SITE DEVELOPMENT PLAN

ELLICOTT CROSSING, PART TWO

LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
(FORMERLY ELLICOTT MILLS OVERLOOK)
ZONED: MXD-6

TAX MAP No. 24 GRID Nos. 6, 1
PARCEL Nos. 852, 847

SHEET INDEX

SHEET NO.	DESCRIPTION
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6-7	SEDIMENT & EROSION CONTROL PLAN
8	SEDIMENT & EROSION CONTROL NOTES AND DETAILS
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10-12	STORM DRAIN PROFILES
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15	STORMWATER MANAGEMENT NOTES, DETAILS AND PRIVATE SEWER PROFILE
16	BORINGS
17-18	LANDSCAPE PLAN
19	LANDSCAPE NOTES AND DETAILS
20	ELECTRICAL SITE PLAN - PHOTOMETRICS
21	RETAINING WALL #1, #2 & #4 LOCATION PLAN AND DETAILS
22	RETAINING WALL #3 LOCATION PLAN
23	RETAINING WALL #1, & #2 ELEVATIONS
24	RETAINING WALL #3 ELEVATIONS - STA. 0+00 TO 3+00
25	RETAINING WALL #3 ELEVATIONS - STA. 3+00 TO 6+80
26	RETAINING WALL #4 ELEVATIONS

STREET LIGHT CHART (PRIVATE)

STREET NAME	STATION	OFFSET	FIXTURE/POLE TYPE
WEBERS QUARRY ROAD	0+25	30'R	150-WATT "PREMIER" H.P.S. VAPOR FIXTURE, POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
WEBERS QUARRY ROAD	1+65	30'L	100-WATT "COLONIAL" SODIUM VAPOR POST TOP FIXTURE MOUNTED ON A 14-FOOT BLACK FIBERGLASS POLE.
	2+95	30'L	
LOCUST MILL STREET	3+35	22'R	
	4+95	22'R	
	7+50	28'R	
KYNE MILLERS WAY	0+25	30'R	
	1+55	27'L	
AMOS HUNTER WAY	0+25	27'L	
	1+52	27'L	

STREET SIGN CHART

STREET NAME	STATION	OFFSET	POSTED SIGN	SIGN CODE
WEBERS QUARRY ROAD	0+33	19'L	STOP	R1-1
WEBERS QUARRY ROAD	2+91	17'R	STOP	R1-1
WEBERS QUARRY ROAD	0+96	15'R	SPEED LIMIT 25 MPH	R2-1
LOCUST MILL STREET	0+29	17'L	STOP	R1-1
LOCUST MILL STREET	7+47	15'R	STOP	R1-1
LOCUST MILL STREET	2+29	15'R	SPEED LIMIT 25 MPH	R2-1
HOCKLEY MILL DRIVE	3+60	14'R	STOP	R1-1
HOCKLEY MILL DRIVE	1+47	13'R	SPEED LIMIT 25 MPH	R2-1
KYNE MILLERS WAY	0+24	16'L	STOP	R1-1
KYNE MILLERS WAY	1+54	16'R	STOP	R1-1
AMOS HUNTER WAY	0+24	16'L	STOP	R1-1
CLEAR SPRING DRIVE	3+87	15'R	STOP	R1-1

ROAD CLASSIFICATION CHART

ROAD NAME	CLASSIFICATION	R/W WIDTH
WEBERS QUARRY ROAD	PRIVATE ROAD	N/A
LOCUST MILL STREET	PRIVATE ROAD	N/A
HOCKLEY MILL DRIVE	PRIVATE ROAD	N/A
KYNE MILLERS WAY	PRIVATE ROAD	N/A
AMOS HUNTER WAY	PRIVATE ROAD	N/A
PRISCILLAS VIEW	PRIVATE ROAD	N/A
CLEAR SPRING DRIVE	PRIVATE ROAD	N/A

MINIMUM COMMERCIAL BUILDING SETBACKS

	Structure (Minimum)	Use* (Minimum)	Accessory Use* (Minimum)
From Arterial Street (Rogers Avenue)	30'	30'	20'
From Collector Street (Ellicott Center Drive)	30'	10'	10'
From Residential Townhouse	30'	30'	10'
From Non-Residential	10'	10'	10'

* DOES NOT INCLUDE STORMWATER MANAGEMENT FACILITIES PRIVATE STREETS AND RECREATIONAL OPEN SPACE AMENITIES AND RETAINING WALLS.

MINIMUM USE SETBACK (PARKING SPACES / ACCESS DRIVES, DUMPSTER AND RETAINING WALLS, ECT.)......... 5 FEET FROM EXTERNAL PUBLIC ROAD R/W LINES, 10 FEET FROM PROJECT BOUNDARY LINES

PARKING TABULATION

Residential Townhouse Parking

	Part One	Part Two	Total
Townhouse Units Proposed	37 Units	99 Units	168 Units
Townhouse Parking Required	74 Spaces (37 Units x 2 Spaces/Unit)	198 Spaces (99 Units x 2 Spaces/Unit)	272 Spaces
Townhouse Overflow Parking Required	11 Spaces (37 Units x 0.3 Spaces/Unit)	30 Spaces (99 Units x 0.3 Spaces/Unit)	41 Spaces
Total Townhouse Parking Required	85 Spaces (74 Spaces + 11 Spaces)	228 Spaces (198 Spaces + 30 Spaces)	313 Spaces
Total Townhouse Parking Provided	91 Spaces (25 Single Car Garage with 1 Car Space and Driveway Space + 41 Street Spaces)	228 Spaces 138 (69 One Car Garage/driveway Units) +60 (30 Unit street parking) + 30 overflow	319 Spaces

Shopping Center Parking Required: 77 Spaces (Total Shopping Center Building 15,302 Sq. Ft. x 5 Spaces Per 1000 Sq. Ft.)

Shopping Center Parking Provided: 81 Spaces (76 Standard Spaces & 5 Handicap Spaces)

SITE ANALYSIS DATA CHART

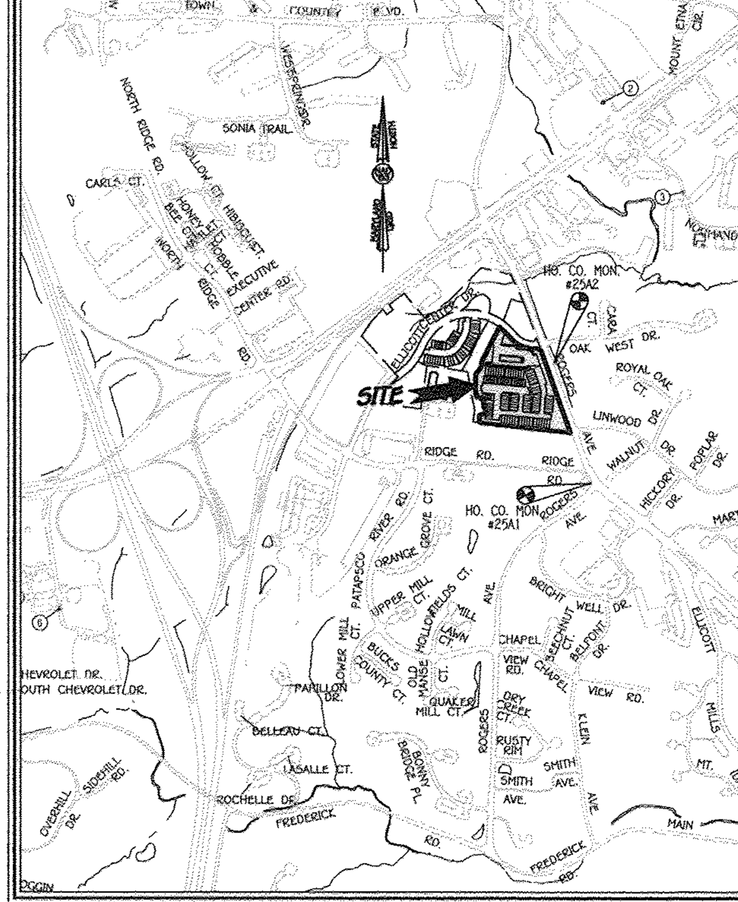
A. TOTAL AREA OF THIS SUBMISSION =8.902 AC.±.
B. LIMIT OF DISTURBED AREA = 8.7 Ac.±
C. PRESENT ZONING DESIGNATION = MXD-6, PER ZB 1093M.
D. PROPOSED USE: SINGLE FAMILY ATTACHED HOUSING AND SHOPPING CENTER BLDG.
E. TOTAL NUMBER OF UNITS PROPOSED: PART ONE AND PART TWO = 168 UNITS (69 UNITS HAVE BEEN PREVIOUSLY APPROVED IN PART ONE SDP-11-057)
F. TOTAL NUMBER OF UNITS PROPOSED: 81 UNITS (PART TWO)
G. OPEN SPACE TABULATION SEE CHART THIS SHEET.
H. RECREATIONAL OPEN SPACE SEE CHART THIS SHEET.
I. BUILDING COVERAGE OF SITE: 1.51 AC± OR 17%
J. PREVIOUS HOWARD COUNTY FILES: F-03-21, SDP-03-026, ZB 1093M, F-12-014, ECP-11-052, WP-12-087, S-12-001, P.B. CASE NO. 391, F-12-070, WP-12-138, SDP-11-056FC, CONT. No. 44-4074-D, SDP-11-057, CONT. 14-4755-D F-13-043/PLAT NO'S. 22945-22950
K. TOTAL AREA OF FLOODPLAIN LOCATED ON SITE 0.0 AC.
L. TOTAL AREA OF SLOPES IN EXCESS OF 25% = 3.346 AC±
M. NET TRACT AREA = 5.556 AC.
(TOTAL SITE AREA - FLOODPLAIN - STEEP SLOPES AREA)
(8.902 Ac - (0.0 Ac + 3.346 Ac)) = 5.556 AC±
N. TOTAL AREA OF WETLANDS (INCLUDING BUFFER) LOCATED ON SITE = 0.0 AC.±

Open Space Tabulation

	Ho. Co. Campus (Par. 'A', 'E', 'F', 'G', 'I') F-12-014, SDP-06-023	PART ONE LOTS 38 THRU 41 F-12-070, SDP-11-057	PART TWO LOTS 141 THRU 144 F-13-043, SDP-13-004	TOTALS
Gross Site Area	11.985 Acres	5.490 Acres	8.902 Acres	26.377 Acres
Total Open Space Required (Gross Area X35%)	4.194 Acres	1.922 Acres	3.116 Acres	9.232 Acres
Total Open Space Provided	8.980 Acres (Par. 'E' + 'F' + 'G')	2.369 Acres (Lots 38 + 39 + 40 + 41) (0.680 Ac + 0.554 Ac + 0.697 Ac + 0.438 Ac)	4.562 Acres (Lots 141 + 142 + 143 + 144) (2.461 Ac + 1.860 Ac + 0.080 Ac + 0.161 Ac)	15.911 Acres
Total Credited Open Space Provided	8.980 Acres (Par. 'E' + 'F' + 'G')	1.251 Acres (Lots 38 + 39+ 40+ 41) (0.000 Ac + 0.203 Ac + 0.610 Ac + 0.438 Ac)	1.847 Acres (Lots 141 + 142 + 143 + 144) (1.686 Ac + 0.000 Ac + 0.000 Ac + 0.161 Ac)	12.078 Acres

Credited And Non-Credited Open Space Tabulation

Open Space Lot No.	Credited Open Space	Non-Credited Open Space	Total Open Space
Lot No. 141	1.686 Ac.	0.775 Ac.	2.461 Ac.
Lot No. 142	0.000 Ac.	1.860 Ac.	1.860 Ac.
Lot No. 143	0.000 Ac.	0.080 Ac.	0.080 Ac.
Lot No. 144	0.161 Ac.	0.000 Ac.	0.161 Ac.
Total	1.847 Ac.	2.715 Ac.	4.562 Ac.



VICINITY MAP

SCALE: 1" = 1200'

ADC MAP
PAGE 4815 GRID K6
PAGE 4816 GRID A6

Recreational Open Space Tabulation

	Ho. Co. Campus (Par. 'A', 'E', 'F', 'G', 'I') F-12-014, SDP-06-023	PART ONE LOTS 38 THRU 41 F-12-070, SDP-11-057	PART TWO LOTS 42 THRU 48, 61 THRU 69, 76 THRU 140 OPEN SPACE LOTS 141 THRU 144, NON- BUILDABLE BULK PARCELS 'L', 'M', 'N' AND 'K' F-13-043, SDP-13-004	TOTALS
Gross Site Area	11.985 Acres	5.490 Acres	8.902 Acres	26.377 Acres
Total Gross Open Space Required	4.194 Acres	1.922 Acres	3.116 Acres	9.232 Acres
Total Recreational Area Req'd (Gross Open Space Area x 10%)	0.419 Acres	0.192 Acres	0.312 Acres	0.923 Acres
Total Active/Passive Recreational Area Provided (Credited)	0.000 Acres	0.461 Acres (See Note No. 1) (21,104 Sq. Ft.)	0.463 Ac. (See Note No. 2) (20,175 Sq. Ft.)	0.924 Acres

Note No. 1
(a) Recreational Area #1 (Open Space Lot 41) = 16,193 Sq. Ft.
(b) Recreational Area #2 (Open Space Lot 40) = 3,911 Sq. Ft.

Note No. 2
(a) Recreational Area #3 (Open Space Lot 141), Sheet 2 = 3,049 Sq. Ft.
(b) Recreational Area #4 (Open Space Lot 141), Sheet 2 = 7,021 Sq. Ft.
(c) Recreational Area #5 (Open Space Lot 141), Sheet 4 = 2,840 Sq. Ft.
(d) Recreational Area #6 (Open Space Lot 141), Sheet 5 = 2,520 Sq. Ft.
(e) Pavilion on Open Space Lot 141 = 1,245 Sq. Ft.
(f) Stone Dust/Mulches - (2 Sq. Ft. Rec Area/1 Sq. Ft. Stone Dust x 1750 Sq. Ft.) = 3,500 Sq. Ft.

SECOND ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

MAXIMUM HEIGHT SHALL NOT EXCEED

A. SINGLE FAMILY ATTACHED = 40 FEET
B. SHOPPING CENTER BUILDING = 60 FEET
C. ACCESSORY STRUCTURE = 40 FEET

THERE IS NO MAXIMUM LOT COVERAGE UNDER THIS DEVELOPMENT PLAN CRITERIA

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

0' 600' 1200' 2400'
SCALE: 1" = 1200'

DEVELOPMENT CRITERIA

MINIMUM RESIDENTIAL BUILDING SETBACKS

	SFA Structure (Minimum)	SFA Use* (Minimum)	ACCESSORY USE* (Minimum)	ARAH (Age Restricted Adult Housing)
From Arterial Street (Rogers Avenue)	30'	30'	20'	-
From Collector Street (Ellicott Center Drive)	30'	10'	10'	30'
From Private Residential Street (Face of Curb)	10'	10'	10'	5'
From Commercial Property	30'	30'	20'	-
From Vicinal B-2 Zoned Properties	30'	20'		-
From Vicinal POR And MXD-6 Zoned Properties	25'	20'	10'	25'
From Vicinal R-20 Zoned Properties	25'	20'	10'	-
Residential Townhouse Side to Side	15'	15'	-	-
Residential Townhouse Rear to Rear	30'	30'	-	-
Residential Townhouse Side to Rear	25'	25'	-	-
Residential Townhouse Side to Front	30'	30'	-	-
Residential Townhouse Front to Front	30'	30'	-	-
ARAH Side To Side	-	-	-	30'
ARAH Front To Side	-	-	-	30'
ARAH Front To Front	-	-	-	30'
ARAH Rear To Rear	-	-	-	50'
ARAH Rear To Face	-	-	-	75'

* DOES NOT INCLUDE STORMWATER MANAGEMENT FACILITIES, PRIVATE STREETS, RESIDENTIAL DRIVEWAYS AND RECREATIONAL OPEN SPACE AMENITIES AND RETAINING WALLS.

MINIMUM USE SETBACK (PARKING SPACES / ACCESS DRIVES, DUMPSTER AND RETAINING WALLS, ETC.)......... 5 FEET FROM EXTERNAL PUBLIC ROAD R/W LINES, 10 FEET FROM PROJECT BOUNDARY LINES

GENERAL NOTES

1. 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.
2. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
3. ANY DAMAGE TO THE COUNTY'S RIGHT-OF-WAY SHALL BE CORRECTED AT THE DEVELOPER'S EXPENSE.
4. SUBJECT PROPERTY IS ZONED MXD-6 IN ACCORDANCE WITH ZB CASE 1093M.
5. THIS SITE DEVELOPMENT PLAN IS IN COMPLIANCE WITH THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL 75-2003. DEVELOPMENT OR CONSTRUCTION ON THESE LOTS MUST COMPLY WITH SETBACK AND BUFFER REGULATIONS IN EFFECT AT THE TIME OF SUBMISSION OF THE SITE DEVELOPMENT PLAN, WAIVER PETITION APPLICATION, OR BUILDING/GRADING PERMIT AND PER THE COMP-LITE ZONING REGULATIONS DATED JULY 28, 2006 AND IN ACCORDANCE WITH PRELIMINARY PLAN DEVELOPMENT CRITERIA.
6. IN ACCORDANCE WITH SECTION 128 OF THE HOWARD COUNTY ZONING REGULATIONS, BAY WINDOWS, CHIMNEYS OR EXTERIOR STAIRWAYS NOT MORE THAN 16 FEET IN WIDTH MAY PROJECT NOT MORE THAN 4 FEET INTO ANY SETBACK. PORCHES OR DECKS, OPEN OR ENCLOSED MAY PROJECT NOT MORE THAN 10 FEET INTO THE FRONT OR REAR YARD SETBACK (APPLIES TO RESIDENTIAL SDPS).
7. NO GRADING, REMOVAL OF VEGETATIVE COVER OR TREES, PAVING AND NEW STRUCTURES SHALL BE PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S), BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
8. DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
   WIDTH - 12 (16' SERVING MORE THAN ONE RESIDENCE);
   SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2 MIN)
   GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS;
   STRUCTURES (CULVERTS/BRIDGES) - CAPABLE OF SUPPORTING 25 GROSS TONS (H25 LOADING);
   DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100-YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE;
   MAINTENANCE/SUFFICIENT TO ENSURE ALL WEATHER USE.
9. WETLAND DELINEATION WAS PROVIDED UNDER S-12-001.
10. NO FLOODPLAIN EXISTS ON THIS SITE.
11. A TRAFFIC STUDY WAS PROVIDED UNDER S-12-001.
12. FOREST STAND DELINEATION WAS PROVIDED UNDER S-12-001.
13. EXISTING TOPOGRAPHY HAS BEEN TAKEN FROM SDP-03-026, CREATED BY DAFT, McCUNE, WALKER INC. AND APPROVED BY HOWARD COUNTY IN JULY, 2003.
14. BOUNDARY OUTLINE IS BASED ON A FIELD MONUMENTED SURVEY PERFORMED BY FISHER, COLLINS & CARTER, INC. ON OR ABOUT MARCH, 2011.
15. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY CONTROL STATIONS 25A1 AND 25A2 WERE USED FOR THIS PROJECT:
    HOWARD COUNTY MONUMENT 25A1 N 586,557.503 E 1,366,847.149
    HOWARD COUNTY MONUMENT 25A2 N 587,502.680 E 1,366,556.401
16. THERE ARE NO CEMETERIES LOCATED ON THIS SITE.
17. THE PROPERTY SHOWN IS LOCATED IN THE METROPOLITAN DISTRICT.
18. FOREST CONSERVATION IN ACCORDANCE WITH SECTION 16.1202 OF THE FOREST CONSERVATION MANUAL FOR THE ENTIRE Ellicott Crossing DEVELOPMENT HAS BEEN FULFILLED UNDER F-12-014 (PLAT NOS. 21798 TO 21803) BY PLACEMENT OF 1.052 ACRES OF NON-CREDITED AND 4.275 ACRES OF CREDITED (FOR A TOTAL OF 5.327 AC.) FOREST INTO EASEMENT AREAS. FULFILLMENT OF THE REMAINDER OF OBLIGATION OF 4.33 ACRES OF REQUIRED REFORESTATION IS PROVIDED UNDER SDP-11-057 BY AN OFF-SITE EASEMENT IN THE BRIGHTON MILLS FOREST CONSERVATION BANK (SDP-11-056FC) LOCATED ON TAX MAP NO. 32, PARCEL NO. 2. NO SURETY IS REQUIRED FOR FOREST CONSERVATION UNDER THIS PLAN.
19. PERIMETER, PARKING, SFA UNIT AND TRASH PAD LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF $54,840.00 FOR 132 SHADE TREES, 61 EVERGREEN TREES AND 203 SHRUBS SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR SDP-13-004.
20. B.R.L. DENOTES BUILDING RESTRICTION LINE.
21. REFUSE COLLECTION, SNOW REMOVAL AND PRIVATE ROAD MAINTENANCE WILL BE PROVIDED BY THE ELLICOTT CROSSING HOMEOWNERS ASSOCIATION, INC.
22. PRIVATE ROADS AND PARKING AREAS ARE PRIVATELY MAINTAINED BY THE ELLICOTT CROSSING TOWNHOUSE HOMEOWNERS ASSOCIATION, INC.
23. DECKS ARE ALLOWED 10 FEET INTO THE PROJECT BOUNDARY SETBACK PER ZONING SECTION 128.A.1(d).
24. A PRIVATE ROAD STREET NAME SIGN ASSEMBLY OR PRIVATE RANGE OF ADDRESS SIGN ASSEMBLY SHALL BE FABRICATED AND INSTALLED BY HOWARD COUNTY BUREAU OF HIGHWAYS AT THE DEVELOPERS/OWNERS EXPENSE FOR EACH OF THE PRIVATE ROADS INTERSECTING ELLICOTT CENTER DRIVE. CONTACT HOWARD COUNTY TRAFFIC DIVISION AT 410-313-5752 FOR DETAILS AND COST ESTIMATES.
25. ALL HANDICAP RAMPS SHALL MEET CURRENT ADA REQUIREMENTS.
26. PUBLIC WATER AND SEWER WILL BE PROVIDED TO THE SITE UNDER CONTRACT NOs. 14-4755-D.
27. SINGLE FAMILY ATTACHED DWELLING UNITS SHALL HAVE AN 1-1/2" WATER HOUSE CONNECTION WITH A 1" OUTSIDE METER SETTING; STD. DET. W-3.28 (SINGLE) OR W-3.32 (TWIN). THE COMMERCIAL BUILDING SHALL HAVE AN 8" WATER HOUSE CONNECTION WITH AN INSIDE METER SETTING.
28. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
29. ALL SIGN POSTS USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (14 GAUGE) INSERTED INTO A 2 1/2" GALVANIZED STEEL, PERFORATED, SQUARE TUBE SLEEVE (12 GAUGE)- 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
30. THE DEVELOPER WILL WORK WITH THE OFFICE OF THE FIRE MARSHAL TO ESTABLISH THE MARKINGS NECESSARY TO SHOW THE APPROPRIATE LOCATION OF THE REQUIRED FIRE LANE FOR THE ACCESS OF EMERGENCY VEHICLES.
31. ALL LOT/PARCEL AREAS ARE MORE OR LESS (±).
32. DISTANCES SHOWN ARE BASED ON SURFACE MEASUREMENT AND NOT REDUCED TO NAD '83 GRID MEASUREMENT.
33. STORMWATER MANAGEMENT FOR THIS PROJECT IS PROVIDED BY THE USE OF ONE (1) STORMWATER MANAGEMENT FACILITIES (SAND FILTERS) PROVIDED UNDER SDP-03-026, 8 AREAS CONTAINING POROUS PAVING, AND THIRTEEN (13) MICRO-BIORETENTION FACILITIES PROVIDED UNDER THIS SITE PLAN. MICRO-BIORETENTION AND PERMEABLE PAVING ARE PRIVATELY MAINTAINED. SAND FILTERS ARE PUBLICLY OWNED.
34. THERE ARE NO EXISTING STRUCTURES TO REMAIN WITHIN THE LIMITS OF PLAN SUBMISSION.
35. OPEN SPACE TABULATION SEE TABULATION THIS SHEET.
36. TOTAL RECREATION OPEN SPACE TABULATION SEE TABULATION THIS SHEET.
37. THIS PLAN IS SUBJECT TO DESIGN MANUAL WAIVER APPROVED ON DECEMBER 22, 2011 BY DEVELOPMENT ENGINEERING DIVISION THAT REQUESTS A WAIVER TO SECTIONS 2.3 AND 2.4 OF DESIGN MANUAL VOLUME III REQUESTING THE REDUCTION OF HORIZONTAL CURVATURE AND REDUCTION IN PAVEMENT WIDTH SUBJECT TO:
    A). DESIGN MANUAL VOLUME III, SECTION 2.3 SUBMISSION OF AN EMERGENCY VEHICLE TURNING ANALYSIS MEETING THE FIRE DEPARTMENT STANDARDS BEING SUBMITTED AND APPROVED BY THE DEPARTMENT OF FIRE AND RESCUE SAFETY FOR PRIVATE ROAD 'A';
    B). DESIGN MANUAL VOLUME III; SECTION 2.4 IS APPROVED FOR PRIVATE ROADS 'E' THRU 'I' AND A PORTION OF PRIVATE ROAD 'D'.
    ROAD D - LOCUST MILL STREET ROAD E - HOCKLEY MILL DRIVE ROAD F - KYNE MILLERS WAY
    ROAD G - AMOS HUNTER WAY ROAD H - PRISCILLA VIEW ROAD I - CLEAR SPRING DRIVE
38. THIS PLAN IS SUBJECT TO WP-12-087 WHICH THE DEPARTMENT OF PLANNING AND ZONING ON DECEMBER 23, 2011 APPROVED A WAIVER FROM THE FOLLOWING SECTIONS OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS;
    1) 16.116(A)(2)(II), TO REDUCE THE REQUIRED 75' STREAM BUFFERS REFERENCED FROM A PERENNIAL STREAM IN RESIDENTIAL LAND USE AREAS IN A MXD ZONING DISTRICT TO 50' STREAM BUFFERS, AND;
    2) 16.116(A)(2)(IV), TO BE PERMITTED TO GRADE AND REMOVE VEGETATIVE COVER AND TREES, WITHIN A 50' STREAM BUFFER REFERENCED FROM A PERENNIAL STREAM IN A NON-RESIDENTIAL LAND USE AREA IN A MXD ZONING DISTRICT, AND;
    3) 16.116(B)(1), TO BE PERMITTED TO GRADE, REMOVE VEGETATIVE COVER AND TREES, CONSTRUCT NEW STRUCTURES AND PAVE ON LAND WITH EXISTING 25% OR GREATER STEEP SLOPES, AND;
    4) 16.120(C)(4), TO NOT BE REQUIRED TO PROVIDE ANY OF THE REQUIRED MINIMUM "SINGLE FAMILY ATTACHED" LOT FRONTAGE OF 15 FEET ON AN APPROVED PUBLIC ROAD AND, TO BE PERMITTED TO HAVE THE "SINGLE FAMILY ATTACHED" LOTS FRONT ON A PRIVATE ROAD EXCEEDING A LENGTH OF 200 FEET MEASURED FROM THE EDGE OF A PUBLIC ROAD RIGHT-OF-WAY, AND;
    5) 16.1205(A)(7), TO BE GRANTED PERMISSION TO REMOVE SEVEN (7) EXISTING SPECIMEN TREES 30 INCHES IN DIAMETER OR LARGER (7 TULIP POPLAR: 4-31", 1-35", 1-40", 1-43")
    THE APPROVAL OF THIS WAIVER PETITION IS SUBJECT TO COMPLIANCE WITH THE FOLLOWING CONDITIONS OF APPROVAL:
    1) A HOMEOWNERS ASSOCIATION SHALL BE CREATED FOR THE SINGLE FAMILY ATTACHED (SFA) DEVELOPMENT AREA OF THE SITE IN ACCORDANCE WITH SUBDIVISION SECTION 16.121(C).
    2) THE PRIVATE ROADS SHALL BE DESIGNED AND CONSTRUCTED IN ACCORDANCE WITH THE REQUIREMENTS OF THE DED, DPW AND DFRS.
    3) THE PRIVATE ROADS SHALL BE MAINTAINED BY THE H.O.A. AND THE OWNER(S) OF PARCEL D (COMMERCIAL USE SITE).
    4) A RESUBDIVISION PLAT TO CREATE THE FEE SIMPLE SFA LOTS SHALL BE SUBMITTED, APPROVED AND RECORDED.
    5) THE PETITIONER SHALL PROVIDE FOR STREAM RESTORATION AND CLEAN-UP OF ALL DEBRIS, TRASH, TIRES AND BULK MATERIALS FOUND WITHIN THE STREAM BUFFERS ON THIS SITE. A STREAM RESTORATION PLAN WHICH DESCRIBES WHICH STEPS WILL BE UNDERTAKEN TO IMPROVE WATER QUALITY, NATURAL HYDROLOGY AND WILDLIFE HABITAT SHALL BE SUBMITTED AS A PART OF THE FINAL PLAN AND/OR SITE DEVELOPMENT PLAN FOR THE DEVELOPMENT OF THIS SITE.
    6) THIS WAIVER PETITION APPROVAL OF SUBDIVISION SECTION 16.116(A)(2)(IV) PERTAINS ONLY TO THE DISTURBANCE WITHIN THE 50' STREAM BUFFER NECESSARY FOR THE CONSTRUCTION OF THE PROPOSED RETAINING WALL ALONG THE WEST SIDE OF PARCEL D SHOWN ON THE WP-12-087 EXHIBIT/PLAN SUBMITTED ON 12/20/11, AND THIS AREA OF DISTURBANCE SHALL BE KEPT TO THE MINIMUM NECESSARY FOR THE CONSTRUCTION OF THE RETAINING WALL.
    7) THIS WAIVER PETITION APPROVAL OF SUBDIVISION SECTION 16.116(B)(1) PERTAINS ONLY TO THE AREAS OF PROPOSED DISTURBANCE AND DEVELOPMENT INDICATED ON THE AREAS OF 25% OR GREATER STEEP SLOPE SHOWN ON THE WP-12-087 EXHIBIT/PLAN SUBMITTED ON 12/20/11.
    8) THE APPROVAL OF COMPREHENSIVE SKETCH PLAN, S-12-001, BY THE HOWARD COUNTY PLANNING BOARD.
    9) ADD A DETAILED NOTE TO THE GENERAL NOTES ON SHEETS 1 OF S-12-001 AND TO THE NOTES ON SHEET 1 OF FUTURE PLAN AND PLAT SUBMISSIONS FOR THIS PROJECT THAT INDICATES THIS WAIVER PETITION FILE NUMBER, THE SECTIONS OF THE REGULATIONS, REQUESTS, ACTION, CONDITIONS OF APPROVAL, AND THE APPROVAL DATE.
39. TOTAL NUMBER OF "MODERATELY INCOME HOUSING UNITS" (M.I.H.U.) REQUIRED FOR THIS SITE PER THE MXD-6 ZONING DISTRICT IS 10% OF THE 154 TOTAL UNITS = 16 M.I.H.U. UNITS CALCULATED AS FOLLOWS:
    A. TOTAL NUMBER OF "M.I.H.U." PROVIDED WITH PART ONE (F-12-070) = 4 M.I.H.U.
    B. TOTAL NUMBER OF "M.I.H.U." PROVIDED WITH PART TWO (F-13-043) = 12 M.I.H.U.
40. OPEN SPACE LOTS 141 THRU 144 SHOWN HEREON IS HEREBY DEDICATED TO A PROPERTY OWNERS ASSOCIATION FOR THE RESIDENTS OF ELLICOTT CROSSING SUBDIVISION AND RECORDING REFERENCES OF THE ARTICLES OF INCORPORATION AND RESTRICTIONS ARE SHOWN HEREON.
41. OPEN SPACE LOTS 141 THRU 144 ARE OWNED BY ELLICOTT CROSSING HOMEOWNERS ASSOCIATION, INC.
42. ARTICLES OF INCORPORATION FOR THE ELLICOTT CROSSING TOWNHOUSE HOMEOWNERS ASSOCIATION, INC., WAS FILED WITH THE MARYLAND STATE DEPARTMENT OF ASSESSMENTS AND TAXATION ON JULY 27, 2012, RECEIPT NO. D14802318
43. THIS PLAN FOR ELLICOTT CROSSING (FORMERLY ELLICOTT MILLS OVERLOOK) IS SUBJECT TO ZONING BOARD CASE NO. 1093M. ON JUNE 17, 2011 PLANNING BOARD GRANTED APPROVAL OF A PRELIMINARY DEVELOPMENT PLAN AND CRITERIA FOR THE PROPOSED DEVELOPMENT WITH RECOMMENDED MINOR REVISIONS CONCERNING AN ENHANCED LANDSCAPE BUFFER ALONG THE SOUTH REAR LOT LINE AND PROVISIONS OF AN OUTDOOR SEATING ADJACENT TO THE AGE RESTRICTED ADULT HOUSING APARTMENT BUILDING.
44. RETAINING WALLS LOCATED ON HOA OPEN SPACE LOTS SHALL BE MAINTAINED BY THE ELLOCITT CROSSING TOWNHOME HOMEOWNERS ASSOCIATION, INC.
45. COMPREHENSIVE SKETCH PLAN FOR ELLICOTT CROSSING (FORMERLY ELLICOTT MILLS OVERLOOK) APPROVED MARCH 1, 2012. SITE DEVELOPMENT PLAN (SDP-11-057) APPROVED BY THE PLANNING BOARD ON MAY 24, 2012. THIS SITE PLAN, SDP-13-004, WAS APPROVED BY THE PLANNING BOARD ON APRIL 15, 2013.
46. ALL EXTERIOR LIGHTING SHALL BE PROPOSED UNDER THE ARCHITECTURAL PLANS AND SHALL BE ORIENTED TO DIRECT OR REFLECT LIGHT INWARD AND DOWNWARD AWAY FROM ALL ADJOINING PUBLIC STREETS AND RESIDENTIAL AREAS. ALL OUTDOOR LIGHTING SHALL BE IN COMPLIANCE WITH THE OUTDOOR LIGHTING REQUIREMENT STANDARDS SPECIFIED IN SECTION 134 OF THE ZONING REGULATIONS.
47. MODERATE INCOME HOUSING UNIT AGREEMENT AND RESTRICTIONS HAVE BEEN RECORDED WITH RECORD PLAT ELLICOTT CROSSING PART TWO F-13-043.
48. THIS PLAN IS SUBJECT TO WP-12-138, WHICH WAIVES SECTION 16.146(a)(1) REQUIRING THE SUBMISSION OF A PRELIMINARY PLAN. A FINAL PLAN SUBMISSION OF ALL PHASES SHOWN ON THE APPROVED SKETCH PLAN, S-12-001, SHALL BE SUBMITTED WITHIN NINE MONTHS FROM THE DATE OF THE APPROVAL LETTER (ON OR BEFORE DECEMBER 27, 2012). FAILURE TO SUBMIT THE FINAL PLAT BE THE NEWLY ESTABLISHED DUE DATE MAY RESULT IN THE COMPREHENSIVE SKETCH PLAN (S-12-001) AS APPROVED BY THE PLANNING BOARD UNDER PB CASE No. 391 TO BECOME NULL AND VOID.
49. ELLICOTT CROSSING TOWNHOME HOMEOWNERS ASSOCIATION, INC. FIRST AMENDMENT TO DECLARATION OF COVENANTS, CONDITIONS, EASEMENTS AND RESTRICTIONS HAVE BEEN RECORDED WITH RECORD PLAT ELLICOTT CROSSING PART TWO F-13-043.
50. THIS PLAN IS IN CONFORMANCE WITH ALL COUNTY REQUIREMENTS UNLESS A WAIVER HAS BEEN OBTAINED.
51. THE LOTS CREATED BY THIS SUBDIVISION PLAT ARE SUBJECT TO A FEE OR ASSESSMENT TO COVER OR DEFRAY ALL OR PART OF THE DEVELOPER'S COST OF THE INSTALLATION OF THE WATER AND SEWER FACILITIES, PURSUANT TO THE HOWARD COUNTY CODE SECTION 18.112. THIS FEE OR ASSESSMENT, WHICH RUNS WITH THE LAND, IS CONTRACTUAL OBLIGATION BETWEEN THE DEVELOPER AND EACH OWNER OF THIS PROPERTY AND IS NOT IN ANY WAY A FEE OR ASSESSMENT OF HOWARD COUNTY.
52. DECK POSTS, FOOTERS, AND OTHER SUPPORTS SHALL NOT BE PERMITTED WITHIN THE PRIVATE STORM DRAIN AND MAINTENANCE EASEMENT, BUT CANTILEVERED DECKS ARE PERMISSIBLE.
53. ALL SIGNAGE AND ENTRANCE FEATURES ARE SUBJECT TO A SIGN PERMIT AND APPROVAL BY THE SIGN CODE ADMINISTRATOR AS APPLICABLE.
54. NO LIGHTING OR AUDIO SOUND IS PROPOSED ON THE GAZEBO.
55. SEE SHEET 20 FOR LIGHTING DETAIL OF RETAIL/OFFICE BUILDING.
56. FUTURE LOTS 56 THRU 59 DON NOT MEET THE PUBLIC SEWER EASEMENT SETBACKS AND THEREFORE CANNOT HAVE A DECK.
    MODERATE INCOME HOUSING UNIT AGREEMENT AND RESTRICTIONS HAVE BEEN RECORDED WITH RECORD PLAT ELLICOTT CROSSING PART TWO F-13-043.
57. FOR OPEN SPACE TABULATION SEE THIS SHEET.
58. FOR RECREATIONAL OPEN SPACE TABULATION SEE THIS SHEET.
59. LOTS 42 THRU 92 AND LOTS 123 THRU 140 ARE ENCUMBERED WITH A 2 FOOT WIDE PRIVATE SIDEWALK AND MAINTENANCE EASEMENT. MAINTENANCE OF SIDEWALK IS THE RESPONSIBILITY OF THE HOMEOWNER'S ASSOCIATION.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REV. TITLE & TITLE BLOCK
9/16/15	REV. BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/14/15	REV. TITLE BLOCK TO REFLECT COMMERCIAL BLDG. & PARKING TABULATION
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

FRANK J. MANALANSAN III — 9/23/13 DATE

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 11/13/13
Chief, Division of Land Development — Date 11-08-13
Chief, Development Engineering Division — Date 10-25-13

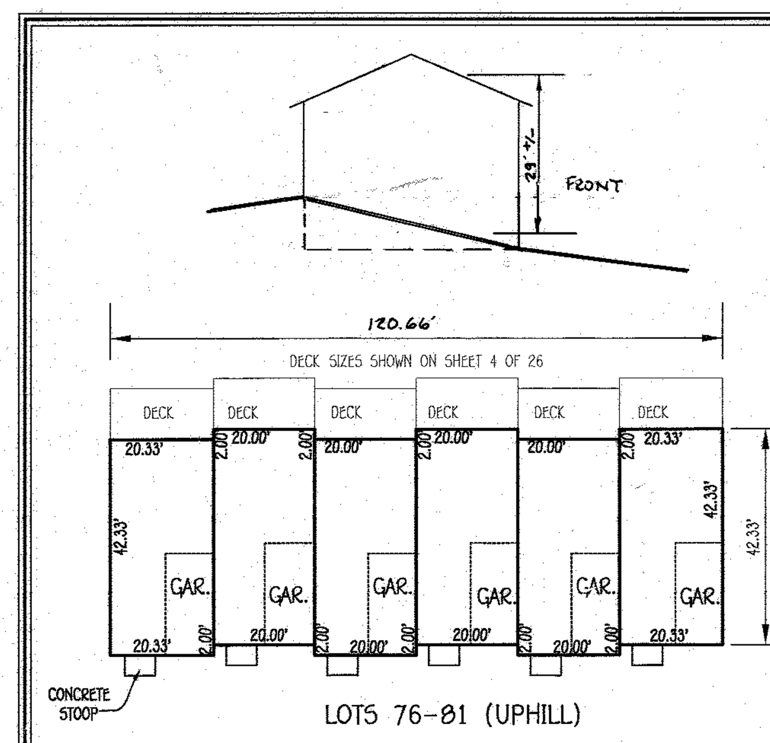
SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871-22875 22945-22950 23905-23908	852, 847	MXD-6	24	2nd.	6029

TITLE SHEET

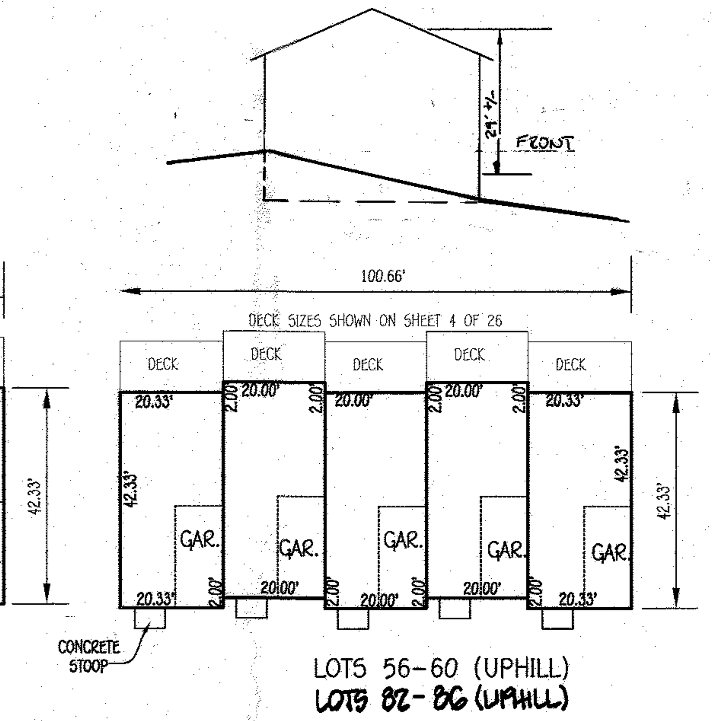
ELLICOTT CROSSING
PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 sdp plan.dwg, 9/30/2013 5:38:29 PM, JohnH, \\FCC108\Mylar 36, 1:1



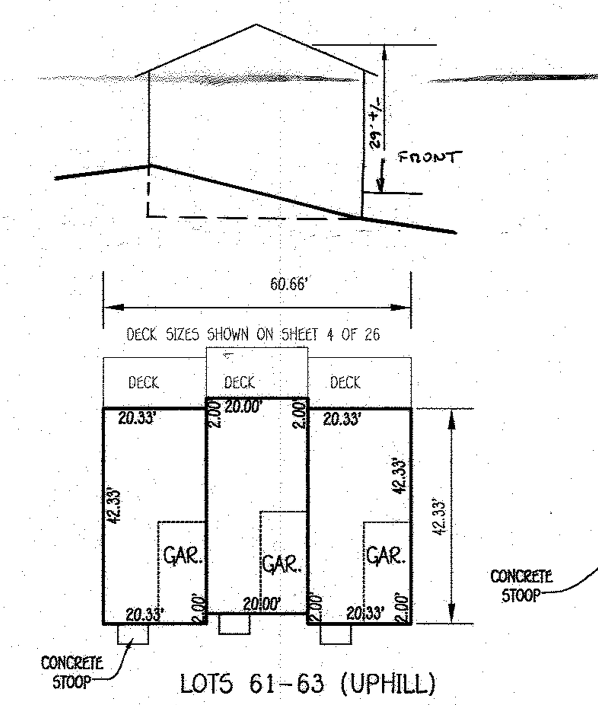
LOTS 76-81 (UPHILL)

STRAUSS 6 UNIT (ONE CAR GARAGE)



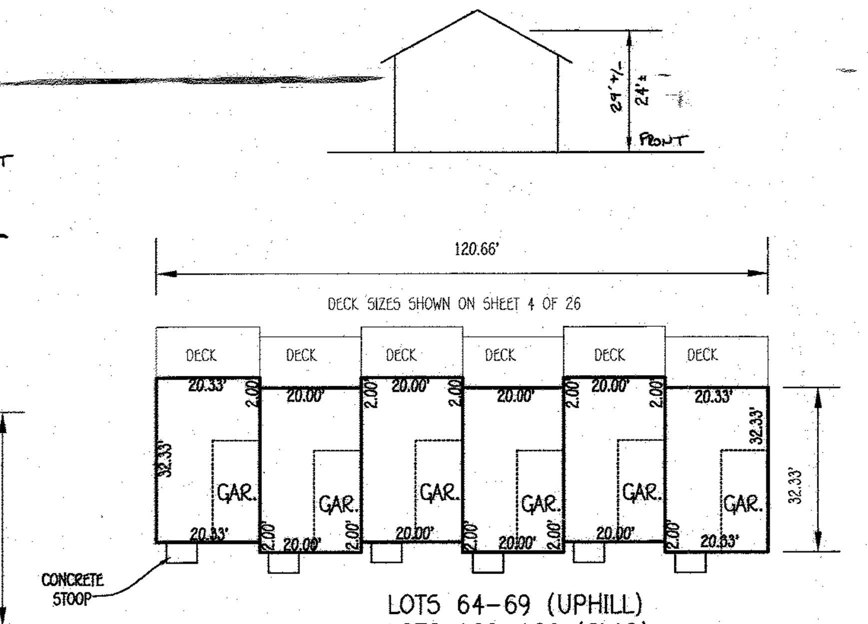
LOTS 56-60 (UPHILL)
LOTS 82-86 (UPHILL)

STRAUSS 5 UNIT (ONE CAR GARAGE)



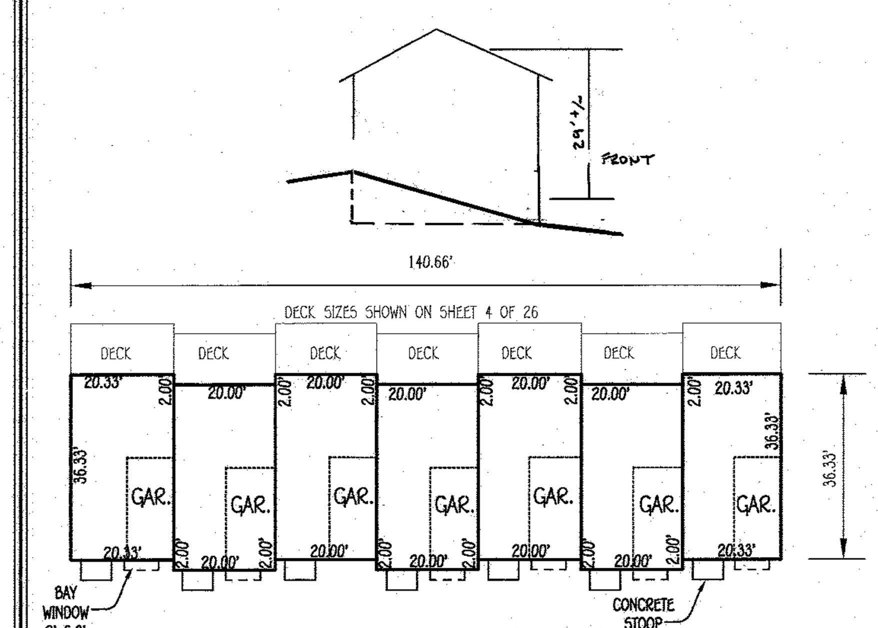
LOTS 61-63 (UPHILL)

STRAUSS 3 UNIT (ONE CAR GARAGE)



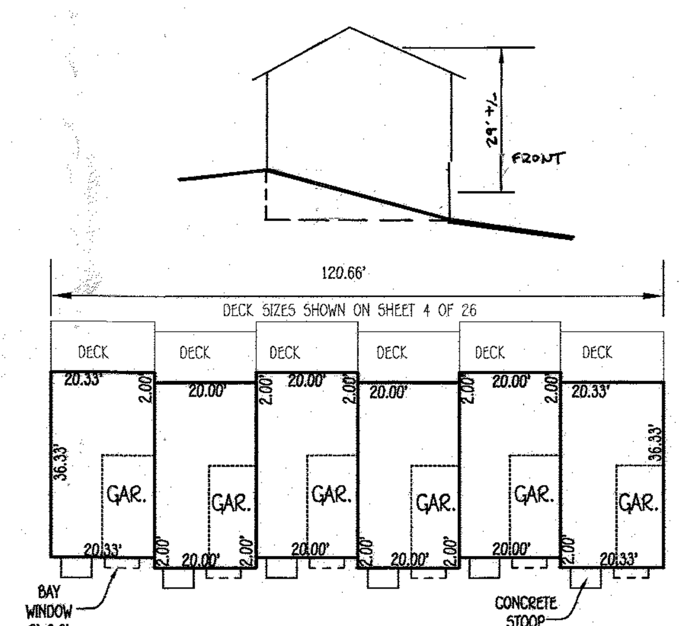
LOTS 64-69 (UPHILL)
LOTS 123-128 (SLAB)
LOTS 129-134 (SLAB)
LOTS 135-140 (SLAB)

BEETHOVEN 6 UNIT (ONE CAR GARAGE)



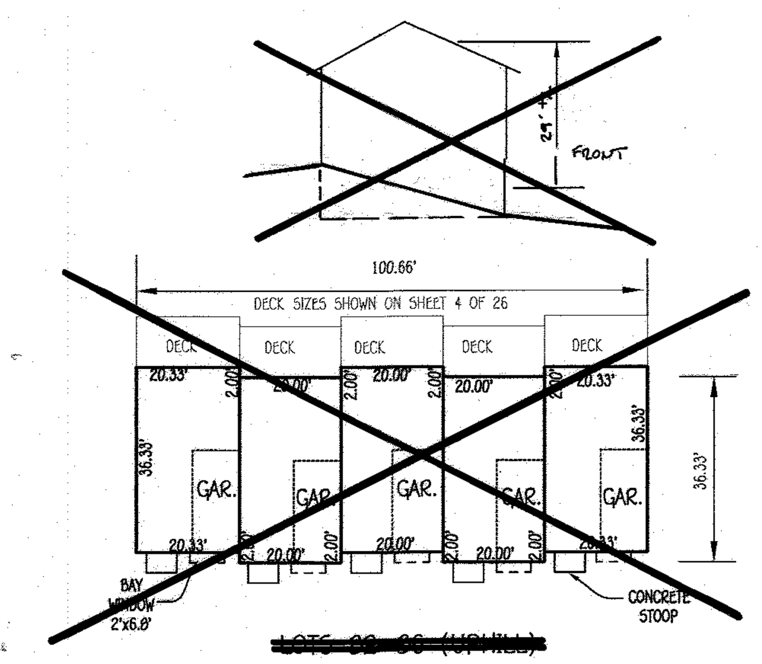
LOTS 42-48 (UPHILL)
LOTS 49-55 (UPHILL)

MOZART 7 UNIT (ONE CAR GARAGE)



LOTS 70-75 (UPHILL)
LOTS 87-92 (UPHILL)

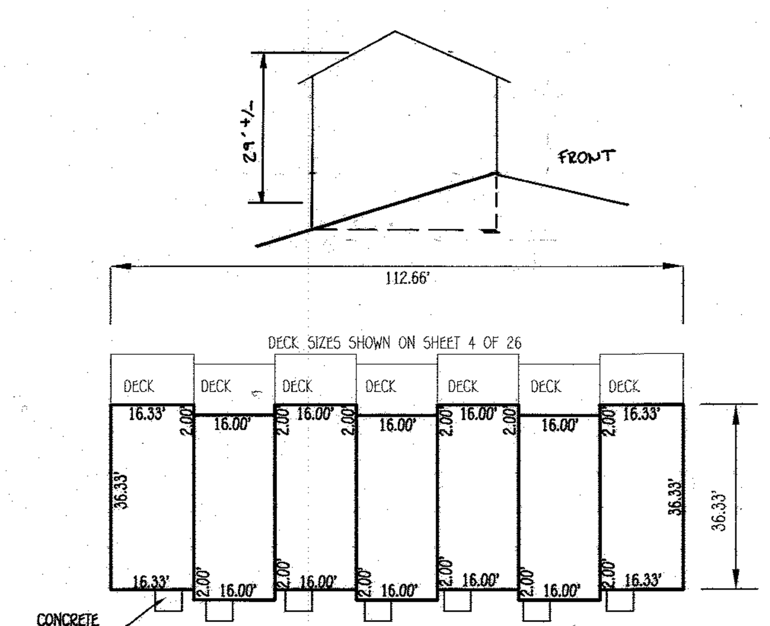
MOZART 6 UNIT (ONE CAR GARAGE)



~~LOTS 82-86 (UPHILL)~~

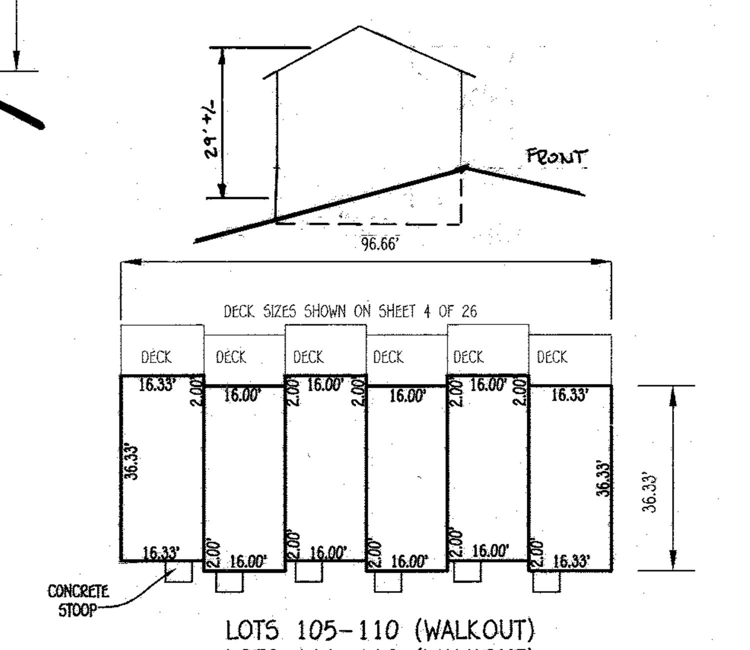
~~MOZART 5 UNIT (ONE CAR GARAGE)~~

NOTE: ONE CAR GARAGE AREAS ON ALL GARAGE UNITS MAY NOT BE CONVERTED TO LIVING SPACE.



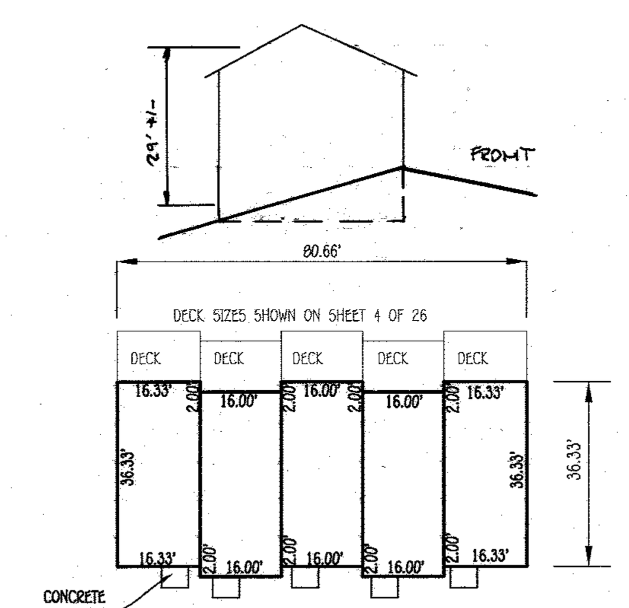
LOTS 93-99 (WALKOUT)

HEPBURN 7 UNIT



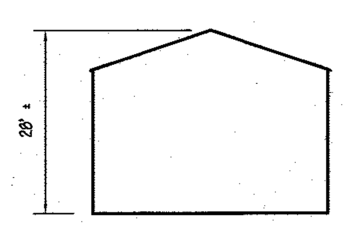
LOTS 105-110 (WALKOUT)
LOTS 111-116 (WALKOUT)
LOTS 117-122 (WALKOUT)

HEPBURN 6 UNIT

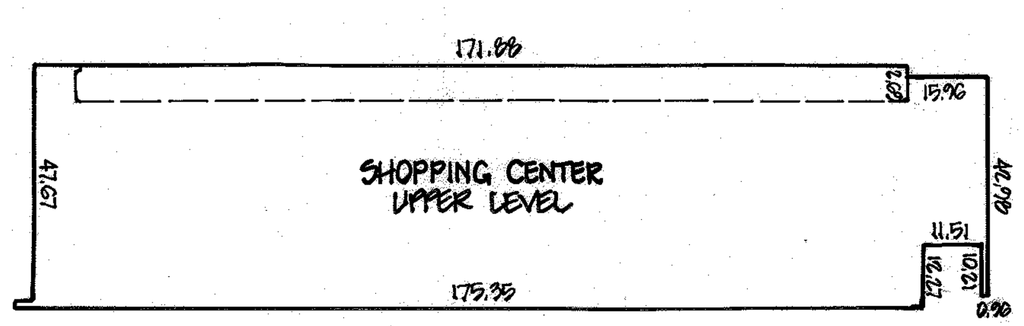


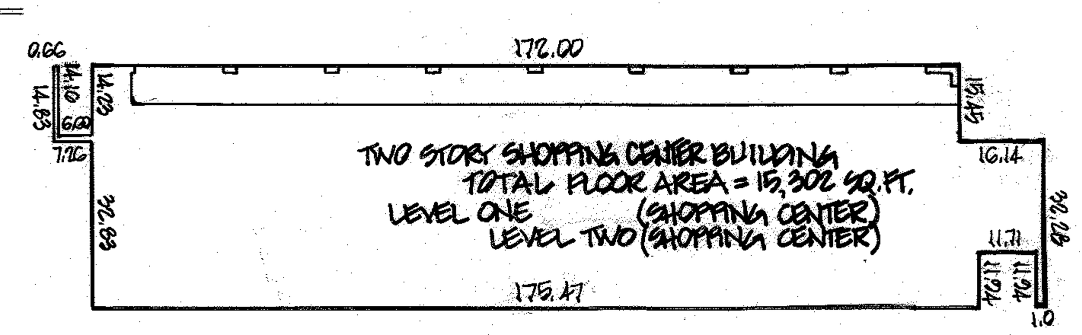
LOTS 100-104 (WALKOUT)

HEPBURN 5 UNIT



PROFILE





SHOPPING CENTER BUILDING

0' 30' 60' 120'

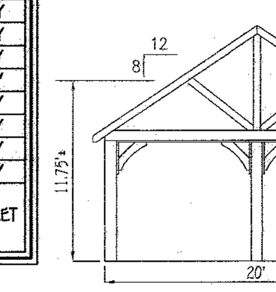
SCALE: 1" = 30'

ADDRESS CHART

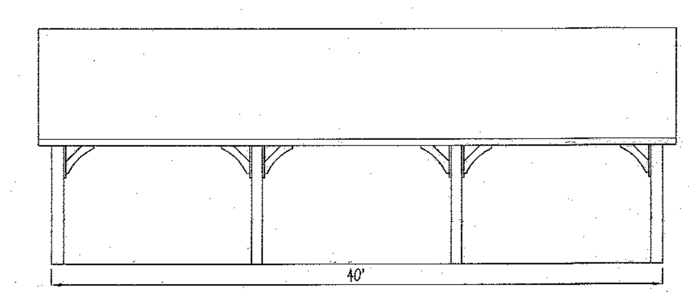
LOT NO.	UNIT NO.	STREET ADDRESS	LOT NO.	UNIT NO.	STREET ADDRESS
42		3039 HOCKLEY MILL DRIVE	92		3237 CLEAR SPRING DRIVE
43		3037 HOCKLEY MILL DRIVE	93		8201 AMOS HUNTER WAY
44		3035 HOCKLEY MILL DRIVE	94		8203 AMOS HUNTER WAY
45		3033 HOCKLEY MILL DRIVE	95		8205 AMOS HUNTER WAY
46		3031 HOCKLEY MILL DRIVE	96		8207 AMOS HUNTER WAY
47		3029 HOCKLEY MILL DRIVE	97		8209 AMOS HUNTER WAY
48		3027 HOCKLEY MILL DRIVE	98		8211 AMOS HUNTER WAY
49		3023 HOCKLEY MILL DRIVE	99		8213 AMOS HUNTER WAY
50		3021 HOCKLEY MILL DRIVE	100		3131 PRISCILLAS VIEW
51		3019 HOCKLEY MILL DRIVE	101		3133 PRISCILLAS VIEW
52		3017 HOCKLEY MILL DRIVE	102		3135 PRISCILLAS VIEW
53		3015 HOCKLEY MILL DRIVE	103		3137 PRISCILLAS VIEW
54		3013 HOCKLEY MILL DRIVE	104		3139 PRISCILLAS VIEW
55		3011 HOCKLEY MILL DRIVE	105		3140 PRISCILLAS VIEW
56		8050 LOCUST MILL STREET	106		3138 PRISCILLAS VIEW
57		8052 LOCUST MILL STREET	107		3136 PRISCILLAS VIEW
58		8054 LOCUST MILL STREET	108		3134 PRISCILLAS VIEW
59		8056 LOCUST MILL STREET	109		3132 PRISCILLAS VIEW
60		8058 LOCUST MILL STREET	110		3130 PRISCILLAS VIEW
61		8062 LOCUST MILL STREET	111		3126 PRISCILLAS VIEW
62		8064 LOCUST MILL STREET	112		3124 PRISCILLAS VIEW
63		8066 LOCUST MILL STREET	113		3122 PRISCILLAS VIEW
64		8070 LOCUST MILL STREET	114		3120 PRISCILLAS VIEW
65		8072 LOCUST MILL STREET	115		3118 PRISCILLAS VIEW
66		8074 LOCUST MILL STREET	116		3116 PRISCILLAS VIEW
67		8076 LOCUST MILL STREET	117		3112 PRISCILLAS VIEW
68		8078 LOCUST MILL STREET	118		3110 PRISCILLAS VIEW
69		8080 LOCUST MILL STREET	119		3108 PRISCILLAS VIEW
70		8071 LOCUST MILL STREET	120		3106 PRISCILLAS VIEW
71		8073 LOCUST MILL STREET	121		3104 PRISCILLAS VIEW
72		8075 LOCUST MILL STREET	122		3102 PRISCILLAS VIEW
73		8077 LOCUST MILL STREET	123		8112 KYNE MILLERS WAY
74		8079 LOCUST MILL STREET	124		8110 KYNE MILLERS WAY
75		8081 LOCUST MILL STREET	125		8108 KYNE MILLERS WAY
76		3201 CLEAR SPRING DRIVE	126		8106 KYNE MILLERS WAY
77		3203 CLEAR SPRING DRIVE	127		8104 KYNE MILLERS WAY
78		3205 CLEAR SPRING DRIVE	128		8102 KYNE MILLERS WAY
79		3207 CLEAR SPRING DRIVE	129		8101 KYNE MILLERS WAY
80		3209 CLEAR SPRING DRIVE	130		8103 KYNE MILLERS WAY
81		3211 CLEAR SPRING DRIVE	131		8105 KYNE MILLERS WAY
82		3215 CLEAR SPRING DRIVE	132		8107 KYNE MILLERS WAY
83		3217 CLEAR SPRING DRIVE	133		8109 KYNE MILLERS WAY
84		3219 CLEAR SPRING DRIVE	134		8111 KYNE MILLERS WAY
85		3221 CLEAR SPRING DRIVE	135		8210 AMOS HUNTER WAY
86		3223 CLEAR SPRING DRIVE	136		8212 AMOS HUNTER WAY
87		3227 CLEAR SPRING DRIVE	137		8214 AMOS HUNTER WAY
88		3229 CLEAR SPRING DRIVE	138		8216 AMOS HUNTER WAY
89		3231 CLEAR SPRING DRIVE	139		8218 AMOS HUNTER WAY
90		3233 CLEAR SPRING DRIVE	140		8220 AMOS HUNTER WAY
91		3235 CLEAR SPRING DRIVE	PARCEL 'K' RETAIL/ OFFICE BULDING		8000 LOCUST MILL STREET

PROPOSED ROAD ALIGNMENT LINE TABLE

ROAD NAME	STATION	STATION	DIRECTION	LENGTH	DELTA	ARC LENGTH	RADIUS	CHORD BEARING	CHORD LENGTH
WEBERS QUARRY ROAD	0+00	0+25.34	S43°03'39"W	25.34'					
WEBERS QUARRY ROAD	0+25.34	1+36.04			42°28'57"	110.70'	150.00'	S26°19'58"W	108.21'
WEBERS QUARRY ROAD	1+36.04	3+18.04	S05°11'23"W	182.00'					
LOCUST MILL STREET	0+00	2+37.38	S84°49'53"E	237.38'					
LOCUST MILL STREET	2+37.38	2+79.60			63°66'22"	42.22'	38.00'	S51°35'20"E	40.08'
LOCUST MILL STREET	2+79.60	5+27.02	S19°45'28"E	247.42'					
LOCUST MILL STREET	5+27.02	6+19.11			24°88'78"	92.09'	212.00'	S7°18'50"E	91.37'
LOCUST MILL STREET	6+19.11	7+74.56	S05°07'48"W	155.45'					
HOCKLEY MILL DRIVE	0+00	2+69.36	S84°52'12"E	269.36'					
HOCKLEY MILL DRIVE	2+69.36	3+42.70			22°35'16"	73.34'	188.00'	N83°57'15"E	72.88'
HOCKLEY MILL DRIVE	3+42.70	3+86.06	N72°46'43"E	43.36'					
KYNE MILLERS WAY	0+00	1+78.29	S06°03'33"W	178.29'					
AMOS HUNTER WAY	0+00	2+34.20	S05°07'48"W	234.20'					
PRISCILLAS VIEW	0+00	3+75.50	S84°52'12"E	375.50'					
CLEAR SPRING DRIVE	0+00	4+13.85	N84°52'12"W	413.85'					

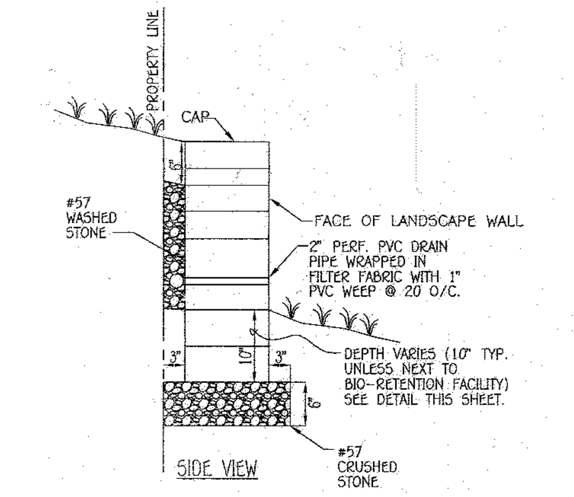


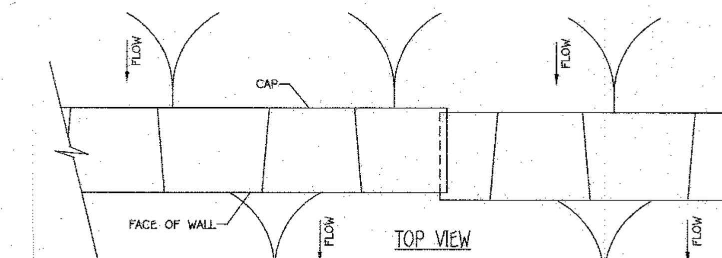
End Elevation SCALE: 1"=10'

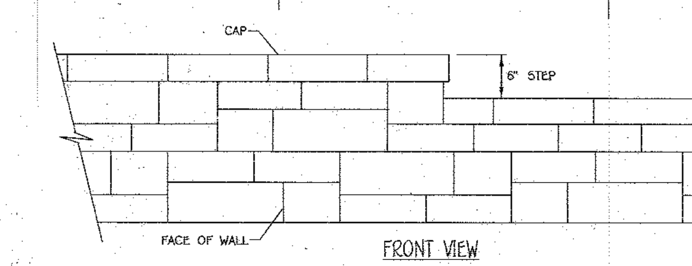


Side Elevation SCALE: 1"=10'

20' X 40' RECTANGULAR ALPINE PAVILION ELEVATIONS

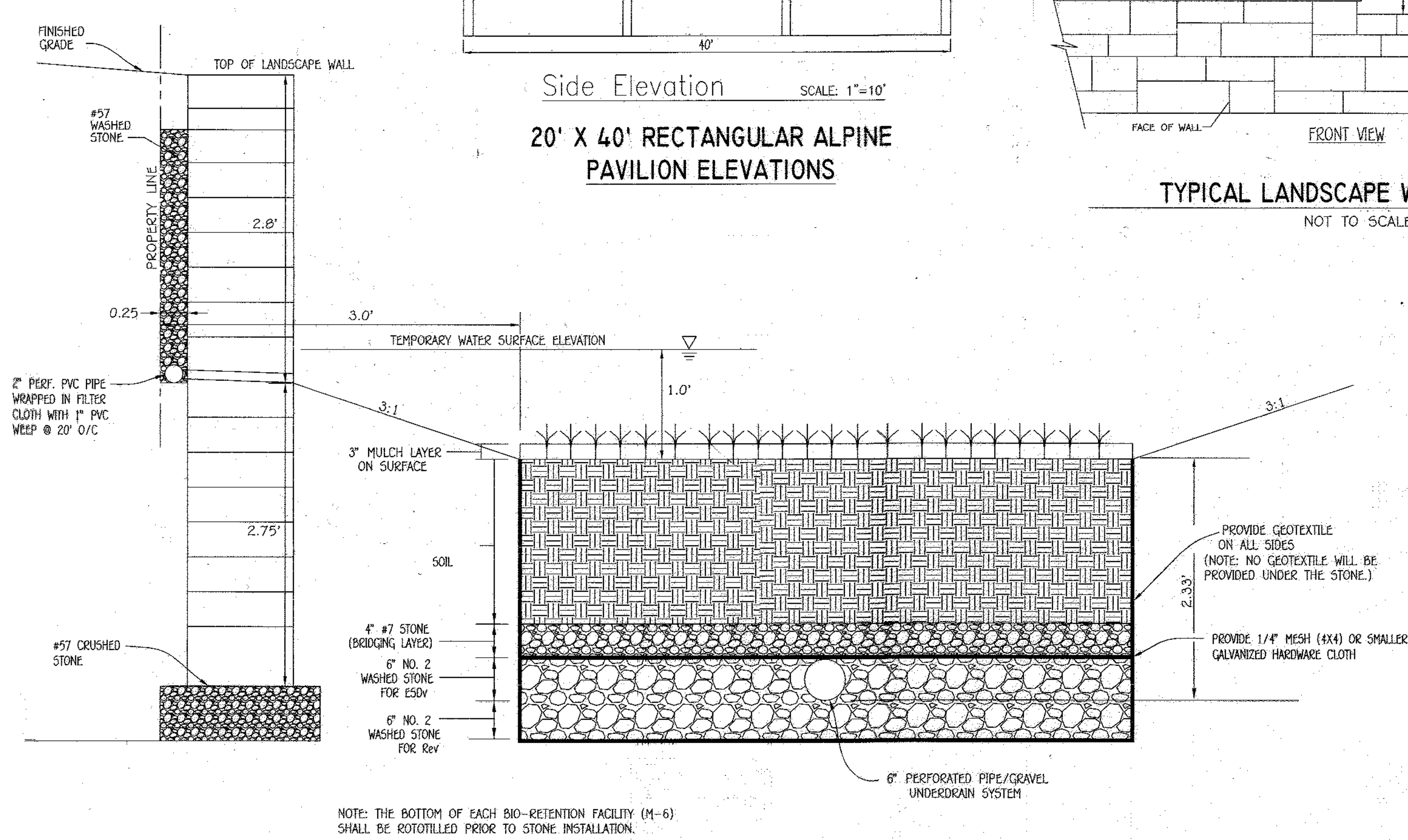






TYPICAL LANDSCAPE WALL DETAIL

NOT TO SCALE



NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

TYPICAL SECTION FOR LANDSCAPE WALL ADJACENT TO BIO-RETENTION FACILITY (M-6)

NOT TO SCALE

NOTE: H.O.A. SHALL BE RESPONSIBLE FOR MAINTENANCE OF LANDSCAPE WALL.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
12/30/16	REVISED UNITS 82 THRU 86, FROM MOZART TO STRAUSS
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/27/15	REVISED ALPINE PAVILION ELEVATIONS, ADDED LANDSCAPE WALL DETAILS
5/14/15	REVISED BUILDING USAGE FROM RETAIL TO COMMERCIAL
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

FRANK MANALANSAN II — 9/23/13 DATE

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443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
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APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 10/13/13
Chief, Division of Land Development — Date 11-08-13
Chief, Development Engineering Division — Date 10-25-13

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871-22875, 22945-22950, 23005-23008	852, 847	MXD-6	24	2nd.	6029

HOUSE TYPES, ADDRESS CHART

ELLICOTT CROSSING

PART TWO

LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

SDP-13-004

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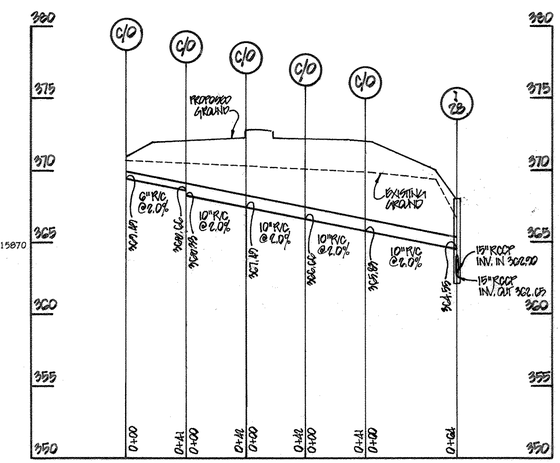
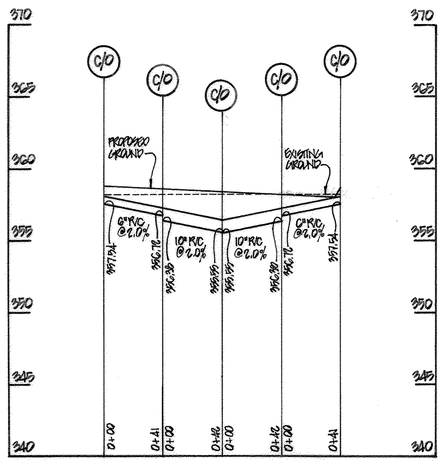


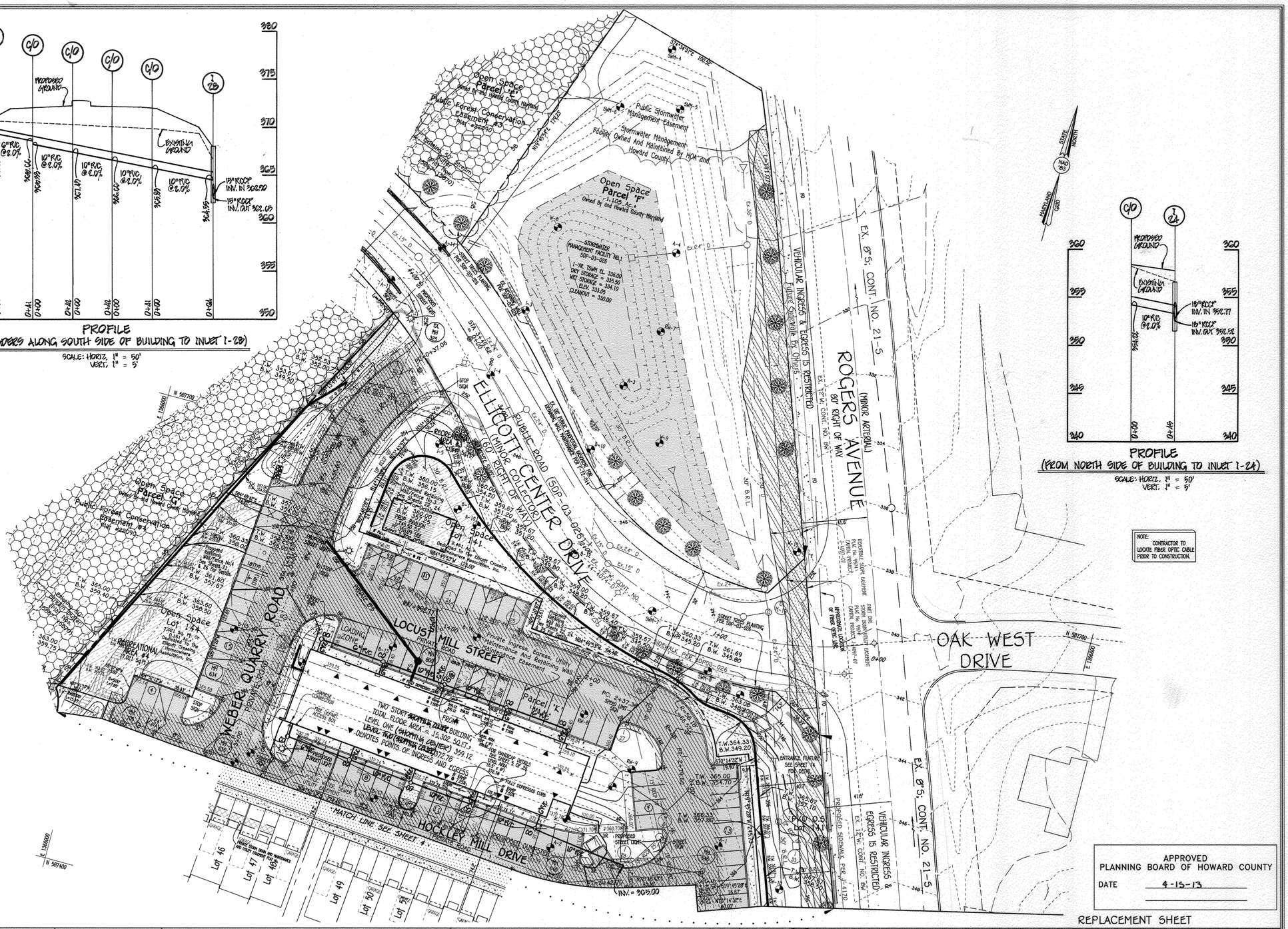
PROFILE
(ROOF LEADERS ALONG SOUTH SIDE OF BUILDING TO INLET 1-28)

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



PROFILE
(ROOF LEADERS ALONG NORTH SIDE OF BUILDING)

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'



PROFILE
(FROM NORTH SIDE OF BUILDING TO INLET 1-24)

SCALE: HORIZ. 1" = 50'
VERT. 1" = 5'

NOTE: CONTRACTOR TO LOCATE FIBER OPTIC CABLE PRIOR TO CONSTRUCTION.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4-15-13

REPLACEMENT SHEET

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REVISE TITLE BLOCK
9/16/15	REVISE BUILDING WIDTH FROM COMMERCIAL TO SHOPPING CENTER
9/27/15	REVISED PAVILION
9/14/15	REVISE BUILDING WIDTH, FROM RETAIL TO COMMERCIAL
7/22/14	REVISE COMMERCIAL BUILDING FOOTPRINT

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER/LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21416, EXPIRATION DATE: 7/14/15.

FRANK JOHN BOSSLEMAN, JR. 7/30/14
FRANK JOHN BOSSLEMAN, JR. DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 8-8-14 Date

Chief, Division of Land Development — 8/6/14 Date

for Chief, Development Engineering Division — 8/4/14 Date

SUBDIVISION		SECTION/AREA		LOT NOS.	
ELLICOTT CROSSING PART TWO		N/A		142 THRU 140	
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22345-22350	852, 847	MXD-6	24	2nd.	6029
22871-22875					
23705-23706					

SITE DEVELOPMENT PLAN

ELLICOTT CROSSING
PART TWO

LOTS 142 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING
~~TWO STORY SHOPPING CENTER~~ BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: AUGUST, 2014

SDP-13-004

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
12/20/16	REVISE LINETO #2 THRU #6, FROM MOZART TO STRAUSS
2/12/16	REVISED TITLE BLOCK.
9/16/15	REVISE TITLE BLOCK TO REFLECT SHOPPING CENTER.
8/27/15	ADDED LANDSCAPE WALLS, LANDSCAPE WALL DETAILS & REVISED 8' MULCH PATH, GAZEBO AND #2 - SHOPPING CENTER.
3/14/15	REVISE ROADWAY LAYOUT FROM ROGERS AVENUE & REVISED TITLE BLOCK TO INCLUDE ROGERS AVENUE, BUILDING & GAZEBO PER THE BUILDING ELEVATIONS
5/1/15	REVISED LANDSCAPING FOR NO-BUILT CONDITIONS FOR LOTS 70 THRU 75.
7/22/14	REVISED "PLAT CHANGES", REVISED ROADWAY LOCATIONS FOR LOTS #2-#6, #1, #7-#9 & #22-#40

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER AND LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10701, EXPIRATION DATE: 7/14/15.

FRANK J. MARKWARDT III, PE — 7/24/14 DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 8.8.14 Date

Chief, Division of Land Development — 8/06/14 Date

Chief, Development Engineering Division — 8/4/14 Date

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	40 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22345-22370 22371-22375	852, 847	MXD-6	24	2nd.	6029

22926-22930

SITE DEVELOPMENT PLAN

ELLICOTT CROSSING
PART TWO

LOTS 40 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: AUGUST, 2014

SHEET 4 OF 26 SDP-13-004

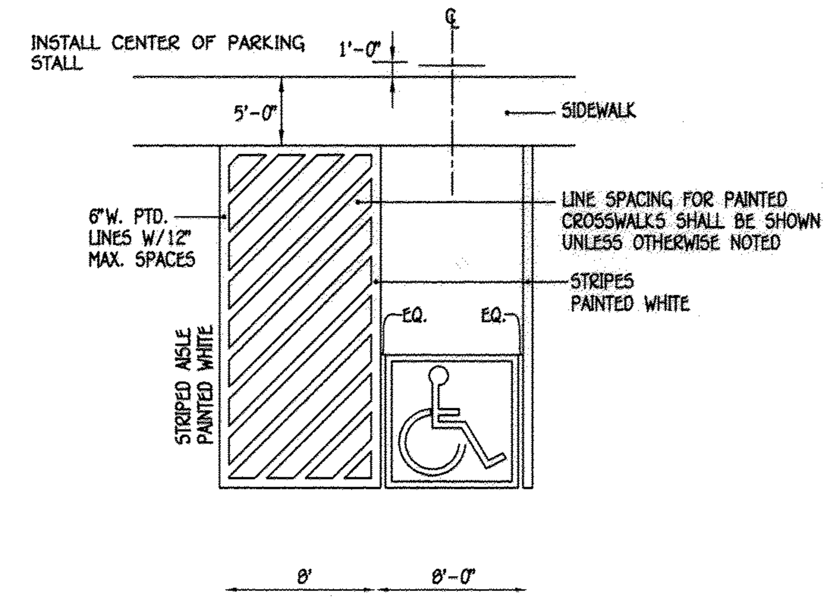
LEGEND

- PROPOSED PAVING
- EXISTING WETLANDS PLAT NOS. 15867 THRU 15870
- EXISTING CONTOUR
- EXISTING TREELINE
- EXISTING STREAM
- 5' WIDE MULCH PATH
- RECREATION OPEN SPACE AREAS
- EXISTING EASEMENT
- SLOPES 25% OR GREATER
- PERMEABLE PAVING
- FOREST CONSERVATION EASEMENT
- EXISTING WATER
- EXISTING SEWER
- EXISTING STORM DRAIN
- PROPOSED STORM DRAIN
- PRIVATE STORM DRAIN AND MAINTENANCE EASEMENT

GENERAL NOTES:
1. SIGNS SHALL MEET DESIGN STANDARDS OF THE FEDERAL HIGHWAY ADMINISTRATION AND CONFORM TO THE STATE OF MARYLAND STANDARD HIGHWAY SIGN BOOKLET DETAIL R7-8.
2. ONE SIGN IS REQUIRED PER SPACE PLACED AS SHOWN ON SITE IMPROVEMENT PLAN.
3. SIGNS SHALL BE POLE MOUNTED WITH HOT DIPPED GALVANIZED COUNTY APPROVED PERFORATED CHANNEL POSTS W/TOP OF SIGNS 9'-1" ABOVE FINISHED GRADE OR AS INDICATED ON SITE DRAWINGS.
4. SIGN SHALL BE ATTACHED TO FLANGED SIDE OF POST. POST SHALL EXTEND INTO GROUND 2'-6" MIN.
5. COLORS: LEGEND AND BORDER-GREEN
   SYMBOL-WHITE ON BLUE BACKGROUND
   BACKGROUND-WHITE
6. CONTRACTOR SHALL COORDINATE ARROW DIRECTION WITH LOCATION OF ADJACENT AISLE.
7. SPACES INDICATED ON SITE DEVELOPMENT PLANS AS "VAN ACCESSIBLE" SHALL BE SIGNED ACCORDINGLY.

HANDICAP PARKING SIGN DETAIL

NOT TO SCALE

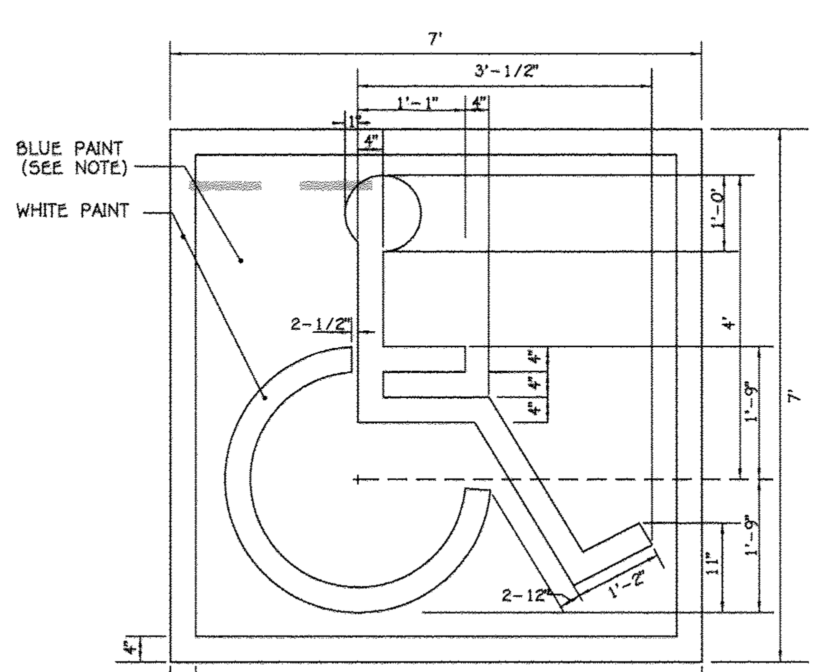


ACCESSIBLE SPACE LAYOUT

SCALE: 1" = 20'

HANDICAP DETAIL

SCALE: 1" = 20'



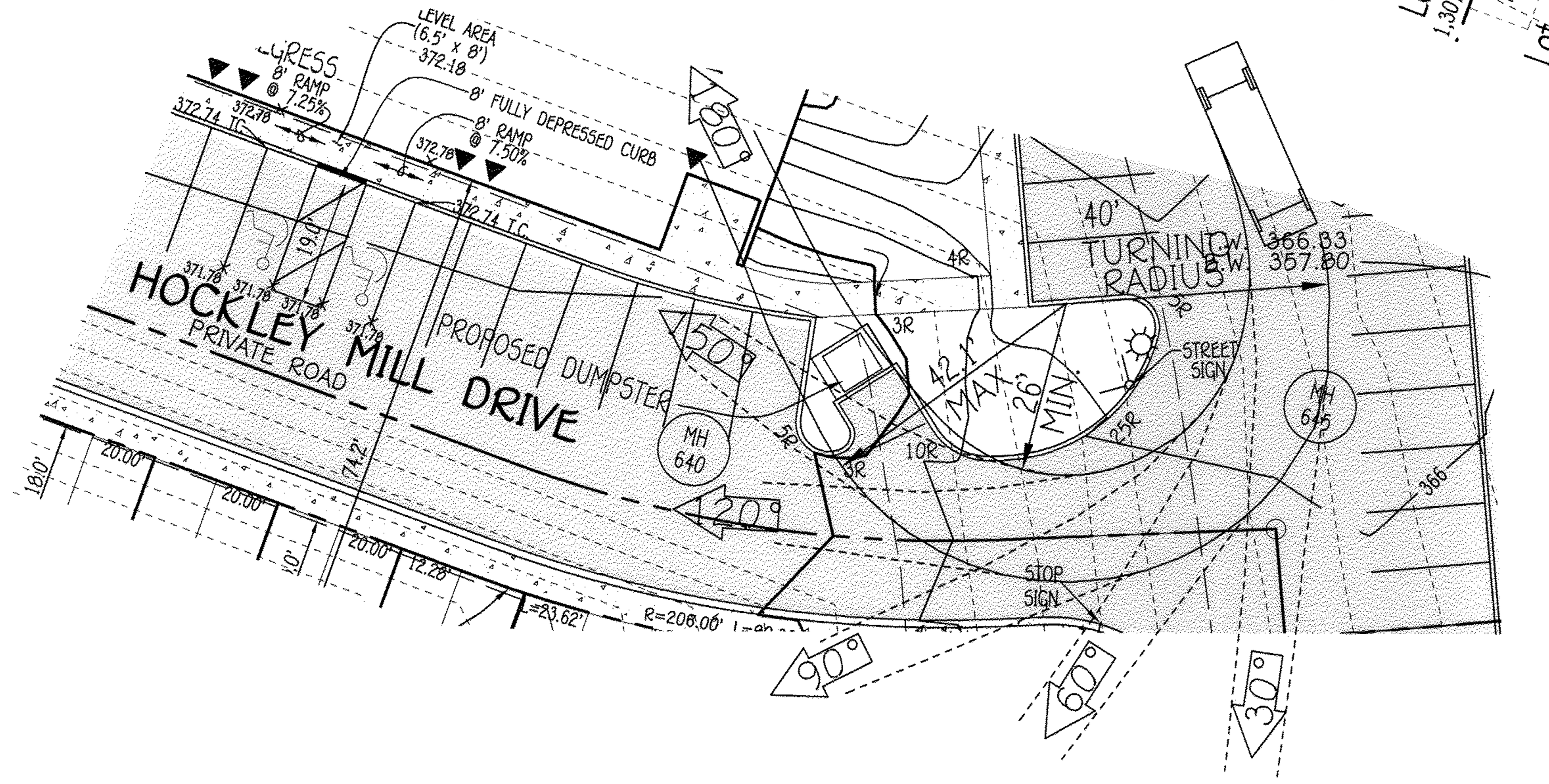
NOTE:
SYMBOL IS REQUIRED TO CONTRAST WITH BACKGROUND (WHITE ON BLUE: COLOR NO. 105090 IN FED. STANDARD 5952-DOUBLE COAT TYP.)

HANDICAP SPACE STENCIL LAYOUT

SCALE: 1" = 20'

0' 20' 40' 80'

SCALE: 1" = 20'



TRASH TRUCK TURNING RADIUS DETAIL

SCALE: 1" = 20'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4-15-13

REPLACEMENT SHEET

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/14/15	REVISED BUILDING USAGE FROM RETAIL, TO COMMERCIAL
7/22/14	REFLECT PLAT CHANGES, REVISE DRIVEWAY LOCATIONS FOR LOTS 42-60, 62, 64-92 & 123-140

REVISION BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.
FRANK J. MANALANSAN, P.S. — DATE 7/30/14

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Director - Department of Planning and Zoning — Date 8.8.14
Chief, Division of Land Development — Date 8/06/14
For Chief, Development Engineering Division — Date 8/4/14

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22945-22950 22871-22875 23905-23908	852, 847	MXD-6	24	2nd.	6029

HANDICAP DETAIL SHEET

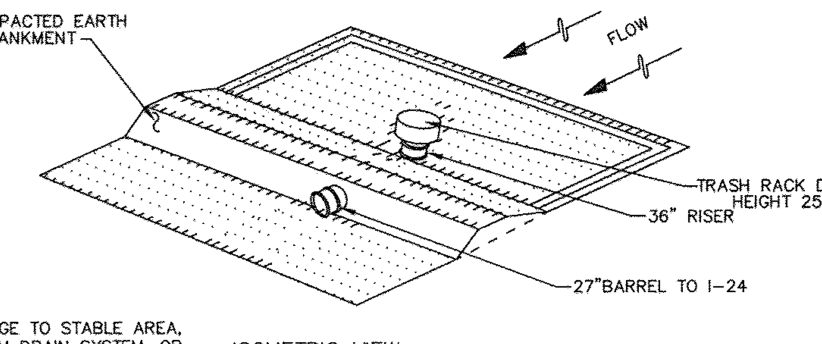
ELLICOTT CROSSING
PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 20' DATE: AUGUST, 2014

 SDP-13-004

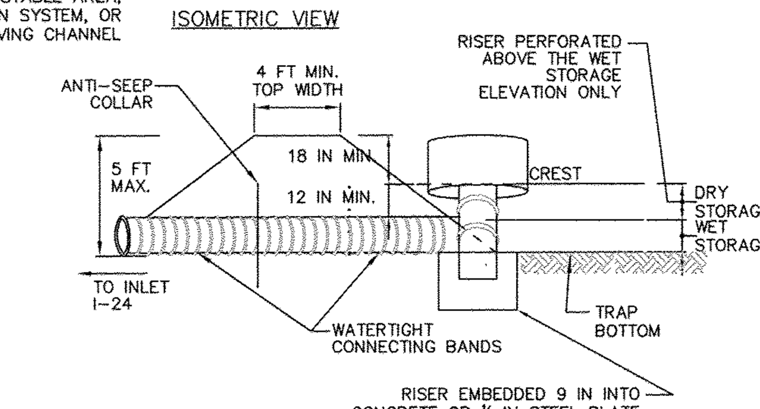
CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
2. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
3. PERFORATE THE RISER WITH 1 INCH DIAMETER HOLES SPACED 6 INCHES ON CENTER WITH THE LOWEST PERFORATIONS AT THE WET STORAGE ELEVATION OR PROVIDE A HORIZONTAL OR VERTICAL DRAW-DOWN DEVICE PERFORATED ACCORDING TO APPROVED PLAN. DO NOT PERFORATE THE RISER WITHIN 6 INCHES OF THE TOP OF THE HORIZONTAL BARREL.
4. SET RISER/BARREL ASSEMBLY PRIOR TO EMBANKMENT CONSTRUCTION. MAKE ALL PIPE CONNECTIONS WATERTIGHT. OFFSET RISER FROM EMBANKEMENT TO ACCOMODATE PLACEMENT OF THE TRASH RACK. ANCHOR THE RISER WITH EITHER A REINFORCED CONCRETE BASE OR STEEL PLATE BASE TO PREVENT FLOTATION. MAKE CONCRETE BASES AT LEAST TWICE THE RISER DIAMETER AND 18 INCHES THICK WITH THE RISER EMBEDDED 9 INCHES.
5. USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
6. HAND COMPACT IN 4 INCH LAYERS FILL MATERIAL AROUND THE PIPE SPILLWAY. PLACE A MINIMUM OF 2 FEET OF HAND COMPACTED BACKFILL OVER THE PIPE SPILLWAY BEFORE CROSSING IT WITH CONSTRUCTION EQUIPMENT.
7. CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE RISER CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
8. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
9. WRAP THE RISER WITH ¼ INCH GALVANIZED HARDWARE CLOTH THEN WRAP WITH NONWOVEN GEOTEXTILE. DO NOT WRAP WITH MORE THAN ONE LAYER OF GEOTEXTILE. EXTEND HARDWARE CLOTH AND GEOTEXTILE AT LEAST 6 INCHES ABOVE THE HIGHEST PERFORATIONS AND AT LEAST 6 INCHES BELOW THE LOWEST PERFORATIONS. OVERLAP, FOLD AND FASTEN WHERE ENDS OF GEOTEXTILE COME TOGETHER TO PREVENT BYPASS. REPLACE GEOTEXTILE AS NECESSARY TO PREVENT CLOGGING.
10. USE STRAPS OR CONNECTING BANDS AT THE TOP AND BOTTOM OF THE GEOTEXTILE TO HOLD THE GEOTEXTILE AND HARDWARE CLOTH IN PLACE.
11. USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
12. STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
13. CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO THE APPROVED PLAN AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
14. REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION. MAINTAIN WATER TIGHT CONNECTIONS. REPLACE GEOTEXTILE AROUND PERFORATED RISER IF DRY STORAGE VOLUME DOES NOT DRAW DOWN WITHIN 10 HOURS.
15. WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
16. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

MAXIMUM DRAINAGE AREA = 5 ACRES



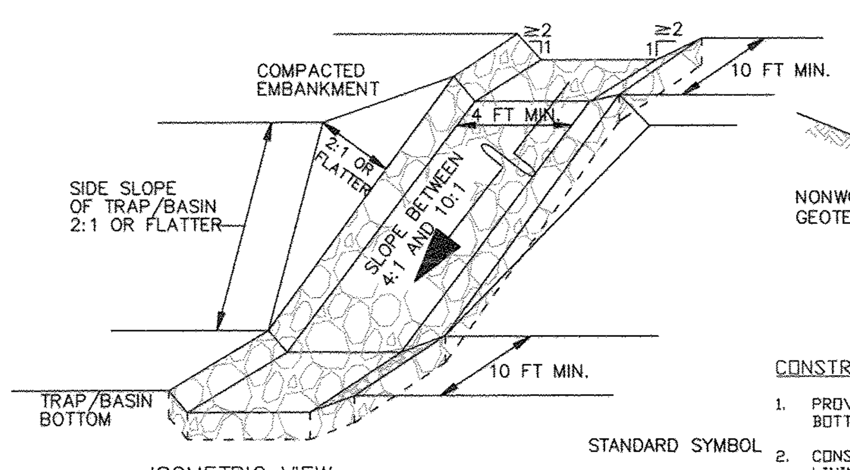
ISOMETRIC VIEW



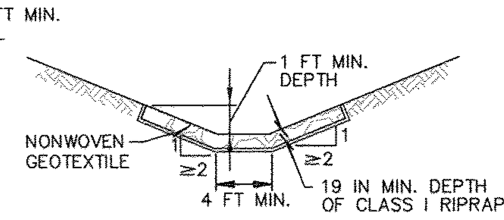
SECTION

NOTE:
REFER TO DETAIL G-2-1 – TYPICAL ANTI-SEEP COLLARS
REFER TO DETAIL G-2-2 – RISER BASE
REFER TO DETAIL G-2-3 – CONCENTRIC TRASH RACK AND ANTI-VORTEX DEVICE

¼ INCH GALVANIZED HARDWARE CLOTH WITH NONWOVEN GEOTEXTILE SECURELY FASTENED TO PERFORATED RISER
NONWOVEN GEOTEXTILE
GALVANIZED HARDWARE CLOTH
RISER

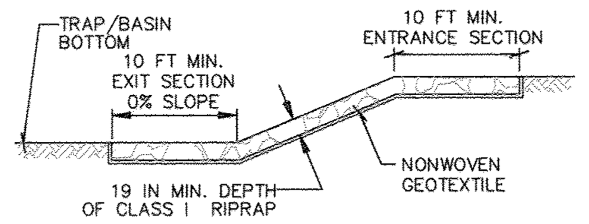


ISOMETRIC VIEW



CROSS SECTION

STANDARD SYMBOL RRP



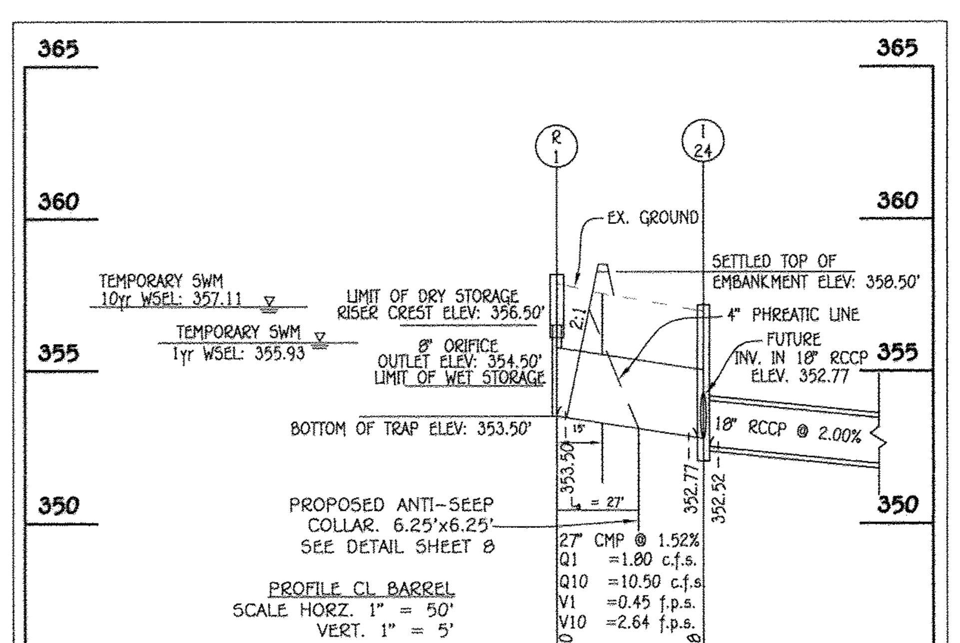
PROFILE ALONG CENTERLINE

CONSTRUCTION SPECIFICATIONS

1. PROVIDE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, UNDER THE BOTTOM AND ALONG SIDES OF ALL RIPRAP.
2. CONSTRUCT INFLOW CHANNEL WITH CLASS I RIPRAP OR EQUIVALENT RECYCLED CONCRETE LINING TO A MINIMUM DEPTH OF 19 INCHES (2 x D_{50}) AND A 1 FOOT DEEP FLOW CHANNEL. INFLOW RIPRAP PROTECTION CHANNEL MUST HAVE A TRAPEZOIDAL CROSS SECTION WITH 2:1 OR FLATTER SIDE SLOPES AND A 4 FOOT MINIMUM BOTTOM WIDTH.
3. INSTALL ENTRANCE AND EXIT SECTIONS AS SHOWN ON THE PROFILE.
4. BLEND RIPRAP INTO EXISTING GROUND.
5. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. KEEP POINTS OF INFLOW AND OUTFLOW FREE OF EROSION.

RIP RAP INFLOW PROTECTION

NOTE:
1) EARTH DIKES DAMAGED BY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.
2) FENCING IS TO BE HOOKED NO MORE THEN 50' APART.
3) STOCK PILING IN EXCESS OF 15' IS TO BE BENCHED.



PROFILE CL BARREL
SCALE HORZ. 1" = 50'
VERT. 1" = 5'

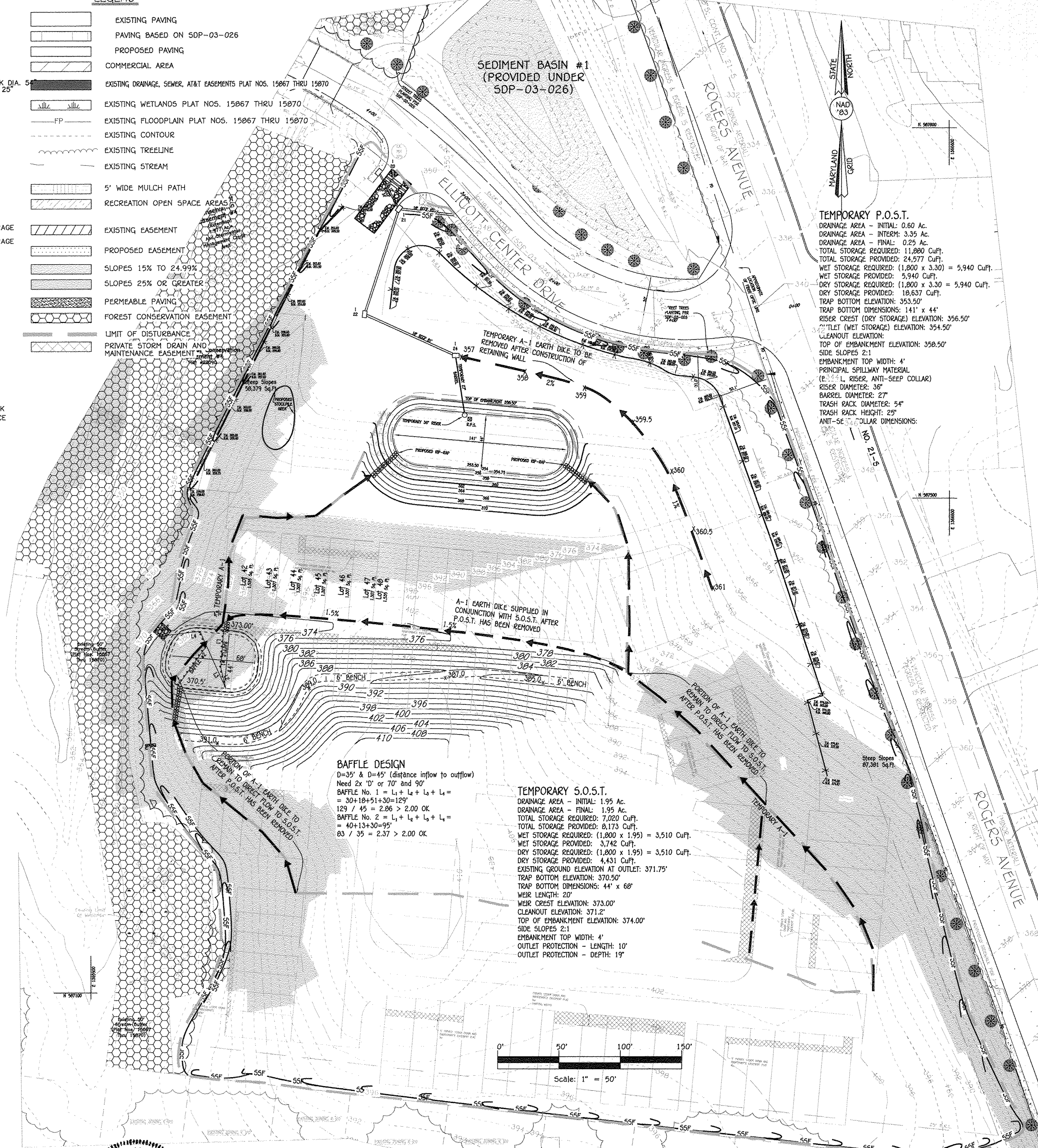
BASIN TABLE (TAKEN FROM SDP-03-026)

BASIN NUMBER		1
EXISTING DRAINAGE AREA: ACRES		5.72
INTERIM DRAINAGE AREA: ACRES		5.60
PROPOSED DRAINAGE AREA: ACRES		9.64
STORAGE REQUIRED: CUBIC FEET	WET	17,352
	DRY	17,352
	TOTAL	34,704
STORAGE PROVIDED: CUBIC FEET	WET	17,675
	DRY	19,384
	TOTAL	37,059
EXISTING GROUND ELEVATION		340.0
TOP EMBANKMENT ELEVATION		341.0
EMERGENCY SPILLWAY CREST ELEVATION		N/A
RISER CREST ELEVATION		337.8
WET STORAGE ELEVATION		335.5
CLEANOUT ELEVATION		334.3
BOTTOM ELEVATION		332.0
Q1 EXISTING (C.F.S.)		2.49
Q1 INTO BASIN (C.F.S.)		21.71
Q OUT BARREL (C.F.S.)		1.49
OUT EMERGENCY SPILLWAY		N/A
BASIN DEPTH	WET	3.5 FT.
	DRY	2.0 FT.
	TOTAL	5.5 FT.
DESIGN HIGHWATER		339.0
FREEBOARD PROVIDED		2.0 FT.
BARREL DIAMETER		24 IN.
RISER DIAMETER		4' x 4'
EMERGENCY SPILLWAY WIDTH		N/A
WET STORAGE ZONE ELEVATION		332.0-335.5
DRY STORAGE ZONE ELEVATION		335.5-337.5
BOTTOM DIMENSIONS		SEE PLAN (SDP-03-026)
S.E.C. CONTROL PLATE ORIFICE SIZE (IN.)		4.0 IN.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4-15-13

LEGEND

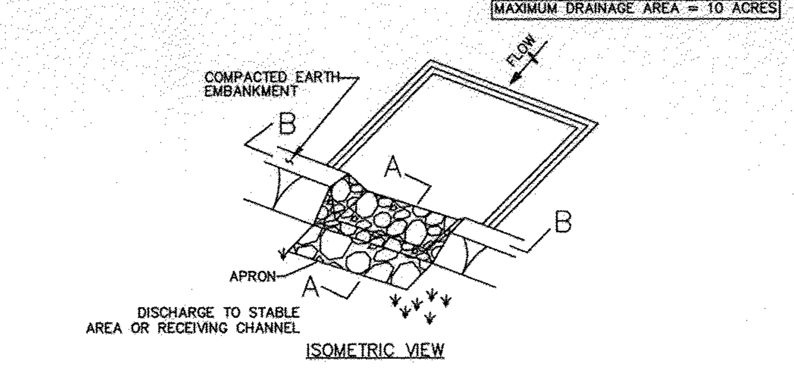
- EXISTING PAVING
- PAVING BASED ON SDP-03-026
- PROPOSED PAVING
- COMMERCIAL AREA
- EXISTING DRAINAGE, SEWER, AT&T EASEMENTS PLAT NOS. 15867 THRU 15870
- EXISTING WETLANDS PLAT NOS. 15867 THRU 15870
- EXISTING FLOODPLAIN PLAT NOS. 15867 THRU 15870
- EXISTING CONTOUR
- EXISTING TREELINE
- EXISTING STREAM
- 5' WIDE MULCH PATH
- RECREATION OPEN SPACE AREAS
- EXISTING EASEMENT
- PROPOSED EASEMENT
- SLOPES 15% TO 24.99%
- SLOPES 25% OR GREATER
- PERMEABLE PAVING
- FOREST CONSERVATION EASEMENT
- LIMIT OF DISTURBANCE
- PRIVATE STORM DRAIN AND MAINTENANCE EASEMENT



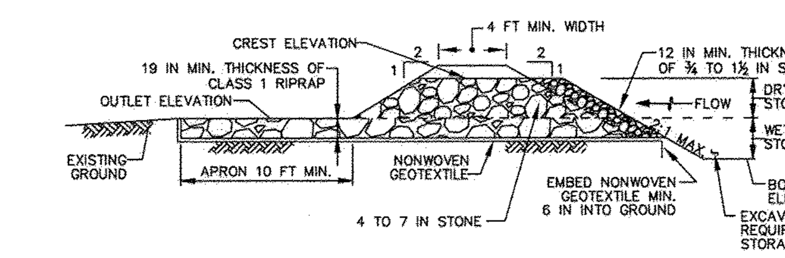
DETAIL G-1-2 STONE/RIPRAP OUTLET SEDIMENT TRAP ST-II

STANDARD SYMBOL ST-II

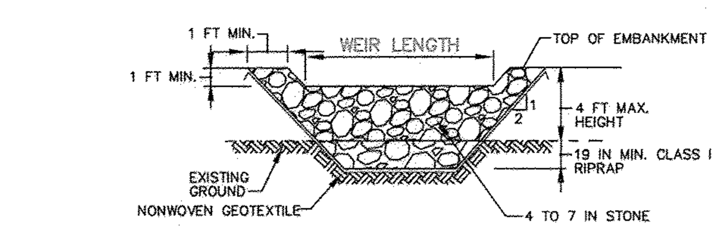
MAXIMUM DRAINAGE AREA = 10 ACRES



ISOMETRIC VIEW



SECTION A–A



SECTION B–B

CONSTRUCTION SPECIFICATIONS

1. CONSTRUCT TRAP IN SUCH A MANNER THAT EROSION AND WATER POLLUTION ARE AVOIDED.
2. CLEAR, GRUB, AND STRIP ANY VEGETATION AND ROOT MAT FROM THE AREA UNDER THE EMBANKMENT AND TRAP BOTTOM.
3. USE FILL MATERIAL FREE OF ROOTS, WOODY VEGETATION, OVERSIZED STONES, ROCKS, ORGANIC MATERIAL, OR OTHER OBJECTIONABLE MATERIAL FOR THE EMBANKMENT.
4. CONSTRUCT TOP OF EMBANKMENT 1 FOOT MINIMUM ABOVE WEIR CREST. COMPACT THE EMBANKMENT BY TRAVERSING WITH EQUIPMENT WHILE IT IS BEING CONSTRUCTED.
5. MAKE ALL CUT AND FILL SLOPES 2:1 OR FLATTER.
6. PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS, OVER THE BOTTOM AND SIDES OF OUTLET AND APRON PRIOR TO PLACEMENT OF RIPRAP. OVERLAP SECTIONS OF GEOTEXTILE AT LEAST 1 FOOT WITH THE SECTION NEARER TO THE TRAP PLACED ON TOP. EMBED GEOTEXTILE AT LEAST 6 INCHES INTO EXISTING GROUND AT ENTRANCE OF OUTLET CHANNEL.
7. USE CLEAN 4 TO 7 INCH RIPRAP TO CONSTRUCT THE WEIR. USE CLASS I RIPRAP FOR THE APRON. USE OF RECYCLED CONCRETE EQUIVALENT IS ACCEPTABLE.
8. PLACE 1 FOOT OF CLEAN ¾ TO 1½ INCH STONE OR EQUIVALENT RECYCLED CONCRETE ON THE UPSTREAM FACE OF THE WEIR.
9. CONSTRUCT AND MAINTAIN THE OUTLET ACCORDING TO APPROVED PLAN, AND IN SUCH A MANNER THAT EROSION AT OR BELOW THE OUTLET DOES NOT OCCUR.
10. STABILIZE THE EMBANKMENT AND INTERIOR SLOPES WITH SEED AND MULCH. STABILIZE POINTS OF CONCENTRATED INFLOW AS SHOWN ON APPROVED PLAN.
11. REMOVE SEDIMENT AND RESTORE TRAP TO ORIGINAL DIMENSIONS WHEN SEDIMENT HAS ACCUMULATED TO CLEANOUT ELEVATION (50% OF WET STORAGE DEPTH). DEPOSIT REMOVED SEDIMENT IN AN APPROVED AREA AND IN SUCH A MANNER THAT IT WILL NOT ERODE. KEEP POINTS OF INFLOW AND OUTFLOW AS WELL AS INTERIOR OF THE TRAP FREE FROM EROSION, AND REMOVE ACCUMULATED DEBRIS. MAINTAIN EMBANKMENTS TO CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION. REMOVE ANY TREES, BRUSH, OR OTHER WOODY VEGETATION GROWING ON EMBANKMENT OR NEAR PRINCIPAL SPILLWAY. MAINTAIN LINE, GRADE, AND CROSS SECTION.
12. WHEN DEWATERING TRAP, PASS REMOVED WATER THROUGH AN APPROVED SEDIMENT CONTROL PRACTICE.
13. UPON REMOVAL, GRADE AND STABILIZE THE AREA OCCUPIED BY TRAP.

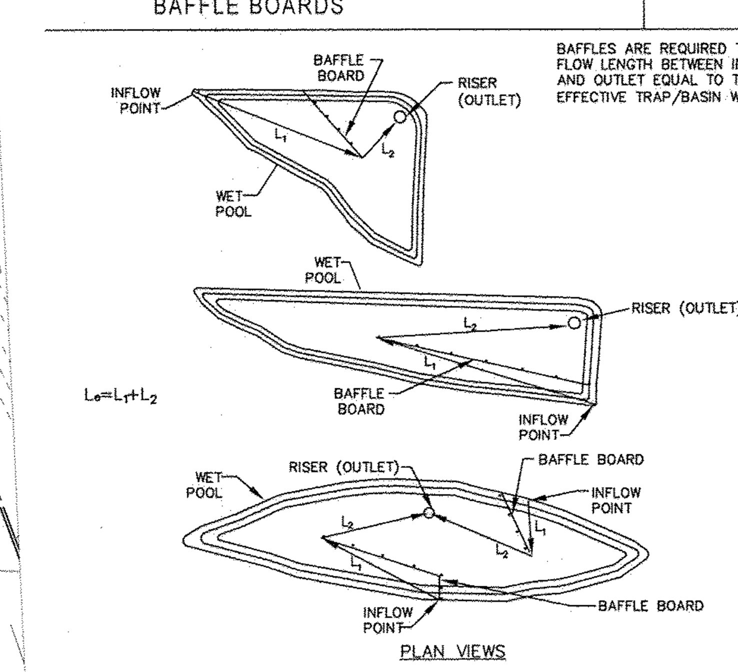
MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

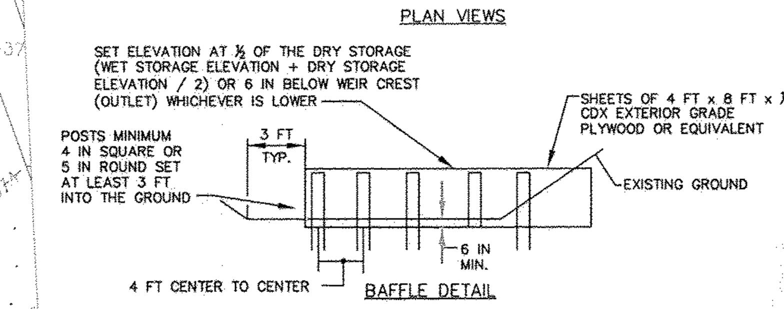
DETAIL G-2-4 BAFFLE BOARDS

STANDARD SYMBOL BB

BAFFLES ARE REQUIRED TO PROVIDE A FLOW LENGTH BETWEEN INFLOW POINT AND OUTLET EQUAL TO TWICE THE EFFECTIVE TRAP/BASIN WIDTH.



PLAN VIEWS



BAFFLE DETAIL

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL

U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	REFLECT PLAT CHANGES, REVISE DRIVEWAY LOCATIONS FOR LOTS 40-60, 62, 64-92 & 123-140

REVISION BLOCK

SURVEYOR'S CERTIFICATE

"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 of Surveyor FRANK JOHN MANALANSAN II — 7-24-14 Date

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — 7/24/14 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 7/24/14 Date
9/14/16

OWNERS	DEVELOPER
3330 ROGERS AVENUE LLC SUITE 102 5300 DORSEY HALL DRIVE ELLICOTT CITY, MD 21042 443-367-0422	M & T DEVELOPERS, LLC 4515 MANOR LANE ELLICOTT CITY, MD 21042 443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — 8-8-14 Date
Chief, Division of Land Development — 8/06/14 Date
Chief, Development Engineering Division — 8/4/14 Date

SUBDIVISION		SECTION/AREA	LOT NOS.		
ELLICOTT CROSSING PART TWO		N/A	42 THRU 140		
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22945-22950 22871-22875 23305-23308	852, 847	MXD-6	24	2nd.	6029

SEDIMENT & EROSION CONTROL PLAN

ELLICOTT CROSSING
PART TWO

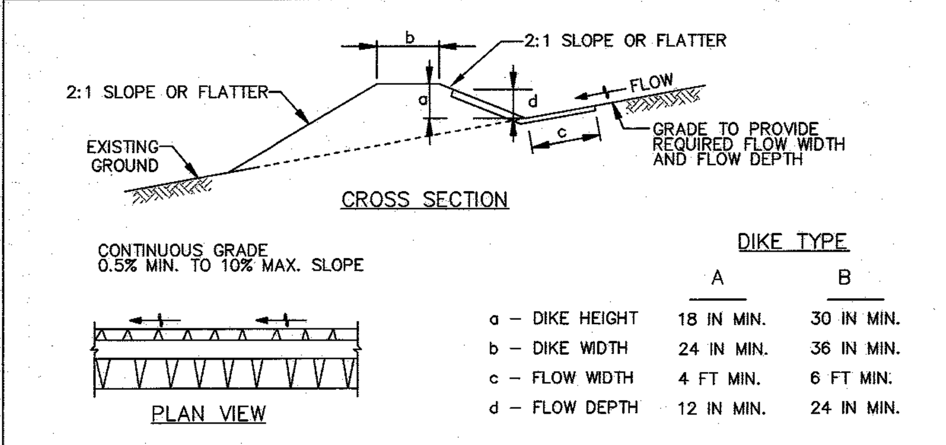
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' DATE: JULY 24, 2014

I:\2010\10040\dwg\Phase 2 SDP-Redline #1\10040-3001 SDP - Phase 2 SEC plan 2 Revised.dwg, SEC SHEET 6, 7/24/2014 1:14:13 PM, 1:1

DETAIL C-1	EARTH DIKE	STANDARD SYMBOL A-1 PLACE DESIGNATION (e.g. A-1) ON FLOW CHANNEL SIDE OF DIKE.



DIKE TYPE

	A	B
a – DIKE HEIGHT	18 IN MIN.	30 IN MIN.
b – DIKE WIDTH	24 IN MIN.	36 IN MIN.
c – FLOW WIDTH	4 FT MIN.	6 FT MIN.
d – FLOW DEPTH	12 IN MIN.	24 IN MIN.

FLOW CHANNEL STABILIZATION

A-1 SEED WITH STRAW MULCH AND TACK. (NOT ALLOWED FOR CLEAR WATER DIVERSION.)

A-2/B-2 SEED WITH SOIL STABILIZATION MATTING OR LINE WITH SOD.

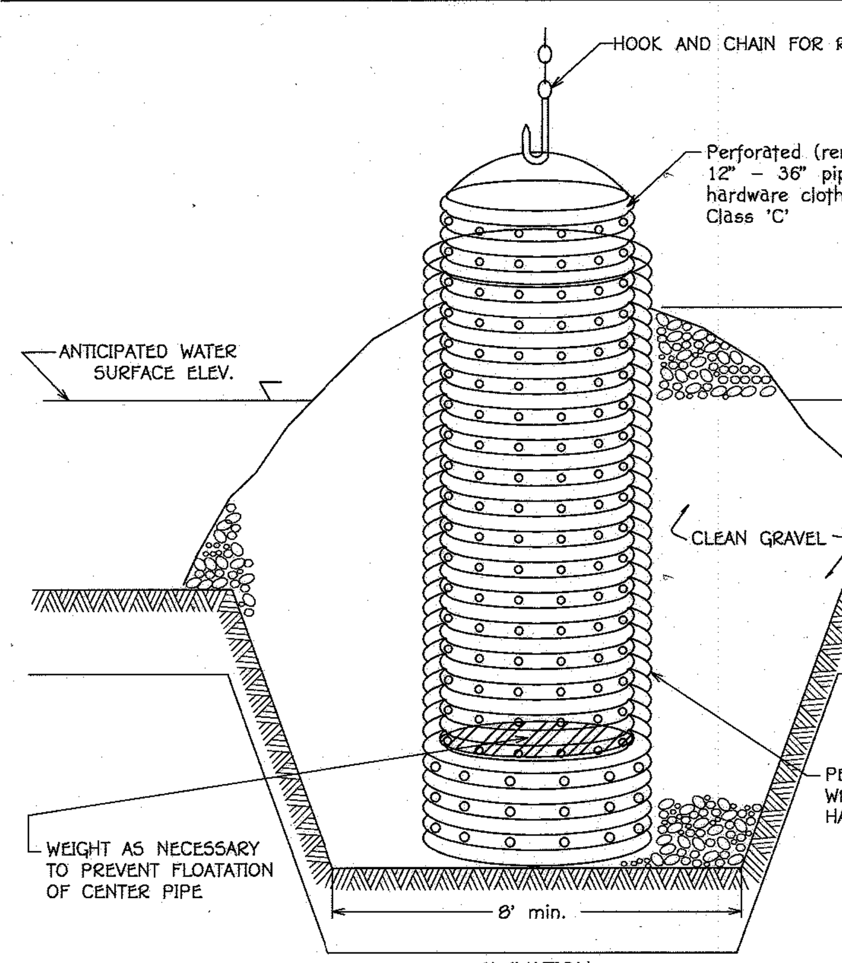
A-3/B-3 4 TO 7 INCH STONE OR EQUIVALENT RECYCLED CONCRETE PRESSED INTO SOIL A MINIMUM OF 7 INCHES AND FLUSH WITH GROUND.

CONSTRUCTION SPECIFICATIONS

1. REMOVE AND DISPOSE OF ALL TREES, BRUSH, STUMPS, OBSTRUCTIONS, AND OTHER OBJECTIONABLE MATERIAL SO AS NOT TO INTERFERE WITH PROPER FUNCTION OF EARTHDIKE.
2. EXCAVATE OR SHAPE EARTH DIKE TO LINE, GRADE, AND CROSS SECTION AS SPECIFIED. BANK PROJECTIONS OR OTHER IRREGULARITIES ARE NOT ALLOWED.
3. COMPACT FILL.
4. CONSTRUCT FLOW CHANNEL ON AN UNINTERRUPTED, CONTINUOUS GRADE, ADJUSTING THE LOCATION DUE TO FIELD CONDITIONS AS NECESSARY TO MAINTAIN POSITIVE DRAINAGE.
5. PROVIDE OUTLET PROTECTION AS REQUIRED ON APPROVED PLAN.
6. STABILIZE EARTH DIKE WITHIN THREE DAYS OF INSTALLATION. STABILIZE FLOW CHANNEL FOR CLEAR WATER DIVERSION WITHIN 24 HOURS OF INSTALLATION.
7. MAINTAIN LINE, GRADE, AND CROSS SECTION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS, AND MAINTAIN POSITIVE DRAINAGE. KEEP EARTH DIKE AND POINT OF DISCHARGE FREE OF EROSION, AND CONTINUOUSLY MEET REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.
8. UPON REMOVAL OF EARTH DIKE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS OF REMOVAL STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

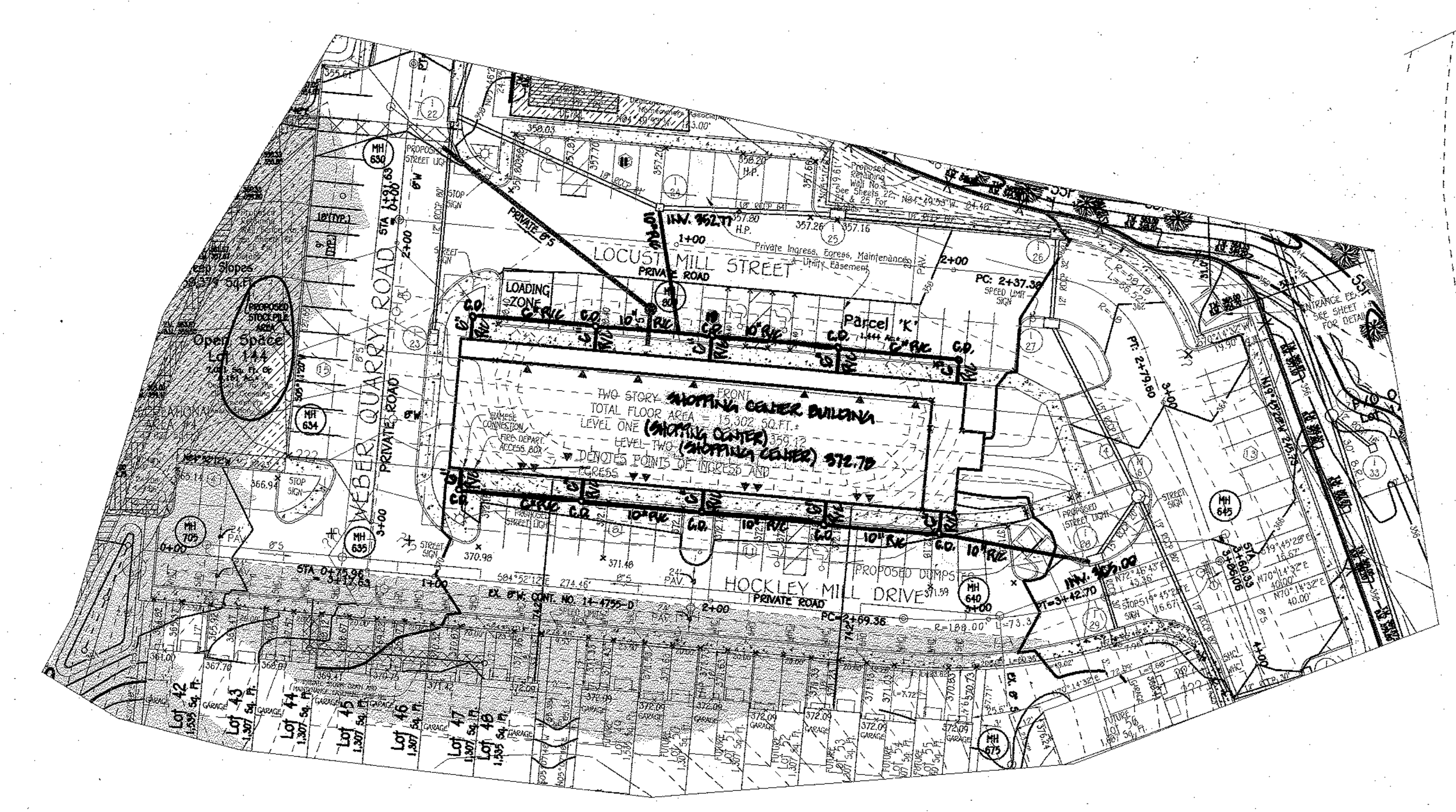
REMOVABLE PUMPING STATION



ELEVATION

Construction Specifications

1. The outer pipe should be 48" dia. or shall, in any case, be at least 4" greater in diameter than the center pipe. The outer pipe shall be wrapped with 1/2" hardware cloth to prevent backfill material from entering the perforations.
2. After installing the outer pipe, backfill around outer pipe with 2" aggregate or clean gravel.
3. The inside stand pipe (center pipe) should be constructed by perforating 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.



FINAL TRAP GRADING DETAIL

LEGEND

- EXISTING PAVING
- PAVING BASED ON SDP-03-026
- PROPOSED PAVING
- 16'X36' 5-UNIT SINGLE FAMILY ATTACHED WITHOUT GARAGE
- 16'X36' 6-UNIT SINGLE FAMILY ATTACHED WITHOUT GARAGE
- 16'X36' 7-UNIT SINGLE FAMILY ATTACHED WITHOUT GARAGE
- 20'x32' 6-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- 20'x36' 6-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- 20'x36' 7-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- 20'x42' 3-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- 20'x42' 5-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- 20'x42' 6-UNIT SINGLE FAMILY ATTACHED WITH ONE CAR GARAGE
- COMMERCIAL BUILDING
- COMMERCIAL AREA
- EXISTING DRAINAGE, SEWER, AT&T EASEMENTS PLAT NOS. 15867 THRU 15870
- EXISTING WETLANDS PLAT NOS. 15867 THRU 15870
- EXISTING FLOODPLAIN PLAT NOS. 15867 THRU 15870
- EXISTING CONTOUR
- EXISTING TREELINE
- EXISTING STREAM
- 5' WIDE MULCH PATH
- RECREATION OPEN SPACE AREAS
- EXISTING EASEMENT
- PROPOSED EASEMENT
- SLOPES 15% TO 24.99%
- SLOPES 25% OR GREATER
- PERMEABLE PAVING
- FOREST CONSERVATION EASEMENT
- LIMIT OF DISTURBANCE
- PRIVATE STORM DRAIN AND MAINTENANCE EASEMENT

STATE NORTH — NAD '83 — MARYLAND GRID

B-4-8 STANDARDS AND SPECIFICATIONS FOR STOCKPILE AREA

Definition

A mound or pile of soil protected by appropriately designed erosion and sediment control measures.

Purpose

To provide a designated location for the temporary storage of soil that controls the potential for erosion, sedimentation, and changes to drainage patterns.

Conditions Where Practice Applies

Stockpile areas are utilized when it is necessary to salvage and store soil for later use.

Criteria

1. The stockpile location and all related sediment control practices must be clearly indicated on the erosion and sediment control plan.
2. The footprint of the stockpile must be sized to accommodate the anticipated volume of material and based on a side slope ratio no steeper than 2:1. Benching must be provided in accordance with Section B-3 Land Grading.
3. Runoff from the stockpile area must drain to a suitable sediment control practice.
4. Access the stockpile area from the upgrade side.
5. Clear water runoff into the stockpile area must be minimized by use of a diversion device such as an earth dike, temporary swale or diversion fence. Provisions must be made for discharging concentrated flow in a non-erosive manner.
6. Where runoff concentrates along the toe of the stockpile fill, an appropriate erosion/sediment control practice must be used to intercept the discharge.
7. Stockpiles must be stabilized in accordance with the 3/7 day stabilization requirement as well as Standard B-4-1 Incremental Stabilization and Standard B-4-4 Temporary Stabilization.
8. If the stockpile is located on an impervious surface, a liner should be provided below the stockpile to facilitate cleanup. Stockpiles containing contaminated material must be covered with impermeable sheeting.

Maintenance

The stockpile area must continuously meet the requirements for Adequate Vegetative Establishment in accordance with Section B-4 Vegetative Stabilization. Side slopes must be maintained at no steeper than a 2:1 ratio. The stockpile area must be kept free of erosion. If the vertical height of a stockpile exceeds 20 feet for 2:1 slopes, 30 feet for 3:1 slopes, or 40 feet for 4:1 slopes, benching must be provided in accordance with Section B-3 Land Grading.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4-15-13

0' 50' 100' 150'
Scale: 1" = 50'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
12/30/16	REVISE UNITS 82 THRU 86 FROM MOZART TO STRAUSS
09/12/16	REVISE TITLE BLOCK
09/16/15	REVISE BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/14/15	REMOVE IMPERVIOUS AREAS FROM DRIVEWAYS & REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING & REVISE LOTS 82-88 BUILDING FOOTPRINT
7/22/14	REFLECT PLAT CHANGES, REVISE DRIVEWAY LOCATIONS FOR LOT 40-60, 62, 64-92 & 123-140

REVISION BLOCK

SURVEYOR'S CERTIFICATE

"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 of Surveyor FRANK JOHN MANALANSAN II — Date 7-24-14

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — Date 7/24/14

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — Date 7/24/14
9/14/16

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — Date 8-8-14

Chief, Division of Land Development — Date 8/26/14

Chief, Development Engineering Division — Date 8/4/14

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22945-22950 22871-22875 23905-23908	852, 847	MXD-6	24	2nd.	6029

SEDIMENT & EROSION CONTROL PLAN

ELLICOTT CROSSING

PART TWO

LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 50' DATE: JULY 24, 2014

 SDP-13-004

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20.0 STANDARDS AND SPECIFICATIONS FOR VEGETATIVE STABILIZATION

DEFINITION

Using vegetation as cover for barren soil to protect it from forces that cause erosion.

PURPOSE

Vegetative stabilization specifications are used to promote the establishment of vegetation on exposed soil. When soil is stabilized with vegetation, the soil is less likely to erode and more likely to allow infiltration of rainfall, thereby reducing sediment loads and run-off to downstream areas, and improving wildlife habitat and visual resources.

CONDITIONS WHERE PRACTICE APPLIES

This practice shall be used on denuded areas as specified on the plans and may be used on highly erodible or critically eroding areas. This specification is divided into Temporary Seeding, to quickly establish vegetative cover for short duration (up to one year), and Permanent Seeding, for long term vegetative cover. Examples of applicable areas for Temporary Seeding are temporary Soil Stockpiles, cleared areas being left idle between construction phases, earth dikes, etc. and for Permanent Seeding are lawns, dams, cut and fill slopes and other areas at final grade, former stockpile and staging areas, etc.

EFFECTS ON WATER QUALITY AND QUANTITY

Planting vegetation in disturbed areas will have an effect on the water budget, especially on volumes and rates of runoff, infiltration evaporation, transpiration, percolation, and groundwater recharge. Vegetation, over time, will increase organic matter content and improve the water holding capacity of the soil and subsequent plant growth.
Vegetation will help reduce the movement of sediment, nutrients, and other chemicals carried by runoff to receiving waters. Plants will also help protect groundwater supplies by assimilating those substances present within the root zone.
Sediment control devices must remain in place during grading, seedbed preparation, seeding, mulching and vegetative establishment to prevent large quantities of sediment and associated chemicals and nutrients from washing into surface waters.

SECTION 1 – VEGETATIVE STABILIZATION METHODS AND MATERIALS

A. Site Preparation
  i. Install erosion and sediment control structures (either temporary of permanent) such as diversions, grade stabilization structures, berms, waterways, or sediment control basins.
  ii. Perform all grading operations at right angles to the slope. Final grading and shaping is not usually necessary for temporary seeding.
  iii. Schedule required soil tests to determine soil amendment composition and application rates for sites having disturbed area over 5 acres.
B. Soil Amendments (Fertilizer and Lime Specifications)
  i. Soil tests must be performed to determine the exact ratios and application rates for both lime and fertilizer on sites having disturbed areas over 5 acres. Soil analysis may be performed by the University of Maryland or a recognized commercial laboratory. Soil samples taken for engineering purposes may also be used for chemical analyses.
  ii. Fertilizers shall be uniform in composition, free flowing and suitable for accurate application by approved equipment. Manure may be substituted for fertilizer with prior approval from the appropriate approval authority. Fertilizers shall all be delivered to the site fully labeled according to the applicable state fertilizer laws and shall bear the name, trade name or trademark and warrantee of the producer.
  iii. Lime materials shall be ground limestone (hydrated or burnt lime may be substituted) which contains at least 50% total oxides (calcium oxide plus magnesium oxide). Limestone shall be ground to such fineness that at least 50% will pass through a #100 mesh sieve and 98–100% will pass through a #20 mesh sieve.
  iv. Incorporate lime and fertilizer into the top 3–5" of soil by disking or other suitable means.
C. Seedbed Preparation
  i. Temporary Seeding
    a. Seedbed preparation shall consist of loosening soil to a depth of 3" to 5" by means of suitable agricultural or construction equipment, such as disc harrows or chisel plows or rippers mounted on construction equipment. After the soil is loosened it should not be rolled or dragged smooth, but left in the roughened condition. Sloped areas (greater than 3:1) should be tracked leaving the surface in an irregular condition with ridges running parallel to the contour of the slope.
    b. Apply fertilizer and lime as prescribed on the plans.
    c. In corporate lime and fertilizer into the top 3–5" of soil by disking or other suitable means.
  ii. Permanent Seeding
    a. Minimum soil conditions required for permanent vegetative establishment:
      1. Soil pH shall be between 6.0 and 7.0.
      2. Soluble salts shall be less than 500 parts per million (ppm).
      3. The soil shall contain less than 40% clay, but enough fine grained material (>30% silt plus clay) to provide the capacity to hold a moderate amount of moisture. An exception is if lovegrass or serecia lespedezas is to be planted, then a sandy soil (<30% silt plus clay) would be acceptable.
      4. Soil shall contain 1.5% minimum organic matter by weight.
      5. Soil must contain sufficient pore space to permit adequate root penetration.
      6. If these conditions cannot be met by soils on site, adding topsoil is required in accordance with Section 21 Standard and Specification for Topsoil.
    b. Areas previously graded in conformance with the drawings shall be maintained in a true and even grade, then scarified or otherwise loosened to a depth of 3–5" to permit bonding of the topsoil to the surface area and to create horizontal erosion check slots to prevent topsoil from sliding down a slope.
    c. Apply soil amendments as per soil test or as included on the plans.
    d. Mix soil amendments into the top 3–5" of topsoil by disking or other suitable means. Lawn areas should be raked to smooth the surface, remove large objects like stones and branches, and ready the area for seed and application. Where site conditions will not permit normal seedbed preparation, loosen surface soil by dragging with a heavy chain or other equipment to roughen the surface. Steep slopes (steeper than 3:1) should be tracked by a dozer leaving the soil in an irregular condition with ridges running parallel to the contour of the slope. The top 1–3" of soil should be loose and friable. Seedbed loosening may not be necessary on newly disturbed areas.
D. Seed Specifications
  i. All seed must meet the requirements of the Maryland State Seed Law. All seed shall be subject to re-testing by a recognized seed laboratory. All seed used shall have been tested within the 6 months immediately preceding the date of sowing such material on this job.
  Note: Seed tags shall be made available to the inspector to verify type and rate of seed used.
  ii. Inoculant – The inoculant for treating legume seed in the seed mixtures shall be a pure culture of nitrogen-fixing bacteria prepared specifically for the species. Inoculants shall not be used later than the date indicated on the container. Add fresh inoculant as directed on package. Use four times the recommended rate when hydroseeding. Note: It is very important to keep inoculant as cool as possible until used. Temperatures above 75°–80° F. can weaken bacteria and make the inoculant less effective.
E. Methods of Seeding
  i. Hydroseeding: Apply seed uniformly with hydroseeder (slurry includes seed and fertilizer), broadcast or drop seeded, or a cultipacker seeder.
    a. If fertilizer is being applied at the time of seeding, the application rates amounts will not exceed the following: nitrogen; maximum of 100 lbs. per acre total of soluble nitrogen; P205 (phosphorous); 200 lbs/ac; K20 (potassium): 200 lbs/ac.
    b. Lime – use only ground agricultural limestone, (Up to 3 tons per acre may be applied by hydroseeding). Normally, not more than 2 tons are applied by hydroseeding at any one time. Do not use burnt or hydrated lime when hydroseeding.
    c. Seed and fertilizer shall be mixed on site and seeding shall be done immediately and without interruption.
  ii. Dry Seeding: This includes use of conventional drop or broadcast spreaders.
    a. Seed spread dry shall be incorporated into the subsoil at the rates prescribed on the Temporary or Permanent Seeding Summaries or Tables 265 or 26. The seeded area shall then be rolled with a weighted roller to provide good seed to soil contact.
    b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
  iii. Drill or Cultipacker Seeding: Mechanized seeders that apply and cover seed with soil.
    a. Cultipacking seeders are required to bury the seed in such a fashion as to provide at least 1/4 inch of soil covering. Seedbed must be firm after planting.
    b. Where practical, seed should be applied in two directions perpendicular to each other. Apply half the seeding rate in each direction.
F. Mulch Specifications (In order of preference)
  i. Straw shall consist of thoroughly threshed wheat, rye or oat straw, reasonable bright in color, and shall not be musty, moldy, caked, decayed, or excessively dusty and shall be free of noxious weed seeds as specified in the Maryland Seed Law.
  ii. Wood Cellulose Fiber Mulch (WCFM)
    a. WCFM shall consist of specially prepared wood cellulose processed into a uniform fibrous physical state.
    b. WCFM shall be dyed green or contain a green dye in the package that will provide an appropriate color to facilitate visual inspection of the uniformly spread slurry.
    c. WCFM, including dye, shall contain no germination or growth inhibiting factors.
    d. WCFM materials shall be manufactured and processed in such a manner that the wood cellulose fiber mulch will remain in uniform suspension in water under agitation and will blend with seed, fertilizer and other additives to form a homogeneous slurry. The mulch material shall form a blotter-like ground cover, on application, having moisture absorption and percolation properties and shall cover and hold grass seed in contact with the soil without inhibiting the growth of the grass seedlings.
    e. WCFM material shall contain no elements of compounds at concentration levels that will be phytol-toxic.
    f. WCFM must conform to the following physical requirements: fiber length to approximately 10 mm. , diameter approximately 1 mm., pH range of 4.0 to 8.5, ash content of 1.6% maximum and water holding capacity of 90% minimum.
  Note: Only sterile straw mulch should be used in areas where one species of grass is desired.
G. Mulching Seeded Areas – Mulch shall be applied to all seeded areas immediately after seeding.
  i. If grading is completed outside of the seeding season, mulch along shall be applied as prescribed in this section and maintained until the seeding season returns and seeding can be performed in accordance with these specifications.
  ii. When straw mulch is used, it shall be spread over all seeded areas at the rate of 2 tons/acre. Mulch shall be applied to a uniform loose depth of between 1" and 2". Mulch applied shall achieve a uniform distribution and depth so that the soil surface is not exposed. If a mulch anchoring tool is to be used, the rate should be increased to 2.5 tons/acre.
  iii. Wood cellulose fiber used as a mulch shall be applied at a net dry weight of 1,500 lbs. per acre. The wood cellulose fiber shall be mixed with water, and the mixture shall contain a maximum of 50 lbs. of wood cellulose fiber per 100 gallons of water.
H. Securing Straw Mulch (Mulch Anchoring): Mulch anchoring shall be performed immediately following mulch application to minimize loss by wind or water. This may be done by one of the following methods (listed by preference), depending upon size of area and erosion hazard:
  i. A mulch anchoring tool is a tractor drawn implement designed to punch and anchor mulch into the soil surface a minimum of two (2) inches. This practice is most effective on large areas, but is limited to flatter slopes where equipment can operate safely. If used on sloping land, this practice should be used on the contour if possible.
  ii. Wood cellulose fiber may be used for anchoring straw. The fiber binder shall be applied at a net dry weight of 750 pounds/acre. The wood cellulose fiber shall be mixed with water and the mixture shall contain a maximum of 50 pounds of wood cellulose fiber per 100 gallons of water.
  iii. Application of liquid binders should be heavier at the edges where wind catches mulch, such as in valleys and crest of banks. The remainder of area should be appear uniform after binder application. Synthetic binders – such as Acrylic DLR (Agro-Tack), DCA-70 Petroset, Terra Tax II, Terra Tack AR or other approved equal may be used at rates recommended by the manufacturer to anchor mulch.
  iv. Lightweight plastic netting may be stapled over the mulch according to manufacturer's recommendations. Netting is usually available in rolls 4' to 15' feet wide and 300 to 3,000 feet long.
I. Incremental Stabilization – Cut Slopes
  i. All cuts slopes shall be dressed, prepared, seeded and mulched as the work progresses. Slopes shall be excavated and stabilized in equal increments not to exceed 15'.
  ii. Construction sequence (Refer to Figure 3 below):
    a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to convey runoff from the excavation.
    b. Perform Phase 1 excavation, dress, and stabilize.
    c. Perform Phase 2 excavation, dress and stabilize. Overseed Phase 1 areas as necessary.
    d. Perform final phase excavation, dress and stabilize. Overseed previously seeded areas as necessary.
Note: Once excavation has begun the operation should be continuous from grubbing through the completion of grading and placement of topsoil (if required) and permanent seed and mulch. Any interruptions in the operation of completing the operation out of the seeding season will necessitate the application of temporary stabilization.
J. Incremental Stabilization of Embankments – Fill Slopes
  i. Embankments shall be constructed in lifts as prescribed on the plans.
  ii. Slopes shall be stabilized immediately when the vertical height of the multiple lifts reaches 15", or when the grading operation ceases as prescribed in the plans.
  iii. At the end of each day, temporary berms and pipe slope drains should be constructed along the top edge of the embankment to intercept surface runoff and convey it down the slope in a non-erosive manner to a sediment trapping device.
  iv. Construction sequence: Refer to Figure 4 (below).
    a. Excavate and stabilize all temporary swales, side ditches, or berms that will be used to divert runoff around the fill. Construct slope silt fence on low side of fill as shown in Figure 5, unless other methods shown on the plans address this area.
    b. Place Phase 1 embankment, dress and stabilize.
    c. Place Phase 2 embankment, dress and stabilize.
    d. Place final phase embankment, dress and stabilize. Overseed previously seeded areas as necessary.
Note: Once the placement of fill has begun the operation should be continuous from grubbing through the completion of and placement of topsoil (if required) grading and permanent seed and mulch. Any interruptions in the operation or completing the operation out of the seeding season will necessitate the application of temporary stabilization.

TEMPORARY SEEDING NOTES (B-4-4)

Definition

To stabilize disturbed soils with vegetation for up to 6 months.

Purpose

To use fast growing vegetation that provides cover on disturbed soils.

Conditions Where Practice Applies

Exposed soils where ground cover is needed for a period of 6 months or less. For longer duration of time, permanent stabilization practices are required.

Criteria

1. Select one or more of the species or seed mixtures listed in Table B.1 for the appropriate Plant Hardiness Zone (from Figure B.3), and enter them in the Temporary Seeding Summary below along with application rates, seeding dates and seeding depths. If this Summary is not put on the plan and completed, then Table B.1 plus fertilizer and lime rates must be put on the plan.

2. For sites having soil tests performed, use and show the recommended rates by the testing agency. Soil tests are not required for Temporary Seeding.

3. When stabilization is required outside of a seeding season, apply seed and mulch or straw mulch alone as prescribed in Section B-4-3.A.1.b and maintain until the next seeding season.

Temporary Seeding Summary

Hardiness Zone (from Figure B.3): 6b Seed Mixture (from Table B.1):				Fertilizer Rate (10-20-20)	Lime Rate
Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths		
BARLEY	96	3/1 – 5/15, 8/15 – 10/15	1"	436 lb/ac (10 lb/ 1000 sf)	2 tons/ac (90 lb/ 1000 sf)
OATS	72		1"		
RYE	112		1"		

SECTION 3 – PERMANENT SEEDING

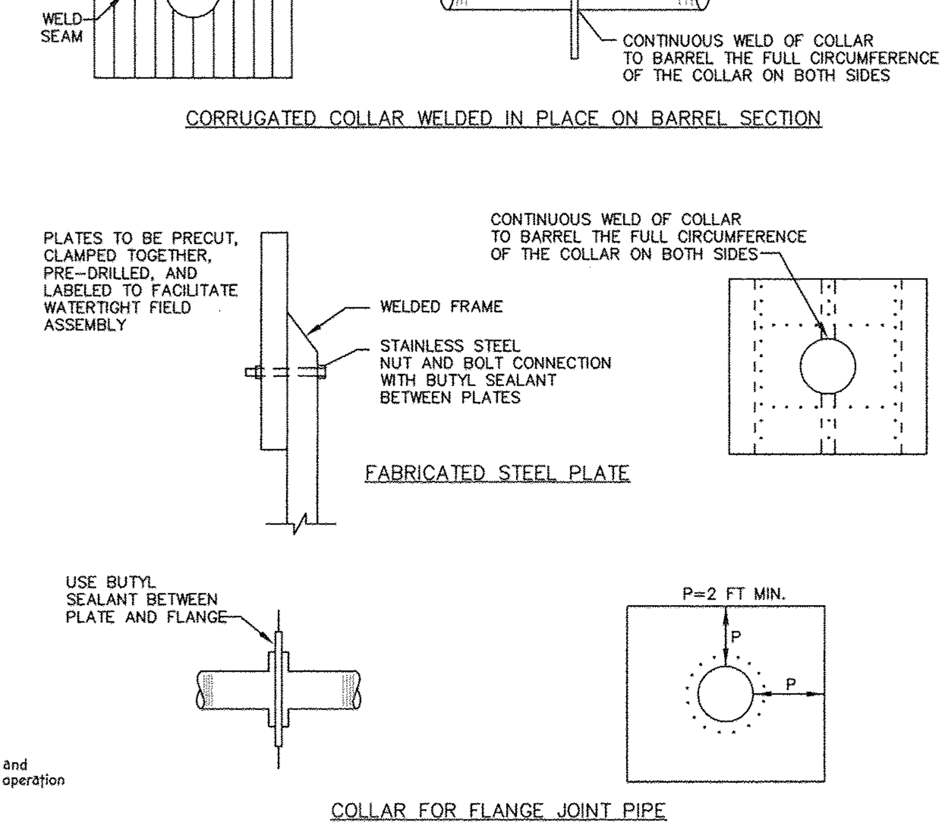
Seeding grass and legumes to establish groung cover for a minimum of one year on disturbed areas generally receiving low maintenance.

A. Seed mixtures – Permanent Seeding
  i. Select one or more of the species or mixtures listed in Table 25 for the appropriate Plant Hardiness Zone (from Figure 5) and enter them in the Permanent Seeding Summary below, along with application rates and seeding dates. Seeding depths can be estimated using Table 26. If this summary is not put on the construction plans and completed, then Table 25 must be put on the plans. Additional planting specifications for exceptional sites such as shorelines, streambanks, or dunes or for special purposes such as wildlife or aesthetic treatment may be found in USDA-SCS Techinical Field Office Guide, Section 342 – Critical Area Planting. For special lawn maintenance areas, see Sections IV Sod and V Turfgrass.
  ii. For sites having disturbed area over 5 areas, the rates shown on this table shall be deleted and the rates recommended by the soil testing agency shall be written in.
  iii. For areas receiving low maintenance, apply ureaform fertilizer (46-0-0) at 3 1/2 lbs/1000 sq. ft. (150 lbs/ac), in addition to the above soil amendments shown in the table below, to be performed at the time of seeding.

Seed Mixture (Hardiness Zone 6b) From Table 25					Fertilizer Rate (10-20-20)			Lime Rate
No.	Species	Application Rate (lb/ac)	Seeding Dates	Seeding Depths	N	P205	K20	
3	TALL FESCUE (85%) PERENNIAL RYE GRASS (10%) KENTUCKY BLUEGRASS (5%)	125 15 10	3/1 – 5/15, 8/15 – 10/15	1" – 2"	90 lb/ac (2.0 lb/ 1000sf)	175 lb/ac (4 lb/ 1000sf)	175 lb/ac (4 lb/ 1000sf)	2 tons/ac (100 lb/ 1000sf)
10	TALL FESCUE (80%) HARD FESCUE (20%)	120 30	3/1 – 5/15, 8/15 – 10/15	1" – 2"				

DETAIL G-2-1 TYPICAL ANTI-SEEP COLLARS

STANDARD SYMBOL



MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL		
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE	2011	MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

STANDARDS 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 Experimental 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 11/2" 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 the subsoil is either highly acidic or composed of heavy clays, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Lime shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.

II. For sites havinc, 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.

III. 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 perscribed 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 havina 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 or amendments, as recommended by a qualified agronomist or soil scientist and approved by the appopriate 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 seedine 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 sites 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 I 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 I ton/1,000 square feet.
  iv. 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.

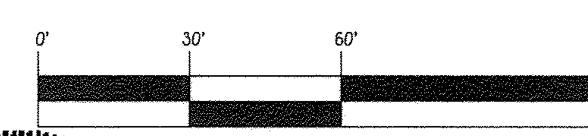
  References: Guideline Specifications, Soil Preparation Sodding,. MD-VA, Pub. #I, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institutes. Revised 1973.

STANDARD STABILIZATION NOTE

FOLLOWING INITIAL SOIL DISTURBANCE OR RE-DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION MUST BE COMPLETED WITHIN:

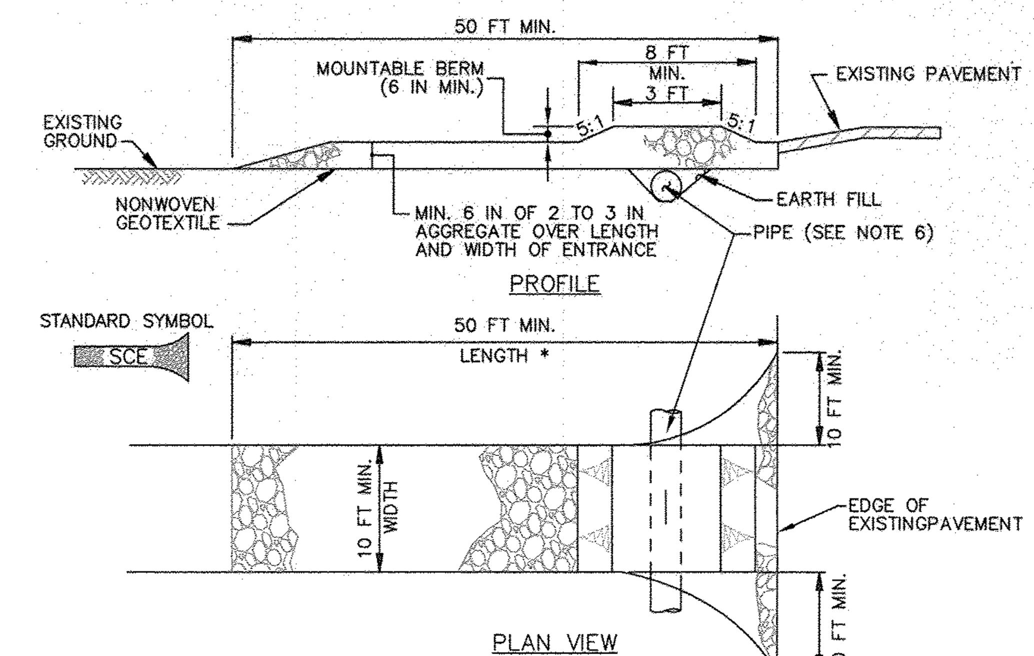
A.) THREE (3) CALENDAR DAYS AS TO THE SURFACE OF ALL PERIMETER DIKES, SWALES, DITCHES, PERIMETER SLOPES, AND ALL SLOPES STEEPER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1); AND

B.) SEVEN (7) CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE NOT UNDER ACTIVE GRADING.



SCALE: 1" = 30'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4-15-13

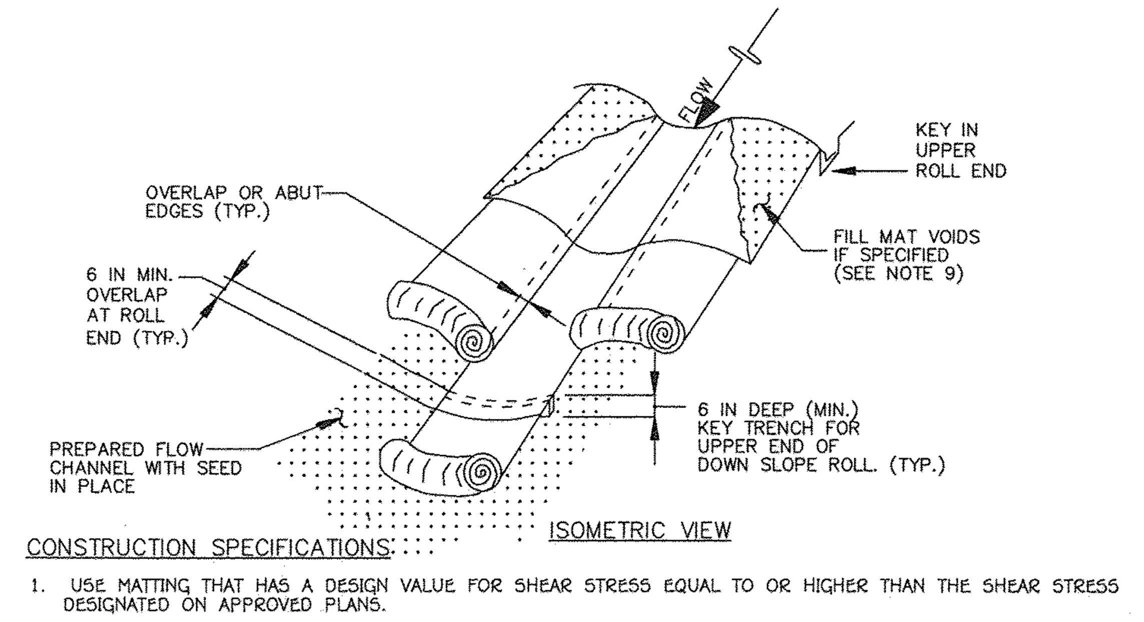


CONSTRUCTION SPECIFICATIONS

1. PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
2. PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
3. PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
4. PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
5. MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE, MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

STABILIZED CONSTRUCTION ENTRANCE

NOT TO SCALE



CONSTRUCTION SPECIFICATIONS

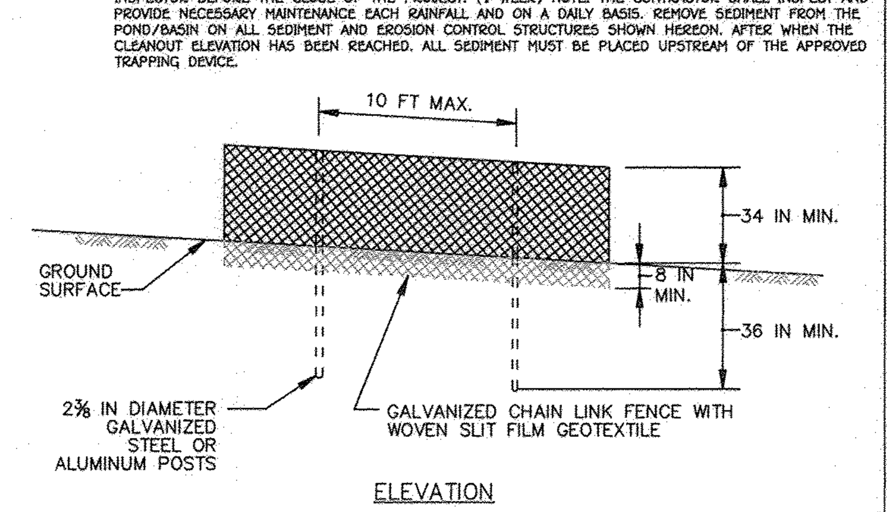
1. USE MATTING THAT HAS A DESIGN VALUE FOR SHEAR STRESS EQUAL TO OR HIGHER THAN THE SHEAR STRESS DESIGNATED ON APPROVED PLANS.
2. USE PERMANENT SOIL STABILIZATION MATTING MADE OF OPEN WEAVE SYNTHETIC, NON-DEGRADABLE FIBERS OR ELEMENTS OF UNIFORM THICKNESS AND DISTRIBUTION THROUGHOUT. CHEMICALS USED IN THE MAT MUST BE NON-LEACHING AND NON-TOXIC TO VEGETATION AND SEED GERMINATION AND NON-INJURIOUS TO THE SKIN. IF PRESENT, NETTING MUST BE EXTRUDED PLASTIC WITH A MAXIMUM MESH OPENING OF 2x2 INCHES AND SUFFICIENTLY BONDED OR SEWN ON 2 INCH CENTERS ALONG LONGITUDINAL AXIS OF THE MATERIAL TO PREVENT SEPARATION OF THE NET FROM THE PARENT MATERIAL.
3. SECURE MATTING USING STEEL STAPLES OR WOOD STAKES. STAPLES MUST BE "U" OR "T" SHAPED STEEL WIRE HAVING A MINIMUM GAUGE OF NO. 11 AND NO. 8 RESPECTIVELY. "U" SHAPED STAPLES MUST AVERAGE 1 TO 1 1/2 INCHES WIDE AND BE A MINIMUM OF 6 INCHES LONG. "T" SHAPED STAPLES MUST HAVE A MINIMUM 8 INCH MAIN LEG, A MINIMUM 1 INCH SECONDARY LEG, AND MINIMUM 4 INCH HEAD. WOOD STAKES MUST BE ROUGH-SAWN HARDWOOD, 12 TO 24 INCHES IN LENGTH, 1x3 INCH IN CROSS SECTION, AND WEDGE SHAPE AT THE BOTTOM.
4. PERFORM FINAL GRADING, TOPSOIL APPLICATION, SEEDBED PREPARATION, AND PERMANENT SEEDING IN ACCORDANCE WITH SPECIFICATIONS. PLACE MATTING WITHIN 48 HOURS OF COMPLETING SEEDING OPERATIONS, UNLESS END OF WORKDAY STABILIZATION IS SPECIFIED ON THE APPROVED EROSION AND SEDIMENT CONTROL PLAN.
5. UNROLL MATTING IN DIRECTION OF WATER FLOW, CENTERING THE FIRST ROLL ON THE CHANNEL CENTER LINE. WORK FROM CENTER OF CHANNEL OUTWARD WHEN PLACING ROLLS. LAY MATTING SMOOTHLY AND FIRMLY UPON THE SEEDED SURFACE. AVOID STRETCHING THE MATTING.
6. OVERLAP OR ABUT EDGES OF MATTING ROLLS PER MANUFACTURER RECOMMENDATIONS. OVERLAP ROLL ENDS BY 6 INCHES (MINIMUM), WITH THE UPSTREAM MAT OVERLAPPING ON TOP OF THE NEXT DOWNSTREAM MAT.
7. KEY IN THE TOP OF SLOPE END OF MAT 6 INCHES (MINIMUM) BY DIGGING A TRENCH, PLACING THE MATTING ROLL END IN THE TRENCH, STAPLING THE MAT IN PLACE, REPLACING THE EXCAVATED MATERIAL, AND TAMPING TO SECURE THE MAT END IN THE KEY.
8. STAPLE/STAKE MAT IN A STAGGERED PATTERN ON 4 FOOT (MAXIMUM) CENTERS THROUGHOUT AND 2 FOOT (MAXIMUM) CENTERS ALONG SEAMS, JOINTS, AND ROLL ENDS.
9. IF SPECIFIED BY THE DESIGNER OR MANUFACTURER AND DEPENDING ON THE TYPE OF MAT BEING INSTALLED, ONCE THE MATTING IS KEYED AND STAPLED IN PLACE, FILL THE MAT VOIDS WITH TOP SOIL OR GRANULAR MATERIAL AND LIGHTLY COMPACT OR ROLL TO MAXIMIZE SOIL/MAT CONTACT WITHOUT CRUSHING MAT.
10. ESTABLISH AND MAINTAIN VEGETATION SO THAT REQUIREMENTS FOR ADEQUATE VEGETATIVE ESTABLISHMENT ARE CONTINUOUSLY MET IN ACCORDANCE WITH SECTION B-4 VEGETATIVE STABILIZATION.

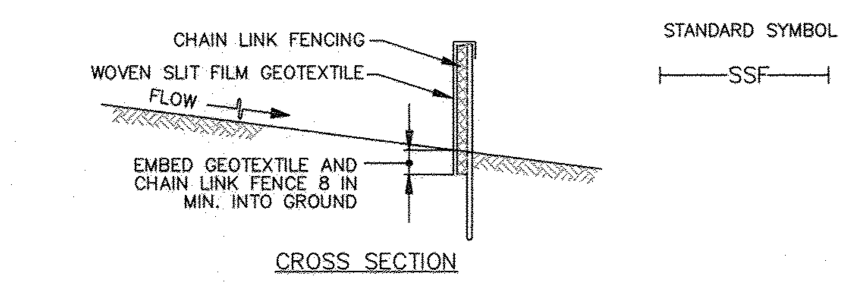
EROSION CONTROL MATTING

NOT TO SCALE

SEQUENCE OF CONSTRUCTION

1. OBTAIN A GRADING PERMIT. (2 WEEKS)
2. NOTIFY "MISS UTILITY" AT LEAST 48 HOURS BEFORE BEGINNING ANY WORK AT 1-800-257-7777. NOTIFY THE HOWARD COUNTY OFFICE OF CONSTRUCTION/INSPECTION AT 410-313-1330 AT LEAST 24 HOURS BEFORE STARTING WORK.
3. INSTALL THE STABILIZED CONSTRUCTION ENTRANCE. INSTALL ALL TREE PROTECTION FENCE FOR TREES TO BE UNDISTURBED AS INDICATED ON THE PLANS. (1 WEEK). THE CONTRACTOR SHALL VERIFY THAT BASIN No. 1 AND CONTROLS PER SDP-03-026 HAVE BEEN COMPLETELY INSTALLED BEFORE PROCEEDING.
4. INSTALL SILT FENCE & REMAINING SUPER-SILT FENCE. (1 WEEK)
5. INSTALL STORM DRAIN SYSTEM SHOWN ON SHEET 6 CONSISTING OF I-20 THROUGH I-22, I-24. (2 WEEKS)
6. INSTALL EARTH DIKES AND PIPE OUTLET SEDIMENT TRAP (1 WEEK) DURING THE INSTALLATION OF EARTH DIKES, GRADING SHALL BE LIMITED TO OCCUR ONLY BETWEEN THE L.O.D. AND EARTH DIKE UNTIL ALL FINAL EARTH DIKE GRADES ARE REACHED. AT WHICH TIME, MASS GRADING MAY OCCUR UPON PERMISSION FROM INSPECTOR.
7. CLEAR AND GRUB FOR THE REMAINDER OF THE SITE. (1 WEEK)
8. GRADE WEBER QUARRY ROAD AND HOCKLEY MILL DRIVE TO STATION 3+00 TO PROPOSED SUBGRADE AND INSTALL THE RETAINING WALLS, REMAINING STORM DRAIN SYSTEM, WATER AND SEWER LINES. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. DO NOT BLOCK INLETS AS STORM DRAIN SYSTEM WILL BE USED TO CONVEY SEDIMENT RUNOFF INTO THE BASIN. (12 WEEKS)
9. CONSTRUCT CURB & GUTTER AND INSTALL ROAD BASE COURSE FOR QUARRY ROAD AND HOCKLEY MILL DRIVE TO STATION 3+00 ROADS. (5 WEEKS)
10. INSTALL STONE OUTLET SEDIMENT TRAP BAFFLES AND ASSOCIATED EARTH DIKES. (1 WEEK)
11. REMOVE PIPE OUTLET SEDIMENT TRAP. (1 WEEK)
12. GRADE SITE TO PROPOSED SUBGRADE AND INSTALL THE RETAINING WALLS, REMAINING STORM DRAIN SYSTEM, WATER AND SEWER LINES. STABILIZE ALL SLOPES IMMEDIATELY UPON COMPLETION OF GRADING. DO NOT BLOCK INLETS AS STORM DRAIN SYSTEM WILL BE USED TO CONVEY SEDIMENT RUNOFF INTO THE BASIN. (12 WEEKS)
13. CONSTRUCT CURB & GUTTER AND INSTALL ROAD BASE COURSE FOR SUBDIVISION ROADS. (5 WEEKS)
14. CONSTRUCT BUILDINGS AND DRIVEWAYS.
15. INSTALL FINISHED SURFACE COURSE, SIDEWALKS AND STREET TREES. (3 WEEKS)
16. CONTRACTOR SHALL REMOVE ALL OLD AND NEW JUNK, TRASH, AND DEBRIS FROM FORESTS, FLOODPLAIN, STREAMS, WETLANDS AND THEIR BUFFERS.
17. ALL FINAL GRADES AND STABILIZATION SHOULD BE COMPLETED BEFORE ANY REMOVAL OF CONTROLS. WHEN ALL CONTRIBUTING AREAS TO THE SEDIMENT CONTROL DEVICES AND PONDS HAVE BEEN STABILIZED AND WITH THE PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, THE SEDIMENT CONTROL DEVICES MAY BE REMOVED AND/OR BACKFILLED AND THE REMAINING AREAS BROUGHT TO FINAL GRADE. STABILIZE ALL AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES. SEDIMENT BASIN No. 1 SHALL BE CONVERTED AND STABILIZED TO THE PERMANENT DESIGN OF THE SDP-03-026 PLAN. (3 WEEKS)
14. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF THE COMPLETED PROJECT. AN "AS-BUILT" APPROVAL LETTER FOR EACH POND IS TO BE SUBMITTED TO THE COUNTY INSPECTOR BEFORE THE CLOSE OF THE PROJECT. (1 WEEK) NOTE: THE CONTRACTOR SHALL INSPECT AND PROVIDE NECESSARY MAINTENANCE EACH RAINFALL AND ON A DAILY BASIS. REMOVE SEDIMENT FROM THE POND/BASIN ON ALL SEDIMENT AND EROSION CONTROL STRUCTURES SHOWN HEREON. AFTER WHEN THE CLEANOUT ELEVATION HAS BEEN REACHED, ALL SEDIMENT MUST BE PLACED UPSTREAM OF THE APPROVED TRAPPING DEVICE.





CONSTRUCTION SPECIFICATIONS

1. INSTALL 2⅜ INCH DIAMETER GALVANIZED STEEL POSTS OF 0.095 INCH WALL THICKNESS AND SIX FOOT LENGTH SPACED NO FURTHER THAN 10 FEET APART. DRIVE THE POSTS A MINIMUM OF 36 INCHES INTO THE GROUND.
2. FASTEN 9 GAUGE OR HEAVIER GALVANIZED CHAIN LINK FENCE (2⅜ INCH MAXIMUM OPENING) 42 INCHES IN HEIGHT SECURELY TO THE FENCE POSTS WITH WIRE TIES OR HUG RINGS.
3. FASTEN WOVEN SLIT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS, SECURELY TO THE UPSLOPE SIDE OF CHAIN LINK FENCE WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND CHAIN LINK FENCE A MINIMUM OF 8 INCHES INTO THE GROUND.
4. WHERE ENDS OF THE GEOTEXTILE COME TOGETHER, THE ENDS SHALL BE OVERLAPPED BY 6 INCHES, FOLDED, AND STAPLED TO PREVENT SEDIMENT BY PASS.
5. EXTEND BOTH ENDS OF THE SUPER SILT FENCE A MINIMUM OF FIVE HORIZONTAL FEET UPSLOPE AT 45 DEGREES TO THE MAIN FENCE ALIGNMENT TO PREVENT RUNOFF FROM GOING AROUND THE ENDS OF THE SUPER SILT FENCE.
6. PROVIDE MANUFACTURER CERTIFICATION TO THE INSPECTION/ENFORCEMENT AUTHORITY SHOWING THAT GEOTEXTILE USED MEETS THE REQUIREMENTS IN SECTION H-1 MATERIALS.
7. REMOVE ACCUMULATED SEDIMENT AND DEBRIS WHEN BULGES DEVELOP IN FENCE OR WHEN SEDIMENT REACHES 25% OF FENCE HEIGHT. REPLACE GEOTEXTILE IF TORN. IF UNDERMINING OCCURS, REINSTALL CHAIN LINK FENCING AND GEOTEXTILE.

SEDIMENT & EROSION CONTROL NOTES

1) A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LISCENSES 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 MOST CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
3) ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
4) 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 (SEC. 51), SOD (SEC. 54), TEMPORARY SEEDING (SEC. 50), AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
5) 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.
6) SITE ANALYSIS:

TOTAL AREA OF SITE	8.902	ACRES
AREA DISTURBED	8.7	ACRES
AREA TO BE ROOFED OR PAVED	3.88	ACRES
AREA TO BE VEGETATIVELY STABILIZED	4.82	ACRES
TOTAL CUT	54,399	CU.YDS.
TOTAL FILL	15,174	CU.YDS.
OFFSITE WASTE/BORROW AREA LOCATION		CU.YDS.

7) ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
8) ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
9) 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.
10) TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGHTS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	REFLECT PLAT CHANGES, REVISE DRIVEWAY LOCATIONS FOR LOTS 40-60, 62, 64-92 & 123-140

REVISION BLOCK

SURVEYOR'S CERTIFICATE

"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 of Surveyor FRANK JOHN MANALANSAN II — 7-24-14 Date

BUILDER/DEVELOPER'S CERTIFICATE

"I/We certify that all development and construction will be done according to this plan and that any responsible personnel involved in the construction project will have a Certificate of Attendance at a Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer — 7/24/14 Date

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Howard SCD — 7/24/14 Date

9/14/16

OWNERS	DEVELOPER
3330 ROGERS AVENUE LLC SUITE 102 5300 DORSEY HALL DRIVE ELLICOTT CITY, MD 21042 443-367-0422	M & T DEVELOPERS, LLC 4515 MANOR LANE ELLICOTT CITY, MD 21042 443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — 8-8-14 Date

Chief, Division of Land Development BB — 8/06/14 Date

FOR: Chief, Development Engineering Division J.P. — 8/4/14 Date

SUBDIVISION	SECTION/AREA	LOT NOS.			
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140			
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22945-22950 22871-22875 23305-23308	852, 847	MXD-6	24	2nd.	6029

SEDIMENT & EROSION CONTROL NOTES & DETAILS

ELLICOTT CROSSING

PART TWO

LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: JULY 24, 2014

I:\2010\10040\dwg\Phase 2 SDP-Redline #1\10040-3001 SDP - Phase 2 SEC plan 2 Revised.dwg, Notes And Detail SHEET 8, 7/24/2014 1:18:58 PM, 1:1

DRAINAGE AREA DATA

STRUCTURE NO.	AREA	'C'	ZONED	% IMP.
I-20	0.17 AC.	0.95	POR/MXD-6	100%
I-21	0.07 AC.	0.57	POR/MXD-6	45%
I-22	0.02 AC.	0.92	POR/MXD-6	95%
I-23	0.04 AC.	0.92	POR/MXD-6	95%
I-24	0.16 AC.	0.95	POR/MXD-6	100%
I-25	0.32 AC.	0.94	POR/MXD-6	98%
I-26	0.15 AC.	0.95	POR/MXD-6	100%
I-27	0.15 AC.	0.87	POR/MXD-6	88%
I-28	0.32 AC.	0.89	POR/MXD-6	92%
I-29	0.44 AC.	0.91	POR/MXD-6	94%
I-30	0.26 AC.	0.92	POR/MXD-6	95%
I-31	0.09 AC.	0.94	POR/MXD-6	98%
I-31a	0.13 AC.	0.86	POR/MXD-6	95%
I-32	0.13 AC.	0.86	POR/MXD-6	87%
I-33	0.21 AC.	0.91	POR/MXD-6	94%
I-34	0.11 AC.	0.44	POR/MXD-6	28%
I-35	0.07 AC.	0.81	POR/MXD-6	80%
I-36	0.10 AC.	0.46	POR/MXD-6	30%
I-37	0.23 AC.	0.89	POR/MXD-6	92%
I-38	0.05 AC.	0.61	POR/MXD-6	52%
I-39	0.05 AC.	0.25	POR/MXD-6	0%
I-40	0.12 AC.	0.95	POR/MXD-6	100%
I-41	0.02 AC.	0.25	POR/MXD-6	0%
I-42	0.27 AC.	0.92	POR/MXD-6	95%
I-43	0.21 AC.	0.67	POR/MXD-6	60%
I-44	0.03 AC.	0.25	POR/MXD-6	0%
I-45	0.19 AC.	0.95	POR/MXD-6	100%
I-46	0.04 AC.	0.86	POR/MXD-6	90%
I-47	0.08 AC.	0.92	POR/MXD-6	95%
I-48	0.06 AC.	0.92	POR/MXD-6	96%
I-49	0.17 AC.	0.25	POR/MXD-6	0%
I-50	0.09 AC.	0.90	POR/MXD-6	93%
I-51	0.34 AC.	0.64	POR/MXD-6	55%
I-52	0.25 AC.	0.91	POR/MXD-6	94%
I-53	0.25 AC.	0.71	POR/MXD-6	71%
I-54	0.08 AC.	0.71	POR/MXD-6	65%
I-55	0.12 AC.	0.92	POR/MXD-6	95%
I-56	0.17 AC.	0.90	POR/MXD-6	90%
I-57	0.27 AC.	0.92	POR/MXD-6	95%
I-58	0.09 AC.	0.71	POR/MXD-6	65%
I-59	0.23 AC.	0.80	POR/MXD-6	79%
I-60	0.07 AC.	0.74	POR/MXD-6	70%

ELLIOTT CENTER DRIVE
ROGERS AVENUE
OAK WEST DRIVE
ROGERS AVENUE
LOCUST HILL STREET
OAK 8% CONT. NO. 21-5
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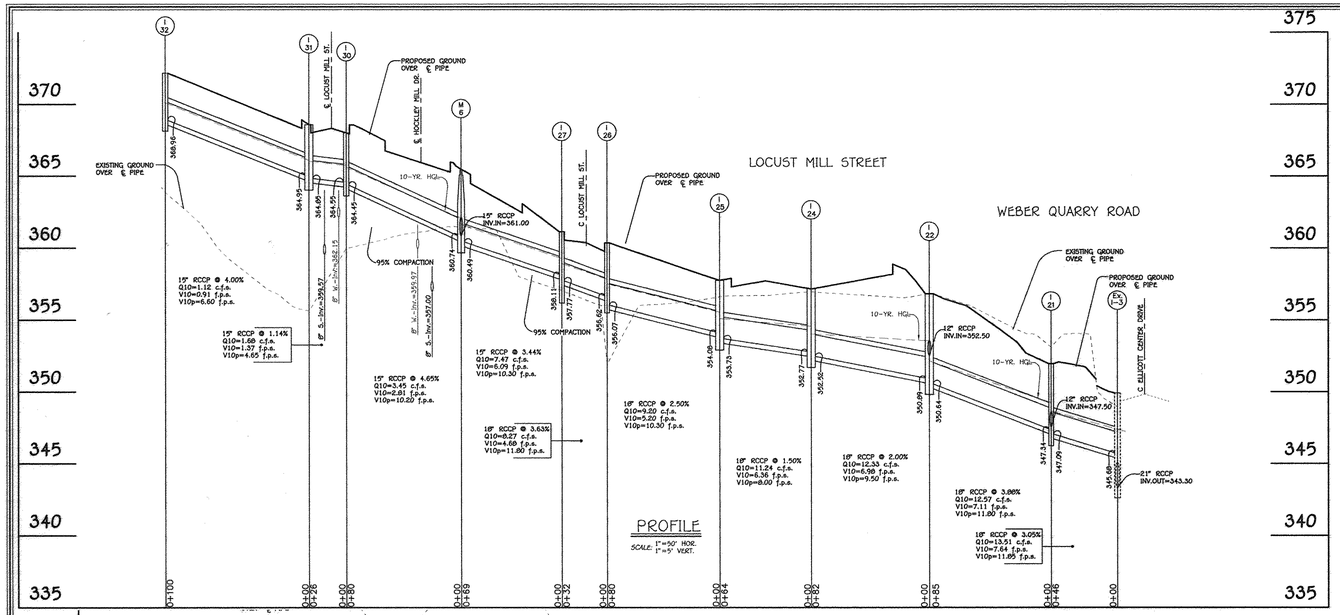
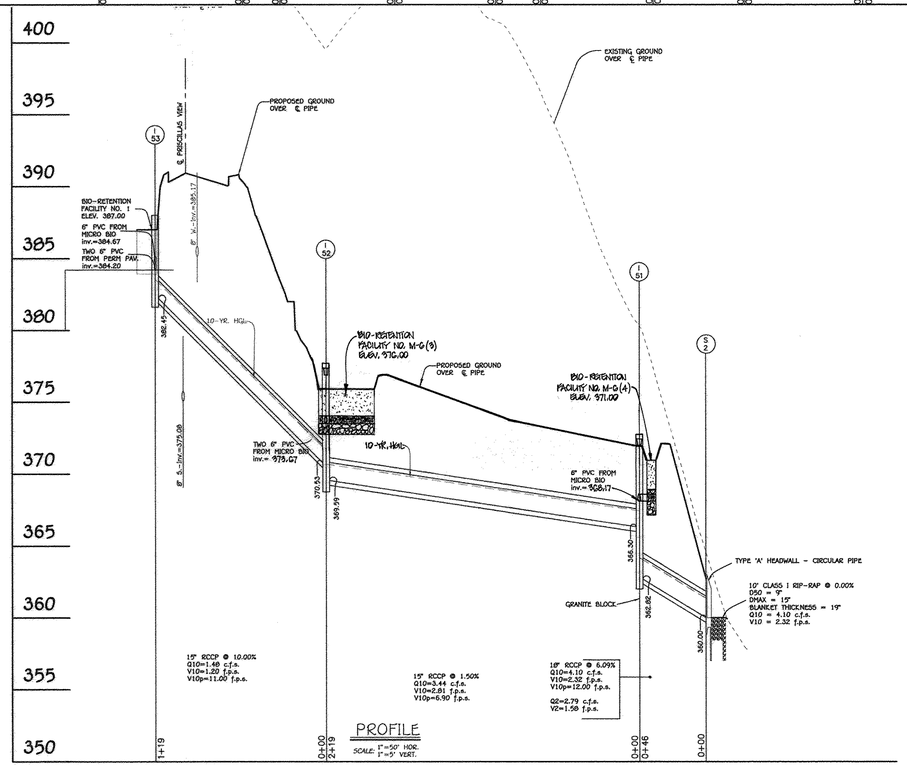
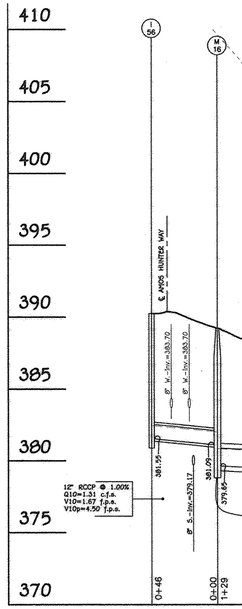
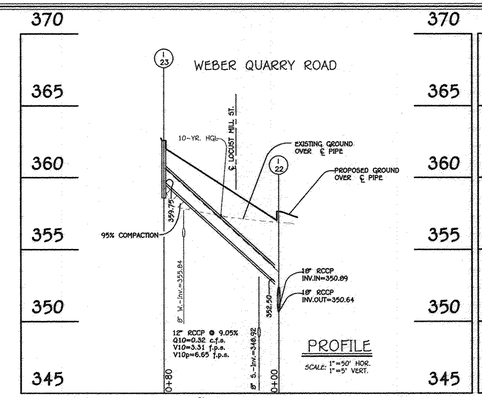
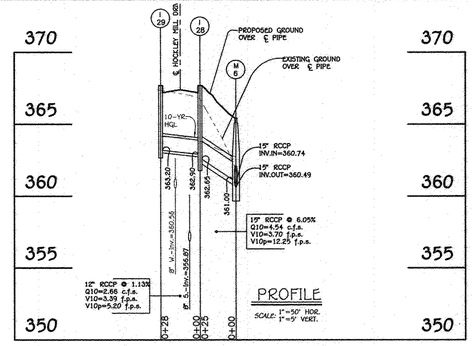
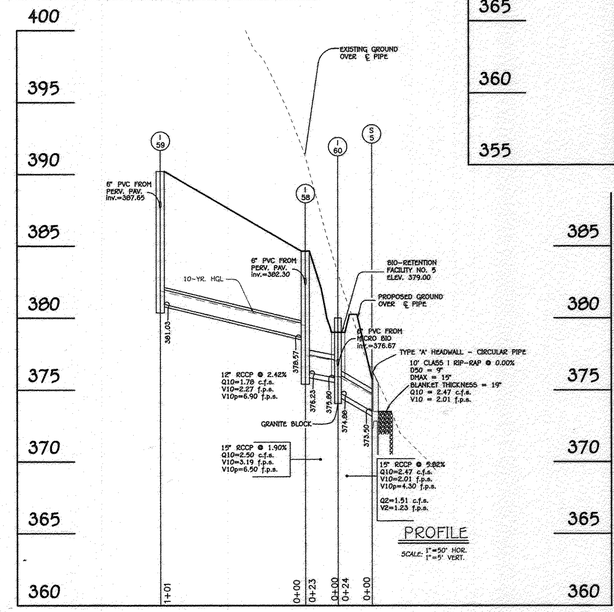


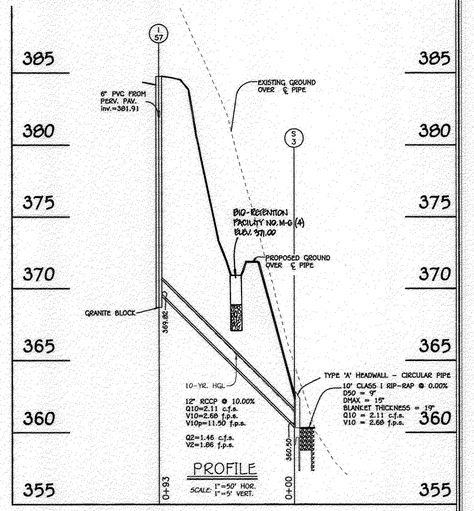












APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
	REVISION BLOCK
7/12/16	REVISED TITLE BLOCK.
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/22/15	REVISED BIO-RETENTION FACILITIES & STORM DRAIN PROFILES
5/18/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	ADDED BUILDING FOR THIS SECTION

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. [illegible], EXPIRATION DATE: 7/14/15.
Frank J. Thomas 7/23/13
FRANK J. THOMAS DATE

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Director - Department of Planning and Zoning — 11/13/13 Date
Chief, Division of Land Development — 10-8-13 Date
Chief, Development Engineering Division — 10-25-13 Date

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	142 THRU 160

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871 - 22878 22940 - 22950 23005 - 23006	852, 847	MXD-6	24	2nd.	6029

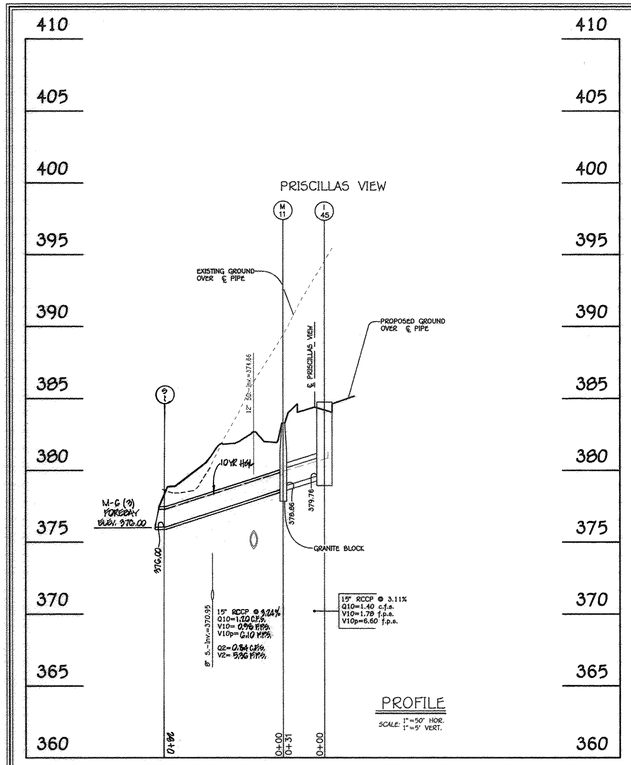
STORM DRAIN PROFILES

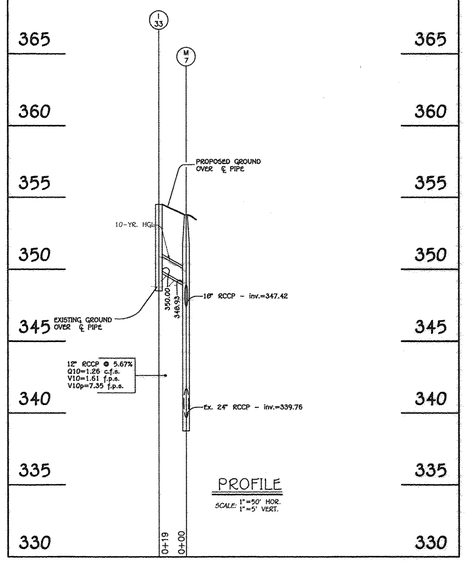
ELLICOTT CROSSING
PART TWO
LOTS 142 THRU 160, OPEN SPACE LOTS 161 THRU 164 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

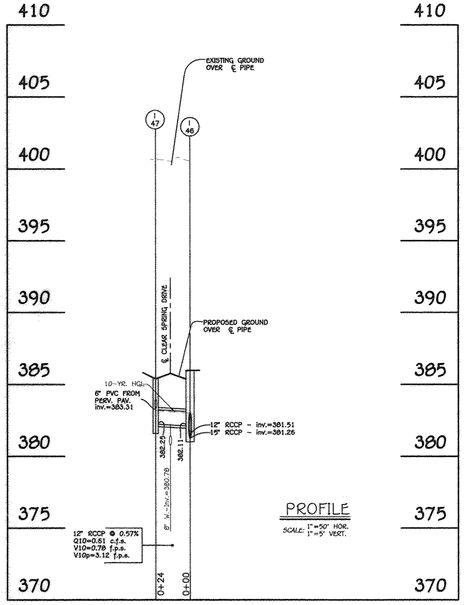
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

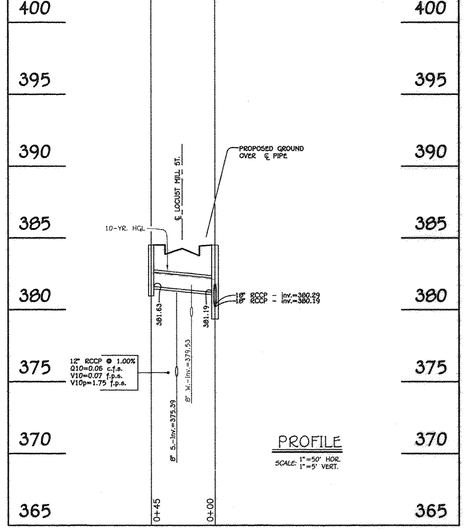
SHEET 10 OF 26 SDP-13-004

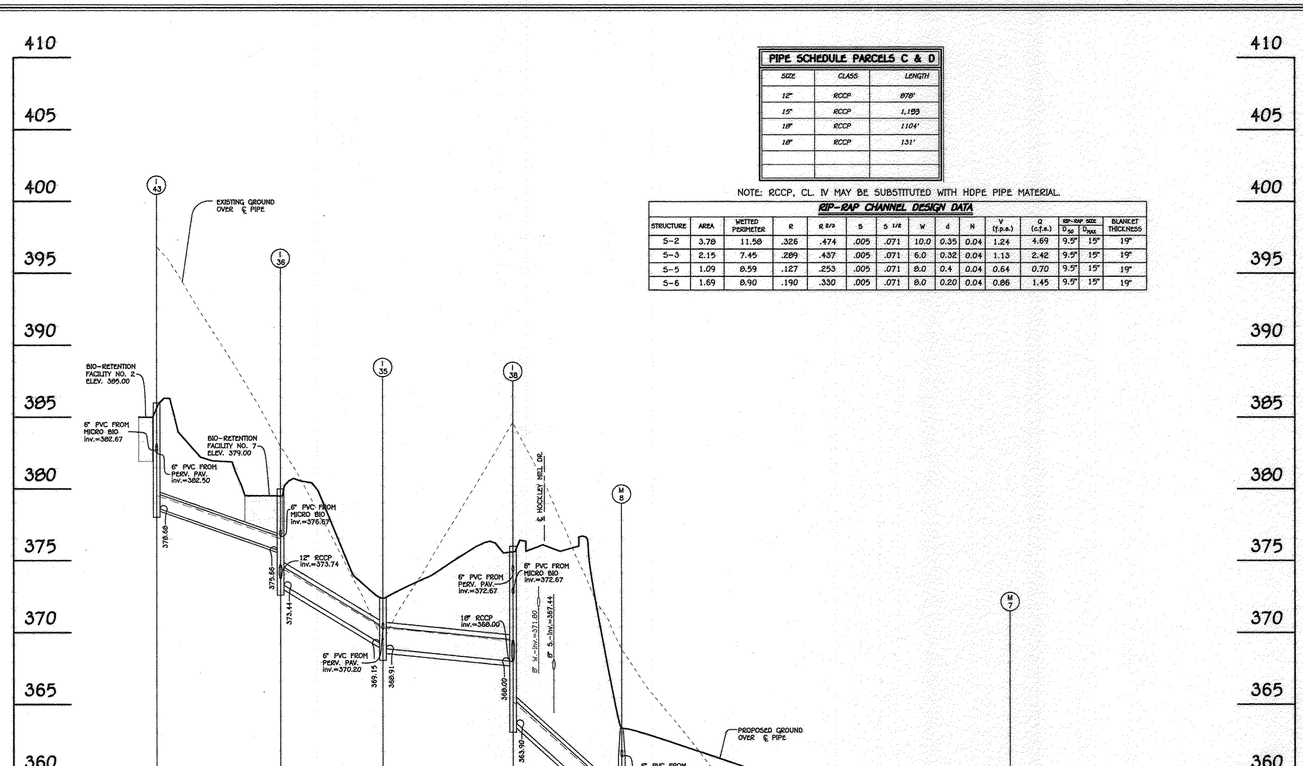
I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 stormdrain profiles.dwg, Sheet 10- Parcels C&D, 9/23/2013 2:19:56 PM, 1:1











PIPE SCHEDULE PARCELS C & D

SIZE	CLASS	LENGTH
12"	RCCP	878'
15"	RCCP	1,193
18"	RCCP	1104'
18"	RCCP	131'

NOTE: RCCP, CL. IV MAY BE SUBSTITUTED WITH HDPE PIPE MATERIAL.

RIP-RAP CHANNEL DESIGN DATA

STRUCTURE	AREA	WETTED PERIMETER	R	R 2/3	S	S 1/2	W	d	N	V (f.p.s.)	Q (c.f.s.)	RIP-RAP SIZE D_{50}	RIP-RAP SIZE D_{MAX}	BLANKET THICKNESS
S-2	3.78	11.58	.326	.474	.005	.071	10.0	0.35	0.04	1.24	4.69	9.5"	15"	19"
S-3	2.15	7.45	.289	.437	.005	.071	6.0	0.32	0.04	1.13	2.42	9.5"	15"	19"
S-5	1.09	8.59	.127	.253	.005	.071	8.0	0.4	0.04	0.64	0.70	9.5"	15"	19"
S-6	1.69	8.90	.190	.330	.005	.071	8.0	0.20	0.04	0.86	1.45	9.5"	15"	19"

PROFILE ALIGNMENT 13

0' 50' 100' 200'

SCALE: 1" = 50'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION REVISION BLOCK
9/12/16	REVISED TITLE BLOCK.
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
9/27/13	REVISED STORM DRAIN PROFILES
9/14/13	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/02/13	ADDED BUILDINGS FOR THIS SECTION

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21676, EXPIRATION DATE: 7/14/15.

Frank J. Thomas Jr. 7/23/13
FRANK J. THOMAS JR. DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 11/12/13 Date

Chief, Division of Land Development — 11-08-13 Date

Chief, Development Engineering Division — 10.25.13 Date

SUBDIVISION			SECTION/AREA		LOT NOS.
ELLICOTT CROSSING PART TWO			N/A		A6 THRU A10
PLAT NOS. 21871 - 21879 22945 - 22950 23909 - 23910	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
	852, 847	MXD-6	24	2nd.	6029

STORM DRAIN PROFILES

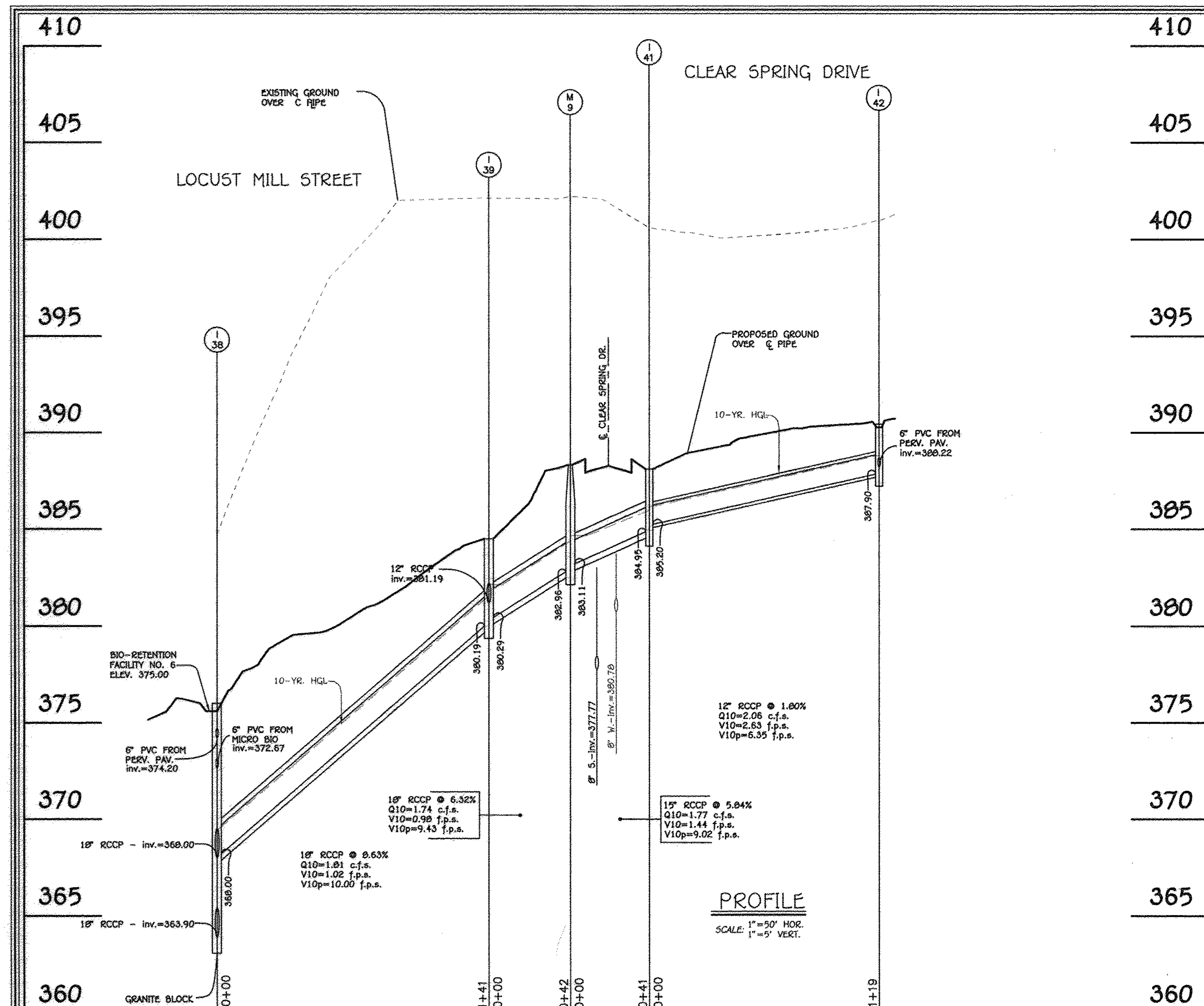
ELLICOTT CROSSING
PART TWO
LOTS A6 THRU A10, OPEN SPACE LOTS A11 THRU A14 & PARCEL 'K'

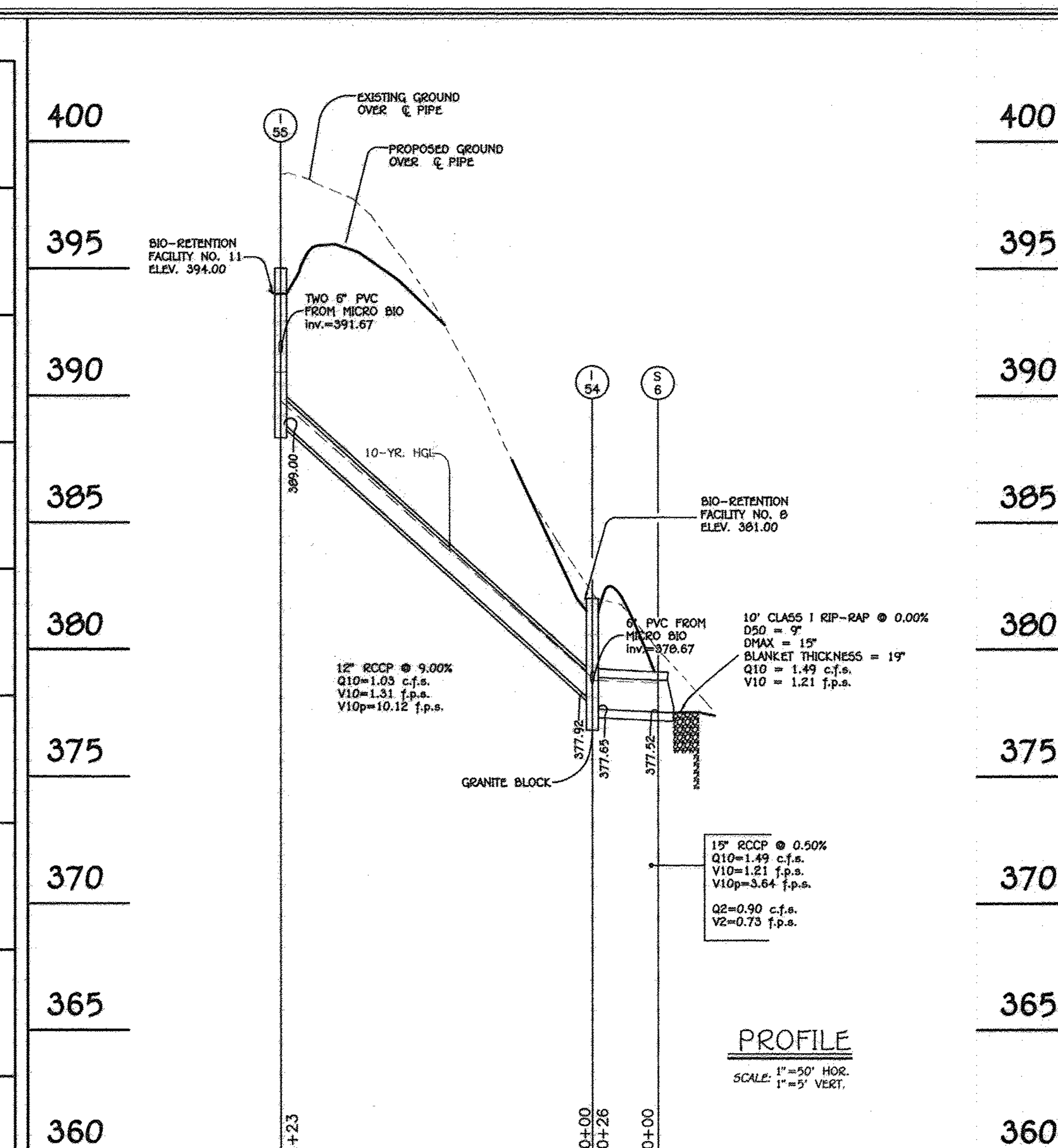
SINGLE FAMILY ATTACHED HOUSING, TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO

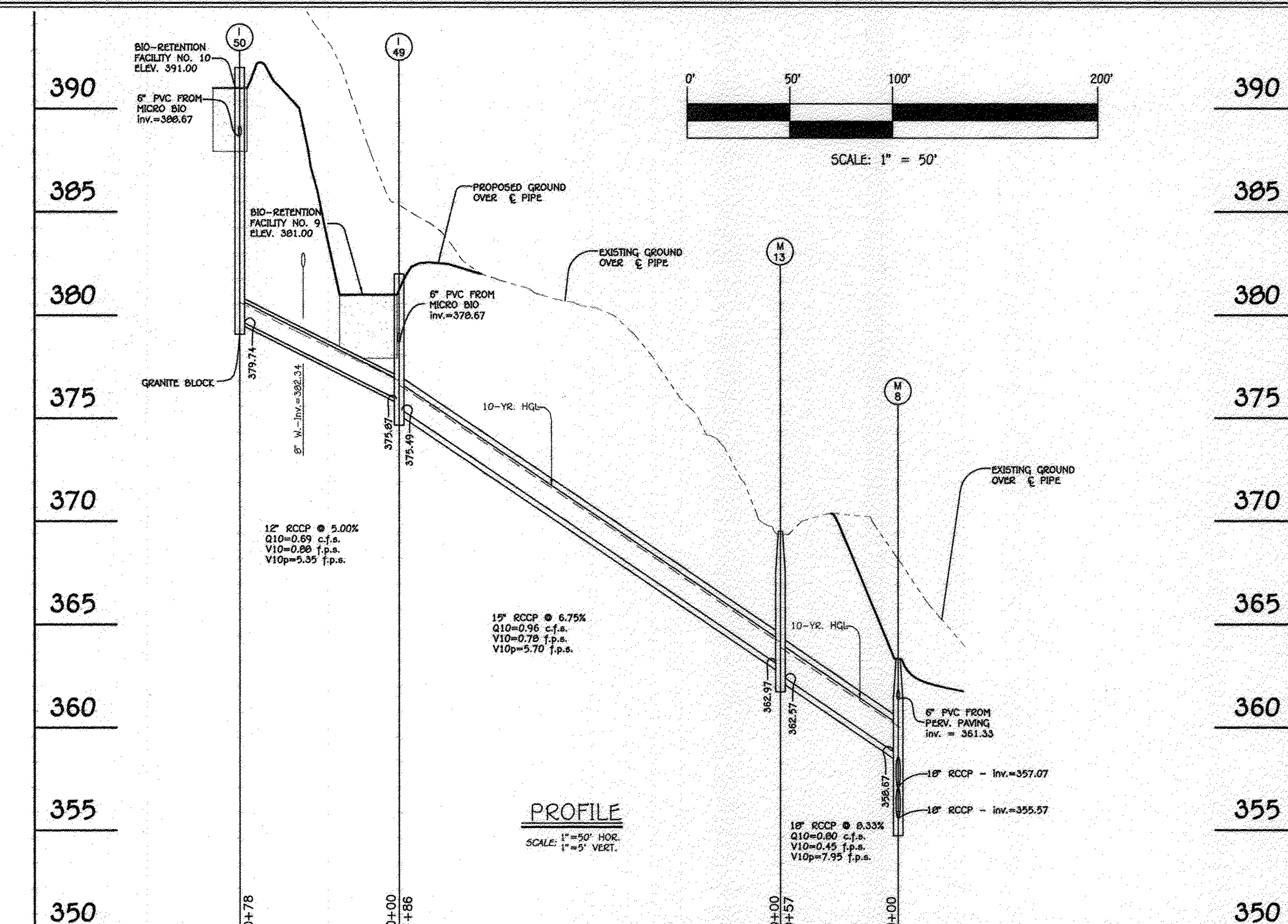
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

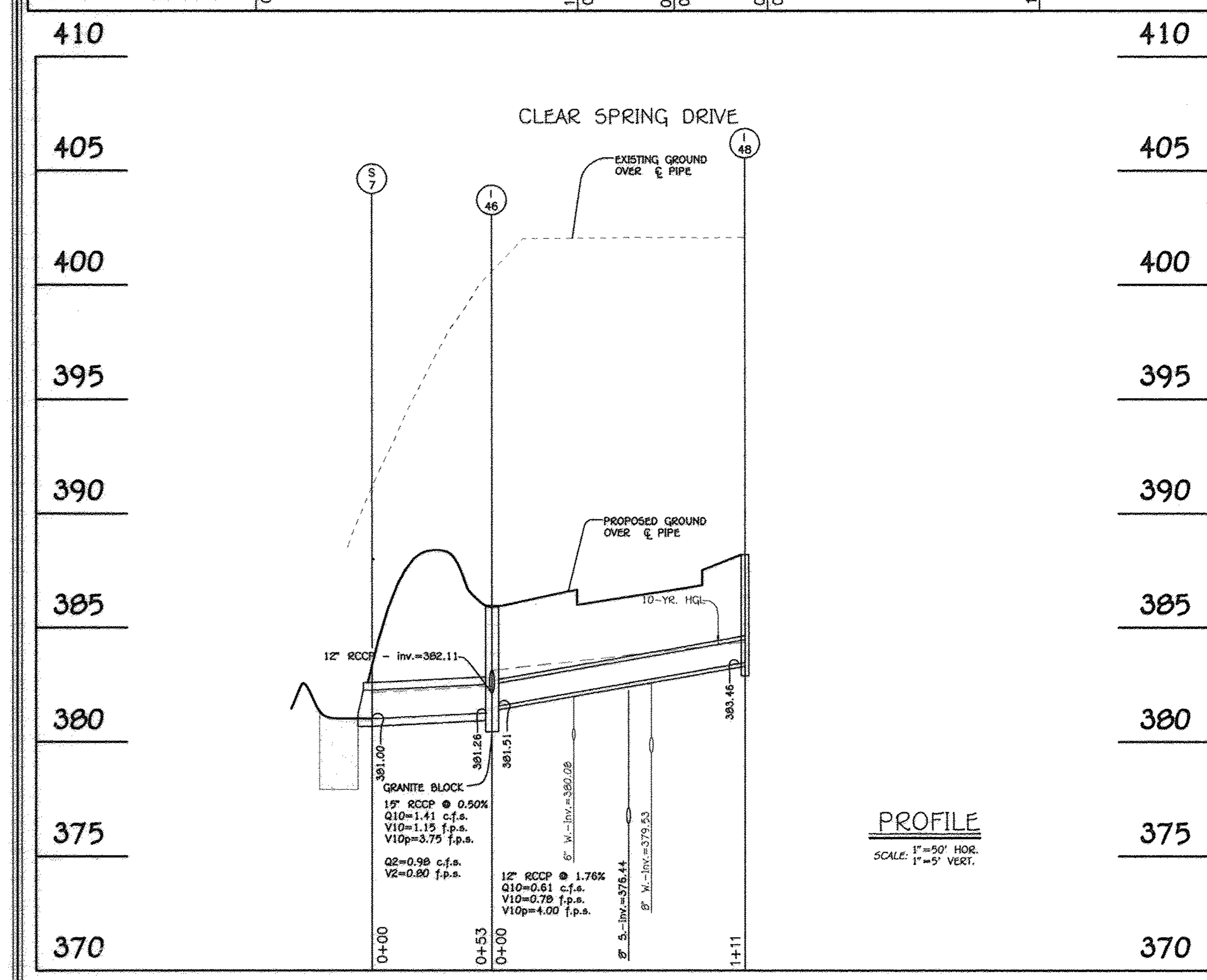
SHEET 11 OF 26 SDP-13-004

I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 stormdrain profiles.dwg, Sheet 11-Parcels C&D, 9/23/2013 2:27:10 PM, 1:1



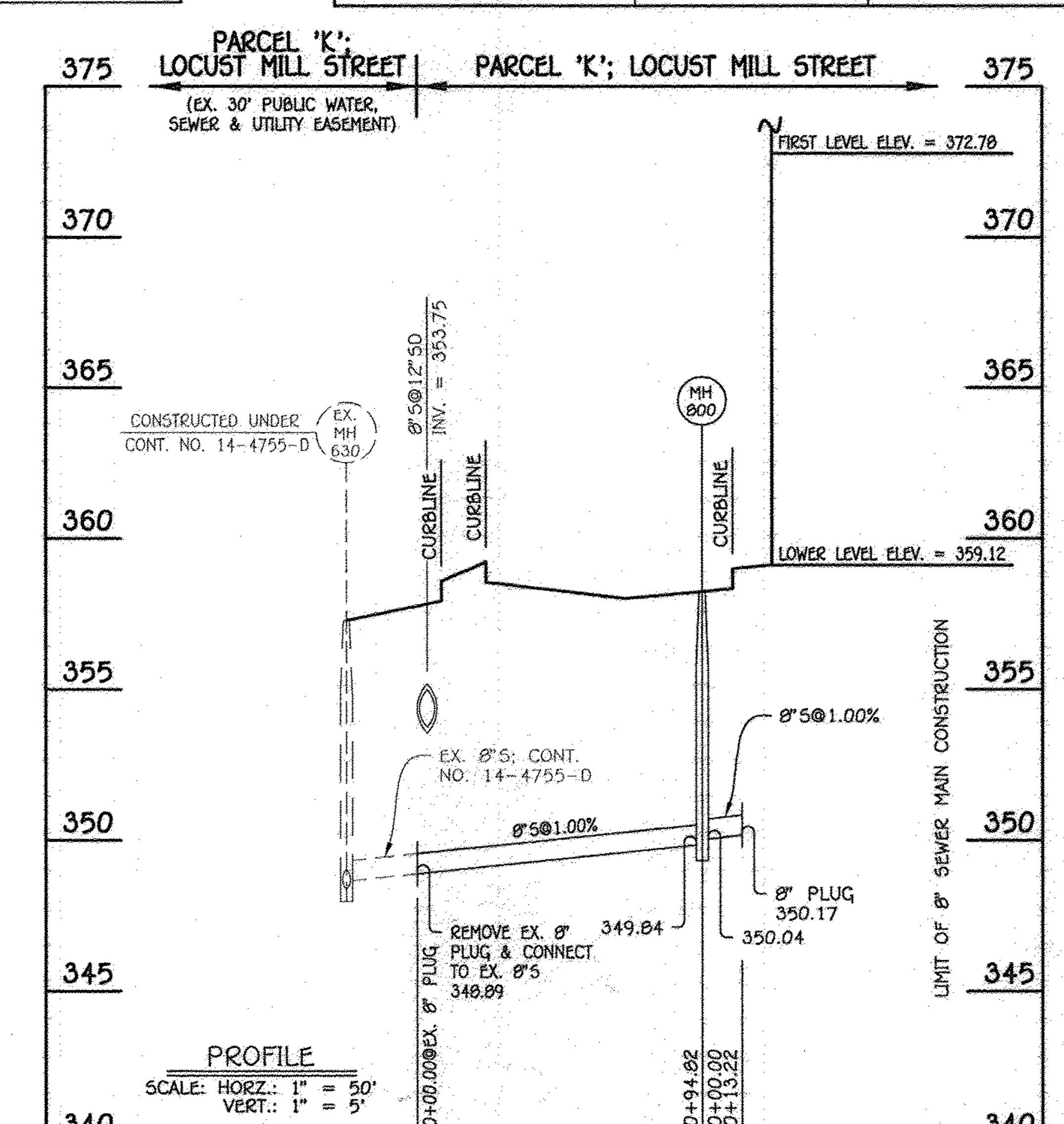






STRUCTURE SCHEDULE

STRUCTURE NO.	TOP ELEVATION	INV.IN	INV.OUT	ROAD NAME	ROAD STA.	OFFSET	TYPE	REMARKS
I-20	351.38	-----	348.00 (12")	WEBER QUARRY ROAD	0+39.59	14' R.	A-10 INLET	PARCEL 'C'
I-21	351.95	347.34 (18"), 347.50 (12")	347.09 (18")	WEBER QUARRY ROAD	0+52.09	14' L.	A-10 INLET	PARCEL 'C'
I-22	356.81	350.89 (18"), 352.50 (12")	350.64 (18")	WEBER QUARRY ROAD	1+52.33	14' L.	A-5 INLET	PARCEL 'C'
I-23	362.58	-----	359.75 (12")	WEBER QUARRY ROAD	2+32.47	14' L.	A-10 INLET	PARCEL 'C'
I-24	357.17 *	352.77 (18")	352.52 (18")	LOCUST MILL STREET	0+92.82	12.5' L.	DOUBLE 'S' INLET	PARCEL 'C'
I-25	357.75	354.08 (18")	353.73 (18")	LOCUST MILL STREET	1+56.63	14' R.	A-5 INLET	PARCEL 'C'
I-26	360.34	356.62 (18")	356.07 (18")	LOCUST MILL STREET	2+36.15	14' L.	A-10 INLET	PARCEL 'C'
I-27	361.12	358.11 (15")	357.77 (18")	LOCUST MILL STREET	2+36.78	14' R.	A-10 INLET	PARCEL 'C'
I-28	367.68	362.90 (12")	362.65 (15")	HOCKLEY MILL DRIVE	3+43.28	12' L.	A-5 INLET	PARCEL 'C'
I-29	367.68	-----	363.20 (12")	HOCKLEY MILL DRIVE	3+43.26	12' R.	A-10 INLET	PARCEL 'D'
I-30	368.00 *	364.55 (15")	364.45 (15")	LOCUST MILL STREET	4+08.35	12' R.	A-5 INLET	PARCEL 'D'
I-31	368.58	364.95 (15")	364.85 (15")	LOCUST MILL STREET	4+09.82	12' L.	A-5 INLET	PARCEL 'D'
I-32	372.17 *	-----	368.96 (15")	LOCUST MILL STREET	5+09.91	12' L.	'S' INLET	PARCEL 'D'
I-33	354.50 *	-----	350.00 (12")	N 587,530 E 1,366,454	-----	-----	'D' INLET	PARCEL 'D'
I-35	372.40 *	370.20 (6"), 369.15 (15")	368.91 (18")	N 587,352 E 1,366,426	-----	-----	'D' INLET	PARCEL 'D'
I-36	380.00 *	376.37 (6"), 373.74 (12") 375.66 (12")	373.44 (15")	N 587,328 E 1,366,359	-----	-----	'D' INLET	PARCEL 'D'
I-37	385.48	382.20 (6")	375.34 (12")	PRISCILLAS VIEW	3+58.29	30' L.	A-10 INLET	PARCEL 'D'
I-38	376.00 *	374.20 (6"), 368.00 (18") 372.67 (6"), 368.00 (18")	363.90 (18")	LOCUST MILL STREET	5+97.30	20.4' R.	'D' INLET	PARCEL 'D'
I-39	384.50 *	381.19 (12"), 380.29 (18")	380.19 (18")	LOCUST MILL STREET	7+40.62	21.6' L.	'D' INLET	PARCEL 'D'
I-41	388.10 *	385.20 (12")	384.95 (15")	LOCUST MILL STREET	1+28.52	21.2' L.	YARD INLET	PARCEL 'D'
I-42	390.44 *	388.22 (6")	387.90 (12")	CLEAR SPRING DRIVE	2+47.83	19.2' L.	YARD INLET	PARCEL 'D'
I-43	386.00 *	382.67 (6"), 382.50 (6")	378.68 (12")	N 587,244 E 1,366,381	-----	-----	'D' INLET	PARCEL 'D'
I-44	384.50 *	-----	381.63 (12")	LOCUST MILL STREET	7+41.19	22.4' L.	YARD INLET	PARCEL 'D'
I-45	384.74	-----	379.78 (15")	PRICILLAS VIEW	0+00.00	9.2' R.	A-10 INLET	PARCEL 'D'
I-46	385.96	381.51 (12"), 382.11 (12")	381.26 (15")	CLEAR SPRING DRIVE	0+02.80	12' R.	A-5 INLET	PARCEL 'D'
I-47	385.38 *	383.31 (6")	382.25 (12")	CLEAR SPRING DRIVE	0+02.83	10' L.	'S' INLET	PARCEL 'D'
I-48	388.19	-----	383.46 (12")	CLEAR SPRING DRIVE	1+13.81	12' R.	A-10 INLET	PARCEL 'D'
I-49	382.00 *	378.67 (6"), 375.87 (12")	375.49 (15")	N 587,067 E 1,366,611	-----	-----	'D' INLET	PARCEL 'D'
I-50	392.00 *	388.67 (6")	379.74 (12")	N 587,005 E 1,366,571	-----	-----	'D' INLET	PARCEL 'D'
I-51	372.00*	368.17(6"), 366.30 (15")	362.82 (18")	N 587,405 E 1,366,001	-----	-----	'D' INLET	PARCEL 'D'
I-52	377.00 *	373.67(6"), 373.67(6") 370.53 (12")	369.59 (15")	N 587,385 E 1,366,219	-----	-----	'D' INLET	PARCEL 'D'
I-53	388.00 *	382.55 (6"), 382.55 (6") 384.67 (6")	382.45 (15")	PRISCILLAS VIEW	2+30.07	21.3' R.	'D' INLET	PARCEL 'D'
I-54	382.00 *	378.67 (6"), 377.92 (12")	377.65 (15")	N 587,061 E 1,366,002	-----	-----	'D' INLET	PARCEL 'D'
I-55	395.00 *	391.67 (6"), 391.67 (6")	389.00 (12")	N 587,048 E 1,366,124	-----	-----	'D' INLET	PARCEL 'D'
I-56	390.24 *	-----	381.55 (12")	AMOS HUNTERS WAY	0+44.59	8' L.	'S' INLET	PARCEL 'D'
I-57	384.75	381.91 (6")	369.82 (12")	PRISCILLAS VIEW	0+12.65	30' L.	A-10 INLET	PARCEL 'D'
I-58	384.64	382.30 (6"), 378.57 (12")	376.23 (15")	N 587,276 E 1,365,991	-----	-----	A-5 INLET	PARCEL 'D'
I-59	390.21	387.65 (6")	381.03 (12")	N 587,266 E 1,366,092	-----	-----	A-5 INLET	PARCEL 'D'
I-60	380.00 *	376.67 (6"), 375.60 (15")	374.88 (15")	N 587,264 E 1,365,972	-----	-----	'D' INLET	PARCEL 'D'
M-6	365.42	360.74 (15"), 361.00(15")	360.49 (15")	LOCUST MILL STREET	3+28.63	20' R.	STD. MANHOLE	PARCEL 'C'
M-7	354.00	347.42 (18"), 348.93 (12")	339.76 (24")	N 587,541 E 1,366,439	-----	-----	STD. MANHOLE	PARCEL 'D'
M-8	363.34	361.84 (6"), 358.67 (18") 357.07 (18")	355.57 (18")	N 587,283 E 1,366,521	-----	-----	STD. MANHOLE	PARCEL 'D'
M-9	388.33	383.11 (15")	382.96 (18")	CLEAR SPRING DRIVE	1+29.42	19.8' R.	STD. MANHOLE	PARCEL 'D'
M-11	383.28	378.86 (15")	378.66 (15")	N 587,297 E 1,366,355	-----	-----	STD. MANHOLE	PARCEL 'D'
M-13	369.50	362.97 (15")	362.57 (18")	N 587,248 E 1,366,566	-----	-----	STD. MANHOLE	PARCEL 'D'
M-16	389.01	381.09 (12")	379.65 (15")	PRISCILLAS VIEW	1+21.88	9.5' R.	STD. MANHOLE	PARCEL 'D'
S-1	377.25	-----	376.00 (15")	N 587,375 E 1,366,330	-----	-----	CONC. END SECTION	PARCEL 'D'
S-2 HEADWALL	363.00	-----	360.00 (18")	N 587,438 E 1,365,968	-----	-----	TYPE 'A' HEADWALL	PARCEL 'D'
S-3 HEADWALL	362.85	-----	360.50 (12")	N 587,420 E 1,365,951	-----	-----	TYPE 'A' HEADWALL	PARCEL 'D'
S-4	380.25	-----	379.00 (15")	N 587,300 E 1,365,973	-----	-----	CONC. END SECTION	PARCEL 'D'
S-5 HEADWALL	376.25	-----	373.50 (15")	N 587,250 E 1,365,953	-----	-----	TYPE 'A' HEADWALL	PARCEL 'D'
S-6	378.77	-----	377.52 (15")	N 587,071 E 1,365,978	-----	-----	CONC. END SECTION	PARCEL 'D'
S-7	382.25	-----	381.00 (15")	N 587,108 E 1,366,570	-----	-----	CONC. END SECTION	PARCEL 'D'
EX. I-3	349.09	345.68 (18")	343.30 (21")	ELLICOTT CENTER DRIVE	2+94.78	18.9' L.	A-10 INLET	PARCEL 'B'
EX. M-19	341.55	336.07(I-13&M-7), 334.86(M-20)	334.07 (24")	ELLICOTT CENTER DRIVE	0+73.48	18.3' R.	STD. MANHOLE	PARCEL 'C'

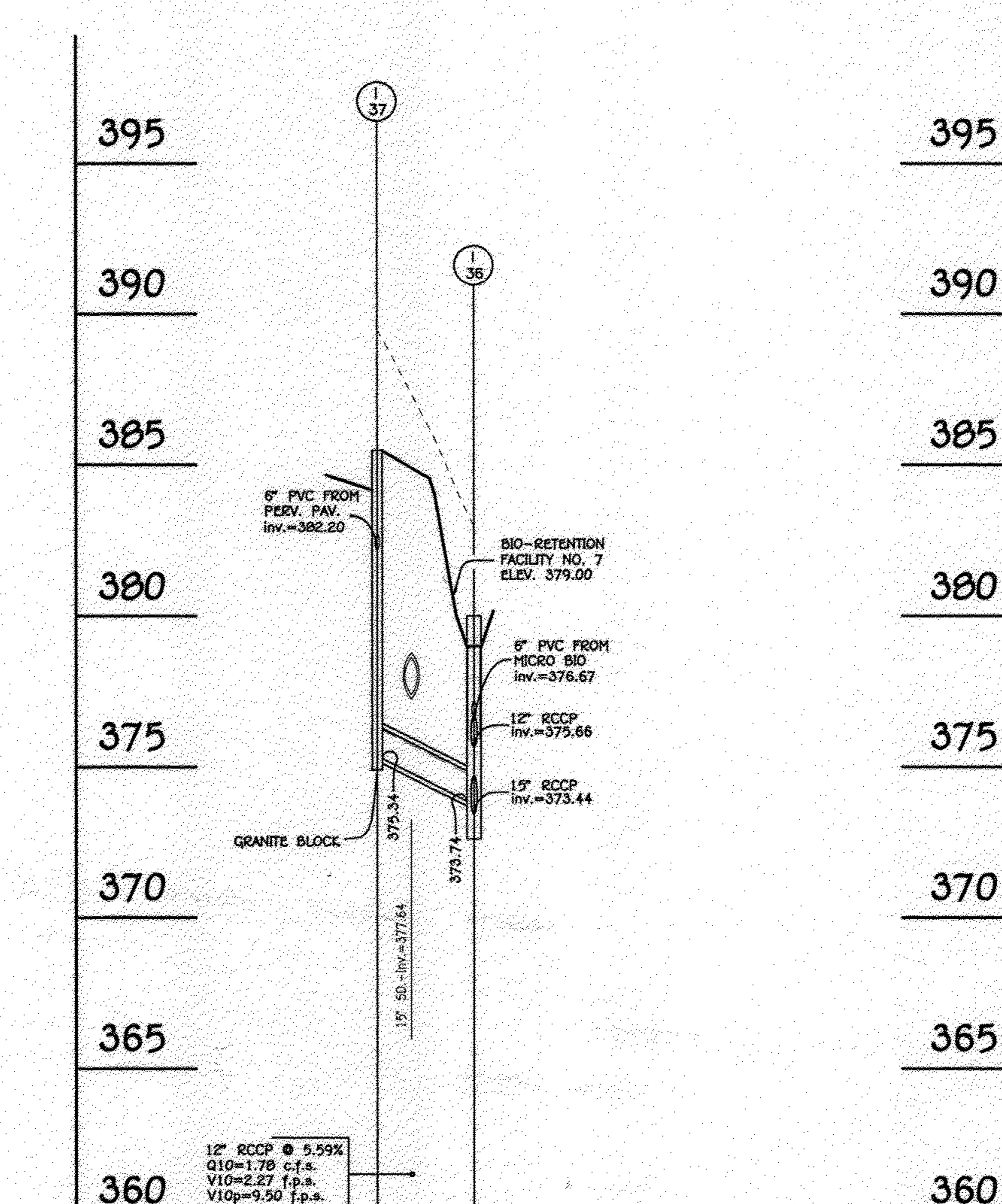


8" SEWER MAIN: SHOPPING CENTER BUILDING

MANHOLE TABULATION CHART

NO.	NORTHING	EASTING	RIM ELEVATION
800	587579.72	1366194.60	358.30
8" PLUG	587566.55	1366193.40	---

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.



APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/10/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
6/27/15	REVISED STRUCTURE SCHEDULE
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 12043, EXPIRATION DATE:

PAUL KRIEBEL

DATE

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

FRANK J. MANALANSAN II — 9/23/13

DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 11/13/13

Chief, Division of Land Development — Date 11-08-13

Chief, Development Engineering Division — Date 10.25.13

SUBDIVISION				SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO				N/A	A2 THRU 140
PLAT NOS. 22871-22875, 22945-22950, 23903-23908	PARCEL NOS. 852, 847	ZONE MXD-6	TAX MAP 24	ELEC. DIST. 2nd.	CENSUS TR. 6029

STORM DRAIN PROFILES

ELLICOTT CROSSING

PART TWO

LOTS A2 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

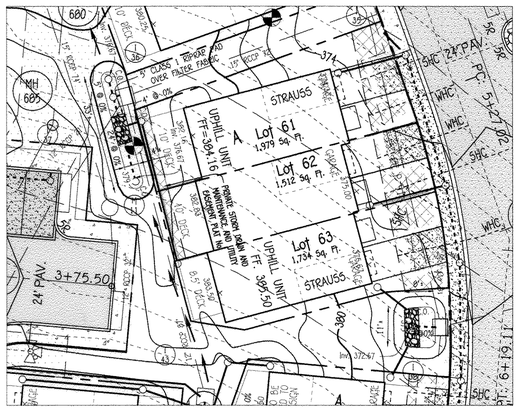
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

SHEET 12 OF 26 SDP-13-004

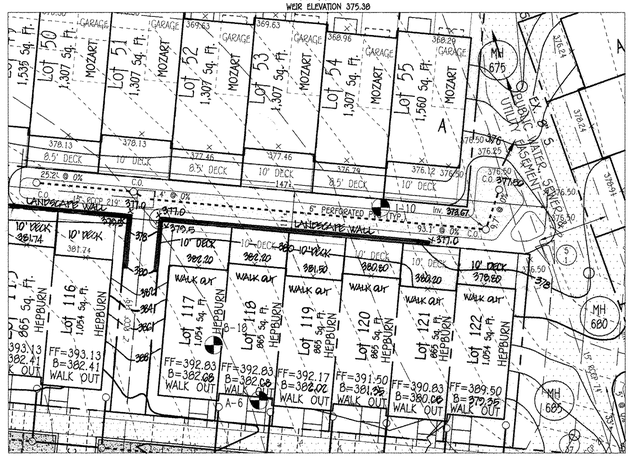
I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 stormdrain profiles.dwg, Sheet 12-Parcels C&D, 9/23/2013 2:28:33 PM, 1:1

M-6 (7)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 4,410 SqFt.
FILTER AREA: 130 SqFt.
ELEVATION 380
PERIMETER 71'
WEIR ELEVATION 380.27

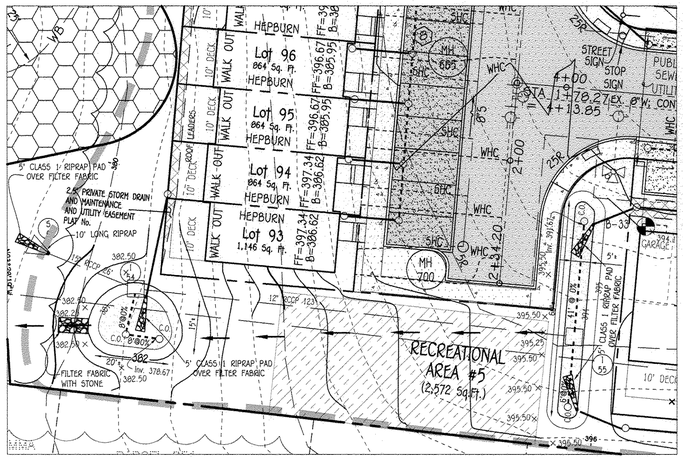


M-6 (6)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 2,084 SqFt.
FILTER AREA: 92 SqFt.
ELEVATION 376
PERIMETER 36'
WEIR ELEVATION 375.64

M-6 (3)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 19,981 SqFt.
FILTER AREA: 917 SqFt.
ELEVATION 376
PERIMETER 308'
WEIR ELEVATION 375.38

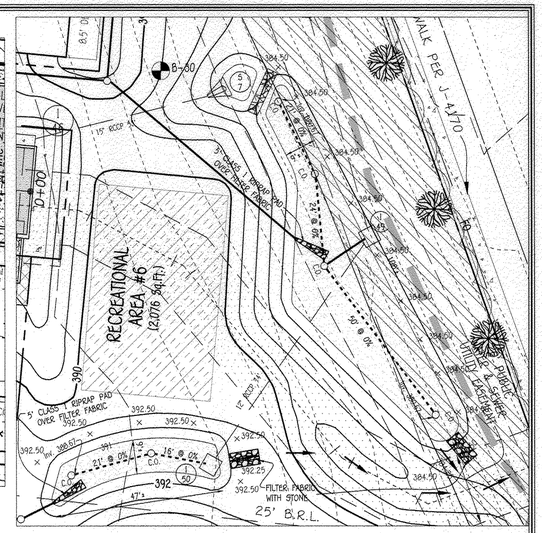


M-6 (8)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 3,673 SqFt.
FILTER AREA: 249 SqFt.
ELEVATION 382
PERIMETER 98'
WEIR ELEVATION 382.00



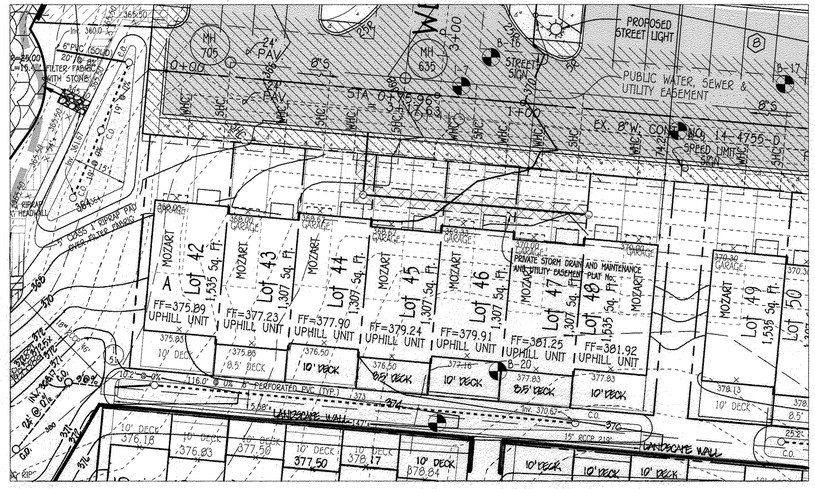
M-6 (11)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 5,024 SqFt.
FILTER AREA: 325 SqFt.
ELEVATION 395
PERIMETER 127'
WEIR ELEVATION 395.11

M-6 (10)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 8,720 SqFt.
FILTER AREA: 452 SqFt.
ELEVATION 392
PERIMETER 113'
WEIR ELEVATION 392.00

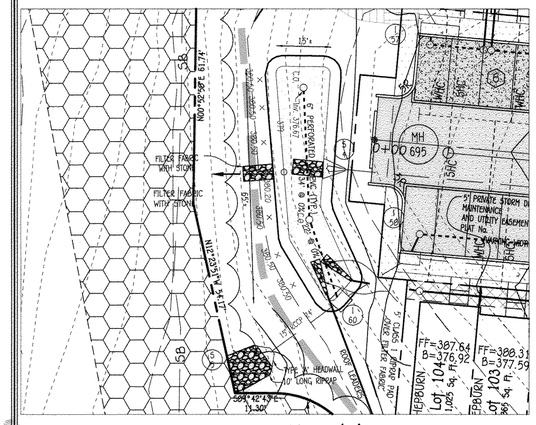


M-6 (9)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 21,858 SqFt.
FILTER AREA: 1,681 SqFt.
ELEVATION 384
PERIMETER 236'
WEIR ELEVATION 384.00

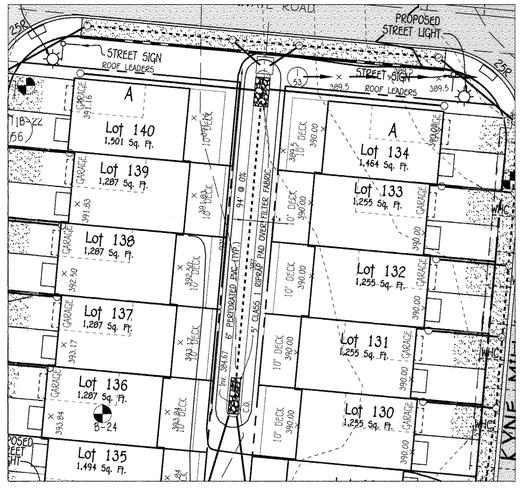
M-6 (12)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 8,326 SqFt.
FILTER AREA: 464 SqFt.
ELEVATION 365
PERIMETER 117'



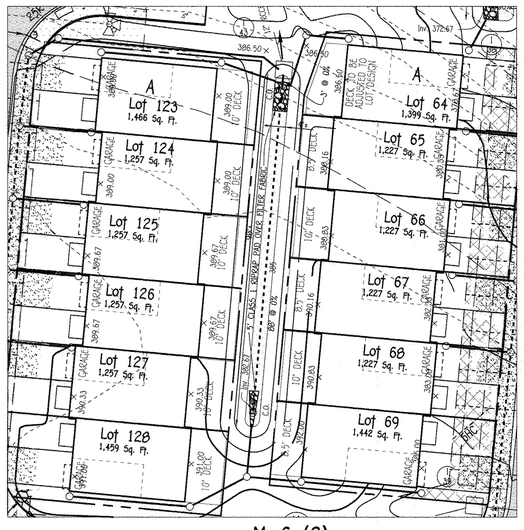
M-6 (4)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 15,687 SqFt.
FILTER AREA: 729 SqFt.
ELEVATION 374
PERIMETER 300'
WEIR ELEVATION 373.80



M-6 (5)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 10,295 SqFt.
FILTER AREA: 750 SqFt.
ELEVATION 379
PERIMETER 157'
WEIR ELEVATION 380.00



M-6 (1)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 10,735 SqFt.
FILTER AREA: 383 SqFt.
ELEVATION 386
PERIMETER 198'
WEIR ELEVATION 387.54



M-6 (2)
(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 9,014 SqFt.
FILTER AREA: 389 SqFt.
ELEVATION 386
PERIMETER 201'
WEIR ELEVATION 386.00

0' 20' 40' 80'
SCALE: 1" = 20'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

REPLACEMENT SHEET

DATE	DESCRIPTION
2/16/16	R3/15E TITLE BLOCK.
2/16/15	REVISE TITLE BLOCK TO REFLECT SHOPPING CENTER
9/14/15	REVISE IMPERVIOUS AREAS FROM REVIEWER
7/22/14	REVISED PLAN CONTENT, REVISE DRIVEWAY LOCATIONS FOR LOTS A0-C03, C06, C24 - C26 & L128-L132

REVISION BLOCK

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21668, EXPIRATION DATE: 7/14/15.

FRANK L. JOHNSON, P.E. — DATE 7/30/14

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 8-8-14

Chief, Division of Land Development — Date 8/06/14

Chief, Development Engineering Division — Date 8/4/14

SUBDIVISION		SECTION/AREA	LOT NOS.		
ELLICOTT CROSSING PART TWO		N/A	A1 THRU A40		
PLAT NOS.	PARCEL NOS	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22241-22250 22371-22375	852, 847	MXD-6	24	2nd.	6029

STORMWATER MANAGEMENT NOTES AND DETAILS

ELLICOTT CROSSING
PART TWO
LOTS A1 THRU A40, OPEN SPACE LOTS A41 THRU A44 & PARCEL 'K'

SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

SDP-13-004

Infiltration and Filter System Construction Specifications

Infiltration and filter systems either take advantage of existing permeable soils or create a permeable medium such as sand for WC), and Re v. In some instances where permeability is great, these facilities may be used for Qp as well. The most common systems include infiltration trenches, infiltration basins, sand filters, and organic filters.

When properly planted, vegetation will thrive and enhance the functioning of these systems. For example, pre-treatment buffers will trap sediments that often are bound with phosphorous and metals. Vegetation planted in the facility will aid in nutrient uptake and water storage. Additionally, plant roots will provide arteries for stormwater to permeate soil for groundwater recharge. Finally, successful plantings provide aesthetic value and wildlife habitat making these facilities more desirable to the public.

Design Constraints:

> Planting buffer strips of at least 20 feet will cause sediments to settle out before reaching the facility, thereby reducing the possibility of clogging.
> Determine areas that will be saturated with water and water table depth so that appropriate plants may be selected (hydrology will be similar to bioretention facilities, see figure A.5 and Table A.4 for planting material guidance).
> Plants known to send down deep taproots should be avoided in systems where filter fabric is used as part of facility design.
> Test soil conditions to determine if soil amendments are necessary.
> Plants shall be located so that access is possible for structure maintenance.
> Stabilize heavy flow areas with erosion control mats or sod.
> Temporarily divert flows from seeded areas until vegetation is established.
> See Table A.5 for additional design considerations.

Bio-retention

Soil Bed Characteristics

The characteristics of the soil for the bioretention facility are perhaps as important as the facility location, size, and treatment volume. The soil must be permeable enough to allow runoff to filter through the media, while having characteristics suitable to promote and sustain a robust vegetative cover crop. In addition, much of the nutrient pollutant uptake (nitrogen and phosphorus) is accomplished through absorption and microbial activity within the soil profile. Therefore, soils must balance their chemical and physical properties to support biotic communities above and below ground.

The planting soil should be a sandy loam, loamy sand, loam (USDA), or a loam/sand mix (should contain a minimum 35 to 60% sand, by volume). The clay content for these soils should be less than 25% by volume [Environmental Quality Resources (EQR), 1996; Engineering Technology Inc. and Biohabitats, Inc. (ETAB), 1993]. Soils should fall within the SM, ML, SC classifications or the Unified Soil Classification System (USCS). A permeability of at least 1.0 feet per day (0.5"/hr) is required (a conservative value of 0.5 feet per day is used for design). The soil should be free of stones, stumps, roots, or other woody material over 1" in diameter. Brush or seeds from noxious weeds (e.g., Johnson Grass, Mugwort, Nutsedge, and Canada Thistle or other noxious weeds as specified under COMAR 15.08.01.05.) should not be present in the soils. Placement of the planting soil should be in 12 to 18 lifts that are loosely compacted (tamped lightly with a backhoe bucket or traversed by dozer tracks). The specific characteristics are presented in Table A.3.

Table A.3 Planting Soil Characteristics

Parameter	Value
pH range	5.2 to 7.00
Organic matter	1.5 to 4.0% (by weight)
Magnesium	35 lbs. per acre, minimum
Phosphorus (phosphate - P205)	75 lbs. per acre, minimum
Potassium (potash -1(K20)	85 lbs. per acre, minimum
Soluble salts	500 ppm
Clay	10 to 25 %
Silt	30 to 55 %
Sand	35 to 60%

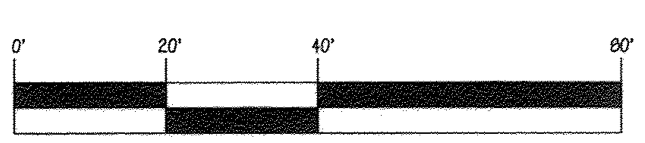
Mulch Layer

The mulch layer plays an important role in the performance of the bioretention system. The mulch layer helps maintain soil moisture and avoids surface sealing, which reduces permeability. Mulch helps prevent erosion, and provides a microenvironment suitable for soil biota at the mulch/soil interface. It also serves as a pretreatment layer, trapping the finer sediments, which remain suspended after the primary pretreatment.

The mulch layer should be standard landscape style, single or double shredded hardwood mulch or chips. The mulch layer should be well aged (stockpiled or stored for at least 12 months), uniform in color, and free of other materials, such as weed seeds, soil, roots, etc. The mulch should be applied to a maximum depth of three inches. Grass clippings should not be used as a mulch material.

Planting Guidance

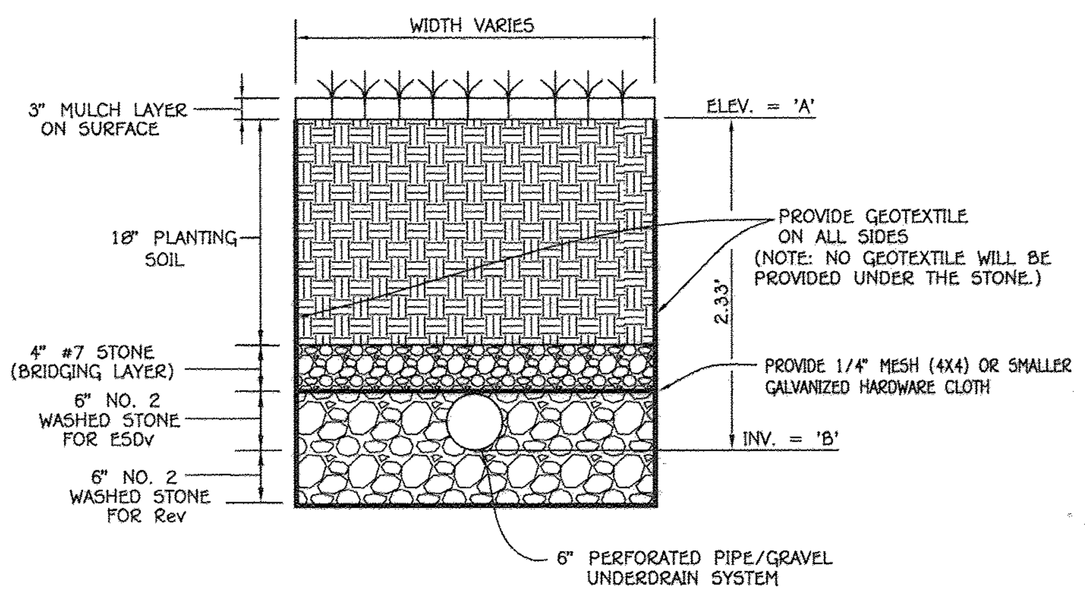
Plant material selection should be based on the goal of simulating a terrestrial forested community of native species. Bioretention simulates an upland-species ecosystem. The community should be dominated by trees, but have a distinct community of understory trees, shrubs and herbaceous materials. By creating a diverse, dense plant cover, a bioretention facility will be able to treat stormwater runoff and withstand urban stresses from insects, disease, drought, temperature, wind, and exposure.
The proper selection and installation of plant materials is key to a successful system. There are essentially three zones within a bioretention facility (Figure A.5). The lowest elevation supports plant species adapted to standing and fluctuating water levels. The middle elevation supports plants that like drier soil conditions, but can still tolerate occasional inundation by water. The outer edge
is the highest elevation and generally supports plants adapted to dryer conditions. A sample of appropriate plant materials for bioretention facilities are included in Table A.4. The layout of plant material should be flexible, but should follow the general principals described in Table A.5. The objective is to have a system, which resembles a random, and natural plant layout, while maintaining optimal conditions for plant establishment and growth. For a more extensive bioretention plan, consult ETAB, 1993 or Claytor and Schueler, 1997.



SCALE: 1" = 20'

OPERATION AND MAINTENANCE SCHEDULE FOR BIO-RETENTION AREAS (M-6)

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

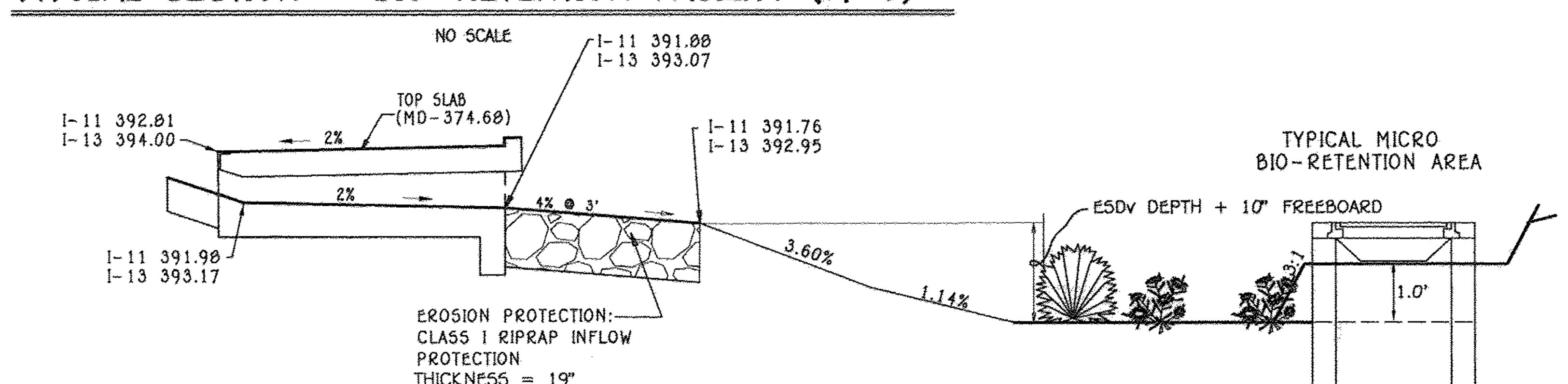


NOTE: THE BOTTOM OF EACH BIO-RETENTION FACILITY (M-6) SHALL BE ROTOTILLED PRIOR TO STONE INSTALLATION.

TYPICAL SECTION - BIO-RETENTION FACILITY (M-6)

FACILITY NO.	A	B
M-6 (1)	387.00	384.67
M-6 (2)	385.00	382.67
M-6 (3)	375.00	372.67
M-6 (4)	373.00	370.67
M-6 (5)	379.00	376.67
M-6 (6)	375.00	372.67
M-6 (7)	379.00	376.67
M-6 (8)	381.00	378.67
M-6 (9)	381.00	378.67
M-6 (10)	391.00	388.67
M-6 (11)	394.00	391.67
M-6 (12)	364.00	361.67
M-6 (13)	354.00	351.67

NO SCALE



SCHEMATIC SECTION FLOW INLET INTO MICRO BIO-RETENTION

NOT TO SCALE

NOTES:
UNDERDRAIN PIPE SHALL BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTMF 758, TYPE PS 28 OR AASHTO-M- 278) IN A GRAVEL LAYER. THE PREFERRED MATERIAL IS SLOTTED 4" RIGID PIPE (e.g., PVC OR HDPE).

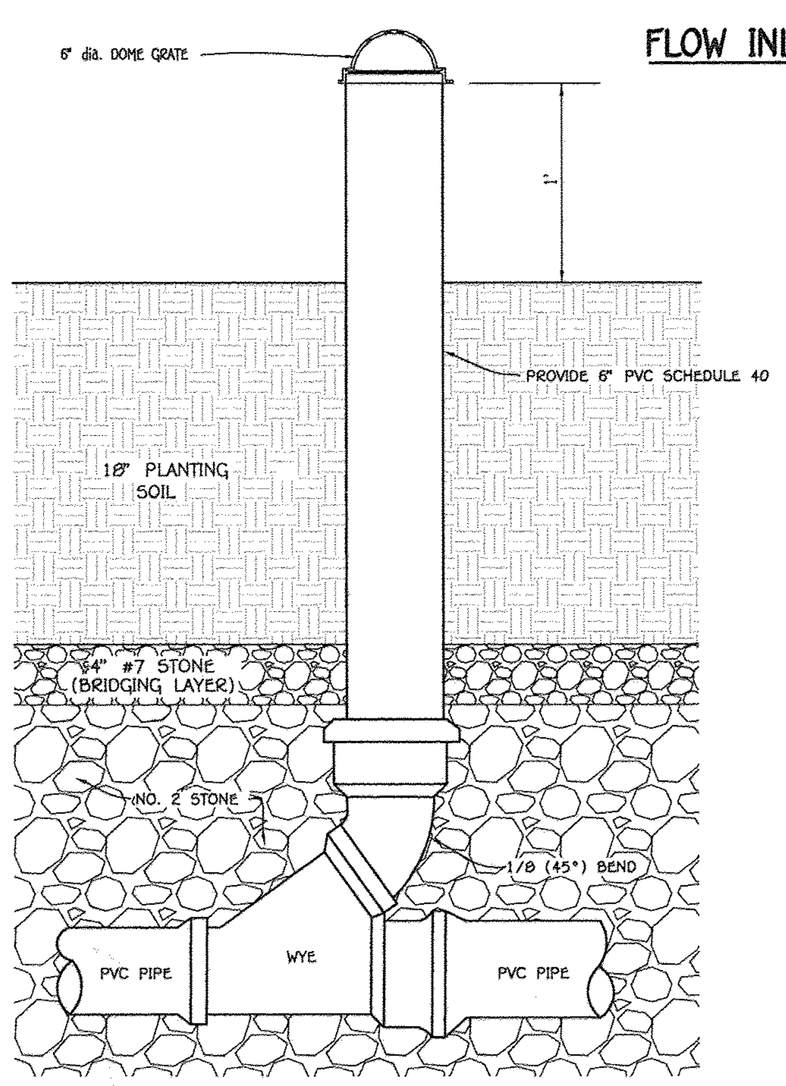
PERFORATIONS SHALL BE 3/8" DIAMETER LOCATED 6" ON CENTER WITH A MINIMUM OF FOUR HOLES PER ROW. PIPE SHALL BE WRAPPED WITH A 1/4" (No. 4 OR 4 x 4) GALVANIZED HARDWARE CLOTH.

GRAVEL LAYER SHALL BE (No. 57 STONE PREFERRED) AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAIN.

THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.

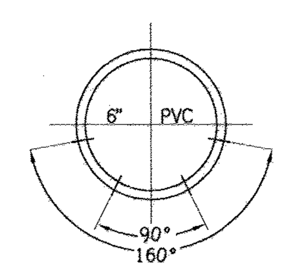
A RIGID, NON PERFORATED OBERSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQ.FT.) TO PROVIDE A CLEANOUT PORT AND MONITOR PERFORMANCE OF THE FILTER.

A 4" LAYER OF PEA GRAVEL (1/8" TO 3/8" STONE) SHALL BE LOCATED BETWEEN THE FILTER MEDIA AND UNDERDRAIN TO PREVENT MIGRATION OF FINES INTO THE UNDERDRAIN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".



TYPICAL CLEAN-OUT DETAIL

NO SCALE



PIPE SIZE: 6"
HOLE SIZE: 3/8"
CENTER TO CENTER: 3"
ROWS OF HOLES: 2 @ 90°
2 @ 160° (+/-3°)

SCH40 PVC PERFORATED UNDERDRAIN PIPE DETAIL FOR HORIZONTAL DRAIN PIPE

NO SCALE

DRAINAGE AREA M-6 (1) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
96	MIXED PERENNIALS	1 FT.
48	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (2) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
96	MIXED PERENNIALS	1 FT.
48	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (3) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
300	MIXED PERENNIALS	1 FT.
150	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (4) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
180	MIXED PERENNIALS	1 FT.
90	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (5) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
180	MIXED PERENNIALS	1 FT.
90	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (6) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
22	MIXED PERENNIALS	1 FT.
11	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (7) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
32	MIXED PERENNIALS	1 FT.
16	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (8) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
62	MIXED PERENNIALS	1 FT.
31	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (9) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
400	MIXED PERENNIALS	1 FT.
200	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (10) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
112	MIXED PERENNIALS	1 FT.
56	SHRUBS / MIXED GRASSES	2 FT.

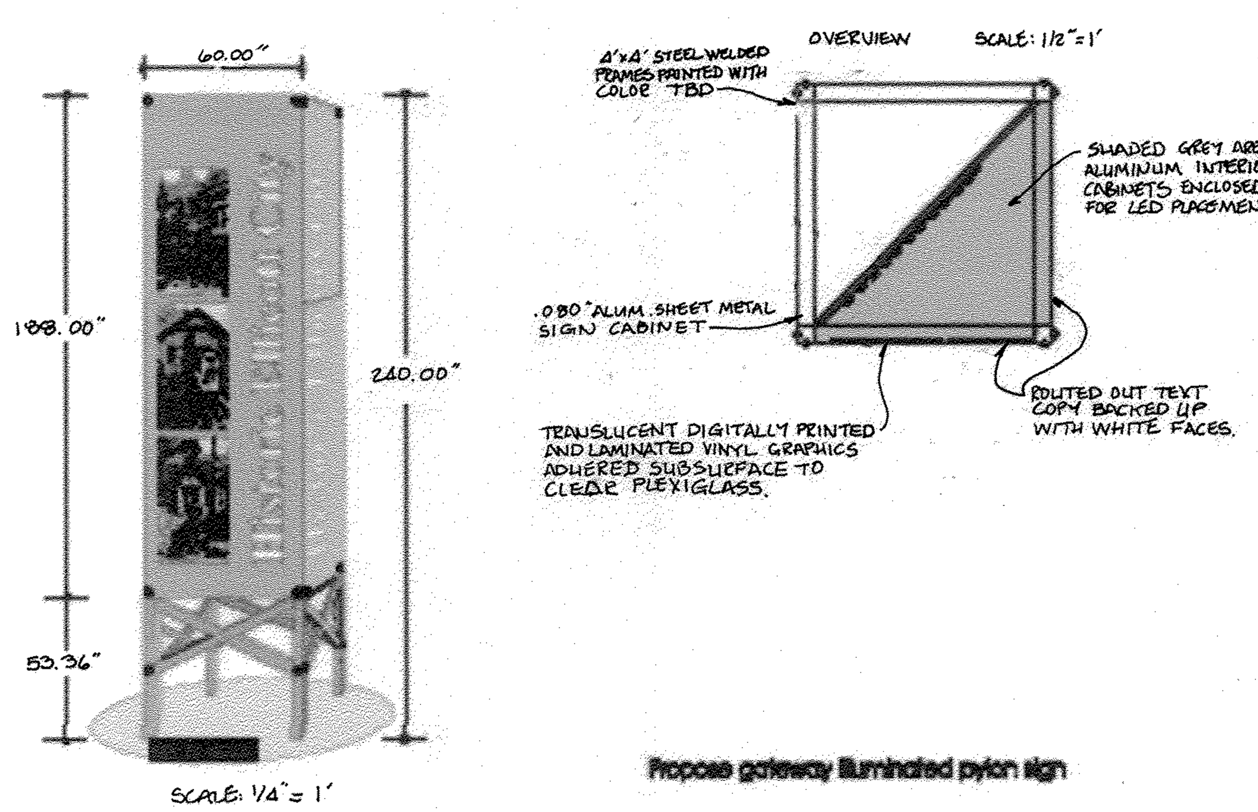
DRAINAGE AREA M-6 (11) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
80	MIXED PERENNIALS	1 FT.
40	SHRUBS / MIXED GRASSES	2 FT.

DRAINAGE AREA M-6 (12) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
116	MIXED PERENNIALS	1 FT.
58	SHRUBS / MIXED GRASSES	2 FT.

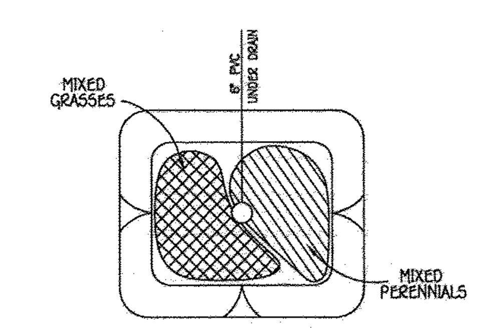
DRAINAGE AREA M-6 (13) MICRO-BIORETENTION PLANT MATERIAL		
QUANTITY	NAME	MAXIMUM SPACING (FT.)
73	MIXED PERENNIALS	1 FT.
37	SHRUBS / MIXED GRASSES	2 FT.

M-6 (13)

(MICRO BIO-RETENTION FACILITY)
SCALE: 1" = 20'
DRAINAGE AREA: 7,141 SqFt.
FILTER AREA: 295 SqFt.
ELEVATION 354
PERIMETER 95'
WEIR ELEVATION 355.00



ENTRANCE SIGN



MICRO-BIORETENTION PLANTING DETAIL

NOT TO SCALE

MIXED PERENNIALS *: CUT-LEAF CONEFLOWER, CARDINAL FLOWER, TRADUSCANT ASTER

SHRUBS *: INK BERRY, ARROWWOOD, BAYBERRY / MIXED GRASSES *: VIRGINIA SWITCHGRASS, PENDULOUS SEDGE, LITTLE BLUESTEM

* SEE PLANT MATERIAL CHARTS FOR QUANTITIES AND SPACING

NOTE:
PLANT MATERIAL MUST COVER AT LEAST 50% OF THE SURFACE AREA OF THE MICRO-BIORETENTION

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

(MICRO - BIORETENTION FACILITIES)

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.
FRANK J. MANALANSAN II — 9/23/13 DATE

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
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443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Director - Department of Planning and Zoning — 11/13/13 Date
Chief, Division of Land Development — 11-08-13 Date
Chief, Development Engineering Division — 10-25-13 Date

SUBDIVISION			SECTION/AREA		LOT NOS.
ELLICOTT CROSSING PART TWO			N/A		42 THRU 140
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871-22875, 22945-22950, 23905-23908	852, 847	MXD-6	24	2nd.	6029

STORMWATER MANAGEMENT NOTES AND DETAILS

ELLICOTT CROSSING

PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

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Construction Specifications for Environmental Site Design Practices

B.4.B Specifications for Permeable Pavements & Reinforced Turf

These specifications include information on acceptable materials for typical applications and are not exclusive or limiting. The designer is responsible for developing detailed specifications for individual projects and specific conditions.

1. Pervious Concrete Specifications

Design Thickness – Pervious concrete applications shall be designed so that the thickness of the concrete slab shall support the traffic and vehicle types that will be carried. Applications may be designed using either standard pavement procedures (e.g., AASHTO, ACI 325.9R, ACI 330R) or using structural values derived from flexible pavement design procedures.

Mix & Installation -- Traditional Portland cements (ASTM C 150, C 1157) may be used in pervious concrete applications. Phosphorus admixtures may also be used. Materials should be tested (e.g., trial batching) prior to construction so that critical properties (e.g., settling time, rate of strength development, porosity, permeability) can be determined.

Aggregate -- Pervious concrete contains a limited fine aggregate content. Commonly used gradations include ASTM C 33 No. 67 (3⁄4 in. to No. 4), No. 8 (/8 in. to No. 16) and No. 89 (3/s in. to No. 50) sieves. Single-sized aggregate (up to 1 inch) may also be used.

Water Content -- Water-to-cement ratios between 0.27 and 0.30 are used routinely with proper inclusion of chemical admixtures. Water quality should meet ACI 30a. As a general rule, potable water should be used although recycled concrete production water meeting ASTM C 94 or AASHTO M 157 may also be used.

Admixtures -- Chemical admixtures (e.g., retarders or hydration-stabilizers) are used to obtain special properties in pervious concrete. Use of admixtures should meet ASTM C 494 (chemical admixtures) and ASTM C 260 (air entraining admixtures) and closely follow manufacturer's recommendations.

Base Course -- The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (n = 0.30).

2. Permeable Interlocking Concrete Pavements (PICP)

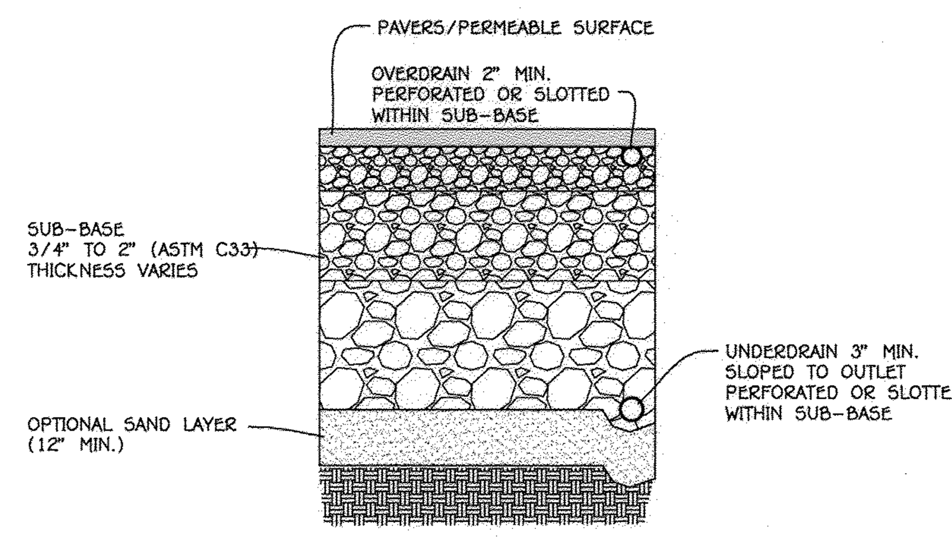
Paver Blocks – Blocks should be either 3 1/8 in. or 4 in. thick, and meet ASTM C 936 or CSA A23 1.2 requirements. Applications should have 20% or more (40% preferred) of the surface area open. Installation should follow manufacturer's instructions, except that infill and base course materials and dimensions specified in this Appendix shall be followed.

Infill Materials and Leveling Course -- Openings shall be filled with ASTM C-33 graded sand or sandy loam. PICP blocks shall be placed on a one-inch thick leveling course of ASTM C-33 sand.

Base Course – The base course shall be AASHTO No. 3 or 4 course aggregate with an assumed open pore space of 30% (n = 0.30).

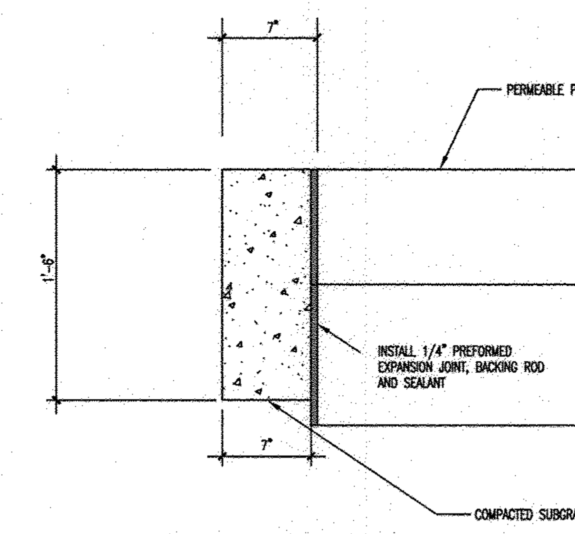
Underdrains – Underdrains should meet the following criteria:
- Pipe– Should be 4" to 6" diameter, slotted or perforated rigid plastic pipe (ASTMF 758, Type PS 28, or AASHTO-M-278) in a gravel layer. The preferred material is slotted, 4" rigid pipe (e.g., PVC or HDPE).
- Perforations – If perforated pipe is used, perforations should be 3/8" diameter located 6" on center with a minimum of four holes per row. Pipe shall be wrapped with a 1/4" (No. 4 or 4x4) galvanized hardware cloth.
- Gravel – The gravel layer shall be at least 3" thick above and below the underdrain.
- The main collector pipe shall be at a minimum 0.5% slope.
- A rigid, non-perforated observation well must be provided (one per every 1,0000 square feet) to provide a clean-out port and monitor performance of the filter section.
- A 4" layer of sand shall be located between the filter media and underdrain to prevent migration of fines into the underdrain.

Note:
These practices may not be constructed until all contributing drainage area has been stabilized



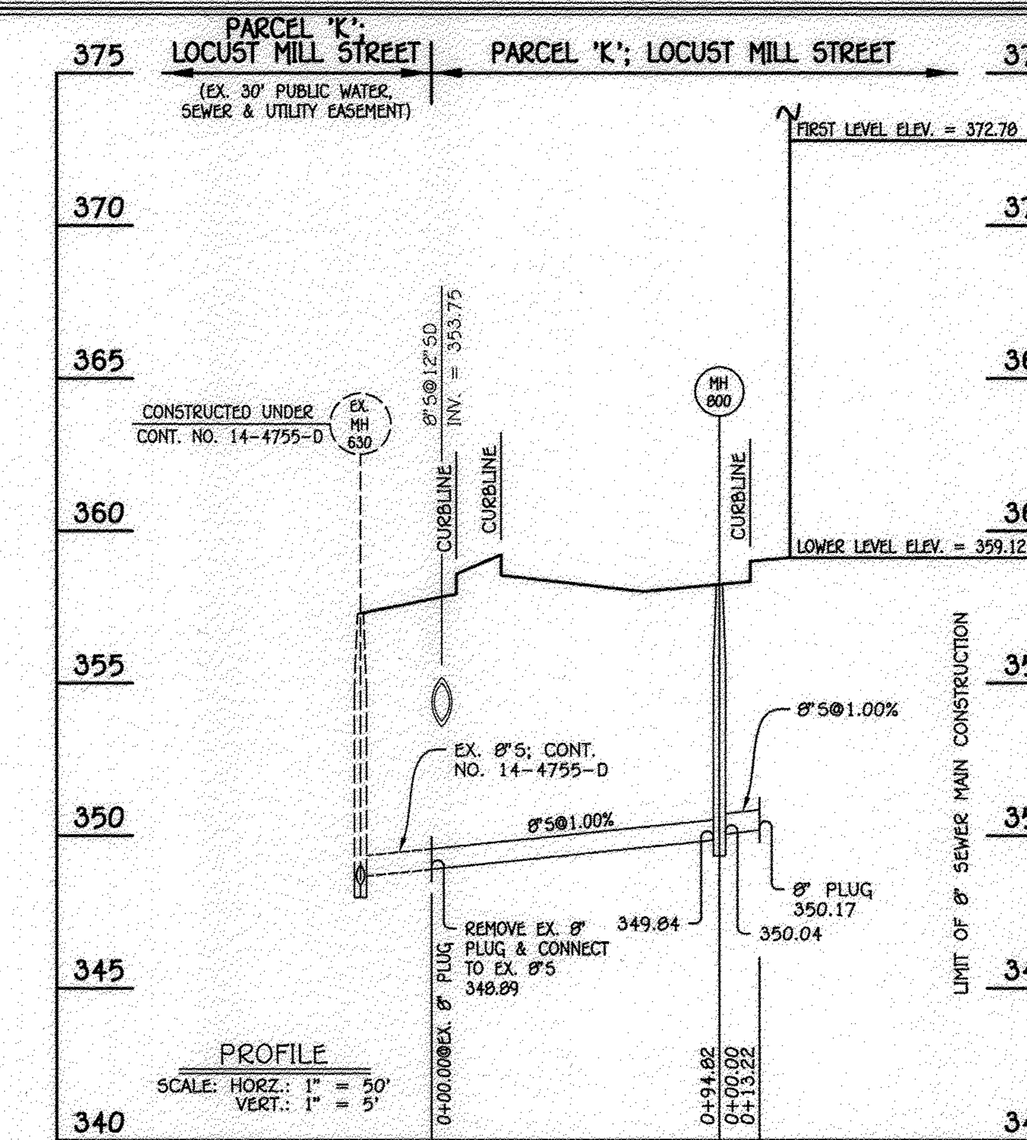
TYPICAL SECTION – PERMEABLE PAVEMENT w/ OVERDRAIN & UNDERDRAIN

NO SCALE



CONCRETE EDGING

N.T.S.



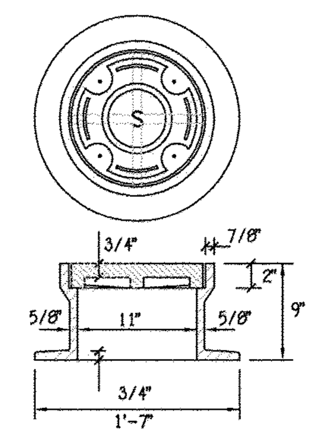
8" SEWER MAIN: SHOPPING CENTER BUILDING

MANHOLE TABULATION CHART			
NO.	NORTHING	EASTING	RIM ELEVATION
800	587579.72	1366194.60	358.30
8" PLUG	587566.55	1366193.40	---

NOTE: SET MH RIM FLUSH W/PROPOSED GRADE.

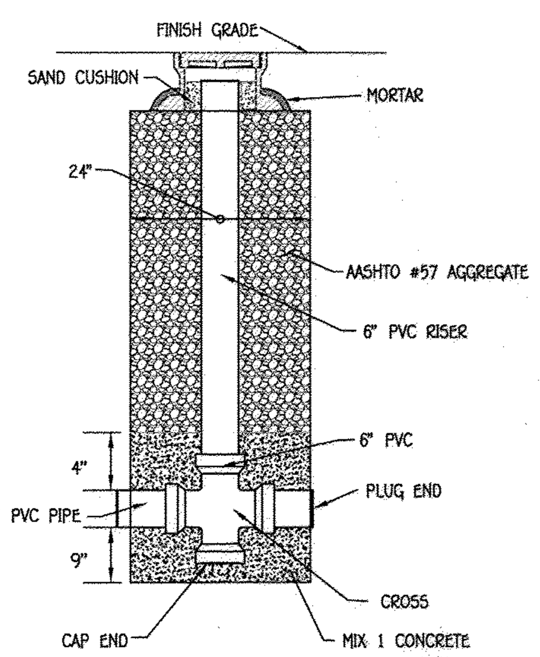
PERMEABLE PAVING CHART

PERM. PAV. AREA NO.	DEPTH
A-2 (1)	2.40'
A-2 (2)	2.38'
A-2 (3)	2.36'
A-2 (4)	2.26'
A-2 (5)	1.68'
A-2 (6)	1.98'
A-2 (7)	2.40'
A-2 (8)	2.41'



LAMPHOLE FRAME & COVER

NOTE:
Material shall be gray iron casting. Castings must be machined on bearing surfaces.



CLEANOUT/ WATER QUALITY SAMPLING PORT DETAIL

NOT TO SCALE

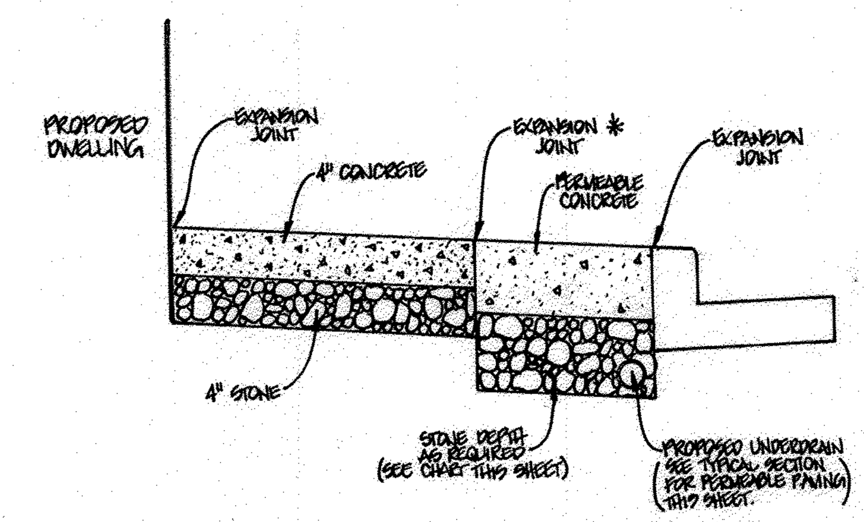
OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT (A-2)

a. The owner shall periodically sweep (or vacuum porous concrete pavement) the pavement surfaces to reduce sediment accumulation and insure continued surface porosity. Sweeping should be performed at least twice annually with a commercial cleaning unit. Washing or compressed air units should not be used to perform surface cleaning.

b. The owner shall periodically clean drainage pipes, inlets, stone edge drains and other structures within or draining to the subbase.

c. The owner shall use deicers in moderation. Deicers should be non-toxic and be applied either as calcium magnesium acetate or as pretreated salt.

d. The owner shall ensure snow plowing is performed carefully with blades set one inch above the surface. Plowed snow piles and snowmelt should not be directed to permeable pavement.



TYPICAL PERMEABLE DRIVEWAY DETAIL

NOT TO SCALE

*EXPANSION JOINT SHALL BE "FIBRE EXPANSION JOINT, AS MANUFACTURED BY W.R. MEADOWS, OR APPROVED EQUAL

OPERATION AND MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED PERMEABLE PAVEMENT SYSTEMS (A-2)

General:

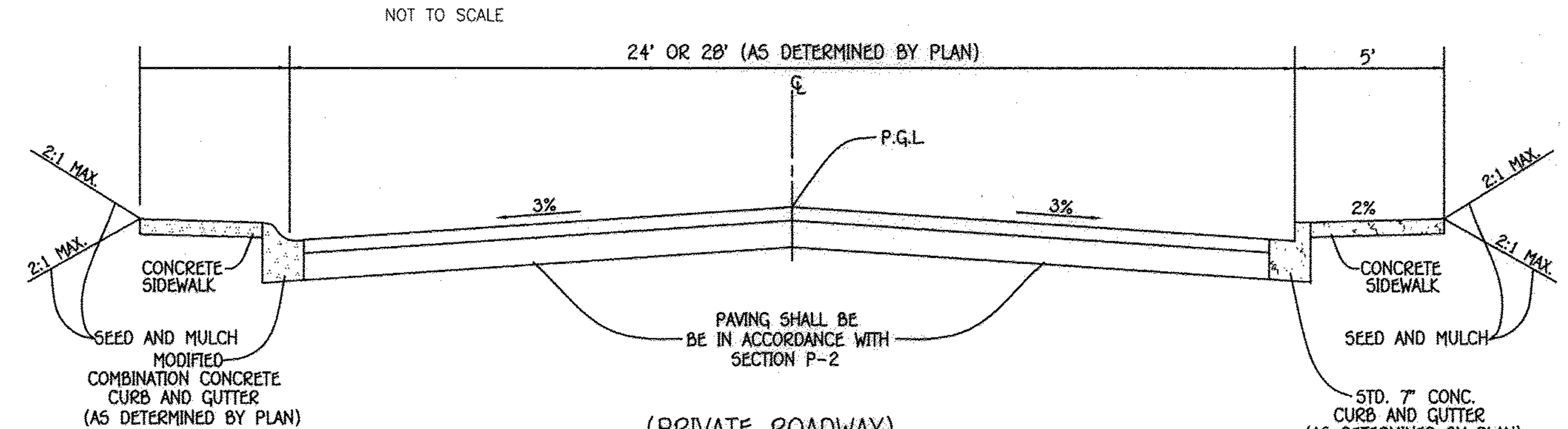
1. Remove grass clippings when mowing areas adjacent to the permeable pavement system.
2. Use deicers moderation. When used, deicers should be non-toxic and organic and can be applied either as calcium magnesium acetate or as pretreated salt.
3. Snow plowing should be done carefully with blades set one-inch higher than normal.
4. Plowed snow piles and snowmelt should not be directed to permeable pavement.
5. The repair or replacement of components must meet the original design specifications.

Quarterly and after every large storm event:

1. Ensure that the permeable pavement surface is free of any obstructions such that may clog or inhibit the system from performing as designed, such as sand, sediment, mulch, leaves, branches and other debris.
2. Inspect the permeable pavement system for standing water in order to verify that the system is dewatering between storm events as required.
3. Inspect cleanouts, sampling ports, underdrain outlets, and structures. Clear any obstructions encountered.
4. Maintain stable ground cover must be maintained in areas draining onto the permeable pavement. Inspect lawn and landscape areas contributing drainage to the system. Repair any erosion immediately.

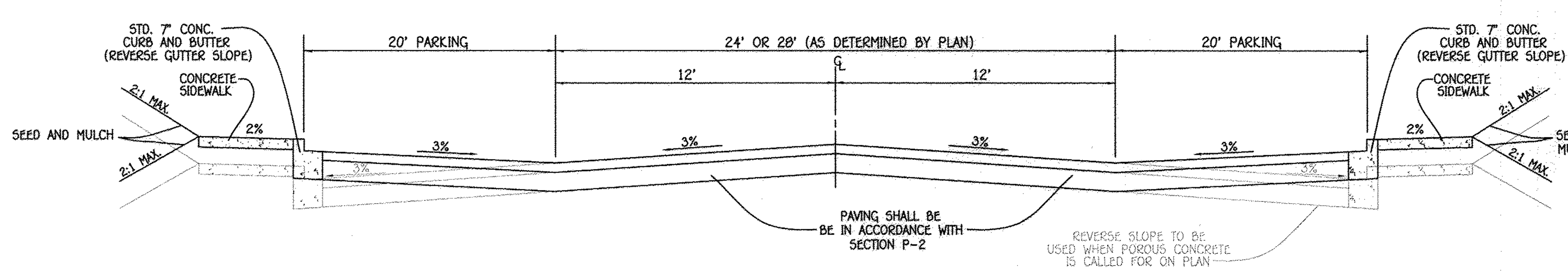
Annually:

1. Vacuum sweep permeable pavement surface with a commercial cleaning unit.
2. Inspect the permeable pavement surface for deterioration.
3. Clean pipes, inlets, underdrains drains, overdrains and other structures within or draining to the permeable pavement system.



(PRIVATE ROADWAY)
TYPICAL ROADWAY SECTION

NO SCALE

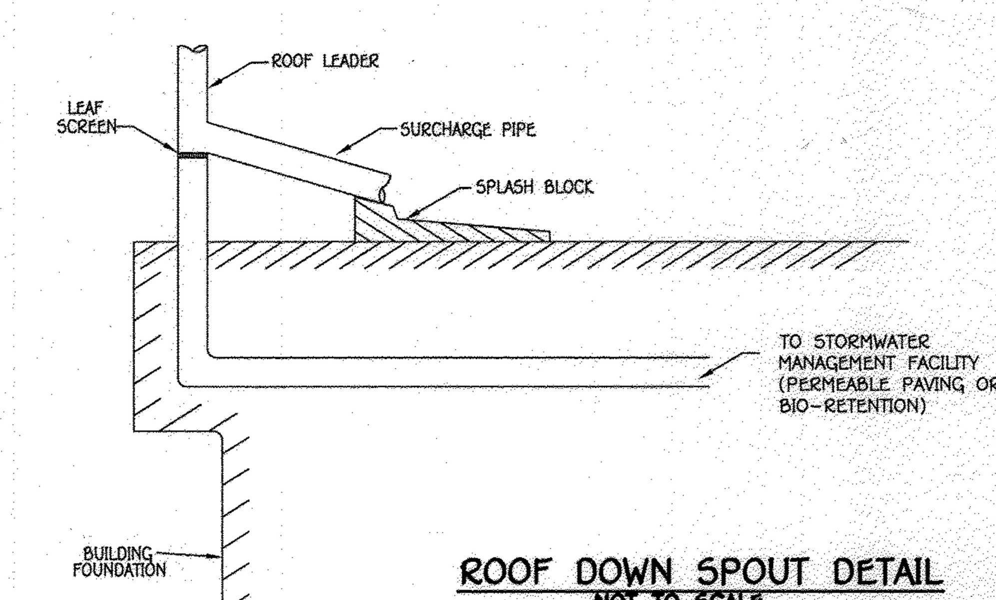


(PRIVATE ROADWAY)
TYPICAL ROADWAY SECTION WITH OFF-STREET PARKING

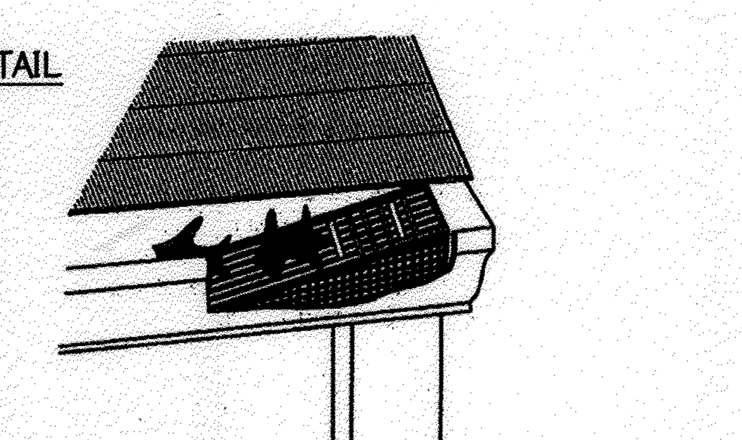
NO SCALE

0' 20' 40' 80'

SCALE: 1" = 20'



ROOF DOWN SPOUT DETAIL
NOT TO SCALE



Gutter Drain Filter (Typical)

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK – 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 – 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING, ADDED PERMEABLE PAVING CHART & PERMEABLE DRIVEWAY DETAIL
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

FRANK J. MANALANSAN 9/23/13
DATE

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — Date 11/6/13

Chief, Division of Land Development — Date 11-05-13

Chief, Development Engineering Division — Date 10-25-13

SUBDIVISION			SECTION/AREA		LOT NOS.
ELLICOTT CROSSING PART TWO			N/A		42 THRU 140
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871-22879 22945-22950 23905-23908	852, 847	MXD-6	24	2nd.	6029

(PERMEABLE PAVEMENT)
STORMWATER MANAGEMENT NOTES, DETAILS & PRIVATE SEWER PROFILE

ELLICOTT CROSSING
PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

SHEET 15 OF 26 SDP-13-004

.10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 Stormwater Management Notes and Details.dwg, SHEET 15, 8/23/2013 3:23:53 PM, 1:1

I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 Stormwater Management Notes and Details.dwg, SHEET 16, 7/29/2013 9:12:50 AM, 1:1

M-1

BORING LOG

FROEHLING & ROBERTSON, INC.
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
"OVER ONE HUNDRED YEARS OF SERVICE"

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-24 (1 of 2) Total Depth: 45.1' Elev: 411 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/22/02 Completed: 5/22/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
409.6	1.0	Stiff sandy SILT, moist, brown (ML)	3-4-5	1.0 / 2.5	9	
407.1	3.5	Grades to trace mica	6-6-7	3.5 / 5.0	13	
404.6	6.0	Stiff sandy SILT, trace mica, brown (ML) - Residuum	5-5-6	6.0 / 7.5	11	
402.1	8.5	Grades to little decomposed rock fragments	6-7-8	8.5 / 10.0	15	
397.1	13.5	Medium dense to very dense silty SAND, little decomposed rock fragments, moist, brown (SM) - Residuum	9-10-13	13.5 / 15.0	23	
392.1	18.5	Grades to dense	18-22-24	18.5 / 20.0	46	
387.1	23.5	Grades to very dense	27-44-35	23.5 / 25.0	79	
			28-37-46	28.5 / 30.0	83	
			17-17-19	33.5 / 35.0	36	
371.1	39.5		10-21-50/6	38.5		

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-2

BORING LOG

FROEHLING & ROBERTSON, INC.
GEOTECHNICAL • ENVIRONMENTAL • MATERIALS
ENGINEERS • LABORATORIES
"OVER ONE HUNDRED YEARS OF SERVICE"

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-24 (2 of 2) Total Depth: 45.1' Elev: 411 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/21/02 Completed: 5/22/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Very dense silty SAND, little decomposed rock fragments, moist, brown (SM) - Soft Weathered Rock		40.5		Dry, Cave In at 40 feet
			50/4	43.5		
365.6	45.0	Very dense SAND AND ROCK FRAGMENTS, trace silt, dry (SW-SM) - Highly Weathered Rock	50/1	45.0		
365.5	45.1	Auger Refusal at 45.1 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-3

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-18 (1 of 1) Total Depth: 25.0' Elev: 403 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/3/02 Completed: 6/3/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
402.0	1.0	Stiff sandy CLAY, trace mica and rock fragments, moist, brown (CL)	4-3-4	1.0 / 2.5	7	
399.5	3.5	Medium dense silty SAND, trace gravel and clay, damp, gray (SM-SC)	10-12-12	3.5 / 5.0	24	
397.0	6.0	Grades to trace rock fragments, tan	8-9-13	6.0 / 7.5	22	
394.5	8.5	Grades to trace mica, decomposed rock fragments	12-14-14	8.5 / 10.0	28	
			12-12-20	13.5 / 15.0	32	
			20-22-30	18.5 / 20.0	52	Dry, Cave-In at 18.9 feet
			30-40-50	23.5 / 25.0	50	
378.0	25.0	Boring Terminated at 25 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-3

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-26 (1 of 1) Total Depth: 5.0' Elev: 376 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/3/02 Completed: 6/3/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
375.3	1.0	Stiff sandy SILT, trace mica, moist, brown (ML)	4-6-7	1.0 / 2.5	13	Dry, Cave In at 2.1 feet
372.8	3.5	Grades to very stiff, little rock fragments	8-8-9	3.5 / 5.0	17	
371.3	5.0	Boring Terminated at 5 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-3

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: I-10 (1 of 1) Total Depth: 20.0' Elev: 392 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/27/02 Completed: 6/27/02 Driller: England

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
391.1	0.4	Surficial Soil; Medium stiff SILT, trace sand and mica, damp, brown (ML)	2-2-5	0.0	7	
389.5	2.0	Stiff silty SAND to sandy SILT, trace weathered rock fragments, mica, damp, brown (SM-ML)	5-5-8	1.5 / 2.0	13	
387.5	4.0	Grades to without rock fragments, damp to moist	2-2-5	3.5 / 4.0	7	
385.5	6.0	Very stiff sandy SILT to silty sand, trace rock fragments, mica, damp, brown (SM-ML) - Residuum	6-12-16	5.5 / 6.0	28	
383.5	8.0	Dense to very dense silty SAND, little rock fragments and mica, dry, brown (SM) - Residuum	8-20-19	7.5 / 8.0	39	
			18-38-50/4	9.5 / 10.0		
380.5	11.0	Dense to very dense silty SAND, little rock fragments and mica, dry, brown (SM) - Soft Weathered Rock (Boulder?)	48-50/2	11.3 / 12.0 / 12.7		
377.5	14.0	Grades to without rock fragments	8-14-21	14.0	35	
375.5	16.0	Grades to trace rock fragments	18-21-3	15.5 / 16.0	24	Dry, Cave-In at 16 feet
373.5	18.0	Very dense silty SAND (SM) little mica, dry, brown - Soft Weathered Rock	16-50/3	17.5 / 18.0 / 18.8		
371.5	20.0	Boring Terminated at 20 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-4

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: I-8 (1 of 1) Total Depth: 25.5' Elev: 405 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/28/02 Completed: 6/28/02 Driller: Estep

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
404.5	0.5	Surficial Soil; Loose SILT AND SAND (ML-SM) damp, dark brown	3-3-4	0.0	7	
			2-3-7	1.5 / 2.0	10	
401.0	4.0	Loose sandy ROCK FRAGMENTS, trace silt and mica (GP) dry, brown - Residuum	4-2-2	3.5 / 4.0	4	
			4-4-5	5.5 / 6.0	9	
397.0	8.0	Loose SILTY SAND (SM) dry, brown - Residuum	3-2-3	7.5 / 8.0	5	
395.0	10.0	Very dense SILTY SAND AND ROCK FRAGMENTS (GM-SM) damp, brown - Soft Weathered Rock (Boulder?)	44-50/4	9.5 / 10.0 / 10.5		
393.0	12.0	Dense SILT AND SAND with decomposed rock fragments (SM-ML) damp, gray-brown - Residuum	9-22-25	12.0	47	
391.0	14.0	Very dense SILT AND SAND, with decomposed rock fragments (SM-ML) damp, gray-brown - Soft Weathered Rock	33-50/5	13.5 / 14.0 / 14.9		Dry, Cave-In at 14 feet
389.0	16.0	Very dense silty SANG AND ROCK FRAGMENTS (GM-SM) dry, tan, brown and or gray - Soft Weathered Rock	50/2	16.0		
			50/4	18.0		
			50/2	20.0		
			50/2	22.0		
			50/2	24.0		
379.5	25.5	Boring Terminated at 25.5				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-8

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-20 (1 of 1) Total Depth: 35.0' Elev: 395 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/28/02 Completed: 5/28/02 Driller: Estep

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
394.4	0.5	Surficial Soil; Medium stiff sandy SILT, trace mica, moist, red-brown (ML)	3-3-3	1.0 / 2.5	6	
391.4	3.5	Very dense sandy ROCK FRAGMENTS, sand is fine, trace silt, damp, gray (GW-GM) - Residuum	22-30-26	3.5 / 5.0	56	
388.9	6.0	Very stiff sandy SILT, trace rock fragments, moist, brown (ML)	12-12-14	6.0 / 7.5	26	
386.4	8.5	Very dense silty SAND, some rock fragments, moist, brown (SM) - Soft Weathered Rock (Boulder?)	42-50/2	8.5 / 9.2		
381.4	13.5	Very dense silty SAND, some rock fragments, trace mica, moist, brown (SM) - Residuum	11-25-32	13.5 / 15.0	57	
376.4	18.5	Hard sandy SILT, some rock fragments, damp, brown (ML-SM) - Soft Weathered Rock	50/2	18.5		
						Dry, Cave-In at 22 feet
371.4	23.5	Grades to some decomposed rock fragments	50/6	23.5		
366.4	28.5	Grades to little gravel, trace mica	50/2	28.5		
361.4	33.5	Hard sandy SILT, some rock fragments, damp, brown (SM-ML) - Hard Weathered Rock	50/1	33.5		
359.9	35.0	Boring Terminated at 35 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-4

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-19 (1 of 1) Total Depth: 25.0' Elev: 408 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/22/02 Completed: 5/22/02 Driller: Estep

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
407.5	0.5	Surficial Soil; Medium stiff sandy SILT, some rock fragments, moist, brown (ML)	2-3-4	1.0 / 2.5	7	
404.5	3.5	Medium dense silty SAND, some rock fragments, little mica, damp, dark brown (SM) - Residuum	7-11-17	3.5 / 5.0	28	
402.0	6.0	Very dense ROCK FRAGMENTS, little fine sand, trace silt, damp, gray (GW-GM) - Residuum	36-44-30	6.0 / 7.5	74	
			14-20-32	8.5 / 10.0	52	Dry
394.5	13.5	Very dense silty SAND, trace gravel, damp, gray-brown (SM) - Soft Weathered Rock	50/5	13.5		
			50/2	18.5		
383.0	25.0	Very dense silty SAND, trace gravel, damp, gray-brown (SM) - Hard Weathered Rock; Auger Refusal at 25 feet	50/1	23.5		

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-6

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-29 (1 of 1) Total Depth: 14.3' Elev: 391 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/4/02 Completed: 6/4/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
389.8	1.0	Medium stiff sandy SILT, trace mica, moist, brown (ML)	3-3-4	1.0 / 2.5	7	
387.3	3.5	Grades to little gravel, some rock fragments	6-6-5	3.5 / 5.0	11	
384.8	6.0	Dense silty SAND, and decomposed rock, damp, brown (SM) - Residuum	16-22-18	6.0 / 7.5	40	
382.3	8.5	Very dense silty SAND and decomposed rock fragments, damp, brown (SM) - Soft Weathered Rock	26-50/6	8.5 / 9.5		Dry, Cave In at 10.7 feet
			35-50/4	13.5 / 14.0		
376.5	14.3	Boring Terminated at 14.3 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-7

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-28 (1 of 1) Total Depth: 18.8' Elev: 398 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/3/02 Completed: 6/3/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
397.0	0.8	Medium dense clayey SAND, damp, little rock fragments (SC) - Residuum	4-8-8	1.0 / 2.5	16	
394.3	3.5	Medium dense SAND, little silt and rock fragments, trace roots, dry, brown (SP-SM) - Residuum	10-12-11	3.5 / 5.0	23	
391.8	6.0	Very dense silty SAND, dry, brown (SM) - Residuum	13-20-33	6.0 / 7.5	53	
389.3	8.5	Very dense silty SAND, dry, gray (SM) - Soft Weathered Rock	41-50/5	8.5 / 9.4		
			50/6	13.5		Dry, Cave-In at 14.5 feet
			50/4	15.5		
379.0	18.8	Boring Terminated at 18.8 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-7

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-27 (1 of 1) Total Depth: 5.0' Elev: 370 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 6/3/02 Completed: 6/3/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
		Surficial Soil				
368.8	1.0	Medium stiff SILT, trace mica, moist, brown (ML)	5-5-6	1.0 / 2.5	11	Dry, Cave-In at 2.9 feet
366.3	3.5	Medium dense silty SAND, trace mica and rock fragments, moist, red-brown (SM)	10-11-13	3.5 / 5.0	24	
364.8	5.0	Boring Terminated at 5 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-9

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-30 (1 of 1) Total Depth: 25.0' Elev: 392 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/31/02 Completed: 5/31/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
391.2	0.5	Surficial Soil; Medium stiff sandy SILT, some mica, damp, brown (ML)	3-3-3	1.0 / 2.5	6	
388.2	3.5	Grades to little rock fragments	4-5-5	3.5 / 5.0	10	
385.7	6.0	Loose silty SAND and decomposed rock, moist, tan (SM) - Residuum?	3-5-3	6.0 / 7.5	8	
383.2	8.5	Hard sandy SILT, little mica, trace rock fragments, damp, dark brown (ML) - Soft Weathered Rock (Boulder?)	37-50/6	8.5 / 9.5		
378.2	13.5	Very dense silty SAND, trace clay and mica, dry-damp, gray (SM) - Soft Weathered Rock (Boulder?)	40-50/5	13.5 / 14.4		
373.2	18.5	Very dense silty SAND, trace mica, moist, gray (SM) - Residuum	24-25-27	18.5 / 20.0	52	Dry, Cave-In at 18.5 feet
368.2	23.5	Very dense silty SAND, little decomposed rock fragments, moist, gray (SM) - Residuum	33-44-50/5	23.5 / 24.9		
367.2	24.5	Very dense silty SAND, little decomposed rock fragments, moist, gray (SM) - Soft Weathered Rock				
366.7	25.0	Boring Terminated at 25 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-10

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-31 (1 of 1) Total Depth: 28.8' Elev: 401 ± Location: See Boring Location plan
Type of Boring: HSA Started: 5/31/02 Completed: 5/31/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
400.3	0.6	Surficial Soil; Stiff sandy SILT, some gravel, moist, brown (ML)	4-5-9	1.0 / 2.5	14	
397.4	3.5	Very stiff sandy SILT, some rock fragments, moist, brown (ML) - Residuum	10-13-14	3.5 / 5.0	27	
394.9	6.0	Grades to damp	6-7-9	6.0 / 7.5	16	
392.4	8.5	Grades to moist, trace decomposed rock fragments	5-6-10	8.5 / 10.0	16	
387.4	13.5	Very dense silty SAND, some decomposed rock fragments, moist, gray (SM) - Residuum	40-34-17	13.5 / 15.0	51	
382.4	18.5	Very dense silty SAND, some decomposed rock fragments, moist, gray (SM) - Soft Weathered Rock	35-50/5	18.5 / 19.4		
			50/5	23.5		Dry, Cave-In at 23 feet
372.1	28.8	Boring Terminated at 28.8 feet	50/4	28.5		

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

M-11

BORING LOG

Report No.: C68-090G Date: 7-26-02
Client: Trammell Crow Company
Project: Howard County Gov't Office Campus, Ellicott City, MD
Boring No.: B-33 (1 of 1) Total Depth: 24.0' Elev: 401 ± Location: See Boring Location Plan
Type of Boring: HSA Started: 5/30/02 Completed: 5/30/02 Driller: Foster

Elevation	Depth	DESCRIPTION OF MATERIALS (Classification)	* Sample Blows	Sample Depth (feet)	N Value (blows/ft)	REMARKS
400.3	0.7	Surficial Soil; Loose clayey SAND, trace silt and mica, damp, brown-red (SC)	5-5-5	1.0 / 2.5	10	
397.5	3.5	Loose clayey SAND to silty SAND and decomposed rock fragments, trace mica, damp, brown-red-tan (SM-SC)	4-5-7	3.5 / 5.0	12	
395.0	6.0	Medium stiff sandy CLAY, little decomposed rock fragments, damp, brown (SC)	5-4-3	6.0 / 7.5	7	
392.5	8.5	Medium dense silty SAND, dry-damp, light brown (SM) - Residuum	8-9-13	8.5 / 10.0	22	
387.5	13.5	Grades to dense, little decomposed rock fragments	22-19-19	13.5 / 15.0	38	
382.5	18.5	Grades to very dense, damp-moist	23-33-28	18.5 / 20.0	61	Dry, Cave-In at 18.3 feet
377.5	23.5	Very dense silty SAND, trace rock fragments, damp-moist, light brown (SM) - Soft Weathered Rock	50/6	23.5		
377.0	24.0	Boring Terminated at 24 feet				

*Number of blows required for a 140 lb hammer dropping 30" to drive 2" O.D., 1.375" I.D. sampler a total of 18 inches in three 6" increments. The sum of the second and third increments of penetration is termed the standard penetration resistance, N.

0' 20' 40' 80'

SCALE: 1" = 20'

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/12/16	REVISED TITLE BLOCK
9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

FRANK J. MANALANSAN 9/23/13 DATE

STATE OF MARYLAND FRANK JOHN MANALANSAN No. 21476 PROFESSIONAL LAND SURVEYOR

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning 11/13/13 Date

Chief, Division of Land Development 11-08-13 Date

Chief, Development Engineering Division 10.25.13 Date

SUBDIVISION				SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO				N/A	42 THRU 140
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871-22875, 22945-22950, 23905-23908	852, 847	MXD-6	24	2nd.	6029

SOIL BORINGS

ELLICOTT CROSSING

PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

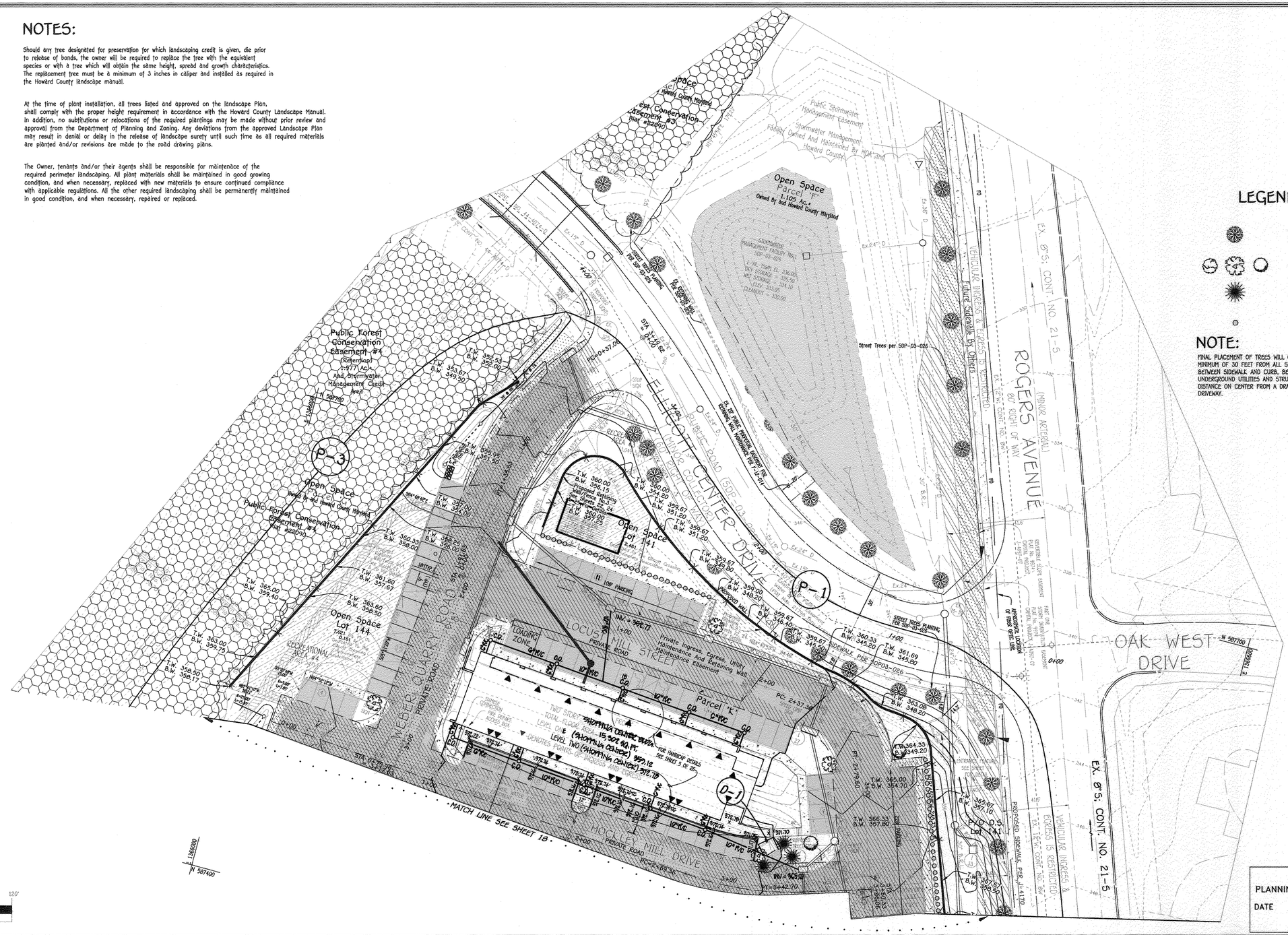
 SDP-13-004

NOTES:

Should any tree designated for preservation for which landscaping credit is given, die prior to release of bonds, the owner will be required to replace the tree with the equivalent species or with a tree which will obtain the same height, spread and growth characteristics. The replacement tree must be a minimum of 3 inches in caliper and installed as required in the Howard County landscape manual.

At the time of plant installation, all trees listed and approved on the landscape Plan, shall comply with the proper height requirement in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocations of the required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviations from the approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to the road drawing plans.

The Owner, tenants and/or their agents shall be responsible for maintenace of the required perimeter landscaping. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All the other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.



LEGEND

- EXISTING STREET TREE (SDP-03-026)
- PROPOSED SHADE TREE
- PROPOSED EVERGREEN TREE
- PROPOSED SHRUB

NOTE:

FINAL PLACEMENT OF TREES WILL OCCUR IN THE FIELD AND BE PLACED A MINIMUM OF 30 FEET FROM ALL SIGNS AND INTERSECTIONS WHEN PLANTED BETWEEN SIDEWALK AND CURB, BE LOCATED WITH CONSIDERATION OF UNDERGROUND UTILITIES AND STRUCTURES AND MAINTAIN A MINIMUM 5 FEET DISTANCE ON CENTER FROM A DRAIN INLET STRUCTURE AND 10 FEET FROM A DRIVEWAY.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING, CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
2/12/16	REVISED TITLE BLOCK
9/16/15	REVISED BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/7/19	REVISED PARKING
9/14/19	REVISED BUILDING USAGE FROM RETAIL TO COMMERCIAL
7/02/14	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

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FRANK J. [illegible] — 9/23/13 DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 11/18/13
Chief, Division of Land Development — Date 11-08-13
Chief, Development Engineering Division — Date 10-25-13

SUBDIVISION			SECTION/AREA		LOT NOS.
ELLICOTT CROSSING PART TWO			N/A		142 THRU 160
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22821 - 22875 22945 - 22950 23103 - 23108	852, 847	MXD-6	24	2nd.	6029

LANDSCAPE PLAN

ELLICOTT CROSSING

PART TWO
LOTS 142 THRU 160, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

SHEET 17 OF 26 SDP-13-004

I:\2010\10040\dwg\Phase 2 SDP\10040-3001 SDP - Phase 2 Landscape And Street Trees.dwg, LANDSCAPE SHEET 17, 9/23/2013 2:32:43 PM, 1:1

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

REPLACEMENT SHEET

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
10/20/10	REVISE UNITS BE THRU 86, FROM MOZART TO STRAUSS
2/12/12	REVISE TITLE BLOCK
7/16/13	REVISE TITLE BLOCK TO REFLECT SHOPPING CENTER
5/21/13	ADD LANDSCAPE WALL LANDSCAPE WALL DETAILS AND REVISED 5' WALDEN PATH;
5/14/13	REVISE UNDERLYING LOTS NO. 87, 88, 89 AND 90 AND TITLE BLOCK TO REFLECT
7/22/14	ADDED 5' WALDEN PATH, REVISED LOCATION OF PROPOSED SHOPPING CENTER BUILDING & REVISED LOT NO. 87, 88, 89 AND 90 AND TITLE BLOCK TO REFLECT LOTS 141-142-143 & P/O 141 TO 141

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER AND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21402, EXPIRATION DATE: 7/14/15.

FRANK M. FISHER, JR. — 7/30/14 DATE

OWNERS

3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER

M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director – Department of Planning and Zoning — 8/8/14 Date

Chief, Division of Land Development — 8/6/14 Date

Chief, Development Engineering Division — 8/4/14 Date

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22345-22350 22371-22375 10909-10909	852, 847	MXD-6	24	2nd.	6029

LANDSCAPE PLAN

ELLICOTT CROSSING
PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

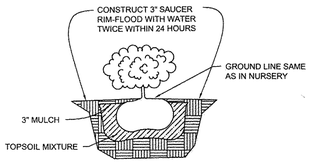
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID No.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: 1" = 30' DATE: AUGUST, 2014

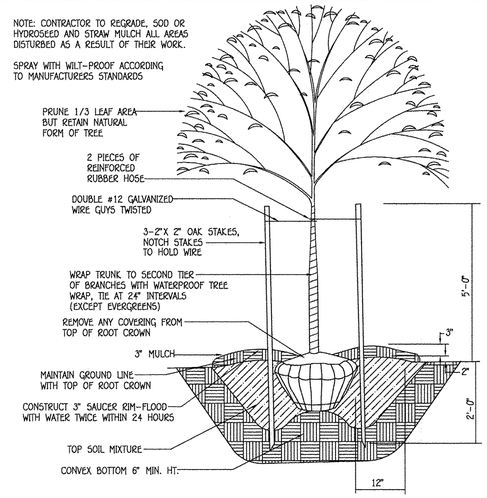
SHEET 10 OF 26 SDP-13-004

SCHEDULE A
PERIMETER LANDSCAPE EDGE

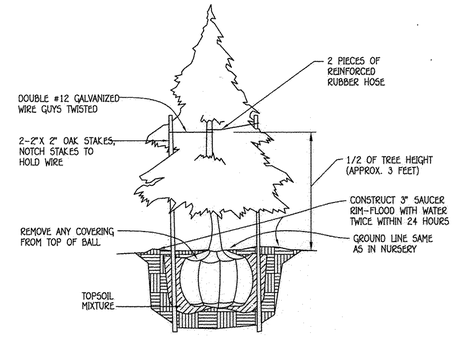
PERIMETER	P-1	P-1	P-2	P-3	P-3	D-1	B-1	B-2	B-3
CATEGORY	ADJACENT TO ROADWAY	PARKING TO ROADWAY	SFA TO SFD	RES. TO NON-RES.	SFA TO SFA	DUMPSTER PAD	SFA TO PARKING	SFA TO PARKING	SFA TO PARKING
LANDSCAPE TYPE	B	E	C	C	B	D	E	E	E
LINEAR FEET OR ROADWAY FRONTAGE/PERIMETER	743'	336'	775'	447'	431'	26'	104'	80'	291'
CREDIT FOR EXISTING VEGETATION (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	–	–	–	100% EX. FOREST	100% F.C.E.	–	–	–	–
CREDIT FOR WALL, FENCE OR BERM (YES, NO LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	459' WALL	336' WALL	153' WALL	–	–	–	–	–	–
NUMBER OF PLANTS REQUIRED SHADE TREES EVERGREEN TREES SHRUBS	6 7 –	0 – 84	16 31 –	0 0 –	0 0 –	1 3 –	3 – 26	2 – 20	7 – 73
NUMBER OF PLANTS PROVIDED SHADE TREES EVERGREEN TREES SHRUBS	6 7 –	0 – 84	16 31 –	0 0 –	0 0 –	1 3 –	3 – 26	2 – 20	7 – 73



SHRUB PLANTING DETAIL



TREE PLANTING DETAIL
NOT TO SCALE



EVERGREEN PLANTING DETAIL
NOT TO SCALE

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

	SINGLE FAMILY ATTACHED
NUMBER OF PARKING SPACES	40
NUMBER OF TREES REQUIRED (1:10)	4
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTE)	4 –

SCHEDULE B
PARKING LOT INTERNAL LANDSCAPING

	~~SHOPPING CENTER~~ BUILDING
NUMBER OF PARKING SPACES	81
NUMBER OF TREES REQUIRED (1:20)	4
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTE)	4 –

SCHEDULE C
RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

	SINGLE FAMILY ATTACHED
NUMBER OF DWELLING UNITS	99
NUMBER OF TREES REQUIRED (1:DU SFA) (1:3 DU APTS)	99
NUMBER OF TREES PROVIDED SHADE TREES OTHER TREES (2:1 SUBSTITUTE)	89 20 *

* EVERGREEN TREES HAVE BEEN PROVIDED FOR ADDITIONAL BUFFERING ALONG THE REAR OF UNITS 70-75

ALTERNATIVE COMPLIANCE TO THE 15' SFA/PARKING LANDSCAPE BUFFER HAS BEEN APPROVED BY DPZ.

LANDSCAPING PLANT LIST (SCHEDULE A, B & C)

SYMBOL	QUANTITY	BOTANICAL AND COMMON NAME	SIZE	COMMENTS
	78	ACER RUBRUM 'ARMSTRONG' RED MAPLE	2 1/2-3" CAL.	
	54	PRUNUS SARGENTII SARGENT CHERRY	2 1/2-3" CAL.	
	61	ILEX OPACA AMERICAN HOLLY	5'-6' HT.	
	203	ABELIA X GRANDIFLORA GLOSSY ABELIA	18" - 24" SP.	

NOTE:

PERIMETER, PARKING, SFA UNIT AND TRASH PAD LANDSCAPING SHALL BE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE LANDSCAPE MANUAL. SURETY IN THE AMOUNT OF $54,840.00 FOR 132 SHADE TREES, 61 EVERGREEN TREES AND 203 SHRUBS SHALL BE POSTED WITH THE DEVELOPERS AGREEMENT FOR SDP-13-004.

PLANTING SPECIFICATIONS

PLANTS, RELATED MATERIAL, AND OPERATIONS SHALL MEET THE DETAILED DESCRIPTION AS GIVEN ON THE PLANS AND AS DESCRIBED HEREIN.

ALL PLANT MATERIAL, UNLESS OTHERWISE SPECIFIED, SHALL BE NURSERY GROWN, UNIFORMLY BRANCHED, HAVE A VIGOROUS ROOT SYSTEM, AND SHALL CONFORM TO THE SPECIES, SIZE, ROOT AND SHAPE SHOWN ON THE PLANT LIST AND THE AMERICAN ASSOCIATION OF NURSERYMEN (AAN) STANDARDS. PLANT MATERIAL SHALL BE HEALTHY, VIGOROUS, FREE FROM DEFECTS, DECAY, DISFIGURING ROOTS, SUN SCALD INJURIES, ABRASIONS OF THE BARK, PLANT DISEASE, INSECT PEST EGGS, BORERS AND ALL FORMS OF INSECT INFESTATIONS OR OBJECTIONABLE DISFIGUREMENTS. 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 NOT BE ACCEPTED. ALL PLANTS SHALL BE FRESHLY DUG; NO HEALED-IN PLANTS FROM COLD STORAGE WILL BE ACCEPTED.

UNLESS OTHERWISE SPECIFIED, ALL GENERAL CONDITIONS, PLANTING OPERATIONS, DETAILS AND PLANTING SPECIFICATION SHALL CONFORM TO "LANDSCAPE SPECIFICATION GUIDELINES FOR BALTIMORE-WASHINGTON METROPOLITAN AREAS", (HEREINAFTER "LANDSCAPE GUIDELINES") APPROVED BY THE LANDSCAPE CONTRACTORS ASSOCIATION OF METROPOLITAN WASHINGTON AND THE POTOMAC CHAPTER OF THE AMERICAN SOCIETY OF LANDSCAPE ARCHITECT, LATEST EDITION, INCLUDING ALL AGENDA.

CONTRACTOR SHALL BE REQUIRED TO GUARANTEE ALL PLANT MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE IN ACCORDANCE WITH THE APPROPRIATE SECTION OF THE LANDSCAPE GUIDELINES. CONTRACTOR'S ATTENTION IS DIRECTED TO THE MAINTENANCE REQUIREMENTS FOUND WITHIN THE ONE YEAR SPECIFICATIONS INCLUDING WATERING AND REPLACEMENT OF SPECIFIED PLANT MATERIAL.

CONTRACTOR SHALL BE RESPONSIBLE FOR NOTIFYING UTILITY COMPANIES, UTILITY CONTRACTORS AND "MISS UTILITY" A MINIMUM OF 48 HOURS PRIOR TO BEGINNING ANY WORK. CONTRACTOR MAY MAKE MINOR ADJUSTMENTS IN SPACING AND LOCATION OF PLANT MATERIAL TO AVOID CONFLICTS WITH UTILITIES. DAMAGE TO EXISTING STRUCTURE AND UTILITIES SHALL BE REPAIRED AT THE EXPENSE OF THE CONTRACTOR.

PROTECTION OF EXISTING VEGETATION TO REMAIN SHALL BE ACCOMPLISHED BY THE TEMPORARY INSTALLATION OF 4 FOOT HIGH SNOW FENCE OR BLAZE ORANGE SAFETY FENCE AT THE DRIP LINE.

CONTRACTOR IS RESPONSIBLE FOR INSTALLING ALL MATERIAL IN THE PROPER PLANTING SEASON FOR EACH PLANT TYPE. ALL PLANTING IS TO BE COMPLETED WITHIN THE GROWING SEASON OF COMPLETION OF SITE CONSTRUCTION.

BID SHALL BE BASE ON ACTUAL SITE CONDITIONS. NO EXTRA PAYMENT SHALL BE MADE FOR WORK ARISING FROM SITE CONDITIONS DIFFERING FROM THOSE INDICATED ON DRAWINGS AND SPECIFICATIONS

PLANT QUANTITIES ARE PROVIDED FOR THE CONVENIENCE OF THE CONTRACTOR-ONLY. IF DISCREPANCIES EXIST BETWEEN QUANTITIES SHOWN ON PLAN AND THOSE SHOWN ON THE PLANT LIST, THE QUANTITIES ON THE PLAN TAKE PRECEDENCE.

ALL SHRUBS SHALL BE PLANTED IN CONTINUOUS TRENCHES OR PREPARED PLANTING BEDS AND MULCHED WITH COMPOSTED HARDWOOD MULCH AS DETAILS AND SPECIFIED EXCEPT WHERE NOTED ON PLANS.

POSITIVE DRAINAGE SHALL BE MAINTAINED IN PLANTING BEDS 2 PERCENT SLOPE).

PLANTING MIX SHALL BE AS FOLLOWS: DECIDUOUS PLANTS - TWO PARTS TOPSOIL, ONE PART WELL-ROTTED COW OR HORSE MANURE. ADD 3 LBS. OF STANDARD FERTILIZER PER CUBIC YARD OF PLANTING MIX. EVERGREEN PLANTS - TWO PARTS TOPSOIL, ONE PART HUMUS OR OTHER APPROVED ORGANIC MATERIAL. ADD 3 LBS. OF EVERGREEN (ACIDIC) FERTILIZER PER CUBIC YARD OF PLANTING MIX. TOPSOIL SHALL CONFORM TO THE LANDSCAPE GUIDELINES.

WEED CONTROL: INCORPORATE A PRE-EMERGENT HERBICIDE INTO THE PLANTING BED FOLLOWING RECOMMENDED RATES ON THE LABEL. CAUTION: BE SURE TO CAREFULLY CHECK THE CHEMICAL USED TO ASSURE ITS ADAPTABILITY TO THE SPECIFIC GROUND COVER TO BE TREATED.

ALL AREAS WITHIN CONTRACT LIMITS DISTURBED DURING OR PRIOR TO CONSTRUCTION NOT DESIGNATED TO RECEIVE PLANTS AND MULCH SHALL BE FINE GRADED AND SEEDED.

THIS PLAN IS INTENDED FOR LANDSCAPE USE ONLY. SEE OTHER PLAN SHEETS FOR MORE INFORMATION ON GRADING, SEDIMENT CONTROL, LAYOUT, ETC.

LANDSCAPE DEVELOPER'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.

Megan Reuwer — 1-29-13 Date

This plan has been prepared in accordance with the provision of Section 16.124 of the Howard County Code and Landscape Manual. Financial surety for the required landscaping will be posted as part of the developer's agreement.

APPROVED
PLANNING BOARD OF HOWARD COUNTY
DATE 4/15/13

0' 30' 60' 120'
SCALE: 1" = 30'

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

DATE	DESCRIPTION
9/13/13	REVISED TITLE BLOCK.
8/16/13	REVISED TITLE BLOCK TO REFLECT ~~SHOPPING CENTER~~.
8/14/13	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
7/22/13	ADDED BUILDINGS FOR THIS SECTION

REVISION BLOCK

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21476, EXPIRATION DATE: 7/14/15.

Frank J. Mascari IV — 7/23/13 Date
FRANK J. MASCARI IV

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4615 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — 10/18/13 Date

Chief, Division of Land Development — 11-08-13 Date

Chief, Development Engineering Division — 10-25-13 Date

SUBDIVISION	SECTION/AREA	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	142 THRU 160

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22871 - 22876 22945 - 22950 22905 - 22908	852, 847	MXD-6	24	2nd.	6029

LANDSCAPE NOTES AND DETAILS

ELLICOTT CROSSING
PART TWO
LOTS 142 THRU 160, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO
TAX MAP No.: 24 GRID Nos.: 6, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2013

SHEET 19 OF 26 SDP-13-004

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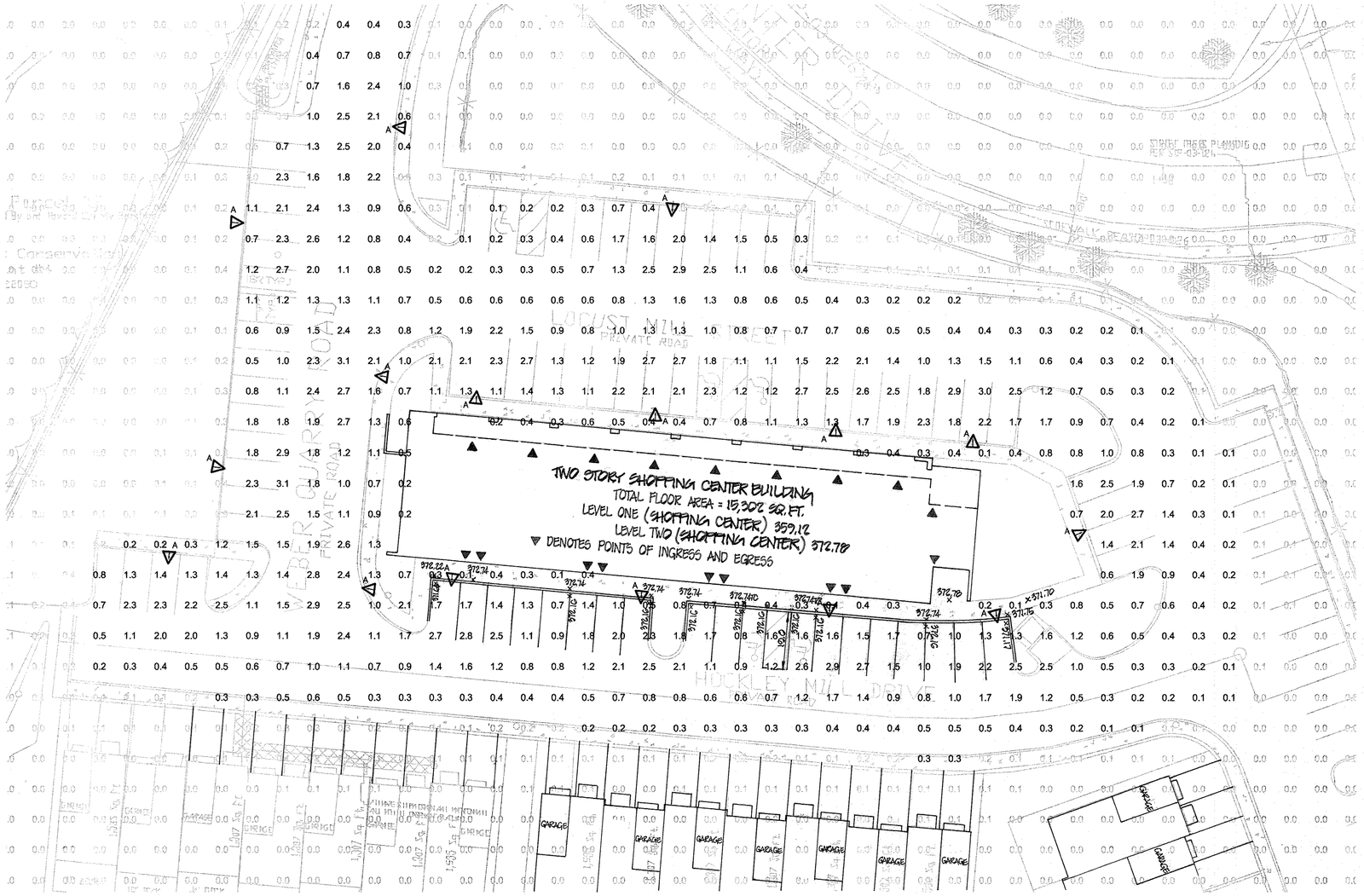


SITE PLAN – PHOTOMETRICS

SCALE: 1" = 20'

STATISTICS					
Description	Avg	Max	Min	Max/Min	Avg/Min
Stat Zone # 2	1.1 fc	3.1 fc	0.1 fc	31.0:1	11.0:1

LEGEND

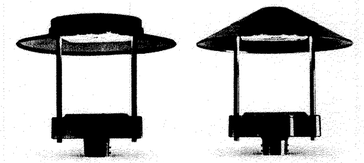
⚠ POST TOP LIGHT FIXTURE, MOUNTED ON 16' STRAIGHT ROUND POLE. FIXTURE SHALL BE AIMED IN DIRECTION THE ARROW IS POINTING.

GE
Lighting Solutions

TYPE A

Evolve™ LED Post Top

Contemporary Twin Support Post Top (EPTC)



imagination at work

Product Features

The new Evolve™ LED Contemporary Twin Support Post Top (EPTC) offers energy efficiency and quality of light in your choice of two distinct, modern styles. The advanced LED optical system provides improved horizontal and vertical uniformity, no cool glare and improved lighting control. GE's unique optical ring technology effectively aims the light where you need it, while eliminating the unsightly shadow circles commonly seen under other LED post top fixtures.

The EPTC can yield up to a 60-percent reduction in system energy compared with standard HID systems, depending on applications. This reliable system operates well in cold temperatures and offers more than 11 years of service life to reduce maintenance frequency and expense, based on a 50,000 hour life at 17 hours of operation per day (L85 Rating).

Applications

- Roadway, site, area, and general lighting utilizing advanced LED optical system providing high uniformity, excellent vertical illuminance, reduced offsite visibility, and reduced on-site glare.

Housing

- Base: die-cast aluminum housing.
- Top Upper Housing: one-piece cast aluminum, available in two distinct contemporary designs.
- The upper fixture design incorporates the heat sink directly into the unit ensuring maximum heat transfer and long LED life.
- Meets 3G vibration per ANSI C136.31-2001, For 3G rating contact manufacturer

LED & Optical Assembly

- Structured LED array for optimized roadway, walkway, and campus photometric distribution.
- Evolve light engine consisting of nested concentric directional reflectors designed to optimize application efficiency and minimize glare.
- Utilizes high brightness LEDs, 65 CRI or 4100K typical.
- LM-79 tests and reports are performed in accordance with IESNA standards.

Lumen Maintenance

- System rating is L85 at 50,000 hours. Contact manufacturer for L rating (Lumen Depreciation) beyond 50,000 hours.

Ratings

- cULus listed, suitable for wet locations.
- IP 66 rated optical enclosure per ANSI C136.25-2009.
- Temperature rated at -40° to 50°C.

Mounting

- Post top mounting 3-inch (76mm) OD held in place with six square head set screws.

Finish

- Corrosion resistant polyester powder painted, minimum 2.0 mil thickness.
- Standard colors: Black, Gray and Dark Bronze.
- RAL & custom colors available.

Electrical

- 120-277 volt and 347-480 volt available.
- System power factor is >90% and THD <20%.
- Class 'A' audible sound rating.
- Integral surge protection:
  - For 120-277VAC per IEEE/ANSI C62.41-1991, 4kV/2kA Location Category B2 (120 Events).
  - For 347-480VAC per IEEE/ANSI C62.41-1991, 4kV/2kA Location Category B2 (120 Events).
- EMI, Title 47 CFR Part 15 Class A.
- Photo Electric Sensors (PE) available for all voltages.

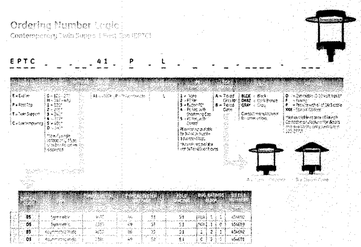
Warranty

- 5-year limited system warranty standard.

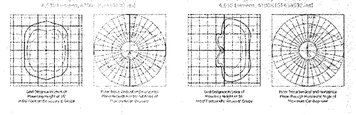
Ordering Number Logic

Contemporary Twin Support Post Top (EPTC)

EPTC - _ _ - _ _ - 41 - P - L - _ _ - _ _ _ _ - _ _ _

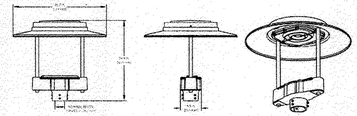


Photometrics

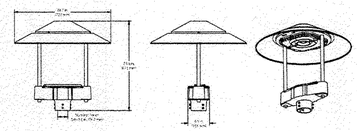


Product Dimensions

Tapered Circular Tenon Mounting



Tapered Cone Top Housing



- Approximate Net Weight: 452 lbs (434.51 kgs)
- Suggested Mounting Height: 8-16 ft. (2.5-5 m)
- Effective Projected Area (EPA): 3.17 sq. ft. max (0.30 sq. m)

GE Lighting Solutions • 1-888-MY-GE-LED • www.gelightingsolutions.com

GE Lighting, a business of the General Electric Company, by its operating unit GE Consumer & Industrial, Nela Park, East Cleveland, Ohio 44112
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H-EPTC-0001.Rev 1009.US

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLICOTT CITY, MARYLAND 21042
(410) 461 - 2855

CENTURY ENGINEERING
CONSULTING ENGINEERS – PLANNERS
10710 GILROY ROAD
HUNT VALLEY, MD 21031
Phone: 443-589-2400 Fax: 443-589-2401

DATE	DESCRIPTION REVISION BLOCK
9/12/16	REVISED TITLE BLOCK
9/10/13	REVISED BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
5/14/13	REVISED BUILDING USAGE FROM RETAIL TO COMMERCIAL
7/22/14	ADDED BUILDING FOR THIS SECTION

STATE OF MARYLAND · CHRISTOPHER T. KELLY · No. 27414 · REGISTERED PROFESSIONAL ENGINEER

"Professional Certification. I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 27414 Expiration Date: 07/18/2014

OWNERS
3330 ROGERS AVENUE LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Director - Department of Planning and Zoning — Date 11/13/13

Chief, Division of Land Development — Date 10-8-13

Chief, Development Engineering Division — Date 10-25-13

SUBDIVISION			SECTION/AREA		LOT NOS.
ELLICOTT CROSSING PART TWO			N/A		142 THRU 160
PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELEC. DIST.	CENSUS TR.
22671 - 22679 22945 - 22950 23005 - 23008	852, 847	MXD-6	24	2nd.	6029

ELECTRICAL SITE PLAN – PHOTOMETRICS

ELLICOTT CROSSING

PART TWO

LOTS 142 THRU 160, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'

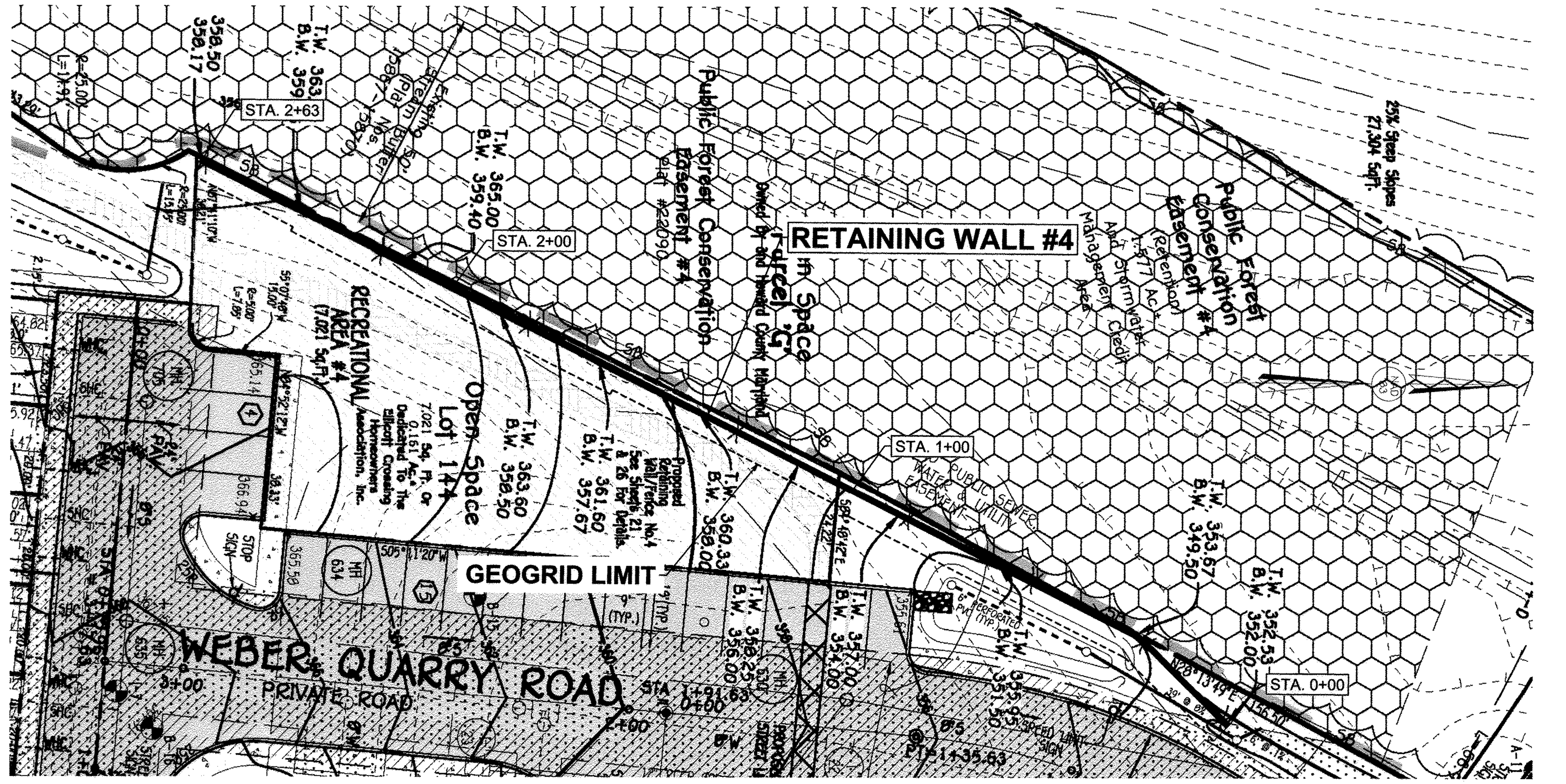
SINGLE FAMILY ATTACHED HOUSING,
TWO STORY SHOPPING CENTER BUILDING AND GAZEBO

TAX MAP No.: 24 GRID Nos.: 5, 1 PARCEL Nos.: 852, 847
2nd ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: AUGUST, 2014

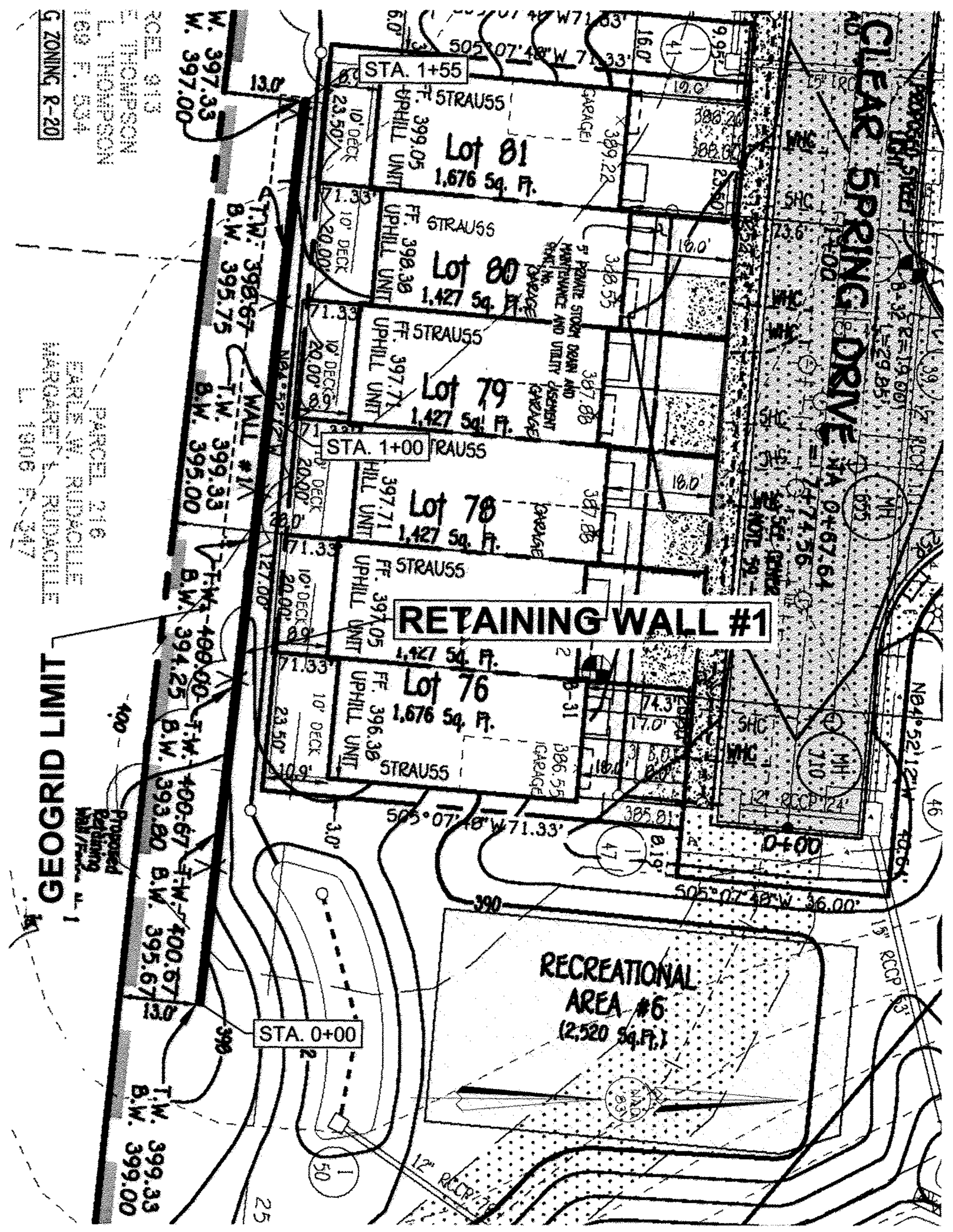
SHEET 20 OF 26

E-1

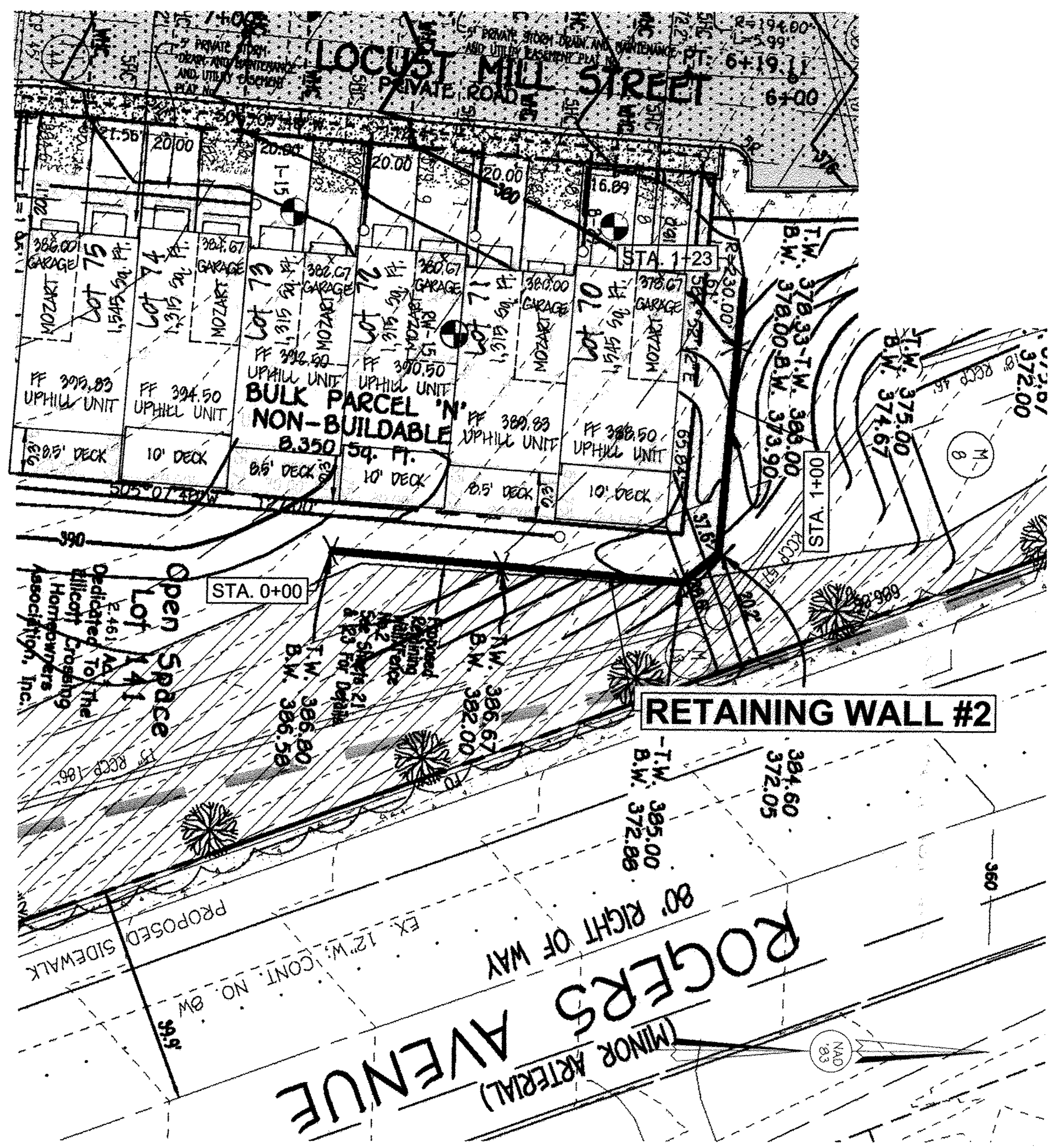
\\Terra\vol1\AJ Project Files\2011\11351A Ellicott Mills Overlook Walls\wall design dwgs & Calcs\DESIGN DWGS\Design Drawings - East Walls_V3.dwg Sep 16, 2013 - 12:45pm



WALL #4 LOCATION PLAN
1" = 20'



WALL #1 LOCATION PLAN
1" = 20'



WALL #2 LOCATION PLAN
1" = 20'

SPECIFICATIONS

MODULAR CONCRETE BLOCK RETAINING WALL

PART 1: GENERAL

1.01 Description

A. Work shall consist of furnishing and construction of a Modular Retaining Wall System in accordance with these specifications and in reasonably close conformity with the lines, grades, design, and dimensions shown on the plans.

B. Work includes preparing foundation soil, furnishing and installing leveling pad, unit drainage fill and backfill to the lines and grades shown on the construction drawings.

C. Work includes furnishing and installing geogrid soil reinforcement of the type, size, location, and lengths designated on the construction drawings.

1.02 Delivery, Storage and Handling

A. Contractor shall check all materials upon delivery to assure that the proper type, grade, color, and certification has been received.

B. Contractor shall protect all materials from damage due to job site conditions and in accordance with manufacturer's recommendations. Damaged materials shall not be incorporated into the work.

PART 2: PRODUCTS

2.01 Modular Concrete Retaining Wall Units

A. Modular concrete units shall conform to the following architectural requirements: face color - color may be specified by the Owner.

face finish - sculptured rock face in angular tri-planer or flat configuration. Other face finishes will not be allowed without written approval of Owner.

bond configuration - running with bonds nominally located at midpoint vertically adjacent units, in both straight and curved alignments.

exposed surfaces of units shall be free of chips, cracks or other imperfections when viewed from a distance of 10 feet under diffused lighting.

B. Modular concrete materials shall conform to the requirements of ASTM C1372 - Standard Specifications for Segmental Retaining Wall Units.

C. Modular concrete units shall conform to the following structural and geometric requirements measured in accordance with appropriate references:

compressive strength = 3000 psi minimum; absorption = 8% maximum (6% in northern states) for standard weight aggregates;

dimensional tolerances = ±1/8" from nominal unit dimensions not including rough split face, ±1/16"

unit height - top and bottom planes; unit size - 8" (H) x 18" (W) x 12 (D) minimum;

unit weight - 75 lbs/unit minimum for standard weight aggregates;

inter-unit shear strength - 1000 plf minimum at 2 psi normal pressure; at 2 psi normal force.

geogrid/unit peak connection strength - 1000 plf minimum

D. Modular concrete units shall conform to the following constructability requirements: (if applicable)

vertical setback = 1/8"± per course (near vertical) or 1"+ per course per the design;

alignment and grid positioning mechanism - fiberglass pins, two per unit minimum;

maximum horizontal gap between erected units shall be - 1/2 inch.

2.02 Shear Connectors (if applicable)

A. Shear connectors shall be 1/2 inch diameter thermoset isopthalic polyester resin-protruded fiberglass reinforcement rods or equivalent to provide connection between vertically and horizontally adjacent units. Strength of shear connectors between vertical adjacent units shall be applicable over a design temperature of 10 degrees F to + 100 degrees F. B. Shear connectors shall be capable of holding the geogrid in the proper design position during grid pre-tensioning and backfilling.

2.03 Base Leveling Pad Material

A. Material shall consist of a compacted #57 crushed stone base as shown on the construction drawings.

2.04 Unit Drainage Fill

A. Unit drainage fill shall consist of #57crushed stone

2.05 Reinforced Backfill

A. Reinforced backfill shall type SM, be free of debris and meet the following gradation tested in accordance with ASTM D-422 and meet other properties shown on the plan:

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

Plasticity Index (PI) <10 and Liquid Limit <35 per ASTM D-4318.

B. Material can be site excavated soils where the above requirements can be met. Unsuitable soils for backfill (high plastic clays or organic soils) shall not be used in the reinforced soil mass.

2.06 Geogrid Soil Reinforcement

A. Geosynthetic reinforcement shall consist of geogrids manufactured specifically for soil reinforcement applications and shall be manufactured from high tenacity polyester yarn.

2.07 Drainage Pipe

A. The drainage pipe shall be perforated corrugated HDPE pipe manufactured in accordance with ASTM D-1248.

PART 3 EXECUTION

3.01 Excavation

A. Contractor shall excavate to the lines and grades shown on the construction drawings. Owner's representative shall be responsible for inspecting and approving the excavation prior to placement of leveling material or fill soils.

3.02 Base Leveling Pad

A. Leveling pad material shall be placed to the lines and grades shown on the construction drawings, to a minimum thickness of 6 inches and extend laterally a minimum of 6" in front and behind the modular wall unit.

B. Leveling pad shall be prepared to insure full contact to the base surface of the concrete units.

3.03 Modular Unit Installation

A. First course of units shall be placed on the leveling pad at the appropriate line and grade. Alignment and level shall be checked in all directions and insure that all units are in full contact with the base and properly seated.

B. Place the front of units side-by-side. Do not leave gaps between adjacent units. Layout of corners and curves shall be in accordance with manufacturer's recommendations.

C. Install shear/connecting devices per manufacturer's recommendations.

D. Place and compact drainage fill within and behind wall units. Place and compact backfill soil behind drainage fill. Follow wall erection and drainage fill closely with structure backfill.

E. Maximum stacked vertical height of wall units, prior to unit drainage fill and backfill placement and compaction, shall not exceed three courses.

3.04 Structural Geogrid Installation

A. Geogrid shall be oriented with the highest strength axis perpendicular to the wall alignment.

B. Geogrid reinforcement shall be placed at the strengths, lengths, and elevations shown on the construction design drawings or as directed by the Engineer.

C. The geogrid shall be laid horizontally on compacted backfill and attached to the modular wall units. Place the next course of modular concrete units over the geogrid. The geogrid shall be pulled taut, and anchored prior to backfill placement on the geogrid.

D. Geogrid reinforcements shall be continuous throughout their embedment lengths and placed side-by-side to provide 100% coverage at each level. Spliced connections between shorter pieces of geogrid or gaps between adjacent pieces of geogrid are not permitted.

3.05 Reinforced Backfill Placement

A. Reinforced backfill shall be placed, spread, and compacted in such a manner that minimizes the development of slack in the geogrid and installation damage.

B. Reinforced backfill shall be placed and compacted in lifts not to exceed 6 inches where hand compaction is used, or 8 - 10 inches where heavy compaction equipment is used. Lift thickness shall be decreased to achieve the required density as required.

C. Reinforced backfill shall be compacted to 95% of the maximum density as determined by ASTM D698. The moisture content of the backfill material prior to and during compaction shall be uniformly distributed throughout each layer and shall be + 3% to - 3% of optimum.

D. Only lightweight hand-operated equipment shall be allowed within 3 feet from the tail of the modular concrete unit.

E. Tracked construction equipment shall not be operated directly upon the geogrid reinforcement. A minimum fill thickness of 6 inches is required prior to operation of tracked vehicles over the geogrid. Tracked vehicle turning should be kept to a minimum to prevent tracks from displacing the fill and damaging the geogrid.

F. Rubber tired equipment may pass over geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning shall be avoided.

G. At the end of each day's operation, the Contractor shall slope the last lift of reinforced backfill away from the wall units to direct runoff away from wall face. The Contractor shall not allow surface runoff from adjacent areas to enter the wall construction site.

3.06 Cap Installation

A. Cap units shall be glued to underlying units with an all-weather adhesive recommended by the manufacturer.

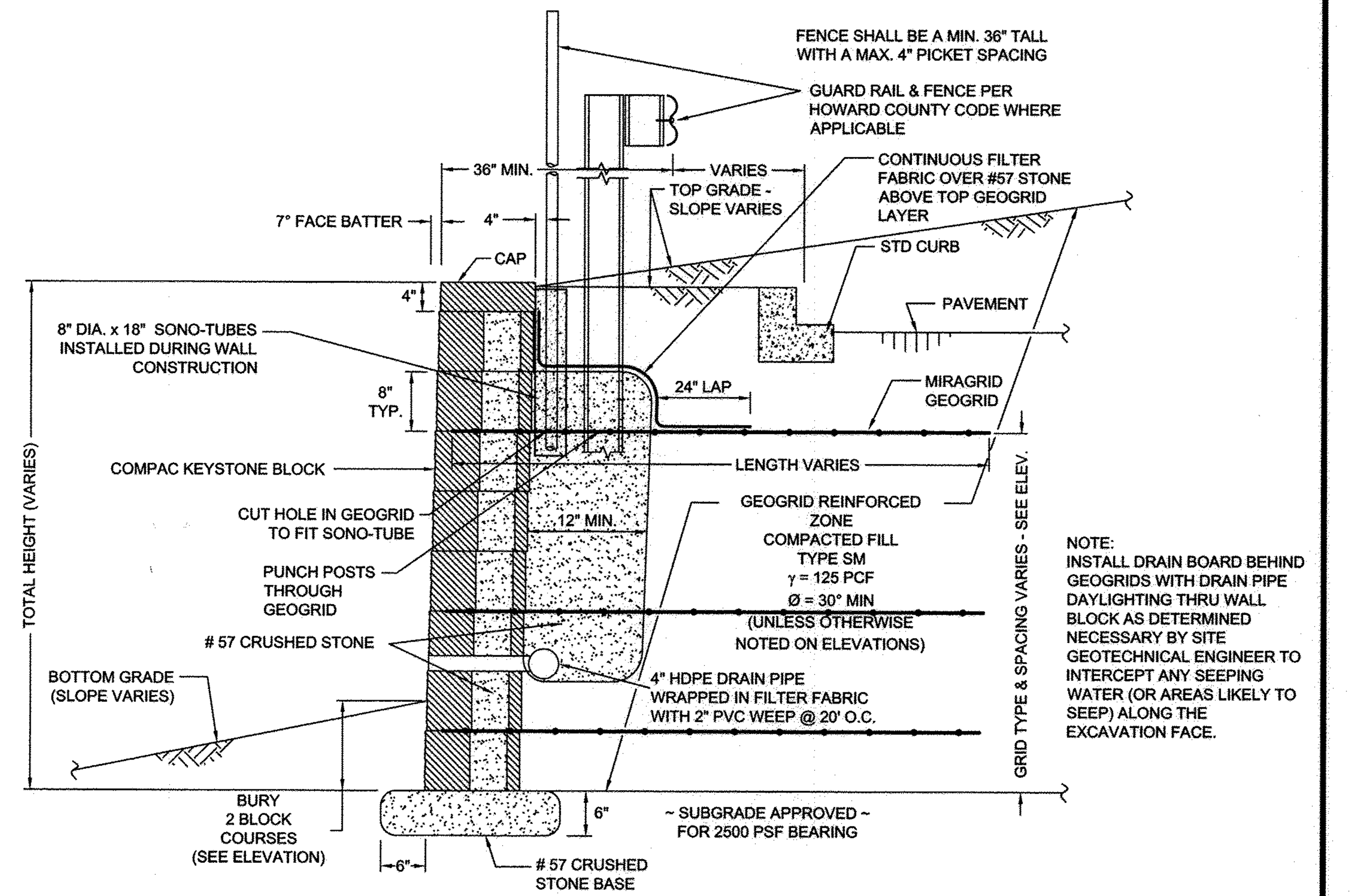
3.07 Field Quality Control

A. The Owner shall engage inspection and testing services, including independent laboratories, to provide quality assurance and testing services during construction.

B. As a minimum, quality assurance testing should include foundation soil inspection, soil and backfill testing, verification of design parameters, and observation of construction for general compliance with design drawings and specifications.

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. One soil boring shall be required every one hundred feet along the entire length of the wall. Copies of all boring reports shall be provided to the Howard County Inspector Prior to the start of construction.
4. 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.
5. 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.
6. Walls shall not be constructed on uncertified fill materials.
7. Walls shall not be constructed within a Howard Co. right-of-way or easement.



TYPICAL BLOCK WALL #1, #3 & #4 SECTION
N.T.S.

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	7/22/14	ADDED BUILDINGS FOR THIS SECTION
2	5/14/15	REMOVE IMPERVIOUS AREAS FROM DRIVEWAYS
3	9/16/15	REVISE TITLE BLOCK TO REFLECT SHOPPING CENTER
4	9/12/16	REVISE TITLE BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND — RICHARD WARREN STURTEVANT — No. 14434 — REGISTERED PROFESSIONAL ENGINEER

OWNERS:
3330 ROGERS AVENUE, LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division	Date 10-25-13
Chief, Division of Land Development	Date 11-05-13
Director	Date 11/13/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	21 OF 26

RETAINING WALL #1, #2 & #4 LOCATION PLAN & DETAILS

ELLICOTT CROSSING - PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY ~~SHOPPING CENTER~~ BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
22871 - 22875, 22346 - 22350, 23905 - 23908	852, 847	MXD-6	24	2nd	6029

SDP-13-004

WALL #3 LOCATION PLAN

1" = 20'

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	5/14/15	REMOVE IMPERVIOUS AREAS FROM DRIVEWAYS & REVISE BUILDING USAGE
2	9/10/15	REVISE BUILDING USAGE FROM COMMERCIAL TO SHOPPING CENTER
3	9/12/16	REVISE TITLE BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND · RICHARD WARREN STURTEVANT · No. 14434 · REGISTERED PROFESSIONAL ENGINEER

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5300 DORSEY HALL DRIVE
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443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Signature	Date
Chief, Development Engineering Division	10-25-13
Chief, Division of Land Development	11-08-13
Director	11/13/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	22 OF 26

RETAINING WALL #3 LOCATION PLAN

ELLICOTT CROSSING - PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
22871 - 22875, 22946 - 22950, 23005 - 23009	852, 847	MXD-6	24	2nd	6029

SDP-13-004

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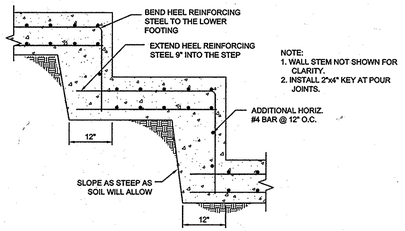
NOTES:

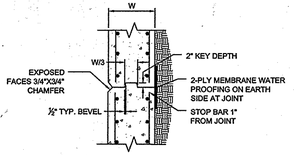
1. ALL RETAINING WALL CONCRETE SHALL BE 4000 PSI WITH AIR ENTRAINMENT.
2. REINFORCING STEEL SHALL CONFORM TO ASTM A-615 GRADE 60.
3. WALL BACKFILL SHALL BE COMPACTED TO 95% OF T-99.
4. CONCRETE WORK SHALL COMPLY WITH THE LATEST ACI 318 BUILDING CODE FOR CONCRETE STRUCTURES.
5. ALL REBAR SPLICES NOT SHOWN SHALL BE A MINIMUM OF 40 BAR DIAM.
6. ALL WALL PERMANENTLY EXPOSED SURFACES SHALL BE MORTAR PATCHED AND SACK-RUBBED FINISHED WITH GROUT AND BURLAP, (RUB FINISH PER OWNERS SPECIFICATIONS).
7. DESIGN SOIL BEARING VALUE OF 3000 PSF TO BE FIELD VERIFIED.
8. ALL WALL DIMENSIONS, ANGLES, BEND LOCATIONS, TW/BW GRADES AND LAYOUT SHALL BE FIELD VERIFIED.
9. 2-PLY MEMBRANE WATERPROOFING PER SHA. STANDARD DETAIL NO. BR-SB(6.47)-05-362.
10. SEE SHEET #21 FOR STANDARD HOWARD COUNTY NOTES FOR WALL CONSTRUCTION.



NOTE:
1. WALL STEM NOT SHOWN FOR CLARITY.
2. INSTALL 2"x4" KEY AT POUR JOINTS.

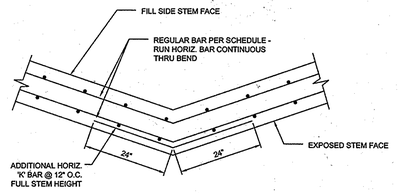
CONCRETE WALL FOOTING STEP DETAIL

NOT TO SCALE



CONCRETE WALL STEM VERTICAL CONTRACTION JOINT C.J. DETAIL (PLAN VIEW)

NOT TO SCALE

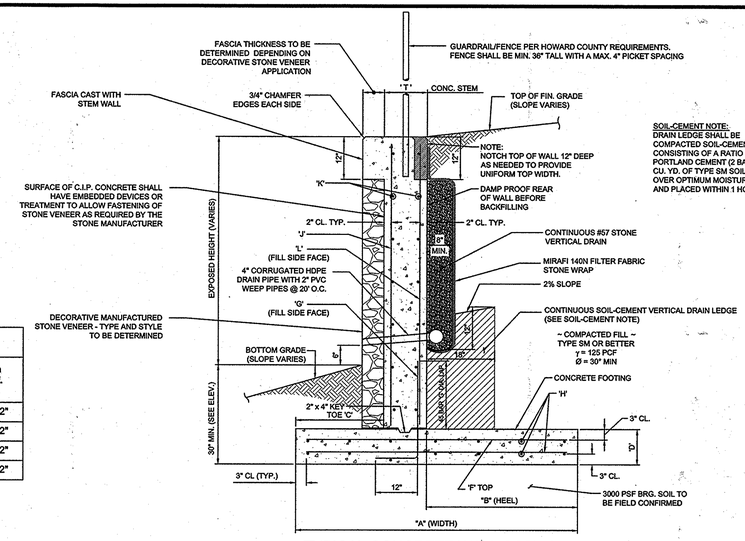


WALL BEND REINFORCEMENT DETAIL

NOT TO SCALE

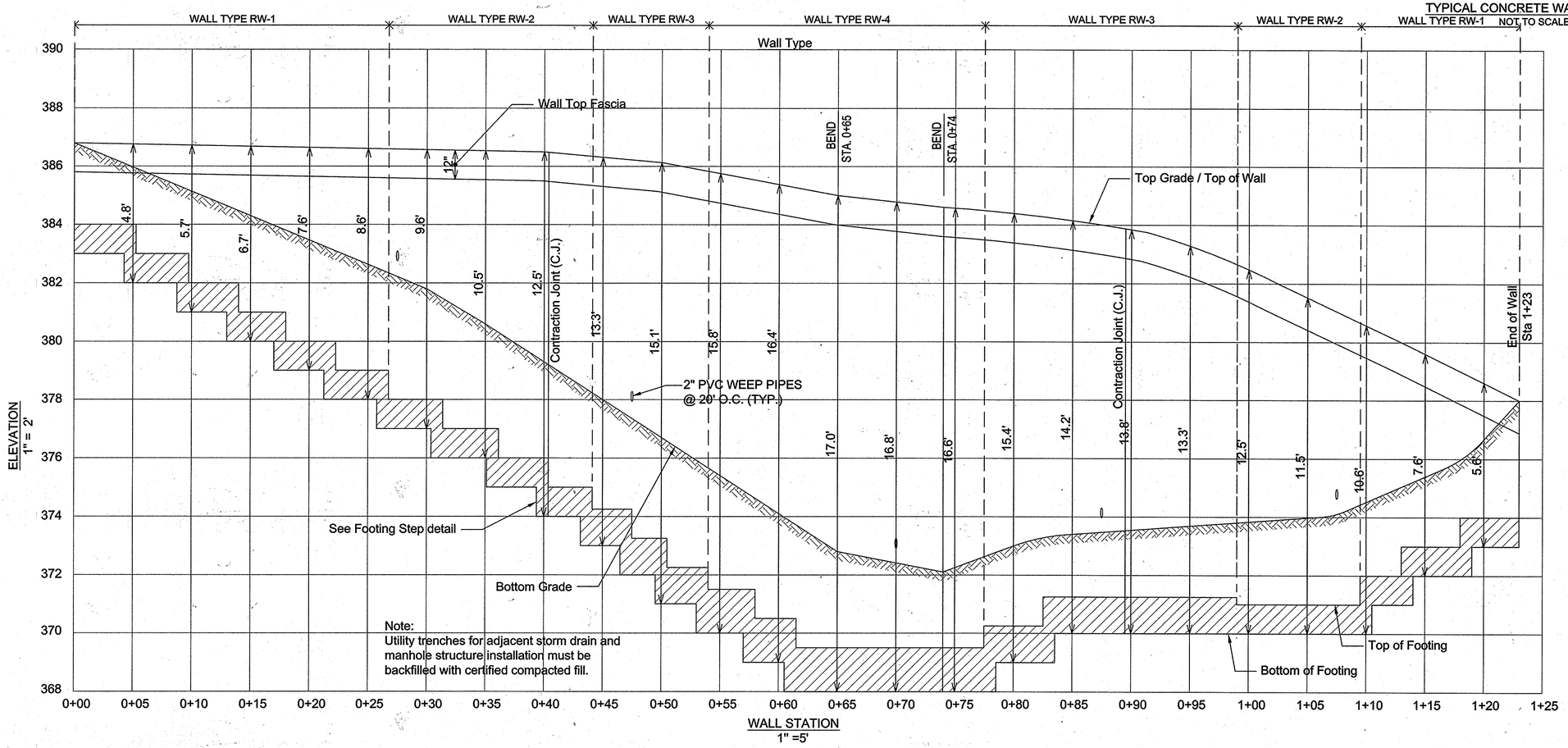
CONCRETE WALL SCHEDULE

Wall Type	Wall Footing Width 'A'	Wall Footing Heel 'B'	Wall Footing Toe 'C'	Footing Depth 'D'	Stem Thickness 'T'	Footing Reinf. 'F'	Stem Reinf. 'G'	Footing Reinf. 'H'	Stem Reinf. 'J'	Stem Reinf. 'K'	Stem Reinf. 'L'
RW-1	5'-2"	2'-8"	1'-6"	1'-0"	1'-0"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"	#5 @ 12"
RW-2	7'-4"	4'-7"	1'-9"	1'-0"	1'-0"	#6 @ 12"	#7 @ 12"	#5 @ 12"	#5 @ 12"	#4 @ 12"	#5 @ 12"
RW-3	9'-4"	5'-7"	2'-6"	1'-3"	1'-3"	#7 @ 12"	#8 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#6 @ 12"
RW-4	10'-6"	6'-0"	3'-0"	1'-6"	1'-6"	#7 @ 12"	#8 @ 12"	#6 @ 12"	#6 @ 12"	#5 @ 12"	#7 @ 12"



TYPICAL CONCRETE WALL SECTION

NOT TO SCALE



WALL #2 ELEVATION

HILLIS-CARNES
ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
2	9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND · RICHARD WARREN HILLIS · REG. NO. 14434 · PROFESSIONAL ENGINEER

OWNERS:
3330 ROGERS AVENUE, LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED/ HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division — Date 10-25-13

Chief, Division of Land Development — Date 11-08-13

Director — Date 11/12/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	23 OF 26

CONCRETE WALL #2 ELEVATION & DETAILS

ELLICOTT CROSSING - PART TWO
LOTS 41 THRU 81, 87 THRU 98, 100 THRU 120, 135 THRU 140, OPEN SPACE LOTS 141 THRU 144, PARCELS 'K', NON - BUILDABLE BULK PARCELS 'L', 'M' AND 'N'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	41-81, 87-98, 100-120, 135-140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
20091 - 20096, 20115 - 20120	852, 847	MXD-6	24	2nd	6029

SDP-13-004

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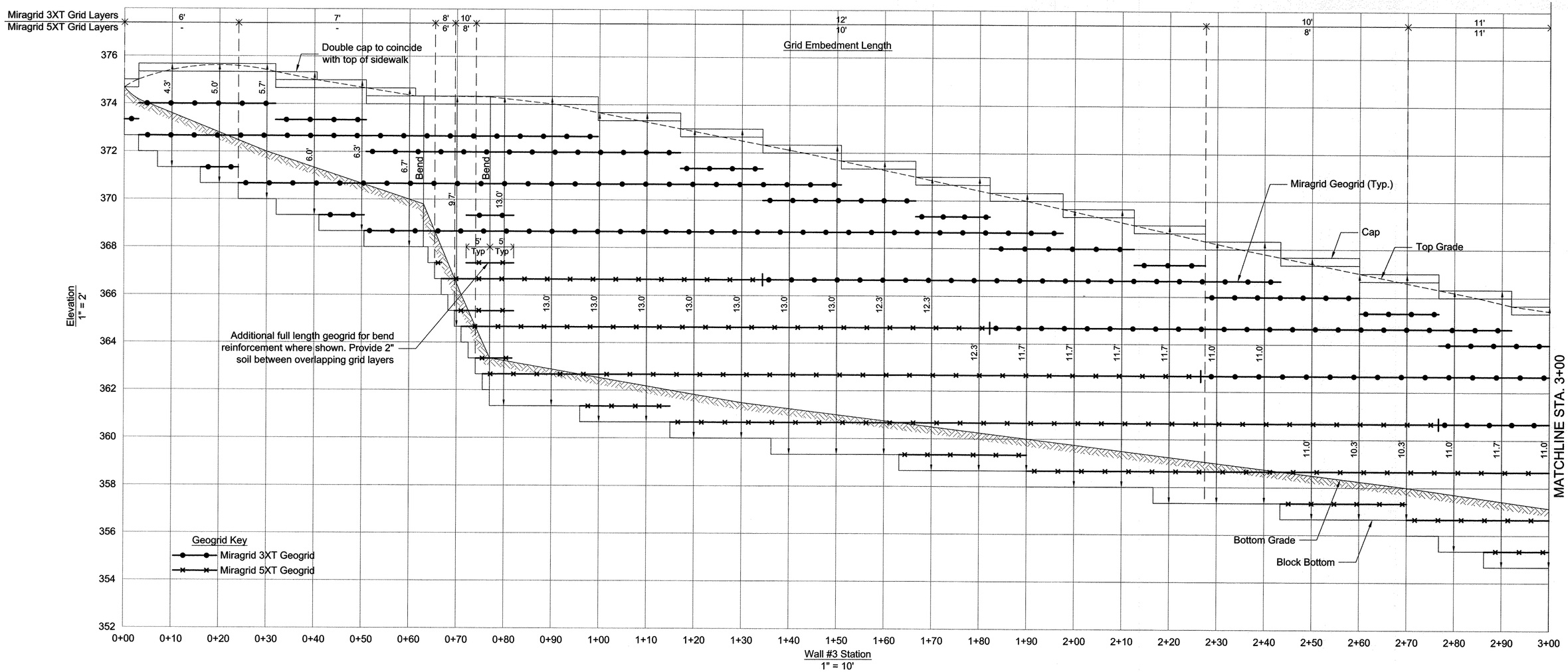

WALL #3 ELEVATION - STA. 0+00 TO 3+00

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
2	9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
3	9/12/16	REVISED TITLE BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND RICHARD WARREN STURTEVANT 14434 REGISTERED PROFESSIONAL ENGINEER

OWNERS:
3330 ROGERS AVENUE, LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Development Engineering Division — Date 10-25-13
Chief, Division of Land Development — Date 11-08-13
Director — Date 11/13/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	24 OF 26

RETAINING WALL #3 ELEVATION - STA. 0+00 TO 3+00

ELLICOTT CROSSING - PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
22871 - 22875 22945 - 22950 23905 - 23908	852, 847	MXD-6	24	2nd	6029

SDP-13-004

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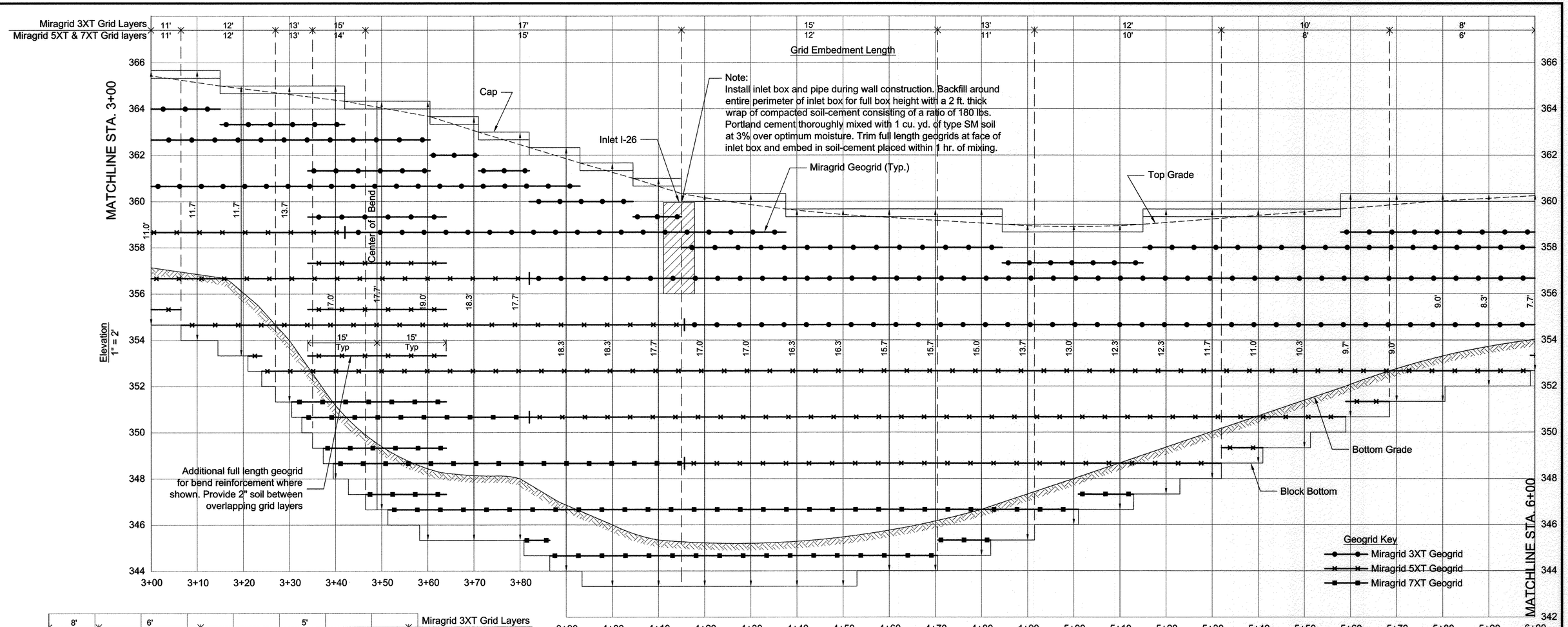
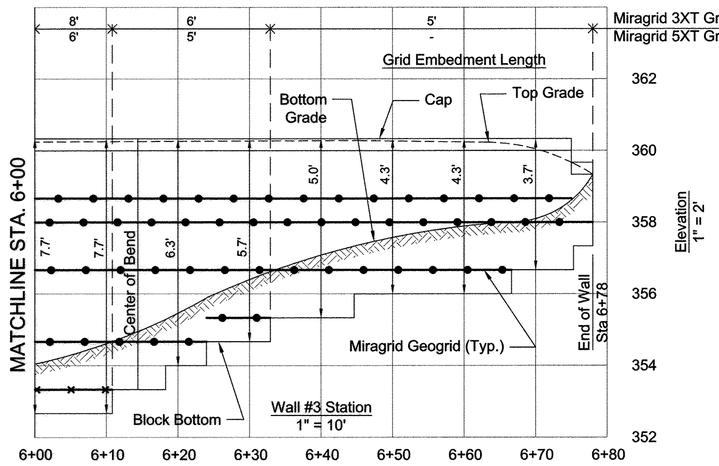


WALL #3 ELEVATION - STA. 3+00 TO 6+00



WALL #3 ELEVATION - STA. 6+00 TO 6+78

HILLIS-CARNES ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	5/14/15	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
2	9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
3	9/12/16	REVISED TITLE BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND RICHARD WARREN STURGEON No. 14434 REGISTERED PROFESSIONAL ENGINEER

OWNERS:
3330 ROGERS AVENUE, LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Chief, Development Engineering Division — Date 10-25-17
Chief, Division of Land Development — Date 11-08-13
Director — Date 11/13/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	25 OF 26

RETAINING WALL #3 ELEVATION - STA. 3+00 TO 6+78

ELLICOTT CROSSING - PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
22871 - 22875, 22945 - 22950, 23905 - 23908	852, 847	MXD-6	24	2nd	6029

SDP-13-004

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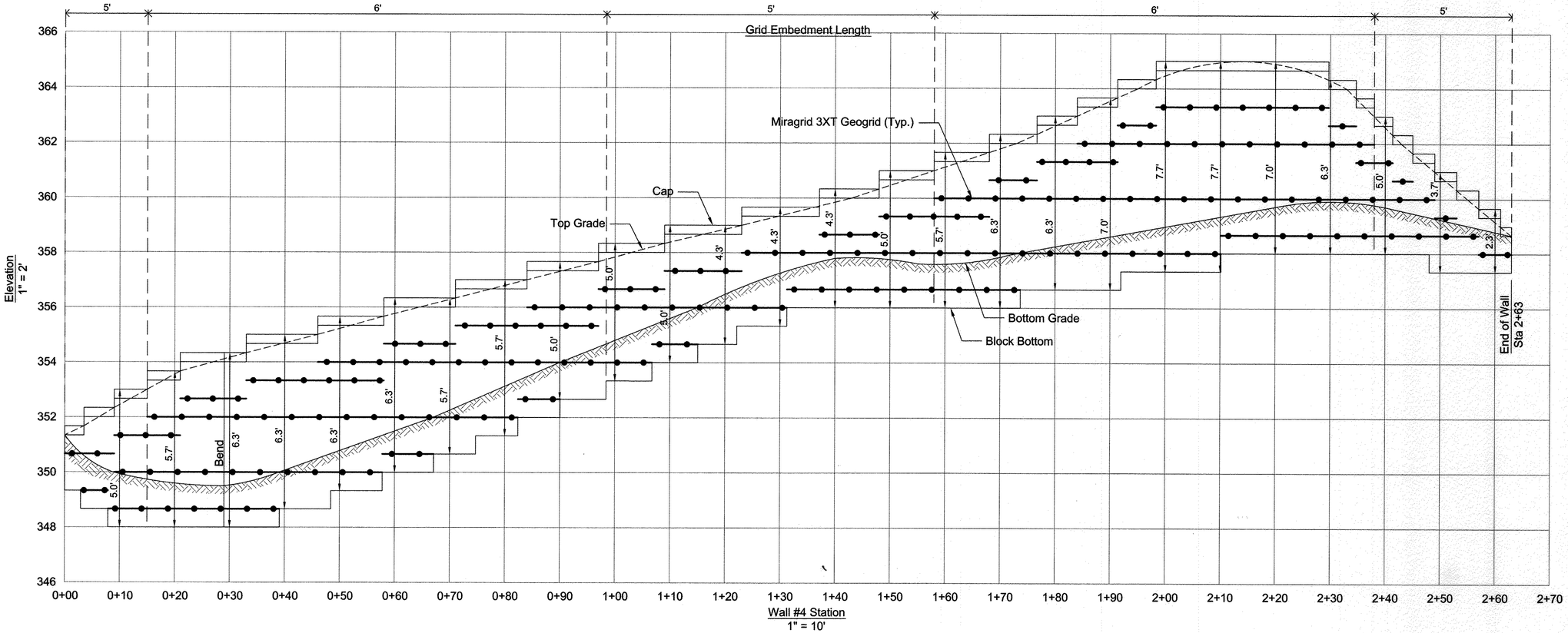
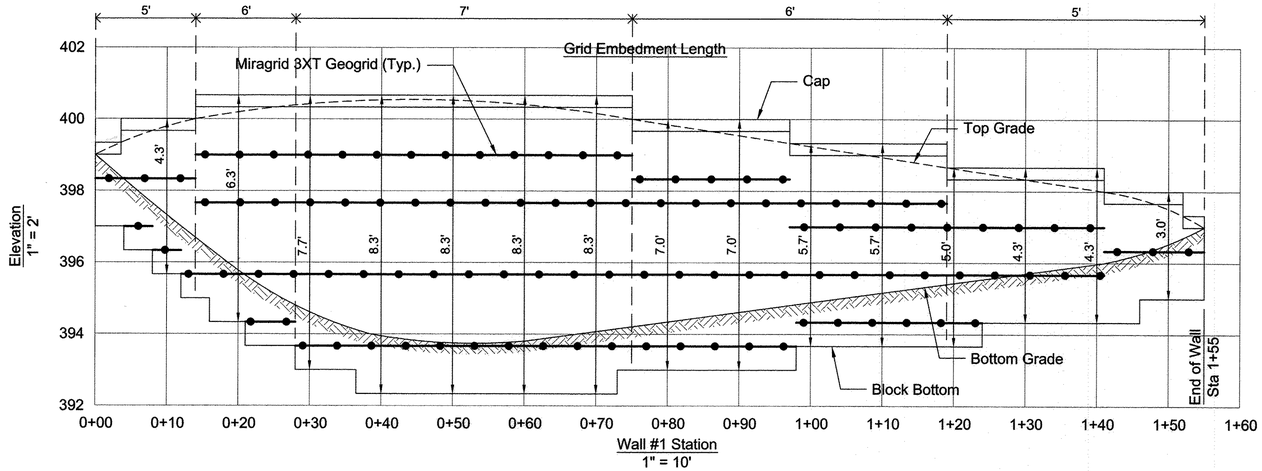


WALL #4 ELEVATION



WALL #1 ELEVATION

HILLIS-CARNES
ENGINEERING ASSOCIATES
10975 Guilford Road, Suite A Annapolis Junction, Maryland
(410) 880-4788 WWW.HCEA.COM Fax: (410) 880-4098

NO.:	DATE:	REVISION
1	5/14/19	REVISED TITLE BLOCK TO REFLECT COMMERCIAL BUILDING
2	9/16/15	REVISED TITLE BLOCK TO REFLECT SHOPPING CENTER
3	9/12/16	REVISED TITLE BLOCK

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE PLANS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 14434, EXPIRATION DATE: 05/13/15.

STATE OF MARYLAND · RICHARD WARREN SIMPSON · 14434 · REGISTERED PROFESSIONAL ENGINEER

OWNERS:
3330 ROGERS AVENUE, LLC
SUITE 102
5300 DORSEY HALL DRIVE
ELLICOTT CITY, MD 21042
443-367-0422

DEVELOPER:
M & T DEVELOPERS, LLC
4515 MANOR LANE
ELLICOTT CITY, MD 21042
443-367-0422

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Chief, Development Engineering Division — Date 10-25-13

Chief, Division of Land Development — Date 11-08-13

Director — Date 11/28/13

DESIGNED BY:	HM
DRAWN BY:	HM
PROJECT NO:	11351-A
DATE:	AUGUST, 2014
SCALE:	AS SHOWN
DRAWING NO.	26 OF 26

RETAINING WALL #1 AND #4 ELEVATIONS

ELLICOTT CROSSING - PART TWO
LOTS 42 THRU 140, OPEN SPACE LOTS 141 THRU 144 & PARCEL 'K'
SINGLE FAMILY ATTACHED HOUSING, TWO STORY SHOPPING CENTER BUILDING AND GAZEBO
HOWARD COUNTY, MARYLAND

SUBDIVISION NAME	SECTION / AREA	GRID NOS.	LOT NOS.
ELLICOTT CROSSING PART TWO	N/A	6 & 1	42 THRU 140

PLAT NOS.	PARCEL NOS.	ZONE	TAX MAP	ELECT. DISTRICT	CENSUS TR.
20911, 20912, 22260 - 22269	852, 847	MXD-6	24	2nd	6029

SDP-13-004

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