

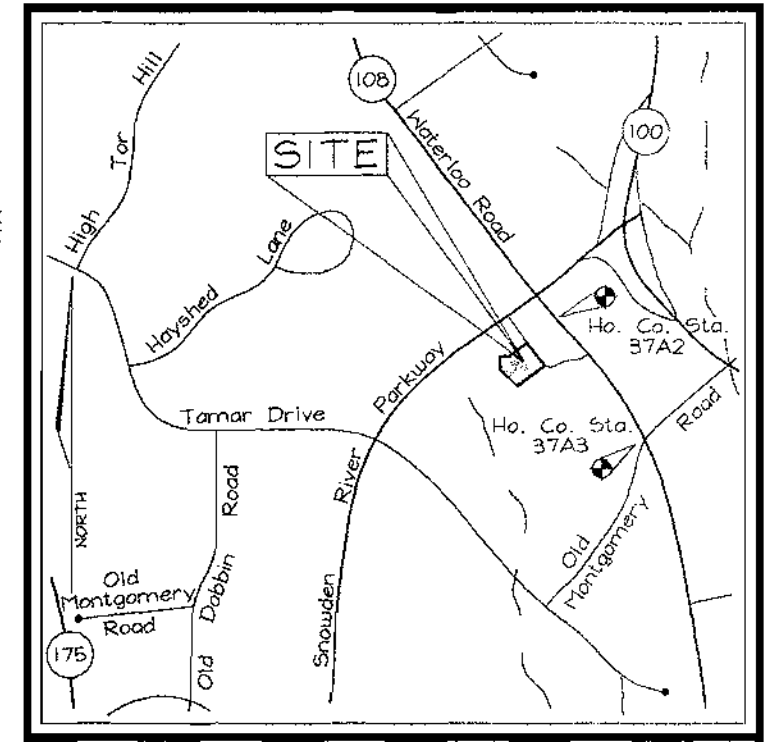
GENERAL NOTES

- All construction shall conform with the latest standards and specifications of Howard County plus "M" standards and specifications, if applicable.
- The contractor shall notify "M" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The contractor is to notify the following utilities or agencies at least five days before starting work on the site:
 - Water Utility: 1-800-257-7777
 - Gas Utility: 725-4476
 - Howard County Public Works: 313-2366
 - Electric: 343-3553
 - Gas: 850-4620
 - State Highway Department: 787-4620
 - State Highway Department: 531-5533
- Site analysis:
 - Area of parcel: 6.21 ac.
 - Design zoning: N100 (Neighborhood commercial) FDP 229
 - Use of adjacent parcels: B-2
 - Building coverage: 15.6% of gross area
 - Paved parking: 41.3% of gross area
 - Area of landscape: 974.2sf
 - Area of 25% or greater tree canopy on site: 2,500 sf
- Project background:
 - Location: Columbia, MD, Tax Map #37, Parcel B-2
 - Design Area: 2.48 ac.
 - Site Area: 2.48 ac.
 - DP# references: WP-98-34; WP-97-107, FDP Phase 229; PB-315; DP-00-044; Plat #14126; Plat #14173
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection at (410) 313-1880 at least five (5) working days prior to start of work.
- Any damage to public utilities, paving, or existing utilities will be connected at the contractor's expense.
- Existing utilities located from utility construction plans, field surveys and available record drawings. Approximate location of existing utilities are shown for the contractor's information. Contractor shall locate existing utilities well in advance of construction activities and take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- All reinforced concrete foundation structures shall have a minimum of 28 days strength of 3,500 psi.
- Traffic control devices, signs 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 placement of any asphalt.
- Estimates of construction quantities are provided solely for the purpose of calculating fees.
- Soil compaction specifications, methods and materials are to be in accordance with the requirements of the project Geotechnical Engineer. Geotechnical Engineer to confirm acceptability of test and paving section, based on soil test.
- All storm drain pipe shall be Class 'C'.
- Coordinate and elevate all monuments on Howard County Right-of-Way Monuments.
- A noise study is not required for this project.
- Existing topography, contours and other information performed by Gutschick, Little and Weber, Inc. E-11-01-001-011.
- Paving sections based on test report performed by Giles Engineering Associates, Inc. on May 22, 2006.
- All curb and gutter to be in accordance with Standard concrete Detail 3.01 unless otherwise specified.
- Contractor responsible for providing all handicap parking and handicap access in accordance with current ADA requirements.
- Where drainage falls directly into curb, contractor to reverse the gutter pan.
- All elevations and grades shall be in accordance with notes.
- All dimensions are in feet unless otherwise noted.
- Public water and sewer are under a Private Road Contract #24-3813-D.
- Stormwater Management is subject to per F-98-101, Route 108 Commercial, Section One/Area One; Water Utility is provided per DP-01.
- All exterior lighting shall comply with Zoning Regulations Section 134.
- Building to have its own water meter settings.
- This site plan was approved by the Board of Planning and Zoning on May 8, 1998 as a condition of approval for SP-98-05.
- This site is exempt from the Historic Conservation Ordinance in accordance with 16.1202(b)(1)(iv).
- All setbacks and other site plan requirements will be in accordance with FDP-229.
- Existing storm drain stubs and elevations are in accordance with SDP-00-044. Adjustments may be necessary to change the vertical locations of storm drain stubs.
- Retaining walls to be finished in classic style, mottled brown color, straight face.
- Contractor to connect building to storm drain system, see Architectural plans for details.
- Contractor to mow and grade areas to building, parking lot islands and area adjacent to entrance drive aisle, all areas to be seeded and mulched.

SITE DEVELOPMENT PLAN HILTON GARDEN INN

LEGEND

- Existing Contour: ---
- Proposed Contour: - - -
- Spot Elevation: +82.53
- Direction of Flow: →
- Light Poles: [Symbol]
- 25%-49.99% Slopes: [Symbol]
- P-3 Paving: [Symbol]

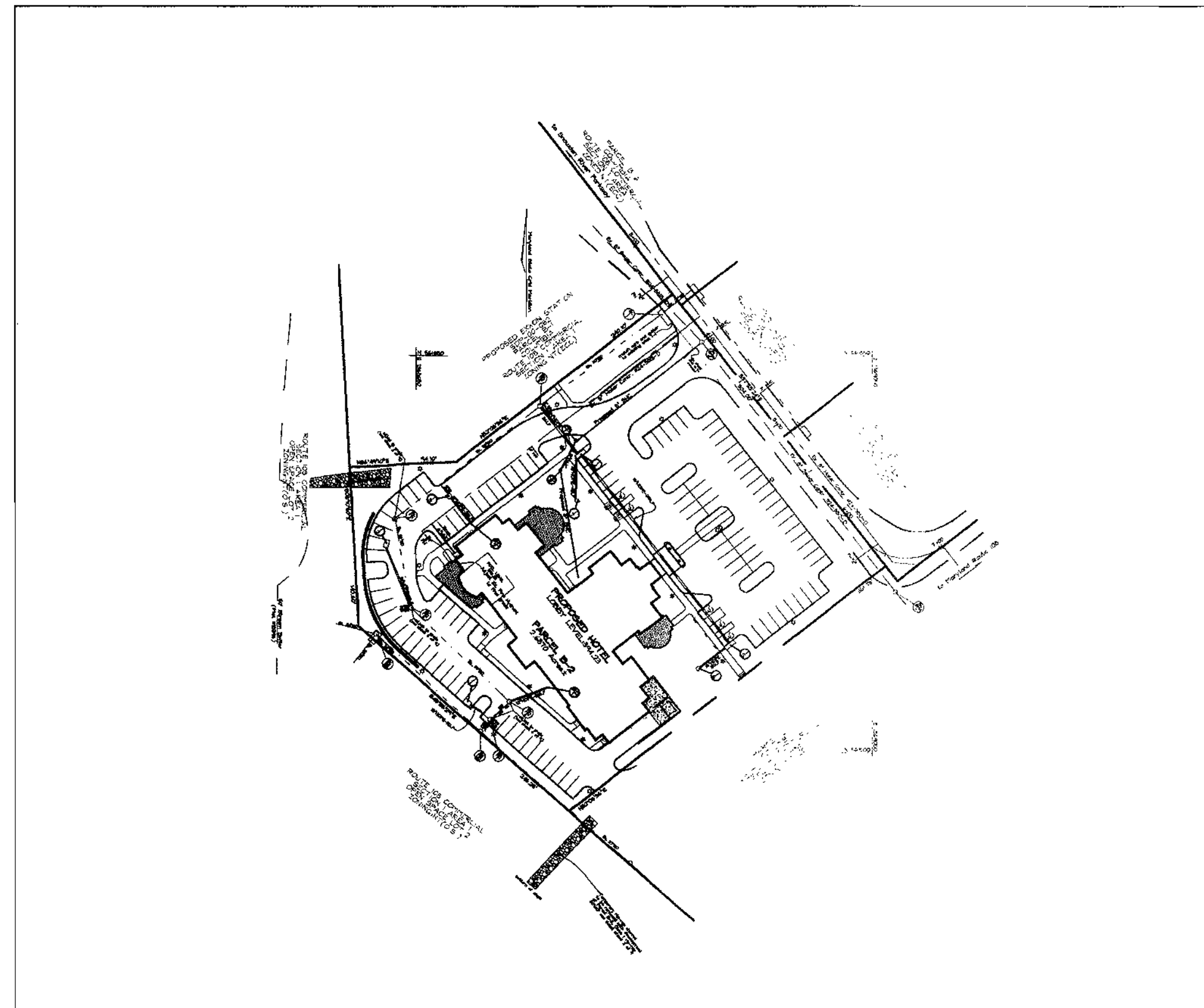


BENCHMARKS

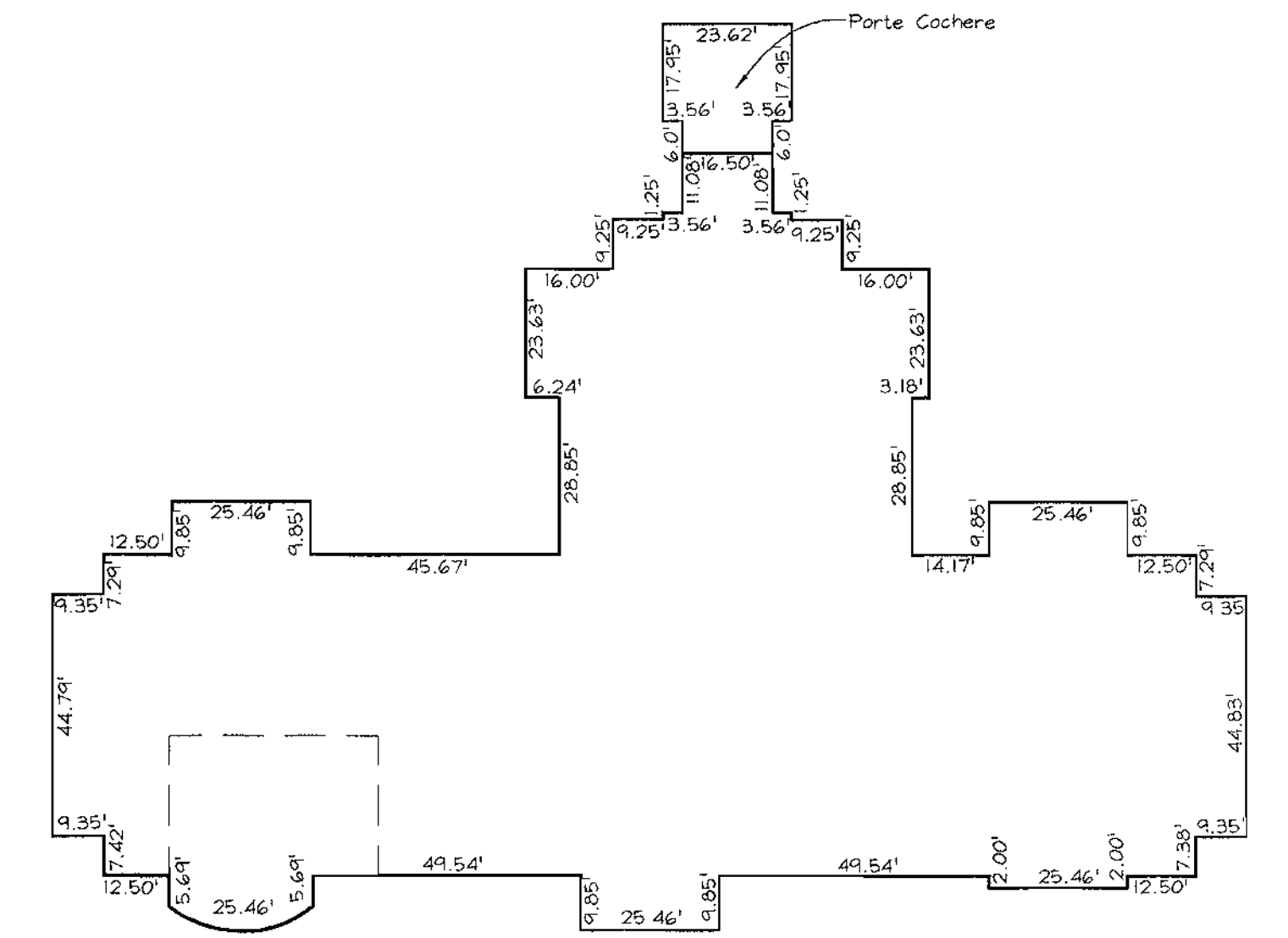
Howard County Station 37A2
N 562,120.83 E 1,369,300.26 Elev. 403.71
40' northeast of MD Route 108, 1100' northwest of Old Montgomery Road
Howard County Station 37A3
N 561,131.07 E 1,369,913.29 Elev. 395.66
southwest of the intersection of MD Route 108 and Old Montgomery Road

SHEET INDEX

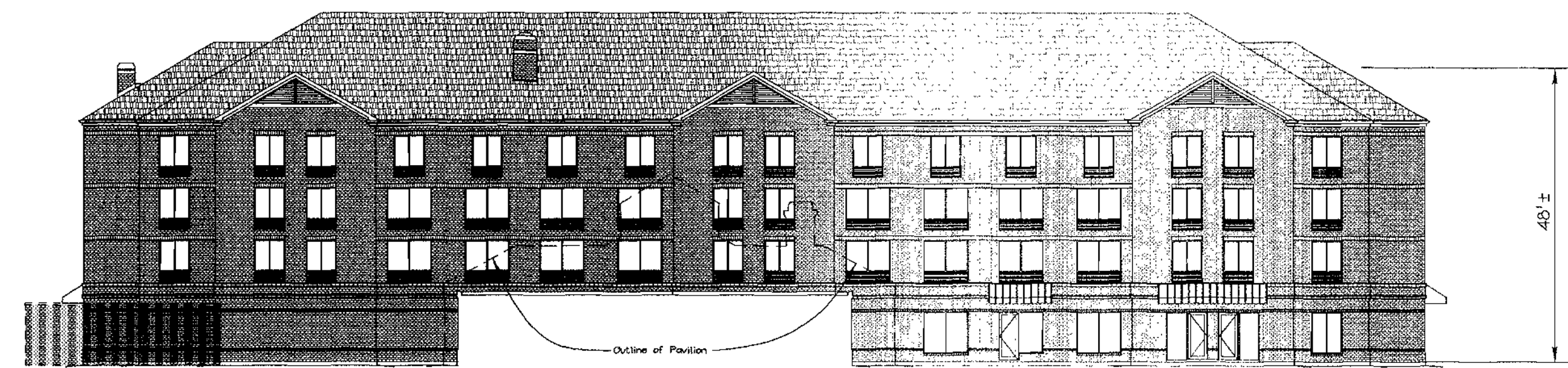
DESCRIPTION	SHEET NO.
Cover Sheet	1 of 9
Site Development Plan	2 of 9
Sediment and Erosion Control Plan	3 of 9
Sediment and Erosion Control Details	4 of 9
Storm Drain Drainage Area Map	5 of 9
Storm Drain, Water and Sewer Profiles and Miscellaneous Details	6 of 9
Landscape Plan	7 of 9
Retaining Wall Details	8 of 9
Retaining Wall Details	9 of 9



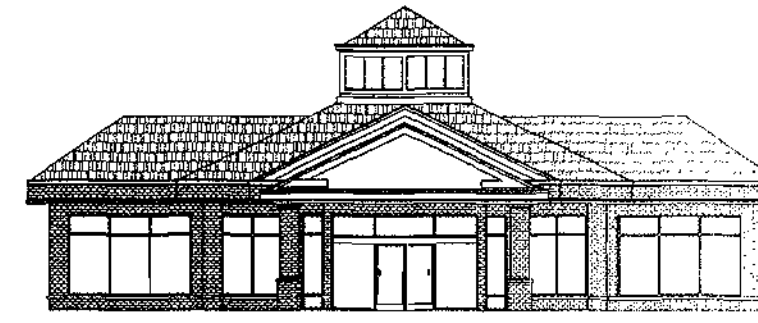
LOCATION MAP
SCALE: 1"=100'



BUILDING PLAN VIEW
SCALE: 1"=30'



BUILDING ELEVATION
SCALE: 1"=20'



PAVILION ELEVATION
SCALE: 1"=20'

APPROVED: 6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT AND APPROVALS: [Signature] 9/5/00
 CHIEF, DESIGN AND PERMITS: [Signature] 9/7/00
 DIRECTOR: [Signature] 9/7/00

PARKING TABULATION

Parking Required: Hotel: 1 space for each bedroom, 1 space for each 5 employees; 98 rooms, 12 employees max. per shift=101 spaces
Restaurant: 1 space for each 3 seats; 1 space for each 5 employees; 36 seats, 3 employees max. per shift=15 spaces
Total required: 114
Parking Provided: 114
Handicap Spaces Required: 5 (4 std./1 van)
Handicap Spaces Provided: 5 (4 std./1 van)

OWNER
Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia, MD 21044
410 992 6000

DEVELOPER
Star Hotels
12119 Duskview Court
Clarksville, MD 21029
410 988 9363
Mr. M. Majumdar

ADDRESS CHART
STREET ADDRESS: 8241 Snowden River Parkway

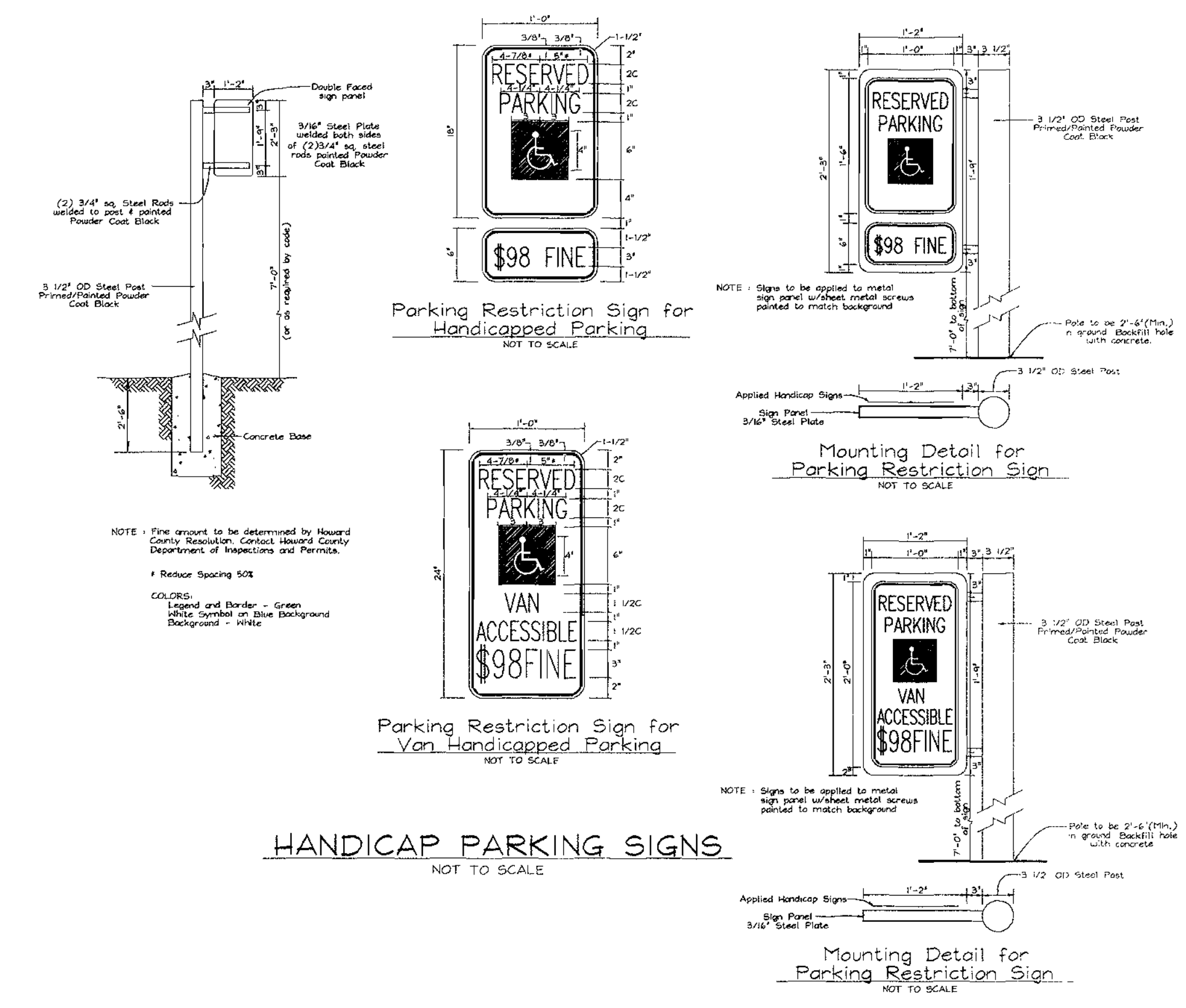
SUBDIVISION NAME	SECTION/AREA	PARCEL NUMBER
Route 108 Commercial	1/1	B-2
PLAT NO. 14126	BLOCK NO. 1	ZONE NT ECC
TAX/ZONE 37	ELECT. DIST. 6th	CENSUS TR. 6066.22
WATER CODE: E-07	SEWER CODE: 2780000	

COVER SHEET
HILTON GARDEN INN
 COLUMBIA ROUTE 108 COMMERCIAL
 SECTION 1 AREA 1
 TAX MAP #37 GRID #1 PARCEL B-2
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

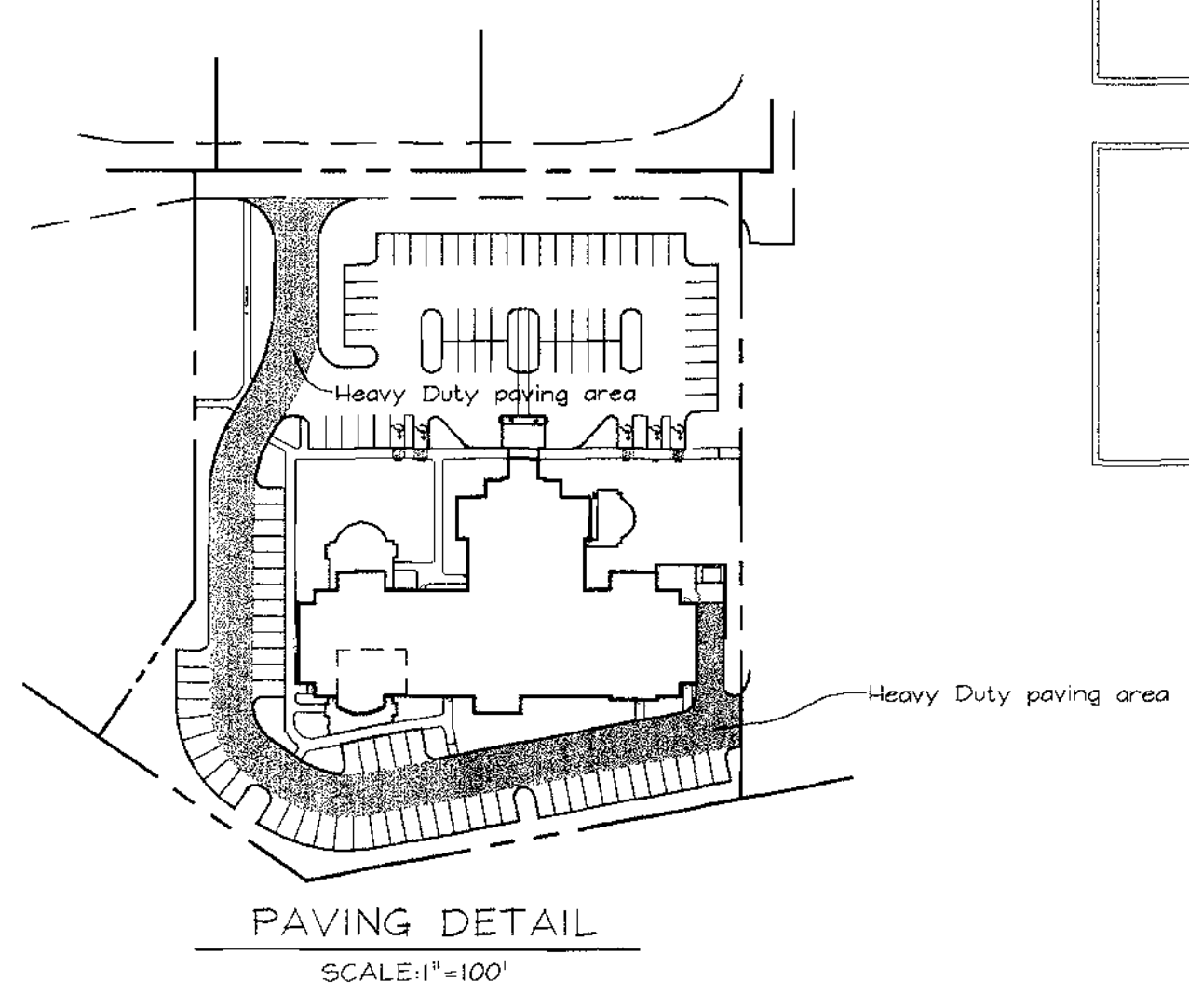
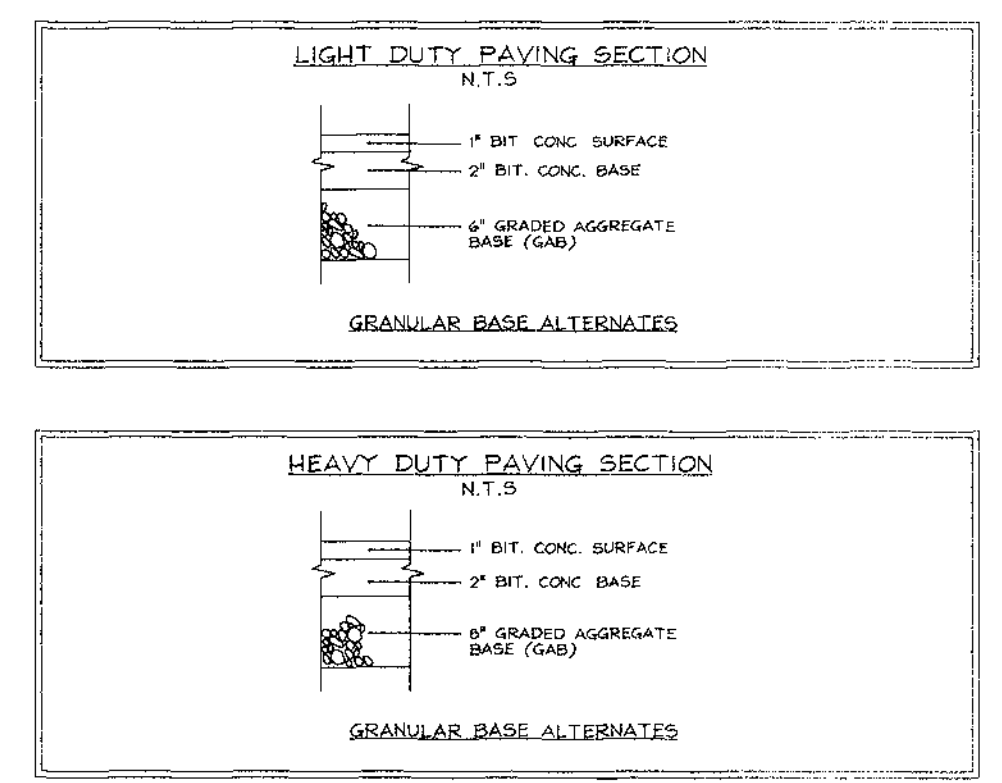
VOGEL & ASSOCIATES
 ENGINEERS SURVEYORS PLANNERS
 3681 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3956

DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: RHV
 DATE: August 16, 2000
 SCALE: As Shown
 W.O. NO.: 99-156

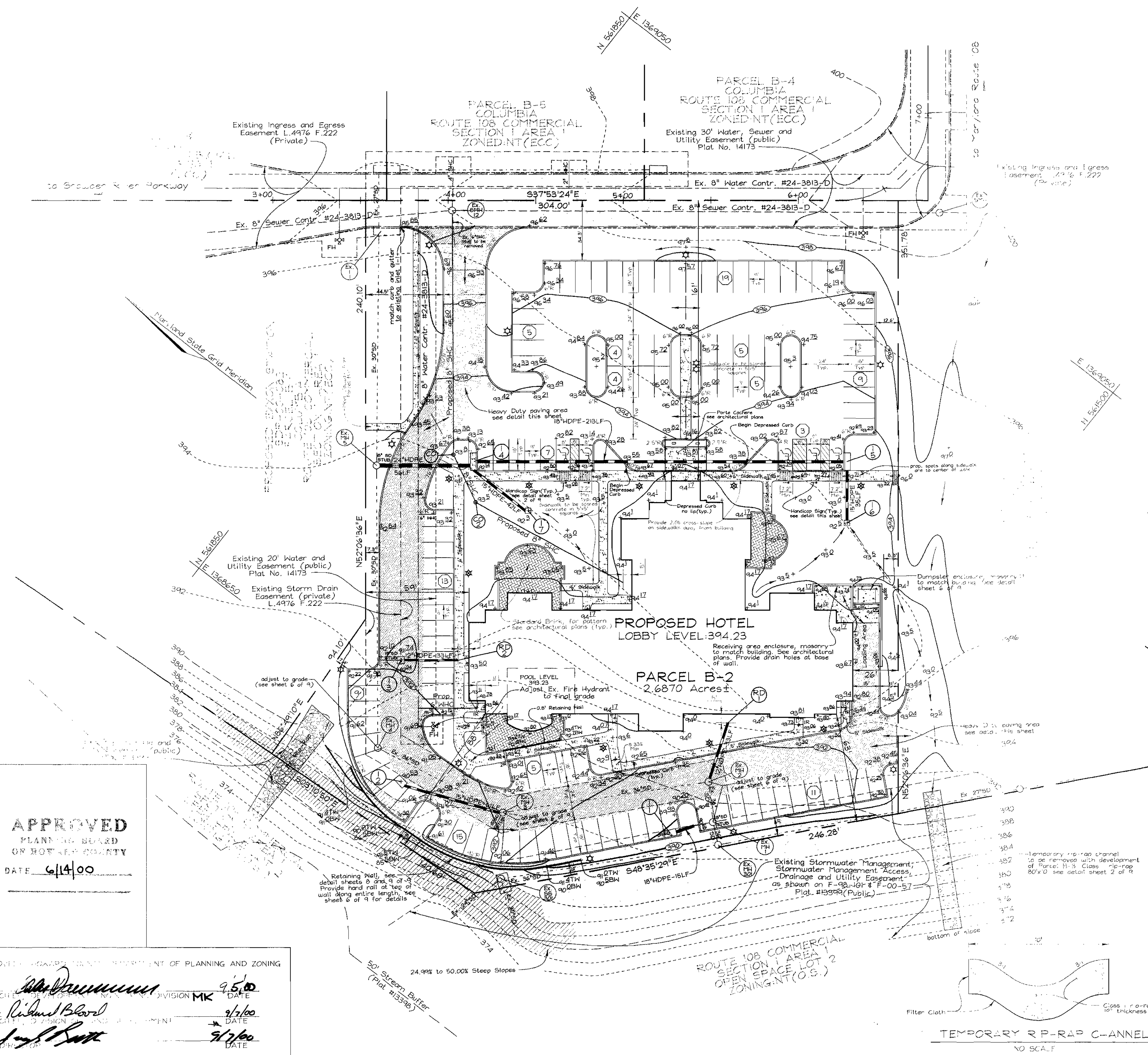
1 SHEET OF 9



HANDICAP PARKING SIGNS
NOT TO SCALE



PAVING DETAIL
SCALE: 1"=100'



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE 9/5/00
DATE 9/7/00
DATE 9/7/00

DEVELOPER
Star Hotels
12119 Duskview Court
Clarksville, MD 21029
410.488.9363
Mr. H. Majumdar

OWNER
Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia, MD 21044
410.992.6000

SITE DEVELOPMENT PLAN
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION I AREA I
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

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3681 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.481.5828 Fax 410.465.3966

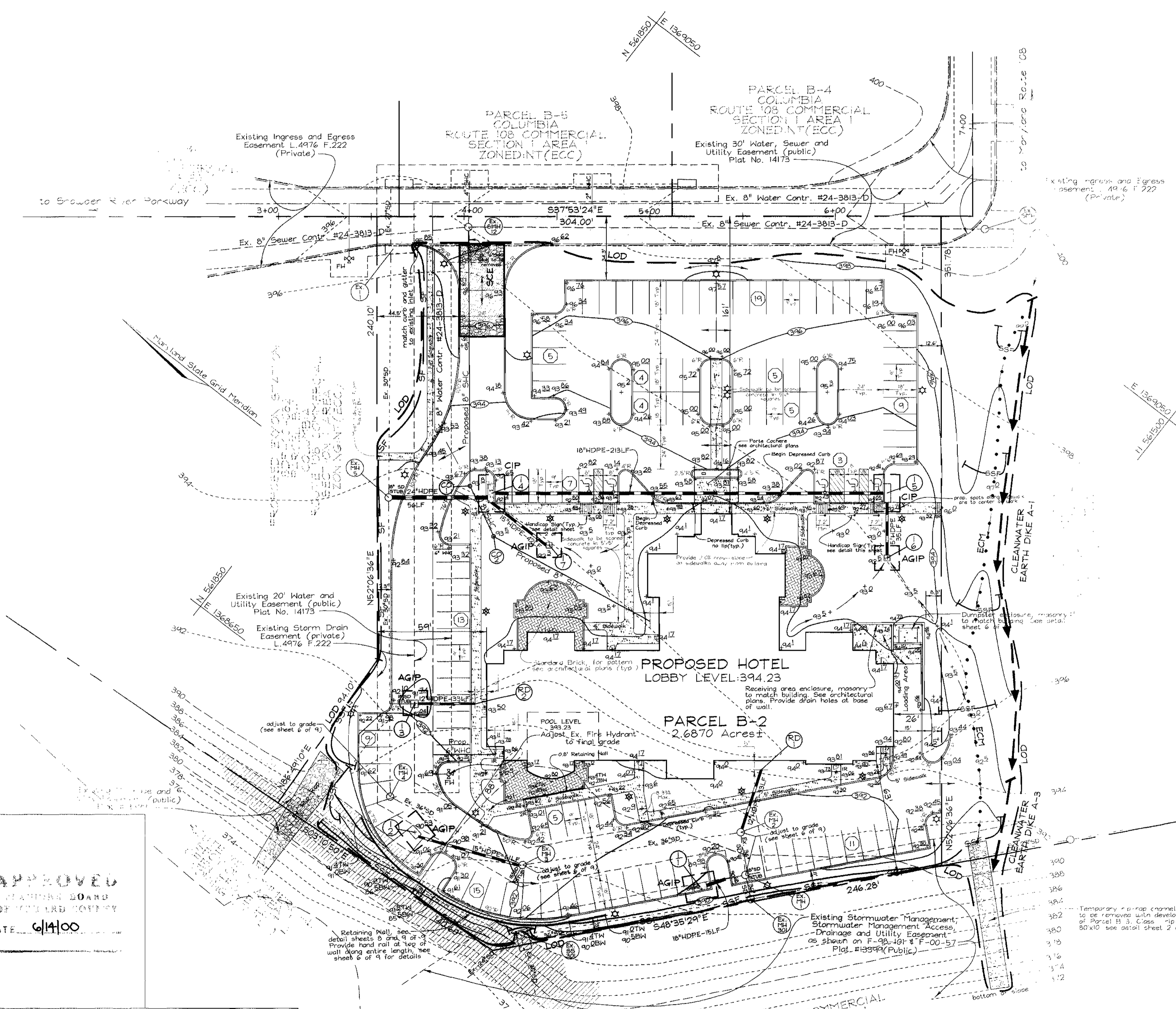
DESIGN BY: PS
DRAWN BY: PS
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DATE: August 16, 2000
SCALE: 1"=30'
W.O. NO.: 99-156

STATE OF MARYLAND
PROFESSIONAL ENGINEER
ROBERT H. VOGEL, PE No. 16785

2 SHEET OF 9

LEGEND

Existing Contour	-----	-382
Proposed Contour	-----	+8253
Spot Elevation	○	
Direction of Flow	→	
Light Poles	○	
Parking Lot	□	
Roadway	□	
Pedestrian	○	
Parking Lot (Twin Head)	□	
Stabilized Construction Entrance	▨	
Silt Fence	— SF — SF —	
Super Silt Fence	— SSF — SSF —	
Earth Dike	— ED A-1 —	
Limit of Disturbance	— LOD —	
Erosion Control Matting	•••••	ECM
Curb Inlet Protection	□	CIP
At Grade Inlet Protection	□	AGIP



REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 8/31/00
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 8/31/00
 HOWARD SCD DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.

Mukul Sharma 8-22-2000
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

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

Robert H. Vogel 8/31/00
 SIGNATURE OF ENGINEER DATE

SEDIMENT AND EROSION CONTROL PLAN
HILTON GARDEN INN
 COLUMBIA ROUTE 108 COMMERCIAL SECTION I AREA I
 TAX MAP #37 GRID #1 PARCEL B-2
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3996

DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: RHV
 DATE: August 16, 2000
 SCALE: 1"=30'
 W.C. NO.: 99-156

3 SHEET OF 9

DEVELOPER
 Star Hotels
 1219 Duskview Court
 Clarksville, MD 21029
 410.988.9363
 Mr. M. Majumdar

OWNER
 Howard Research and Development Corp.
 10275 Little Patuxent Parkway
 Columbia, MD 21044
 410.992.6000

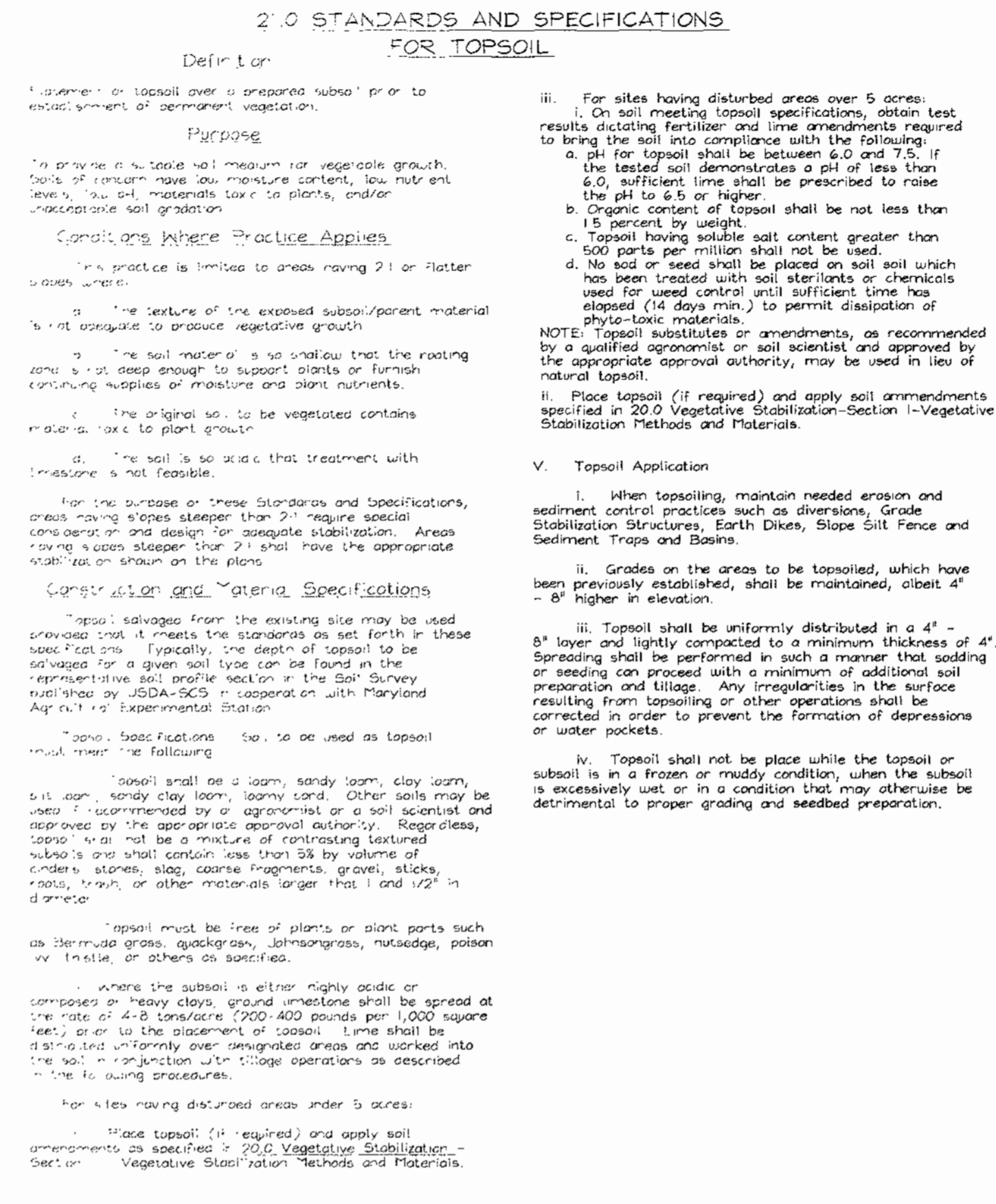
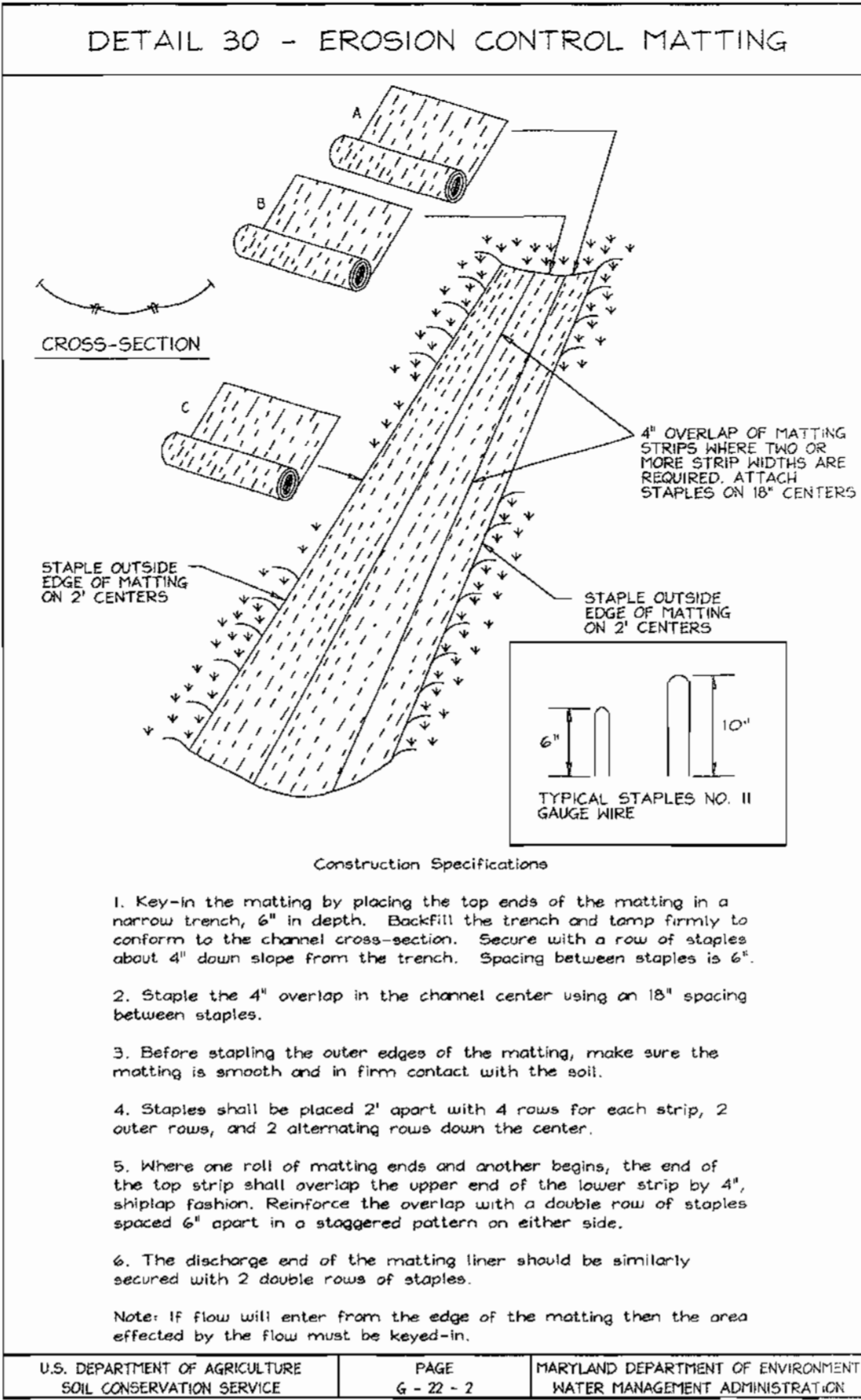
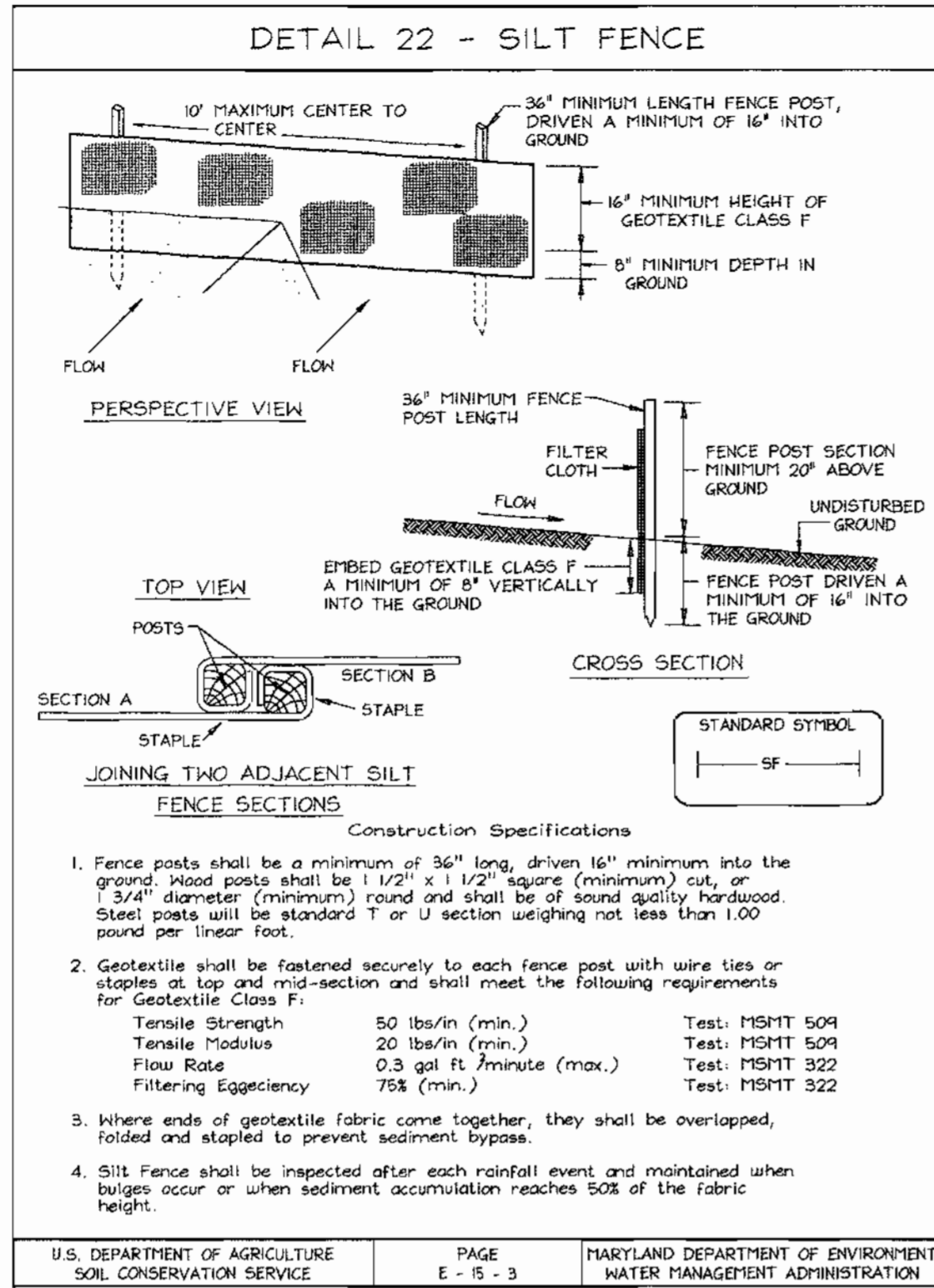
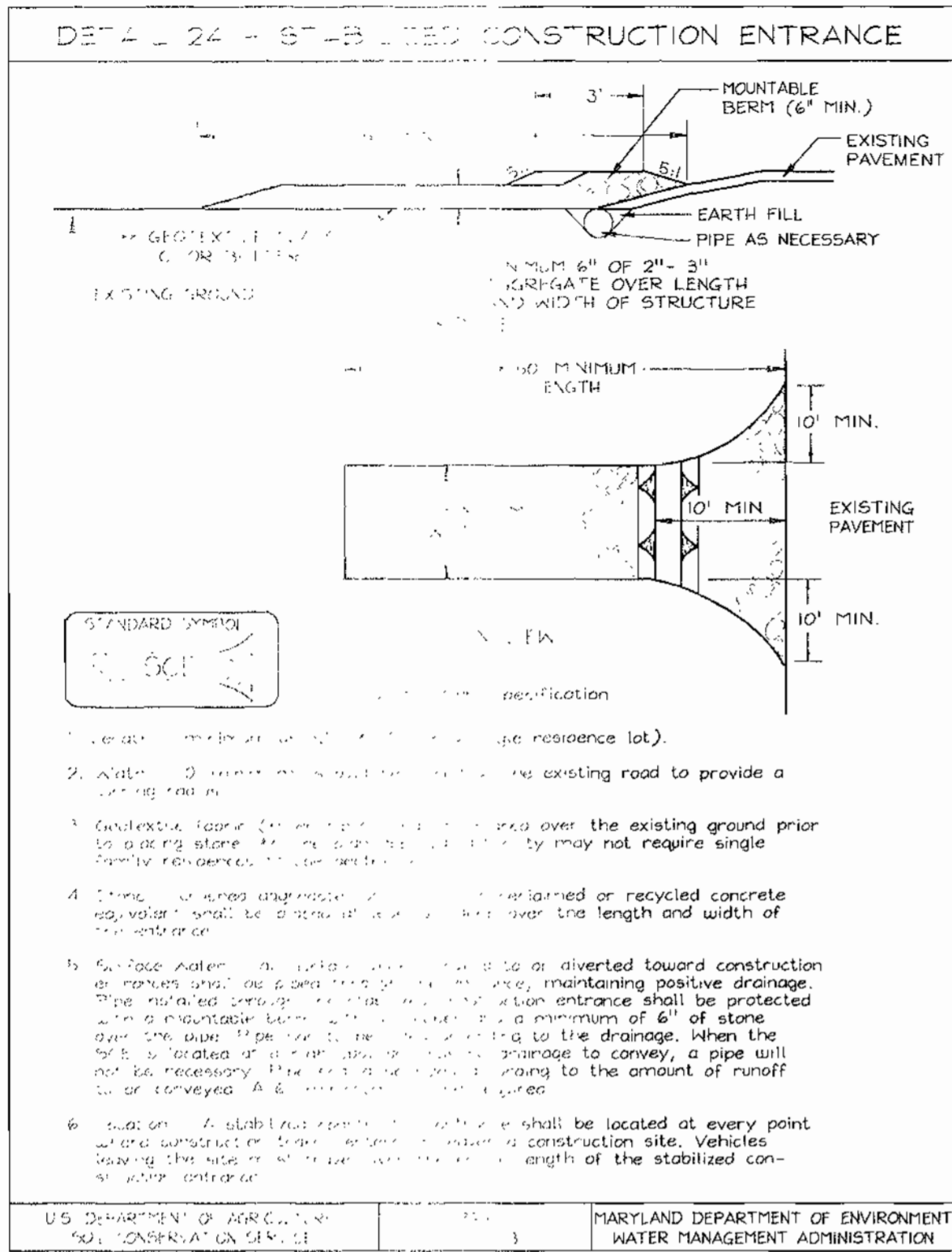
APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/5/00
 CHIEF DEVELOPMENT DIVISION MK DATE

James Smith 9/2/00
 CHIEF DIVISION OF PLANNING AND ZONING DATE

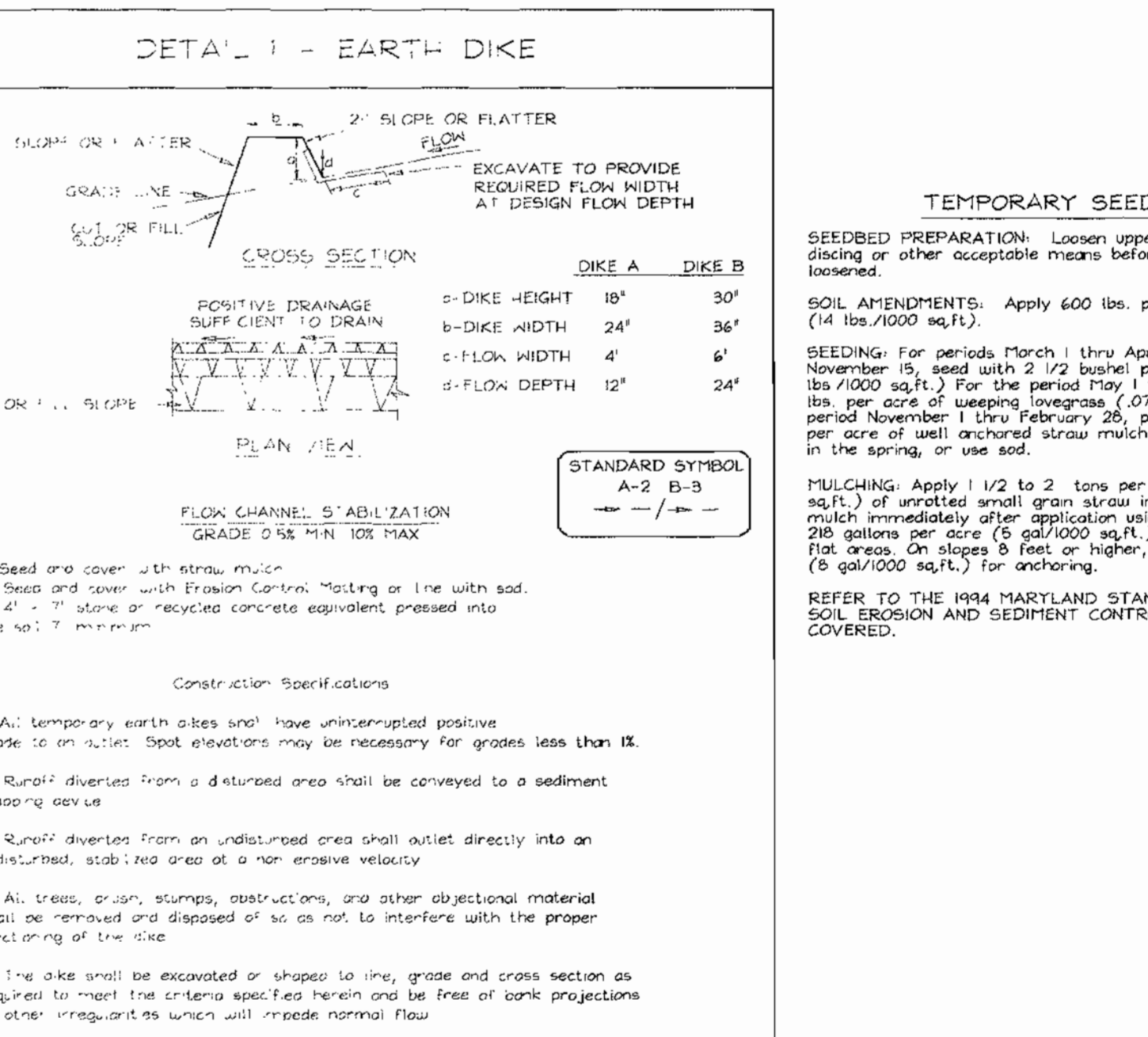
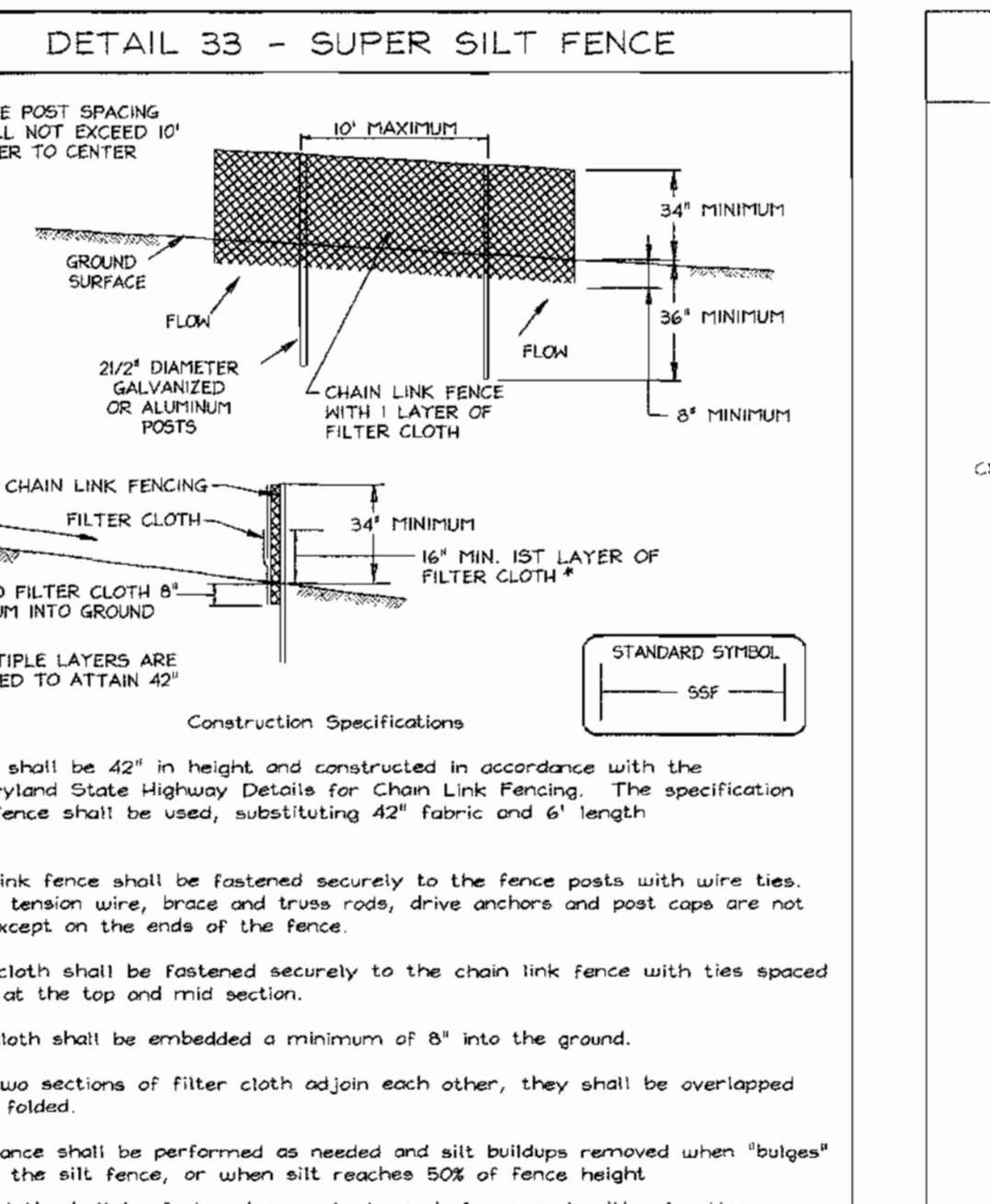
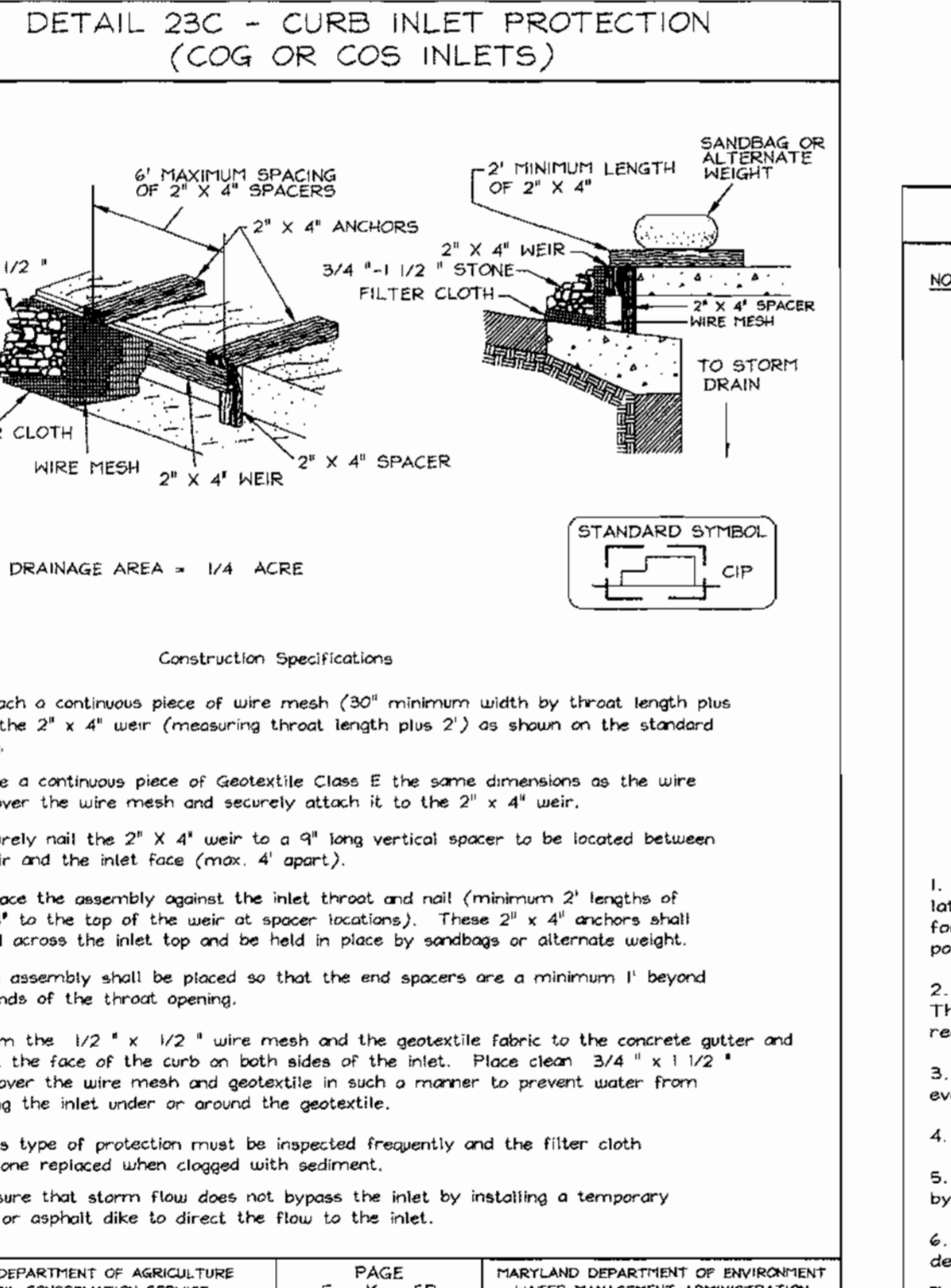
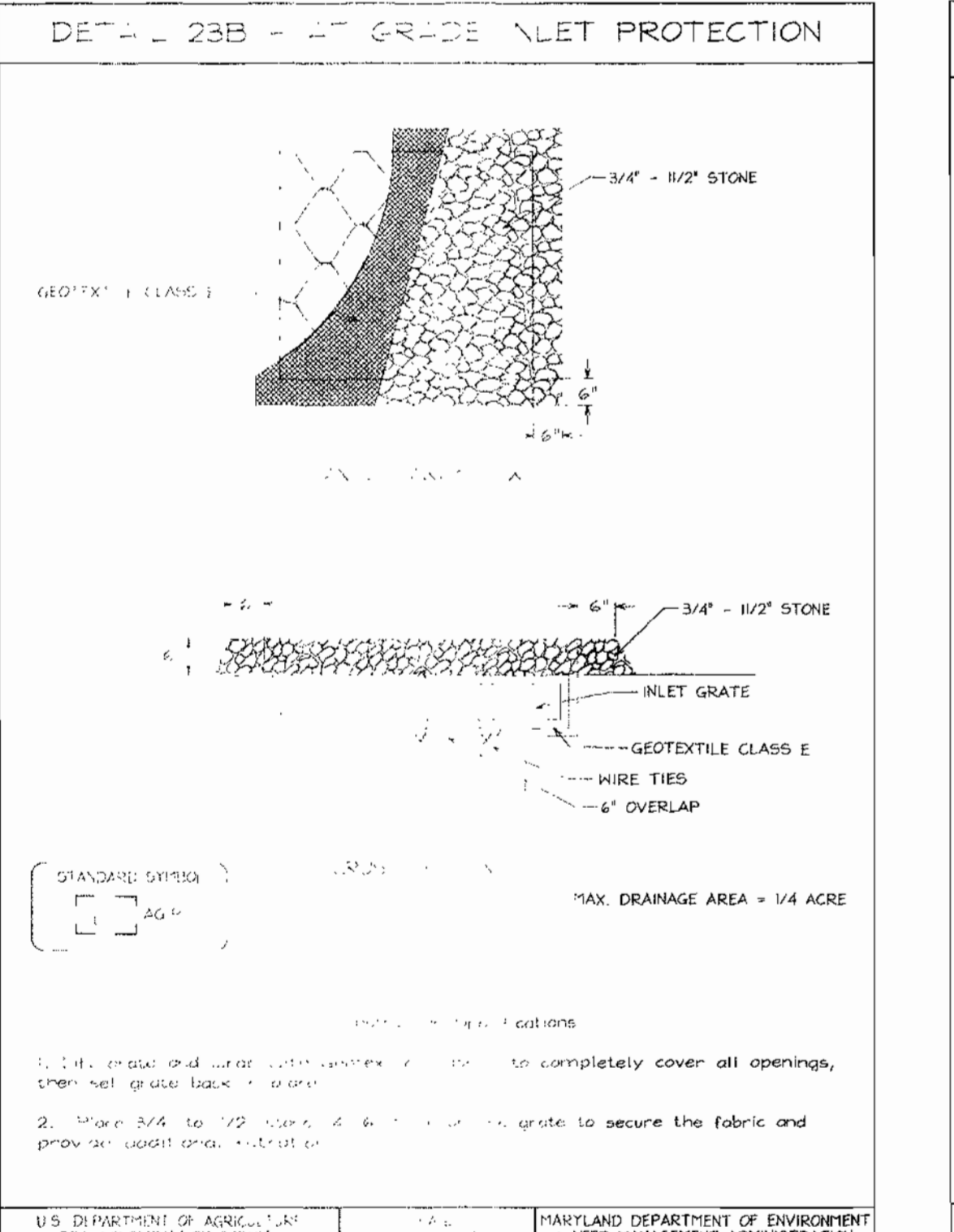
James Smith 9/2/00
 CHIEF OF PLANNING AND ZONING DATE



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 (313-1855).
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 as to all other disturbed or graded areas on the project site.
4. All sediment traps/basins should 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 in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch alone shall be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
7. Site Analysis:

Total Area	2.69 Acres
Area Disturbed	2.72 Acres
Area to be roofed or paved	1.53 Acres
Area to be vegetatively stabilized	1.19 Acres
Total Cut	5198 CY
Total Fill	2085 CY
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.



TEMPORARY SEEDING NOTES

SEEDBED PREPARATION: Loosen three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: Apply 600 lbs. per acre 10-10-10 fertilizer (14 lbs/1000 sq.ft.)

SEEDING: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2 1/2 bushel per acre of annual rye (3.2 lbs/1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of weeping lovegrass (0.7 lbs/1000 sq.ft.). For the period November 1 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

MULCHING: Apply 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 340 gallons per acre (5 gal/1000 sq.ft.) for anchoring.

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

PERMANENT SEEDING NOTES

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

SEEDBED PREPARATION: Loosen three inches of soil by raking, discing or other acceptable means before seeding, if not previously loosened.

SOIL AMENDMENTS: In lieu of soil test recommendations, use one of the following schedules:

- 1) Preferred-Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq.ft.) and 600 lbs per acre 10-10-10 fertilizer (14 lbs/1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At the time of seeding, apply 400 lbs. per acre 30-0-0 urea-form fertilizer (9 lbs/1000 sq.ft.)
- 2) Acceptable-Apply 2 tons per acre dolomitic limestone (92 lbs/1000 sq.ft.) and apply 1000 lbs per acre 10-10-10 fertilizer (29 lbs/1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

SEEDING: For the periods March 1 thru April 30, and August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs/1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.5 lbs/1000 sq.ft.) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

MULCHING: Apply 1/2 to 2 tons per acre (70 to 90 lbs/1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 200 gallons per acre (5 gal/1000 sq.ft.) of emulsified asphalt on flat areas. On slopes 6 feet or higher, use 340 gallons per acre (5 gal/1000 sq.ft.) for anchoring.

MAINTENANCE: Inspect all seeded areas and make needed repairs, replacements and reseedings.

APPROVED

SEAL

DATE: 6/14/00

APPROVED

SEAL

DATE: 6/14/00

APPROVED

SEAL

DATE: 6/14/00

APPROVED

SEAL

DATE: 6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 6/14/00

ENGINEERS CERTIFICATE

SIGNATURE OF ENGINEER: ROBERT H. VOGEL

DATE: 6/15/00

DEVELOPER'S CERTIFICATE

SIGNATURE OF DEVELOPER: Miles Shwartz

DATE: 8-22-2000

REVIEWED FOR HOWARD SOI AND MET'S TECHNICAL REQUIREMENTS

SIGNATURE: Cheryl Simmons

DATE: 8/31/00

SIGNATURE: John R. Robertson

DATE: 8/31/00

SEDIMENT AND EROSION CONTROL DETAILS

HILTON GARDEN INN

COLUMBIA ROUTE 108 COMMERCIAL SECTION I AREA I

TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS

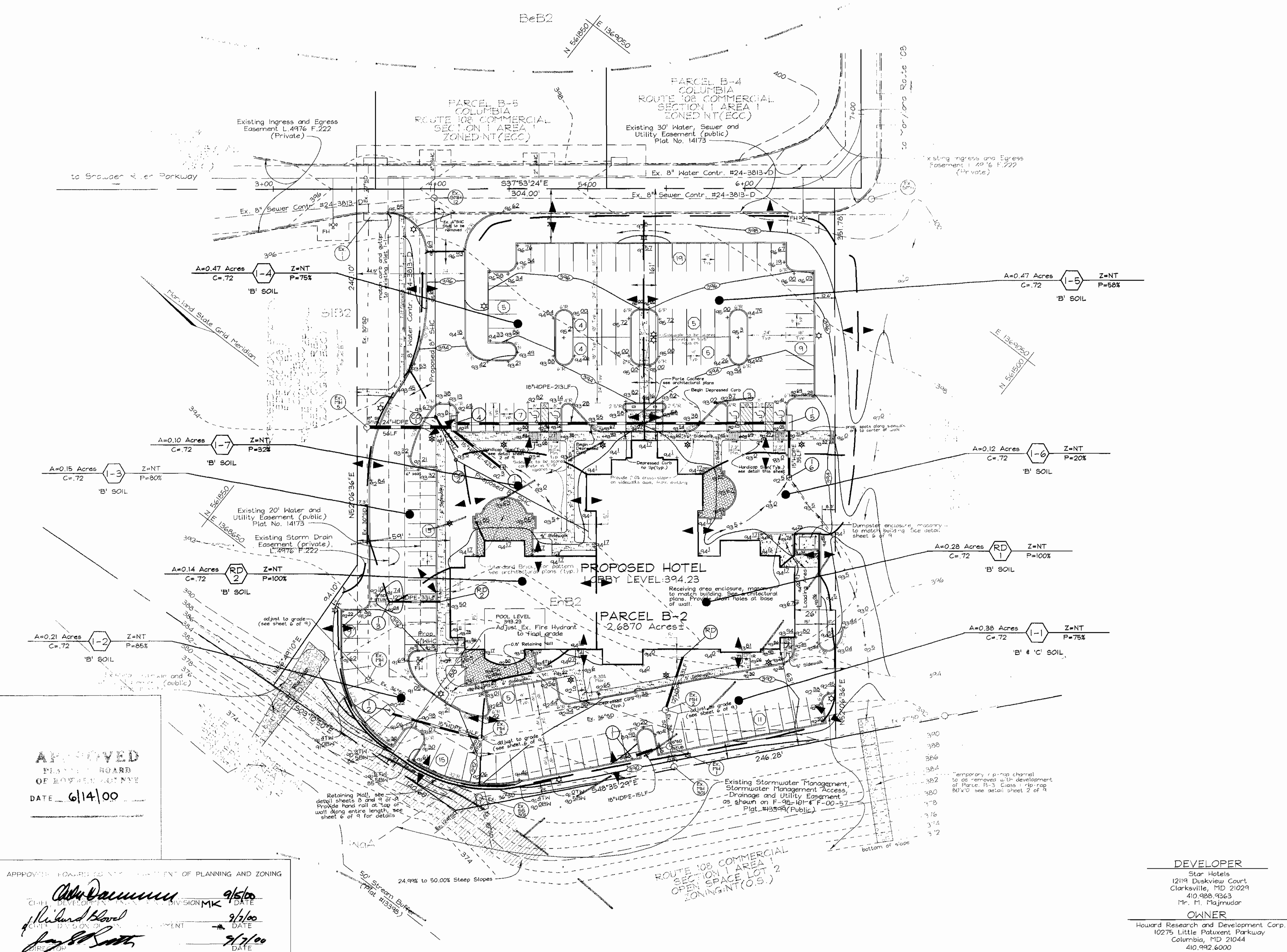
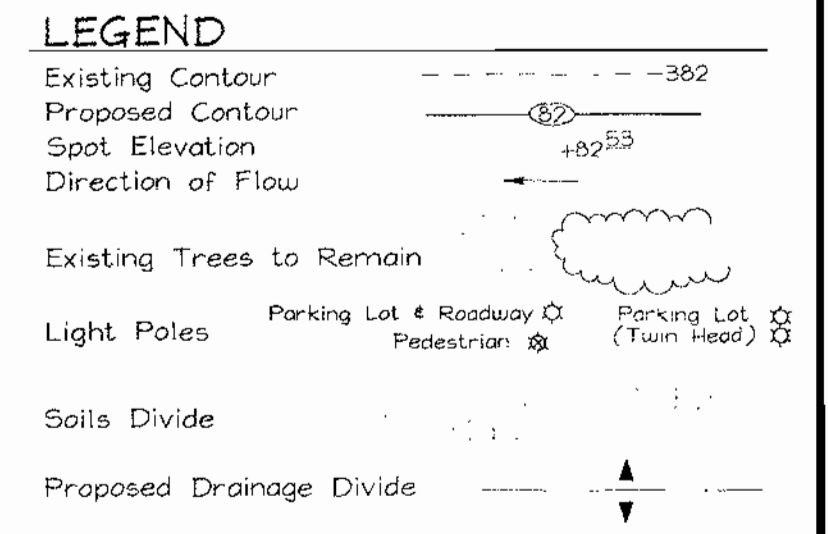
3991 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: RHV
DATE: August 16, 2000
SCALE: As Shown
W.O. NO.: 99-156

4 SHEET OF 9

SOILS LEGEND		
SYMBOL	DESCRIPTION	SOIL GROUP
BcB2	Heavy clay, loam, to heavy clay, moderately eroded	C
ErB2	Light gray, loam, to heavy clay, moderately eroded	B
lB2	Light gray, loam, to heavy clay, moderate slopes	C
KcB2	Heavy clay, loam, to heavy clay, moderately eroded	D
SrB2	Light gray, loam, to heavy clay, moderately eroded	B
NcA	Light gray, loam, to heavy clay, moderate slopes	D

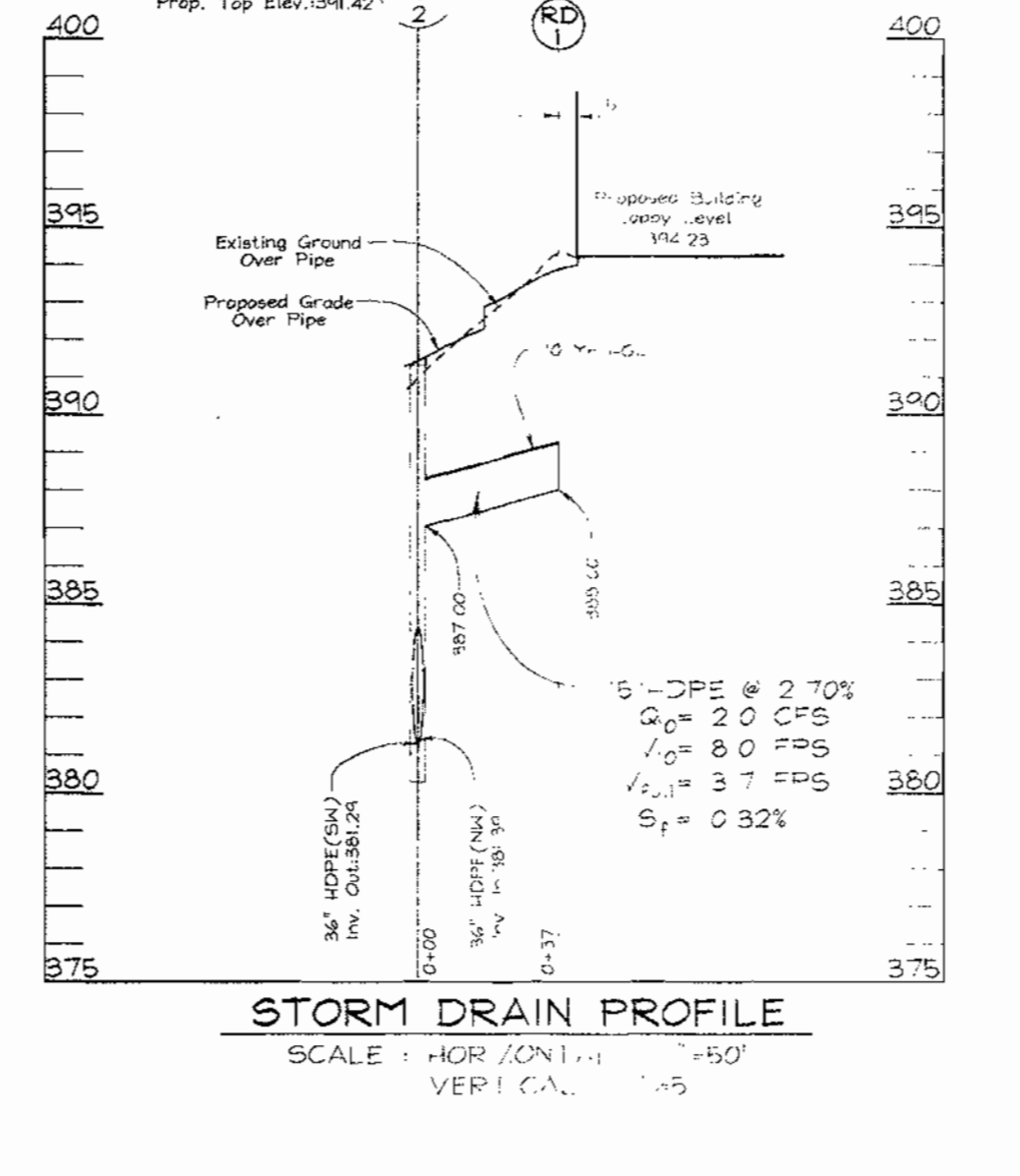
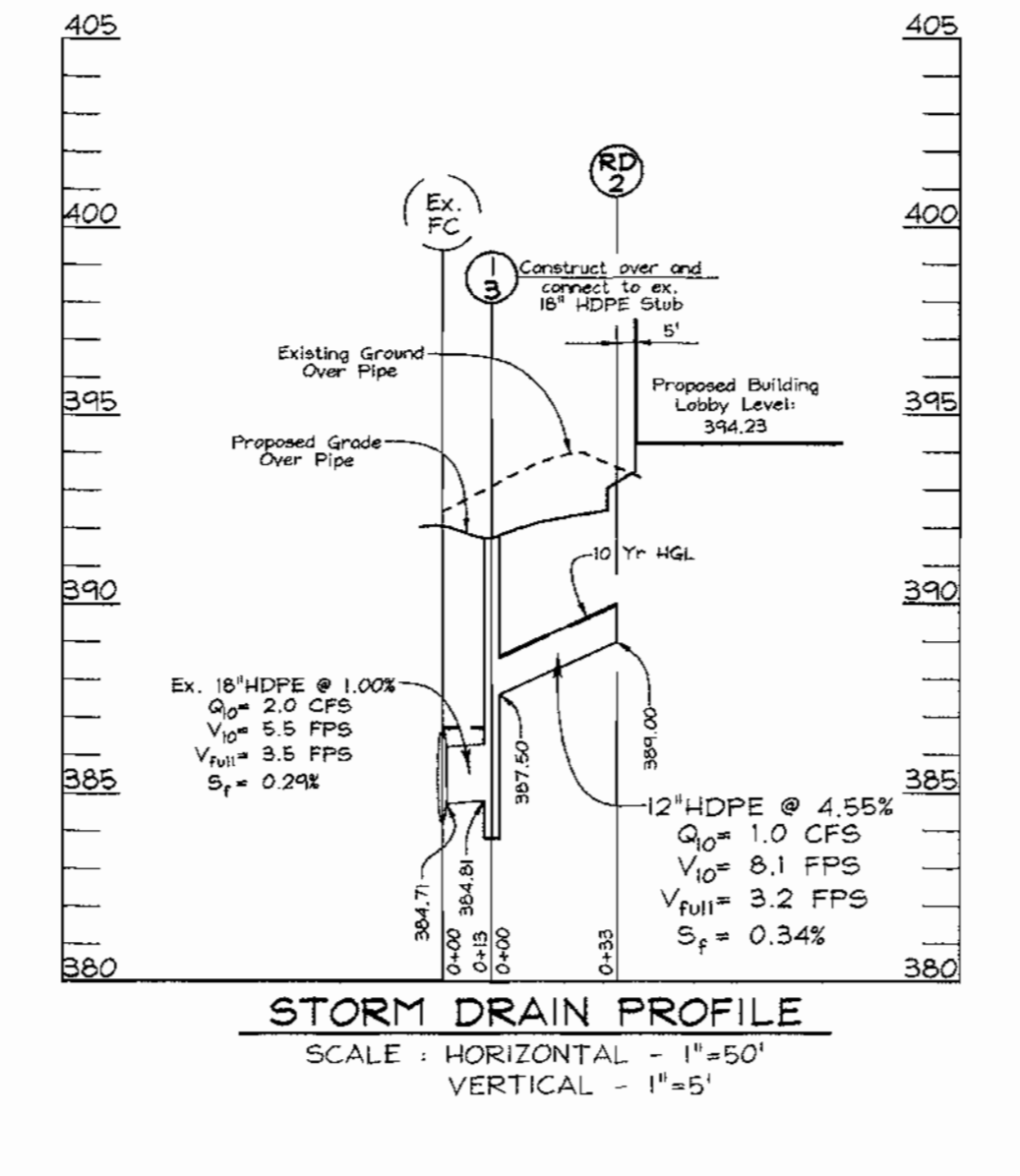
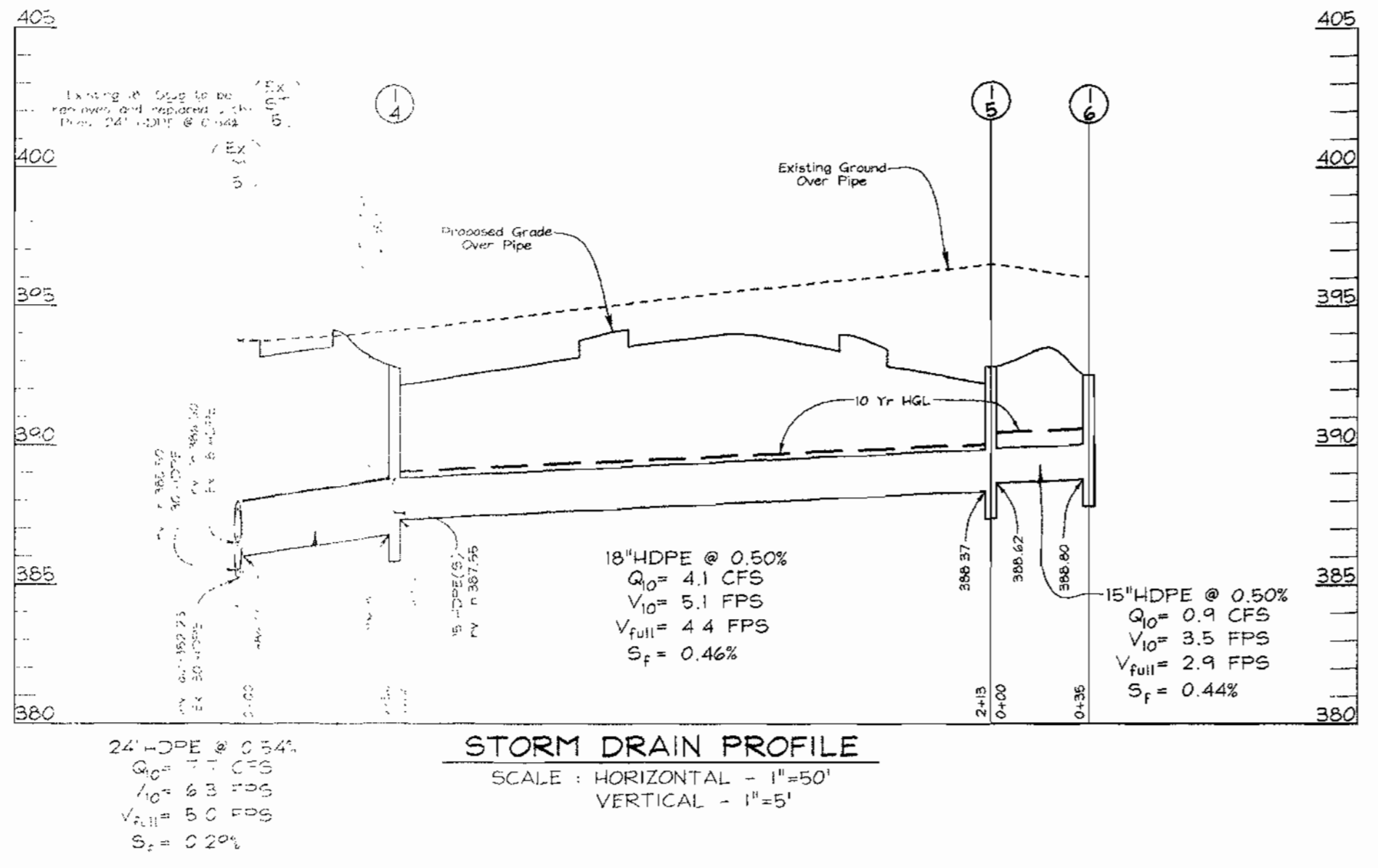
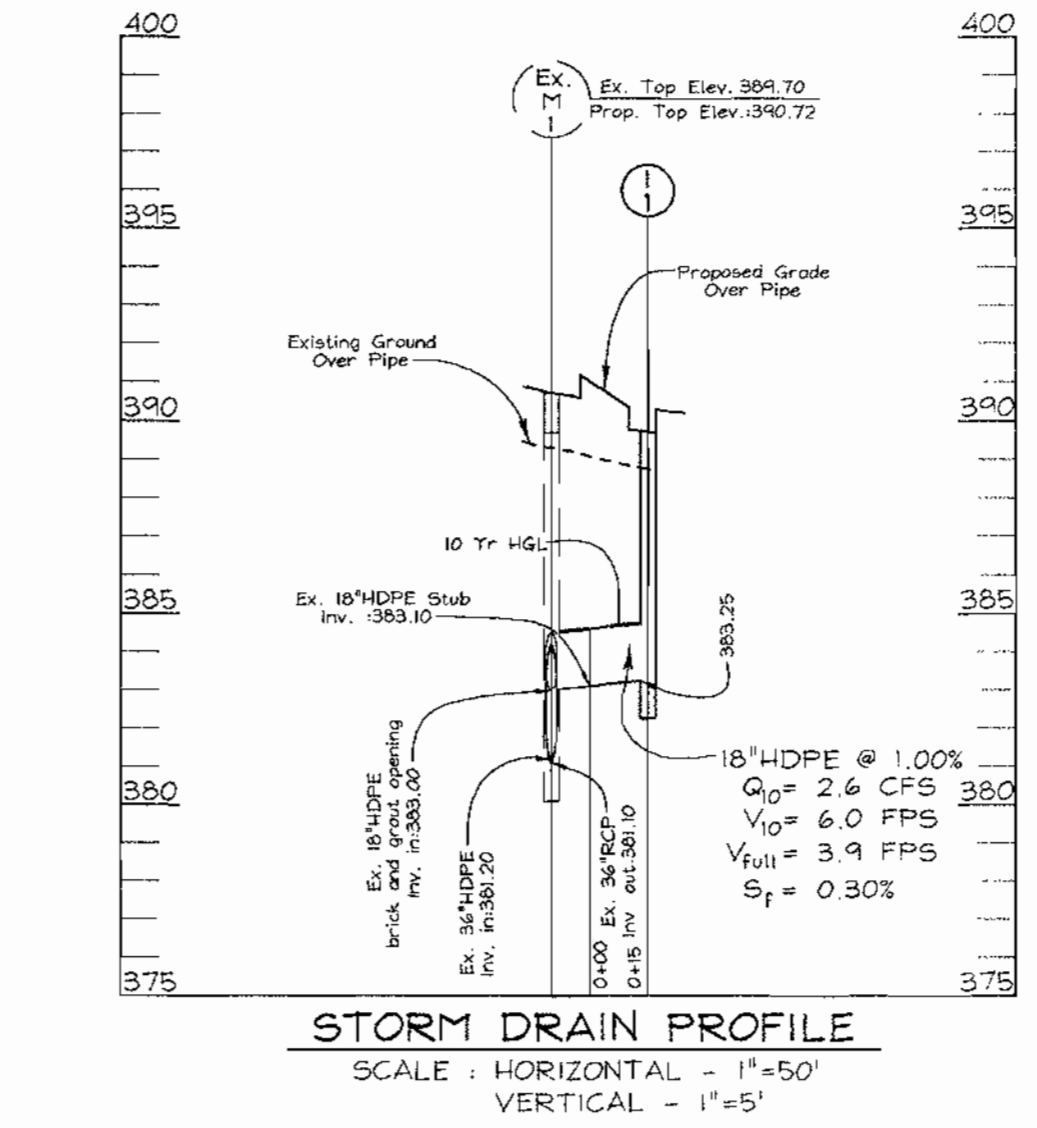
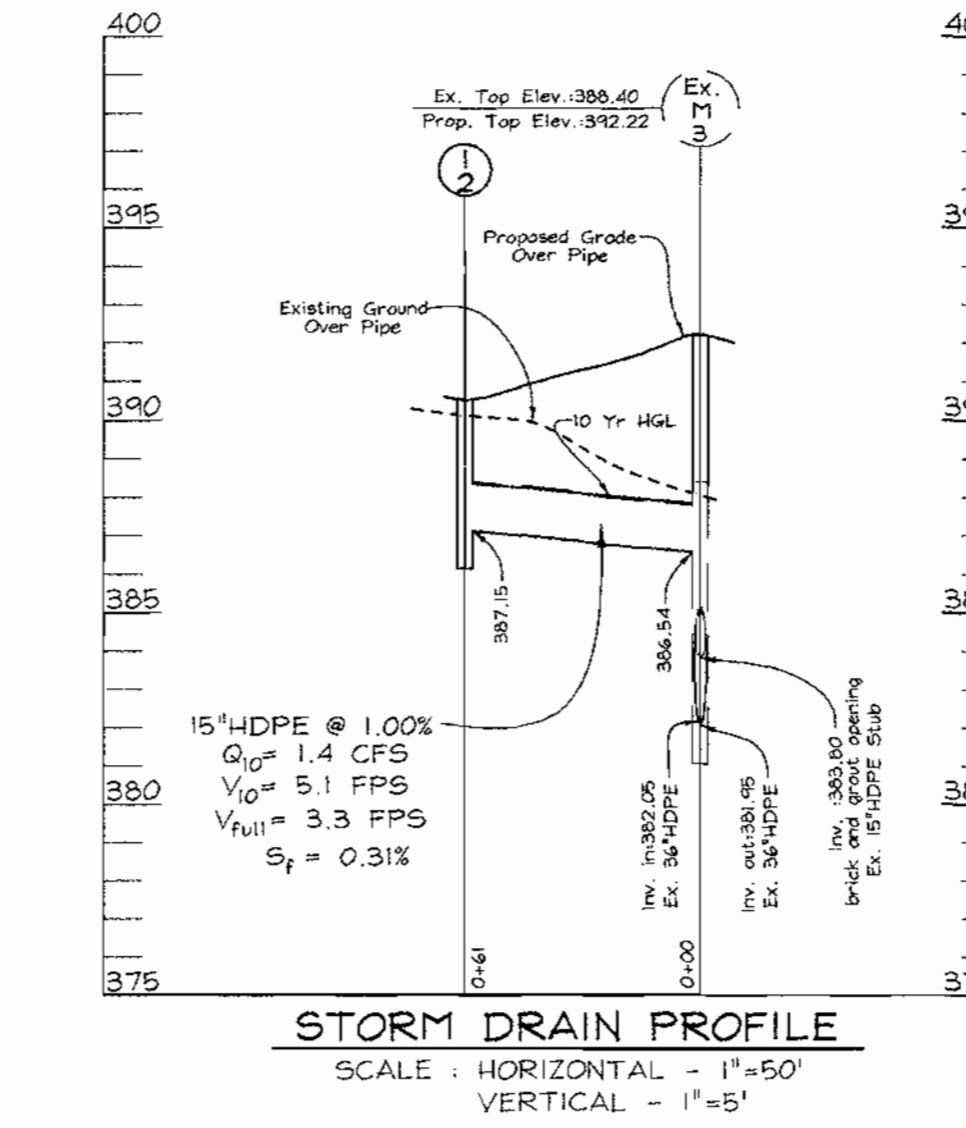
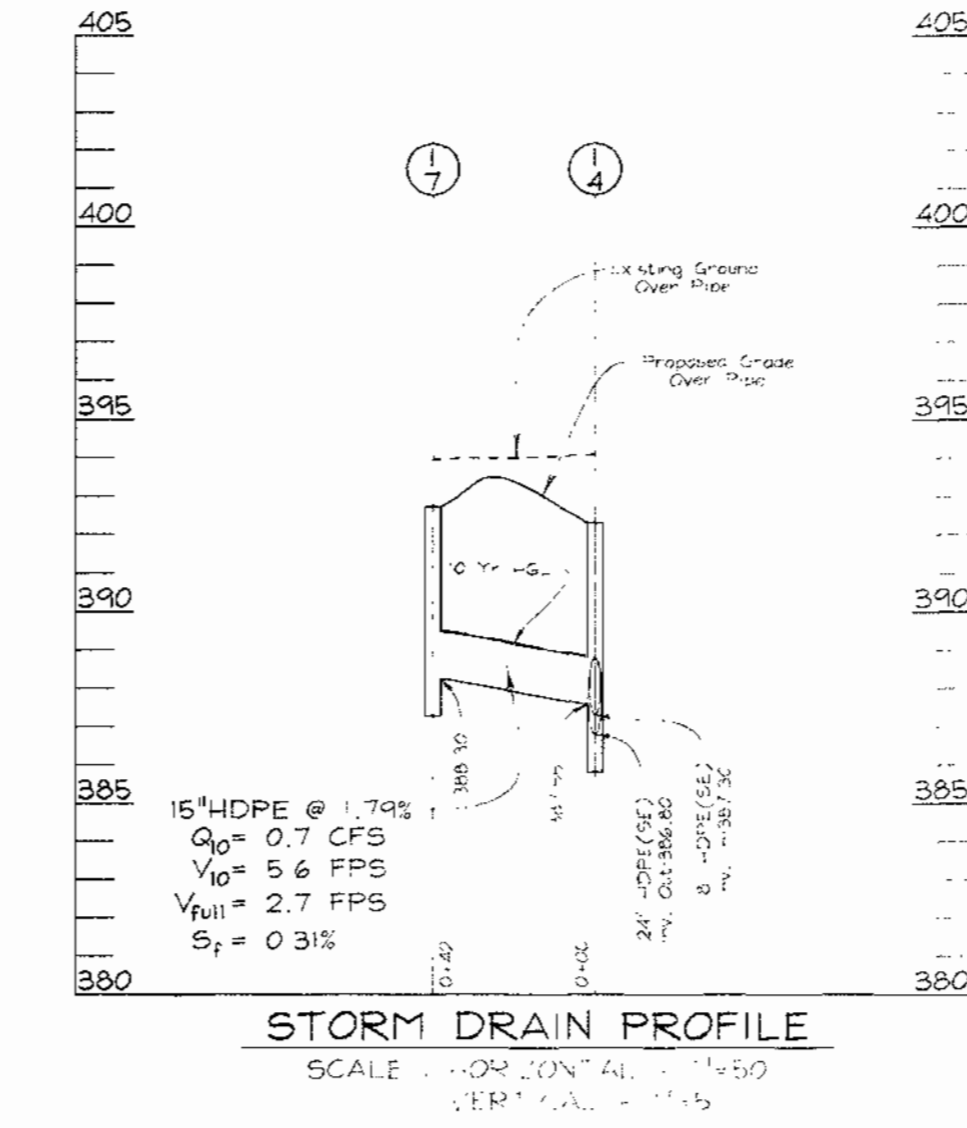
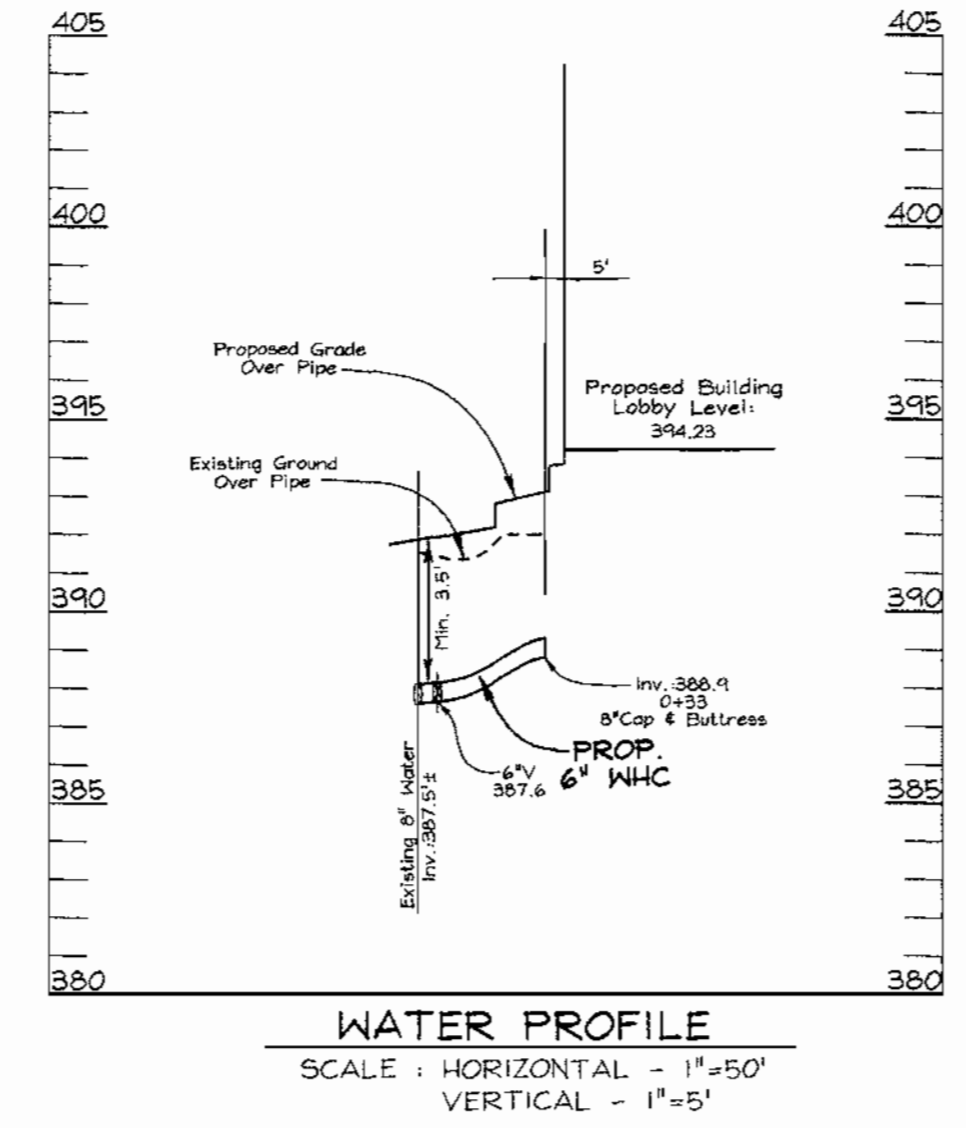
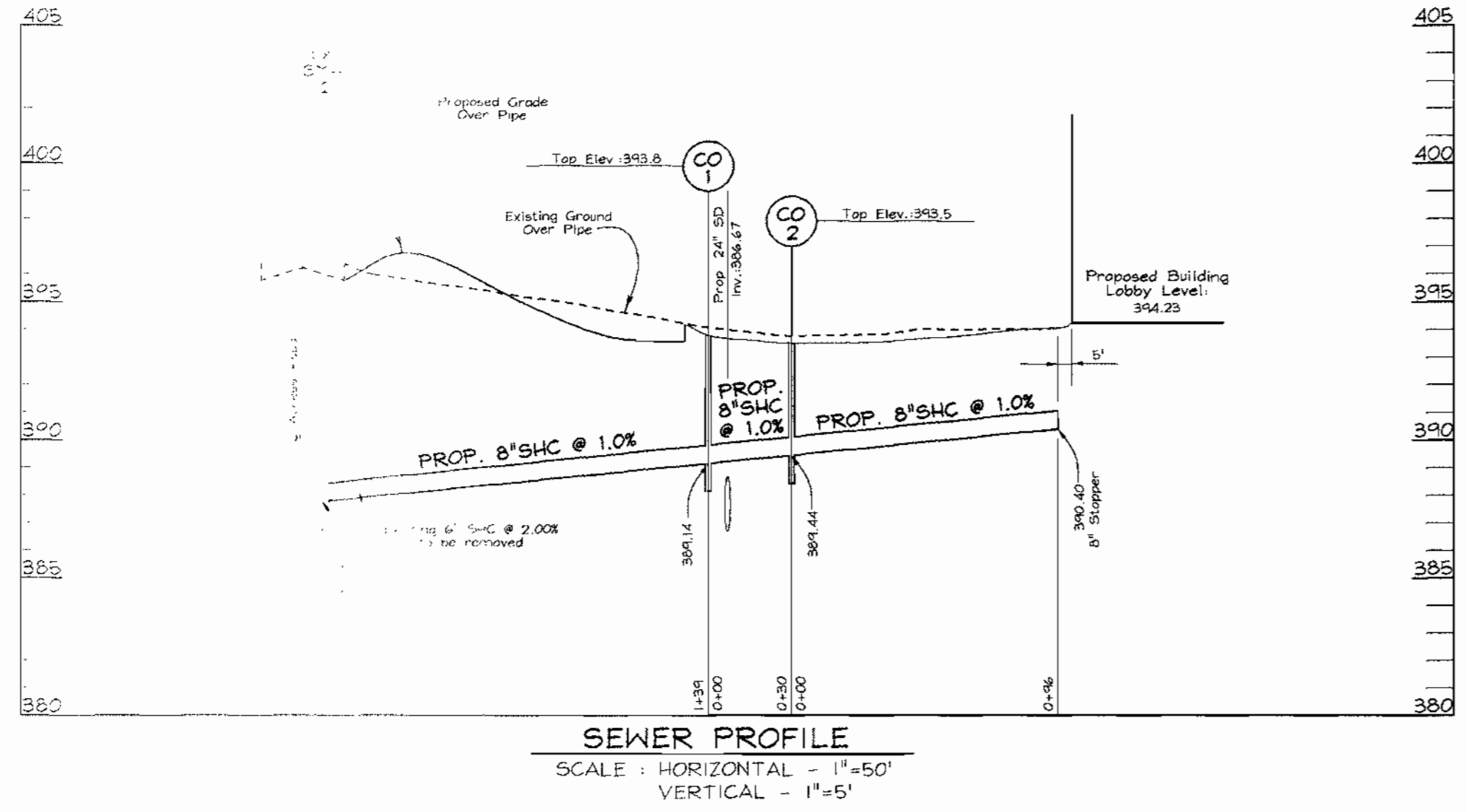
NOTE: For planning or other preliminary information purposes only.



**DRAINAGE AREA MAP
FOR STORM DRAIN
HILTON GARDEN INN**
COLUMBIA ROUTE 108 COMMERCIAL
SECTION I AREA 1
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

**VOGEL &
ASSOCIATES**
ENGINEERS-SURVEYORS-PLANNERS
3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3996

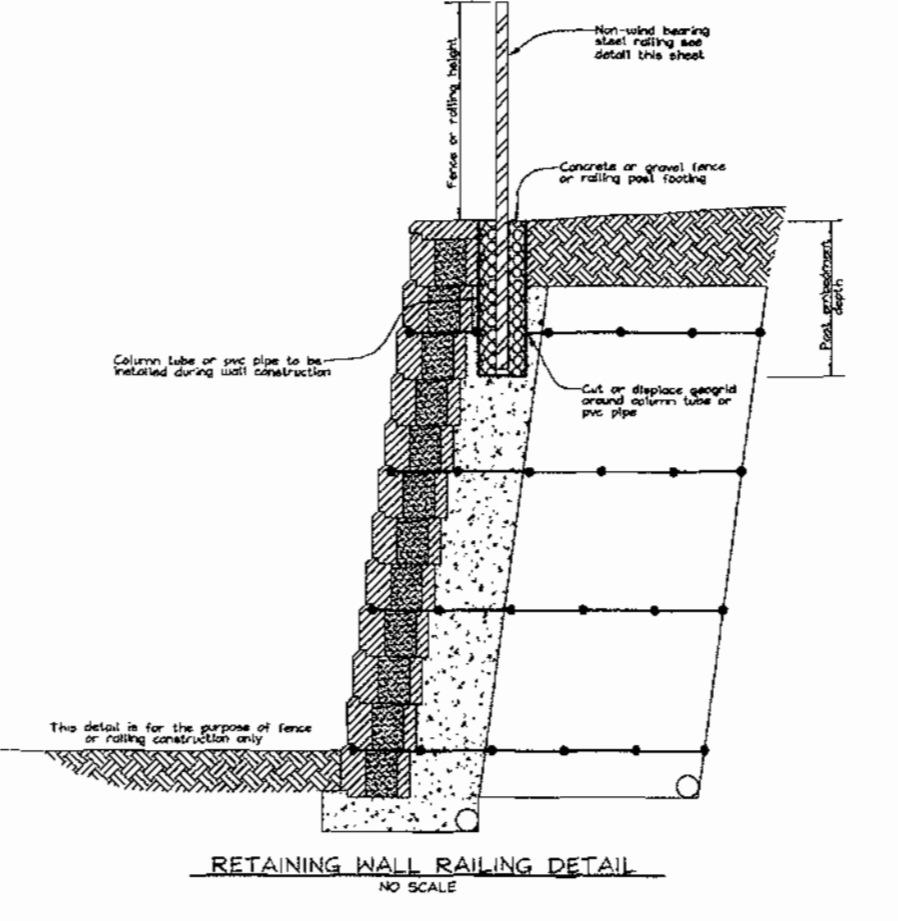
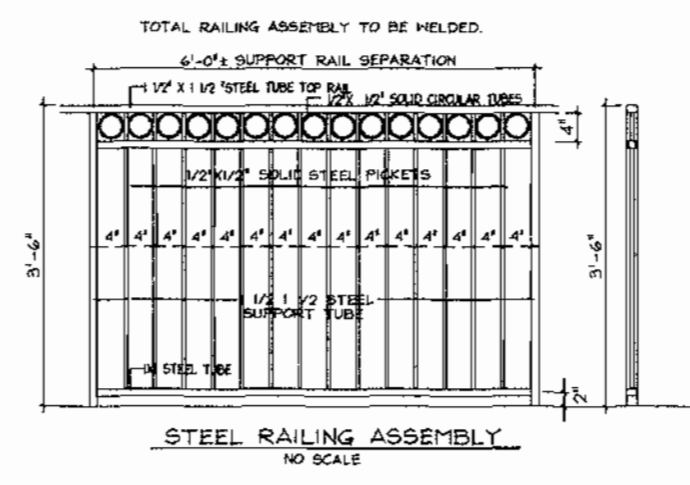
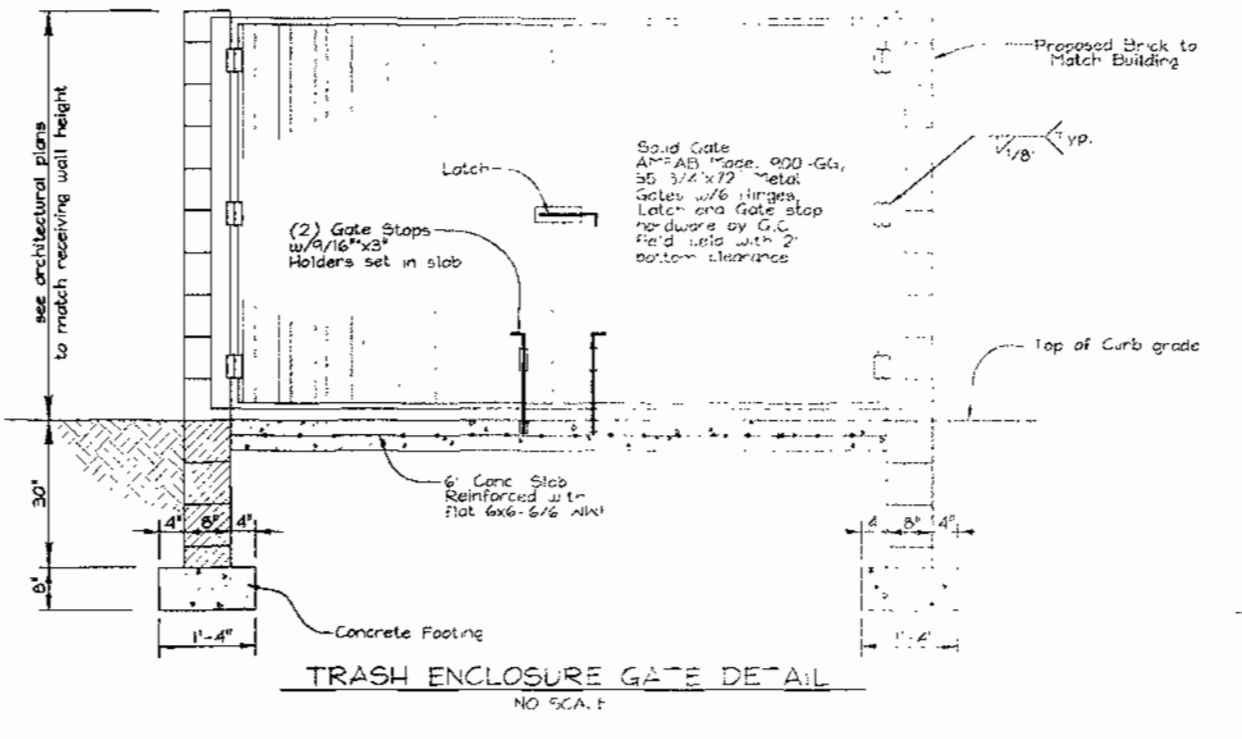
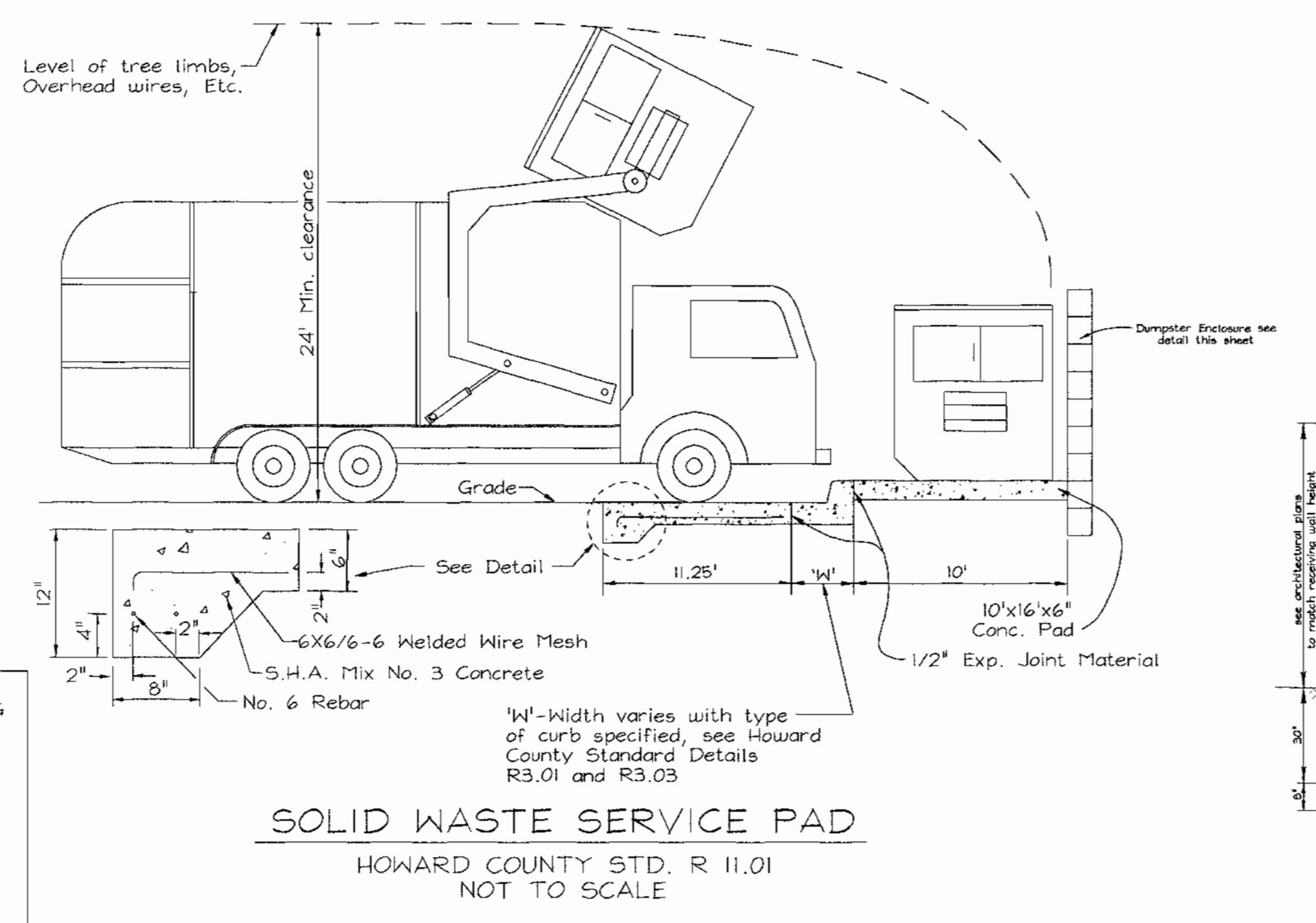
	DESIGN BY: RHV	<p>5 SHEET OF 9</p>
	DRAIN BY: PS	
	CHECKED BY: RHV	
	DATE: August 16, 2000	
SCALE: 1"=30'		
W.O. NO.: 99-156		



SIZE	TYPE	LENGTH
12"	HDPE	33 LF
15"	HDPE	175 LF
18"	HDPE	228 LF
24"	HDPE	56 LF

NO.	TYPE	LOCATION	TOP ELEV.	INV. IN.	INV. OUT.	REMARKS
1-1	Double Type 'S' Combination Inlet	N 561,544 E 1,368,695	390.28	-	383.25	SD 4.34
1-2	Double Type 'S' Inlet	N 561,676 E 1,368,609	390.53	-	387.15	SD 4.32
1-3	Type 'S' Inlet	N 561,727 E 1,368,679	391.74	387.50	384.81	SD 4.22
1-4	Precast A-10	N 561,764 E 1,368,795	392.95	387.55	386.80	SD 4.41
1-5	Precast A-10	N 561,596 E 1,368,925	392.75	388.62	386.37	SD 4.41
1-6	Yard Inlet	N 561,574 E 1,368,898	392.50	-	388.80	SD 4.14
1-7	Yard Inlet	N 561,722 E 1,368,791	392.30	-	388.30	SD 4.14

NOTE: Top elevations are to the center of the structure at top of curb for A-10 and Type 'S' Comb. inlets, and top of grate for Yard and Type 'S' inlets.



DEVELOPER

Star Hotels
1219 Duskview Court
Clarksville, MD 21029
410.988.4363
Mr. M. Majumdar

OWNER

Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia, MD 21044
410.992.6000

STORM DRAIN, WATER AND SEWER PROFILES AND MISCELLANEOUS DETAILS
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION I AREA I
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS

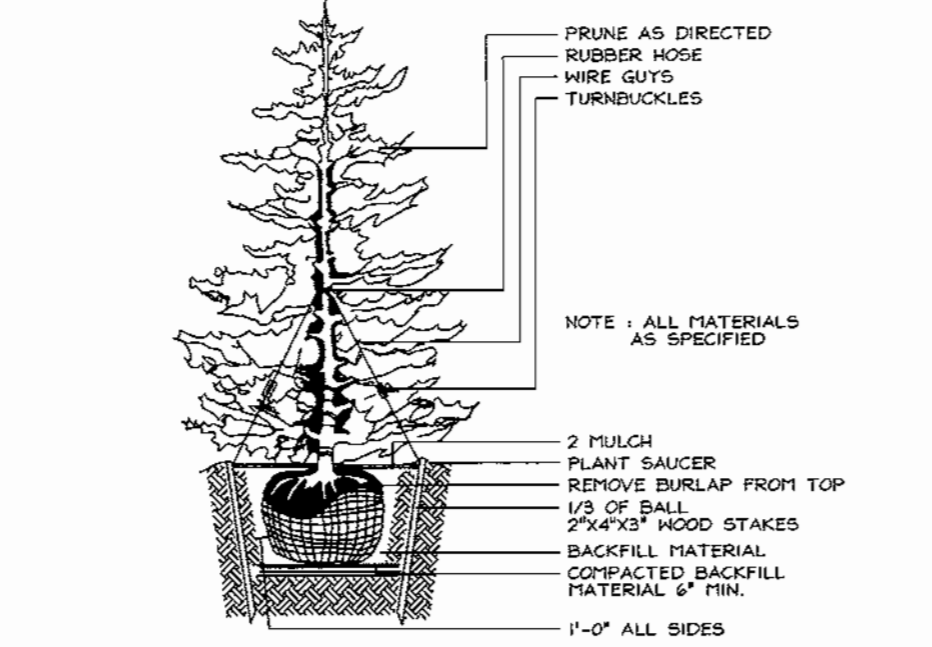
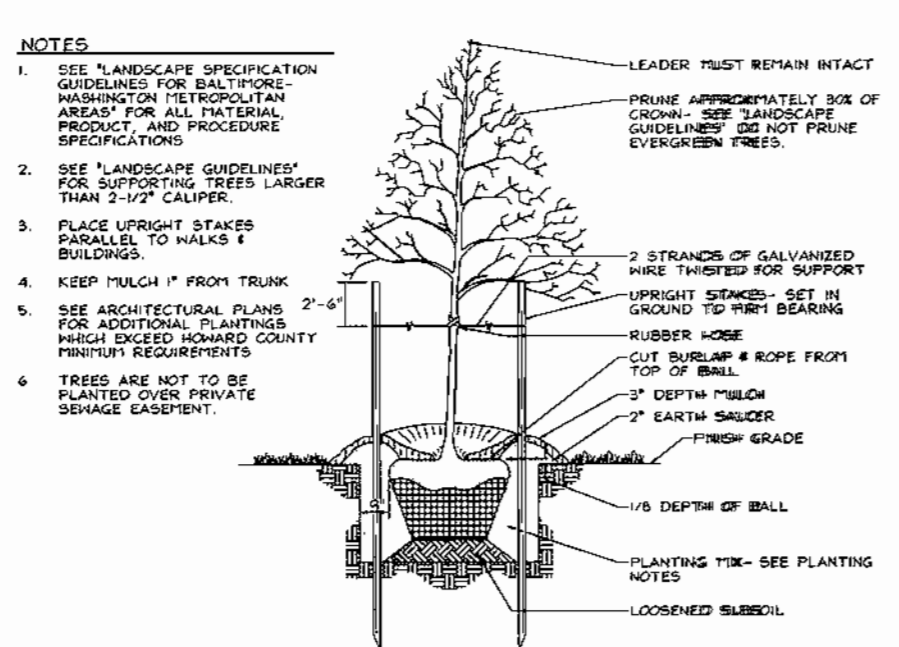
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966



DESIGN BY: RHV/PS
DRAWN BY: PS
CHECKED BY: RHV
DATE: August 16, 2000
SCALE: 1"=30'
W.O. NO.: 99-156

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 6/14/00

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
DATE 9/5/00
DATE 9/7/00
DATE 9/21/00



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

TYPICAL EVERGREEN TREE PLANTING DETAIL
NOT TO SCALE

**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of parking spaces	117
Number of trees and parking lot islands required	6
Number of trees and parking lot islands provided	6
Shade Trees	-
Other Trees (2:1 Substitution)	-

GENERAL NOTES

- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual. The required parking and perimeter landscaping will be bonded per this submission.
- Financial Surety for the required landscaping must be posted as part of the Grading Permit in the amount of \$7,650.00 for 16 shade trees and 19 evergreen trees.
- Drive lighting to be Kim Entablature ET Luminaire; 25' black steel round poles, 250 Watt Metal Halide. Pedestrian lighting to be Spectra SP2 with black angled hood and GR3 glass refractor. Pole to be 10' black aluminum. Lamp to be 100 watt metal halide.

LANDSCAPE SCHEDULE

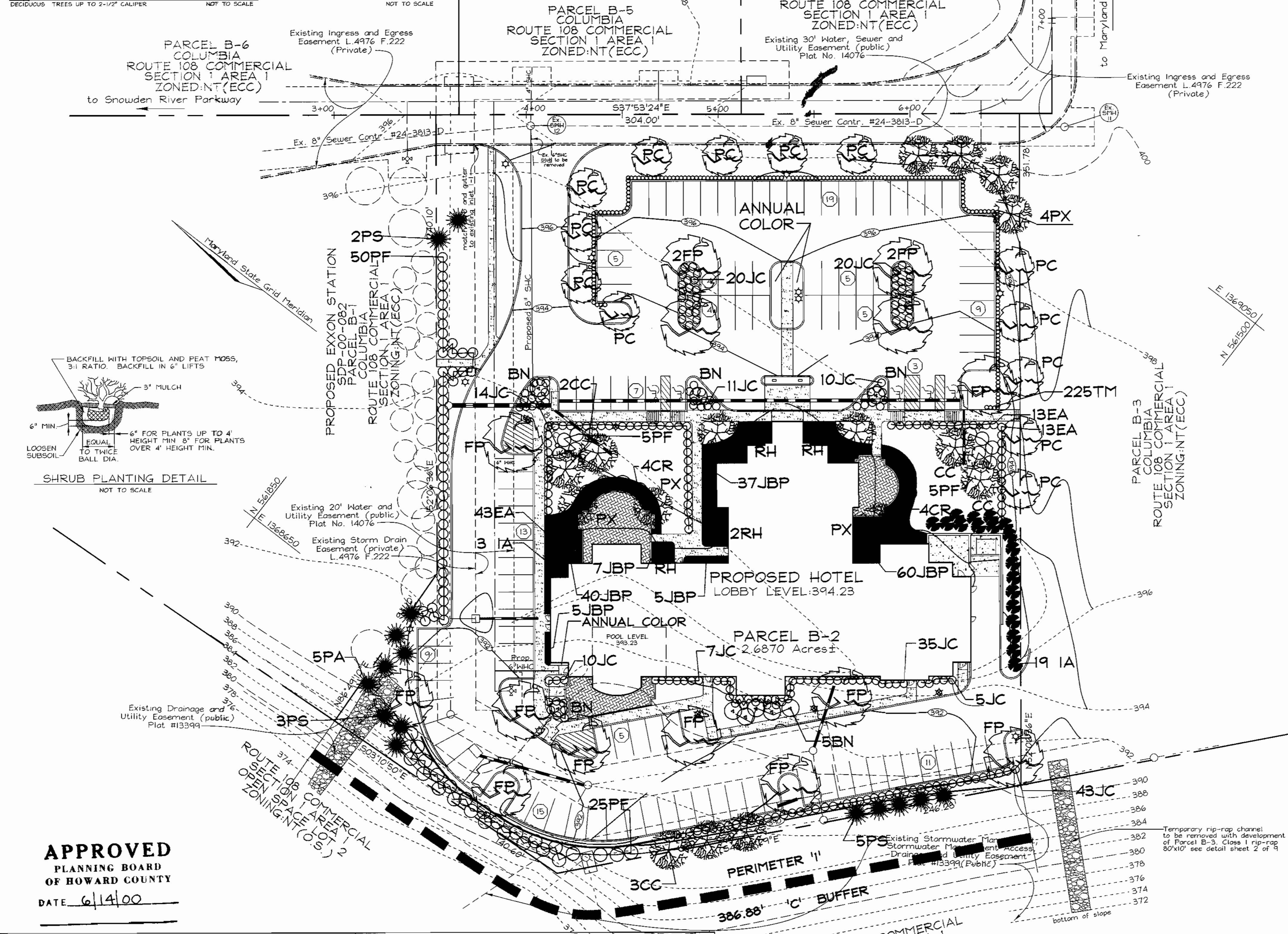
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
BN	9	Betula nigra 'Heritage' Heritage River Birch	14 - 16' Ht.	B & B
CC	7	Carpinus caroliniana American Hornbeam	2 - 2 1/2" Cal	B & B
CR	8	Cornus rutgersensis 'Aurora' White Steier Dogwood	9 - 11' Ht.	B & B
EA	69	Euonymus alata 'Compacta' Compact Winged Euonymus	30" - 36" Ht.	B & B
FP	14	Fraxinus p. 'Patmore' Patmore Green Ash	3-3 1/2" Cal.	B & B
IA	21	Ilex attenuata 'Fosteri' Foster's Holly	30" - 36" Ht.	B & B
JC	160	Juniperus d.e. 'Parsonii' Parson's Juniper	18"-24" Spd.	B & B
JBP	160	Juniperus c. var. sargentii 'Glauca' Blue Sargent Juniper	2 Gallon	4' o.c.
PA	5	Picea abies Norway Spruce	7 - 9' Ht.	B & B
PC	13	Pyrus c. 'Cleveland Select' Cleveland Select Pear	3-3 1/2" Cal.	B & B
PF	85	Photinia 'Fraseri' Fraser Photinia	30" - 36" Ht.	B & B
PS	10	Pinus strobus Eastern White Pine	7 - 9' Ht.	B & B
PX	9	Prunus c. 'Newport' Purpleleaf Flowering Plum	2 1/2"-3" Cal.	B & B
RH	5	Rhododendron hy. 'PJM' P-J-M Rhododendron	30"-36" Spd.	B & B
TM	225	Taxus m. Hicksii Hicks Yew	30"-36" Ht.	2' o.c.

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- MAINTENANCE TO INCLUDE MONITORING AND HAND WATERING AS NEEDED FOR THE FIRST TWO GROWING SEASONS TO ESTABLISH WOODY PLANTS. SPECIALIZED PLANTING AREAS INCLUDING INTERIOR COURTYARDS AND ANNUAL BEDS MAY REQUIRE REGULAR HAND WATERING OR IRRIGATION.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

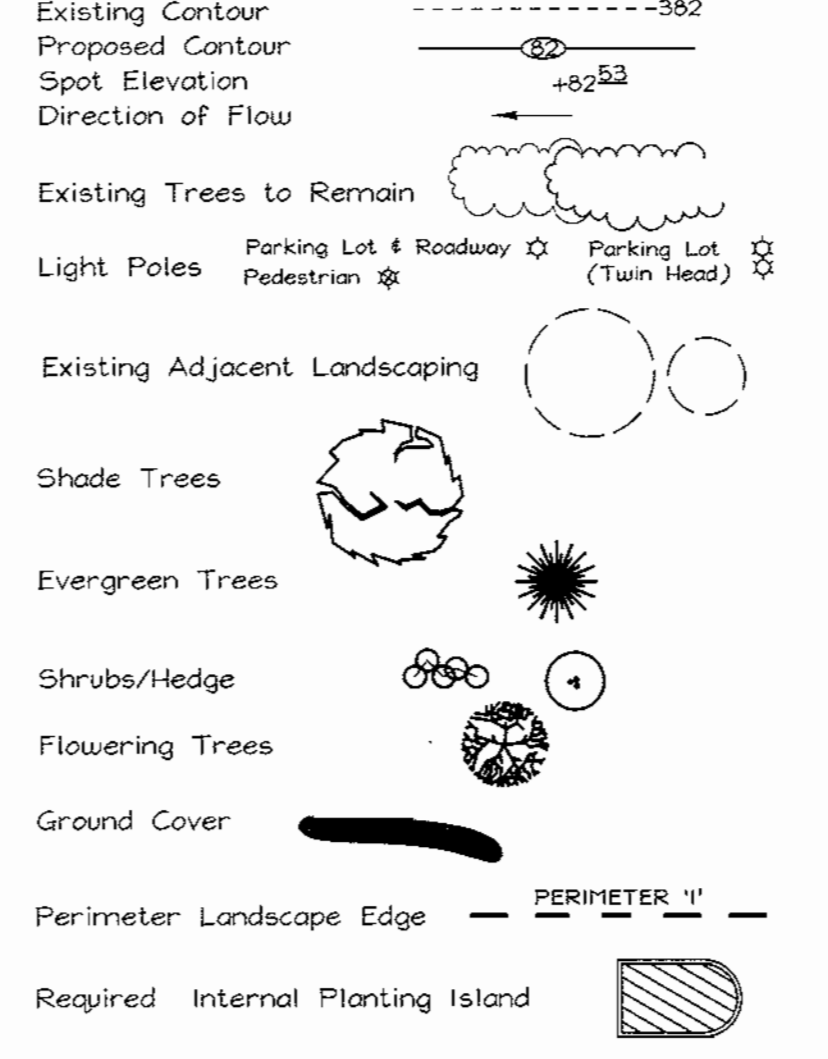
**SCHEDULE A
PERIMETER LANDSCAPE EDGE***

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation		1
Landscape Type		C
Linear Feet of Roadway Frontage/Perimeter		386.88
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)		No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)		No
Number of Plants Required		
Shade Trees		1:40 10
Evergreen Trees		1:20 19
Shrubs		-
Number of Plants Provided		
Shade Trees		4
Evergreen Trees		9
Other Trees (2:1 Substitution)		3
Shrubs (10:1 Substitution)		68
Describe Plant Substitution Credits Below if needed)		

* This plan prepared per New Town Alternative Compliance method. Substitutions per HRD.
* Parcel B-5 is an internal parcel within a subdivision.



LEGEND



**LANDSCAPE PLAN
HILTON GARDEN INN**

TAX MAP #37
6TH ELECTION DISTRICT

PARCEL B-5
HOWARD COUNTY, MARYLAND

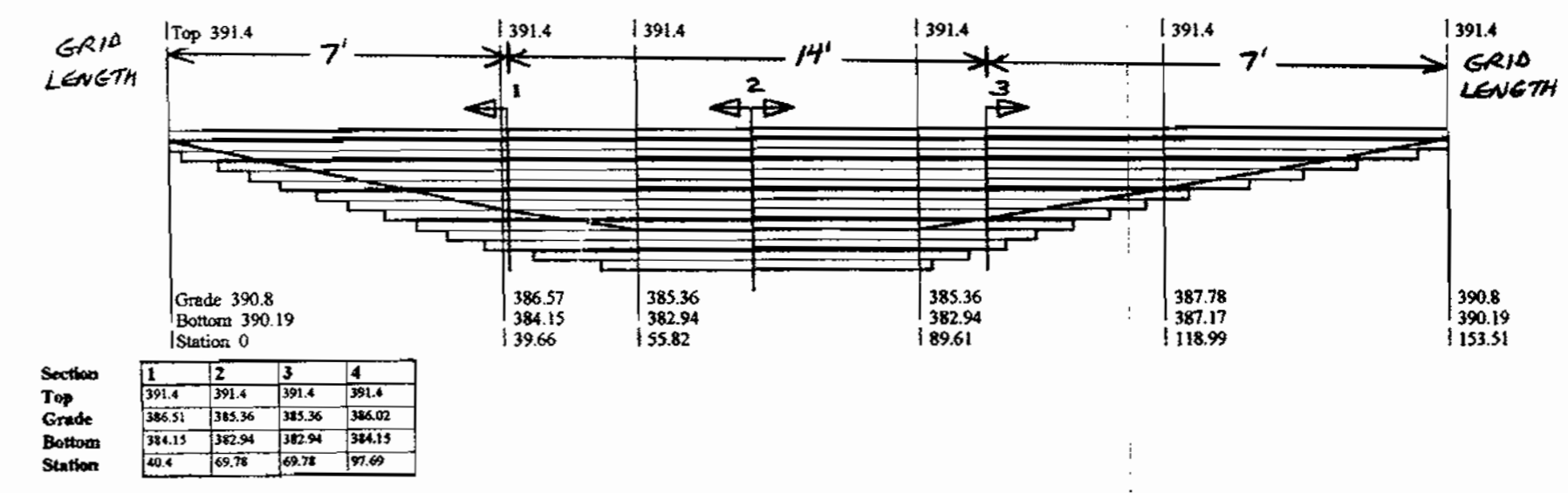
VAVOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS
3891 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3965

DESIGN BY: MIM
DRAWN BY: PS/MIM
CHECKED BY: RHV
DATE: August 21, 2000
SCALE: 1"=30'
W.O. NO.: 99-156

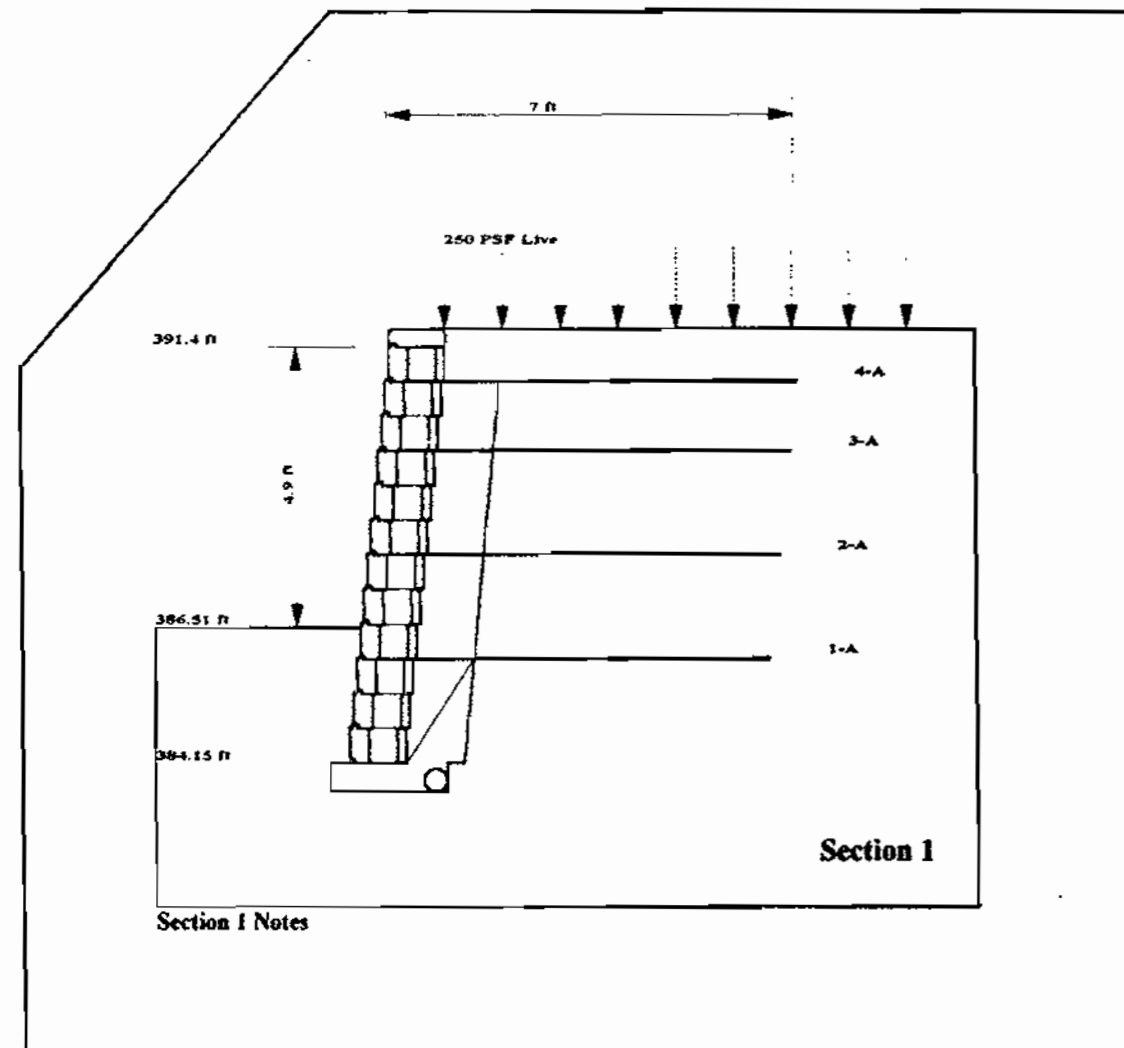
7 SHEET OF 9

ALLAN BLOCK RETAINING WALL SYSTEM

As manufactured by NITTERHOUSE MASONRY PRODUCTS, LLC
Chambersburg, PA 717-267-4500



SEE SHEET #G FOR HANDRAIL DETAIL FOR RETAINING WALL



Allan Block Corp.
7400 Metro Blvd
Suite 185
Edina, MN 55439
Phone 612-835-5309
Fax 612-835-5013
http://www.allanblock.com

Nitterhouse Masonry Prd.
859 Cleveland Ave. PO Box 692
Chambersburg, PA 17201
717-267-4500
717-264-7535 - fax

AB Classic
Total Wall Height = 7.25 Feet
Block Height = 0.604 Feet
Angle of Setback = 6 Deg
Depth of Block = 0.97 Feet
Length of Block = 1.469 Feet

Infill Soil	Retained Soil
Friction Angle = 25 Deg	Friction Angle = 25 Deg
Unit Weight = 120 PCF	Unit Weight = 120 PCF

Foundation Soil
Friction Angle = 25 Deg
Cohesion = 0 PSF
Unit Weight = 120 PCF

Bearing Capacity
Factor of Safety = 4.38

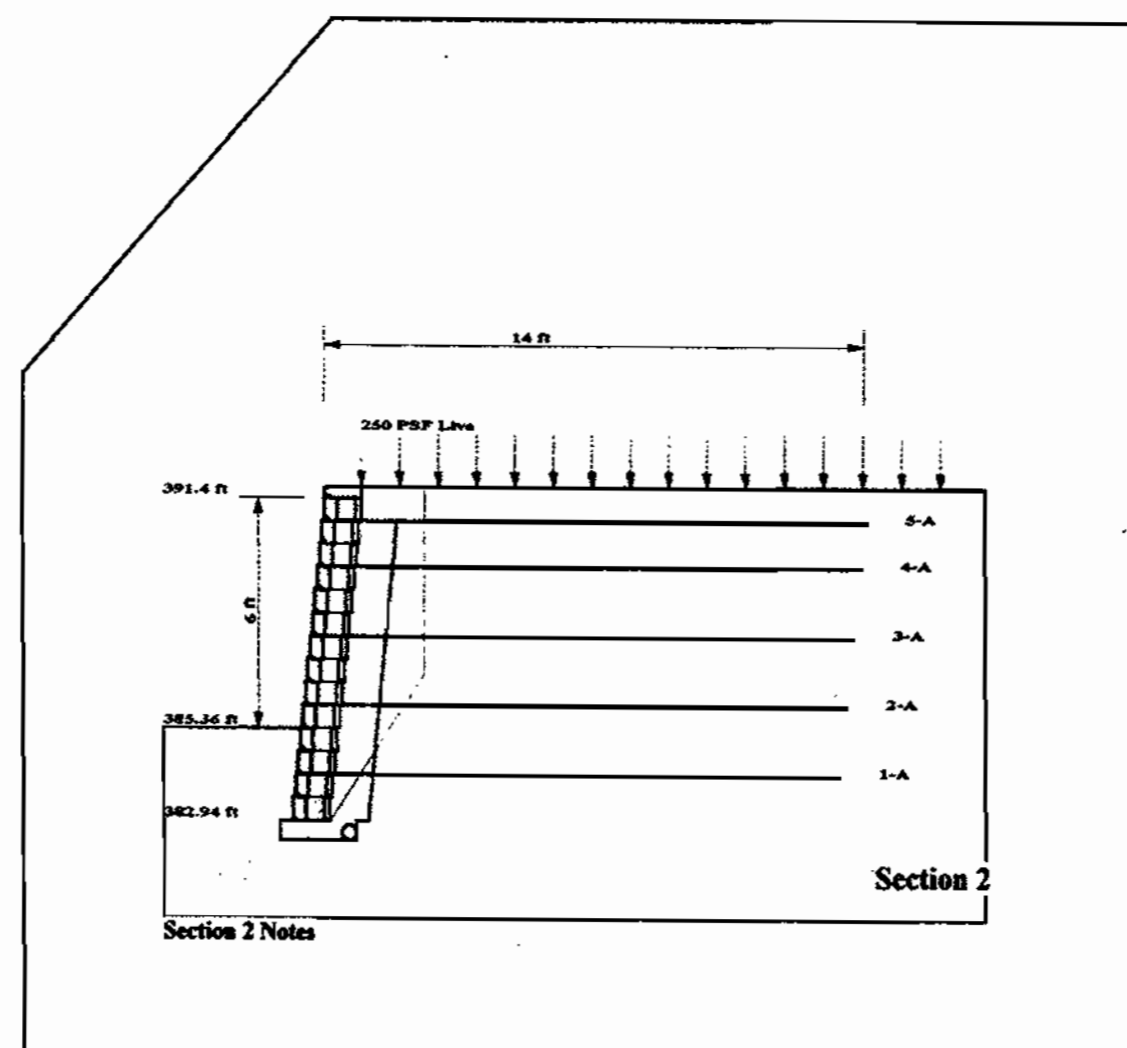
Safety Factors Static
Actual Sliding = 2.012
Actual Overturning = 6.191

Safety Factors Seismic
Actual Sliding = N.A.
Actual Overturning = N.A.

Geogrid Legend
A-Miramid 3XT
B-Miramid 5XT
C-Miramid 7XT
a-Crowned Connection
Min. Length of Geogrid = 7 Feet

1 of 3

ABwalls 2000 V.3 Allan Block Corporation



Allan Block Corp.
7400 Metro Blvd
Suite 185
Edina, MN 55439
Phone 612-835-5309
Fax 612-835-5013
http://www.allanblock.com

Nitterhouse Masonry Prd.
859 Cleveland Ave. PO Box 692
Chambersburg, PA 17201
717-267-4500
717-264-7535 - fax

AB Classic
Total Wall Height = 8.46 Feet
Block Height = 0.604 Feet
Angle of Setback = 6 Deg
Depth of Block = 0.97 Feet
Length of Block = 1.469 Feet

Infill Soil	Retained Soil
Friction Angle = 25 Deg	Friction Angle = 25 Deg
Unit Weight = 120 PCF	Unit Weight = 120 PCF

Foundation Soil
Friction Angle = 25 Deg
Cohesion = 0 PSF
Unit Weight = 120 PCF

Bearing Capacity
Factor of Safety = 4

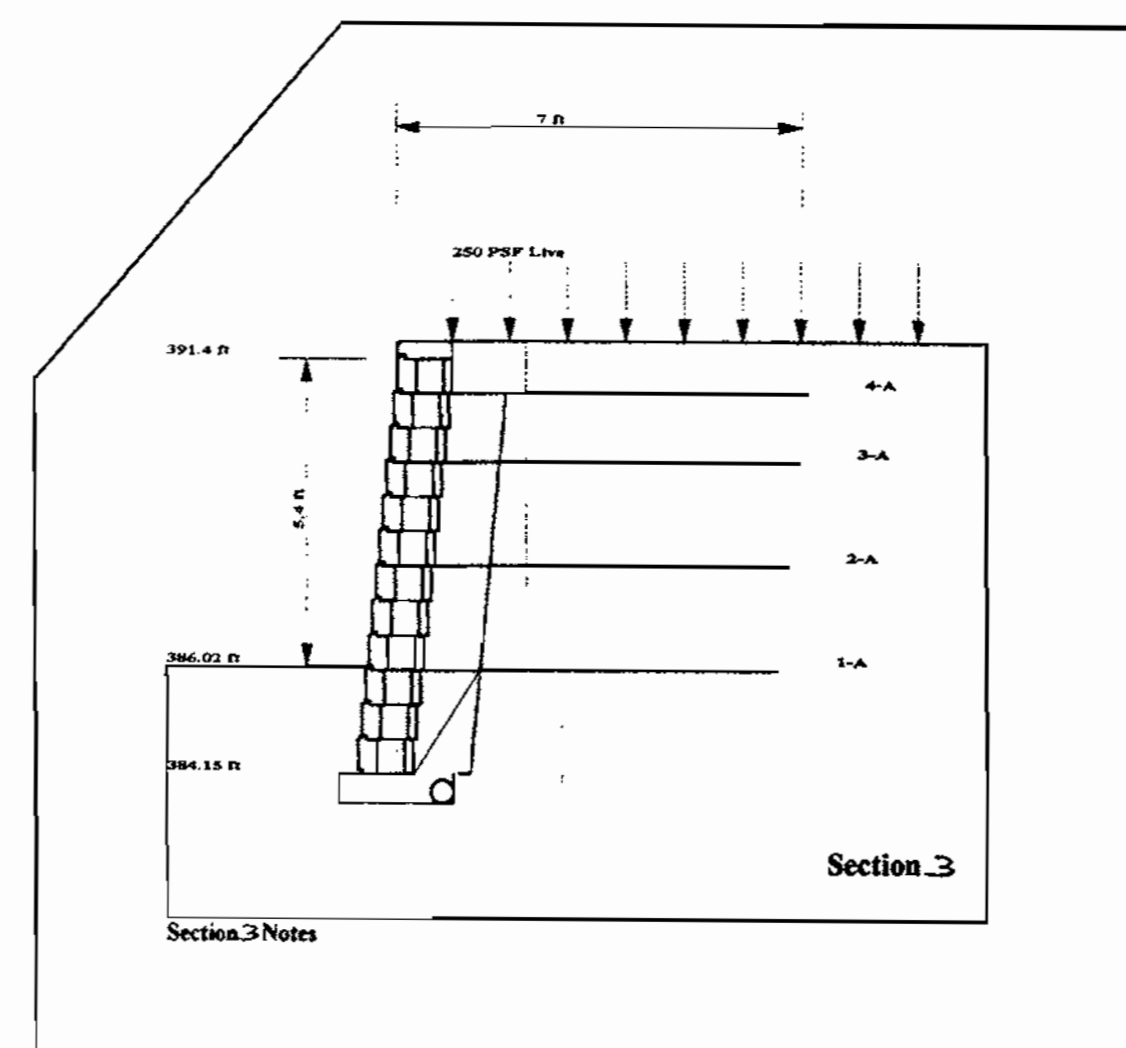
Safety Factors Static
Actual Sliding = 3.518
Actual Overturning = 17.678

Safety Factors Seismic
Actual Sliding = N.A.
Actual Overturning = N.A.

Geogrid Legend
A-Miramid 3XT
B-Miramid 5XT
C-Miramid 7XT
a-Crowned Connection
Min. Length of Geogrid = 14 Feet

2 of 3

ABwalls 2000 V.3 Allan Block Corporation



Allan Block Corp.
7400 Metro Blvd
Suite 185
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Phone 612-835-5309
Fax 612-835-5013
http://www.allanblock.com

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859 Cleveland Ave. PO Box 692
Chambersburg, PA 17201
717-267-4500
717-264-7535 - fax

AB Classic
Total Wall Height = 7.25 Feet
Block Height = 0.604 Feet
Angle of Setback = 6 Deg
Depth of Block = 0.97 Feet
Length of Block = 1.469 Feet

Infill Soil	Retained Soil
Friction Angle = 25 Deg	Friction Angle = 25 Deg
Unit Weight = 120 PCF	Unit Weight = 120 PCF

Foundation Soil
Friction Angle = 25 Deg
Cohesion = 0 PSF
Unit Weight = 120 PCF

Bearing Capacity
Factor of Safety = 3.77

Safety Factors Static
Actual Sliding = 2.012
Actual Overturning = 6.191

Safety Factors Seismic
Actual Sliding = N.A.
Actual Overturning = N.A.

Geogrid Legend
A-Miramid 3XT
B-Miramid 5XT
C-Miramid 7XT
a-Crowned Connection
Min. Length of Geogrid = 7 Feet

3 of 3

ABwalls 2000 V.3 Allan Block Corporation

Project Name: HILTON GARDEN INN
Location: Howard County, MD
Project Number: DS201039
Wall Number:
Designer: DKS
Date: 5-31-00

Project Name: HILTON GARDEN INN
Location: Howard County, MD
Project Number: DS201039
Wall Number:
Designer: DKS
Date: 5-31-00

Project Name: HILTON GARDEN INN
Location: Howard County, MD
Project Number: DS201039
Wall Number:
Designer: DKS
Date: 5-31-00

6/14/00

SEE THE SUBMITTED 8 1/2 X 11 SET FOR ALL
INTERNAL AND EXTERNAL CALCULATIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

John P. Smith 9/7/00
DIRECTOR DATE

Richard Blood 9/6/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. ... 9/5/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION MKC DATE

DEVELOPER
Star Hotels
12119 Duskview Court
Clarksville, MD 21029
410-988-9363
Mr. M. Majmudar

OWNER
Howard Research and Development Corp.
10275 Little Patuxent Parkway
Columbia, MD 21044
410-992-6000

RETAINING WALL DETAILS
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION 1 AREA 1

TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3801 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3666

DESIGN BY: DKS
DRAWN BY: DKS
CHECKED BY: WKR
DATE: Aug 22, 2000
SCALE: AS SHOWN
N.O. NO.: 99-156

8 SHEET OF 9

SPECIFICATION FOR SEGMENTAL RETAINING WALL SYSTEMS

PART 1: GENERAL

- 1.01 Description
A. Work includes furnishing and installing segmental retaining wall (SRW) units to the lines and grades designated on the construction drawings. Also included is furnishing and installing appurtenant materials required for construction of the retaining wall as shown on the construction drawings.
1.02 Reference Standards
A. Segmental Retaining Wall Units
1. ASTM C 140 - Sampling and Testing Concrete Masonry Units
B. Geosynthetic Reinforcement
1. ASTM D 4595 - Tensile Properties of Geotextiles by the Wide-Width Strip Method.
2. ASTM D 5262 - Test Method for Evaluating the Unconfined Creep Behavior of Geosynthetics
3. GRI:GG1 - Single Rib Geogrid Tensile Strength
4. GRI:GG5 - Geogrid Pullout
C. Soils
1. ASTM D 698 - Moisture Density Relationship for Soils, Standard Method
2. ASTM D 422 - Gradation of Soils
3. ASTM 4318 - Atterberg Limits of Soil
D. Drainage Pipe
1. ASTM 3034 - Specification for Polyvinyl Chloride (PVC) Plastic Pipe
2. ASTM D1248 - Specification for Corrugated Plastic Pipe
E. Where Allan Block specifications and reference documents conflict with these specifications, these specifications hold precedence.

PART 2: MATERIALS

- 2.01 Segmental Retaining Wall Units
A. SRW units shall be machine formed, Portland Cement concrete blocks specifically designed for retaining wall applications. SRW unit currently approved for this project is:
Allan Block Retaining Wall Units as manufactured by Nitterhouse Masonry Products.
B. SRW units shall be capable of being erected with the horizontal gap between adjacent units not exceeding 1/8 inches.
C. SRW units shall have a minimum 4" overlap of units on each successive course so that walls are interlocked and continuous.

- D. SRW units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength or permanence of the structure. Cracking or excessive chipping may be grounds for rejection. Units showing cracks longer than 1/2" shall not be used within the wall. Units showing chips visible at a distance of 30 feet from the wall shall not be used within the wall.
E. Concrete used to manufacture SRW units shall have a minimum 28 days compressive strength of 3,000 psi and a maximum moisture absorption rate, by weight, of 8% as determined in accordance with ASTM C 140. Compressive strength test specimens shall conform to the saw-cut coupon provisions of Section 5.2.4 of ASTM C140 with the following exception: Coupon shall be taken from the least dimension of the unit of a size and shape representing the geometry of the unit as a whole.
F. SRW units' molded dimensions shall not differ more than +/- 1/8 inch from that specified, except height which shall be +/- 1/16 inch as measured in accordance with ASTM C140.

- 2.02 Geosynthetic Reinforcement
A. Geosynthetic reinforcement shall consist of geogrids or geotextiles as indicated on the design plans. No grid substitutions shall be permitted without approval of Ryan & Associates.
2.03 Leveling Pad
A. Material for leveling pad shall consist of compacted sand, gravel, or combination thereof and shall be a minimum of 6 inches in depth. Lean concrete with strength of 200-300 psi and three inches thick maximum may also be used as a leveling pad material. The leveling pad should extend laterally at least a distance of 6 inches from the toe and heel of the lowestmost SRW unit. Install geosynthetic grid in level pads as directed in the design plans.

- 2.04 Drainage Aggregate
A. Drainage aggregate shall be angular, clean stone or granular fill meeting the following gradation as determined in accordance with ASTM D422

Table with 2 columns: Sieve Size, Percent Passing. Values include 1 inch (100%), 3/4 inch (75-100%), No. 4 (0-60%), No. 40 (0-50%), No. 200 (0-5%).

- 2.05 Drainage Pipe
A. The drainage collection pipe shall be a 4" perforated or slotted PVC, or corrugated HDPE pipe. The drainage pipe may be wrapped with a geotextile to function as a filter.
B. Drainage pipe shall be manufactured in accordance with ASTM D 3034 and/or ASTM D 1248
C. A drain pipe to daylight is mandatory on all walls 4' exposed height or taller.
2.06 Reinforced (Infill) Soil

- A. The reinforced soil material shall be free of debris. Unless otherwise noted on the plans, the reinforced material shall consist of the inorganic USCS soil types GP, GW, GM, GC, SW, SP, SM, SC meeting the following gradation, as determined in accordance with ASTM D422:
Sieve Size Percent Passing
4 inch 100
No. 4 20-100
No. 40 0-60
No. 200 0-35
B. The maximum particle size of poorly graded gravels (GP) (no fines) should not exceed 3/4 inch unless geosynthetic strength is reduced to account for additional installation damage from particles larger than this maximum.
C. The plasticity index of the fine fraction shall be less than 20, with the liquid limit less than 50.

PART 3: DESIGN PARAMETERS

- 3.01 Soil
A. Should the actual soil conditions observed during construction differ from those used for the design (as indicated on the plans), the site geotechnical engineer and the design engineer (Ryan & Associates) must be notified.
3.02 Design
A. Scope: The retaining wall design engineer (Ryan & Associates) scope consists of: reviewing the design provided by the block manufacturer or the Allan Block corporation; or preparing the entire wall design themselves and professionally sealing to enable the contractor to obtain the necessary permits. The design considers the internal and local stability of the reinforced soil mass and shall be in accordance with acceptable engineering practice and these specifications. Services outside this scope such as responding to the owners engineering firm (civil, structural, geotechnical or otherwise), provision of quality control testing & inspection, investigation of failed or non-conforming walls or any other services may be provided time & materials or for a negotiated fee.
B. For constructability considerations, maximum vertical spacing between geogrid layers shall be three courses on 3 and 6 degree walls and four courses on 12 degree walls.
C. Stormwater Management: The segmental retaining wall is not a stormwater management structure. Therefore, it is absolutely essential that surface water be prevented from entering the reinforced zone. This is usually accomplished by the site engineer (owner's civil engineer) grading the surface behind the wall to direct surface water to swales that issue the water around the wall ends, to inlets or over the top of the wall through scuppers. If water is directed to the wall, the top six inches of compacted fill over the reinforced zone must have impermeable soil such as GC, SC, CL or an underlying geomembrane (geosynthetic liner).

PART 4: CONSTRUCTION

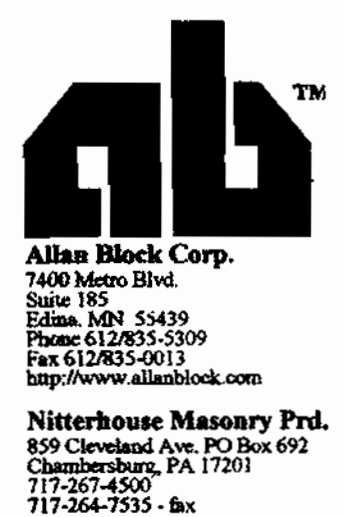
- 4.01 Inspection
A. The Owner or Owner's Representative is responsible for verifying that the contractor meets all the requirements of the specification. This includes all submittals for materials and design, qualifications,

- accordance with SRW manufacturer's installation guidelines. Walls shall be interlocked by overlapping successive courses.
E. Repeat procedures to extent of wall height.
F. The wall face cant shall not differ more than +/- 2 degrees from that specified.

- 4.06 Geosynthetic Reinforcement Placement
A. All geosynthetic reinforcement shall be installed at the proper elevation and orientation as shown on the wall profiles and details on the final construction plans. Partial grid coverage is not acceptable- no gaps shall be present between grid sections.
B. At the elevations shown on the plans, the geosynthetic reinforcement shall be laid horizontally on compacted infill and on top of the concrete SRW units. Embedment of the geosynthetic in the SRW units shall be consistent with SRW manufacturer's recommendations. Correct orientation of the geosynthetic reinforcement shall be verified by the Contractor to be in accordance with the geosynthetic manufacturer's recommendations. The highest strength direction of the geosynthetic must be perpendicular to the wall face.
C. Geosynthetic reinforcement layers shall be one continuous piece for their entire embedment length. Overlap of the geosynthetic in the design strength direction (perpendicular to the wall face) is not permitted.
D. Tracked construction equipment shall not be operated directly on the geosynthetic reinforcement. A minimum of 6 inches of backfill is required prior to operation of tracked vehicles over the geosynthetic. Turning should be kept to a minimum. Rubber-tired equipment may pass over the geosynthetic reinforcement at slow speeds (less than 5 mph).
E. The geosynthetic reinforcement shall be in tension and free of wrinkles prior to placement of soil fill. The nominal tension shall be applied to the reinforcement and secured in place with staples, stakes or by hand tensioning until reinforcement is covered by six inches of fill.

- 4.07 Drainage Materials
A. Drainage aggregate shall be installed to the line, grades, and sections shown on the final plans. Drainage fill shall be placed to the minimum thickness shown on the construction plans between and behind units.
B. Drainage collection pipes shall be installed to maintain gravity flow of water outside the reinforced soil zone. The drainage collection pipe shall daylight into a storm sewer manhole or along a slope at an elevation lower than the lowest point of the pipe within the aggregate drain.
4.08 Backfill Placement
A. The reinforced backfill shall be placed as shown in the construction plans in the maximum compacted lift thickness of 10 inches and shall be compacted to a minimum of 95% of standard Proctor density (ASTM D 698) at a moisture content within 2% of optimum. The backfill shall be placed and spread in such a manner as to eliminate wrinkles or movement of the geosynthetic reinforcement and the SRW units. Compaction testing shall be done at 25%, 50%, 75%, and 100% of the wall height or as specified by the site geotechnical engineer.

Project Information
Project Name: HILTON GARDEN INN
Location: Howard County, MD
Project Number: DS201039
Wall Number:
Designer: DKS
Date: 5-31-00



- General Notes
1 - Retaining wall units and installation shall conform to the Allan Block Design Manual, the Allan Block Installation Manual #2 for Geo-grid Reinforced Retaining Walls, and the Ryan & Associates "Specification for Segmental Retaining Wall Systems" (Part 1:1.01 through Part 4:4.10).
2 - A 4" drain tile must be installed in this wall. This drain pipe shall be vented to daylight at the end(s) of the wall or at the central low point of the wall. If this is not possible, vent through the wall above finished grade at a minimum of 30' intervals.
3 - Soil compaction tests shall be taken at 25%, 50%, 75%, and 100% of the wall height or as specified by the site geotechnical engineer. Bearing capacity of the footer shall be verified prior to the installation of the stone base. The minimum bearing capacity allowed for this project is 2,000 PSF.
4 - The geo-grid used in this design is Mirafi 3XT which has a LTDS of 1328. Ryan & Associates shall be notified before any substitutions are made in the field.
5 - Based on the geotechnical report prepared by Giles Engineering Associates, an internal angle of friction of 25 was used for the site soil on this project. The borings indicate that some MH (fat silt) is present, therefore a very low friction angle was used. The following soil types will not be acceptable: CH and OH. If encountered, they shall be removed and replaced with soils meeting or exceeding a friction angle of 25. The on site geotechnical engineer shall verify this during the construction process.
6 - This design accounts for the load of a live load surcharge of 250 PSF for the parking area above the wall.
7 - A global stability analysis was performed for the tall section of the wall since it rests on a 2.5:1 slope. The grids were lengthened to satisfy the global failure plane and a factor of safety of 1.3 was met.
8 - Any proposed guard rails subject to vehicle impact or fences subject to wind loading (solid or semi-solid) must be kept back a minimum of 3' from the rear of the wall to avoid loading of the wall. If car stops or curbing prevent vehicular impact, guard rails may be installed closer than the 3' minimum. Open rails (such as pipe, wrought iron, treated lumber, etc.) subject only to pedestrian loading may be placed directly behind the wall. The preferred method of installation is to place concrete form tubes within the wall during construction and grout in the posts later.
9 - If water is encountered in the area of the wall during excavation or construction, a drainage system (chimney, composite or blanket) must be installed as directed by the geotechnical or site engineer.
10 - At the end of each day's construction and at final completion, grade the backfill to avoid water accumulation behind wall or in the reinforced zone.
11 - Surface water must not be allowed to pond or be trapped in the area above the wall or at the toe of the wall.
12 - Establish final grade with a positive gradient away from the wall structure. Concentrations of surface water runoff should be managed by providing necessary structures, such as paved ditches, drainage swales, catchbasins, etc.
13 - All roof eaves should be guttered, with the outlets from the downspouts provided with adequate capacity to carry storm water from the structure to reduce the possibility of soil saturation and/or erosion. The connection should be in a closed conduit, which discharges at an approved location, away from the wall structure.
14 - Cut and fill slopes shall be constructed so that surface water will not be allowed to drain over the top of the slope face and over the wall. This may require berms along the top of fill slopes and surface drainage ditches above cut slopes.
15 - Irrigation activities at the site should be done in a controlled and reasonable manner.
16 - The consulting geotechnical or site engineer for the project must address any design drainage features or site features, discovered during excavation.
17 - Contain sources of concentrated water flow such as roof scuppers, drainage swales, parking lots, etc... and route around wall.

- and proper installation of wall system.
B. Contractor's field construction supervisor shall have demonstrated experience and be qualified to direct all work at the site.
4.02 Excavation
A. Contractor shall excavate to the lines and grades shown on the project plans. Contractor shall take precautions to minimize over-excavation. Over-excavation shall be filled with compacted infill material or as directed by the Geotechnical Engineer.
B. Contractor shall verify location of existing structures and utilities prior to excavation. Contractor shall ensure all surrounding structures are protected from the effects of wall excavation. Excavation support (shoring), if required, is the responsibility of the Contractor.
4.03 Foundation Preparation
A. Following the excavation, the foundation soil shall be examined by the Owner's Geotechnical Engineer to assure actual foundation soil strength meets or exceeds the assumed design bearing strength. Soils not meeting the required strength shall be removed and replaced with select structural fill approved by the Owner's Geotechnical Engineer.
B. Foundation soil shall be proofrolled and compacted to 95% standard Proctor density and inspected by the Owner's Geotechnical Engineer prior to placement of leveling pad materials.
4.04 Leveling Pad Construction
A. Leveling pad shall be placed as shown on the construction drawings with a minimum thickness of 6 inches. The leveling pad should be at a minimum extend laterally at least a distance of 6 inches from the toe and heel of the lower most SRW Unit.
B. Soil leveling pad material shall be compacted with a vibratory plate compactor to provide a firm, level, bearing surface on which to place the first course of units. Well-graded sand can be used to smooth the top 1/2 to 1/4 inch of the leveling pad. Compaction will be with mechanical plate compactors to achieve 95% of maximum standard Proctor density (ASTM D 698).
4.05 SRW Unit Installation
A. All SRW units shall be installed at the proper elevation and orientation as shown on the wall profiles and details on the construction plans. The SRW units shall be installed in general accordance with the manufacturer's recommendations. The design engineer of record (Ryan & Associates) specifications and drawings shall govern in any conflict between the two requirements.
B. First course of SRW units shall be placed on the leveling pad. The units shall be leveled side-to-side, front-to-rear and with adjacent units, and aligned to ensure intimate contact with the leveling pad. The first course is the most important to ensure accurate and acceptable results. No gaps shall be left between the front of adjacent units. Alignment may be done by means of a string line or offset from base line to the back of the units.
C. Clean all excess debris from top of units and install next course.
D. Lay out of curves and corners shall be installed in accordance with the plan details or in general

- B. Only a vibratory plate or small-scale vibratory smooth drum compactor equipment shall be allowed within 3 feet of the front of the wall face. Compaction within the 3 feet behind the wall face shall be achieved by at least three (3) passes of the lightweight mechanical plate compactor or roller.
C. At the end of each day's operation, the Contractor shall slope the last level of backfill away from the wall facing to direct water runoff away from the wall face.
D. At completion of wall construction, backfill shall be placed level with final top of wall elevation. If final grading, paving, landscaping, and/or storm drainage installation adjacent to the wall is not placed immediately after wall completion, temporary surface drainage shall be provided to ensure water runoff is not directed at the wall nor allowed to collect or pond behind the wall until final construction adjacent to the wall is completed.
4.09 SRW Caps
A. SRW caps shall be properly aligned and glued to underlying units with a flexible, high-strength concrete adhesive. Rigid adhesive or mortar is not acceptable.
4.10 Construction Adjacent to Completed Wall
A. The Owner or Owner's Representative is responsible for ensuring that construction adjacent to the wall by others does not disturb the wall or place temporary construction loads on the wall that exceed design loads, including loads such as water pressure, temporary grades, or equipment loading. Heavy paving or grading equipment shall be kept a minimum of three feet behind the back of the wall face. Equipment with wheel loads in excess of 150 psf live load shall not be operated with 10 feet of the face of the retaining wall during construction adjacent to the wall. Care should be taken by the General Contractor to ensure water runoff is directed away from the wall structure until final grading and surface drainage collection systems are completed.

END OF SECTION

6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Director: [Signature] DATE: 9/16/00
Chief, Division of Land Development: [Signature] DATE: 9/21/00
Chief, Development Engineering Division: [Signature] DATE: 9/5/00

DEVELOPER: Star Hotels, 12119 Duskview Court, Clarksville, MD 21029, 410.988.4363, Mr. M. Majumdar
OWNER: Howard Research and Development Corp., 10275 Little Patuxent Parkway, Columbia, MD 21044, 410.992.6000

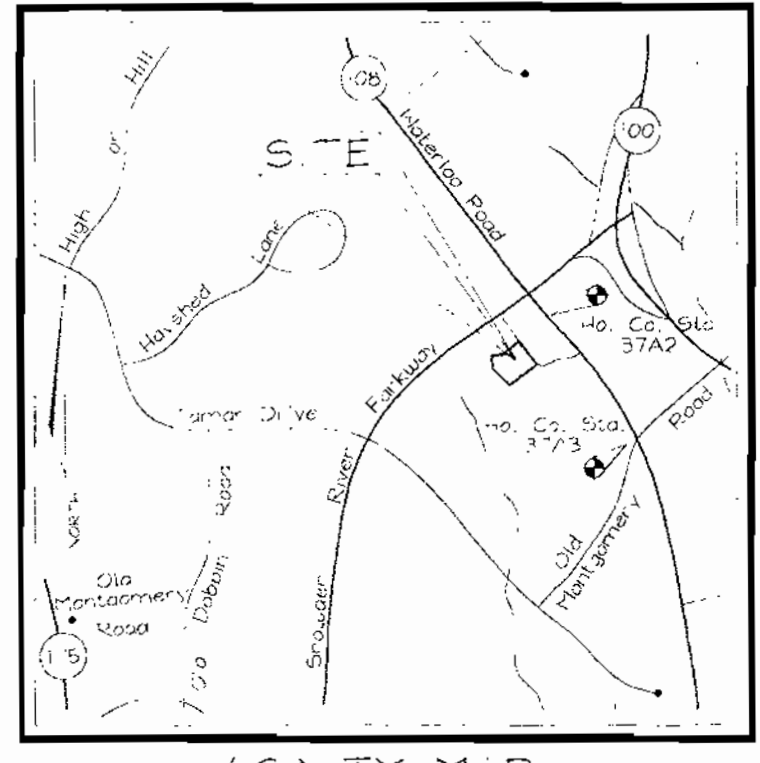
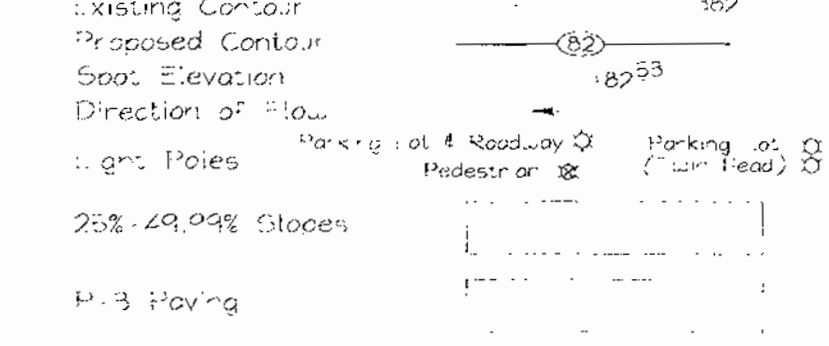
RETAINING WALL DETAILS
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION 1 AREA 1
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
VOGEL & ASSOCIATES ENGINEERS-SURVEYORS-PLANNERS
3001 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3995
DESIGN BY: DKS
DRAWN BY: DKS
CHECKED BY: WKR
DATE: Aug 22, 2000
SCALE: AS SHOWN
W.O. NO.: 99-156
9 SHEET OF 9

GENERAL NOTES

- All construction shall be in accordance with the latest standards and specifications of Howard County plus MSA standards and specifications, if applicable.
- The contractor shall notify "Miss Utility" at 1-800-257-7777 at least 48 hours prior to any excavation work.
- The contractor is to notify the following utilities or agencies at least five days before starting work on these drawings:
 - Miss Utility: 1-800-257-7777
 - City of Columbia: 725-4976
 - Howard County Bureau of Utilities: 313-2366
 - AIRTEL Cable Location Division: 393-3553
 - B.G.E. Co. Contractor Services: 850-4620
 - B.G.E. Co. Underground Damage Control: 787-4620
 - State Highway Administration: 531-9553
- Site analysis:
 - Area of parcel: 2.6870 Ac.
 - Present zoning: A-1 (employment center commercial) FDP 229
 - Use of structure: hotel
 - Building area: 18,552 SF
 - Building coverage on site: 0.43 Ac. or 16.0% of gross area
 - Paved parking lot area: 1.1 Ac. or 41.3% of gross area
 - Area of landscape island: 0.02 Ac. or 0.742sf
 - Area of 25% or greater steep slopes on site: 2,500 sf
- Project background:
 - Location: Columbia, Md., Tax Map 37, Parcel B-2
 - Zoning: A-1
 - Section/Area: Site Area: 2.6870 Acres
 - DPZ references: SP-98-05, AP-98-34, WP-97-10, FDP Prose 229, PB-315, T-98-0, DP-00-044, Plat #14126, Plat #4173
- The contractor shall notify the Department of Public Works/Bureau of Engineering/Construction Inspection Division at (410) 313-880 at least five (5) working days prior to start of work.
- Any damage to public right of ways, paving, or existing utilities will be corrected at the contractor's expense.
- Existing utilities located from Hand Construction Plans, Field Surveys and available record drawings. Approximate location of existing utilities are shown for the contractor's information. Contractor shall locate existing utilities well in advance of construction activities and take all necessary precautions to protect the existing utilities and to maintain uninterrupted service. Any damage incurred due to contractor's operation shall be repaired immediately at the contractor's expense.
- All reinforced concrete for storm drain structures shall have a minimum of 28 days strength of 3,500 p.s.i.
- 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.
- Estimates of earthwork quantities are provided solely for the purpose of calculating fees.
- Soil compaction specifications, requirements, methods and materials are to be in accordance with the recommendations of the project Geotechnical Engineer. Geotechnical Engineer to confirm acceptability of proposed paving section, based on soil test.
- All storm drain pipe bedding shall be Class "C".
- Coordinates and elevations are based on Howard County Right-of-Way Monuments.
- A noise study is not required for this project.
- Existing topography is based on field information performed by Gutschick, Little and Weber, Inc. on January, 1998.
- Paving sections based on Geotechnical Report performed by Giles Engineering Associates, Inc. on May 22, 2000.
- All curb and gutter to be Howard County Standard concrete Detail 3.01 unless otherwise specified.
- Contractor responsible to construct all handicap parking and handicap access in accordance with current ADA requirements.
- Where drainage flows away from curb, contractor to reverse the gutter pan.
- All elevations are to finished bottom of curb unless otherwise noted.
- All dimensions are to face of curb unless otherwise noted.
- Public Water and Sewer available from Private Road Contract #24-3813-D.
- Stormwater Management is provided per SP-98-101, Route 108 Commercial, Section One/Area One, water quality is provided per SP-98-101.
- All exterior lighting shall conform to Zoning Regulations Section 134.
- Building to have Inside Water Meter settings.
- This site passed the APD Traffic test on May 8, 1998 as a condition of approval for SP-98-05.
- This site is exempt from the Forest Conservation Ordinance in accordance with 16.1202(b)(1)(iv).
- All setbacks and other code regulation requirements will be in accordance with FDP-229.
- Existing storm drain structures and elevations are in accordance with SDP-00-044. Adjustments may be necessary to meet as-built vertical locations of storm drain stubs.
- Retaining Walls to be Allen Block, Classic Style, Mottled Brown color, straight face.
- Contractor to connect all roof drains to storm drain system, see Architectural plans for details.
- Contractor to sod all areas adjacent to building, parking lot islands and area adjacent to entrance drive aisle. All other areas to be seeded and mulched.

SITE DEVELOPMENT PLAN HILTON GARDEN INN

LEGEND

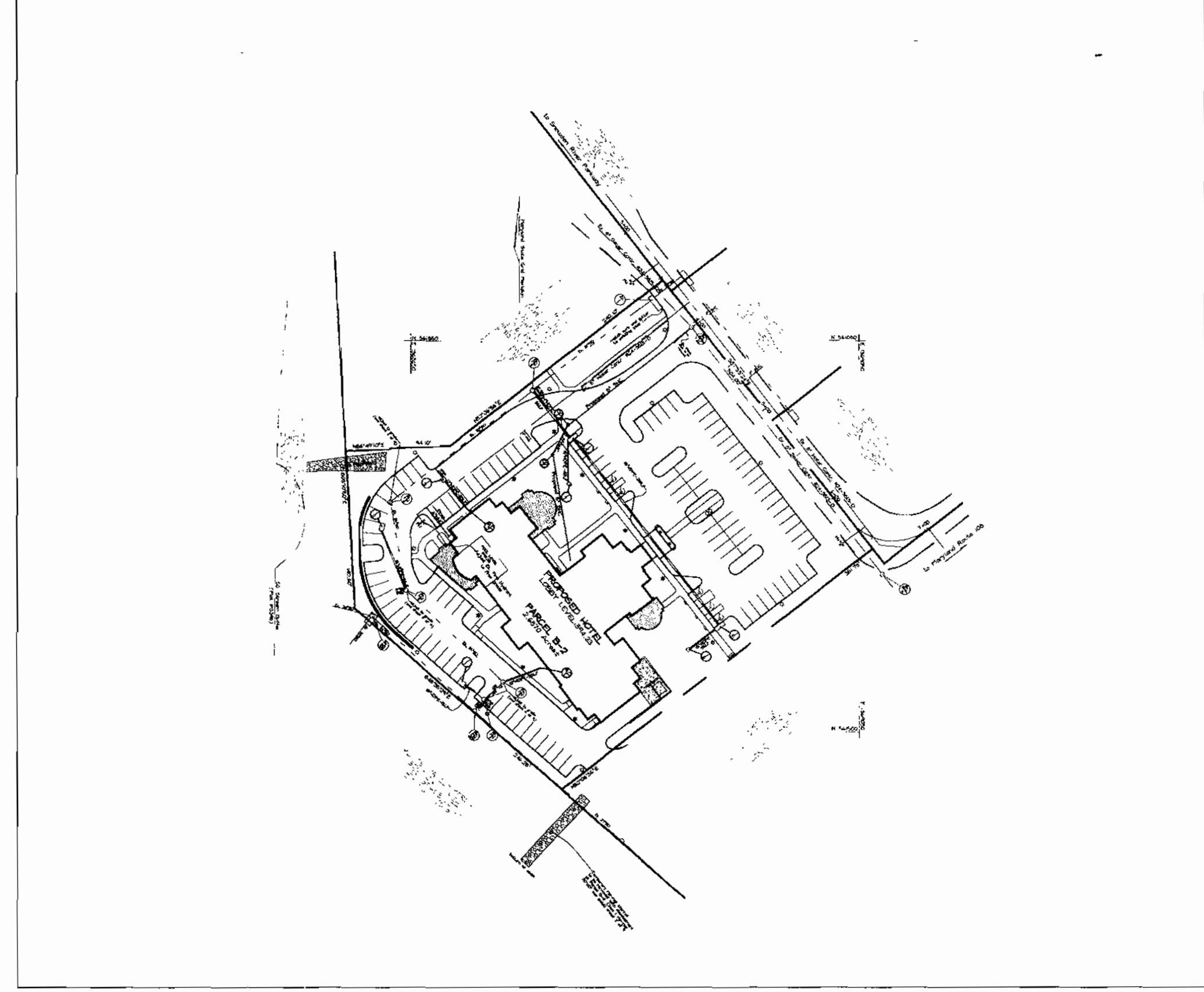


BENCHMARKS

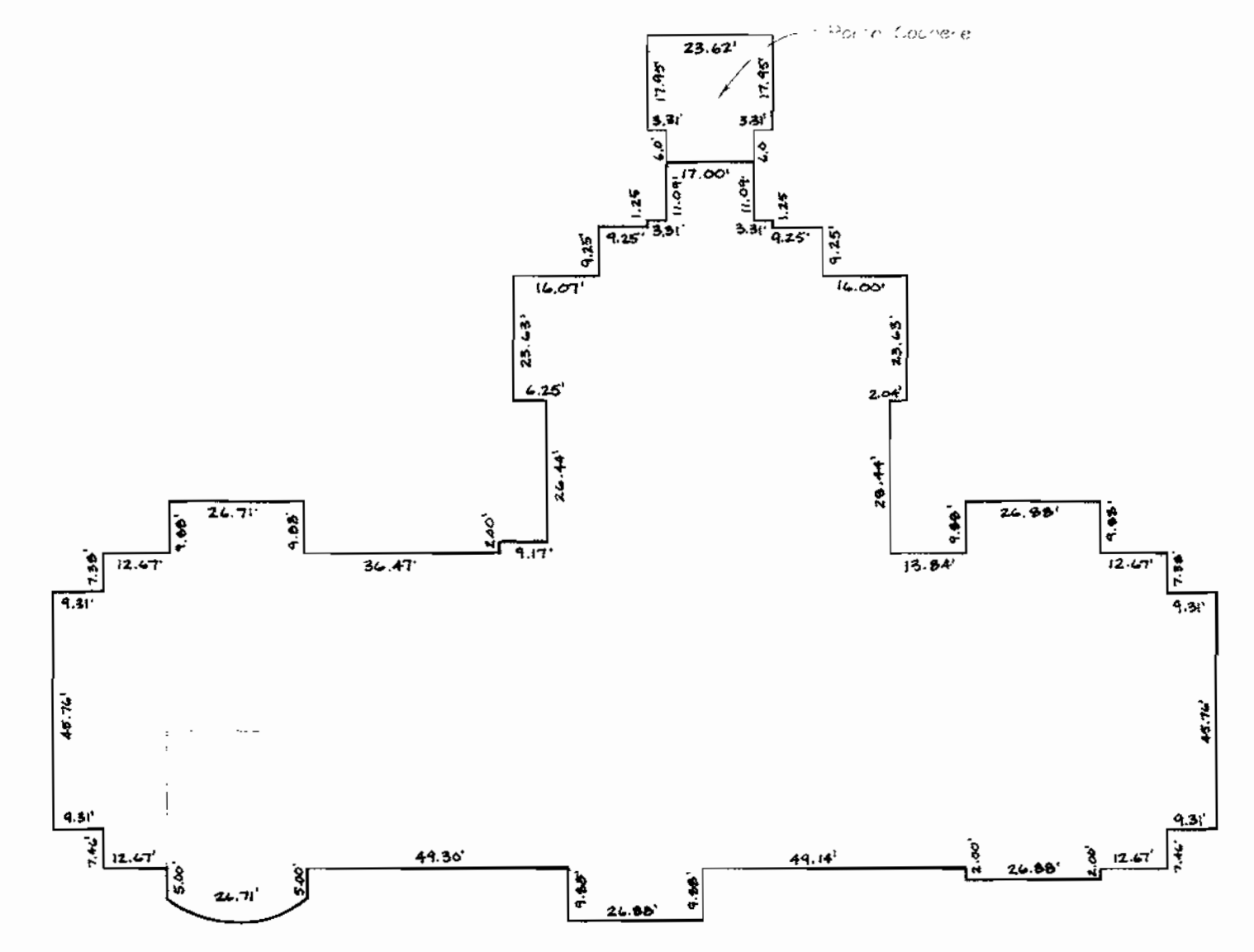
Howard County Station 37A2
N 562, 20.83' E 359, 300.26' Elev. 403.11
40' northeast of MD Route 108, 100' northwest of Old Montgomery Road

Howard County Station 37A3
N 561, 13.07' E 354, 913.29' Elev. 385.66
southwest of the intersection of MD Route 108 and Old Montgomery Road

DESCRIPTION	SHEET NO.
Cover Sheet	1 of 9
Site Development Plan	2 of 9
Sediment and Erosion Control Plan	3 of 9
Sediment and Erosion Control Details	4 of 9
Storm Drain Drainage Area Map	5 of 9
Storm Drain, Water and Sewer Profiles and Appurtenances Details	6 of 9
Landscape Plan	7 of 9
Retaining Wall Details	8 of 9
Retaining Wall Details	9 of 9



LOCATION MAP
SCALE: 1"=100'



BUILDING PLAN VIEW
SCALE: 1"=30'



BUILDING ELEVATION
SCALE: 1"=20'



PAVILION ELEVATION
SCALE: 1"=20'

OWNER
Howard Research and Development Corp.
2275 Little Patuxent Parkway
Columbia, MD 21044
410 999 6000

DEVELOPER
Star Hotels
2719 Dusky Elm Court
Crownsville, MD 21032
410 988 9363
W. M. McQuar

ADDRESS CHART	
STREET ADDRESS	024 Snowden River Parkway
SUBDIVISION NAME	Route 108 Commercial
SECTION/AREA	17 B-2
PARCEL NUMBER	17 B-2
PLAT NO.	14 26
BOOK NO.	1
ZONE	ECC
AX/ZONE	3'
ELECT.	61'
DIST.	6066.22
CENSUS	3
WATER CODE	E-07
SEWER CODE	2780000

REVISION BUILDING FOOTPRINT		10-2-01
NO.	REVISION	

COVER SHEET
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION 1 AREA 1
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS
3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3866

DESIGN BY: PS
DRAWN BY: PS
CHECKED BY: R-1
DATE: August 6, 2000
SCALE: As Shown
W.O. NO.: 99-56

1 SHEET OF 9

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

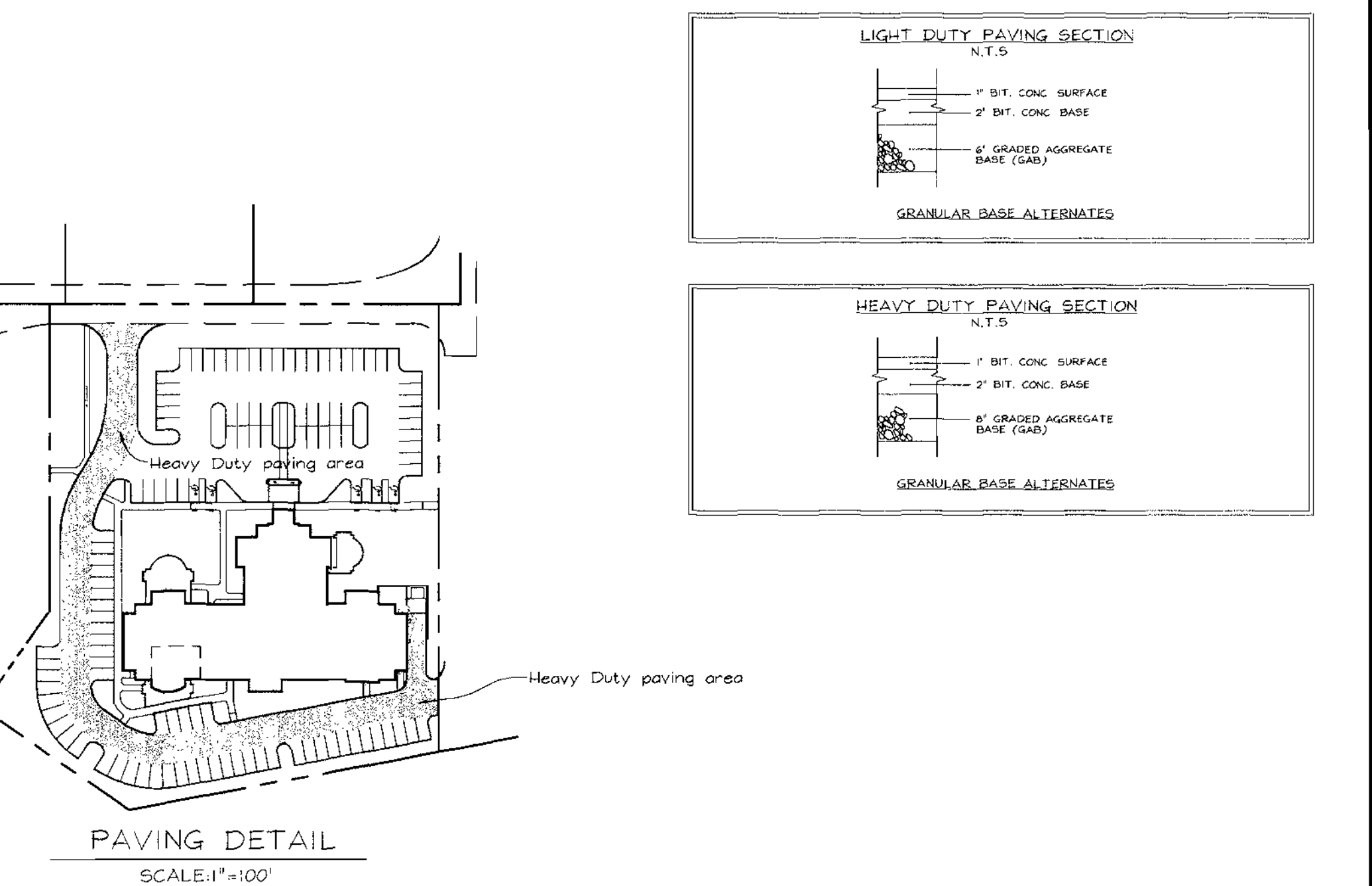
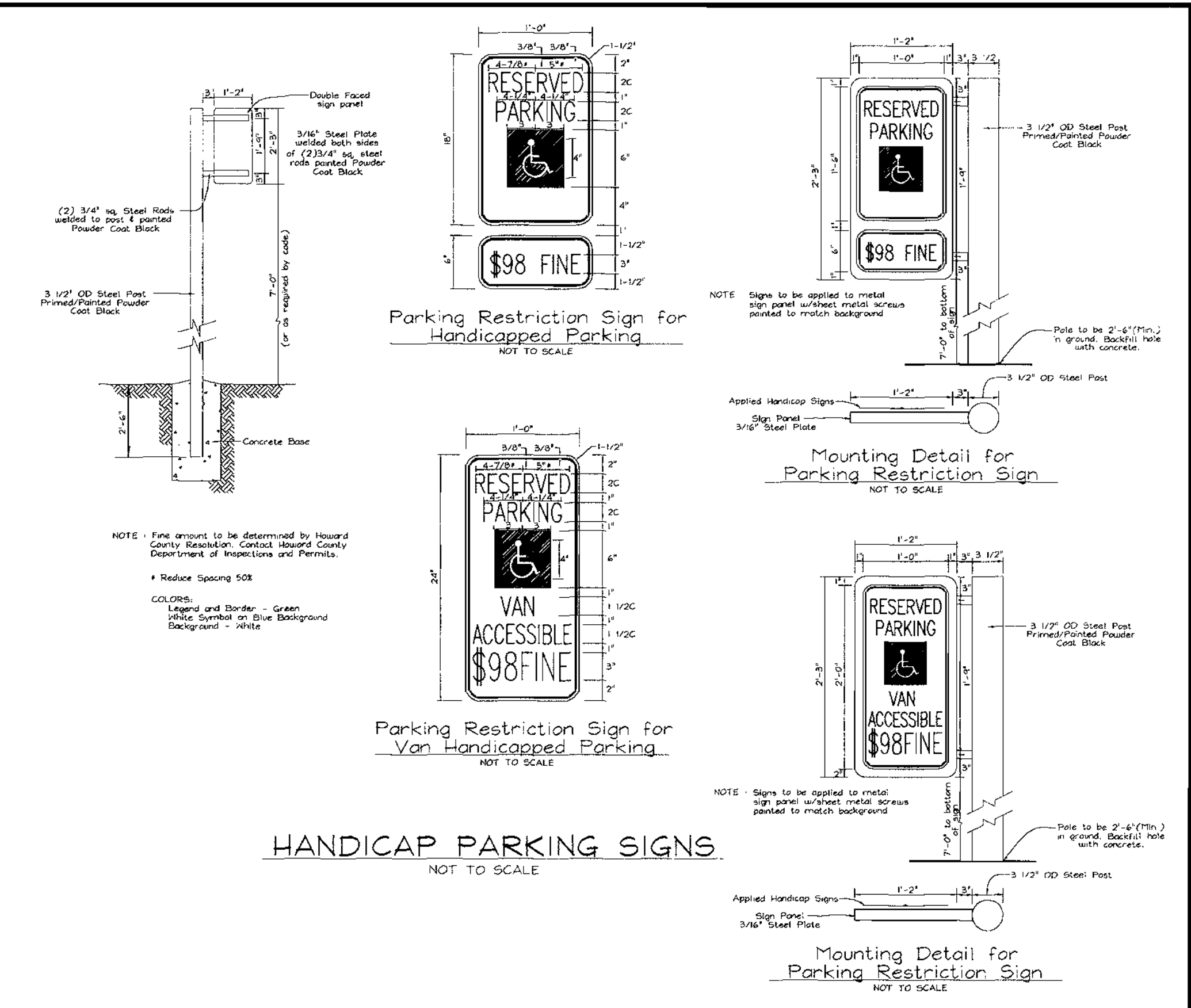
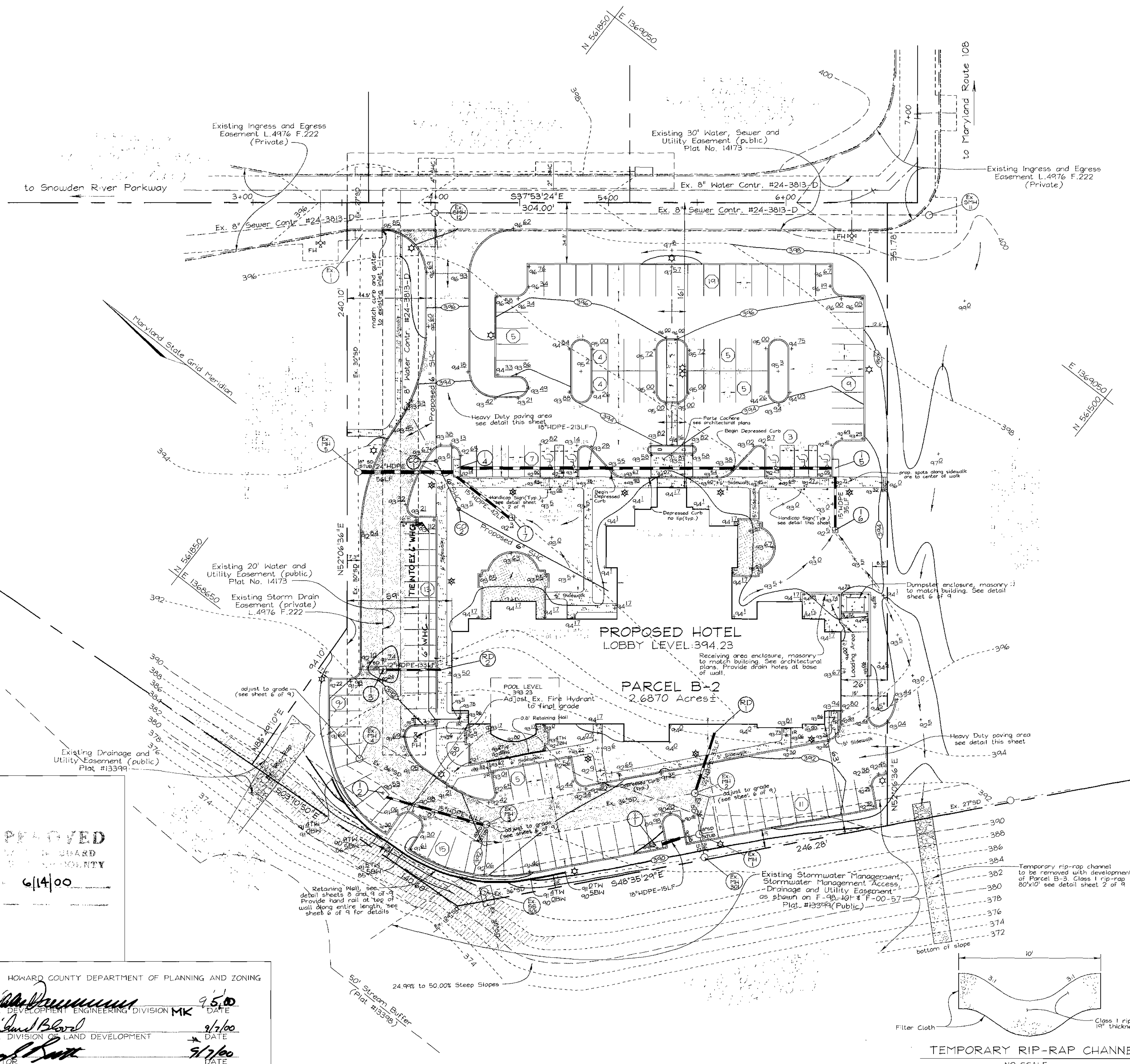
Richard Blagel
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK 9/5/00
DATE

Richard Blagel
CHIEF, DIVISION OF PLANNING AND DEVELOPMENT MK 9/7/00
DATE

Richard Blagel
DIRECTOR 9/7/00
DATE

PARKING TABULATION

Parking Required:	Hotel: 1 space for each bedroom, 1 space for each 5 employees, 98 rooms, 12 employees max. per shift=107 spaces
	Restaurant: 1 space for each 3 seats, 1 space for each 5 employees; 36 seats, 3 employees max. per shift=13 spaces
	Total req. req.: 114
Parking Provided:	114
Handicap Spaces Required:	5 (4 std./1 van)
Handicap Spaces Provided:	5 (4 std./1 van)



NO	DATE	REVISION
1	5-21-01	REVISE SHC TO 6\"/>

**SITE DEVELOPMENT PLAN
HILTON GARDEN INN**

COLUMBIA ROUTE 108 COMMERCIAL
SECTION I AREA I

TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS • SURVEYORS • PLANNERS

3681 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3986

DESIGN BY: PS	
DRAWN BY: PS	
CHECKED BY: RHV	
DATE: August 16, 2000	
SCALE: 1"=30'	<p align="center">2 SHEET OF 9</p>
W.O. NO.: 99-156	

APPROVED

6/14/00

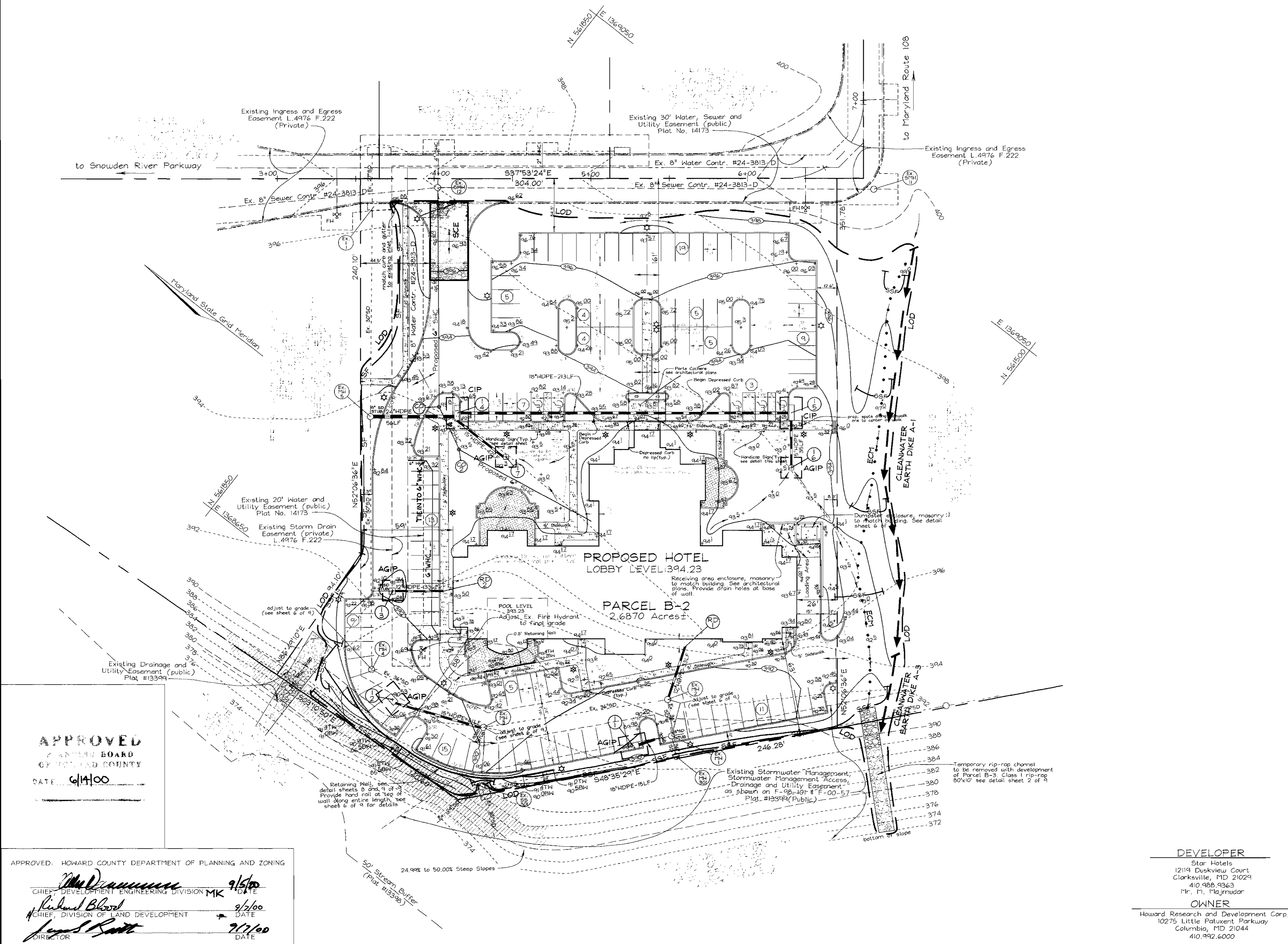
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Board 9/5/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

Paul Smith 9/7/00
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

Paul Smith 9/7/00
DIRECTOR DATE

LEGEND	
Existing Contour	-----382
Proposed Contour	---(382)---
Spot Elevation	+82.53
Direction of Flow	→
Light Poles	Parking Lot # Roadway □ Parking Lot □ Pedestrian & (Twin Head) □
Stabilized Construction Entrance	[Symbol]
Silt Fence	---SF---SF---
Super Silt Fence	---SSF---SSF---
Earth Dike	---ED A-1---
Limit of Disturbance	---LOD---
Erosion Control Matting	---ECM---
Curb Inlet Protection	[Symbol] CIP
At Grade Inlet Protection	[Symbol] AGIP



NO.	DATE	REVISION
1	5-21-01	REVISE SHC TO 6" REVISE WHC TO UTILIZE EX. WHC

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Cheryl Simmons 8/31/00
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT

John R. Robertson 8/31/00
 HOWARD SCD DATE

DEVELOPER'S CERTIFICATE

"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

Mikes Immanuel 8-22-2000
 SIGNATURE OF DEVELOPER DATE

ENGINEERS CERTIFICATE

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

Robert H. Vogel 8/15/00
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

SEDIMENT AND EROSION CONTROL PLAN
HILTON GARDEN INN
 COLUMBIA ROUTE 108 COMMERCIAL
 SECTION I AREA I
 TAX MAP #37 GRID #1 PARCEL B-2
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS/SURVEYORS/PLANNERS
 3681 Park Avenue, Suite 101 • Elkott City, Maryland 21043
 Tel 410.461.5828 Fax 410.465.3966

DESIGNER
 Star Hotels
 12119 Duskview Court
 Clarksville, MD 21029
 410.988.9363
 Mr. M. M. Immanuel

OWNER
 Howard Research and Development Corp.
 10275 Little Patuxent Parkway
 Columbia, MD 21044
 410.992.6000

DESIGN BY: PS
 DRAWN BY: PS
 CHECKED BY: RHY
 DATE: August 16, 2000
 SCALE: 1"=30'
 W.O. NO.: 01-156

STATE OF MARYLAND
 ROBERT H. VOGEL, PE No. 14198
 PROFESSIONAL ENGINEER

3 SHEET OF 9

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Richard Blood 9/5/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

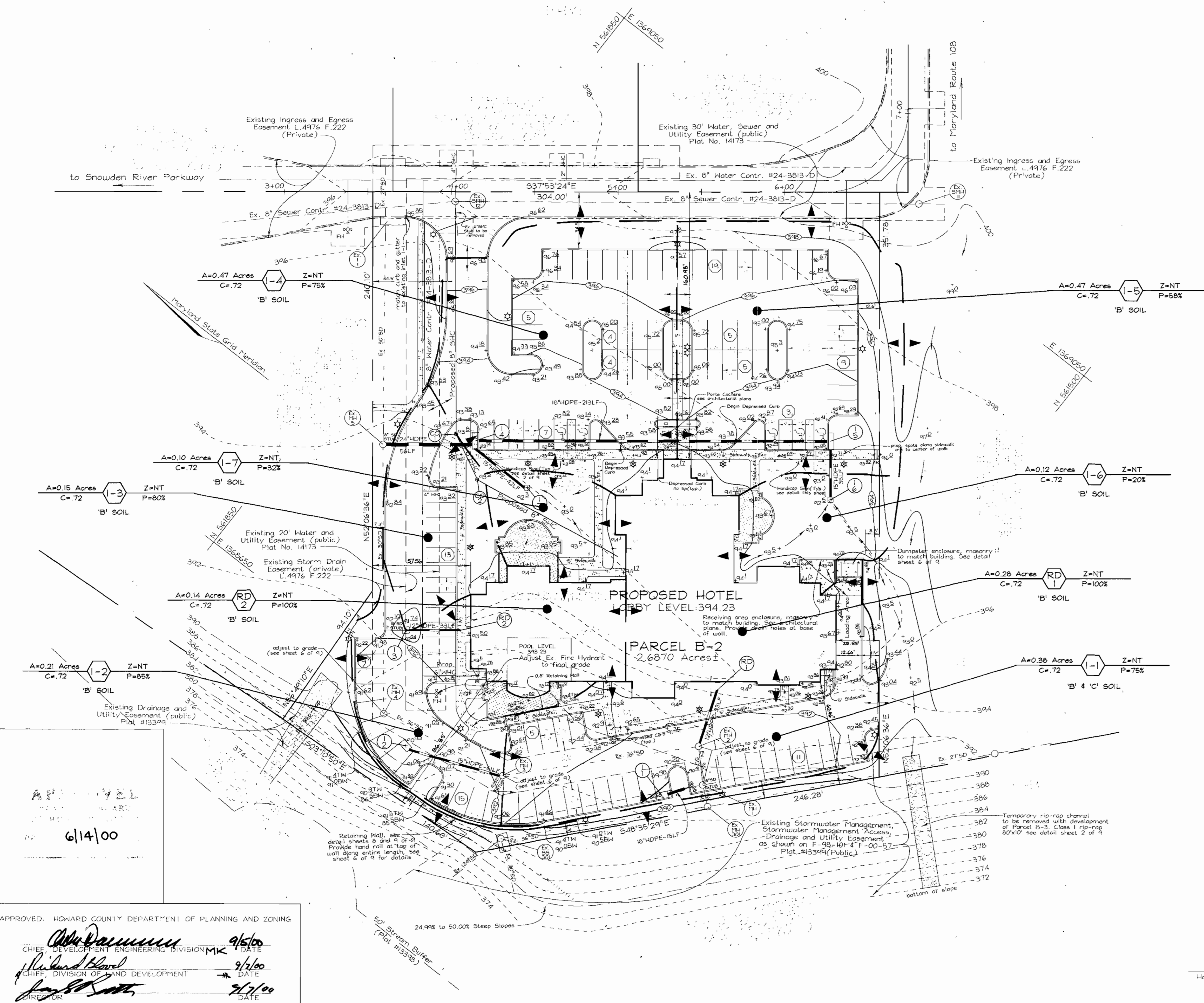
Richard Blood 9/2/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James Smith 9/2/00
 DIRECTOR DATE

SOILS LEGEND		
SYMBOL	NAME / DESCRIPTION	SOIL GROUP
BuB2	Beltville Silt Loam, 1 to 5 percent slopes, moderately eroded	C
EuB2	Elkridge Loam, 3 to 8 percent slopes, moderately eroded	B
LuB	Luka Loam, local alluvium, 1 to 5 percent slopes	C
KeB2	Kelly Silt Loam, 3 to 8 percent slopes, moderately eroded	D
SiB2	Sassafras Loam, 1 to 5 percent slopes, moderately eroded	B
WaA	Watching Silt Loam, 0 to 3 percent slopes	D

NOTE: This Plan is for Drainage Area and Soil Information purposes only.

LEGEND	
Existing Contour	--- 387
Proposed Contour	--- 387
Spot Elevation	⊙ 382.53
Direction of Flow	→
Existing Trees to Remain	⊙
Light Poles	⊙
Parking Lot & Roadway	⊙
Pedestrian	⊙
Parking Lot (Turn Head)	⊙
Soils Divide	---
Proposed Drainage Divide	---



6/14/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/5/00
 CHIEF DEVELOPMENT ENGINEERING DIVISION MK
 [Signature] 9/7/00
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 9/7/00
 DIRECTOR

DEVELOPER
 Star Hotels
 12119 Duskview Court
 Clarksville, MD 21029
 410.888.9363
 Mr. M. Majumdar
 OWNER
 Howard Research and Development Corp.
 10275 Little Patuxent Parkway
 Columbia, MD 21044
 410.942.6000

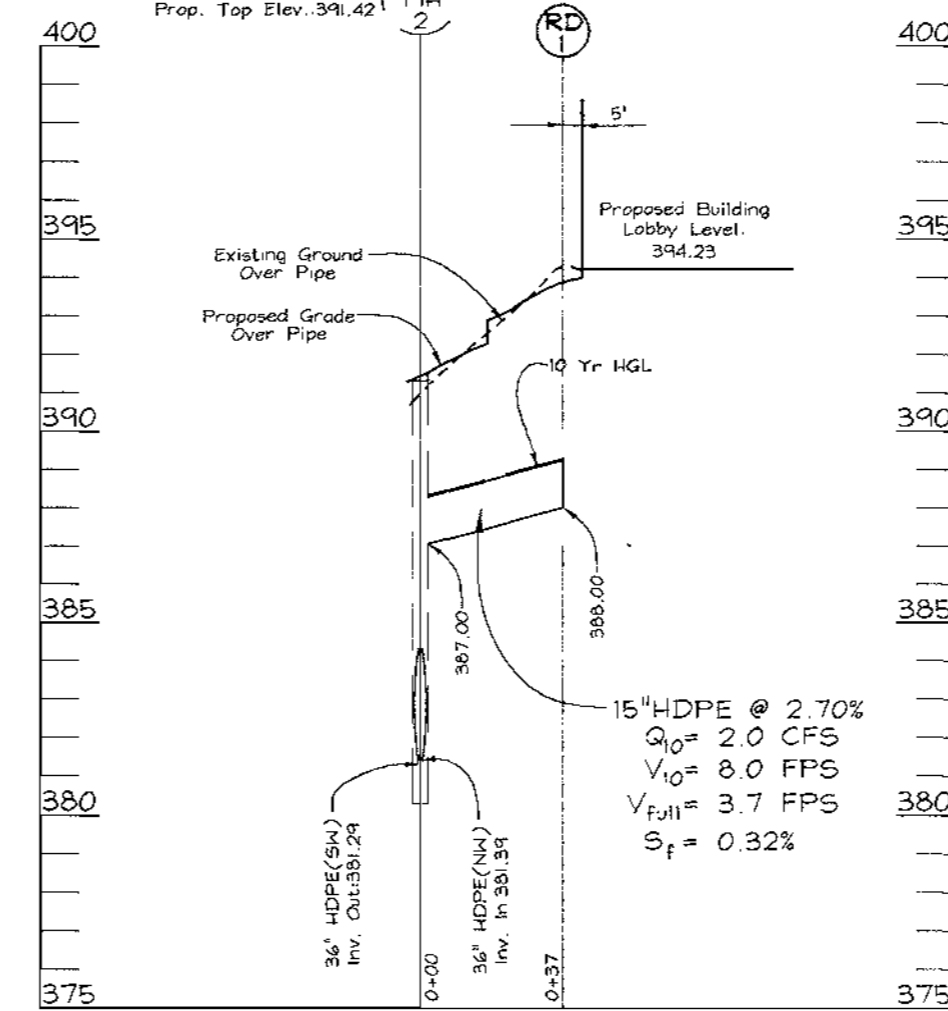
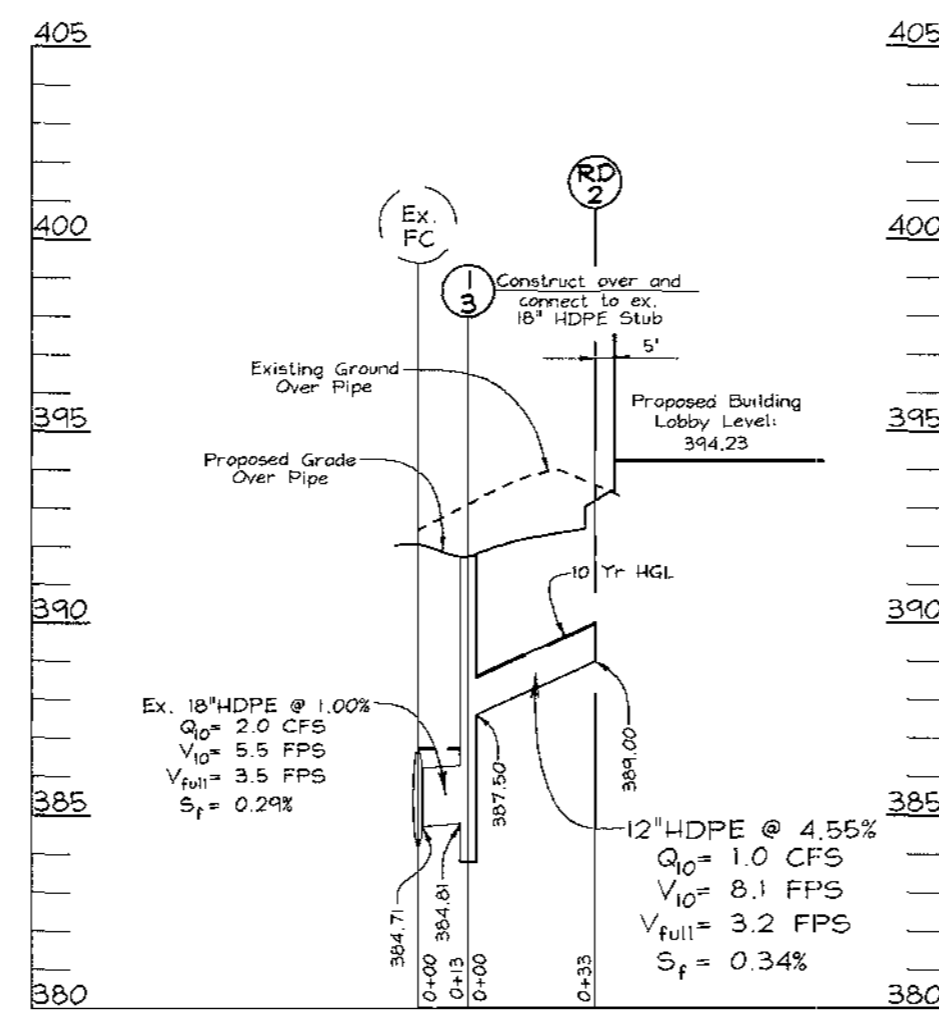
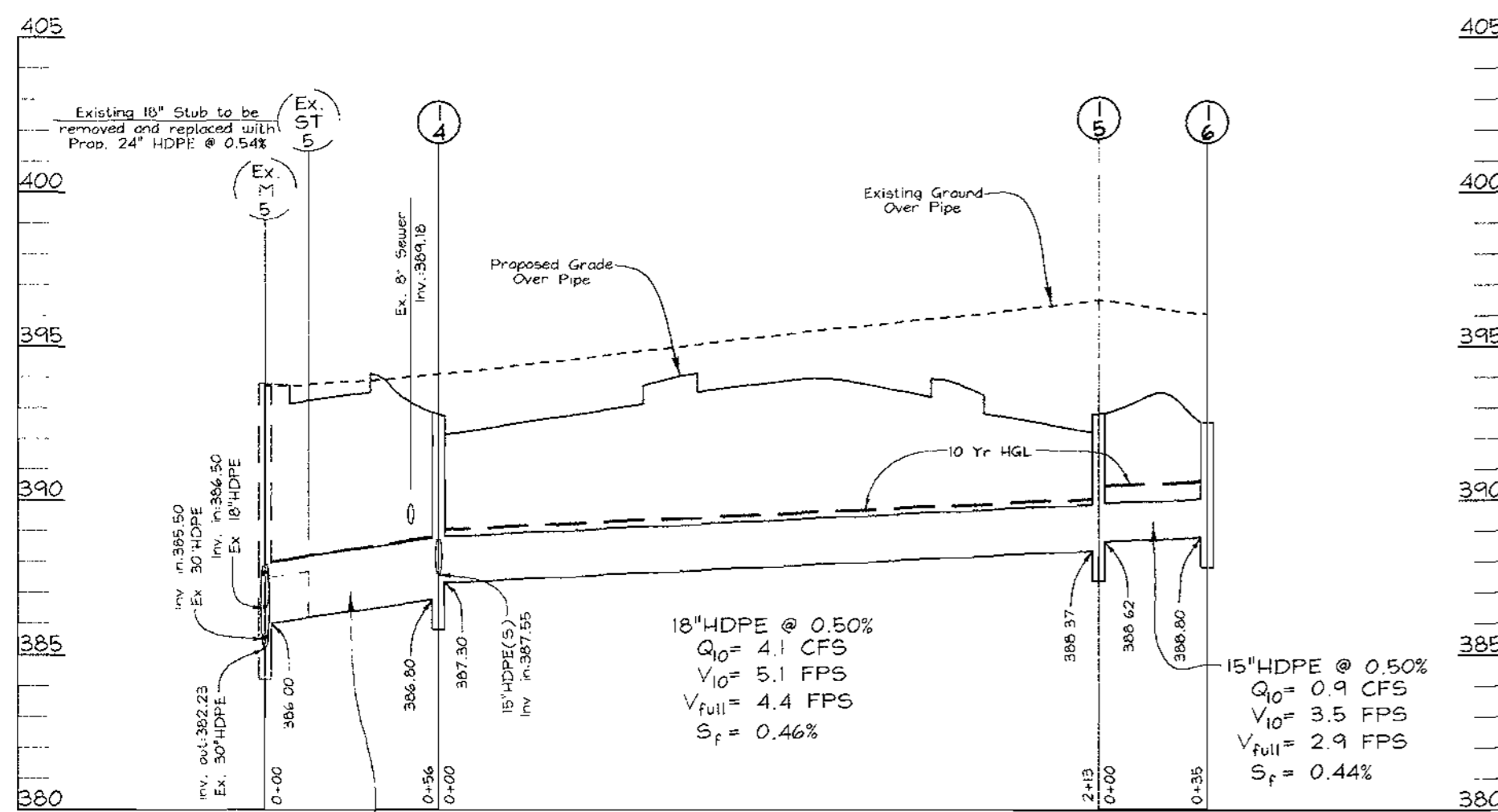
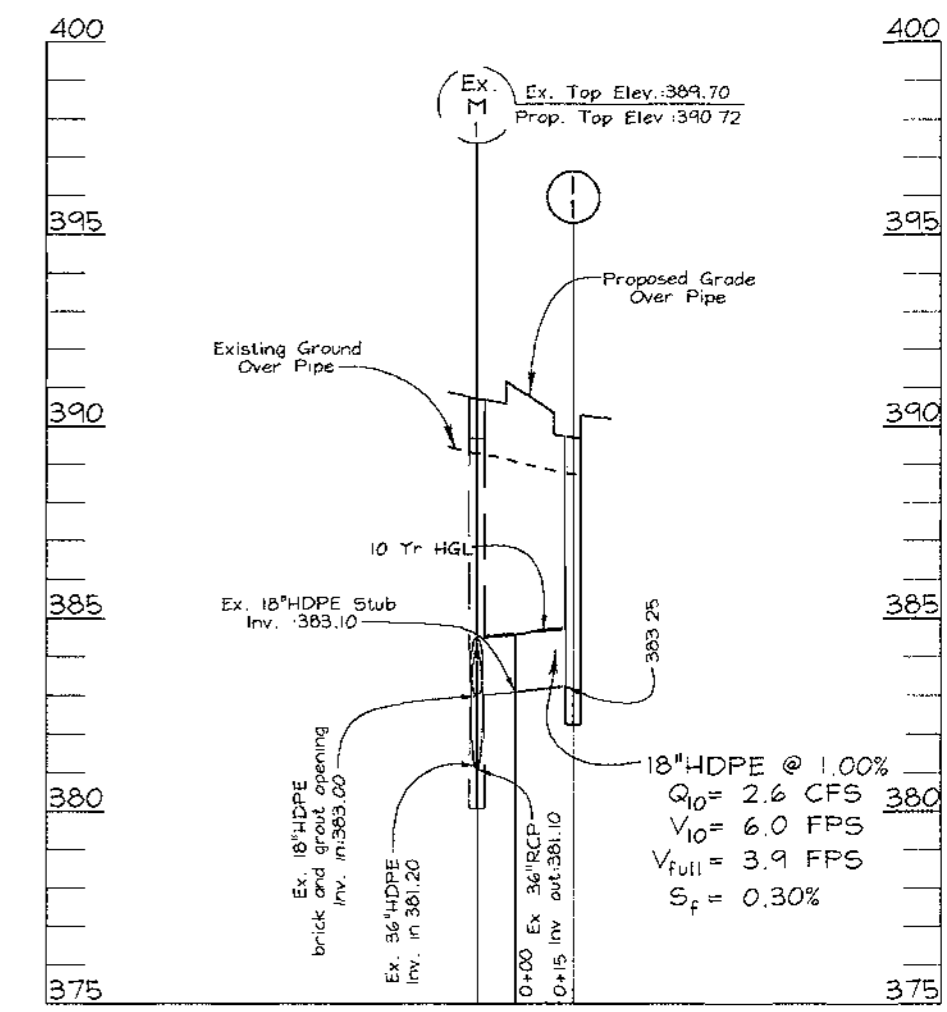
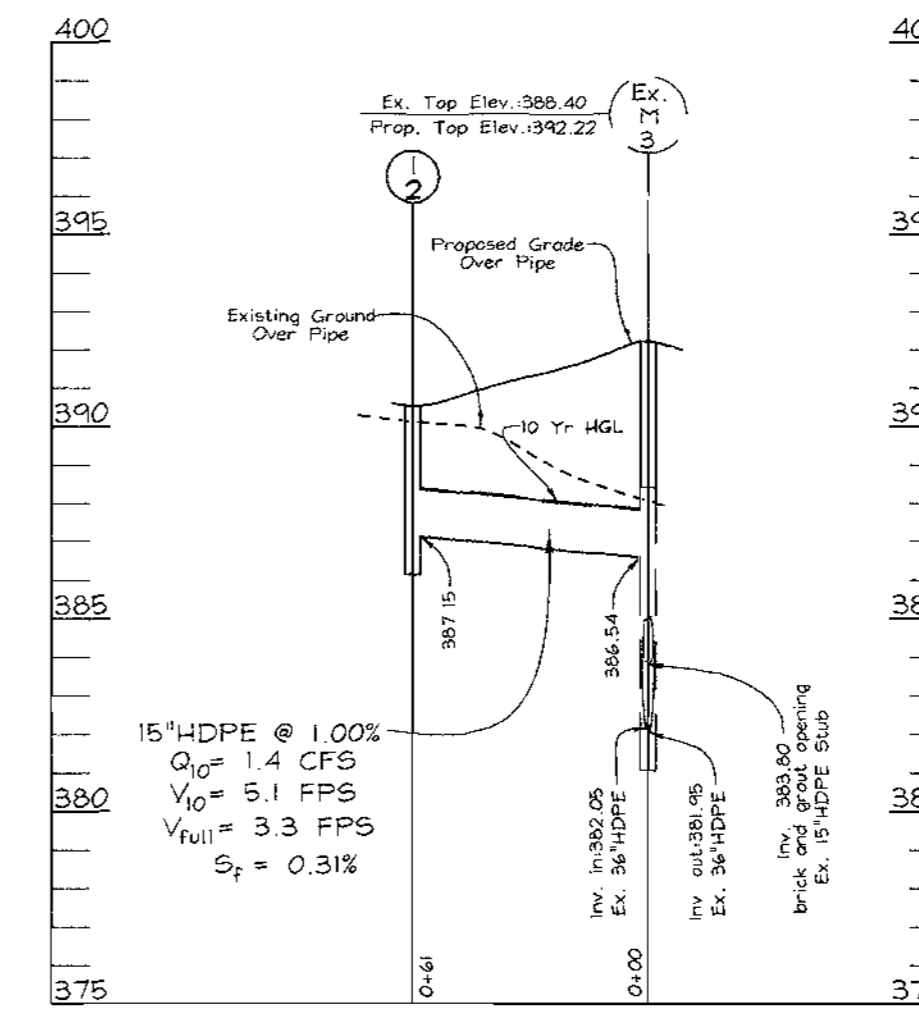
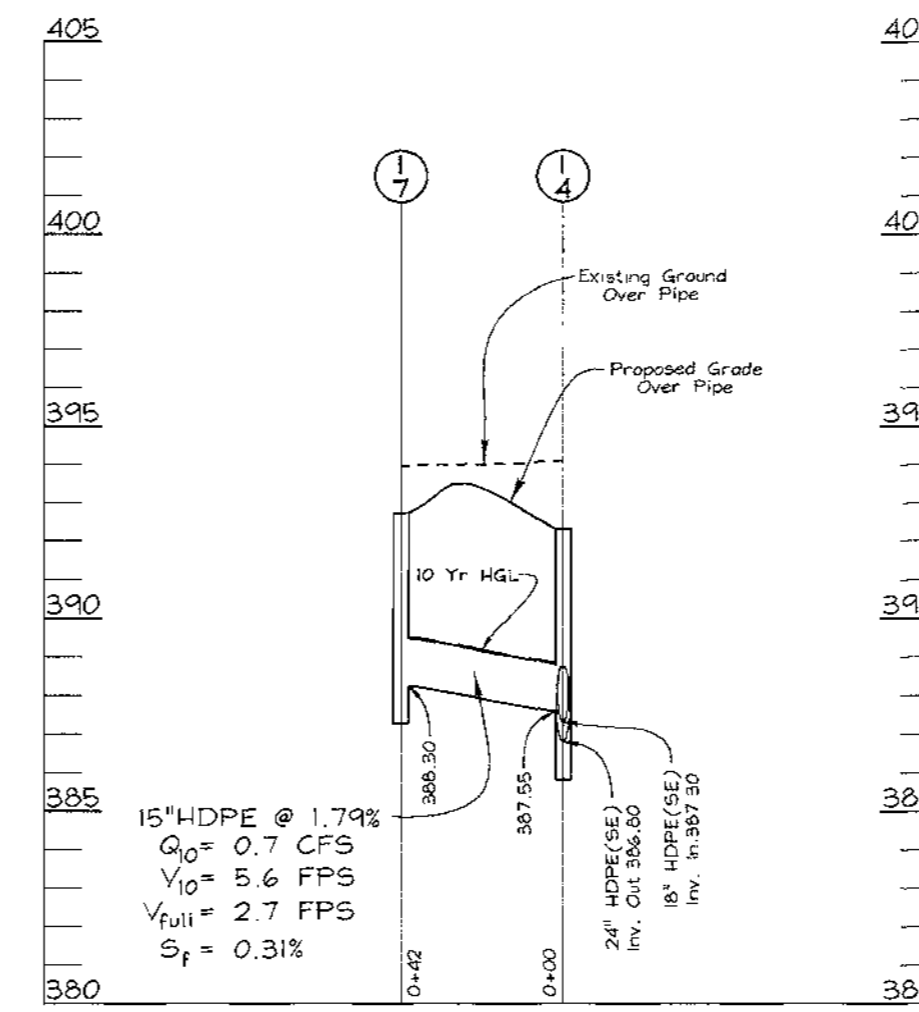
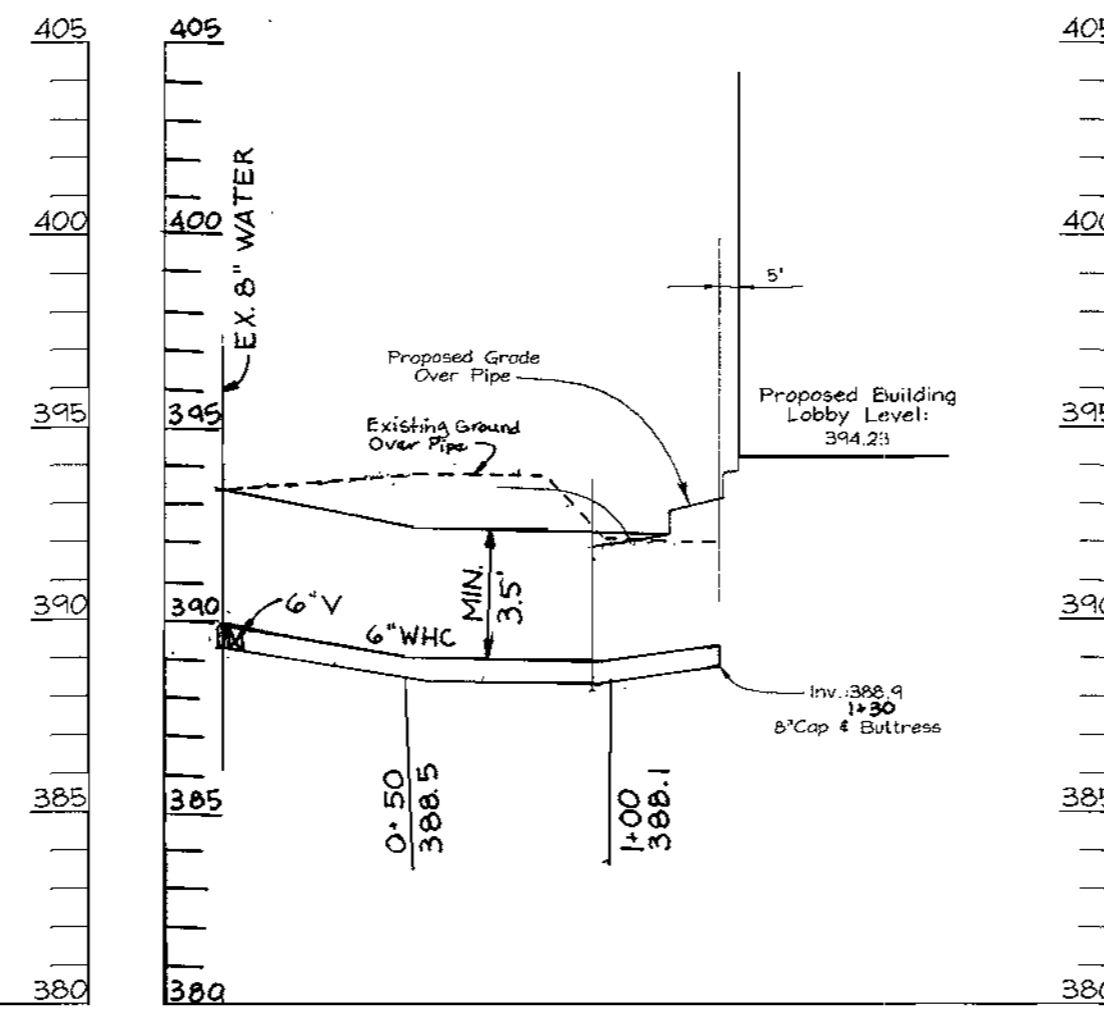
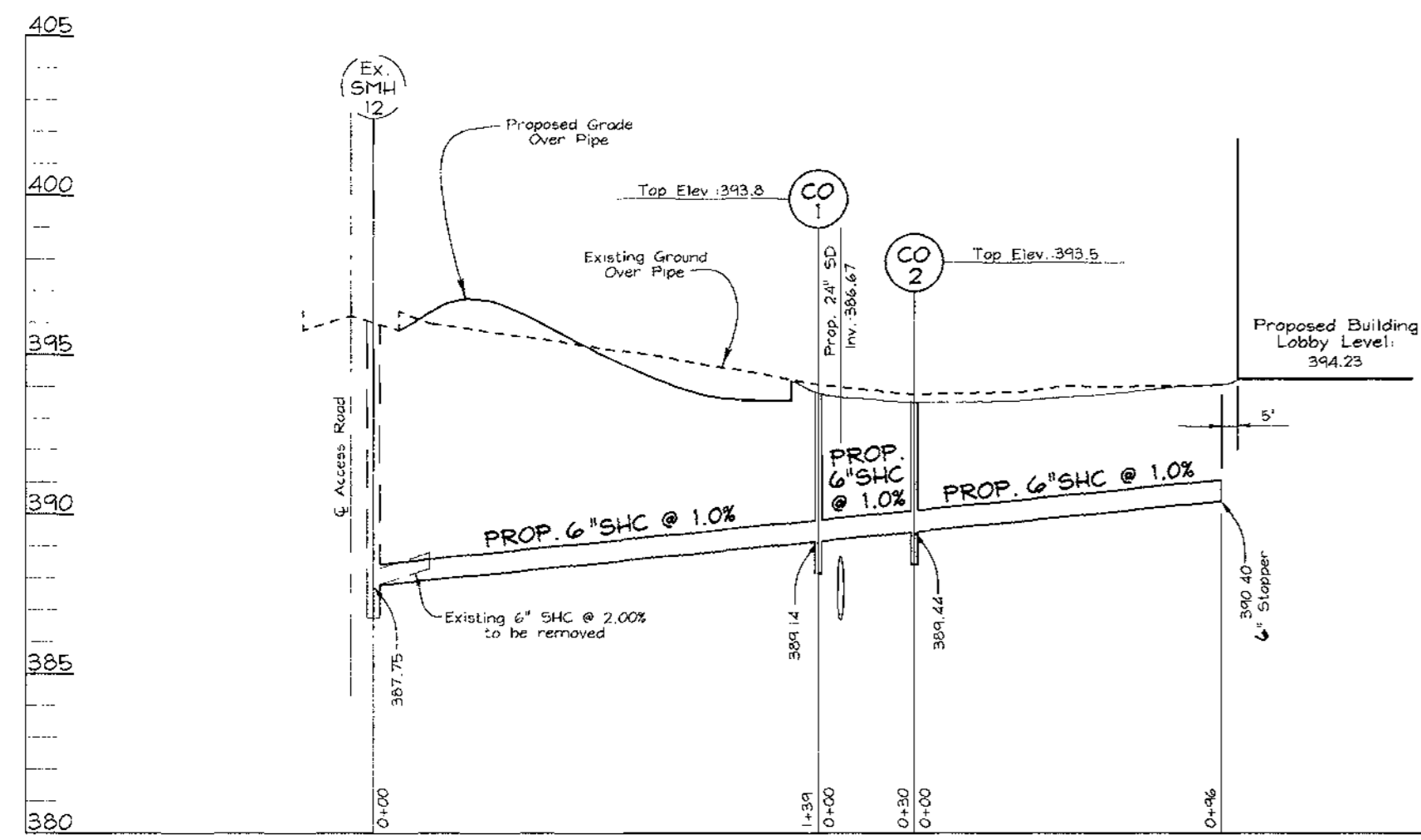
NO.	REVISION	DATE
1	RESERVE BUILDING FOOTPRINT	10-2-01
2	REVISION	DATE

DRAINAGE AREA MAP FOR STORM DRAIN HILTON GARDEN INN
 COLUMBIA ROUTE 108 COMMERCIAL SECTION I AREA I
 TAX MAP #37 GRID #1 PARCEL B-2
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS SURVEYORS PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.461.5629 Fax 410.465.3966

DESIGN BY: R.H.V.
 DRAWN BY: P.S.
 CHECKED BY: R.H.V.
 DATE: August 16, 2000
 SCALE: 1"=30'
 W.O. NO.: 99-156

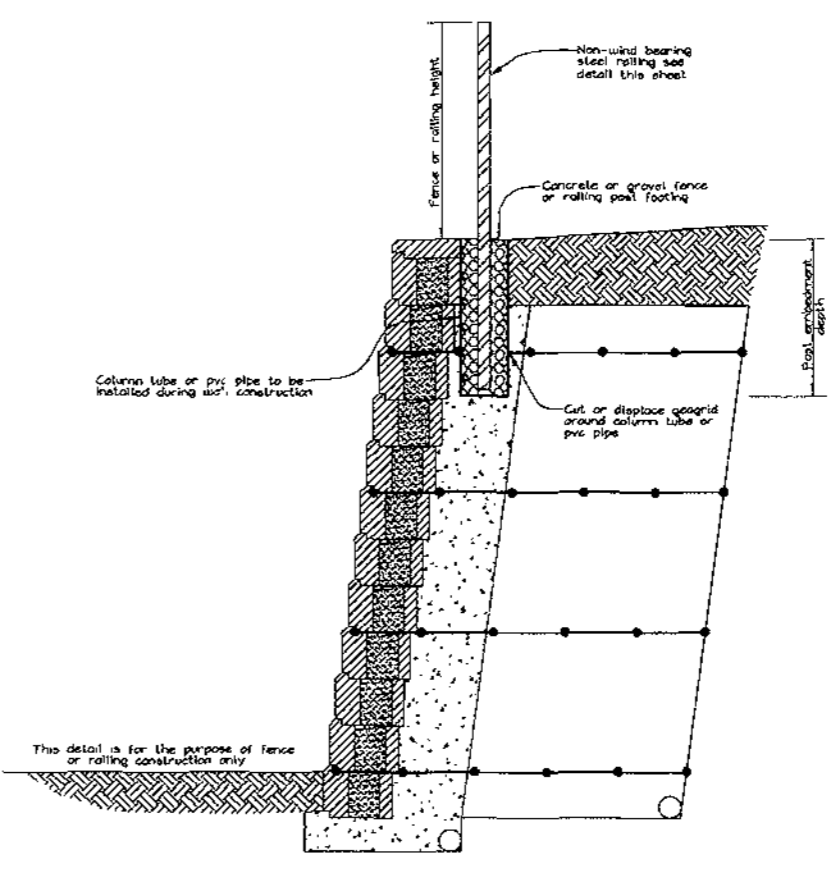
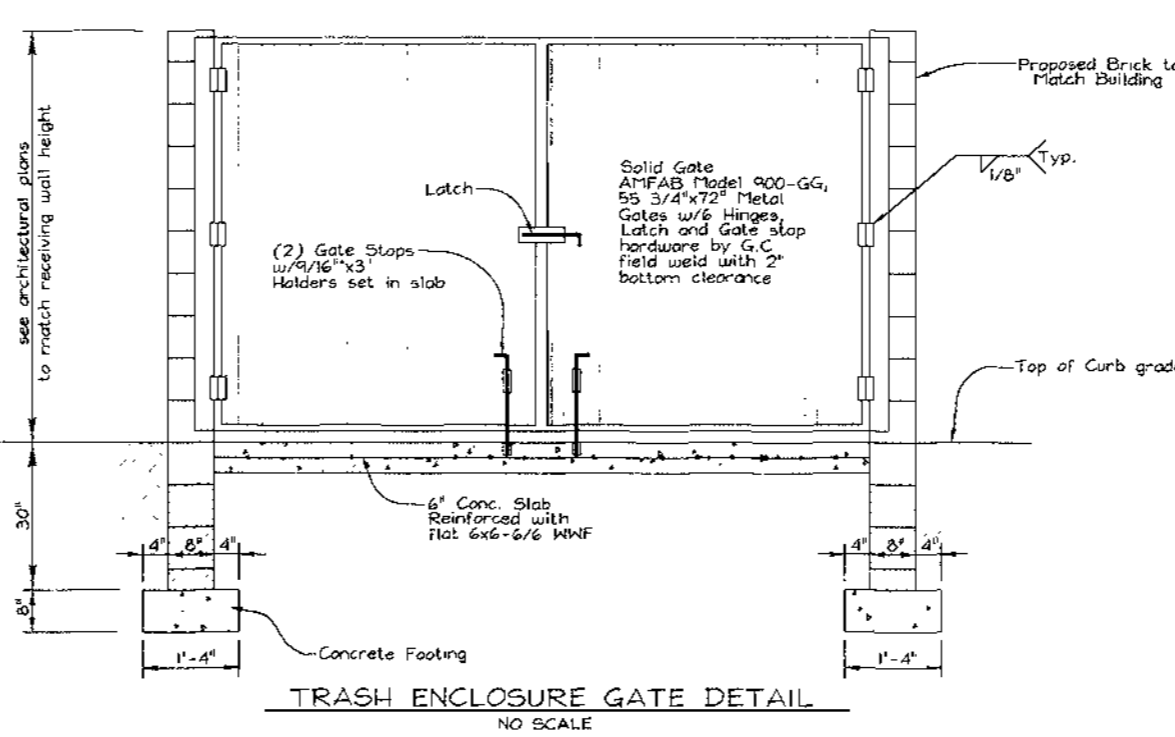
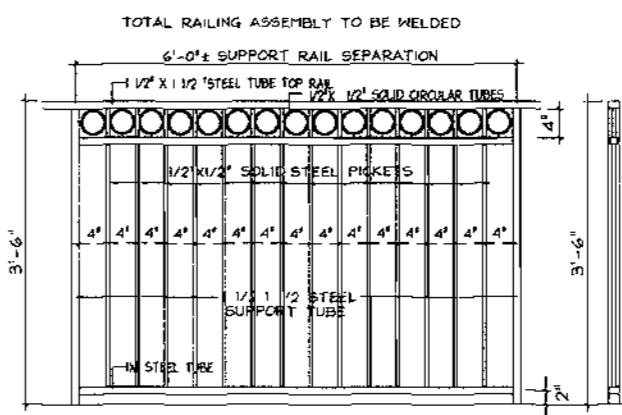
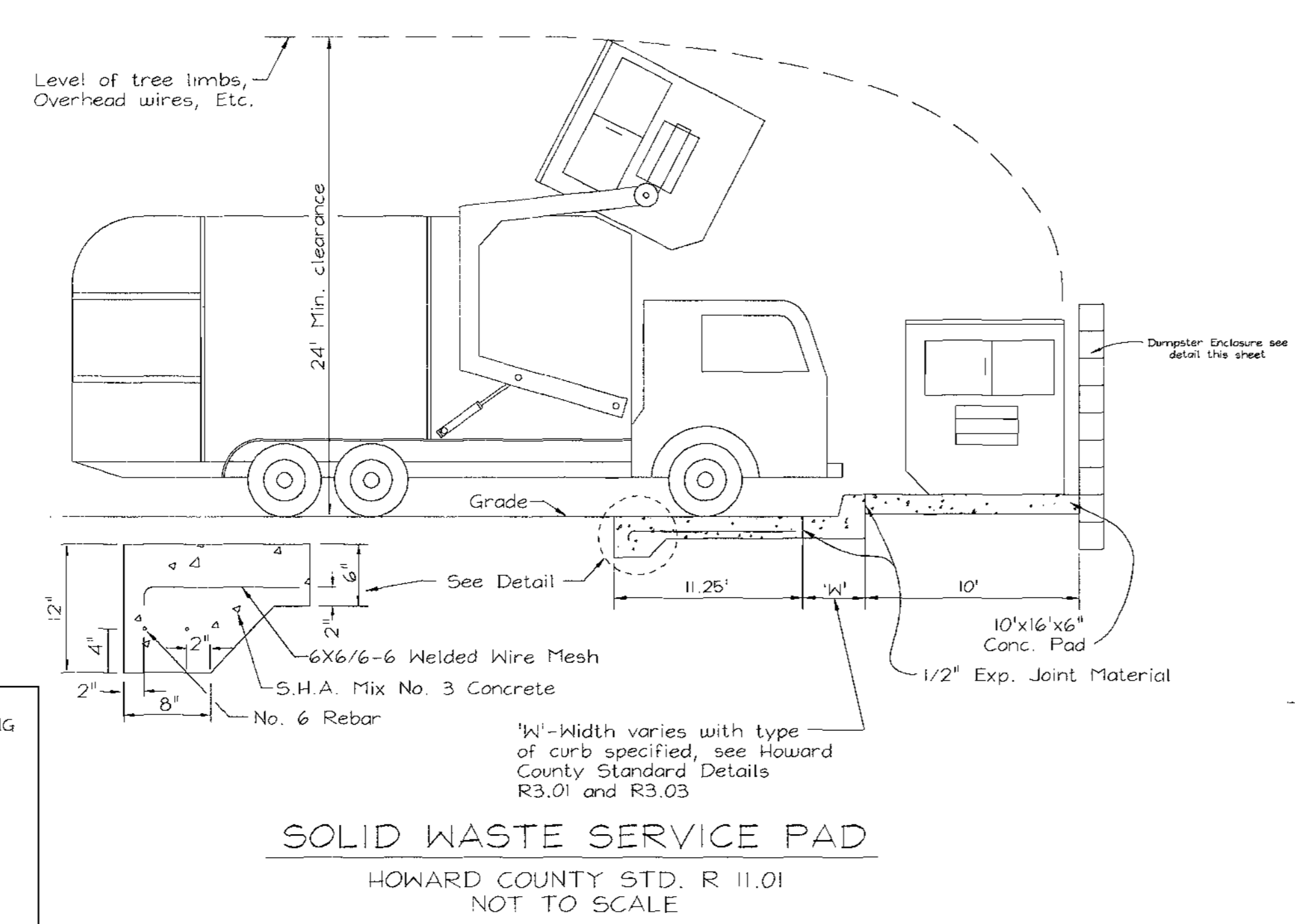
5 SHEET OF 9



PIPE SCHEDULE		
SIZE	TYPE	LENGTH
12"	HDPE	33 LF
15"	HDPE	175 LF
18"	HDPE	228 LF
24"	HDPE	56 LF

STRUCTURE SCHEDULE						
NO.	TYPE	LOCATION	TOP ELEV.	INV. IN	INV. OUT	REMARKS
1-1	Double Type 'S' Combination Inlet	N 561,544 E 1,368,695	390.28	-	383.25	SD 4.34
1-2	Double Type 'S' Inlet	N 561,676 E 1,368,609	390.53	-	387.15	SD 4.32
1-3	Type 'S' Inlet	N 561,727 E 1,368,679	391.74	387.50	384.81	SD 4.22
1-4	Precast A-10	N 561,764 E 1,368,795	392.95	387.55	386.80	SD 4.4'
1-5	Precast A-10	N 561,596 E 1,368,925	392.75	388.62	388.37	SD 4.4'
1-6	Yard Inlet	N 561,574 E 1,368,898	392.50	-	388.80	SD 4.14
1-7	Yard Inlet	N 561,722 E 1,368,791	392.30	-	388.30	SD 4.14

NOTE: Top elevations are to the center of the structure at top of curb for A-10 and Type 'S' Comb. inlets, and top of grate for Yard and Type 'S' inlets.



DEVELOPER

Star Hotels
1219 Duskyview Court
Clarksville, MD 21029
410.988.9363
Mr. M. Majumdar

OWNER

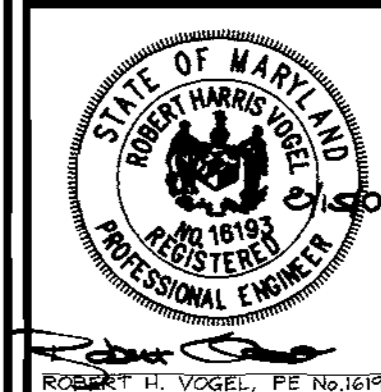
Howard Research and Development Corp
10275 Little Patuxent Parkway
Columbia, MD 21044

NO	DATE	REVISION
1	5-21-01	REVISE SHC TO 6" REVISE W/C TO UTILIZE EX. W/C

STORM DRAIN, WATER AND SEWER PROFILES AND MISCELLANEOUS DETAILS
HILTON GARDEN INN
COLUMBIA ROUTE 108 COMMERCIAL
SECTION 1 AREA 1
TAX MAP #37 GRID #1 PARCEL B-2
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

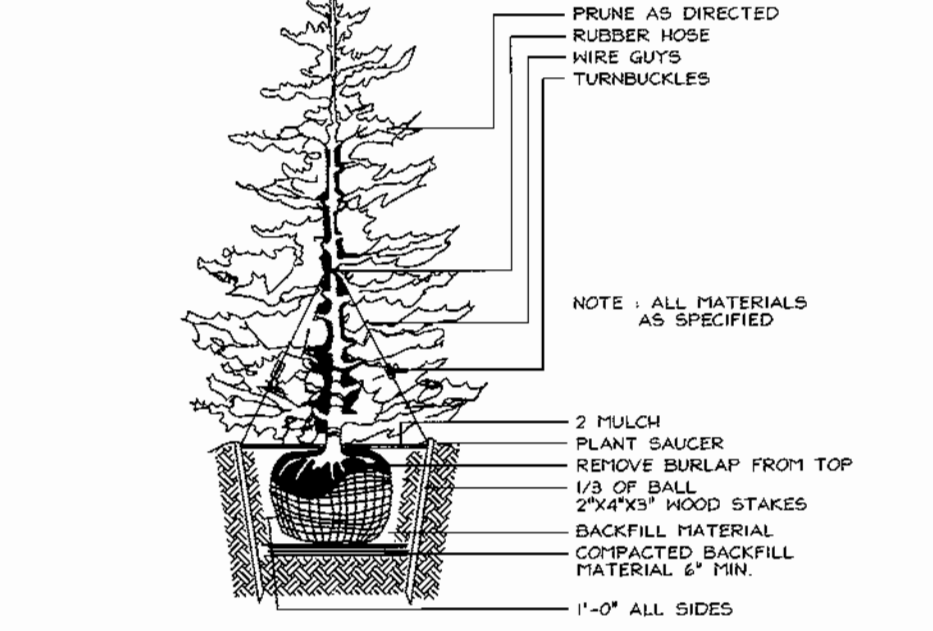
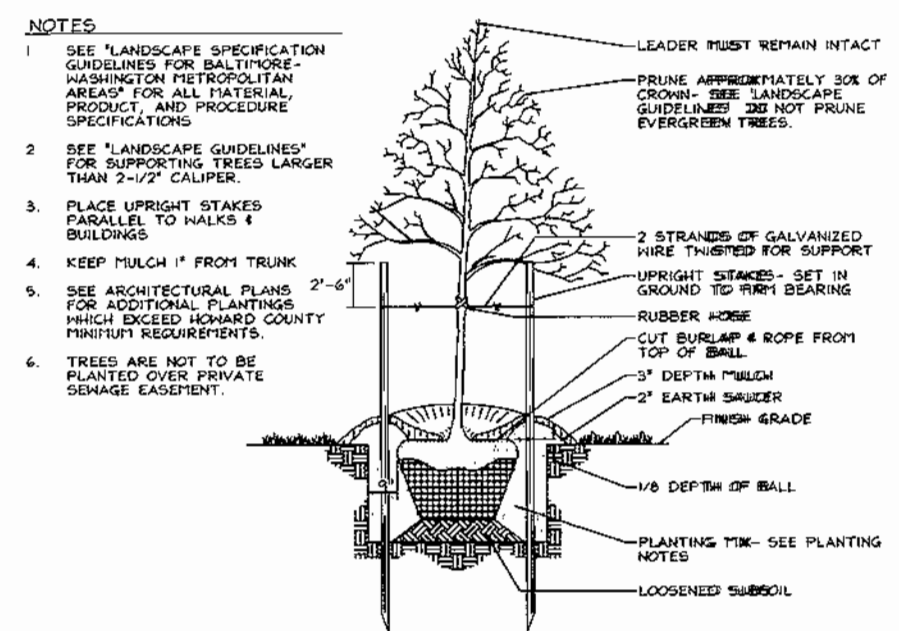
VOGEL & ASSOCIATES
ENGINEERS SURVEYORS PLANNERS

3681 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3966



DESIGN BY: RHY/PS
DRAWN BY: PS
CHECKED BY: RHY
DATE: August 16, 2000
SCALE: 1"=30'
W.O. NO.: 99-156

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/5/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE
 [Signature] 9/7/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE
 [Signature] 9/7/00
 DIRECTOR DATE



**SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING**

Number of parking spaces	117
Number of trees and parking lot islands required	6
Number of trees and parking lot islands provided	-
Shade Trees	-
Other Trees (2:1 Substitution)	6

GENERAL NOTES

- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual. The required parking and perimeter landscaping will be bonded per this submission.
- Financial Surety for the required landscaping must be posted as part of the Grading Permit in the amount of \$7,650.00 for 16 shade trees and 19 evergreen trees.
- Drive lighting to be Kim Haloblatte ET Luminaire; 25' black steel round poles; 250 Watt Metal Halide. Pedestrian lighting to be Spectra SP2 with black angled hood and GR3 glass refractor. Pole to be 10' black aluminum. Lamp to be 100 watt metal halide.

LANDSCAPE SCHEDULE

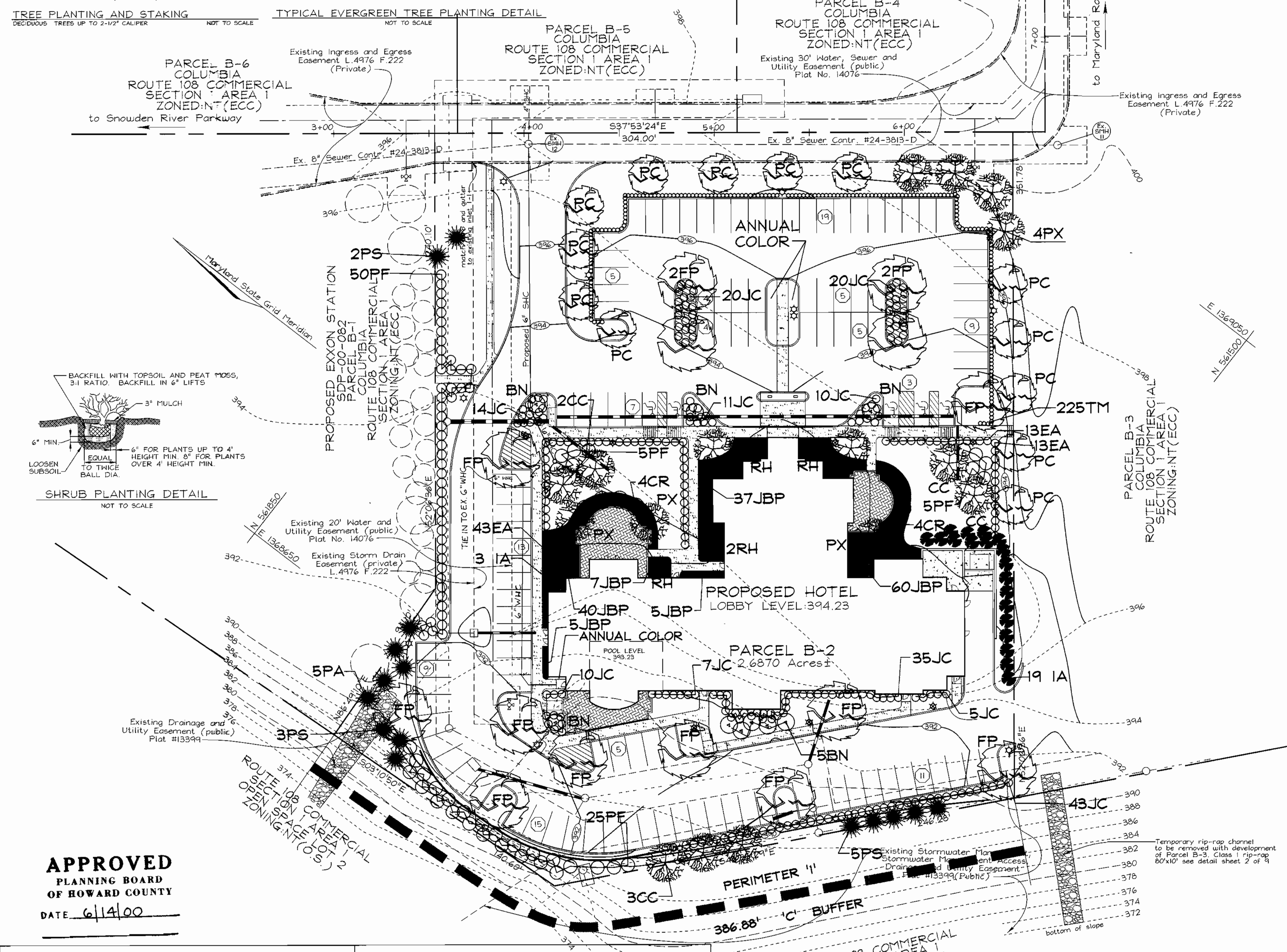
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
BN	9	Betula nigra 'Heritage' Heritage River Birch	14 - 16' Ht.	B # B
CC	7	Carpinus caroliniana American Hornbeam	2 - 2 1/2" Cal.	B # B
CR	8	Cornus rutgersensis 'Aurora' White Steller Dogwood	9 - 11' Ht.	B # B
EA	69	Euonymus alata 'Compacta' Compact Winged Euonymus	30" - 36" Ht.	B # B
FP	14	Fraxinus p. 'Patmore' Patmore Green Ash	3-3 1/2" Cal.	B # B
IA	21	Ilex attenuata 'Fosteri' Foster's Holly	30" - 36" Ht.	B # B
JC	180	Juniperus d.e. 'Parsonii' Parsons Juniper	18"-24" Spd.	B # B
JBP	160	Juniperus c. var. sargentii 'Glauca' Blue Sargent Juniper	2 Gallon	4' o.c.
PA	5	Picea abies Norway Spruce	7 - 9' Ht.	B # B
PC	13	Pyrus c. 'Cleveland Select' Cleveland Select Pear	3-3 1/2" Cal.	B # B
PF	85	Photinia 'Fraseri' Fraser Photinia	30" - 36" Ht.	B # B
PS	10	Pinus strobus Eastern White Pine	7 - 9' Ht.	B # B
PX	9	Prunus c. 'Newport' Purpleleaf Flowering Plum	2 1/2"-3" Cal.	B # B
RH	5	Rhododendron hy. 'PJM' PJM Rhododendron	30"-36" Spd.	B # B
TM	225	Toxus m. hicksii Hicks Yew	30"-36" Ht.	2' o.c.

- ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.
- MAINTENANCE TO INCLUDE MONITORING AND HAND WATERING AS NEEDED FOR THE FIRST TWO GROWING SEASONS TO ESTABLISH WOODY PLANTS. SPECIALIZED PLANTING AREAS INCLUDING INTERIOR COURTYARDS AND ANNUAL BEDS MAY REQUIRE REGULAR HAND WATERING OR IRRIGATION.
- CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
- FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
- CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

**SCHEDULE A
PERIMETER LANDSCAPE EDGE***

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation		
Landscape Type		I C
Linear Feet of Roadway Frontage/Perimeter		386.88
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)		No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)		No
Number of Plants Required		
Shade Trees		1.40 10
Evergreen Trees		1.20 19
Shrubs		-
Number of Plants Provided		
Shade Trees		4
Evergreen Trees		9
Other Trees (2:1 Substitution)		3
Shrubs (10:1 Substitution)		68
Describe Plant Substitution Credits Below if needed		

* This plan prepared per New Town Alternative Compliance method. Substitutions per HRD.
* Parcel B-5 is an internal parcel within a subdivision.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Paul Kutt 7/10
DIRECTOR DATE

John Blum 7/10
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

John Damascus 8/5/00
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

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.

mmmmccc 8-20-2000
SIGNATURE OF DEVELOPER DATE

ROUTE 108 COMMERCIAL SECTION 1 AREA 1 OPEN SPACE LOT 2 ZONING: NT(O.S.)

ROUTE 108 COMMERCIAL SECTION 1 AREA 1 ZONING: NT(ECC)

ROUTE 108 COMMERCIAL SECTION 1 AREA 1 ZONING: NT(ECC)

ROUTE 108 COMMERCIAL SECTION 1 AREA 1 ZONING: NT(ECC)

ROUTE 108 COMMERCIAL SECTION 1 AREA 1 ZONING: NT(ECC)

LANDSCAPE PLAN
HILTON GARDEN INN

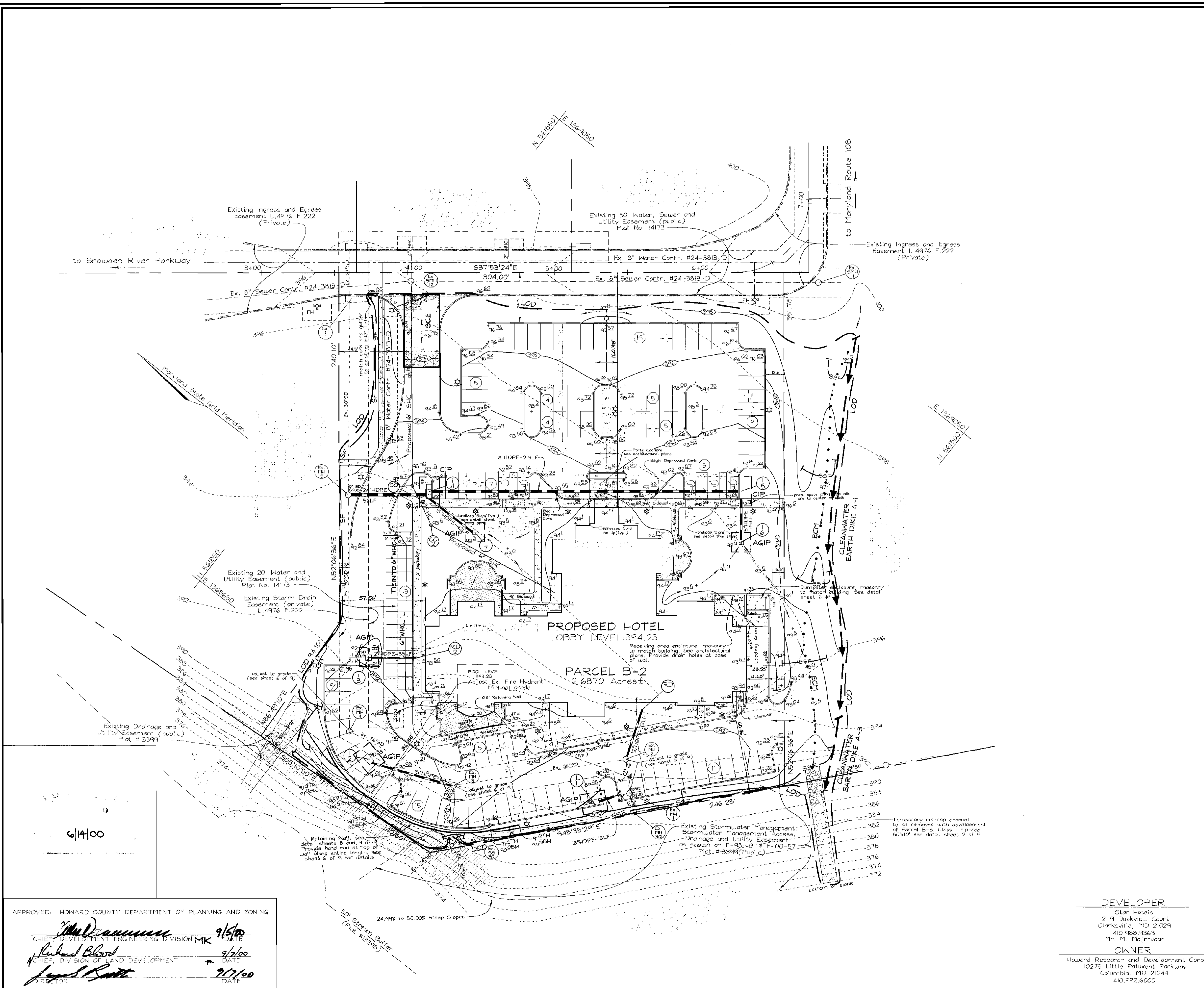
TAX MAP #37 PARCEL B-5
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
ENGINEERS-SURVEYORS-PLANNERS

3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
Tel 410.461.5828 Fax 410.465.3968

DESIGN BY: MM
DRAWN BY: PS/MM
CHECKED BY: RHV
DATE: August 21, 2000
SCALE: 1"=30'
N.O. NO.: 99-156

7 SHEET OF 9



LEGEND

Existing Contour	--- 382
Proposed Contour	--- 382
Spot Elevation	+82.53
Direction of Flow	→
Light Poles	⊙
Parking Lot & Roadway	⊙
Pedestrian	⊙
Parking Lot (Twin Head)	⊙
Stabilized Construction Entrance	[]
Silt Fence	— SF — SF —
Super Silt Fence	— SSF — SSF —
Earth Dike	— ED A-1 —
Limit of Disturbance	— LOD —
Erosion Control Matting	••••• ECM
Curb Inlet Protection	[] CIP
At Grade Inlet Protection	[] AGIP

2	10-2-01	REVISE BUILDING FOOTPRINT
1	5-21-01	REVISE SHC TO 6" REVISE WHC TO UTILIZE EX WHC
NO	DATE	REVISION

REVIEWED FOR HOWARD SCD AND MEETS TECHNICAL REQUIREMENTS

Cheer Simmona 8/31/00
 USDA-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John R. Robertson 8/31/00
 HOWARD SCD DATE

DEVELOPER'S CERTIFICATE

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR SEDIMENT AND EROSION CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT

Mukesh Majumdar 8-22-2000
 SIGNATURE OF DEVELOPER DATE

ENGINEER'S CERTIFICATE

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

Robert H. Vogel 8/15/00
 SIGNATURE OF ENGINEER DATE
 ROBERT H. VOGEL

SEDIMENT AND EROSION CONTROL PLAN
HILTON GARDEN INN
 COLUMBIA ROUTE 108 COMMERCIAL
 SECTION 1 AREA 1
 TAX MAP #37 GRID #1 PARCEL B-2
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

VOGEL & ASSOCIATES
 ENGINEERS-SURVEYORS-PLANNERS
 3691 Park Avenue, Suite 101 • Ellicott City, Maryland 21043
 Tel 410.481.5628 Fax 410.465.3966

	DESIGN BY: PS	3 SHEET OF 9
	DRAWN BY: PS	
	CHECKED BY: RHV	
	DATE: August 16, 2000	
SCALE: 1"=30'	NO. NO.: 99-156	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

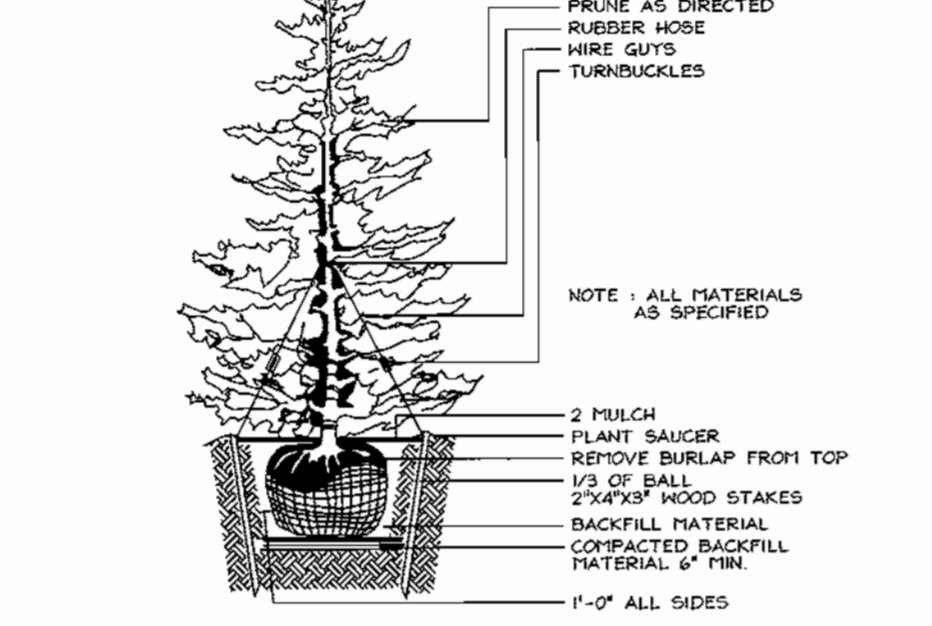
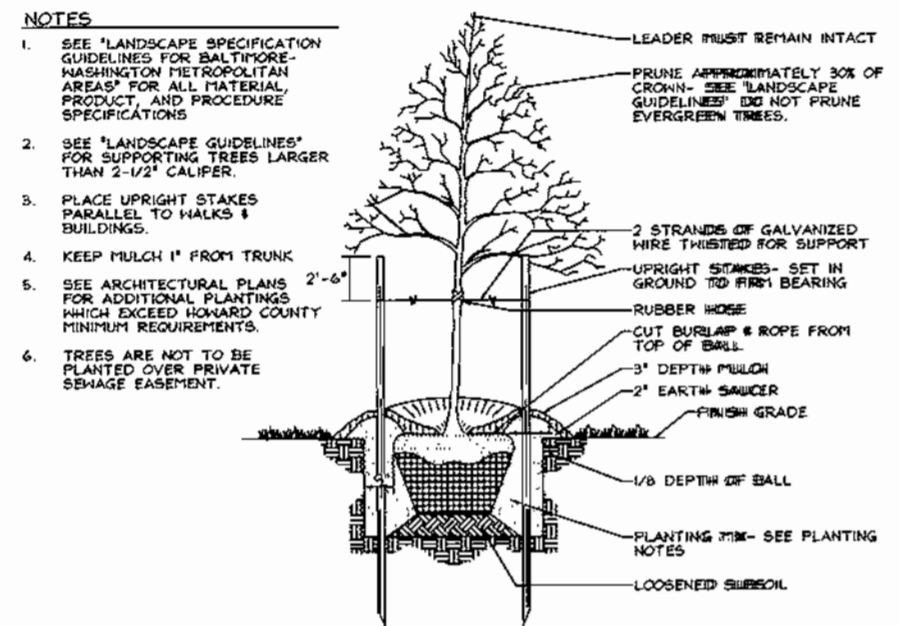
Richard Blawie 9/5/00
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MK DATE

James S. Smith 9/7/00
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

James S. Smith 9/7/00
 DIRECTOR DATE

DEVELOPER
 Star Hotels
 12114 Duskview Court
 Clarksville, MD 21029
 410.988.9363
 Mr. M. Majumdar

OWNER
 Howard Research and Development Corp.
 10275 Little Patuxent Parkway
 Columbia, MD 21044
 410.992.6000



SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of parking spaces	117
Number of trees and parking lot islands required	6
Number of trees and parking lot islands provided	6
Shade Trees	6
Other Trees (2:1 Substitution)	-

GENERAL NOTES

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LANDSCAPE SCHEDULE

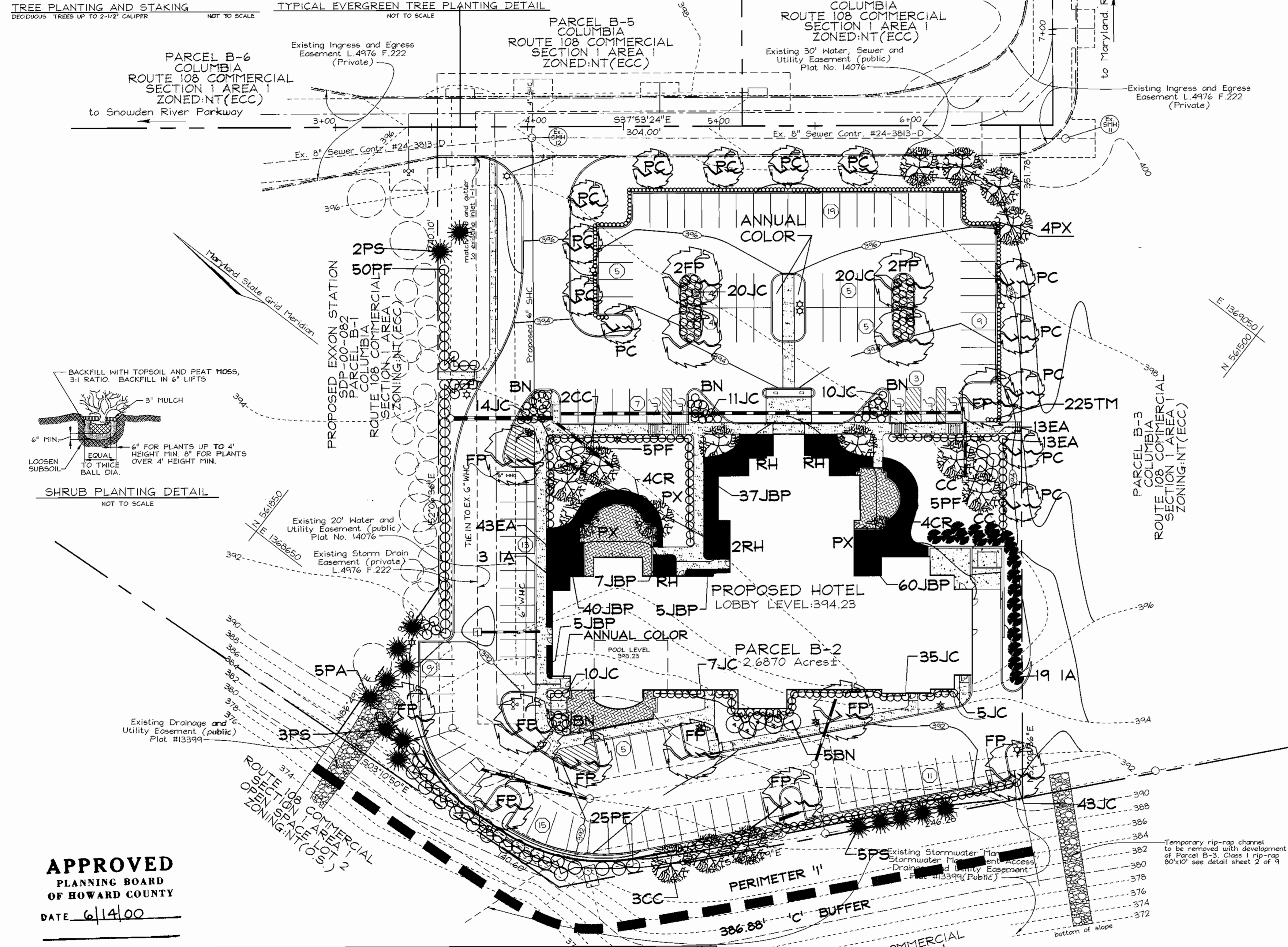
KEY	QUAN.	BOTANICAL NAME	SIZE	REM.
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JBP	160	Juniperus c. var. sargentii 'Glauda' Blue Sargent Juniper	2 Gallon	4' o.c.
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PX	9	Prunus c. 'Newport' Purpleleaf Flowering Plum	2 1/2"-3" Cal.	B & B
RH	5	Rhododendron hy. 'PJM1' PJM1 Rhododendron	30"-36" Spd.	B & B
TM	225	Taxus m. hicksii Hicksi Yew	30"-36" Ht.	2' o.c.

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SCHEDULE A PERIMETER LANDSCAPE EDGE*

CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
Perimeter/Frontage Designation		
Landscape Type		C
Linear Feet of Roadway Frontage/Perimeter		386.88
Credit for Existing Vegetation (Yes, No, Linear Feet Describe below if needed)		No
Credit for Wall, Fence or Berm (Yes, No, Linear Feet Describe below if needed)		No
Number of Plants Required		
Shade Trees		1:40 10
Evergreen Trees		1:20 19
Shrubs		-
Number of Plants Provided		
Shade Trees		4
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Describe Plant Substitution Credits Below if needed)		

* This plan prepared per New Town Alternative Compliance method. Substitutions per HRD.
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LANDSCAPE PLAN
HILTON GARDEN INN

TAX MAP #37
6TH ELECTION DISTRICT

PARCEL B-5
HOWARD COUNTY, MARYLAND

VAVOGEL & ASSOCIATES
ENGINEERS/SURVEYORS/PLANNERS

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