

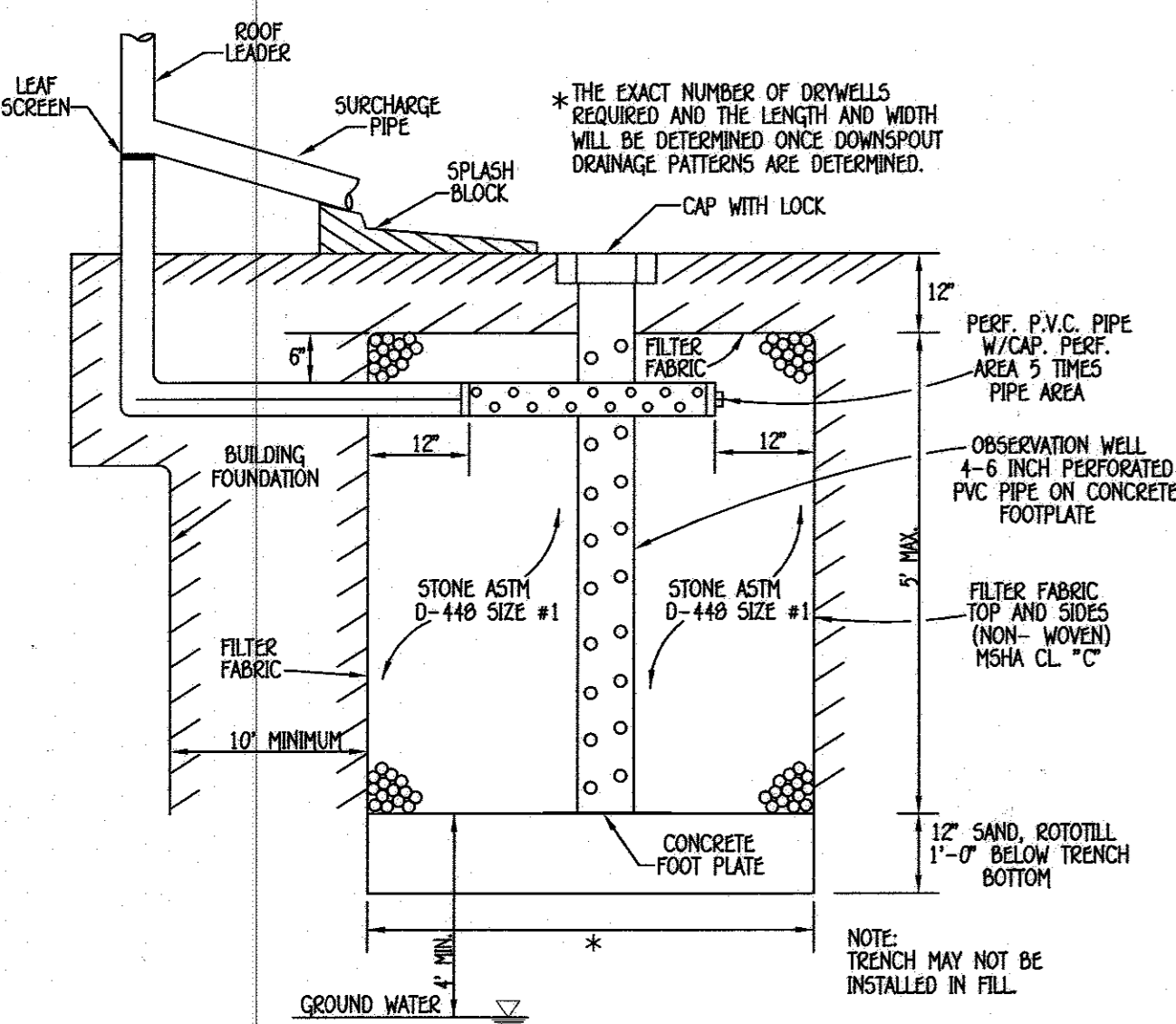
SHEET INDEX	
SHEET NO.	DESCRIPTION
1	TITLE SHEET
2	ENVIRONMENTAL CONCEPT PLAN
3	PRELIMINARY GRADING AND SEDIMENT CONTROL

SOILS LEGEND			
SOIL	NAME	CLASS	E. FACTOR
GfB	Gladstone-Urban land complex, 0 to 8 percent slopes	A	0.28
GfB	Gladstone-Urban land complex, 3 to 8 percent slopes	A	0.28
GfC	Gladstone-Urban land complex, 8 to 15 percent slopes	A	0.28

Soil Map: 17 (Clarksville, NE)

STORMWATER MANAGEMENT SUMMARY			
AREA ID.	ESD REQUIRED CU.FT.	ESD PROVIDED CU.FT.	REMARKS
SITE	3,476	3,676	DRY WELLS (M-5), MICRO-BIORETENTION (M-6) & GRASS SWALE (M-8)
TOTAL	3,476	3,676	

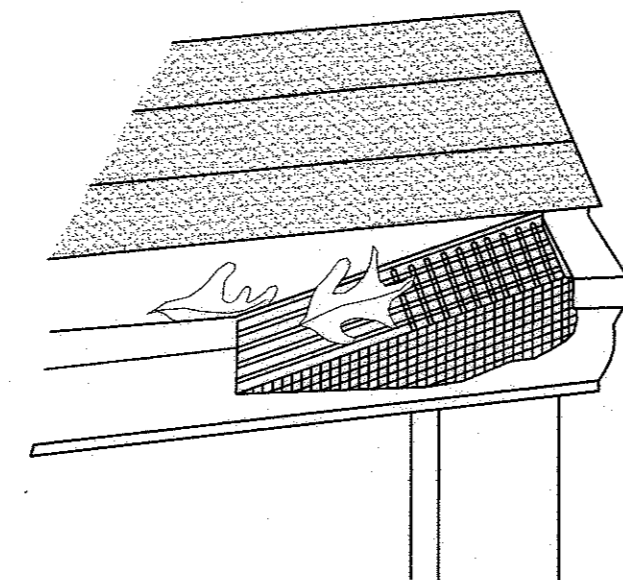
GROSS AREA = 3.93 ACRES
 LOD = 3.00 ACRES
 RCN = 38
 TARGET Pe = 1.2"



DRY WELL DETAIL (M-5)
NOT TO SCALE

Table B.4. Materials Specifications for Micro-Bioretenion, Rain Gardens & Landscape Infiltration

Material	Specification	Size	Notes
Plantings	see Appendix A, Table A-4	n/a	plantings are site-specific
Filling soil	loamy sand 60-65% compast 35-40% or sandy loam 30% coarse sand 30% compast 40%	n/a	USDA soil types loamy sand or sandy loam; clay content <5%
Organic Content	Min. 10% by dry weight (ASTM D 2974)		
Mulch	shredded hardwood		aged 6 months, minimum
Peat gravel diaphragm	peat gravel: ASTM-D-448	No. 8 or No. 9 (1/8" to 3/8")	
Curtain drain	ornamental stone: washed cobbles	stone: 2" to 5"	
Geotextile		n/a	PE Type I nonwoven
Gravel (underdrains and infiltration basins)	ASHTO M-43	No. 57 or No. Aggregates (3/8" to 3/4")	
Underdrain piping	F 750, Type PS 28 or ASHTO M-270	4" to 6" rigid schedule 40 PVC or 50625	Slotted or perforated pipe; 3/8" perf. @ 6" on center; 4 holes per row; minimum of 3" of gravel over pipe; not necessary underneath pipes. Perforated pipe shall be wrapped with 1/4 inch galvanized hardware cloth.
Poured in place concrete (if required)	MSHA Mix No. 3; f = 3500 psi at 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-80	n/a	on-site testing of poured-in-place concrete required: 28 day strength and slump test; all concrete design (cast-in-place or pre-cast) not using previously approved site or local standards requires design drawings sealed and approved by a professional structural engineer licensed in the State of Maryland - design to include meeting ACI Code 308.8/89; vertical loading D1-10 or H-20; allowable horizontal loading (based on soil pressures); and analysis of potential cracking.
Sand	ASHTO M-6 or ASTM-C-33	0.02" to 0.075"	Sand substitutions such as Diabase and Geystone (ASHTO #10) are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand.



GUTTER DRAIN FILTER DETAIL
NOT TO SCALE

ENVIRONMENTAL CONCEPT PLAN

TROTTER WOODS, SECTION 2

LOTS 33 THRU 41,

OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'B'

TAX MAP No. 35 GRID No. 8 PARCEL NOS. 21

FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

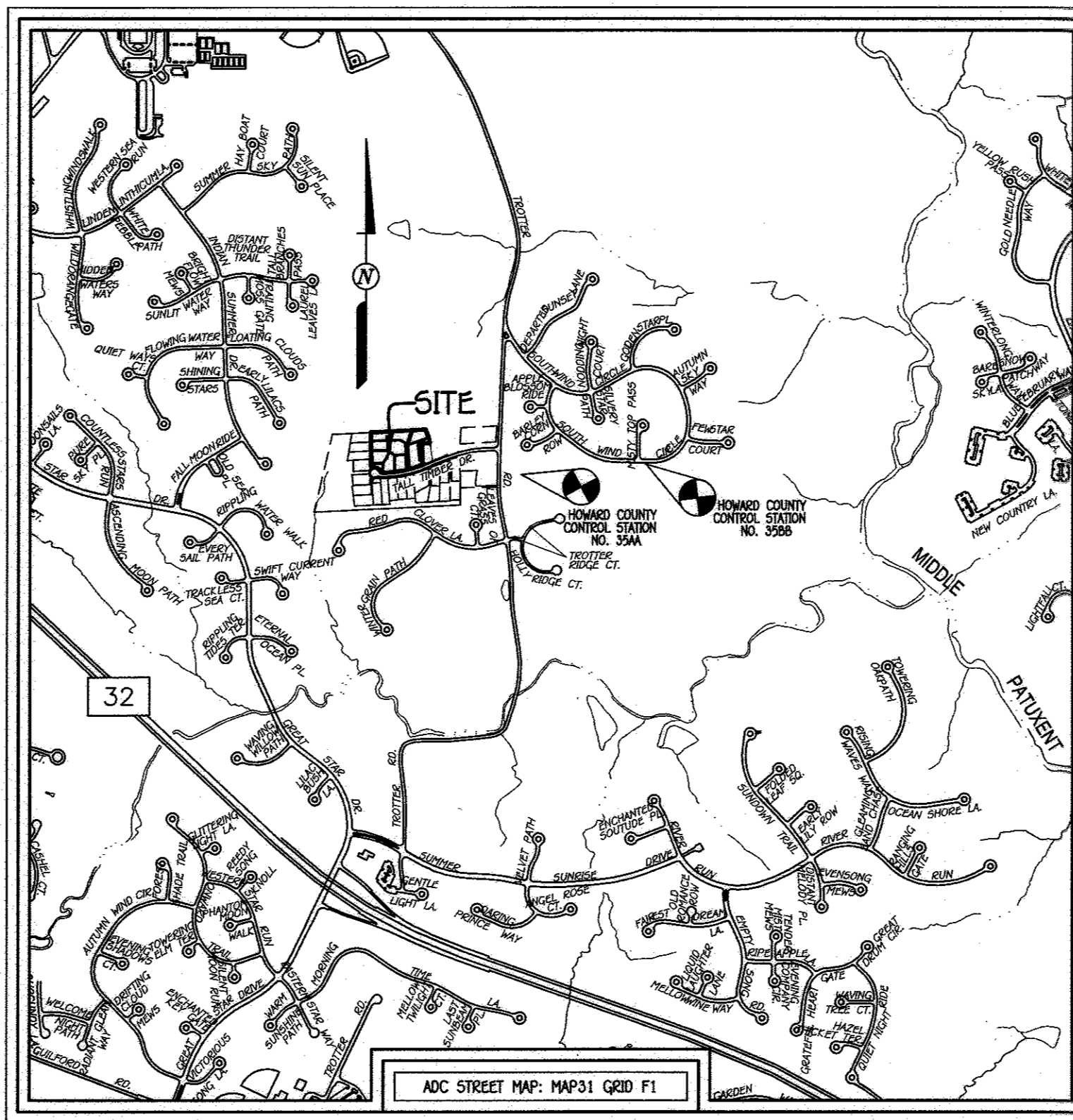
DRY WELL CHART					
LOT NO.	DRYWELL NO.	AREA OF ROOF PER DOWN SPOUT	VOLUME REQUIRED	VOLUME PROVIDED	AREA OF TREATMENT
34	BLD (FR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	BLD (FL)	600 SQ. FT.	57 C.F.	126 C.F.	100%*
	DRIVEWAY	570 SQ. FT.	55 C.F.	96 C.F.	100%*
35	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	BLD (RR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
	BLD (RR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
	DRIVEWAY	900 SQ. FT.	86 C.F.	96 C.F.	100%*
37	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	BLD (FL)	600 SQ. FT.	57 C.F.	126 C.F.	100%*
	DRIVEWAY	900 SQ. FT.	86 C.F.	96 C.F.	100%*
	BLD (RR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
38	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	DRIVEWAY	900 SQ. FT.	86 C.F.	96 C.F.	100%*
	BLD (FR)	600 SQ. FT.	57 C.F.	126 C.F.	100%*
	BLD (RR)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
39	BLD (RL)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
	N/A				
	BLD (RR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
40	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	BLD (FL)	600 SQ. FT.	57 C.F.	126 C.F.	100%*
	N/A				
	BLD (RR)	900 SQ. FT.	86 C.F.	126 C.F.	100%*
41	BLD (RL)	500 SQ. FT.	48 C.F.	126 C.F.	100%*
	BLD (FL)	600 SQ. FT.	57 C.F.	126 C.F.	100%*
	DRIVEWAY	1000 SQ. FT.	95 C.F.	96 C.F.	100%*

(F=FRONT, R=REAR / L=LEFT, R=RIGHT)

AREA OF TREATMENT EXCEEDS THAT REQUIRED.

*NOTE: ALL ROOF DRYWELLS = 9'x 7'x 5' (LxWxD) = 126 C.F.

** ALL DRIVEWAY DRYWELLS = 8'x 6'x 5' (LxWxD) = 96 C.F.



VICINITY MAP
SCALE: 1" = 1200'

BENCHMARK INFORMATION

B.M.#1 - HOWARD COUNTY CONTROL STATION #35AA - HORIZONTAL - (NAD '83)
 (LOCATED BEHIND #6523 BARLEY CORN ROAD, EAST OF TROTTER ROAD)
 N 560,767.601
 E 1,335,483.897
 ELEVATION = 430.957 - VERTICAL - (NAVD '88)

B.M.#2 - HOWARD COUNTY CONTROL STATION #35BB - HORIZONTAL - (NAD '83)
 (LOCATED AT SOUTH SIDE OF SOUTH WIND CIR. NEAR THE INTERSECTION OF MISTY TOP PATH)
 N 560,760.257
 E 1,336,537.287
 ELEVATION = 394.271 - VERTICAL - (NAVD '88)

STORMWATER MANAGEMENT NOTES

- STORMWATER MANAGEMENT IS PROVIDED IN ACCORDANCE WITH CHAPTER 5, "ENVIRONMENTAL SITE DESIGN" OF THE 2007 MARYLAND STORMWATER MANAGEMENT DESIGN MANUAL, EFFECTIVE MAY 4, 2010.
- MAXIMUM CONTRIBUTING ROOF TOP AREA TO EACH DOWNSPOUT SHALL BE 1,000 SQ. FT. OR LESS.
- DRYWELLS SHALL BE PROVIDED AT LOCATIONS WHERE THE LENGTH OF DISCONNECTION IS LESS THAN 75' AT 5%. THE SIZE AND CONSTRUCTION OF THE DRYWELL SHALL BE IN ACCORDANCE WITH THE DETAIL SHOWN ON THIS SHEET.
- FINAL GRADING WILL BE SHOWN ON A SITE DEVELOPMENT PLAN.

OPERATION & MAINTENANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED DRY WELLS (M-5)

- THE OWNER SHALL INSPECT THE MONITORING WELLS AND STRUCTURES ON A QUARTERLY BASIS AND AFTER EVERY HEAVY STORM EVENT.
- THE OWNER SHALL RECORD THE WATER LEVELS AND SEDIMENT BUILD UP IN THE MONITORING WELLS OVER A PERIOD OF SEVERAL DAYS TO ENSURE TRENCH DRAINAGE.
- THE OWNER SHALL MAINTAIN A LOG BOOK TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- WHEN THE FACILITY BECOMES CLOGGED SO THAT IT DOES NOT DRAIN WITHIN A SEVENTY-TWO (72) HOUR TIME PERIOD, CORRECTIVE ACTION SHALL BE TAKEN.
- THE MAINTENANCE LOG BOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION FACILITY HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

SITE ANALYSIS DATA CHART

- TOTAL AREA OF THIS SUBMISSION = 171,207 SQ.FT. OR 3.93 AC.*
- LIMIT OF DISTURBED AREA = 134,646 SQ.FT. OR 3.09 AC.*
- PRESENT ZONING DESIGNATION = R-20
(PER 10/06/2013 COMPREHENSIVE ZONING PLAN)
- PROPOSED USE: RESIDENTIAL
- PREVIOUS HOWARD COUNTY FILES: F-81-119; PLAT 4917, F-83-96; PLAT 5590; S-97-02; P-98-01; F-98-09; PLAT 13449; SDP-00-032.
- TOTAL AREA OF FLOODPLAIN LOCATED ON-SITE = 0.00 AC.
- TOTAL AREA OF SLOPES IN EXCESS OF 1% = 0.00 AC.
- TOTAL AREA OF WETLANDS (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF STREAM (INCLUDING BUFFER) = 0.00 AC.
- TOTAL AREA OF EXISTING FOREST = 1.40 AC*
- TOTAL GREEN OPEN AREA = 3.27 AC*
- TOTAL IMPERVIOUS AREA = 0.66 AC*
- TOTAL AREA OF ERODIBLE SOILS = 0.00 AC.
- TOTAL AREA OF ROAD DEDICATION = 0.00 AC.

NO.	REVISION	DATE	X

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21351, EXPIRATION DATE: 07/15/2017.

Signature of Professional Land Surveyor: *[Signature]* / 7/27/2016 DATE



OWNERS / DEVELOPER

TYSON TALL TIMBER INC. AND BROOKE GINGERICH-TYSON
 11850 TALL TIMBER DRIVE
 CLARKSVILLE, MD 21029-1213
 (410) 370-9406

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

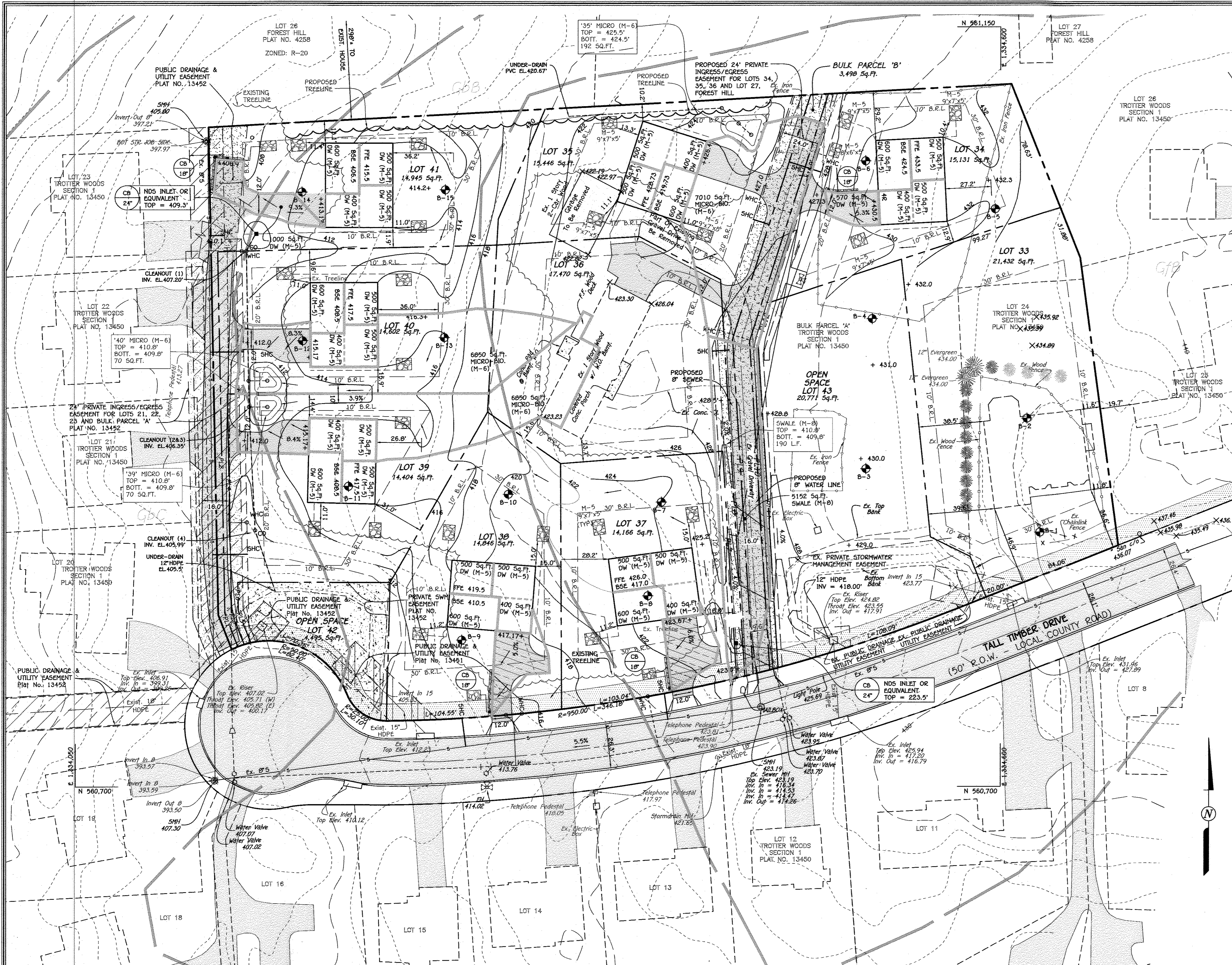
[Signature]
 Chief, Division of Land Development
 Date: 10-12-16

[Signature]
 Chief, Development Engineering Division
 Date: 10-12-16

PROJECT	SECTION	PARCEL NO.
TROTTER WOODS, SECTION 2 OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'B' A RESUBDIVISION OF BULK PARCEL A AND LOT 24 OF TROTTER WOODS, SECTION 1	2	21
DEED 4934/437	BLOCK NO. 8	ZONE R-20
TAX/ZONE 35	ELEC. DIST. FIFTH	CENSUS TR. 605505

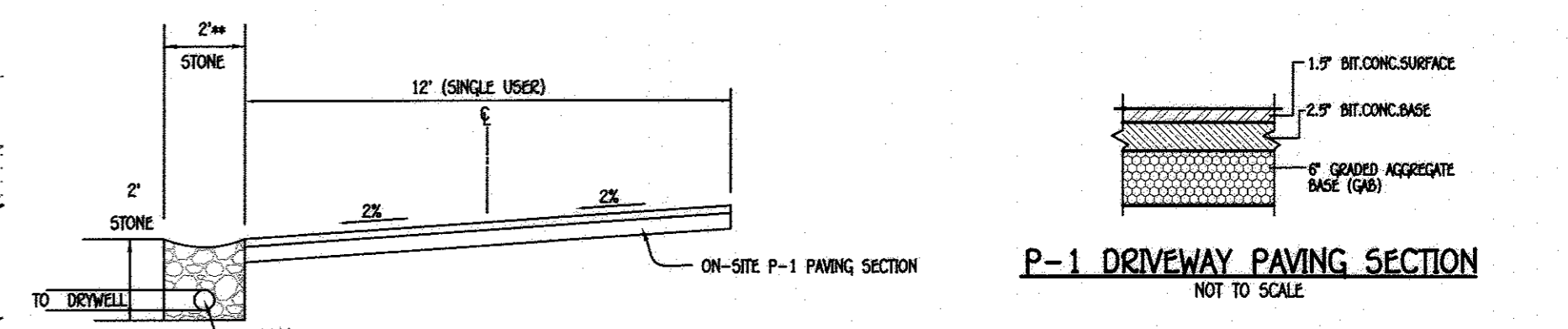
TITLE SHEET

TROTTER WOODS, SECTION 2
 LOTS 33 THRU 41,
 OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'B'
 A Resubdivision of Bulk Parcel A and Lot 24 of Trotter Woods, Section 1
 ZONED R-20
 TAX MAP No. 35 GRID No. 8 PARCEL No. 21
 FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN DATE: SEPT. 14, 2016
 SHEET 1 OF 3 ECP-16-047



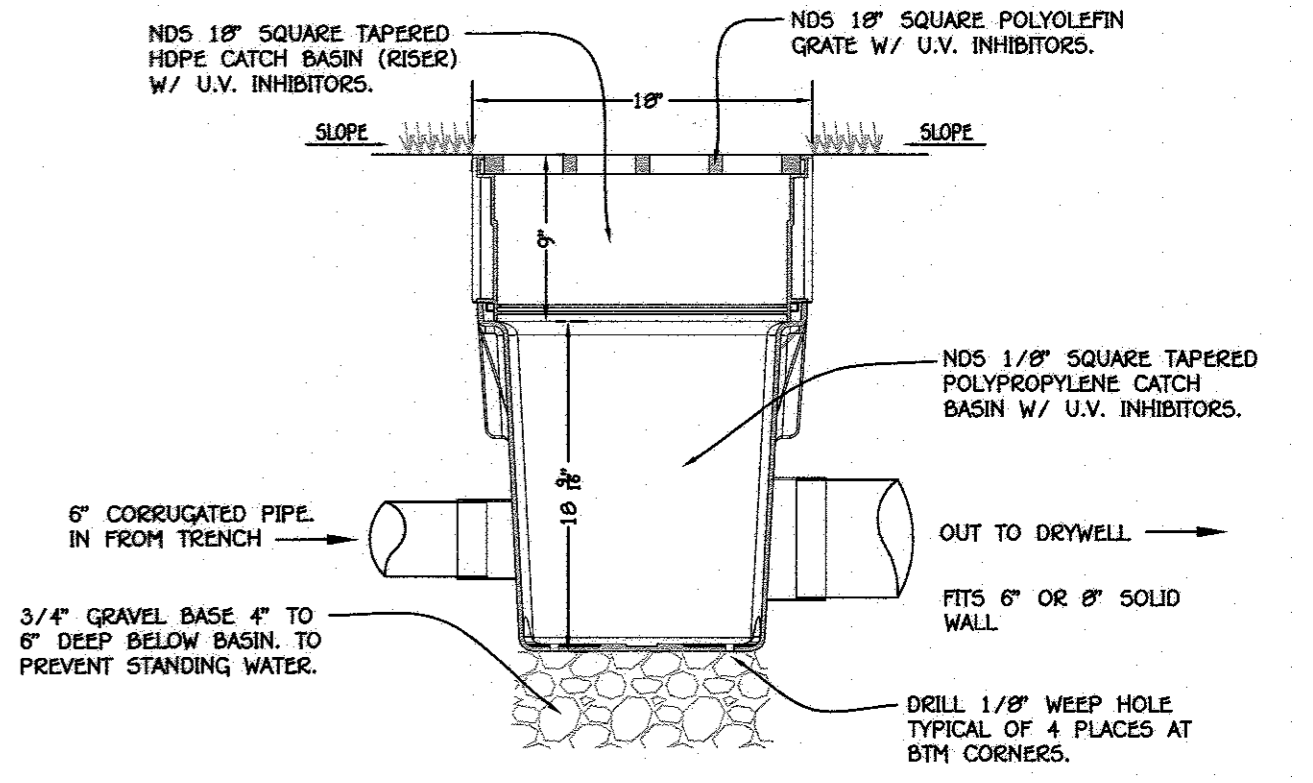
LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
---	EXISTING 2' CONTOURS	---	PROPOSED CONTOUR
---	EXISTING 10' CONTOURS	+	SPOT ELEVATION
SW	SOILS LINES AND TYPE	---	LIMITS OF DISTURBANCE
---	EXISTING TREE LINE	---	PROPOSED TREE LINE
---	EXISTING FENCE LINE	---	SILT FENCE
---	EXISTING PAVING	---	PERMANENT SOIL STAB. MATING CHANNEL
---	DRAINAGE AREA DIVIDE	---	SUPER SILT FENCE
---	AREA OF RUNOFF TO DRYWELL	---	STABILIZES CONSTRUCTION ENTRANCE
---	PROPOSED EARTH DIKE	---	USE-IN-COMMON ACCESS EASEMENT
---	EXISTING TREE LINE	---	PROPOSED TREE LINE
---	TEMP. STONE CHECK DAM	---	TEMPORARY STONE OUTLET STRUCT. (E.18)
---	TIMBER CHECK DAM	---	CLEANOUT

STORMWATER MANAGEMENT PRACTICES				
LOT NO.	DISCONNECTION OF ROOFTOP RUNOFF (N-1) Y/N, NUMBER	DISCONNECTION OF NON-ROOFTOP RUNOFF (N-2) Y/N	DRY WELLS (M-5) Y/N, NUMBER	MICRO-BIORETENTION (M-6) Y/N, NUMBER
33	** STORMWATER MANAGEMENT PROVIDED UNDER SDP-XX-XXX			
34	NO	NO	YES, FOUR(4)	NO
35	NO	NO	YES, THREE(3)	YES(1)
36	EXISTING HOUSE (TO REMAIN)	NO	NO	NO
37	NO	NO	YES, FOUR(4)	NO
38	NO	NO	YES, FOUR(4)	NO
39	NO	NO	YES, THREE(3)	YES(1)
40	NO	NO	YES, THREE(3)	YES(1)
41	NO	NO	YES, FOUR(4)	NO
42	N/A	N/A	N/A	N/A
43	N/A	N/A	N/A	N/A



- NOTE:
- ALL MATERIALS AND CONSTRUCTION SHALL BE IN ACCORDANCE WITH HOWARD COUNTY DESIGN MANUAL VOLUME IV, STANDARD SPECIFICATION AND DETAILS FOR CONSTRUCTION.
 - **2" STONE TRENCH ON LOTS 39, 40 AND 41. DRIVEWAY MUST SLOPE TOWARDS STONE TRENCH.
 - 4-6 INCH PERFORATED PVC PIPE PLACED IN STONE TRENCH.

TYPICAL PRIVATE DRIVE CROSS SLOPE SECTION
NOT TO SCALE



SQUARE CATCH BASIN
18" or 24" SQUARE CATCH BASIN WITH RISER INSTALLATION FOR LANDSCAPE APPLICATIONS

NOTE: APPROVAL OF THIS PLAN BY HOWARD SOIL CONSERVATION DISTRICT DOES NOT PROVIDE APPROVAL OF THE SHOWN SEDIMENT CONTROLS.

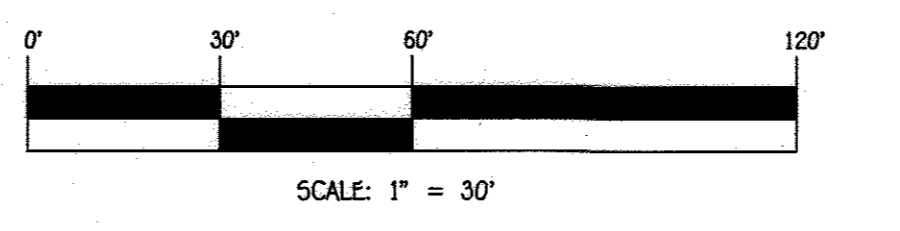
FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALDWIN NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 441-2299

NO.	REVISION	DATE

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21351, EXPIRATION DATE: 07/15/2017.

[Signature]
Signature of Professional Land Surveyor

9/22/2016
DATE



OWNERS / DEVELOPER
TYSON TALL TIMBER INC. AND
BROOKE GINGERSCH-TYSON
11850 TALL TIMBER DRIVE
CLARKSVILLE MD 21029-1213
(410) 370-9406

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
Chief, Division of Land Development

10.12.16
Date

[Signature]
Chief, Development Engineering Division

10.12.16
Date

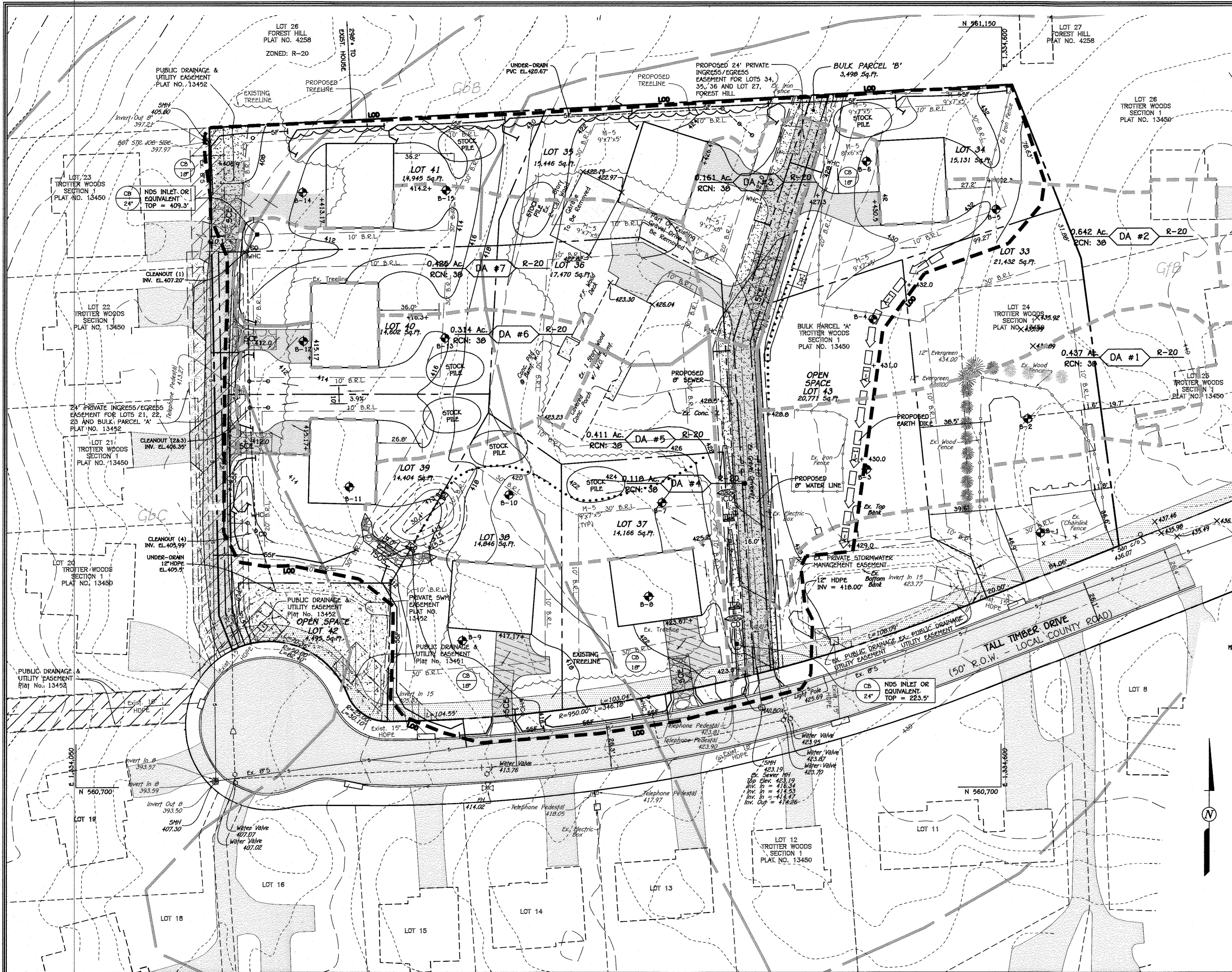
PROJECT	TROTTER WOODS, SECTION 2 LOTS 33 THRU 41, OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'B' A RESUBDIVISION OF BULK PARCEL A AND LOT 24 OF TROTTER WOODS, SECTION 1	SECTION	2	PARCEL NO.	21
DEED	4934/ 437	BLOCK	8	ZONE	R-20
TAX/ZONE	35	ELEC. DIST.	FIFTH	CENSUS TR.	605505

ENVIRONMENTAL CONCEPT PLAN

TROTTER WOODS, SECTION 2
LOTS 33 THRU 41,
OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'B'
A Resubdivision of Bulk Parcel A and Lot 24 of
Trotter Woods, Section 1

ZONED R-20
TAX MAP No. 35 GRID No. 8 PARCEL No. 21
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: SEPT. 14, 2016
SHEET 2 OF 3 **ECP-16-047**





LEGEND			
SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION
(dashed line)	EXISTING 2' CONTOURS	(solid line)	PROPOSED CONTOUR
(dashed line)	EXISTING 10' CONTOURS	(dotted line)	SPOT ELEVATION
(line with 'G')	SOILS LINES AND TYPE	(line with 'L')	LIMITS OF DISTURBANCE
(line with 'T')	EXISTING TREELINE	(line with 'P')	PROPOSED TREELINE
(line with 'F')	EXISTING FENCE LINE	(line with 'S')	SILT FENCE
(line with 'P')	EXISTING PAVING	(line with 'M')	PERMANENT SOIL STAB. MATING CHANNEL
(line with 'D')	DRAINAGE AREA DIVIDE	(line with 'S')	SUPER SILT FENCE
(line with 'R')	AREA OF RUNOFF TO DRYWELL	(line with 'S')	STABILIZES CONSTRUCTION ENTRANCE
(line with 'D')	PROPOSED EARTH DIKE	(line with 'A')	USE-IN-COMMON ACCESS EASEMENT
(line with 'T')	EXISTING TREELINE	(line with 'T')	PROPOSED TREELINE
(line with 'C')	TEMP. STONE CHECK DAM	(line with 'T')	TEMPORARY STONE OUTLET STRUCT. (E.18)
(line with 'T')	TIMBER CHECK DAM	(line with 'C')	CLEANOUT

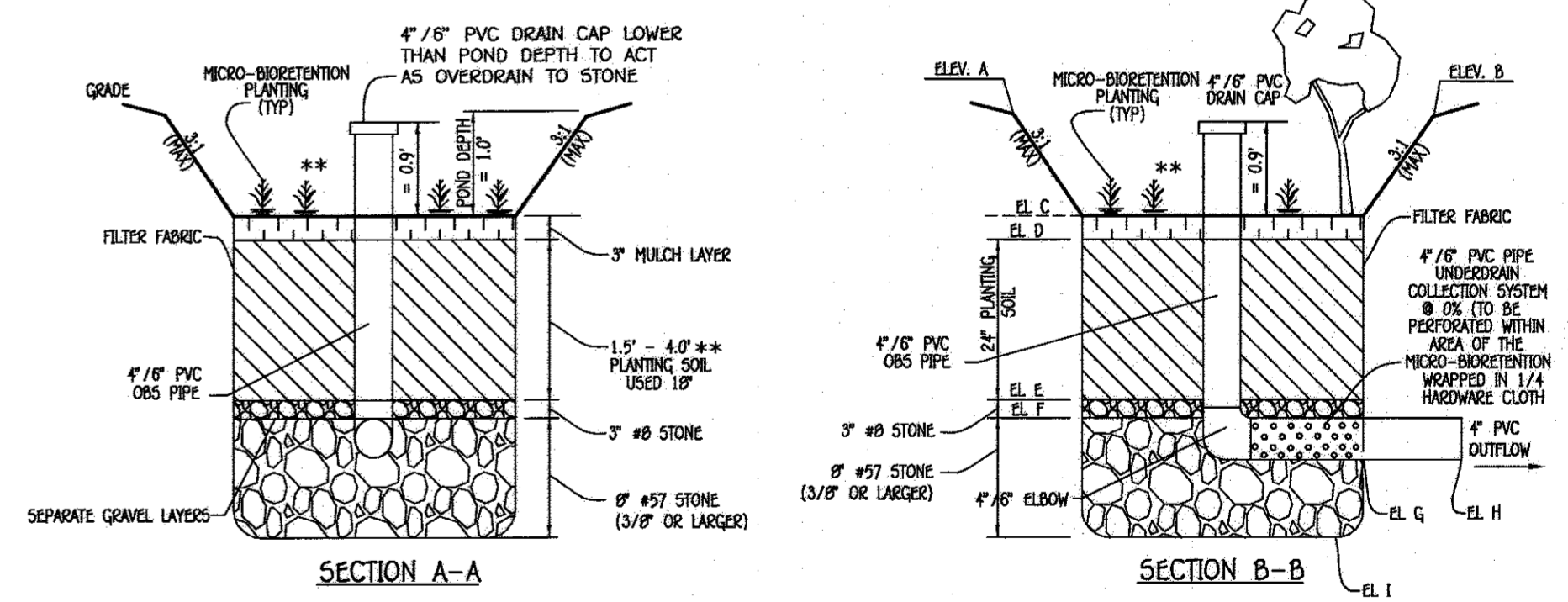
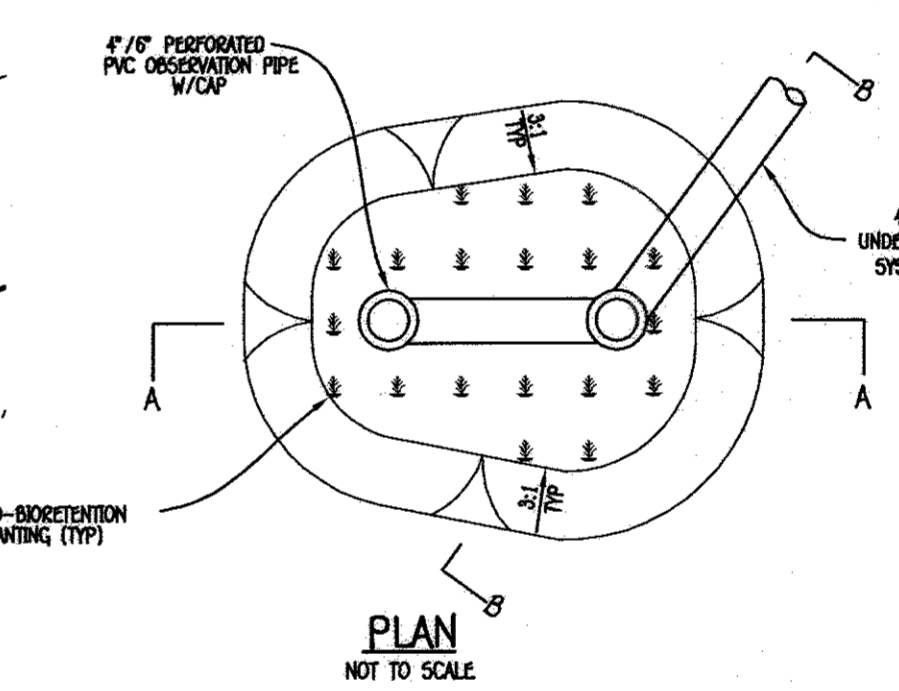
STAGE/STORAGE TABULATION						
Water Surface Elev.	Area (sq. ft.)	Avg. Area (sq. ft.)	ΔH (ft.)	Δ Volume (cu. ft.)	Σ Volume (cu. ft.)	Σ Volume (ac.-ft.)
413.00	356				0	0.000
414.00	723	540	1.0	540	540	0.012
415.00	1,198	961	1.0	961	1,500	0.034
415.50	1,770	1,484	0.5	742	2,242	0.051

3,600 cu.ft. per acre of DA x 0.5 acres = 1,800 cu.ft.



MICRO-BIORETENTION / BIORETENTION									
BIORETENTION FILTER	A	B	C	D	E	F	G	H	I
35	425.5	425.5	424.5	424.25	422.25	422.00	421.67	420.67	421.0
39	410.0	410.0	409.8	409.55	408.05	407.80	407.47	405.8	406.3
40	410.0	410.0	409.8	409.55	408.05	407.80	407.47	405.8	406.3

MICRO-BIORETENTION PLANT MATERIAL		
MICRO-BIO QUANTITY	NAME	MAXIMUM SPACING (FT.)
42	PERENNIALS	1.5 TO 3.0 FT.
3	SILKY DOGWOOD	PLANT AWAY FROM INFLOW LOCATION

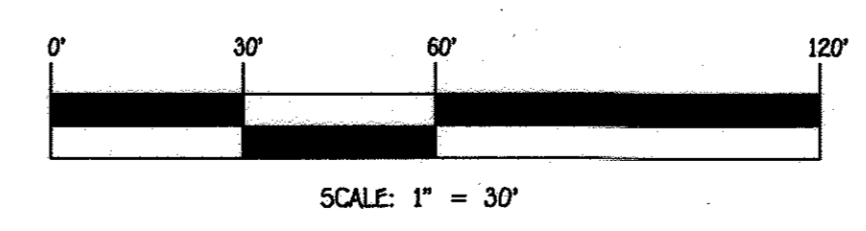


NOTE: APPROVAL OF THIS PLAN BY HOWARD SOIL CONSERVATION DISTRICT DOES NOT PROVIDE APPROVAL OF THE SHOWN SEDIMENT CONTROLS.

FISHER, COLLINS & CARTER, INC.
CIVIL ENGINEERING CONSULTANTS & LAND SURVEYORS
CENTENNIAL SQUARE OFFICE PARK - 10272 BALTIMORE NATIONAL PIKE
ELLSWORTH CITY, MARYLAND 21042
(410) 461-2292

PROFESSIONAL CERTIFICATION
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 21351, EXPIRATION DATE: 07/15/2017.

[Signature] 9/27/2016
Signature of Professional Land Surveyor DATE



OWNERS / DEVELOPER
TYSON TALL TIMBER, INC. AND
BRUCKLE, GINGERSICH-TYSON
11920 TALL TIMBER DRIVE
CLARKSVILLE MD 21029-1213
(410) 370-9406

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 10/6/16
Chief, Division of Land Development Date

[Signature] 10/12/16
Chief, Development Engineering Division Date

PROJECT	TROTTER WOODS, SECTION 2 LOTS 33 THRU 41, OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'A' A RESUBDIVISION OF BULK PARCEL A AND LOT 24 OF TROTTER WOODS, SECTION 1	SECTION	2	PARCEL NO.	21
DEED	4934/ 437	BLOCK NO.	8	ZONE	R-20
TAX/ZONE	35	ELEC. DIST.	FIFTH	CENSUS TR.	605505

PRELIMINARY GRADING AND SEDIMENT CONTROL

TROTTER WOODS, SECTION 2
LOTS 33 THRU 41,
OPEN SPACE LOTS 42, 43 AND BULK PARCEL 'A'
A Resubdivision of Bulk Parcel A and Lot 24 of
Trotter Woods, Section 1
ZONED R-20
TAX MAP No. 35 GRID No. 8 PARCEL No. 21
FIFTH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN DATE: SEPT. 14, 2016
SHEET 3 OF 3 **ECP-16-047**