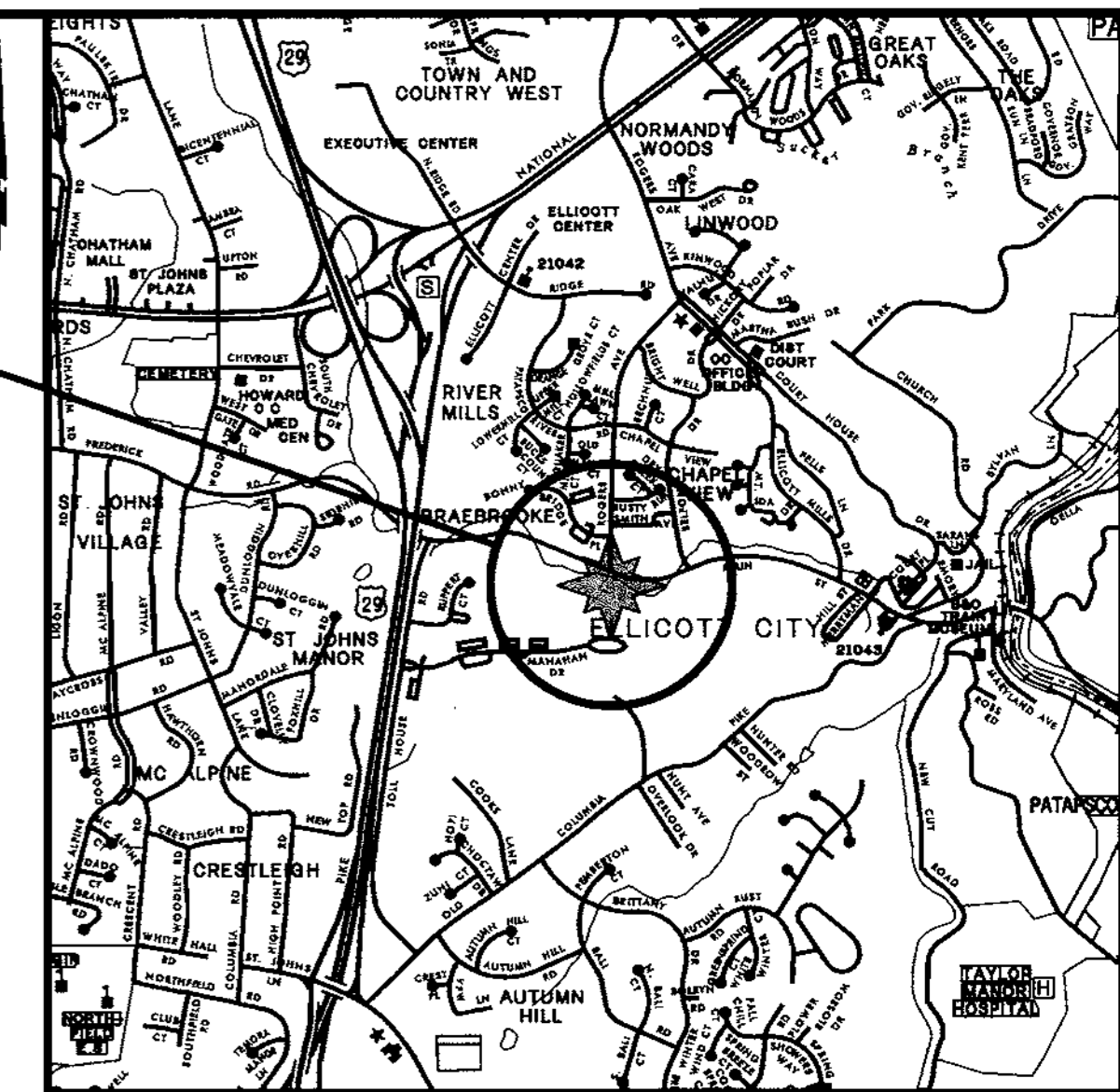


SHEET NO.	SDP SHEET NO.	TITLE
1	1	TITLE SHEET
2	2	EXISTING CONDITIONS SITE PLAN
3	3	NEW CONDITIONS SITE PLAN
4	4	CONSTRUCTION DETAILS
5	5	TRAFFIC CONTROL PLAN
6	6	SEDIMENT & EROSION CONTROL NOTES
7	7	DRAINAGE AREA MAP
8	8	WATER AND SEWER PROFILES
9		S1 - GENERAL NOTES
10		S2 - VEHICULAR BRIDGE PLAN AND ELEVATION
11		S3 - VEHICULAR BRIDGE EARTHWORK
12		S4 - VEHICULAR BRIDGE ABUTMENT 'A'
13		S5 - VEHICULAR BRIDGE ABUTMENT 'B'
14		S6 - VEHICULAR BRIDGE BEAM LAYOUT AND TRANSVERSE SECTION
15		S7 - VEHICULAR BRIDGE 4'-0" PRESTRESSED CONCRETE SLAB UNIT
16		S8 - VEHICULAR BRIDGE 3'-0" PRESTRESSED CONCRETE SLAB UNIT
17		S9 - VEHICLE BRIDGE PRESTRESSED CONCRETE SLAB UNIT DETAILS
18		S10 - VEHICULAR BRIDGE APPROACH SLABS
19		S11 - PEDESTRIAN BRIDGE PLAN AND ELEVATION
20		S12 - PEDESTRIAN BRIDGE TYPICAL SECTIONS
21		S13 - VEHICULAR BRIDGE - BRIDGE RAILING DETAILS
22		S14 - VEHICULAR BRIDGE - BRIDGE RAILING DETAILS
23		S15 - BARLIST
24		S16 - BARLIST
25		S17 - STANDARD SHEET
26		S18 - STANDARD SHEET

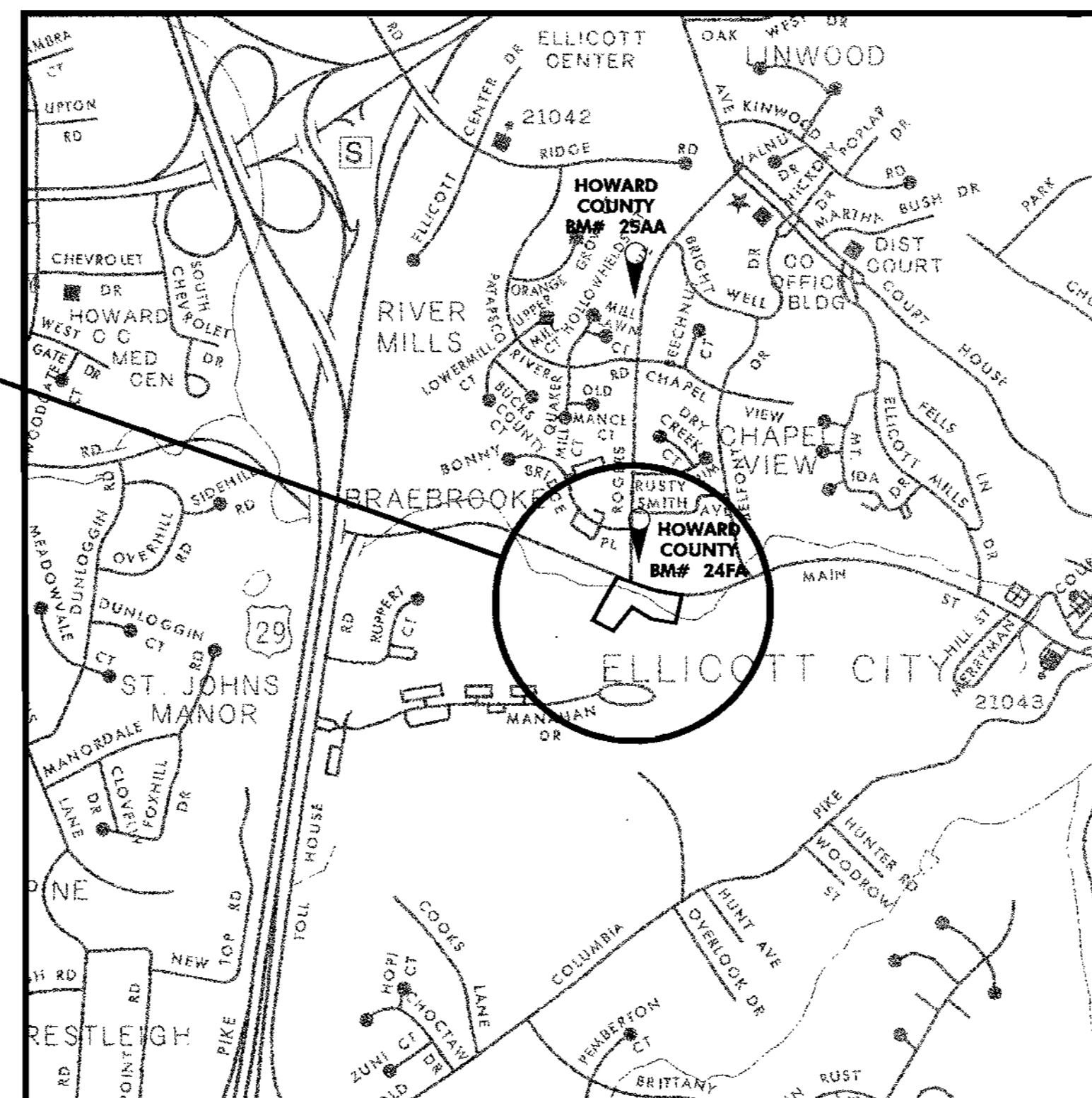
ELLICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS CAPITAL PROJECT NO.: N-3910

SITE



VICINITY MAP
SCALE: 1" = 2000'



LOCATION MAP
SCALE: 1" = 1000'

Lot/Parcel #	Street Address
820, 221, 987	8888 Main Street

SITE

GENERAL NOTE'S CONTINUED

- The approval of Waiver Petition WP-02-45 Ellicott City Colored School is subject to the following conditions:
 - The work is limited to the improvements shown on SDP-01-130, once signature approval has been completed. The developer must pursue approval of SDP-01-130 through to signature or this waiver approval will be nullified.
 - The petitioner shall minimize all disturbances and provide stabilization in accordance with the approval SDP-01-130.
- The 20' use setback is not applicable for the handicap parking space behind the existing building.
- Note: "Existing parking area, building and drive aisle are non-conforming with respect to structure and use setbacks. No additions or expansions are permitted which do not comply with all zoning regulations."

NOTES:

- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD RUN SURVEY WITH ONE FOOT CONTOUR INTERVALS PREPARED BY: GREENMAN-PEDERSEN, INC. DATED: AUGUST, 2000
- RIGHT-OF-WAY LINES SHOWN ON THESE PLANS DO NOT INCLUDE EASEMENTS. THEY ARE FOR ASSISTANCE IN INTERPRETING THE PLANS. THEY ARE NOT FOR OFFICIAL FEE RIGHT-OF-WAY AND EASEMENT INFORMATION. SEE APPROPRIATE RIGHT-OF-WAY PLAT OR PLATS.
- THE LOCATIONS OF EXISTING UTILITIES SHOWN ON THE PLANS ARE FOR INFORMATION AND GUIDANCE ONLY. NO GUARANTEE IS MADE AS TO THE ACCURACY OF SAID LOCATIONS. CALL "MISS UTILITY", 1-800-257-7777 FOR UTILITY LOCATIONS AT LEAST 48 HOURS BEFORE BEGINNING CONSTRUCTION.

- GENERAL NOTES**
- COORDINATES SHOWN HEREON ARE BASED ON HOWARD COUNTY GEODETIC SYSTEM POINT NOS. 24FA, 25AA HORIZ. NAD 83 DATUM.
 - INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM THE BEST AVAILABLE RECORDS. THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE UTILITIES BY DIGGING TEST PITS AT ALL UTILITY CROSSINGS PRIOR TO CONSTRUCTION. IF CLEARANCES ARE LESS THAN SPECIFIED ON THIS PLAN OR LESS THAN 12 INCHES WHEN NOT SPECIFIED, CONTACT THE ENGINEER AND THE OWNER OF OTHER INVOLVED UTILITY.
 - CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE PLANS:
 - MISS UTILITY 1-800-257-7777
 - CONSTRUCTION INSPECTION DIVISION, HOWARD COUNTY (410) 313-1880
 - BALTIMORE GAS & ELECTRIC COMPANY - UNDERGROUND ELECTRIC DISTRIBUTION CUSTOMER SERVICE (410) 685-0123
 - VERIZON 1-800-870-0000
 - AMERICAN TELEPHONE & TELEGRAPH CABLE LOCATION DIVISION (410) 393-3553
 - BUREAU OF UTILITIES, HOWARD COUNTY (410) 313-2040
 - AVOID DAMAGE TO TREES ON THE SITE TO MAXIMUM EXTENT. OTHER TREES WITHIN LIMITS OF CONSTRUCTION SHALL NOT BE DESTROYED WITHOUT APPROVAL OF THE ENGINEER. TREES > 12" DBH WITHIN LOD SHALL BE PROTECTED USING TREE PROTECTIVE FENCING.
 - ALL GRADING SHALL BE INSIDE THE L.O.D. SHOWN INCLUDING SIDE SLOPES AND STABILIZATION ONLY. FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED AS FOLLOWS:
 - SEVEN (7) CALENDAR DAYS FOR THE SURFACE OF ALL PERIMETER CONTROLS, DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES, AND ALL SLOPES GREATER THAN THREE HORIZONTAL TO ONE VERTICAL (3:1).
 - FOURTEEN (14) CALENDAR DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
 - FOR DETAILS NOT SHOWN ON THESE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, USE HOWARD CO. DESIGN MANUAL VOL. IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (LATEST EDITION). THE CONTRACTOR SHALL HAVE A COPY OF VOL. IV ON THE JOB.
 - THE ELLICOTT CITY COLORED SCHOOL SHALL BE MAINTAINED AFTER CONSTRUCTION BY THE HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS.
 - ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
 - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE "MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE PLACED PRIOR TO THE PLACEMENT OF ANY ASPHALT.
 - ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
 - WATER IS PUBLIC, CONTRACT NO. 10-W.
 - SEWER IS PUBLIC, CONTRACT NO. 31-S.
 - THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY:
 - HOWARD COUNTY WATERSHED MODEL UPDATE TIBER-HUDSON HEC-2 FOR STATE OF MARYLAND WATER RESOURCES ADMINISTRATION, PREPARED BY SHELADIA ASSOCIATES, INC., 1987.
 - TIBER-HUDSON GREEK WATERSHED MODEL UPDATE FOR HOWARD COUNTY, MARYLAND, HEC-RAS MODEL FOR ELLICOTT CITY COLORED SCHOOL, PREPARED BY PHOENIX ENGINEERING, FEBRUARY 1988.
 - TIBER-HUDSON CREEK WATERSHED MODEL UPDATE FOR HOWARD COUNTY, MARYLAND, HEC-RAS MODEL FOR ELLICOTT CITY COLORED SCHOOL, PREPARED BY GREENMAN-PEDERSEN, INC. JULY, 2001.
 - THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY GREENMAN-PEDERSEN, INC., NOVEMBER 2000, NO WETLANDS WERE FOUND ON THIS SITE.
 - NO TRAFFIC STUDY IS REQUIRED FOR THIS PROJECT.
 - STORMWATER MANAGEMENT QUANTITY CONTROL HAS BEEN PROVIDED BY A REDUCTION IN IMPERVIOUS AREA AND RCN VALUE. THE REQUIREMENT FOR STORMWATER MANAGEMENT QUALITY CONTROL HAS BEEN SATISFIED BY A 20% REDUCTION IN IMPERVIOUS AREA IN REDEVELOPMENT AREAS. THE NEW DEVELOPMENT HANDICAP PARKING AREA BEHIND THE SCHOOL BUILDING IS LESS THAN 5,000 SQUARE FEET OF IMPERVIOUS AREA THUS MEETING THE STORMWATER MANAGEMENT REQUIREMENT.
 - THE WORK FOR WAIVER (WP-98-14), HUDSON BRANCH STREAM BANK STABILIZATION REQUESTED THE ADDITION OF A MODULAR BLOCK RETAINING WALL AND STABILIZATION OF THE EXISTING HUDSON BRANCH STREAM BANK. THERE ARE NO CONDITIONS OF APPROVAL FOR WAIVER WP-98-14!
 - REFORESTATION IS NOT REQUIRED FOR THIS PROJECT. HOWEVER, THE AFFORESTATION REQUIREMENT OF 4,356 S.F. WILL BE SATISFIED BY A FEE-IN-LIEU PAYMENT INTO THE HOWARD COUNTY FOREST CONSERVATION FUND. THIS FEE-IN-LIEU PAYMENT SATISFIES THE FOREST CONSERVATION REQUIREMENT IN ACCORDANCE WITH THE HOWARD COUNTY CODE (FOREST CONSERVATION PROGRAM).
 - HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS IS RESPONSIBLE FOR DISPOSITION OF TRASH. NO DUMPSTER IS REQUIRED.

DEVELOPERS CERTIFICATE

"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 Approval Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District.

John P. Johnson 3/6/02
Signature Chief, Bureau of Engineering Date

ENGINEERS CERTIFICATE

"I certify that this plan for erosion and sediment control represents a practical and workable plan based on personal knowledge of the site conditions and that it was prepared in accordance with the requirements of the Howard Soil Conservation District.

John P. Johnson 3/4/2002
Signature of Engineer Date

SITE ANALYSIS DATA CHART

TOTAL PROJECT AREA : 34,848 S.F.
TOTAL AREA DISTURBED: 26,552 S.F.
PRESENT ZONING: R-ED (RESIDENTIAL-ENVIRONMENTAL DEVELOPMENT)
RELATED FILES: WP-98-14!
NUMBER OF PARKING SPACES REQUIRED:
5 REGULAR
1 HANDICAP
NUMBER OF PARKING SPACES PROVIDED:
2 BUS
5 REGULAR
1 HANDICAP
PROPOSED USE OF BUILDING:
PUBLIC USE (MUSEUM WITH LIMITED OPENINGS)

RELEVANT BACKGROUND INFORMATION

TAX MAP NO.: 24
ZONING: R-ED
ELECTION DISTRICT: 2ND
HOWARD COUNTY FIELD BOOK SURVEY REFERENCES:
BOOK NO. 2000I36.04 DATE SURVEYED 06-16-00
M.D.E. AUTHORIZATION NO.: 00-NT-0522/200161219

PERMIT INFORMATION CHART					
Subdivision Name	N/A		Section/Area	Ellicott City	
Lot/Parcel No.	220, 221, 987				
Plot # or L/F	Grid #	Zoning	Tax Map No.	Elect. Distr.	Census Tract
3544/25	12	R-ED	24	2nd	602800
Water Code	Sewer Code				
25-10-0005	2-74-103				

LEGEND	
EXISTING	PROPOSED
CONTOUR	265 - 264
EDGE OF ROAD	
CURB AND GUTTER	
SIDEWALK	
STORM DRAIN PIPE	
STORM DRAIN INLET	
STORM DRAIN HEADWALL	
WATER MAIN	WM
FIRE HYDRANT	
WELL	
GAS MAIN	
GAS VALVE	
SANITARY SEWER MAIN	4" DIP
SANITARY SEWER CLEANOUT	CO
SANITARY SEWER MANHOLE	
OVERHEAD ELECTRIC LINE	
ELECTRIC CONDUIT	
ELECTRIC POLE W/ GUY	
UNDERGROUND CABLE TV	
UNDERGROUND TELEPHONE	
GUARDRAIL	
W-BEAM TRAFFIC BARRIER AND HANDRAIL	
TREELINE	
PROPERTY/R-O-W LINE	
LIMIT OF DISTURBANCE	LOD
SILT FENCE	
TREE PROTECTIVE FENCE	TPF
STABILIZED CONSTRUCTION ENTRANCE	
LIMIT OF NEW PAVEMENT	
EARTH DIKE	
GABION MATTRESS	GM

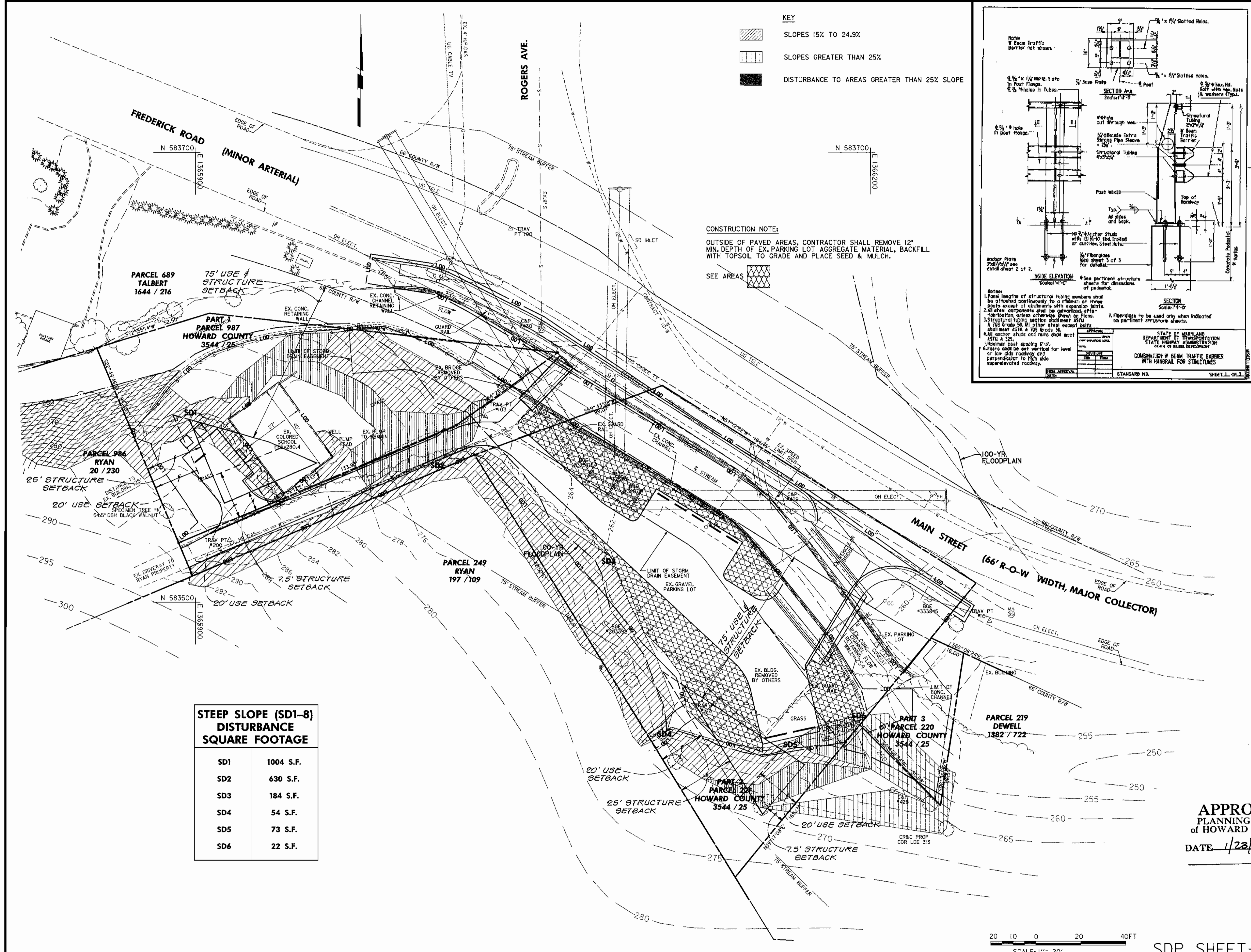
**APPROVED
PLANNING BOARD
OF HOWARD COUNTY**
DATE 1/23/02

Reviewed for Howard SCD and meets Technical Requirements
John P. Johnson 3/19/02
USDA Natural Resources Conservation Service Date
This development is approved for soil erosion and sediment control by the Howard Soil Conservation District
John P. Johnson 3/19/02
Howard SCD Date

SITE DEVELOPMENT PLANS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
John P. Johnson 3/20/02
Chief, Development Engineering Division Date
Wendy Stewart 4/1/02
Chief, Division of Land Development Date
John P. Johnson 4/1/02
Director Date
APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS
County Health Officer
Howard County Health Department Date

SDP SHEET- 1 OF 8

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND <i>John P. Johnson</i> 3/6/02 DIRECTOR OF PUBLIC WORKS DATE	DEPARTMENT OF RECREATION & PARKS HOWARD COUNTY, MARYLAND <i>John P. Johnson</i> 3-6-02 DIRECTOR, DEPARTMENT OF RECREATION & PARKS DATE	GPI GREENMAN-PEDERSEN, INC. ENGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & INSPECTORS 10620 GUILFORD ROAD, SUITE 100, JESSUP, MD, 20794 BALD. (301) 470-2772 BALD. (410) 380-2095 FAX: (301) 490-2649 www.gpi-ho.com	DES: W.R.F. DRN: W.K.T. CHK: M.S.Z. DATE: MARCH, 2002	BY NO REVISION DATE	'SCALE MAP NO. BLOCK NO.	TITLE SHEET	SCALE AS SHOWN SHEET 1 OF 26 SDP 148
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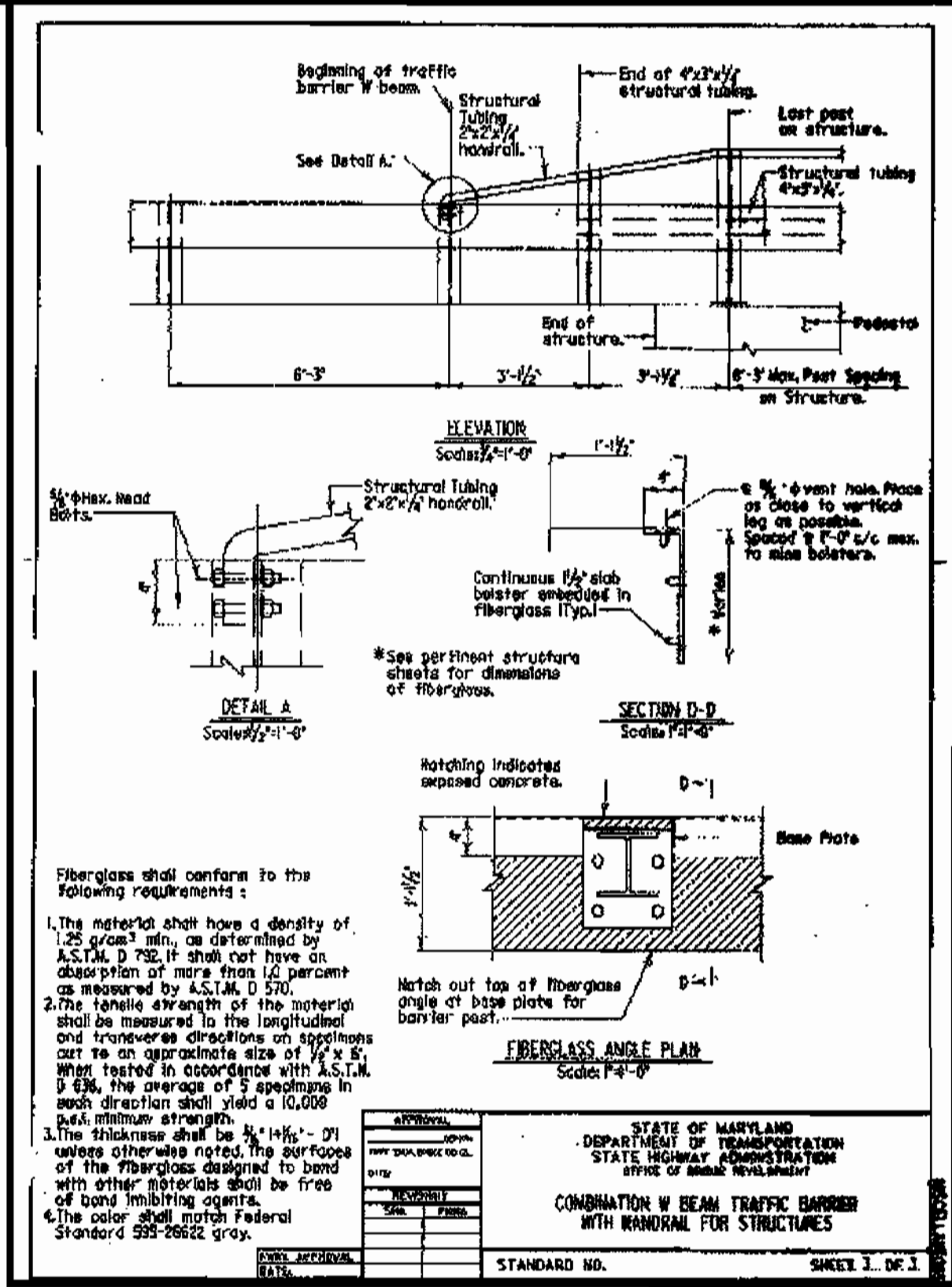
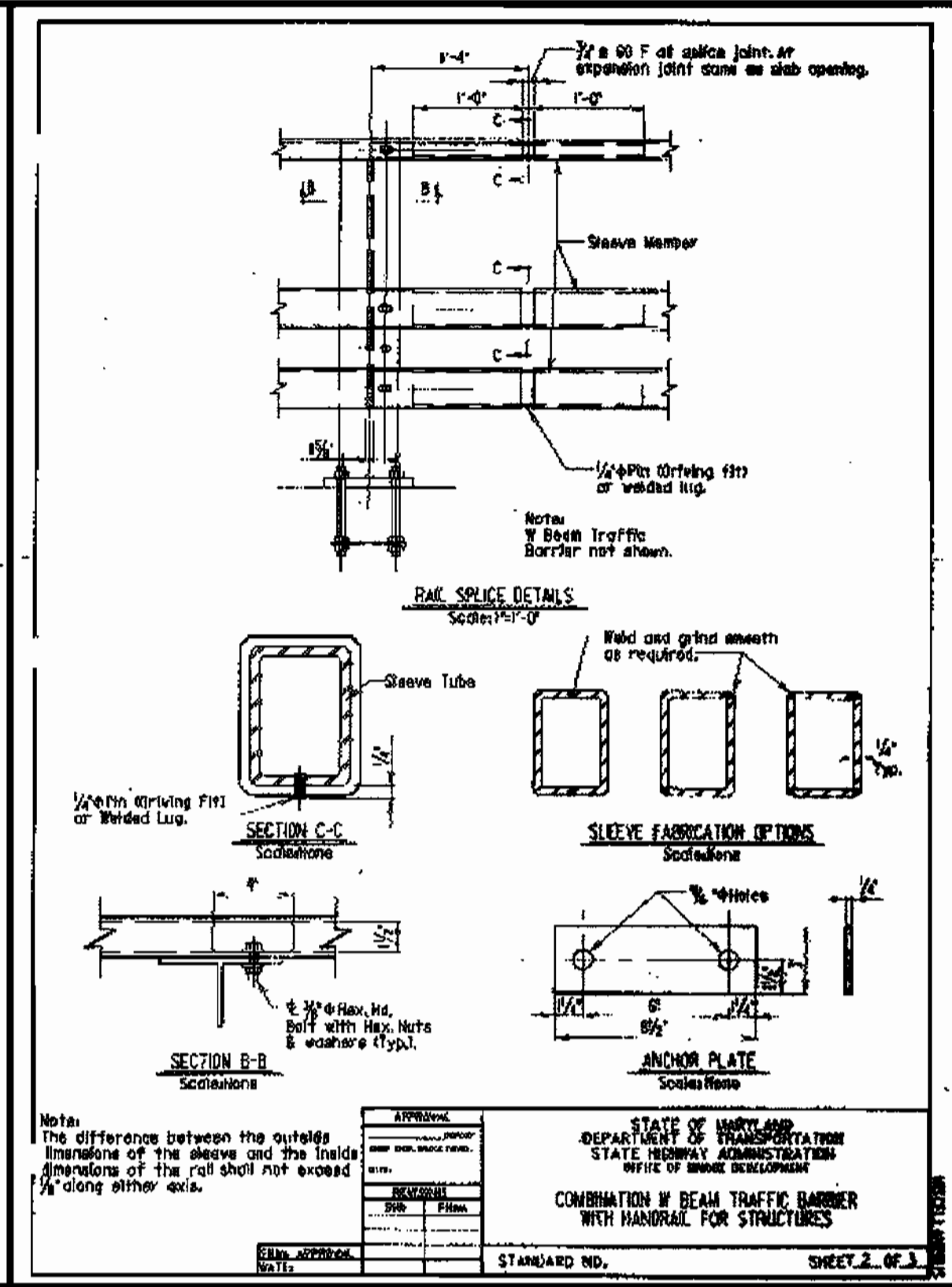
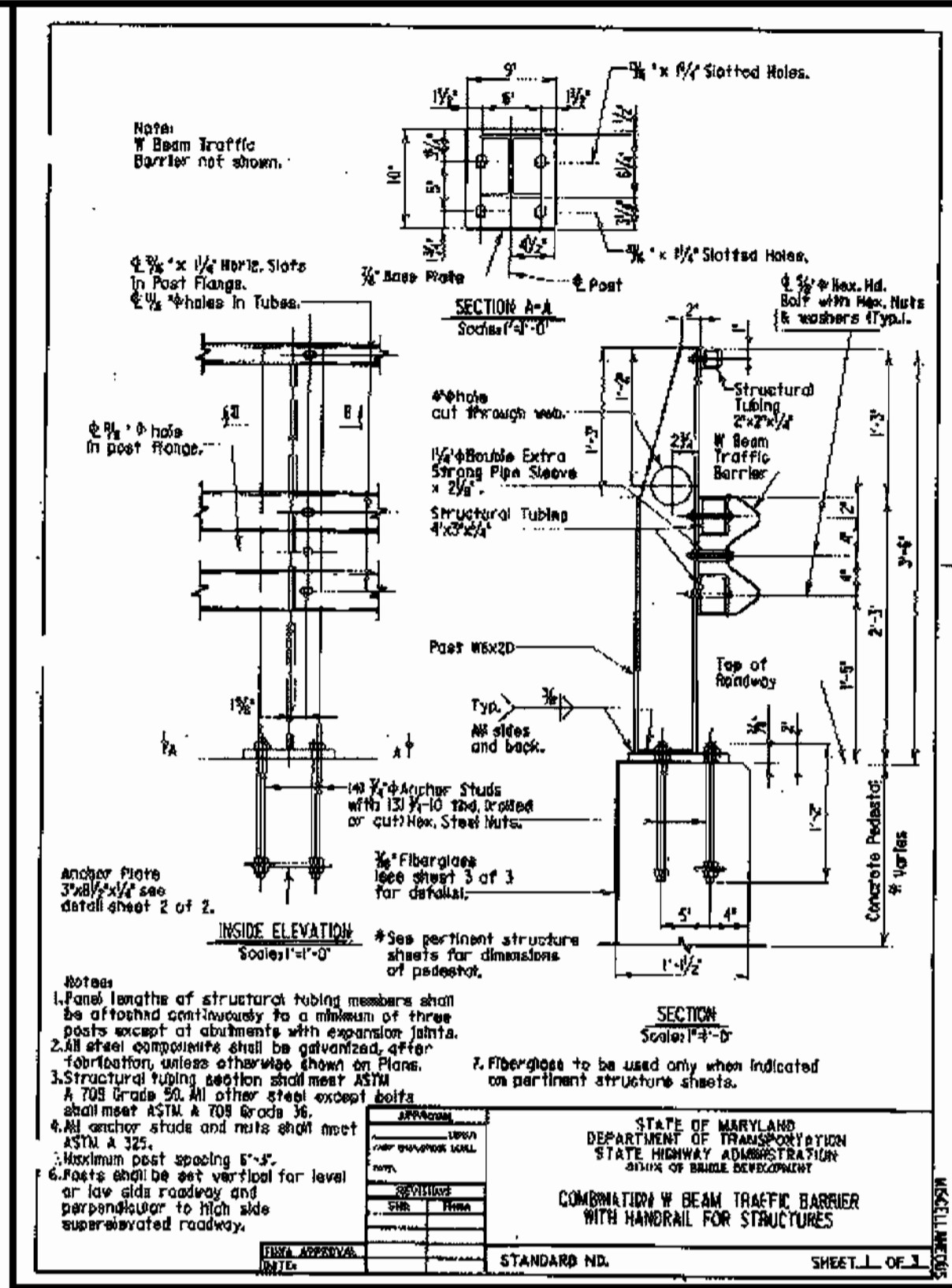
- KEY**
- SLOPES 15% TO 24.9%
 - SLOPES GREATER THAN 25%
 - DISTURBANCE TO AREAS GREATER THAN 25% SLOPE

CONSTRUCTION NOTE:
 OUTSIDE OF PAVED AREAS, CONTRACTOR SHALL REMOVE 12" MIN. DEPTH OF EX. PARKING LOT AGGREGATE MATERIAL, BACKFILL WITH TOPSOIL TO GRADE AND PLACE SEED & MULCH.

SEE AREAS

STEEP SLOPE (SD1-8) DISTURBANCE SQUARE FOOTAGE

SD1	1004 S.F.
SD2	630 S.F.
SD3	184 S.F.
SD4	54 S.F.
SD5	73 S.F.
SD6	22 S.F.



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: 1/23/02

SITE DEVELOPMENT PLANS

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* 2/20/02 Date

Chief, Division of Land Development: *[Signature]* 4/1/02 Date

Director: *[Signature]* 4/1/02 Date

APPROVED FOR PUBLIC WATER AND PUBLIC SEWERAGE SYSTEMS

County Health Officer: _____ Date

Howard County Health Department

SCALE: 1" = 20'

SDP SHEET - 2 OF 8

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND
[Signature] 3/6/02
 DIRECTOR OF PUBLIC WORKS DATE

DEPARTMENT OF RECREATION & PARKS
 HOWARD COUNTY, MARYLAND
[Signature] 3-6-02
 DIRECTOR, DEPARTMENT OF RECREATION & PARKS DATE

GPI GREENMAN-PEDERSEN, INC.
 ENGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & INSPECTORS
 10620 GILFORD ROAD, SUITE 100, BELTSVILLE, MD 20704
 WASH. DC: 410-271-2712 BALT.: 410-860-3055
 FAX: (301) 490-2649 www.gpi.net

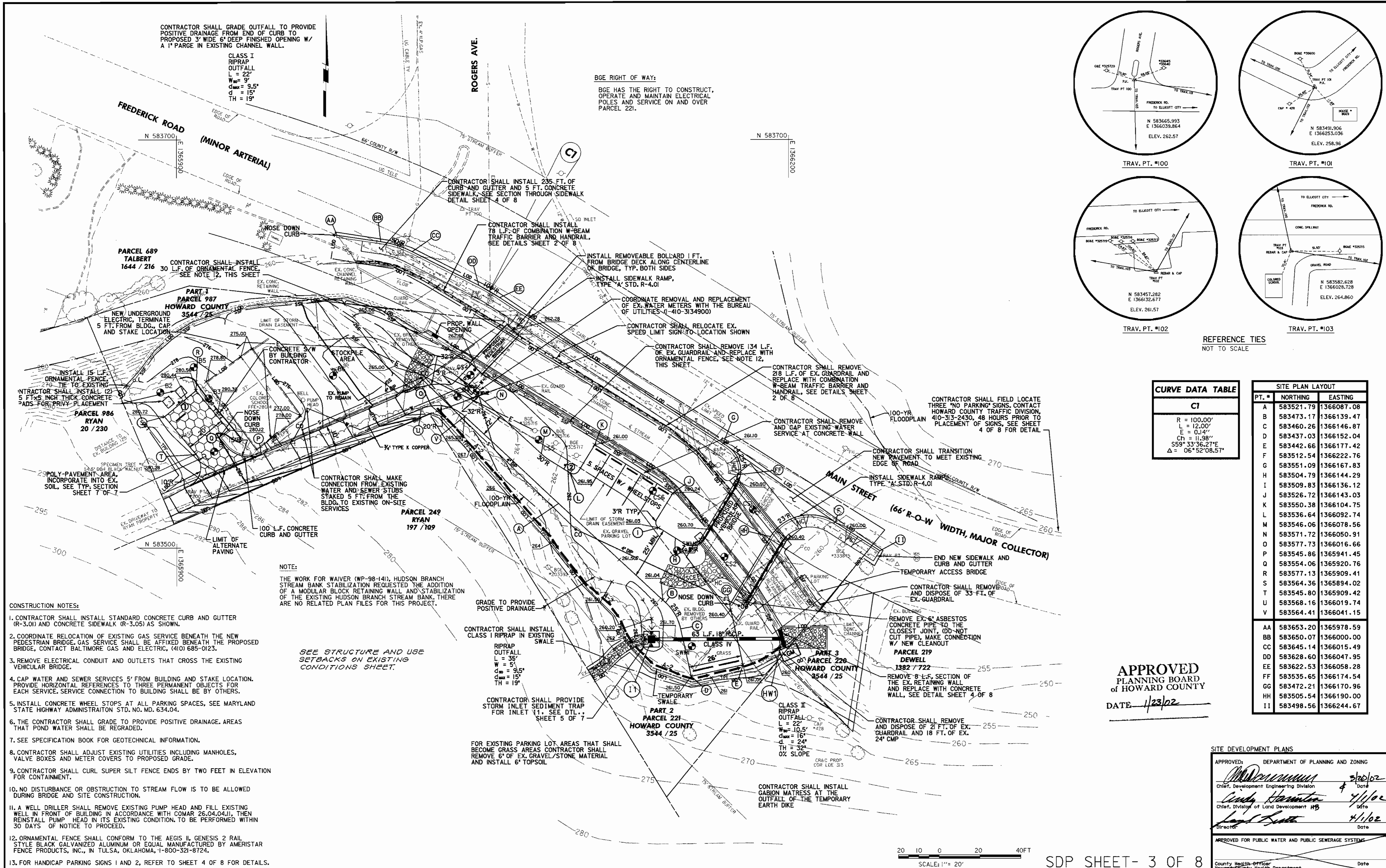
STATE OF MARYLAND
 DONALD JOSEPH MALETIC
 No. 13759
 REGISTERED PROFESSIONAL ENGINEER

DES: W.R.F.					
DRN: W.K.T.					
CHK: M.S.Z.					
DATE: MARCH, 2002	BY: NO	REVISION	DATE	SCALE MAP NO.	BLOCK NO.

EXISTING CONDITIONS SITE PLAN

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK
 HOWARD COUNTY, MARYLAND
 CAPITAL PROJECT NO. N-3910

SCALE AS SHOWN
 SHEET - 2 OF 26
 02/21/02



CONTRACTOR SHALL GRADE OUTFALL TO PROVIDE POSITIVE DRAINAGE FROM END OF CURB TO PROPOSED 3' WIDE 6" DEEP FINISHED OPENING W/ A 1" PARGE IN EXISTING CHANNEL WALL.

CLASS I RIPRAP OUTFALL
L = 22'
W = 9"
d_{max} = 9.5"
d = 15"
TH = 19"

BGE RIGHT OF WAY:
BGE HAS THE RIGHT TO CONSTRUCT, OPERATE AND MAINTAIN ELECTRICAL POLES AND SERVICE ON AND OVER PARCEL 221.

CONTRACTOR SHALL INSTALL 235 FT. OF CURB AND GUTTER AND 5 FT. CONCRETE SIDEWALK, SEE SECTION THROUGH SIDEWALK DETAIL SHEET 4 OF 8

CONTRACTOR SHALL INSTALL 78 L.F. OF COMBINATION W-BEAM TRAFFIC BARRIER AND HANDRAIL, SEE DETAILS SHEET 2 OF 8

INSTALL REMOVEABLE BOLLARD 1 FT. FROM BRIDGE DECK ALONG CENTERLINE OR BRIDGE, TYP. BOTH SIDES

INSTALL SIDEWALK RAMP, TYPE 'A' STD. R-4.01

COORDINATE REMOVAL AND REPLACEMENT OF EX. WATER METERS WITH THE BUREAU OF UTILITIES (1-410-3134900)

CONTRACTOR SHALL RELOCATE EX. SPEED LIMIT SIGN TO LOCATION SHOWN

CONTRACTOR SHALL REMOVE 134 L.F. OF EX. GUARDRAIL AND REPLACE WITH ORNAMENTAL FENCE, SEE NOTE 12

CONTRACTOR SHALL REMOVE 218 L.F. OF EX. GUARDRAIL AND REPLACE WITH COMBINATION W-BEAM TRAFFIC BARRIER AND HANDRAIL, SEE DETAILS SHEET 2 OF 8

CONTRACTOR SHALL REMOVE AND GAP EXISTING WATER SERVICE AT CONCRETE WALL

CONTRACTOR SHALL FIELD LOCATE THREE 'NO PARKING' SIGNS, CONTACT HOWARD COUNTY TRAFFIC DIVISION, 410-313-2430, 48 HOURS PRIOR TO PLACEMENT OF SIGNS, SEE SHEET 4 OF 8 FOR DETAIL

CONTRACTOR SHALL TRANSITION NEW PAVEMENT TO MEET EXISTING EDGE OF ROAD

INSTALL SIDEWALK RAMP, TYPE 'A' STD. R-4.01

CONTRACTOR SHALL REMOVE AND DISPOSE OF 33 FT. OF EX. GUARDRAIL

REMOVE EX. 6" ASBESTOS CONCRETE PIPE TO THE CLOSEST JOINT, DO NOT CUT PIPE, MAKE CONNECTION W/ NEW CLEANOUT

REMOVE 8 L.F. SECTION OF THE EX. RETAINING WALL AND REPLACE WITH CONCRETE WALL, SEE DETAIL SHEET 4 OF 8

CONTRACTOR SHALL REMOVE AND DISPOSE OF 21 FT. OF EX. GUARDRAIL AND 18 FT. OF EX. 24" CMP

CONTRACTOR SHALL INSTALL GABION MATRESS AT THE OUTFALL OF THE TEMPORARY EARTH DIKE

CURVE DATA TABLE	
C1	
R = 100.00'	
L = 12.00'	
E = 0.14"	
Ch = 11.98"	
SS = 33°36.27'E	
Δ = 06°52'08.57"	

SITE PLAN LAYOUT		
PT. #	NORTHING	EASTING
A	583521.79	1366087.08
B	583473.17	1366139.47
C	583460.26	1366146.87
D	583437.03	1366152.04
E	583442.66	1366177.42
F	583512.54	1366222.76
G	583551.09	1366167.83
H	583504.79	1366144.29
I	583509.83	1366136.12
J	583526.72	1366143.03
K	583550.38	1366104.75
L	583536.64	1366092.74
M	583546.06	1366078.56
N	583571.72	1366050.91
O	583577.73	1366016.66
P	583545.86	1365941.45
Q	583554.06	1365920.76
R	583577.13	1365909.41
S	583564.36	1365894.02
T	583545.80	1365909.42
U	583568.16	1366019.74
V	583564.41	1366041.15
AA	583653.20	1365978.59
BB	583650.07	1366000.00
CC	583645.14	1366015.49
DD	583628.60	1366047.95
EE	583622.53	1366058.28
FF	583535.65	1366174.54
GG	583472.21	1366170.96
HH	583505.54	1366190.00
II	583498.56	1366244.67

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 1/23/02

- CONSTRUCTION NOTES:
- CONTRACTOR SHALL INSTALL STANDARD CONCRETE CURB AND GUTTER (R-3.01) AND CONCRETE SIDEWALK (R-3.05) AS SHOWN.
 - COORDINATE RELOCATION OF EXISTING GAS SERVICE BENEATH THE NEW PEDESTRIAN BRIDGE. GAS SERVICE SHALL BE AFFIXED BENEATH THE PROPOSED BRIDGE, CONTACT BALTIMORE GAS AND ELECTRIC, (410) 685-0123.
 - REMOVE ELECTRICAL CONDUIT AND OUTLETS THAT CROSS THE EXISTING VEHICULAR BRIDGE.
 - CAP WATER AND SEWER SERVICES 5' FROM BUILDING AND STAKE LOCATION. PROVIDE HORIZONTAL REFERENCES TO THREE PERMANENT OBJECTS FOR EACH SERVICE. SERVICE CONNECTION TO BUILDING SHALL BE BY OTHERS.
 - INSTALL CONCRETE WHEEL STOPS AT ALL PARKING SPACES, SEE MARYLAND STATE HIGHWAY ADMINISTRATION STD. NO. MD. 634.04.
 - THE CONTRACTOR SHALL GRADE TO PROVIDE POSITIVE DRAINAGE. AREAS THAT POND WATER SHALL BE REGRADED.
 - SEE SPECIFICATION BOOK FOR GEOTECHNICAL INFORMATION.
 - CONTRACTOR SHALL ADJUST EXISTING UTILITIES INCLUDING MANHOLES, VALVE BOXES AND METER COVERS TO PROPOSED GRADE.
 - CONTRACTOR SHALL CURL SUPER SILT FENCE ENDS BY TWO FEET IN ELEVATION FOR CONTAINMENT.
 - NO DISTURBANCE OR OBSTRUCTION TO STREAM FLOW IS TO BE ALLOWED DURING BRIDGE AND SITE CONSTRUCTION.
 - A WELL DRILLER SHALL REMOVE EXISTING PUMP HEAD AND FILL EXISTING WELL IN FRONT OF BUILDING IN ACCORDANCE WITH COMAR 26.04.04.11. THEN REINSTALL PUMP HEAD IN ITS EXISTING CONDITION. TO BE PERFORMED WITHIN 30 DAYS OF NOTICE TO PROCEED.
 - ORNAMENTAL FENCE SHALL CONFORM TO THE AEGIS II GENESIS 2 RAIL STYLE BLACK GALVANIZED ALUMINUM OR EQUAL MANUFACTURED BY AMERISTAR FENCE PRODUCTS, INC., IN TULSA, OKLAHOMA, 1-800-321-8724.
 - FOR HANDICAP PARKING SIGNS 1 AND 2, REFER TO SHEET 4 OF 8 FOR DETAILS.

NOTE:
THE WORK FOR WAIVER (WP-98-141), HUDSON BRANCH STREAM BANK STABILIZATION REQUESTED THE ADDITION OF A MODULAR BLOCK RETAINING WALL AND STABILIZATION OF THE EXISTING HUDSON BRANCH STREAM BANK. THERE ARE NO RELATED PLAN FILES FOR THIS PROJECT.

SEE STRUCTURE AND USE SETBACKS ON EXISTING CONDITIONS SHEET.

CONTRACTOR SHALL INSTALL CLASS I RIPRAP IN EXISTING SWALE

RIPRAP OUTFALL
L = 35'
W = 5"
d_{max} = 9.5"
d = 15"
TH = 19"

CONTRACTOR SHALL PROVIDE STORM INLET SEDIMENT TRAP FOR INLET 11, SEE DTL., SHEET 5 OF 7

FOR EXISTING PARKING LOT AREAS THAT SHALL BECOME GRASS AREAS CONTRACTOR SHALL REMOVE 6" OF EX. GRAVEL/STONE MATERIAL AND INSTALL 6" TOPSOIL

SCALE: 1" = 20'

SDP SHEET- 3 OF 8

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
DATE: 3/26/02

DEPARTMENT OF RECREATION & PARKS
HOWARD COUNTY, MARYLAND
DATE: 3/26/02

GPI GREENMAN-PEDERSEN, INC.
10620 GULFORD ROAD, SUITE 100, BETHESDA, MD 20814
TEL: (301) 470-0772 FAX: (301) 490-2649 www.gpi.net

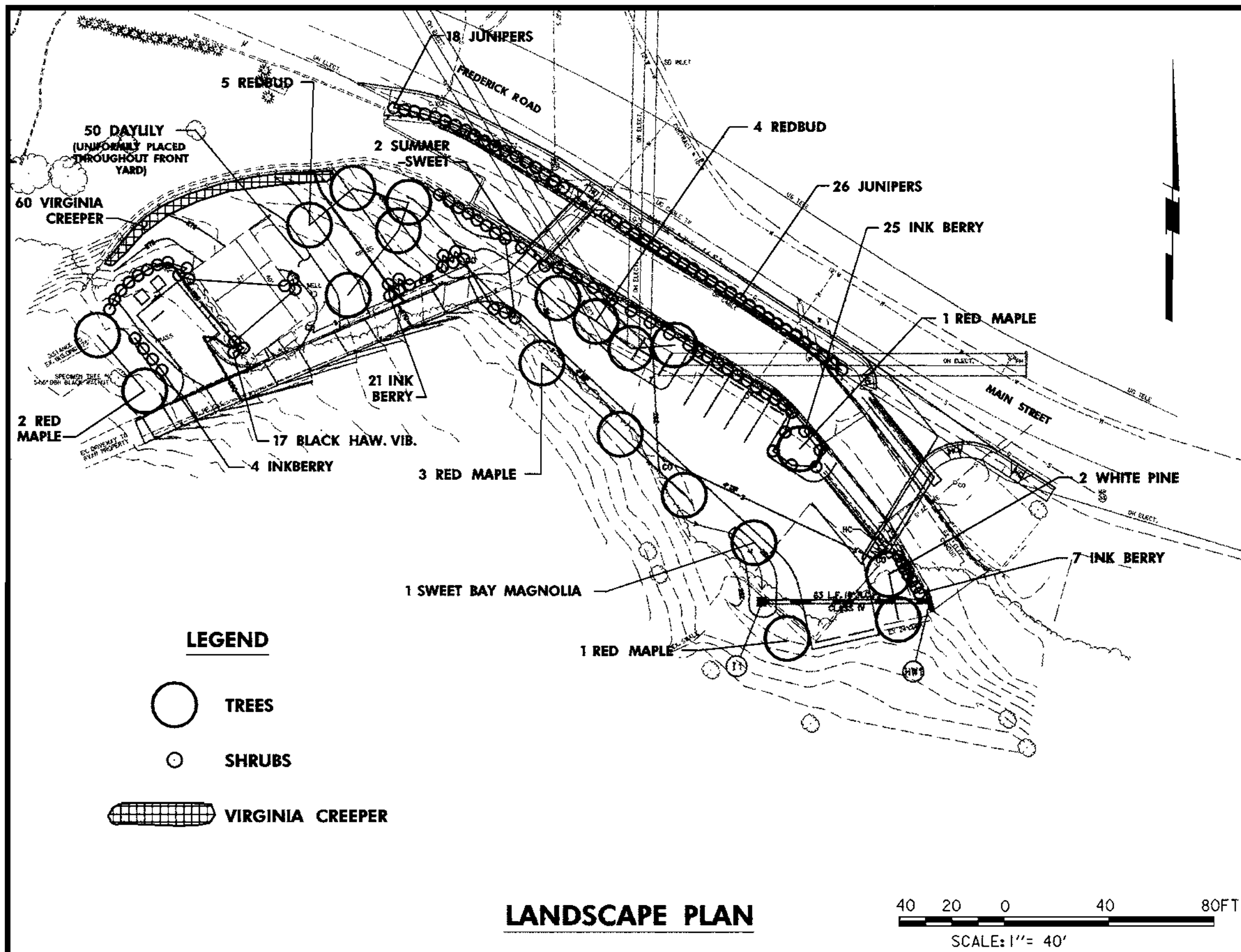


DES: W.R.F.	
DRN: W.K.T.	
CHK: M.S.Z.	
DATE: MARCH, 2002	
BY: NO	
REVISION	
DATE	

SITE AND SEDIMENT AND EROSION CONTROL PLAN
SCALE MAP NO. BLOCK NO.

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. N-3910

SCALE AS SHOWN
SHEET 3 OF 28
SDP 3/8



TOTAL	BOTANICAL NAME	COMMON NAME	SIZE	SPACING
7	ACER RUBRUM 'OCTOBER GLORY'	OCTOBER GLORY RED MAPLE	3" CAL., B&B	AS SHOWN
2	PINUS STROBUS	WHITE PINE	1" CAL., B&B	AS SHOWN
9	PINUS STROBUS	REDBLUD	1" CAL., B&B	AS SHOWN
57	ILEX GLABRA	INKBERRY	18 - 24", POT	AS SHOWN
2	CLETHRA ALNIFOLIA	SUMMERSWEET	18 - 24", POT	AS SHOWN
1	MYRICA PENNSYLVANICA	SWEET BAY MAGNOLIA	18 - 24", POT	AS SHOWN
17	VIBURNUM PRUNIFOLIUM	BLACK HAW VIBURNUM	18 - 24", POT	AS SHOWN
50	HEMEROCALIS 'HYPERION'	DAYLILY	1 QT. POT	AS SHOWN
44	ANDORRA	JUNIPER	1 GAL. CONT.	AS SHOWN
60 FLATS	DARTHENOISSUS QUINQUEFOLIA	VIRGINIA CREEPER	100 EA. FLAT	8' O.C.

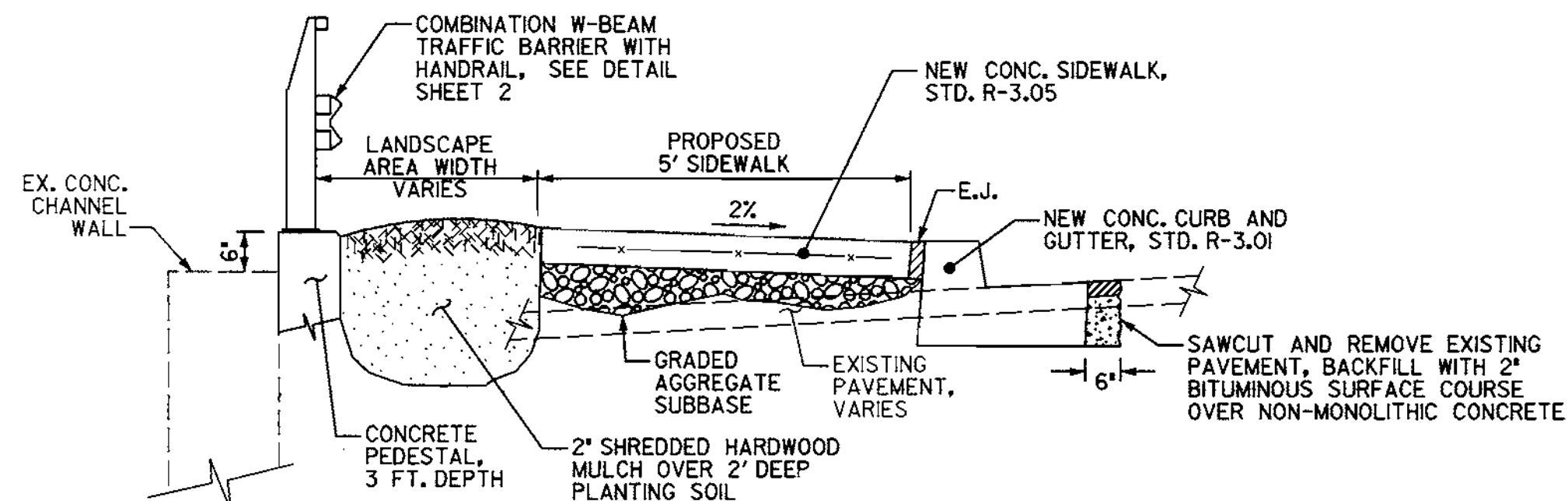
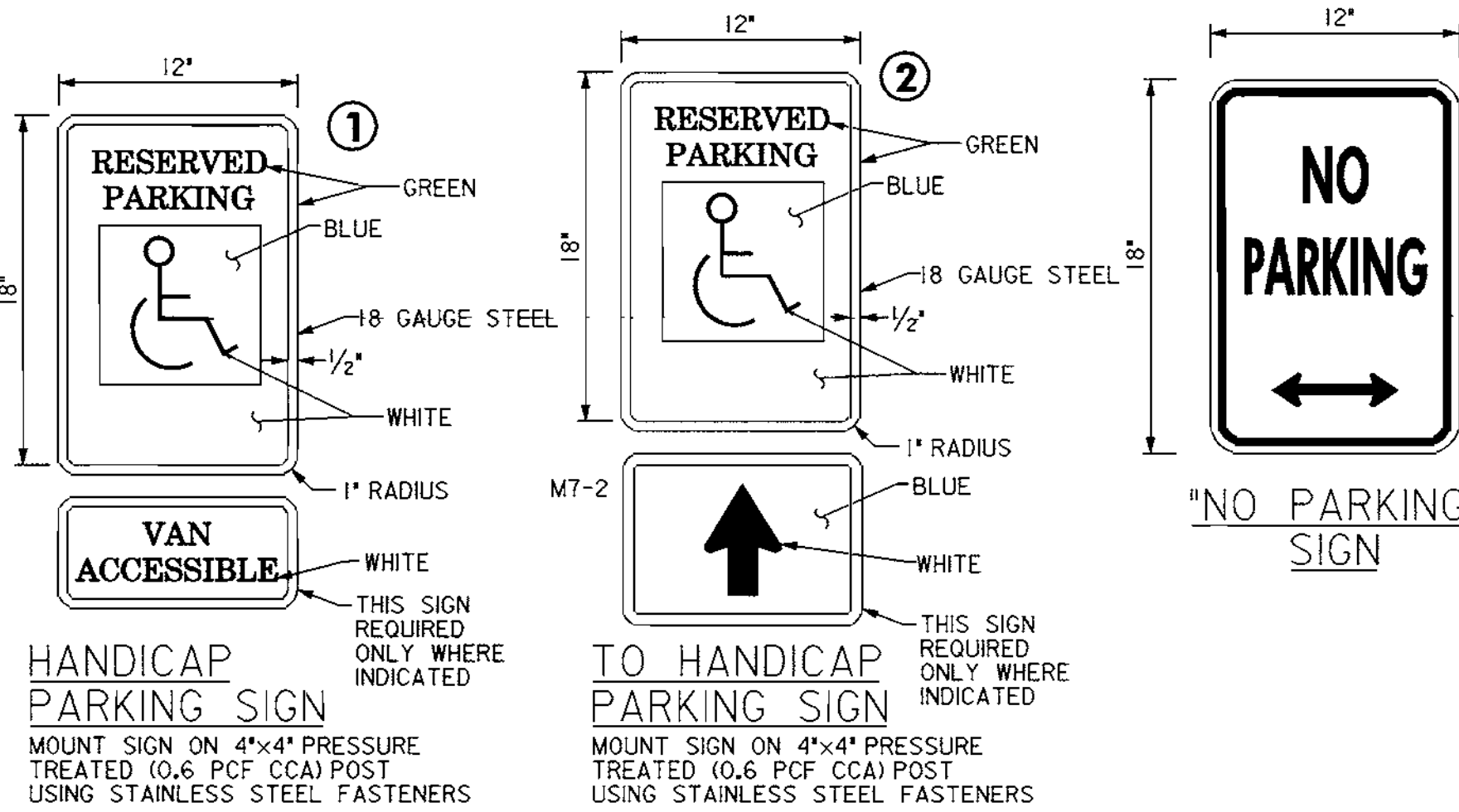
INTERIOR GREEN AREA TABULATIONS	
TOTAL PARKING AREA (SMALL LOT)	1,350 s.f.
INTERIOR GREEN AREA REQUIRED	0 s.f.
INTERIOR GREEN AREA PROVIDED	0 s.f.
INTERIOR SHADE TREES REQUIRED	0
INTERIOR SHADE TREES PROVIDED	0

PLANTING NOTES

- Plants shall conform to current 'American Standards for Nursery Stock' by American Association of Nurserymen (A.A.N.), particularly with regards to size, growth, size of ball, and density of branch structure.
- All plants (B&B or container) shall be properly identified by weather-proof labels securely attached thereto before delivery to project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the Landscape Architect.
- Any material and/or work may be rejected by the Landscape Architect if it does not meet the requirements of the specifications. All rejected materials shall be removed from the site by the contractor.
- The Contractor shall furnish all plants in quantities and sizes to complete the work as specified in the plant schedule.
- Substitutions in plant species or size shall not be permitted except with the written approval of the Landscape Architect.
- Plants shall be located as shown on the drawings and by scaling or as designated in the field by the Landscape Architect. All locations are to be approved by the Landscape Architect before excavation.
- Contractor shall contact Miss Utility prior to any excavation.
- If utility lines are encountered in excavation of tree pits, other locations for trees shall be selected by the Landscape Architect. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the Landscape Architect.
- Contractor shall first locate and mark the underground utilities and delineate the utility easement areas where no planting shall take place, prior to locating and digging the pits for the trees.
- All equipment and tools shall be placed so as to not interfere or hinder the pedestrian and vehicular flow.
- During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
- The Landscape Contractor shall be responsible to verify all plant quantities prior to commencement of work. Quantities in the schedule are for the Contractor's convenience.
- All disturbed areas of the site not planted with shrubs or ground cover shall be seeded with lawn seed.
- All planting beds as shown on the plan are to receive 3-4" of shredded hardwood bark mulch after planting and clean-up operations have been completed.

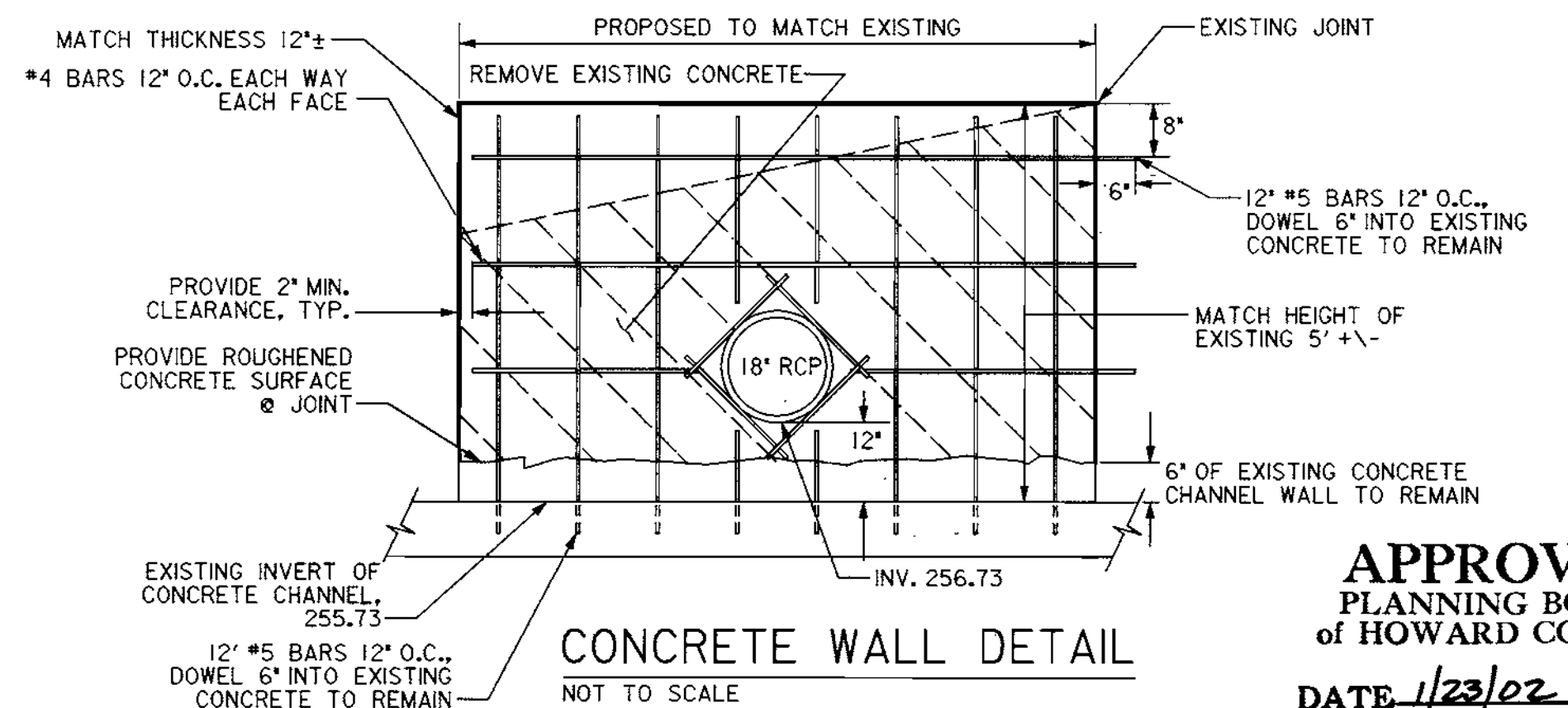
Forest Conservation Worksheet 2.0

- Note: Use 0 for all negative numbers that result from the calculations.
- Net Tract Area
 A. Total Tract Area A = 0.8
 B. Area within 100-year nontidal floodplain (Drainage area greater than 400 acres or Class III waters) B = 0.5
 C. Other Deductions C = 0.0
 D. Net Tract Area = (A-B-C) D = 0.3
- Land Use Category: Institutional Use
 E. Afforestation Threshold (Net Tract Area x 20 %) E = 0.1
 F. Conservation Threshold (Net Tract Area x 50 %) F = 0.2
- Existing Forest Cover
 G. Existing Forest Cover within the Net Tract Area G = 0.0
 H. Area of Forest Above Conservation Threshold
 If the Existing Forest Cover is greater than the Conservation Threshold, then H = Existing Forest Cover (G) - Conservation Threshold (F)
 H = 0.0
- Break Even Point
 I. Break Even (Amount of forest that must be retained so that no mitigation is required) I = 0.0
 If the area of forest above the Conservation Threshold is greater than zero, then I = (0.2 x the area of forest above Conservation Threshold (H)) + the Conservation Threshold (F)
- J. Forest Clearing Permitted Without Mitigation J = 0.0
 J = Existing Forest Cover (G) - Break Even Point (I)
- Proposed Forest Clearing
 K. Total Area of Forest to be Cleared K = 0.0
 L. Total Area of Forest Remaining L = 0.0
 L = Existing Forest Cover (G) - forest to be cleared (K)
- Planting Requirements
 If you are retaining forest at or above the break even point (I), no planting is required. If not, calculate the planting requirement below.
- M. Reforestation for Clearing Above the Conservation Threshold M = 0.0
 (1) If the total area of forest to be retained (L) is greater than or equal to the Conservation Threshold (F), then M = the area of forest to be cleared (K) x 0.25; or
 (2) If the forest to be retained (L) is less than the Conservation Threshold (F), then M = area of forest above Conservation Threshold (H) x 0.25
- N. Reforestation for Clearing Below the Conservation Threshold N = 0.0
 (1) If Existing Forest Cover (G) is greater than Conservation Threshold (F) and the forest to be retained (L) is less than the Conservation Threshold (F), then N = 2.0 x (the Conservation Threshold (F) - the forest to be retained (L))
 (2) If Existing Forest is less than or equal to the Conservation Threshold, then N = 2.0 x the forest cleared (K)
- P. Credit for Retention Above the Conservation Threshold P = 0.0
 If the area of forest to be retained (L) is greater than the Conservation Threshold (F), then P = L - F
- Q. Total Reforestation Required Q = M + N - P Q = 0.0
 R. Total Afforestation Required R = 0.1
 (1) If Existing Forest Cover (G) is less than the Afforestation Threshold (E) then R = the Afforestation Threshold (E) - the Existing Forest Cover (G)
 (2) If Existing Forest Cover (G) is less than the Afforestation Threshold (E) and you are clearing forest, then R = the Afforestation Threshold (E) - the Existing Forest Cover (G) + (2.0 x Forest to be Cleared (K))
- S. Total Planting Requirement S = Q + R S = 0.1

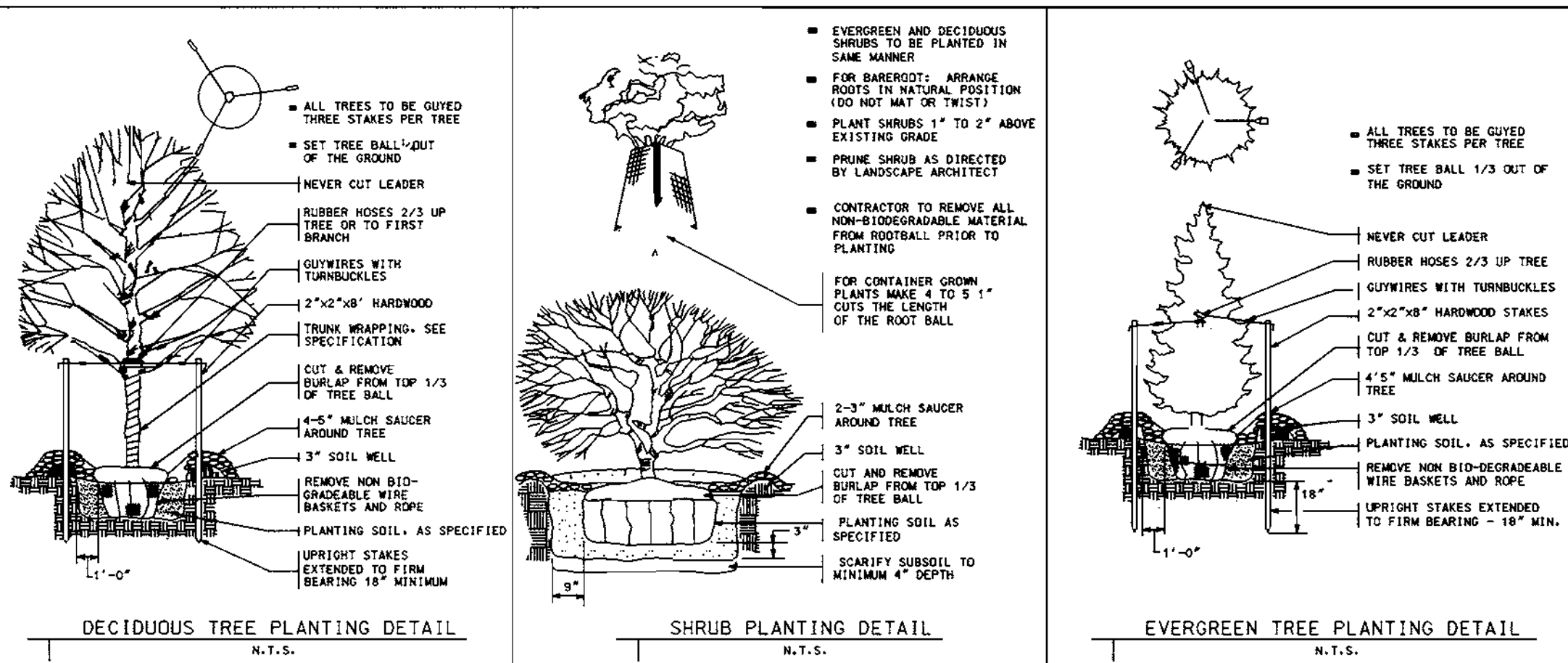


SCHEDULE A PERIMETER LANDSCAPE EDGE		
CATEGORY	ADJACENT TO ROADWAYS	ADJACENT TO PERIMETER PROPERTIES
LANDSCAPE TYPE	E	C
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	280	80' Parking Lot Behind Building
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO, NONE PROVIDED BETWEEN ROAD AND PARKING LOT	NO EXISTING VEGETATION ON ROADWAY SITE
CREDIT FOR WALL, FENCE OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	ORNAMENTAL FENCE PROVIDED ALONG ENTIRE SITE PERIMETER	EXISTING ORNAMENTAL FENCE CONSTRUCTED UNDER CORPS OF ENGINEERS CONTRACT
NUMBER OF PLANTS REQUIRED		
SHADE TREES	7	2 Shade Trees
EVERGREEN TREES	70	20 Shrubs
NUMBER OF PLANTS PROVIDED		
SHADE TREES	5	12
EVERGREEN TREES	2	
OTHER TREES (2) (SUBSTITUTION)		
SHRUBS (2) (SUBSTITUTION)		
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)	78	21

COMMENTS:
 NO SCREENING OIS REQUIRED FOR AN EXISTING SCHOOL BUILDING, ADDITIONAL SHRUBS WERE ADDED TO SCREEN PARKING LOT BEHIND BUILDING ALONG WITH ORNAMENTAL FENCE.



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 1/23/02



SDP SHEET-4

APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division, Date 3/2/02
 Chief, Division of Land Development, Date 4/1/02
 Director, Date 4/1/02

NO FOREST CONSERVATION SURETY NECESSARY FOR THIS HOWARD CO. CAPITAL IMPROVEMENT PROJECT

NO LANDSCAPE SURETY NECESSARY FOR THIS HOWARD COUNTY CAPITAL IMPROVEMENT PROJECT

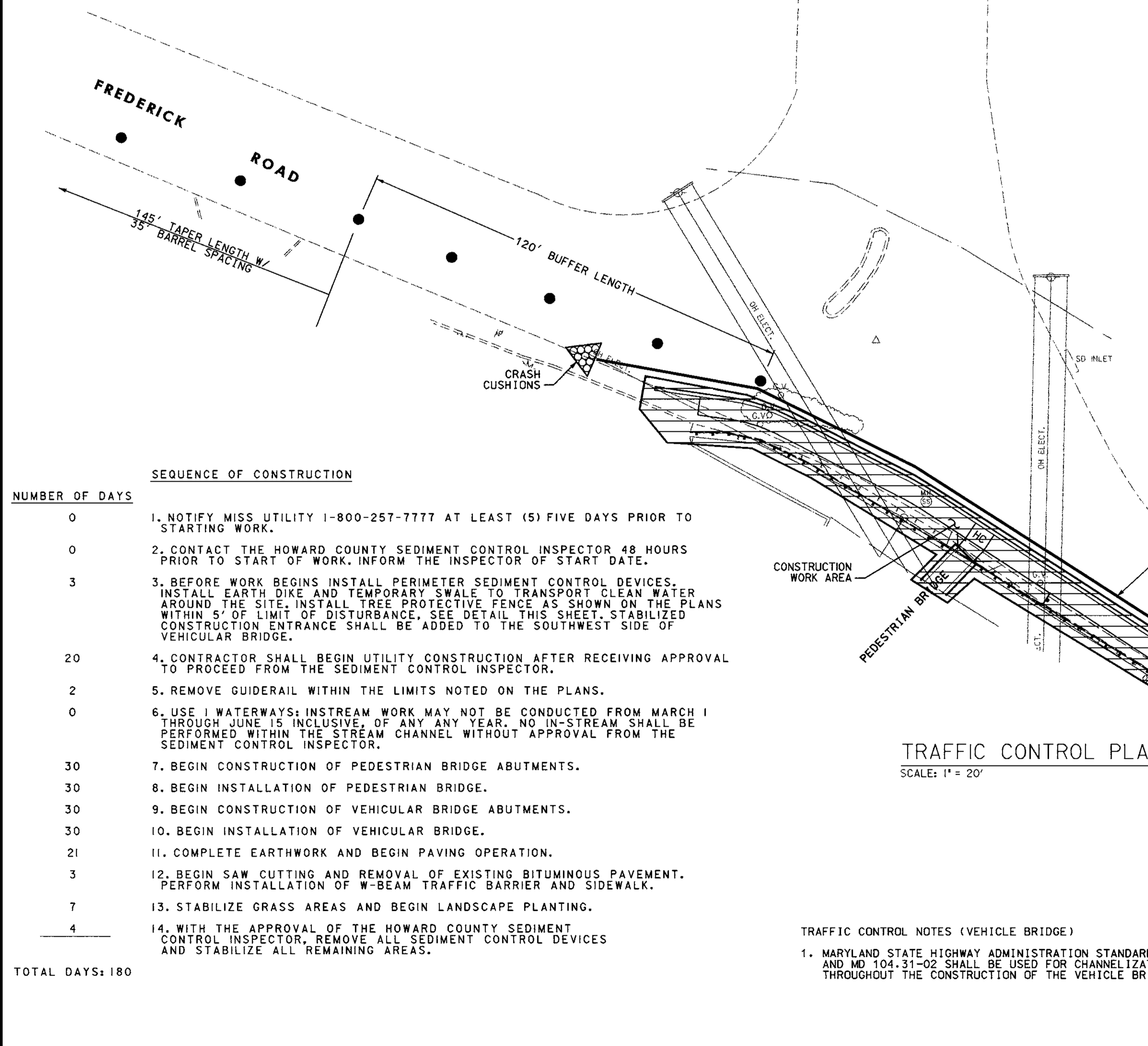
DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director of Public Works DATE 3/6/02	DEPARTMENT OF RECREATION & PARKS HOWARD COUNTY, MARYLAND Director, Department of Recreation & Parks DATE 3/6/02	GPI GREENMAN-PEDERSEN, INC. ENGINEERING, ARCHITECTURAL, PLANNING, CONSTRUCTION ENGINEERS & INSPECTORS 10620 GULFORD ROAD, SUITE 100, JESSUP, MD 20794 BALD. 0301-470-2772 BALD. (410) 840-3055 FAX 0301-490-2649 www.gpi.net	DES: W.R.F. DRN: W.K.T. CHK: M.S.Z. DATE: MARCH, 2002 BY: NO REVISION:	FOREST CONSERVATION PLAN, LANDSCAPE PLAN AND SITE CONSTRUCTION DETAILS SCALE MAP NO. _____ BLOCK NO. _____	ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK HOWARD COUNTY, MARYLAND CAPITAL PROJECT NO. N-3910 SCALE AS SHOWN SHEET 4 OF 26 SDP-01-130
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TRAFFIC CONTROL NOTES (PEDESTRIAN BRIDGE):

- MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS MD.104.04-02 AND MD.104.31-02 SHALL BE USED FOR CHANNELIZATION OF TRAFFIC THROUGHOUT THE CONSTRUCTION OF THE PEDESTRIAN BRIDGE.
- MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS MD.104.35, MD.104.87-02, MD.104.86 AND MD.104.91-01 SHALL BE USED FOR THE LANE SHIFT ALONG FREDERICK ROAD.

TRAFFIC CONTROL GENERAL NOTES:

- HOWARD COUNTY SHALL BE NOTIFIED 48 HOURS IN ADVANCE OF BEGINNING ANY WORK IN ORDER TO SCHEDULE A FIELD INSPECTION OF THE TRAFFIC CONTROL DEVICES, (410) 313-2430.
- ALL CONSTRUCTION AND MATERIALS FOR THE TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE STANDARDS IN THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.
- TRAVEL LANES SHALL BE A MINIMUM OF TEN FEET IN WIDTH. SINGLE LANE CLOSURES SHALL BE ALLOWED BETWEEN THE HOURS OF 9:00AM AND 4:00PM. FLAGMEN AND THE APPROPRIATE SIGNING SHALL BE PROVIDED. THE ROADWAY SHALL BE OPENED TO TWO LANES AT NIGHT UNLESS APPROVED BY THE HOWARD COUNTY TRAFFIC DIVISION.
- ALL SIGNS THAT DO NOT APPLY SHALL BE COVERED.
- ACCESS SHALL BE PROVIDED TO ALL EXISTING DRIVEWAYS AT ALL TIMES.
- ALL CONES, BARRELS AND FLAGMEN SHALL BE MOVED ACCORDINGLY AS CONSTRUCTION PROGRESSES.
- ALL CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE TYPICAL SIGN PLACEMENT SHOWN ON THESE PLANS AND SHALL NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- CONSTRUCTION EQUIPMENT AND WORKMENS VEHICLES SHALL NOT BE PARKED IN A MANNER THAT WILL IMPEDE TRAFFIC OR IMPAIR SITE DISTANCE. THESE VEHICLES SHOULD BE PARKED OFF-STREET ON THE CONSTRUCTION SITE OR ON A SIDE STREET NOT UNDER CONSTRUCTION.

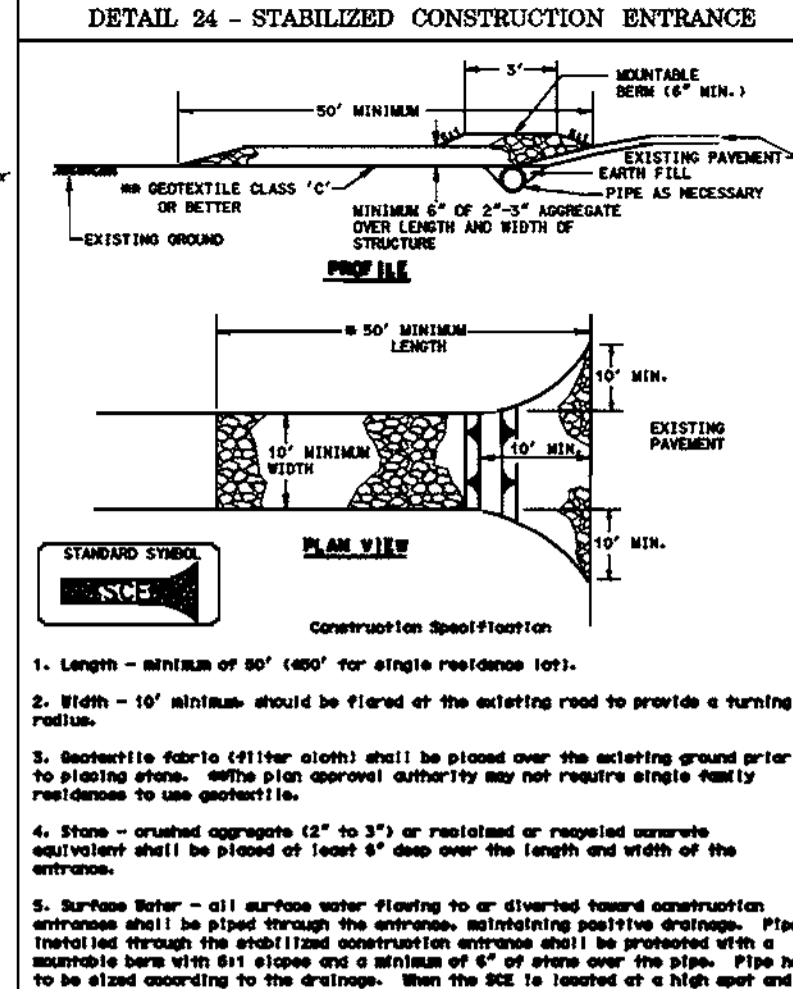
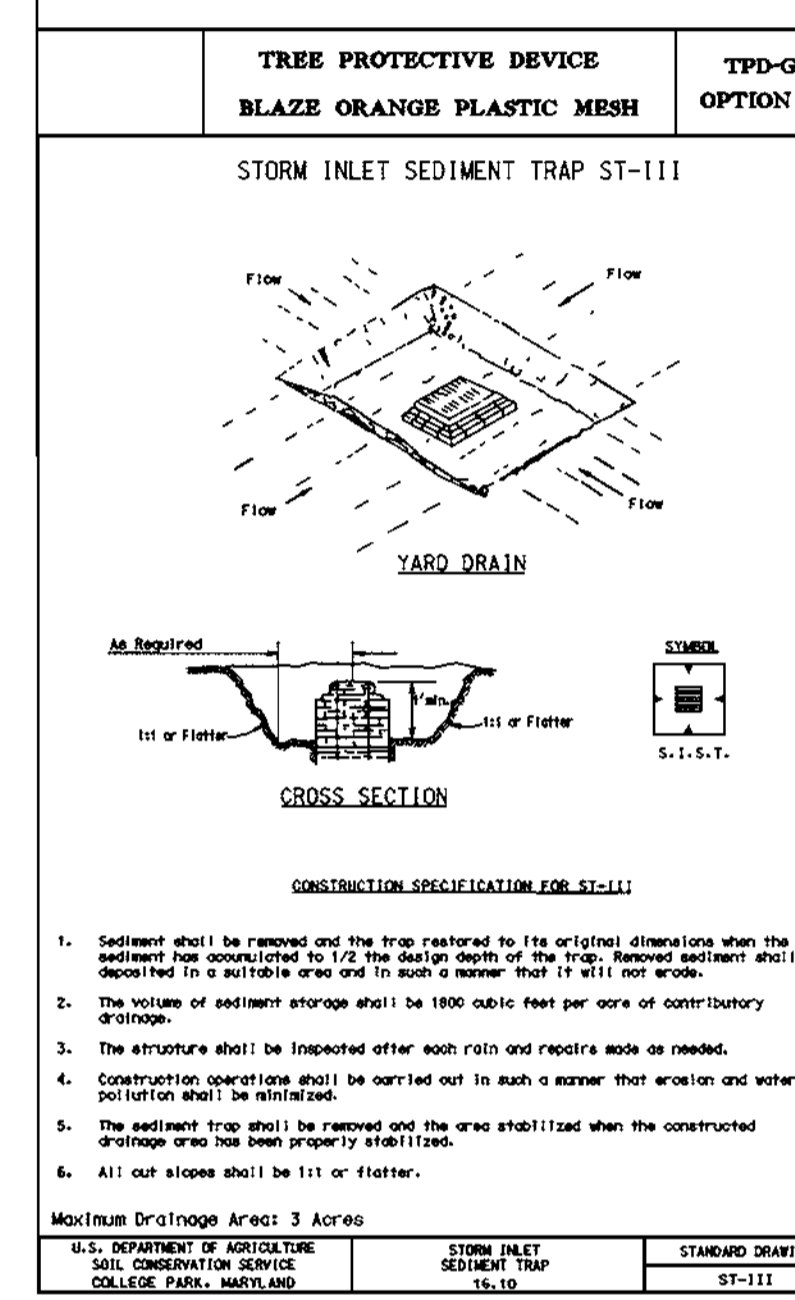
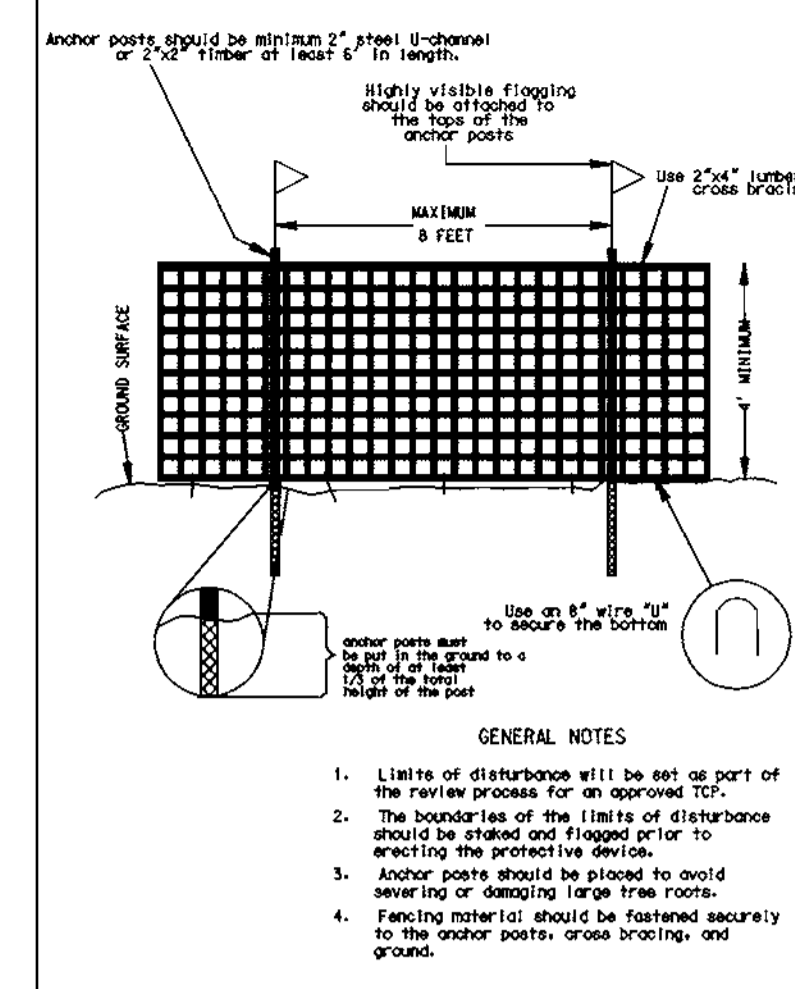


SEQUENCE OF CONSTRUCTION

NUMBER OF DAYS	DESCRIPTION
0	1. NOTIFY MISS UTILITY 1-800-257-7777 AT LEAST (5) FIVE DAYS PRIOR TO STARTING WORK.
0	2. CONTACT THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR 48 HOURS PRIOR TO START OF WORK. INFORM THE INSPECTOR OF START DATE.
3	3. BEFORE WORK BEGINS INSTALL PERIMETER SEDIMENT CONTROL DEVICES. INSTALL EARTH DIKE AND TEMPORARY SWALE TO TRANSPORT CLEAN WATER AROUND THE SITE. INSTALL TREE PROTECTIVE FENCE AS SHOWN ON THE PLANS WITHIN 5' OF LIMIT OF DISTURBANCE. SEE DETAIL THIS SHEET. STABILIZED CONSTRUCTION ENTRANCE SHALL BE ADDED TO THE SOUTHWEST SIDE OF VEHICULAR BRIDGE.
20	4. CONTRACTOR SHALL BEGIN UTILITY CONSTRUCTION AFTER RECEIVING APPROVAL TO PROCEED FROM THE SEDIMENT CONTROL INSPECTOR.
2	5. REMOVE GUIDERAIL WITHIN THE LIMITS NOTED ON THE PLANS.
0	6. USE 1 WATERWAYS: INSTREAM WORK MAY NOT BE CONDUCTED FROM MARCH 1 THROUGH JUNE 15 INCLUSIVE. IF ANY YEAR. NO IN-STREAM SHALL BE PERFORMED WITHIN THE STREAM CHANNEL WITHOUT APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR.
30	7. BEGIN CONSTRUCTION OF PEDESTRIAN BRIDGE ABUTMENTS.
30	8. BEGIN INSTALLATION OF PEDESTRIAN BRIDGE.
30	9. BEGIN CONSTRUCTION OF VEHICULAR BRIDGE ABUTMENTS.
30	10. BEGIN INSTALLATION OF VEHICULAR BRIDGE.
21	11. COMPLETE EARTHWORK AND BEGIN PAVING OPERATION.
3	12. BEGIN SAW CUTTING AND REMOVAL OF EXISTING BITUMINOUS PAVEMENT. PERFORM INSTALLATION OF W-BEAM TRAFFIC BARRIER AND SIDEWALK.
7	13. STABILIZE GRASS AREAS AND BEGIN LANDSCAPE PLANTING.
4	14. WITH THE APPROVAL OF THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING AREAS.

TOTAL DAYS: 180

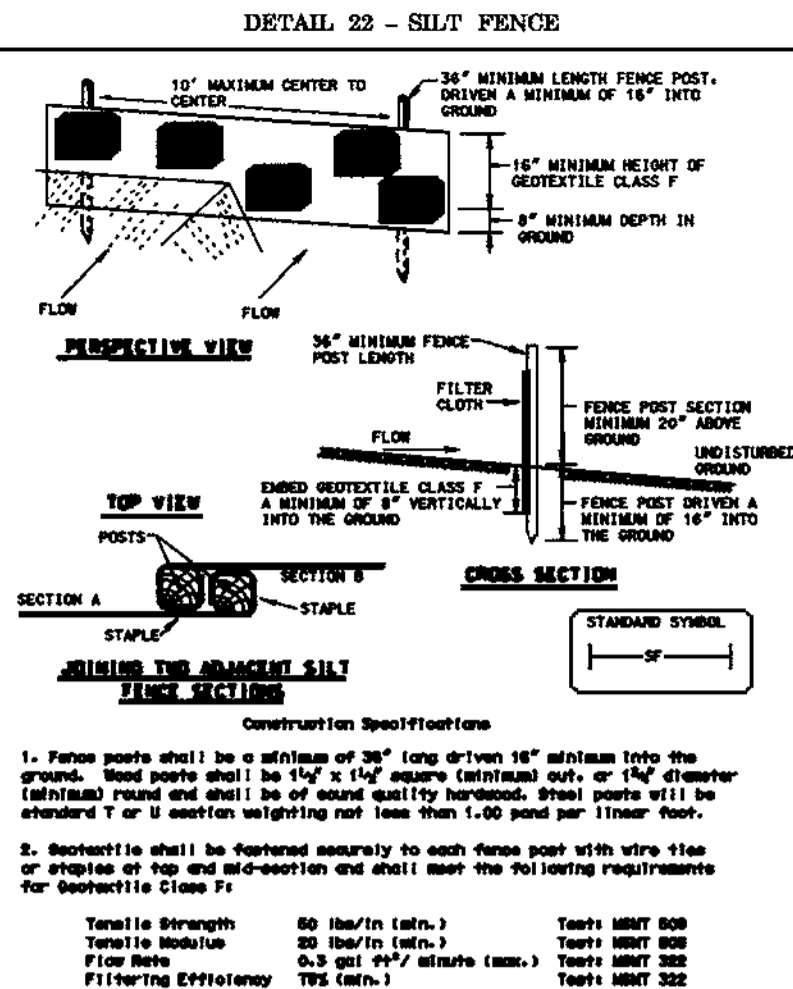
- TRAFFIC CONTROL NOTES (VEHICLE BRIDGE)**
- MARYLAND STATE HIGHWAY ADMINISTRATION STANDARDS MD 104.04-02 AND MD 104.31-02 SHALL BE USED FOR CHANNELIZATION OF TRAFFIC THROUGHOUT THE CONSTRUCTION OF THE VEHICLE BRIDGE.



STABILIZED CONSTRUCTION ENTRANCE

Construction Specifications

- Length - minimum of 80' (40' for simple residence lot).
- Width - 10' minimum should be placed at the existing road to provide a turning radius.
- Geotextile fabric (filter cloth) shall be placed over the existing ground prior to placing stone. Stone shall be placed over the geotextile fabric. Geotextile fabric shall be placed over the stone. Stone shall be placed over the geotextile fabric.
- Stone - crushed aggregate (1/2" to 3/4") or recycled or recycled concrete equivalent shall be placed at least 8" deep over the length and width of the entrance.
- Surface Water - all surface water flowing to or diverted toward construction entrance shall be placed through the entrance, maintaining positive drainage. Pipe installed through the stabilized construction entrance shall be protected with a geotextile fabric with 8' slope and a minimum of 6" of stone over the pipe. Pipe has to be sized according to the drainage. When the SIZ is located at a high spot and has no drainage to convey a pipe will not be necessary. Pipe should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.
- Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Traffic leaving the site must travel over the entire length of the stabilized construction entrance.



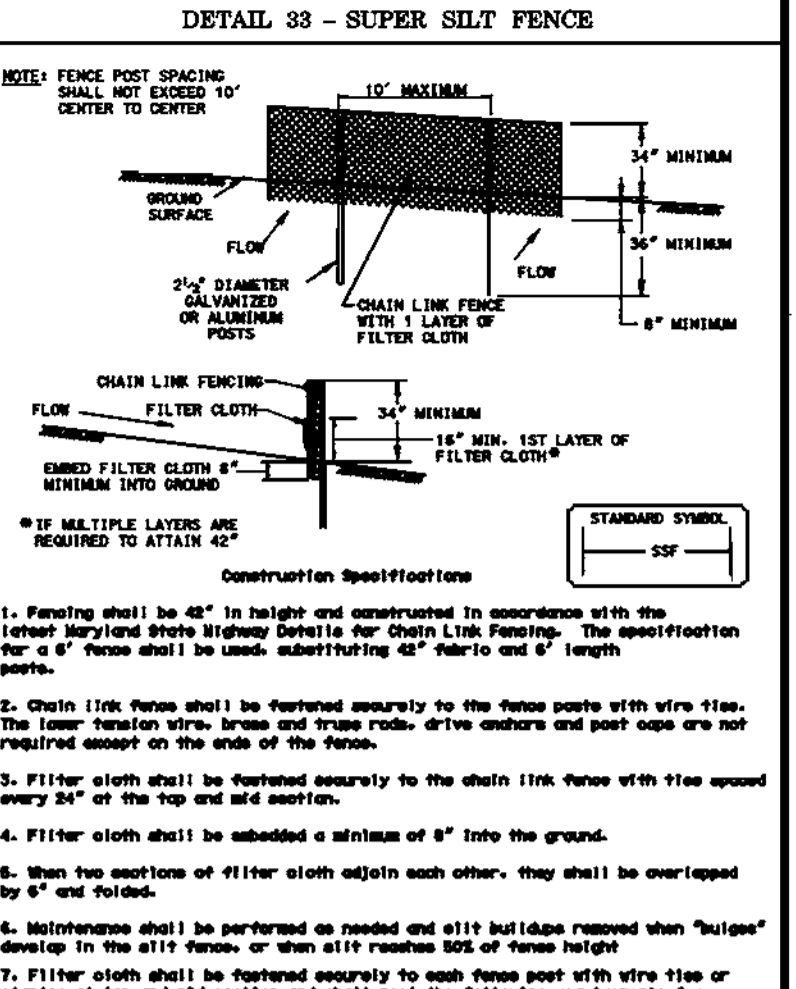
SILT FENCE

Silt Fence Design Criteria

Slope Steepness	Maximum Slope Length (feet)	Minimum Silt Fence Length (feet)
Flatter than 50:1	Unlimited	Unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	80 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Super Silt Fences Design Criteria

Slope Steepness	Maximum Slope Length (feet)	Minimum Super Silt Fence Length (feet)
0 - 10%	0 - 100'	Unlimited
10 - 20%	101 - 201'	200 feet
20 - 30%	202 - 301'	1,000 feet
30 - 40%	302 - 401'	1,000 feet
40% +	402 - 501'	250 feet



GABION INFLOW PROTECTION

Construction Specifications

- Gabion inflow protection shall be constructed of 6" x 3" x 6" gabion baskets. The baskets shall be placed in a staggered pattern with 2' between baskets.
- Geotextile Class C shall be installed under all gabion baskets.
- The stone used to fill the gabion baskets shall be 4" - 7".
- Gabion shall be installed in accordance with manufacturer's recommendations.
- Gabion Inflow Protection shall be used where concentrated flow is present on slopes steeper than 4:1.

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
3/6/02

DEPARTMENT OF RECREATION & PARKS
HOWARD COUNTY, MARYLAND
3-6-02

GPI
GREENMAN-PEDERSEN, INC.
ENGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & SURVEYORS
10620 GULFORD ROAD, SUITE 100, BELTSVILLE, MD 20704
TEL: (301) 470-0772 FAX: (301) 470-0772

STATE OF MARYLAND
DANIEL JOSEPH MALETIC
No. 19799
REGISTERED PROFESSIONAL ENGINEER

DES: W.R.F.	
DRN: W.K.T.	
CHK: M.S.Z.	
DATE: MARCH, 2002	
BY: NO	
REVISION	
DATE	

TRAFFIC CONTROL AND SEDIMENT AND EROSION CONTROL PLAN

SCALE MAP NO. BLOCK NO.

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. N-3910

SCALE AS SHOWN
SHEET 5 OF 28
SDP 58

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 1/23/02

SITE DEVELOPMENT PLANS
APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division & Date
Chief, Division of Land Development & Date
Director & Date

19.0 STANDARDS AND SPECIFICATIONS

FOR
LAND GRADING

Design Criteria

The grading plan should be based upon the incorporation of building designs and street layouts that fit and utilize existing topography and desirable natural surroundings to avoid extreme grade modifications. Information submitted must provide sufficient topographic surveys and soil investigations to determine limitations that must be imposed on the grading operation related to slope stability, effect on adjacent properties and drainage patterns, measures for drainage and water removal and vegetative treatment, etc.

Many counties have regulations and design procedures already established for land grading and out and fill slopes. Where these requirements exist, they shall be followed. The plan must show existing and proposed contours of the areas to be graded. The plan shall also include practices for erosion control, slope stabilization, safe disposal of runoff water and drainage, such as waterways, lined ditches, reverse slope benches (include grade and cross section), grade stabilization structures, retaining walls, and surface and subsurface drains. The plan shall also include phasing of these practices. The following shall be incorporated into the plan:

I. Provisions shall be made to safely conduct surface runoff to storm drains, protected outlets or to stable water courses to insure that surface runoff will not damage slopes or other graded

II. Cut and fill slopes that are to be stabilized with grasses shall not be steeper than 2:1. (Where the slope is to be mowed the slope should be no steeper than 3:1; 4:1 is preferred because of safety factors related to mowing steep slopes.) Slopes exceeding 2:1 shall require special design and stabilization considerations that shall be adequately shown on the plans.

III. Reverse benches shall be provided whenever the vertical interval (height) of any 2:1 slope exceeds 20 feet; for 3:1 slope it shall be increased to 30 feet and for 4:1 to 40 feet. Benches shall be located to divide the slope face as equally as possible and shall convey the water to a stable outlet. Soils, seeps, rock outcrops, etc., shall also be taken into consideration when designing benches.

A. Benches shall be a minimum of six-feet wide to provide for ease of maintenance.

B. Benches shall be designed with a reverse slope of 6:1 or flatter to the toe of the upper slope and with a minimum of one foot in depth. Bench gradient to the outlet shall be between 2 percent and 3 percent, unless accompanied by appropriate design and computations.

C. The flow length within a bench shall not exceed 800' unless accompanied by appropriate design and computations. For flow channel stabilization see temporary

IV. Surface water shall be diverted from the face of all cut and/or fill slopes by the use of earth dikes, ditches and swales or conveyed downslope by the use of a designed structure, except

A. The face of the slope is or shall be stabilized and the face of all graded slopes shall be protected from surface runoff until they are stabilized.

B. The face of the slope shall not be subject to any concentrated flows of surface water such as from natural drainageways, graded swales, downspouts, etc.

C. The face of the slope will be protected by special erosion control materials, to include, but not limited to approved vegetative stabilization practices (see section G), rip-rap or other approved stabilization methods.

V. Cut slopes occurring in ripable rock shall be serrated as shown on the following diagram. These serrations shall be made with conventional equipment as the excavation is made. Each step or serration shall be constructed on the contour and will have steps out at nominal two-foot intervals with nominal three-foot horizontal shelves. These steps will vary depending on the slope ratio or the cut slope. The nominal slope line is 1:1. These steps will weather and act to hold moisture, lime, fertilizer and seed thus producing a much quicker and longer lived vegetative cover and better slope stabilization. Overland flow shall be diverted from the top of all serrated cut slopes and carries to a suitable outlet.

VI. Subsurface drainage shall be provided where necessary to intercept seepage that would otherwise adversely affect slope stability or create excessively wet site conditions.

VII. Slopes shall not be created so close to property lines as to endanger adjoining properties without adequately protecting such properties against sedimentation, erosion, slippage, settlement, subsidence or other related damages.

VIII. Fill material shall be free of brush, rubbish, rocks, logs, stumps, building debris, and other objectionable material. It should be free of stones over two (2) inches in diameter where compacted by hand or mechanical tampers or over eight (8) inches in diameter where compacted by rollers or other equipment. Frozen material shall not be placed in the fill nor shall the fill material be placed on a frozen foundation.

IX. Stockpiles, borrow areas and spoil shall be shown on the plans and shall be subject to the provisions of this Standard and Specifications.

X. All disturbed areas shall be stabilized structurally or vegetatively in compliance with 20.0 Standards and Specifications for Vegetative Stabilization.

Seed Mix Table For Turf Establishment In Shaded areas

Common Name	Percent of Seed Mix	Purity Percent Min.	Purity Percent Max.	Weedseed Percent Max.	Germination Percent Min.
Shadow chewing fescue or other improved chewing fescue	30	90	90	1	80
Aurora hard fescue or other improved hard fescue	30	90	90	1	80
Flyer creeping red fescue or other creeping red fescue	20	90	90	1	80
Glade Kentucky bluegrass or improved Kentucky bluegrass	10	90	90	1	80
Manhattan II, Affinity or other improved perennial ryegrass	10	90	90	1	80

- Note:
- * Application rate shall be 20 lbs./acre.
 - * Seed mix percentages are based upon weight.
 - * This seed mix will supersede any other permanent seed mixture listed in the Contract Documents unless otherwise allowed by the engineer.
 - * Seeds shall be mixed onsite and delivered throughly mixed.
 - * This mix is to be used for temporary seeding when directed by the engineer.

20.0 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

I. This practice is limited to areas having 2:1 or flatter slopes where:

- The texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
- The soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
- The original soil to be vegetated contains material toxic to plant growth.
- The soil is so acidic that treatment with limestone is not feasible.

II. 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

I. Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-SCS in cooperation with Maryland Agricultural Experimental Station.

II. 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 1/2" 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 the 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.

III. For sites having disturbed areas under 5 acres place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

IV. 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 dissipation of phyto-toxic materials.

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

B. Place topsoil (if required) and apply soil amendments as specified in 20.0 Vegetative Stabilization - Section I - Vegetative Stabilization Methods and Materials.

V. Topsoil Application

A. 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.

1. Grades on the areas to be topsoiled, which have been previously established, shall be maintained, albeit 4" - 8" higher in elevation.

2. 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.

3. Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedbed preparation.

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:

A. 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 sites 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.

B. 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-VA, Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes, Revised 1973.

HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

- Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:
- Preferred - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
 - Acceptable - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding: For the periods March 1 - April 30, and August 1 - October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue per acre and 2 lbs/acre (0.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16 - February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - use sod. Option 3 - seed with 60 lbs/acre Kentucky 30 tall fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 - 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeding areas and make needed repairs, replacements and reseeding.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: For periods March 1 - April 30 and from August 15 - October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1 - August 14, seed with 3 lbs/acre of weeping lovegrass (0.07 lbs/1000 lbs/sq. ft.). For the period November 16 - February 28, protect site by applying 2 tons/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 - 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

HOWARD SOIL CONSERVATION DISTRICT

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 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) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes steeper than 3:1.
 - B) 14 calendar 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 their perimeter in accordance with Vol. I, 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 (section G). Temporary stabilization with mulch alone shall only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	= 0.80 Acres
Area Disturbed	= 0.64 Acres
Area to be Roofed or Paved	= 0.28 Acres
Area to be Vegetatively Stabilized	= 0.36 Acres
Total Fill	= 0 Cu. Yds.

Offsite waste/borrow area location... to be determined by the contractor.
 * A site with a current active grading permit is needed for offsite waste/borrow. Site plan, grading permit or waiver may be necessary.
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
- 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.
 - 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.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE 1/23/02

SITE DEVELOPMENT PLANS

APPROVED:
DEPARTMENT OF PLANNING AND ZONING
3/2/02
Chief, Development Engineering Division
Chief, Division of Land Development
Director

SDP SHEET- 6 OF 8

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

DEPARTMENT OF RECREATION & PARKS
HOWARD COUNTY, MARYLAND

GPI GREENMAN-PEDERSEN, INC.
ENGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & INSPECTORS
10620 GUILFORD ROAD, SUITE 100, JESSUP, MD, 20794
WASH. (301) 470-2772 BAL. (410) 860-3055
FAX (301) 490-2649 www.gpi.net



DES: W.R.F.

DRN: W.K.T.

CHK: M.S.Z.

DATE: MARCH, 2002

BY NO

REVISION

DATE

SEDIMENT & EROSION CONTROL NOTES

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK

HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. N-3910

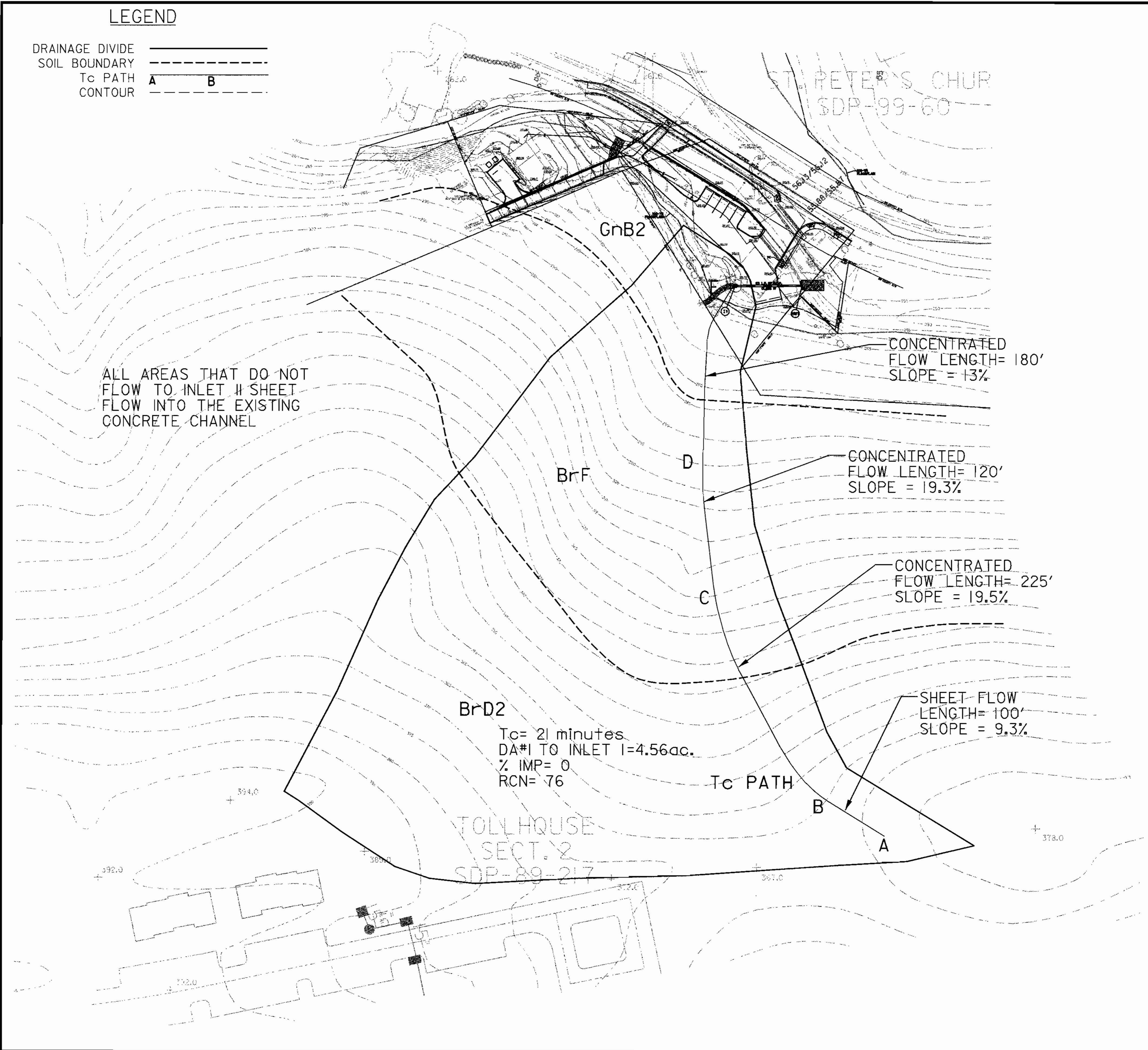
SCALE AS SHOWN

SHEET 6 OF 26

SDP 6/8

LEGEND

- DRAINAGE DIVIDE _____
- SOIL BOUNDARY - - - - -
- Tc PATH A B
- CONTOUR - - - - -



ALL AREAS THAT DO NOT FLOW TO INLET IF SHEET FLOW INTO THE EXISTING CONCRETE CHANNEL

CONCENTRATED FLOW LENGTH= 180' SLOPE = 13%

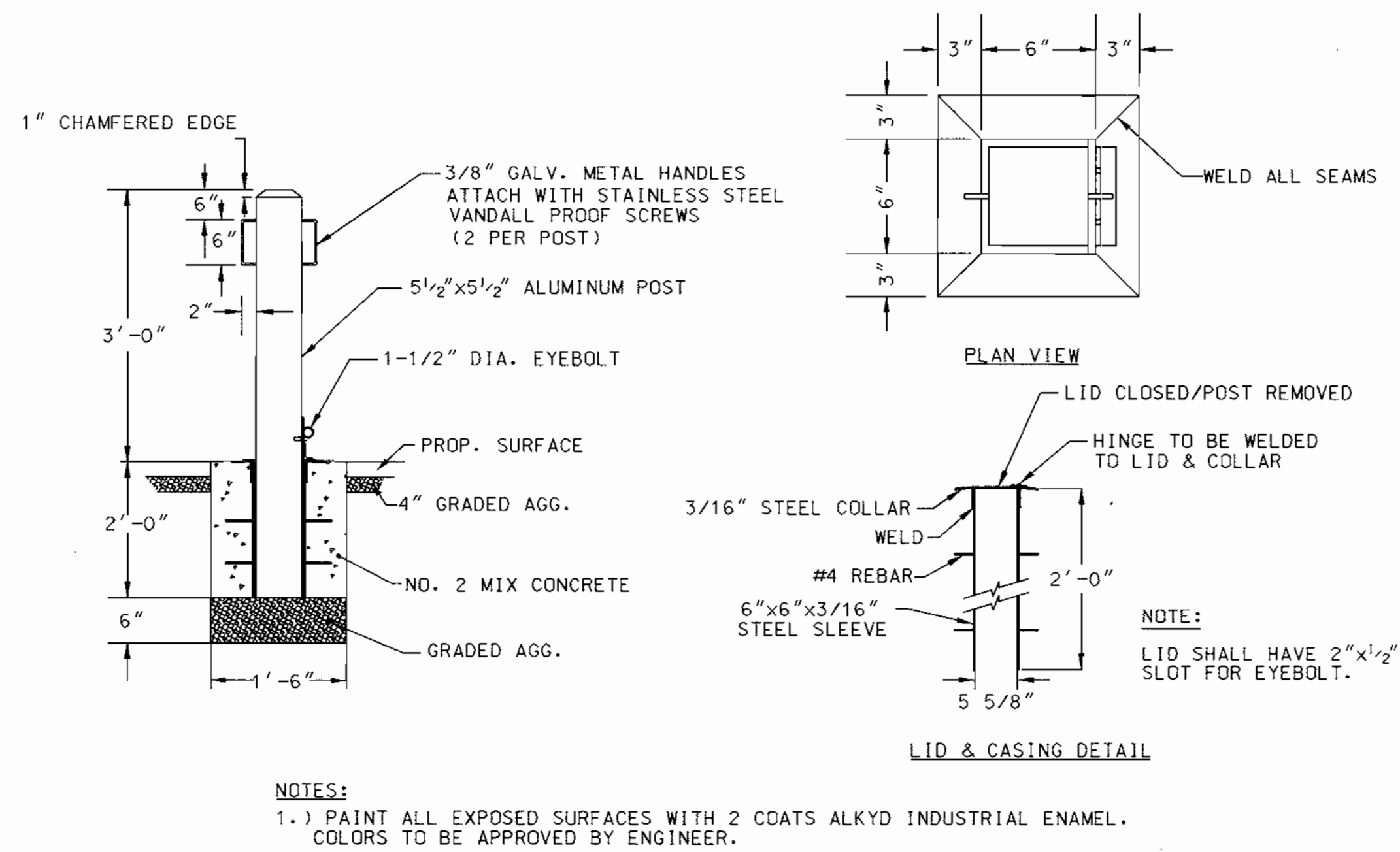
CONCENTRATED FLOW LENGTH= 120' SLOPE = 19.3%

CONCENTRATED FLOW LENGTH= 225' SLOPE = 19.5%

SHEET FLOW LENGTH= 100' SLOPE = 9.3%

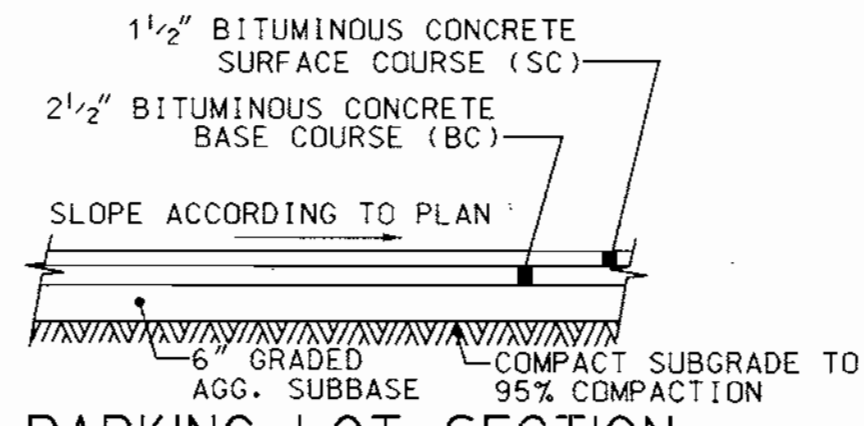
BrD2
Tc = 21 minutes
DA#1 TO INLET I=4.56ac.
% IMP= 0
RCN= 76

PROPOSED DRAINAGE AREA MAP



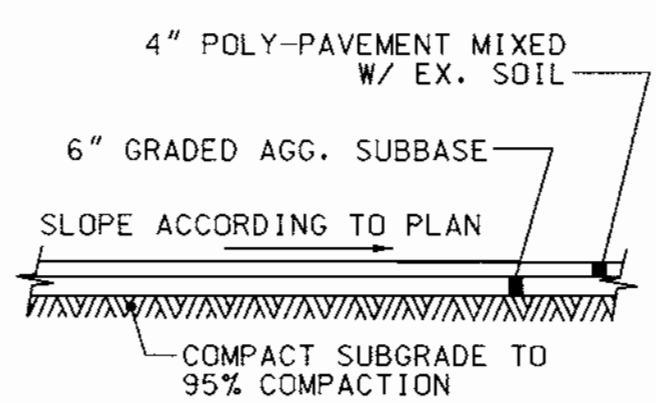
NOTES:
1. PAINT ALL EXPOSED SURFACES WITH 2 COATS ALKYL INDUSTRIAL ENAMEL. COLORS TO BE APPROVED BY ENGINEER.

BOLLARD DETAIL
NOT TO SCALE



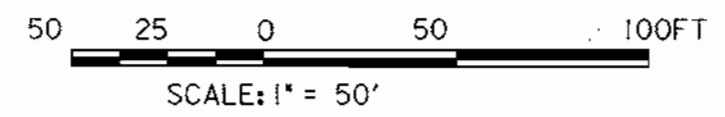
PARKING LOT SECTION
NOT TO SCALE

NOTE:
CONTRACTOR SHALL PROOF ROLL SUBGRADE BENEATH ALL PROPOSED PAVED AREAS TO DETECT UNSUITABLE SOIL CONDITIONS.



POLY-PAVEMENT PARKING LOT SECTION
NOT TO SCALE

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 1/23/02



SITE DEVELOPMENT PLANS
APPROVED
DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division 2/2/02
Chief, Division of Land Development 4/1/02
Director 4/1/02

SDP SHEET- 7 OF 8

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
Director of Public Works
DATE

DEPARTMENT OF RECREATION & PARKS
HOWARD COUNTY, MARYLAND
Director, Department of Recreation & Parks
DATE

GPI GREENMAN-PEDERSEN, INC.
ENGINEERS, ARCHITECTS, PLANNERS, CONSTRUCTION ENGINEERS & INSPECTORS
10620 GILFORD ROAD, SUITE 100, JESSUP, MD, 20794
PHONE: (301) 470-2772 FAX: (301) 490-2649 www.gpinet.com



DES: W.R.F.					
DRN: W.K.T.					
CHK: M.S.Z.					
DATE: MARCH, 2002	BY	NO	REVISION	DATE	

PROPOSED CONDITION DRAINAGE AREA MAP

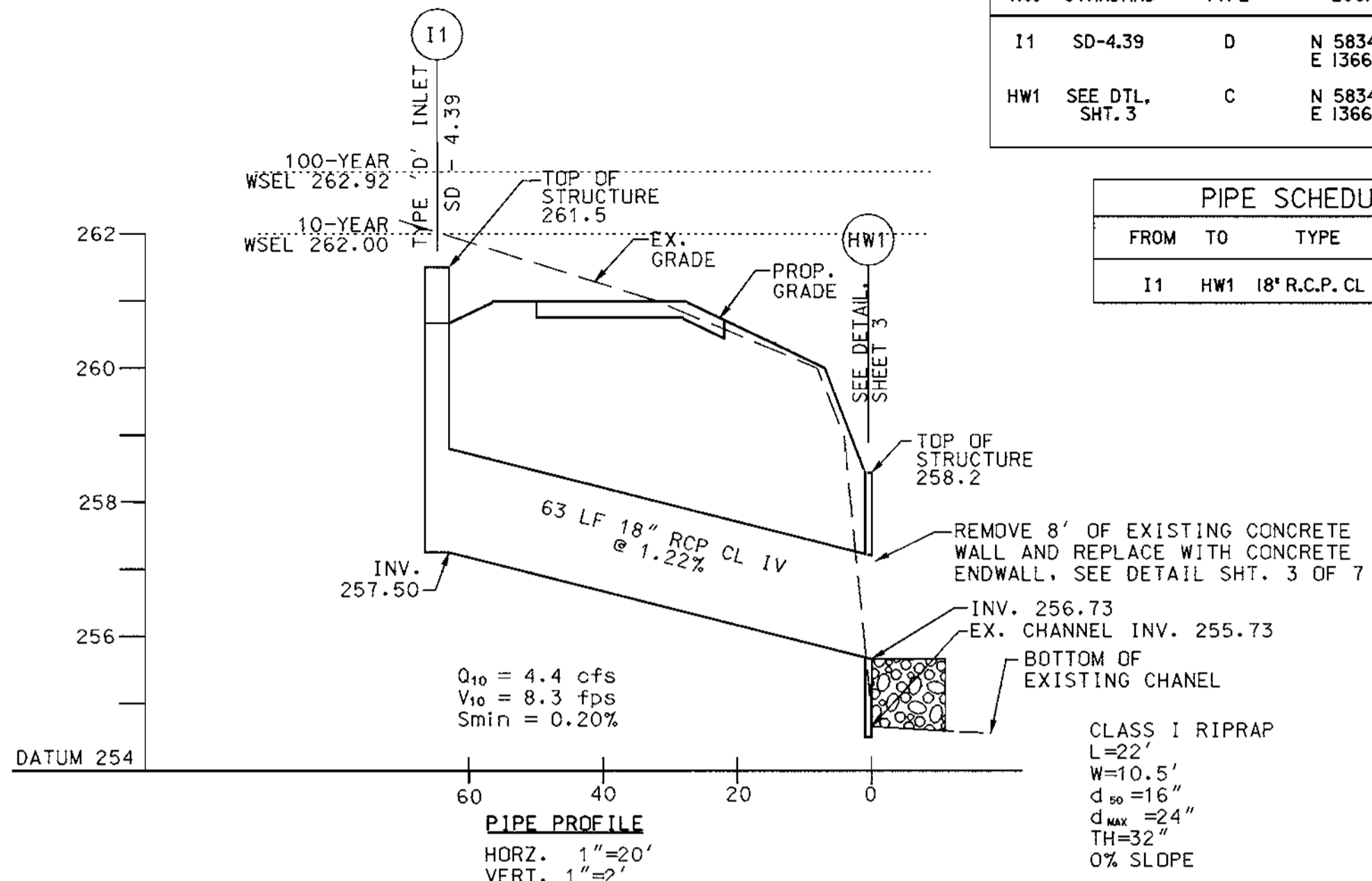
SCALE MAP NO. BLOCK NO.

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. N-3910

SCALE AS SHOWN
SHEET 7 OF 26
SDP 7/8

STRUCTURE SCHEDULE					
NO.	STANDARD	TYPE	LOCATION	T.O.S.	INV. OUT
I1	SD-4.39	D	N 583455.04 E 1366132.72	261.5	257.5
HW1	SEE DTL. SHT. 3	C	N 583456.00 E 1366196.94	258.2	256.73

PIPE SCHEDULE			
FROM	TO	TYPE	LENGTH
I1	HW1	18" R.C.P. CL IV	63 L.F.



CLASS I RIPRAP
L=22'
W=10.5'
d₅₀=16"
d_{max}=24"
TH=32"
0% SLOPE

UTILITY NOTES:

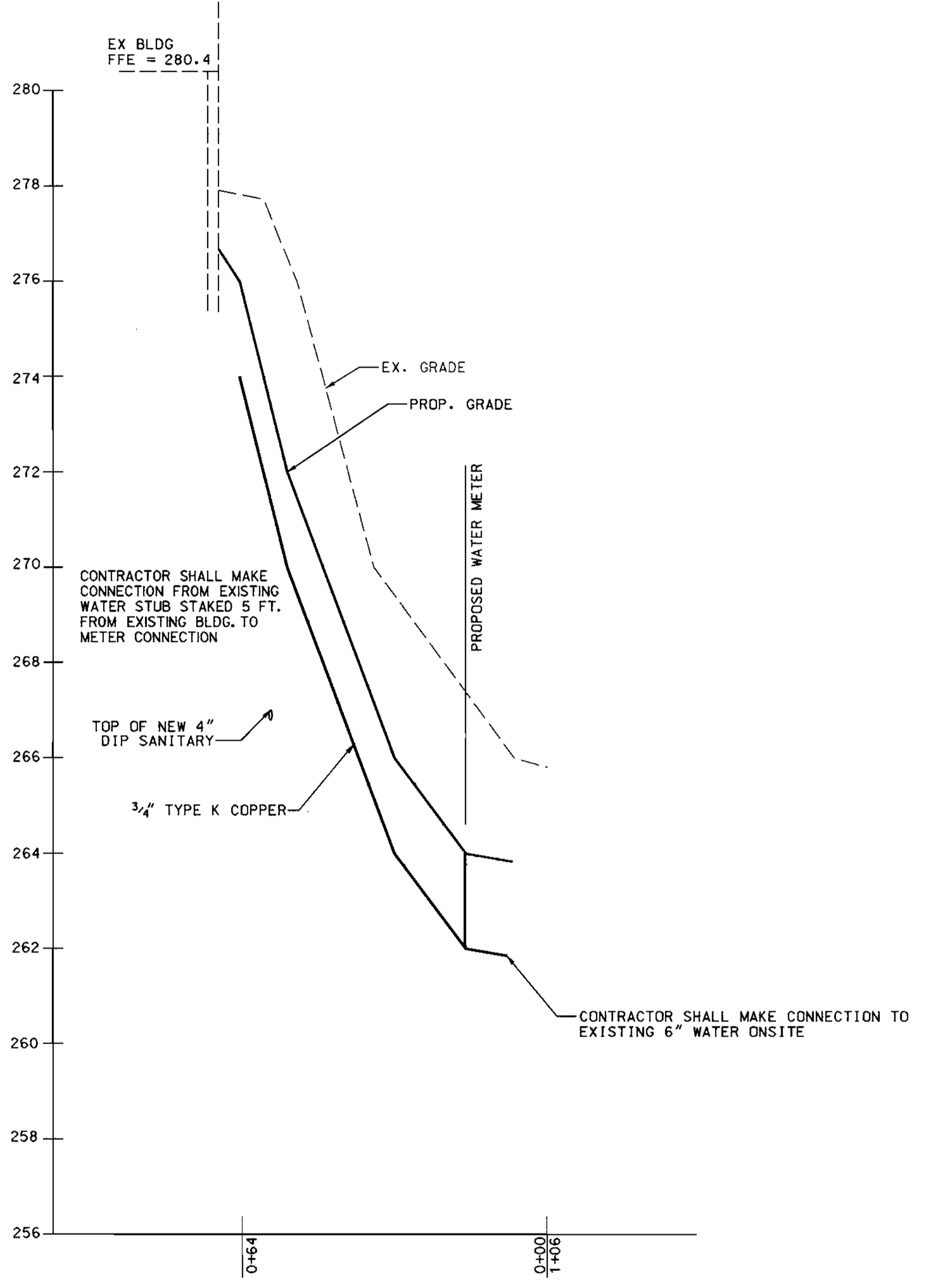
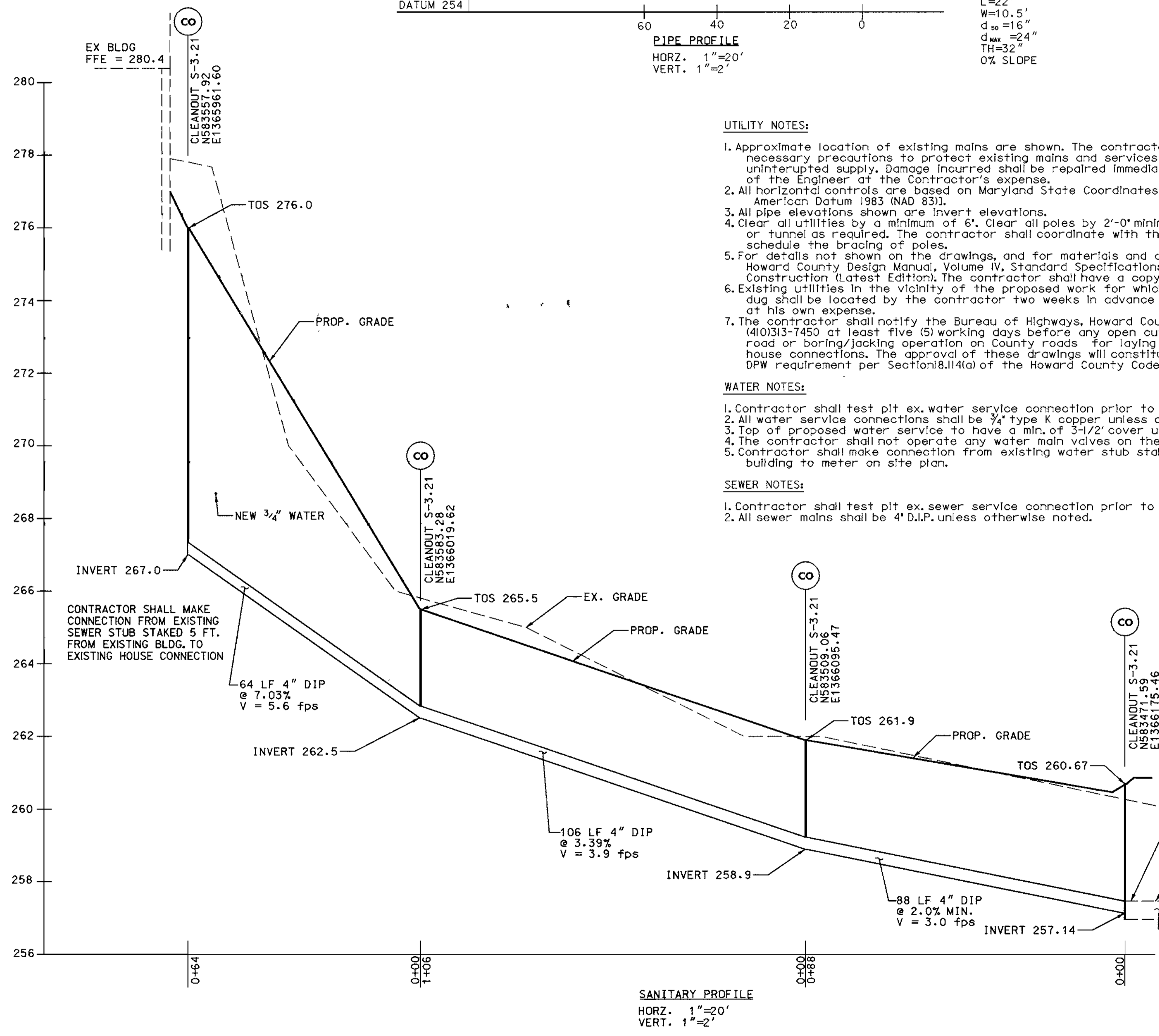
1. Approximate location of existing mains are shown. The contractor shall take all necessary precautions to protect existing mains and services and maintain uninterrupted supply. Damage incurred shall be repaired immediately to the satisfaction of the Engineer at the Contractor's expense.
2. All horizontal controls are based on Maryland State Coordinates [North American Datum 1983 (NAD 83)].
3. All pipe elevations shown are Invert elevations.
4. Clear all utilities by a minimum of 6'. Clear all poles by 2'-0" minimum or tunnel as required. The contractor shall coordinate with the utility companies to schedule the bracing of poles.
5. For details not shown on the drawings, and for materials and construction methods use Howard County Design Manual, Volume IV, Standard Specifications and Detail for Construction (latest Edition). The contractor shall have a copy of Volume IV on the job.
6. Existing utilities in the vicinity of the proposed work for which test pits have not been dug shall be located by the contractor two weeks in advance of construction operations at his own expense.
7. The contractor shall notify the Bureau of Highways, Howard County, at (410)313-7450 at least five (5) working days before any open cut of any County road or boring/lacking operation on County roads for laying water/sewer mains or house connections. The approval of these drawings will constitute compliance with DPW requirement per Section 8.11.4(a) of the Howard County Code.

WATER NOTES:

1. Contractor shall test pit ex. water service connection prior to installing any new pipe.
2. All water service connections shall be 3/4" type K copper unless otherwise noted.
3. Top of proposed water service to have a min. of 3-1/2' cover unless otherwise noted.
4. The contractor shall not operate any water main valves on the existing water system.
5. Contractor shall make connection from existing water stub staked 5 ft. from existing building to meter on site plan.

SEWER NOTES:

1. Contractor shall test pit ex. sewer service connection prior to installing any new pipe.
2. All sewer mains shall be 4' D.I.P. unless otherwise noted.



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 1/23/02

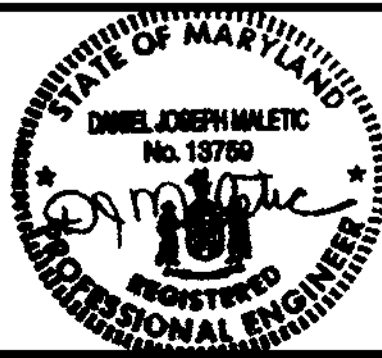
SITE DEVELOPMENT PLANS
APPROVED:
DEPARTMENT OF PLANNING AND ZONING
3/20/02
Chief, Development Engineering Division Date
Chief, Division of Land Development Date
Director Date

SDP SHEET- 8 OF 8

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND
3/6/02
DIRECTOR OF PUBLIC WORKS DATE

DEPARTMENT OF RECREATION & PARKS
HOWARD COUNTY, MARYLAND
3/6/02
DIRECTOR, DEPARTMENT OF RECREATION & PARKS DATE

GPI
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DES: W.R.F.					
DRN: W.K.T.					
CHK: M.S.Z.					
DATE: MARCH, 2002	BY: NO	REVISION	DATE	' SCALE MAP NO.	BLOCK NO.

DRAINAGE AND UTILITY PROFILES

ELICOTT CITY COLORED SCHOOL - ACCESS BRIDGES AND SITE WORK
HOWARD COUNTY, MARYLAND
CAPITAL PROJECT NO. N-3910

SCALE AS SHOWN
SHEET 8 OF 26
SDP-01-130