ROADWAYS, STORM DRAINS AND STORMWATER MANAGEMENT

TIMBER RIDGE

PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720 AND
OPEN SPACE LOTS 704-A & 706-A
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SHEET INDEX			
NO	DESCRIPTION	NO	DESCRIPTION
1	TITLE SHEET	7	SEDIMENT CONTROL DETAILS
2	SITE PLAN AND STREET TREES	8	STREET TREE PLANT DETAILS
3	PROFILES	9	RETAINING WALL #1 PLAN AND CONSTRUCTION DETAILS
4	GRADING & SEDIMENT CONTROL PLAN	10	RETAINING WALL #1 ELEVATION
5	DETAILS AND PROFILES	11	MOT PLAN
6	SEDIMENT CONTROL NOTES AND DETAILS	12	INLET DRAINAGE AREA MAP

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

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

5. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS, (JANUARY 1998)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD STUDY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST AND ASSOCIATES, DATED FEBRUARY, 2003.

7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 38D5 AND 38D6.

8. PROPOSED WATER IS PUBLIC. CONTRACT NO: 14-4360-D

9. PROPOSED SEWER IS PUBLIC. CONTRACT NO: 14-4360-D

10. THE HOA OWNED STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED BY PRIVATELY MAINTAINED GRASS CHANNEL CREDIT AND LEVEL SPREADERS.

11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.

12. THE WETLANDS DELINEATION FOR THIS PROJECT WAS TAKEN FROM A REPORT PREPARED BY WILDMAN ENVIRONMENTAL SERVICES.

13. THE TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT.

14. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

15. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PATTON HARRIS RUST AND ASSOCIATES DATED AUGUST 2002.

16. SUBJECT PROPERTY ZONED R-12 PER 02-02-04 COMPREHENSIVE ZONING PLAN.

17. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.

18. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S.: SDP-01-93, WP-04-87, WP-05-129, SP-04-12

19. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

20. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

21. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

22. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.

23. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.

24. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

25. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.

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

27. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. III. ALL 40' RIGHT OF WAYS 20 M.P.H.

28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MIN. OF 95% COMPACTION OF AASHTO T180.

29. ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.

30. ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 2'-0" AND 4'-0" BEHIND FACE OF CURB.

31. TYPE AND NUMBER OF STREET TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMODATE FIELD CONDITIONS INCLUDING 20' CLEARANCE OF ANY STREET LIGHT AND SHALL BE IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. BOND RELEASE IS CONTINGENT UPON SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.

32. WETLANDS, 100 YEAR FLOODPLAIN, AND +15% SLOPES HAVE BEEN SHOWN.

33. BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.

34. THIS SUBDIVISION IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202(B)(1)(iii) OF THE FOREST CONSERVATION MANUAL SINCE IT HAS PRELIMINARY PLAN APPROVAL PRIOR TO 12/31/92.

35. THE SUBDIVISION IS EXEMPT FROM PERIMETER LANDSCAPING SINCE IT HAD A PRELIMINARY PLAN AND PLAT RECORDATION PRIOR TO 1993. IN ADDITION, THE SUBJECT LOTS ARE INTERIOR TO AN EXISTING SUBDIVISION, AND THIS PLAN DOES NOT PROPOSE ANY NEW BUILDING LOTS OR ADDITIONAL ACREAGE. STORM WATER MANAGEMENT PERIMETER LANDSCAPING IS NOT REQUIRED SINCE THE FOREBAY HAS BEEN ELIMINATED. STREET TREE PLANTINGS WILL BE REQUIRED AND PROVIDED AS SHOWN ON THE ROAD CONSTRUCTION DRAWINGS. SURETY WILL BE POSTED WITH THE DPW DEVELOPER'S AGREEMENT UNDER THIS PLAN, F-06-133.

36. THIS PROJECT IS EXEMPT FROM THE 35' ENVIRONMENTAL SETBACK REQUIREMENT SINCE IT HAD A PRELIMINARY PLAN AND PLAT RECORDATION PRIOR TO 1993. HOWEVER, ENVIRONMENTAL BUFFERS AND RESTRICTIONS IN ACCORDANCE WITH SECTIONS 16.115 AND 16.116 OF THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS APPLY TO THIS PROJECT BECAUSE THESE LOTS PRE-DATE THOSE REGULATIONS. ANY IMPACT TO THESE PROTECTED AREAS FOR THE CONSTRUCTION OF HOMES WILL BE CONSIDERED ESSENTIAL, PROVIDED THAT THOSE IMPACTS ARE MINIMIZED.

37. ALL FEDERAL AND STATE PERMITS FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT WILL BE APPLIED FOR AS APPLICABLE PRIOR TO ANY GRADING OR DISTURBANCE IN THE ENVIRONMENTAL AREAS AS SHOWN ON THIS PLAN.

38. WP-04-87 A REQUEST TO REACTIVATE SDP-01-93 WAS APPROVED ON DECEMBER 30, 2005

39. WP-05-129 PERMITS STORMWATER MANAGEMENT ACCESS TO THE STORMWATER MANAGEMENT FACILITY LOCATED ON OPEN SPACE LOT 704 SHALL EXACTLY FOLLOW AND BE PLACED OVER THE EXISTING 20' WIDE PUBLIC SEWER AND UTILITY EASEMENT WHICH CROSSES LOTS 707 TO 711.

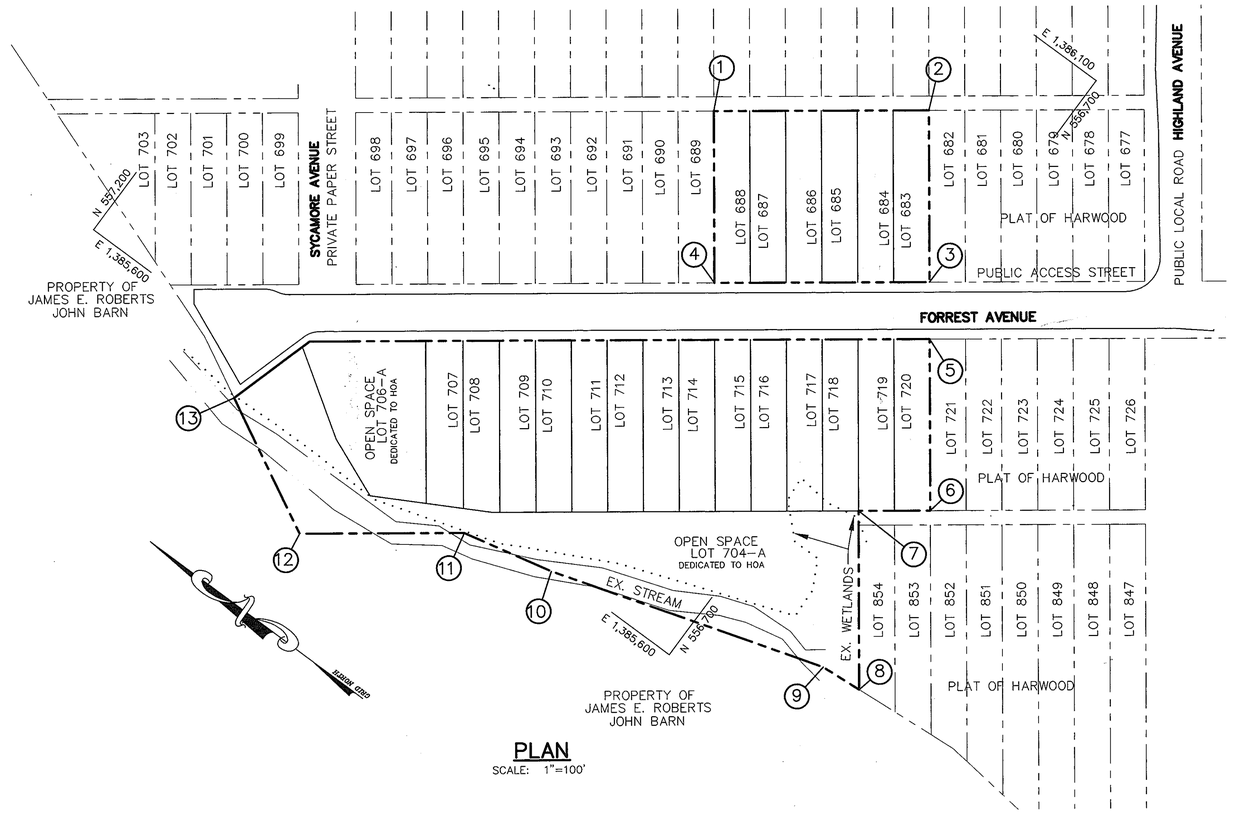
40. PROPERTY OWNERS OF LOTS WHICH ARE NOT PART OF THIS DEVELOPMENT HAVE BEEN NOTIFIED BY CERTIFIED MAIL OF THE PROPOSED LOCATION OF THE RETAINING WALLS WITHIN THE RIGHT-OF-WAY, WHICH MAY PROHIBIT ACCESSIBILITY ONTO FORREST AVENUE.

41. ALL OF THE RETAINING WALLS AND STORMWATER MANAGEMENT OUTSIDE PUBLIC RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. RETAINING WALLS WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE PUBLICLY OWNED AND MAINTAINED. ALL GRAFFITI SHALL BE REMOVED FROM THE RETAINING WALLS BY THE HOME OWNERS ASSOCIATION.

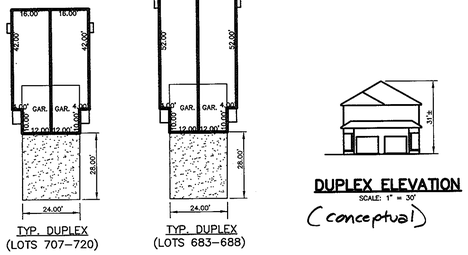
42. STORMWATER MANAGEMENT FOR LOTS 677 - 682 AND LOTS 550 TO 557 OF 8650 HIGHLAND AVENUE WILL BE REQUIRED AT THE SITE DEVELOPMENT PLAN STAGE.

43. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-½" GALVANIZED STEEL PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

44. OPEN SPACE LOTS 704-A AND 706-A SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.



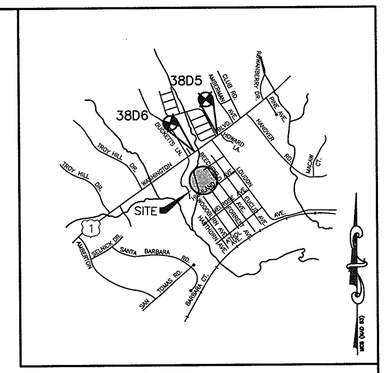
PLAN
SCALE: 1"=100'



PLAN
SCALE: 1"=30'

DUPLEX ELEVATION
SCALE: 1" = 30'
(conceptual)

COORDINATE LIST		
1	N 556,901.59	E 1,385,924.05
2	N 556,781.40	E 1,386,013.80
3	N 556,709.60	E 1,385,917.65
4	N 556,829.79	E 1,385,827.90
5	N 556,685.67	E 1,385,885.60
6	N 556,613.87	E 1,385,789.45
7	N 556,653.93	E 1,385,759.54
8	N 556,579.08	E 1,385,659.29
9	N 556,608.58	E 1,385,657.01
10	N 556,800.93	E 1,385,598.03
11	N 556,865.69	E 1,385,583.49
12	N 556,957.84	E 1,385,514.70
13	N 557,051.06	E 1,385,563.75



VICINITY MAP
SCALE: 1"=2000'

BENCH MARK

HOWARD COUNTY CONTROL
STATION 38D5
N 558,378.575
E 1,386,524.158
ELEV. 193.726

HOWARD COUNTY CONTROL
STATION 38D6
N 557,155.459
E 1,384,992.262
ELEV. 175.228

SITE TABULATION

EXISTING ZONING	R-12
GROSS AREA OF PROPERTY	2.1958 AC ±
LIMIT OF DISTURBANCE	3.32 ACRES
AREA IN 100 YR. FLOODPLAIN	0.20 AC (8,563 SF)
AREA OF STEEP SLOPE	0.74 AC
AREA OF R.O.W. TO BE RECORDED	0.0322 AC
NET TRACT AREA	2.1636 AC ±
AREA OF PROPOSED BUILDABLE LOTS	1.3783 AC ±
NUMBER OF BUILDABLE LOTS	20
PROPOSED WATER AND SEWER	PUBLIC

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **TITLE SHEET**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /FINAL/COOCOV.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	1 OF 12

F-06-133

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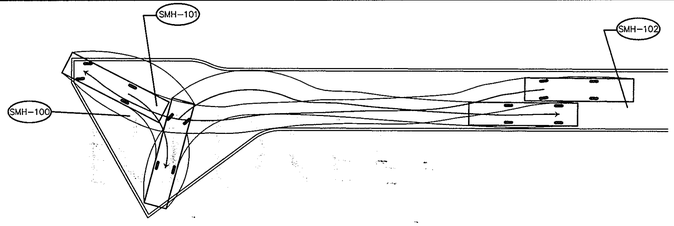
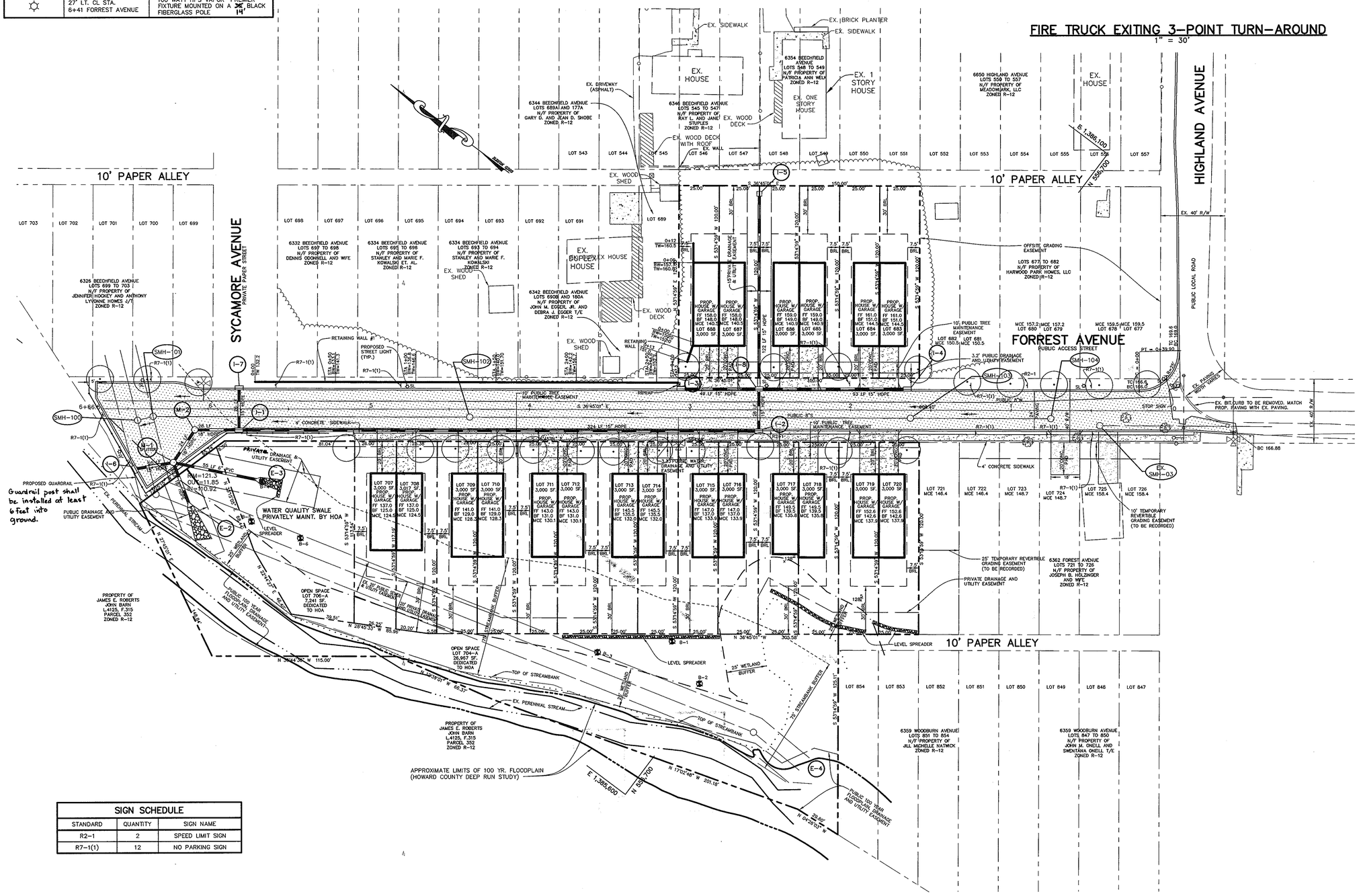
STREET LIGHT CHART		
SYMBOL	LOCATION	DESCRIPTION
☼	20' RT. CL STA. 0+05 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	15.5' RT. CL STA. 0+55 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	15' RT. CL STA. 2+53 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	14' RT. CL STA. 4+76 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	18' RT. CL STA. 6+41 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	27' LT. CL STA. 6+41 FORREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'



FIRE TRUCK EXITING 3-POINT TURN-AROUND
1" = 30'



PLAN
1" = 30'

SIGN SCHEDULE		
STANDARD	QUANTITY	SIGN NAME
R2-1	2	SPEED LIMIT SIGN
R7-1(1)	12	NO PARKING SIGN

LEGEND

PROPERTY LINE AND RIGHT OF WAY
EXISTING STORM DRAIN — EX.15"D
PROPOSED STORM DRAIN — 15"D
OVERHEAD WIRES — OHW
EXISTING TREELINE
PROPOSED TREE
PROP.SPOT ELEVATION 13 X 2
SETBACK LINES
P-2 PAVING
EXISTING WATER
EXISTING CURB
PROPOSED CURB
EXISTING BUILDING
PROPOSED BUILDING
PROPOSED DEPRESSED CURB
PROPOSED DEPRESSED SIDEWALK
PROPOSED GUARDRAIL
PROPOSED SIDEWALK

LEGEND

REQUIRED OFF-STREET PARKING = 2 SP/LOT

PROVIDED PARKING:
LOTS 683 - 688 = 1 GARAGE SPACE & 1 DRIVEWAY SPACE
LOTS 707 - 720 = 1 GARAGE SPACE & 1 DRIVEWAY SPACE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **SITE PLAN AND STREET TREES**

Patton Harris Rust & Associates, pc
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8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS C400SIT.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	2 OF 12

F-06-133

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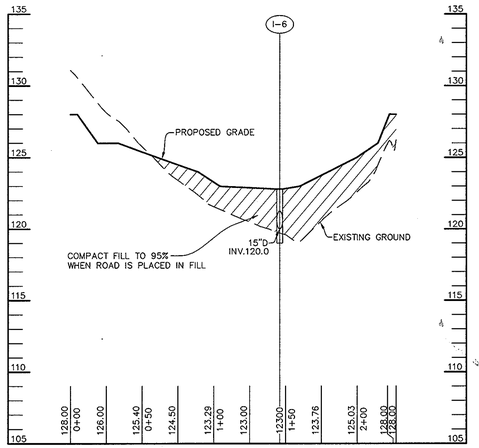
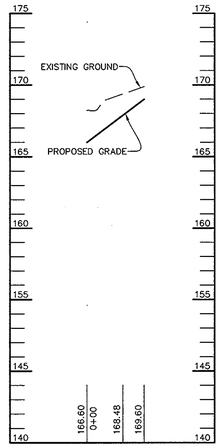


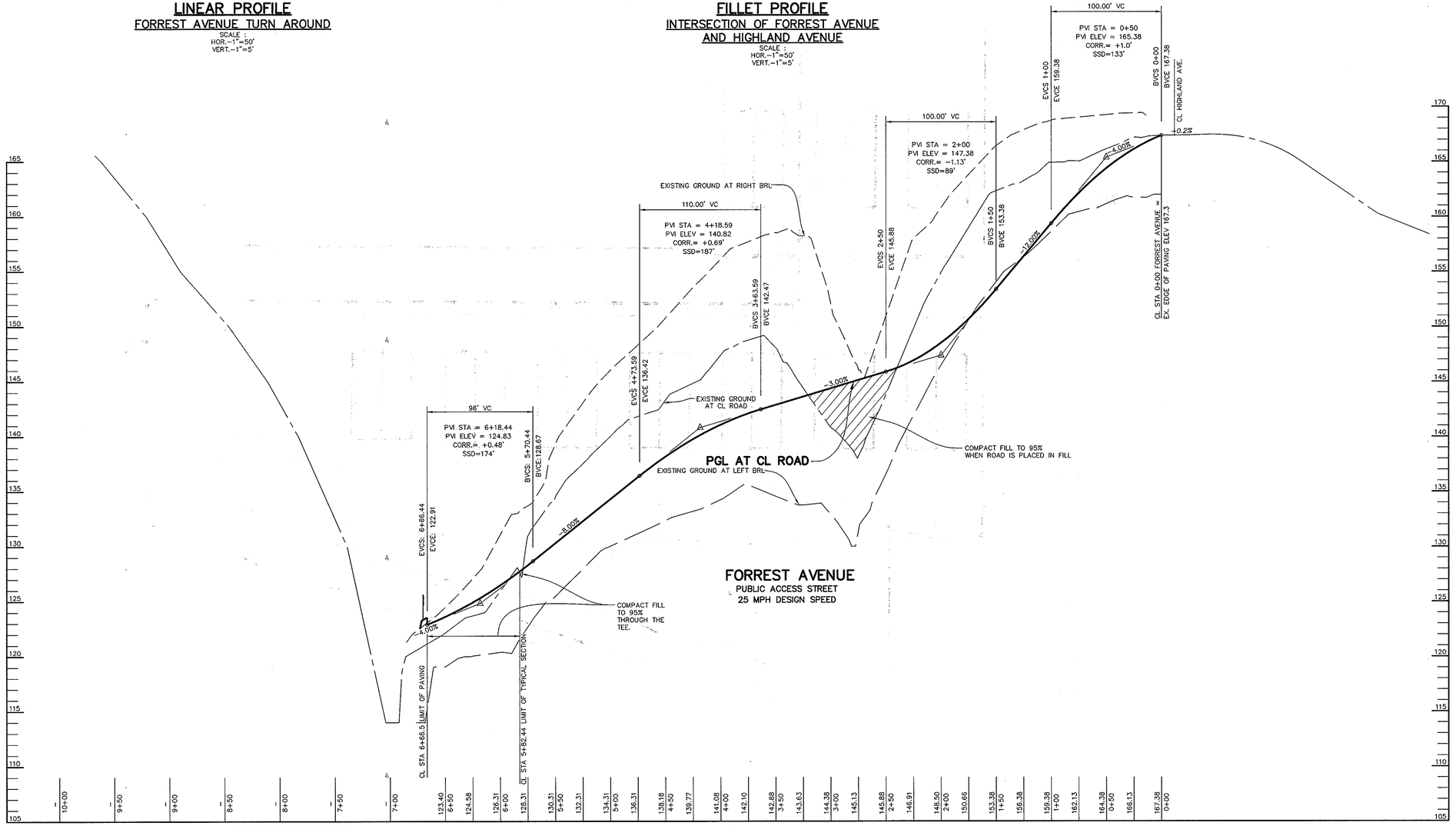
LINEAR PROFILE
FORREST AVENUE TURN AROUND

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



FILLET PROFILE
INTERSECTION OF FORREST AVENUE AND HIGHLAND AVENUE

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



PROFILE

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES

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

8/14/07
DATE

STATE OF MARYLAND — DOMENICK W. COLANGECO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGECO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS FINAL/C401SIT
DATE : AUGUST 16, 2007
SCALE : AS SHOWN
DRAWING NO. 3 OF 12

F-06-133

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SOIL CHART

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C

BY THE DEVELOPER :

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

DEVELOPER — DATE 8/15/07

BY THE ENGINEER :

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

ENGINEER — DATE 8/14/07

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/23/07

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/23/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **GRADING & SEDIMENT CONTROL PLAN**

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

8/14/07
DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /C200ECS
DATE :	AUGUST 16, 2007
SCALE :	1" = 30'
DRAWING NO.	4 OF 12

F-06-133

LEGEND

- SOIL LINES BASED ON SOILS MAP 31
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE (SSF)
- EROSION CONTROL MATTING
- INLET PROTECTION
- STORM DRAIN DRAINAGE DIVIDE
- 15%-24.9% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES
- REINFORCED EARTH

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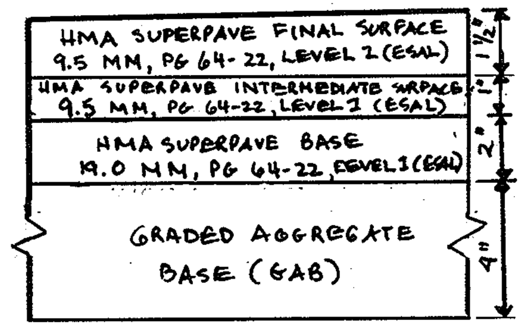
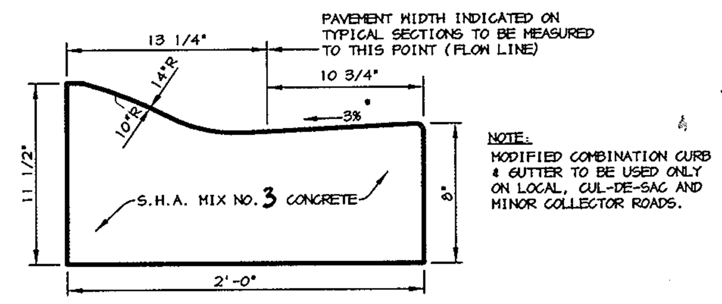


HOWARD COUNTY DESIGN MANUAL VOLUME IV– STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

THE PAVING SECTION SHOWN HAS NOT BEEN DESIGNED FOR ACTUAL SOIL CONDITIONS, IN PLACE COMPACTION RESULTS, OR TRAFFIC VOLUMES SPECIFIC TO THIS PROJECT. IT IS RECOMMENDED THAT THE USER CONSULT WITH A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER FOR A SPECIFIC PAVING DESIGN BASED ON THE APPROPRIATE PARAMETERS PRIOR TO INSTALLATION OF THIS PAVING SECTION.

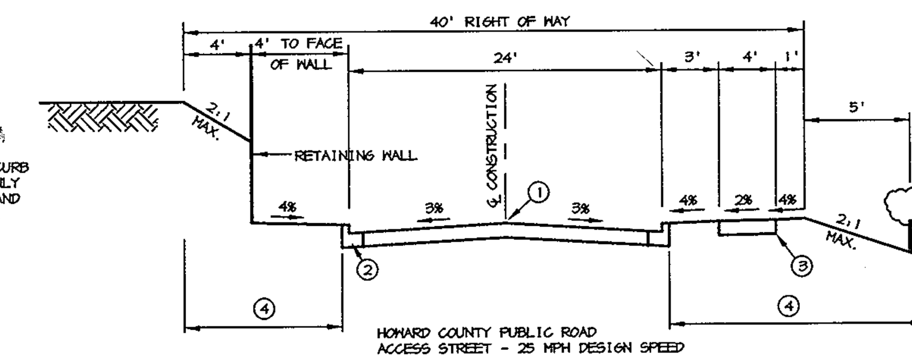
P-2 PAVING

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER

* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

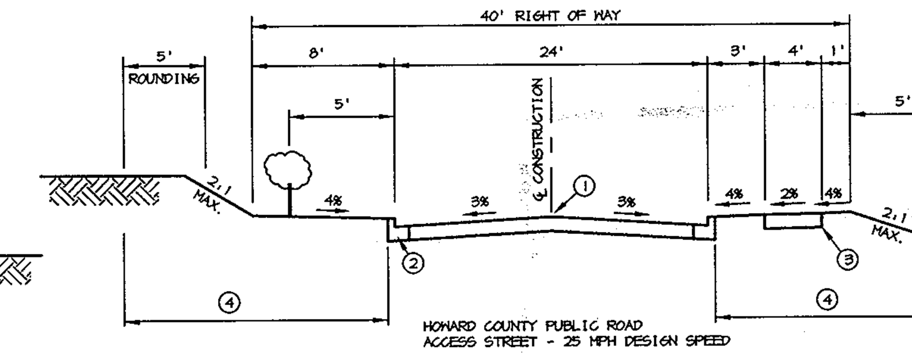


CLOSED SECTION

1. PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
2. TYPE OF CURB VARIES (MOD. COMB. CURB)
3. 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
4. INDICATES 2" TOPSOIL, SEED AND MULCH.

TYPICAL SECTION FORREST AVENUE WITH RETAINING WALL

NO SCALE
FROM CL STA 0+55 TO CL STA 1+60
FROM CL STA 3+09 TO CL STA 5+71



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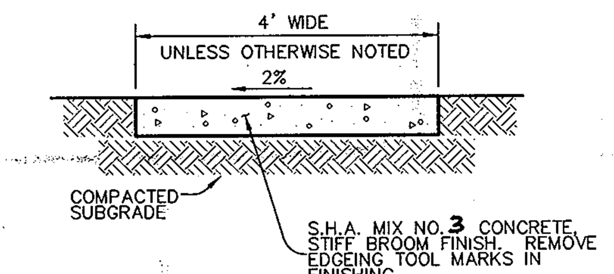
TYPICAL SECTION FORREST AVENUE

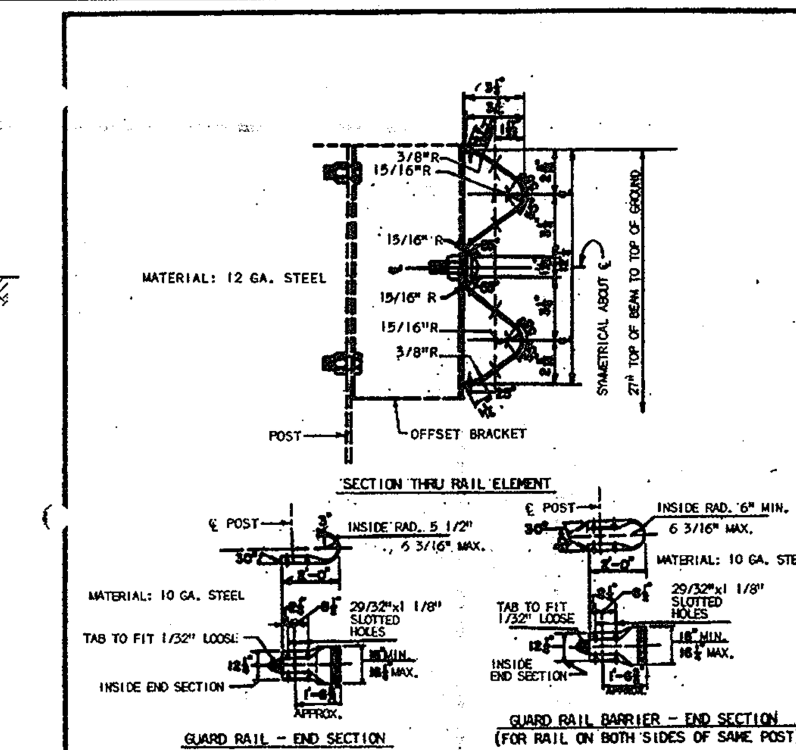
NO SCALE



NOTES :
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

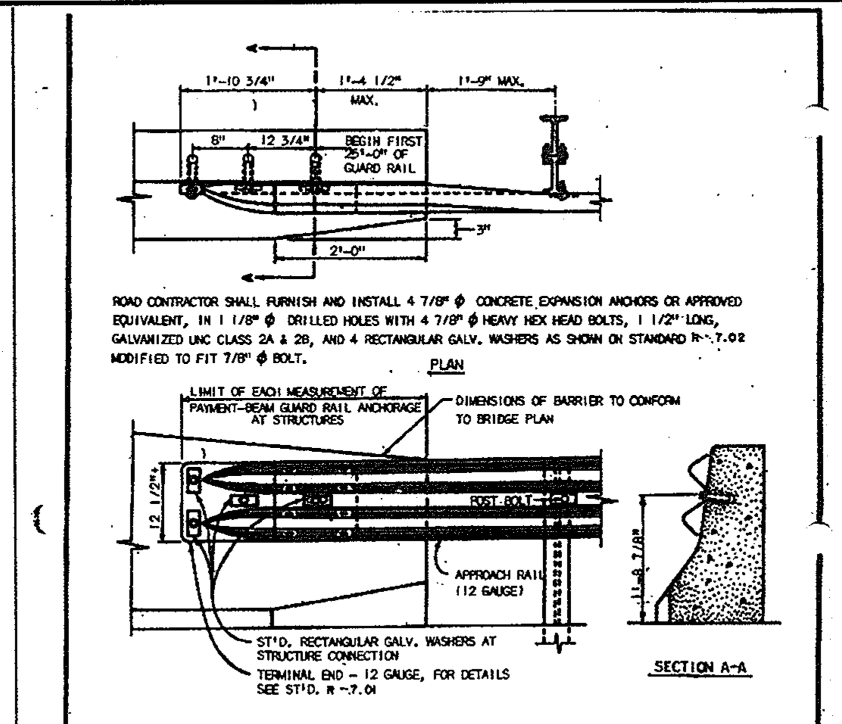
SIDEWALK DETAIL

NO SCALE



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 W6x9.
7. BACK-UP PLATE (12" 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 — GUARD RAIL W BEAM GENERAL NOTES AND DETAILS — DRAWN BY W.T. BALLARD — CHECKED BY J.L.R. — NO SCALE — R-7.06



ROAD CONTRACTOR SHALL FURNISH AND INSTALL 4 7/8" ϕ CONCRETE EXPANSION ANCHORS OR APPROVED EQUIVALENT, IN 1 1/8" ϕ DRILLED HOLES WITH 4 7/8" ϕ HEAVY HEX HEAD BOLTS, 1 1/2" LONG, GALVANIZED UNC CLASS 2A & 2B, AND 4 RECTANGULAR GALV. WASHERS AS SHOWN ON STANDARD R-7.02 MODIFIED TO FIT 7/8" ϕ BOLT.

GENERAL NOTES

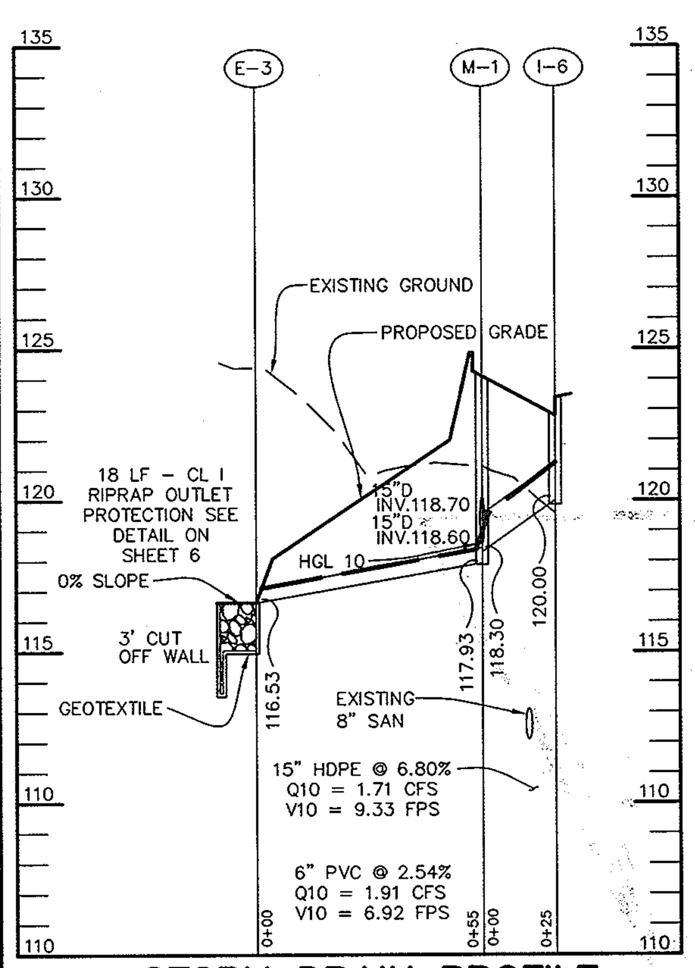
FIRST 25'-0" OF GUARD RAIL AFFIXED TO BRIDGE ON THE APPROACH END. PLACE FIRST POST MAXIMUM 1'-9" FROM BRIDGE AND NEXT SEVEN POSTS SPACED 3'-1 1/2" C/C. PLACE AN ADDITIONAL OFFSET BRACKET AT THE FOURTH AND FIFTH POSTS FROM THE BRIDGE TO AVOID CONFLICT WITH INLETS.
WHEN AFFIXING GUARD RAIL TO BRIDGE ON THE TRAILING END, USE NORMAL POST SPACING WITH AN ADDITIONAL OFFSET BRACKET PLACED AT THE SECOND POST TO AVOID CONFLICT WITH INLETS.
COST OF ADDITIONAL POSTS AND OFFSET BRACKETS TO BE INCLUDED IN BID PRICE PER LINEAR FOOT OF GUARD RAIL.
IN GENERAL, TWO OFFSET BRACKETS SHALL BE USED WHEREVER NECESSARY TO AVOID CONFLICT WITH DRAINAGE INLETS.

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS — GUARD RAIL W BEAM ANCHORAGE AT STRUCTURES — DRAWN BY W.T. BALLARD — CHECKED BY J.L.R. — NO SCALE — R-7.07

NOTE: GUARDRAIL POSTS SHALL BE INSTALLED AT LEAST 6 FEET INTO GROUND.

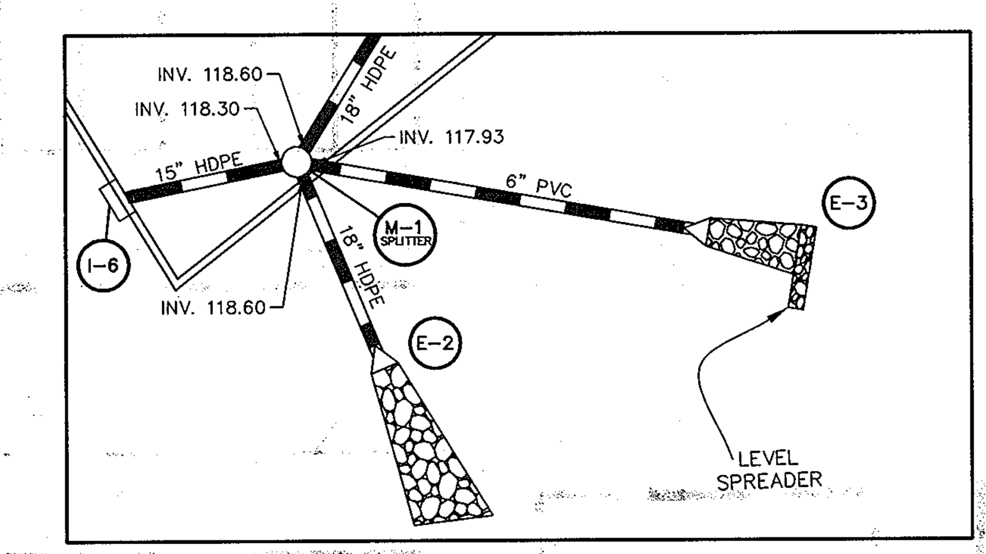
STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-5 INLET	N 557030 E 1385639	124.70 124.85	124.60	127.51	HOCO STD. DETAIL D-4.01
I-2	A-5 INLET	N 556771 E 1385832	140.52	140.42	145.31	HOCO STD. DETAIL D-4.01
I-3	A-5 INLET	N 556824 E 1385822	–	141.00	143.66	HOCO STD. DETAIL D-4.01
I-4	A-10 INLET	N 556711 E 1385907	–	147.35	151.43	HOCO STD. DETAIL D-4.03
I-5	YARD INLET	N 556859 E 1385950	–	156.66	165.50	HOCO STD. DETAIL D-4.14
I-6	A-10 INLET	N 557066 E 1383580	–	120.00	122.80	HOCO STD. DETAIL D-4.03
I-7	A-10 INLET	N 557044 E 1385658	–	124.87	127.51	HOCO STD. DETAIL D-4.03
I-8	A-5 INLET	N 556785 E 1385852	142.75 142.67 140.74	140.65	145.31	HOCO STD. DETAIL D-4.01
M-1	STD. MH	N 557049 E 1385596	118.30 118.70	118.60 (15") 117.93 (6")	124.10	HOCO STD. DETAIL G-5.12
M-2	STD. MH	N 557051 E 1385621	122.50	122.40	125.20	HOCO STD. DETAIL G-5.12
E-2	18" CMP END SECTION	N 557025 E 1385581	–	118.43	–	MSHA STD. DETAIL MD-374.66
E-3	6" CMP END SECTION	N 556983 E 1385628	–	116.53	–	MSHA STD. DETAIL MD-374.66



STORM DRAIN PROFILE

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



PLAN VIEW DETAIL OF FLOW SPLITTER (M-1)

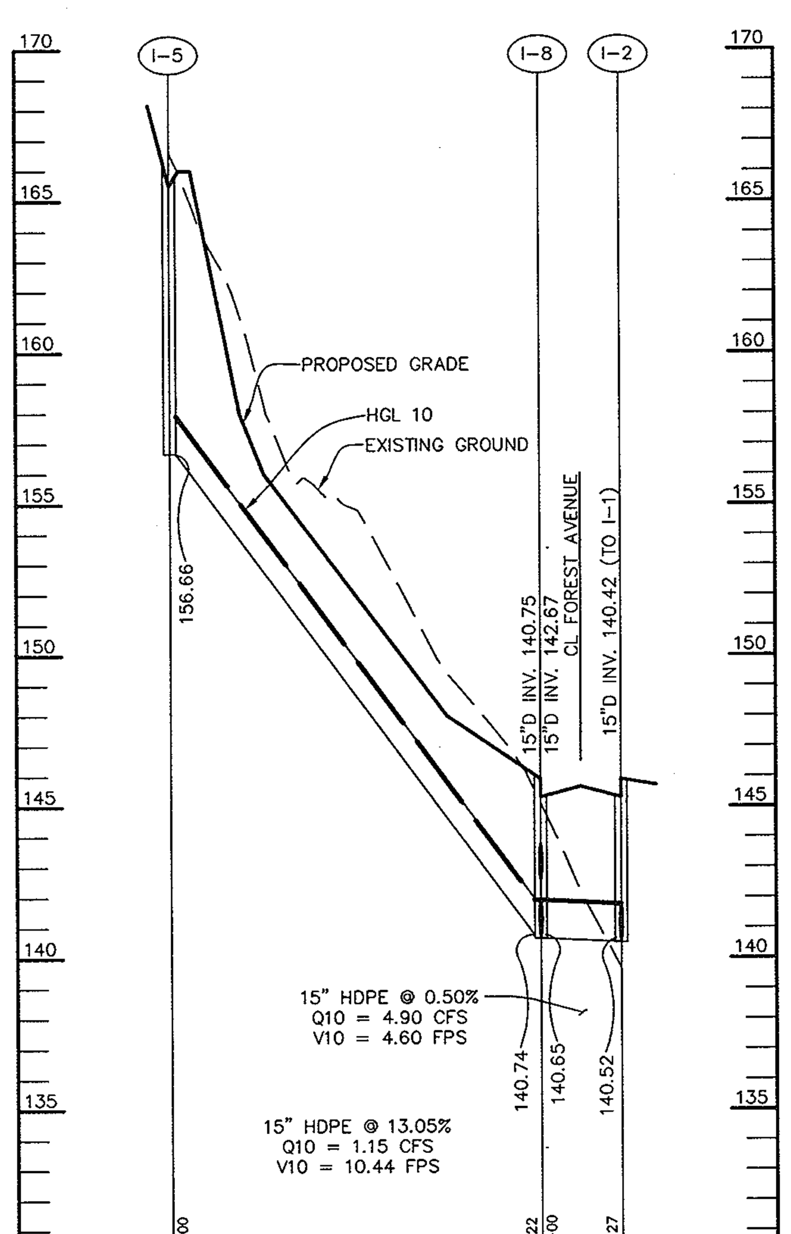
NO SCALE

GENERAL NOTES:

1. 95% COMPACTION REQUIRED WHERE PROPOSED STORM DRAIN PIPES ARE PLACED ON FULL.

PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
55	6"	PVC
665	15"	HDPE
82	18"	HDPE



STORM DRAIN PROFILE

SCALE :
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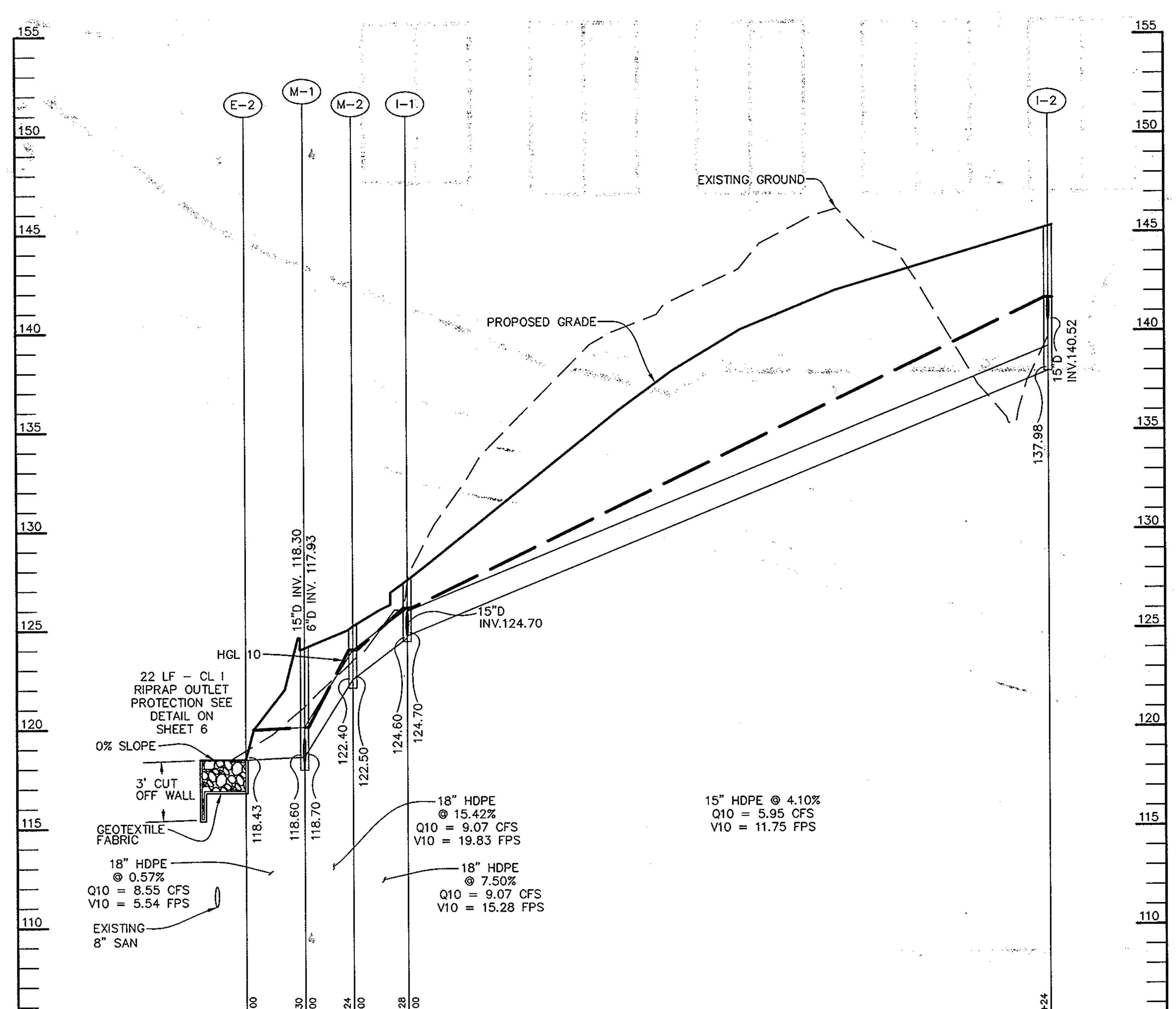
VERT.-1"=5'



STORM DRAIN PROFILE

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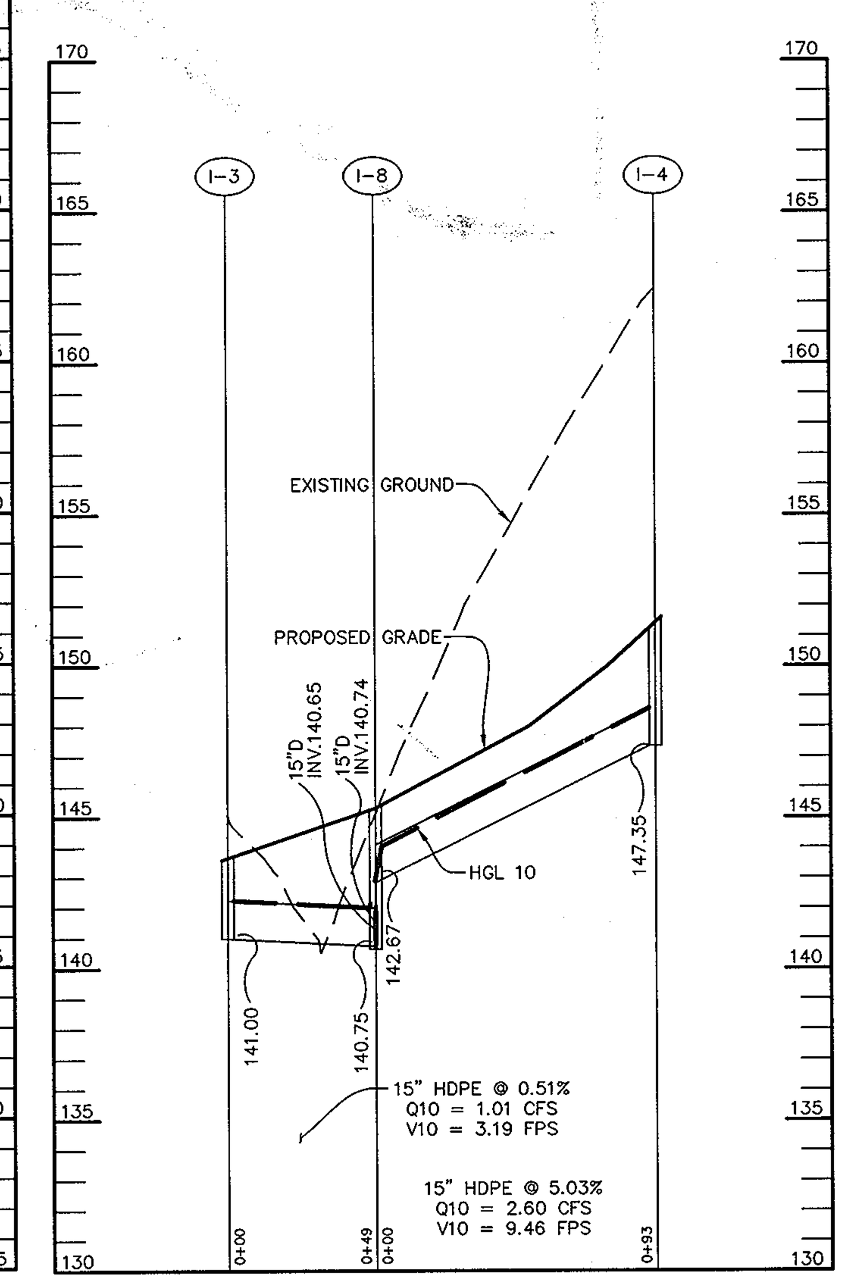

STORM DRAIN PROFILE

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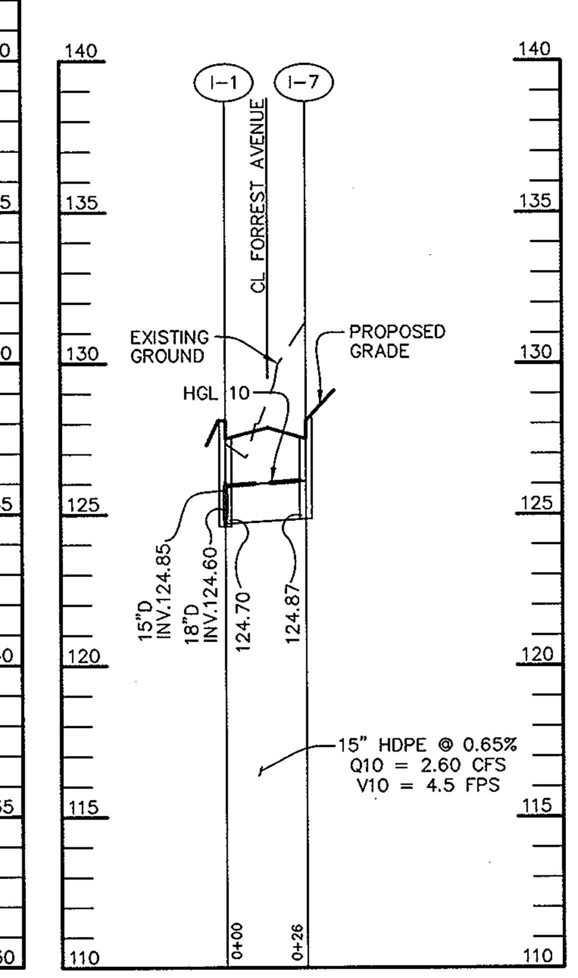


STORM DRAIN PROFILE

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — 9-5-07 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — 9/13/07 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION — 9/12/07 DATE

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **DETAILS AND PROFILES**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS/FINAL/C400PROF.DWG
DATE : AUGUST 16, 2007
SCALE : AS SHOWN
DRAWING NO. 5 OF 12

F-06-133

P:\Project\11563(02-06-06)\1-0\Engr\Plans\FINAL\C400PROF.dwg, 8/14/2007 10:20:33 AM

TEMPORARY SEEDING NOTES

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

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

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

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

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

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

PERMANENT SEEDING NOTES

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

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

SOIL AMENDMENTS : IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES :

1) PREFERRED – APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS. PER 1000 SQ.FT.) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS. PER 1000 SQ.FT.) BEFORE SEEDING. 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. PER 1000 SQ.FT.).

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

SEEDING : FOR THE PERIOD MARCH 1 THRU APRIL 30 AND FROM AUGUST 1 THRU OCTOBER 15, SEED WITH 60 LBS. PER ACRE (1.4 LBS. PER 1000 SQ.FT.) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THRU JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS. PER ACRE (0.05 LBS. PER 1000 SQ.FT.) OF WEEPING LOVEGRASS. DURING THE PERIOD OCTOBER 16 THRU FEBRUARY 28, PROTECT SITE BY ONE OF THE FOLLOWING OPTIONS:

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

2) USE SOD.

3) SEED WITH 60 LBS. PER ACRE KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE WELL ANCHORED STRAW.

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

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

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL

DEFINITION

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

PURPOSE

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

CONDITIONS WHERE PRACTICE APPLIES

I. THIS PRACTICE IS LIMITED TO AREAS HAVING 2:1 OR FLATTER SLOPES WHERE:
- A. THE TEXTURE OF THE EXPOSED SUBSOIL/PARENT MATERIAL IS NOT ADEQUATE TO PRODUCE VEGETATIVE GROWTH.
- B. 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.
- C. THE ORIGINAL SOIL TO BE VEGETATED CONTAINS MATERIAL TOXIC TO PLANT GROWTH.
- D. THE SOIL IS SO ACIDIC THAT TREATMENT WITH LIMESTONE IS NOT FEASIBLE.

II. FOR THE PURPOSE OF THESE STANDARDS AND SPECIFICATIONS, AREAS HAVING SLOPES STEEPER THAN 2:1 REQUIRE SPECIAL CONSIDERATION AND DESIGN FOR ADEQUATE STABILIZATION. AREAS HAVING SLOPES STEEPER THAN 2:1 SHALL HAVE THE APPROPRIATE STABILIZATION SHOWN ON THE PLANS.

CONSTRUCTION AND MATERIAL SPECIFICATIONS

I. TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTATION STATION.

II. TOPSOIL SPECIFICATIONS – SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

I. TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND. OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1-½" IN DIAMETER.

II. TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

III. WHERE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

III. FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES: I. PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 20.0 VEGETATIVE STABILIZATION – SECTION I – VEGETATIVE STABILIZATION METHODS AND MATERIALS.

IV. FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES:

I. ON SOIL MEETING TOPSOIL SPECIFICATIONS, OBTAIN TEST RESULTS DICTATING FERTILIZER AND LIME AMENDMENTS REQUIRED TO BRING THE SOIL INTO COMPLIANCE WITH THE FOLLOWING:

- A. PH FOR TOPSOIL SHALL BE BETWEEN 6.0 AND 7.5. IF THE TESTED SOIL DEMONSTRATES A PH OF LESS THAN 6.0, SUFFICIENT LIME SHALL BE PRESCRIBED TO RAISE THE PH TO 6.5 OR HIGHER.
- B. ORGANIC CONTENT OF TOPSOIL SHALL BE NOT LESS THAN 1.5 PERCENT BY WEIGHT.
- C. TOPSOIL HAVING SOLUBLE SALT CONTENT GREATER THAN 500 PARTS PER MILLION SHALL NOT BE USED.
- D. NO SOD OR SEED SHALL BE PLACED ON SOIL WHICH HAS BEEN TREATED WITH SOIL STERILANTS OR CHEMICALS USED FOR WEED CONTROL UNTIL SUFFICIENT TIME HAS ELAPSED (14 DAYS MIN.) TO PERMIT DISSIPATION OF PHYTO-TOXIC MATERIALS.

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

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

V. TOPSOIL APPLICATION

I. WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

II. GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBEIT 4" – 8" HIGHER IN ELEVATION.

III. TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4" – 8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.

IV. TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION, WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDBED PREPARATION.

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

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

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

STANDARD SEDIMENT CONTROL NOTES

1. A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
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 AND REVISIONS THERETO.
3. FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A)7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3:1, B) 14 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 THE 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 SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING (SEC. G.). TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHED OF GRASSES.
6. ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
7. SITE ANALYSIS:

TOTAL AREA OF SITE	2.1958 ACRES
AREA DISTURBED	3.32 ACRES
AREA TO BE ROOFED OR PAVED	0.80 ACRES
AREA TO BE VEGETATIVELY STABILIZED	2.60 ACRES
TOTAL CUT	13000 CY
TOTAL FILL	7500 CY
OFFSITE WASTE AREA LOCATION TO HAVE ACTIVE GRADING PERMIT.	

*QUANTITIES ARE FOR COUNTY FEE PURPOSES ONLY. CONTRACTOR IS RESPONSIBLE FOR VERIFICATION OF ACTUAL QUANTITIES.

8. ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
9. ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
10. ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
11. TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
12. SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
13. SEDIMENT WILL BE REMOVED FROM TRAPS WHEN ITS DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON THE PLANS.
14. CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT BID QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR EMBANKMENT MATERIAL, NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
15. FOREBAY IS TO USED AS A SEDIMENT BASIN FOR CONTROL OFF ONSITE RUNOFF.

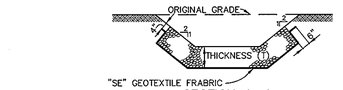
SEQUENCE OF CONSTRUCTION

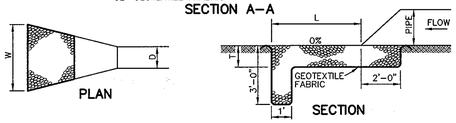
1. OBTAIN GRADING PERMIT.
2. INSTALL STABILIZED CONSTRUCTION ENTRANCE AND SUPER SILT FENCE. (1 WEEK)
3. UPON ACCEPTANCE BY THE COUNTY INSPECTOR, CONTRACTOR TO PROCEED WITH ROUGH GRADING OF ENTIRE SITE. (1 WEEK) CONTRACTOR TO PROVIDE DUST CONTROL AS NECESSARY AND AS DIRECTED BY THE INSPECTOR.
4. INSTALL WATER, SEWER AND STORM DRAINS WITH INLET PROTECTION AS SUBGRADE ELEVATIONS ARE REACHED. (4 WEEKS)
5. INSTALL CURB AND GUTTER AND PAVE. (1 WEEK)
6. PERFORM FINE GRADING, SIDEWALK, LIGHTING AND LANDSCAPING. (1 WEEK)
7. APPLY TOPSOIL AND STABILIZE DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. (2 WEEKS)
8. UPON PERMISSION OF COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ALL REMAINING SEDIMENT CONTROL DEVICES.

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. "SE" GEOTEXTILE OR BETTER SHALL BE PROTECTED FROM PUNCHING, CUTTING, OR TEARING. ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE SHALL BE REPAIRED BY PLACING ANOTHER PIECE OF GEOTEXTILE FABRIC OVER THE DAMAGED SECTION, WHETHER FOR REPAIRS OR FOR JOINING TWO PIECES OF GEOTEXTILE FABRIC, IT 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 HOMOGENOUS WITH THE SMALLER STONES AND SPALLS FILLING THE VOIDS BETWEEN THE LARGER STONES. RIP-RAP SHALL BE PLACED IN A MANNER TO PREVENT DAMANGE TO THE FILTER BLANKET OR GEOTEXTILE FABRIC. 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.

RIPRAP TO BE EMBEDDED IN PROPOSED TRANSITION SECTION



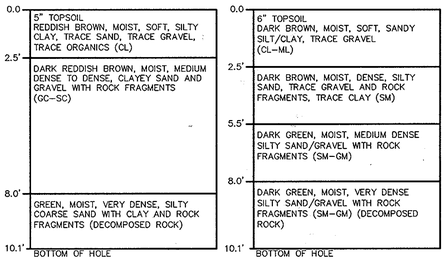


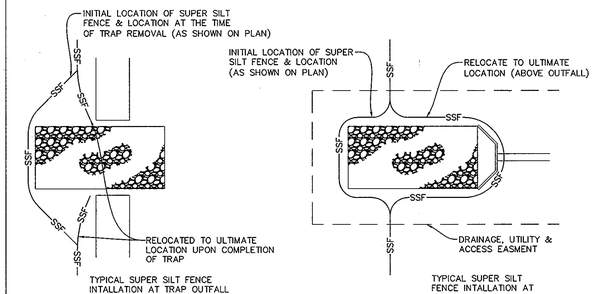
NOTE: Q_{10}, V & DEPTH CALCULATED AT END OF RIPRAP OUTLET CHANNEL.

STRUCTURE	MEDIAN STONE DIA.	LENGTH (L)	WIDTH (W)	THICKNESS (T)	Q_{25}	Vp	DEPTH
E-2	9.5" CL I	22'	11'	19"	10.06	–	–
E-3	9.5" CL I	18'	6'	19"	7.11	–	–
S-1	9.5" CL I	11'	25'	12"	–	–	–

RIPRAP OUTLET PROTECTION DETAIL

NO SCALE





SUPER SILT FENCE OUTFALL PROTECTION

SCALE: NO SCALE

BY THE DEVELOPER :

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

DEVELOPER — DATE 8/15/07

BY THE ENGINEER :

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

ENGINEER — DATE 8/14/07

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/23/07

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/23/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/13/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **SEDIMENT CONTROL NOTES AND DETAILS**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /FINAL/C901DET.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	6 OF 12

F-06-133

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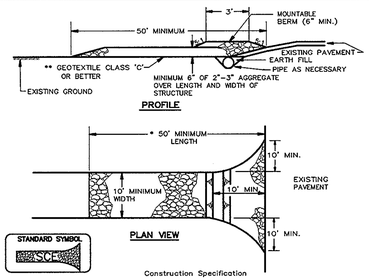
DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



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.

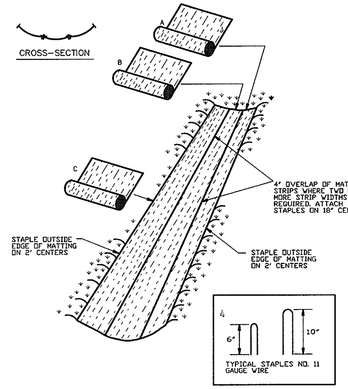
4. Stone – crushed aggregate (2" to 3") or reclaimed or recycled concrete equivalent shall be placed at least 6" deep over the length and width of the entrance.

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.

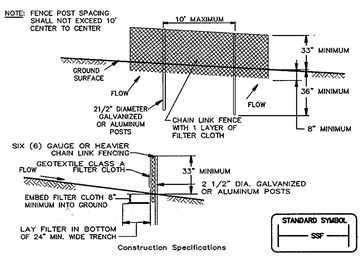
U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE F – 17 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 30 - EROSION CONTROL MATTING



U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE G – 28 – 2	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 33 - SUPER SILT FENCE



Construction Specifications

1. Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway (SHA) Details for Chain Link Fencing. The SHA specifications for a 6 foot fence shall be used, substituting 42" fabric and 8 foot length posts.

2. The posts do not need to be set in concrete.

3. Chain link fence shall be fastened securely to the fence posts with wire ties or staples. The lower tension wire, brace and truss rods, drive anchors and post caps are not required except on the ends of the fence. The chain link fencing shall be six (6) gauge or heavier.

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

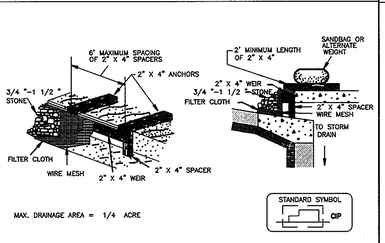
5. Filter cloth shall be embedded a minimum of 8" into the ground.

6. When two sections of geotextile fabric adjoin each other, they shall be overlapped by 6" and folded.

7. 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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE H – 26 – 3	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 23C - CURB INLET PROTECTION



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.

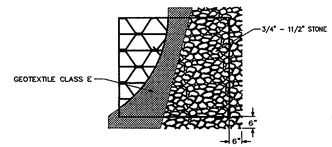
6. Form the 1/2 " x 1/2 " wire mesh and the geotextile fabric to the concrete gutter and against the face of the curb on both sides of the inlet. Place clean 3/4 " x 1 1/2 " stone over the wire mesh and geotextile in such a manner to prevent water from entering the inlet under or around the geotextile.

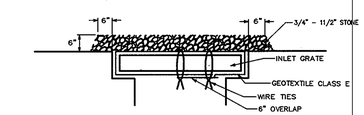
7. This type of protection must be inspected frequently and the filter cloth and stone replaced when clogged with sediment.

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.

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

DETAIL 23B - AT GRADE INLET PROTECTION





Construction Specifications

1. Lift grate and wrap with Geotextile Class E to completely cover all openings, then set grate back in place.

2. Place 3/4" to 11/2" stone, 4"-6" thick on the grate to secure the fabric and provide additional filtration.

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

DETAIL 1 - EARTH DIKE

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

FLOW CHANNEL STABILIZATION
GRADE 0.5% MIN. 10% MAX.

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.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE A – 1 – 6	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

30.0 - DUST CONTROL

DEFINITION

CONTROLLING DUST BLOWING AND MOVEMENT ON CONSTRUCTION SITES AND ROADS.

PURPOSE

TO PREVENT BLOWING AND MOVEMENT OF DUST FROM EXPOSED SOIL SURFACES, REDUCE ON AND OFF-SITE DAMAGE, HEALTH HAZARDS, AND IMPROVE TRAFFIC SAFETY.

CONDITIONS WHERE PRACTICE APPLIES

THIS PRACTICE IS APPLICABLE TO AREAS SUBJECT TO DUST BLOWING AND MOVEMENT WHERE ON OFF-SITE DAMAGE IS LIKELY WITHOUT TREATMENT.

SPECIFICATIONS

TEMPORARY METHODS

1. MULCHES – SEE STANDARDS FOR VEGETATIVE STABILIZATION WITH MULCHES ONLY. MULCH SHOULD BE CRIMPED OR TACKED TO PREVENT BLOWING.
2. VEGETATIVE COVER – SEE STANDARDS FOR TEMPORARY VEGETATIVE COVER.
3. TILLAGE – TO ROUGHEN SURFACE AND BRING CLODS TO THE SURFACE. THIS IS AN EMERGENCY MEASURE WHICH SHOULD BE USED BEFORE SOIL BLOWING STARTS. BEGIN PLOWING ON WINDWARD SIDE OF SITE. CHISEL-TYPE PLOWS SPACED ABOUT 12" APART, SPRING-TOOTHED HARROWS, AND SMILAR PLOWS ARE EXAMPLES OF EQUIPMENT WHICH MAY PRODUCE THE DESIRED EFFECT.
4. IRRIGATION – THIS IS GENERALLY DONE AS AN EMERGENCY TREATMENT. SITE IS SPRINKLED WITH WATER UNTIL THE SURFACE IS MOIST. REPEAT AS NEEDED. AT NO TIME SHOULD THE SITE BE IRRIGATED TO THE POINT THAT RUNOFF BEGINS TO FLOW.
5. BARRIERS – SOLID BOARD FENCES, SILT FENCES, SNOW FENCES, BURLAP FENCES, STRAW BALES, AND SIMILAR MATERIAL CAN BE USED TO CONTROL AIR CURRENTS AND SOIL BLOWING. BARRIERS PLACED AT RIGHT ANGLES TO PREVAILING CURRENTS AT INTERVALS OF ABOUT 10 TIMES THEIR HEIGHT ARE EFFECTIVE IN CONTROLLING SOIL BLOWING.
6. CALCIUM CHLORIDE – APPLY AT RATES THAT WILL KEEP SURFACE MOIST. MAY NEED RETREATMENT.

PERMANENT METHODS

1. PERMANENT VEGETATION – SEE STANDARDS FOR PERMANENT VEGETATIVE COVER, AND PERMANENT STABILIZATION WITH SOD. EXISTING TREES OR LARGE SHRUBS MAY AFFORD VALUABLE PROTECTION IF LEFT IN PLACE.
2. TOPSOILING – COVERING WITH LESS EROSIVE SOIL MATERIALS. SEE STANDARDS FOR TOPSOILING.
3. STONE – COVER SURFACE WITH CRUSHED STONE OR COARSE GRAVEL.

REFERENCES

1. AGRICULTURE HANDBOOK 346. WIND EROSION FORCES IN THE UNITED STATES AND THEIR USES IN PREDICTING SOIL LOSS.
2. AGRICULTURE INFORMATION BULLETIN 354. HOW TO CONTROL WIND EROSION, USDA-ARS.

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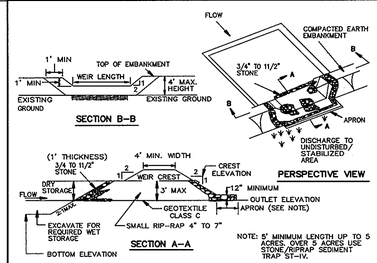
DETAIL 9 - STONE OUTLET SEDIMENT TRAP - ST II



Construction Specifications

1. Area under embankment shall be cleared, grubbed and stripped of any vegetation and root mat. The pool area shall be cleared.

2. The fill material for the embankment shall be free of roots and other woody vegetation as well as over-sized stones, rocks, organic material or other objectionable material. The embankment shall be compacted by traversing with equipment while it is being constructed.

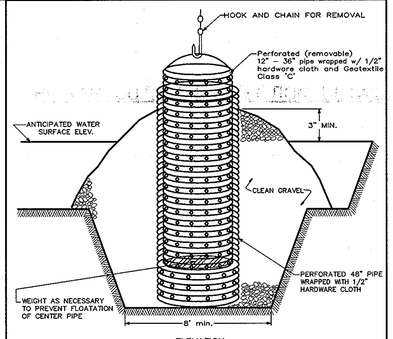
3. All cut and fill slopes shall be 2:1 or flatter.

4. The stone used in the outlet shall be small rip-rap 4" to 7" in size with a 1' thick layer of 3/4" to 11/2" washed aggregate placed on the upstream face of the outlet. Stone facing shall be as necessary to prevent clogging. Geotextile Class C may be substituted for the stone facing by placing it on the inside face of the stone outlet.

5. Sediment shall be removed and trap restored to its original dimensions when the sediment has accumulated to one half of the wet storage depth of the trap. Removed sediment shall be deposited in a suitable area and in such a manner that it will not erode.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE C – 9 – 18	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

DETAIL 20A - REMOVABLE PUMPING STATION



Construction Specifications

1. The outer pipe should be 48" dia. or small, 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 a 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 C.

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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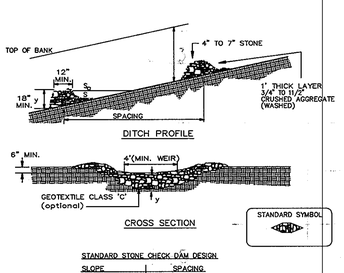
DETAIL 7 - STONE CHECK DAM



STANDARD STONE CHECK DAM DESIGN

SLOPE	SPACING
2% or less	80'
2.1% to 4%	40'
4.1% to 7%	25'
7.1% to 10%	15'
over 10%	use lined waterway design

Construction Specifications

1. Swales and ditches shall be prepared in accordance with the construction specifications described in Section A-2, Standards and Specifications for Temporary Swale.

2. The check dam shall be constructed of 4"-7" stone. The stone shall be placed so that it completely covers the width of the channel and keyed into the channel banks.

3. The top of the check dam shall be constructed so the the center is approximately 6" lower than the outer edges, forming a weir that water can flow across.

4. The maximum height of the check dam at the center shall not exced 2'.

5. The upstream sideof the check dam shall be lined with approximately 1" of 3/4" to 11/2" crushed aggregate.

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE	PAGE B – 8 – 5	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

BY THE DEVELOPER :

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

DEVELOPER — DATE 8/8/07

BY THE ENGINEER :

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

ENGINEER — DATE 8/14/07

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/23/07

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/23/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/5/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL DETAILS

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

8/14/07
DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS/FINAL/C902DET.DWG
DATE : AUGUST 16, 2007
SCALE : AS SHOWN
DRAWING NO. 7 OF 12

F-06-133

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STREET TREE CALCULATIONS FORREST AVENUE		
LENGTH= 1,350'	1 / 1918'/40'	34 SHADE TREES
TOTAL TREES REQUIRED		34 SHADE TREES
TOTAL TREES PROVIDED		24 SHADE TREES*

*DUE TO RETAINING WALL SHOWN ON PLANS, AND THE REQUIRED 10' NO TREE ZONE BEHIND THE WALL, NO STREET TREES ARE SHOWN ALONG THE TOP OF THE WALL.

STREET TREE SCHEDULE – FOREST ROAD

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
---	24	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2.5–3" CAL.	B&B	FULL CANOPY, MALE SP. ONLY

PLANTING SPECIFICATIONS

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Landscape Manual of the applicable jurisdiction, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed–in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double–shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).

13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5–10–5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.

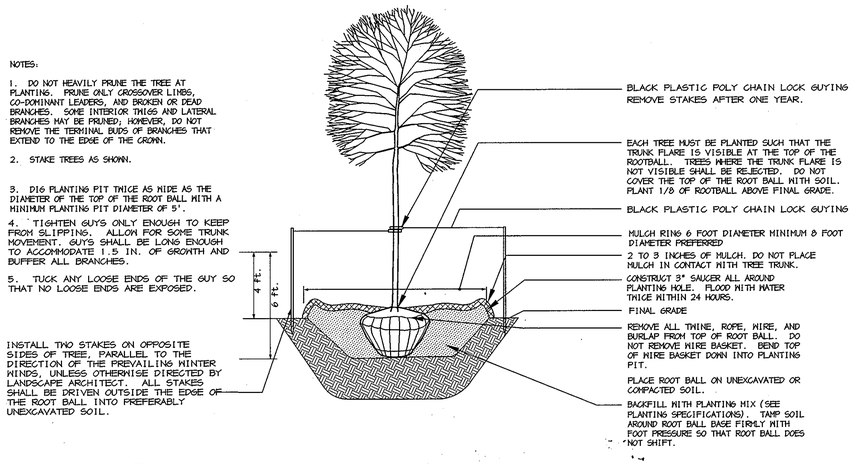
14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

15. Weed & insect control: Incorporate a pre–emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre–emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed–free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.

16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid dessication.

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)
NOT TO SCALE

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

2. NO FINANCIAL SURETY IS REQUIRED FOR THE PROPSOED LANDSCAPING. STREET TREE SURETY PROVIDED UNDER PUBLIC ROAD BONDS.

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.

7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.

8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE:

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

SIGNATURE 8/15/07 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS 9-5-07 DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT 9/12/07 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION 9/12/07 DATE

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410–796–6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683–688 & 707–720,
AND OPEN SPACE LOTS 704–A & 706–A

AREA TAX MAP #38 PARCEL 873 ZONED R–12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **STREET TREE PLANT DETAILS**

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

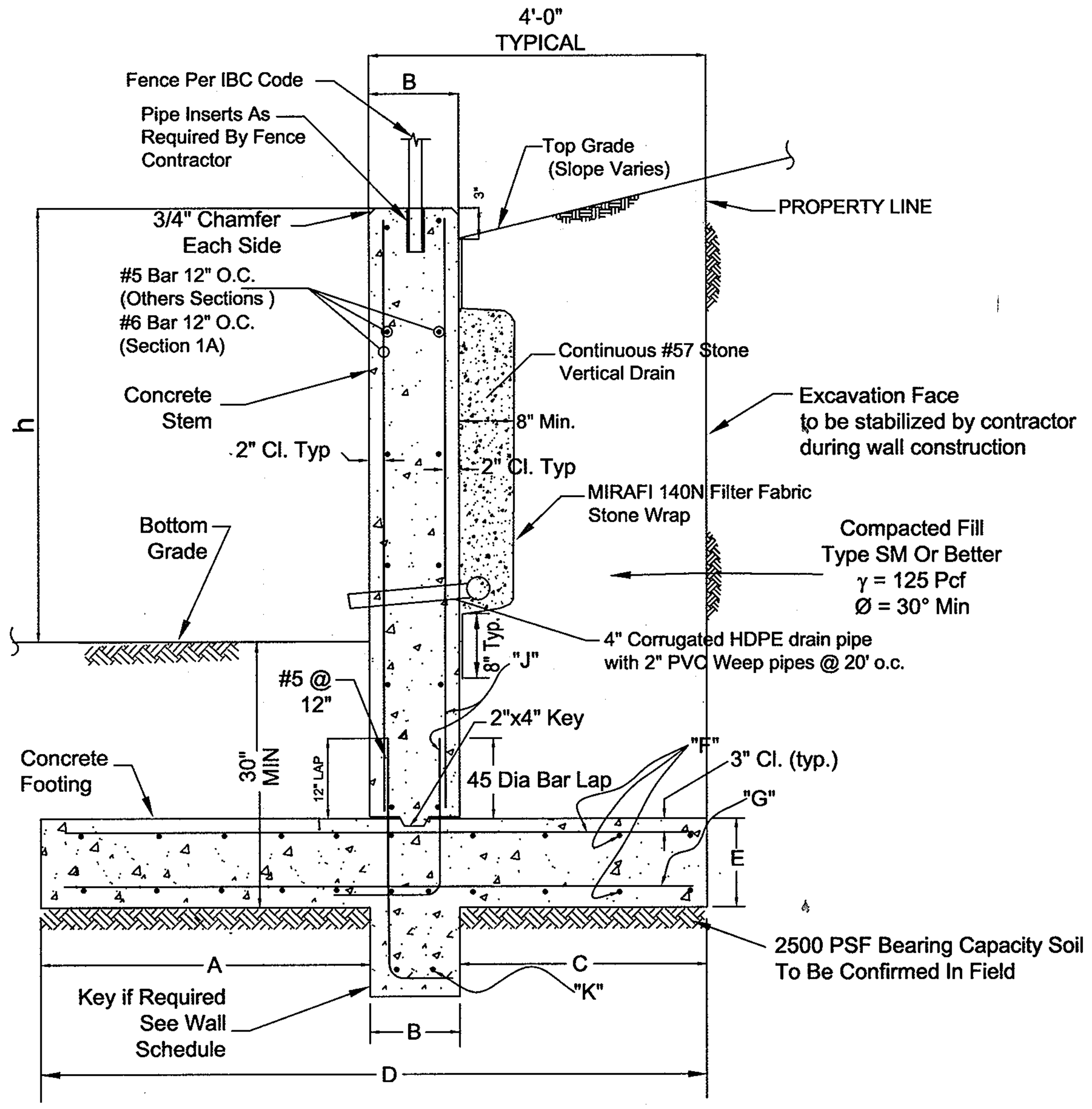
8.15.07 DATE

STATE OF MARYLAND 3068 PETER J. STONE LANDSCAPE ARCHITECT

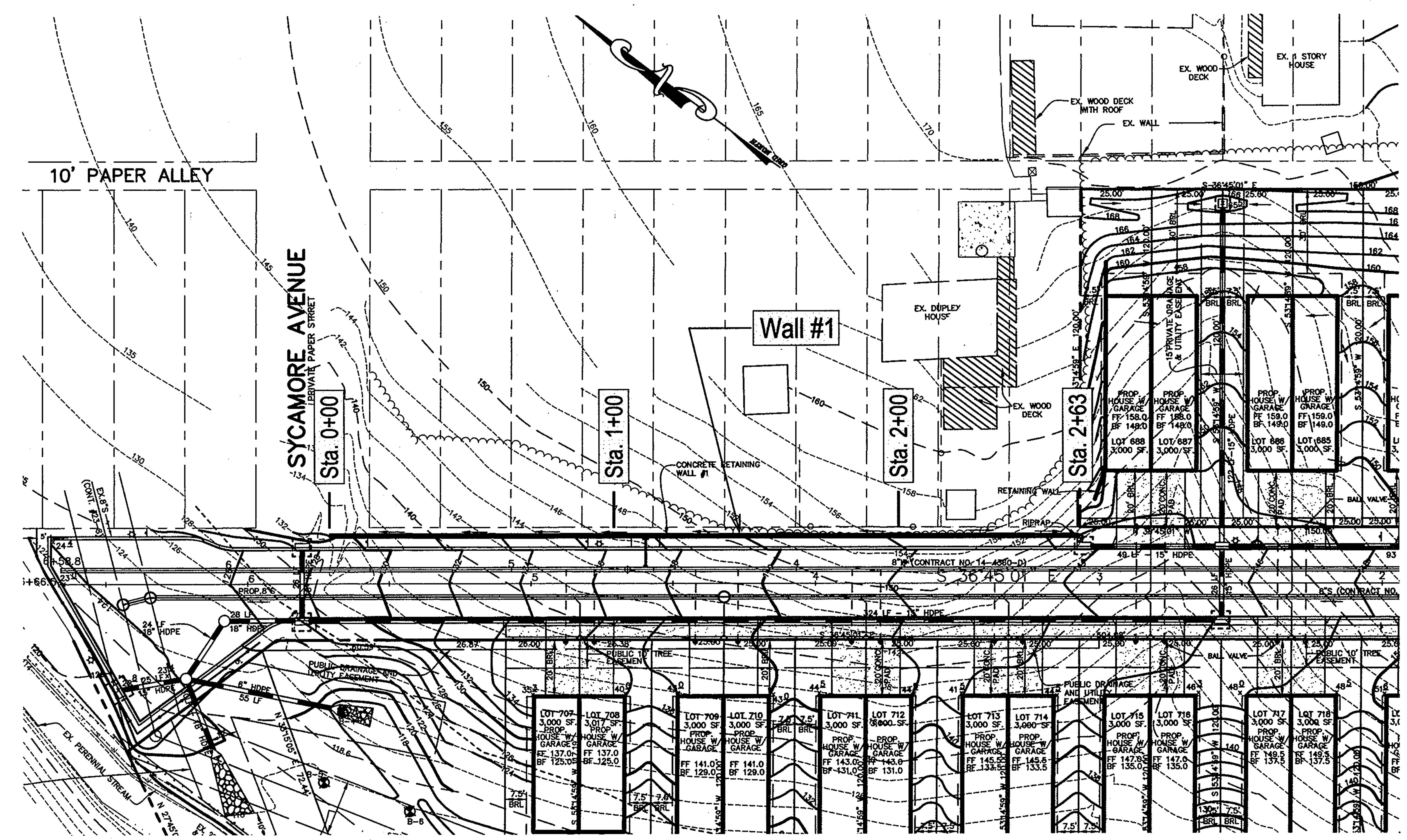
PETER J. STONE #3068

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1–0/ENGR/PLANS /FINAL/C8OODET.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	8 OF 12

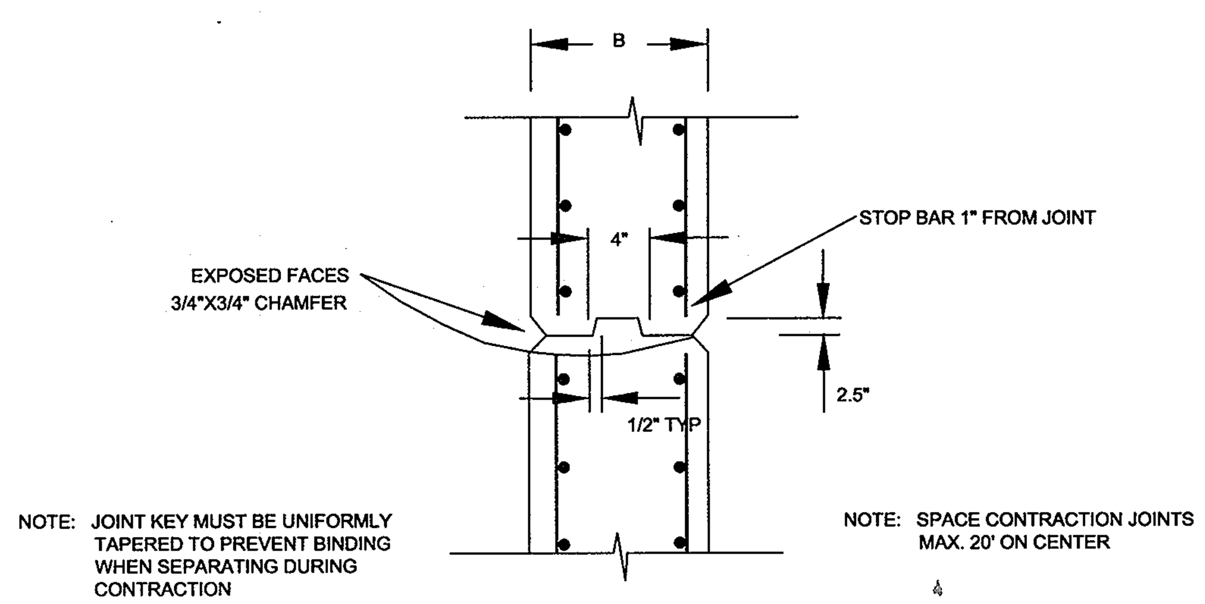
F–06–133



WALL SECTION
N.T.S.



WALL LOCATION PLAN
1"=30'



WALL STEM VERTICAL
CONTRACTION JOINT DETAIL
N.T.S.

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

Wall Type	A	B	C	D	E	Max. h	KEY	"F" Footing Reinf	"G" Stem Reinf	"J" Stem Reinf	"K" Key Reinf
1A	7'-9"	14"	2'-10"	11'-9"	22"	14'-6"	18"X18"	#7 @ 12"	#8 @ 12"	#9 @ 12"	#6 @ 12"
1B	5'-0"	14"	2'-10"	9'-0"	18"	12'-6"	14"X14"	#6 @ 12"	#7 @ 12"	#8 @ 12"	#5 @ 12"
2	3'-8"	14"	2'-10"	7'-8"	16"	10'-6"	14"X14"	#6 @ 12"	#6 @ 12"	#7 @ 12"	#5 @ 12"
3	2'-6"	14"	2'-10"	6'-6"	14"	9'-0"	14"X14"	#5 @ 12"	#5 @ 12"	#6 @ 12"	#5 @ 12"
4	1'-10"	14"	2'-10"	5'-8"	12"	7'-0"	NONE	#5 @ 12"	#5 @ 12"	#5 @ 12"	

WALL SCHEDULE

NOTE:
1. All retaining wall concrete shall be 4000 psi at 28 days with air entrainment.
2. Reinforcing steel shall conform to ASTM-615 Grade 60
3. Wall backfill shall be compacted to 95% of T-99
4. Concrete work shall comply with the latest ACI 318 Building code for concrete structures
5. All rebar splices not shown shall be a minimum 30 bar diam.
6. All wall exposed surfaces shall be mortar patched and sack-rubbed finished with grout and burlap.

APPROVED : HOWARD COUNTY DEPARTMENT OF ~~PLANNING AND ZONING~~ PUBLIC WORKS.

[signature] 9-5-07
~~DIRECTOR~~ CHIEF, BUREAU OF HIGHWAYS — DATE

[signature] 9/12/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE

[signature] 9/13/07
CHIEF, DIVISION OF LAND DEVELOPMENT — DATE

DATE	NO.	REVISION

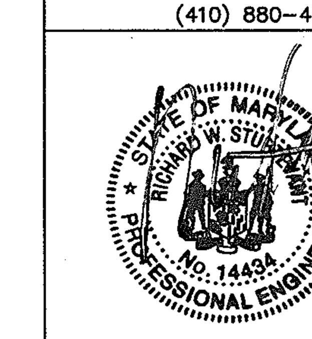
OWNER/DEVELOPER
MEADOWLARK, LLC
6375 HANOVER CROSSING WAY
HANOVER, MARYLAND 21076
410-796-6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720 AND OPEN SPACE LOTS 704-706

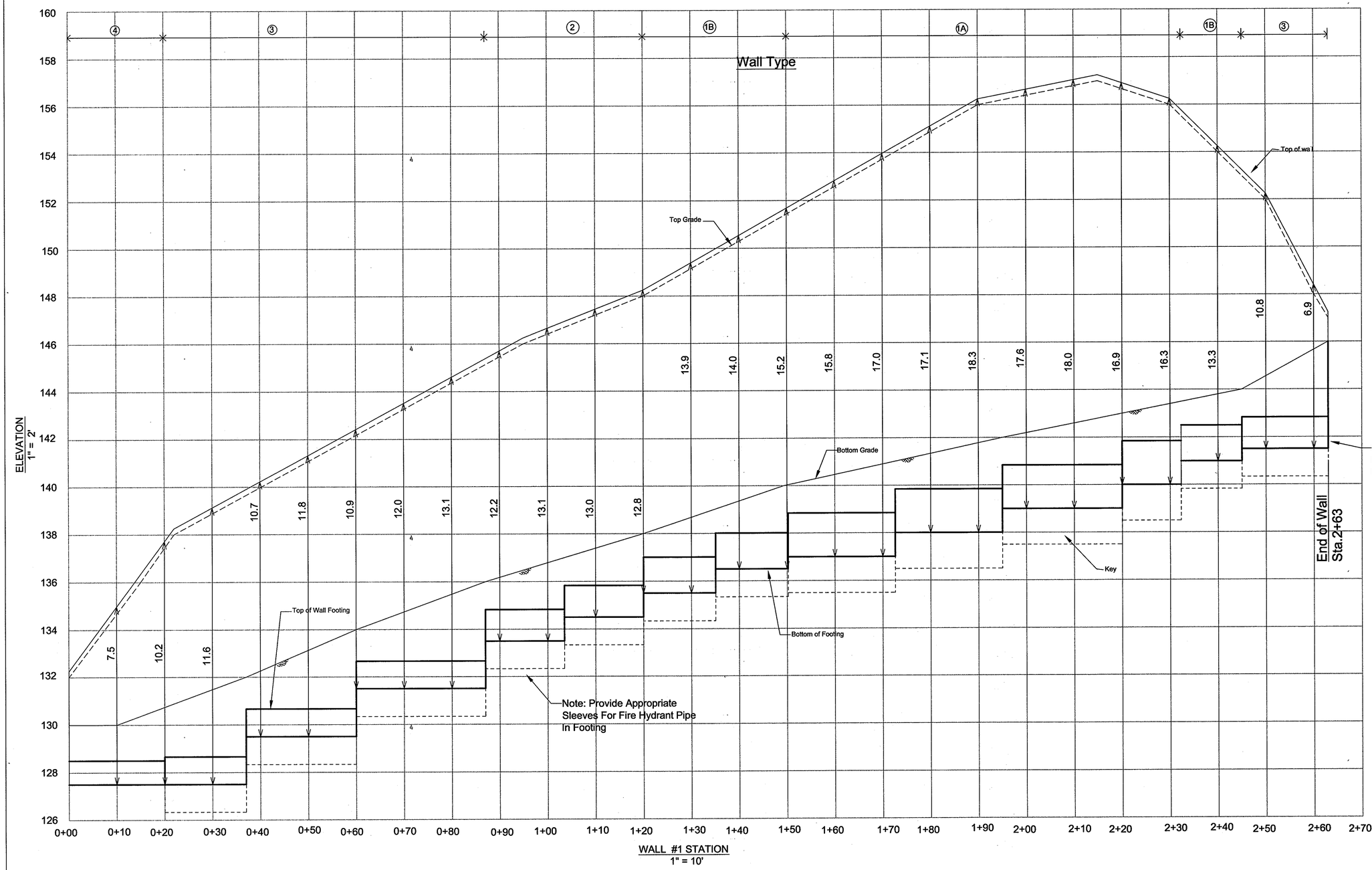
AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
RETAINING WALL #1 PLAN & CONSTRUCTION DETAILS

HILLIS-CARNES
ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A (410) 880-4788
Annapolis Junction, MD Fax: (410)880-4098



DESIGNED BY : CX
DRAWN BY: CX
PROJECT NO : 04264-C
DATE : AUGUST 16, 2007
SCALE : AS SHOWN
DRAWING NO. 9 OF 12



APPROVED : HOWARD COUNTY DEPARTMENT OF ~~PLANNING AND ZONING~~ PUBLIC WORKS.

~~DIRECTOR~~ CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/4/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
6375 HANOVER CROSSING WAY
HANOVER, MARYLAND 21076
410-796-6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720 AND OPEN SPACE LOTS 704-706

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

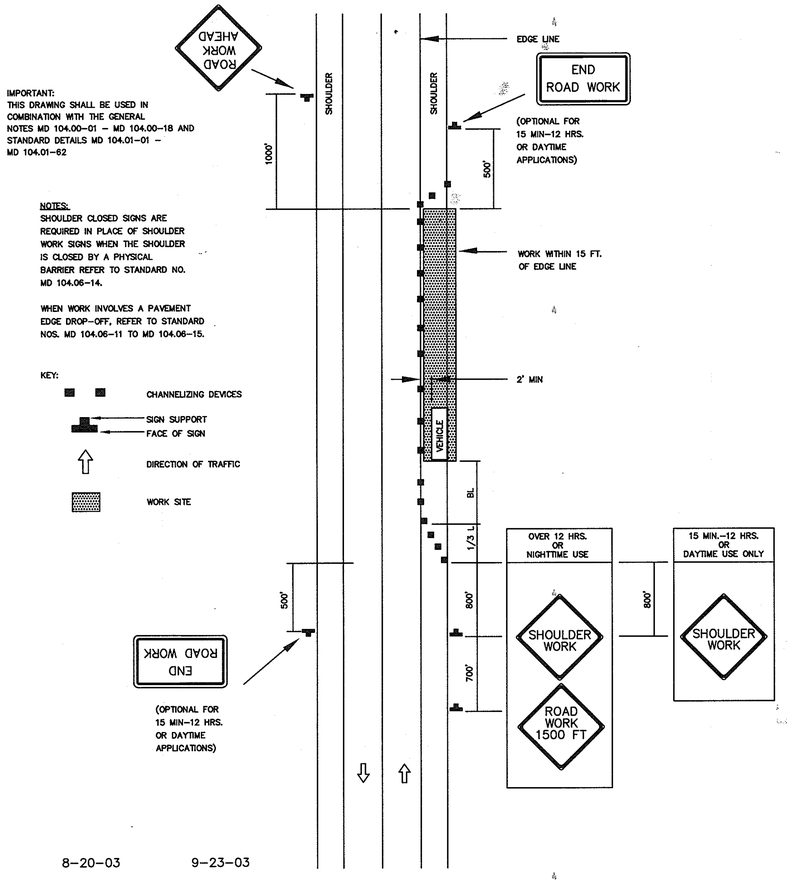
TITLE
RETAINING WALL #1 ELEVATION

HILLIS-CARNES
ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A, Annapolis Junction, MD
(410) 880-4788 Fax: (410)880-4098

STATE OF MARYLAND — HOWARD W. STURGIS — No. 14494 — PROFESSIONAL ENGINEER

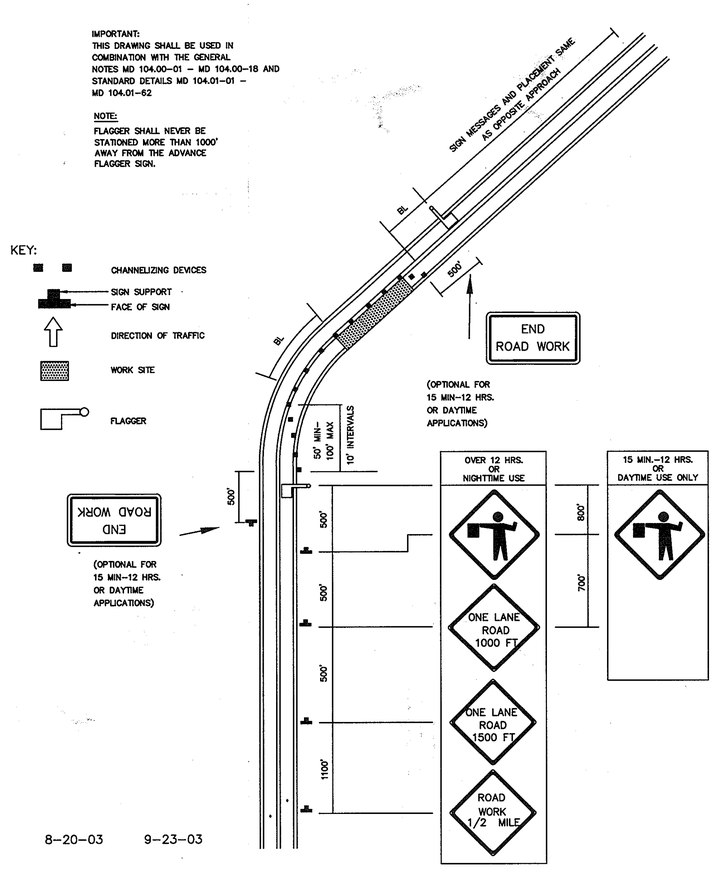
DESIGNED BY :	CX
DRAWN BY:	CX
PROJECT NO :	04264-C
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	10 OF 12

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



MD. 104.02–02
SHOULDER WORK, 2 LANE, 2–WAY TRAFFIC, ≤ 40MPH
NO SCALE

TEMPORARY TRAFFIC CONTROL TYPICAL APPLICATION



MD. 104.02–10
FLAGGING OPERATION, 2 LANE, 2–WAY TRAFFIC, ≤ 40MPH
NO SCALE

NOTES
1. HIGHLAND AVENUE IS AN EXISTING 2 LANE, 2–WAY ROAD. THE POSTED SPEED LIMIT FOR THE ROAD IS 25 MPH.
2. REFER TO MDSHA STANDARDS MD 104.01–80 AND MD 104.01–81 FOR BUFFER LENGTHS AND TAPER LENGTHS. FOR GENERAL NOTES FOR CHANNELIZATION DEVICES, REFER TO MDSHA STANDARD MD 104.00–10.
3. REFER TO MDSHA STANDARD MD 104.00–12 FOR GENERAL NOTES FOR FLAGGING OPERATION.

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/18/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410–796–6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683–688 & 707–720,
AND OPEN SPACE LOTS 704–A & 706–A

AREA TAX MAP #38 PARCEL 873 ZONED R–12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
MOT PLAN

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

9/14/07
DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1–0/ENGR/PLANS C903DET
DATE : AUGUST 16, 2007
SCALE : NO SCALE
DRAWING NO. 11 OF 12

F–06–133

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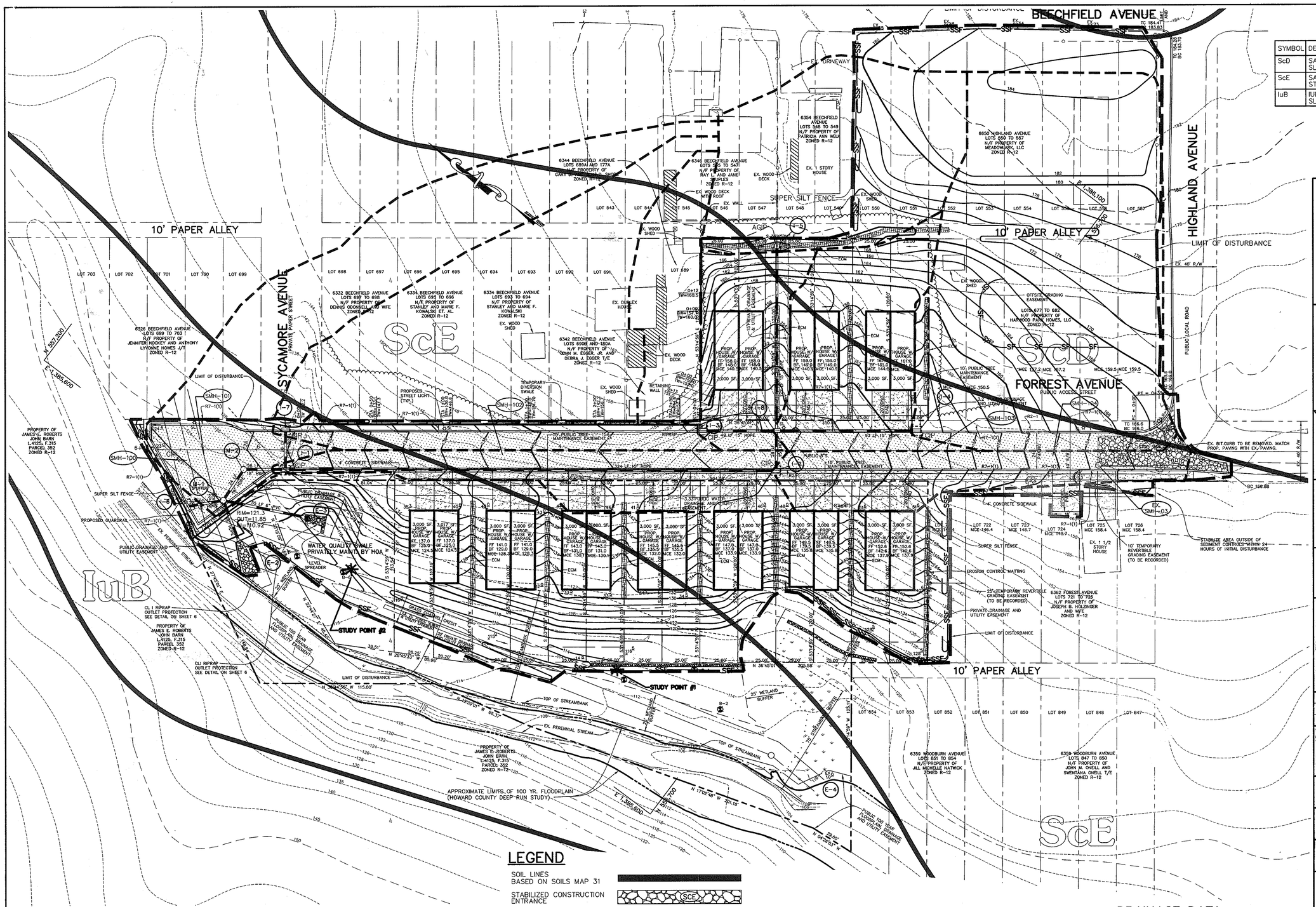


SOIL CHART

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C

BY THE DEVELOPER :

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

DEVELOPER — DATE 8/13/07

BY THE ENGINEER :

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

ENGINEER — DATE 8/14/07

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE

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

HOWARD SOIL CONSERVATION DISTRICT — DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/5/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK LOTS 683-688 & 707-720, AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **INLET DRAINAGE AREA MAP**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS C500DSW.DWG
DATE : AUGUST 16, 2007
SCALE : 1" = 30'
DRAWING NO. 12 OF 12

F-06-133

LEGEND

- SOIL LINES BASED ON SOILS MAP 31
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE (SSF)
- EROSION CONTROL MATTING
- INLET PROTECTION
- STORM DRAIN DRAINAGE DIVIDE
- 15%-24.9% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES
- STUDY POINT

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	'C' FACTOR
I-1	0.21	0.87
I-2	0.18	0.81
I-3	0.34	0.35
I-4	0.85	0.36
I-5	0.41	0.33
I-6	0.49	0.41
I-7	0.71	0.43
I-8	0.28	0.43

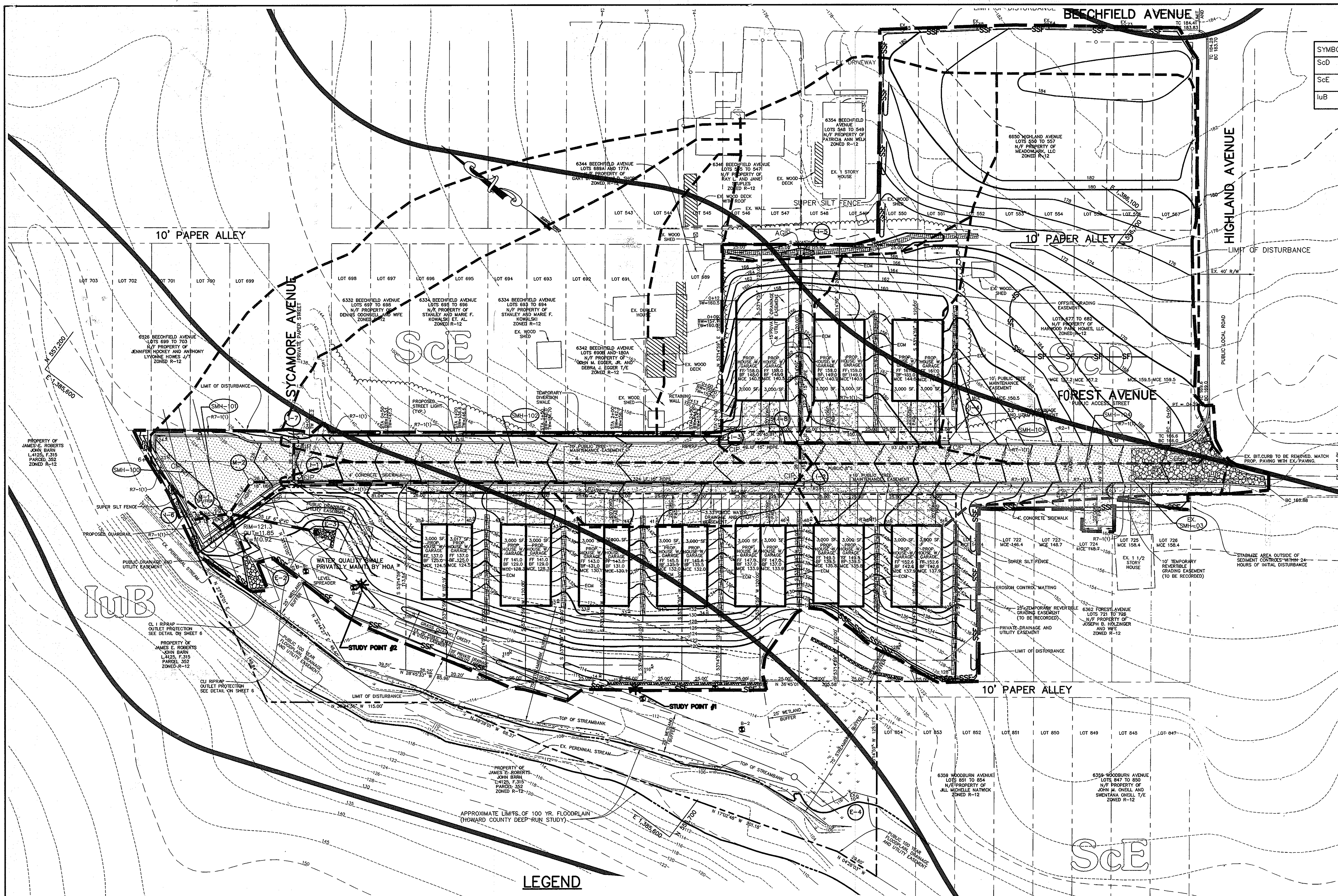
STORMWATER MANAGEMENT SUMMARY TABLE

	DRAINAGE AREA (AC)	WQv (CF)	Rev (CF)	Cpv (AC-FT)	Qp 1 (CFS)	Qp 10 (CFS)	Qp 100 (CFS)	COMMENTS
STUDY POINT 1	0.56	1011	131	N/A	1.27	3.02	–	SHEET FLOW TO BUFFER
STUDY POINT 2	1.31	2581	336	0.110	3.03	7.36	–	GRASS CHANNEL CREDIT

FOR DRAINAGE AREA #1 THE SHEET FLOW TO BUFFER CREDIT WILL PROVIDE FOR THE REQUIRED WQv AND Rev. THE 1-YEAR PEAK DISCHARGE AT STUDY POINT 1 IS LESS THAN 2 CFS; THEREFORE, Cpv IS NOT REQUIRED.

FOR DRAINAGE AREA #2 GRASS CHANNEL CREDIT WILL PROVIDE THE REQUIRED REQUIRED WQv AND Rev.

P:\Projects\11563\02-06-09\1-0\Engr\Plans\FINAL\C500DSW.dwg, 8/14/2007 10:31:41 AM



SOIL CHART

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C

BY THE DEVELOPER :

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

[signature] 8/15/07
DEVELOPER DATE

BY THE ENGINEER :

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

[signature] 8/14/07
ENGINEER DATE

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

NATURAL RESOURCES CONSERVATION SERVICE DATE

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

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

[signature] 9-5-07
CHIEF, BUREAU OF HIGHWAYS HS DATE

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[signature] 9/13/07
CHIEF, DIVISION OF LAND DEVELOPMENT BB DATE

[signature] 9/12/07
CHIEF, DEVELOPMENT ENGINEERING DIVISION AW DATE

DATE	NO.	REVISION
1/4/08	1	REVISED STREET NAME SPELLING TO FOREST AVENUE

OWNER/DEVELOPER

MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT

TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE

INLET DRAINAGE AREA MAP

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

8/14/07
DATE

STATE OF MARYLAND
DOMENICK W. COLANGELO
NO. 27200
REGISTERED
PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS C500DSW.DWG
DATE : AUGUST 16, 2007
SCALE : 1" = 30'
DRAWING NO. 12 OF 12

F-06-133

STORMWATER MANAGEMENT SUMMARY TABLE

	DRAINAGE AREA (AC)	WQv (CF)	Rev (CF)	Cpv (AC-FT)	Qp 1 (CFS)	Qp 10 (CFS)	Qp 100 (CFS)	COMMENTS
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FOR DRAINAGE AREA #2 GRASS CHANNEL CREDIT WILL PROVIDE THE REQUIRED REQUIRED WQv AND Rev.

LEGEND

SOIL LINES BASED ON SOILS MAP 31
STABILIZED CONSTRUCTION ENTRANCE (SCE)
LIMIT OF DISTURBANCE
SUPER SILT FENCE (SSF)
EROSION CONTROL MATTING
INLET PROTECTION
STORM DRAIN DRAINAGE DIVIDE
15%-24.9% STEEP SLOPES
25% OR GREATER STEEP SLOPES
STUDY POINT *

DRAINAGE DATA

INLET NOS.	AREA IN ACRES	'C' FACTOR
I-1	0.21	0.87
I-2	0.18	0.81
I-3	0.34	0.35
I-4	0.85	0.36
I-5	0.41	0.33
I-6	0.49	0.41
I-7	0.71	0.43
I-8	0.28	0.43

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STREET TREE CALCULATIONS FOREST AVENUE		
LENGTH= 1,350'	1918'/40'	34 SHADE TREES
TOTAL TREES REQUIRED		34 SHADE TREES
TOTAL TREES PROVIDED		24 SHADE TREES*

*DUE TO RETAINING WALL SHOWN ON PLANS, AND THE REQUIRED 10' NO TREE ZONE BEHIND THE WALL, NO STREET TREES ARE SHOWN ALONG THE TOP OF THE WALL.

STREET TREE SCHEDULE – FOREST AVENUE

SYMBOL	QTY.	SCIENTIFIC/ COMMON NAME	SIZE	ROOT	REMARKS
SHADE TREES					
--	24	GINKGO BILOBA 'AUTUMN GOLD' AUTUMN GOLD GINKGO	2.5-3" CAL.	B&B	FULL CANOPY, MALE SP. ONLY

PLANTING SPECIFICATIONS

1. Plants, related material, and operations shall meet the detailed description, as given on the plans and as described herein. Where discrepancies exist between Standards & Guidelines referenced within these specifications and the Landscape Manual of the applicable jurisdiction, the latter takes precedence.

2. All plant material, unless otherwise specified, that is not nursery grown, uniformly branched, does not have a vigorous root system, and does not conform to the most recent edition of the American Association of Nurserymen (AAN) Standards will be rejected. Plant material that is not healthy, vigorous, free from defects, decay, disfiguring roots, sunscald injuries, abrasions of the bark, plant disease, insect pest eggs, borers and all forms of insect infestations or objectionable disfigurements will be rejected. Plant material that is weak or which has been cut back from larger grades to meet specified requirements will be rejected. Trees with forked leaders will be rejected. All B & B plants shall be freshly dug; no healed-in plants or plants from cold storage will be accepted.

3. Unless otherwise specified, all general conditions, planting operations, details and planting specifications shall conform to the most recent edition of the "Landscape Specification Guidelines by the Landscape Contractors Association of MD, DC, & VA", (hereinafter "Landscape Guidelines") approved by the Landscape Contractors Association of Metropolitan Washington and the Potomac Chapter of the American Society of Landscape Architects.

4. Contractor shall guarantee all plant material for a period of one year after date of acceptance in accordance with the appropriate section on the Landscape Guidelines. Contractor's attention is directed to the maintenance requirements found within the one year specifications including watering and replacement of specified plant material.

5. Contractor shall be responsible for notifying all relevant and appropriate utility companies, utility contractors, and "Miss Utility" a minimum of 48 hours prior to the beginning of any work. Contractor may make minor adjustments in spacing and location of plant material to avoid conflicts with utilities. Major changes will require the approval of the landscape architect. Damage to existing structure and utilities shall be repaired at the expense of the Contractor.

6. Protection of existing vegetation to remain shall be accomplished via the temporary installation of 4 foot high snow fence at the drip line, see detail.

7. Contractor is responsible for installing all material in the proper planting season for each plant type. All planting is to be completed within growing season of completion of site construction. Do not plant Pinus strobus or XCupressocyparis leylandii between November 15 and March 15. Landscape plants are not to be installed before site is graded to final grade.

8. Contractor to regrade, fine grade, sod, hydroseed and straw mulch all areas disturbed by their work.

9. Bid shall be based on actual site conditions. No extra payment shall be made for work arising from actual site conditions differing from those indicated on drawings and specifications.

10. Plant quantities are provided for the convenience of the contractor only. If discrepancies exist between quantities shown on plan and those shown on the plant list, the quantities on the plan take precedence. Where discrepancies on the plan exist between the symbols and the callout leader, the number of symbols take precedence.

11. All shrubs and groundcover areas shall be planted in continuous planting beds, prepared as specified, unless otherwise indicated on plans. (See Specification 13). Beds to be mulched with minimum 2" and maximum 3" of composted, double-shredded hardwood mulch throughout.

12. Positive drainage shall be maintained on planting beds (minimum 2 percent slope).

13. Bed preparation shall be as follows: Till into a minimum depth of 6" 1 yard of Compro or Leafgro per 200 SF of planting bed, and 1 yard of topsoil per 100 SF of bed. Add 3 lbs of standard 5-10-5 fertilizer per cubic yard of planting mix and till. Ericaceous plants (Azaleas, Rhododendrons, etc.): top dress after planting with iron sulfate or comparable product according to package directions. Taxus baccata 'Repandens' (English weeping yews): Top dress after planting with 1/4 to 1/2 cup lime each.

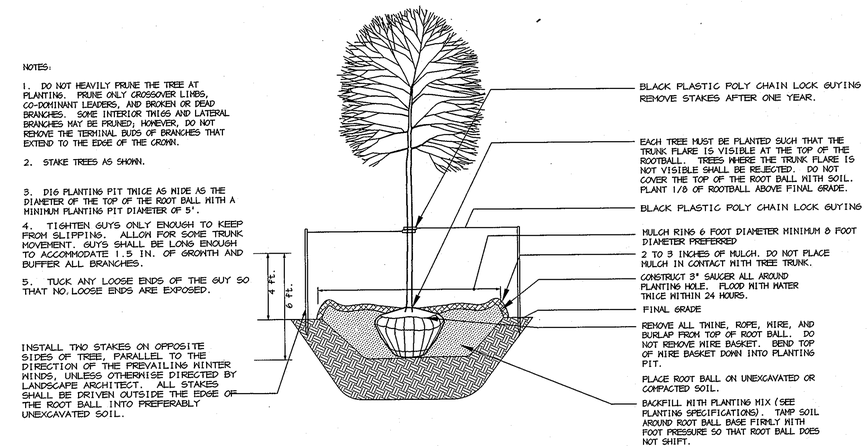
14. Planting mix: For trees not in a prepared bed, mix 50% Compro or Leafgro with 50% soil from tree hole to use as backfill, see tree planting detail.

15. Weed & insect control: Incorporate a pre-emergent herbicide into the planting bed following recommended rates on the label. For tree planting, apply a pre-emergent on top of soil and root ball before mulching. Caution: For areas to be planted with a ground cover, be sure to carefully check the chemical used to assure its adaptability to the specific groundcover to be treated. Maintain the mulch weed-free for the extent of the warranty period. Under no circumstances is a pesticide containing chlorpyrifos to be used as a means of pest control.

16. Water: All plant material planted shall be watered thoroughly the day of planting. All plant material not yet planted shall be properly protected from drying out until planted. At a minimum, water unplanted plant material daily and as necessary to avoid dessication.

17. Pruning: Do not heavily prune trees and shrubs at planting. Prune only broken, dead, or diseased branches.

18. All areas within contract limits disturbed during or prior to construction not designated to receive plants and mulch shall be fine graded, grass seed planted, and covered with straw mulch.



DECIDUOUS B&B TREE PLANTING DETAIL (TREES 3" CAL. OR SMALLER)
NOT TO SCALE

GENERAL NOTES:

1. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

2. NO FINANCIAL SURETY IS REQUIRED FOR THE PROPSOED LANDSCAPING. STREET TREE SURETY PROVIDED UNDER PUBLIC ROAD BONDS.

3. THIS PLAN IS FOR LANDSCAPING PURPOSES ONLY.

4. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

5. ALL MATERIAL SELECTED SHALL BE EQUAL TO OR BETTER THAN THE REQUIREMENTS OF THE "USA STANDARD FOR NURSERY STOCK", LATEST EDITION, AS PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN.

6. ALL MATERIAL SHALL BE PLANTED IN ACCORDANCE WITH THE MINIMUM STANDARDS CITED IN THE LATEST EDITION OF "LANDSCAPE SPECIFICATION GUIDELINES" PUBLISHED BY THE LANDSCAPE CONTRACTORS ASSOCIATION.

7. AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS SHALL BE OF THE PROPER HEIGHT AND/OR SPREAD REQUIREMENTS IN ACCORDANCE WITH THIS PLAN AND THE HOWARD COUNTY LANDSCAPE MANUAL.

8. NO SUBSTITUTIONS OR RELOCATION OF PLANTS MAY BE MADE WITHOUT PRIOR APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING OF HOWARD COUNTY. ANY DEVIATION FROM THIS LANDSCAPE PLAN MAY RESULT IN A REQUIREMENT FOR SUBMITTAL OF AN OFFICIAL "REDLINE REVISION" TO THE SITE DEVELOPMENT PLAN(S) AND/OR DENIAL IN THE RELEASE OF LANDSCAPE SURETY.

DEVELOPER'S/BUILDER'S CERTIFICATE:

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

SIGNATURE — DATE 8/15/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT BB — DATE 9/8/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION AV — DATE 9/12/07

DATE	NO.	REVISION
1/4/08	1	REVISED STREET NAME SPELLING TO FOREST AVENUE

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
STREET TREE PLANT DETAILS

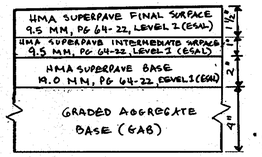
Patton Harris Rust & Associates, pc
Engineers. Surveyors. Planners. Landscape Architects.
8818 Centre Park Drive
Columbia, MD 21045
T 410.997.8900
F 410.997.9282

8.15.07
DATE

STATE OF MARYLAND 3068 PETER J. STONE PROFESSIONAL LANDSCAPE ARCHITECT
PETER J. STONE #3068

DESIGNED BY : ESF	
DRAWN BY: EMR	
PROJECT NO: 11563/1-0/ENGR/PLANS /FINAL/C900DET.DWG	
DATE : AUGUST 16, 2007	
SCALE : AS SHOWN	
DRAWING NO. 8 OF 12	

F-06-133

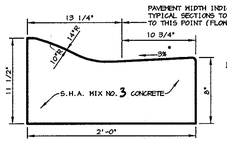


HOWARD COUNTY DESIGN MANUAL VOLUME IV- STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION (DRAWING R-2.01)

THE PAVING SECTION SHOWN HAS NOT BEEN DESIGNED FOR ACTUAL SOIL CONDITIONS, IN PLACE COMPACTION RESULTS, OR TRAFFIC VOLUMES SPECIFIC TO THIS PROJECT. IT IS RECOMMENDED THAT THE USER CONSULT WITH A LICENSED PROFESSIONAL GEOTECHNICAL ENGINEER FOR A SPECIFIC PAVING DESIGN BASED ON THE APPROPRIATE PARAMETERS PRIOR TO INSTALLATION OF THIS PAVING SECTION.

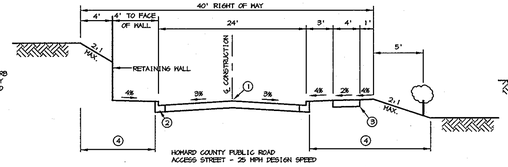
P-2 PAVING

NO SCALE



MODIFIED COMBINATION CURB AND GUTTER

- GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE SAME RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.



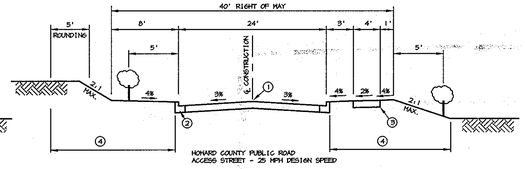
CLOSED SECTION

① PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
② TYPE OF CURB VARIES (MOD. COMB. CURB)
③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
④ INDICATES 2" TOPSOIL, SEED AND MULCH.

TYPICAL SECTION FOREST AVENUE WITH RETAINING WALL

NO SCALE

FROM CL STA 0+55 TO CL STA 1+60
FROM CL STA 3+09 TO CL STA 5+71

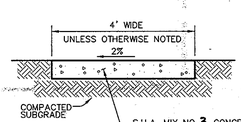


CLOSED SECTION

① PROFILE GRADE LINE (PGL), SEE DESIGN MANUAL.
② TYPE OF CURB VARIES (MOD. COMB. CURB)
③ 4" CONCRETE SIDEWALK AS REQUIRED BY SUBDIVISION REGULATIONS.
④ INDICATES 2" TOPSOIL, SEED AND MULCH.

TYPICAL SECTION FOREST AVENUE

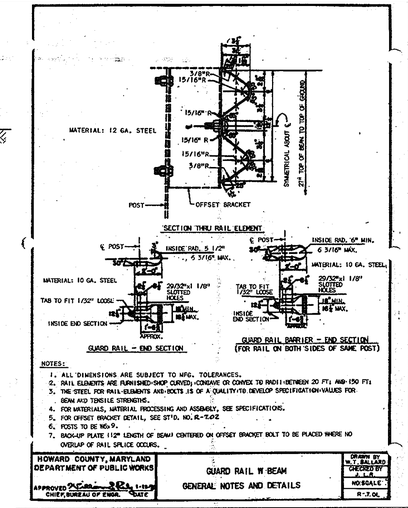
NO SCALE



NOTES :
PROVIDE LATITUDINAL EXPANSION JOINTS AT 15' O.C. (MAX.) PROVIDE CONTRACTION (DUMMY) JOINT AT 5' O.C. INTERVALS BETWEEN EXPANSION JOINTS. SIDEWALK TO BE SCRIBED IN 5' MAX. SQUARES.

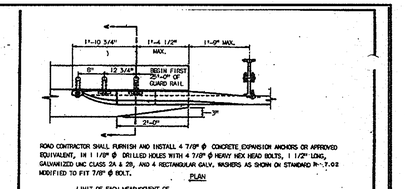
SIDEWALK DETAIL

NO SCALE



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 STD. NO. R-7.02
6. POSTS TO BE W6×9.
7. BACK-UP PLATE 1'2" 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	GUARD RAIL W BEAM GENERAL NOTES AND DETAILS	DRAWN BY: W. T. DILLARD; CHECKED BY: A.L.E.; NO SCALE; R-7.01
APPROVED 9-5-07 CHIEF, BUREAU OF ENGR. DATE		



ROAD CONTRACTOR SHALL FURNISH AND INSTALL 4 7/8" Ø CONCRETE EXPANSION ANCHORS OR APPROVED EQUIVALENT, IN 1 1/8" Ø DRILLED HOLES WITH 4 7/8" Ø HEAVY HEX HEAD BOLTS, 1 1/2" LONG, GALVANIZED UNC CLASS 2A & 2B, AND 4 RECTANGULAR GALV. WASHERS AS SHOWN ON STANDARD R-7.02 MODIFIED TO FIT 7/8" Ø BOLT.

GENERAL NOTES

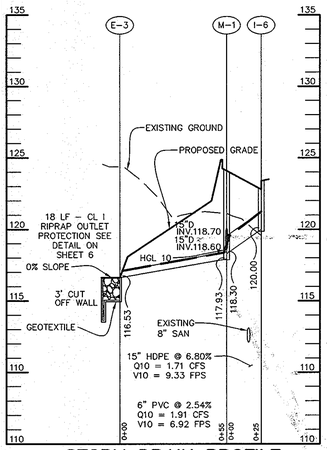
FIRST 25'-0" OF GUARD RAIL AFFIXED TO BRIDGE ON THE APPROACH END. PLACE FIRST POST MAXIMUM 1'-0" FROM BRIDGE AND NEXT SEVEN POSTS SPACED 3'-1 1/2" C/C. PLACE AN ADDITIONAL OFFSET BRACKET AT THE FOURTH AND FIFTH POSTS FROM THE BRIDGE TO AVOID CONFLICT WITH INLETS.
WHEN AFFIXING GUARD RAIL TO BRIDGE ON THE TRAILING END, USE NORMAL POST SPACING WITH AN ADDITIONAL OFFSET BRACKET PLACED AT THE SECOND POST TO AVOID CONFLICT WITH INLETS.
COST OF ADDITIONAL POSTS AND OFFSET BRACKETS TO BE INCLUDED IN BID PRICE PER LINEAR FOOT OF GUARD RAIL.
IN GENERAL, TWO OFFSET BRACKETS SHALL BE USED WHEREVER NECESSARY TO AVOID CONFLICT WITH DRAINAGE INLETS.

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS	GUARD RAIL W BEAM ANCHORAGE AT STRUCTURES	DRAWN BY: W.T. DILLARD; CHECKED BY: A.L.E.; NO SCALE; R-7.07
APPROVED 9-5-07 CHIEF, BUREAU OF ENGR. DATE		

NOTE: GUARDRAIL POSTS SHALL BE INSTALLED AT LEAST 6 FEET INTO GROUND.

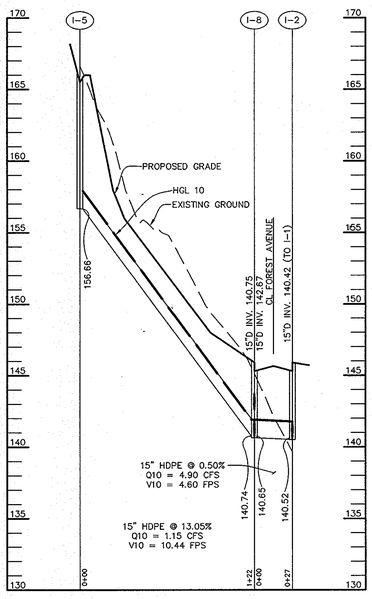
STRUCTURE SCHEDULE

STRUCTURE	TYPE	LOCATION	INV. IN	INV. OUT	TOP	REMARKS
I-1	A-5 INLET	N 557030 E 1385639	124.70 124.85	124.60	127.51	HOCO STD. DETAIL D-4.01
I-2	A-5 INLET	N 556771 E 1385832	140.52	140.42	145.31	HOCO STD. DETAIL D-4.01
I-3	A-5 INLET	N 556824 E 1385822	–	141.00	143.66	HOCO STD. DETAIL D-4.01
I-4	A-10 INLET	N 556711 E 1385907	–	147.35	151.43	HOCO STD. DETAIL D-4.03
I-5	YARD INLET	N 556859 E 1385950	–	156.66	165.50	HOCO STD. DETAIL D-4.14
I-6	A-10 INLET	N 557066 E 1383580	–	120.00	122.80	HOCO STD. DETAIL D-4.03
I-7	A-10 INLET	N 557044 E 1385658	–	124.87	127.51	HOCO STD. DETAIL D-4.03
I-8	A-5 INLET	N 556785 E 1385852	142.75 142.67 140.74	140.65	145.31	HOCO STD. DETAIL D-4.01
M-1	STD. MH	N 557049 E 1385596	118.30 118.70	118.60 (15") 117.93 (6")	124.10	HOCO STD. DETAIL G-5.12
M-2	STD. MH	N 557051 E 1385621	122.50	122.40	125.20	HOCO STD. DETAIL G-5.12
E-2	18" CMP END SECTION	N 557025 E 1385581	–	118.43	–	MSHA STD. DETAIL MD-374.66
E-3	6" CMP END SECTION	N 556983 E 1385628	–	116.53	–	MSHA STD. DETAIL MD-374.66



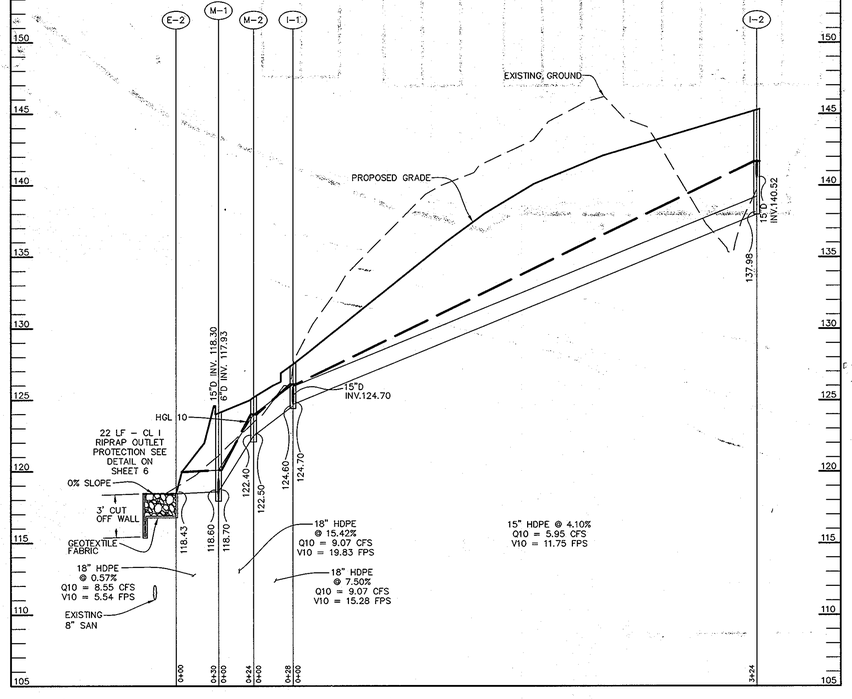
STORM DRAIN PROFILE

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



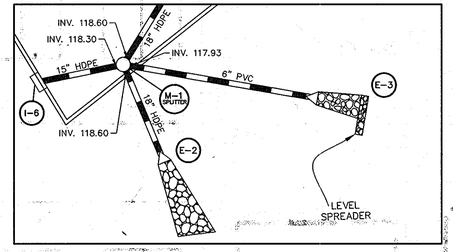
STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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



PLAN VIEW DETAIL OF FLOW SPLITTER (M-1)

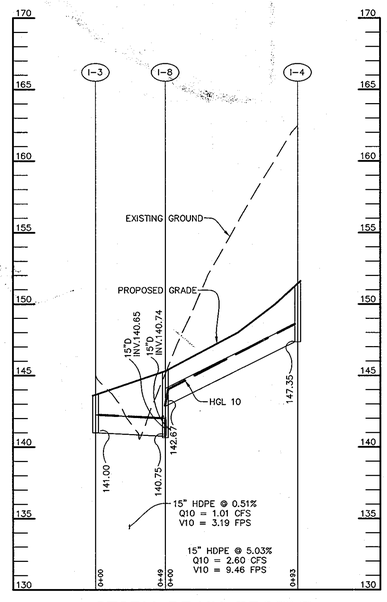
NO SCALE

GENERAL NOTES:

1. 95% COMPACTION REQUIRED WHERE PROPOSED STORM DRAIN PIPES ARE PLACED ON FULL.

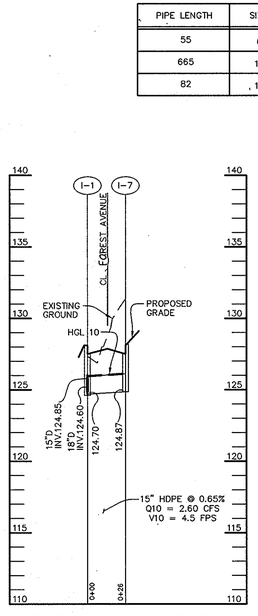
PIPE SCHEDULE

PIPE LENGTH	SIZE	TYPE
55	6"	PVC
665	15"	HDPE
82	18"	HDPE



STORM DRAIN PROFILE

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



STORM DRAIN PROFILE

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION
1/04/08	1	REVISED STREET NAME SPELLING TO FOREST AVENUE

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
DETAILS AND PROFILES

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /FINAL/C400PROF.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	5 OF 12

F-06-133

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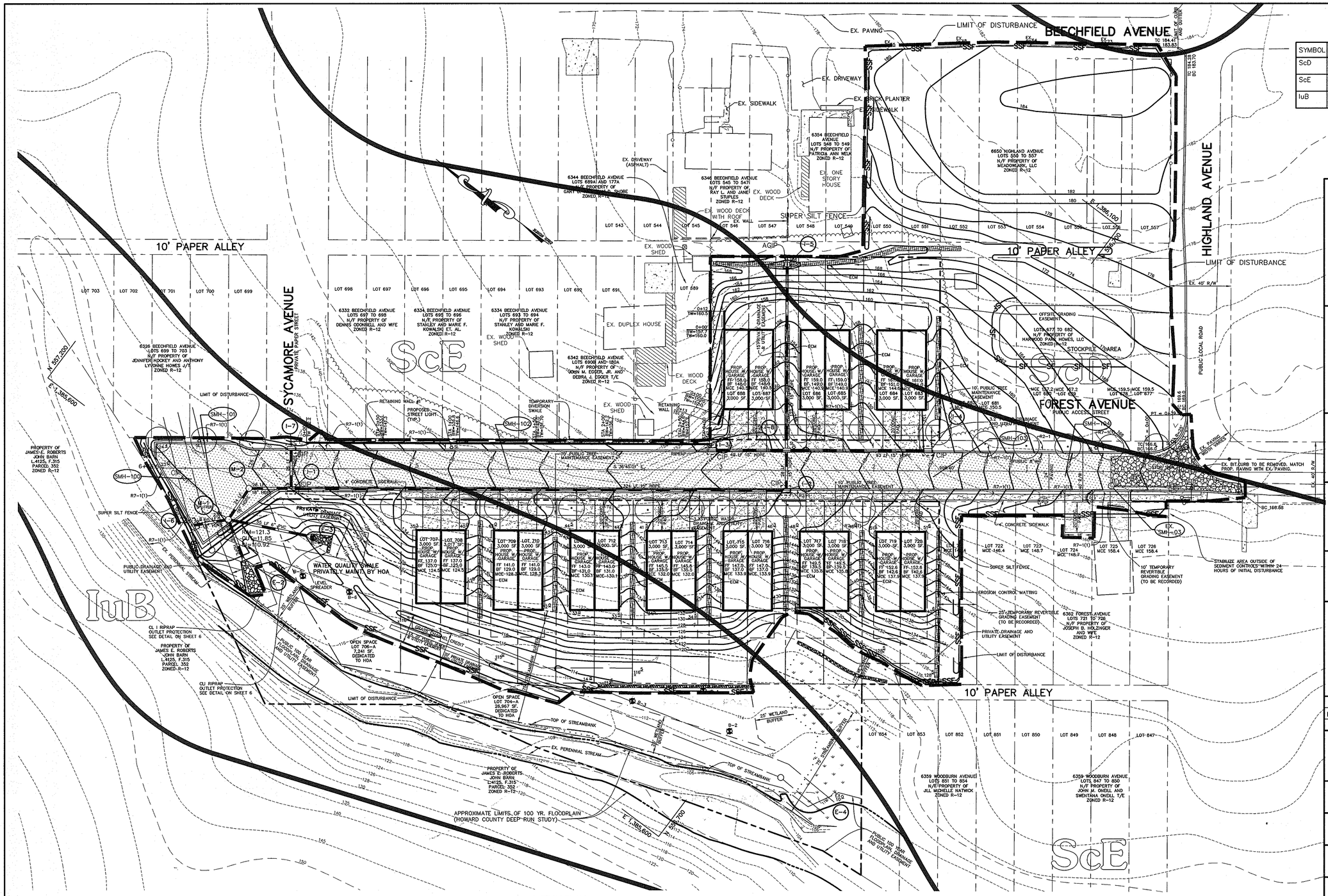

SOIL CHART

SYMBOL	DESCRIPTION	HYDROLOGIC SOIL GROUP
ScD	SANDY AND CLAYEY LAND, MODERATELY SLOPING	C
ScE	SANDY AND CLAYEY LAND, MODERATELY STEEP	C
IuB	IUKA LOAM, LOCAL ALLUVIUM, 1 TO 5 PERCENT SLOPES	C

LEGEND

- SOIL LINES BASED ON SOILS MAP 31
- STABILIZED CONSTRUCTION ENTRANCE (SCE)
- LIMIT OF DISTURBANCE
- SUPER SILT FENCE (SSF)
- EROSION CONTROL MATTING
- INLET PROTECTION
- STORM DRAIN DRAINAGE DIVIDE
- 15%–24.9% STEEP SLOPES
- 25% OR GREATER STEEP SLOPES
- REINFORCED EARTH

BY THE DEVELOPER :

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

DEVELOPER — DATE 8/15/07

BY THE ENGINEER :

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

ENGINEER — DATE 8/14/07

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

NATURAL RESOURCES CONSERVATION SERVICE — DATE 8/23/07

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

HOWARD SOIL CONSERVATION DISTRICT — DATE 8/23/07

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION
1/04/08	1	REVISED STREET NAME SPELLING TO FOREST AVE.

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410–796–6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683–688 & 707–720,
AND OPEN SPACE LOTS 704–A & 706–A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **GRADING & SEDIMENT CONTROL PLAN**

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

8/14/07
DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — No. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /C200ECS
DATE :	AUGUST 16, 2007
SCALE :	1" = 30'
DRAWING NO.	4 OF 12

F-06-133

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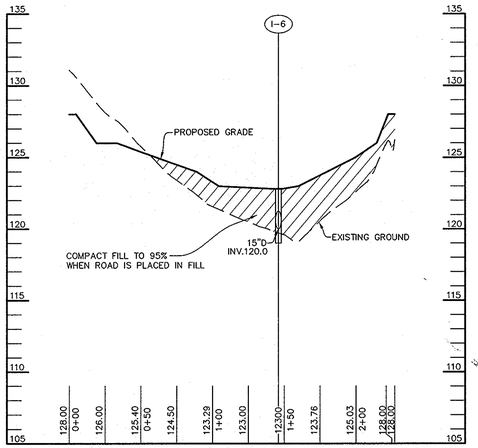
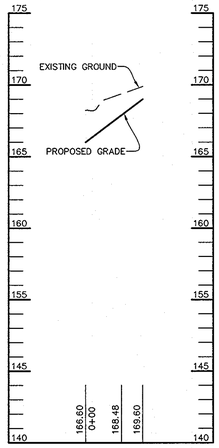


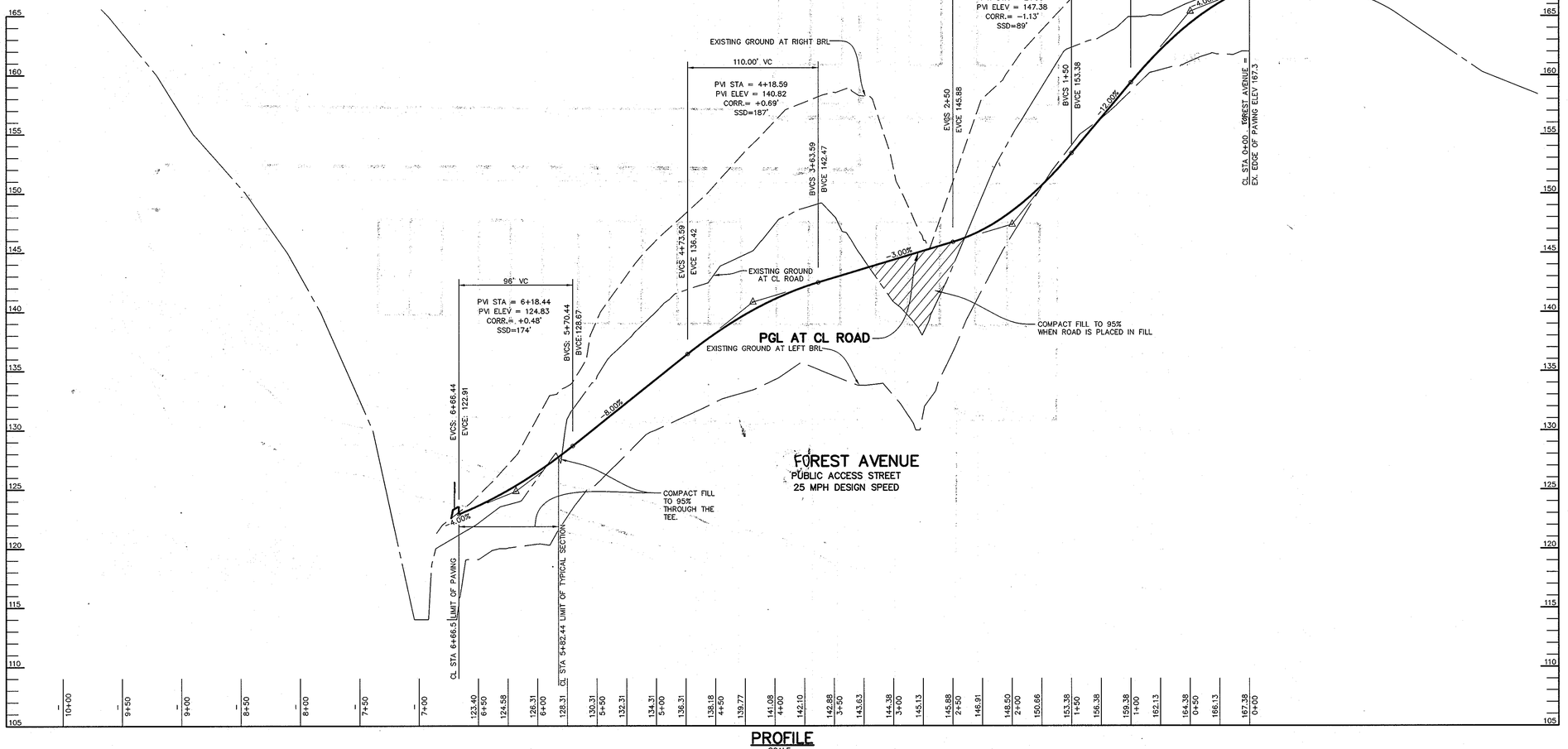
LINEAR PROFILE
FOREST AVENUE TURN AROUND

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



FILLET PROFILE
INTERSECTION OF FOREST AVENUE AND HIGHLAND AVENUE

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



PROFILE
FOREST AVENUE
PUBLIC ACCESS STREET
25 MPH DESIGN SPEED

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

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION
1/04/08	1	REVISED STREET NAME SPELLING TO FOREST AVENUE.

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT
TIMBER RIDGE
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
PROFILES

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — No. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS FINAL/C401SIT
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	3 OF 12

F-06-133

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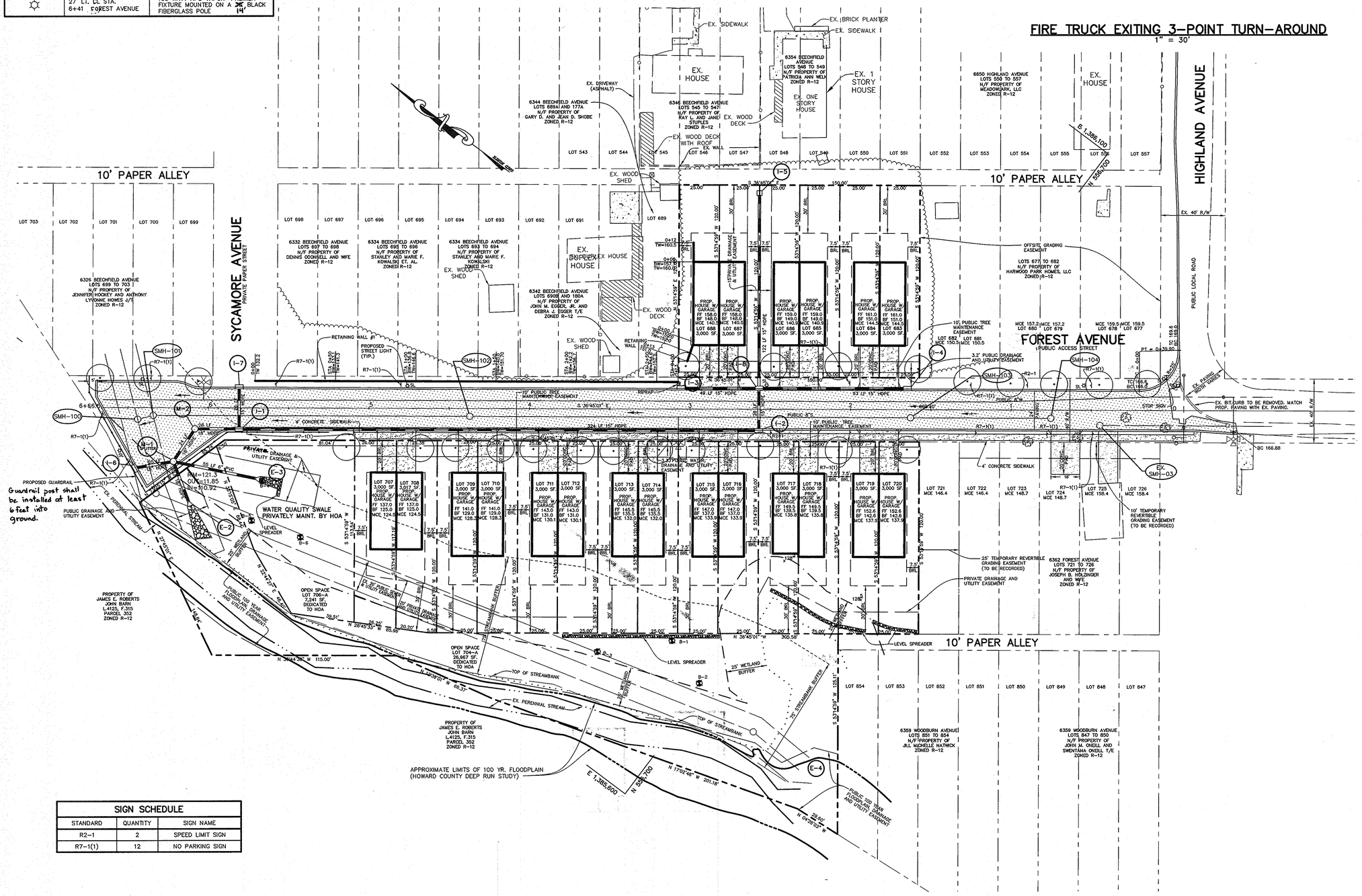
STREET LIGHT CHART		
SYMBOL	LOCATION	DESCRIPTION
☼	20' RT. CL STA. 0+05 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	15.5' RT. CL STA. 0+55 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	15' RT. CL STA. 2+53 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	14' RT. CL STA. 4+76 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	18' RT. CL STA. 6+41 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'
☼	27' LT. CL STA. 6+41 , FOREST AVENUE	100 WATT HPS VAPOR "PREMIER" FIXTURE MOUNTED ON A 30' BLACK FIBERGLASS POLE 14'



FIRE TRUCK EXITING 3-POINT TURN-AROUND
1" = 30'

PLAN
1" = 30'

SIGN SCHEDULE		
STANDARD	QUANTITY	SIGN NAME
R2-1	2	SPEED LIMIT SIGN
R7-1(1)	12	NO PARKING SIGN

LEGEND

PROPERTY LINE AND RIGHT OF WAY
EXISTING STORM DRAIN — EX.15"D
PROPOSED STORM DRAIN — 15"D
OVERHEAD WIRES — OHW
EXISTING TREELINE
PROPOSED TREE
PROP.SPOT ELEVATION 13 X 2
SETBACK LINES
P-2 PAVING
EXISTING WATER
EXISTING CURB
PROPOSED CURB
EXISTING BUILDING
PROPOSED BUILDING
PROPOSED DEPRESSED CURB
PROPOSED DEPRESSED SIDEWALK
PROPOSED GUARDRAIL
PROPOSED SIDEWALK

LEGEND

REQUIRED OFF-STREET PARKING = 2 SP/LOT

PROVIDED PARKING:
LOTS 683 - 688 = 1 GARAGE SPACE & 1 DRIVEWAY SPACE
LOTS 707 - 720 = 1 GARAGE SPACE & 1 DRIVEWAY SPACE

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/12/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION
1/04/08	1	REVISED STREET NAME SPELLING TO FOREST AVE.

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **SITE PLAN AND STREET TREES**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — NO. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY : ESF
DRAWN BY: EMR
PROJECT NO: 11563/1-0/ENGR/PLANS C400SIT.DWG
DATE : AUGUST 16, 2007
SCALE : AS SHOWN
DRAWING NO. 2 OF 12

F-06-133

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ROADWAYS, STORM DRAINS AND STORMWATER MANAGEMENT

TIMBER RIDGE

PLAT OF HARWOOD PARK LOTS 683-688 & 707-720 AND OPEN SPACE LOTS 704-A & 706-A

1st ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

SHEET INDEX			
NO	DESCRIPTION	NO	DESCRIPTION
1	TITLE SHEET	7	SEDIMENT CONTROL DETAILS
2	SITE PLAN AND STREET TREES	8	STREET TREE PLANT DETAILS
3	PROFILES	9	RETAINING WALL #1 PLAN AND CONSTRUCTION DETAILS
4	GRADING & SEDIMENT CONTROL PLAN	10	RETAINING WALL #1 ELEVATION
5	DETAILS AND PROFILES	11	MOT PLAN
6	SEDIMENT CONTROL NOTES AND DETAILS	12	INLET DRAINAGE AREA MAP

GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOL. IV "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.

2. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.

3. THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AY LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.

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

5. STREET LIGHT PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL DEVELOPMENTS, (JANUARY 1998)." A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.

6. THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD STUDY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY PATTON HARRIS RUST AND ASSOCIATES, DATED FEBRUARY, 2003.

7. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 38D5 AND 38D6.

8. PROPOSED WATER IS PUBLIC. CONTRACT NO: 14-4360-D

9. PROPOSED SEWER IS PUBLIC. CONTRACT NO: 14-4360-D

10. THE HOA OWNED STORMWATER MANAGEMENT FOR THIS SITE WILL BE PROVIDED BY PRIVATELY MAINTAINED GRASS CHANNEL CREDIT AND LEVEL SPREADERS.

11. APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.

12. THE WETLANDS DELINEATION FOR THIS PROJECT WAS TAKEN FROM A REPORT PREPARED BY WILDMAN ENVIRONMENTAL SERVICES.

13. THE TRAFFIC STUDY IS NOT REQUIRED FOR THIS PROJECT.

14. A NOISE STUDY IS NOT REQUIRED FOR THIS PROJECT.

15. THE BOUNDARY SURVEY FOR THIS PROJECT WAS PREPARED BY PATTON HARRIS RUST AND ASSOCIATES DATED AUGUST 2002.

16. SUBJECT PROPERTY ZONED R-12 PER 02-02-04 COMPREHENSIVE ZONING PLAN.

17. ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.

18. SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S.: SDP-01-93, WP-04-87, WP-05-129, SP-04-12

19. THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.

20. CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.

21. PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.

22. NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.

23. ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.

24. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.

25. STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, i.e., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.

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

27. DESIGNED TRAFFIC SPEED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL VOL. III. ALL 40' RIGHT OF WAYS 20 M.P.H.

28. ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MIN. OF 95% COMPACTION OF AASHTO T180.

29. ALL STREET CURB RETURNS SHALL HAVE 25' RADII UNLESS OTHERWISE NOTED.

30. ALL STREET LIGHTS SHALL BE LOCATED BETWEEN 2'-0" AND 4'-0" BEHIND FACE OF CURB.

31. TYPE AND NUMBER OF STREET TREES SHOWN ON THIS PLAN ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMODATE FIELD CONDITIONS INCLUDING 20' CLEARANCE OF ANY STREET LIGHT AND SHALL BE IN ACCORDANCE WITH THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. BOND RELEASE IS CONTINGENT UPON SECTION 16.124 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.

32. WETLANDS, 100 YEAR FLOODPLAIN, AND +15% SLOPES HAVE BEEN SHOWN.

33. BASED ON AVAILABLE COUNTY MAPS AND RECORDS, THERE ARE NO HISTORIC STRUCTURES OR KNOWN CEMETERIES LOCATED ON THE SUBJECT PROPERTY.

34. THIS SUBDIVISION IS EXEMPT FROM FOREST CONSERVATION OBLIGATIONS IN ACCORDANCE WITH SECTION 16.1202(B)(1)(iii) OF THE FOREST CONSERVATION MANUAL SINCE IT HAS PRELIMINARY PLAN APPROVAL PRIOR TO 12/31/92.

35. THE SUBDIVISION IS EXEMPT FROM PERIMETER LANDSCAPING SINCE IT HAD A PRELIMINARY PLAN AND PLAT RECORDATION PRIOR TO 1993. IN ADDITION, THE SUBJECT LOTS ARE INTERIOR TO AN EXISTING SUBDIVISION, AND THIS PLAN DOES NOT PROPOSE ANY NEW BUILDING LOTS OR ADDITIONAL ACREAGE. STORM WATER MANAGEMENT PERIMETER LANDSCAPING IS NOT REQUIRED SINCE THE FOREST HAS BEEN ELIMINATED. STREET TREE PLANTINGS WILL BE REQUIRED AND PROVIDED AS SHOWN ON THE ROAD CONSTRUCTION DRAWINGS. SURETY WILL BE POSTED WITH THE DPW DEVELOPER'S AGREEMENT UNDER THIS PLAN, F-06-133.

36. THIS PROJECT IS EXEMPT FROM THE 35' ENVIRONMENTAL SETBACK REQUIREMENT SINCE IT HAD A PRELIMINARY PLAN AND PLAT RECORDATION PRIOR TO 1993. HOWEVER, ENVIRONMENTAL BUFFERS AND RESTRICTIONS IN ACCORDANCE WITH SECTIONS 16.115 AND 16.116 OF THE AMENDED FIFTH EDITION OF THE SUBDIVISION REGULATIONS APPLY TO THIS PROJECT BECAUSE THESE LOTS PRE-DATE THOSE REGULATIONS. ANY IMPACT TO THESE PROTECTED AREAS FOR THE CONSTRUCTION OF HOMES WILL BE CONSIDERED ESSENTIAL, PROVIDED THAT THOSE IMPACTS ARE MINIMIZED.

37. ALL FEDERAL AND STATE PERMITS FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT WILL BE APPLIED FOR AS APPLICABLE PRIOR TO ANY GRADING OR DISTURBANCE IN THE ENVIRONMENTAL AREAS AS SHOWN ON THIS PLAN.

38. WP-04-87 A REQUEST TO REACTIVATE SDP-01-93 WAS APPROVED ON DECEMBER 30, 2005

39. WP-05-129 PERMITS STORMWATER MANAGEMENT ACCESS TO THE STORMWATER MANAGEMENT FACILITY LOCATED ON OPEN SPACE LOT 704 SHALL EXACTLY FOLLOW AND BE PLACED OVER THE EXISTING 20' WIDE PUBLIC SEWER AND UTILITY EASEMENT WHICH CROSSES LOTS 707 TO 711.

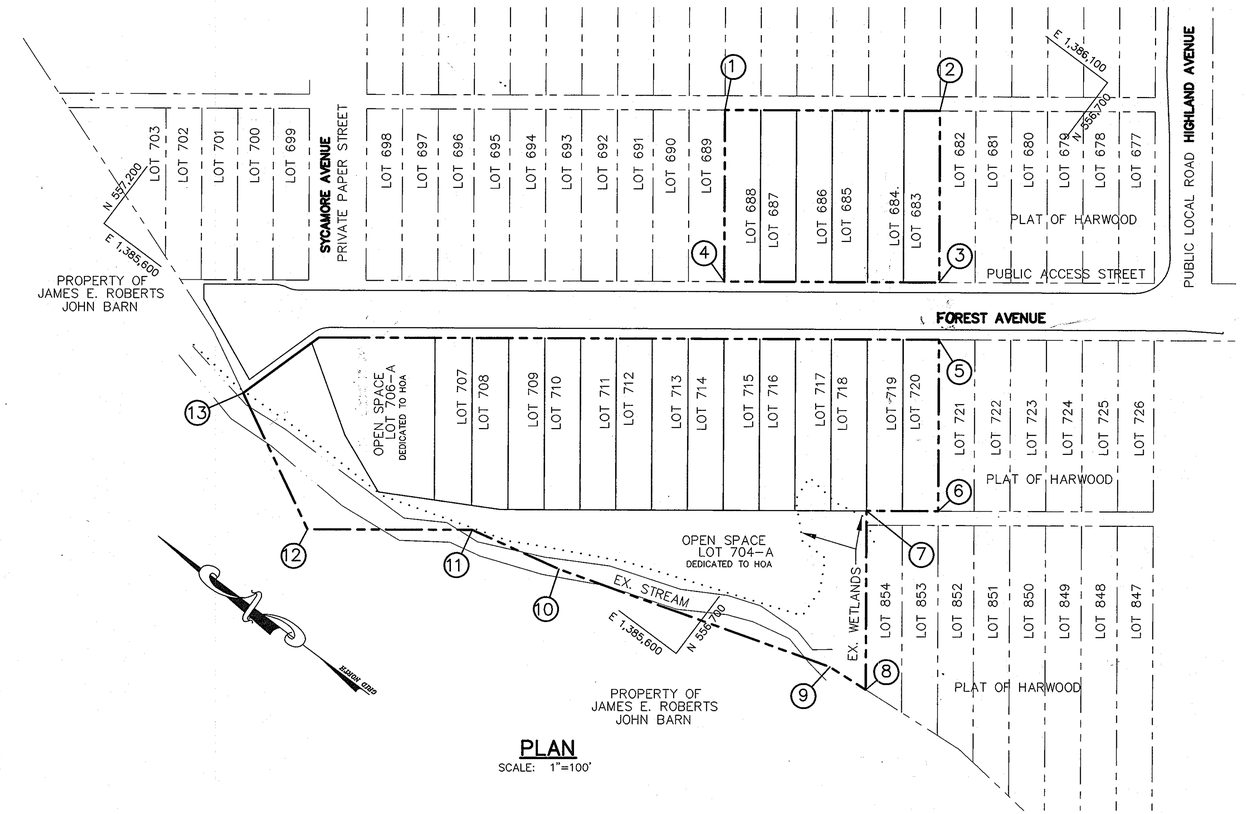
40. PROPERTY OWNERS OF LOTS WHICH ARE NOT PART OF THIS DEVELOPMENT HAVE BEEN NOTIFIED BY CERTIFIED MAIL OF THE PROPOSED LOCATION OF THE RETAINING WALLS WITHIN THE RIGHT-OF-WAY, WHICH MAY PROHIBIT ACCESSIBILITY ONTO FORREST AVENUE.

41. ALL OF THE RETAINING WALLS AND STORMWATER MANAGEMENT OUTSIDE PUBLIC RIGHT-OF-WAY WILL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION. RETAINING WALLS WITHIN THE PUBLIC RIGHT-OF-WAY WILL BE PUBLICLY OWNED AND MAINTAINED. ALL GRAFFITI SHALL BE REMOVED FROM THE RETAINING WALLS BY THE HOME OWNERS ASSOCIATION.

42. STORMWATER MANAGEMENT FOR LOTS 677 - 682 AND LOTS 550 TO 557 OF 8650 HIGHLAND AVENUE WILL BE REQUIRED AT THE SITE DEVELOPMENT PLAN STAGE.

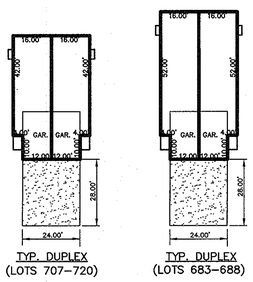
43. ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-½" GALVANIZED STEEL PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.

44. OPEN SPACE LOTS 704-A AND 706-A SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.



PLAN

SCALE: 1"=100'



TYP. DUPLEX (LOTS 707-720)

TYP. DUPLEX (LOTS 683-688)

PLAN

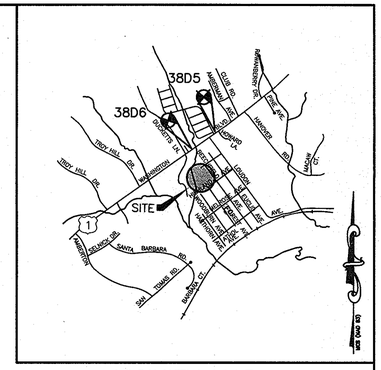
SCALE: 1"=30'

DUPLEX ELEVATION

SCALE: 1" = 30'

(conceptual)

COORDINATE LIST		
1	N 556,901.59	E 1,385,924.05
2	N 556,781.40	E 1,386,013.80
3	N 556,709.60	E 1,385,917.65
4	N 556,829.79	E 1,385,827.90
5	N 556,685.67	E 1,385,885.60
6	N 556,613.87	E 1,385,789.45
7	N 556,653.93	E 1,385,759.54
8	N 556,579.08	E 1,385,659.29
9	N 556,608.58	E 1,385,657.01
10	N 556,800.93	E 1,385,598.03
11	N 556,865.69	E 1,385,583.49
12	N 556,957.84	E 1,385,514.70
13	N 557,051.06	E 1,385,563.75



VICINITY MAP

SCALE: 1"=2000'

BENCH MARK

HOWARD COUNTY CONTROL
STATION 38D5
N 558,378.575
E 1,386,524.158
ELEV. 193.726

HOWARD COUNTY CONTROL
STATION 38D6
N 557,155.459
E 1,384,992.262
ELEV. 175.228

SITE TABULATION

EXISTING ZONING	R-12
GROSS AREA OF PROPERTY	2.1958 AC ±
LIMIT OF DISTURBANCE	3.32 ACRES
AREA IN 100 YR. FLOODPLAIN	0.20 AC (8,563 SF)
AREA OF STEEP SLOPE	0.74 AC
AREA OF R.O.W. TO BE RECORDED	0.0322 AC
NET TRACT AREA	2.1636 AC ±
AREA OF PROPOSED BUILDABLE LOTS	1.3783 AC ±
NUMBER OF BUILDABLE LOTS	20
PROPOSED WATER AND SEWER	PUBLIC

APPROVED : HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.

CHIEF, BUREAU OF HIGHWAYS — DATE 9-5-07

APPROVED : HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

CHIEF, DIVISION OF LAND DEVELOPMENT — DATE 9/13/07

CHIEF, DEVELOPMENT ENGINEERING DIVISION — DATE 9/12/07

DATE	NO.	REVISION
1/04/08	1	REVISED STREET NAME SPELLING TO FOREST AVENUE.

OWNER/DEVELOPER
MEADOWLARK, LLC
ATTN: MARK PRITCHETT, ALAN YOUNG
P.O. BOX 484
HANOVER, MARYLAND 21076
410-796-6505

PROJECT **TIMBER RIDGE**
PLAT OF HARWOOD PARK
LOTS 683-688 & 707-720,
AND OPEN SPACE LOTS 704-A & 706-A

AREA TAX MAP #38 PARCEL 873 ZONED R-12
1st ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE **TITLE SHEET**

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

8/14/07 DATE

STATE OF MARYLAND — DOMENICK W. COLANGELO — No. 27200 — REGISTERED PROFESSIONAL ENGINEER

DOMENICK W. COLANGELO #27200

DESIGNED BY :	ESF
DRAWN BY:	EMR
PROJECT NO:	11563/1-0/ENGR/PLANS /FINAL/C00COV.DWG
DATE :	AUGUST 16, 2007
SCALE :	AS SHOWN
DRAWING NO.	1 OF 12

F-06-133

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