TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER

2ND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX	
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4	SEDIMENT CONTROL NOTES AND DETAILS
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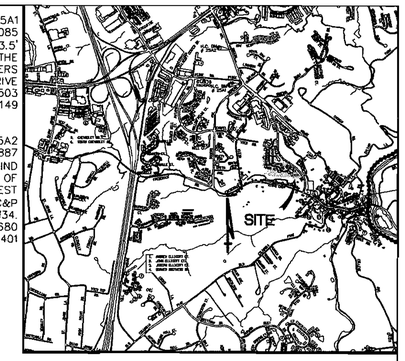
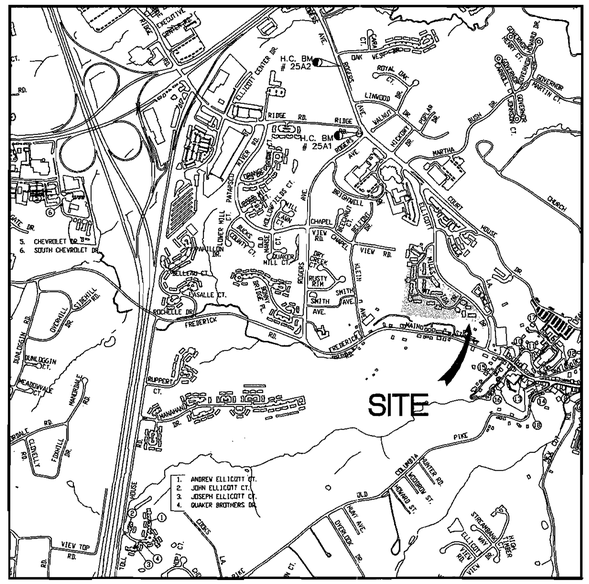
BM #25A1
ELEV. 397.085
CONC. MONUMENT LOCATED 3.5' BEHIND FACE OF CURB AT THE NORTHEAST INTERSECTION OF ROGERS AVENUE AND COURT HOUSE DRIVE
NORTHING 586557.503
EASTING 1366847.149

BM #25A2
ELEV. 348.887
CONC. MONUMENT LOCATED 1.8' BEHIND EDGE OF THE NORTH-EAST SIDE OF ROGERS AVENUE SOUTH OF OAK WEST DRIVE AND 72.3' SOUTHWEST OF C&P POLE #34.
NORTHING 587502.680
EASTING 1366556.401



VICINITY MAP
SCALE: 1" = 2000'



LOCATION MAP
SCALE: 1" = 1000'

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE PERFORMED IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS M.S.H.A. STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

2. THE LOCATIONS OF THE UTILITIES SHOWN IS APPROXIMATE ONLY. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION AND DEPTH OF ANY UTILITIES AND SHALL NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.

3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING THE ENGINEERING OFFICE, PHOENIX ENGINEERING, INC. AS 410-247-8833 IN THE EVENT OF ANY DISCREPANCIES IN THE PLANS OR IN THE RELATIONSHIP OF FINISHED GRADES OR EXISTING GRADES PRIOR TO WORK.

4. THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE PLANS, THE FIGURED DIMENSIONS SHALL GOVERN.

5. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.

6. CONTRACTOR TO NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK ON THESE DRAWINGS:

"MISS UTILITY".....1-800-257-7777

BALTIMORE GAS AND ELECTRIC COMPANY.....410-685-0123

VERIZON TELEPHONE.....410-725-9976

AT&T CABLE LOCATION DIVISION.....410-393-3553

HOWARD COUNTY BUREAU OF UTILITIES.....410-313-4900
HOWARD COUNTY CONSTRUCTION/
INSPECTION DIVISION
(24 HOURS NOTICE PRIOR TO
COMMENCEMENT OF WORK).....410-313-1880

7. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS

8. PROFILE STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.

9. NO PIPE SHALL BE LAID UNTIL LINE OF EXCAVATION HAS BEEN BROUGHT TO SUBGRADE.

10. ALL SPOT ELEVATIONS SHOWN ARE TOP OF PROPOSED PAVING OR CONCRETE WHEN ADJACENT TO CURB. ELEVATION SHOWN IS BOTTOM OF CURB AT FLOWLINE.

11. STORM WATER QUANTITY MANAGEMENT IS BEING PROVIDED ON SITE IN THE FORM OF A DETENTION FACILITY. WATER QUALITY IS PROVIDED BY A SAND FILTER. THIS FACILITY WILL BE OWNED AND MAINTAINED BY HOWARD COUNTY HOUSING AND COMMUNITY DEVELOPMENT. Cpv IS NOT REQUIRED SINCE THE DEVELOPED DISCHARGE IS LESS THAN 2.0 CFS.

12. HANDICAP RAMPS SHALL MEET ADA REQUIREMENTS.

13. THE CONTRACTOR SHALL OBTAIN THE NECESSARY BUILDING PERMITS FOR CONSTRUCTION.

14. THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH 2' CONTOUR INTERVALS PREPARED BY ERIK C. MARKS, R.P.L.S. DATED SEPTEMBER, 2001.

15. ALL HORIZONTAL CONTROLS ARE BASED ON MARYLAND STATE GRID COORDINATES, (NAD 83). ALL VERTICAL CONTROLS ARE BASED ON NGVD 29 DATUM.

16. CONTRACTOR SHALL USE DIMENSIONS SHOWN. SCALING OF THESE PLANS IS DISCOURAGED UNLESS DIRECTED BY THE CIVIL ENGINEER.

17. ANY DAMAGE TO COUNTY RIGHT-OF-WAY AND PAVING OF PUBLIC ROADS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE IN ACCORDANCE WITH THE HOWARD COUNTY SPECIFICATIONS AND STANDARDS.

18. THERE ARE NO CEMETERIES LOCATED ON THIS SITE.

19. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.

20. ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.

21. THE COORDINATES SHOWN HEREIN ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NO. 25A1 AND 25A2 WERE USED FOR THIS PROJECT.

22. WATER AND SEWER ARE PUBLIC AND ARE IN THE LITTLE PATUXENT DRAINAGE AREA, AND ARE DESIGNATED AS CONTRACT NUMBER 287 W&S. ALSO SEE F 02-166.

23. THERE ARE NO WETLANDS OR FLOODPLAINS ON THIS SITE.

24. THE SUBJECT PROPERTY IS ZONED RA-15 PER THE FEBRUARY 2, 2004 COMPREHENSIVE ZONING PLAN.

25. ALL EXTERIOR LIGHT FIXTURES SHALL BE ORIENTED TO DIRECT LIGHT INWARDS AND DOWNWARDS ON-SITE, AWAY FROM ALL ADJOINING RESIDENTIAL USE AREAS AND PUBLIC ROADS IN ACCORDANCE WITH SECTION 134 OF THE HOWARD COUNTY ZONING REGULATIONS.

26. THIS SITE DEVELOPMENT PLAN IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS DATED OCTOBER 2, 2003.

27. THIS SITE DEVELOPMENT PLAN IS SUBJECT TO PREVIOUS DEPARTMENT OF PLANNING AND ZONING FILES F 02-166, F 68-92, F 72-22, F 72-97, SDP 68-11, SDP 72-81, SDP 77-13 AND WP 04-054.

28. THIS SITE IS NOT LOCATED WITHIN THE ELLICOTT CITY HISTORIC DISTRICT.

29. THIS PROJECT COMPLIES WITH THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE FOR FOREST CONSERVATION WITH AN OBLIGATION OF 0.52 ACRES AND 0.52 ACRES OF RETENTION EASEMENT PROVIDED ON F 02-166 PLAT NO. 16815

30. THIS SITE IS EXEMPT FROM APFO REQUIREMENTS AS SPECIFIED IN HOWARD COUNTY DESIGN MANUAL VOLUME III (4.7.1.B.1.)

31. WP 04-054, WHICH ASKED FOR A WAIVER TO SECTION 16.116(b) TO ALLOW GRADING AND CONSTRUCTION IN STEEP SLOPES AND A WAIVER TO SECTION 16.120(b)(4)(iii), WHICH REQUIRES ENVIRONMENTAL FEATURES TO BE LOCATED IN AN OPEN SPACE WITH UNITS NO CLOSER THAN 15 FEET FROM PROTECTED FEATURES. THE CONDITIONS OF APPROVAL ARE AS FOLLOWS:
THE WAIVER PETITION APPROVAL PERTAINS TO THE LIMIT OF DISTURBANCE WITHIN THE STEEP SLOPES AND 15' SETBACK AREA AS SHOWN ON THE WAIVER PETITION PLAN EXHIBIT AND THE REVISED SITE DEVELOPMENT PLAN APPROVED ON NOVEMBER 20, 2003. THE LIMIT OF DISTURBANCE SHALL BE THE MINIMUM NECESSARY FOR THE PROPOSED SITE IMPROVEMENTS.

32. TRASH REMOVAL WILL BE HANDLED BY USING THE EXISTING DUMPSTERS LOCATED BEHIND LOTS 2 AND 3.

33. THIS PLAN IS SUBJECT TO THE APPROVED COUNTY COUNCIL RESOLUTION NO. 163-2003, APPROVED ON JANUARY 6, 2004, FOR THE FOLLOWING SETBACK REDUCTION OF THE REQUIRED ZONING REGULATIONS:

A REDUCTION OF THE MINIMUM 30 FOOT STRUCTURE SETBACK DISTANCE BETWEEN THE PROPOSED SENIOR HOUSING BUILDING AND THE ADJACENT TOWNHOUSE UNIT LOCATED ON LOT NO. 1 TO 25 FEET.

A REDUCTION OF THE MINIMUM 50 FOOT STRUCTURE SETBACK FOR A PROPOSED RETAINING WALL TO 42 FEET FROM ELLICOTT MILLS DRIVE, A MINOR ARTERIAL.

A REDUCTION OF THE MINIMUM 20 FOOT STRUCTURE SETBACK FOR A PROPOSED RETAINING WALL TO 18 FEET FROM THE MT. IDA DRIVE R/W LINE.

34. IF IMPERVIOUS COVER IS INCREASED OVER WHAT IS PROPOSED UNDER THIS SUBMISSION, STORMWATER MANAGEMENT IN ACCORDANCE WITH CURRENT REQUIREMENT SHALL BE REQUIRED.

35. A WAIVER TO THE DESIGN MANUAL WAS APPROVED BY THE DEVELOPMENT ENGINEERING DIVISION ON MARCH 19, 2004. THE WAIVER ASKED FOR RELIEF FROM REGULATIONS REQUIRING A TEE TURN-AROUND AT THE END OF OUR PARKING LOT. THE WAIVER INCLUDED A REQUEST TO WAIVE THE REQUIRED 25' SETBACK FROM PROPERTY LINES OR RIGHT OF WAY. THE WAIVER ALSO ASKED THAT WE NOT BE REQUIRED TO PROVIDE A MAINTENANCE ROAD INTO THE STORMWATER MANAGEMENT FACILITY. ALSO, A WAIVER TO THE HOWARD COUNTY DESIGN MANUAL, VOLUME III, FIGURE 2.18 AND SECTION 2.5.2.H, WHICH REQUIRES A 3 CENTERED CURVE AND WAIVER FOR INTERSECTION SIGHT DISTANCE RESPECTIVELY, WAS APPROVED ON MAY 6, 2004. A WAIVER TO SECTION 5.4B5 OF VOLUME II, WATER AND SEWER DESIGN MANUAL WAS APPROVED ON MAY 19, 2004, WHICH ALLOWS THE PROPOSED BUILDING TO BE WITHIN 10' OF THE UTILITY EASEMENT.

36. THIS PROJECT IS RECEIVING A TOTAL OF 14 "MODERATE INCOME HOUSING UNITS" FROM THE CEDAR VILLAS I AND II PROJECT, SDP 04-124 AND SDP-04-162.

37. THIS PROJECT COMPLIES WITH THE 10% "MODERATE INCOME HOUSING UNIT" REQUIREMENT FOR ALL "RA-15" DEVELOPMENTS IN ACCORDANCE WITH SECTION 112.E OF THE ZONING REGULATIONS. "MIHU" AGREEMENT DOCUMENTS ARE REQUIRED FOR THIS PROJECT.

PARKING TABULATION (PARCELS A & B ONLY)

PARKING REQUIREMENT IS BASED ON A PARKING ANALYSIS OF COMPARABLE COUNTY SENIOR HOUSING PROJECTS SUBMITTED BY THE DEPT. OF HOUSING AND COMMUNITY DEVELOPMENT DATED DECEMBER 19, 2003.

A. BUILDING AREA:
BLDG A (RESIDENTIAL) (6,866 SF./FLOOR=20,598 SF)
25 D.U. @ 2.0 SPACES / 5 D.U. = 10 SPACES REQUIRED
BLDG B (ASSEMBLY HALL)
1,600 S.F. = 0 SPACES REQUIRED
EX. BUILDINGS 'C','D'&'E' (18 D.U. TOTAL - RESIDENTIAL)
18 D.U. @ 2.0 SPACES / 5 D.U. (UNCHANGED) = 8 SPACES REQUIRED
TOTAL NUMBER OF PARKING SPACES REQUIRED = 18 SPACES REQUIRED

B. TOTAL NUMBER OF PARKING SPACES PROVIDED (PROPOSED) = 13 SPACES PROVIDED
UNCHANGED-(EXISTING) = 29 SPACES PROVIDED
TOTAL = 42 SPACES PROVIDED

C. TOTAL HANDICAP SPACES REQUIRED = 2 SPACE
REGULAR HANDICAP SPACES PROVIDED
8' X 18' TYPICAL (WITH 5' AISLE) (EXISTING) = 3 SPACES
VAN ACCESSIBLE HANDICAP SPACES PROVIDED
8' X 20' TYPICAL (WITH 8' AISLE) = 2 SPACES
TOTAL HANDICAP SPACES PROVIDED = 5 SPACES

SITE ANALYSIS

1. TOTAL AREA OF "FELS LANE URBAN RENEWAL PROJECT" (PARCEL 291)= 19.207 AC.
25% SLOPES OR STEEP SLOPES= 3.938 AC.
FLOOD PLAIN= 0 AC.
NET AREA= 15.269 AC.

ZONING: RA-15

MAX DENSITY ALLOWED (PARCEL 291)-NET AREA * 15 D.U./NET AC.= 229 D.U.
EXISTING DWELLING UNITS= 94 D.U.
PROPOSED DWELLING UNITS= 25 D.U.
TOTAL= 119 D.U.

2. AREA PARCEL A= 1.168 AC. OR 50,878 SQ. FT.
AREA PARCEL B= 2.772 AC. OR 120,739 SQ. FT. (UNCHANGED)

3. TOTAL AREA= 3.94 AC. OR 171,617 SQ. FT.
TOTAL AREA OF THIS SUBMISSION= 3.94 AC. OR 171,617 SQ. FT.

4. EXISTING USE= UNDEVELOPED & EX. APARTMENTS

5. PROPOSED USE= AGE RESTRICTED SENIOR HOUSING- ONE RESIDENT PER UNIT

6. THERE ARE EXISTING OR PROPOSED SLOPES 15% OR GREATER ON THIS SITE AND ARE SHOWN ON THE FOREST CONSERVATION PLAN.

7. THE SOIL TYPES SHOWN ON THESE PLANS ARE AS SHOWN IN THE "HOWARD COUNTY SOILS SURVEY." THE SITE IS PREDOMINATELY TYPE A SOILS WITHIN THE DEVELOPED AREA.

8. THERE ARE NO EXISTING FLOODPLAINS OR WETLANDS ON THIS SITE.

9. ALL EXISTING VEGETATION ON SITE IS IN THE FORM OF LAWN AND LIGHT WOODS.

10. RECREATIONAL OPEN SPACE REQUIRED- ALL OPEN SPACE IS TO BE OWNED AND MAINTAINED BY HOWARD COUNTY FOR USE BY THE RESIDENTS OF THIS DEVELOPMENT.

11. TOTAL AREA OF PAVED PARKING/DRIVEWAY= 15,710 SF OR 0.361 AC.
TOTAL IMPERVIOUS (PROPOSED) =31,627 SF OR 0.726 AC.

12. RECREATIONAL OPEN SPACE IS REQUIRED FOR THIS DEVELOPMENT.

OPEN SPACE TABULATION:

PARCEL A:
BUILDING COVERAGE (25 UNITS)= 8,466 SF 0.194 AC. OR 16.6%
OPEN SPACE (GREEN AREA)= 36,123 SF 0.829 AC. OR 71%
PAVED PARKING/DRIVEWAYS= 6,286 SF 0.144 AC. OR 12.4%
TOTAL= 50,875 SF 1.168 AC. OR 100%

REQUIRED RECREATIONAL OPEN SPACE: @400 SF/UNIT= 10,000 SF

RECREATIONAL OPEN SPACE PROVIDED: 10,000 SF

PARCEL B: (UNCHANGED)
BUILDING COVERAGE (18 UNITS)= 7,451 SF 0.171 AC. OR 6.2%
OPEN SPACE (GREEN AREA)= 103,875 SF 2.385 AC. OR 86%
PAVED PARKING/DRIVEWAYS= 9,424 SF 0.216 AC. OR 7.8%
TOTAL= 120,766 SF 2.772 AC. OR 100%

TOTAL OPEN SPACE (PB 17, FOLIO 18): 8.781 AC.

TOTAL OPEN SPACE REMAINING ON PARCEL 291: 4.841 AC.

OPEN SPACE REQUIRED (@ 19.207 AC X 25%): 4.8 AC.

LEGEND

-----188-------	EX. CONTOURS
——188——	PROP. CONTOURS
52 X 61	SPOT ELEVATIONS
	PROP. STORM DRAINS
— — — —	PROPERTY LINES

13. BUILDING COVERAGE OF SITE:

BLDG. A= 6,866 SF.

BLDG. B= 1,600 SF.
TOTAL: = 8,466 SF. OR 16.6% OF PARCEL A

EX. BUILDING C=1964 SF.
EX. BUILDING D=2542 SF.
EX. BUILDING E=2945 SF.
TOTAL: = 7451 SF OR 6.2% OF PARCEL B (UNCHANGED)

TOTAL AREA TO BE DISTURBED= 1.10 ACRES OR 47,973 SQ. FT.

EARTH QUANTITIES

TOTAL CUT	1260 C.Y.
TOTAL FILL	1595 C.Y.

NOTE:
CIVIL ENGINEER DOES NOT GUARANTEE OR WARRANT THIS INFORMATION. CONTRACTOR IS RESPONSIBLE FOR SOIL QUANTITY CALCULATIONS.

ADDRESS CHART

LOT No.	STREET ADDRESS
PARCEL 291	3600 MT. IDA DRIVE

TIBER HUDSON SENIOR HOUSING FELS LANE URBAN RENEWAL PROJECT PARCELS A AND B			SECT/AREA N/A		PARCEL P/O 291
~~DEED~~ PLAT # 16815	BLOCK 7	ZONE RA-15	TAX/ZONE MAP 25	ELEC. DIST. 2nd	CENSUS TR. 6029
WATER CODE F 04			SEWER CODE 1411600		

7.12.04
Date

STATE OF MARYLAND — JOHN R. HEINRICHS — No. 14920 — REGISTERED PROFESSIONAL ENGINEER

JOHN R. HEINRICHS
Professional Engr. No. 14920

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/13/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/13/04

DIRECTOR — DATE 8/18/04

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:
TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER
At Parcels A and B Fels Lane Renewal Project
Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18 , Plat No. 16815
HOWARD COUNTY, MARYLAND

TITLE:
COVER SHEET

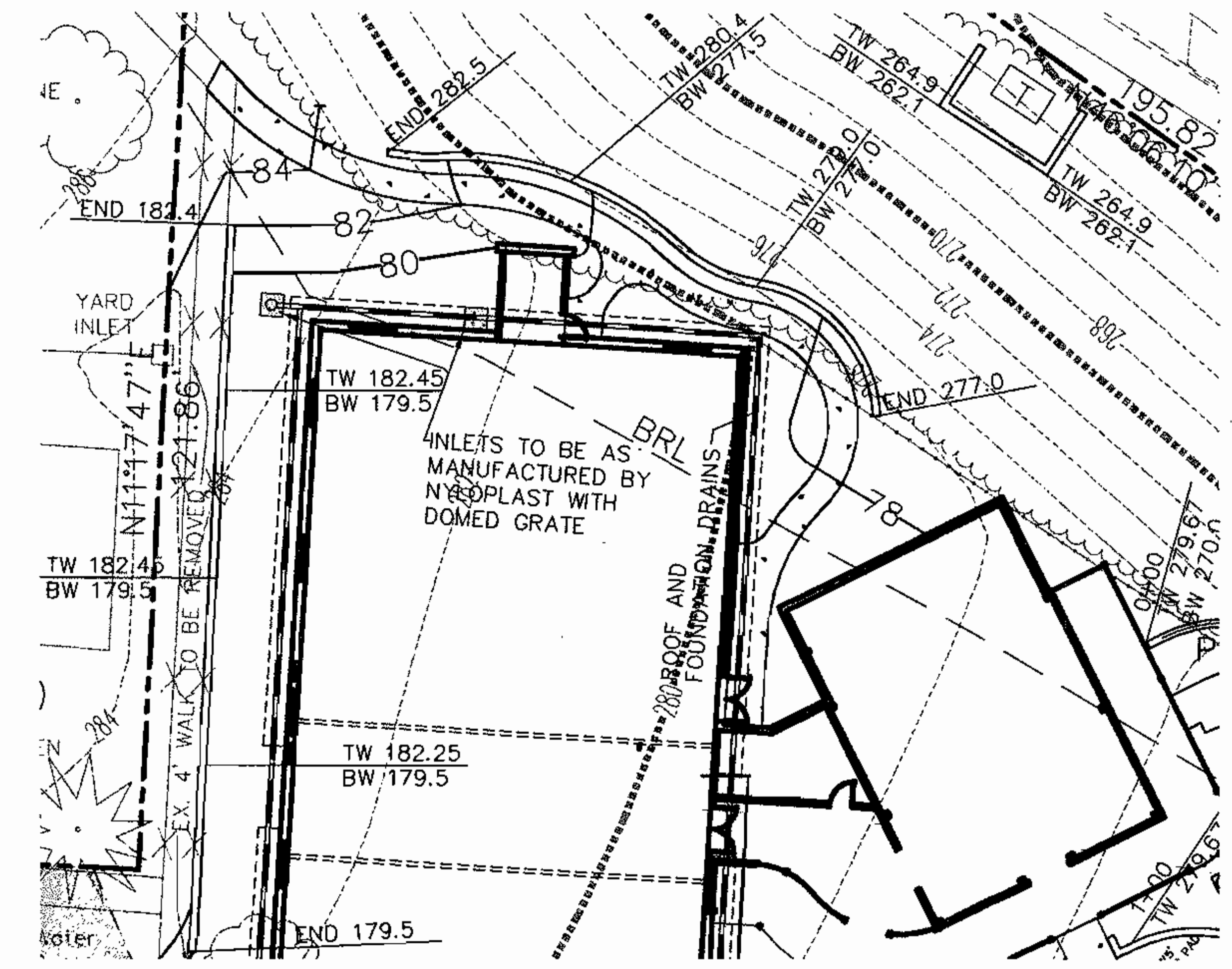
PLAT: F-02-166

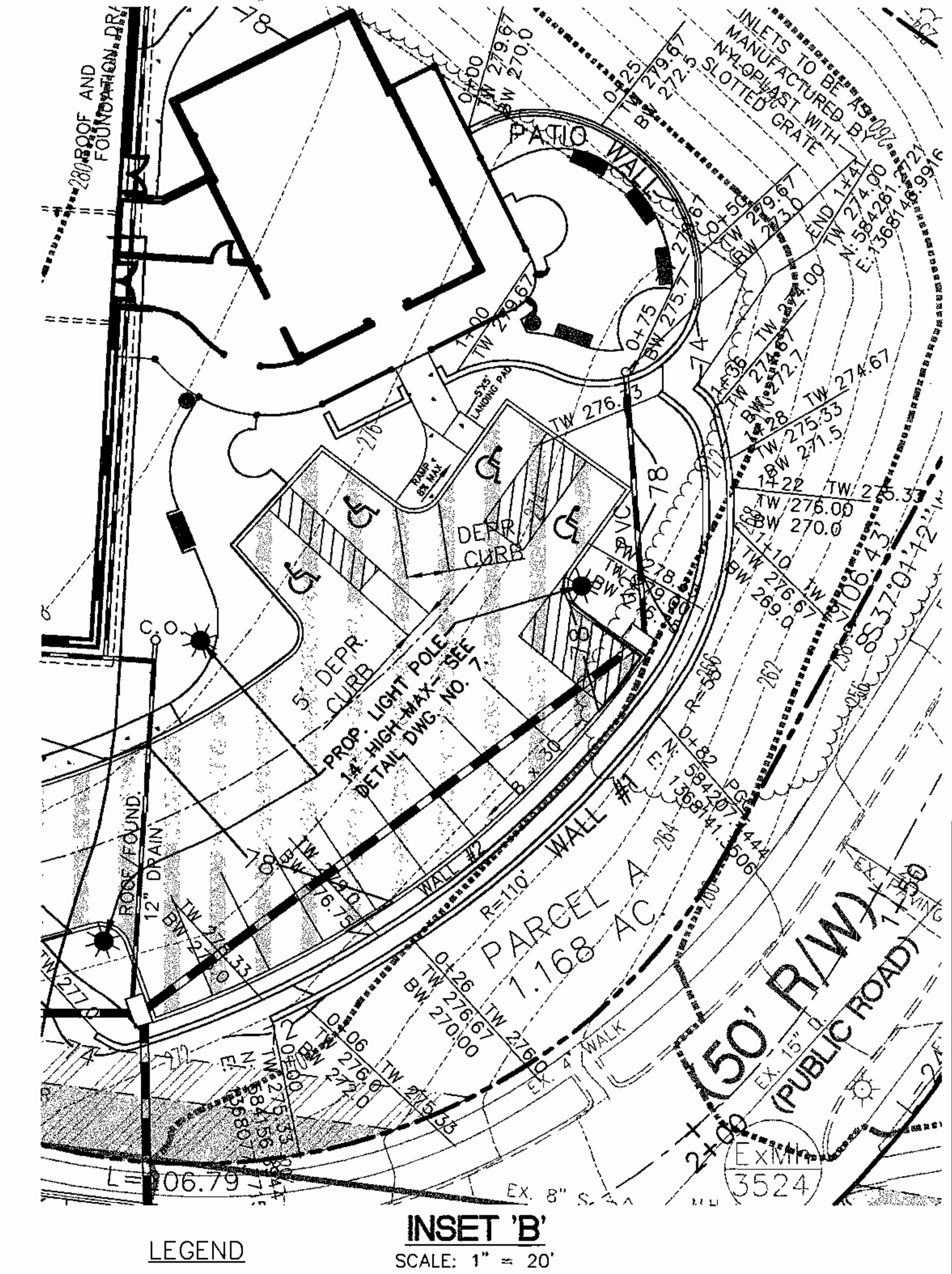
PREPARED FOR:
Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

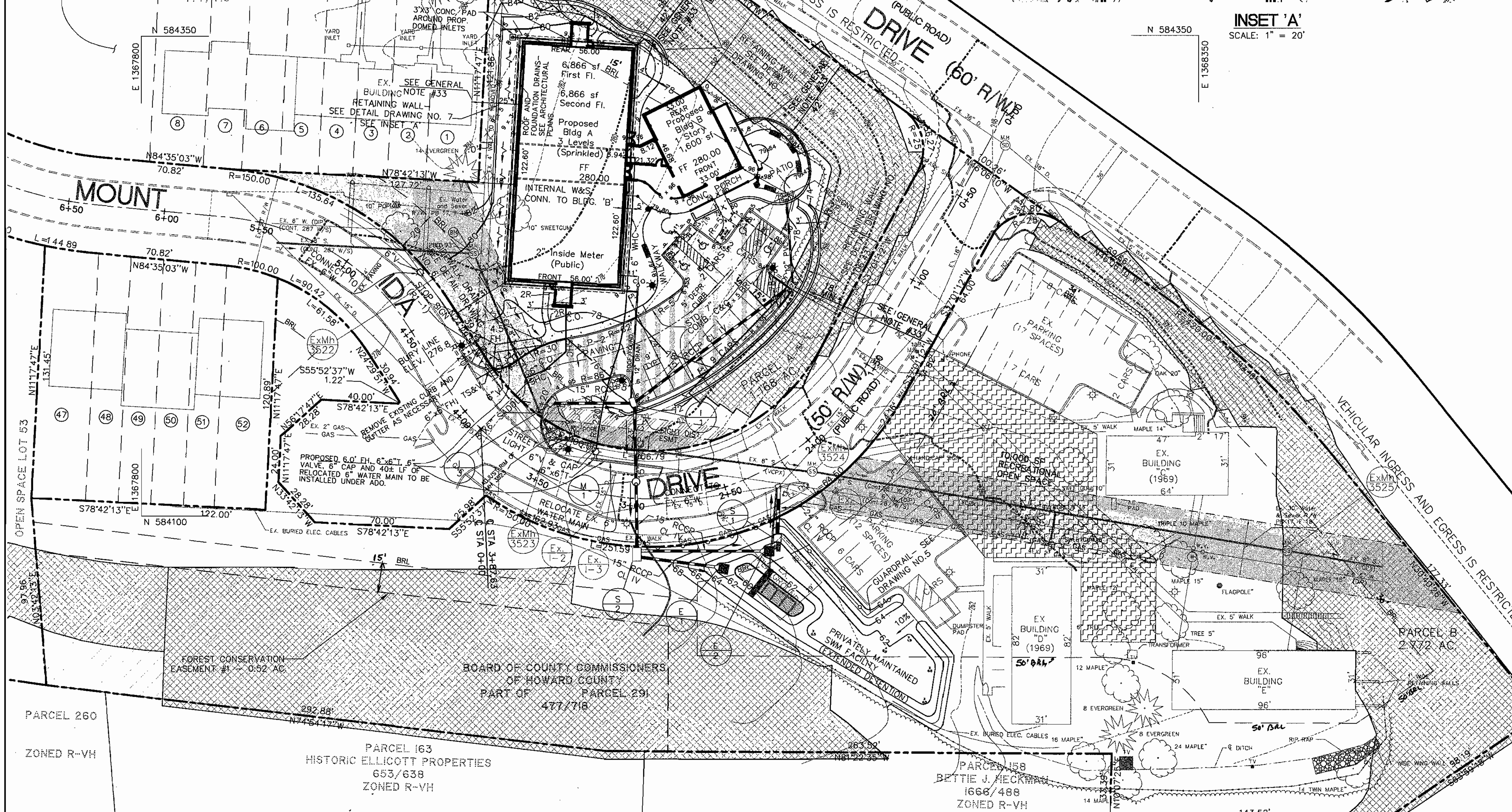
PREPARED BY:
PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

Des By R.J.W.		Scale AS SHOWN	Proj No 03-013
Drn By S.E.W.		Date APRIL, 2004	DRAWING NO 11011tiber.dwg
Chk By J.R.H.		SDP 04-027	1 OF 12

SDP 04-027







* SEE GENERAL NOTE 31 & 33.

** FOLLOWING COMPLETION OF THE CONSTRUCTION OF BUILDING 'A' THE CONTRACTOR IS TO TELEVISE THE SEWER BETWEEN MH 3522 AND MH 3523 TO INSURE THAT THE 8" SEWER HAS NOT BEEN DAMAGED BY THE CONSTRUCTION. ANY DAMAGE TO THE EXISTING 8" SEWER SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.

NOTE: CONTRACTOR TO TEST PIT EXISTING UNDERGROUND ELECTRIC AND 2" GAS MAIN AROUND SWMF, TO CHECK FOR CONFLICT, AS FIRST ORDER OF WORK. CONFLICTS ARE TO BE COORDINATED WITH BG&E TO HAVE THESE EXISTING SERVICES RELOCATED.

PLAN

SCALE: 1" = 30'

LEGEND

⊕	EX. FIRE HYDRANT
☼	EX. LIGHT POLE
✹	PROP. LIGHT POLE 14' MAX.
M.B. ■	EX. MAILBOX
C.O. ○	EX. SAN. CLEAN OUT
M.H. (SS)	EX. SANITARY SEWER
TV ■	EX. CABLE TV BOX
W.M. ○	EX. WATER METER
⊠	25+% SLOPES

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION	8/13/04 DATE
[signature] CHIEF, DIVISION OF LAND DEVELOPMENT	8/13/04 DATE
[signature] DIRECTOR	8/16/04 DATE

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:

TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER

At Parcels A and B Fels Lane Renewal Project

Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18, PLAT NO. 16815
HOWARD COUNTY, MARYLAND

TITLE:

SITE DEVELOPMENT PLAN

PREPARED FOR:

Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8633 FAX 247-9397

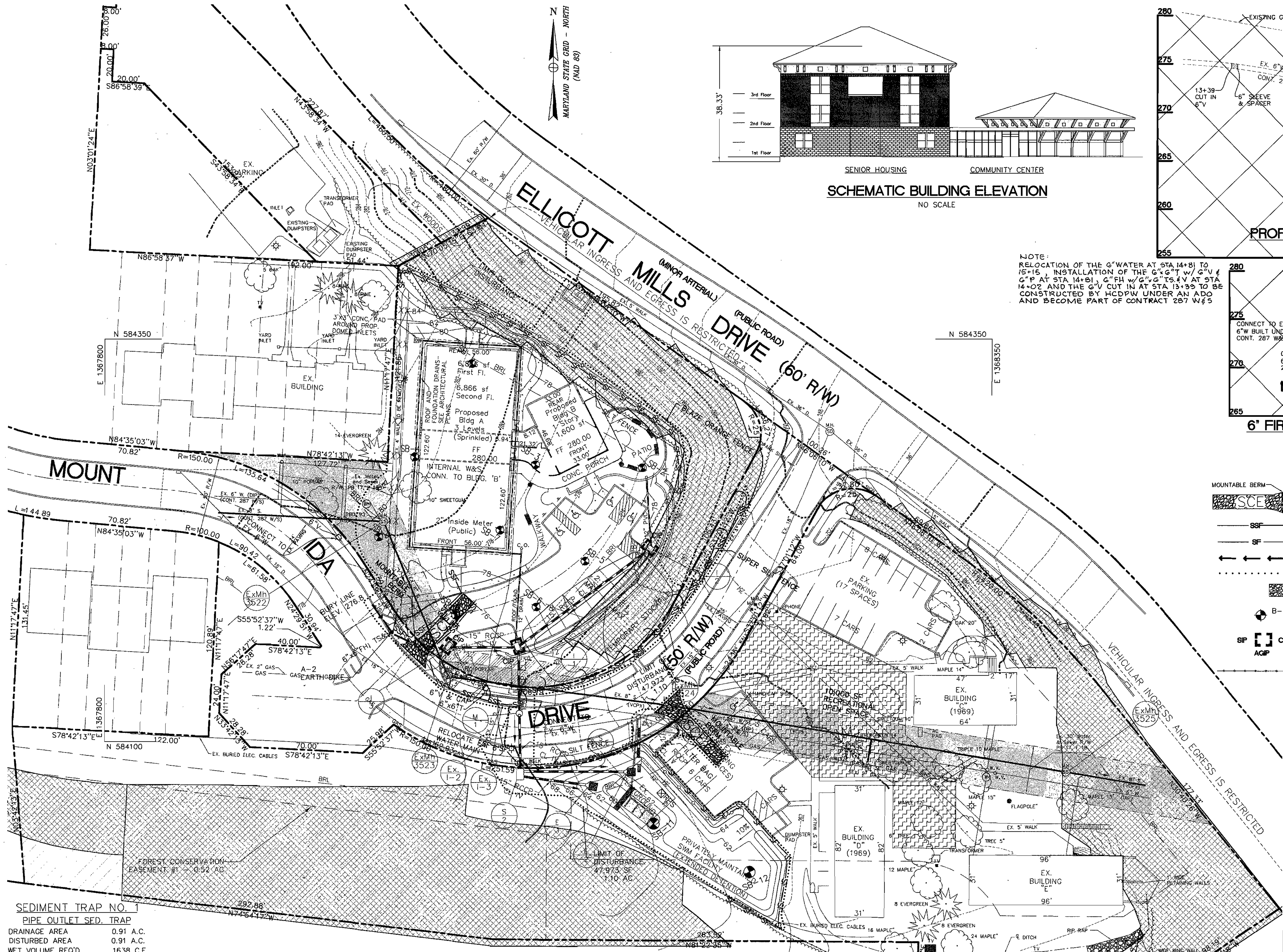
7.12.04
Date

STATE OF MARYLAND PROFESSIONAL ENGINEER

[signature]
JOHN R. HEINRICHS
Professional Engr. No. 14920

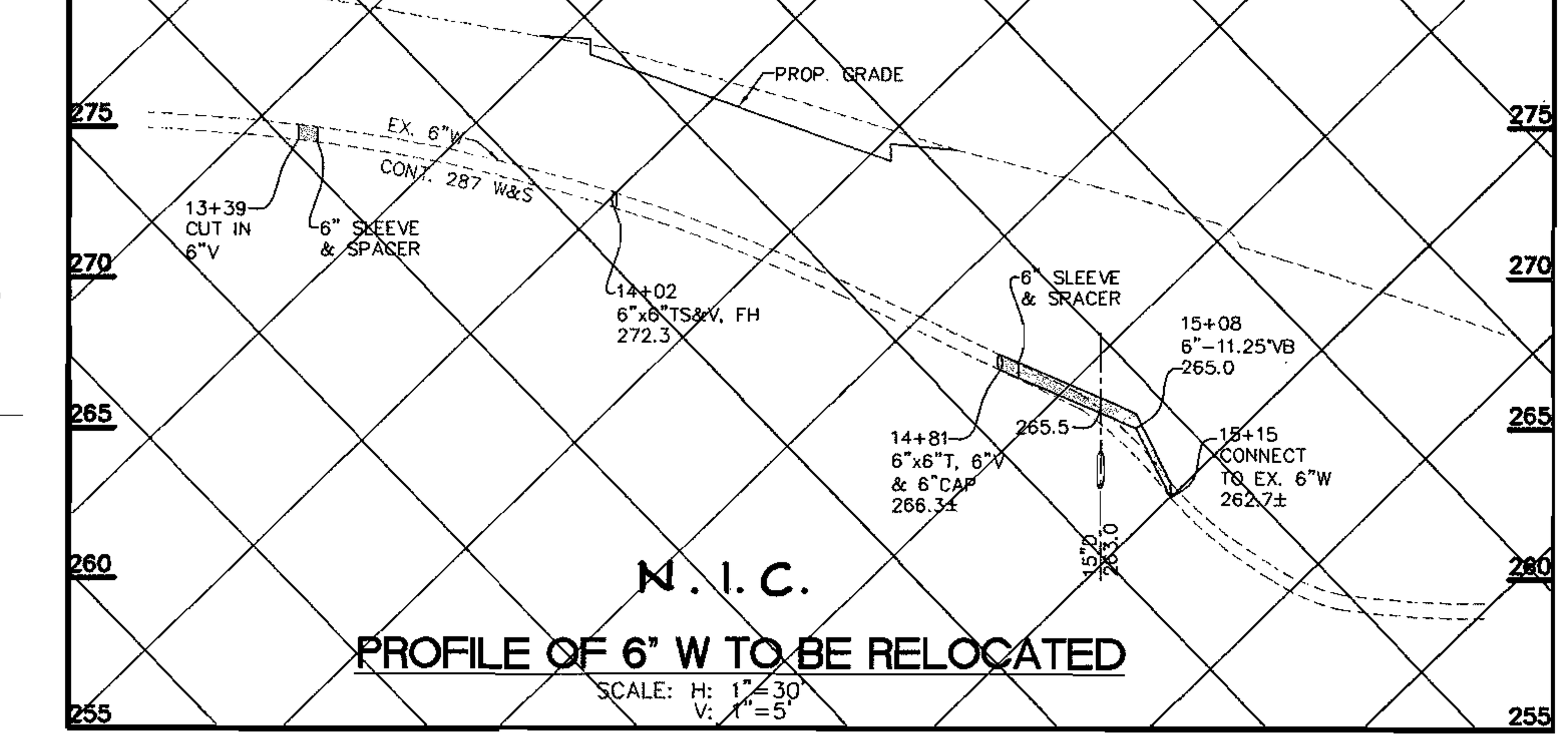
Des By R.J.W.	Scale 1"=30'	Proj No 03-013	
Drn By S.E.W.	Date APRIL, 2004	DRAWING NO ps01tiber.dwg	
Chk By J.R.H.	SDP 04-027	2 OF 12	

SDP 04-027



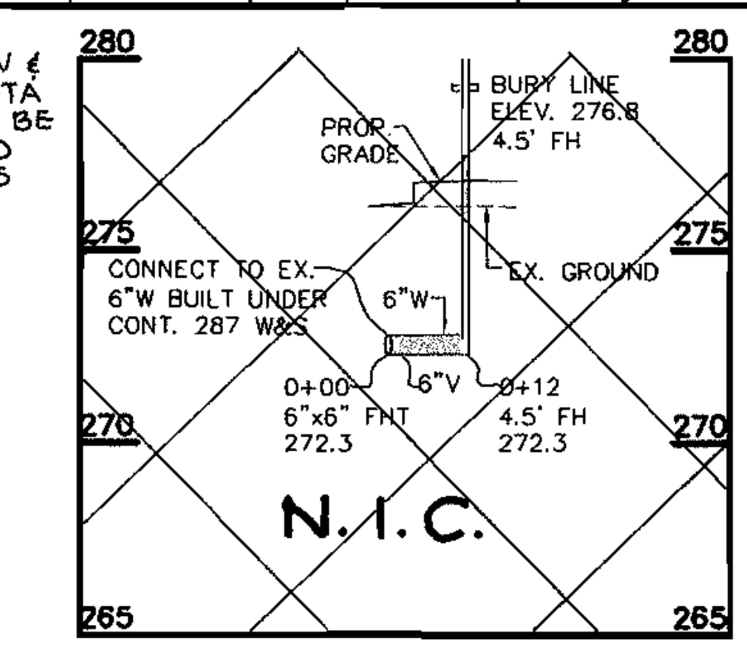
PLAN
SCALE: 1"=30'

SCHEMATIC BUILDING ELEVATION
NO SCALE



PROFILE OF 6" W TO BE RELOCATED
SCALE: H: 1"=30'
V: 1"=5'

NOTE:
RELOCATION OF THE 6"WATER AT STA 14+81 TO 15+15, INSTALLATION OF THE 6"x6"T w/ 6"V & 6"P AT STA 14+81, 6"FH w/6"x6"TS.&V AT STA 14+02 AND THE 6"V CUT IN AT STA 13+39 TO BE CONSTRUCTED BY HCDPW UNDER AN ADO AND BECOME PART OF CONTRACT 287 W&S



6" FIRE HYDRANT LEAD
SCALE: H: 1"=30'
V: 1"=5'

LEGEND

Symbol	Description
MOUNTABLE BERM / SCE	STABILIZED CONSTR. ENT.
SSF	SUPER SILT FENCE
SF	SILT FENCE
← ← ←	EARTH DIKE
. . . . . .	LIMIT OF DISTURBANCE
	STONE OUTLET STRUCTURE
B-2	TEST BORING
SIP CIP AGIP	INLET PROTECTION
	BLAZE ORANGE FENCE

ENGINEER'S CERTIFICATE

"I/WE 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 COUNTY SOIL CONSERVATION DISTRICT.

[signature] 7.12.04
ENGINEER: JOHN R. HEINRICHS, VICE PRESIDENT, PHOENIX ENGINEERING, INC. — DATE

DEVELOPER'S 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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

[signature] 7.12.04
DEVELOPER: LEONARD VAUGHAN H.C. HOUSING AND COMM. DEV. — DATE
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHINICAL REQUIREMENTS

[signature] 8/10/04
NATURAL RESOURCES CONSERVATION SERVICES — DATE

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

[signature] 8/10/04
HOWARD S.C. D. — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 8/13/04
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 8/13/04
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 8/16/04
DIRECTOR — DATE

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

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TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER
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Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18, PLAT No. 16815
HOWARD COUNTY, MARYLAND

TITLE:
SEDIMENT CONTROL PLAN

PREPARED FOR:
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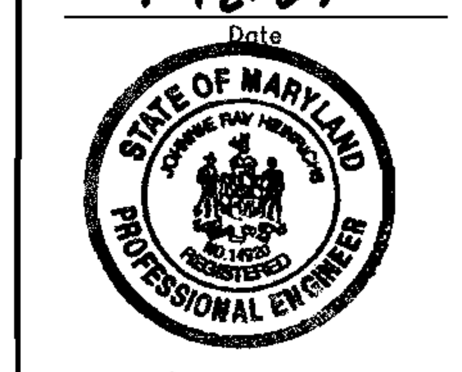
7.12.04
Date



[signature]
JOHN R. HEINRICHS
Professional Engr. No. 14920

Des By	R.J.W.	Scale	AS SHOWN	Proj No	03-013
Drn By	S.E.W.	Date	APRIL, 2004	DRAWING NO	ep01tiber.dwg
Chk By	J.R.H.	SDP 04-027		3 OF 12	

SEDIMENT TRAP NO. 1
PIPE OUTLET SED. TRAP

DRAINAGE AREA	0.91 A.C.
DISTURBED AREA	0.91 A.C.
WET VOLUME REQ'D.	1638 C.F
WET VOLUME PROV.	
@EL. 261.85	2954 C.F.
DRY VOLUME REQ'D.	1638 C.F.
DRY VOLUME PROV.	
@ EL. 262.50	2371 C.F.
TOP EMBANKMENT ELEV.	264.50
BOTTOM ELEV	260.50
CREST ELEV.	261.85
CLEANOUT REQ'D.	819 C.F.
CLEANOUT PROV.	
@ EL. 261.00	884 C.F.
SIDE SLOPES INSIDE	3:1
OUTSIDE	3:1
BOTTOM DIM.	IRREGULAR X 1.25'

UTILITY NOTES

1. CONTRACTOR SHALL OPEN ONLY THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN 1 DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIALS ON UPHILL SIDE OF TRENCH.
3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

THE CONTRACTOR SHALL NOT CONSTRUCT THE 15" STORM DRAIN BETWEEN S-2 AND M-1 UNTIL HE HAS A THREE DAY CLEAR WEATHER WINDOW. THIS PIPE CROSSING IS TO BE CONSTRUCTED AND STABILIZED IMMEDIATELY UPON COMPLETION.

STANDARD AND SPECIFICATION FOR TOPSOILING

DEFINITION

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

PURPOSE

TO PROVIDE A SUITABLE SOIL MEDIUM FOR VEGETATION GROWTH ON AREAS WITH LOW MOISTURE, LOW NUTRIENT LEVELS, LOW PH, OR THE PRESENCE OF OTHER MATERIALS TOXIC TO PLANTS.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS RECOMMENDED FOR SITES OF 2:1 OR FLATTER SLOPES WHERE:

1. THE TEXTURE OF THE EXPOSED SUBSOIL OR PERCENT MATERIAL IS NOT SUITABLE TO PRODUCE ADEQUATE VEGETATIVE GROWTH.

2. 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.

3. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.

4. THE SOIL IS SO ACID THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

SPECIFICATIONS

SECTION I – SITE PREPARATION (WHERE TOPSOIL IS TO BE ADDED.)

WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, BERMS, DIKES, WATERWAYS AND SEDIMENT BASINS.

GRADING: GRADES ON THE AREAS TO BE TOPSOILED WHICH HAVE BEEN PREVIOUSLY ESTABLISHED SHALL BE MAINTAINED.

LIMING: WHERE THE SUBSOIL IS EITHER HIGHLY ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE ON 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQ. FT.). LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

TILLING: AFTER THE AREAS TO BE TOPSOILED HAVE BEEN BROUGHT TO GRADE, AND IMMEDIATELY PRIOR TO DUMPING AND SPREADING THE TOPSOIL, THE SUBGRADE SHALL BE LOOSENED BY DISCING OR BY SCARIFYING TO A DEPTH OF AT LEAST 3 INCHES TO PERMIT BONDING OF THE TOPSOIL TO THE SURFACE AREA OF THE SLOPE TO CREATE HORIZONTAL EROSION CHECK SLOTS TO PREVENT TOPSOIL FROM SLIDING DOWN THE SLOPE.

SECTION II – TOPSOIL MATERIAL AND APPLICATION.

NOTE: TOPSOIL SALVAGED FROM THE EXISTING SITE MAY OFTEN BE USED BUT IT SHOULD MEET THE SAME STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. THE DEPTH OF TOPSOIL TO BE SALVAGED SHALL BE NO MORE THAN THE DEPTH DESCRIBED AS A REPRESENTATIVE PROFILE FOR THAT PARTICULAR SOIL TYPE AS DESCRIBED IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

MATERIALS: TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND OR OTHER SOIL AS APPROVED BY AN AGRONOMIST OR SOIL SCIENTIST. IT SHALL NOT HAVE A MIXTURE OF CONTRASTING TEXTURED SUBSOIL AND CONTAIN NO MORE THAN 5 PERCENT BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENT, GRAVEL, STICKS, ROOTS, TRASH OR OTHER EXTRANEOUS MATERIALS LARGER THAN 1-1/2 INCHES IN DIAMETER. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS OF BERMUDAGRASS, QUICKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLES OR OTHERS AS SPECIFIED. ALL TOPSOIL SHALL BE TESTED BY A RECOGNIZED LABORATORY FOR ORGANIC MATTER CONTENT, PH AND SOLUABLE SALTS. A PH OF 6.0 TO 7.5 AND AN ORGANIC CONTENT OF NOT LESS THAN 6.0. LIME SHALL BE APPLIED AND INCORPORATED WITH TOPSOIL TO ADJUST THE PH TO 6.5 OR HIGHER. TOPSOIL CONTAINING SOLUABLE SALTS GREATER THAN 500 PARTS PER MILLOIN 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 TO PERMIT DISIPATION OF TOXIC MATERIALS.

NOTE: TOPSOIL SUBSTITUTES OR AMENDMENTS AS APPROVED BY A QUALIFIED AGRONOMIST OR SOIL SCIENTIST, MAY BE USED IN LIEU OF NATURAL TOPSOIL

GRADING: THE TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED AND COMPACTED TO A MINIMUM OF FOUR (4) INCHES. 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 IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBGRADE IS EXCESSIVELY WET, OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

ALTERNATIVE FOR PERMANENT SEEDING

AS AN OPTION TO APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZER, APPLY COMPOSTED SLUDGE AS SPECIFIED BELOW, A POTASSIUM FERTILIZER AT THE RATE OF 4 POUNDS PER 1,000 SQ. FT. AND 1/3 THE NORMAL LIME APPLICATION RATE.

COMPOSTED SLUDGE MATERIAL

COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL AMENDMENT OR CONDITIONER SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:

1. 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 HEALTH AND MENTAL HYGIENE UNDER REGULATION 10.17.10.

2. SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN, 1.5 PERCENT PHOSPHORUS AND .2 PERCENT POTASSIUM AND HAVE A PH OF 7.0 AND 8.0

IF COMPOST DOES NOT MEET THESE REQUIREMENTS, THE APPROPRIATE CONSTITUENTS MUST BE ADDED SO THAT THE REQUIREMENTS ARE MET PRIOR TO USE OF THE COMPOST.

3. BE APPLIED AT A RATE OF 2,000 POUNDS PER 1,000 SQ. FT.

REFERENCES

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

SEDIMENT CONTROL NOTES

1) A MINIMUM OF 24 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY OFFICE OF INSPECTION AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION. (313-1855)

2) 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.

3) FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN; A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.

4) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.

5) ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS, SOD, TEMPORARY SEEDING AND MULCHING (SEC. G) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.

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

7) SITE ANALYSIS:

TOTAL AREA OF SITE	3.94 ACRES
AREA DISTURBED	(47,973 SF)....1.10 ACRES
AREA TO BE ROOFED OR PAVED	0.41 ACRES
AREA TO BE VEGETATIVELY STABILIZED	0.51 ACRES
TOTAL CUT	126.0 CU. YDS
TOTAL FILL	1595 CU. YDS.

OFFSITE WASTE/BORROW AREA LOCATION TO BE DETERMINED

ALL WASTE/BORROW TO GO TO OR COME FROM A SITE WITH AN APPROVED AND 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 DPW 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 SHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

PERMANENT SEEDING NOTES

APPLY TO GRADED OT 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:

1) PREFERRED- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92LBS/1000 SF.) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SF.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS PER ACRE 30-0-0 UREAFORM FERTILIZER (9 LBS/1000 SF.).

2) ACCEPTABLE- APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS/1000 SF.) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SF.) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.

SEEDING- FOR THE PERIODS MARCH 1 THRU APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ. FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (.05 LBS/1000 SQ. FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY:

OPTION (1)- 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING.

OPTION (2)- USE SOD

OPTION (3)- SEED WITH 60 LBS/ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED STRAW.

MULCHING-APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SF.) 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 SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8GAL/1000 SF. FT.) FOR ANCHORING.

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

TEMPORARY SEEDING NOTES

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

SEEDED PREPARATION: LOOSEN UPPER THREE INCHES OF SOIL BY RAKING, DISKING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING, IF NOT PREVIOUSLY LOOSENED.

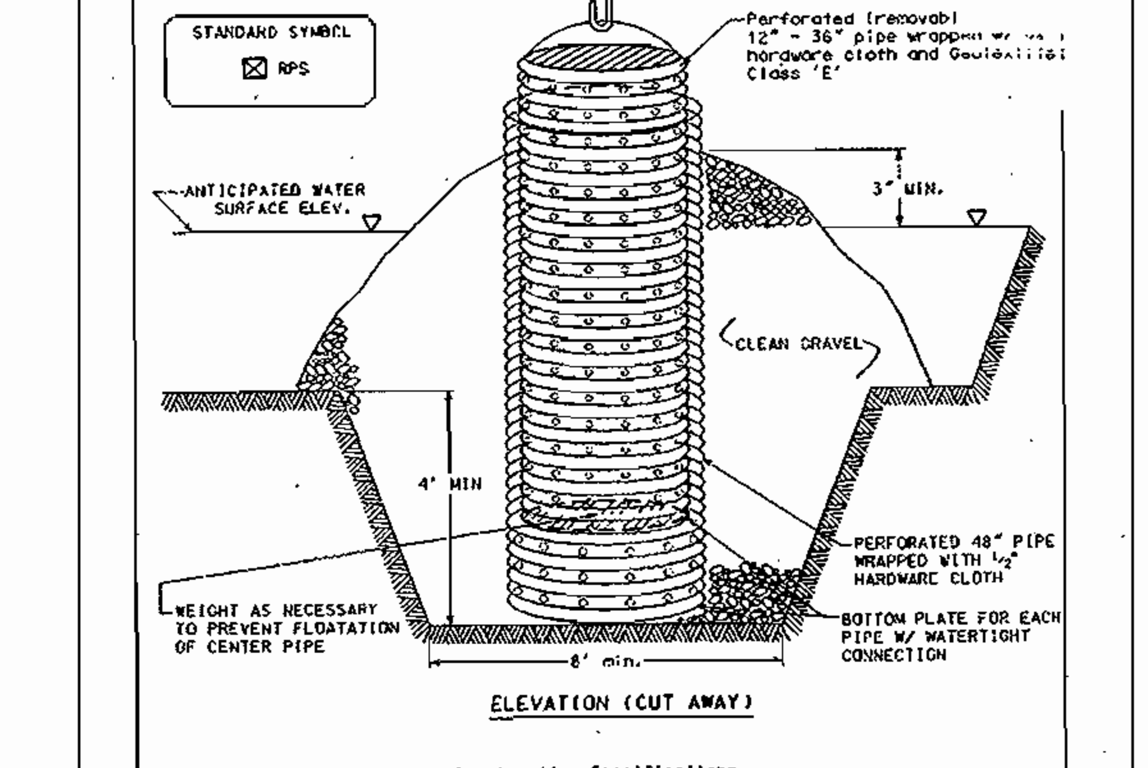
SOIL AMENDMENTS: APPLY 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/1000 SQ. FT).

SEEDING: FOR PERIODS MARCH 1 THRU APRIL 30 AND FROM AUGUST 15 THRU NOVEMBER 15, SEED WITH 2 1/3 BUSHEL PER ACRE OF ANNUAL RYE (3.2 LBS/1000 SQ. FT.).FOR THE PERIOD MAY 1 THRU AUGUST 14, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (.07 LBS/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/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./1000 SF.) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES 8 FT. OR HIGHER, USE 348 GAL. PER ACRE (8 GAL./1000 SF.) FOR ANCHORING.

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

DETAIL 20A – REMOVABLE PUMPING STATION



Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.

2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.

3. The inside stand pipe (center pipe) should be constructed by perforating corrugated or PVC pipe between 12" and 36" in diameter. The perforations shall be 1/2" X 6" slits or 1" diameter holes 6" on center. The center pipe shall be wrapped with 1/2" hardware cloth first, then wrapped again with Geotextile Class E.

4. The center pipe should extend 12" to 18" above the anticipated water surface elevation or riser crest elevation when dewatering a basin.

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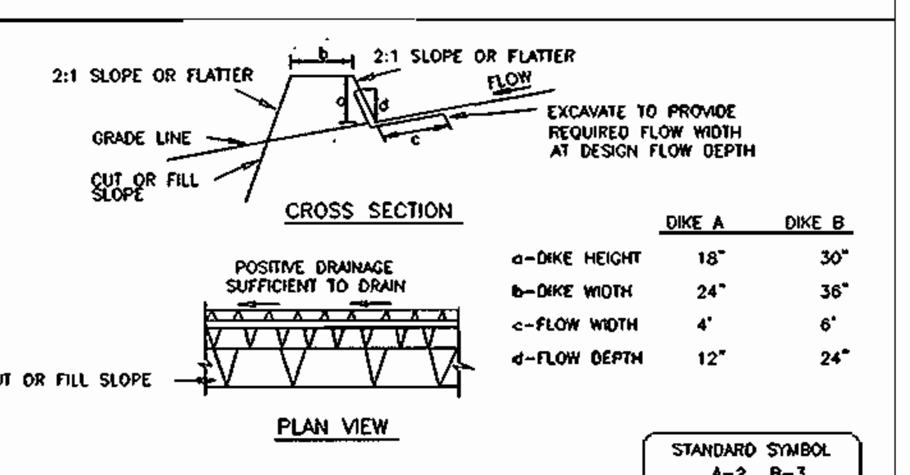
1994

DETAIL 1 – EARTH DIKE



	DIKE A	DIKE B
a-DIKE HEIGHT	18"	30"
b-DIKE WIDTH	24"	36"
c-FLOW WIDTH	4'	6'
d-FLOW DEPTH	12"	24"

1. Seed and cover with straw mulch.
2. Seed and cover with Erosion Control Matting or line with sod.
3. 4" - 7" stone or recycled concrete equivalent pressed into the soil 7" minimum

Construction Specifications

1. All temporary earth dikes shall have uninterrupted positive grade to an outlet. Spot elevations may be necessary for grades less than 1%.

2. Runoff diverted from a disturbed area shall be conveyed to a sediment trapping device.

3. Runoff diverted from an undisturbed area shall outlet directly into an undisturbed, stabilized area at a non-erosive velocity.

4. All trees, brush, stumps, obstructions, and other objectional material shall be removed and disposed of so as not to interfere with the proper functioning of the dike.

5. The dike shall be excavated or shaped to line, grade and cross section as required to meet the criteria specified herein and be free of bank projections or other irregularities which will impede normal flow.

6. Fill shall be compacted by earth moving equipment.

7. All earth removed and not needed for construction shall be placed so that it will not interfere with the functioning of the dike.

8. Inspection and maintenance must be provided periodically and after each rain event.

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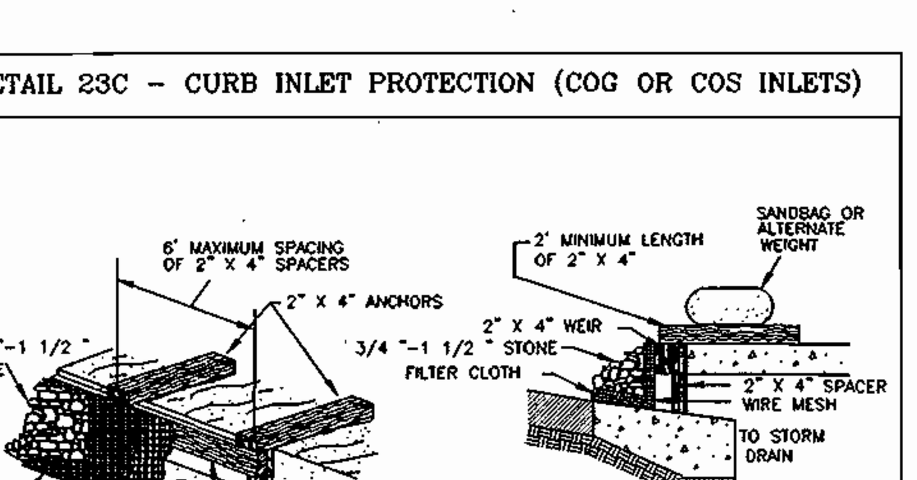
DETAIL 23C – CURB INLET PROTECTION (COG OR COS INLETS)



MAX. DRAINAGE AREA = 1/4 ACRE

Construction Specifications

1. 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.

2. 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.

3. Securely nail the 2" X 4" weir to a 9" long vertical spacer to be located between the weir and the inlet face (max. 4' apart).

4. 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.

5. The assembly shall be placed so that the end spacers are a minimum 1' beyond both ends of the throat opening.

6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

8. Assure that storm flow does not bypass the inlet by installing a temporary earth or asphalt dike to direct the flow to the inlet.

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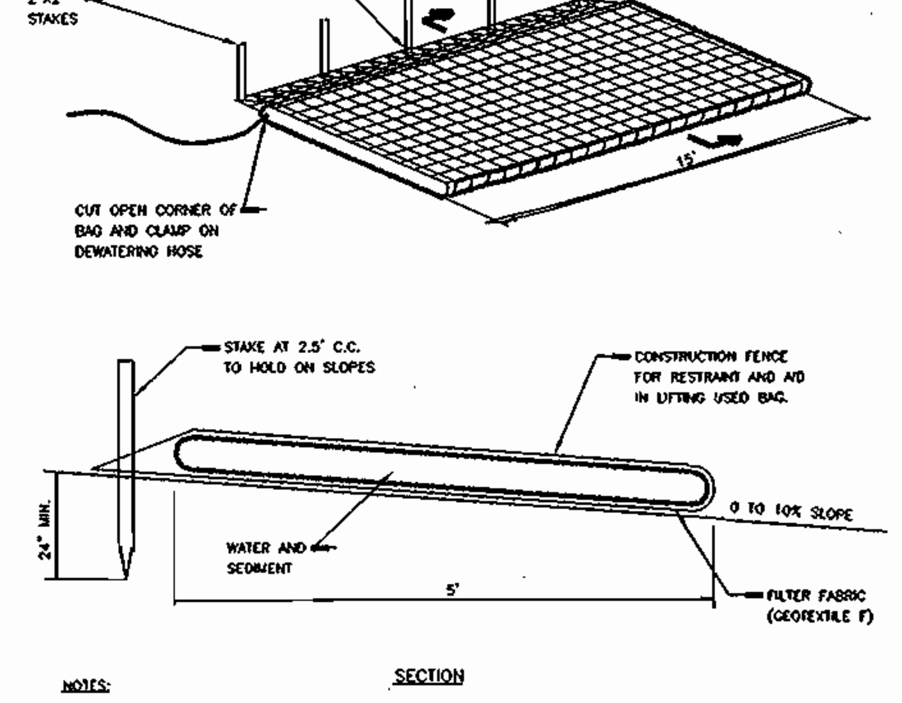


NOTES:

FILTER BAG SHALL BE PLACED ON A SLOPING LEVEL, WELL GRADED VEGETATED SITE SUCH THAT WATER WILL FLOW AWAY FROM DEVICE AND ANY WORK AREAS.

WIDTH AND LENGTH SHALL BE AS SHOWN.

THE FILTER BAG MUST BE STAKED IN PLACE AND SECURED TO THE PUMP DISCHARGE LINE.

FILTER BAG SHALL NOT BE USED FOR DISCHARGE FLOWS GREATER THAN 300GPM.

DEVICE SHALL BE REMOVED AND DISPOSED OF AFTER BAG IS FILLED WITH SEDIMENT. SEDIMENT FROM BAG SHALL BE SPREAD IN AN UPLAND AREA.

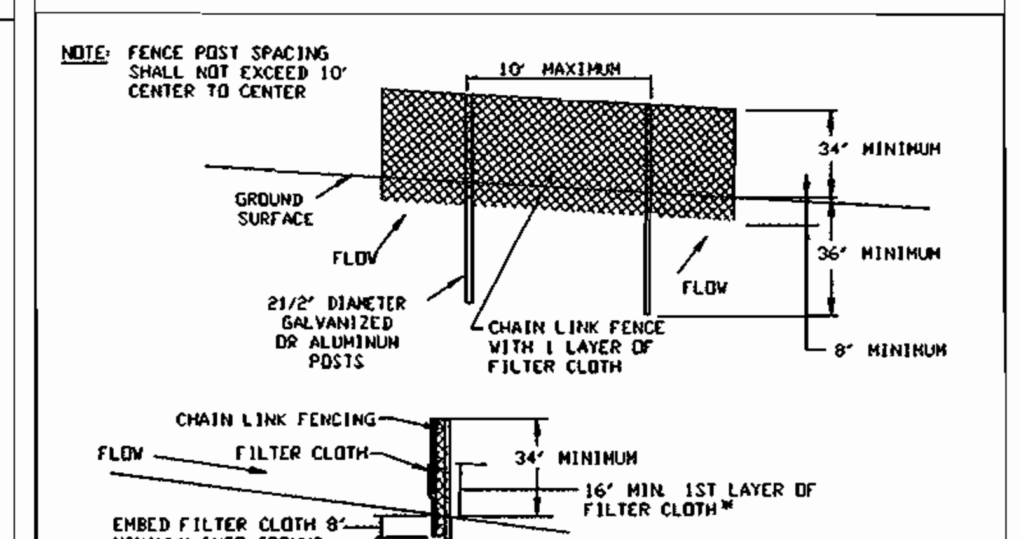
FILTER FABRIC SHALL MEET THE FOLLOWING REQUIREMENTS FOR GEOTEXTILE CLASS F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft / minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

FILTER BAG

TEMPORARY EROSION CONTROL MEASURE

DETAIL 33 – SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Details for Chain Link Fencing. The specification for a 6' fence shall be used, substituting 42" fabric and 6' length posts.

2. Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence.

3. Filter cloth shall be fastened securely to the chain link fence with ties spaced every 24" at the top and mid section.

4. Filter cloth shall be embedded a minimum of 8" into the ground.

5. When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and folded.

6. Maintenance shall be performed as needed and silt buildups removed when 'bulges' develop in the silt fence, or when silt reaches 50% of fence height.

7. Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal/ft²/minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

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SUPER SILT FENCE

Design Criteria

Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

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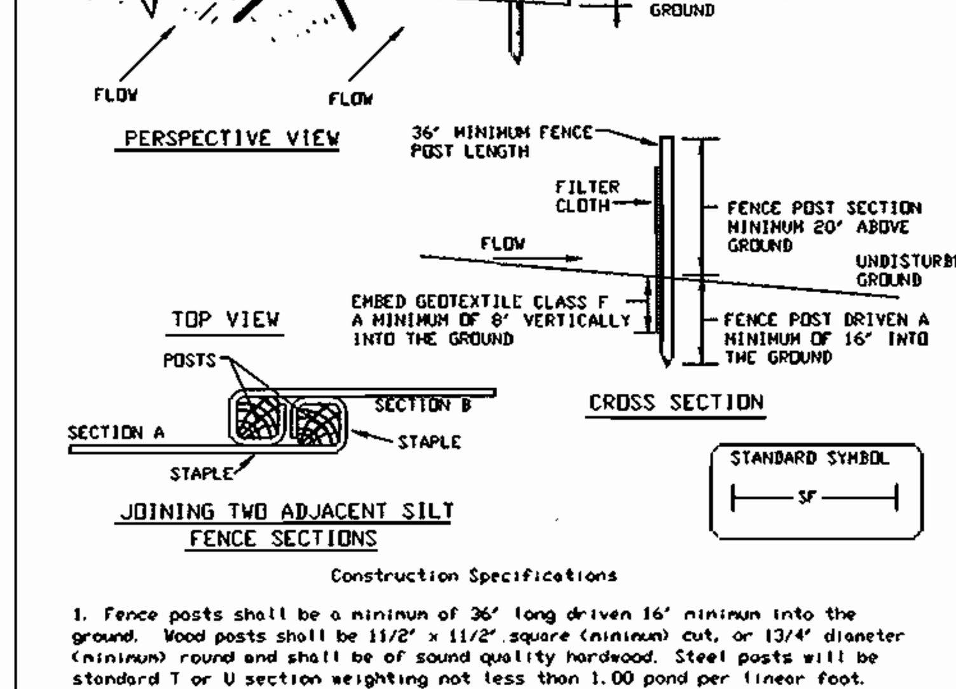
DETAIL 22 – SILT FENCE



Construction Specifications

1. Fence posts shall be a minimum of 36" long driven 16" minimum into the ground. Wood posts shall be 11/2" x 11/2" square (minimum) cut, or 13/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts will be standard T or U section weighting not less than 1.00 pond per linear foot.

2. Geotextile shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

Tensile Strength	50 lbs/in (min.)	Test: MSMT 509
Tensile Modulus	20 lbs/in (min.)	Test: MSMT 509
Flow Rate	0.3 gal ft²/ minute (max.)	Test: MSMT 322
Filtering Efficiency	75% (min.)	Test: MSMT 322

3. Where ends of geotextile fabric come together, they shall be overlapped, folded and stapled to prevent sediment bypass.

4. Silt Fence shall be inspected after each rainfall event and maintained when bulges occur or when sediment accumulation reached 50% of the fabric height.

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SILT FENCE

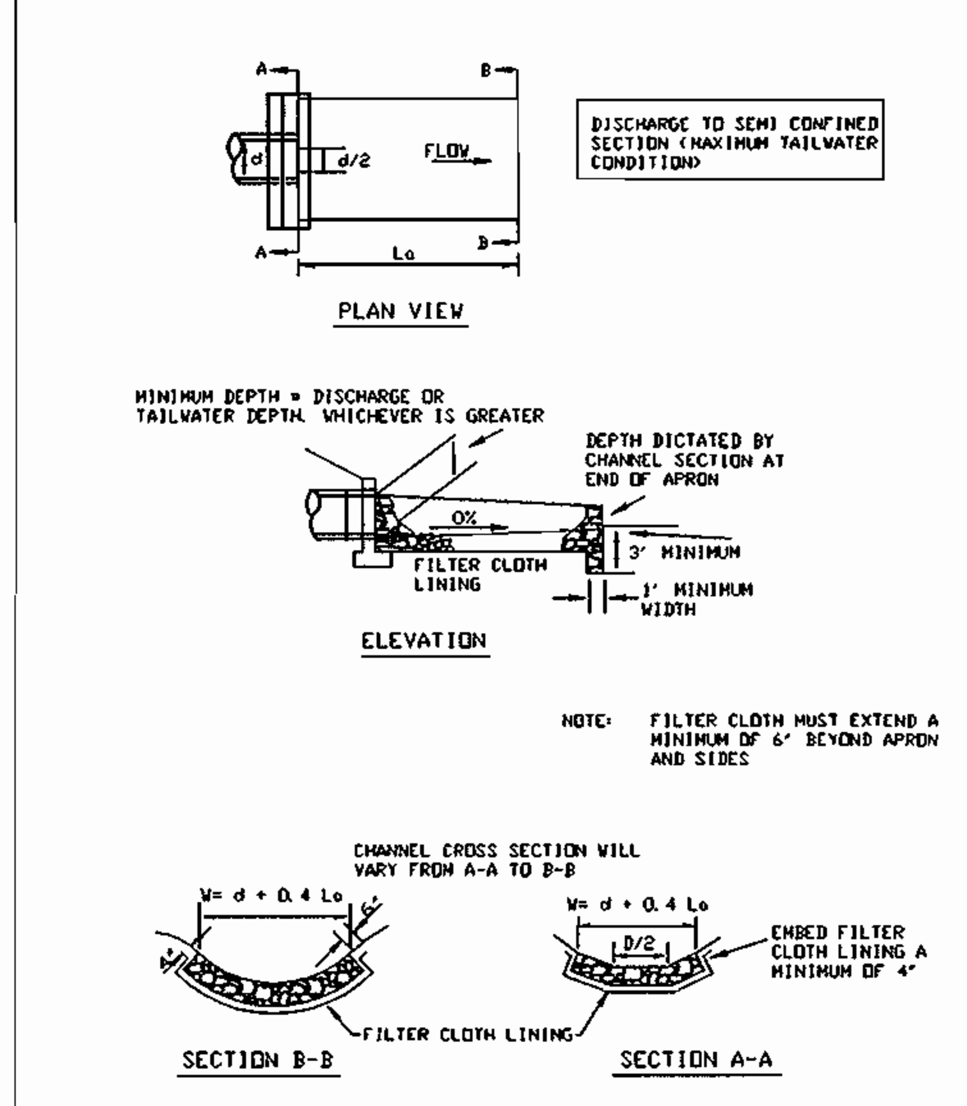
Silt Fence Design Criteria

Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
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	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil Class A) maximum slope length and silt fence length will be unlimited. In these areas a silt fence may be the only perimeter control required.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE E - 15 - 3A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 25 – ROCK OUTLET PROTECTION I



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 8	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

ROCK OUTLET PROTECTION

Construction Specifications

1. 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.

2. The rock or gravel shall conform to the specified grading limits when installed respectively in the rip-rap or filter.

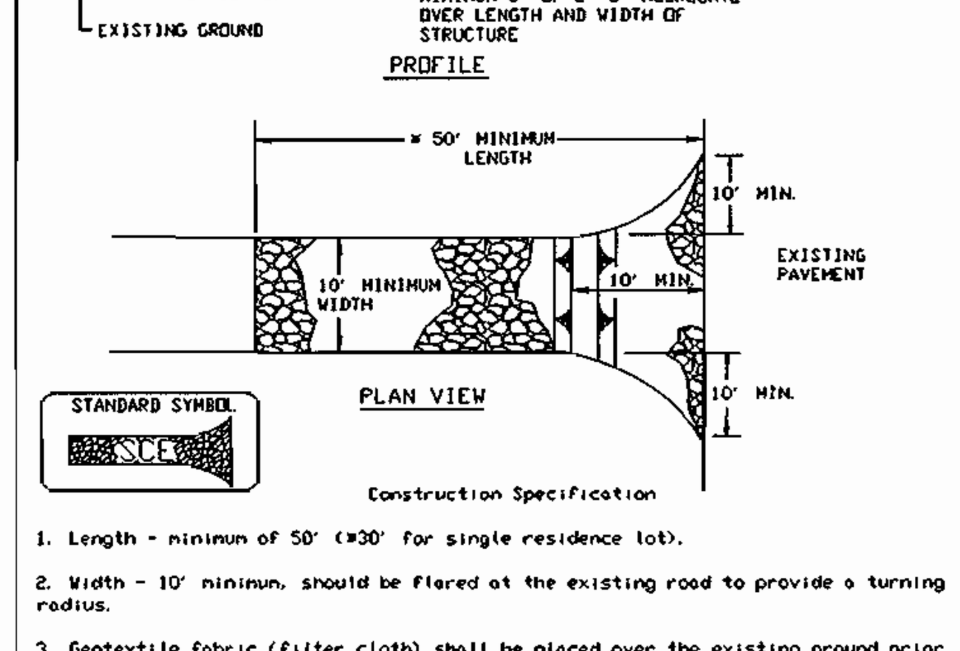
3. Geotextile shall be protected from punching, cutting, or tearing. Any damage other than an occasional small hole shall be repaired by placing another piece of geotextile over the damaged part or by completely replacing the geotextile. All overlaps whether for repairs or for joining two pieces of geotextile shall be a minimum of one foot.

4. 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 homogeneous 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. Hand placement will be required to the extent necessary to prevent damage to the permanent works.

5. 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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 18 - 8A	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 24 – STABILIZED CONSTRUCTION ENTRANCE



Construction Specification

1. Length - minimum of 50' (*30' for single residence lot).

2. Width - 10' minimum, should be flared at the existing road to provide a turning radius.

3. 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.

4. 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.

5. 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 should be sized according to the amount of runoff to be conveyed. A 6" minimum will be required.

6. Location - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Vehicles leaving the site must travel over the entire length of the stabilized construction entrance.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F - 17 - 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

SEQUENCE OF CONSTRUCTION

(1 DAY)	DAY 1	OBTAIN A GRADING PERMIT
(2 DAYS)	DAY 2-3	CONSTRUCT A STABILIZED CONSTRUCTION ENTRANCE (SCE) W/MOUNTABLE BERM
(5 DAYS)	DAY 4-8	CLEAR AND GRUB AREA FOR, AND INSTALL REMAINING SEDIMENT CONTROL DEVICES, AND GET PERMISSION FROM SEDIMENT CONTROL INSPECTOR BEFORE PROCEEDING.
(15 DAYS)	DAY 9-23	ROUGH GRADE SITE, INCLUDING SWMF AND STABILIZE AS PER TEMPORARY SEEDING NOTES.
(60 DAYS)	DAY 24-84	CONSTRUCT BUILDINGS
(21 DAYS)	DAY 85-106	INSTALL ALL UTILITIES, IE: WATER, SEWER CONNECTIONS, STORM DRAINS, ETC. HOWEVER, BULKHEAD PIPE LEAVING EX. I-1 FROM RECEIVING WATER AT THIS TIME.
(15 DAYS)	DAY 107-122	CONSTRUCT CURBS, PAVING AND SIDEWALKS
(5 DAYS)	DAY 123-128	STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
(3 DAYS)	DAY 129-131	FINE GRADE SITE, AND SWMF, AND SEED DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. REMOVE BULKHEAD IN INLET EX. I-1.
(5 DAYS)	DAY 132-137	WHEN ALL DISTURBED AREAS HAVE BEEN STABILIZED AND UPON APPROVAL OF THE SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES.

ENGINEER'S CERTIFICATE

"I/WE 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 COUNTY SOIL CONSERVATION DISTRICT.

[signature] 7.12.04

ENGINEER: JOHN R. HEINRICHS, VICE PRESIDENT — DATE
PHOENIX ENGINEERING, INC.

DEVELOPER'S 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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

[signature] 7.12.04

DEVELOPER: LEONARD VAUGHAN H.C. HOUSING AND COMM. DEV. — DATE
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHINICAL REQUIREMENTS

[signature] 8/10/04

NATURAL RESOURCES CONSERVATION SERVICES — DATE

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

[signature] 8/10/04

HOWARD S. C. D. — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

[signature] 8/13/04

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 8/13/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

[signature] 8/16/04

DIRECTOR — DATE

Date	No	Revision Description

OWNER/DEVELOPER: Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:

TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER

At Parcels A and B Fels Lane Renewal Project

Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18 , PLAT NO. 16815
HOWARD COUNTY, MARYLAND

TITLE:

SEDIMENT CONTROL NOTES AND DETAILS

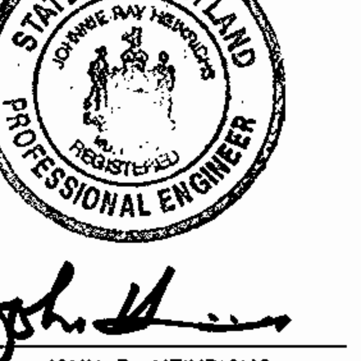
PREPARED FOR:

Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

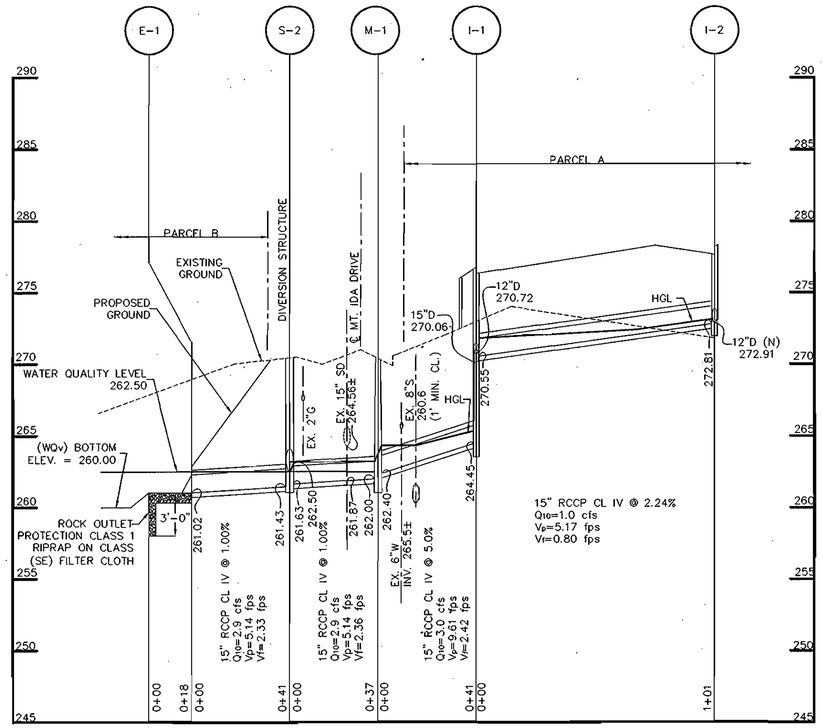
PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

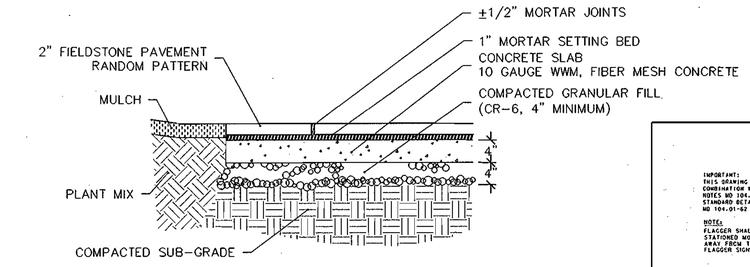
7.12.04
Date



[signature]
JOHN R. HEINRICHS
Professional Engr. No. 14920

Des By	R.J.W.	Scale	AS SHOWN	Proj No	03-013
Drn By	S.E.W.	Date	APRIL, 2004	DRAWING NO	de01tiber.dwg
Chk By	J.R.H.	SDP 04-027		4 OF 12	





MORTARED FIELDSTONE DETAIL

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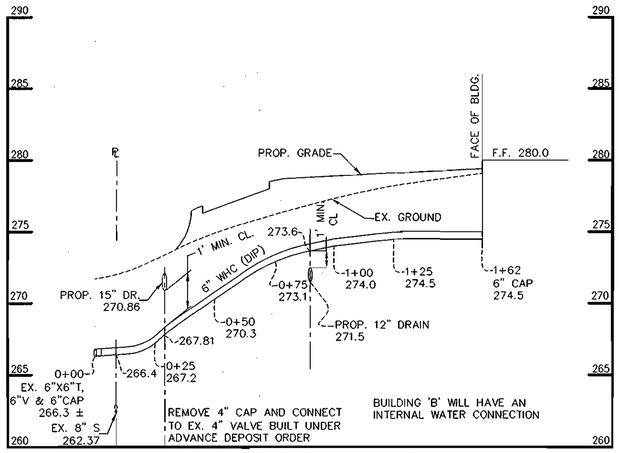
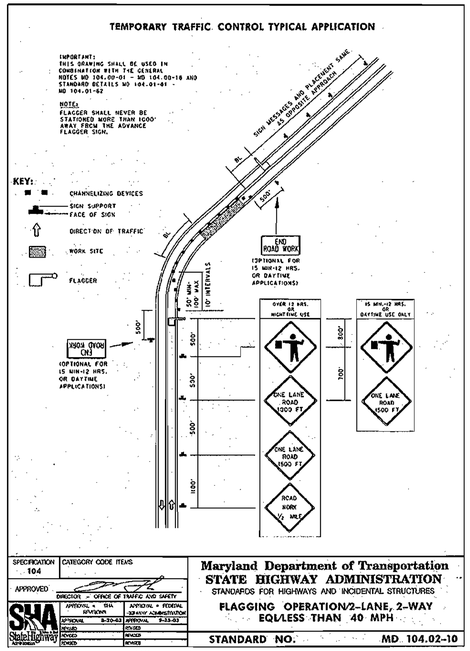
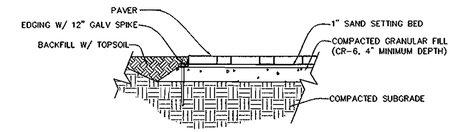


WHC PROFILE @ BLDGS A + B

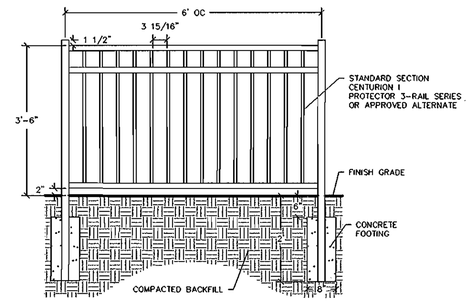


MAINTENANCE OF TRAFFIC PLAN



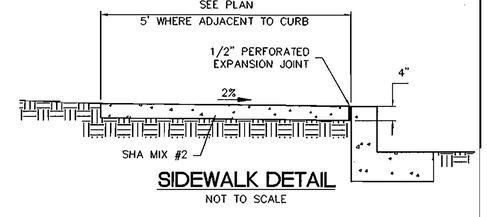
BRICK PAVER DETAIL

SCALE: 1/2"=1'-0"



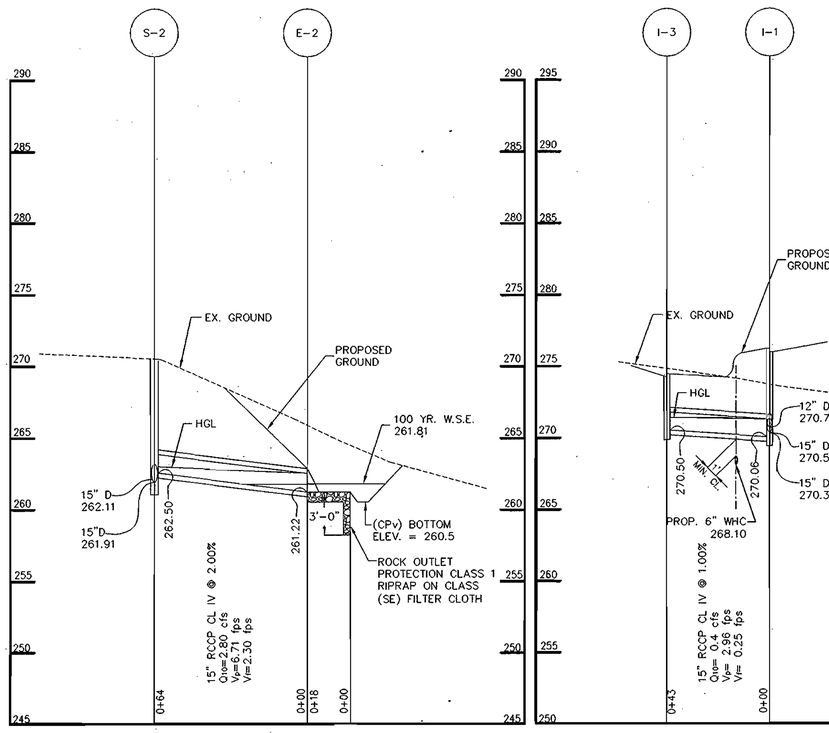
GUARDRAIL DETAIL

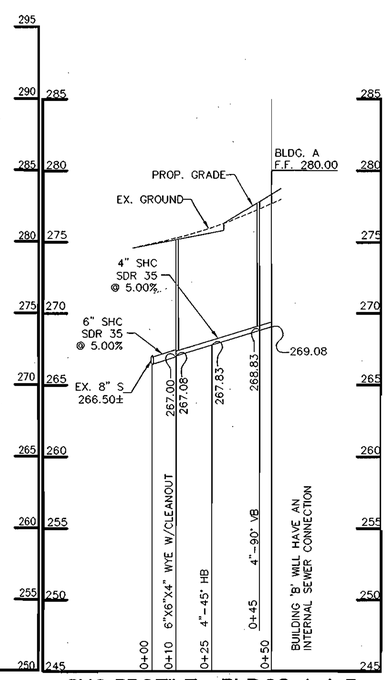
SCALE: 1/2"=1'-0"



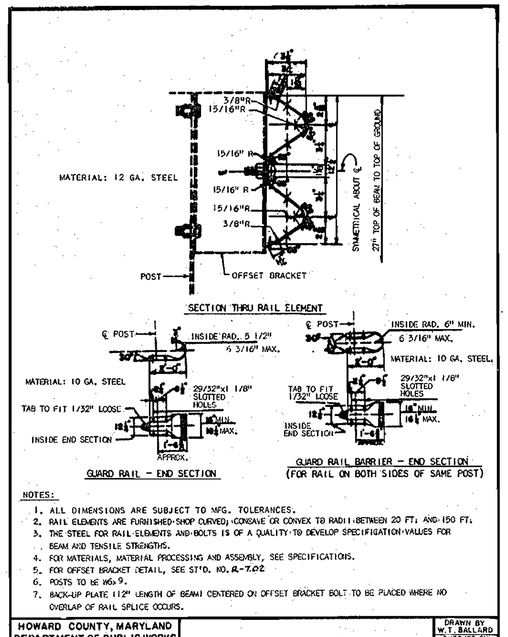
SIDEWALK DETAIL

NOT TO SCALE





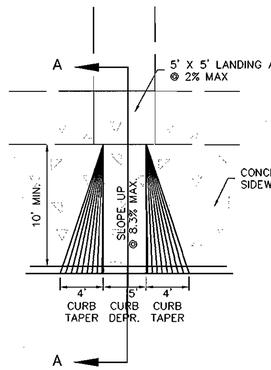
SHC PROFILE @ BLDGS. A + B



NOTES:

1. ALL DIMENSIONS ARE SUBJECT TO MFG. TOLERANCES.
2. RAIL ELEMENTS ARE FURNISHED SHOP CURVED, CONCAVE OR CONVEX TO RADII BETWEEN 20 FT. AND 150 FT.
3. THE STEEL FOR RAIL ELEMENTS AND BOLTS IS OF A QUALITY TO DEVELOP SPECIFICATION VALUES FOR BEAM AND TENSILE STRENGTHS.
4. FOR MATERIALS, MATERIAL PROCESSING AND ASSEMBLY, SEE SPECIFICATIONS.
5. FOR OFFSET BRACKET DETAIL, SEE ST'D. NO. R-7.02
6. POSTS TO BE W6.9.
7. BACK-UP PLATE 112" LENGTH OF BEAM CENTERED ON OFFSET BRACKET BOLT TO BE PLACED WHERE NO OVERLAP OF RAIL SPLICE OCCURS.

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS APPROVED 2-20-01 CHIEF, BUREAU OF ENGR. DATE	GUARD RAIL W BEAM GENERAL NOTES AND DETAILS	DRAWN BY W.T. BALLARD CHECKED BY J. L.B. NO SCALE R-7.01



TYPE 1 -PLAN

HANDICAP RAMP DETAIL

NOT TO SCALE

7.12.04
Date

STATE OF MARYLAND
JOHN R. HEINRICHS
No. 14920
REGISTERED
PROFESSIONAL ENGINEER

JOHN R. HEINRICHS
Professional Engr. No. 14920

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 6/16/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 5/13/04

DIRECTOR — DATE 6/16/04

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:

TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER

At the Fels Lane Renewal Site
Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2

HOWARD COUNTY, MARYLAND

TITLE:

PROFILES, DETAILS & M.O.T. PLAN

PREPARED FOR:

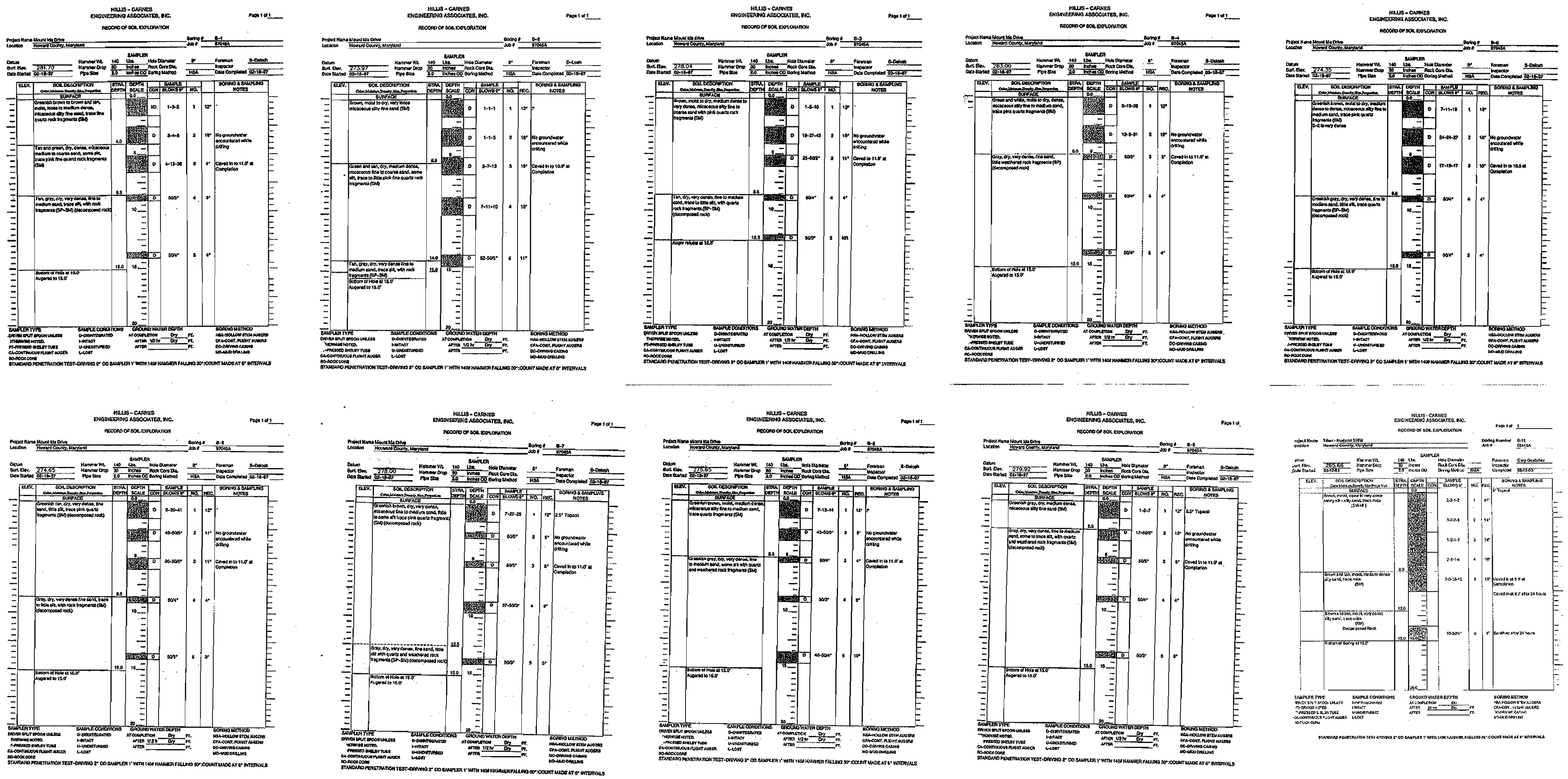
Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

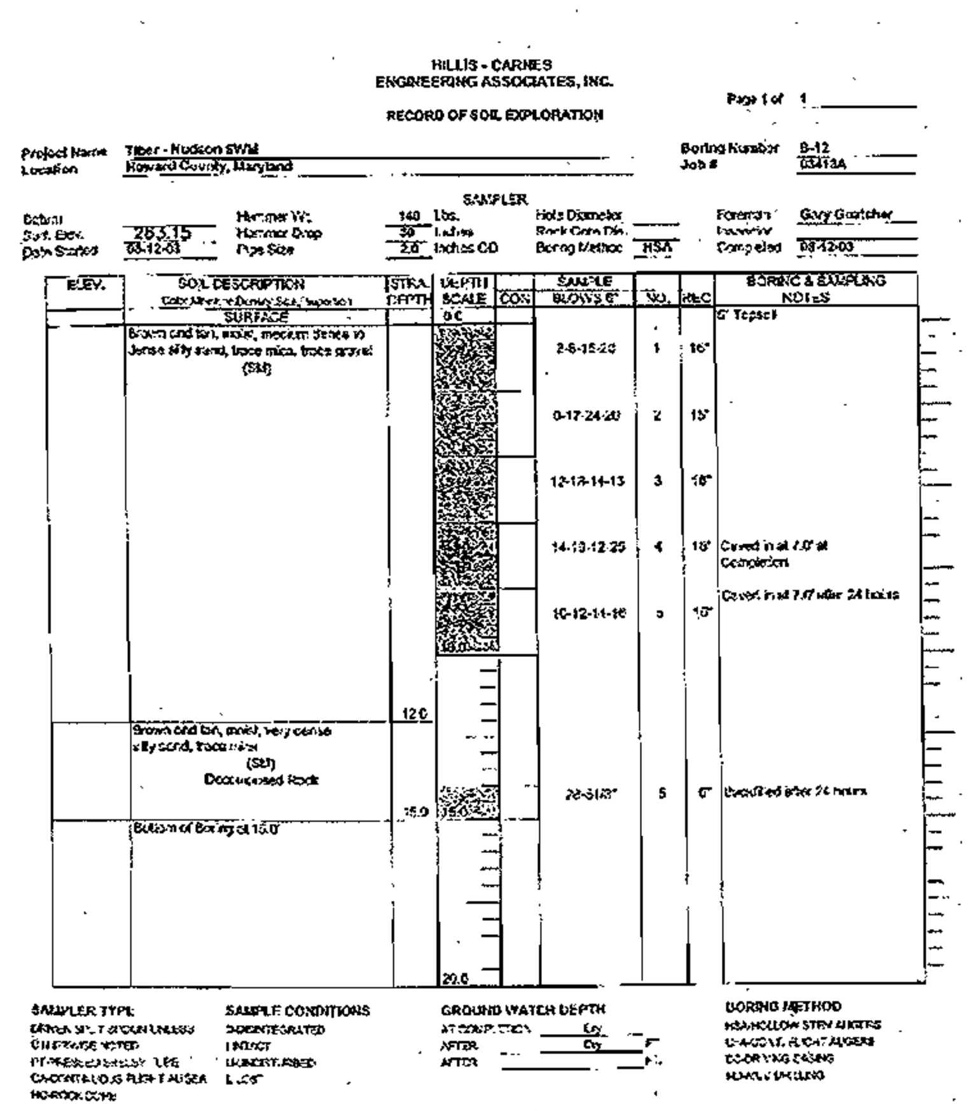
PREPARED BY:

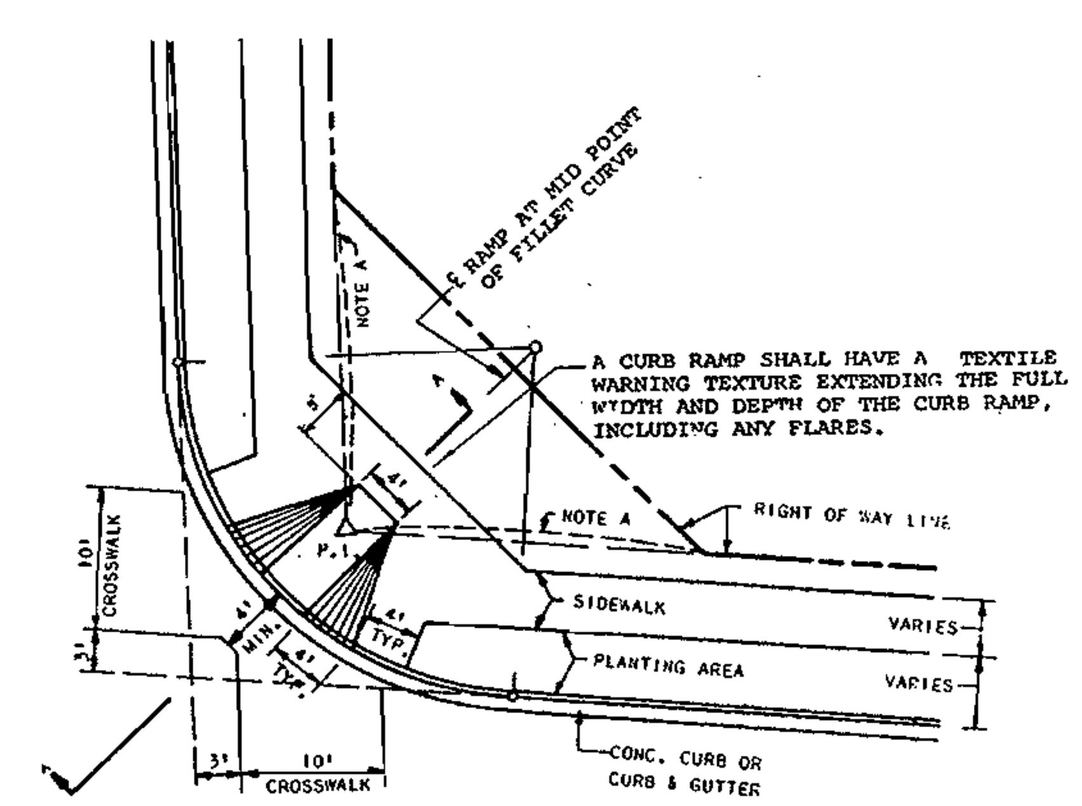
PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

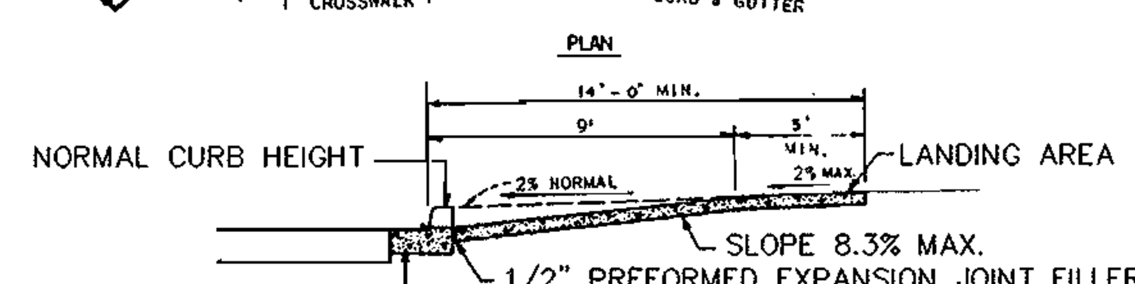
Des By R.J.W.	Scale H: 1" = 30' V: 1" = 5'	Proj No 03-013	
Drn By S.E.W.	Date APRIL, 2004	DRAWING NO pp01tiber.dwg	
Chk By J.R.H.	SDP 04-027	5 OF 12	

SDP 04-027









SECTION A-A

SIDEWALK RAMP DETAIL

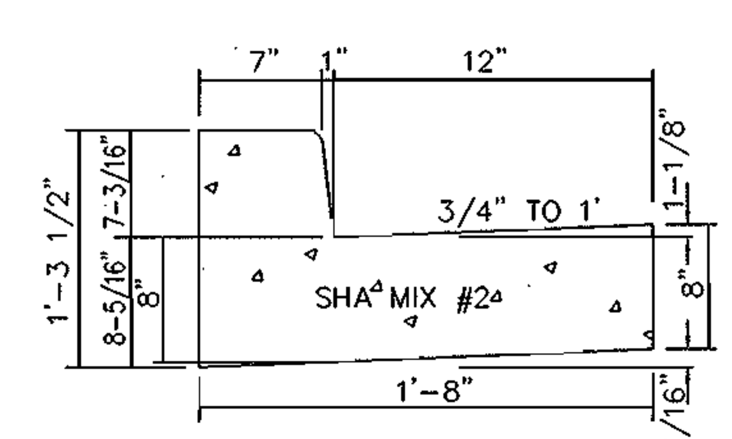
NOT TO SCALE

NOTES:

A. RIGHT OF WAY LINE TRUNCATION TO BE SET 25' FROM POINT OF INTERSECTION ALONG EACH OF THE INTERSECTING LINES AS SET FORTH IN SECTION 16-113, PAR. F3 OF SUBDIVISION REGULATIONS. MINIMUM DISTANCE BETWEEN BACK OF SIDEWALK AND RIGHT OF WAY LINE TO BE 1 FT.

B. TYPE A RAMP TO BE USED FOR ALL NEW CONSTRUCTION WHERE APPLICABLE UNLESS OTHERWISE DIRECTED BY THE DEPARTMENT OF PUBLIC WORKS.

C. SURFACE TEXTURE OF CONCRETE RAMP SHALL BE COARSE BROOMING OR OTHER NON-SKID TYPE FINISH.
*STANDARD 7" COMBINATION CURB AND GUTTER IS SHOWN. DETAILS TO BE SIMILAR FOR MODIFIED CURB AND GUTTER AND BITIMINUOUS CURB EXCEPT THAT FLOW LINE LIP IS TO BE OMITTED.



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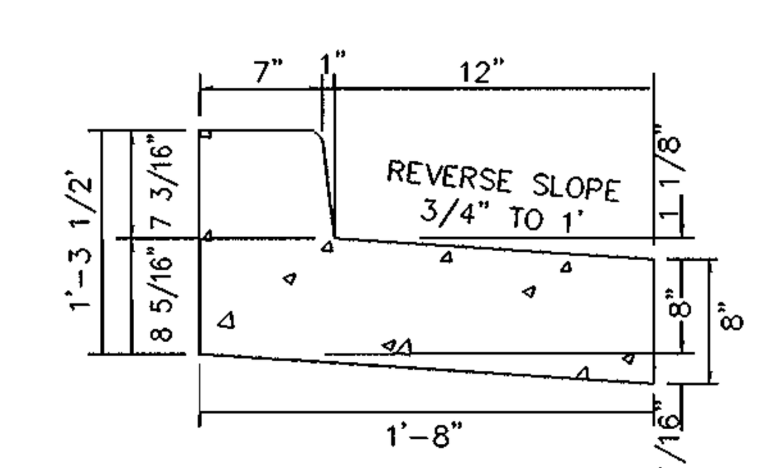
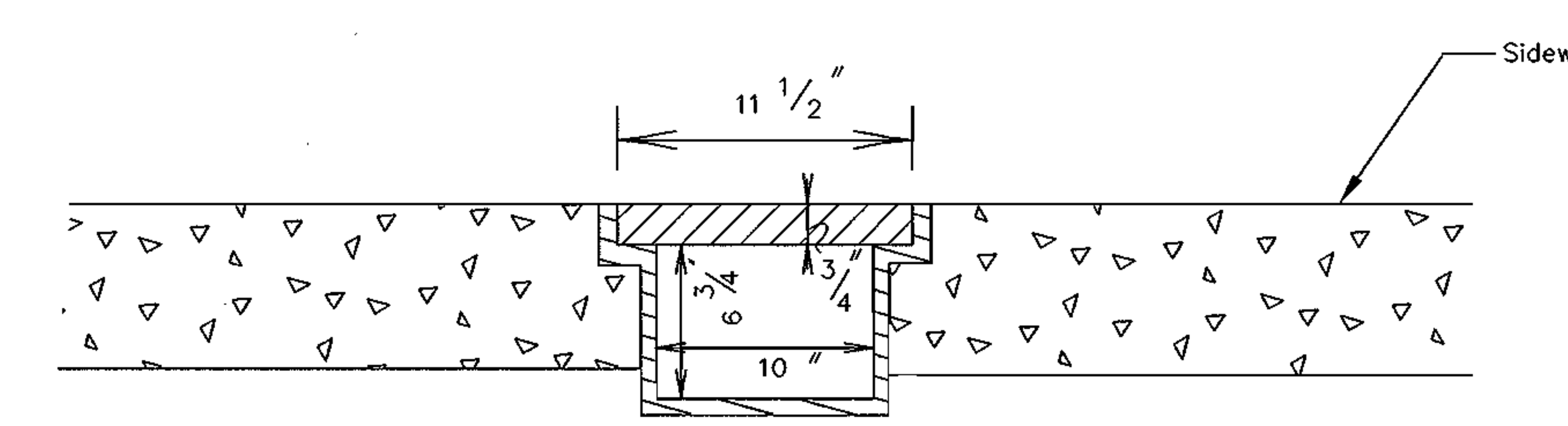


HOWARD COUNTY DESIGN MANUAL VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-3.01)

GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AS THE PAVEMENT

STANDARD 7" COMBINATION CURB AND GUTTER

NOT TO SCALE



TYPICAL SECTION

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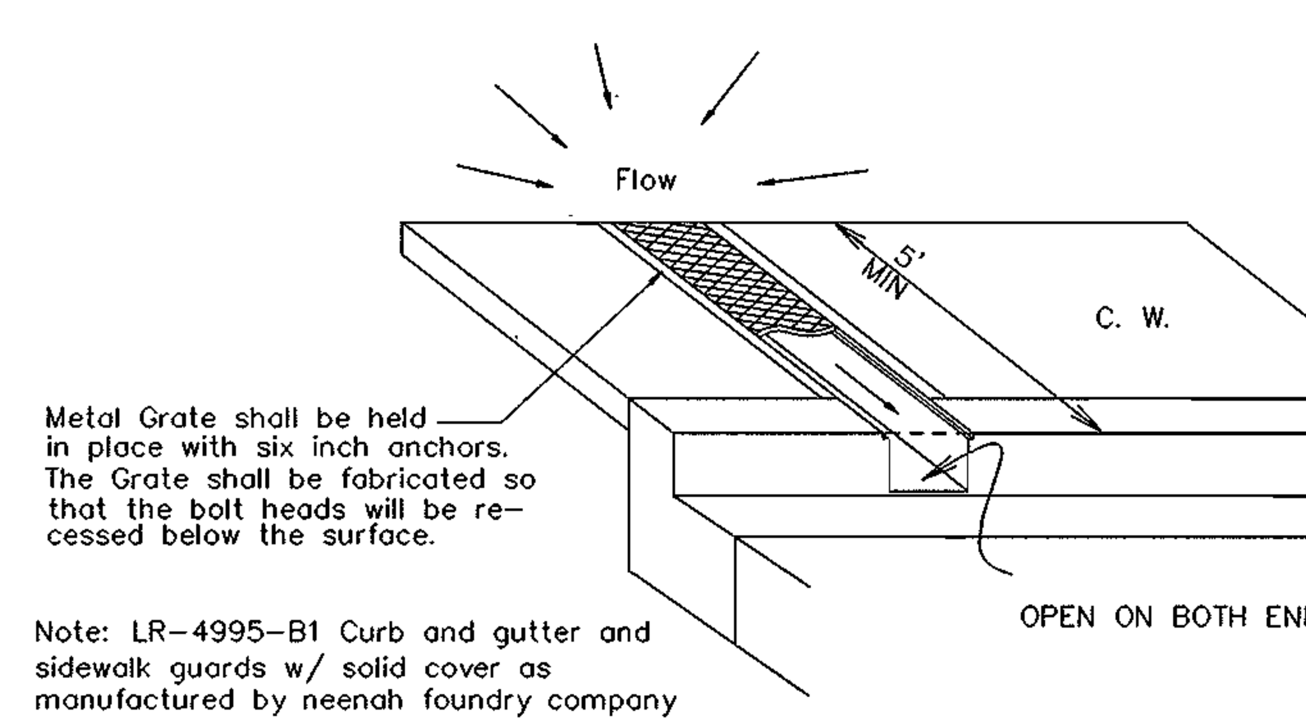


Metal Grate shall be held in place with six inch anchors. The Grate shall be fabricated so that the bolt heads will be recessed below the surface.

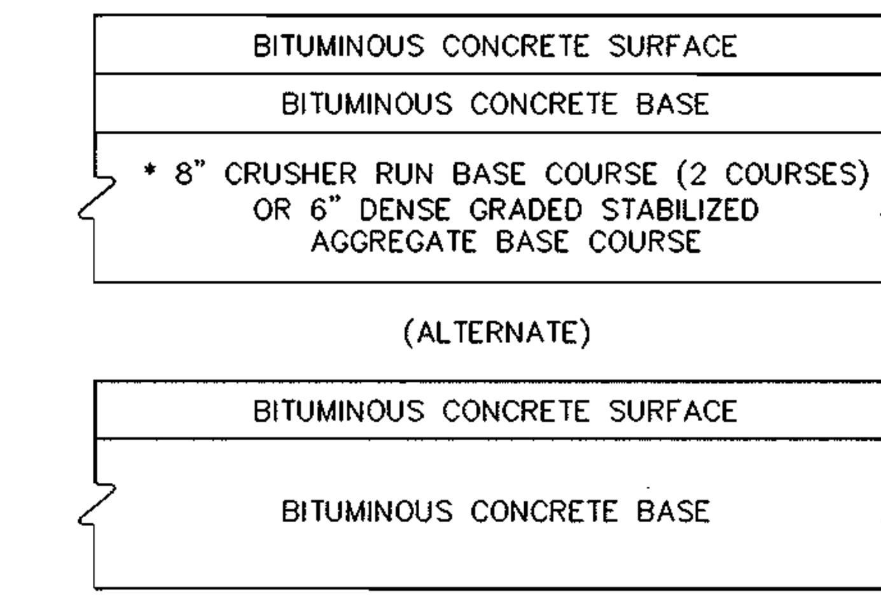
Note: LR-4995-B1 Curb and gutter and sidewalk guards w/ solid cover as manufactured by neenah foundry company

ISOMETRIC

NO SCALE

SIDEWALK DRAIN

NO SCALE



HOWARD COUNTY DESIGN MANUAL VOLUME IV STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

6 1/2" P-2 PAVING

NOT TO SCALE

ENGINEER'S CERTIFICATE

"I/WE 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 COUNTY SOIL CONSERVATION DISTRICT.

7.12.04 DATE

ENGINEER: JOHN R. HEINRICHS, VICE PRESIDENT PHOENIX ENGINEERING, INC.

DEVELOPER'S 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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD COUNTY SOIL CONSERVATION DISTRICT.

7.12.04 DATE

DEVELOPER: LEONARD VAUGHAN H.C. HOUSING AND COMM. DEV. HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

NATURAL RESOURCES CONSERVATION SERVICES — DATE

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

HOWARD S. C. D. — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/13/04 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 8/13/04 DATE

DIRECTOR — 8/14/04 DATE

Date	No	Revision Description

OWNER/DEVELOPER: Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:

TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER

At Parcels A and B Fels Lane Renewal Project

Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18, PLAT NO. 16815
HOWARD COUNTY, MARYLAND

TITLE:

BORING LOGS

PREPARED FOR:

Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

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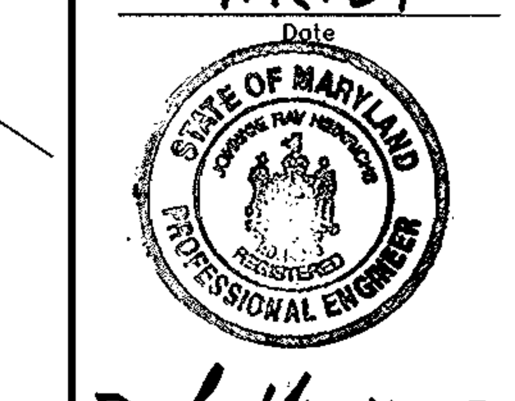
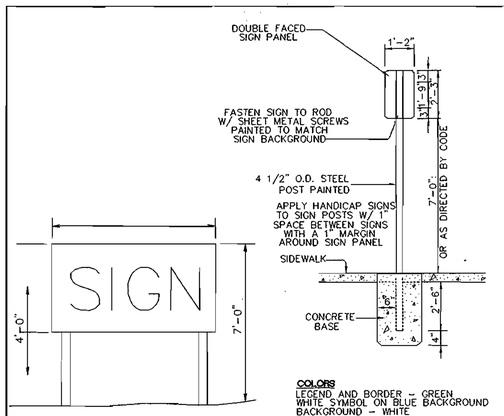


JOHN R. HEINRICHS
Professional Engr. No. 14920

Des By R.J.W.	Scale AS SHOWN	Proj No 03-013	
Drn By D.R.B.	Date APRIL, 2004	DRAWING NO br01tiber.dwg	
Chk By J.R.H.	SDP 04-027	6 OF 12	

SDP 04-027



SIGN DETAIL

NOT TO SCALE

COLORS
LEGEND AND BORDER – GREEN
WHITE SYMBOL ON BLUE BACKGROUND
BACKGROUND – WHITE

1. FREESTANDING SIGN 7' ABOVE FINISHED GRADE MOUNTED ON WALL OR STRUCTURE 6' ABOVE GROUND.
2. TWO SEPARATE SIGNS TO BE APPLIED TO METAL SIGN BOARD MOUNTED TO METAL POST.

HANDICAP SIGN DETAIL

NOT TO SCALE

$98 FINE SIGN

SIGN TO UTILIZE AN ALUMINUM BLANK 6"X12"X0.060" THICK WITH TWO SINGLE POST MOUNTING HOLES. THE TEXT AND BORDER SHALL BE STANDARD GREEN TO MATCH THAT ON R7-8 AND THE BACKGROUND SHALL BE REFLECTIVE WHITE. TEXT SHALL BE IN 3" CHARACTERS. SIGN SHALL BE MOUNTED DIRECTLY BELOW THE STANDARD R7-8 RESERVED PARKING FOR HANDICAPPED SIGN. ITS BOTTOM EDGE SHALL BE NO LESS THAN 7' ABOVE GROUND. IF THE SIGN IS PLACED AGAINST A BUILDING OR OTHER LOCATION WHERE VEHICLE OR PEDESTRIAN TRAFFIC IS NOT OBSTRUCTED THE BOTTOM EDGE OF SIGN SHALL BE AT LEAST 6' BUT NOT MORE THAN 10' ABOVE GROUND.

STRUCTURE SCHEDULE

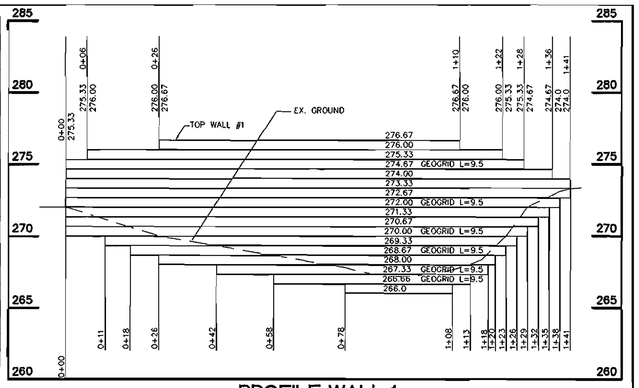
NO.	TYPE	LOCATION	INV. IN	INV. OUT	RIM/SLAB ELEV.	REMARKS
M-1	4' DIA. MANHOLE	SEE PLAN	262.40	262.00	RIM @ EX. GR.	HC STD. G 5.12
S-2	DIVERSION STRUCTURE	SEE PLAN	261.63	261.43 262.50	SLAB @ EX. GR.	DETAIL– SEE SHEET 9
E-1	15" CONC END SECT.	SEE PLAN	–	261.02	–	HC STD SD 5.51
E-2	15" CONC END SECT.	SEE PLAN	–	261.22	–	HC STD SD 5.51
S-1	'D' INLET	SEE PLAN	259.75	258.73	261.85 @ THR.	HC STD SD 4.11
I-1	A-5 INLET	SEE PLAN	270.72 270.55 270.06	270.35	276.30 @ THR.	HC STD SD 4.01
I-2	A-5 INLET	SEE PLAN	272.91	272.81	277.75 @ THR.	HC STD SD 4.01
I-3	A-5 INLET	SEE PLAN	–	270.50	274.28 @ THR.	HC STD SD 4.01

SOIL CLASSIFICATION

SYMBOL	TYPE	DESCRIPTION
BrB2	A	BRANDYWINE LOAM, 3 TO 8 PERCENT SLOPES, MODERATELY ERODED
BrC2	A	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, MODERATELY ERODED
BrC3	A	BRANDYWINE LOAM, 8 TO 15 PERCENT SLOPES, SEVERELY ERODED
BrD2	A	BRANDYWINE LOAM, 15 TO 25 PERCENT SLOPES, MODERATELY ERODED
BrD3	A	BRANDYWINE LOAM , 15 TO 25 PERCENT SLOPES, SEVERELY ERODED
BrF	A	BRANDYWINE LOAM
ALL STORM DRAIN PIPE BEDDING TO BE CLASS 'C'		

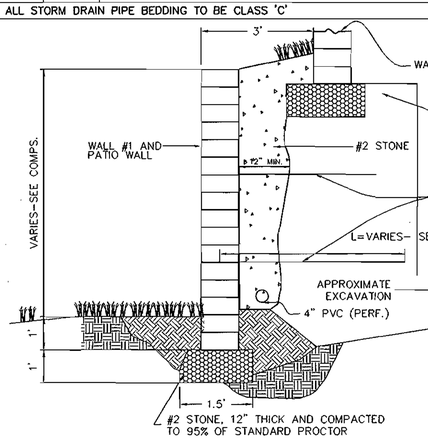
PIPE SCHEDULE

LOCATION	LENGTH	SIZE	TYPE
E-1~M-2	39	15"	RCCP CL IV
M-2~M-1	39	15"	RCCP CL IV
M-1~I-1	31	15"	RCCP CL IV
I-1~I-2	98	15"	RCCP CL IV
M-2~E-2	62	15"	RCCP CL IV
I-3~I-1	41	15"	RCCP CL IV
S-1~E-1	25	15"	RCCP CL IV
TOTAL	335	15"	RCCP CL IV



PROFILE WALL 1

SCALE: H: 1"=20'
V: 1"=5'



RETAINING WALL DETAIL

NOT TO SCALE

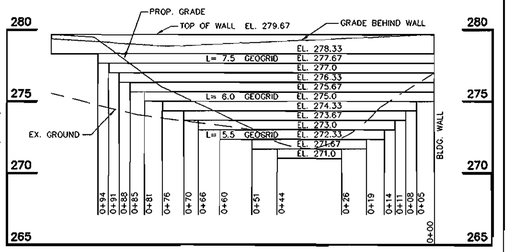
NOTES:

A. RETAINING WALL TO BE AS MANUFACTURED BY KEYSTONE RETAINING WALL SYSTEMS, 4444 WEST 78TH STREET MINNEAPOLIS, MN. 55435 1–800–747–8971.

B. THE LEVELING PAD SUB-GRADE BEARING MUST BE CERTIFIED BY MARYLAND REGISTERED PROFESSIONAL GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTION.

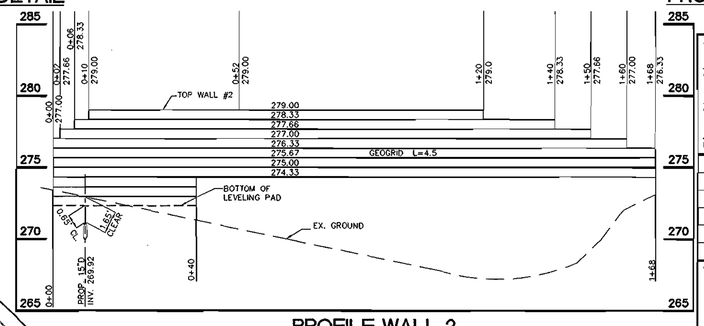
C. THE RETAINING WALL CONSTRUCTION MUST BE INSPECTED BY A QUALIFIED ENGINEER DURING CONSTRUCTION.

D. RETAINED BACKFILL TO BE NATIVE SOILS PLACED IN 8" LIFTS AND COMPACTED TO 95% OF STANDARD PROCTOR.



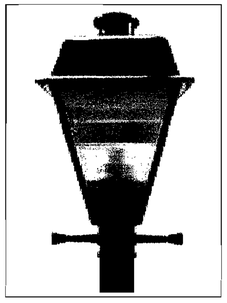
PROFILE WALL #3 @ PATIO

SCALE: H: 1"=20'
V: 1"=5'



PROFILE WALL 2

SCALE: H: 1"=20'
V: 1"=5'



ALL SITE LIGHTING FIXTURES ARE COLONIAL TYPE HIGH PRESSURE SODIUM WITH 3400 LUMENS MOUNTED ON 14' HIGH ROUND BLACK FIBERGLASS POLES WITHOUT HOUSE SHIELDS.

LIGHT DETAIL

NOT TO SCALE

DRAINAGE AREA MAP

SCALE: 1" = 50'

7.12.04
Date

STATE OF MARYLAND
JOHNNIE RAY HEINRICHS
No. 14920
REGISTERED
PROFESSIONAL ENGINEER

JOHN R. HEINRICHS
Professional Engr. No. 14920

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/12/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/16/04

DIRECTOR — DATE 8/16/04

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:
TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER
At Parcels A and B Feis Lane Renewal Project

Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
Plat Book 17, Folio 18, PLAT NO.16815
HOWARD COUNTY, MARYLAND

TITLE:
DRAINAGE AREA MAP AND DETAILS

PREPARED FOR:

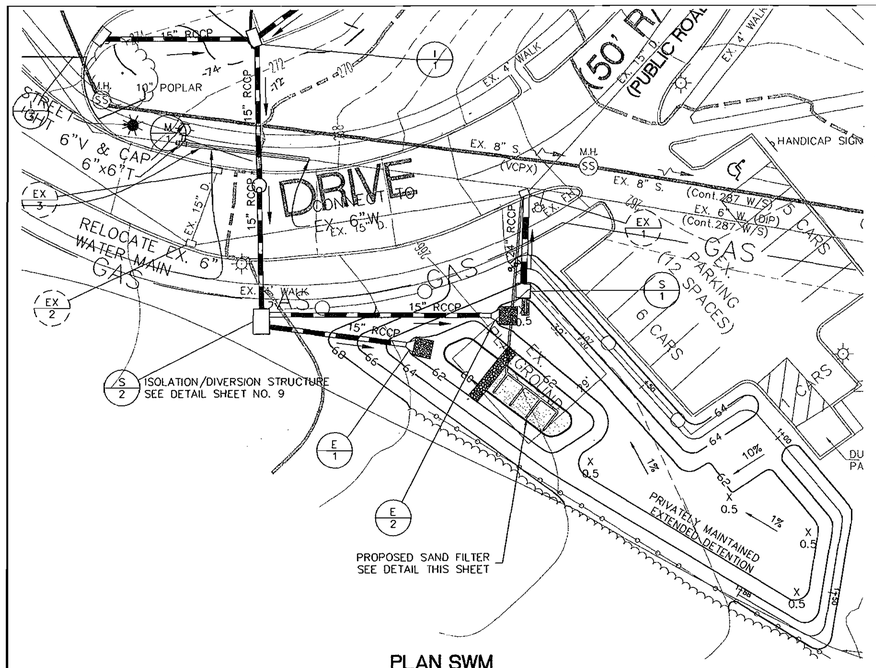
Symmetry First
Architects, LLC
PO Box 1522
Columbia, MD 21044
410–531–9055
410–531–9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420–A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247–8833 FAX 247–9397

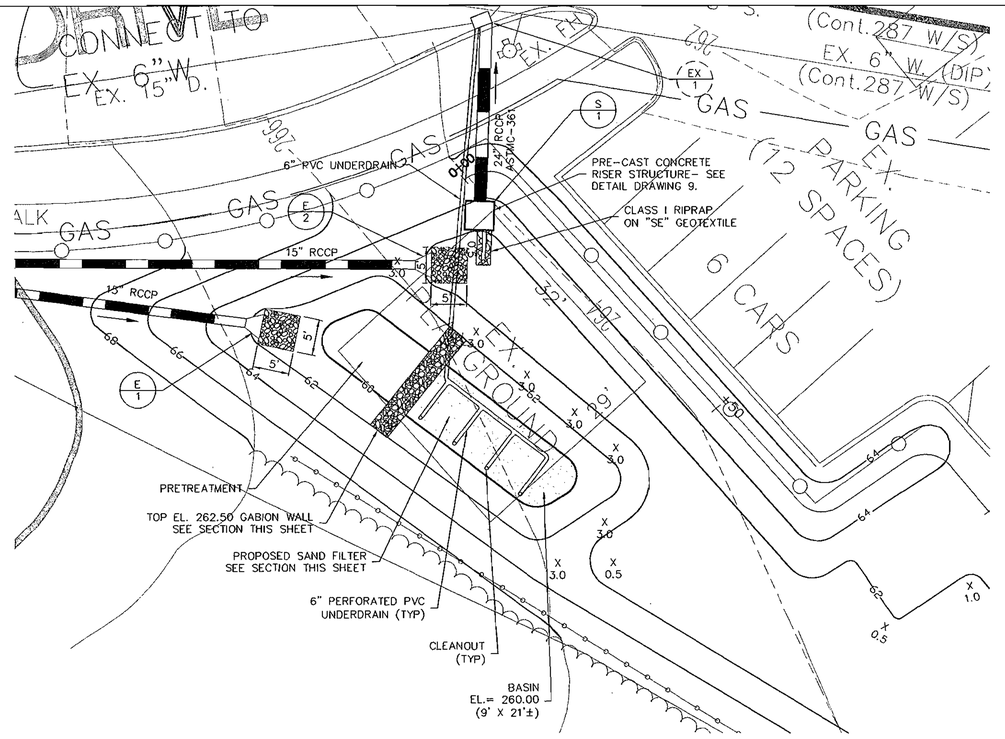
Des By R.J.W.		Scale AS SHOWN	Proj No 03-013
Drn By S.E.W.		Date APRIL, 2004	DRAWING NO do01tiber.dwg
Chk By J.R.H.		SDP 04-027	7 OF 12

SDP 04-027



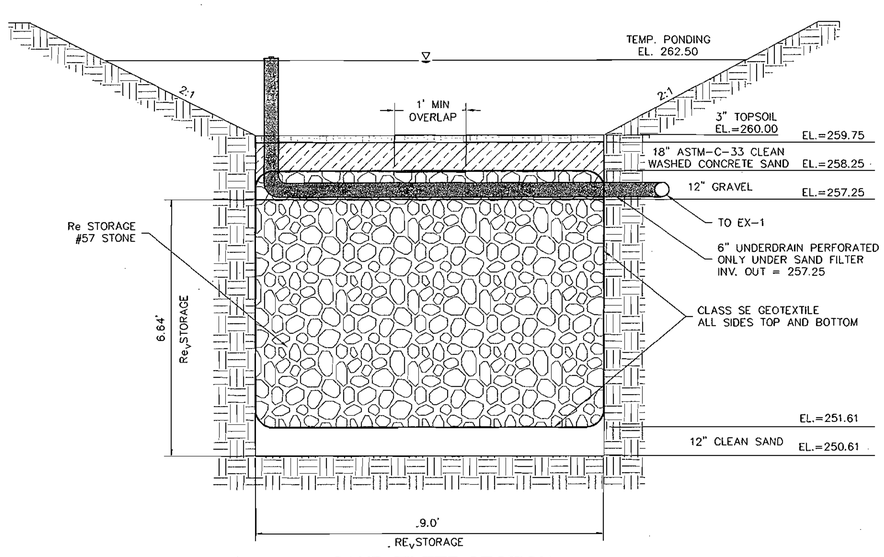
PLAN SWM

SCALE: 1" = 20'



SAND FILTER DETAIL

SCALE: 1" = 10'



SAND FILTER SECTION

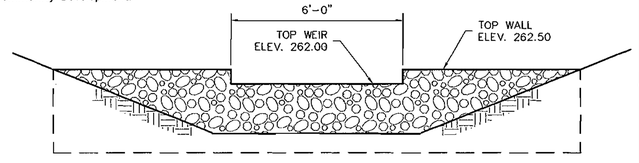
NOT TO SCALE

SAND FILTER SPECIFICATIONS

1. MATERIAL SPECIFICATIONS FOR SAND FILTERS
   The allowable materials for Sand Filter construction are detailed in Table B.3.1.
2. SAND FILTER TESTING SPECIFICATIONS
   Underground Sand Filters, Facilities within sensitive groundwater Aquifers and Filters designed to serve urban hot spots are to be tested for water tightness prior to placement of Filter media. Entrances and exits should be plugged and the system completely filled with water to demonstrate water tightness. Water tightness means no leakage for a period of 8 hours.
   All overflow Weirs, multiple Orifices and flow distribution Slots are to be field-tested to verify adequate distribution of flows.
3. SAND FILTER CONSTRUCTION SPECIFICATIONS
   Provide sufficient maintenance access (i.e., 12'-wide road with legally recorded easement). Vegetated access slopes are to be a maximum of 10%; gravel slopes to 15%; paved slopes to 25%.
   Absolutely no runoff is to enter the Filter until all contributing drainage areas have benn stabilized. Surface of Filter bed is to be level.
   All underground Sand Filters should be clearly delineated with signs so that they may be located when maintenance is due.
   Surface Sand Filters may be planted with appropriate grasses; see Appendix A.

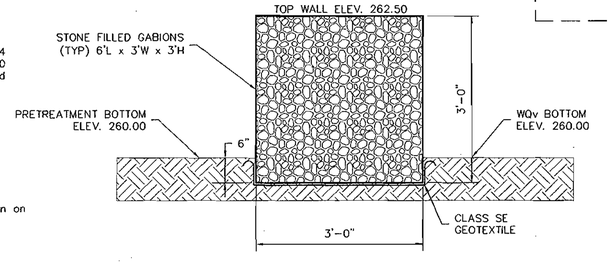
FILTERING MAINTENANCE CRITERIA

1. The Sediment Chanber outlet devices shall be cleaned/repaired when drawdown times within the chamber exceeds 36 hours. Trash and debris shall be removed as necessary.
2. Sediment should be cleaned out of the Sedimentation Chamber when it accumulates to a depth of more than 6 inches. Vegetation within the Sedimentation Chamber should be limited to a height of 18 inches.
3. When th filtering capacity of the Filter diminishes (e.g., when water ponds on the surface of the Filter bed for more than 72 hours), the top few inches of discolored material shall be removed and shall replaced with fresh material. The removed sediments should be disposed in an accepted manner (e.g., landfill). Silt/sediment should be removed from the Filter bed when the accumulation exceeds one inch.
4. Organic Filters (F-4) or Surface Sand Filters (F-1) that have a grass cover should be mowed a minimum of 3 times per growing season to maintain maximum grass height less than 12 inches.
5. Direct maintenance access shall be provided to the Pretreatment area and the Filter bed.
6. Maintenance shall be provided be the owner, Howard County, Maryland Housing & Community Development.



GABION WALL ELEVATION

NOT TO SCALE



GABION WALL SECTION

NOT TO SCALE

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the pond(s) shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards And Specifications For Ponds" (MD-387). The ponds owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observances that may be intications of distress such as excessive seepage, turbid seepage, sliding or slumping.

John R. Heinrichs _____ Signature

MD Reg. P.E.# 14920 7.12.04 Date

DESIGN CERTIFICATION

I hereby certify that this plan has been designed in accordance with the 1994 Standards and specifications for Soil Erosion and Sediment Control, the 2000 Maryland Storm Water Design Manual, Volumes I & II and the Maryland Department of the Environment Storm Water Management Regulations.

John R. Heinrichs _____ Signature

MD Reg. P.E.# 14920 7.12.04 Date

AS BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meets the approved plans and specifications.

MD Reg. P.E. No. 14920 _____ Signature

_____ Date

OPERATION AND MAINTENANCE SCHEDULE
FOR PRIVATELY OWNED AND MAINTAINED SURFACE STORMWATER FILTRATION SYSTEMS
(F-1, F-4, & F-5)

1. The stormwater wetland facility shall be inspected annually and after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
2. The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegitation reaches 18" in height, or as needed.
3. Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
4. Debris and litter shall be removed during regular mowing operations and as needed.
5. Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
6. Remove silt when it exceeds four (4) inches deep in the forebay.
7. When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
8. A log book shall be maintained to determine the rate at which the facility drains.
9. The maintenance log book shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
10. Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicated that a more frequent schedule is required.

ENGINEER'S CERTIFICATE

"I/WE 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 COUNTY SOIL CONSERVATION DISTRICT."

ENGINEER: JOHN R. HEINRICHS, VICE PRESIDENT PHOENIX ENGINEERING, INC. — 7.12.04 DATE

DEVELOPER'S 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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: LEONARD VAUGHAN, H.C. HOUSING AND COMM. DEV. — 7.12.04 DATE
HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

NATURAL RESOURCES CONSERVATION SERVICES — DATE

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

HOWARD S.C.D. — DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/13/04 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 8/13/04 DATE

DIRECTOR — 8/16/04 DATE

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:
TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER
At the Fels Lane Renewal Site
Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
HOWARD COUNTY, MARYLAND

TITLE:
STORM WATER MANAGEMENT FACILITY PLAN AND DETAILS

PREPARED FOR:

Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

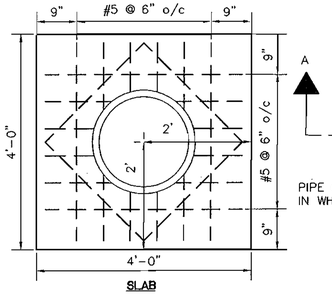
Des By	D.R.B.	Scale AS SHOWN	Proj No 03-013
Drn By	V.M.S.	Date APRIL, 2004	DRAWING NO sw01tiber.dwg
Chk By	J.R.H.	SDP 04-027	8 OF 12

7.12.04 Date

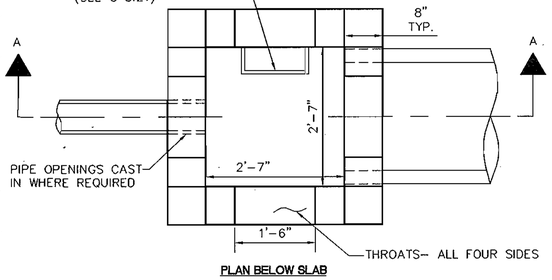
STATE OF MARYLAND — JOHN RICHARD HEINRICHS — No. 14920 — REGISTERED PROFESSIONAL ENGINEER

JOHN R. HEINRICHS
Professional Engr. No. 14920

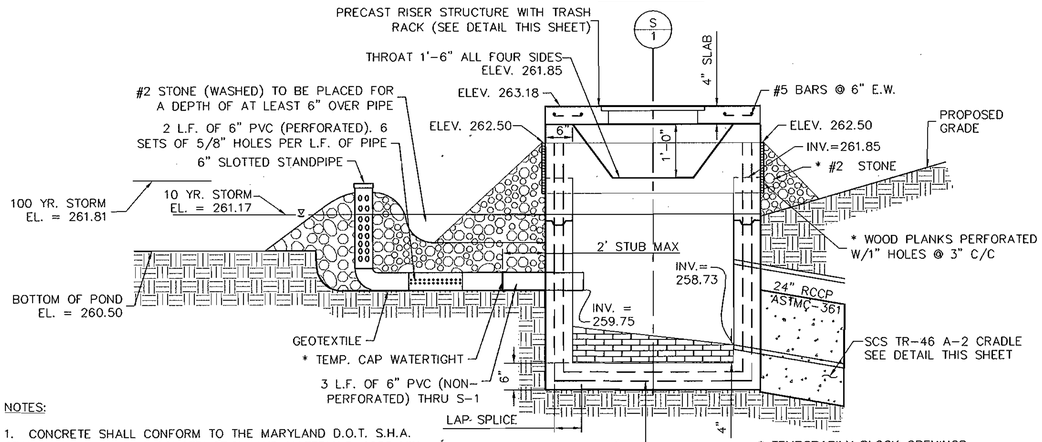
SDP 04-027



SLAB



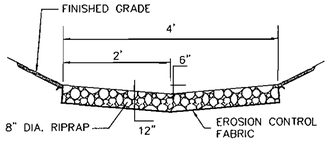
PLAN BELOW SLAB



NOTES:

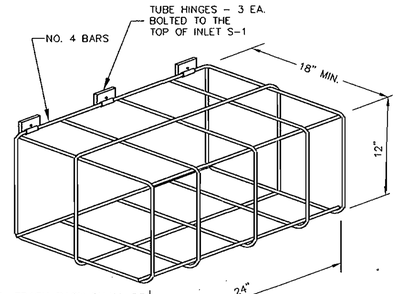
1. CONCRETE SHALL CONFORM TO THE MARYLAND D.O.T. S.H.A. STANDARD SPEC'S FOR CONSTRUCTION AND MATERIALS, 1982 MIX. NO. 6, EXCEPT THAT TY. III CEMENT & A.S.T.M. C33 NO. 8 COARSE AGG. SHALL BE USED.

2. WELDED WIRE FABRIC SHALL CONFORM TO A.S.T.M. A-185, LAP SPLICES SHALL BE A MIN. OF 1½ TRANSVERSE WIRE SPACES. WIRE CAGES SHALL BE TACK WELDED TO PRODUCE A RIGID UNIT.



PILOT CHANNEL

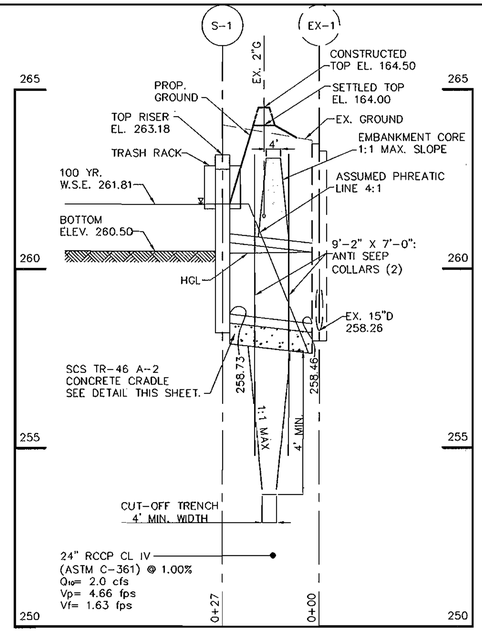
NOT TO SCALE



NOTE: TRASH RACK SHALL BE HOT DIPPED GALVANIZED AND PAINTED BATTLESHIP GREY.

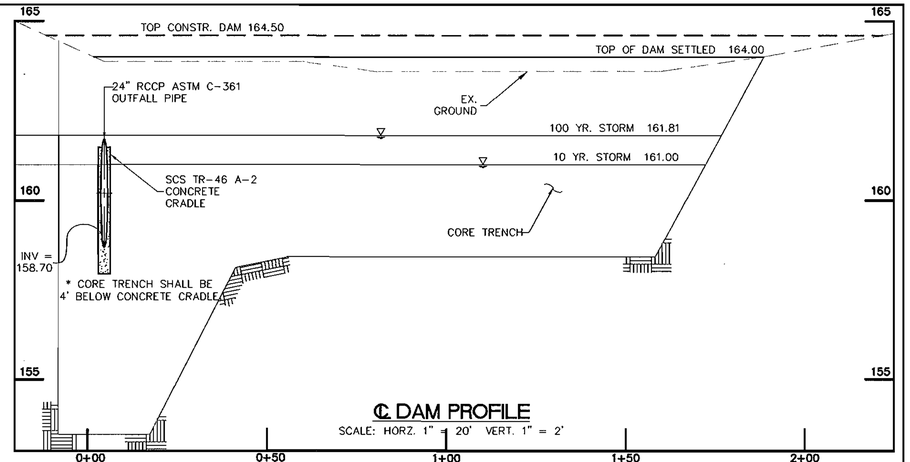
TRASH RACK DETAIL @ S-1

1 1/2" = 1'-0"



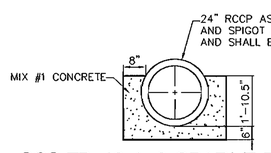
PRINCIPAL SPILLWAY PROFILE

SCALE: HORZ. 1" = 20' VERT. 1" = 2'



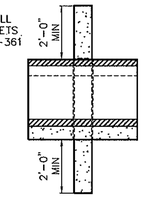
℄ DAM PROFILE

SCALE: HORZ. 1" = 20' VERT. 1" = 2'



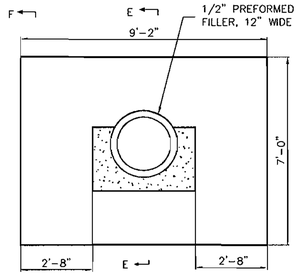
SCS TR-46 A-2 CRADLE DETAIL

SCALE: 3/8" = 1'-0"



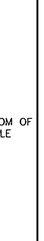
SECTION E-E

SCALE: 3/8" = 1'-0"



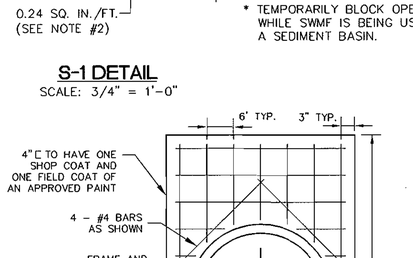
ANTI-SEEP COLLAR DETAIL

SCALE: 3/8" = 1'-0"



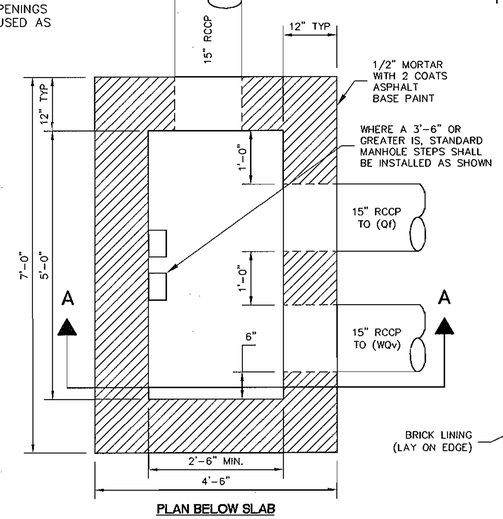
SECTION F-F

SCALE: 3/8" = 1'-0"



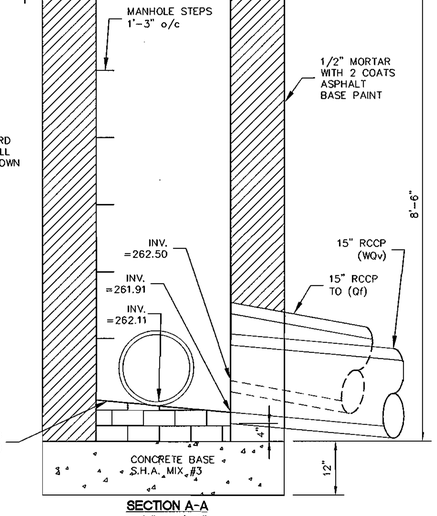
SLAB TOP

3/4" = 1'-0"



PLAN BELOW SLAB

3/4" = 1'-0"



SECTION A-A

3/4" = 1'-0"

S-2 ISOLATION/DIVERSION MODIFIED A-5 INLET CAST IN PLACE DETAIL

DESIGN CERTIFICATION

I hereby certify that this plan has been designed in accordance with the 1994 Standards and specifications for Soil Erosion and Sediment Control, the 2000 Maryland Storm Water Design Manual, Volumes I & II and the Maryland Department of the Environment Storm Water Management Regulations.

John R. Heinrichs _____ Signature

MD Reg. P.E.# 14920 7.12.04 Date

AS BUILT CERTIFICATION

I hereby certify that the facility shown on this plan was constructed as shown on the "as-built" plans and meets the approved plans and specifications.

MD Reg. P.E. No. 14920 _____ Signature

_____ Date

OPERATION, MAINTENANCE AND INSPECTION

Inspection of the pond(s) shown herein shall be performed at least annually, in accordance with the checklist and requirements contained within USDA, SCS "Standards And Specifications For Ponds" (MD-387). The pons owner(s) and any heirs, successors, or assigns shall be responsible for the safety of the pond and the continued operation, surveillance, inspection, and maintenance thereof. The pond owner(s) shall promptly notify the Soil Conservation District of any unusual observances that may be intications of distress such as excessive seepage, turbid seepage, sliding or slumping.

John R. Heinrichs _____ Signature

MD Reg. P.E.# 14920 7.12.04 Date

REVIEWED FOR HOWARD COUNTY SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENTS

NATURAL RESOURCES CONSERVATION SERVICES — 8/16/04 DATE

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

HOWARD S.C.D. — 8/16/04 DATE

APPROVED, DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 8/12/04 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT — 8/12/04 DATE

DIRECTOR — 8/16/04 DATE

ENGINEER'S CERTIFICATE

"I/WE 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 COUNTY SOIL CONSERVATION DISTRICT."

ENGINEER: JOHN R. HEINRICHS, VICE PRESIDENT PHOENIX ENGINEERING, INC. — 7.12.04 DATE

DEVELOPER'S 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 MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."

DEVELOPER: LEONARD VAUGHAN, H.C. HOUSING AND COMM. DEV. DEPARTMENT OF PUBLIC WORKS — 7.12.04 DATE

7.12.04 Date

STATE OF MARYLAND — JOHN RICHARD HEINRICHS — No. 14920 — REGISTERED PROFESSIONAL ENGINEER

JOHN R. HEINRICHS
Professional Engr. No. 14920

Date	No	Revision Description

OWNER/DEVELOPER:
Attn., Leonard Vaughan
Howard County, Maryland
Housing & Community Development
6751 Columbia Gateway Drive
Columbia, Md. 21046 (410) 313-6348

PROJECT:
TIBER HUDSON SENIOR HOUSING AND COMMUNITY CENTER
At the Fels Lane Renewal Site
Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2
HOWARD COUNTY, MARYLAND

TITLE:
STORM WATER MANAGEMENT DETAILS

PREPARED FOR:

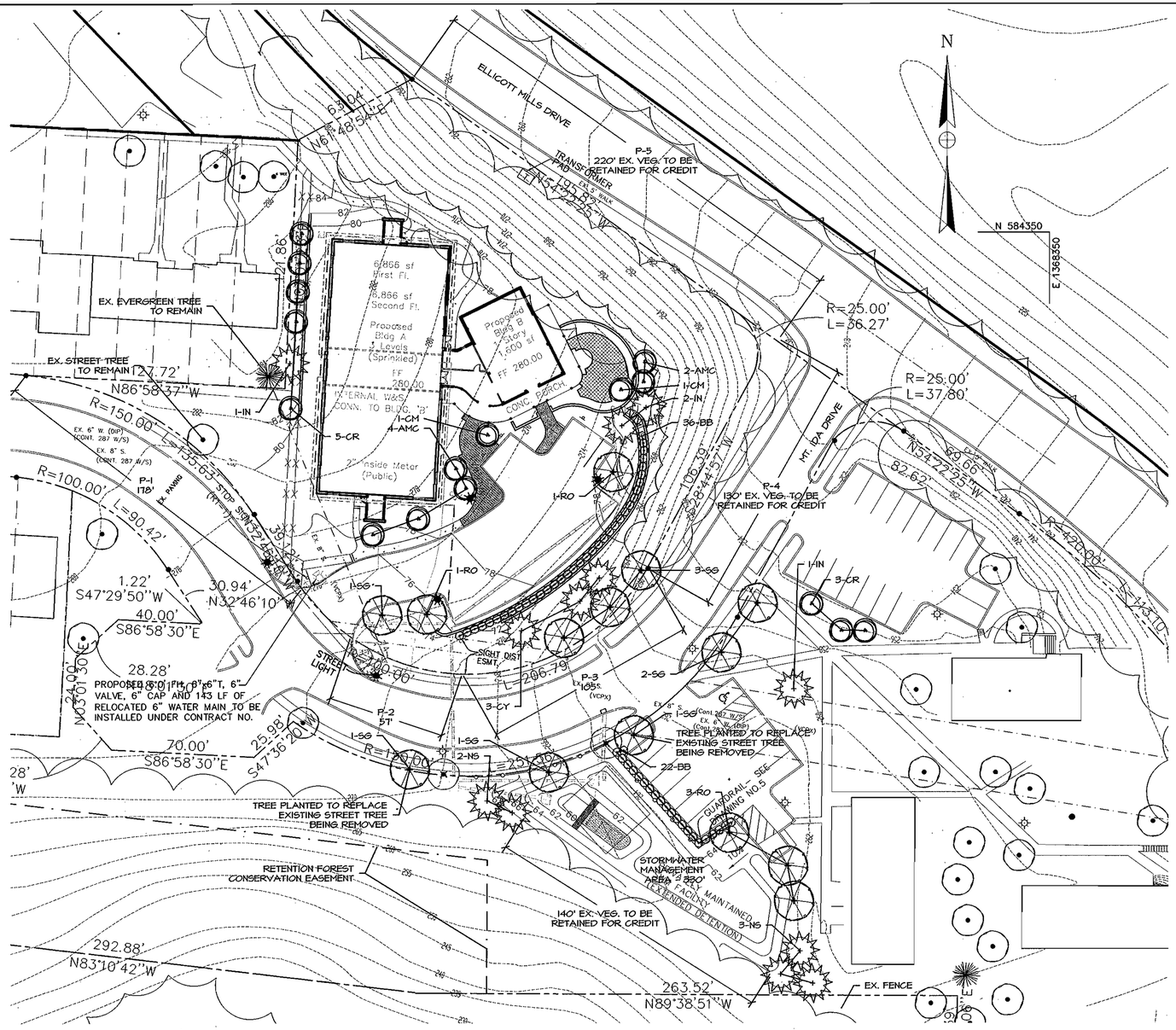
Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
www.symmetryfirst.com

PREPARED BY:

PHOENIX ENGINEERING, INC.
CONSULTING ENGINEERS
1420-A JOH AVENUE
BALTIMORE, MARYLAND 21227
(410) 247-8833 FAX 247-9397

Des By	D.R.B.	Scale AS SHOWN	Proj No 03-013
Drn By	S.E.W.	Date APRIL, 2004	DRAWING NO s\02\iber.dwg
Chk By	J.R.H.	SDP 04-027	9 OF 12

SDP 04-27



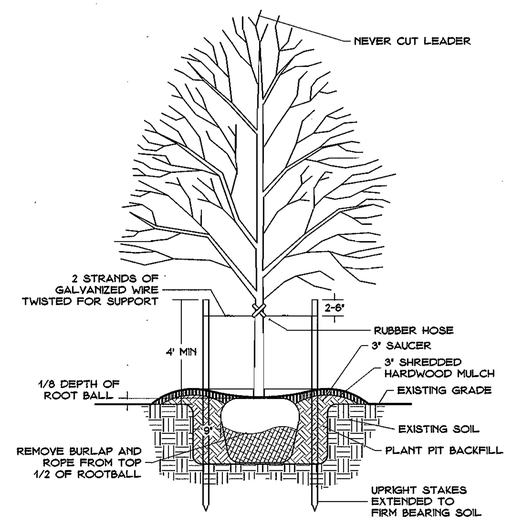
Plant List

Quan.	Key	Botanical Name	Common Name	Size	Remarks
Trees					
6	AMC	Amelanchier grandiflora 'Autumn Brilliance'	Autumn Brilliance Serviceberry	8-10' ht.	B&B or cont.
2	CM	Lagerstroemia indica 'Natchez'	Natchez Crapemyrtle (white)	8-10' ht.	B&B or cont.
8	CR	Cornus X "Rutban" Constellation	Constellation White Dogwood	8-10' ht.	B&B or cont.
3	CY	Cryptomeria japonica	Japanese Cedar	6-8' ht.	B&B or cont.
4	IN	Ilex x 'Nellie R. Stevens'	Nellie Stevens Holly	6-8' ht.	B&B or cont.
5	NS	Picea abies	Norway Spruce	6-8' ht.	B&B or cont.
5	RO	Quercus borealis	Northern Red Oak	2 1/2-3" cal.	B&B or cont.
9	SG	Liquidambar styraciflua 'Rotundiloba'	Fruitless Sweetgum	2 1/2-3" cal.	B&B or cont.
Shrubs					
58	BB	Euonymus alatus 'Compacta'	Dwarf Winged euonymus	24-30" ht.	B&B or cont.

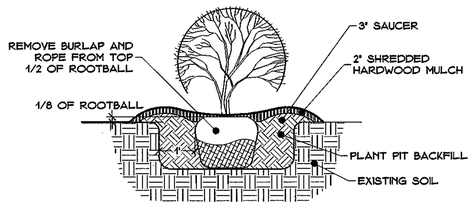
Landscape Notes

1. Contractor shall be responsible for making himself familiar with all existing on-site conditions prior to submission of bid. The contractor is responsible for the location of all underground utilities, pipes, and structures. Contractor shall take sole responsibility for any cost incurred due to damage of said utilities. Call Miss Utility, 48 hours, prior to digging. (1-800-257-7777)
2. Size and standards of plant materials shall conform to latest edition of "USA Standards For Nursery Stock", by the American Association of Nurserymen, Inc. (AAN).
3. All planting procedures and specifications shall conform to "Landscape Guidelines for Baltimore-Washington Metropolitan Area" latest edition.
4. Contractor shall guarantee all plant material for one (1) year from planting approval/acceptance.
5. Contractor shall confirm quantity of plant materials by plan count.
6. Plant pit backfill shall be a uniform mixture of one (1) part topsoil, two (2) parts existing soil and one (1) part Leafgrow® or approved alternative organic compost.
7. All mulch to be shredded hardwood mulch.
8. All plants shall be thoroughly watered by the contractor immediately following installation.
9. Contractor to adjust plant locations in field as necessary.
10. All plants shall be placed as not to obstruct drainage.
11. No plant substitutes without prior approval.
12. Where field conditions exist which would adversely affect plant performance, or interfere with proper planting procedures, the contractor shall notify the Engineer prior to installation of plant material.
13. All areas not otherwise indicted are to be seeded or sodded as per plan project specifications and in accordance with the Maryland Standards and Specifications for Soil Erosion and Sediment Control.
14. This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.

LEGEND
- PROPERTY LINE
- CONTOURS
- TREELINE
- EXISTING TREE TO REMAIN
- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED ORNAMENTAL TREE
- PROPOSED SHRUB
- PROPOSED LIGHT



1 Tree Planting Detail
Scale: 1/2"= 1'-0"



2 Shrub Planting Detail
Scale: 1/2"= 1'-0"

Schedule A - Perimeter Landscape Edge

Category	Apart/Road (Mt. Ida Drive)	Apart/Road (Mt. Ida Drive)	Parking/Road (Mt. Ida Drive)	Apart/Road (Mt. Ida Drive)	Apart/Road (Ellicott Mills Drive)
Perimeter Name	P-1	P-2	P-3	P-4	P-5
Landscape Type	B	B	E	B	B
Linear Feet of Roadway Frontage/Perimeter	178	57	105	130	220
Credit for Existing Vegetation (Yes, No, Linear Feet)	N/A	N/A	N/A	Yes, 130 (0' remaining)	Yes, 220' (0' remaining)
Credit for Wall, Fence, or Berm (Yes, No, Linear Feet)	N/A	N/A	N/A	N/A	N/A
Number of Plants Required					
Shade Trees	4	1	3	0	0
Evergreen Trees	4	1	0	0	0
Shrubs	0	0	26	0	0
Number of Plants Provided					
Shade Trees	4*	1	1	0	0
Evergreen Trees	4*	1**	2	0	0
Shrubs	0	0	36	0	0
Other Trees (2:1 Sub.)	0	0	0	0	0

* Two (2) shade trees are located along perimeter P-3, two (2) shade trees are located across Mt. Ida Drive, two (2) evergreen trees are located along perimeter P-4, and one (1) evergreen tree is located across Mt. Ida Drive to provide strategic buffering of the proposed development.
** One (1) evergreen tree is located along perimeter P-3 to maintain the sight distance easement.

Schedule B - Parking Lot Internal Landscaping

Number of Parking Spaces	13
Number of Trees Required	1
Number of Trees Provided	
Shade Trees	2
Other Trees (2:1 Sub.)	0

Schedule C - Residential Development Internal Landscaping

Number of Dwelling Units	25
Number of Trees Required (1:DU SFA; 1:3 DU APTS)	8
Number of Trees Provided	
Shade Trees	0
Other Trees (2:1 Sub.)	16*

* Three (3) ornamental trees are located across Mt. Ida Drive to avoid conflicts with public utility easements.

Schedule D - Stormwater Management Area Landscaping

Landscape Type	B
Linear Feet of Perimeter	330'
Number of Trees Required	
Shade Trees	7
Evergreen Trees	8
Credit for Existing Vegetation (No, Yes and %)	Yes, 140' or 42%
Credit for Other Landscaping (No, Yes and %)	No
Number of Trees Provided	
Shade Trees	4
Evergreen Trees	5
Other Trees (2:1 Sub.)	0

Developer's/Owner Landscape 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 Landscape Manual. I/we further certify that upon completion a letter of landscape installation, accompanied by an executed one year guarantee of plant materials, will be submitted to the Department of Planning and Zoning.

Developer's/Owner's Name — Date: July 21, 2004

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/13/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/13/04

DIRECTOR — DATE 8/16/04

Date	No	Revision Description

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Columbia, Md. 21046 (410) 313-6348

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At the Fels Lane Renewal Site
Mt. Ida Drive Ellicott City, Maryland 21043
Tax Map No. 25, Grid 7, Parcel 291, Elec. Dist. No. 2

HOWARD COUNTY, MARYLAND

TITLE:
LANDSCAPE PLAN AND DETAILS

PREPARED FOR:

Symmetry First Architects, LLC
PO Box 1522
Columbia, MD 21044
410-531-9055
410-531-9065 fax
inbox@symmetryfirst.com
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TP+A Landscape Architecture Environmental Planning
TIMOTHY PRIGG+ASSOCIATES
208 Mallow Hill Road - Baltimore, Maryland 21229
410/368-4850 fax: 410/368-4859

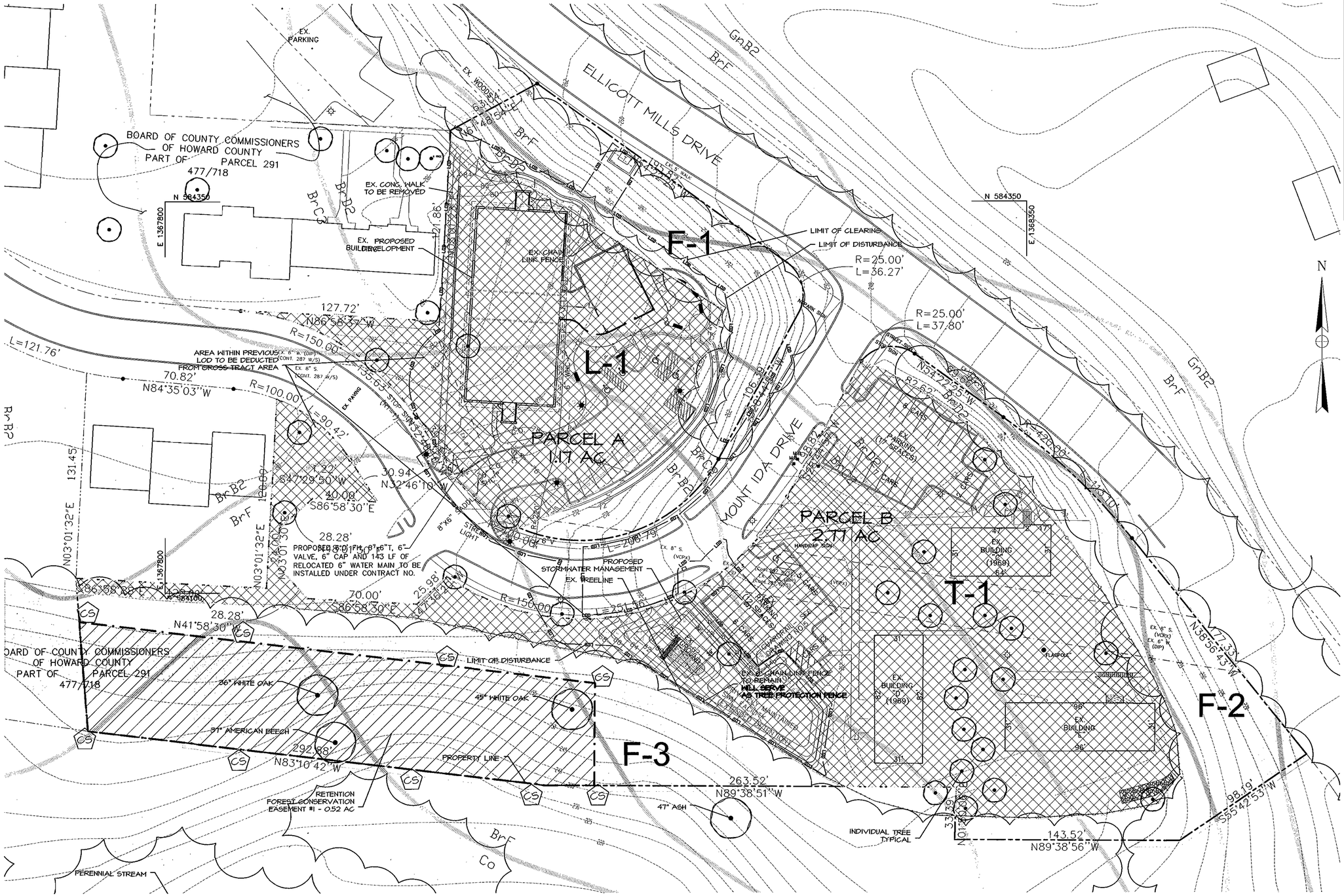
July 20, 2004
Date

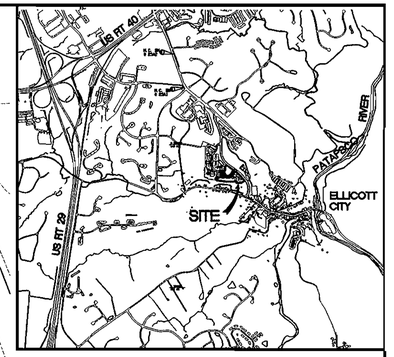
STATE OF MARYLAND — TIMOTHY T. PRIGG — REGISTERED LANDSCAPE ARCHITECT — NO. 1000

TIMOTHY T. PRIGG
Registered Land. Arch. No. 1000

Des By	T.T.P.	Scale	1" = 30'	Proj No	01-016
Dn By	D.J.M.	Date	JULY 15, 2004	DRAWING NO	tpaconcept.dwg
Chk By	T.T.P.				10 OF 12

SDP-04-27





VICINITY MAP
1" = 2000'

N

SITE DATA - PARCEL A - 1.168 AC

TOTAL AREA= 1.17 AC
FLOODPLAIN AREA= 0 AC
DEDUCTION FOR PREVIOUS LOD= 0.73 AC
NET TRACT AREA= 0.44 AC
EXISTING FOREST= 0.35 AC
EXISTING FOREST TO BE CLEARED= 0.35 AC
EXISTING ZONING= RA-15
PROPOSED USE= SENIOR RENTAL HOUSING
% WOODLAND CONSERVATION THRESHOLD= 20%
% WOODLAND AFFORESTATION THRESHOLD= 15%

SITE DATA - PARCEL B- 2.77 AC

TOTAL AREA= 2.77 AC
FLOODPLAIN AREA= 0 AC
DEDUCTION FOR PREVIOUS LOD= 1.54 AC
NET TRACT AREA= 1.23 AC
EXISTING FOREST= 0.85 AC
EXISTING FOREST TO BE CLEARED= 0.33 AC
EXISTING ZONING= RA-15
% WOODLAND CONSERVATION THRESHOLD= 20%
% WOODLAND AFFORESTATION THRESHOLD= 15%

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/13/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/13/04

DIRECTOR — DATE 8/16/04

Date	No	Revision Description

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HOWARD COUNTY, MARYLAND

TITLE:
FOREST CONSERVATION PLAN

PREPARED FOR:

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Drn By	D.J.M.	Date JULY 15, 2004	DRAWING NO fcd.dwg
Chk By	T.T.P.		11 OF 12

7-14-04
Date

STATE OF MARYLAND — TIMOTHY T. PRIGG — NO. 1000 — REGISTERED LANDSCAPE ARCHITECT

TIMOTHY T. PRIGG
Registered Land. Arch. No. 1000

SOIL DESCRIPTIONS

BrB2 - Brandywine loam, 3-8% slopes, mod. eroded
BrC2 - Brandywine loam, 8-15% slopes, mod. eroded
BrC3 - Brandywine loam, 8-15% slopes, sev. eroded
BrD2 - Brandywine loam, 15-25% slopes, mod. eroded
BrD3 - Brandywine loam, 15-25% slopes, sev. eroded
BrF - Brandywine loam, 25-60% slopes
Co - Codorus silt loam (HYDRIC)
GnB2 - Glenville silt loam, 3-8% slopes, mod. eroded
Gp - Gravel pits and quarries (IN DEPRESSIONS)
WaB - Watchung silt loam, 3-8% slopes (HYDRIC)

LEGEND

- PROPERTY LINE
- CONTOURS
- SLOPES 15-25%
- SLOPES GREATER THAN 25%
- SOIL UNIT
- TREELINE
- AREA WITHIN PREVIOUS LOD (DEDUCTED FROM GROSS SITE AREA)
- FOREST CONSERVATION EASEMENT
- FOREST CONSERVATION SIGN

NOTES

1. This plan depicts existing environmental features, existing development, and the locations of proposed development of the parcels.

2. Existing soil information provided by the Soil Survey of Howard County 1968. these soils were mapped before the development of the site.

3. The development of the proposed rental housing, community center, parking lot, and utilities will not significantly impact the existing forest resources.

4. This project complies with the requirements of Section 16.1200 of the Howard County Code and Forest Conservation Manual with a break-even retention obligation of 0.51 acres which has been met by recording 0.52 acres of retention forest conservation easement area on final plat, F-02-166, Plat No. 16615.

5. The forest conservation easements indicated on this plan have been established to fulfill the requirements of Section 16.1200 of the Howard County Code. No clearing, grading, or construction is permitted within the forest conservation easements, however, forest management practices as defined in the Deed of Forest Conservation Easement are allowed.

SDP-04-27

Forest Conservation Worksheet
Howard County, Maryland

Project Name:
Tiber Hudson Senior Housing

		ACRES (1/10 acre)
I.	**Basic Site Data**	
	Gross Site Area	3.94
	Area within 100 Year Floodplain	0.00
	Area within previous LOD	2.27
	Net Tract Area	1.67
	Land use category	IDA
II.	**Information For Calculations**	
A.	Net Tract Area	1.67
B.	Reforestation Threshold (20% x A)	0.33
C.	Afforestation Minimum (15% x A)	0.25
D.	Existing Forest on Net Tract Area	1.20
E.	Forest Areas to be Cleared	0.68
F.	Forest Areas to be Retained	0.52

III. Determining Requirements: Afforestation or Reforestation

1 - **Reforestation**

TRUE If existing forests areas equal or exceed the afforestation minimum (if D equals or is more than C) and clearing of existing forest areas is proposed, reforestation requirements may apply.

Go To Section IV

FALSE If existing forests exceed the afforestation minimum (if D equals or is more than C) and no clearing of existing forest resources is proposed, no reforestation is required. No further calculations are needed.

2 **Afforestation**

FALSE If existing forest area is less than the afforestation minimum (if D is less than C), Afforestation requirements apply.

		ACRES (1/10 acre)
IV	**Reforestation Calculations**	
A.	Net Tract Area	1.67
B.	Reforestation Threshold (20% x A)	0.33
D.	Existing Forest on Net Tract Area	1.20
E.	Forest Areas to be Cleared	0.68
F.	Forest Areas to be Retained	0.52
G.	Forest Areas to be Cleared Above Reforestation Threshold (D - F, if F equals or is greater than B, alternative 1) (B - D, if F less than B, alternative 2)	0.68
H.	Forest Areas Cleared Below Reforestation Threshold (B - F, if applicable)	N/A
I.	Forest Areas Retained ABOVE Reforestation Threshold (F - B, Retention Credit, if applicable)	0.19

Select the alternative that applies:

1 If forest areas to be retained equal or are greater than the Reforestation Threshold (if F equals or is greater than B), the following calculations apply.

Reforestation for clearing above Threshold (G x 1/4)	0.17
Credit for Forest Areas retained above Threshold I = Retention Credit	0.19
Total Reforestation Required (G x 1/4) - I	0.00

If the total reforestation requirement is equal to or less than 0, no reforestation is required

2 If the forest areas to be retained are less than the reforestation threshold (if F is less than B), the following calculations apply.

Reforestation for clearing above threshold (G x 1/4)	N/A
Reforestation for clearing below Threshold (H x 2)	N/A
Total Reforestation Required (G x 1/4) + (H x 2)	N/A

Since clearing occurs below the threshold, no forest retention credit is possible.

		ACRES (1/10 acre)
V.	**Afforestation Calculations**	
A.	Net Tract Area	N/A
C.	Afforestation Minimum (15% x A)	N/A
D.	Existing Forest on Net Tract Area	N/A
E.	Forest Areas to be Cleared	N/A
F.	Forest Areas to be Retained	N/A

Select the alternative that applies:

1 No clearing below the minimum

If existing forests are less than the afforestation minimum (if D is less than C) and no clearing is proposed, the following calculations apply:

Total Afforestation Required (C - D)	N/A

Afforestation must make total forest area equal the minimum required.

2 Clearing below the minimum

If existing forests are less than the afforestation minimum (if D is less than C) and clearing is proposed, the following calculations apply:

Afforestation for unforested areas below Minimum (C - D)	N/A
Afforestation for clearing below Minimum (E x 2)	N/A
Total Afforestation Required (C - D) + (E x 2)	N/A

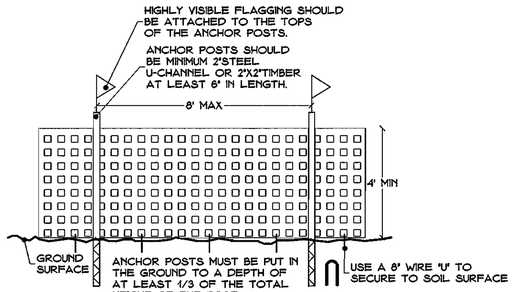
Forest Conservation Worksheet - Howard County, MD
Break-even Point Calculations

Project Name:
Tiber Hudson Senior Housing

		ACRES (1/10 acre)
A.	Net Tract Area	1.67
B.	Reforestation Threshold (20% x A)	0.33
D.	Existing Forest on Net Tract Area	1.20

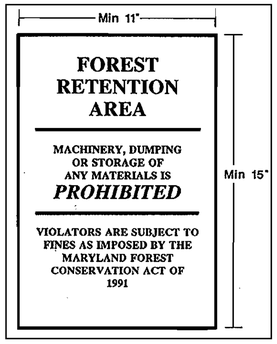
B.E.P = (existing forest equal to reforestation threshold) + (0.2 x existing forest above threshold)

Break-Even Point =	0.51



GENERAL NOTES
1. LIMITS OF DISTURBANCE WILL BE SET AS PART OF THE REVIEW PROCESS FOR AN APPROVED TCP.
2. THE BOUNDARIES OF THE LIMITS OF DISTURBANCE SHOULD BE STAKED AND FLAGGED PRIOR TO ERECTING THE PROTECTIVE DEVICE.
3. ANCHOR POSTS SHOULD BE PLACED TO AVOID SEVERING OR DAMAGING LARGE TREE ROOTS.
4. FENCING MATERIAL SHOULD BE FASTENED SECURELY TO THE ANCHOR POSTS, CROSS BRACING, AND GROUND.

1 Blaze Orange Fence Detail
Scale: NTS



NOTES
1. Sign shall be mounted 4' above the ground on 3" steel U-channel posts driven to firm bearing.
2. Sign locations are shown on the plan with the symbol (CS)

2 Sign Detail
Scale: NTS

Construction Period Protection Program

Before the beginning of any clearing or grading, temporary, blaze orange protective fencing will be established along the limit of disturbance. This fence shall be maintained throughout the entire construction process. Also, permanent protective signage will be installed approximately 100' on center along the entire perimeter of the forest conservation easement.

Post-Construction Protection Program

Forest conservation easements will be recorded with Howard County for the long-term protection of the forest retention areas. The temporary protection fence shall be removed at the conclusion of construction. The permanent protection signs shall be maintained. In addition, an existing chain link fence will remain along the southern retention area, which will serve as a physical barrier to prevent any vehicles or machinery from intruding on the easement.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 8/13/04

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 8/13/04

DIRECTOR — DATE 8/16/04

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HOWARD COUNTY, MARYLAND

TITLE:
FOREST CONSERVATION WORKSHEETS AND DETAILS

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7-14-09
Date

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TIMOTHY T. PRIGG
Registered Land. Arch. No. 1000

Des By T.T.P.	Scale AS NOTED	Proj No 01-016	
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Chk By T.T.P.		12 OF 12	

SDP-04-27