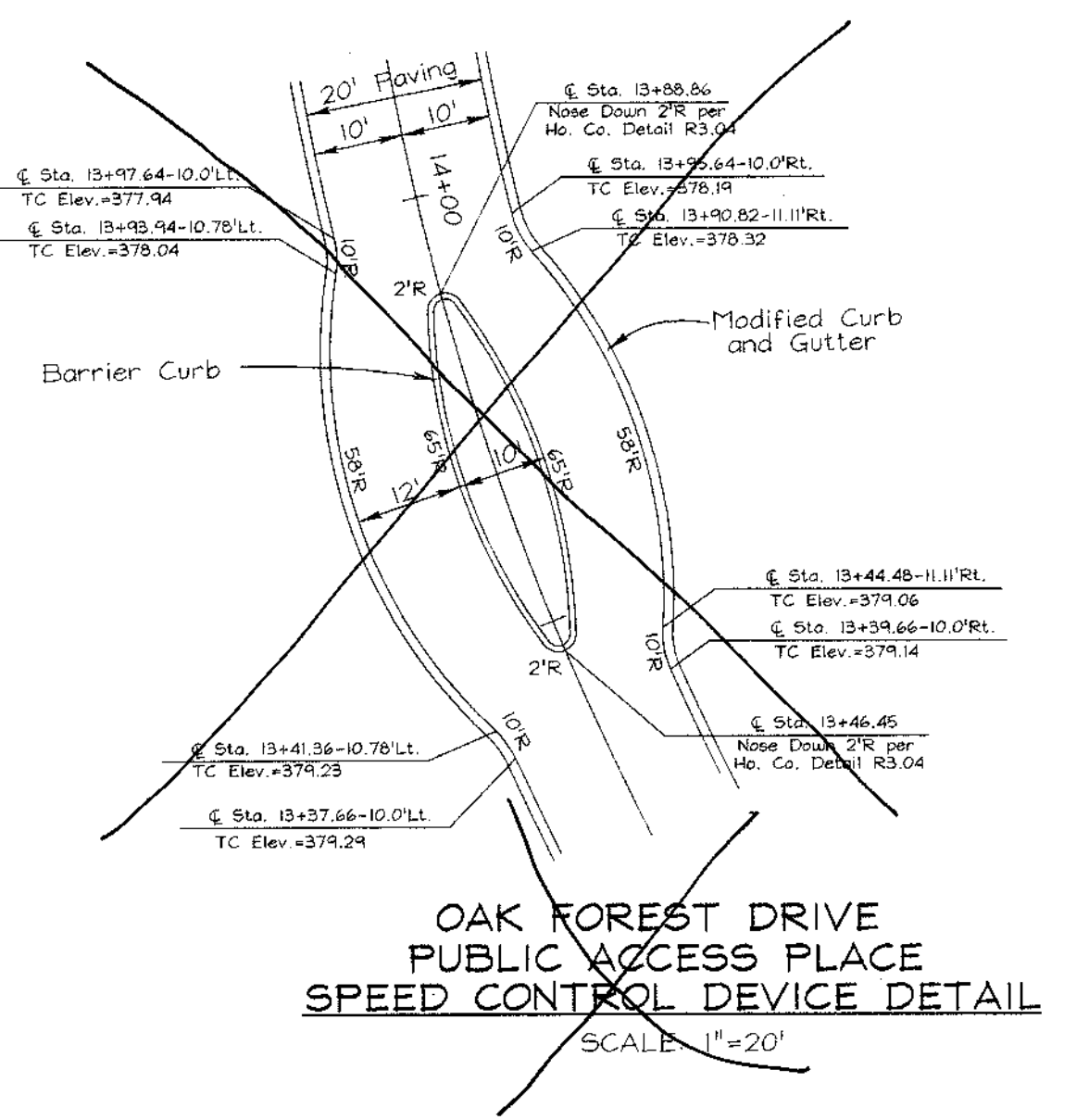
NO.	REVISION	DATE

AS-BUILT CERTIFICATE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Charles Skirven 3/29/06
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Candice Stewart 4/13/06
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



OAK FOREST DRIVE
PUBLIC ACCESS PLACE
SPEED CONTROL DEVICE DETAIL
 SCALE: 1"=20'

ROAD PLAN AND PROFILES
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

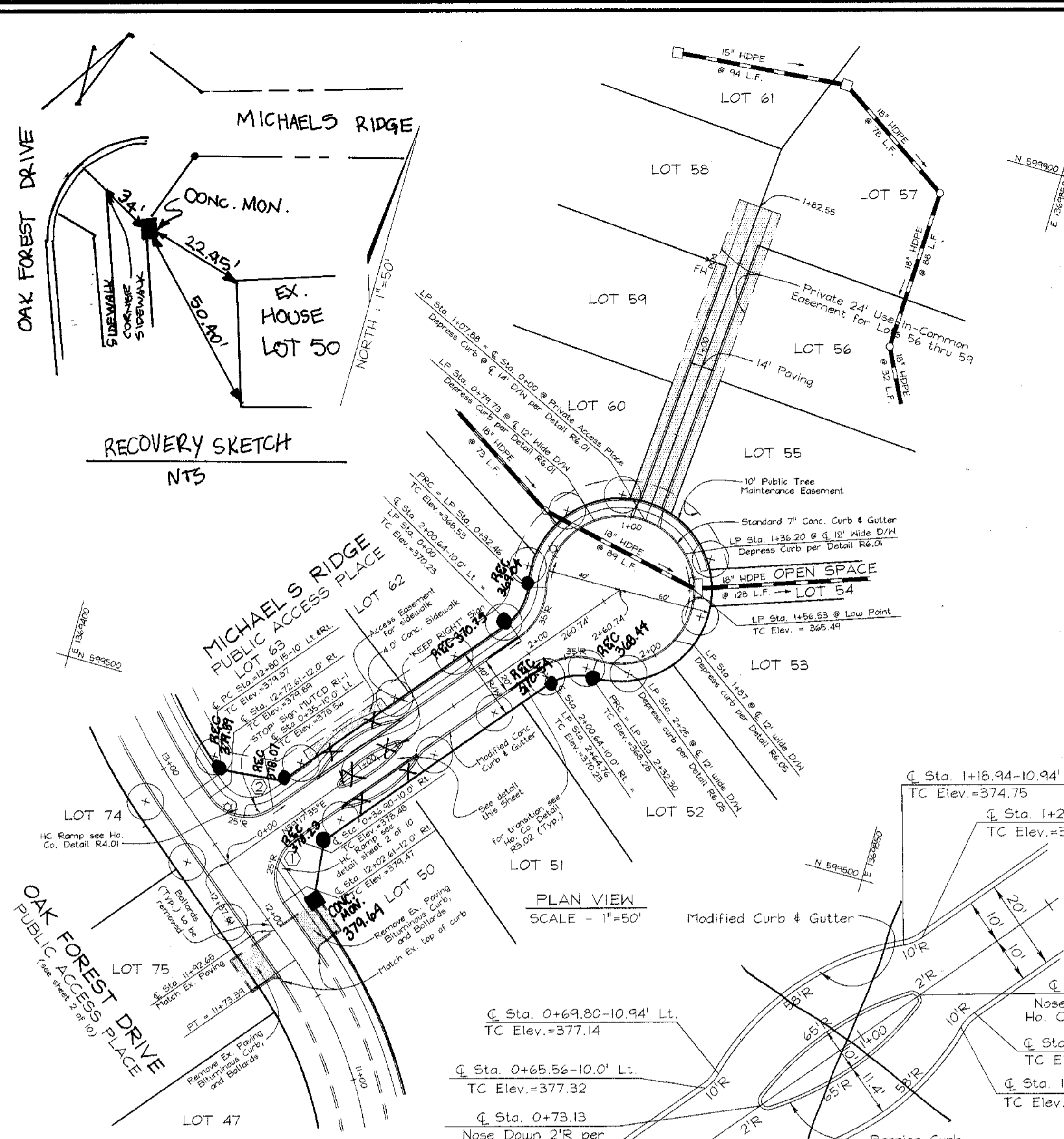
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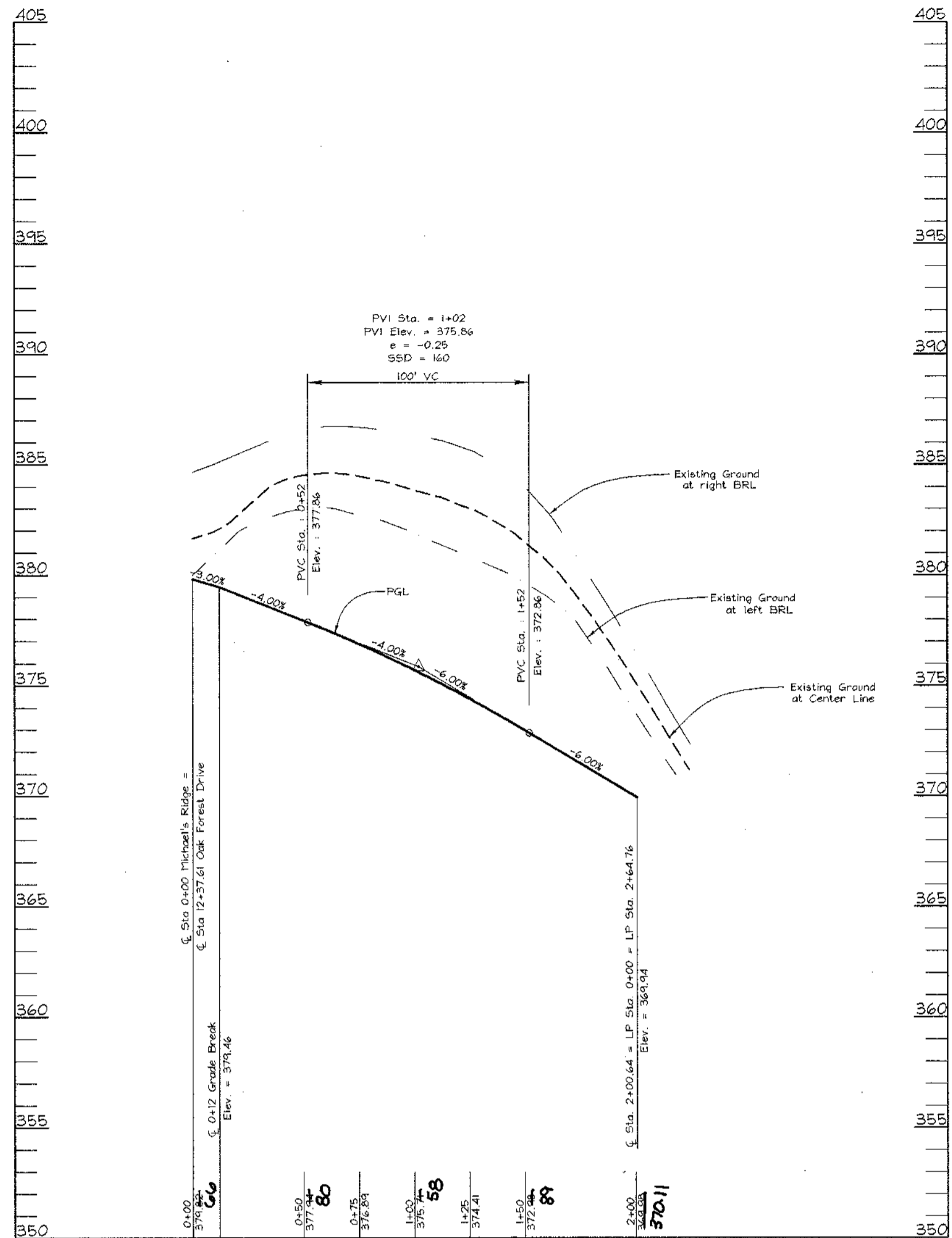
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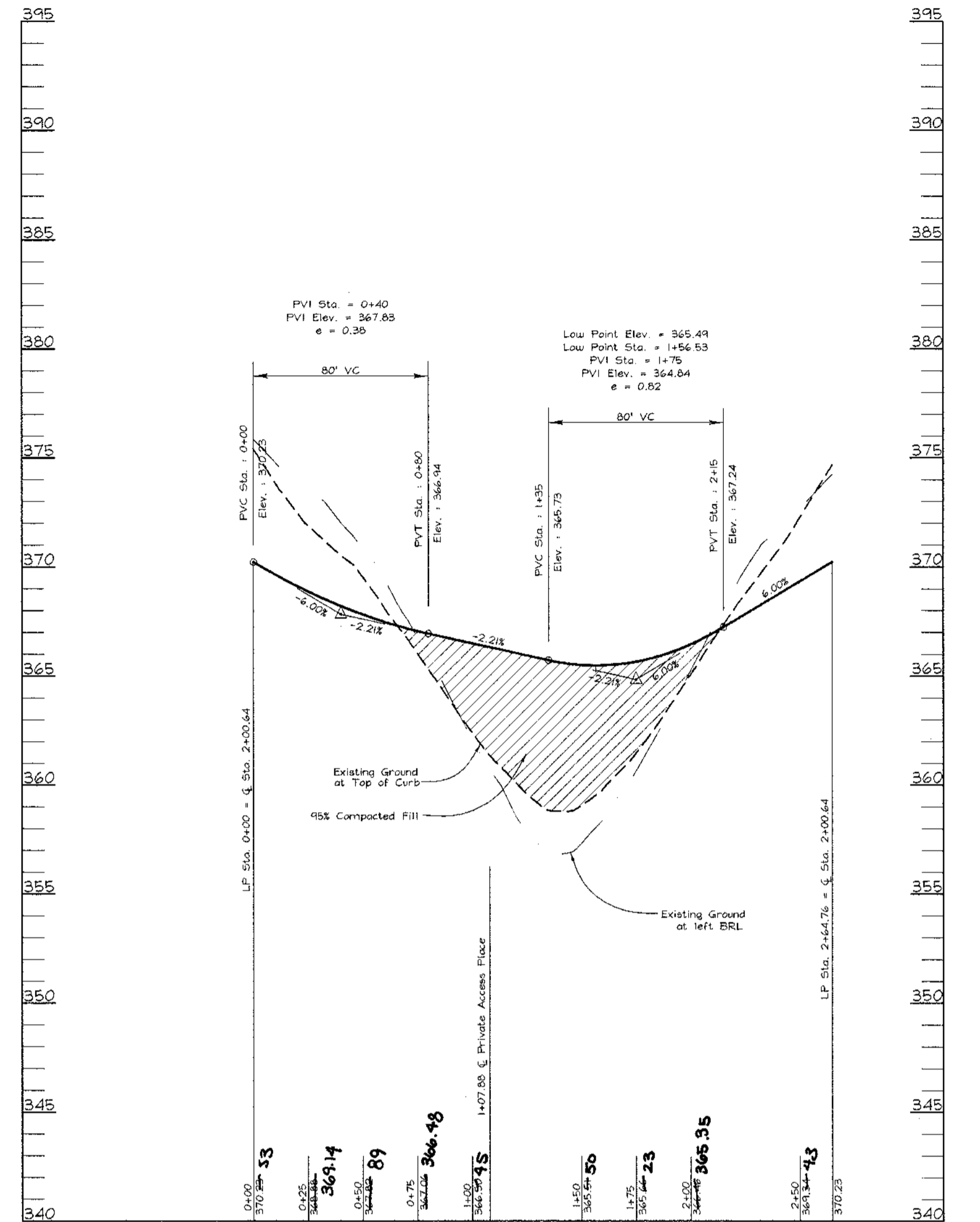
2 SHEET OF 10



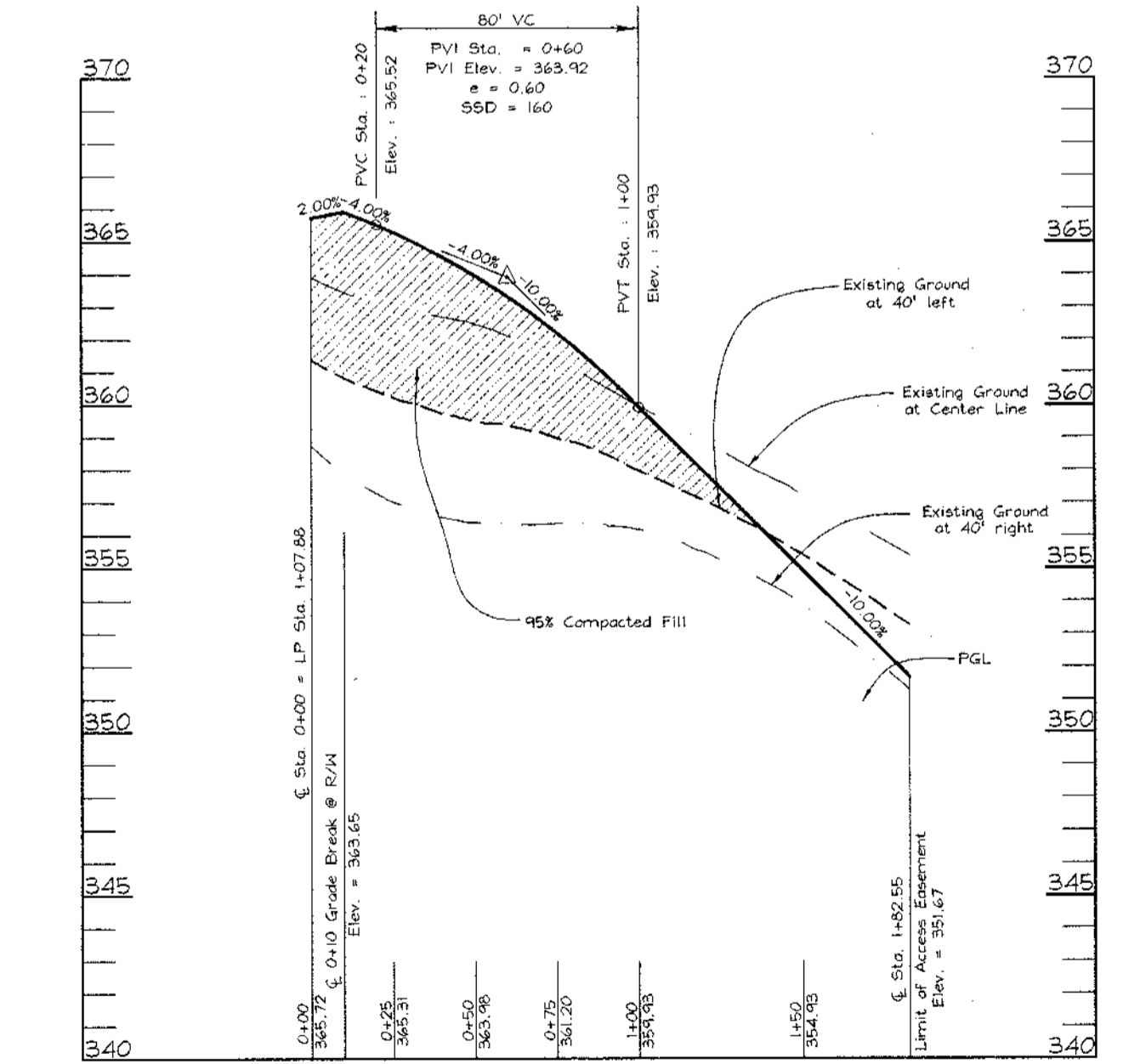
PLAN VIEW
SCALE - 1"=50'



ROAD PROFILE
MICHAELS RIDGE
PUBLIC ACCESS PLACE
VERTICAL DESIGN SPEED-25 MPH
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



LINEAR PROFILE
MICHAELS RIDGE
PUBLIC ACCESS PLACE
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'



USE-IN-COMMON DRIVEWAY
LOTS 56 THRU 59
SCALE: HORIZONTAL - 1"=50'
VERTICAL - 1"=5'

MICHAELS RIDGE
PUBLIC ACCESS PLACE
SPEED CONTROL DEVICE DETAIL
SCALE: 1"=20'

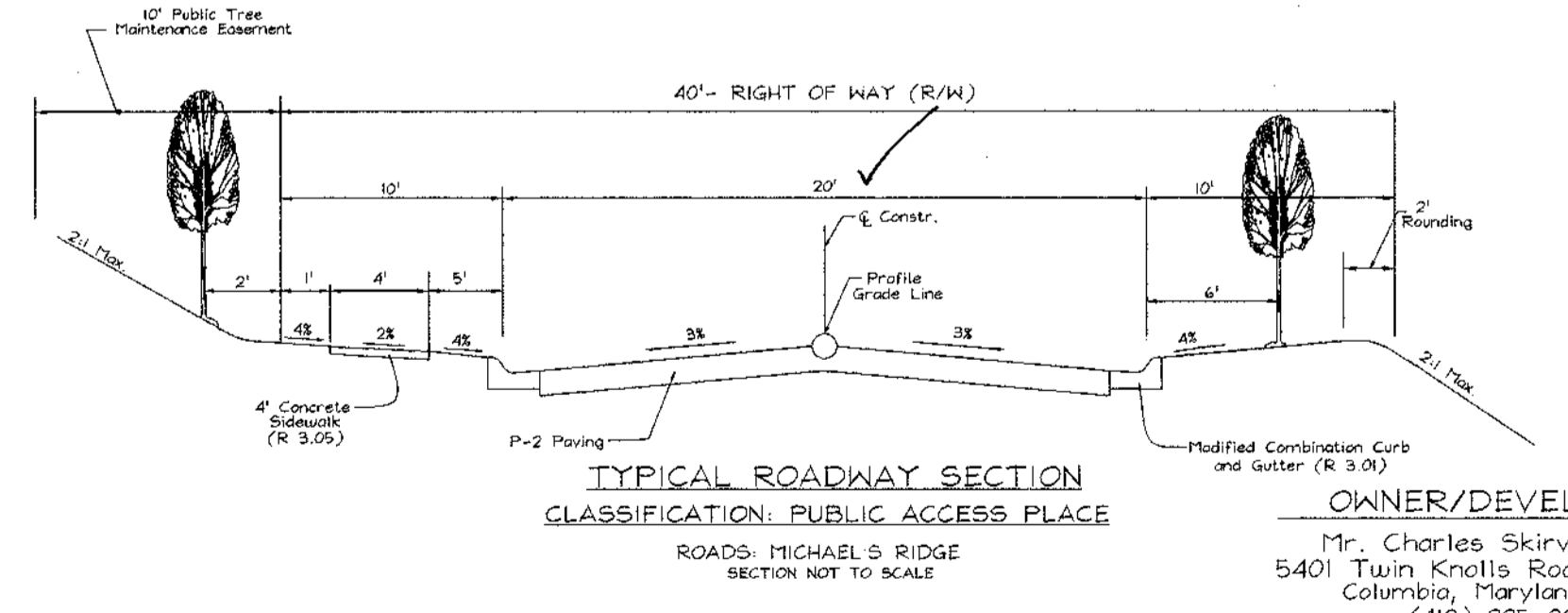
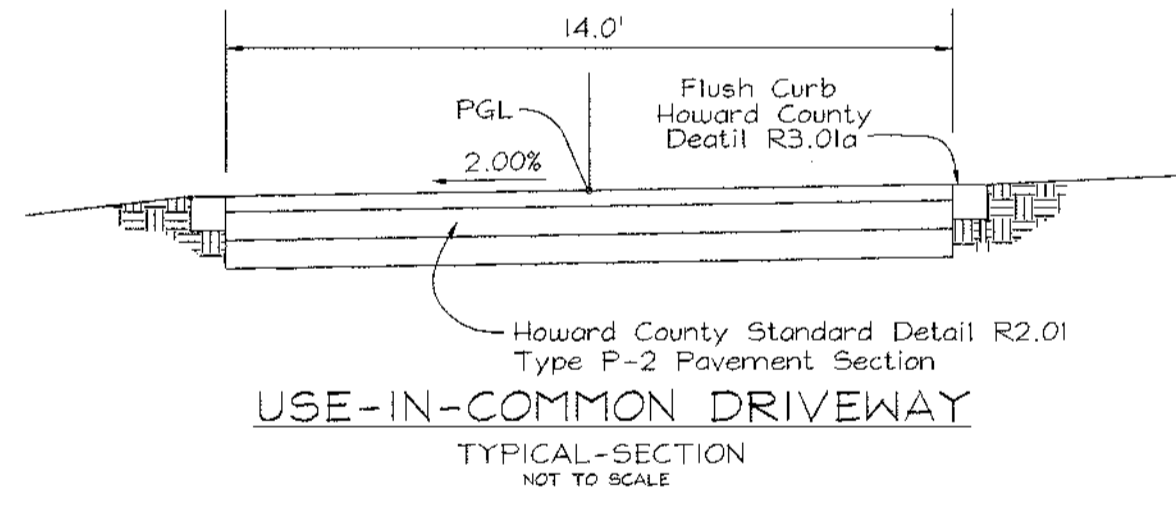
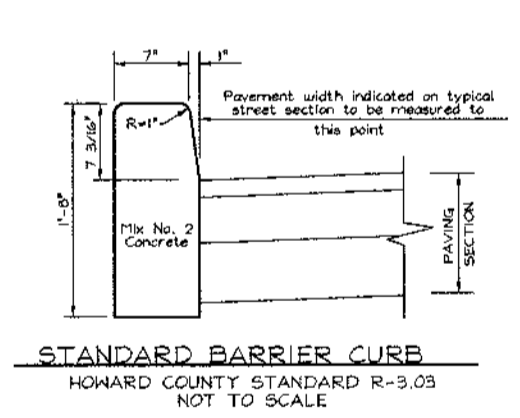
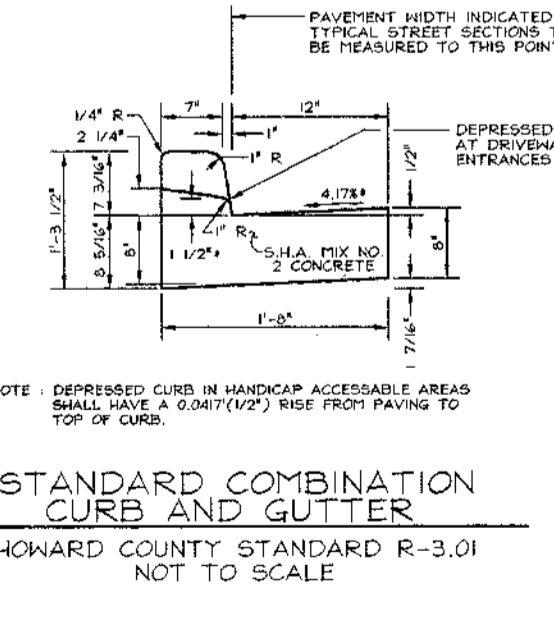
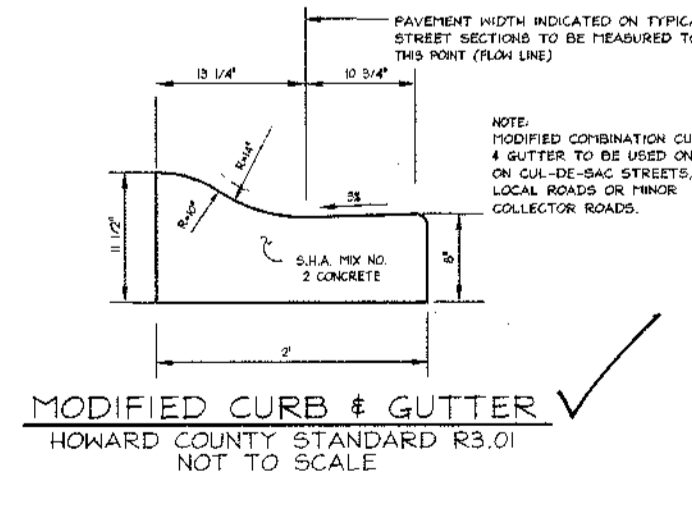
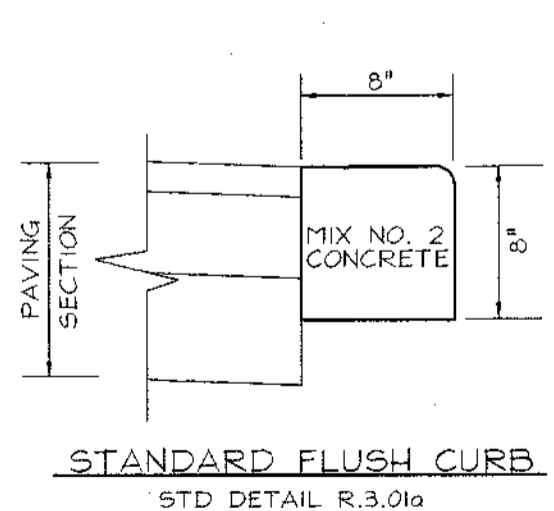
STREET LIGHT LOCATION CHART

STREET NAME	CENTERLINE STATION CENTERLINE OFFSET
Oak Forest Drive	12+20 RL
Michael's Ridge	LP 2+33.16

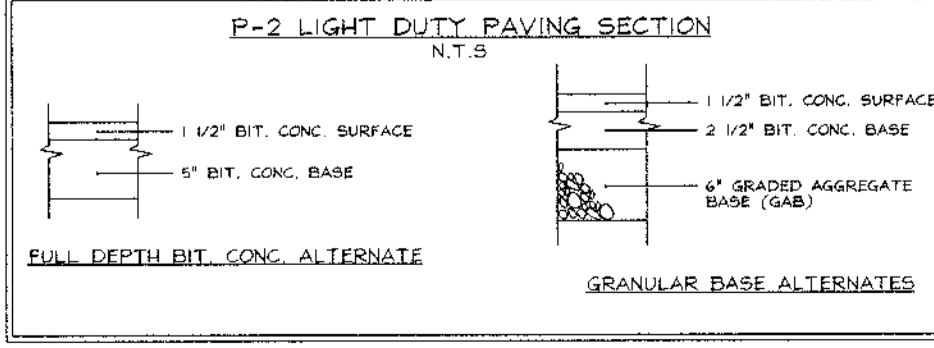
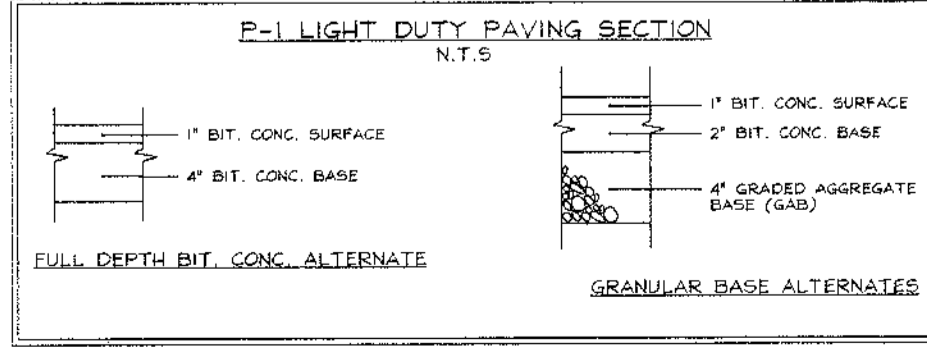
Traditional 100-watt HPS Vapor "Traditional" Post Top fixture mounted on a 14" black fiberglass pole

STREET TREE CALCULATIONS

Street Name	Linear Feet	Required Trees	Provided Trees
Michael's Ridge	597/40	15	15



OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Twin Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 998-0000



AS-BUILT CERTIFICATE

NO. _____ REVISION _____ DATE _____

APPROVED: *[Signature]* 1/3/05 DATE

CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[Signature] 3/29/00 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 4/14/00 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT

ROAD PLAN AND PROFILES AND MISCELLANEOUS DETAILS
HOLLIFIELD ESTATES I SECTION TWO

TAX MAP #18 2nd ELECTION DISTRICT PARCEL 1 HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: GAH
DATE: Oct. 12, 1999
SCALE: As Shown
W.O. NO.: 99-013

3 SHEET OF 10

SEDIMENT TRAP DATA

TRAP NO. : 4
 TRAP TYPE: TONE OUTLET ST- II
 EXISTING DRAINAGE AREA: 1.98 AC.
 PROPOSED DRAINAGE AREA: 1.38 AC.
 WET STORAGE REQUIRED: 3564 CU.FT.
 DRY STORAGE REQUIRED: 3564 CU.FT.
 WET STORAGE PROVIDED: 3917 CU.FT.
 DRY STORAGE PROVIDED: 3715 CU.FT.
 BOTTOM DIMENSION: 7'1" X 35'
 BOTTOM ELEVATION: 342.50
 WEIR CREST ELEVATION: 345.00
 WEIR LENGTH: 10.00'
 WET STORAGE ELEVATION: 343.90
 DRY STORAGE ELEVATION: 345.00
 TOTAL STORAGE DEPTH: 2.50'
 TOP OF EMBANKMENT: 346.00
 CLEANOUT ELEVATION: 343.20
 SIDE SLOPES: 2 : 1
 OUTFALL CONDITION: UNDISTURBED/WOODED

SEDIMENT TRAP DATA

TRAP NO. : 3
 TRAP TYPE: STONE OUTLET ST- II
 EXISTING DRAINAGE AREA: 1.43 AC.
 PROPOSED DRAINAGE AREA: 1.96 AC.
 WET STORAGE REQUIRED: 3928 CU.FT.
 DRY STORAGE REQUIRED: 3528 CU.FT.
 WET STORAGE PROVIDED: 4460 CU.FT.
 DRY STORAGE PROVIDED: 3573 CU.FT.
 BOTTOM DIMENSION: 7'6" X 35'
 BOTTOM ELEVATION: 328.50
 WEIR CREST ELEVATION: 331.00
 WEIR LENGTH: 10.00'
 WET STORAGE ELEVATION: 330.00
 DRY STORAGE ELEVATION: 331.00
 TOTAL STORAGE DEPTH: 2.50'
 TOP OF EMBANKMENT: 332.00
 CLEANOUT ELEVATION: 329.25
 SIDE SLOPES: 2 : 1
 OUTFALL CONDITION: UNDISTURBED/WOODED

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

Computed by: G.A.H. Date: 4/20/99, Rev. 12/21/99. Checked by: _____ Date: _____
 Project name: HOLLIFIELD ESTATES I Basin # 2
 Location: HOWARD COUNTY, MARYLAND

Total area draining to basin: 8.87 acres (ac)

Basin Volume Design

Note: 1. also see Surface Area Design #30, this form.

- Min. required vol. = 3600 cu.ft./ac x 8.87 ac drainage = 32,292 cu.ft.
- Actual Volume of basin = 52,010 cu.ft.
- Concrete 28,000 cu.ft. (C 95% cu.ft.) to 45% required capacity
- Vol. of dewatering elev. = 1500 cu.ft./ac x 8.87 ac = 13,305 cu.ft.
- Vol. of basin at dewater = 900 cu.ft./ac x 8.87 ac = 8,000 cu.ft.
- Elevation corresponding to min. required volume of basin (riser crest elevation) 234.60 ft.
- Permanent pool elevation = 231.00 ft.
- Distance from riser crest elevation to permanent pool elevation 2.85 ft.
- Basin cleanup elevation 230.50 ft.
- Distance from riser crest elevation to cleanup elevation 4.10 ft.

Spillway Design

- $Q_p = 41.28$ cfs (peak discharge from 10-yr, 24-hr storm event, attach computations)

Principal Spillway (Gate) (See Detail 11)

- Design Principal Spillway (Barrel) discharge, Design $Q_p = 41.28$ cfs (min. 10% of 10-yr peak or 8" pipe)
- $H = 8.28$ ft., Barrel length = 50.0 ft.
- Barrel diam. = 30 in. Note Q_p must equal or exceed Design Q_p
- $Q_{max} = Q$ (from Table 13 or 14) 46.25 x (length correction factor) 1.09 = 50.43 cfs
- Riser diam. 42 in., Riser Height 5.2 ft., Riser Head (h) = 1.09 ft.
- Trash Rack diam. 20 in.; Trash Rack Height 12 in.

Emergency Spillway (Gate) (N/A)

- Emergency spillway cap. $Q_{em} = Q_p - Q_{ps} =$ _____ cfs.
- Width _____ ft., Hip _____ ft.
- Entrance channel slope _____ %
- Exit channel slope _____ %

Anti-Seep Collar Design (for each Barrel)

- $y = 8.29$, $z = 21$, pipe slope = 2.0 %, $ts = 41.02$ ft.
- Lee = 1 collar, 3 ft., 10 in. square projection = 3.2 ft.

Design Elevations

- Riser Crest = 235.20 ft. 24. Design High Water = 236.28 ft.
- Emergency Spillway Crest = 237.65 ft. 25. Min. settled top of dam = 237.60 ft.
- Permanent pool = 231.00 ft. 26. Bottom of Basin = 230.00 ft.
- Draw-down orifice invert = 230.00 ft.

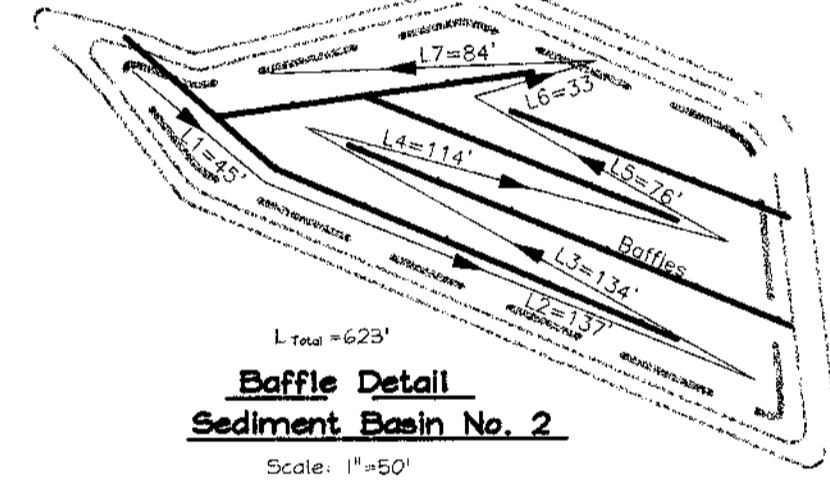
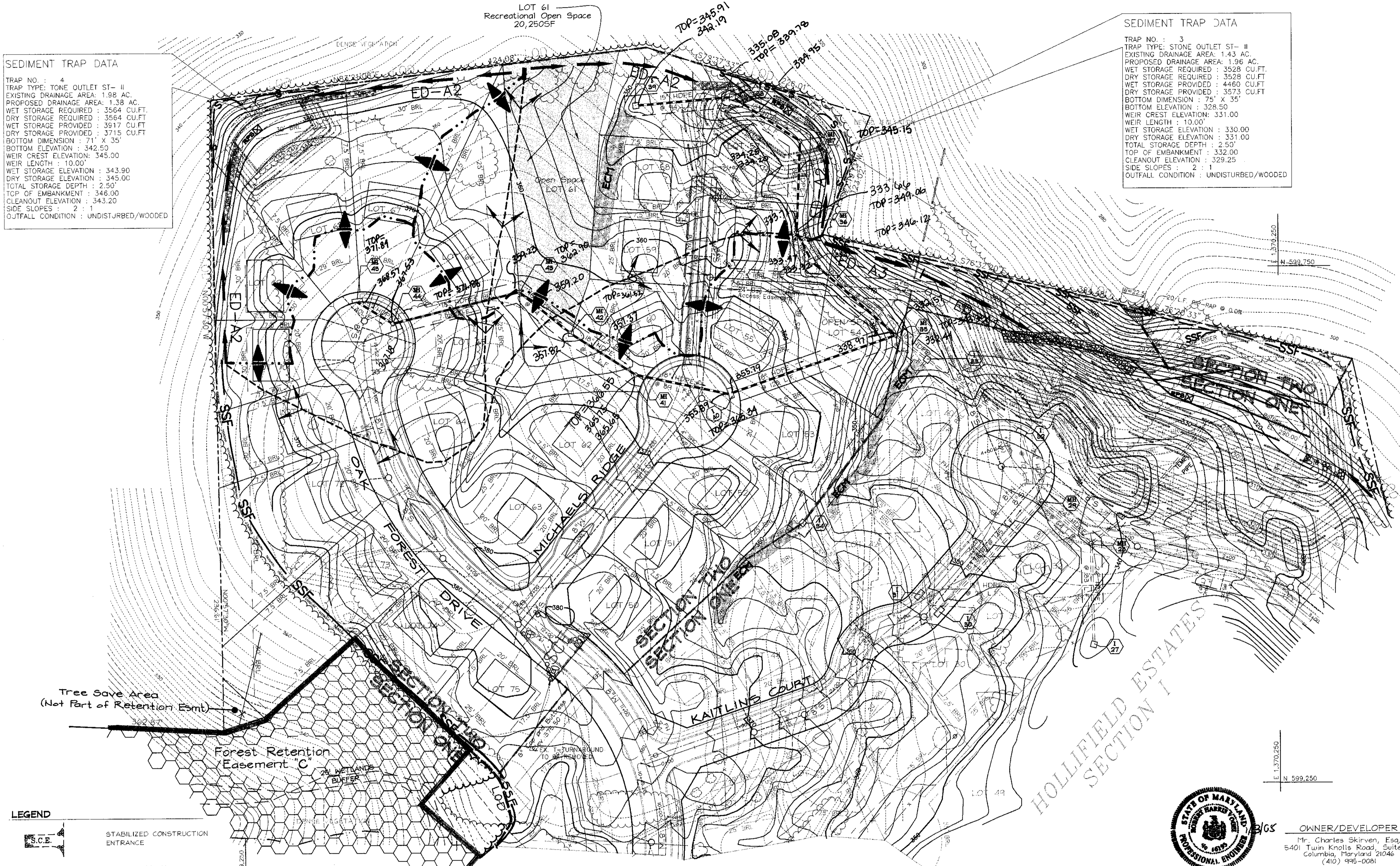
Surface Area Design

- Min. basin surface area: $SA \geq 0.0035 \times Q_{ps} = 0.0035 \times 46.53$ cfs ≤ 0.16 ac.

Draw-down Device

- Draw-down device orifice diameter = 4 in. (From Table 11)
- $A_p =$ Total area of perforations $\geq 4A_o$
 $A_p =$ (# of perforations/foot)(perforation area ft²)(perforated section length ft.)
 $A_p =$ (12 perforations/foot)(0.0055 sq. ft.)(6 ft.)
 $A_p = 0.38$ sq. ft.
 $A_o =$ internal orifice area (from Table 11 or computed) = 0.35 sq. ft.

C - 10 - 10 & 11



- LEGEND**
- STABILIZED CONSTRUCTION ENTRANCE
 - PROP. TREELINE
 - BASIN / TRAP CONTOURS
 - PROPOSED GRADE
 - SILT FENCE
 - SUPER SILT FENCE
 - EARTH DIKE
 - EROSION CONTROL MATTING
 - LIMIT OF DISTURBANCE
 - EX. DRAINAGE DIVIDE TO TRAPS
 - PROP. DRAINAGE DIVIDE TO TRAPS



OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Turin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 995-0081

"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL, P.E. NO. 16193 DATE 4/30/99

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFICATION RELIEVES ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

NO.	REVISION	DATE

GRADING, SEDIMENT AND EROSION CONTROL PLAN

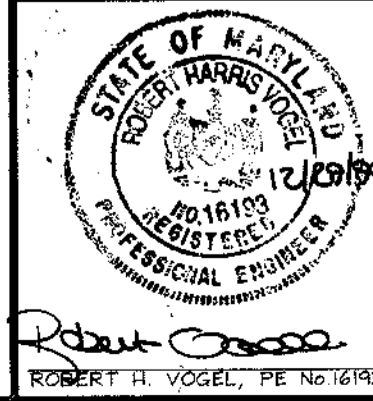
HOLLIFIELD ESTATES I

SECTION TWO

TAX MAP #18 PARCEL 1
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS

3591 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3986



DESIGN BY: G.A.H.
 DRAWN BY: J.E.R.
 CHECKED BY: R.H.V.
 DATE: Oct. 12, 1999
 SCALE: 1"=50'
 W.O. NO.: 99-013

4 SHEET OF 10

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

Cheryl Spitzer / G.S. 3/24/00
 JSDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Robert H. Vogel 3/24/00
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

ENGINEER'S CERTIFICATE

I HEREBY 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.

Robert H. Vogel 12/23/99
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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 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.

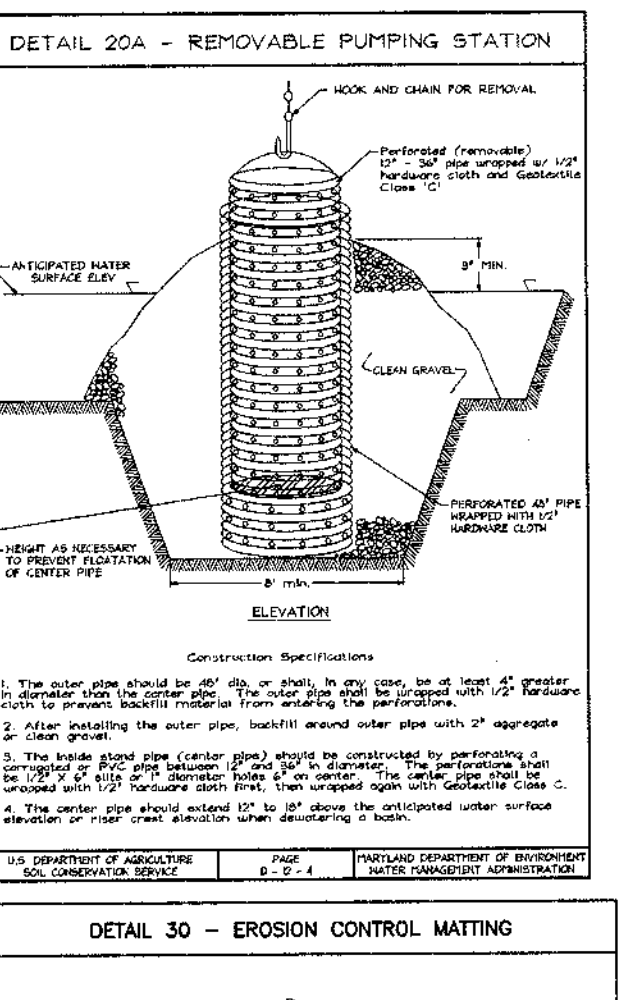
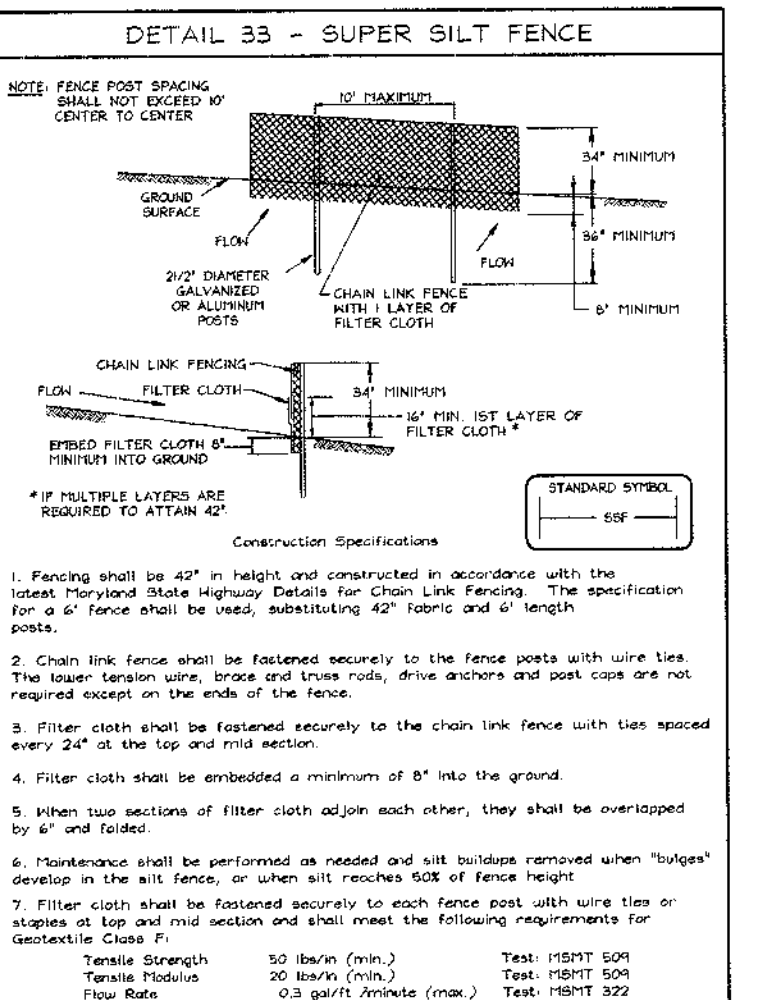
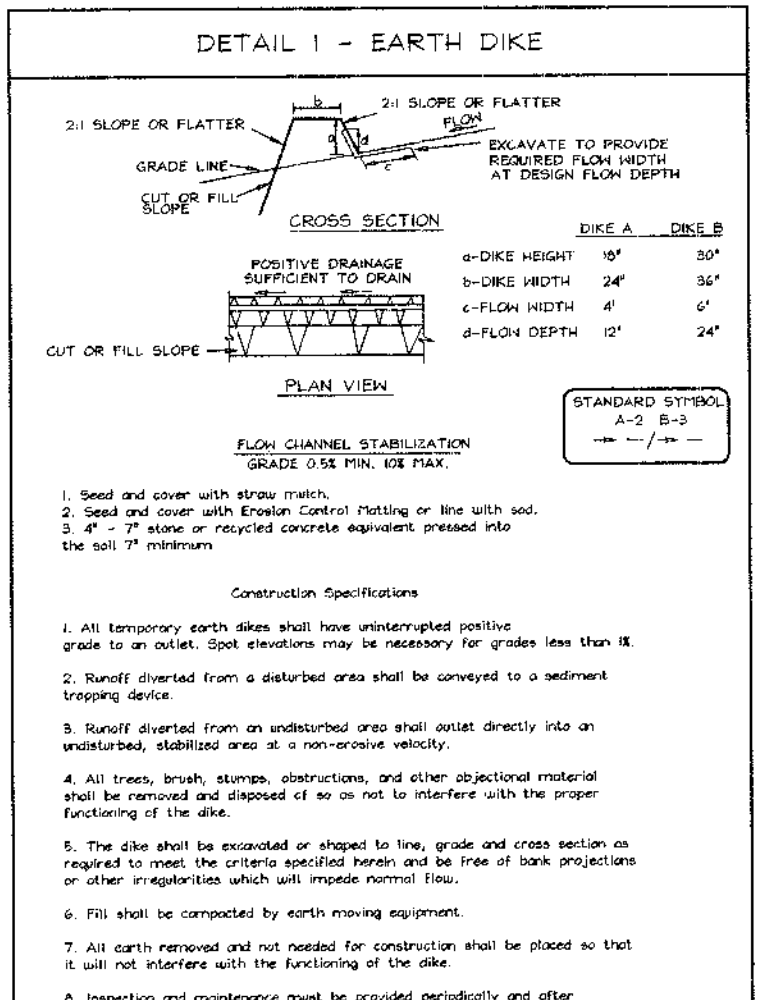
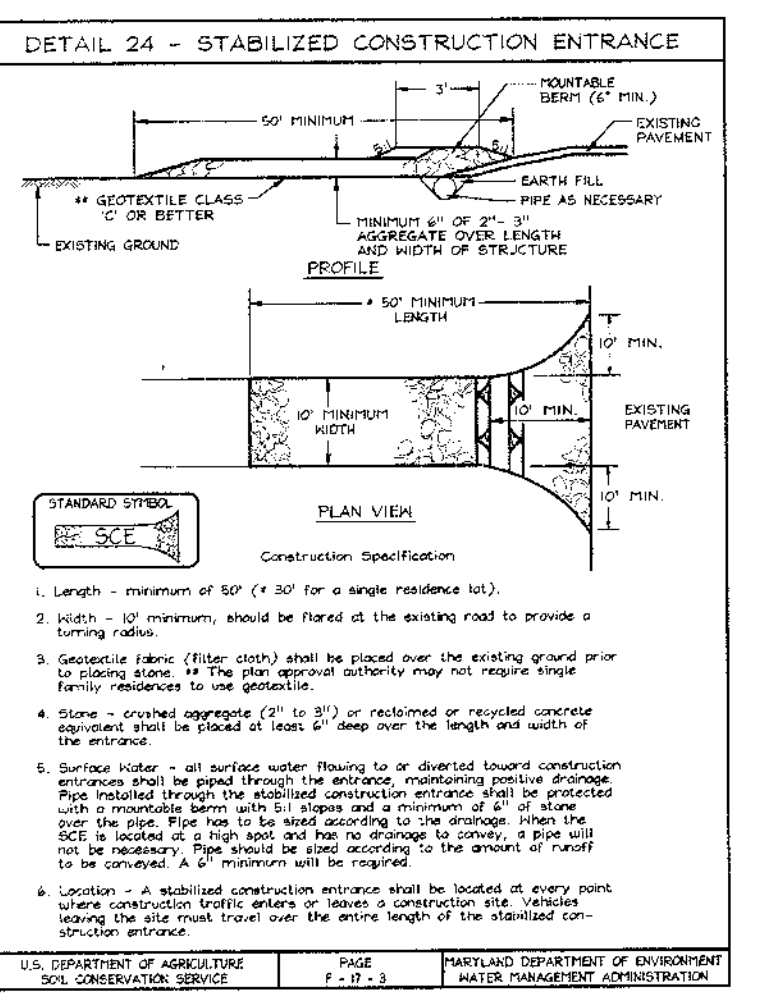
Charles Skirven 12/23/99
 SIGNATURE OF DEVELOPER DATE
 CHARLES SKIRVEN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Charles Skirven 3/24/00
 CHIEF, BUREAU OF HIGHWAYS DATE

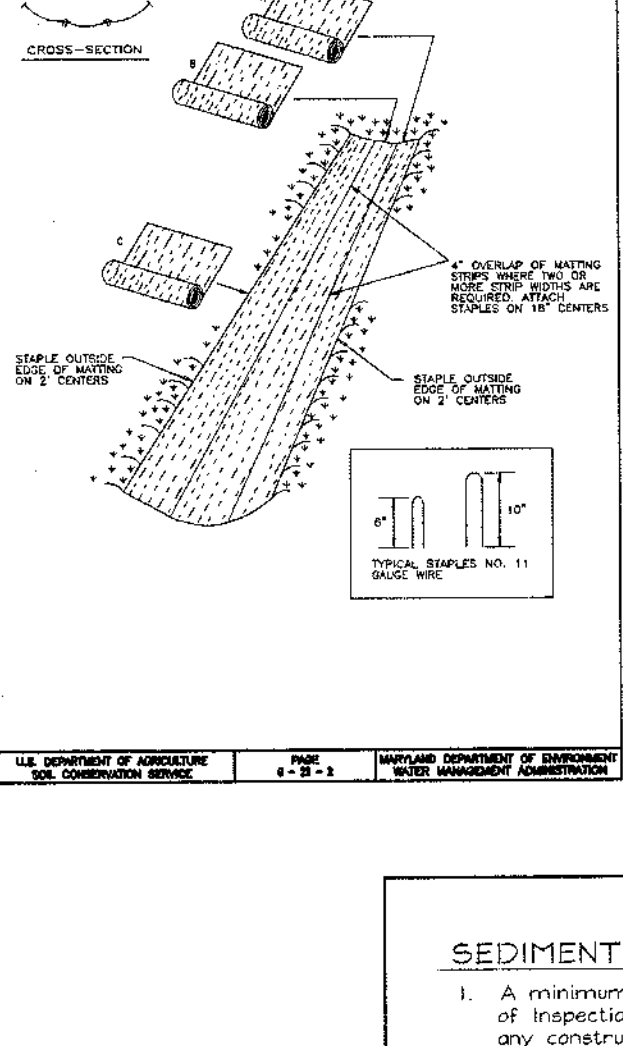
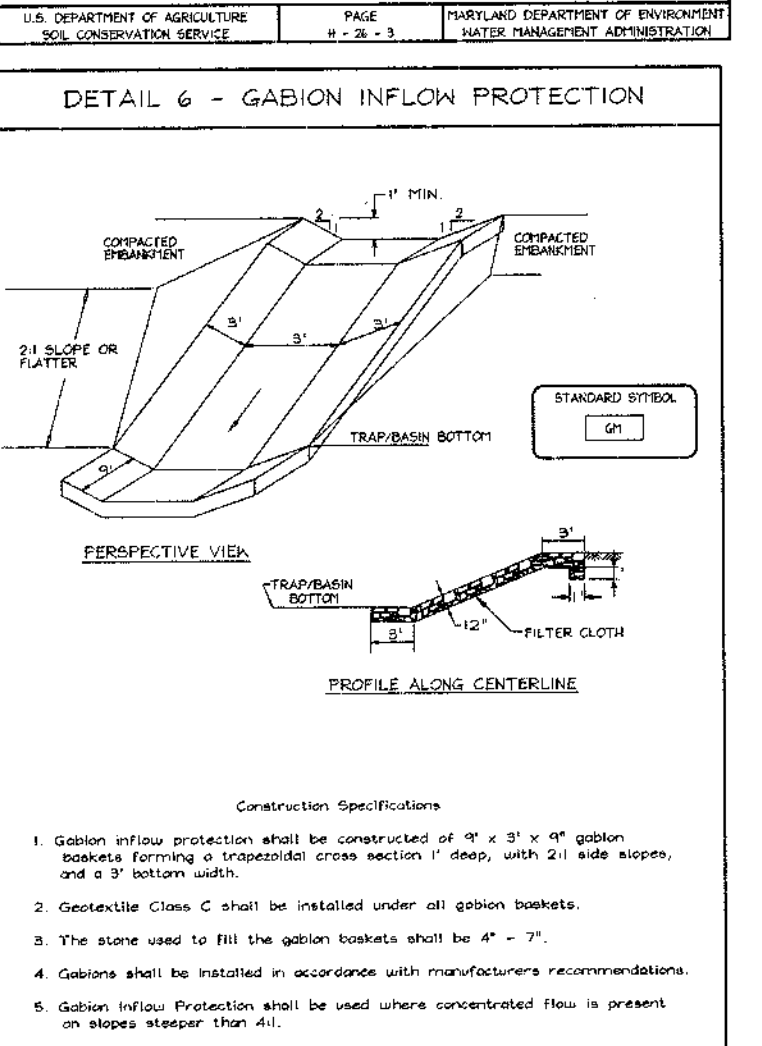
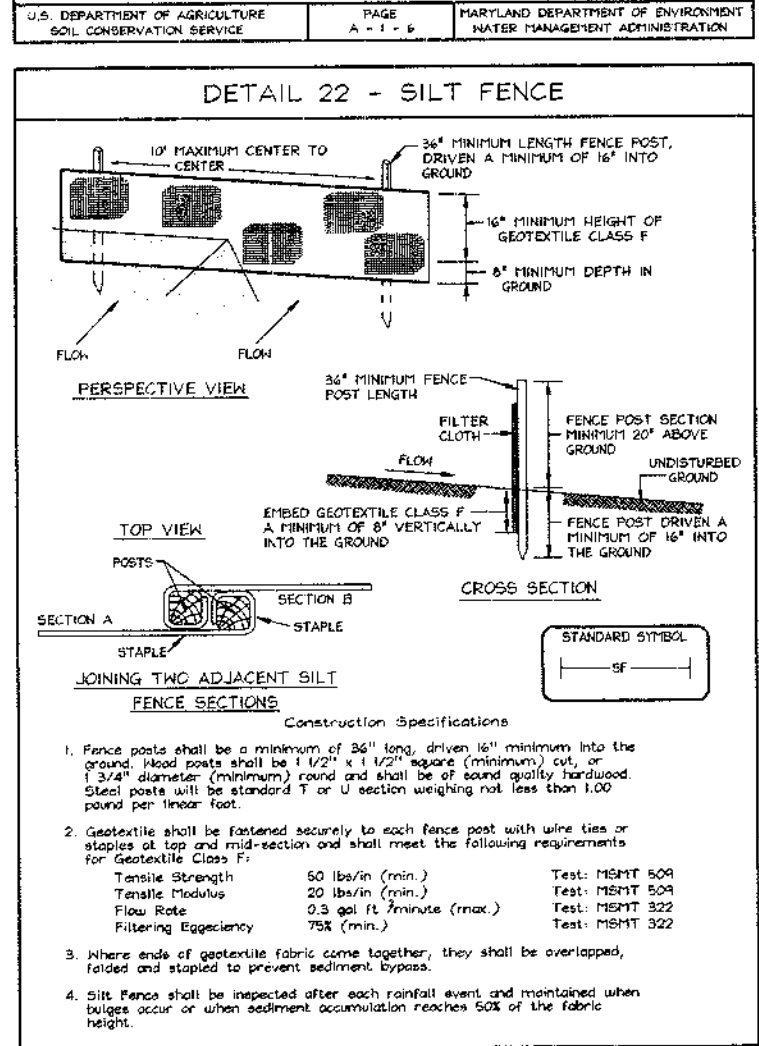
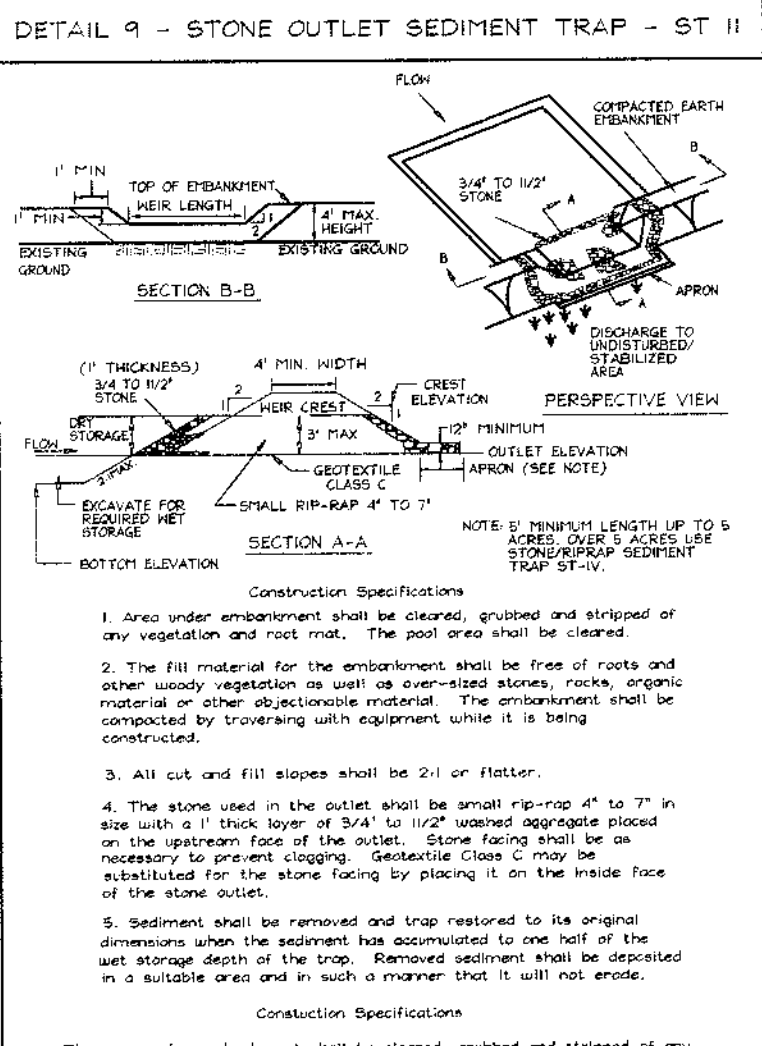
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Charles Skirven 4/30/99
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



Construction Specifications

1. Site Preparation: Perimeter sediment control devices must be installed prior to clearing and grubbing. Areas where the embankment is to be placed shall be cleared, grubbed, and stripped of topsoil to remove trees, vegetation, roots or other objectionable material. The pool area shall not be cleared until completion of the dam embankment unless the pool area is to be used for borrow. In order to facilitate clean-out and restoration, the pool area (measured at the top of the pipe spillway) shall be cleared of all brush, trees, and other objectionable materials.
2. Cut-off Trench: A cut-off trench shall be excavated along the centerline of earth fill embankments. The minimum depth shall be four feet. The cut-off trench shall extend up both abutments to the riser crest elevation. The minimum bottom width shall be two feet, but wide enough to permit operation of excavation and compaction equipment. The side slopes shall be no steeper than 1:1. Compaction requirements shall be the same as those for the embankment. The trench shall be dewatered during the backfilling-compaction operations. For dewatering see Section D.
3. Embankment: The fill material shall be free of roots, woody vegetation, oversized stones, rocks, or other objectionable material. Relatively pervious materials such as sand or gravel (Unified Soil Classes GW, GP, SW & SP) or organic materials (Unified Soil Classes OL and OH) shall not be placed in the embankment. Areas on which fill is to be placed shall be scarified prior to placement of fill. The fill material shall contain sufficient moisture so that it can be formed by hand into a ball without crumbling. If water can be squeezed out of the ball, it is too wet for proper compaction. Fill material shall be placed in six-inch to eight-inch thick continuous lifts over the entire length of the fill. Compaction shall be obtained by routing and hauling the construction equipment over the fill so that the entire surface of each layer of the fill is traversed by at least one wheel or tread track of the equipment or by the use of a compactor. The embankment shall be constructed to an elevation 10 percent higher than the design height to allow for settlement.
4. Principal Spillway: Steel risers shall be securely attached to the barrel or barrel stub by welding the full circumference making a watertight structural connection. Concrete risers shall be poured with the principal spillway in place or precast with voids around the principal spillway filled with concrete or shrink proof grout for watertight connection. The barrel slab must be attached to the riser and the riser base shall be watertight. All connections between barrel sections must be watertight. All connections between barrel assemblies. The barrel and riser shall be placed on a firm, smooth foundation of impervious soil as the embankment is constructed. Breaching the embankment to install the barrel is unacceptable. Pervious materials such as sand, gravel, or crushed stone shall not be used as backfill around the pipe or anti-seep collar. The fill material around the pipe spillway shall be placed in four inch lifts and hand compacted under and around the pipe to at least the same density as the adjacent embankment. A depth of 1.5 times the pipe diameter (min.) shall be backfilled over the principal spillway and hand compacted before crossing it with construction.
5. Emergency Spillway: The emergency spillway shall be installed in undisturbed ground. The achievement of planned elevations, grades, design width, entrance and exit channel slopes are critical to the successful operation of the emergency spillway and must be constructed within a tolerance of +/- 0.2 feet.
6. Vegetative Treatment: Stabilize the embankment in accordance with the appropriate vegetative Standard and Specifications immediately following construction. In no case shall the embankment remain unstabilized for more than seven (7) days. Once constructed, the top and outside face of the embankment shall be stabilized with seed and mulch. The remainder of the interior slopes should be stabilized (one time) with seed and mulch upon basin completion and monitored and maintained erosion free during the life of the basin.
7. Safety: Local requirements concerning fencing and signs shall be met, warning the public of hazards of soft sediment and floodwater.
8. Maintenance: Repair all damage caused by soil erosion and construction equipment at or before the end of each working day. Sediment shall be removed from the basin when it reaches the specified distance below the top of the riser as shown on the plan. This sediment shall be placed in such a manner that it will not erode from the site. The sediment shall not be deposited downstream from the embankment, adjacent to a stream or floodplain. Disposal areas must be stabilized.
9. Final Disposal: When temporary structures have served their intended purpose and the contributing drainage area has been properly stabilized, the embankment and resulting sediment deposits are to be leveled or otherwise disposed of in accordance with the approved sediment control plan. The proposed use of a sediment basin site will often dictate final disposition of the basin and any sediment contained therein. If the site is scheduled for future construction, then the basin material and trapped sediments must be removed and safely disposed of and the basin shall be backfilled with a structural fill. When the basin area is to remain open space, the pond may be pumped dry (using methods in Section D - Dewatering), graded, and back filled.
10. Conversion to Stormwater Management Structure: After permanent stabilization of all disturbed contributory drainage areas, temporary sediment basins, if initially built and certified to meet permanent standards, may be converted to permanent stormwater management structures. To convert the basin from temporary to permanent use, the outlet structure must be modified in accordance with approved stormwater management design plans. Additional grading may also be necessary to provide the required storage volume in the basin. Conversion can only take place after all disturbed areas have been permanently stabilized.

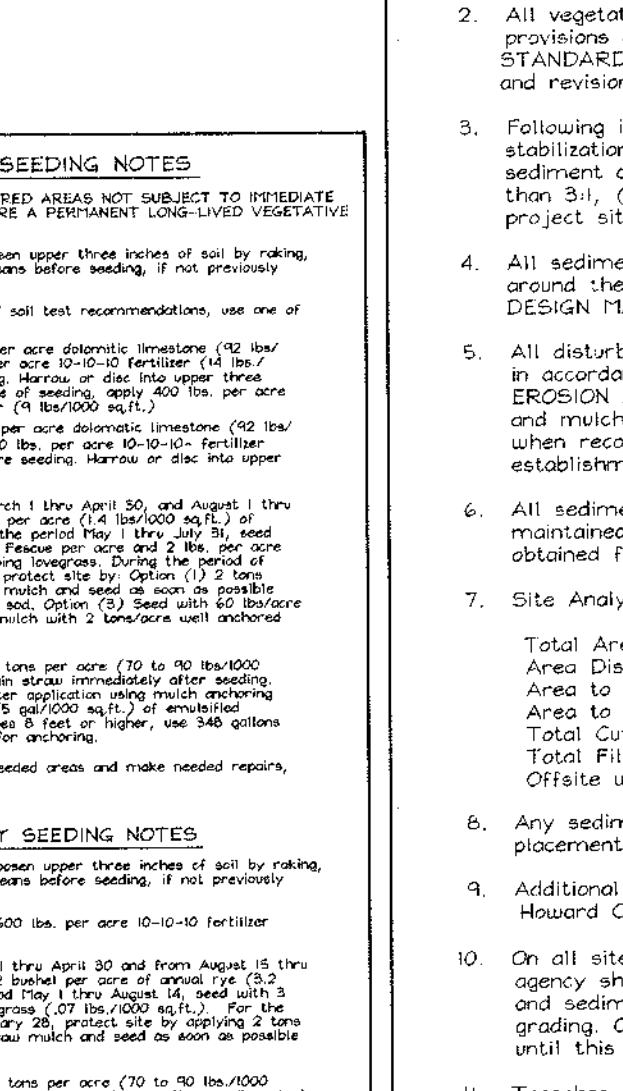
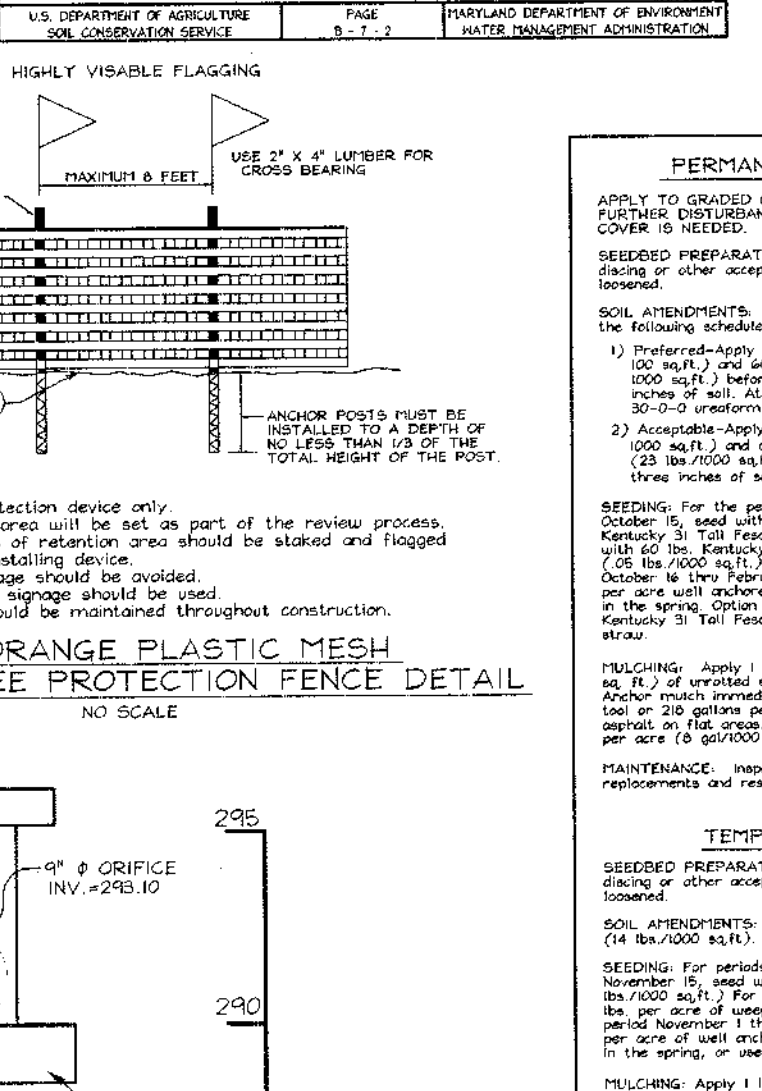
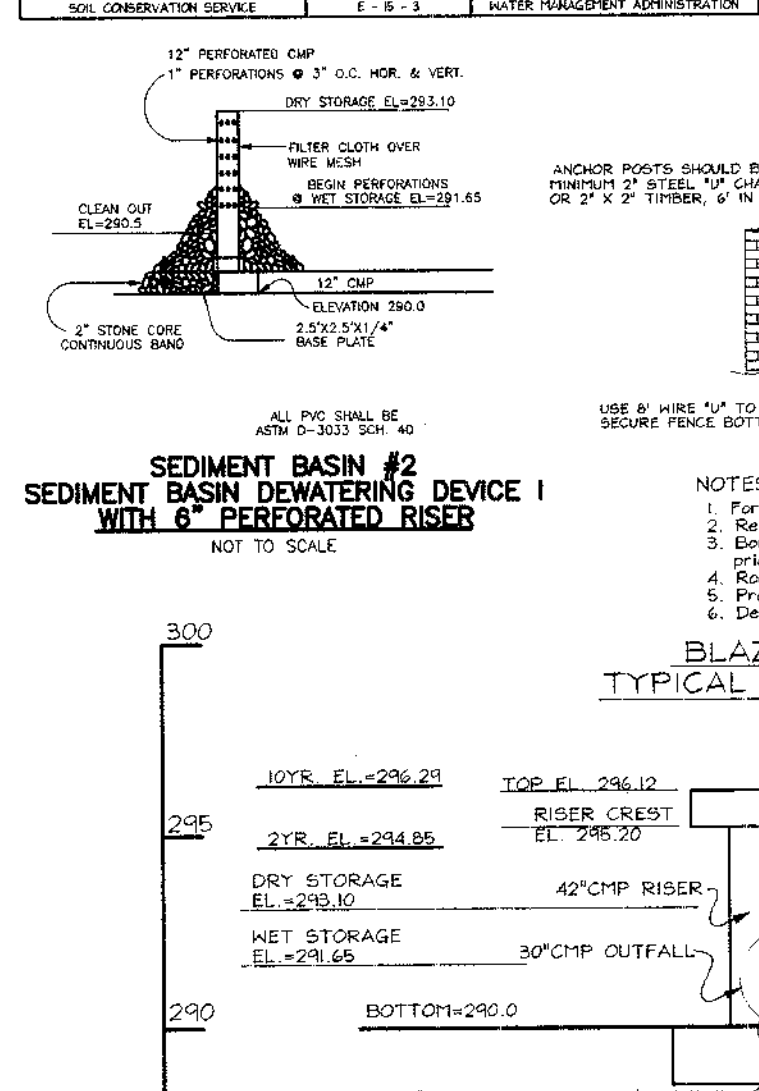
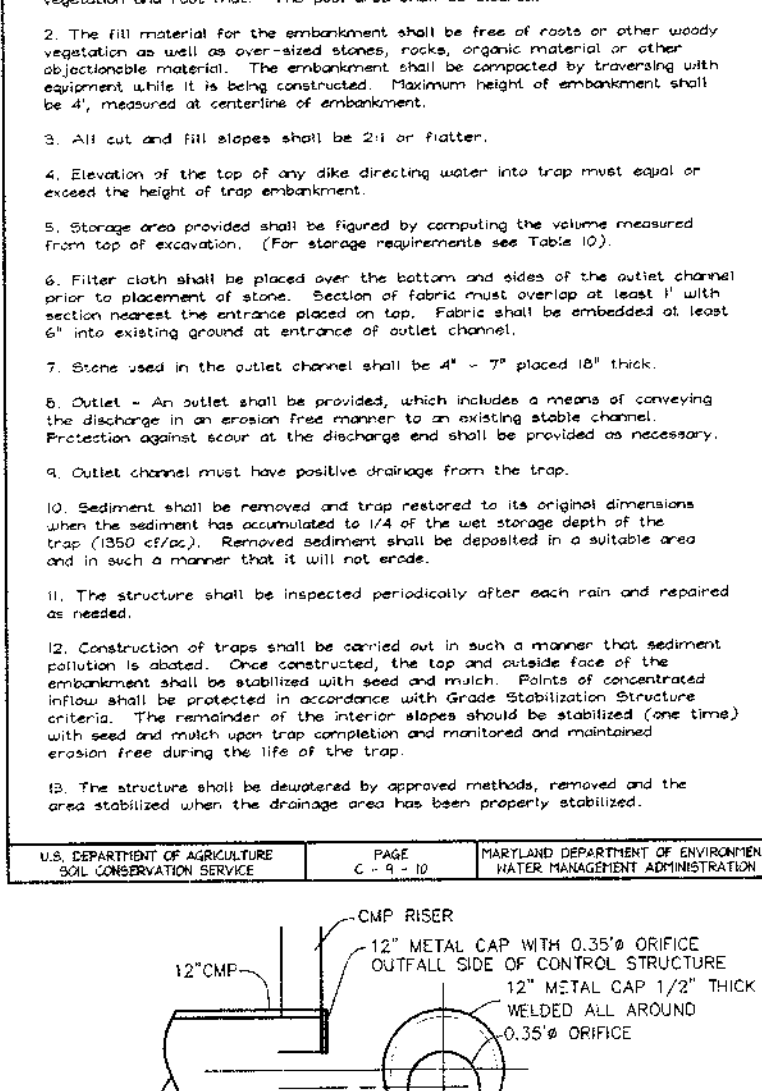


Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.
2. The fill material for the embankment shall be free of roots and other woody vegetation as well as any stones, rocks, or other objectionable material. The embankment shall be constructed by trucking with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap of 1/2 to 3/4 inch with a 1/4 inch layer of 3/4 inch washed aggregate placed on the upstream face of the outlet. Stone facing shall be on necessary riprap facing. Concrete Class C must be established for the stone facing by placing it on the inside face of the stone outlet.
5. Sediment shall be removed and trap prepared to its original dimensions when the sediment has accumulated to one half of the set storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

Construction Specifications

1. Four posts shall be a minimum of 30 feet apart, 30' minimum high the ground. Posts shall be 4" x 4" x 1/2" galvanized steel pipe. Posts shall be spaced every 30 feet along the length of the fence.
2. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors. Posts shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
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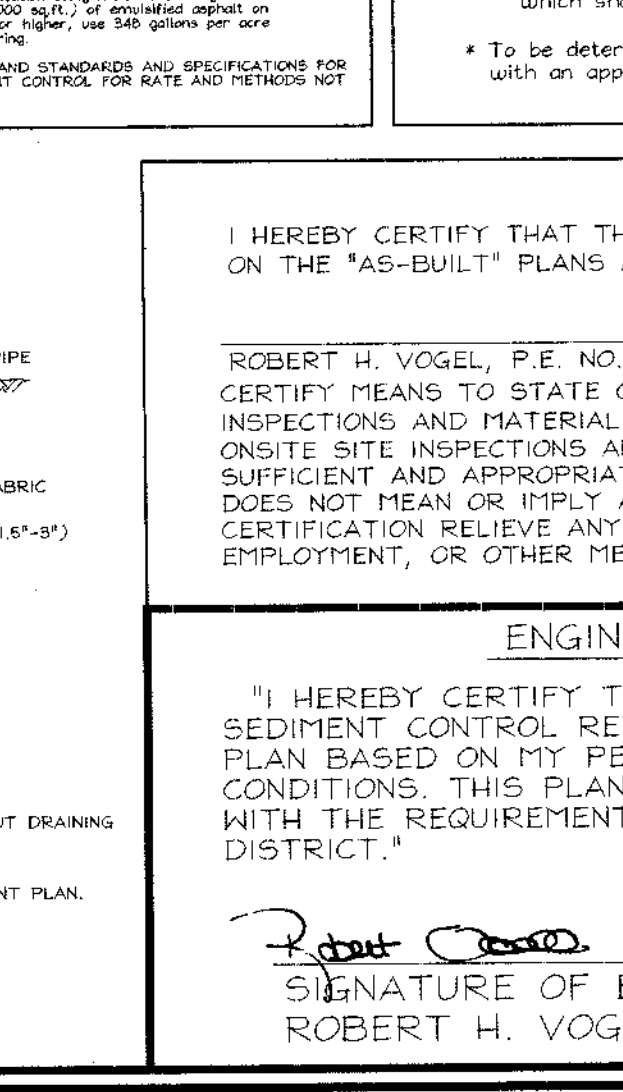
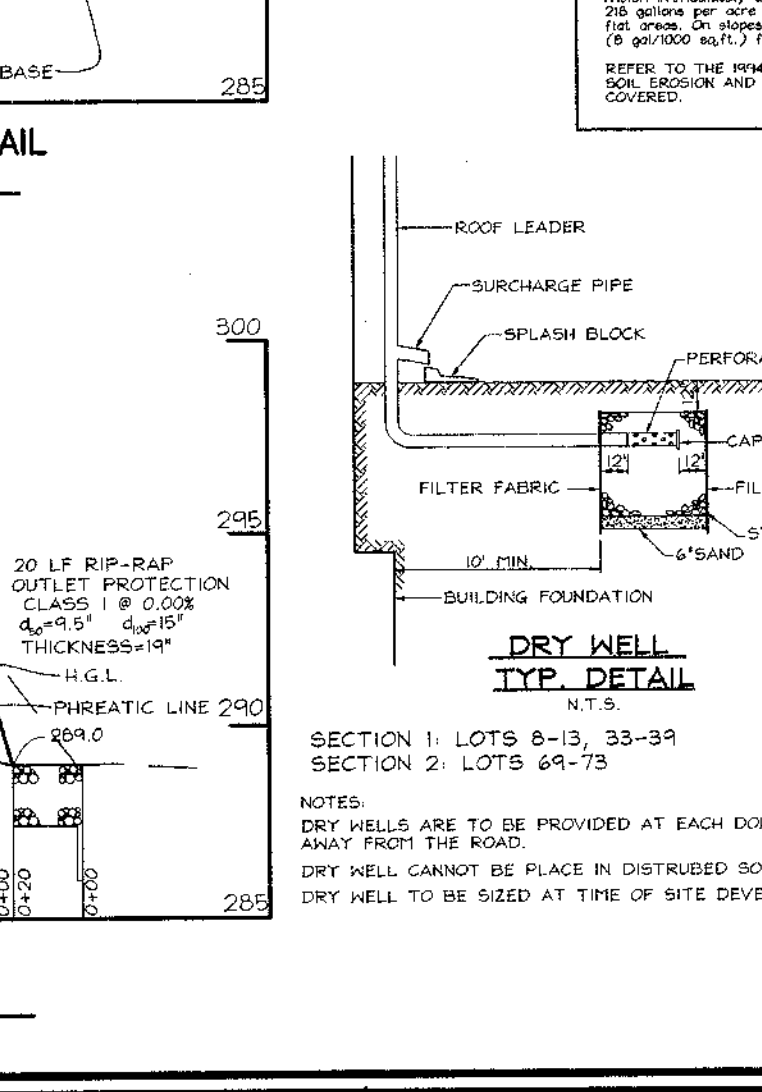
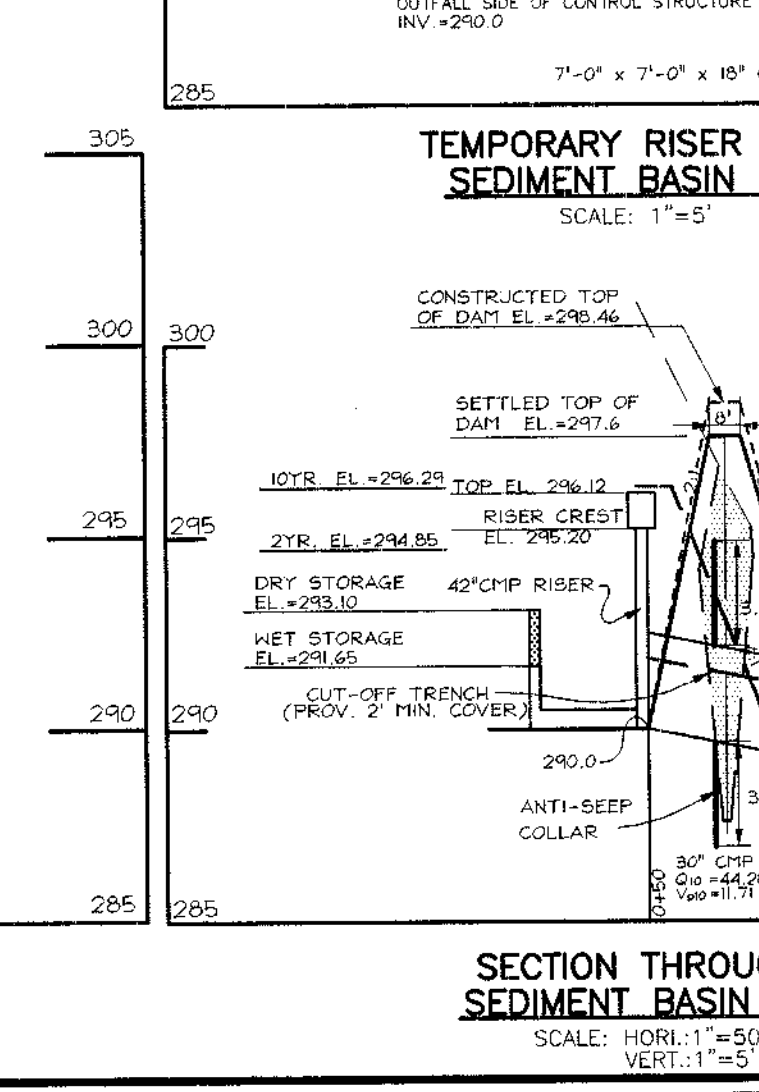
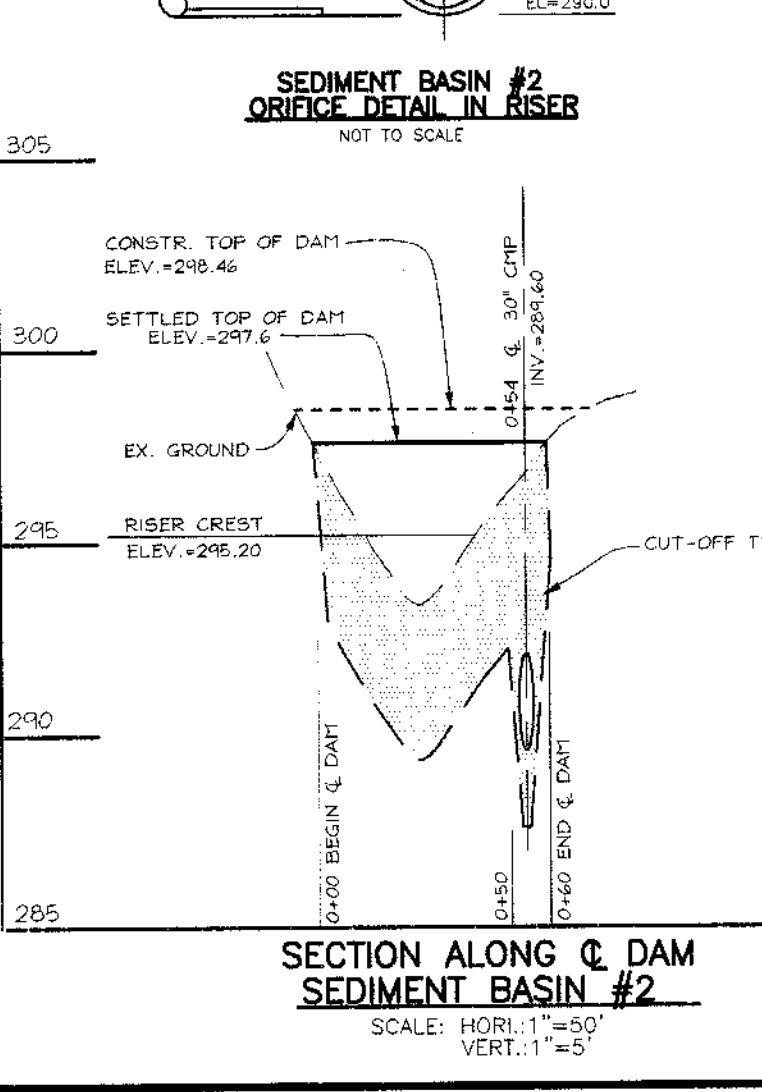


Construction Specifications

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2. The fill material for the embankment shall be free of roots and other woody vegetation as well as any stones, rocks, or other objectionable material. The embankment shall be constructed by trucking with equipment while it is being constructed.
3. All cut and fill slopes shall be 2:1 or flatter.
4. The stone used in the outlet shall be small riprap of 1/2 to 3/4 inch with a 1/4 inch layer of 3/4 inch washed aggregate placed on the upstream face of the outlet. Stone facing shall be on necessary riprap facing. Concrete Class C must be established for the stone facing by placing it on the inside face of the stone outlet.
5. Sediment shall be removed and trap prepared to its original dimensions when the sediment has accumulated to one half of the set storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

Construction Specifications

1. Four posts shall be a minimum of 30 feet apart, 30' minimum high the ground. Posts shall be 4" x 4" x 1/2" galvanized steel pipe. Posts shall be spaced every 30 feet along the length of the fence.
2. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors. Posts shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
3. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
4. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
5. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
6. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
7. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
8. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
9. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.
10. Posts shall be installed in a line with the fence and shall be secured to the ground with 1/2" x 1/2" x 1/2" galvanized steel anchors.

21.0 STANDARDS AND SPECIFICATIONS FOR TOPSOIL

Definition: The amount of topsoil to be prepared shall be that required to meet the minimum requirements for topsoil.

Purpose: To provide a suitable soil medium for vegetation growth. Soil in contact with the moisture content, the nutrient level, the pH, and the texture shall be suitable for the growth of vegetation.

Specifications: The topsoil shall be prepared in accordance with the following specifications:

1. The topsoil shall be prepared in accordance with the following specifications:
2. The topsoil shall be prepared in accordance with the following specifications:
3. The topsoil shall be prepared in accordance with the following specifications:
4. The topsoil shall be prepared in accordance with the following specifications:
5. The topsoil shall be prepared in accordance with the following specifications:
6. The topsoil shall be prepared in accordance with the following specifications:
7. The topsoil shall be prepared in accordance with the following specifications:
8. The topsoil shall be prepared in accordance with the following specifications:
9. The topsoil shall be prepared in accordance with the following specifications:
10. The topsoil shall be prepared in accordance with the following specifications:

SEQUENCE OF CONSTRUCTION

NOTE: Section One (F-99-75) and Section Two (F-99-76) will be constructed concurrently. (One Day)

1. Obtain grading permits. Grading permits for F-99-75 and F-99-76 must be issued to run concurrently. (One Day)
2. Notify Howard County Bureau of Inspections and Permits at (410)331-0800 at least 24 hours before starting any work. (One Day)
3. Install Temporary Construction Structures, First Protection Fences, Silt Fence and Super Silt Fence at Limits of Disturbance. (One-Two Weeks)
4. Obtain permission from Inspector before proceeding with cleaning and grading operations. (Three - Four Weeks)
5. Install Earth Dikes, Traps and Basins. (One-Two Weeks)
6. Obtain permission from Inspector before proceeding with cleaning and grading operations. (Three - Four Weeks)
7. Clear and grub site. (One Week)
8. Rough Grade Site. Grade same areas to provide positive drainage to traps and basins. (One Week)
9. Install Storm Drains, excluding pipe from H-30 through H-30. Provide temporary blocking at upstream opening of H-30 and at permanent downstream opening of H-30. Install temporary blocking and temporary pipe diversion to Basin #2. (Three-Four Weeks)
10. Install Inlet and Outlet Structures. (One-Two Weeks)
11. Construct Curb and Gutter and base paving. (One-Two Weeks)
12. Rough Grade any remaining areas. (One-Two Weeks)
13. Stabilize Basin/Stormwater Management Facility No. 1 and install landscaping. (Two Weeks)
14. During grading and other earth removal, the contractor shall inspect and provide necessary maintenance to sediment control measures.
15. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed with:
 - a. 7 calendar days for all perimeter Sediment Control Structures, Dikes, Basins, ditches, perimeter slopes and all slopes greater than 3:1.
 - b. 14 calendar days for all other disturbed areas.
16. Obtain permission from Inspector before proceeding with removal of sediment controls.
17. Once site is completely stabilized, Section 1 and Section 2, flush storm drain system, remove temporary pipe and temporary blocking, earth dikes and temporary sediment basin. (One-Two Weeks)
18. Upon stabilization of all disturbed areas and with approval of sediment control inspector, remove all remaining sediment control devices and install surface paving. (One Week)

SEDIMENT CONTROL NOTES

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspection, License and Permits Sediment Control Division prior to the start of any construction (315-1855).
2. All vegetation and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: (a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes, and all slopes greater than 3:1; (b) 14 days for all other disturbed or graded areas on the project site.
4. All sediment traps/basins shall be fenced and warning signs posted around their perimeter in accordance with Vol. 1, Chapter 7, HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
5. All disturbed areas must be stabilized within the time period specified above by accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, soil, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall 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 one to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

Total Area	3.45 Acres
Area Disturbed	3.13 Acres
Area to be roofed or paved	0.66 Acres
Area to be vegetatively stabilized	2.47 Acres
Total Cost	\$5,424 C.Y.
Offsite waste/borrow area location	
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 back-filled and stabilized within one working day, whichever is shorter.
12. To be determined by contractor, with pre-approval of the Sediment Control Inspector with an approved and active grading permit.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

Wanda Hancock, CHIEF, DIVISION OF LAND DEVELOPMENT, DATE 4/14/00

Samuel Ashby, CHIEF, BUREAU OF HIGHWAYS, DATE 3/29/00

Michael DeWitt, CHIEF, DEVELOPMENT ENGINEERING DIVISION, DATE 4/13/00

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

Chief Simon, DATE 3/29/00
USDA-NATURAL RESOURCES CONSERVATION SERVICE

Chief Ashby, DATE 3/29/00
HOWARD SOIL CONSERVATION DISTRICT

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

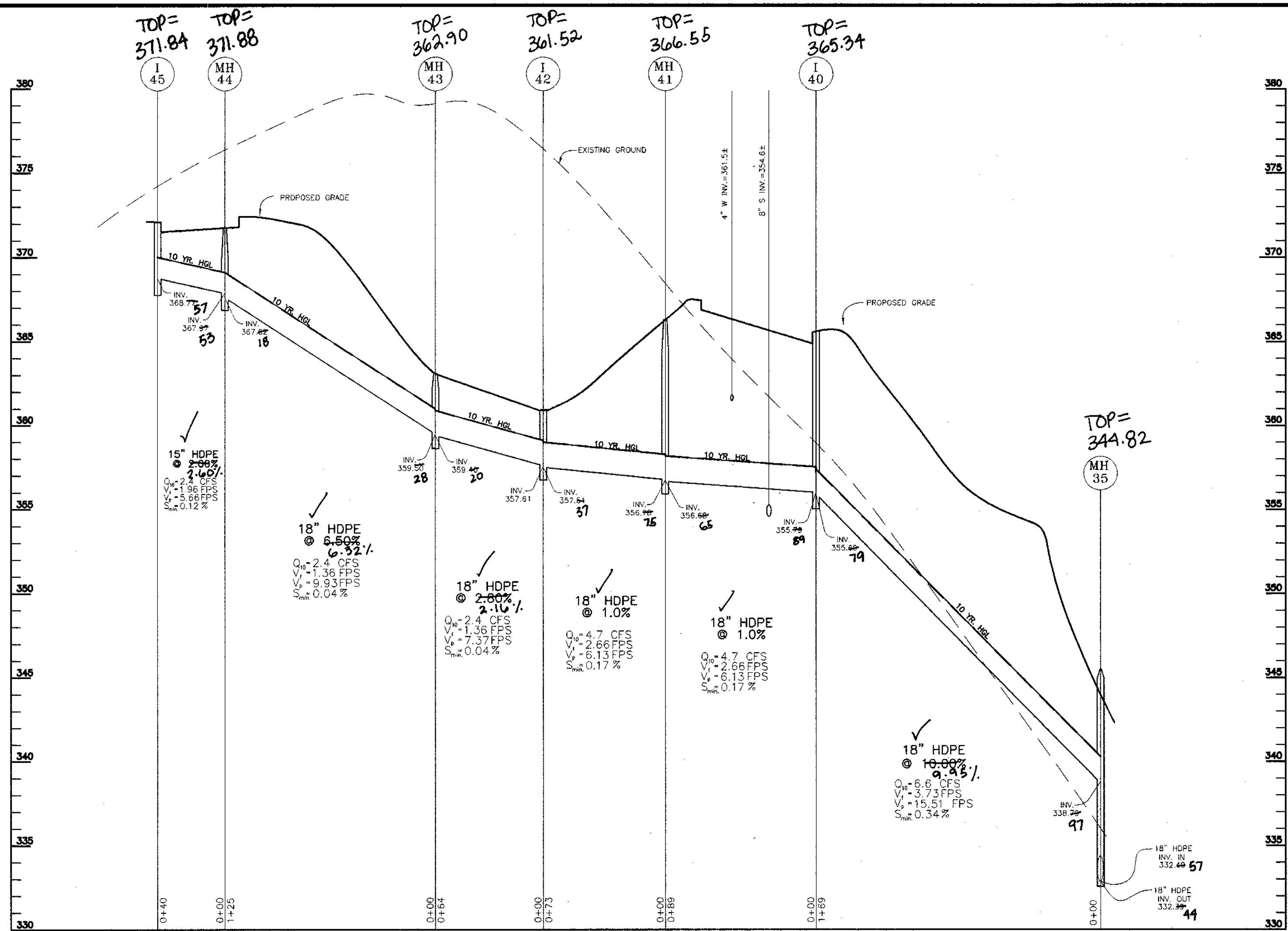
Robert H. Vogel, ENGINEER, DATE 4/29/99
ROBERT H. VOGEL, P.E. NO. 16193

Clayton Kutz, DEVELOPER, DATE 4/23/99

DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: RHV
DATE: Oct. 12, 1999
SCALE: As Shown
W.O. NO.: 99-013

5 SHEET OF 10

AS-BUILT 01-03-05 F-99-76



STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.

STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN.	INV. OUT.	NORTHING	EASTING	REMARKS
MH-35	4' PRECAST STD. MANHOLE *	345.50	338.79 332.48	332.24	N 599654.4005	E 1364900.4543	G 5.12
I-35A	PRECAST TYPE 'D' INLET	345.83	333.19 333.03	333.03	N 599756.2360	E 1364794.6547	SD 4.39 2 SIDES
MH-36	4' PRECAST STD. MANHOLE	349.50	333.39	333.29	N 599784.8630	E 1364786.1520	G 5.12
MH-37	4' PRECAST STD. MANHOLE	345.50	333.25 334.20	334.20	N 599872.7499	E 1364788.7761	G 5.12
I-38	PRECAST TYPE 'D' INLET	339.83	334.07 335.08	334.95	N 599915.4780	E 1364723.6223	SD 4.39 2 SIDES
I-39	PRECAST TYPE 'D' INLET	345.83	-	342.08 341.09	N 599907.5263	E 1364630.2855	SD 4.39 2 SIDES
I-40	PRECAST 'A-10' INLET	365.49	355.79 355.69	355.69	N 599629.1774	E 1364720.4892	SD 4.41
MH-41	4' PRECAST STD. MANHOLE	366.90	356.75 356.65	356.65	N 599647.3467	E 1364629.1016	G 5.12
I-42	YARD INLET	331.00	357.84 357.82	357.82	N 599687.4510	E 1364656.6021	SD 4.14
MH-43	PRECAST SHALLOW MANHOLE	332.50	359.50 359.40	359.40	N 599727.9630	E 1364616.8983	G 5.12
MH-44	PRECAST SHALLOW MANHOLE	371.85	367.97 367.88	367.88	N 599647.9426	E 1364834.7509	G 5.12
I-45	PRECAST 'A-10' INLET	372.12	-	368.22 367.67	N 599720.1930	E 1364860.4674	SD 4.41

TOP ELEVATIONS ARE TO CENTERLINE TOP FACE OF CURB FOR TYPE A INLETS, CENTERLINE TOP OF SLAB FOR TYPE D AND CENTERLINE TOP OF GRATE FOR YARD INLETS. STRUCTURE LOCATION COORDINATES ARE TO CENTER OF STRUCTURE.
* GRANITE BLOCK BOTTOM

SOIL DUST CONTROL

Definition
Controlling dust blowing and movement on construction sites and roads.

Purpose
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage health hazards, and improve traffic safety.

Conditions Where Practice Applies
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

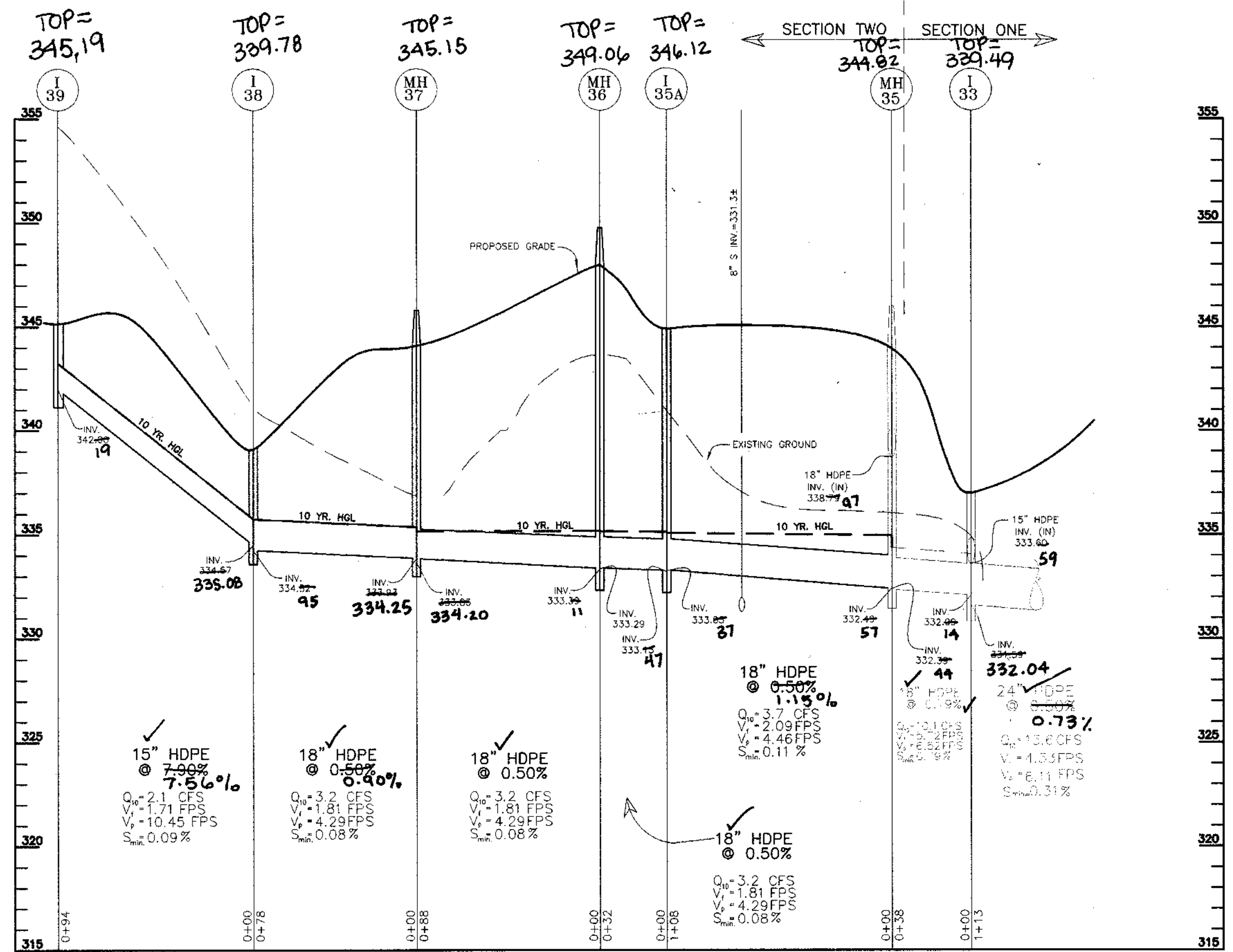
- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' 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 that runoff begins to flow.
- Barriers - Solid board fences, silt 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 rates that will keep surface moist. May need retreatment.

Permanent Methods

- Permanent vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsailing - Covering with less erosive soil materials. See standards for Topsailing.
- Stone - Cover surface with crushed stone or coarse gravel.

References

- Agricultural Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agricultural Information Bulletin 354. How to Control Wind Erosion. USDA-ARS.



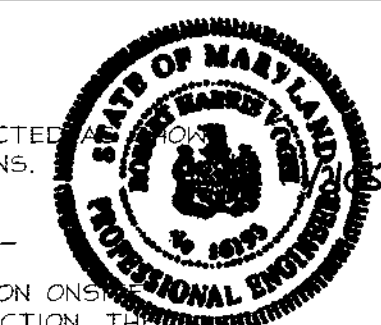
STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.

"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

Robert H. Vogel DATE 12/16/99
ROBERT H. VOGEL, P.E. NO. 16193

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THIS ON-SITE SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.



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

Chaf Simon / 65. 3/24/00
USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Robert H. Vogel 3/24/00
HOWARD SOIL CONSERVATION DISTRICT DATE

ENGINEER'S CERTIFICATE

I HEREBY CERTIFY THAT THIS PLAN FOR 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.

Robert H. Vogel 12/23/99 DATE
SIGNATURE OF ENGINEER ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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.

Charles Skirven 12/23/99 DATE
SIGNATURE OF DEVELOPER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard Skirven 3/29/00
CHIEF, BUREAU OF HIGHWAYS DATE

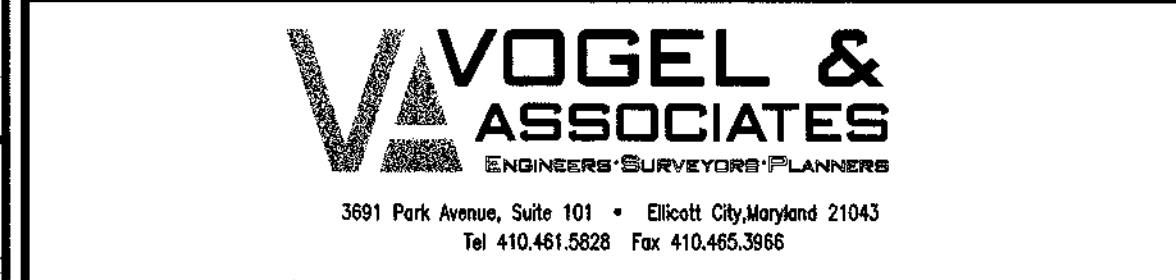
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Condy Hamstra 4/14/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Robert H. Vogel 4/3/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

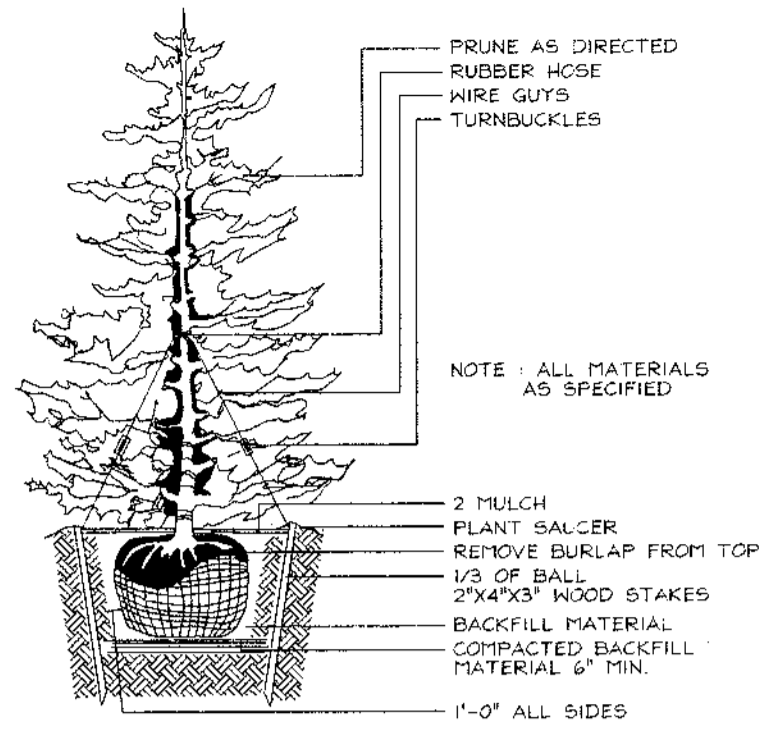
STORM DRAIN PROFILES
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL I
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

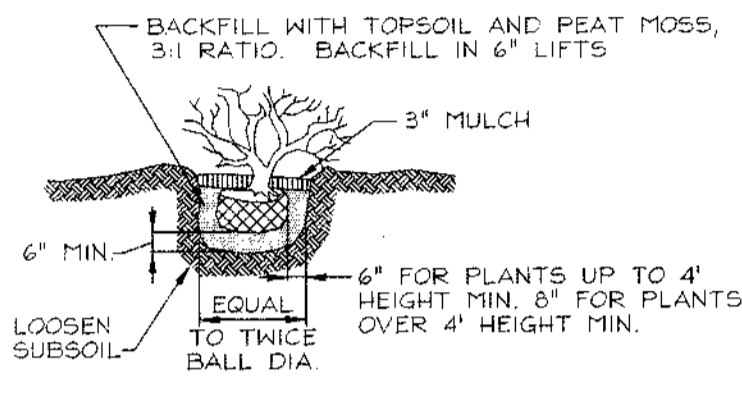


DESIGN BY: G.A.H.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: Oct. 12, 1999
SCALE: AS SHOWN
H.O. NO.: 99-013

6 SHEET OF 10



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

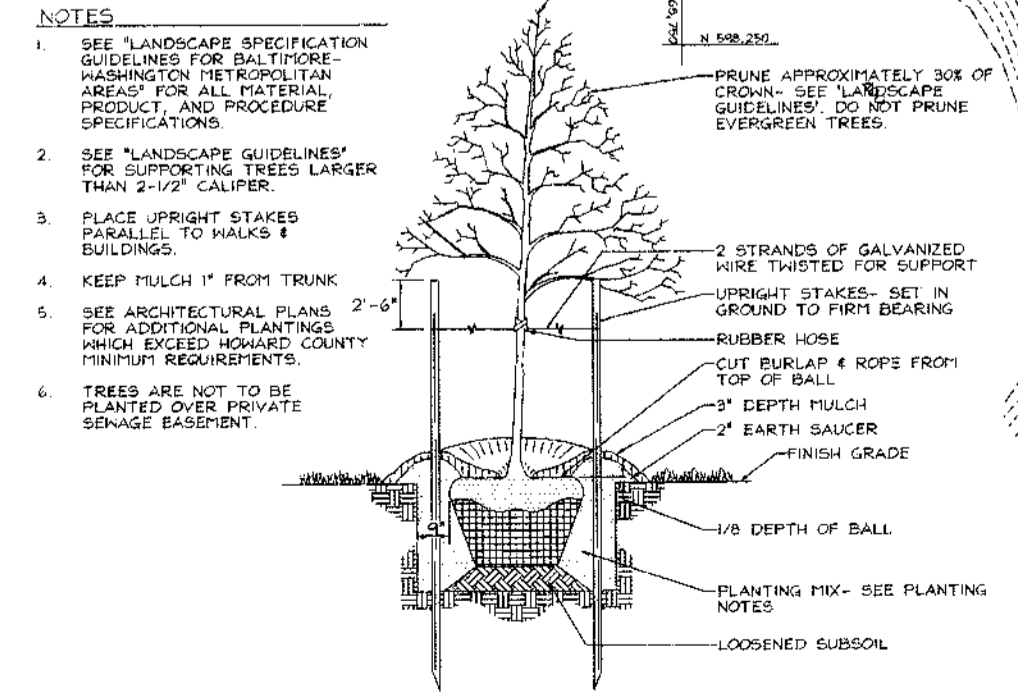
STREET TREE CALCULATIONS			
Street Name	Linear Feet	Required Trees	Provided Trees
Oak Forest Drive	800/40	20	20
Michael's Ridge	647/40	15	15
Total Trees		35	35

LANDSCAPE SCHEDULE			
KEY	QUAN.	BOTANICAL NAME	REMARKS
○	35	Platanus x Acerifolia London Plane	2 1/2"-3" Cal. 40' etc

SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation	1	
Landscape Type	156C	
Linear Feet of Roadway		
Frontage/Perimeter		
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)		Tree 160
Credit for Walk Fence or Berm (Yes, No, Linear Feet Describe below if needed)	No	
Number of Plants Required		160/28
Shade Trees		
Evergreen Trees		
Shrubs		
Number of Plants Provided		28
Shade Trees		
Evergreen Trees		
Other Trees (21 Substitution)		
Shrubs (101 Substitution)		
Describe Plant Substitution Credits Below, if needed		

* Existing Woods to Remain

- GENERAL NOTES**
- Financial Surety for the required 28 perimeter landscape trees has been posted as part of the Developer's Agreement in the amount of \$8,400.
 - This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE

- NOTES**
- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE WASHINGTON METROPOLITAN AREA" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
 - SEE "LANDSCAPE GUIDELINES" FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIPER.
 - PLACE UPRIGHT STAKES PARALLEL TO TRUNK & BUILDINGS.
 - KEEP FLUGH 1" FROM TRUNK.
 - SEE ARCHITECTURAL PLANS 2'-0" FOR ADDITIONAL PLANTINGS WHICH EXCEED SQUARE COUNTY MINIMUM REQUIREMENTS.
 - TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWAGE EASEMENT.

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(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Charles H. Hump 12/23/99 DATE
SIGNATURE OF DEVELOPER

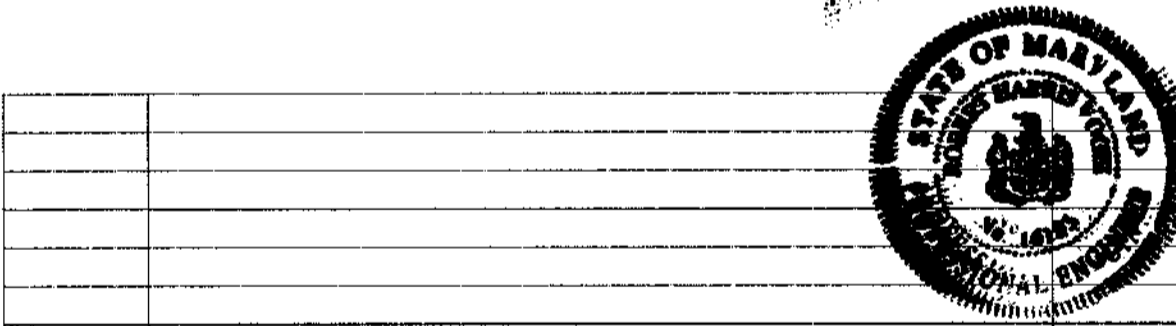
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Louise S. Hill 12/23/99 DATE
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Strout 4/14/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

Robert H. Vogel 4/3/00 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION



NO.	REVISION	DATE
	AS-BUILT CERTIFICATE	
		1/3/05 DATE

LANDSCAPE PLAN
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS

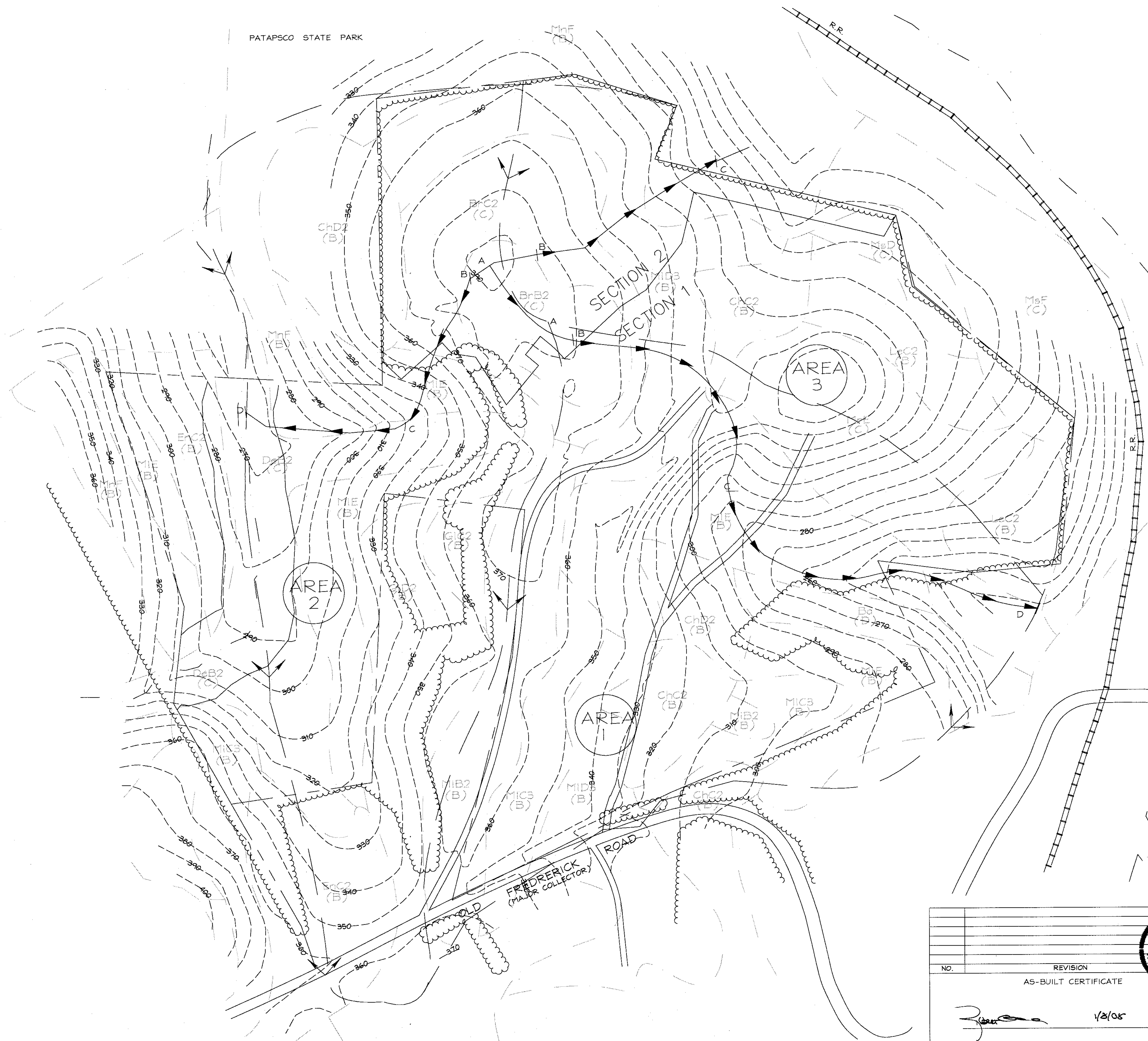
3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: RHV
DATE: Oct. 12, 1999
SCALE: 1"=100'
W.O. NO.: 99-013

7 SHEET OF 10

PATAPSCO STATE PARK

SYMBOL	NAME / DESCRIPTION	SOIL GROUP
Ba	Baile Silt Loam	D
BrB2	Brandywine Loam, 3 to 8 percent slopes, moderately eroded	C
BrC2	Brandywine Loam, 8 to 15 percent slopes, moderately eroded	C
ChC2	Chester Silt Loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester Silt Loam, 15 to 25 percent slopes, moderately eroded	B
DeB2	Delance Silt Loam, 3 to 8 percent slopes, moderately eroded	C
EnC2	Elainboro Loam, 8 to 15 percent slopes, moderately eroded	B
GlC2	Glenela Loam, 8 to 15 percent slopes, moderately eroded	B
GlD2	Glenela Loam, 15 to 25 percent slopes, moderately eroded	B
LsC2	Loans Silt, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor Loam, 3 to 8 percent slopes, moderately eroded	B
MIC3	Manor Loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor Loam, 15 to 25 percent slopes, severely eroded	B
MIE	Manor Loam, 25 to 45 percent slopes	B
MvF	Manor very stony Loam, 25 to 60 percent slopes	B
MvE	Montalto and Relay Soils, 15 to 45 percent slopes	C
MvD	Montalto and Relay very stony Silt Loams, 3 to 25 percent slopes	C
MvF	Montalto and Relay very stony Silt Loams, 25 to 60 percent slopes	C



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
Howard 3/29/05
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hunter 4/14/05
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike 4/3/05
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

STORM WATER MANAGEMENT DRAINAGE AREA MAP EXISTING CONDITIONS HOLLIFIELD ESTATES I SECTION TWO
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3591 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.3828 Fax 410.465.3966

NO.	REVISION	DATE
	AS-BUILT CERTIFICATE	1/2/05

DESIGN BY: GAH
 DRAWN BY: PS/GAH
 CHECKED BY: RHV
 DATE: Oct. 12, 1999
 SCALE: 1"=100'
 W.O. NO.: 99-013

8 SHEET OF 10






DRAINAGE AREA TABULATIONS					
NO.	AREA	"C"	% IMP.	SOIL TYPES	ZONE
5	0.23 AC	.33	38%	B	R-ED
10	1.01 AC	.33	38%	B	R-ED
11	1.03 AC	.33	38%	B	R-ED
14	0.28 AC	.33	38%	B	R-ED
15	0.50 AC	.33	38%	B	R-ED
16	0.12 AC	.33	38%	B	R-ED
17	0.64 AC	.33	38%	B	R-ED
18	0.37 AC	.34	38%	B/C	R-ED
19	0.67 AC	.32	38%	B/C	R-ED
23	0.91 AC	.33	38%	B/C	R-ED
27	1.09 AC	.34	38%	B/C	R-ED
30	0.35 AC	.34	38%	B/C	R-ED
31	0.53 AC	.35	38%	B/C	R-ED
32	0.54 AC	.33	38%	B	R-ED
33	0.66 AC	.33	38%	B	R-ED
34	0.84 AC	.35	38%	B/C	R-ED
35A	0.23 AC	.33	38%	B	R-ED
38	0.45 AC	.34	38%	B/C	R-ED
39	0.80 AC	.35	38%	B/C	R-ED
40	0.75 AC	.36	38%	B/C	R-ED
42	0.74 AC	.36	38%	B/C	R-ED
45	1.00 AC	.36	38%	B/C	R-ED





PATAPSCO RIVER

NORTH 1"=100'

OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Twin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 995-0081

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

 CHIEF, BUREAU OF HIGHWAYS DATE 4/18/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

 CHIEF, DIVISION OF LAND DEVELOPMENT DATE 4/18/00

 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/3/00

	
NO.	REVISION
AS-BUILT CERTIFICATE	
 DATE	
DRAINAGE AREA MAP FOR STORM DRAINAGE HOLLIFIELD ESTATES I SECTION TWO	
TAX MAP #18 2ND ELECTION DISTRICT	PARCEL 1 HOWARD COUNTY, MARYLAND
	
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043 Tel 410.461.5828 Fax 410.465.3986	
	DESIGN BY: GAH DRAWN BY: PS CHECKED BY: RHY DATE: Oct. 12, 1999 SCALE: 1" = 100' W.O. NO.: 99-013
9 SHEET OF 10	

AS-BUILT 01-03-05 F-99-76

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
Ba	Belle Silt Loam	D
BrB2	Brandywine Loam, 3 to 8 percent slopes, moderately eroded	C
BrC2	Brandywine Loam, 8 to 15 percent slopes, moderately eroded	C
ChC2	Chester Silt Loam, 0 to 15 percent slopes, moderately eroded	B
ChD2	Chester Silt Loam, 15 to 25 percent slopes, moderately eroded	B
DeB2	Delaware Silt Loam, 3 to 8 percent slopes, moderately eroded	C
ErC2	Flainburg Loam, 0 to 15 percent slopes, moderately eroded	B
GIC2	Glenside Loam, 0 to 15 percent slopes, moderately eroded	B
GLD2	Glenside Loam, 15 to 25 percent slopes, moderately eroded	B
LeC2	Lodgepole Silt, 8 to 15 percent slopes, moderately eroded	B
MI1B2	Manor Loam, 3 to 8 percent slopes, moderately eroded	B
MI1C3	Manor Loam, 8 to 15 percent slopes, severely eroded	B
MI1D3	Manor Loam, 15 to 25 percent slopes, severely eroded	B
MI1E	Manor Loam, 25 to 45 percent slopes	B
MI1F	Manor very stony Loam, 25 to 60 percent slopes	B
MI1F	Montalto and Relay Soils, 15 to 45 percent slopes	C
MI1D	Montalto and Relay very stony Silt Loams, 3 to 25 percent slopes	C
MI1F	Montalto and Relay very stony Silt Loams, 25 to 60 percent slopes	C



PATAPSCO RIVER

NORTH 1"=100'

OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Twin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 995-0081

STATE OF MARYLAND DEPARTMENT OF TRANSPORTATION	
NO.	REVISION
AS-BUILT CERTIFICATE	

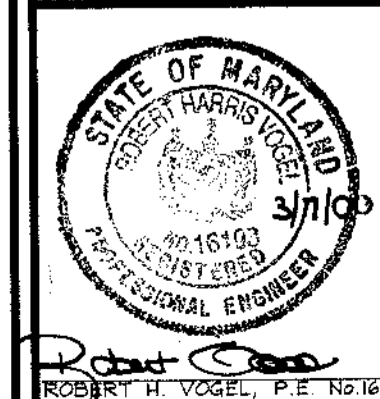
[Signature] 1/3/00
 DATE

**DRAINAGE AREA MAP
 STORM WATER MANAGEMENT
 HOLLIFIELD ESTATES I
 SECTION TWO**
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS SURVEYORS PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3966

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
[Signature] 3/29/00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 4/14/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
[Signature] 4/3/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE



DESIGN BY: GAH
 DRAWN BY: PS
 CHECKED BY: RHV
 DATE: Oct. 12, 1999
 SCALE: 1"=100'
 W.O. NO.: 99-013

10 SHEET OF 10

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
Ba	Baile Silt Loam	D
BrB2	Brandywine Loam, 3 to 8 percent slopes, moderately eroded	C
BrC2	Brandywine Loam, 8 to 15 percent slopes, moderately eroded	C
ChC2	Chester Silt Loam, 8 to 15 percent slopes, moderately eroded	B
ChD2	Chester Silt Loam, 15 to 25 percent slopes, moderately eroded	B
DeB2	Delancey Silt Loam, 3 to 8 percent slopes, moderately eroded	C
EnC2	Elainboro Loam, 8 to 15 percent slopes, moderately eroded	B
GlC2	Gleneta Loam, 8 to 15 percent slopes, moderately eroded	B
GlD2	Gleneta Loam, 15 to 25 percent slopes, moderately eroded	B
Lec2	Lagone Silt, 8 to 15 percent slopes, moderately eroded	B
MIB2	Manor Loam, 3 to 8 percent slopes, moderately eroded	B
MIC3	Manor Loam, 8 to 15 percent slopes, severely eroded	B
MID3	Manor Loam, 15 to 25 percent slopes, severely eroded	B
MIE	Manor Loam, 25 to 45 percent slopes	B
MIF	Manor very stony Loam, 25 to 45 percent slopes	B
MIF	Mantolito and Relay Silt, 15 to 45 percent slopes	C
MfD	Mantolito and Relay very stony Silt Loams, 3 to 25 percent slopes	C
MfF	Mantolito and Relay very stony Silt Loams, 25 to 60 percent slopes	C



PATAPSCO RIVER

NORTH: T=100'



Robert H. Vogel
for Revision 4

OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Turn Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 995-0081

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard Skirven 4/2/00
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cynthia Denton 4/14/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Robert H. Vogel 4/2/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Removed Ex. 15" HDPE 9 Str. T-30 between T-38 & T-39 4-16-07		
NO.	REVISION	

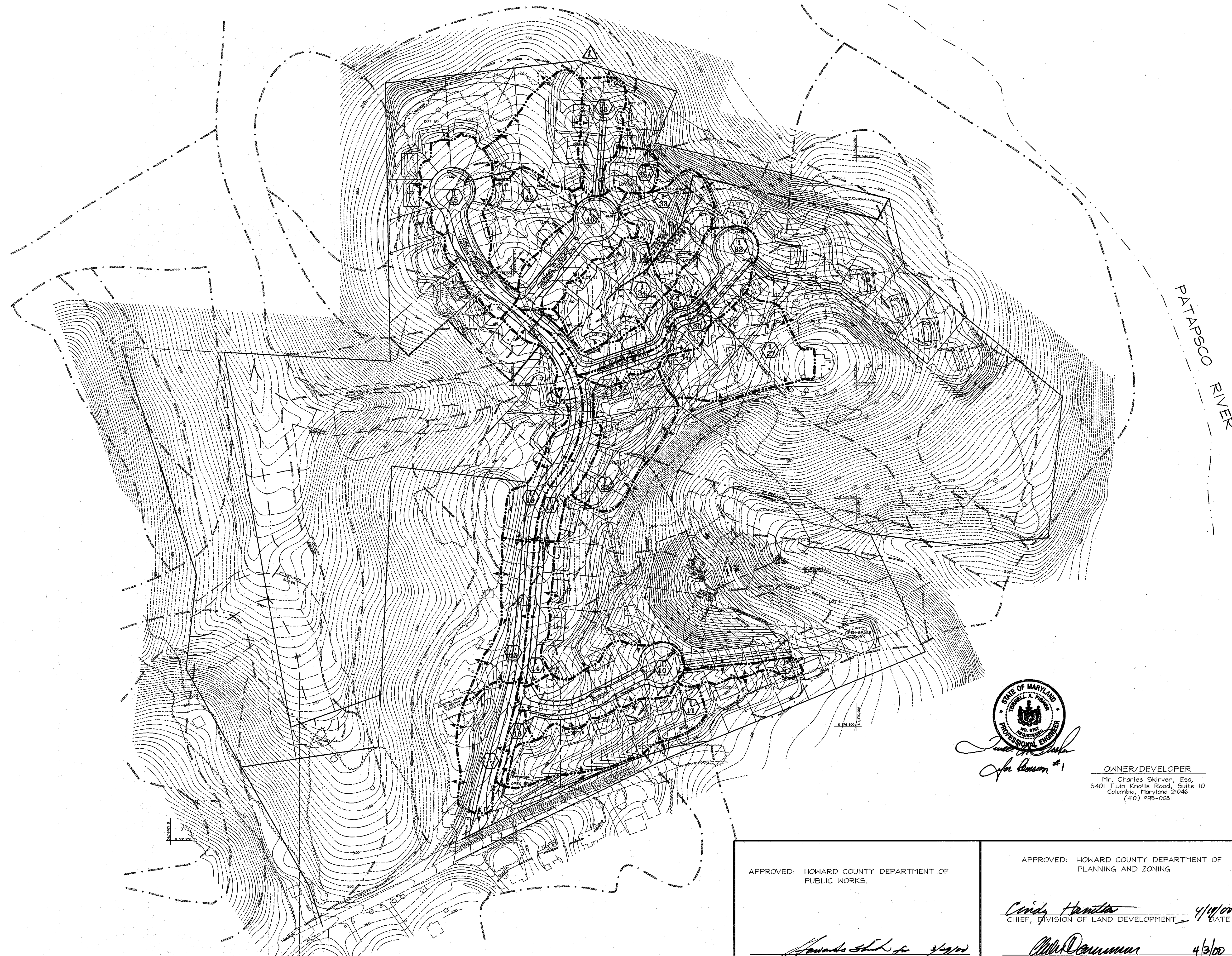
AS-BUILT CERTIFICATE
Robert H. Vogel 1/3/02
DATE

DRAINAGE AREA MAP
STORM WATER MANAGEMENT
HOLLIFIELD ESTATES I
SECTION TWO
TAX MAP #18 PARCEL 1
2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS
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Tel 410.461.5828 Fax 410.465.3966


	DESIGN BY: GAH	10 SHEET OF 10
	DRAWN BY: PS	
	CHECKED BY: RHV	
	DATE: Oct. 12, 1999	
	SCALE: 1" = 100'	
W.O. NO.: 99-013		

DRAINAGE AREA TABULATIONS					
NO.	AREA	"C"	% IMP.	SOIL TYPES	ZONE
5	0.23 AC	.33	38%	B	R-ED
10	1.01 AC	.33	38%	B	R-ED
11	1.03 AC	.33	38%	B	R-ED
14	0.28 AC	.33	38%	B	R-ED
15	0.50 AC	.33	38%	B	R-ED
16	0.12 AC	.33	38%	B	R-ED
17	0.64 AC	.33	38%	B	R-ED
18	0.37 AC	.34	38%	B/C	R-ED
19	0.67 AC	.32	38%	B/C	R-ED
23	0.91 AC	.33	38%	B/C	R-ED
27	1.09 AC	.34	38%	B/C	R-ED
30	0.35 AC	.34	38%	B/C	R-ED
31	0.53 AC	.35	38%	B/C	R-ED
32	0.54 AC	.33	38%	B	R-ED
33	0.66 AC	.33	38%	B	R-ED
34	0.84 AC	.35	38%	B/C	R-ED
35A	0.23 AC	.33	38%	B	R-ED
38	1.25 AC	.34	38%	B/C	R-ED
40	0.75 AC	.36	38%	B/C	R-ED
42	0.74 AC	.36	38%	B/C	R-ED
45	1.00 AC	.36	38%	B/C	R-ED



PATAPSCO RIVER

NORTH: 1"=100'


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 (410) 996-0081

OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Twin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 996-0081

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Howard S. H. Jr. 3/29/07
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Hamilton 4/19/07
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Mike Demunier 4/13/07
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE


Removed Ex. 15" H.D.P.E. 4" Str. I-30
 between I-384 I-30
 REVISION 4-16-07

AS-BUILT CERTIFICATE
 DATE

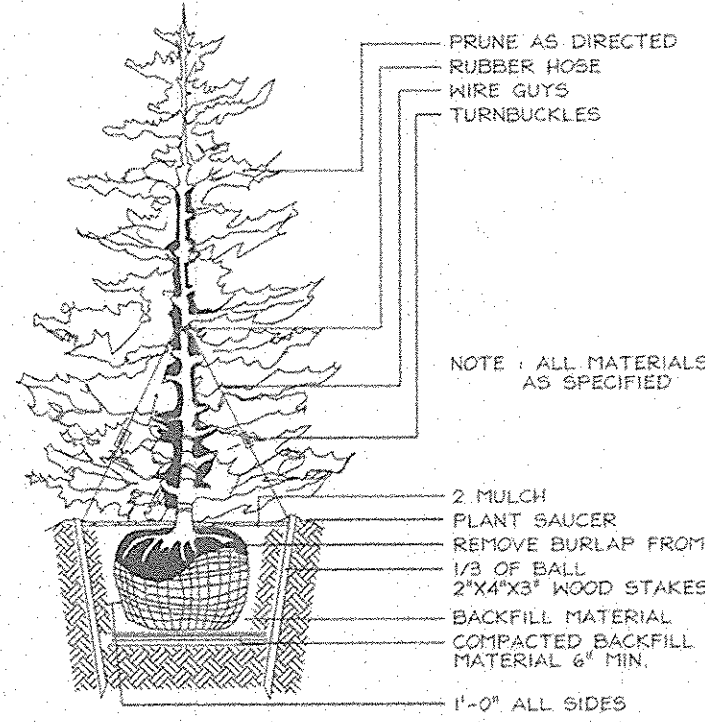
DRAINAGE AREA MAP FOR STORM DRAINAGE HOLLIFIELD ESTATES I SECTION TWO
 TAX MAP #18 PARCEL 1
 2ND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
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 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.463.3956

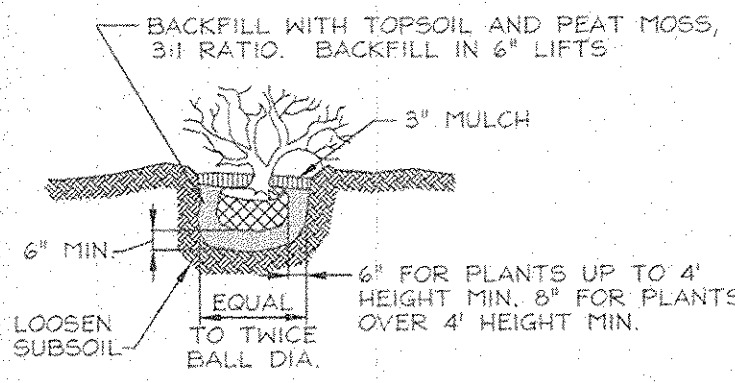
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 W.O. NO.: 99-013


 ROBERT H. VOGEL, P.E. No. 16193

9 SHEET OF 10



TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE

STREET TREE CALCULATIONS

Street Name	Linear Feet	Required Trees	Provided Trees
Oak Forest Drive	800'/40	20	20
Michael's Ridge	597'/40	15	15
Total Trees		35	35

LANDSCAPE SCHEDULE

KEY	QUAN.	BOTANICAL NAME	SIZE	REMARKS
1	35	Platanus x Acerifolia London Plane	2 1/2"-3" Cal.	40' o/c

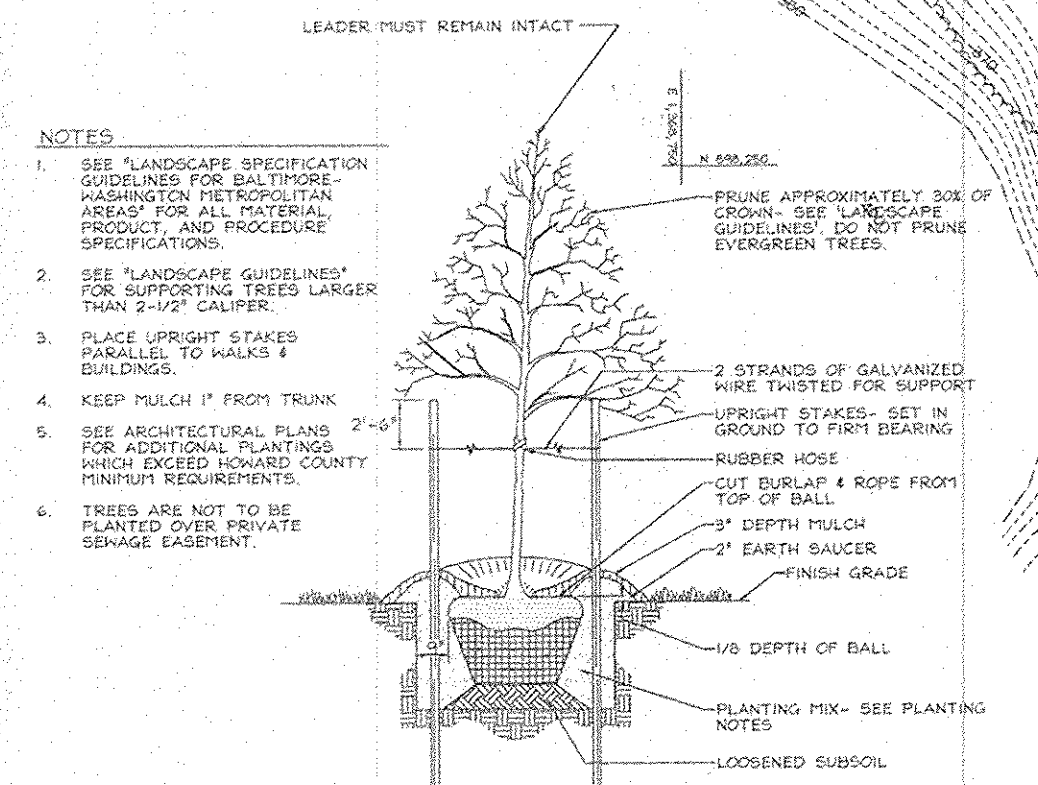
SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation		
Linear Feet of Roadway	1850	
Frontage/Perimeter		
Credit for existing vegetation (Yes, No, Linear Feet Describe below if needed)	Yes N/A	
Credit for walls, fence or berm (Yes, No, Linear Feet Describe below if needed)	No	
Number of Plants Required		
Shade Trees	140 2B	
Evergreen Trees		
Shrubs		
Number of Plants Provided		
Shade Trees	20	
Evergreen Trees		
Other Trees (2:1 Substitution)		
Shrubs (10:1 Substitution)		
Describe Plant Substitution Credits Below if needed		
* Existing Woods to Remain		

GENERAL NOTES

- Financial Surety for the required 28 perimeter landscape trees has been posted as part of the Developer's Agreement in the amount of \$8,400.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE



TREE PLANTING AND STAKING
DECIDUOUS TREES UP TO 2-1/2" CALIPER
NOT TO SCALE

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(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

Charles Henry 12/23/99 DATE
SIGNATURE OF DEVELOPER

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Laurie Shindler 3/29/01 DATE
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cindy Stratta 4/14/00 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT

John Dammon 4/1/00 DATE
CHIEF, DEVELOPMENT ENGINEERING DIVISION

Removed Ex. 15 H.D.P.E. & Str. I-39 between I-38 & I-39 4-18-07

NO.	REVISION	DATE
	AS-BUILT CERTIFICATE	

[Signature] 1/3/06 DATE

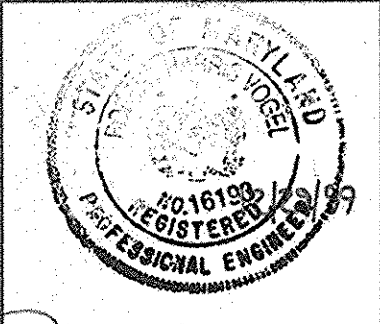


LANDSCAPE PLAN
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND



3591 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3865

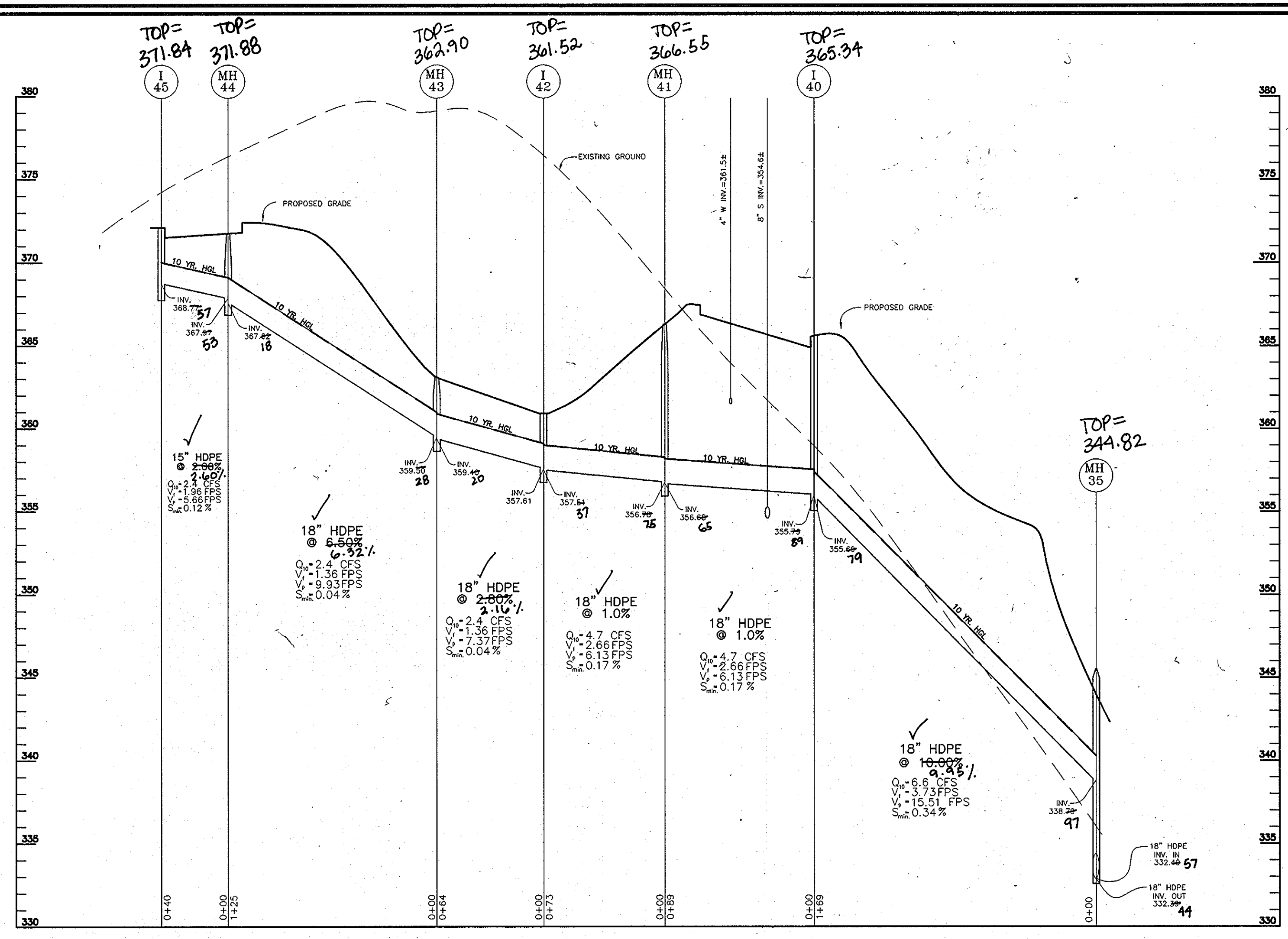


DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: RHV
DATE: Oct. 12, 1999
SCALE: 1"=100'
W.O. NO.: 99-018

7 SHEET OF 10

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No.	REVISION	DATE
1.	Removed Ex. 15" HDPE & Str. I-39 between I-38 & I-39	4-18-07



STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.

STRUCTURE SCHEDULE

NO.	TYPE	TOP EL.	INV. IN.	INV. OUT.	NORTHING	EASTING	REMARKS
MH-36	4' PRECAST STD. MANHOLE	345.50	338.79 ⁹⁷ 332.48	332.24 ⁴⁴	N 599604.4006	E 1367800.4643	G 5.12
I-35A	PRECAST TYPE 'D' INLET	345.83	333.10 ⁹⁹	333.03 ⁸¹	N 599756.2360	E 1367799.6647	SD 4.39 2 SIDES
MH-38	4' PRECAST STD. MANHOLE	349.50	333.39	333.29	N 599754.6630	E 1367766.1520	G 5.12
MH-37	4' PRECAST STD. MANHOLE	345.50	333.25 ⁹⁵ 334.25	333.20	N 599872.7491	E 1367780.7761	G 5.12
I-38	PRECAST TYPE 'D' INLET	339.83	334.27 ⁹⁷ 335.08	334.25 ⁴⁵	N 599915.4780	E 1367723.6223	SD 4.39 2 SIDES
I-40	PRECAST 'A-10' INLET	365.49	355.78 ⁸⁹	355.68 ⁷⁹	N 599629.1714	E 1367720.4332	SD 4.41
MH-41	4' PRECAST STD. MANHOLE	366.90	356.75 ⁷⁵	356.65 ⁶⁵	N 599647.3407	E 1367629.1016	G 5.12
I-42	YARD INLET	331.00	357.61 ⁸²	357.31 ³⁷	N 599657.4510	E 1367566.6821	SD 4.14
MH-43	PRECAST SHALLOW MANHOLE	332.50	359.59 ²⁸	359.40 ²⁰	N 599727.9630	E 1367516.8983	G 5.12
MH-44	PRECAST SHALLOW MANHOLE	371.85	367.97 ⁵³	367.82 ⁷⁸	N 599697.9426	E 1367934.7594	G 5.12
I-45	PRECAST 'A-10' INLET	372.12	-	368.77 ⁵⁷	N 599720.1938	E 1367960.4674	SD 4.41

TOP ELEVATIONS ARE TO CENTERLINE TOP FACE OF CURB FOR TYPE A INLETS, CENTERLINE TOP OF SLAB FOR TYPE D AND CENTERLINE TOP OF GRATE FOR YARD INLETS. STRUCTURE LOCATION COORDINATES ARE TO CENTER OF STRUCTURE.
* GRANITE BLOCK BOTTOM

30.0 DUST CONTROL

Definition
Controlling dust blowing and movement on construction sites and roads.

Purpose
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage health hazards, and improve traffic safety.

Conditions Where Practice Applies
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

Specifications

Temporary Methods

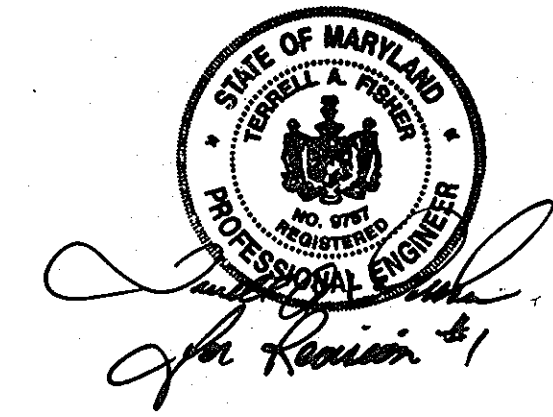
- Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
- Vegetative Cover - See standards for temporary vegetative cover.
- Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Begin plowing on windward side of site. Chisel-type plows spaced about 12' 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 that runoff begins to flow.
- Barriers - Solid board fences, silt 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 rates that will keep surface moist. May need retreatment.

Permanent Methods

- Permanent vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
- Topsailing - Covering with less erosive soil materials. See standards for Topsailing.
- Stone - Cover surface with crushed stone or coarse gravel.

References

- Agricultural Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
- Agricultural Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.



"AS-BUILT" CERTIFICATION

I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL, P.E. NO. 16193 DATE 1/31/05

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THIS ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.



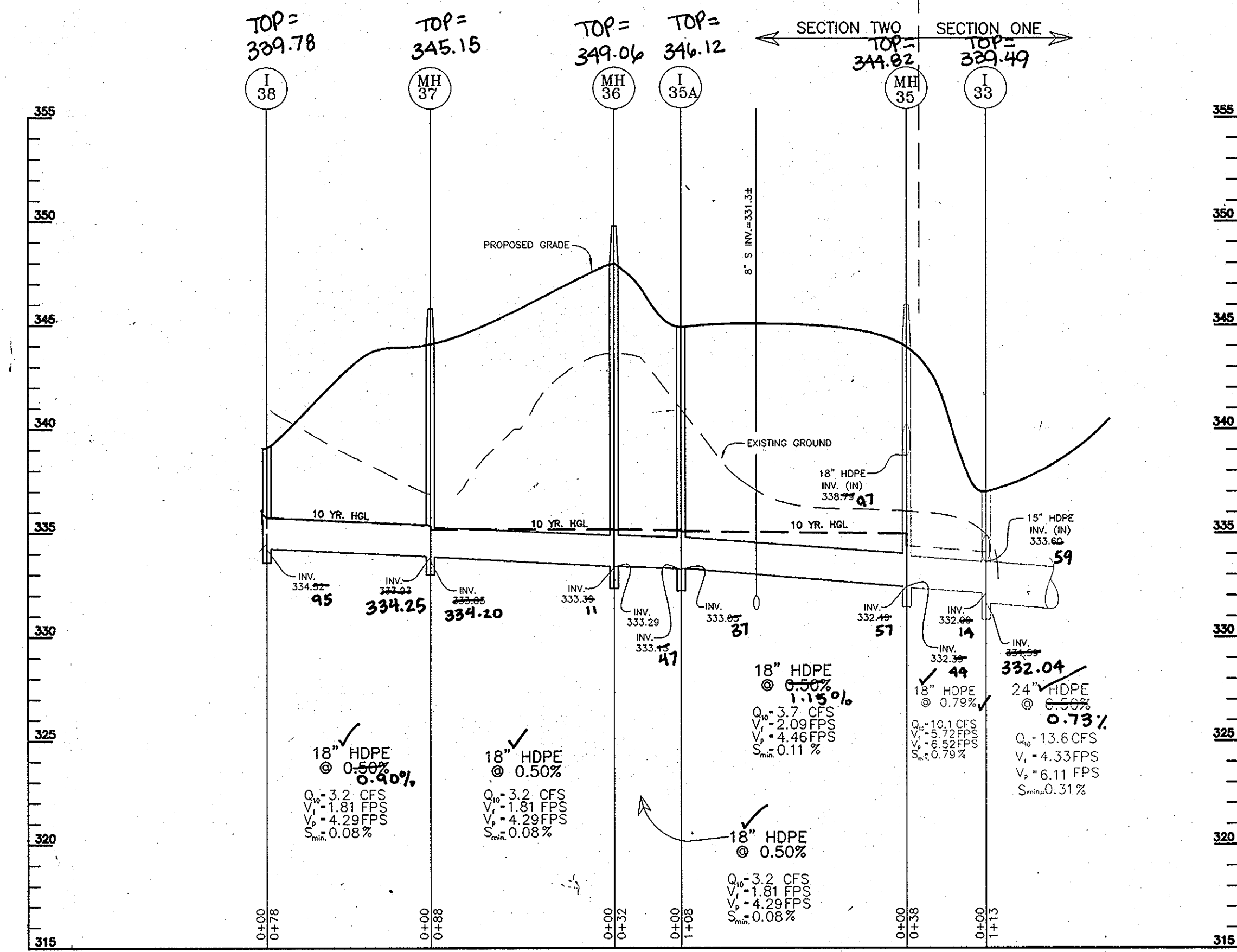
THESE PLANS HAVE BEEN REVIEWED FOR HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Cheryl Simon / as. 3/24/00 DATE

USDA-NATURAL RESOURCES CONSERVATION SERVICE

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

3/24/00 DATE



STORM DRAIN PROFILES
SCALE 1" = 50' HOR.
1" = 5' VERT.

OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Twin Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 995-0081

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR 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."

ROBERT H. VOGEL DATE 12/29/99

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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."

CHARL SKIRVEN DATE 12/23/99

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS DATE 3/29/00

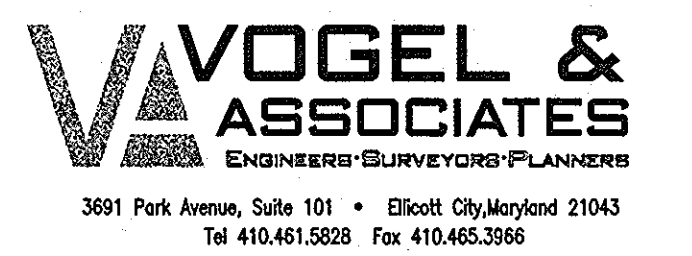
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 4/14/00

CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE 4/3/00

STORM DRAIN PROFILES
HOLLIFIELD ESTATES I
SECTION TWO

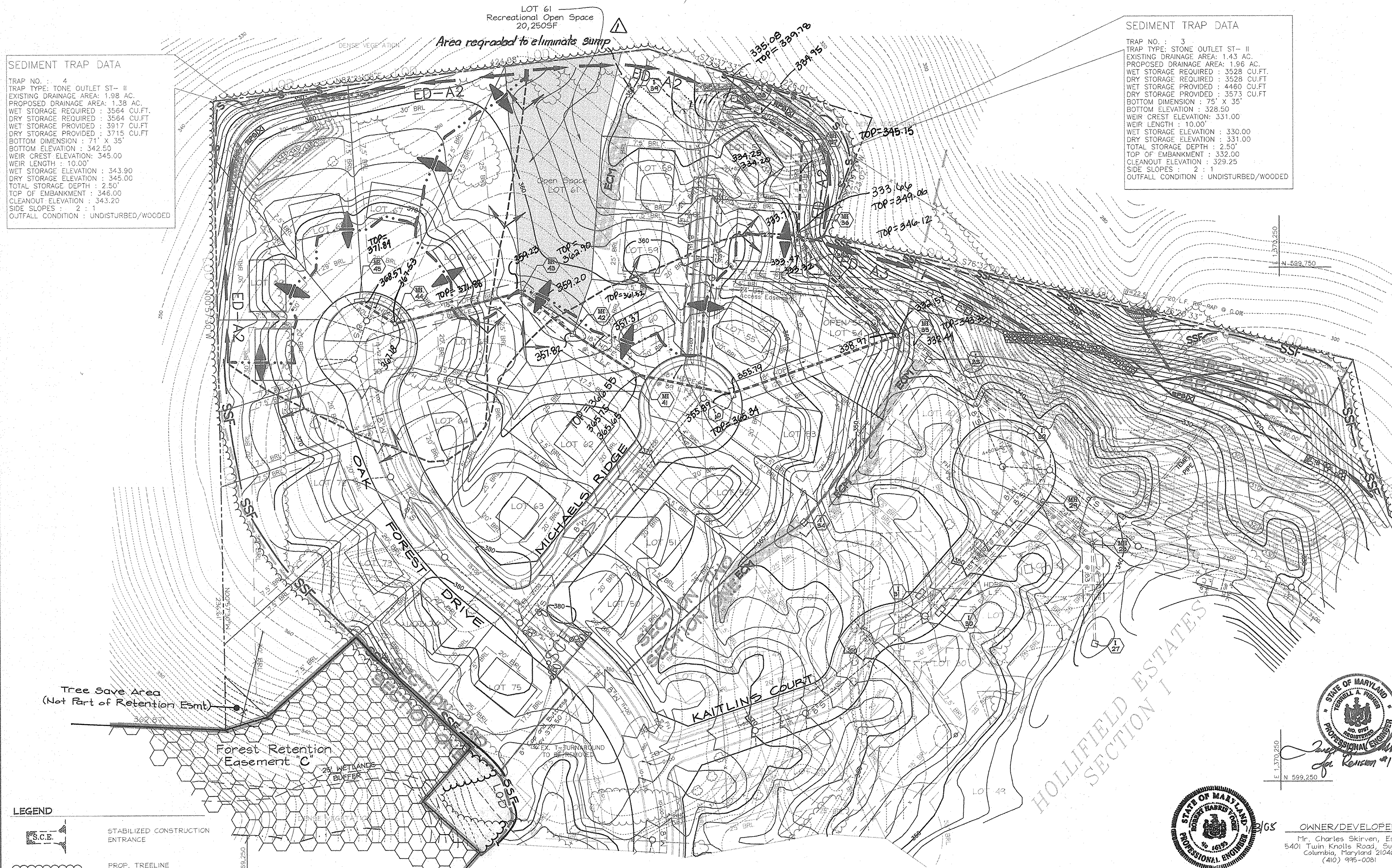
TAX MAP #18 PARCEL I
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND



3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5823 Fax 410.465.3566

DESIGN BY: G.A.H.
DRAWN BY: J.E.R.
CHECKED BY: R.H.V.
DATE: Oct. 12, 1999
SCALE: AS SHOWN
W.O. NO.: 99-013

6 SHEET OF 10



SEDIMENT TRAP DATA

TRAP NO. : 4
 TRAP TYPE: TONE OUTLET ST- II
 EXISTING DRAINAGE AREA: 1.98 AC.
 PROPOSED DRAINAGE AREA: 1.98 AC.
 WET STORAGE REQUIRED : 3564 CU.FT.
 DRY STORAGE REQUIRED : 3564 CU.FT.
 WET STORAGE PROVIDED : 3917 CU.FT.
 DRY STORAGE PROVIDED : 3715 CU.FT.
 BOTTOM DIMENSION : 7'1" X 35'
 BOTTOM ELEVATION : 342.50
 WEIR CREST ELEVATION: 345.00
 WEIR LENGTH : 10.00'
 WET STORAGE ELEVATION : 343.90
 DRY STORAGE ELEVATION : 345.00
 TOTAL STORAGE DEPTH : 2.50'
 TOP OF EMBANKMENT : 346.00
 CLEANOUT ELEVATION : 343.20
 SIDE SLOPES : 2 : 1
 OUTFALL CONDITION : UNDISTURBED/WOODDED

SEDIMENT TRAP DATA

TRAP NO. : 3
 TRAP TYPE: STONE OUTLET ST- II
 EXISTING DRAINAGE AREA: 1.43 AC.
 PROPOSED DRAINAGE AREA: 1.98 AC.
 WET STORAGE REQUIRED : 3528 CU.FT.
 DRY STORAGE REQUIRED : 3528 CU.FT.
 WET STORAGE PROVIDED : 4460 CU.FT.
 DRY STORAGE PROVIDED : 3573 CU.FT.
 BOTTOM DIMENSION : 75' X 35'
 BOTTOM ELEVATION : 328.50
 WEIR CREST ELEVATION: 331.00
 WEIR LENGTH : 10.00'
 WET STORAGE ELEVATION : 330.00
 DRY STORAGE ELEVATION : 331.00
 TOTAL STORAGE DEPTH : 2.50'
 TOP OF EMBANKMENT : 332.00
 CLEANOUT ELEVATION : 329.25
 SIDE SLOPES : 2 : 1
 OUTFALL CONDITION : UNDISTURBED/WOODDED

TEMPORARY SEDIMENT BASIN DESIGN DATA SHEET

Computed by: G.A.H. Date: 4/20/99 Rev: 12/21/99 Checked by: _____ Date: _____
 Project name: HOLLIFIELD ESTATES I Basin #: 2
 Location: HOWARD COUNTY, MARYLAND

Total area draining to basin: 8.87 acres (ac)

Basin Volume Design

Note: 1. also see Surface Area Design #30, this form.

- Min. required vol. = 3600 cu.ft./ac x 8.87 ac. drainage = 32,232 cu.ft.
- Actual Volume of basin = 52,010 cu.ft.
- Excavate 28,000 cu.ft. (8,000 cu.yd.) to obtain required capacity.
- Vol. of dewatering elev. = 1800 cu.ft./sq x 8.87 ac. = 16,146 cu.ft.
- Vol. of basin at cleanout = 900 cu.ft./ac x 8.87 ac. = 8,073 cu.ft.
- Elevation corresponding to min. required volume of basin (riser crest elevation) 284.80 ft.
- Permanent pool elevation = 281.55 ft.
- Distance from riser crest elevation to permanent pool elevation 2.95 ft.
- Basin cleanout elevation 280.50 ft.
- Distance from riser crest elevation to cleanout elevation 4.10 ft.

Sillway Design

- $Q_p = 41.28$ cfs (peak discharge from 10-yr. 24-hr storm event, attach computations)

Principal Spillway (Gate) (See Detail 11)

- Design Principal Spillway (barrel) discharge, Design $Q_p = 41.28$ cfs (min. 10% of 10-yr peak or 8" pipe)
- $H = 6.05$ ft. Barrel length = 50.0 ft.
- Barrel Diam. = 30 in. Note Q_p must equal or exceed Design Q_p .
- $Q_{10} = 0$ (from Table 13 or 14) 46.25 x (length correction factor) 1.09 = 50.41 cfs.
- Riser Diameter 62 in.; Riser Height 5.2 ft.; Riser Head (h) = 1.02 ft.
- Trash Rack Diam. 80 in.; Trash Rack Height 12 in.

Emergency Spillway (Gate) (N/A)

- Emergency spillway cap. $Q_{10} = Q_{10} - Q_p = 0$ cfs.
- Width ft. hp _____ ft.
- Entrance channel slope _____ %.
- Exit channel slope _____ %.

Anti-Seep Cover Design (for each Barrel)

- $y = 8.29$; $z = 2.1$; pipe slope = 2.0 %; $L_s = 41.02$ ft.
- Use #1 collars, 5.5 ft. x 10 in. square; projection = 3.2 ft.

Design Elevations

- Riser Crest = 285.20 ft. 24. Design High Water = 288.28 ft.
- Emergency Spillway Crest = 279 ft. 25. Min. settled top of dam = 282.50 ft.
- Permanent pool = 281.55 ft. 26. Bottom of Basin = 280.00 ft.
- Draw-down orifice invert = 281.00 ft.

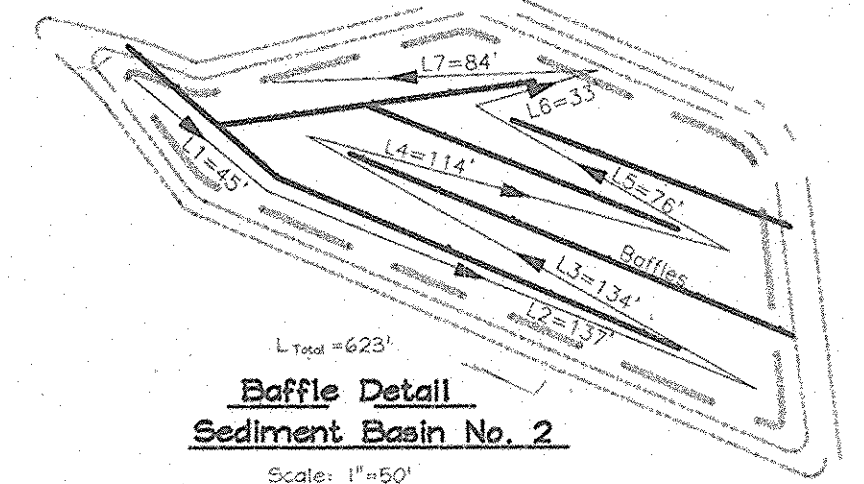
Surface Area Design

- Min. basin surface area; $S_A \geq 0.0035 \times Q_p = 0.0035 \times 46.53$ cfs ≤ 0.16 ac.

Draw-down Device

- Draw-down device orifice diameter = 4 in. (From Table 11)
- $A_p =$ Total area of perforations $\geq 4A_p$.
- $A_p =$ (# of perforations/foot)(perforation area ft²)(perforated section length ft)
- $A_p =$ (12 perforations/foot)(0.0055 sq. ft.)(6 ft.)
- $A_p = 0.38$ sq. ft.
- A_p = Internal orifice area (from Table 11 or computed) = 0.35 sq. ft.

C - 10 - 10 & 11



STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 J. R. KENNEDY, P.E.
 License No. 10119

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 ROBERT H. VOGEL, P.E.
 License No. 16193

OWNER/DEVELOPER
 Mr. Charles Skirven, Esq.
 5401 Twin Knolls Road, Suite 10
 Columbia, Maryland 21046
 (410) 995-0081

"AS-BUILT" CERTIFICATION
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS APPROVED PLANS AND SPECIFICATIONS.

ROBERT H. VOGEL, P.E. No. 16193 DATE 4/30/00

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ONSITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ONSITE SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

LEGEND

- S.C.E. STABILIZED CONSTRUCTION ENTRANCE
- PROP. TREELINE
- BASIN / TRAP CONTOURS
- PROPOSED GRADE
- S-S-S SILT FENCE
- SSP SUPER SILT FENCE
- EARTH DIKE
- ECM EROSION CONTROL MATTING
- LOD LIMIT OF DISTURBANCE
- EX. DRAINAGE DIVIDE TO TRAPS
- PROP. DRAINAGE DIVIDE TO TRAPS

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

Cheryl Spitzer / Esq. 3/24/00
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Robert H. Vogel 3/24/00
 HOWARD SOIL CONSERVATION DISTRICT DATE

ENGINEERS CERTIFICATE

"I HEREBY 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."

Robert H. Vogel 12/29/99
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, 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 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."

Charles Skirven 12/23/99
 SIGNATURE OF DEVELOPER DATE
 CHARLES SKIRVEN

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Lawrence Stahl Jr. 3/29/00
 CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Carole Hunter 4/14/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 4/30/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

NO.	REVISION	DATE
1	Removed Ex. 15" H.D.P.E. & Str. I-39 between I-39 & I-39	4-16-07

GRADING, SEDIMENT AND EROSION CONTROL PLAN
HOLLIFIELD ESTATES I
 SECTION TWO

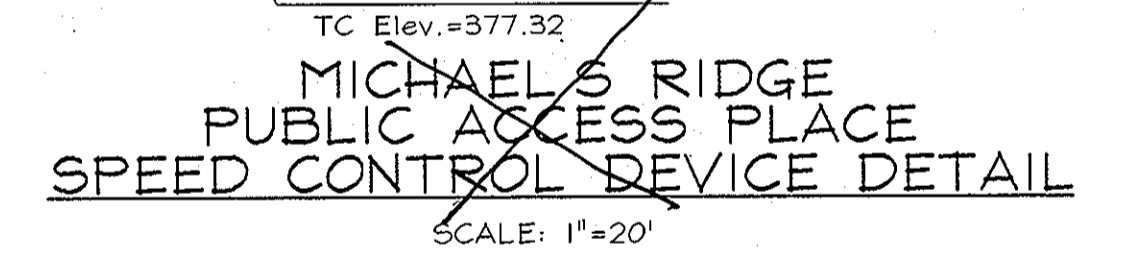
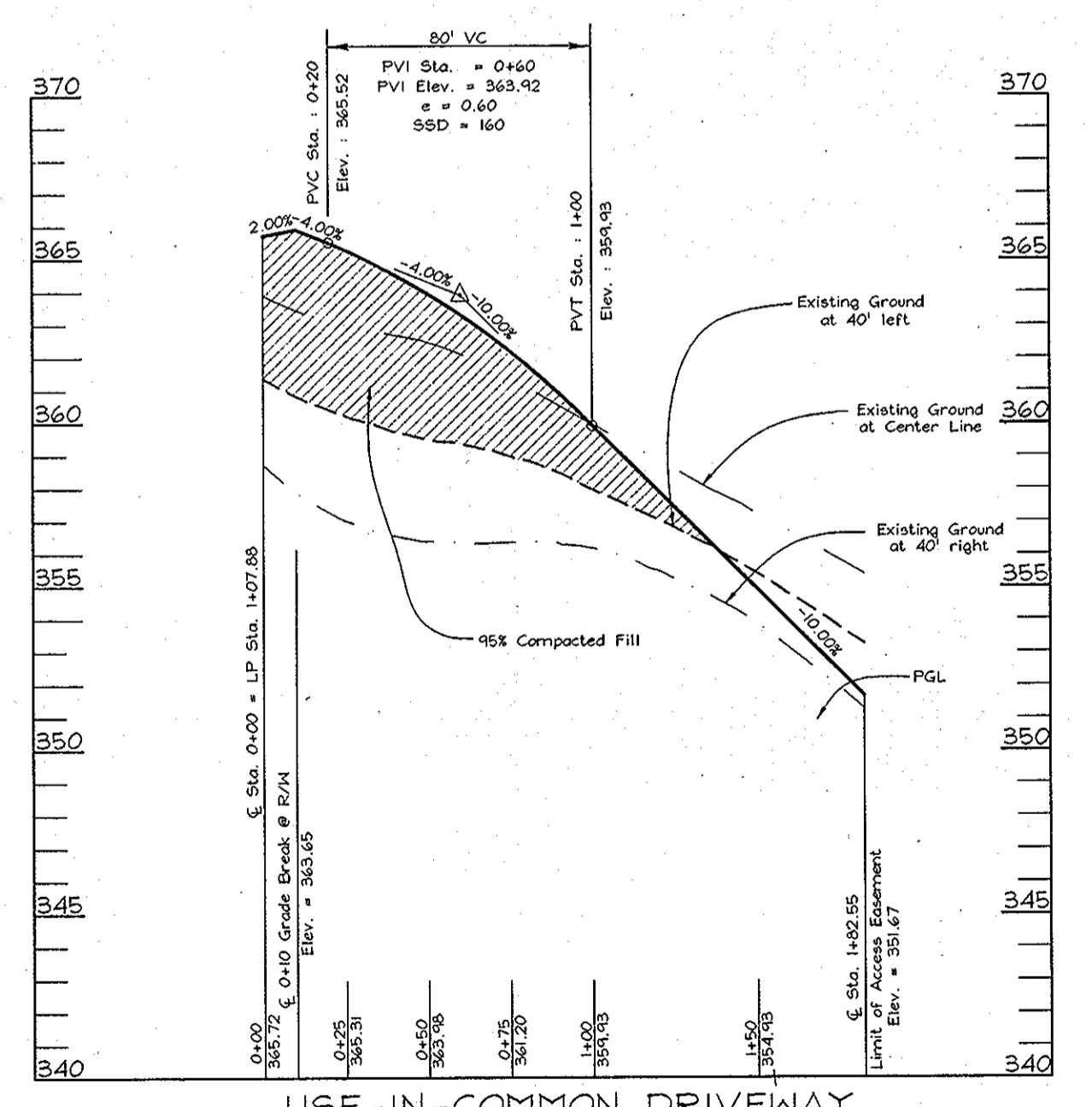
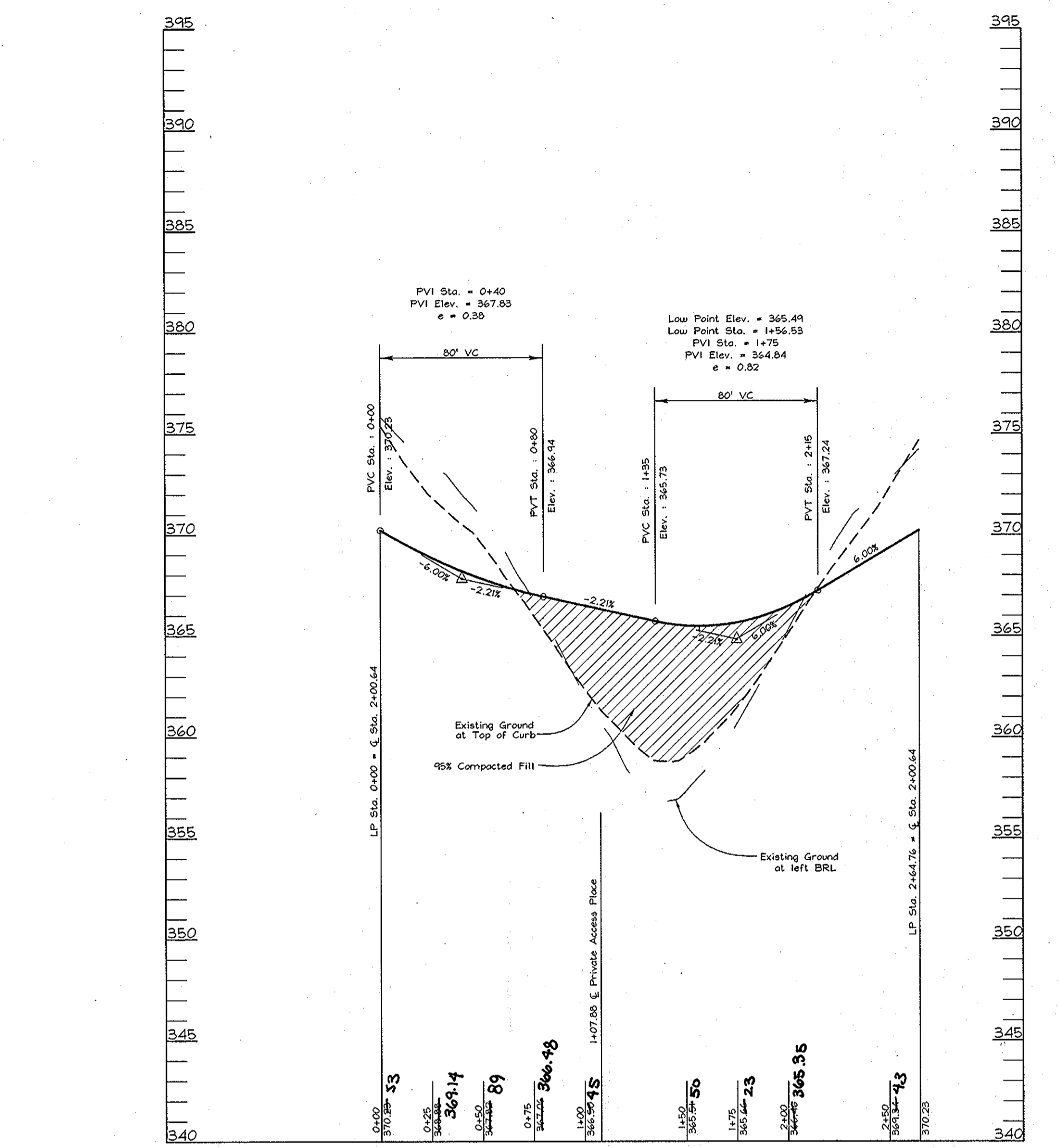
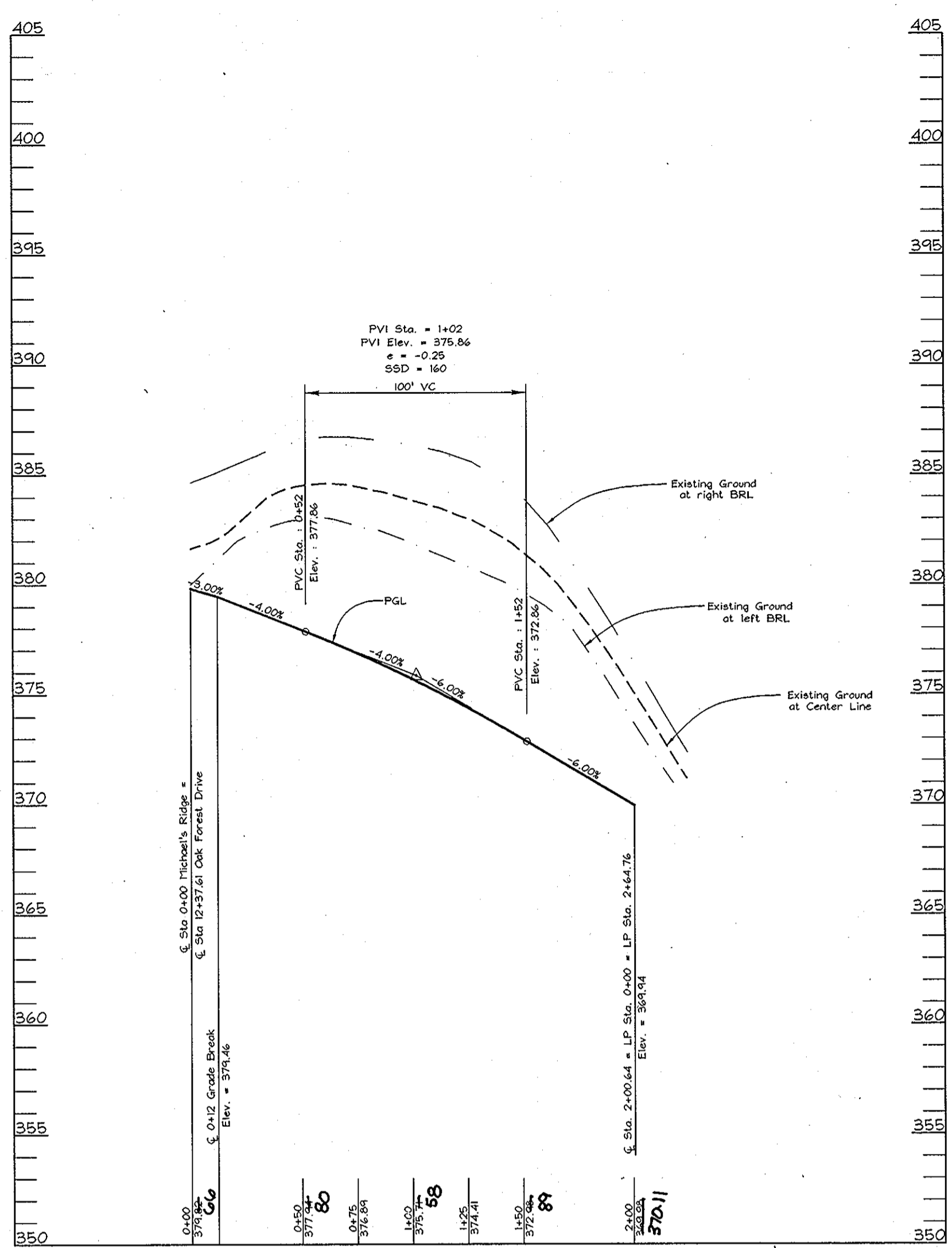
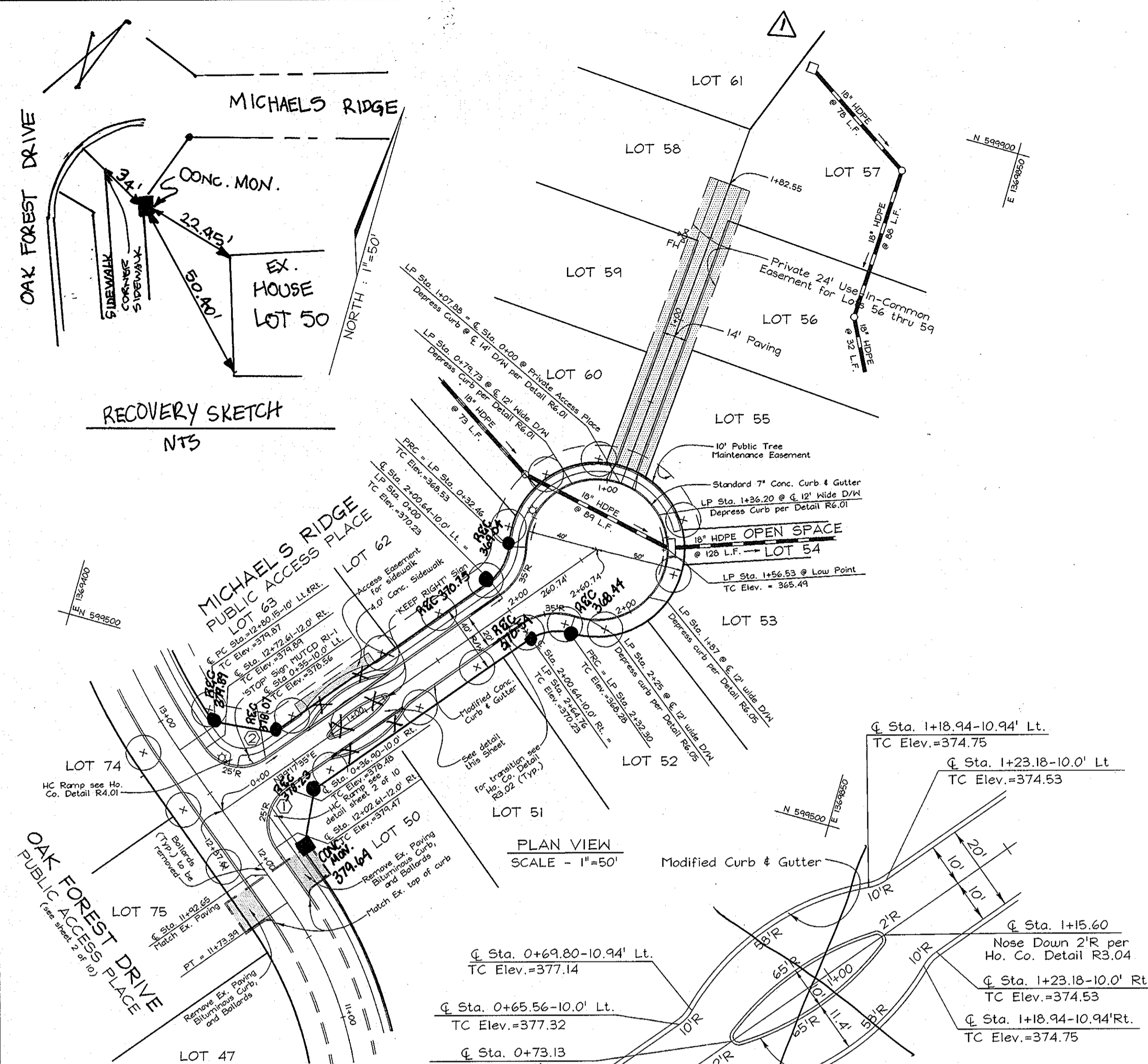
TAX MAP #18 PARCEL 1
 2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS

3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: G.A.H.
 DRAWN BY: J.E.R.
 CHECKED BY: R.H.V.
 DATE: Oct. 12, 1999
 SCALE: 1"=50'
 W.O. NO.: 99-015

4 SHEET OF 10



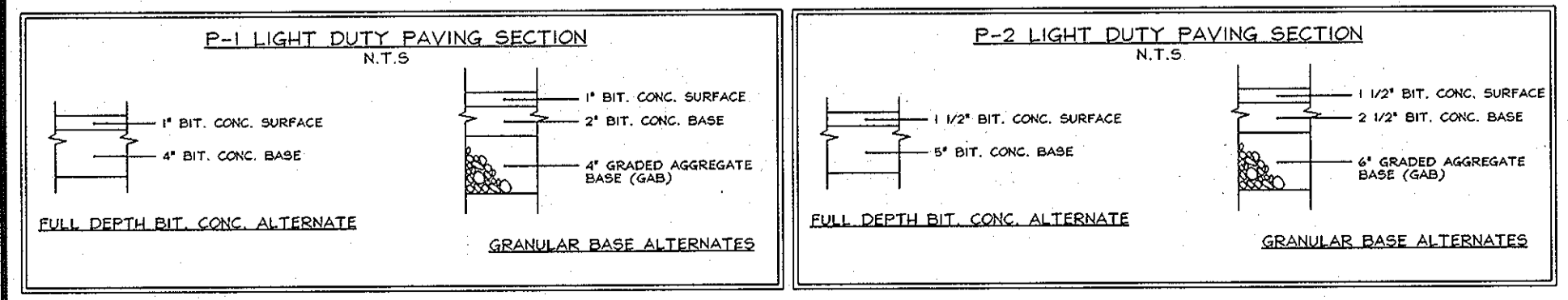
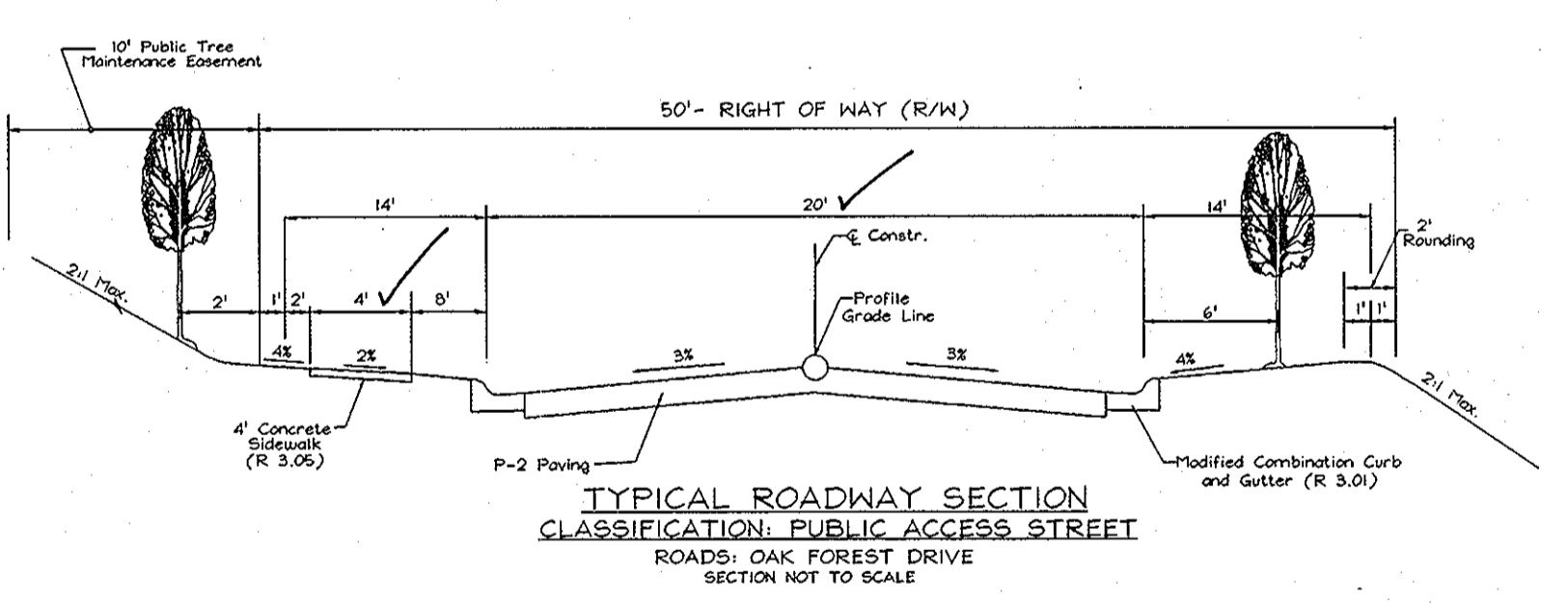
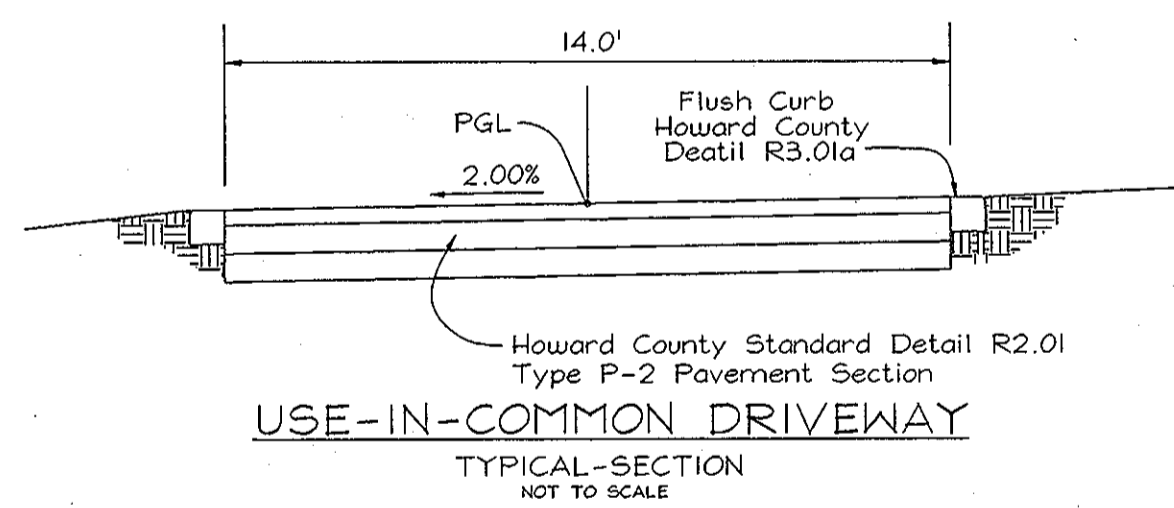
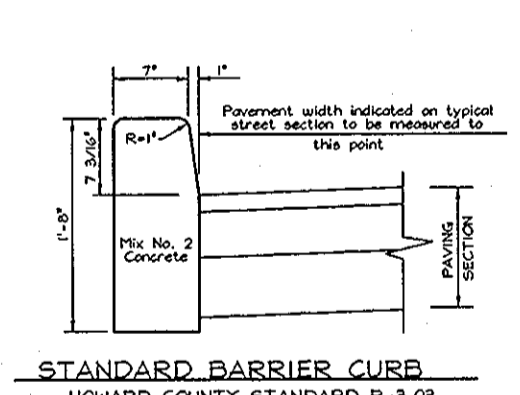
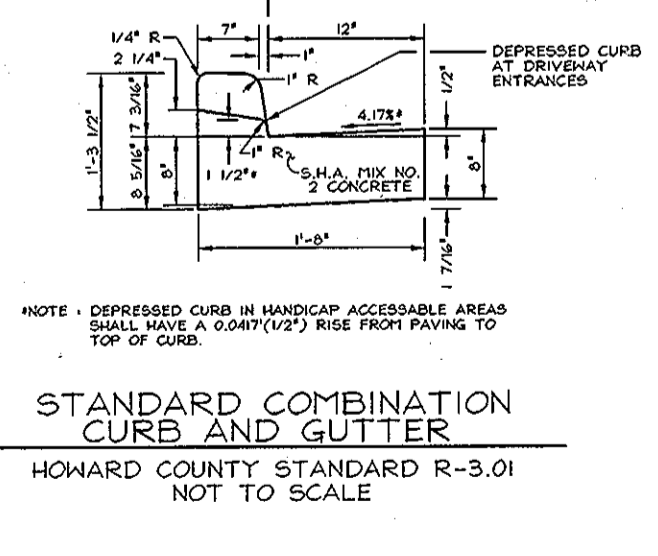
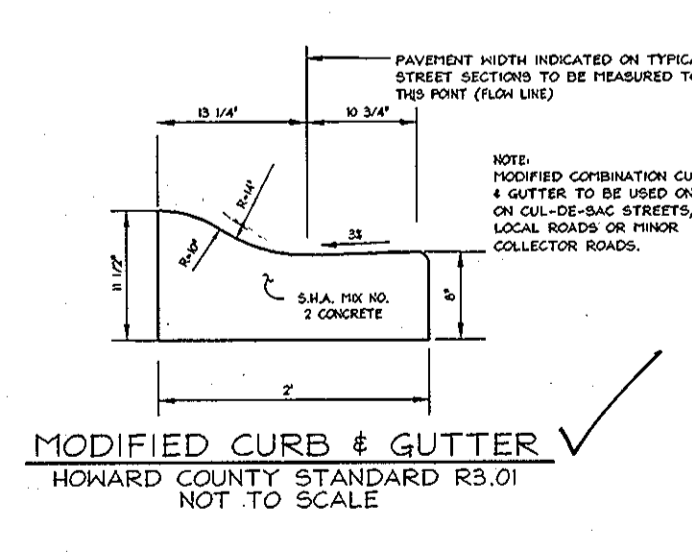
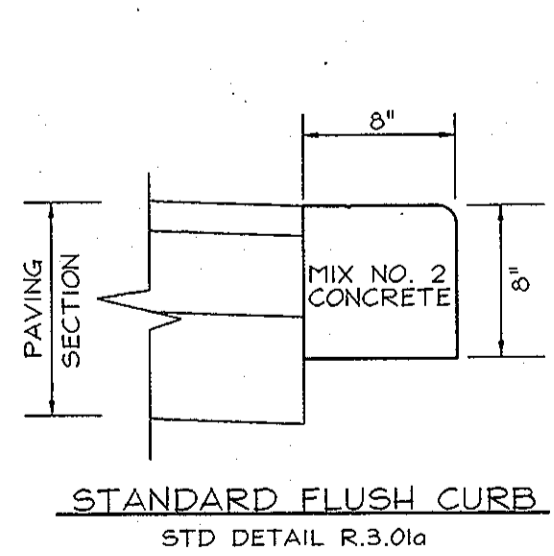
STREET LIGHT LOCATION CHART

STREET NAME	CENTERLINE STATION	CENTERLINE OFFSET
Oak Forest Drive	12+52.85	17.26' RT.
Michael's Ridge	LP 0+53.16	3.7' LT.

Traditionaire 100-watt HPS Vapor 'Traditionaire' Post Top fixture mounted on a 14" black fiberglass pole

STREET TREE CALCULATIONS

Street Name	Linear Feet	Required Trees	Provided Trees
Michael's Ridge	597/40	15	15



AS-BUILT CERTIFICATE

Removed Ex. 15 H.D.P.E. & Str. T-32 between I-28 & I-29 4-16-07

NO. _____ REVISION _____ DATE _____

13/05 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

Charles Skirven 3/29/00
CHIEF, BUREAU OF HIGHWAYS DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Cathy Brantley 4/14/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Robert H. Vogel 4/13/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

ROAD PLAN AND PROFILES AND MISCELLANEOUS DETAILS
HOLLIFIELD ESTATES I
SECTION TWO

TAX MAP #18 PARCEL 1
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
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OWNER/DEVELOPER
Mr. Charles Skirven, Esq.
5401 Twin Knolls Road, Suite 10
Columbia, Maryland 21046
(410) 995-0081

DESIGN BY: GAH
DRAWN BY: PS
CHECKED BY: GAH
DATE: Oct. 12, 1999
SCALE: As Shown
W.O. NO.: 99-013

3 SHEET OF 10