

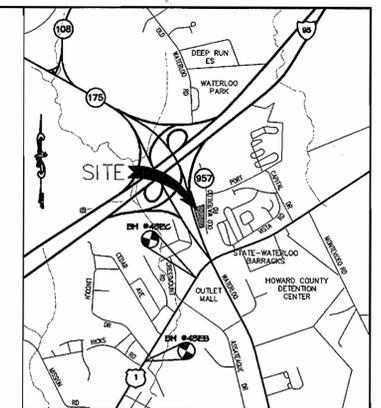
SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	GRADING AND SEDIMENT CONTROL PLAN
4	SEDIMENT CONTROL DETAILS
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12	EXISTING CONDITIONS STORMWATER DRAINAGE AREA MAP
13	PROPOSED CONDITIONS STORMWATER DRAINAGE AREA MAP
14	RETAINING WALL CONSTRUCTION DETAILS

SITE DEVELOPMENT PLAN COMFORT SUITES PARCEL 591 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

CONTROL USED FOR AS-BUILT SURVEY

BENCH MARK

- ✓ CONTROL STATION 43EB
ELEVATION 216.99
N 545,963.658
E 1,371,573.830
- ✓ CONTROL STATION 43EC
ELEVATION 220.369
N 547,821.276
E 1,372,882.447



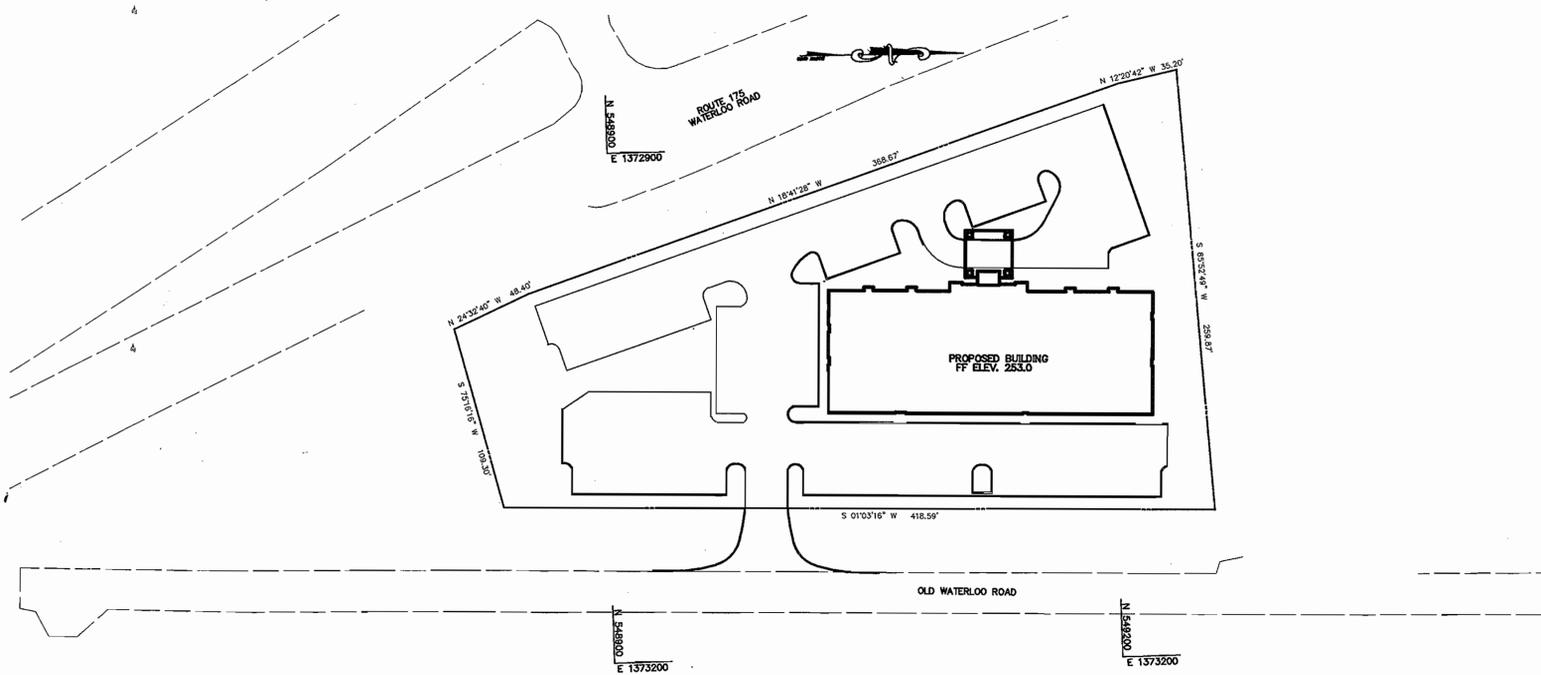
VICINITY MAP
SCALE: 1" = 2000'

GENERAL NOTES

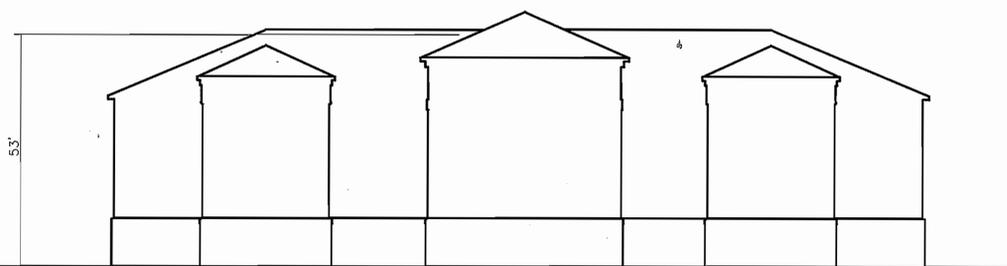
1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
4. 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.
5. ALL LIGHTING IS TO BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES, AND BE IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.
6. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
7. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD-RUN SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PHR&A DATED AUGUST 2002.
8. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 43EB AND 43EC WERE USED FOR THIS PROJECT.
9. WATER IS PUBLIC. CONTRACT NO. 493-DW
10. SEWER IS PUBLIC. SEWER DRAINAGE AREA: CONTRACT NO. 14-1086-D
11. THE STORMWATER MANAGEMENT FOR THIS DEVELOPMENT IS PROVIDED BY A PRIVATELY MAINTAINED UNDERGROUND DETENTION SYSTEM AND BIOTENTION BMP.
12. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
13. THE 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
14. THERE ARE NO WETLANDS WITHIN THE PROPERTY BASED ON FIELD EVALUATION BY GRAHAM HUBBARD, PHR&A, SEPTEMBER 14, 2001.
15. THE TRAFFIC STUDY WAS PREPARED BY THE TRAFFIC GROUP, DATED JUNE 2002.
16. THE GEOTECHNICAL STUDY FOR STORMWATER MANAGEMENT FOR THIS PROJECT WAS PREPARED BY GEOTECH ENGINEERS, INC. DATED AUGUST 2002.
17. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PHR&A DATED AUGUST 2002.
18. SUBJECT PROPERTY ZONED M-1 PER 10-18-93 COMPREHENSIVE ZONING PLAN.
19. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
20. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S. BA-01-69V
21. THE CONTRACTOR SHALL VERIFY EXISTING UTILITIES AT LEAST FIVE DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
22. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
23. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
24. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
25. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
26. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
27. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T99.
29. BA-01-69V IS A CASE TO REDUCE THE 30 FOOT PARKING USE SETBACK FROM EXTERNAL PUBLIC STREET RIGHTS-OF-WAY TO 7 FEET FROM MD 175 AND OLD WATERLOO ROAD, GRANTED BY BOARD OF APPEALS ON FEBRUARY 5, 2002, SUBJECT TO THE FOLLOWING CONDITIONS:
 1. THE VARIANCE SHALL APPLY ONLY TO THE PROPOSED PARKING USE AREAS AS DESCRIBED IN THE PETITION, AND AS DEPICTED ON THE PLAN FOR COMFORT SUITES SUBMITTED ON NOVEMBER 29, 2001, OR AS MAY BE REVISED BY THE BOARD, AND NOT TO ANY OTHER USES OR STRUCTURES ON THE PROPERTY.
 2. THE TYPE E LANDSCAPE EDGE ALONG THE MD175 RIGHT-OF-WAY LABELED "PERIMETER4" ON THE PLAN SHALL BE PROPOSED, ESTABLISHED, AND MAINTAINED PREDOMINANTLY AS A HEDGE PLANTING OF UPRIGHT SHRUBS TO SCREEN AND BUFFER THE ENCRDACHING PARKING USE AREA FROM MD 175.
30. ALL EXISTING STRUCTURES SHALL BE REMOVED.
31. THE FOREST CONSERVATION OBLIGATION OF 0.94 AC. FOR THIS SITE DEVELOPMENT PLAN HAS BEEN MET BY A FEE-IN-LIEU OF PAYMENT OF \$20,473.20.

SITE TABULATION

SITE AREA	1.85 ACRES (80602 SF)
LIMIT OF DISTURBED AREA	1.9 ACRES
PRESENT ZONING	M-1
PROPOSED USE	4 STORY HOTEL 83 ROOMS
FLOOR SIZE	14830 SF
PARKING SPACES REQUIRED	1 SPACE PER GUEST ROOM
1 SPACE PER GUEST ROOM	83 SPACES
PARKING SPACES PROVIDED	84 SPACES (INCLUDES 4 HC SPACES)
BUILDING COVERAGE	18% OF SITE
PLANNING AND ZONING FILE No.	BA-01-69V



LOCATION PLAN
1" = 50'



BUILDING ELEVATION
SCALE: 1" = 20'

ADDRESS CHART

LOT NUMBER	STREET ADDRESS
591	7164 OLD WATERLOO ROAD

PROJECT NAME	COMFORT SUITES	SECT./AREA	-	PARCEL	591
PLAT #	N/A	BLOCK #	5	ZONING	M-1
		TAX MAP NO.	43	ELECT. DIST.	6
				CENSUS TRACT	6012
WATER CODE	B 01	SEWER CODE	2153000		

STATE OF MARYLAND
PROFESSIONAL ENGINEER

8/1/02
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

6/6/02
DATE

6/5/03
DATE

DATE NO. REVISION

OWNER / DEVELOPER

NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

PROJECT **COMFORT SUITES**
4 STORY - 83 ROOM HOTEL

AREA TAX MAP 43 ZONED M-1 PARCEL 591
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **TITLE SHEET**

PHR&A
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

3-24-03
DATE

DESIGNED BY: ACR

DRAWN BY: DAM

CHECKED BY: CJR

PROJECT NO: 01256
C000COV.DWG

DATE: APRIL 2, 2003

SCALE: AS SHOWN

CHRISTOPHER J. REID #19949
AS-BUILT

DRAWING NO. 1 OF 14

STORMWATER MANAGEMENT SUMMARY TABLES

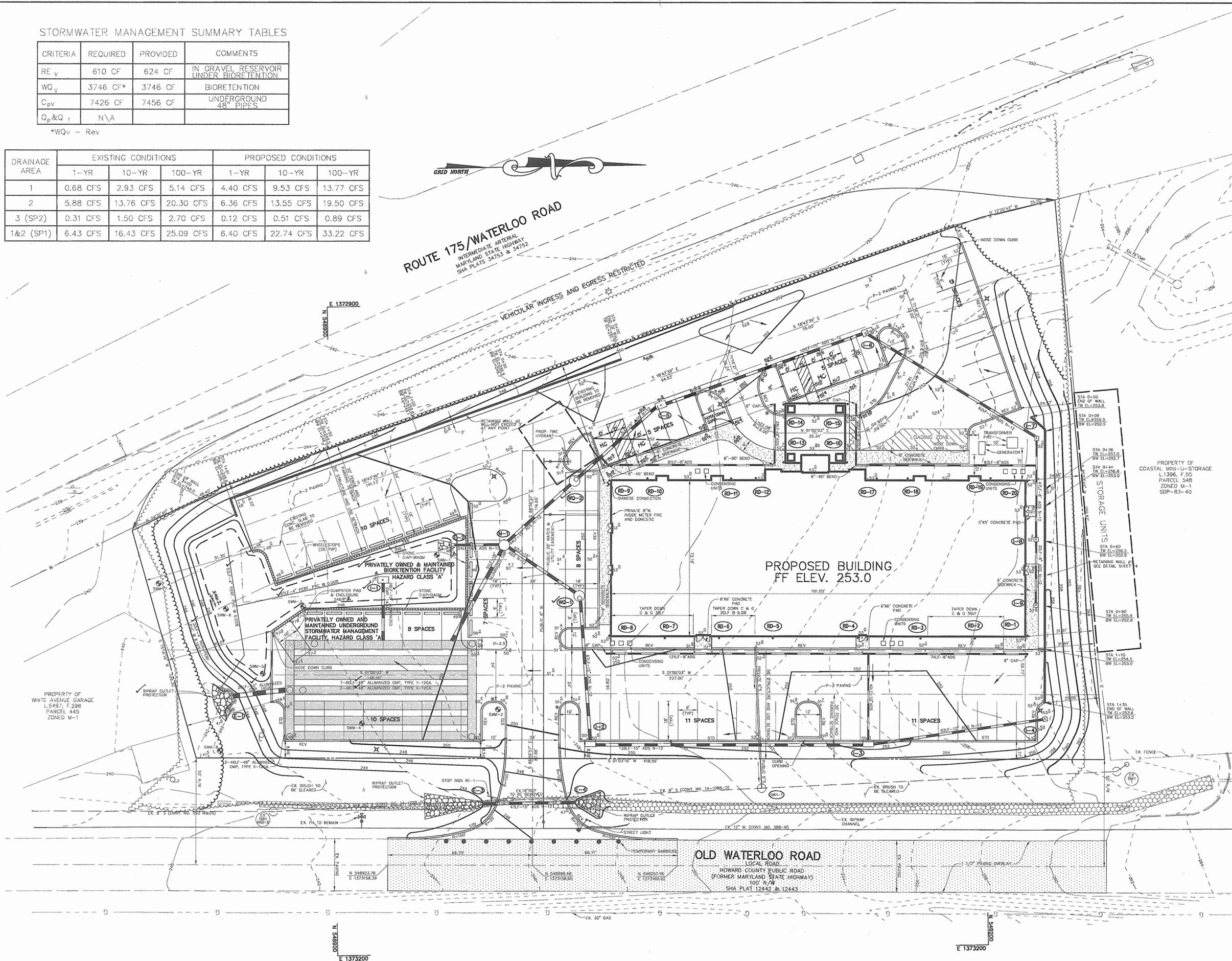
CRITERIA	REQUIRED	PROVIDED	COMMENTS
RE _v	610 CF	624 CF	IN GRAVEL RESERVOIR UNDER BIORETENTION
WQ _v	3746 CF*	3746 CF	BIORETENTION
C _{pV}	7426 CF	7456 CF	UNDERGROUND 48" PIPES
Q _p & Q _r	N/A		

*WQ_v - Rev

DRAINAGE AREA	EXISTING CONDITIONS			PROPOSED CONDITIONS		
	1-YR	10-YR	100-YR	1-YR	10-YR	100-YR
1	0.68 CFS	2.93 CFS	5.14 CFS	4.40 CFS	9.53 CFS	13.77 CFS
2	5.88 CFS	13.76 CFS	20.30 CFS	6.36 CFS	13.55 CFS	19.50 CFS
3 (SP2)	0.31 CFS	1.50 CFS	2.70 CFS	0.12 CFS	0.51 CFS	0.89 CFS
1&2 (SP1)	6.43 CFS	16.43 CFS	25.09 CFS	6.40 CFS	22.74 CFS	33.22 CFS



ROUTE 175/WATERLOO ROAD
 INTERMEDIATE ARTERIAL
 MARYLAND STATE HIGHWAY
 SHA PLATS 34753 & 34752



- NOTES:**
- ALL RADII ARE 5' UNLESS OTHERWISE NOTED.
 - ALL DIMENSIONS ARE TO FACE OF CURB OR BUILDING UNLESS OTHERWISE NOTED.
 - ALL ON-SITE ROADS ARE PRIVATE.
 - * STD/REV - STANDARD TO REVERSE CURB TRANSITION.
 - S.C.E. S.C.E.
 - P-2 PAVING (HO.CO. DETAIL R-2.01)
 - 1 1/2" PAVING OVERLAY (USE P-2 SURFACE COURSE)
 - STONE DIAPHRAM
 - CONCRETE SIDEWALK (HO.CO. DETAIL R-3.05)
 - UNDERGROUND STORM WATER MANAGEMENT FACILITY
 - LIGHTS

- LEGEND**
- EXISTING 10' CONTOURS
 - EXISTING 2' CONTOURS
 - PROPOSED 10' CONTOURS
 - PROPOSED 2' CONTOURS
 - PROPOSED CURB & GUTTER
 - PROPOSED STORM DRAIN
 - EXISTING TREELINE
 - PROPOSED TREELINE

AS-BUILT CERTIFICATION

DOMENICK W. COLANESE #27200 DATE: 8/16/03

STREET LIGHT DATA
 LOCATE RIGHT OF CL STA 0+20, 3' BEHIND CURB.
 POLE HEIGHT = 30' LIGHT FIXTURE = 250W HPS
 POLE TYPE = BRONZE ALUMINUM W/ 12' ARM

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Mark A. Legler 4/6/03
 DIRECTOR DATE

Victor Henderson 6/5/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MWD DATE

Victor Henderson 6/5/03
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER / DEVELOPER

NORTHSTAR HOTELS
 7211 HANOVER PARKWAY
 SUITE C-D
 GREENBELT, MARYLAND 20770
 301-345-8700
 ATTN: AL PATEL

PROJECT COMFORT SUITES
 4 STORY - 83 ROOM HOTEL

AREA TAX MAP 43 ZONED M-1 PARCEL 591
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE SITE DEVELOPMENT PLAN

Patton Harris Rust & Associates, PC
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

3.27.03
 DATE

DESIGNED BY : ACR
 DRAWN BY: DAM
 CHECKED BY: CJR
 PROJECT NO : 01256
 C400SIT.DWG
 DATE : APRIL 2, 2003
 SCALE : 1" = 20'
 DRAWING NO. 2 OF 14

CHRISTOPHER J. REID #19949
 AS-BUILT

SDP-03-45

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	C FACTOR	PERCENT IMPERVIOUS
1	---	---	---
2	0.10	0.79	90
3	0.18	0.75	83
4	0.08	0.27	13
5	0.15	0.77	87
6	0.28	0.74	82
7	0.055	0.19	0
8	0.006	0.36	25
9	0.006	0.64	67

SOIL CHART

SYMBOL	DESCRIPTION
ScB	SANDY AND CLAYEY LAND, GENTLY SLOPING
ScC	SANDY AND CLAYEY LAND, MODERATELY SLOPING

LEGEND

STABILIZED CONSTRUCTION ENTRANCE	
LIMIT OF DISTURBANCE	
SUPER SILT FENCE	
DRAINAGE AREA DIVIDE	
INLET PROTECTION DEVICE	

ScD

ROUTE 175/WATERLOO ROAD
INTERMEDIATE ARTERIAL
MARYLAND STATE HIGHWAY
SHA PLATS 34753 & 34752

GRID NORTH

BY THE DEVELOPER :

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

Chris Alon 04-2-03
DEVELOPER DATE

BY THE ENGINEER :

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

Chris J Reid 3-26-03
ENGINEER DATE

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

Jin Nguyen 5/27/03
NATURAL RESOURCES CONSERVATION SERVICE DATE

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

Shelley Selig 5/27/03
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

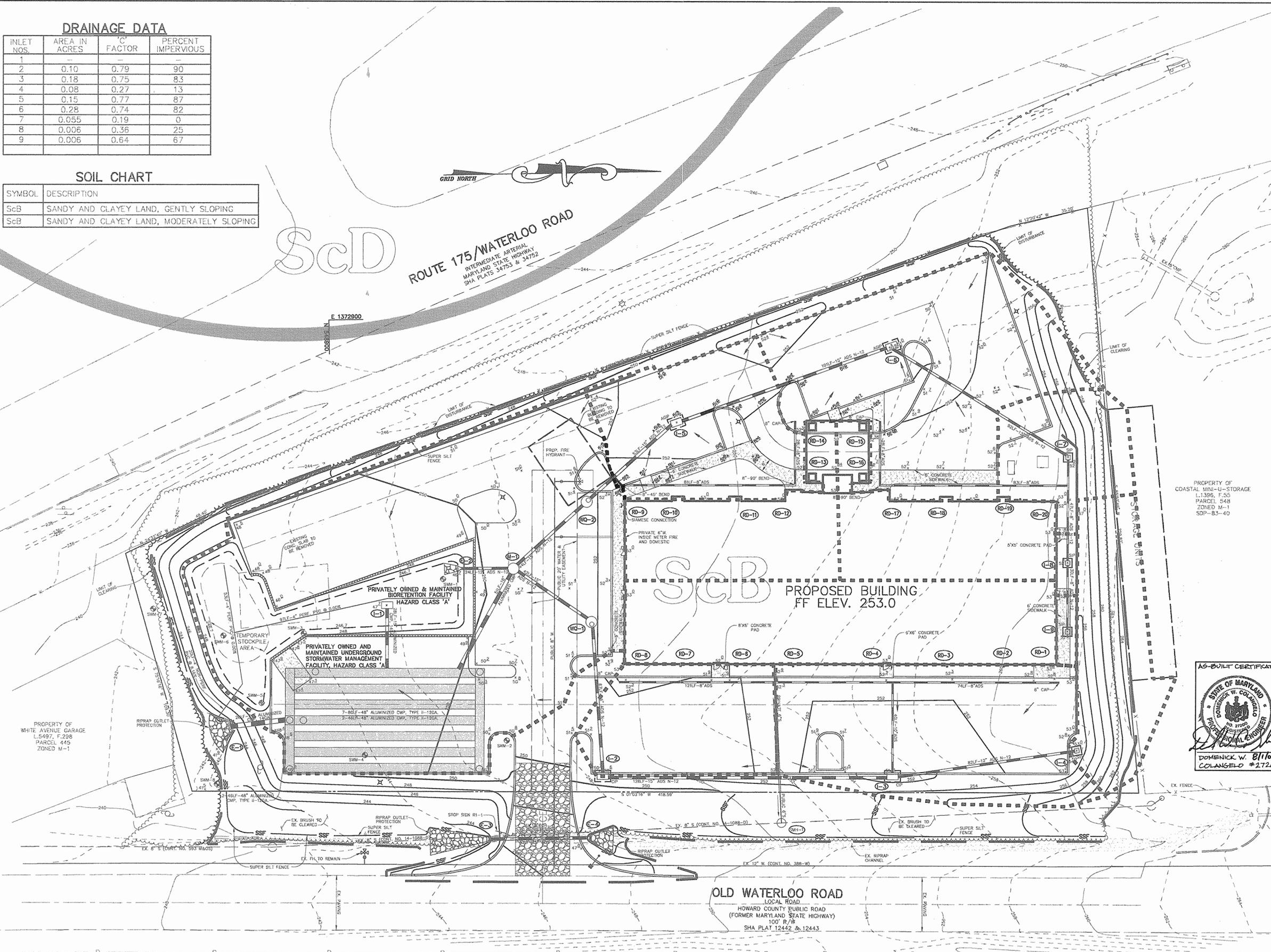
Danica A. Coughlin 4/4/03
DIRECTOR DATE

Robert S. Jones 6/5/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Robert S. Jones 6/5/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

PROPERTY OF
COASTAL MINI-U-STORAGE
L.1396, F.55
PARCEL 548
ZONED M-1
SDP-83-40

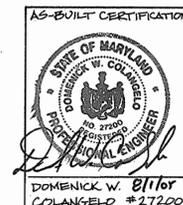
PROPERTY OF
WHITE AVENUE GARAGE
L.5497, F.2298
PARCEL 445
ZONED M-1



ScB PROPOSED BUILDING
FF ELEV. 253.0

OLD WATERLOO ROAD
LOCAL ROAD
HOWARD COUNTY PUBLIC ROAD
(FORMER MARYLAND STATE HIGHWAY)
100' R/W
SHA PLAT 12442 & 12443

NOTE: EXTEND ALL SUPER SILT FENCE ENDS UP 2' IN ELEVATION FROM SUMP.



DATE NO.	REVISION

OWNER / DEVELOPER
NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

PROJECT	COMFORT SUITES 4 STORY - 83 ROOM HOTEL
AREA	TAX MAP 43 ZONED M-1 PARCEL 591 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE
GRADING AND
SEDIMENT CONTROL PLAN

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DATE	3-26-03	DESIGNED BY :	ACR
DATE	3-26-03	DRAWN BY :	DAM
DATE	3-26-03	CHECKED BY :	CJR
PROJECT NO.	01256	PROJECT NO.	01256
DATE	APRIL 2, 2003	DATE	APRIL 2, 2003
SCALE	1" = 20'	SCALE	1" = 20'
DRAWING NO.	3 OF 14	DRAWING NO.	3 OF 14

CHRISTOPHER J. REID #19949
AS-BUILT
SDP-03-45

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION
PLACEMENT OF TOPSOIL OVER A PREPARED SUBSOIL PRIOR TO ESTABLISHMENT OF PERMANENT VEGETATION.

PURPOSE
TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATIVE GROWTH. SOILS OF CONCERN HAVE LOW MOISTURE CONTENT, LOW NUTRIENT LEVELS, LOW PH, MATERIALS TOXIC TO PLANTS, AND/OR UNACCEPTABLE SOIL GRADATION.

- CONDITIONS WHERE PRACTICE APPLIES
- THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
 - THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
 - THE SOIL MATERIAL IS SO SHALLOW THAT THE ROOTING ZONE IS NOT DEEP ENOUGH TO SUPPORT PLANTS OR FURNISH CONTINUING SUPPLIES OF MOISTURE AND PLANT NUTRIENTS.
 - THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIALS TOXIC TO PLANT GROWTH.
 - THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.
 - FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SSS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTATION STATION.
- TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
 - TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1" IN DIAMETER.
 - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.
 - WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

- FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:
 - PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:
 - ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:
 - PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
 - ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
 - TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
 - NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL, UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DEGRADATION OF PHYTO-TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES TO AMENDMENTS, AS RECOMMENDED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY MAY BE USED IN LIEU OF NATURAL TOPSOIL.

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

V. TOPSOIL APPLICATION

- WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 4" - 8" HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" - 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

VI. ALTERNATIVE FOR PERMANENT SEEDING - INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:

- COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO PRESCRIBE AMENDMENTS AND FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
 - COMPOSTED SLUDGE SHALL BE SUPPLIED BY OR ORIGINATE FROM A PERSON OR PERSONS THAT ARE PERMITTED (AT THE TIME OF ACQUISITION OF THE COMPOST) BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
 - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS, AND 0.2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0. IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED TO MEET THE REQUIREMENTS PRIOR TO USE.
 - COMPOSTED SLUDGE SHALL BE APPLIED AT A RATE OF 1 TON/1,000 SQUARE FEET.
 - COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB./1,000 SQUARE FEET, AND 1/3 THE NORMAL LIME APPLICATION RATE.

REFERENCES: GUIDELINE SPECIFICATIONS, SOIL PREPARATION AND SODDING, MD-VIA, PUB. #1, COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTES, REVISED 1973.

TEMPORARY SEEDING NOTES

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

SEEDING PREPARATION - LOOSEN UPPER 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. PER 1000 SQ.FT.).

SEEDING - FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (3.2 LBS. PER 1000 SQ.FT.). FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.07 LBS. PER 1000 SQ.FT.). FOR THE PERIOD NOVEMBER 16 THRU FEBRUARY 28, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE SOD.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 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 NEEDED.

SEEDING PREPARATION - LOOSEN UPPER 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:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARRROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 30-0-0 UREA-FORM FERTILIZER (9 LBS. PER 1000 SQ.FT.).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. HARRROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING - FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS. PER 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 (0.05 LBS. PER 1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS:

- 2 TONS PER ACRE OF WELL-ANCHORED MULCH STRAW AND SEED AS SOON AS POSSIBLE IN THE SPRING.
- USE SOD.
- SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

MULCHING - APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS. PER 1000 SQ.FT.) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GAL. PER ACRE (5 GAL. PER 1000 SQ.FT.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT. OR HIGHER, USE 347 GAL. PER ACRE (8 GAL. PER 1000 SQ.FT.) FOR ANCHORING.

MAINTENANCE - INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL, STRUCTURAL SEDIMENT CONTROL, AND ALL SLOPES STEEPER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.

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

7. SITE ANALYSIS:

TOTAL AREA OF SITE 1.85 ACRES
AREA DISTURBED 1.9 ACRES
AREA TO BE ROOFED OR PAVED 0.65 ACRES
TOTAL CUT 6000 CU. YARDS
TOTAL FILL 6000 CU. YARDS

OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT

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

9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

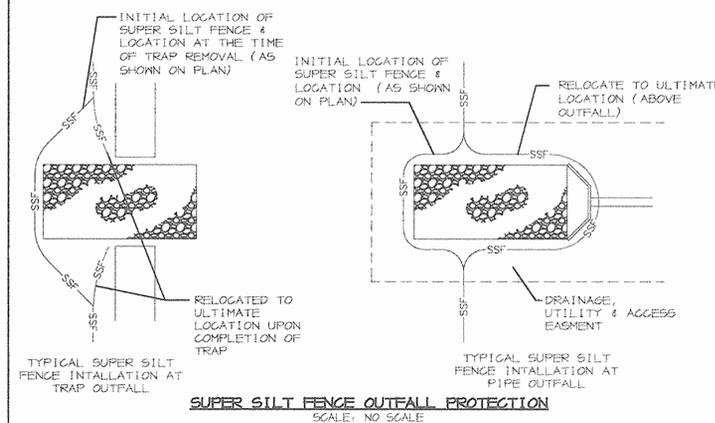
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS 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.

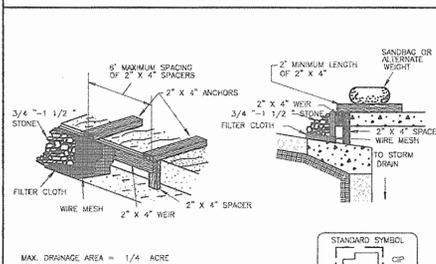
12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.

13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.

14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TEMPORAL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.



DETAIL 23C - CURB INLET PROTECTION



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

- Attach a continuous piece of wire mesh (30" minimum width by throat length plus 4") to the 2" x 4" weir (measuring throat length plus 2") as shown on the standard drawing.
- Place a continuous piece of Geotextile Class E the same dimensions as the wire mesh over the wire mesh and securely attach it to the 2" x 4" weir.
- Securely nail the 2" x 4" weir to a 6" long vertical spacer to be located between the weir and the inlet face (max. 4" apart).
- Place the assembly against the inlet throat and nail (minimum 2" lengths of 2" x 4" to the top of the weir at spacer locations). These 2" x 4" anchors shall extend across the inlet top and be held in place by sandbags or alternate weight.
- The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.
- Form the 1/2" x 1/2" wire mesh and the geotextile to the concrete gutter and against the top of the curb on both sides of the curb. Place slope 3/4" x 1/2" slope over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.
- This type of protection must be inspected frequently and the filter cloth and stones replaced when clogged with sediment.
- Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-58 MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

LIGHT POLE DETAIL

NO SCALE



U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-58 MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

DETAIL 23B - AT GRADE INLET PROTECTION

NO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sump.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-5A MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

DETAIL 23A - STANDARD INLET PROTECTION

NO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

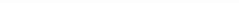
Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sump.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-5A MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

DETAIL 23A - STANDARD INLET PROTECTION

NO SCALE



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

- Excavate completely around the inlet to a depth of 18" below the notch elevation.
- Drive the 2" x 4" construction grade lumber posts 1" into the ground at each corner of the inlet. Place nail strips between the posts on the ends of the inlet. Assemble the top portion of the 2" x 4" frame using the overlap joint shown on Detail 23A. The top of the frame (weir) must be 6" below adjacent roadways where flooding and safety issues may arise.
- Stretch the 1/2" x 1/2" wire mesh tightly around the frame and fasten securely. The ends must meet and overlap at a post.
- Stretch the Geotextile Class E tightly over the wire mesh with the geotextile extending from the top of the frame to 18" below the inlet notch elevation. Fasten the geotextile firmly to the frame. The ends of the geotextile must meet at a post, be overlapped and folded, then fastened down.
- Backfill around the inlet in compacted 6" layers until the layer of earth is level with the notch elevation on the ends and top elevation on the sump.
- If the inlet is not in a sump, construct a compacted earth dike across the ditch line directly below it. The top of the earth dike should be at least 6" higher than the top of the frame.
- The structure must be inspected periodically and after each rain and the geotextile replaced when it becomes clogged.

U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-5A MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

AS-BUILT CERTIFICATION

STATE OF MARYLAND

DOMENICK W. COLANGELO #27200

DATE 6/16/03

BY THE DEVELOPER:

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

DEVELOPER DATE 9-02-03

BY THE ENGINEER:

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

ENGINEER DATE 3-26-03

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

NATURAL RESOURCES CONSERVATION SERVICE DATE 5/27/03

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

HOWARD SOIL CONSERVATION DISTRICT DATE 5/27/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DIRECTOR DATE 4/6/03

CHIEF, DEVELOPMENT ENGINEERING DIVISION M&Z DATE 6/5/03

CHIEF, DIVISION OF LAND DEVELOPMENT DATE 6/5/03

DATE NO. REVISION

OWNER / DEVELOPER

NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

PROJECT COMFORT SUITES
4 STORY - 83 ROOM HOTEL

AREA TAX MAP 43 ZONED M-1 PARCEL 591
8th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE SEDIMENT CONTROL DETAILS

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DESIGNED BY: ACR

DRAWN BY: DAM

CHECKED BY: CJR

PROJECT NO: 01256
CS00DET.DWG

DATE: APRIL 2, 2003

SCALE: AS SHOWN

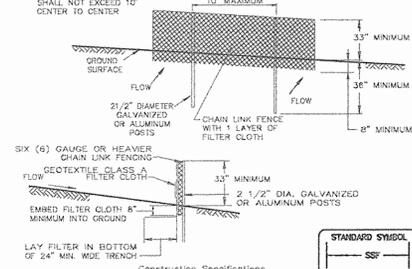
DRAWING NO. 4 OF 14

CHRISTOPHER J. REID #19949

AS-BUILT SDP-03-45

DETAIL 33 - SUPER SILT FENCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER



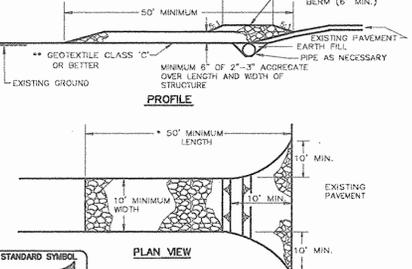
Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 6 foot length posts.
- The posts do not need to be set in concrete.
- Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, arse and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.
- Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.
- Maintenance shall be performed as needed and silt buildup removed when "bulges" develop in the silt fence, or when silt reaches 50% of fence height.

U.S. DEPARTMENT OF AGRICULTURE PAGE E-16-3 MARYLAND DEPARTMENT OF ENVIRONMENT SOIL CONSERVATION SERVICE WATER MANAGEMENT ADMINISTRATION

DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE

NOTE: FENCE POST SPACING SHALL NOT EXCEED 10' CENTER TO CENTER



Construction Specifications

- Length - minimum of 50' (+30' for single residence lot).
- Width - 10' minimum, should be flared at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. **The plan approval authority may not require single family residences to use geotextile.
- Stone - crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrances shall be piped through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a mountable berm with 5:1 slopes and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SCE is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe shall be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

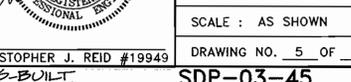
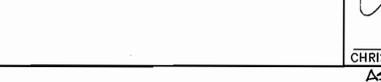
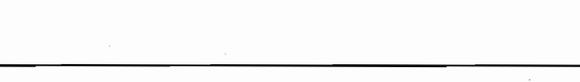
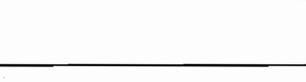
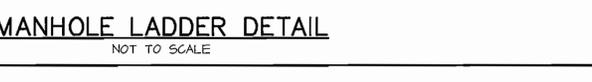
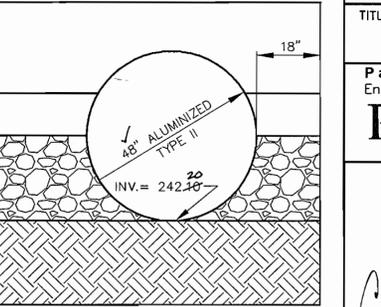
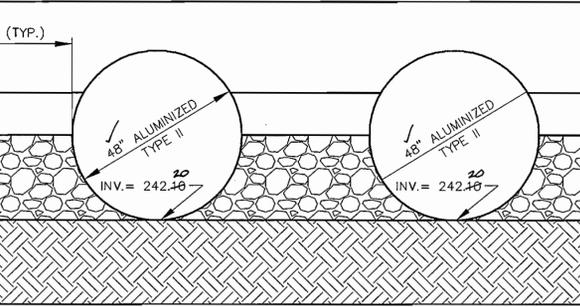
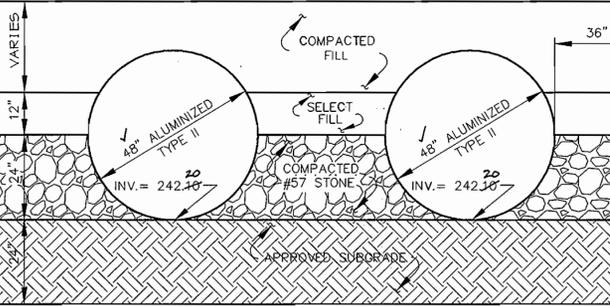
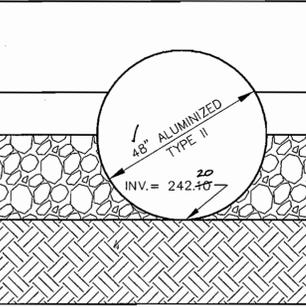
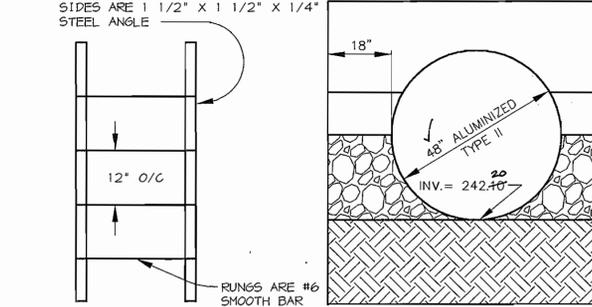
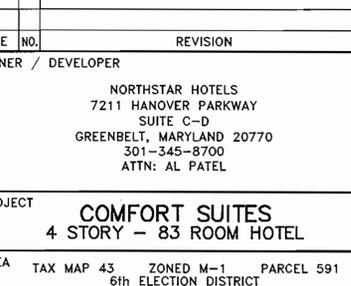
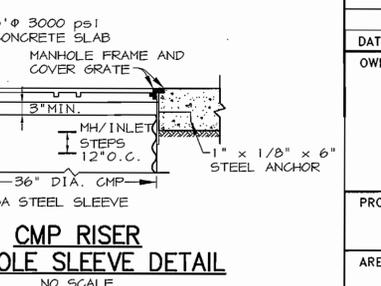
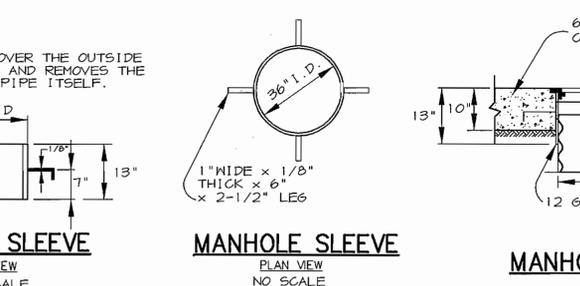
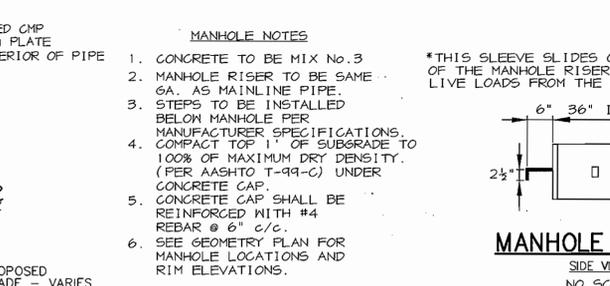
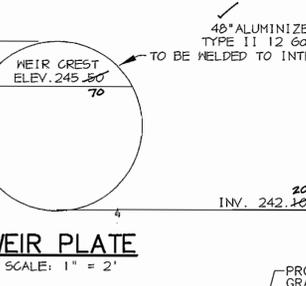
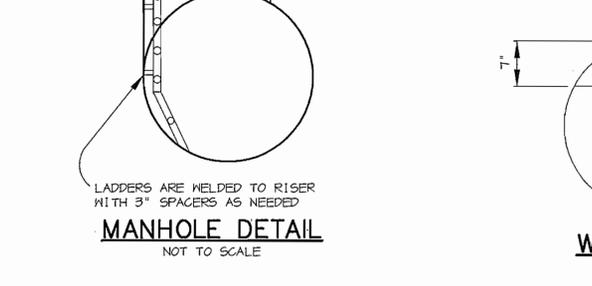
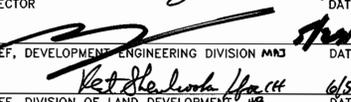
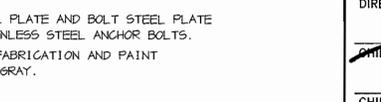
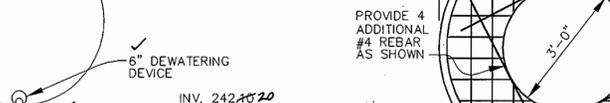
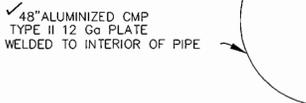
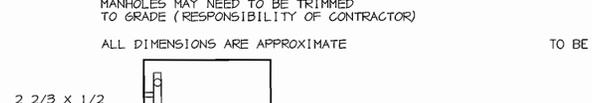
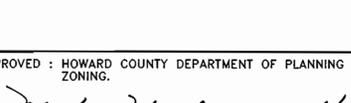
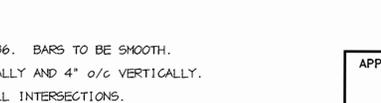
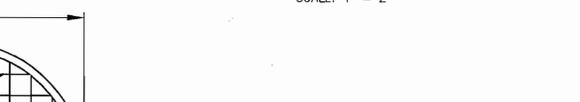
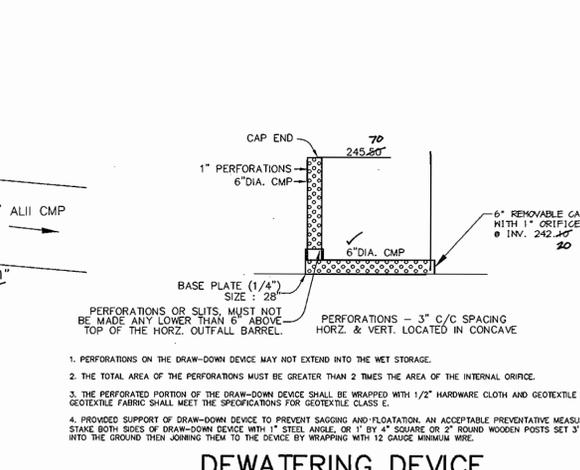
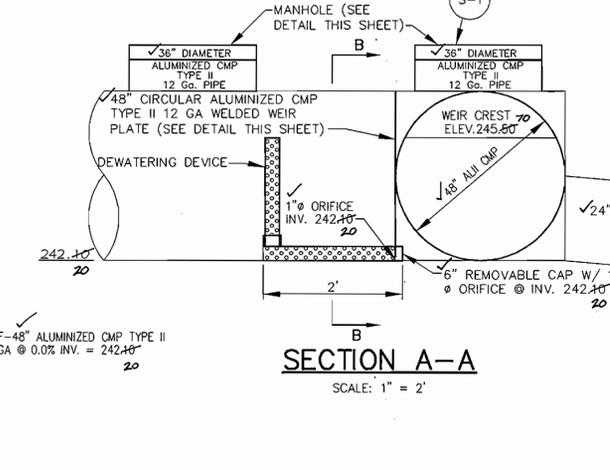
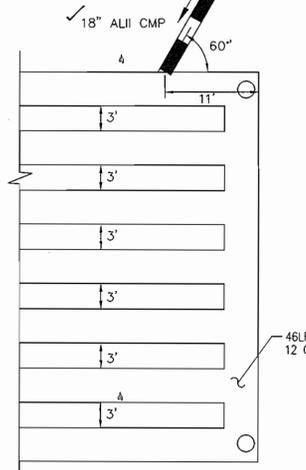
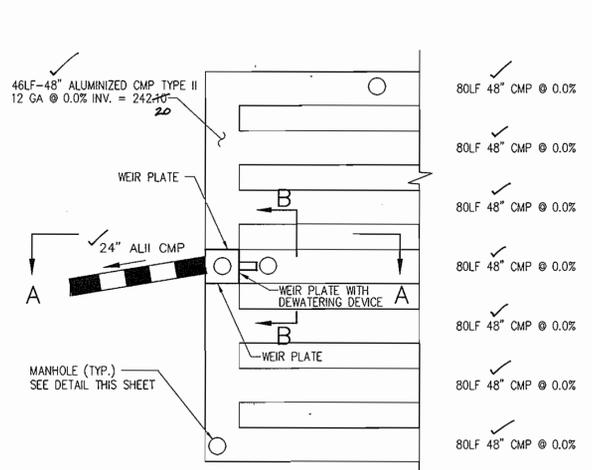
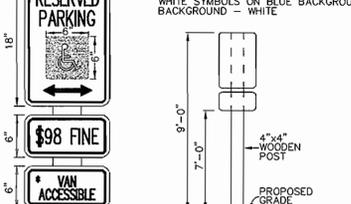
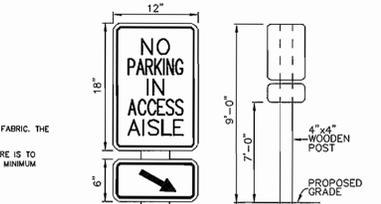
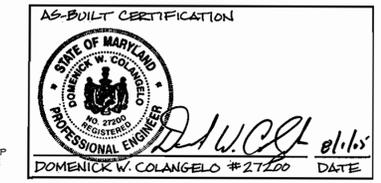
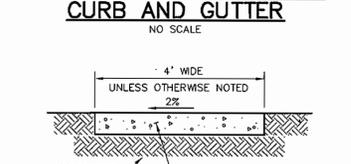
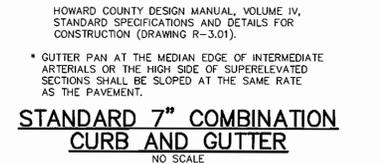
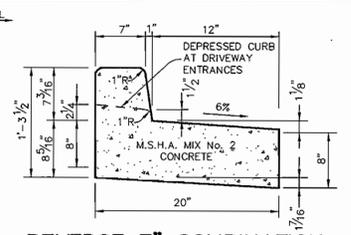
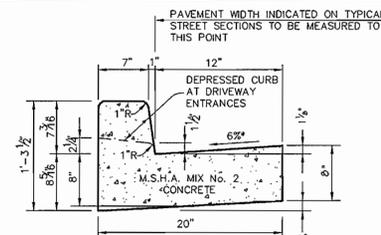
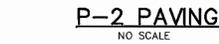
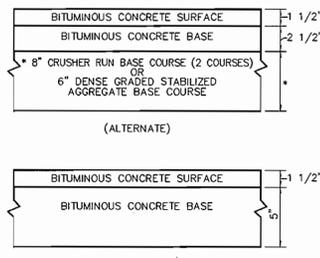
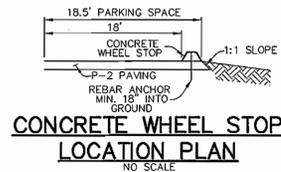
U.S. DEPARTMENT OF AGR

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND STORMWATER MANAGEMENT FACILITY

- Underground structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the underground structures inspected yearly or as Owners will have the underground structures inspected yearly or as required by Howard County, utilizing the underground units inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depths exceed 5" then cleaning of the structures is required.
- Underground facility structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
- Maintenance of underground structures should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
- Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the underground facility will be repaired as needed.
- Owner shall retain and make underground facility inspection/Monitoring forms available to Howard County officials upon their request.

GENERAL NOTES:

- ALL CONSTRUCTION SHALL MEET THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
- CONCRETE STRENGTH SHALL BE 4,000 PSI MIN. AT 28 DAYS.
- REINFORCEMENT SHALL BE CLEAN AND FREE OF RUST AND MEET ASTM-615 GRADE 60.
- ALL REINFORCEMENT SHALL HAVE 2" MIN. COVER.
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.
- THE STRUCTURE FOUNDATION AND PIPE BEDDING SHALL BE APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO INSTALLATION.
- CMP MANHOLE STRUCTURES TO BE DESIGNED TO MEET ROADWAY LOAD STANDARDS.
- ALL ALUMINIZED PIPE IN CONTACT WITH CONCRETE SHALL BE COATED WITH BITUMINOUS COATING.
- CMP PIPE INSTALLATION PER MANUFACTURER'S RECOMMENDATION.
- CONTRACTOR SHALL EXERCISE CARE DURING CONSTRUCTION SO AS NOT TO DAMAGE UNDERGROUND S.W.M.F. ANY DAMAGE TO CMP, MANHOLES, ETC. SHALL BE REPAIRED BY CONTRACTOR AT HIS/HER EXPENSE TO SATISFACTION OF ENGINEER.
- ALL DEBRIS SHALL BE KEPT OUT OF THE FACILITY DURING AND AFTER CONSTRUCTION.



TYPICAL SECTION
SCALE: 1" = 2'

MANHOLE LADDER DETAIL
NOT TO SCALE

MANHOLE DETAIL
NOT TO SCALE

WEIR PLATE
SCALE: 1" = 2'

MANHOLE SLEEVE
SIDE VIEW NO SCALE

MANHOLE SLEEVE
PLAN VIEW NO SCALE

CMP RISER MANHOLE SLEEVE DETAIL
NO SCALE

MANHOLE CONCRETE CAP
SCALE: 1" = 2'

ACCESS AISLE SIGN
NO SCALE

HANDICAP SIGN DETAIL
NO SCALE

DEWATERING DEVICE
SCALE: 1" = 2'

CONCRETE WHEEL STOP LOCATION PLAN
NO SCALE

REVERSE 7\"/>

STANDARD 7\"/>

SIDEWALK DETAIL
NO SCALE

AS-BUILT CERTIFICATION
STATE OF MARYLAND
DOMENICK W. COLANGELO #27100

TRASH RACK NOTES:

- STEEL TO CONFORM TO ASTM A-36. BARS TO BE SMOOTH.
- #4 REBAR @ 4" O/C HORIZONTALLY AND 4" O/C VERTICALLY.
- ALL REBAR TO BE WELDED AT ALL INTERSECTIONS.
- ALL BENDS TO BE 2" RADIUS.
- WELD BARS TO 2" x 1/8" STEEL PLATE AND BOLT STEEL PLATE TO STRUCTURE WITH 1/2" STAINLESS STEEL ANCHOR BOLTS.
- GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT WITH 2 COATS OF BATTLESHIP GRAY.

MANHOLE NOTES:

- CONCRETE TO BE MIX No. 3
- MANHOLE RISER TO BE SAME GA. AS MAINLINE PIPE.
- STEPS TO BE INSTALLED BELOW MANHOLE PER MANUFACTURER SPECIFICATIONS. COMPACT TOP 1" OF SUBGRADE TO 100% OF MAXIMUM DRY DENSITY. (PER AASHTO T-99-C) UNDER CONCRETE CAP.
- CONCRETE CAP SHALL BE REINFORCED WITH #4 REBAR @ 6" C/C.
- SEE GEOMETRY PLAN FOR MANHOLE LOCATIONS AND RIM ELEVATIONS.

MANHOLE SLEEVE NOTES:

- THIS SLEEVE SLIDES OVER THE OUTSIDE OF THE MANHOLE RISER AND REMOVES THE LIVE LOADS FROM THE PIPE ITSELF.

MANHOLE LADDER DETAIL: SIDES ARE 1 1/2" x 1 1/2" x 1/4" STEEL ANGLE. RINGS ARE #6 SMOOTH BAR.

WEIR PLATE: 48" ALUMINIZED CMP TYPE II 12 GA PLATE TO BE WELDED TO INTERIOR OF PIPE.

MANHOLE CONCRETE CAP: PROVIDE 4 ADDITIONAL #4 REBAR AS SHOWN.

MANHOLE SLEEVE: 36" ID. 1" WIDE x 1/8" THICK x 6" x 2-1/2" LEGS.

CMP RISER MANHOLE SLEEVE DETAIL: 6" 3000 PSI CONCRETE SLAB. MANHOLE FRAME AND COVER GRATE. 36" DIA. CMP. 12 GA STEEL SLEEVE. 1" x 1/8" x 6" STEEL ANCHOR.

CONCRETE WHEEL STOP: 18.5' PARKING SPACE. 18' CONCRETE WHEEL STOP. 1:1 SLOPE. P-2 PAVING. REBAR ANCHOR MIN. 18" INTO GROUND.

REVERSE 7\"/>

STANDARD 7\"/>

SIDEWALK DETAIL: 4' WIDE. UNLESS OTHERWISE NOTED 2%. S.H.A. MIX NO. 2 CONCRETE. STIFF BROOM FINISH. REMOVE EDGING TOOL MARKS IN FINISHING.

AS-BUILT CERTIFICATION: STATE OF MARYLAND. DOMENICK W. COLANGELO #27100.

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REVERSE 7\"/>

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STANDARD 7\"/>

SIDEWALK DETAIL: 4' WIDE. UNLESS OTHERWISE NOTED 2%. S.H.A. MIX NO. 2 CONCRETE. STIFF BROOM FINISH. REMOVE EDGING TOOL MARKS IN FINISHING.

AS-BUILT CERTIFICATION: STATE OF MARYLAND. DOMENICK W. COLANGELO #27100.

TRASH RACK NOTES: 1. STEEL TO CONFORM TO ASTM A-36. BARS TO BE SMOOTH. 2. #4 REBAR @ 4" O/C HORIZONTALLY AND 4" O/C VERTICALLY. 3. ALL REBAR TO BE WELDED AT ALL INTERSECTIONS. 4. ALL BENDS TO BE 2" RADIUS. 5. WELD BARS TO 2" x 1/8" STEEL PLATE AND BOLT STEEL PLATE TO STRUCTURE WITH 1/2" STAINLESS STEEL ANCHOR BOLTS. 6. GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT WITH 2 COATS OF BATTLESHIP GRAY.

MANHOLE NOTES: 1. CONCRETE TO BE MIX No. 3 2. MANHOLE RISER TO BE SAME GA. AS MAINLINE PIPE. 3. STEPS TO BE INSTALLED BELOW MANHOLE PER MANUFACTURER SPECIFICATIONS. COMPACT TOP 1" OF SUBGRADE TO 100% OF MAXIMUM DRY DENSITY. (PER AASHTO T-99-C) UNDER CONCRETE CAP. 4. CONCRETE CAP SHALL BE REINFORCED WITH #4 REBAR @ 6" C/C. 5. SEE GEOMETRY PLAN FOR MANHOLE LOCATIONS AND RIM ELEVATIONS.

MANHOLE SLEEVE NOTES: THIS SLEEVE SLIDES OVER THE OUTSIDE OF THE MANHOLE RISER AND REMOVES THE LIVE LOADS FROM THE PIPE ITSELF.

MANHOLE LADDER DETAIL: SIDES ARE 1 1/2" x 1 1/2" x 1/4" STEEL ANGLE. RINGS ARE #6 SMOOTH BAR.

WEIR PLATE: 48" ALUMINIZED CMP TYPE II 12 GA PLATE TO BE WELDED TO INTERIOR OF PIPE.

MANHOLE CONCRETE CAP: PROVIDE 4 ADDITIONAL #4 REBAR AS SHOWN.

MANHOLE SLEEVE: 36" ID. 1" WIDE x 1/8" THICK x 6" x 2-1/2" LEGS.

CMP RISER MANHOLE SLEEVE DETAIL: 6" 3000 PSI CONCRETE SLAB. MANHOLE FRAME AND COVER GRATE. 36" DIA. CMP. 12 GA STEEL SLEEVE. 1" x 1/8" x 6" STEEL ANCHOR.

CONCRETE WHEEL STOP: 18.5' PARKING SPACE. 18' CONCRETE WHEEL STOP. 1:1 SLOPE. P-2 PAVING. REBAR ANCHOR MIN. 18" INTO GROUND.

REVERSE 7\"/>

STANDARD 7\"/>

SIDEWALK DETAIL: 4' WIDE. UNLESS OTHERWISE NOTED 2%. S.H.A. MIX NO. 2 CONCRETE. STIFF BROOM FINISH. REMOVE EDGING TOOL MARKS IN FINISHING.

AS-BUILT CERTIFICATION: STATE OF MARYLAND. DOMENICK W. COLANGELO #27100.

TRASH RACK NOTES: 1. STEEL TO CONFORM TO ASTM A-36. BARS TO BE SMOOTH. 2. #4 REBAR @ 4" O/C HORIZONTALLY AND 4" O/C VERTICALLY. 3. ALL REBAR TO BE WELDED AT ALL INTERSECTIONS. 4. ALL BENDS TO BE 2" RADIUS. 5. WELD BARS TO 2" x 1/8" STEEL PLATE AND BOLT STEEL PLATE TO STRUCTURE WITH 1/2" STAINLESS STEEL ANCHOR BOLTS. 6. GALVANIZE TRASH RACK AFTER FABRICATION AND PAINT WITH 2 COATS OF BATTLESHIP GRAY.

MANHOLE NOTES: 1. CONCRETE TO BE MIX No. 3 2. MANHOLE RISER TO BE SAME GA. AS MAINLINE PIPE. 3. STEPS TO BE INSTALLED BELOW MANHOLE PER MANUFACTURER SPECIFICATIONS. COMPACT TOP 1" OF SUBGRADE TO 100% OF MAXIMUM DRY DENSITY. (PER AASHTO T-99-C) UNDER CONCRETE CAP. 4. CONCRETE CAP SHALL BE REINFORCED WITH #4 REBAR @ 6" C/C. 5. SEE GEOMETRY PLAN FOR MANHOLE LOCATIONS AND RIM ELEVATIONS.

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REVERSE 7\"/>

STANDARD 7\"/>

SIDEWALK DETAIL: 4' WIDE. UNLESS OTHERWISE NOTED 2%. S.H.A. MIX NO. 2 CONCRETE. STIFF BROOM FINISH. REMOVE EDGING TOOL MARKS IN FINISHING.

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STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	DOUBLE 'S' INLET	N 548923.74 E 1373026.49	-	243.45 (15')	247.7	HOCO STD DETAIL SD-4.23
I-2	A-5	N 549017.99 E 1373102.15	247.67 (15')	247.57 (15')	251.20	HOCO STD DETAIL SD-4.01
I-3	A-5	N 549146.16 E 1373104.39	248.53 (12') 248.70 (10')	248.28 (15')	251.70	HOCO STD DETAIL SD-4.01
I-4	YARD	N 549227.73 E 1373095.88	-	250.00 (12')	253.00	HOCO STD DETAIL SD-4.14
I-5	DOUBLE 'S' INLET	N 549053.04 E 1372947.80	247.51 (15')	247.41 (15')	251.20	HOCO STD DETAIL SD-4.23
I-6	DOUBLE 'S' INLET	N 549148.81 E 1372915.64	248.27 (12')	248.02 (15')	250.90	HOCO STD DETAIL SD-4.23
I-7	YARD	N 549225.93 E 1372966.12	249.06 (8')	248.73 (12')	252.20	HOCO STD DETAIL SD-4.14
I-8	10" DRAIN	N 549224.98 E 1373012.86	249.40 (8')	249.30 (8')	252.40	ADS 2710-G8N
I-9	10" DRAIN	N 549224.45 E 1373043.23	-	249.55 (8')	252.60	ADS 2710-G8N
M-1	5'-0" DIA.	N 548979.85 E 1373011.33	246.82 (15') 246.92 (15')	246.72 (12') 247.62 (18')	250.70	HOCO STD DETAIL G-5.11
WO-1	STC 450	N 549013.98 E 1373035.46	247.23 (15')	247.13 (15')	251.91	SEE DETAIL, THIS SHEET
WO-2	STC 450	N 549012.73 E 1372982.23	247.14 (15')	247.04 (15')	251.70	SEE DETAIL, THIS SHEET
E-1	24" CMP	N 548853.78 E 1373079.07	241.90 (24')	-	-	HOCO STD DETAIL SD-5.61
E-2	12" ADS	N 548955.35 E 1373010.88	246.60 (12')	-	-	-
E-3	15" ADS	N 548966.19 E 1373130.70	242.89 (15')	-	-	-
E-4	15" ADS	N 549012.12 E 1373130.92	-	244.82 (15')	-	-
SMH-1	4'-0" DIA.	N 549096.66 E 1373125.75	243.53 (6')	-	250.64	HOCO STD DETAIL G-5.11

NOTES:
FOR END SECTIONS THE LOCATION IS CENTER OF THROAT OPENING AT FACE OF STRUCTURE.
LOCATION OF INLETS AND MANHOLES IS AT CENTER OF TOP COVER

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
28	15"	CMP AL. II
51	18"	CMP AL. II
26	24"	CMP AL. II
652	48"	CMP AL. II
499	8"	ADS, N-12
40	10"	ADS, N-12
198	12"	ADS, N-12
482	15"	ADS, N-12
150	4"	PERF. PVC
20	4"	PVC

CONSTRUCTION SPECIFICATIONS

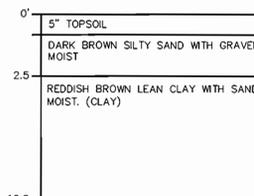
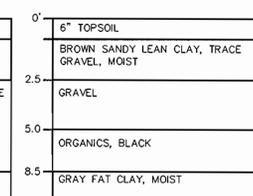
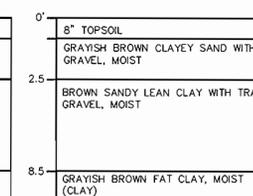
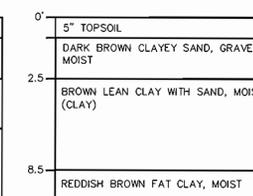
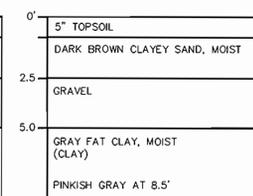
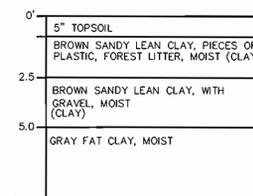
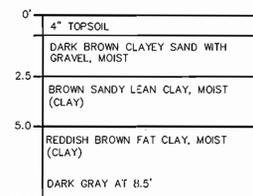
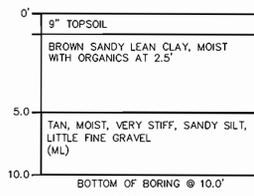
- THE SUBGRADE FOR THE FILTER, RIP-RAP, OR GABION SHALL BE PREPARED TO THE REQUIRED LINES AND GRADES. ANY FILL REQUIRED IN THE SUBGRADE SHALL BE COMPACTED TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- THE ROCK OR GRAVEL SHALL CONFORM TO THE SPECIFIED GRADING LIMITS WHEN INSTALLED RESPECTIVELY IN THE RIP-RAP OR FILTER.
- GEOTEXTILE CLASS C OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC SHALL BE A MINIMUM OF ONE FOOT.
- STONE FOR THE RIP-RAP OR GABION OUTLETS MAY BE PLACED BY EQUIPMENT. THEY SHALL BE CONSTRUCTED TO THE FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. THE STONE FOR RIP-RAP OR GABION OUTLETS SHALL BE DELIVERED AND PLACED IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMAGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. HAND PLACEMENT WILL BE REQUIRED TO THE EXTENT NECESSARY TO PREVENT DAMAGE TO THE PERMANENT WORKS.
- THE STONE SHALL BE PLACED SO THAT IT BLENDS IN WITH THE EXISTING GROUND IF THE STONE IS PLACED TOO HIGH THEN THE FLOW WILL BE FORCED OUT OF THE CHANNEL AND SCOUR ADJACENT TO THE STONE WILL OCCUR.

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED BIORETENTION FACILITY

- ANNUAL MAINTENANCE OF PLANT MATERIAL, MULCH LAYER, AND SOIL LAYER IS REQUIRED. MAINTENANCE OF MULCH AND SOIL IS LIMITED TO CORRECTING AREAS OF EROSION OR WASH OUT. ANY MULCH REPLACEMENT SHALL BE DONE IN THE SPRING. PLANT MATERIAL SHALL BE CHECKED FOR DISEASE AND INSECT INFESTATION AND MAINTENANCE WILL ADDRESS DEAD MATERIAL AND PRUNING.
- SCHEDULE OF PLANT INSPECTION WILL BE TWICE A YEAR IN SPRING AND FALL. THIS INSPECTION WILL INCLUDE REMOVAL OF DEAD AND DISEASED VEGETATION CONSIDERED BEYOND TREATMENT. TREATMENT OF ALL DISEASED TREES AND SHRUBS AND REPLACEMENT OF ALL DEFICIENT STAKES AND WIRES.
- MULCH SHALL BE INSPECTED EACH SPRING. REMOVE PREVIOUS MULCH LAYER BEFORE APPLYING NEW LAYER ONCE EVERY 2 TO 3 YEARS.
- SOIL EROSION TO BE ADDRESSED ON AN AS NEEDED BASIS WITH A MINIMUM OF ONCE PER MONTH AND AFTER HEAVY STORM EVENTS.

Table: Materials Specifications for Bioretention

MATERIAL	SPECIFICATIONS	SIZE	NOTES
PLANTINGS	SEE LANDSCAPE PLAN S-IET	N/A	
PLANTING SOIL (2.5' TO 4' DEEP)	SAND 35 - 60 % SILT 30 - 55 % CLAY 10 - 25 %	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM, OR LOAM
MULCH	SHREDDED HARDWOOD	N/A	AGED 6 MONTHS, MINIMUM
STONE DIAGRAM AND CURTAIN DRAIN	PEA GRAVEL: ASTM-D-448 ORNAMENTAL STONE: WASHED COBBLES	PEA GRAVEL: No. 6 STONE: 2" to 5"	
GEOTEXTILE	CLASSE "C" - APPARENT OPENING SIZE (ASTM-D-4751), G-AB TENSILE STRENGTH (ASTM-D-4632), PUNCTURE RESISTANCE (ASTM-D-4822)	N/A	FOR USE AS NECESSARY BENEATH UNDERDRAINS ONLY.
UNDERDRAIN GRAVEL	AASHTO M-43	0.375" to 0.75"	
UNDERDRAIN PIPE	F 758, TYPE PS 28 OR AASHTO M-278	4" TO 6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. @ 6"/C, 4 HOLES PER ROW
SAND	AASHTO M-6 or ASTM (-33)	0.02" to 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRANSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.



Precast Concrete Order Request Form

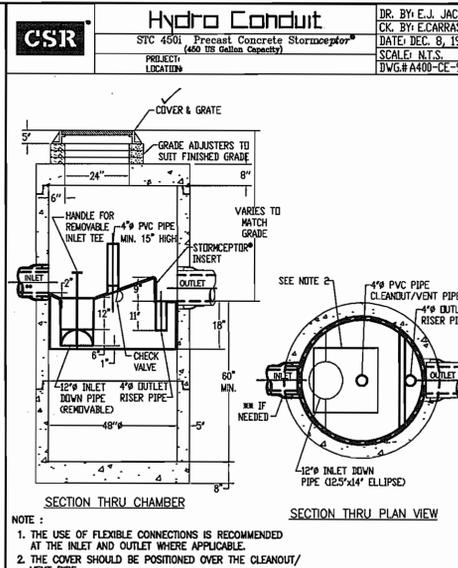
Contractor Information
 Name _____
 Address _____
 City _____
 State _____
 Zip Code _____
 Contact _____
 Phone _____
 Fax _____

Owner Information
 Name _____
 Phone _____
 Fax _____

PERVIOUS DRAINAGE AREA FOR THIS UNIT

Stormceptor Model	Insert Size
STC 2400	SINGLE INLET
450	MULTIPLE INLET
600	DISC
1200	DISC
1800	DISC

Manhole Number: WC-1
 Top Elevation (ft): 251.87
 Inlet Pipe Invert (ft): 247.23
 Outlet Pipe Invert (ft): 247.13
 Pipe Type: ADS, N-12
 Inlet Pipe Inside Diameter (in): 15
 Inlet Pipe Outside Diameter (in): 17.57
 Outlet Pipe Inside Diameter (in): 15
 Outlet Pipe Outside Diameter (in): 17.57



Precast Concrete Order Request Form

Contractor Information
 Name _____
 Address _____
 City _____
 State _____
 Zip Code _____
 Contact _____
 Phone _____
 Fax _____

Owner Information
 Name _____
 Phone _____
 Fax _____

PERVIOUS DRAINAGE AREA FOR THIS UNIT

Stormceptor Model	Insert Size
STC 2400	SINGLE INLET
450	MULTIPLE INLET
600	DISC
1200	DISC
1800	DISC

Manhole Number: WC-2
 Top Elevation (ft): 251.87
 Inlet Pipe Invert (ft): 247.14
 Outlet Pipe Invert (ft): 247.04
 Pipe Type: ADS, N-12
 Inlet Pipe Inside Diameter (in): 15
 Inlet Pipe Outside Diameter (in): 17.57
 Outlet Pipe Inside Diameter (in): 15
 Outlet Pipe Outside Diameter (in): 17.57

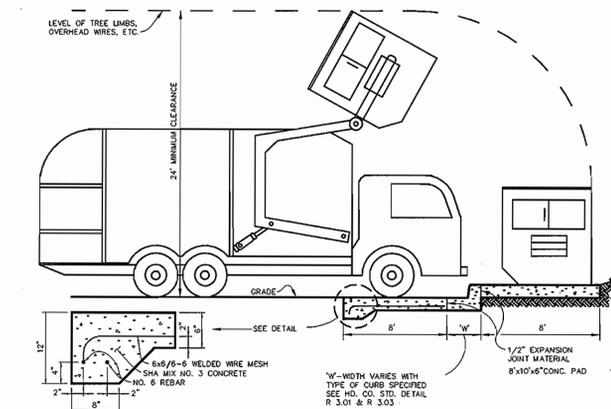
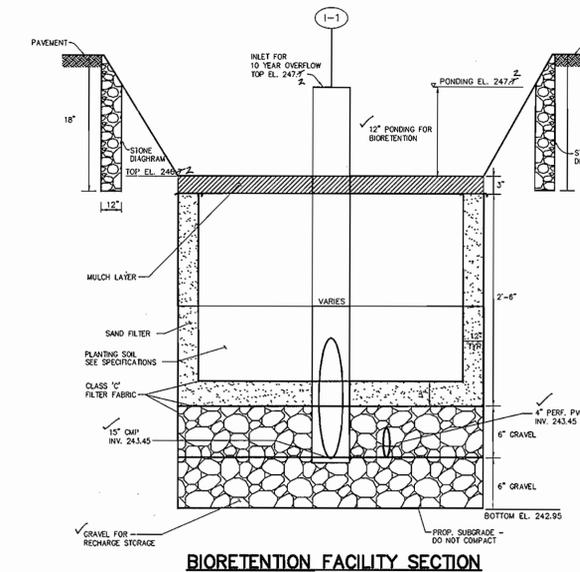
PLEASE FILL OUT COMPLETELY AND FAX TO: CSR
 ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)313-6389
 FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)313-6399

PLEASE FILL OUT COMPLETELY AND FAX TO: CSR
 ATTN: ED O'MALLEY FAX: (703)922-3659, PHONE: (703)313-6389
 FOR TECHNICAL ASSISTANCE PLEASE CALL MIKE BARG, PHONE (703)313-6399

AS-BUILT CERTIFICATION

Domenick W. Colangelo #27200 DATE 8/1/08

- SEQUENCE OF CONSTRUCTION**
- OBTAIN GRADING PERMIT.
 - INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCE. (2 DAYS)
 - CONSTRUCT S-1 AND WEIR PLATES AND WELD DEWATERING DEVICE TO PLATE OVER ORIFICE. (2 DAYS)
 - BEGIN CLEARING, PERFORM ROUGH GRADING AND BEGIN BUILDING CONSTRUCTION. (3 WEEKS)
 - AS SUBGRADE ELEVATIONS ARE ESTABLISHED, INSTALL STORM DRAINS, INLET PROTECTIONS, WATER, SEWER, AND UNDERGROUND STORMWATER MANAGEMENT PIPES. (4 WEEKS)
 - INSTALL CURB AND GUTTER AND PAVE. (2 WEEKS)
 - APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (1 WEEK)
 - PERFORM FINE GRADING, LANDSCAPING, AND SIDEWALKS. (3 WEEKS)
 - COMPLETE BUILDING CONSTRUCTION. (4 MONTHS)
 - UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE REMAINING DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)
 - ONCE THE SITE IS STABILIZED, CONSTRUCT BIORETENTION FACILITY. (1 WEEK)
- *OBTAIN PERMISSION FROM INSPECTOR, FIRST.



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director: *Dan R. Leight* DATE: 4/1/08

Chief, Development Engineering Division: *[Signature]* DATE: 4/1/08

Chief, Division of Land Development: *[Signature]* DATE: 4/1/08

DATE NO.	REVISION

OWNER / DEVELOPER
 NORTHSTAR HOTELS
 7211 HANOVER PARKWAY
 SUITE C-D
 GREENBELT, MARYLAND 20770
 301-345-8700
 ATTN: AL PATEL

PROJECT
COMFORT SUITES
 4 STORY - 83 ROOM HOTEL

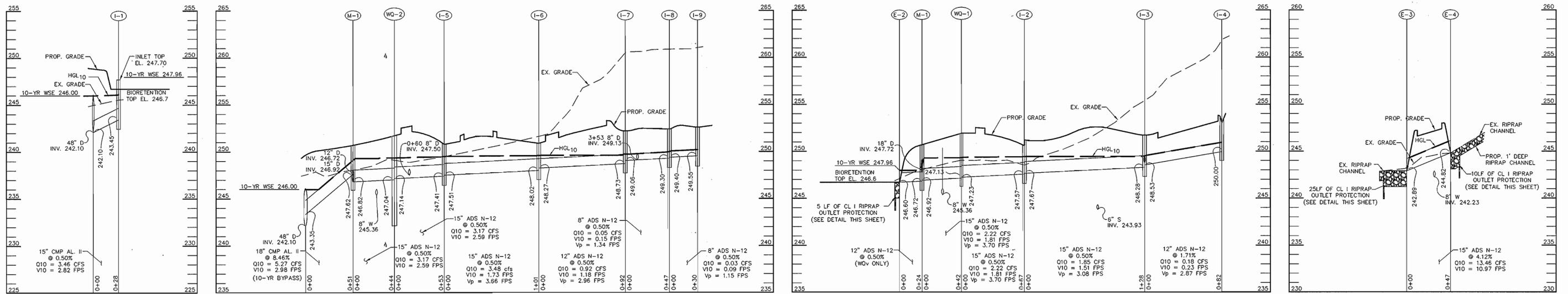
AREA TAX MAP 43 ZONED M-1 PARCEL 591
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
DETAIL SHEET

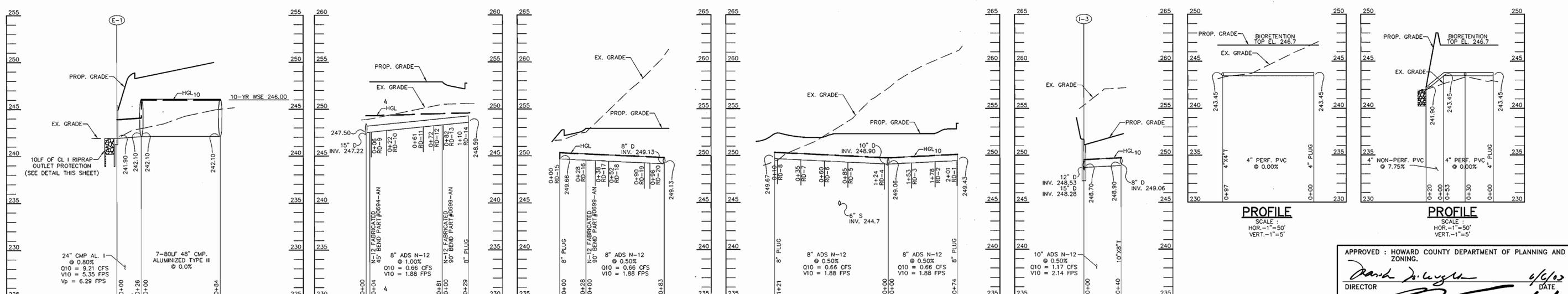
Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

3.26.03 DATE
 DESIGNED BY: ACR
 DRAWN BY: DAM
 CHECKED BY: CJR
 PROJECT NO: 01256
 C701STO.DWG
 DATE: APRIL 2, 2003
 SCALE: AS SHOWN
 DRAWING NO. 6 OF 14

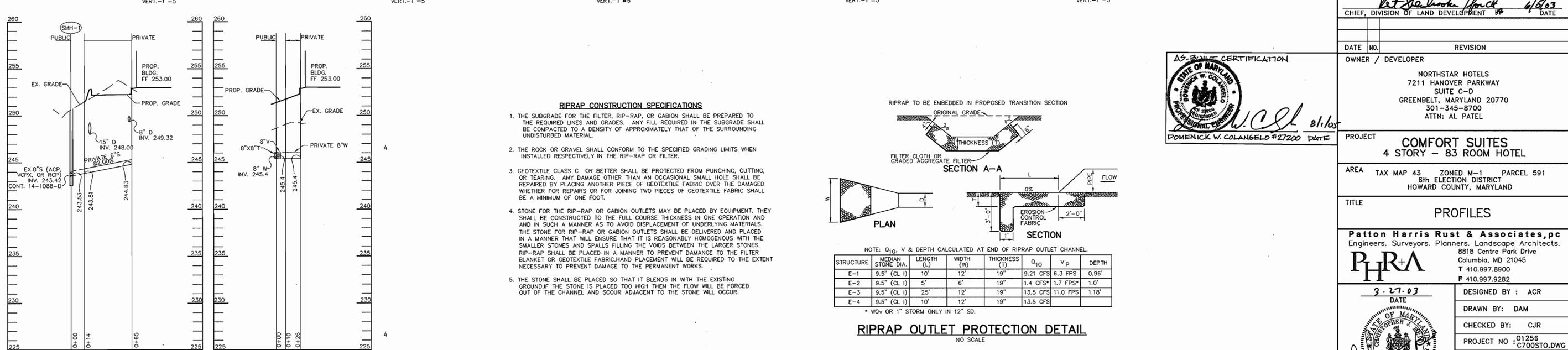
CHRISTOPHER J. REID #19949
 AS-BUILT
SDP-03-45



PROFILE
SCALE: HOR.-1"=50'
VERT.-1"=5'



PROFILE
SCALE: HOR.-1"=50'
VERT.-1"=5'



SEWER PROFILE SCALE: HOR.-1"=50' VERT.-1"=5'
WATER PROFILE SCALE: HOR.-1"=50' VERT.-1"=5'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
David J. Wyle 4/6/03
 DIRECTOR DATE
Mark J. ... 4/6/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE
Pat Harris Rust 4/6/03
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER / DEVELOPER
 NORTHSTAR HOTELS
 7211 HANOVER PARKWAY
 SUITE C-D
 GREENBELT, MARYLAND 20770
 301-345-8700
 ATTN: AL PATEL

PROJECT
COMFORT SUITES
 4 STORY - 83 ROOM HOTEL

AREA TAX MAP 43 ZONED M-1 PARCEL 591
 6th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
PROFILES

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DATE: 3-27-03
 DESIGNED BY: ACR
 DRAWN BY: DAM
 CHECKED BY: CJR
 PROJECT NO: 01256
 C700STO.DWG
 DATE: APRIL 2, 2003
 SCALE: AS SHOWN
 DRAWING NO. 7 OF 14



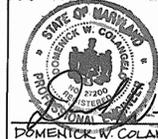
NOTE: Q₁₀, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q ₁₀	V _p	DEPTH
E-1	9.5" (CL I)	10'	12'	19"	9.21 CFS	6.3 FPS	0.96'
E-2	9.5" (CL I)	5'	6'	19"	1.4 CFS*	1.7 FPS*	1.0'
E-3	9.5" (CL I)	25'	12'	19"	13.5 CFS	11.0 FPS	1.18'
E-4	9.5" (CL I)	10'	12'	19"	13.5 CFS		

* WQV OR 1" STORM ONLY IN 12" SD.

RIPRAP OUTLET PROTECTION DETAIL
NO SCALE

AS-BUILT CERTIFICATION



DAVID T. DOWS #830

8/1/05
DATE

LEGEND

EX. TREELINE	
PROP. TREELINE	
EX. TREE	
PROP. TREE	
PROPERTY LINE	
EX. BUILDING	
EX. CONTOUR LINES	
PROP. CONTOUR LINES	
PROP. SHADE TREE	
PROP. ORNAMENTAL TREE	
PROP. SHRUBS	
LANDSCAPE REQUIREMENT	
BIORETENTION PLANTING	
PERIMETER LANDSCAPE EDGE LIMITS	
PERIMETER LANDSCAPE EDGE CONTINUES	
CREDITED LANDSCAPE ISLAND	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director: *Denise A. ...* 6/6/03 DATE
 Chief, Development Engineering Division: *[Signature]* 5/9/03 DATE
 Chief, Division of Land Development: *[Signature]* 6/5/03 DATE

DATE NO. REVISION

OWNER / DEVELOPER

NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

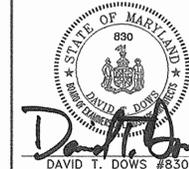
PROJECT: COMFORT SUITES
4 STORY - 83 ROOM HOTEL

AREA: TAX MAP 43 ZONED M-1 PARCEL 591
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: LANDSCAPE PLAN

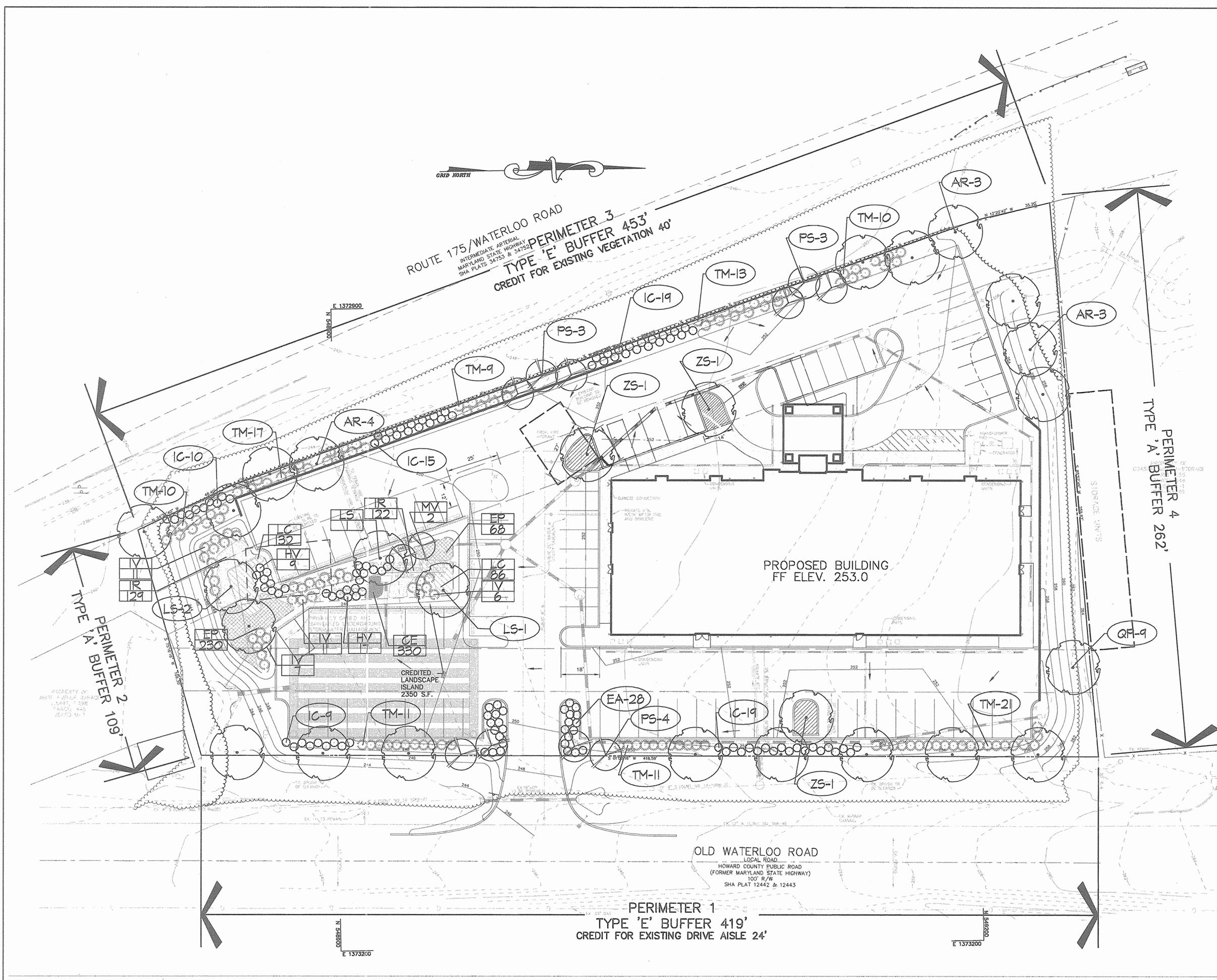
Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

3-20-03 DATE
 DESIGNED BY: KLS
 DRAWN BY: KLS
 CHECKED BY: DTD PJS
 PROJECT NO: 01256
L201LND.DWG
 DATE: APRIL 2, 2003
 SCALE: 1" = 20'
 DRAWING NO. 8 OF 14



AS-BUILT

SDP-03-45



P:\project\01256\1-0\Eng\Plans\L201LND.dwg, Layout1, 03/20/2003 01:27:21 PM, HP750C(36).pc3, Arch D - 24 x 36 in. (landscape), 1:1

SCHEDULE A - PERIMETER LANDSCAPE EDGE				
PERIMETER	ADJACENT TO PERIMETER PROPERTIES		ADJACENT TO ROADWAYS	
	2	4	1	3
LANDSCAPE TYPE	A	A	E	E
LINEAR FEET OF ROADWAY FRONTAGE/ PERIMETER	109'±	262'±	419'±	453'±
CREDIT FOR EXISTING DRIVE AISLE (LINEAR FEET)	NO	NO	YES 24'±	NO
CREDIT FOR EXISTING VEGETATION (YES/NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	YES 40'±
LINEAR FEET REMAINING	109'±	262'±	345'±	413'±
CREDIT FOR WALL, FENCE, OR BERM (YES/NO/LINEAR FEET)	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED				
SHADE TREES	2	4	10	10
EVERGREEN TREES	0	0	0	0
SHRUBS	0	0	49	103
NUMBER OF PLANTS PROVIDED				
SHADE TREES	2	4	8	7
EVERGREEN TREES	0	0	0	0
SHRUBS	0	0	49	103

SCHEDULE A SUBSTITUTION NOTES:
 PERIMETER 1: (4) ORNAMENTAL TREES WERE SUBSTITUTED FOR (2) SHADE TREES.
 PERIMETER 2: (6) ORNAMENTAL TREES WERE SUBSTITUTED FOR (3) SHADE TREES.

SCHEDULE B - PARKING LOT INTERNAL LANDSCAPING	
PARKING LOT	A
NUMBER OF PARKING SPACES	83
NUMBER OF SHADE TREES REQUIRED (1/20 SPACES)	4
NUMBER OF TREES PROVIDED	
SHADE TREES	4
OTHER TREES (2:1 SUBSTITUTION)	-
NUMBER OF ISLANDS REQUIRED (1/20 SPACES)	4
NUMBER OF ISLANDS PROVIDED (200 SF/ISLAND)	4

PLANT LIST					
SYMBOL	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	REMARKS
AR	10	Acer rubrum 'October Glory'	2.5"-3" cal.	B&B	Plant as shown
LS	3	Liquidambar styraciflua 'American Sweetgum'	2.5"-3" cal.	B&B	Plant as shown
QP	9	Quercus phellos 'Million Oak'	2.5"-3" cal.	B&B	Plant as shown
ZS	3	Zelkova serrata 'Village Green'	2.5"-3" cal.	B&B	Plant as shown
PS	10	Prunus serrulata 'Kwanzan'	1.5"-2" cal.	B&B	Plant as shown
EA	20	Euonymus alatus 'Compacta'	24"-30" ht.	Cont.	Plant as shown
IC	72	Ilex crenata 'Green Lustre'	30"-36" ht.	Cont.	Plant as shown
TM	102	Taxus x media 'Densiformis'	24"-30" ht.	Cont.	Plant as shown

SCHEDULE D-STORMWATER MANAGEMENT AREA LANDSCAPING	
S.W.M. POND PERIMETER	1
LANDSCAPE TYPE	
LINEAR FEET OF TOTAL PERIMETER	
CREDIT FOR EX. VEGETATION (NO OR YES & %)	
CREDIT FOR OTHER PROP. LANDSCAPING (NO OR YES & %)	
LINEAR FEET OF REMAINING PERIMETER	
NUMBER OF TREES REQUIRED:	
SHADE TREES	
EVERGREEN TREES	
NUMBER OF PLANTS PROVIDED	
SHADE TREES	
EVERGREEN TREES	
OTHER TREES (2:1 SUBSTITUTION, 50% MAX.)	
SHRUBS	

*SEE GENERAL NOTE 9

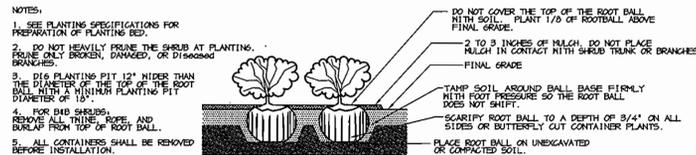
BIORETENTION PLANT LIST						
KEY	QTY.	SCIENTIFIC/COMMON NAME	SIZE	ROOT	SPACING	ZONE*
LS	1	LIQUIDAMBAR STYRACIFLUA AMERICAN SWEETGUM	2.5"-3" CAL.	B&B	PLANT AS SHOWN	(3,4),5
MV	2	MAGNOLIA VIRGINIANA SWEETBAY (SWAMP) MAGNOLIA	6'-8' HT.	B&B	PLANT AS SHOWN	***
HV	26	HAMAMELIS VERNALIS VERNAL WITCHHAZEL	2.5"-3" HT.	CONT.	PLANT AS SHOWN	***
IV	35	ITEA VIRGINICA 'HENRY'S GARNET' VIRGINIA SWEETSPIRE	2.5"-3" HT.	CONT.	PLANT AS SHOWN	***
CE	330	CAREX ELATA 'AUREA' BOWLES GOLDEN SEDGE	BARE ROOT	CONT.	6" SPACING	(1, 2), 3
EP	248	EUPATORIUM PURPUREA JOE PYE WEEED	1 GALLON	CONT.	18" SPACING	****
IR	251	IRIS VERSICOLOR 'BLUE FLAG' BLUE FLAG IRIS	BARE ROOT	CONT.	18" SPACING	(1, 2), 3
LC	218	LOBELIA CARDINALIS CARDINAL FLOWER	1 GAL.	CONT.	18" SPACING	1, (2, 3), 4

BIORETENTION PLANT LIST NOTES:

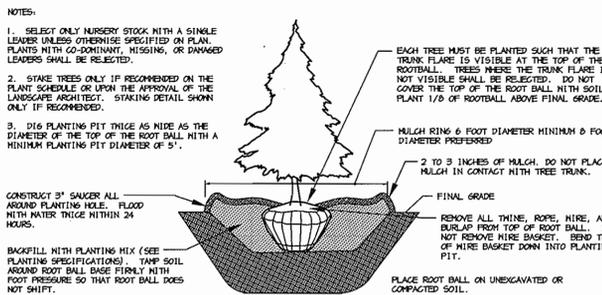
- * HYDROLOGIC ZONES ACCORDING TO APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.
- ** ALSO KNOWN AS CAREX STRICTA 'AUREA'
- *** KNOWN TO TOLERATE INUNDATION AS WELL AS DRY AREAS ACCORDING TO DIRR, MICHAEL A., MANUAL OF WOODY LANDSCAPE PLANTS
- **** COMMONLY USED BIORETENTION SPECIES ACCORDING TO TABLE A.4 IN APPENDIX A OF THE MARYLAND MODEL STORMWATER MANAGEMENT ORDINANCE JULY 2000.

PLANTING SPECIFICATIONS

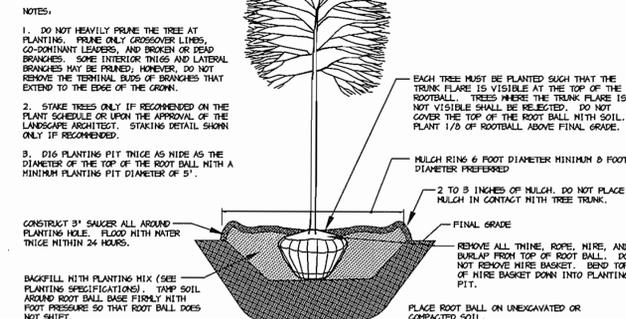
- Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Howard County Landscape Manual, the latter takes precedence.
- All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, unsound injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no heated-in plants or plants from cold storage will be accepted.
- Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.
- Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.
- Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.
- Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.
- Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or Xpressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.
- Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.
- Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.
- Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.
- All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.
- Positive drainage shall be maintained on planting beds (minimum 2 percent slope).
- Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.); top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yew): Top dress after planting with 1/4 to 1/2 cup lime each.
- Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.
- Need & Insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.
- Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid desiccation.
- Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.
- All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.



SHRUB BED PLANTING DETAIL - B&B AND CONTAINER SHRUBS
 NOT TO SCALE



EVERGREEN B&B TREE PLANTING DETAIL
 NOT TO SCALE



DECIDUOUS B&B TREE PLANTING DETAIL
 NOT TO SCALE

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.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$15,060.
 25 SHADE TREES @ \$300 = \$7,500
 0 EVERGREEN TREES @ \$150 = \$0
 10 ORNAMENTAL TREES @ \$150 = \$1,500
 202 SHRUBS @ \$30 = \$6,060
- THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.
- ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.
- AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.
- NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.
- PLANTING FOR SWM IS PROVIDED WITH BIORETENTION PLANTINGS. NO SWM FACILITIES ARE PROPOSED ABOVE GROUND THEREFORE, NO ADDITIONAL PLANTING IS PROPOSED.

DEVELOPER'S/BUILDER'S CERTIFICATE:

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

SIGNATURE: [Signature] DATE: 04-03-03

AS-BUILT CERTIFICATION
 STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 DOMENICK W. COLANGELO #27200
 DATE: 4/1/03

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: [Signature] DATE: 4/1/03
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MARJ [Signature] DATE: 4/1/03
 CHIEF, DIVISION OF LAND DEVELOPMENT [Signature] DATE: 4/1/03

OWNER / DEVELOPER
 NORTHSTAR HOTELS
 7211 HANOVER PARKWAY
 SUITE C-D
 GREENBELT, MARYLAND 20770
 301-345-8700
 ATTN: AL PATEL

PROJECT
 COMFORT SUITES
 4 STORY - 83 ROOM HOTEL

AREA TAX MAP 43 ZONED M-1 PARCEL 591
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE
 LANDSCAPE SCHEDULES AND DETAILS

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

DESIGNED BY: KLS
 DRAWN BY: KLS
 CHECKED BY: DTD PJS
 PROJECT NO: 01255
 L202LND.DWG
 DATE: APRIL 2, 2003
 SCALE: 1" = 20'
 DRAWING NO. 9 OF 14

SDP-03-45

Howard County Forest Conservation Worksheet

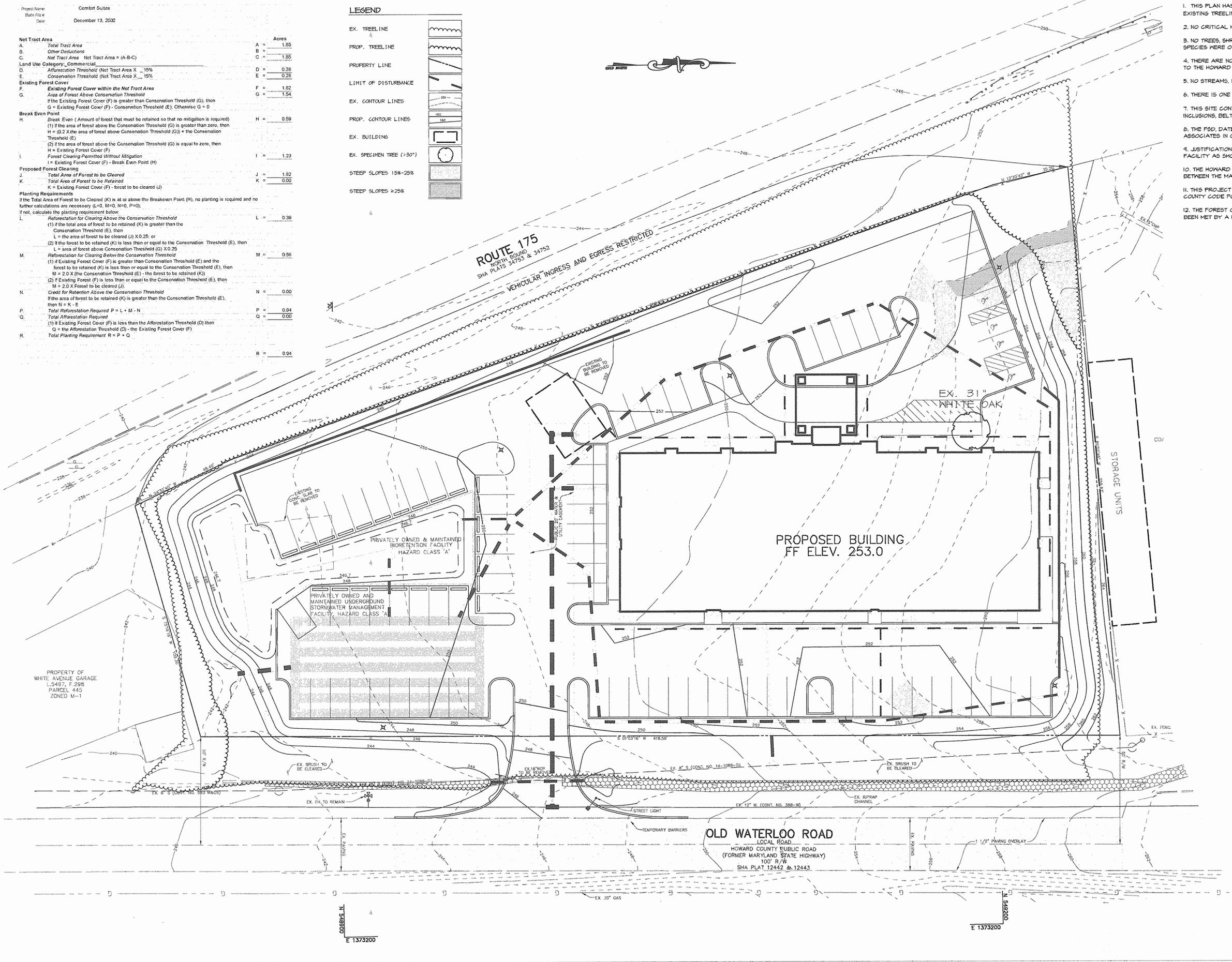
Project Name	Comfort Suites
State File #	
Date	December 13, 2002
Net Tract Area	
A. Total Tract Area	A = 1.85
B. Other Deductions	B = 0.00
C. Net Tract Area - Net Tract Area = (A-B-C)	C = 1.85
Land Use Category, Commercial	
D. Afforestation Threshold (Net Tract Area X 15%)	D = 0.28
E. Conservation Threshold (Net Tract Area X 15%)	E = 0.28
Existing Forest Cover	
F. Existing Forest Cover within the Net Tract Area	F = 1.82
G. Area of Forest Above Conservation Threshold (If the Existing Forest Cover (F) is greater than Conservation Threshold (E), then G = Existing Forest Cover (F) - Conservation Threshold (E). Otherwise G = 0)	G = 1.54
Break Even Point	
H. Break Even (Amount of forest that must be retained so that no mitigation is required) (1) If the area of forest above the Conservation Threshold (G) is greater than zero, then H = (0.2 X the area of forest above Conservation Threshold (G)) + the Conservation Threshold (E) (2) If the area of forest above the Conservation Threshold (G) is equal to zero, then H = Existing Forest Cover (F)	H = 0.59
Forest Clearing Permitted Without Mitigation	
I. Forest Clearing Permitted Without Mitigation (I = Existing Forest Cover (F) - Break Even Point (H))	I = 1.23
Proposed Forest Clearing	
J. Total Area of Forest to be Cleared	J = 1.82
K. Total Area of Forest to be Retained (K = Existing Forest Cover (F) - forest to be cleared (J))	K = 0.00
Planting Requirements	
L. If the Total Area of Forest to be Cleared (J) is at or above the Break Even Point (H), no planting is required and no further calculations are necessary (L=0, M=0, N=0, P=0). If not, calculate the planting requirement below.	L = 0.39
M. Reforestation for Clearing Above the Conservation Threshold (1) If the total area of forest to be retained (K) is greater than the Conservation Threshold (E), then L = the area of forest to be cleared (J) X 0.25; or (2) If the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then L = area of forest above Conservation Threshold (G) X 0.25	M = 0.56
N. Reforestation for Clearing Below the Conservation Threshold (1) If Existing Forest Cover (F) is greater than Conservation Threshold (E) and the forest to be retained (K) is less than or equal to the Conservation Threshold (E), then M = 2.0 X (the Conservation Threshold (E) - the forest to be retained (K)) (2) If Existing Forest (F) is less than or equal to the Conservation Threshold (E), then M = 2.0 X Forest to be cleared (J)	N = 0.00
O. Credit for Retention Above the Conservation Threshold (If the area of forest to be retained (K) is greater than the Conservation Threshold (E), then N = K - E)	O = 0.00
P. Total Reforestation Required P = L + M - N	P = 0.94
Q. Total Afforestation Required (1) If Existing Forest Cover (F) is less than the Afforestation Threshold (D) then Q = the Afforestation Threshold (D) - the Existing Forest Cover (F)	Q = 0.00
R. Total Planting Requirement R = P + Q	R = 0.94

LEGEND

EX. TREELINE	
PROP. TREELINE	
PROPERTY LINE	
LIMIT OF DISTURBANCE	
EX. CONTOUR LINES	
PROP. CONTOUR LINES	
EX. BUILDING	
EX. SPECIEN TREE (>30")	
STEEP SLOPES 15%-25%	
STEEP SLOPES >25%	



- GENERAL NOTES:**
- THIS PLAN HAS BEEN PREPARED USING FIELD-RUN TOPOGRAPHY. PORTIONS OF THE EXISTING TREELINE WERE FIELD APPROXIMATED.
 - NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
 - NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
 - THERE ARE NO KNOWN CEMETERIES OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY CEMETERIES INVENTORY.
 - NO STREAMS, 100-YEAR FLOODPLAINS, OR WETLANDS WERE OBSERVED.
 - THERE IS ONE ABANDONED STRUCTURE LOCATED IN THE CENTER OF THE SITE.
 - THIS SITE CONTAINS ONE HYDRIC SOIL, ELKTON (Eh), AND ONE SOIL WITH POSSIBLE HYDRIC INCLUSIONS, BELTSVILLE (BbB2).
 - THE FSD, DATED SEPTEMBER 25, 2002, WAS PREPARED BY PATTON HARRIS RUST & ASSOCIATES IN CONJUNCTION WITH THIS PROJECT.
 - JUSTIFICATION FOR FOREST REMOVAL. IN ORDER TO DEVELOP THE PROPOSED HOTEL FACILITY AS SHOWN, THE FORESTED AREA ON-SITE NEEDS TO BE CLEARED.
 - THE HOWARD COUNTY FOREST CONSERVATION MANUAL SUPERCEDES ANY DISCREPANCIES BETWEEN THE MANUAL AND THESE PLANS.
 - THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION.
 - THE FOREST CONSERVATION OBLIGATION FOR THE PROPOSED SITE DEVELOPMENT HAS BEEN MET BY A FEE-IN-LIEU PAYMENT OF \$20,419.20 (40,846.4 SF x \$0.50).



<p>AS-BUILT CERTIFICATION</p> <p><i>Domenick W. Colangelo</i> 8/1/05 DOMENICK W. COLANGELO #27200 DATE</p>	
<p>APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.</p> <p><i>Joseph A. Dougherty</i> 4/6/03 DIRECTOR DATE</p> <p><i>Robert J. ...</i> 4/6/03 CHIEF, DEVELOPMENT ENGINEERING DIVISION M&D DATE</p> <p><i>...</i> 4/6/03 CHIEF, DIVISION OF LAND DEVELOPMENT DATE</p>	
DATE NO.	REVISION
OWNER / DEVELOPER	
<p>NORTHSTAR HOTELS 7211 HANOVER PARKWAY SUITE C-D GREENBELT, MARYLAND 20770 301-345-8700 ATTN: AL PATEL</p>	
PROJECT	
<p>COMFORT SUITES 4 STORY - 83 ROOM HOTEL</p>	
AREA	
<p>TAX MAP 43 ZONED M-1 PARCEL 591 6th ELECTION DISTRICT HOWARD COUNTY, MARYLAND</p>	
TITLE	
<p>FOREST CONSERVATION PLAN</p>	
<p>Patton Harris Rust & Associates, pc Engineers, Surveyors, Planners, Landscape Architects. 8818 Centre Park Drive Columbia, MD 21045 T 410.997.8900 F 410.997.9282</p>	
DESIGNED BY :	PJS
DATE	3.26.03
DRAWN BY :	GTH
CHECKED BY :	DTD PJS
PROJECT NO.	01256 L201FCP.DWG
DATE :	APRIL 2, 2003
SCALE :	1" = 20'
DRAWING NO.	10 OF 14
<p><i>David T. Dows</i> DAVID T. DOWS #830 AS-BUILT</p>	
SDP-03-45	

LEGEND

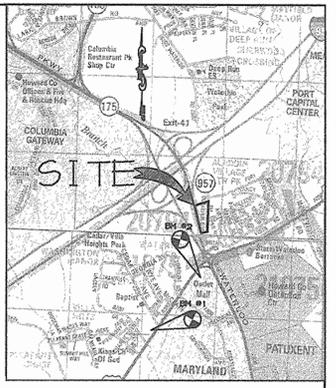
- EX. TREELINE
- EX. TREE
- PROPERTY LINE
- SOILS
- STEEP SLOPES 15%-25%
- STEEP SLOPES >25%
- CONTOUR LINES
- EX. ABAND. STRUCTURE
- EX. SPECIMEN TREE (>30")
- STAND #
- STAND DIVISION LINE

SITE CHARACTERISTICS:

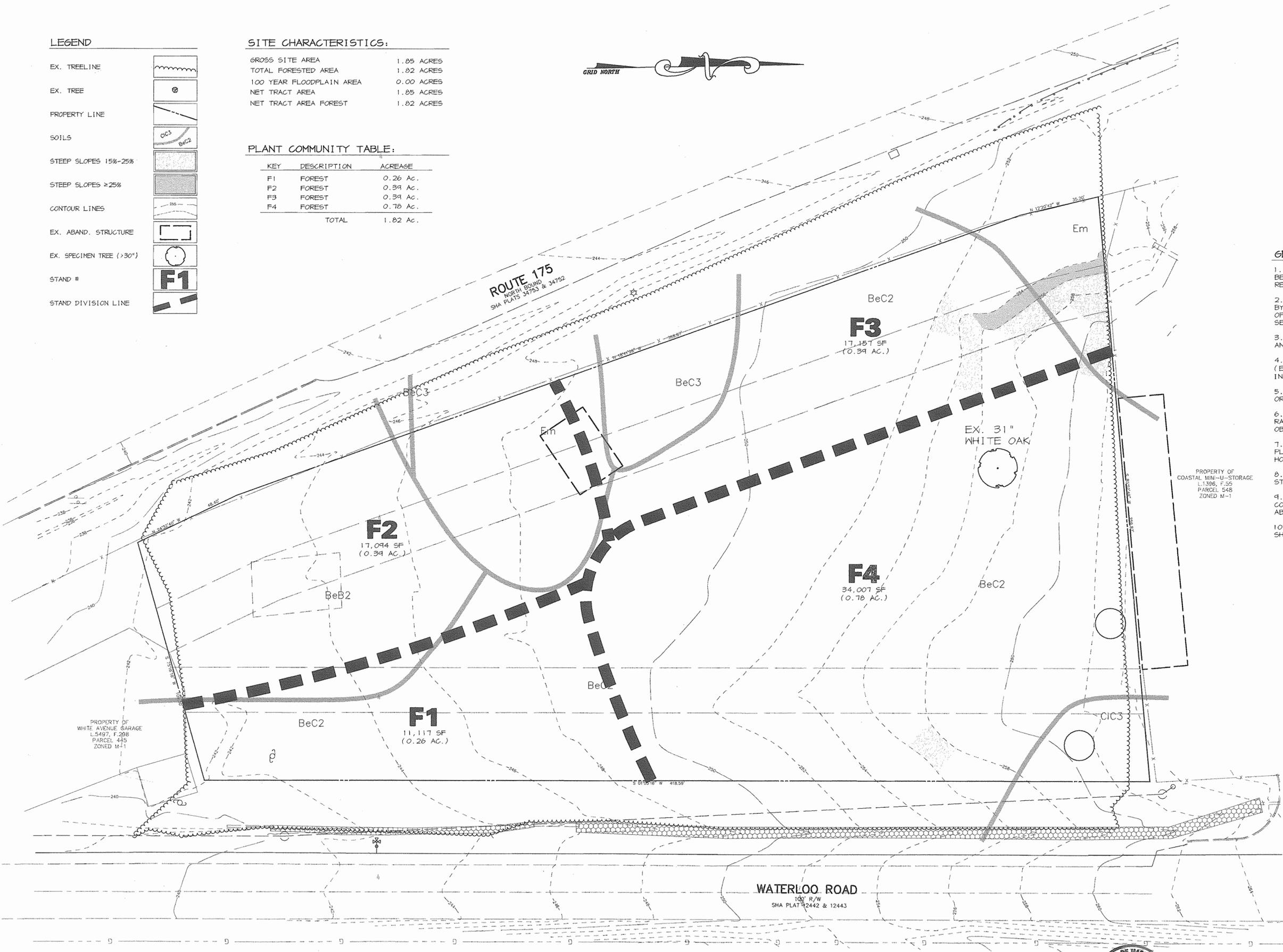
GROSS SITE AREA	1.05 ACRES
TOTAL FORESTED AREA	1.02 ACRES
100 YEAR FLOODPLAIN AREA	0.00 ACRES
NET TRACT AREA	1.05 ACRES
NET TRACT AREA FOREST	1.02 ACRES

PLANT COMMUNITY TABLE:

KEY	DESCRIPTION	ACREAGE
F1	FOREST	0.26 AC.
F2	FOREST	0.39 AC.
F3	FOREST	0.39 AC.
F4	FOREST	0.70 AC.
TOTAL		1.82 AC.



VICINITY MAP
SCALE: 1" = 2000'



GENERAL NOTES:

1. THIS FOREST STAND DELINEATION (FSD) HAS BEEN PREPARED IN ACCORDANCE WITH HOWARD COUNTY REGULATIONS.
2. THIS FSD IS BASED ON A FIELD INVESTIGATION BY PETER J. STONE, RLA AND GRAHAM T. HUBBARD OF PATTON HARRIS RUST & ASSOCIATES, PC ON SEPTEMBER 14, 2001.
3. TREELINES SHOWN ARE BASED ON AERIAL SURVEY AND FIELD APPROXIMATION.
4. THIS SITE CONTAINS ONE HYDRIC SOIL, ELKTON (Em), AND ONE SOIL WITH POSSIBLE HYDRIC INCLUSIONS, BELTSVILLE (BeB2).
5. NO CRITICAL HABITATS OF RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
6. NO TREES, SHRUBS, OR PLANTS IDENTIFIED AS RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED.
7. THERE ARE NO KNOWN CEMETERY OR BURIAL PLOTS LOCATED ON THE SITE, ACCORDING TO THE HOWARD COUNTY HISTORIC & CEMETERY SITE MAP.
8. NO WETLANDS, 100-YEAR FLOODPLAIN, OR STREAMS WERE OBSERVED.
9. THE PROPERTY IS NOT LISTED IN THE HOWARD COUNTY HISTORIC BUILDING REGISTER. ONE ABANDONED BUILDING IS PRESENT ON THE SITE.
10. SPECIMEN TREES ARE PRESENT ON THE SITE AS SHOWN ON THE PLAN.

PROPERTY OF
COASTAL MINI-U-STORAGE
L1396, F.55
PARCEL 548
ZONED M-1

PROPERTY OF
WHITE AVENUE GARAGE
L5497, F.208
PARCEL 445
ZONED M-1

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

David D. Angelo 4/1/03
DIRECTOR DATE

[Signature] 4/1/03
CHIEF, DEVELOPMENT ENGINEERING DIVISION M-1 DATE

Pat Harris Rust 6/5/03
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION

OWNER / DEVELOPER

NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

PROJECT **COMFORT SUITES
4 STORY - 83 ROOM HOTEL**

AREA TAX MAP 43 ZONED M-1 PARCEL 591
6th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **FOREST STAND DELINEATION**

Patton Harris Rust & Associates,pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

DATE **3.20.03**

DESIGNED BY : PJS

DRAWN BY : GTH

CHECKED BY: DTD PJS

PROJECT NO : 01256
L201FSD.DWG

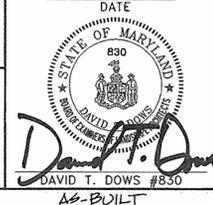
DATE : APRIL 2, 2003

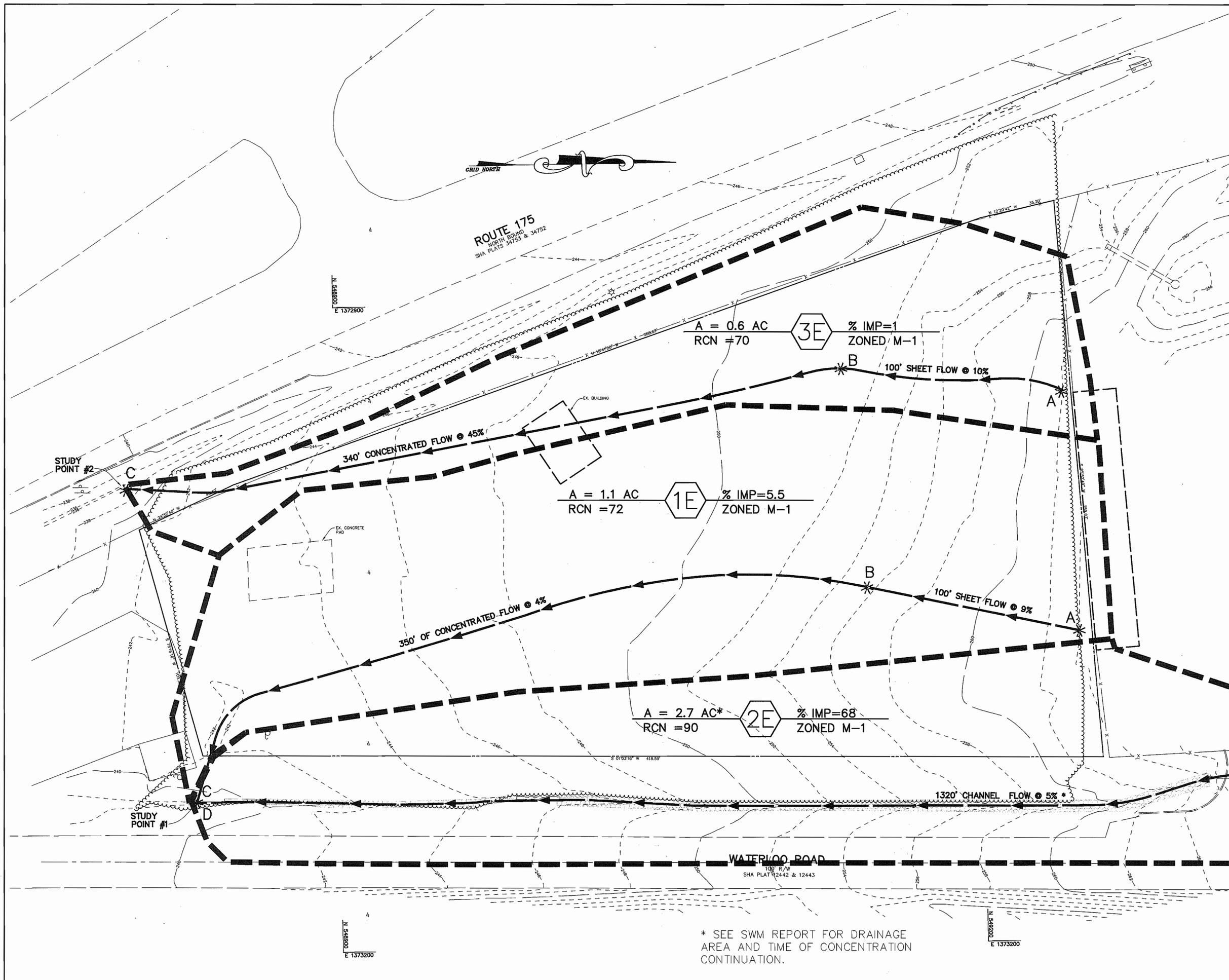
SCALE : 1" = 20'

DRAWING NO. 11 OF 14

AS-BUILT CERTIFICATION

[Signature] 4/1/03
DOMENICO W. COLANGELO #27200 DATE





LEGEND

- DRAINAGE AREA DIVIDE
- * — * TIME OF CONCENTRATION PATH
A B
- ① AREA DESIGNATION

AS-BUILT CERTIFICATION

STATE OF MARYLAND
 PROFESSIONAL ENGINEER
 W. Chell
 8/1/05
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 DIRECTOR: David S. Taylor 4/4/03 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION MWD 4/4/03 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT 6/6/03 DATE

DATE	NO.	REVISION

OWNER / DEVELOPER
 NORTHSTAR HOTELS
 7211 HANOVER PARKWAY
 SUITE C-D
 GREENBELT, MARYLAND 20770
 301-345-8700
 ATTN: AL PATEL

PROJECT: COMFORT SUITES
 4 STORY - 83 ROOM HOTEL

AREA: TAX MAP 43 ZONED M-1 PARCEL 591
 8th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: EXISTING CONDITIONS
 SWM DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
 Engineers, Surveyors, Planners, Landscape Architects.
 8818 Centre Park Drive
 Columbia, MD 21045
 T 410.997.8900
 F 410.997.9282

3-26-03
 DATE

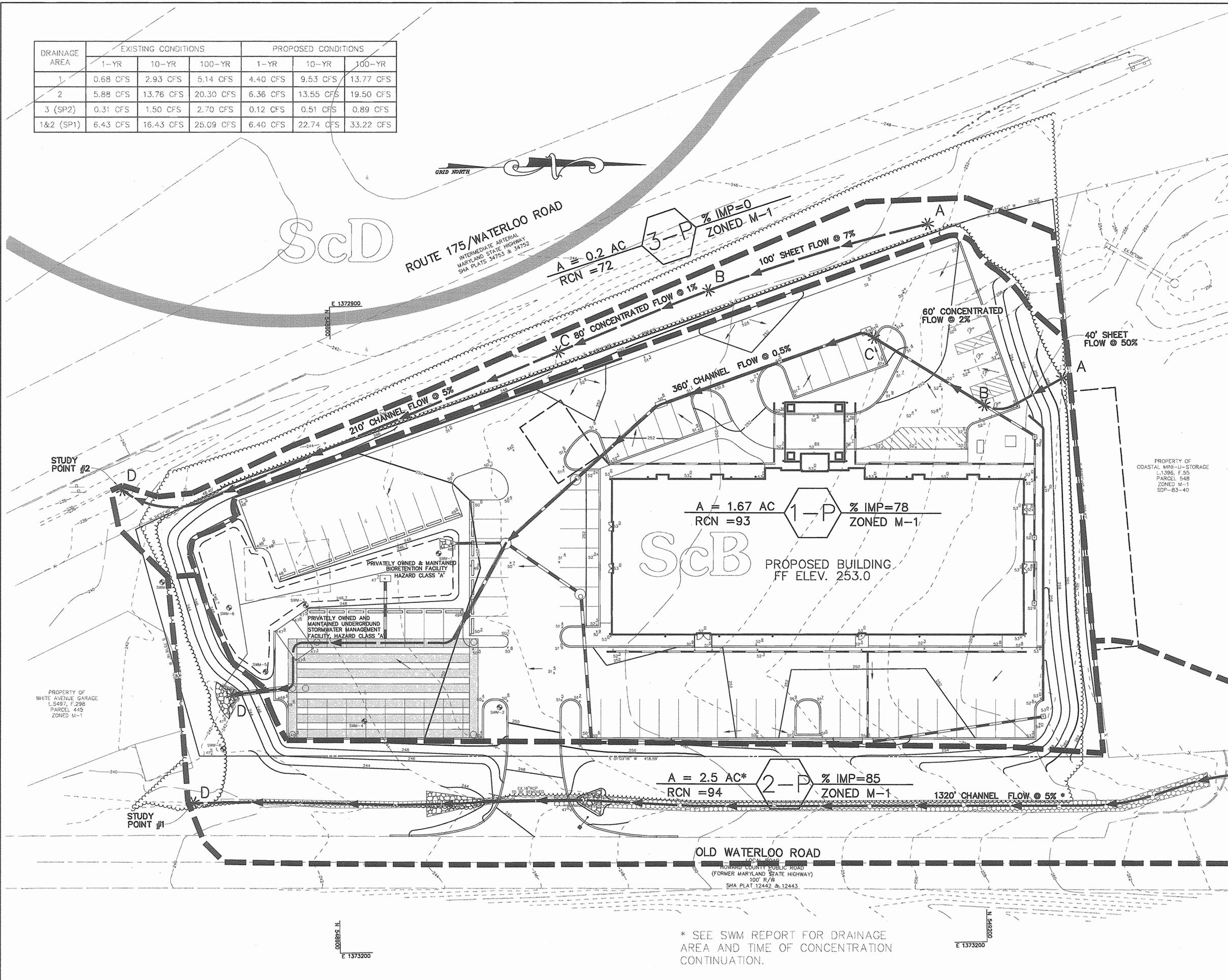
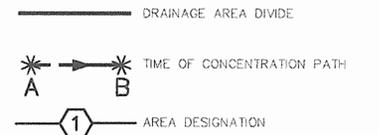
DESIGNED BY: ACR
 DRAWN BY: DAM
 CHECKED BY: CJR
 PROJECT NO: 01256
 C410XDA.DWG
 DATE: APRIL 2, 2003
 SCALE: 1" = 20'
 DRAWING NO. 12 OF 14

CHRISTOPHER J. REID #19949
 AS-BUILT
 SDP-03-45

* SEE SWM REPORT FOR DRAINAGE AREA AND TIME OF CONCENTRATION CONTINUATION.

DRAINAGE AREA	EXISTING CONDITIONS			PROPOSED CONDITIONS		
	1-YR	10-YR	100-YR	1-YR	10-YR	100-YR
1	0.68 CFS	2.93 CFS	5.14 CFS	4.40 CFS	9.53 CFS	13.77 CFS
2	5.88 CFS	13.76 CFS	20.30 CFS	6.36 CFS	13.55 CFS	19.50 CFS
3 (SP2)	0.31 CFS	1.50 CFS	2.70 CFS	0.12 CFS	0.51 CFS	0.89 CFS
1&2 (SP1)	6.43 CFS	16.43 CFS	25.09 CFS	6.40 CFS	22.74 CFS	33.22 CFS

LEGEND



PROPERTY OF COASTAL MINI-U-STORAGE L.1386, F.55 PARCEL 548 ZONED M-1 SDP-83-40

PROPERTY OF WHITE AVENUE GARAGE L.5497, F.298 PARCEL 445 ZONED M-1

AS-BUILT CERTIFICATION

D.W.C. 8/1/03
DOMENICK W. COLANGELO #27200 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
Mark D. Layton 4/4/03
DIRECTOR DATE

Kent DeLoach 6/10/03
CHIEF, DIVISION OF LAND DEVELOPMENT #6 DATE

DATE	NO.	REVISION

OWNER / DEVELOPER
NORTHSTAR HOTELS
7211 HANOVER PARKWAY
SUITE C-D
GREENBELT, MARYLAND 20770
301-345-8700
ATTN: AL PATEL

PROJECT
COMFORT SUITES
4 STORY - 83 ROOM HOTEL

AREA
TAX MAP 43 ZONED M-1 PARCEL 591
8th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROPOSED CONDITIONS
SWM DRAINAGE AREA MAP

Patton Harris Rust & Associates, pc
Engineers, Surveyors, Planners, Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

P.H.R.A.

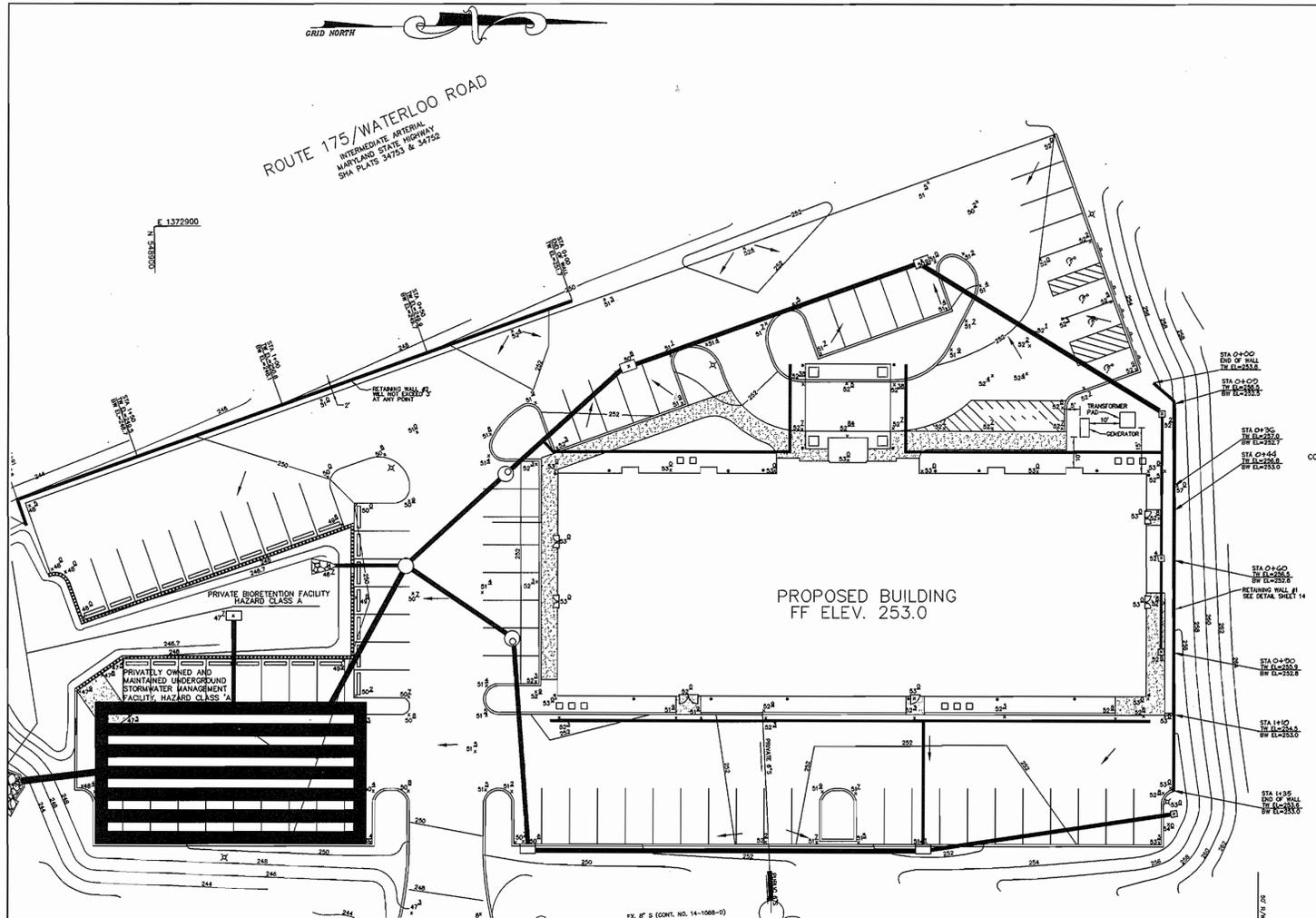
3.26.03
DATE

DESIGNED BY: ACR
DRAWN BY: DAM
CHECKED BY: CJR PJS
PROJECT NO: 01256
C410PRDA.DWG
DATE: APRIL 2, 2003
SCALE: 1" = 20'
DRAWING NO. 13 OF 14

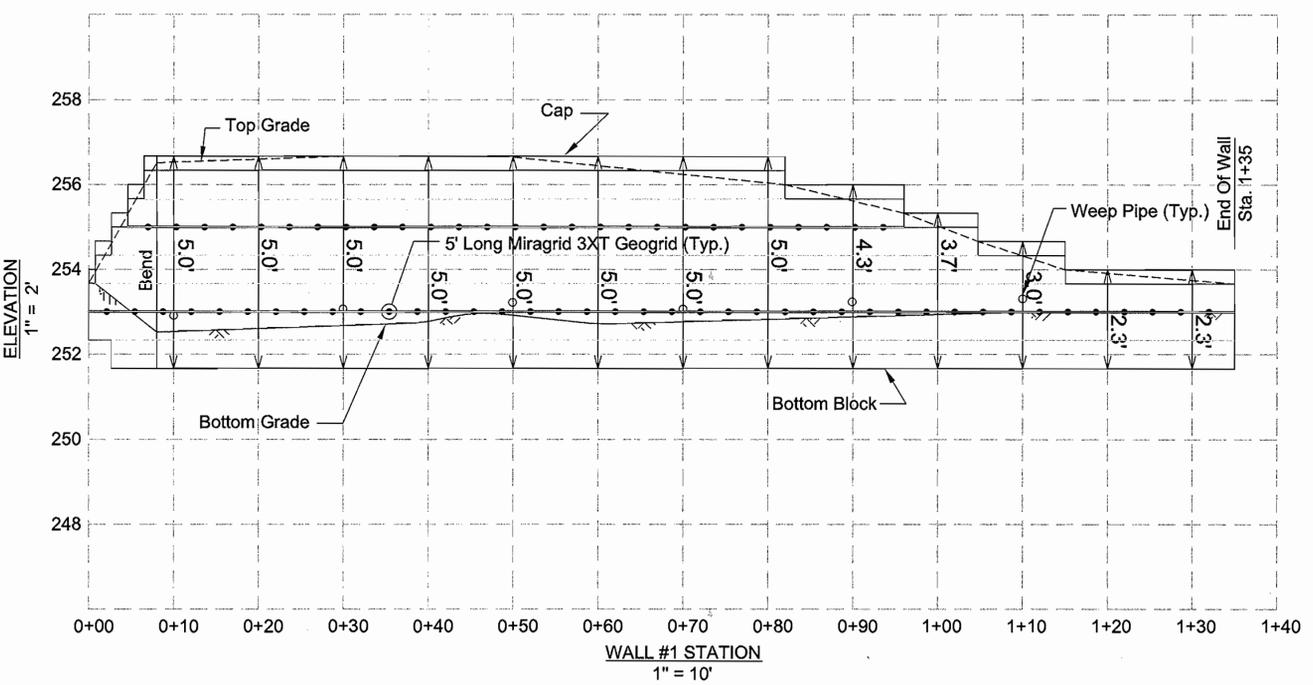
CHRISTOPHER J. REID #19949
AS-BUILT

SDP-03-45

* SEE SWM REPORT FOR DRAINAGE AREA AND TIME OF CONCENTRATION CONTINUATION.



WALL LOCATION PLAN
SCALE: 1" = 25'



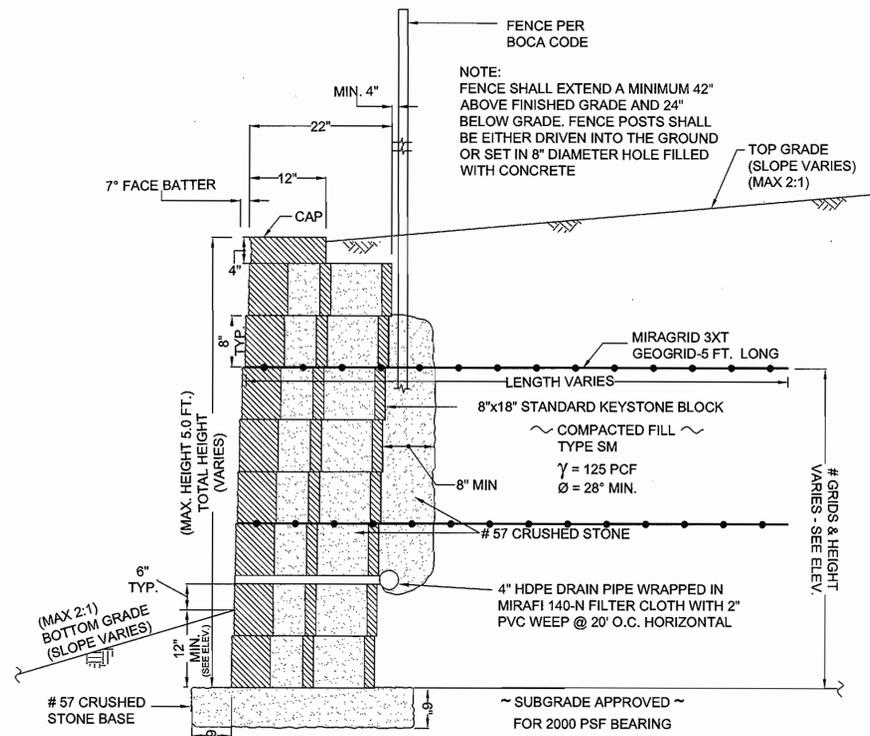
WALL #1 ELEVATION

SPECIFICATIONS
KEYSTONE MODULAR CONCRETE BLOCK RETAINING WALL

- PART 1: GENERAL**
- 1.01 Description**
- Work shall consist of furnishing and construction of a KEYSTONE Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.
 - Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.
 - Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.
- 1.02 Delivery, Storage and Handling**
- Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.
 - Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.
- PART 2: PRODUCTS**
- 2.01 Modular Concrete Retaining Wall Units**
- Modular concrete units shall conform to the following architectural requirements:
 - face color - concrete gray - standard manufacturer's color may be specified by the Owner.
 - face finish - sculptured rock face in angular tri-planer configuration. Other face finishes will not be allowed without written approval of Owner.
 - bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.
 - exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.
 - Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.
 - Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:
 - compressive strength = 3000 psi minimum;
 - absorption = 8% maximum (6% in northern states) for standard weight aggregates;
 - dimensional tolerances = ± 1/8" from nominal unit dimensions - not including rough split face, ± 1/16" unit height - top and bottom planes;
 - unit size - 8' (H) x 16' (W) x 22' (D) minimum;
 - unit weight - 100 lbs/unit minimum for standard weight
- 2.02 Shear Connectors**
- Shear connectors shall be 1/2 inch diameter thimble isophthalic polyester resin-impregnated fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F.
 - Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.
- 2.03 Base Leveling Pad Material**
- Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.
- 2.04 Unit Drainage Fill**
- Unit drainage fill shall consist of #57 crushed stone
 - One cubic foot, minimum, of drainage fill shall be used for each square foot of wall face. Drainage fill shall be placed within cores of, between, and behind units to meet this requirement.
- 2.05 Reinforced Backfill**
- Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

Sieve Size	Percent Passing
2 inch	100-75
3/4 inch	100-75
No. 40	0-60
No. 200	0-35

 Plasticity Index (PI) < 15 and Liquid Limit < 40 per ASTM D-4318.
 - Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.
- 2.06 Geogrid Soil Reinforcement**
- Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.
 - Geogrid reinforcement shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.



TYPICAL WALL SECTION
N.T.S.

- NOTES:**
- No trees shall be planted within 10 feet of the top of the retaining wall.
 - Retaining walls shall only be constructed under the observation of a registered professional engineer and a (NICENT, WACEL, or equiv.) certified soils technician.
 - The required bearing pressure beneath the wall system shall be verified in the field by a certified soils technician. Testing documentation must be provided to the Howard County Inspector prior to start of construction. The required bearing test shall be the Dynamic Cone Penetrometer test ASTM STP-399.
 - The suitability of fill material shall be confirmed by the on-site soils technician. Each 8' lift must be compacted to a minimum 95% standard proctor density and the testing report shall be made available to the Howard County Inspector upon completion of construction.
 - One soil boring is required every one hundred feet along the length of the wall. Copies of the boring reports shall be provided to the Howard County Inspector prior to the start of the construction.

AS-BUILT CERTIFICATION

STATE OF MARYLAND
DOMENICO W. COLANGELO #27200
REGISTERED PROFESSIONAL ENGINEER

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *Mark D. Leggett* 4/13/13 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *Mark J. Leggett* 4/13/13 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *Karl Schumacher* 4/13/13 DATE

DATE	NO.	REVISION

OWNER / DEVELOPER: NORTHSTAR HOTELS, 7211 HANOVER PARKWAY, SUITE C-D, GREENBELT, MARYLAND 20770, 301-345-8700, ATTN: AL PATEL

PROJECT: COMFORT SUITES, 4 STORY - 83 ROOM HOTEL

AREA: TAX MAP 43, ZONED M-1, PARCEL 591, 6th ELECTION DISTRICT, HOWARD COUNTY, MARYLAND

TITLE: RETAINING WALL CONSTRUCTION DETAILS

HILLIS-CARNES ENGINEERING ASSOCIATES, INC.
12011 Guilford Road - Suite 106 Annapolis Junction, MD 20701
(410) 880-4788 Fax: (410) 880-4098

DESIGNED BY: RWS
DRAWN BY: AM
CHECKED BY: RMH
PROJECT NO.: 02511-A
DATE: APRIL 2, 2003
SCALE: AS SHOWN
DRAWING NO. 14 OF 14

ENGINEER: *Domenico W. Colangelo*
AS-BUILT