

| TRAFFIC CONTROL SIGNAGE LOCATION CHART | | | | | |
|--|----------|----------|---|--|--|
| ROAD NAME | STATION | OFFSET | TYPE | | |
| CLOVIS PLACE | 0+234.06 | 19.80' L | 30" x 30" R1-1 "STOP" & VARIES x 12" D3-1 "STREET NAME" | | |
| CLOVIS PLACE | 1+00 | 21.00' R | 24" x 30" R2-1 "2S" | | |
| CLOVIS PLACE | 0+65.92 | 14.67' L | 24" x 30" R8-3a "NO PARKING" | | |
| | 1+40.67 | 19.67' R | | | |
| | 2+02.99 | 14.67' L | | | |
| | 2+63.19 | 19.67' R | | | |
| | 4+50.97 | 14.67' L | | | |
| | 6+48.35 | 31.67' L | | | |
| | 6+48.35 | 31.67' R | | | |

| STREET LIGHT LOCATION TABLE | | | | |
|-----------------------------|--------------|---------|----------|--|
| SYMBOL | STREET NAME | STA. | OFFSET | FIXTURE TYPE |
| * | CLOVIS PLACE | 0+18.13 | 32.92' L | 100 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14" BLACK FIBERGLASS POLE |
| | CLOVIS PLACE | 2+46.76 | 21.80' R | |
| * | CLOVIS PLACE | 6+30.20 | 18.20' L | 100 WATT HPS VAPOR PREMIER POST TOP FIXTURE MOUNTED ON 14" BLACK FIBERGLASS POLE |

- NOTES:**
- REFER TO SHEET 9 FOR STORMDRAIN PROFILES AND SHEET 8 FOR THE STRUCTURE SCHEDULE.
 - FOR STREET TREE LOCATIONS, REFER TO SHEET 12.
 - ALL STREET TREES AND/OR SIGN SHALL BE LOCATED 5' MIN. FROM PROPOSED DRAINAGE, UTILITY STRUCTURE.
 - THERE SHOULD BE A MINIMUM OF 20' BETWEEN STREET LIGHTS AND STREET TREES.
 - IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN:
 - THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL STOP SIGNS.
 - THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND CLOSEST TREE FOR ALL SIGNS OTHER THAN A STOP SIGN.
 - ALL SIGN LOCATIONS ARE APPROXIMATE. HOWARD COUNTY TRAFFIC SHALL FIELD APPROVE OR MARK ALL SIGN LOCATIONS PRIOR TO ANY SIGNS BEING INSTALLED. CALL 410-313-5752.
 - PROVIDE PERMANENT TEE TURN AROUND PER R-5.05 DIMENSIONS AND AS DETAIL HEREON. PROVIDE STD COMBINATION CURB & GUTTER PER R-3.01 AROUND TEE TURNAROUND.
 - PROVIDE DRIVEWAY ENTRANCE PER R-6.05 COMBINED WITH 7" COMBINATION CURB AND GUTTER.

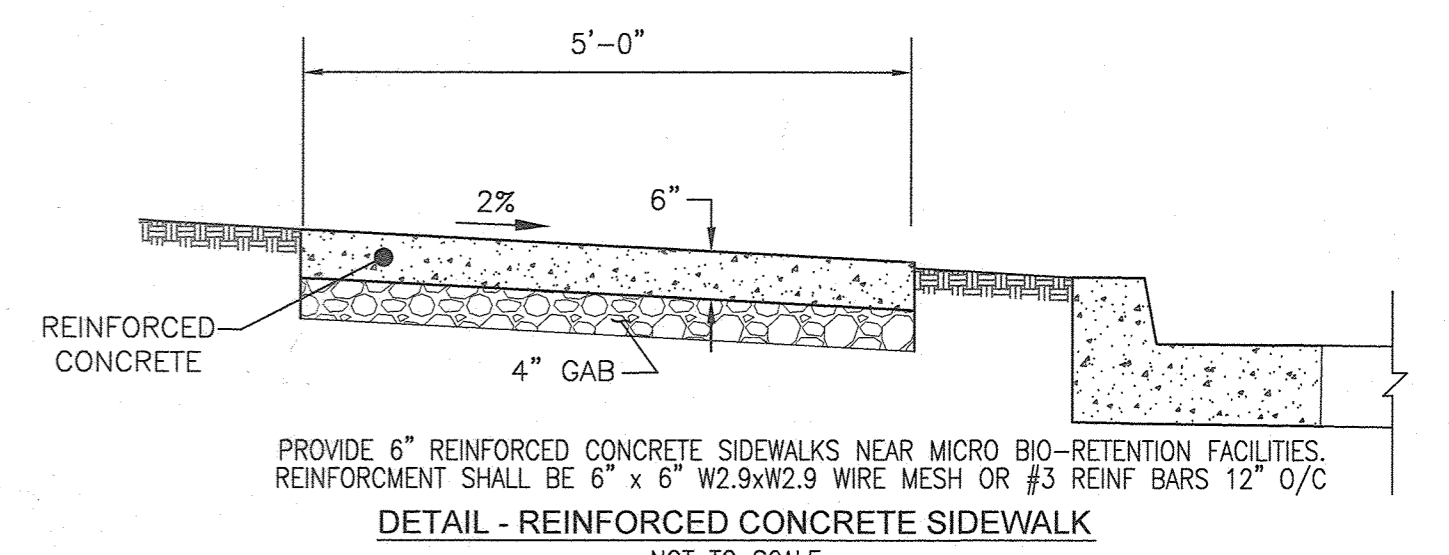
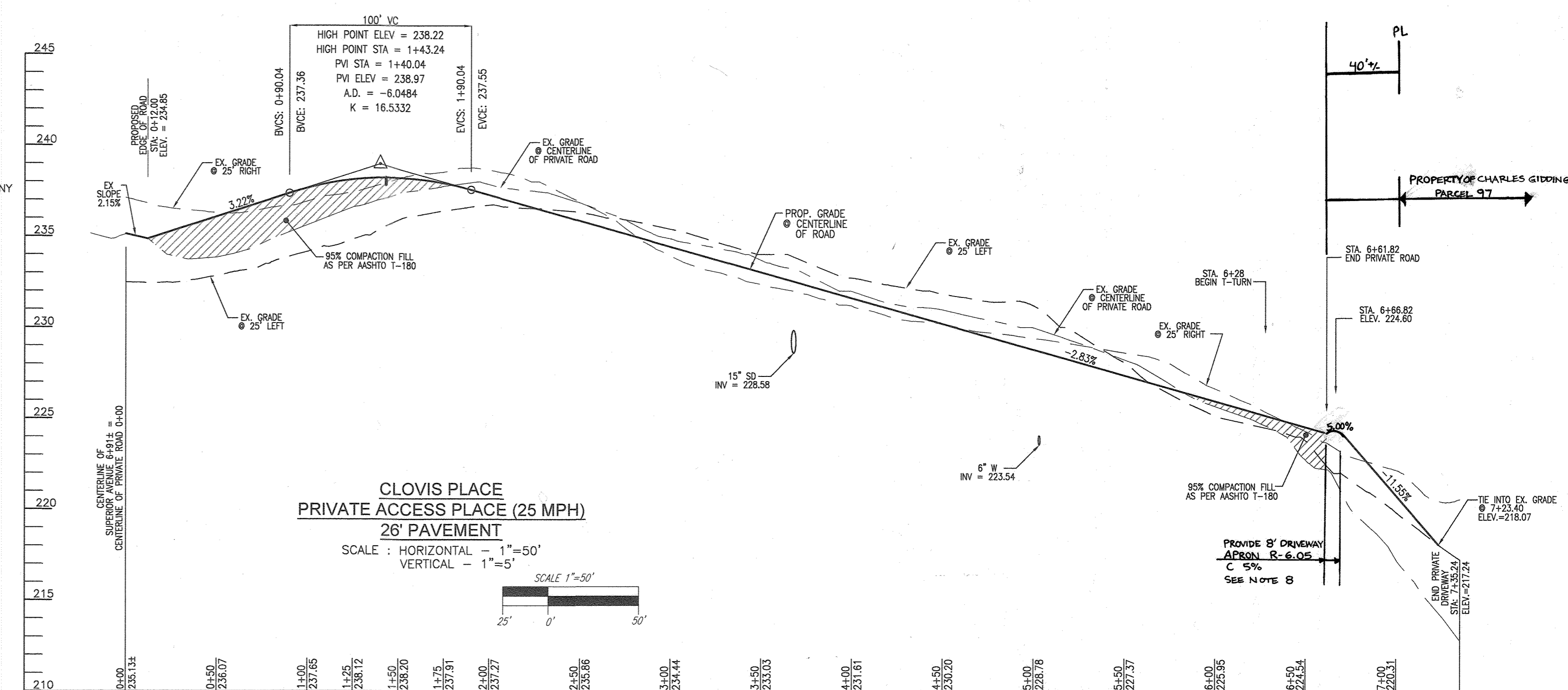
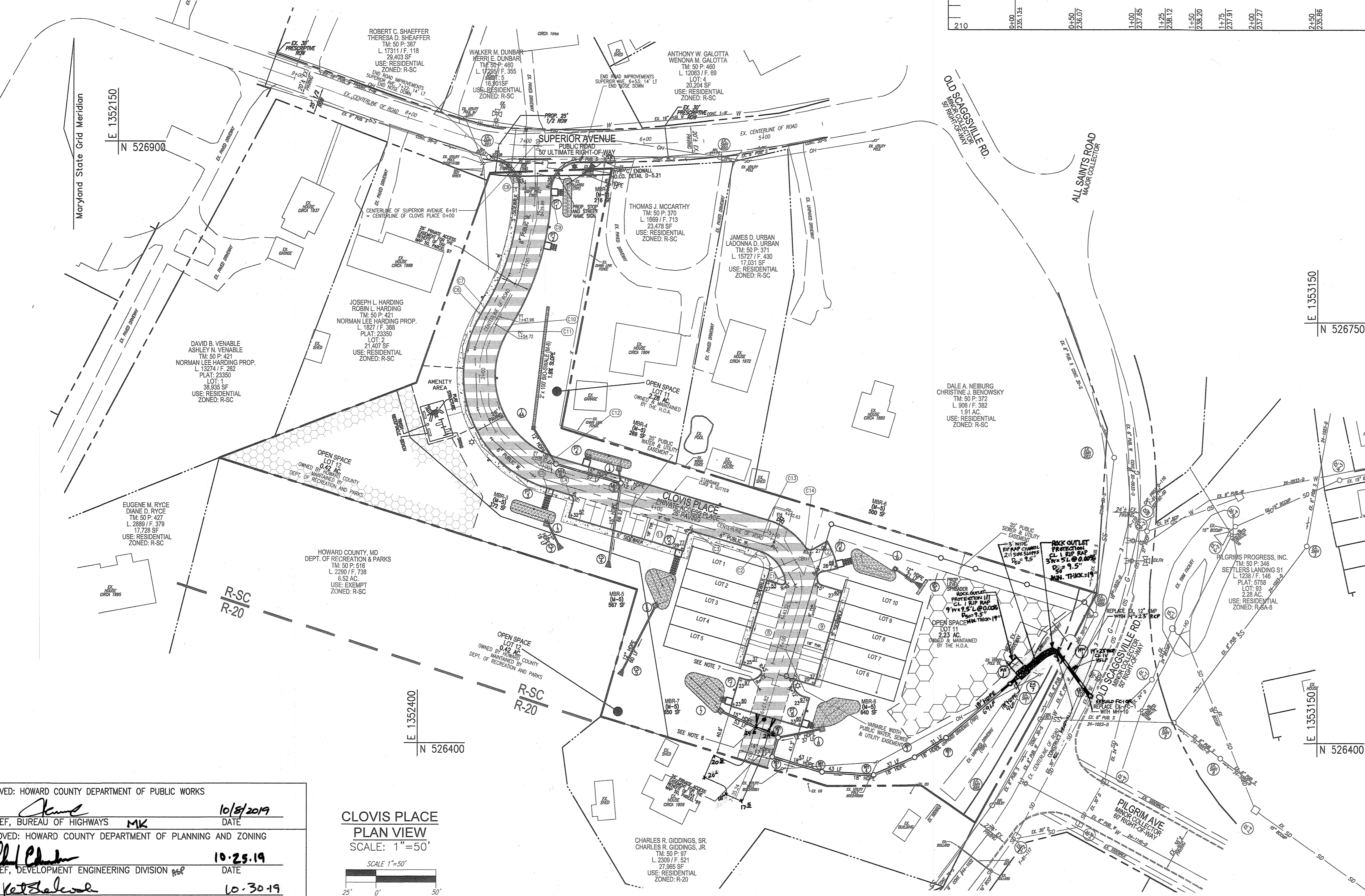
TRAFFIC CONTROL SIGNAGE NOTES

- ALL SIGN LOCATIONS ARE APPROXIMATE.
 - HOWARD COUNTY TRAFFIC SHALL FIELD APPROVE OR MARK ALL SIGN LOCATIONS PRIOR TO ANY SIGNS BEING INSTALLED. CALL 410-313-5752.
 - ONLY SIGNS WITHIN THE COUNTY RIGHT-OF-WAY (SUPERIOR AVENUE) WILL BE FIELD MARKED AND APPROVED.
 - SIGNS ALONG CLOVIS PLACE (PRIVATE ROAD) ARE PRIVATE.
 - STREET NAME SIGNS WILL BE MOUNTED ON THE R1-2 SIGNS IN THE ROUNDABOUT AS DIRECTED BY THE COUNTY TRAFFIC ENGINEER.

| CENTERLINE ROAD CURVE TABLE | | | | | | |
|-----------------------------|---------|---------|-------------|---------|-----------------|--------------|
| CURVE | LENGTH | RADIUS | DELTA ANGLE | TANGENT | CHORD DIRECTION | CHORD LENGTH |
| 0+29.89 - 1+47.96 | 118.26' | 210.00' | 32°16'00" | 60.75' | S 15°13'22" W | 116.71' |
| 1+54.72 - 3+06.67 | 153.96' | 84.00' | 105°00'43" | 109.49' | S 21°09'00" E | 133.29' |
| 4+92.63 - 5+63.32 | 70.69' | 45.00' | 90°00'00" | 45.00' | S 28°39'21" E | 63.64' |

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- PROPOSED LIGHT POLE
- PUBLIC UTILITY EASEMENT
- 26' PRIVATE ACCESS EASEMENT FOR THE BENEFIT OF MAP 50, PARCEL 97
- FOREST CONSERVATION EASEMENT (RETENTION)
- FOREST CONSERVATION EASEMENT (AFFORESTATION / REFORESTATION)
- SIGN
- STORM DRAIN INLETS
- STORM DRAIN
- SIDEWALK
- CURB ELEVATION POINT LEADER



OWNER: MAGNOLIA MANDOR, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER: TRINITY HOMES MARYLAND, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

| NO. | REVISION | DATE |
|-----|--|---------|
| 1 | REVISE STORM DRAIN BASED ON FIELD CONDITIONS | 6-24-21 |

FINAL SUPPLEMENTAL PLAN
CLOVIS PLACE PLAN & PROFILE
FALCON PLACE
 LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
 6TH ELECTRONIC DISTRICT
 DPZ REF: ECP-17-015, S-17-001, WP-17-067
 P-18-001, CONTRACT NO. 24-5033-D, AA-18-002

ZONED: R-SC
 PARCELS: 100 & 428
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
 ENGINEERS • SURVEYORS • PLANNERS
 3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
 ELLICOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHY
 DRAWN BY: LG
 CHECKED BY: RHY
 DATE: SEPTEMBER 2019
 SCALE: AS SHOWN
 W.O. NO.: 16-15

PROFESSIONAL CERTIFICATE
 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. 18183, EXPIRATION DATE: 09-27-2020

2 SHEET OF 14

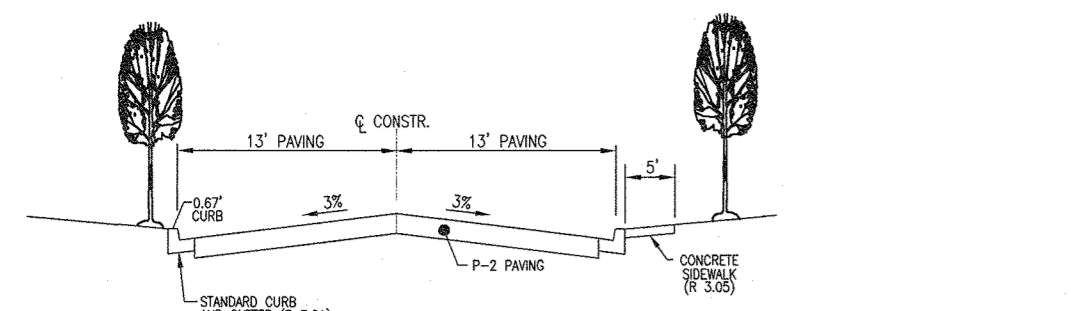
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS
 DATE: 10/8/2019

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 10-25-19

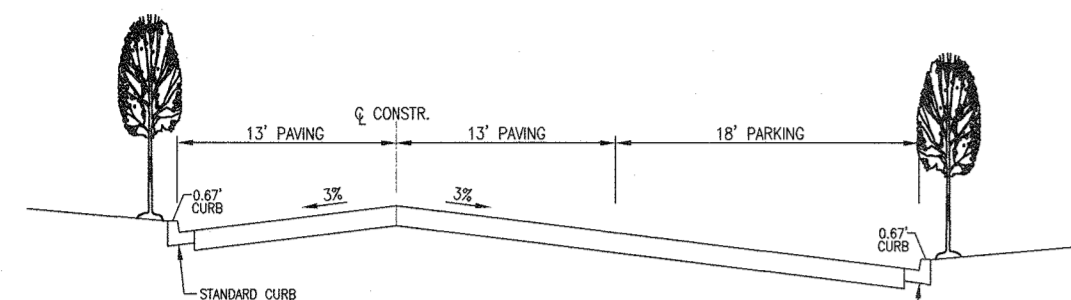
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 10-30-19

CLOVIS PLACE
PLAN VIEW
 SCALE: 1" = 50'

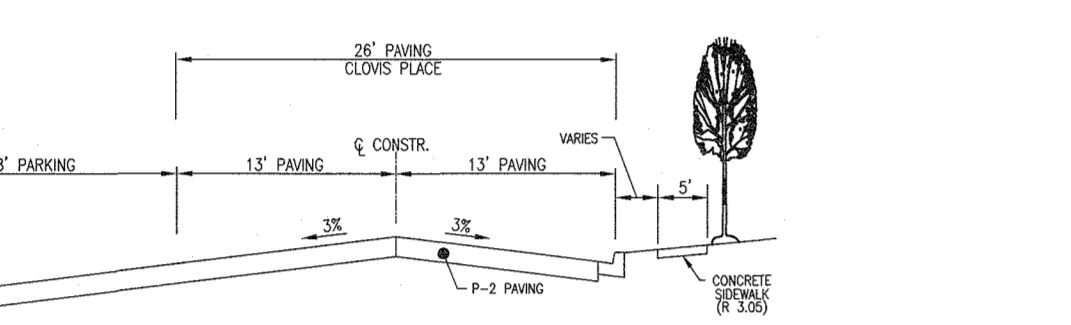
| CURB FLOW LINE ELEVATION TABLE | | | | |
|--------------------------------|---------|----------|-----------|--|
| POINT | STATION | OFFSET | ELEVATION | |
| C1 | 5+43.27 | 13.00 RT | 227.16 | |
| C2 | 4+92.63 | 13.00 RT | 228.99 | |
| C3 | 4+37.32 | 13.00 RT | 230.16 | |
| C4 | 3+28.29 | 13.00 RT | 233.24 | |
| C5 | 3+08.67 | 13.00 RT | 233.80 | |
| C6 | 1+54.72 | 13.00 RT | 237.78 | |
| C7 | 1+47.96 | 13.00 RT | 237.81 | |
| C8 | 0+35.00 | 13.00 RT | 235.99 | |
| C9 | 0+35.85 | 13.00 LT | 235.22 | |
| C10 | 1+47.96 | 13.00 LT | 237.81 | |
| C11 | 1+54.72 | 13.00 LT | 237.78 | |
| C12 | 3+08.67 | 13.00 LT | 233.80 | |
| C13 | 4+92.63 | 13.00 LT | 228.59 | |
| C14 | 5+23.54 | 13.00 LT | 227.72 | |



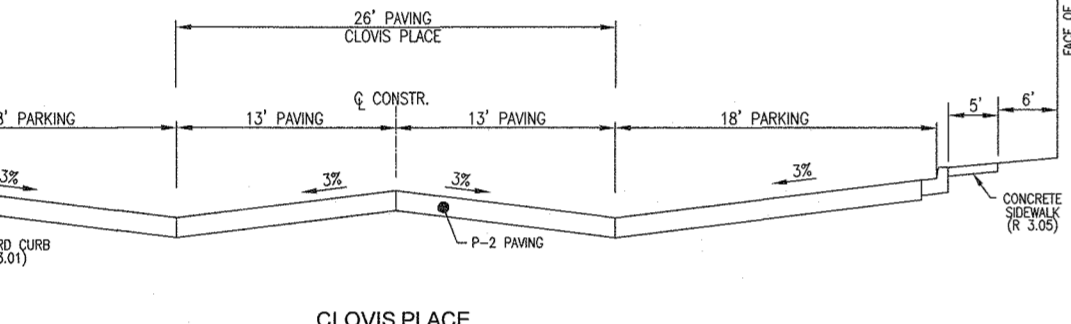
CLOVIS PLACE
TYPICAL ROADWAY SECTION
ACCESS PLACE (CONSTRUCTED TO PUBLIC STANDARD)
STA. 5412 TO STA. 3431.83
& STA. 5420.00 TO STA. 5447.82
(SECTION NOT TO SCALE)



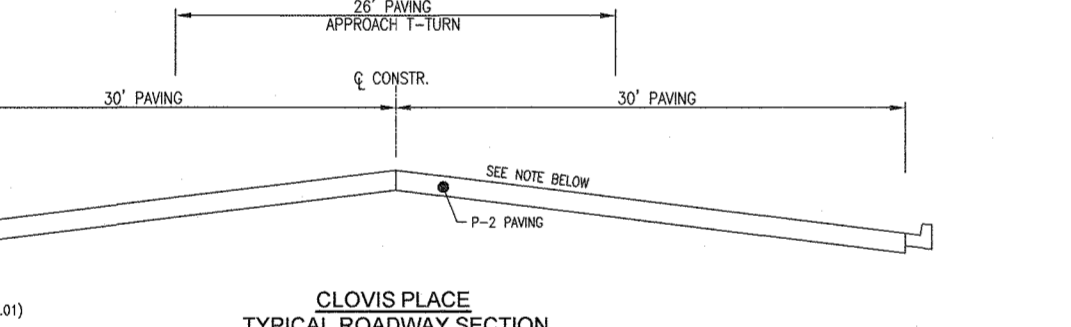
CLOVIS PLACE
TYPICAL ROADWAY SECTION
ACCESS PLACE (CONSTRUCTED TO PUBLIC STANDARD)
STA. 3431.83 TO STA. 4433.79
(SECTION NOT TO SCALE)



CLOVIS PLACE
TYPICAL ROADWAY SECTION
ACCESS PLACE (CONSTRUCTED TO PUBLIC STANDARD)
STA. 3432.43 TO STA. 5442.09
(SECTION NOT TO SCALE)

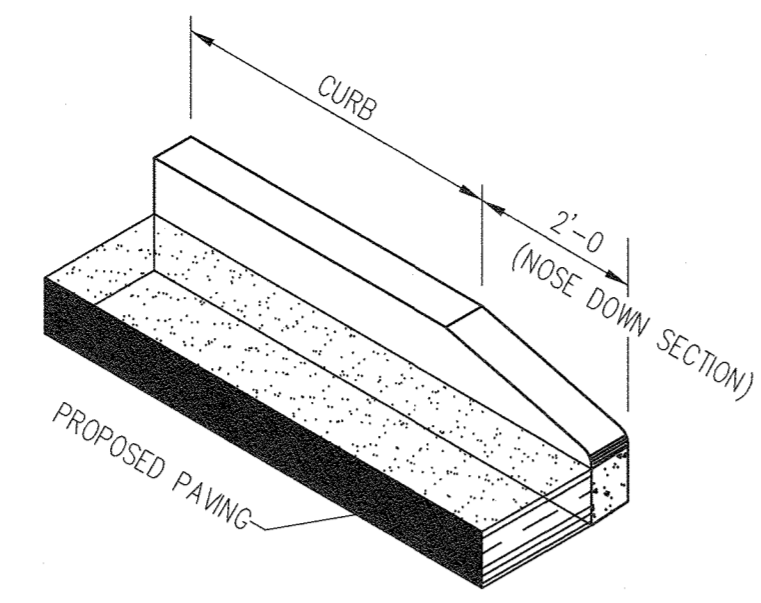


CLOVIS PLACE
TYPICAL ROADWAY SECTION
ACCESS PLACE (CONSTRUCTED TO PUBLIC STANDARD)
STA. 5442.09 TO STA. 6437.82
(SECTION NOT TO SCALE)

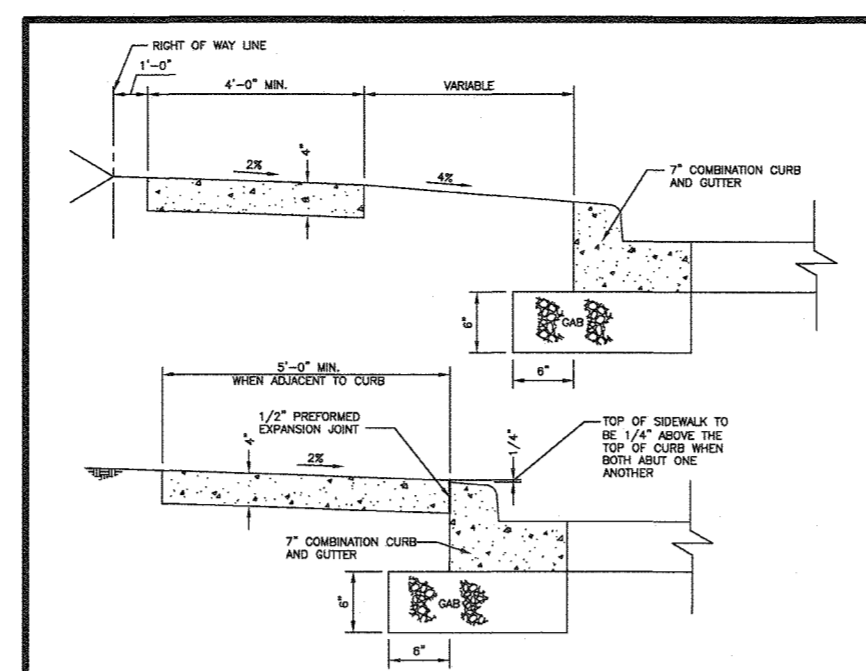


CLOVIS PLACE
TYPICAL ROADWAY SECTION
ACCESS PLACE (CONSTRUCTED TO PUBLIC STANDARD)
STA. 6437.82 TO STA. 6461.82
(SECTION NOT TO SCALE)

NOTES: 1. ROAD SECTION CHANGE STATIONS TAKEN ALONG CURB FILLET.
2. SIDEWALK TAPERS AWAY FROM CURB FROM STA. 4+92.83 TO STA. 5+47.82

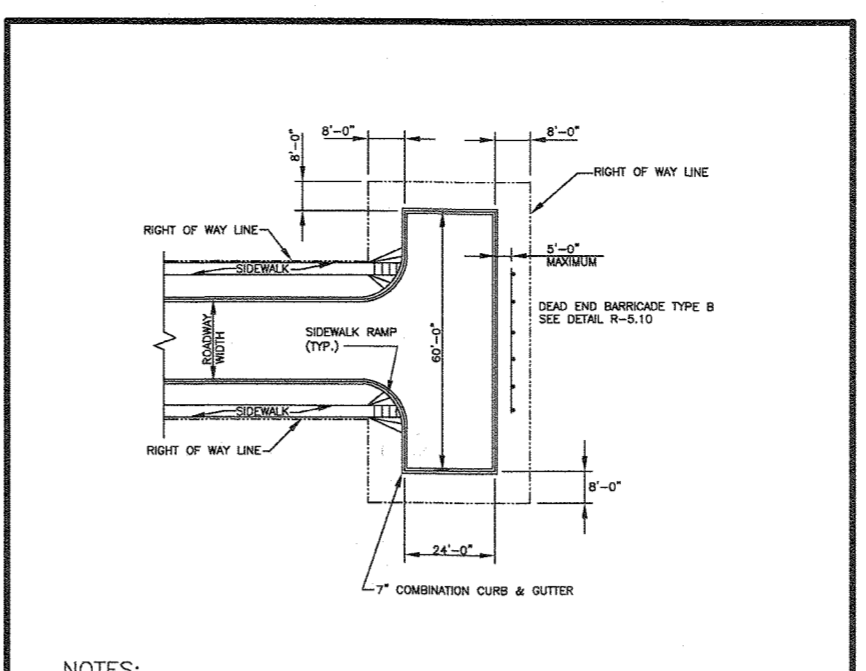


CONCRETE CURB - NOSE DOWN
NOT TO SCALE



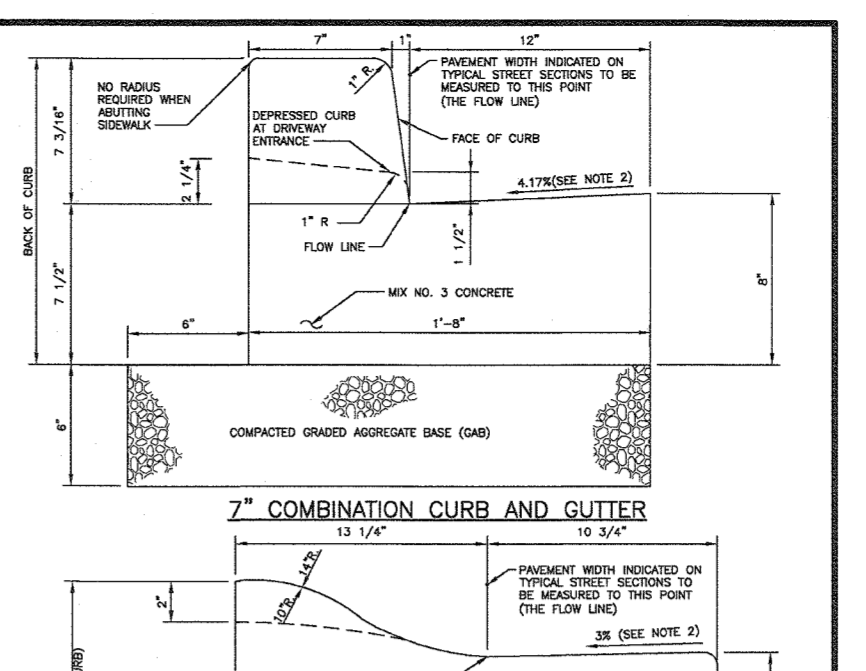
NOTES:
1. SIDEWALK SHALL BE SCAINED IN 5'-0\"/>

| | | | |
|---|-------------------|--------|--------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | CONCRETE SIDEWALK | Detail | R-3.05 |
|---|-------------------|--------|--------|



NOTES:
1. SIDEWALK SHALL ONLY BE INSTALLED ON RESIDENTIAL STREETS WITH LESS THAN 200 ADF.
2. THE LENGTH OF THE SIDEWALK IS TO EQUAL THE WIDTH OF THE ROADWAY.
3. INSTALL SONGS R7-1 (1\"/>

| | | | |
|---|---|--------|--------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | TEE TURN-AROUND Permanent (<200 ADF) | Detail | R-5.05 |
|---|---|--------|--------|



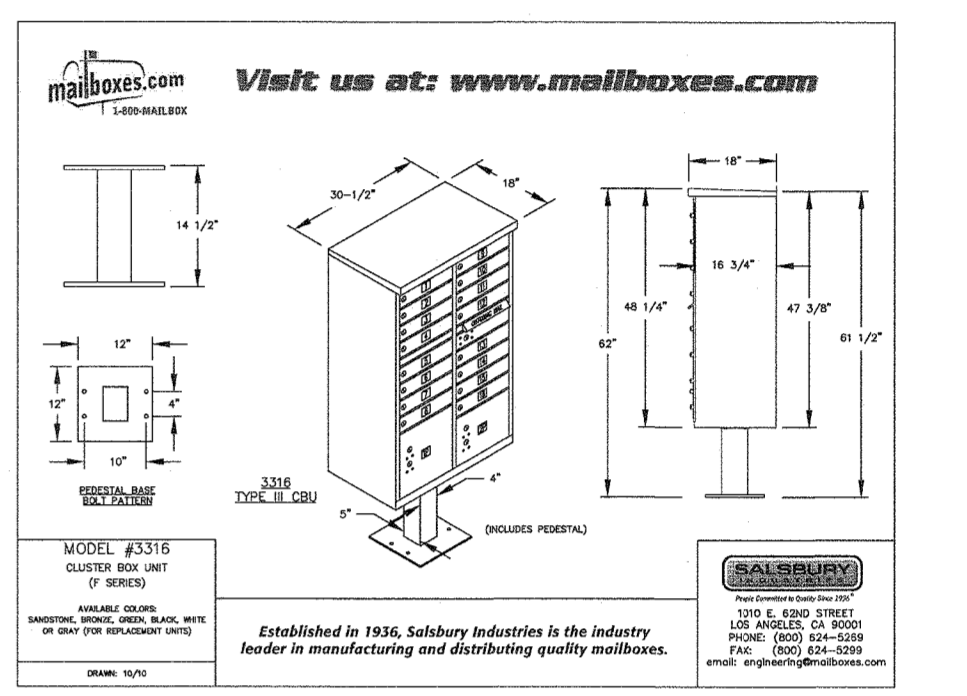
NOTES:
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2. THE LENGTH OF THE SIDEWALK IS TO EQUAL THE WIDTH OF THE ROADWAY.
3. INSTALL SONGS R7-1 (1\"/>

| | |
|---|--------------------------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | CURB AND GUTTER 7\"/> |
|---|--------------------------|

| SECTION NUMBER | ROAD AND STREET | DESCRIPTION | DATE | BY | CHKD | APP'D |
|----------------|-----------------|------------------------------|------------|-----|------|-------|
| P-1 | ROAD AND STREET | PROPOSED SIDEWALK AND GUTTER | 10/15/2019 | MLK | MLK | MLK |
| P-2 | ROAD AND STREET | PROPOSED SIDEWALK AND GUTTER | 10/15/2019 | MLK | MLK | MLK |
| P-3 | ROAD AND STREET | PROPOSED SIDEWALK AND GUTTER | 10/15/2019 | MLK | MLK | MLK |
| P-4 | ROAD AND STREET | PROPOSED SIDEWALK AND GUTTER | 10/15/2019 | MLK | MLK | MLK |

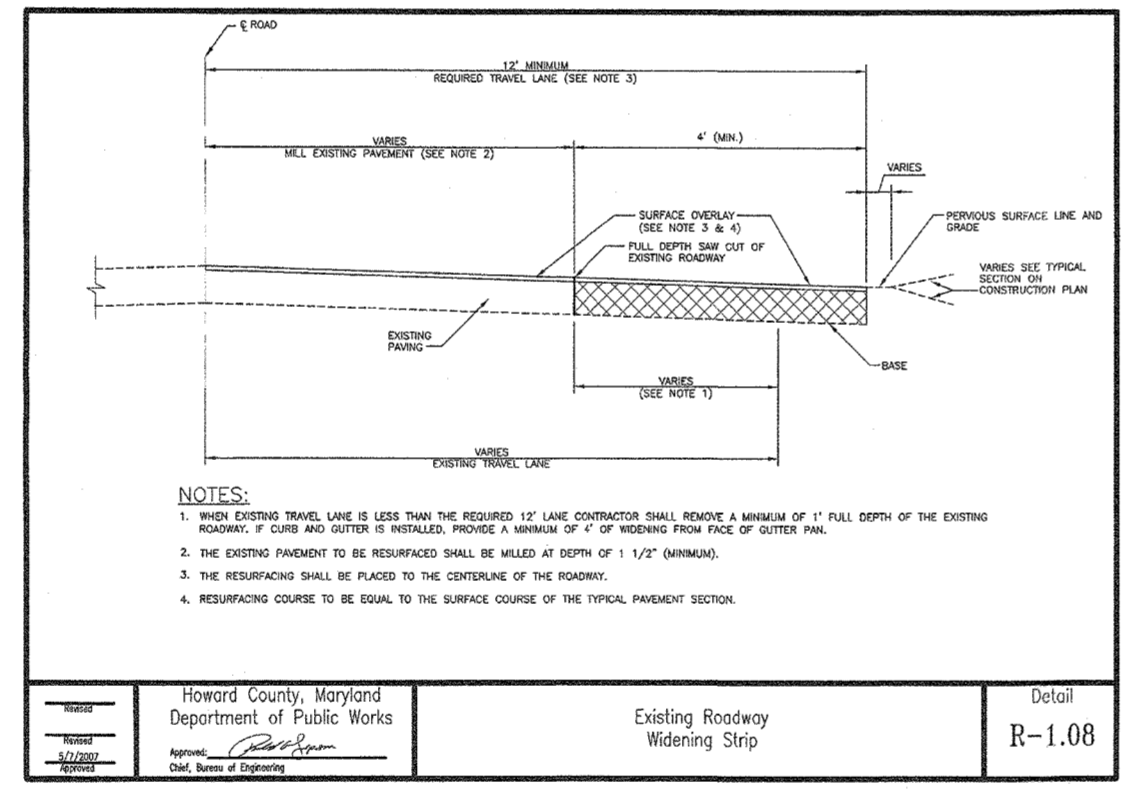
| | | | |
|---|-------------------------------|--------|--------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | PAVING SECTIONS P-1 to P-4 | Detail | R-2.01 |
|---|-------------------------------|--------|--------|

TYPICAL CENTRAL MAIL DELIVERY BOX (CBU)
OR APPROVED EQUAL



SALSBUURY INDUSTRIES MANUFACTURES CBU'S THAT ARE OFFICIALLY LICENSED BY THE U.S.P.S. SALSBUURY 3300 SERIES CLUSTER BOX UNITS ARE MANUFACTURED TO U.S.P.S. SPECIFICATIONS. THEY ARE AN OFFICIALLY LICENSED PRODUCT OF THE U.S. POSTAL SERVICE FOR CENTRALIZED MAIL DELIVERY. LICENSE NUMBER 10CSD-08-B-0026

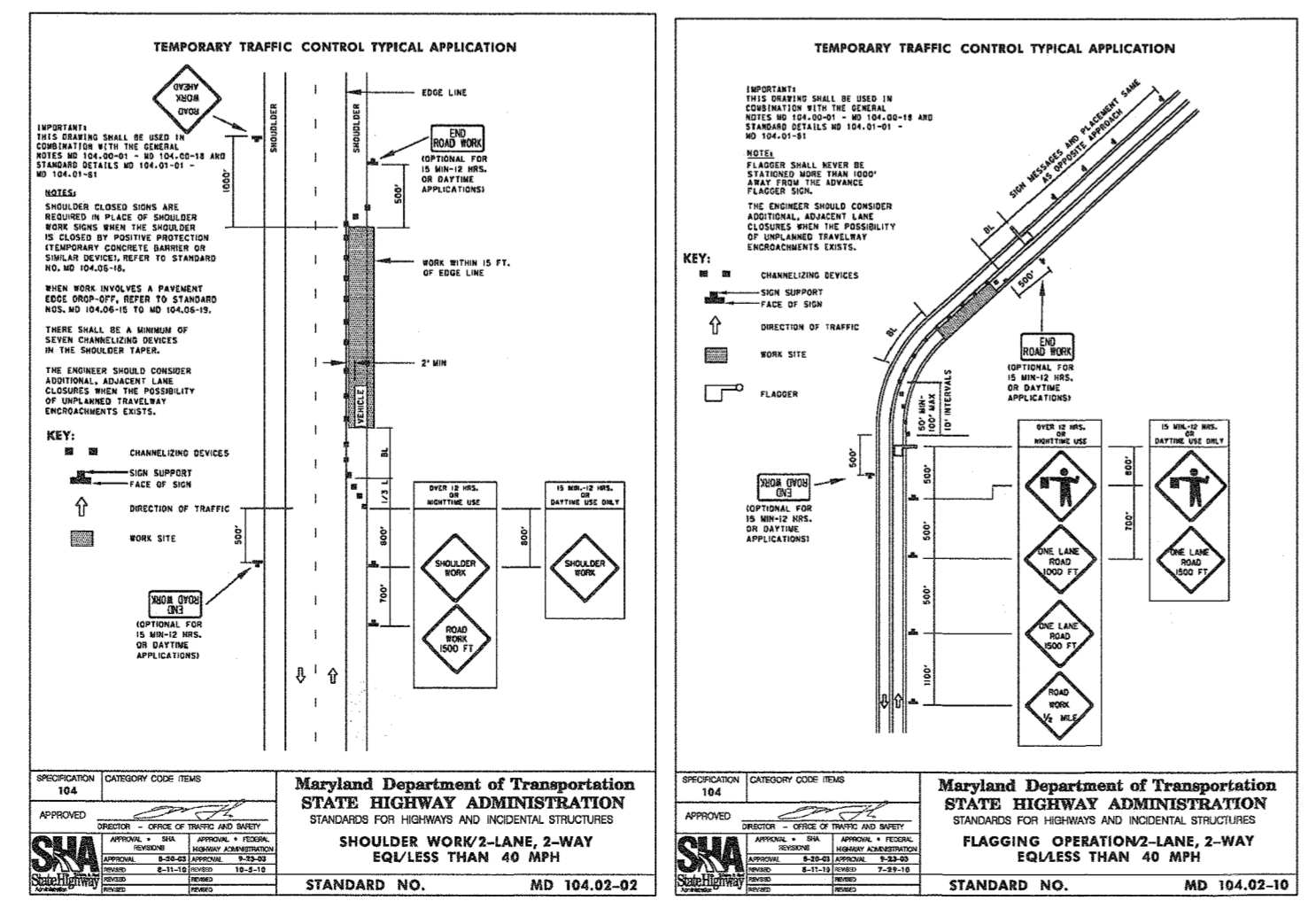
-CBU LOCATION RD STATION 5+20.94; 20.61' RT
PROVIDE ONE 12 UNIT "CLUSTER BOX UNIT"
TO SERVE LOTS 1-10



| | | | |
|---|------------------------------------|--------|--------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | Existing Roadway Widening Strip | Detail | R-1.08 |
|---|------------------------------------|--------|--------|

SUPERIOR AVENUE & OLD SCAGGSVILLE ROAD
TYPICAL WORK ZONE
TRAFFIC CONTROL DETAILS

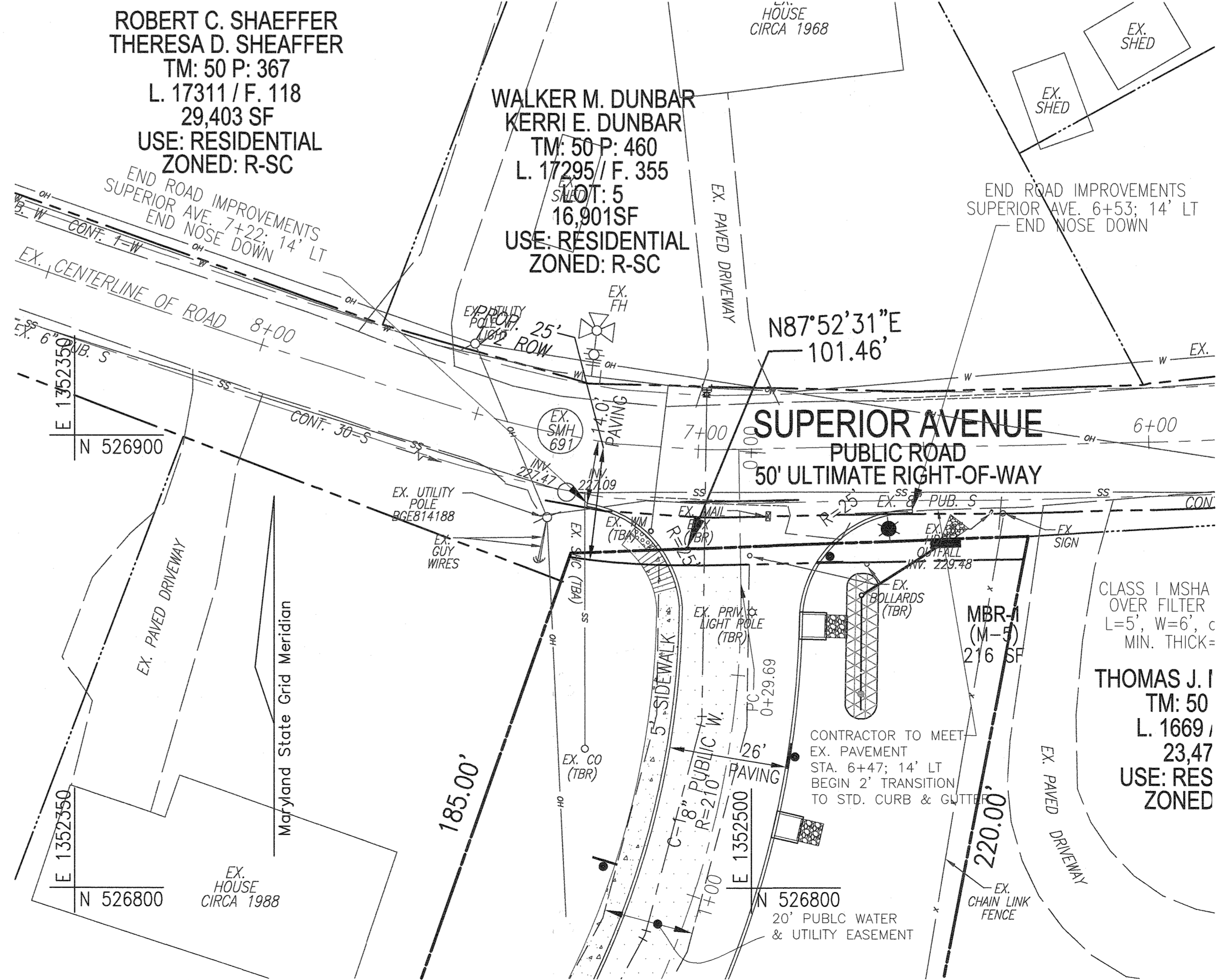
ALL WORK WITHIN THE SUPERIOR AVENUE PUBLIC RIGHT-OF-WAY AND OLD SCAGGSVILLE ROAD PUBLIC RIGHT-OF-WAY SHALL BE IN ACCORDANCE WITH THE STANDARD MARYLAND STATE HIGHWAY ADMINISTRATION DETAILS: MD 104.02-02 & MD 104.02-10 OR AS DIRECTED BY THE HOWARD COUNTY - TRAFFIC ENGINEERING DIVISION.



| | | |
|---|-----------------------|---------------------------|
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | PROPOSED CONSTRUCTION | STANDARD NO. MD 104.02-02 |
| Howards County, Maryland Department of Public Works Bryan E. Pugh, PE Civil Engineer | PROPOSED CONSTRUCTION | STANDARD NO. MD 104.02-10 |

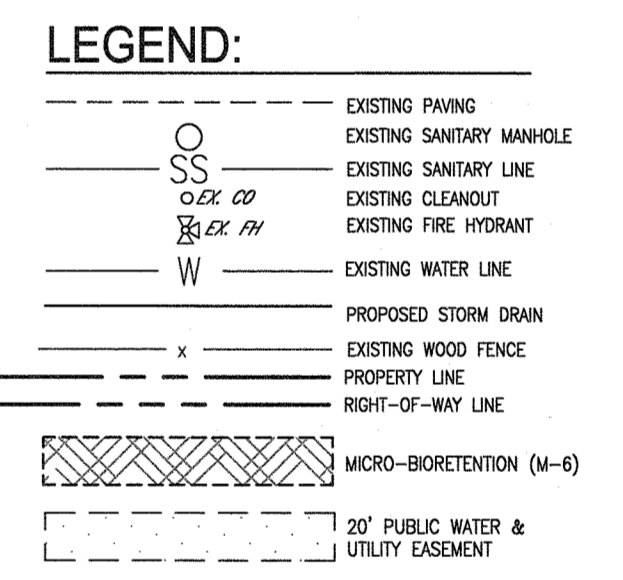
ROBERT C. SHAEFFER
THERESA D. SHAEFFER
TM: 50 P: 367
L. 17311 / F. 118
29,403 SF
USE: RESIDENTIAL
ZONED: R-SC

WALKER M. DUNBAR
KERRI E. DUNBAR
TM: 50 P: 460
L. 17295 / F. 355
LOT 5
16,901 SF
USE: RESIDENTIAL
ZONED: R-SC



SUPERIOR AVENUE
ROAD IMPROVEMENT DETAIL
SCALE: 1" = 20'

| CURVE | LENGTH | RADIUS | DELTA ANGLE | TANGENT | CHORD DIRECTION | CHORD LENGTH |
|-------------------|--------|---------|-------------|---------|-----------------|--------------|
| 7+00.50 - 7+52.98 | 52.48' | 150.00' | 20°02'50" | 26.51' | N 81°02'49" W | 52.22' |



OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

FINAL SUPPLEMENTAL PLAN
SITE DETAILS
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
DISP. REF: EDC-17-015, S-17-001, WP-17-067,
P-18-001, CONTRACT NO. 24-5033-D, AK-18-002

THOMAS J. I
TM: 50
L. 1669 /
23.47
USE: RES
ZONED

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELLCOTT CITY, MD 21043 FAX: 410.461.8961

DESIGN BY: RHV
DRAWN BY: LG
CHECKED BY: RHV
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 16-15

PROFESSIONAL CERTIFICATE
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 16193, EXPIRATION DATE: 09-27-2023

3 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
10/15/2019
CHIEF, BUREAU OF HIGHWAYS

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
10.25.19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

10.30.19
CHIEF, DIVISION OF LAND DEVELOPMENT

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

- NOTES**
- REFER TO SHEET 6 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 6 FOR TRAP DETAILS
 - REFER TO SHEET 6 FOR STANDARD DETAILS AND STABILIZATION NOTES

- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SSF IN 25' SEGMENTS AS REQUIRED UP HILL BY 2' IN ELEVATION.

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UP HILL NO MORE THAN 25 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

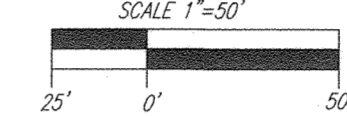
NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREES
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- PROPOSED TREELINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- EXISTING STEEP SLOPES (25% SLOPES OR GREATER)
- EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES)
- LOD
- LIMIT OF DISTURBANCE
- PROPOSED STABILIZED CONSTRUCTION ENTRANCE
- TREE PROTECTION FENCE
- SUPER SILT FENCE
- DIVERSION FENCE
- SILT FENCE
- EARTH DIKE
- EXISTING SPECIMEN TREE TO BE REMOVED
- SEDIMENT CONTROL DEVICE DRAINAGE AREA
- REMOVABLE PUMPING STATION
- RIP RAP INFLOW PROTECTION
- BAFFLE BOARD

PHASE 1 - SOILS MAP, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1"=50'



FENCING SHALL BE INSTALLED PARALLEL TO CONTOUR AT 35 FT INTERVALS FOR THE UTILITY INSTALLATION

| SEDIMENT CONTROL - INITIAL CONDITION | | | | |
|--------------------------------------|------------|--|------------|---------------------------|
| AREA NO. | AREA (AC.) | PRACTICE TYPE | DETAIL NO. | REMARKS |
| 1 | 1.14 | STONE-RIP-RAP OUTLET SEDIMENT TRAP ST-II | G-1-2 | INCLUDES SUBAREAS 1A & 1B |
| 1A | 0.31 | EARTH DIKE | C-1 | |
| 1B | 0.39 | EARTH DIKE | C-1 | |
| 2 | 0.29 | DIVERSION FENCE | C-9 | |
| 3 | 0.40 | DIVERSION FENCE | C-9 | |
| 4 | 0.44 | SUPER SILT FENCE | E-3 | |
| 5 | 0.21 | DIVERSION FENCE | C-9 | |

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELlicOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARY LAND, LLC
3675 PARK AVE., SUITE 301
ELlicOTT CITY, MD 21043
(410) 480-0023

SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | GROUP | K-FACTOR | ERODIBLE |
|--------|--|-------|----------|----------|
| CcC | CHILLUM LOAM, 5 TO 10 PERCENT SLOPES | B | 0.43 | YES |
| Fb | FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN | D | 0.24 | NO |
| MfF | MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY | B | 0.32 | YES |
| UcB | URBAN LAND-CHILLUM-BELLSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES | D | 0.37 | NO |

NOTE:
-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
-HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Jane 10/26/19
CHIEF, BUREAU OF HIGHWAYS MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Michael P. Pfa 10-25-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION MKP DATE

Scott Seidewitz 10-30-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT, AND/OR MDE.

Michael P. Pfa 08-28-19
OWNER/DEVELOPER SIGNATURE DATE
MICHAEL PFA MEMBER
PRINTED NAME & TITLE

DESIGN CERTIFICATION:
I HEREBY CERTIFY THAT THIS PLAN HAS BEEN DESIGNED IN ACCORDANCE WITH CURRENT MARYLAND EROSION AND SEDIMENT CONTROL LAWS, REGULATIONS, AND STANDARDS, THAT IT REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE, AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

Robert H. Vogel 8-28-19
DESIGNER'S SIGNATURE DATE
ROBERT H. VOGEL
PRINTED NAME
MD REGISTRATION NO. 18193
E.D. R.L.S., OR R.L.A. (circle one)

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

John R. Roberts 9/25/19
HOWARD S.C.D. DATE

| NO. | REVISION | DATE |
|-----|--|---------|
| 1 | REVISE STORM DRAIN BASED ON FIELD CONDITIONS | 6-24-21 |

FINAL SUPPLEMENTAL PLAN
PHASE 1 SOILS MAP, GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
6TH ELECTRON DISTRICT
DPZ REF: EOP-17-015, S-17-001, WP-17-067
P-18-001, CONTRACT NO. 24-5033-D, AA-18-002

ZONED: R-SC
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELlicOTT CITY, MD 21043 FAX: 410.461.8961

STATE OF MARYLAND PROFESSIONAL ENGINEER

DESIGN BY: RHY
DRAWN BY: LG
CHECKED BY: RHY
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 18-15

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A FULLY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 18193, EXPIRATION DATE: 09-27-2020

4 SHEET OF 14

ROBERT H. VOGEL, PE No.18193

| SEDIMENT CONTROL - FINAL CONDITION | | | |
|------------------------------------|------------|--|-----------------|
| AREA NO. | AREA (AC.) | PRACTICE TYPE | DETAIL NO. |
| 1 | 0.05 | PERMANENT SOIL STABILIZATION MATTING CHANNEL | B-4-6-C |
| 2 | 0.14 | PERMANENT SOIL STABILIZATION MATTING CHANNEL | B-4-6-C |
| 3 | 0.05 | SUPER SILT FENCE | E-3 |
| 4 | 0.13 | PERMANENT SOIL STABILIZATION MATTING CHANNEL/STANDARD INLET PROTECTION | B-4-6-C & E-9-1 |
| 5 | 0.11 | STANDARD INLET PROTECTION | E-9-1 |
| 6 | 0.09 | STANDARD INLET PROTECTION | E-9-1 |
| 7 | 0.13 | STANDARD INLET PROTECTION | E-9-1 |
| 8 | 0.20 | STANDARD INLET PROTECTION | E-9-1 |
| 9 | 0.33 | STANDARD INLET PROTECTION | E-9-1 |
| 10 | 0.16 | STANDARD INLET PROTECTION | E-9-1 |

NOTE:
- SILT FENCE IS TO BE REPLACED WITH SUPER SILT FENCE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.
- SILT FENCE SHALL BE CURLED UPHILL NO MORE THAN 25 FEET APART
- DOUBLE ROWS OF SUPER SILT FENCE SHALL BE INSTALLED AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR.

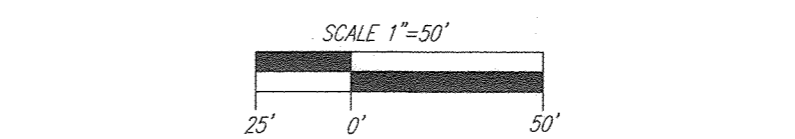
NOTE:
STABILIZATION IS TO BE DONE AT THE DIRECTION OF THE SEDIMENT CONTROL INSPECTOR OR AT THE INTERVALS REQUIRED BY THE 2011 STDS. & SPECS. WHICHEVER IS MORE RESTRICTIVE.

NOTE: LOCATE STOCKPILE AS SHOWN HEREON OR AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. STOCKPILES EXCEEDING 15 FEET IN HEIGHT SHALL BE BENCHED.

LEGEND:

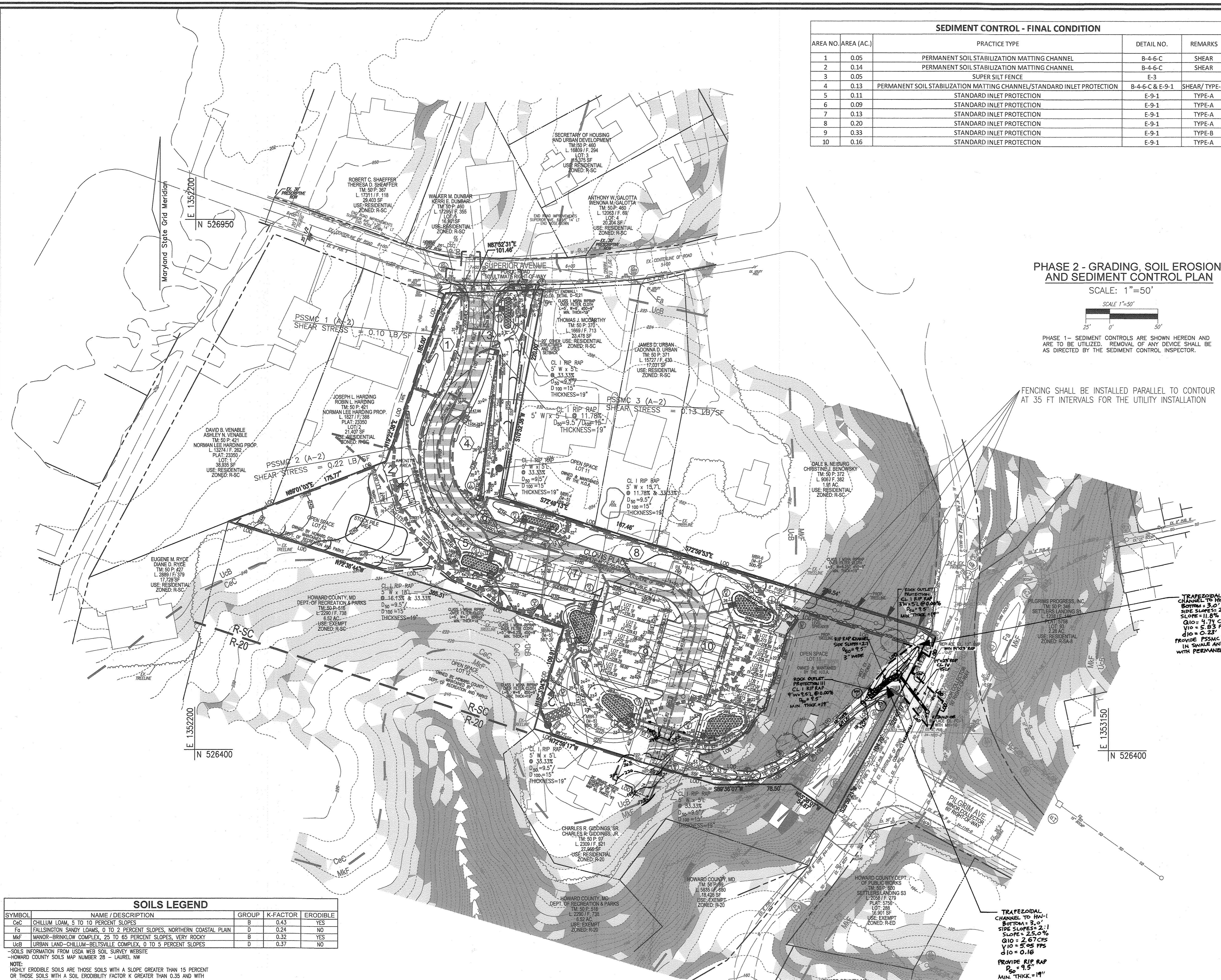
- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING UTILITY POLE
- EXISTING LIGHT POLE
- EXISTING MAILBOX
- EXISTING SIGN
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING CLEANOUT
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREES
- EXISTING WOOD FENCE
- EXISTING METAL FENCE
- PROPOSED TREELINE
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- EXISTING STEEP SLOPES (25% SLOPES OR GREATER)
- EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES)
- LIMIT OF DISTURBANCE
- PROPOSED STORM DRAIN
- MICRO-BIORETENTION
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED TREE PROTECTION FENCE
- SUPER SILT FENCE
- DIVERSION FENCE
- STANDARD INLET PROTECTION
- PERMANENT SOIL STABILIZATION MATTING CHANNEL
- 28' PRIVATE ACCESS EASEMENT FOR THE BENEFIT OF TAX MAP 50, PARCEL 97

PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
SCALE: 1"=50'



PHASE 1 - SEDIMENT CONTROLS ARE SHOWN HEREON AND ARE TO BE UTILIZED. REMOVAL OF ANY DEVICE SHALL BE AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR.

FENCING SHALL BE INSTALLED PARALLEL TO CONTOUR AT 35 FT INTERVALS FOR THE UTILITY INSTALLATION



TRAPEZOIDAL CHANNEL TO HW-1
BOTTOM = 3.0'
SIDE SLOPES = 2:1
SLOPE = 11.0%
Q10 = 4.71 CFS
V10 = 5.05 FPS
D10 = 0.23'
PROVIDE PSMC 1.75 LB/FT² IN SWALE AND STABILIZE WITH PERMANENT SEED MIX.

TRAPEZOIDAL CHANNEL TO HW-1
BOTTOM = 3.0'
SIDE SLOPES = 2:1
SLOPE = 25.0%
Q10 = 2.67 CFS
V10 = 5.05 FPS
D10 = 0.16'
PROVIDE RIP RAP
D10 = 9.5"
MIN. THICK = 14"

- NOTES**
- REFER TO SHEET 6 FOR SEQUENCE OF CONSTRUCTION
 - REFER TO SHEET 6 FOR TRAP DETAILS
 - REFER TO SHEETS 6 FOR STANDARD DETAILS AND STABILIZATION NOTES

- NOTES**
- ALL EARTH DIKES ARE TO BE PLACED IN WORKING ORDER AT THE END OF EACH WORKING DAY.
 - IMBRICATE SF/SSF IN 25' SEGMENTS AS REQUIRED UPHILL BY 2' IN ELEVATION.

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELLICOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLICOTT CITY, MD 21043
(410) 480-0023

| NO. | REVISION | DATE |
|-----|--|---------|
| 1 | REVISE STORM DRAIN BASED ON FIELD CONDITIONS | 6-24-21 |

FINAL SUPPLEMENTAL PLAN
PHASE 2 - GRADING, SOIL EROSION AND SEDIMENT CONTROL PLAN
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
DPZ REF: ECP-17-015, S-17-001, WP-17-067
P-18-001, CONTRACT NO. 24-5033-D, AA-18-002

ZONED: R-SC
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

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ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELLICOTT CITY, MD 21043 FAX: 410.461.8961

PROFESSIONAL CERTIFICATE

DESIGN BY: RHV
DRAWN BY: LG
CHECKED BY: RHV
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 16-15

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. 19183, EXPIRATION DATE: 09-27-2020

5 SHEET OF 14

SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | GROUP | K-FACTOR | ERODIBLE |
|--------|--|-------|----------|----------|
| CeC | CHILLUM LOAM, 5 TO 10 PERCENT SLOPES | B | 0.43 | YES |
| Fg | FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN | D | 0.24 | NO |
| Mf | MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY | B | 0.32 | YES |
| UcB | URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES | D | 0.37 | NO |

NOTE:
-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
-HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/8/2019
CHIEF, BUREAU OF HIGHWAYS MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10-25-19
CHIEF, DEVELOPMENT ENGINEERING DIVISION WBR DATE

[Signature] 10-30-19
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

OWNER/DEVELOPER CERTIFICATION:
I HEREBY CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

[Signature] 08-28-19
MICHAEL PEAL MEMBER
PRINTED NAME & TITLE

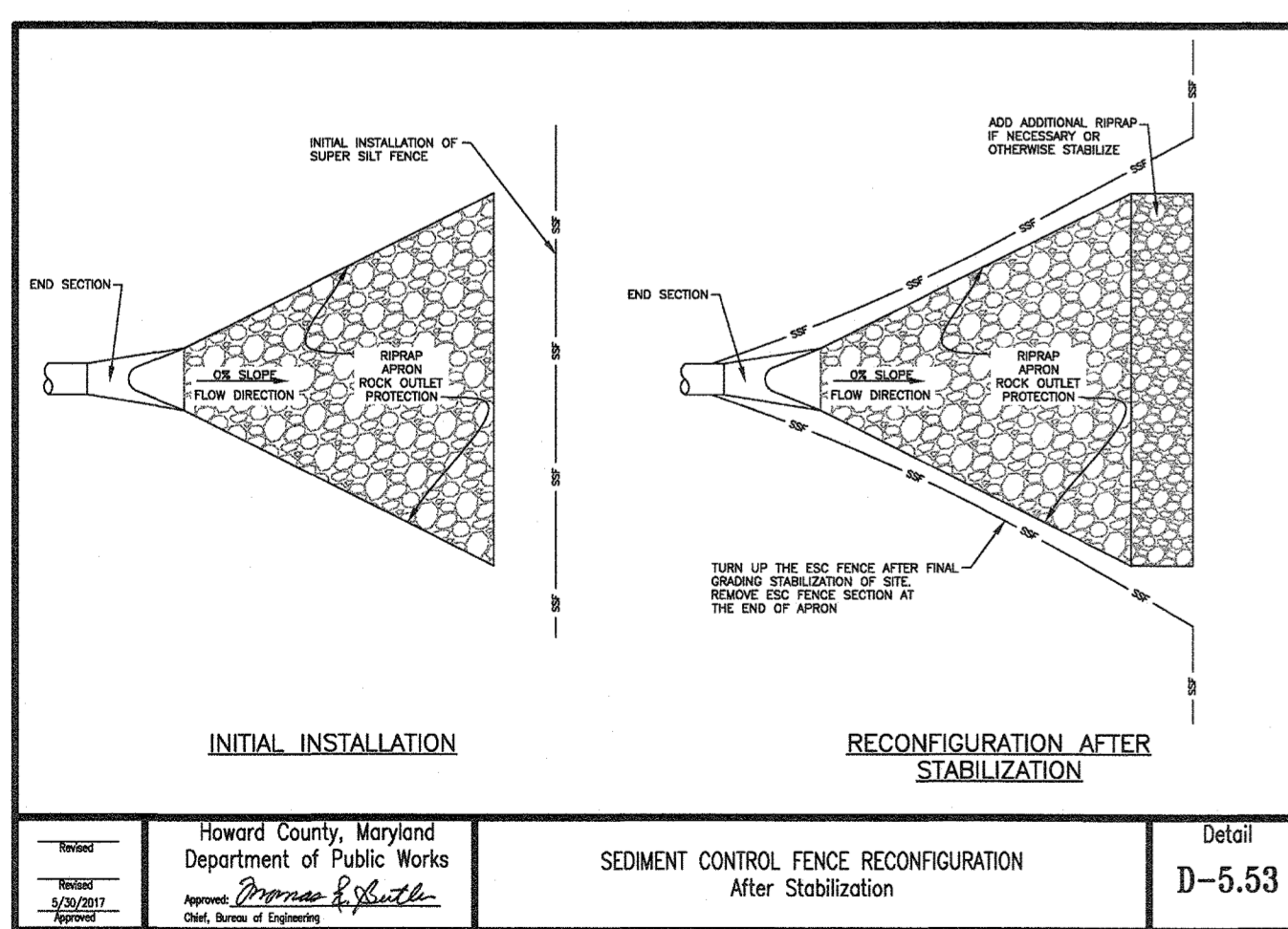
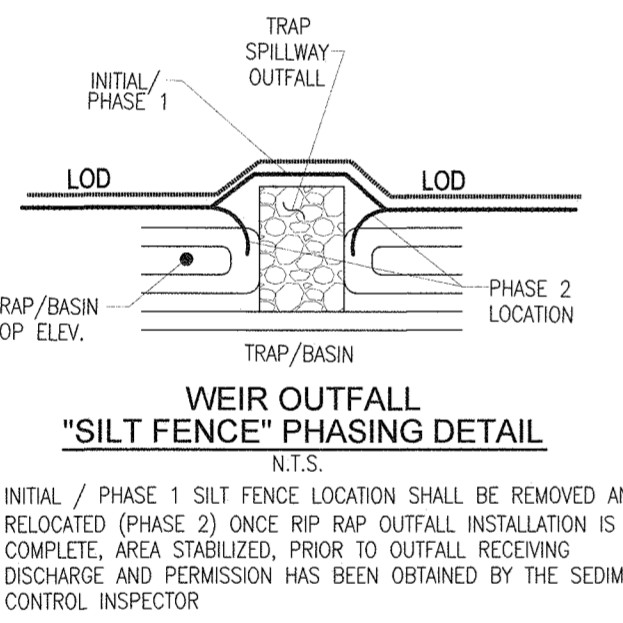
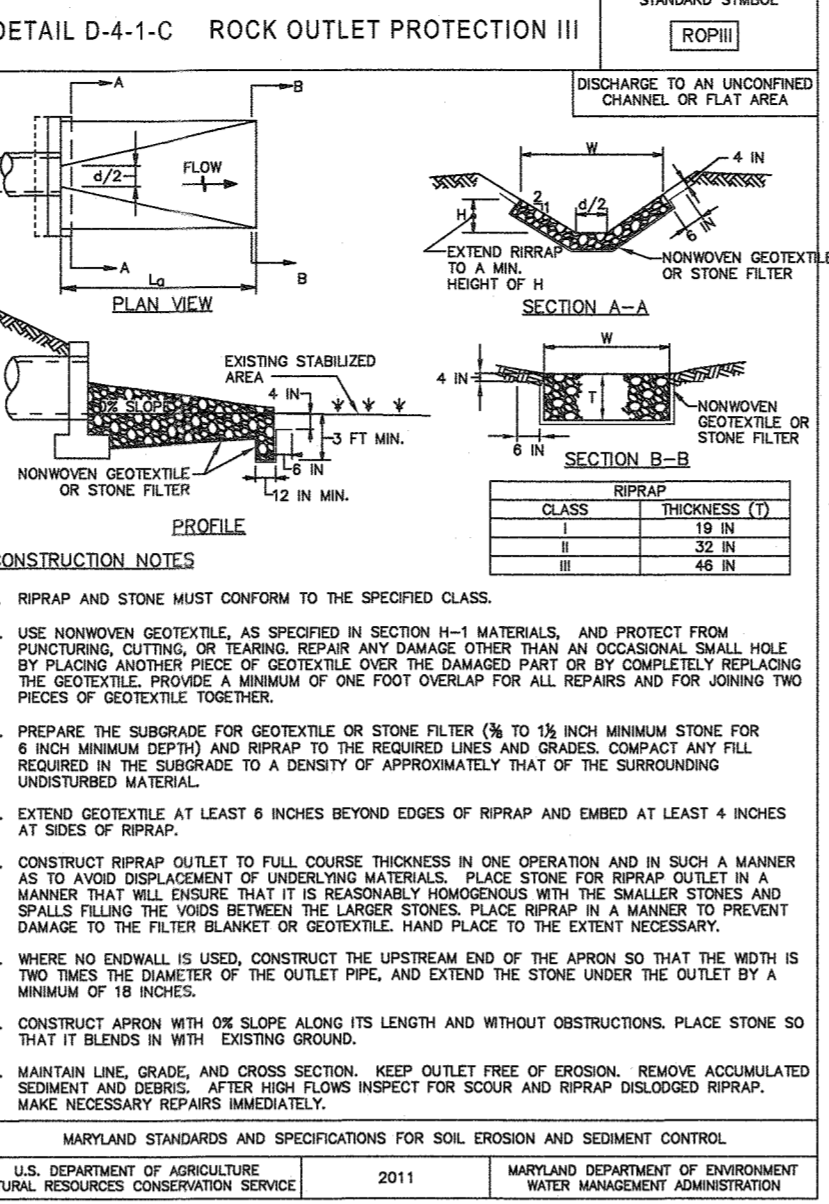
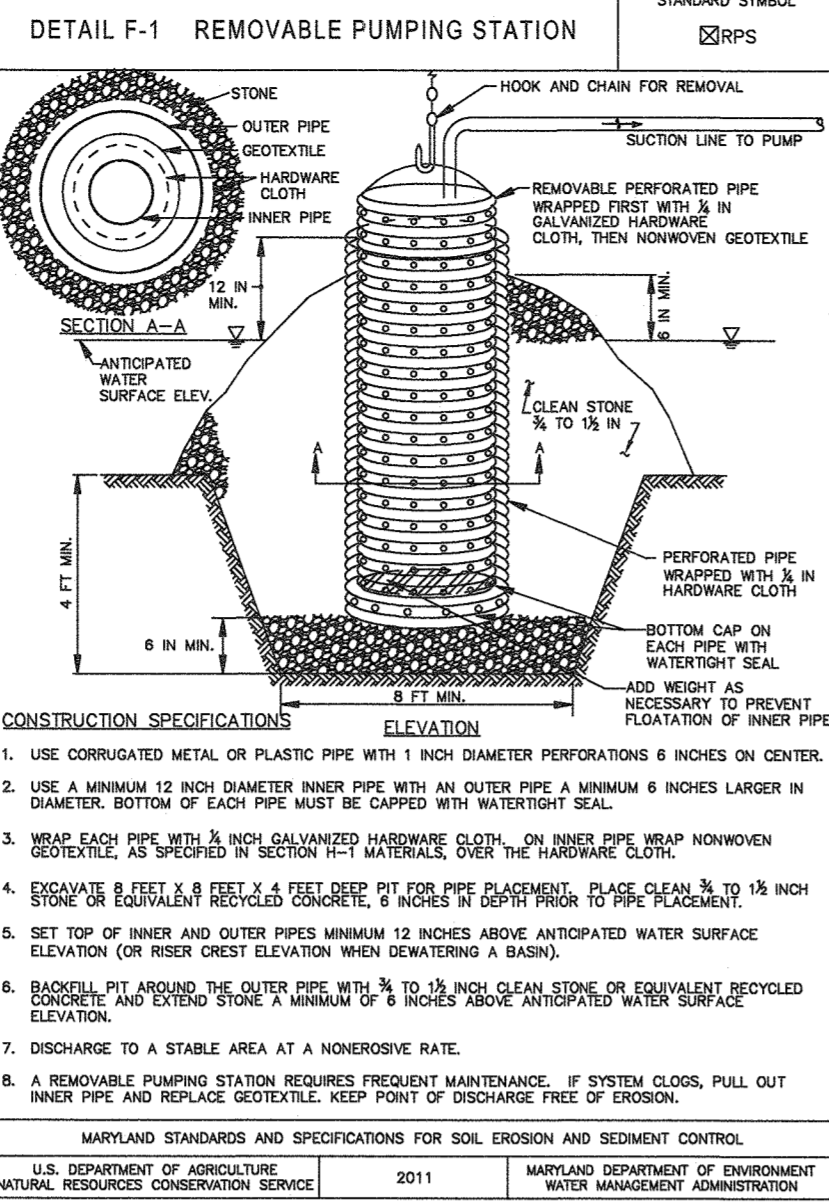
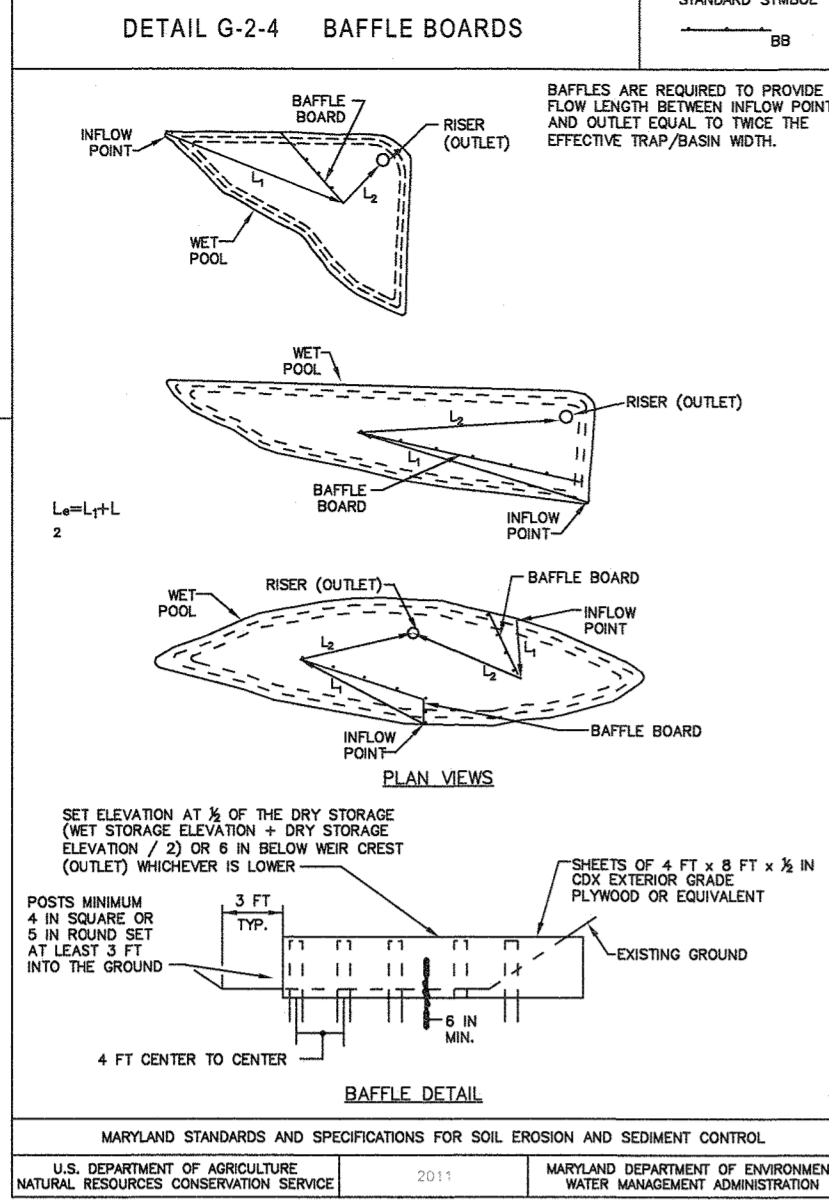
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[Signature] 8-28-19
ROBERT H. VOGEL
PRINTED NAME
MD REGISTRATION NO. 16193
R.L.S., OR R.L.A. (Circle one)

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

[Signature] 9/25/19
HOWARD S.C.D. DATE

BAFFLE DESIGN BASIN #1
 AREA WET STORAGE EL. = 3,028 SF
 $W_e = (L/2)^2 \cdot 0.5$
 $W_e = 38.9'$
 $MIN L_e = W_e \times 2 = 78'$
 INFLOW WEST INFLOW EAST
 $L_1 = 50'$ $L_2 = 68'$
 PROVIDED $L_e = 86'$ PROVIDE $L_e = 78'$



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
James 10/8/2019
 CHIEF, BUREAU OF HIGHWAYS MK
 DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Michael P. Fallon 10-25-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION WEL
 DATE

Keith S. DeWolfe 10-30-19
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE

OWNER/DEVELOPER CERTIFICATION:
 I/WE CERTIFY THAT ANY CLEARING, GRADING, CONSTRUCTION, OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS APPROVED EROSION AND SEDIMENT CONTROL PLAN, INCLUDING INSPECTING AND MAINTAINING CONTROLS, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE) APPROVED TRAINING PROGRAM FOR THE CONTROL OF EROSION AND SEDIMENT PRIOR TO BEGINNING THE PROJECT. I CERTIFY RIGHT-OF-ENTRY FOR PERIODIC ON-SITE EVALUATION BY HOWARD COUNTY, THE HOWARD SOIL CONSERVATION DISTRICT AND/OR MDE.

Michael P. Fallon 08-28-19
 OWNER/DEVELOPER SIGNATURE DATE
 Michael P. Fallon MEMBER
 PRINTED NAME & TITLE

DESIGN CERTIFICATION:
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Robert H. Vogel 8-28-19
 DESIGNER'S SIGNATURE DATE
 ROBERT H. VOGEL
 PRINTED NAME
 MD REGISTRATION NO. 16193
 P.E., R.L.S., OR R.L.A. (circle one)

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

John Robertson 9/25/19
 HOWARD S.C.D. DATE

OWNER
 MAGNOLIA MANOR, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY HOMES MARY LAND, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

| REVISION | DATE |
|----------|------|
| | |
| | |
| | |
| | |

FINAL SUPPLEMENTAL PLAN
SOIL EROSION AND SEDIMENT CONTROL PLAN
NOTES & DETAILS
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
 6TH ELECTION DISTRICT
 072 REF. EOP-17-015, S-17-001, WP-17-067,
 P-18-001, CONTRACT NO. 24-5033-D, AA-18-002

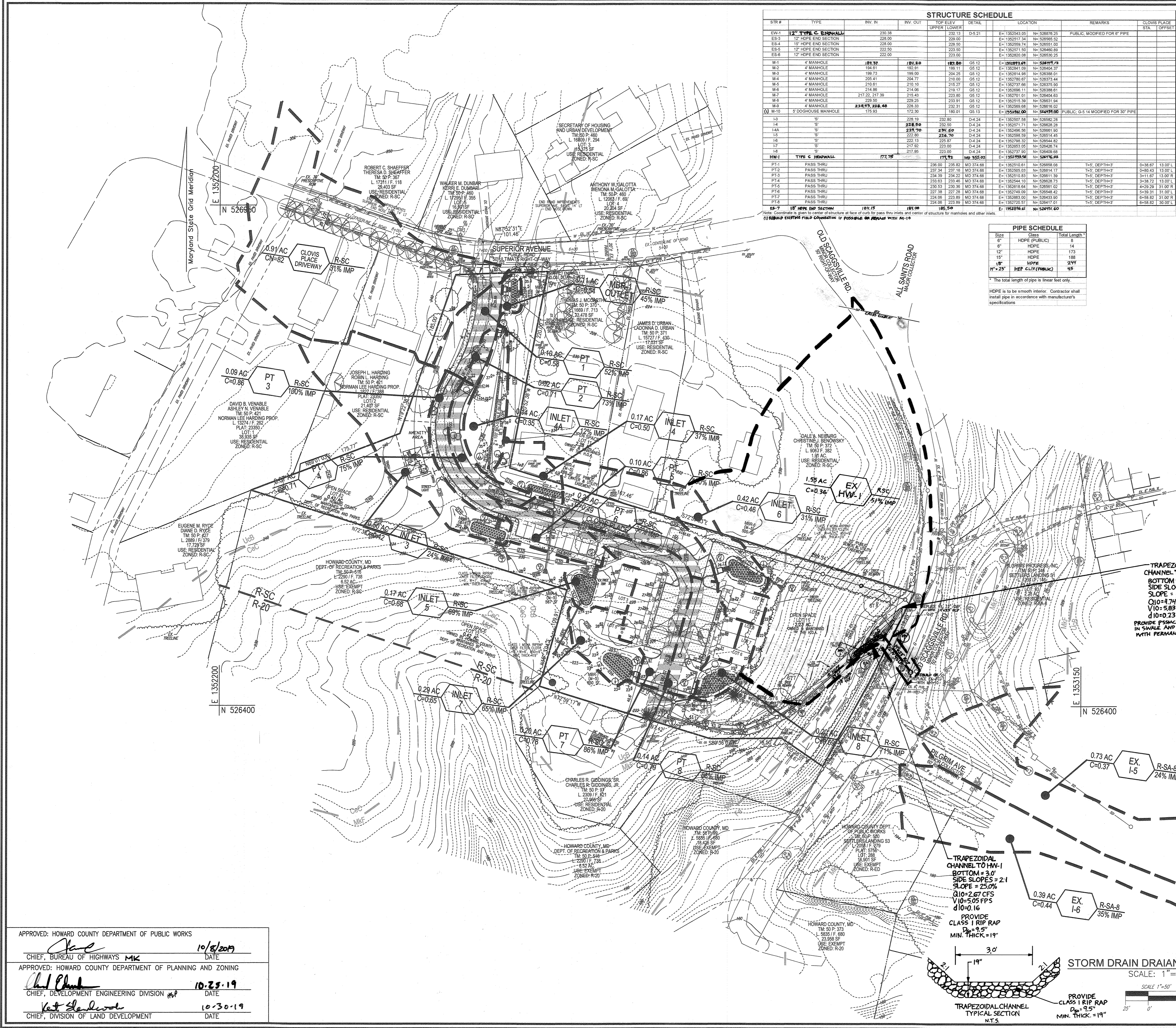
ZONED: R-5C
 PARCELS: 100 & 428
 HOWARD COUNTY, MARYLAND

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DESIGN BY: RHV
 DRAWN BY: LG
 CHECKED BY: RHV
 DATE: SEPTEMBER 2019
 SCALE: AS SHOWN
 W.O. NO.: 16-15

7 SHEET OF 14



STRUCTURE SCHEDULE

| STR # | TYPE | INV. IN | INV. OUT | TOP ELEV. UPPER | TOP ELEV. LOWER | DETAIL | LOCATION | REMARKS | CLOVIS PLACE STA. | OFFSET |
|-------|----------------------|---------|----------|-----------------|-----------------|--------|--------------------------|--------------------------------------|-------------------|------------|
| EW-1 | 12" HDPE END SECTION | 220.38 | 220.38 | 222.13 | D-9.21 | | E=1302043.09 N=526076.25 | PUBLIC, MOOFED FOR 6" PIPE | | |
| EW-2 | 12" HDPE END SECTION | 220.00 | 220.00 | 222.00 | | | E=1302059.74 N=526055.00 | | | |
| EW-3 | 12" HDPE END SECTION | 222.00 | 222.00 | 222.00 | | | E=1302051.50 N=526046.89 | | | |
| EW-4 | 12" HDPE END SECTION | 222.00 | 222.00 | 222.00 | | | E=1302020.08 N=526030.25 | | | |
| M-1 | 4" MANHOLE | 187.97 | 187.20 | 187.80 | G8 12 | | E=1301873.61 N=526177.73 | | | |
| M-2 | 4" MANHOLE | 186.81 | 182.91 | 186.11 | G8 12 | | E=1302041.09 N=526046.37 | | | |
| M-3 | 4" MANHOLE | 199.73 | 199.00 | 204.39 | G8 12 | | E=1302014.68 N=526036.01 | | | |
| M-4 | 4" MANHOLE | 205.41 | 204.77 | 210.00 | G8 12 | | E=1302070.67 N=526073.44 | | | |
| M-5 | 4" MANHOLE | 216.61 | 215.97 | 219.97 | G8 12 | | E=1302077.66 N=526073.90 | | | |
| M-6 | 4" MANHOLE | 214.86 | 214.06 | 218.17 | G8 12 | | E=1302066.11 N=526066.61 | | | |
| M-7 | 4" MANHOLE | 217.22 | 217.39 | 223.40 | G8 12 | | E=1302101.01 N=526044.63 | | | |
| M-8 | 4" MANHOLE | 229.50 | 229.25 | 233.91 | G8 12 | | E=1302051.39 N=526051.84 | | | |
| M-9 | 4" MANHOLE | 228.33 | 228.33 | 232.31 | G8 12 | | E=1302059.68 N=526016.02 | | | |
| M-10 | 8" DOGHOUSE MANHOLE | 175.93 | 172.30 | 180.01 | G5 13 | | E=1302076.00 N=526073.00 | PUBLIC, G-5 14 MODIFIED FOR 30" PIPE | | |
| S-1 | " | | 228.11 | 232.90 | D-4.24 | | E=1302007.58 N=526062.28 | | | |
| S-2 | " | | 228.90 | 232.50 | D-4.24 | | E=1302071.71 N=526062.28 | | | |
| S-3 | " | | 227.77 | 231.50 | D-4.24 | | E=1302066.56 N=526061.90 | | | |
| S-4 | " | | 222.80 | 226.50 | D-4.24 | | E=1302058.98 N=526054.45 | | | |
| S-5 | " | | 222.13 | 225.77 | D-4.24 | | E=1302076.32 N=526044.82 | | | |
| S-6 | " | | 217.92 | 221.00 | D-4.24 | | E=1302053.05 N=526048.74 | | | |
| S-7 | " | | 217.80 | 221.00 | D-4.24 | | E=1302077.69 N=526048.68 | | | |
| S-8 | " | | 217.80 | 221.00 | D-4.24 | | E=1302076.54 N=526076.02 | | | |
| HW-1 | TYPE C HEADWALL | 172.75 | | 175.73 | MD 305 03 | | E=1302051.61 N=526055.08 | T-5' DEPTH=3' | 0+38.67 | 13.00'L |
| PT-1 | PASS THRU | 228.00 | 225.82 | MD 374 68 | | | E=1302005.83 N=526011.39 | T-5' DEPTH=3' | 0+80.43 | 13.00'L |
| PT-2 | PASS THRU | 227.34 | 227.58 | MD 374 68 | | | E=1302054.10 N=526026.73 | T-5' DEPTH=3' | 3+38.72 | 13.00'L |
| PT-3 | PASS THRU | 228.83 | 228.46 | MD 374 68 | | | E=1302048.09 N=526048.42 | T-5' DEPTH=3' | 4+29.29 | 31.00' R/L |
| PT-4 | PASS THRU | 224.08 | 223.89 | MD 374 68 | | | E=1302063.00 N=526043.90 | T-5' DEPTH=3' | 6+58.82 | 31.00' R/L |
| PT-5 | PASS THRU | 224.68 | 223.89 | MD 374 68 | | | E=1302073.97 N=526043.90 | T-5' DEPTH=3' | 8+58.82 | 30.00' R/L |

PIPE SCHEDULE

| Size | Class | Total Length |
|---------|-------------------|--------------|
| 6" | HDPE (PUBLIC) | 8 |
| 6" | HDPE | 14 |
| 12" | HDPE | 173 |
| 15" | HDPE | 186 |
| 18" | HDPE | 249 |
| 18"x23" | HEP CLTY (PUBLIC) | 45 |

The total length of pipe is linear feet only.

HDPE is to be smooth interior. Contractor shall install pipe in accordance with manufacturer's specifications.

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREES
- PROPOSED TREELINE
- 20' PUBLIC WATER & UTILITY EASEMENT
- VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT
- 20' PUBLIC SEWER & UTILITY EASEMENT
- 330
- 328
- SIC2
- 330
- 328
- 2.92'
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED SPOT ELEVATION
- MICRO-BIORETENTION FACILITY (M-6)
- DRAINAGE AREA DIVIDE
- AREA RCN
- INLET
- ZONE IMP
- 20' PRIVATE ACCESS EASEMENT FOR THE BENEFIT OF TAX MAP 50, PARCEL 97

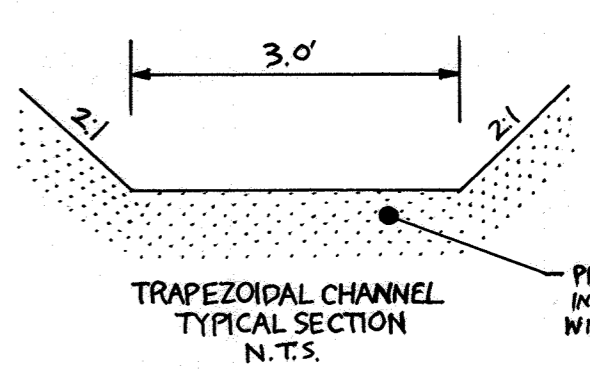
SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | GROUP | K-FACTOR | ERODIBLE |
|--------|--|-------|----------|----------|
| CcC | CHILLUM LOAM, 5 TO 10 PERCENT SLOPES | B | 0.43 | YES |
| Fo | FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN | D | 0.24 | NO |
| Mf | MANOR-BRINLOW COMPLEX, 25 TO 85 PERCENT SLOPES, VERY ROCKY | B | 0.32 | YES |
| Usb | URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES | D | 0.37 | NO |

SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE - HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

CLOVIS PLACE DRIVEWAY TR-85 ANALYSIS
 AREA: 0.91 AC
 WEIGHTED CN: 82
 TIME OF CONCENTRATION: 10 MINUTES
 2-YEAR FLOW ACROSS DRIVEWAY: 1.84 CFS



TRAPEZOIDAL CHANNEL TO HW-1
 BOTTOM = 3.0'
 SIDE SLOPES = 2:1
 SLOPE = 11.8%
 Q10 = 4.74 CFS
 V10 = 5.83 FPS
 d10 = 0.23'
 PROVIDE P55W 1.75 LB/FT² IN SWALE AND STABILIZE WITH PERMANENT SEED MIX

- ### NOTES:
- WORST CASE 5 MIN. TC ASSUMED THROUGHOUT DESIGN.
 - DESIGN ASSUMES COMPLETE FAILURE OF PROPOSED MICRO-SCALE PRACTICES

OWNER
 MAGNOLIA MANOR, LLC
 3675 PARK AVE., SUITE 301
 ELLICOTT CITY, MD 21043
 (410) 480-0023

DEVELOPER
 TRINITY HOMES MARY LAND, LLC
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| NO. | REVISION | DATE |
|-----|--|---------|
| 1 | REVISE STORM DRAIN BASED ON FIELD CONDITIONS | 6-24-21 |

FINAL SUPPLEMENTAL PLAN

STORM DRAIN DRAINAGE AREA MAP

FALCON PLACE

LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
 6TH ELECTION DISTRICT
 822 REF: 02-17-015 S-17-001, WP-17-067
 P-18-001, CONTRACT NO. 24-5033-D, A-18-002

TONED: R-SC
 PARCELS: 100 & 428
 HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.

ENGINEERS • SURVEYORS • PLANNERS

3300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666
 ELLICOTT CITY, MD 21043 FAX: 410-461-8966

PROFESSIONAL CERTIFICATE

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. 16193 EXPIRATION DATE: 09-27-2025

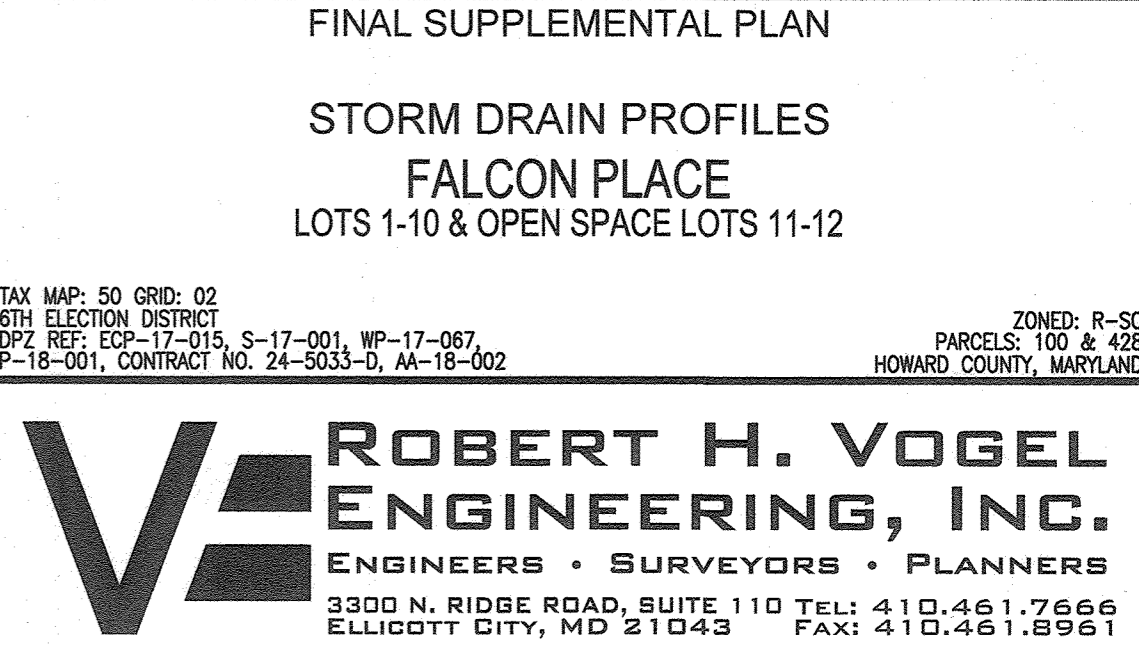
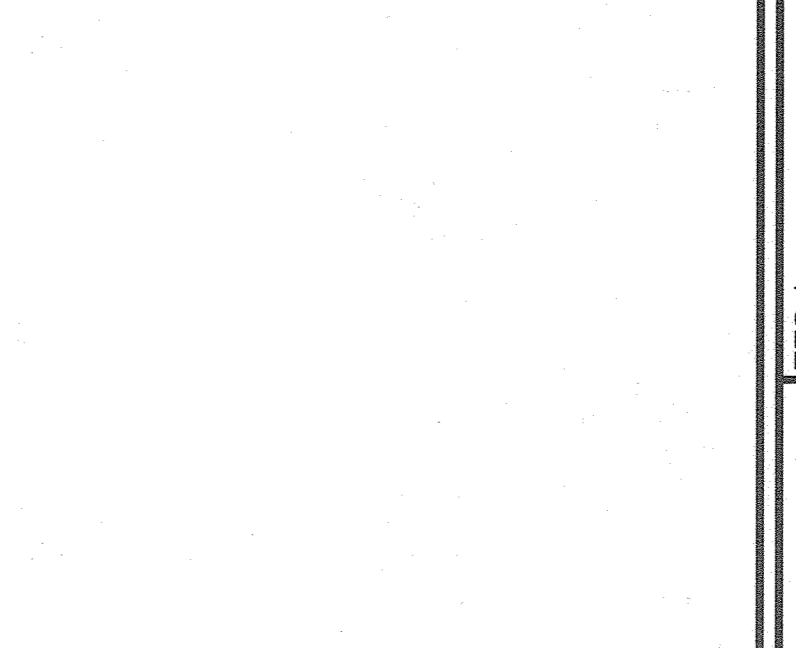
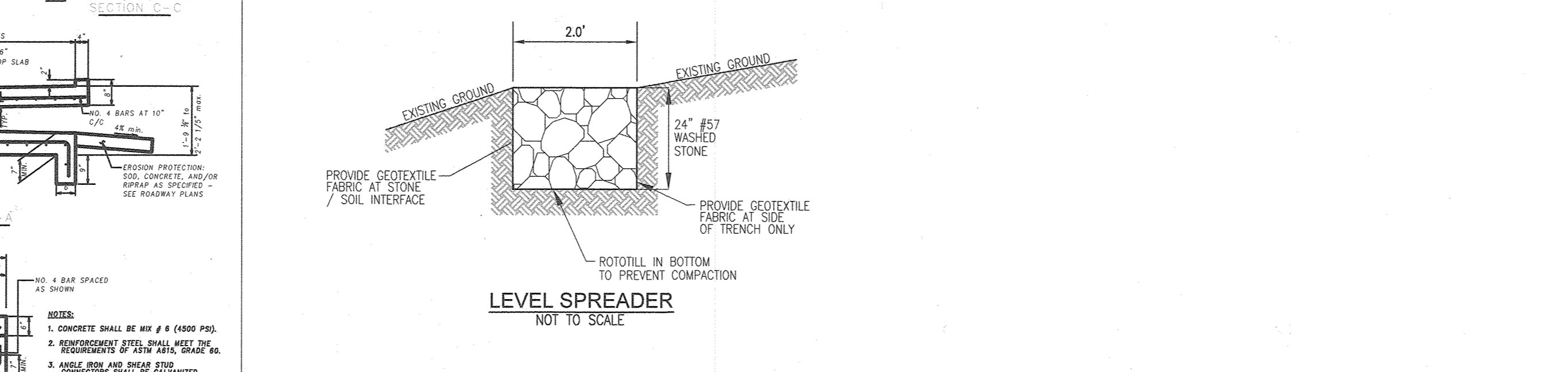
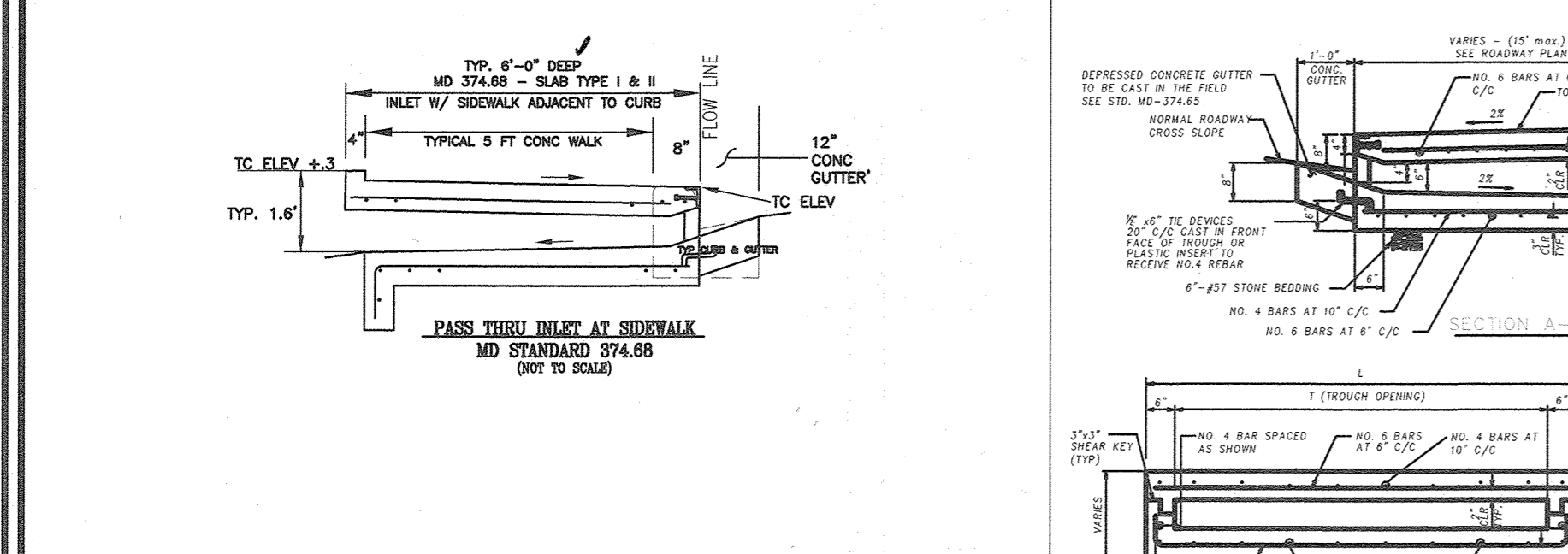
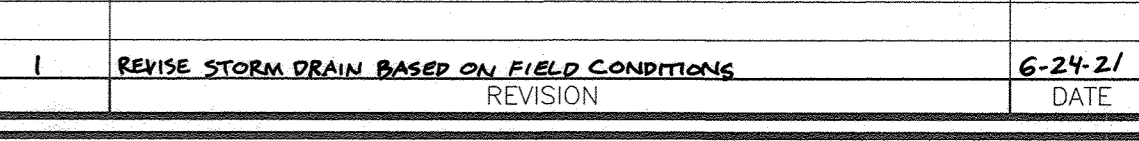
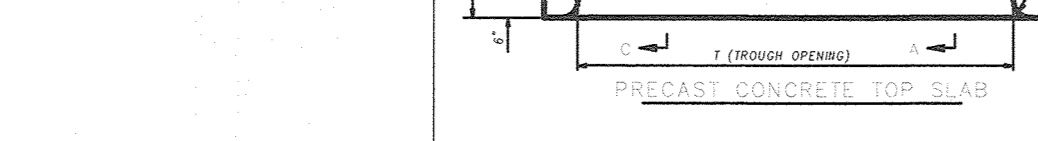
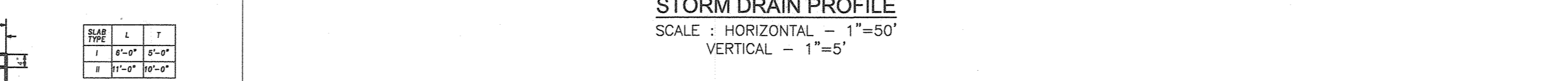
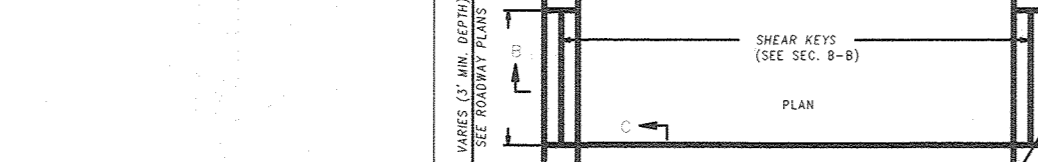
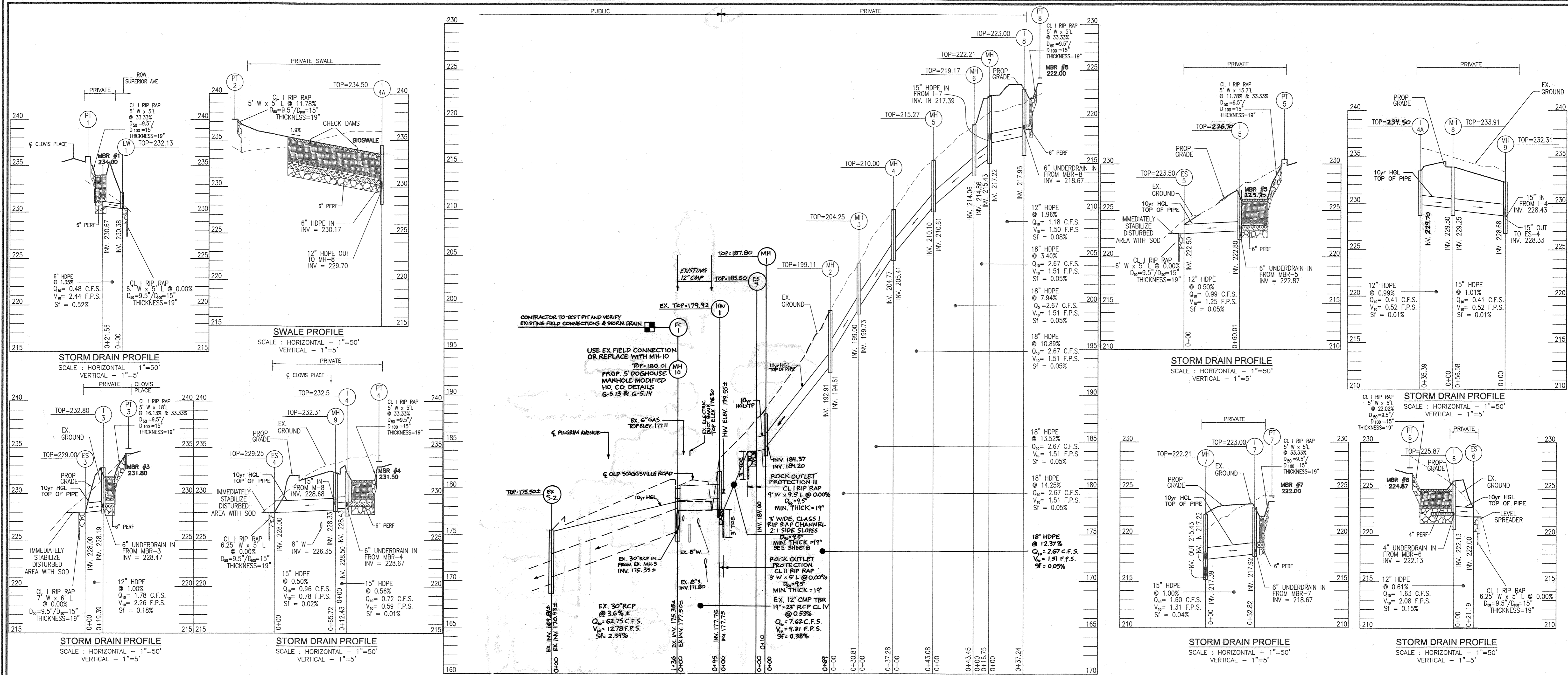
DESIGN BY: RHV
 DRAWN BY: LG
 CHECKED BY: RHV
 DATE: SEPTEMBER 2019
 SCALE: AS SHOWN
 W.O. NO.: 16-15

8 SHEET OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 10/8/2019
 CHIEF, BUREAU OF HIGHWAYS MK DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 10-23-19
 CHIEF, DEVELOPMENT ENGINEERING DIVISION RHP DATE

[Signature] 10-30-19
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS MK 10/8/2019
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 10-25-19
 CHIEF, DIVISION OF LAND DEVELOPMENT 10-30-19

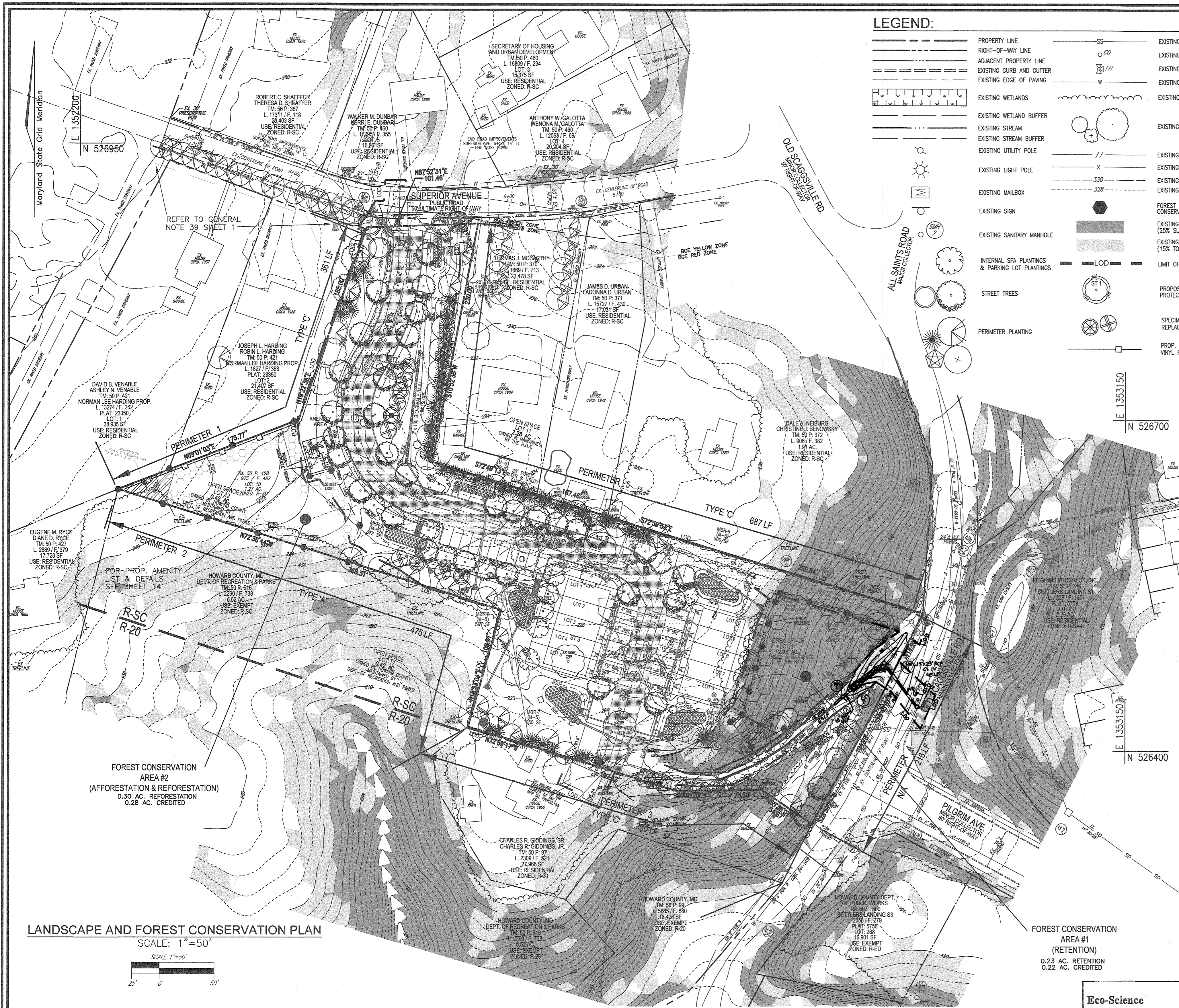
MARYLAND DEPARTMENT OF TRANSPORTATION
 STATE HIGHWAY ADMINISTRATION
 PRECAST OF CAST-IN-PLACE
 COG / COG OPENING FOR 8" CURB
 5' OR 10' ONLY
 STANDARD NO. MD 374.68

OWNER: MAGNOLIA MANOR, LLC
 DEVELOPER: TRINITY HOMES MARYLAND, LLC
 REVISION: REVISE STORM DRAIN BASED ON FIELD CONDITIONS
 DATE: 6-24-21

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 CHIEF, BUREAU OF HIGHWAYS MK 10/8/2019
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 10-25-19
 CHIEF, DIVISION OF LAND DEVELOPMENT 10-30-19

MARYLAND DEPARTMENT OF TRANSPORTATION
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 DATE: 6-24-21



LEGEND:

| | | |
|--|----|---|
| PROPERTY LINE | SS | EXISTING SANITARY LINE |
| RIGHT-OF-WAY LINE | o | EXISTING CLEANOUT |
| ADJACENT PROPERTY LINE | o | EXISTING FIRE HYDRANT |
| EXISTING CURB AND GUTTER | W | EXISTING WATER LINE |
| EXISTING EDGE OF PAVING | W | EXISTING TREENE |
| EXISTING WETLANDS | W | EXISTING TREES |
| EXISTING WETLAND BUFFER | W | EXISTING WOOD FENCE |
| EXISTING STREAM | W | EXISTING METAL FENCE |
| EXISTING STREAM BUFFER | W | EXISTING 10' CONTOUR |
| EXISTING UTILITY POLE | W | EXISTING 2' CONTOUR |
| EXISTING LIGHT POLE | W | FOREST CONSERVATION SIGN |
| EXISTING MAILBOX | W | EXISTING STEEP SLOPES (25% SLOPES OR GREATER) |
| EXISTING SIGN | W | EXISTING MODERATE SLOPES (15% TO 24.99% SLOPES) |
| EXISTING SANITARY MANHOLE | W | LIMIT OF DISTURBANCE |
| INTERNAL SFA PLANTINGS & PARKING LOT PLANTINGS | W | PROPOSED TREE PROTECTION FENCE |
| STREET TREES | W | SPECIMEN TREE REPLACEMENT TREES |
| PERIMETER PLANTING | W | PROP. 6" SOLID VINYL FENCE |



VICINITY MAP
SCALE: 1"=1,000'
ADC MAP COORDINATE: PAGE: 40, GRID: 8B

GENERAL NOTES

WATERSHED NAME: PATUXENT RIVER UPPER
WATERSHED NUMBER: 2131104

| | |
|---|-------------|
| A. GROSS SITE AREA: | 2.97 AC. |
| B. NET SITE AREA: | 2.65 AC. |
| C. AREA OF 100-YEAR FLOODPLAIN: | 0.00 AC. |
| D. AREA OF WETLANDS AND BUFFERS (ONSITE): | 0.00 AC. |
| E. AREA OF STREAM AND BUFFERS (ONSITE): | 0.32 AC. |
| F. AREA OF > 25% STEEP SLOPES: | 0.36 AC. |
| G. ZONED: | R-SC |
| H. EXISTING USE: | RESIDENTIAL |
| I. PROPOSED USE: | RESIDENTIAL |
| J. AFFORESTATION: | 0.05 AC. |

DPZ'S POLICIES GOVERNING THE PLACEMENT OF LANDSCAPING AND STREET TREES IN PROXIMITY TO BGE'S POWER LINES OR TRANSMISSION RIGHT-OF-WAY ARE BASED ON BGE'S PUBLISHED "PLANTING ZONE CONCEPT" WHICH STIPULATES THE MAXIMUM ALLOWABLE SIZE OF PLANT MATERIALS FOR THREE DEFINED ZONES. AS THE DISTANCE FROM BGE EQUIPMENT INCREASES, SO DOES THE SIZE OF THE ALLOWABLE PLANT MATERIALS. THESE THREE ZONES ARE DEFINED AS FOLLOWS:

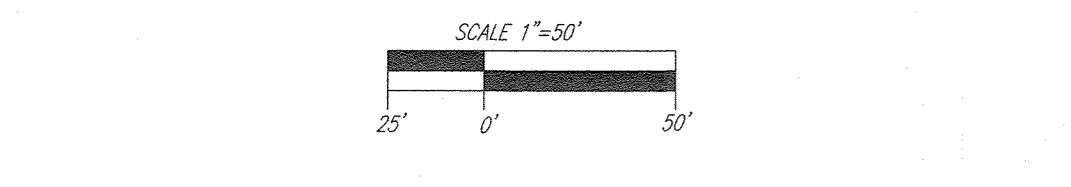
| ZONE | DISTANCE FROM THE BGE POWER LINE OR TRANSMISSION RIGHT-OF-WAY | MAXIMUM HEIGHT OF VEGETATION |
|--------|---|------------------------------|
| GREEN | UP TO 20 FEET | 25 FEET |
| YELLOW | BETWEEN 20 FEET AND 45 FEET | 40 FEET |
| RED | BEYOND 45 FEET | ABOVE 40 FEET |

- B & E NOTES:**
- BGE RESERVES THE RIGHT TO TRIM, TOP OR CUT DOWN ANY TREE IN PROXIMITY TO THE LINE THAT IN THE OPINION OF BGE SHALL BE DEEMED A HAZARD TO THE SAFE AND RELIABLE DELIVERY OF ELECTRICITY.
 - THE DEPARTMENT OF PLANNING AND ZONING MAY AUTHORIZE THE TRIMMING OR REMOVAL OF TREES OR VEGETATION IMMEDIATELY ADJACENT TO THE BGE R/W OR EASEMENT, IF BGE DETERMINES THE TREES ARE COMPROMISING THE SAFETY OR A TRANSMISSION LINE LOCATED WITHIN THEIR UTILITY R/W OR EASEMENT. IF BGE INTENDS TO TRIM OR REMOVE TREES WITHIN A FOREST CONSERVATION EASEMENT, A LETTER SPECIFYING THE LOCATION AND SCOPE OF WORK NEEDS TO BE SENT TO DPZ AT LEAST 30 DAYS IN ADVANCE OF UNDERTAKING THE WORK. DPZ UNDERSTANDS CONSTELLATION ENERGY'S NEED TO PROTECT ITS TRANSMISSION LINES AND WILL NOT UNREASONABLY WITHHOLD PERMISSION.
 - CALL MISS UTILITY TO MARK UP THE LOCATION OF EXISTING GAS LINE BEFORE PLANTING STREET TREES ALONG SUPERIOR AVE & PLANT STREET TREES 10' AWAY FROM ANY EXISTING GASLINE AS REQUIRED.

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

LANDSCAPE AND FOREST CONSERVATION PLAN
SCALE: 1"=50'



FOREST CONSERVATION LEGEND:

| | |
|----------|--|
| [Symbol] | FOREST CONSERVATION EASEMENT (RETENTION) |
| [Symbol] | FOREST CONSERVATION EASEMENT (AFFORESTATION / REFORESTATION) |
| [Symbol] | NON-CREDITED FOREST CONSERVATION AREA |

TRAFFIC CONTROL SIGN NOTES:
IN THE DIRECTION FACING A TRAFFIC CONTROL SIGN
1) THERE SHALL BE A MINIMUM OF 40' BETWEEN THE SIGN FACE AND THE CLOSEST TREE FOR ALL "STOP" SIGNS
2) THERE SHALL BE A MINIMUM OF 35' BETWEEN THE SIGN FACE AND THE CLOSEST TREE FOR ALL SIGNS OTHER THAN "STOP" SIGNS

SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | GROUP | K-FACTOR | ERODIBLE |
|--------|--|-------|----------|----------|
| Cdc | CHILLUM LOAM, 5 TO 10 PERCENT SLOPES | B | 0.43 | YES |
| Fo | FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN | D | 0.24 | NO |
| Mf | MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY | B | 0.32 | YES |
| Ueb | URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES | D | 0.37 | NO |

NOTE: HIGHLY ERODIBLE SOILS ARE THOSE SOILS WITH A SLOPE GREATER THAN 15 PERCENT OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
[Signature] 10/18/2019
CHIEF, BUREAU OF HIGHWAYS
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
[Signature] 10.25.19
CHIEF, DEVELOPMENT ENGINEERING DIVISION
[Signature] 10.30.19
CHIEF, DIVISION OF LAND DEVELOPMENT

DEVELOPER'S/BUILDER'S CERTIFICATE
I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
[Signature] MEMBER 08-28-19
SIGNATURE OF DEVELOPER

Eco-Science Professionals, Inc.
Consulting Ecologists
P.O. Box 5066 Ches Arm, Maryland 21057
Telephone (410) 832-3480 Fax (410) 832-3488

MD DNR Qualified Professional
USACOE Wetland Delineator
Certification # WD0793MD061004432
[Signature]

- SFSD NOTES:**
- No rare, threatened or endangered species or their appropriate habitat were observed on the property.
 - Surrounding land use is medium-high density residential development.
 - All forest on the site is within Stand F-1. Approximately 0.8 acres of forest is present within 100 feet of the property.
 - No wetlands, streams, buffers or 100 year floodplain is present on the property.
 - Steep slopes are present on the property.
 - Specimen trees are present on the property.
 - The property is located in the Use I watershed of the Patuxent River (02-13-11)
 - No cemeteries or historic elements were noted on the property.

FINAL SUPPLEMENTAL PLAN
LANDSCAPE AND FOREST CONSERVATION PLAN
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
8TH ELECTION DISTRICT
DPZ REF: 09-17-015 S-17-001, WP-17-067
P-18-001, CONTRACT NO. 24-5033-D, A-18-002

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
2300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666
ELLCOTT CITY, MD 21043 FAX: 410-461-8961

DESIGN BY: RHV
DRAWN BY: LG
CHECKED BY: RHV
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 16-15

PROFESSIONAL CERTIFICATE
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. 10183 EXPIRATION DATE: 08-27-2023

10 SHEET OF 14

REFORESTATION AND AFFORESTATION PLANTING PLANS

A. PLANTING PLAN AND METHODS

PLANT SPECIES SELECTION WAS BASED ON OUR KNOWLEDGE REGARDING PLANT COMMUNITIES IN MARYLAND'S MOUNTAIN PLATEAU AND INFORMATION PROVIDED IN THE SOIL SURVEY ON TYPICAL VEGETATION FOR THE SOIL TYPE ON THE PLANTING SITE. SPECIES SELECTION WAS ALSO BASED ON OUR KNOWLEDGE OF PLANT AVAILABILITY IN THE NURSERY INDUSTRY.

REFORESTATION AND AFFORESTATION WILL BE ACCOMPLISHED THROUGH A MIXED PLANTING OF WHIPS AND BRANCHED TRANSPLANTS. CONTAINER GROWN STOCK IS RECOMMENDED BUT BAREROOT STOCK MAY BE USED TO HELP CONTROL REFORESTATION COSTS. BAREROOT STOCK IS USED THE ROOT SYSTEMS OF ALL PLANTS WILL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING TO IMPROVE MOISTURE RETENTION IN THE ROOT SYSTEMS.

PRIOR TO PLANTING THE PROPOSED FOREST CONSERVATION EASEMENTS ALL MULTIFLORA ROSE IN THE PLANTING AREA SHALL BE REMOVED. REMOVAL OF THE ROSE MAY BE PERFORMED WITH MOWING AND HERBICIDE TREATMENTS. PHYSICAL REMOVAL OF ALL TOP GROWTH FOLLOWING BY A PERIODIC HERBICIDE TREATMENT OF STUMP SPROUTS IS RECOMMENDED. NATIVE TREE AND SHRUB SPECIES OCCURRING WITHIN THE ROSE THICKETS SHOULD BE RETAINED WHENEVER POSSIBLE. HERBICIDES TREATMENTS SHALL OCCUR ON 2 MONTH INTERVALS DURING THE FIRST GROWING SEASON AND ONCE EACH IN THE SPRING AND FALL FOR SUBSEQUENT YEARS. HERBICIDE USED SHALL BE MADE SPECIFICALLY TO ADDRESS WOODY PLANT MATERIAL AND SHALL BE APPLIED AS PER MANUFACTURER'S SPECIFICATIONS. CARE SHOULD BE TAKEN NOT TO SPRAY PLANTING TREES OR NATURALLY OCCURRING NATIVE TREE/SHRUB SEEDLINGS. IT IS RECOMMENDED THAT INITIATION OF ROSE REMOVAL BEGIN AT LEAST SIX MONTHS PRIOR TO PLANTING.

B. PLANTING AND SOIL SPECIFICATIONS

PLANT MATERIAL WILL BE INSTALLED IN ACCORDANCE WITH THE PLANTING DETAIL AND PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN.

AMENDMENTS TO EXISTING SOIL WILL BE IN ACCORDANCE WITH THE PLANTING SPECIFICATIONS SHOWN ON THE FOREST CONSERVATION PLAN. SOIL DISTURBANCE WILL BE LIMITED TO INDIVIDUAL PLANTING LOCATIONS.

C. MAINTENANCE OF PLANTINGS

FOR INFORMATION REGARDING MAINTENANCE OF THE REFORESTATION AND AFFORESTATION PLANTINGS, SEE SECTION VIII B.

D. GUARANTEE REQUIREMENTS

A 90 PERCENT SURVIVAL RATE OF THE REFORESTATION AND AFFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. AT THE END OF THE SECOND GROWING SEASON, A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

E. SECURITY FOR REFORESTATION AND AFFORESTATION

SECTION 16-1209 OF THE HOWARD COUNTY FOREST CONSERVATION ACT REQUIRES THAT A DEVELOPER SHALL POST A SECURITY (BOND, LETTER OF CREDIT, ETC.) WITH THE COUNTY TO INSURE THAT ALL WORK IS DONE IN ACCORDANCE WITH THE FCP.

CONSTRUCTION PERIOD PROTECTION PROGRAM

A. FOREST PROTECTION TECHNIQUES

1. SOIL PROTECTION AREA (CRITICAL ROOT ZONE)

THE SOIL PROTECTION AREA, OR CRITICAL ROOT ZONE, OF A TREE IS THAT PORTION OF THE SOIL COLUMN WHERE MOST OF ITS ROOTS RESPONSIBLE FOR WATER AND NUTRIENT UPTAKE ARE LOCATED JUST BELOW THE SOIL SURFACE. TEMPORARY FENCING SHALL BE PLACED AROUND THE CRITICAL ROOT ZONE OF THE FOREST IN AREAS WHERE THE FOREST LIMITS OCCUR WITHIN 25 FEET OF THE LIMIT OF DISTURBANCE.

2. FENCING AND SIGNAGE

EXISTING FOREST LIMITS OCCURRING WITHIN 25 FEET OF THE LIMITS OF DISTURBANCE SHALL BE PROTECTED USING TEMPORARY PROTECTIVE FENCING. PERMANENT SIGNAGE SHALL BE PLACED AROUND THE AFFORESTATION AREA PRIOR TO PLANT INSTALLATION, AS SHOWN ON THE PLAN.

B. PRE-CONSTRUCTION MEETING

UPON STAKING OF LIMITS OF DISTURBANCE A PRE-CONSTRUCTION MEETING WILL BE HELD BETWEEN THE DEVELOPER, CONTRACTOR AND APPROPRIATE COUNTY INSPECTOR. THE PURPOSE OF THE MEETING WILL BE TO VERIFY THAT ALL SEDIMENT CONTROL IS IN ORDER, AND TO NOTIFY THE CONTRACTOR OF POSSIBLE PENALTIES FOR NON-COMPLIANCE WITH THE FCP.

C. STORAGE FACILITIES/EQUIPMENT CLEANING

ALL EQUIPMENT STORAGE, PARKING, SANITARY FACILITIES, MATERIAL STOCKPILING, ETC. ASSOCIATED WITH CONSTRUCTION OF THE PROJECT WILL BE RESTRICTED TO THOSE AREAS OUTSIDE OF THE PROPOSED FOREST CONSERVATION EASEMENT. CLEANING OF EQUIPMENT WILL BE LIMITED TO AREA WITHIN THE LOD OF THE PROPOSED HOMESITES. WASTEWATER RESULTING FROM EQUIPMENT CLEANING WILL BE CONTROLLED TO PREVENT RUNOFF INTO ENVIRONMENTALLY SENSITIVE AREAS.

D. SEQUENCE OF CONSTRUCTION

THE FOLLOWING TIMETABLE REPRESENTS THE PROPOSED TIMETABLE FOR DEVELOPMENT. THE ITEMS OUTLINED IN THE FOREST CONSERVATION PLAN WILL BE EMULATED WITHIN TWO (2) YEARS OF SUBDIVISION APPROVAL.

E. CONSTRUCTION MONITORING

GEOTECHNOLOGY ASSOCIATES, INC. OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL MONITOR CONSTRUCTION OF THE PROJECT TO ENSURE THAT ALL ACTIVITIES ARE IN COMPLIANCE WITH THE FOREST CONSERVATION PLAN.

F. POST-CONSTRUCTION MEETING

UPON COMPLETION OF CONSTRUCTION, GEOTECHNOLOGY ASSOCIATES, INC. OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL NOTIFY THE COUNTY THAT CONSTRUCTION HAS BEEN COMPLETED AND ARRANGE FOR A POST-CONSTRUCTION MEETING TO REVIEW THE PROJECT SITE. THE MEETING WILL ALLOW THE COUNTY INSPECTOR TO VERIFY THAT REFORESTATION/AFFORESTATION PLANTINGS HAVE BEEN INSTALLED.

POST-CONSTRUCTION MANAGEMENT PLAN

HOWARD COUNTY REQUIRES A TWO YEAR POST-CONSTRUCTION MANAGEMENT PLAN BE PREPARED AS PART OF THE FOREST CONSERVATION PLAN. THE PLAN GOES INTO EFFECT UPON ACCEPTANCE OF THE CONSTRUCTION CERTIFICATION OF COMPLETION BY THE COUNTY. GEOTECHNOLOGY ASSOCIATES, INC. OR ANOTHER QUALIFIED PROFESSIONAL DESIGNATED BY THE DEVELOPER, WILL BE RESPONSIBLE FOR IMPLEMENTATION OF THE POST-CONSTRUCTION MANAGEMENT PLAN.

A. FENCING AND SIGNAGE

PERMANENT SIGNAGE INDICATING THE LIMITS OF THE RETENTION/REFORESTATION/AFFORESTATION AREA SHALL BE MAINTAINED.

B. GENERAL SITE INSPECTIONS/MAINTENANCE OF PLANTINGS

SITE INSPECTIONS WILL BE PERFORMED A MINIMUM OF THREE TIMES DURING THE GROWING SEASON. THE PURPOSE OF THE INSPECTIONS WILL BE TO ASSESS THE HEALTH OF THE REFORESTATION/AFFORESTATION PLANTINGS. APPROPRIATE MEASURES WILL BE TAKEN TO RECTIFY ANY PROBLEMS WHICH MAY ARISE.

C. EDUCATION

THE DEVELOPER WILL PROVIDE APPROPRIATE MATERIALS TO PROPERTY OWNERS INFORMING THEM OF THE LOCATION AND PURPOSE OF THE REFORESTATION/AFFORESTATION AREA. MATERIALS MAY INCLUDE SITE PLANS AND INFORMATION EXPLAINING THE INTENT OF THE FOREST CONSERVATION PLAN.

D. FINAL INSPECTION

AT THE END OF THE TWO YEAR POST-CONSTRUCTION MANAGEMENT PERIOD, GEOTECHNOLOGY ASSOCIATES, INC. OR ANOTHER QUALIFIED PROFESSIONAL WILL SUBMIT TO THE ADMINISTRATOR OF THE HOWARD COUNTY FOREST CONSERVATION PROGRAM CERTIFICATION THAT ALL RETENTION/REFORESTATION/AFFORESTATION REQUIREMENTS HAVE BEEN MET. UPON ACCEPTANCE OF THIS CERTIFICATION, THE COUNTY WILL RELEASE THE DEVELOPER FROM ALL FUTURE OBLIGATIONS AND RELIEVE THE DEVELOPER'S BOND.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

DATE: 10/8/2019
CHIEF, BUREAU OF HIGHWAYS MK

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

DATE: 10/25/19
CHIEF, DEVELOPMENT ENGINEERING DIVISION

DATE: 10/30/19
CHIEF, DIVISION OF LAND DEVELOPMENT

HOWARD COUNTY FOREST CONSERVATION WORKSHEET

ZONED R-SC NET TRACT AREA:

A. TOTAL TRACT AREA: 2.97 AC.
B. AREA WITHIN 100 YD FLOODPLAIN: 0.00 AC.
C. AREA TO REMAIN IN AG. PRODUCTION: 0.00 AC.
D. NET TRACT AREA: 2.97 AC.

LAND USE CATEGORY

INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY. ZONED R-ED-OR-M-3

ARA MDR IDA HDR MPD CIA

E. AFFOREST THRESHOLD: 15% X 2.97 = 0.4 AC.
F. CONSERVATION THRESHOLD: 20% X 2.97 = 0.6 AC.

EXISTING FOREST COVER:

G. EXISTING FOREST COVER: = 0.4 AC.
H. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.0 AC.
I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 0.0 AC.

BREAK EVEN POINT:

(2 X 1) + F = BREAK EVEN POINT (0 AC)
J. BREAK EVEN POINT / FOREST RET. ABOVE THRESHOLD W/ NO MIT. = 0.0 AC.
K. FOREST CLEARING PERMITTED WITHOUT MITIGATION = 0.0 AC.

PROPOSED FOREST CLEARING:

L. TOTAL AREA OF FOREST TO BE CLEARED = 0.2 AC.
M. TOTAL AREA OF FOREST TO BE RETAINED = 0.2 AC (N FCE).

PLANTING REQUIREMENTS:

N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD (L X 2.5) = 0.0 AC.
O. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.4 AC.
P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD (M-F) = 0.0 AC.
Q. TOTAL REFORESTATION REQUIRED (N+O-Q) = 0.4 AC.
R. TOTAL AFFORESTATION REQUIRED = 0.0 AC.
T. TOTAL PLANTING REQUIREMENT = 0.4 AC.

FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL A PORTION OF THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY FOREST CONSERVATION MANUAL.

NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

TOTAL FOREST CONSERVATION OBLIGATION OF THIS PROJECT TO BE FULFILLED BY:

1. ON-SITE REFORESTATION = 0.22 AC.
2. ON-SITE REFORESTATION PLANTING EASEMENT = 0.30 AC.
3. CREDITED AREA = 0.28 AC.
4. NON-CREDITED AREA = 0.02 AC.

3. THE REMAINING PLANTING OBLIGATION (0.12 AC) SHALL BE SATISFIED VIA A PURCHASE OF THE EQUIVALENT AREA OF CREDIT IN THE FOREST MITIGATION BANK CREATED WITH THE ESTABLISHMENT OF THE FINAL ROAD CONSTRUCTION PLAN, F-18-064.

FINANCIAL SURETY FOR THE REQUIRED REFORESTATION = \$ 6,099 (0.28 AC OR 12,197 SF @ \$0.50/SF) SHALL BE POSTED WITH THE DEVELOPER'S AGREEMENT.

PLANTING NOTES:

- PLANTING DENSITY BASED SPACING REQUIREMENTS WITH SHELTER @ 11' ON CENTER.

- PLANTING MAY BE MADE IN A CURVILINEAR FASHION ALONG CONTOUR. THE PLANTING SHOULD AVOID A GRID APPEARANCE BUT SHOULD BE SPACED TO FACILITATE MAINTENANCE.

- MULTIFLORA ROSE/HEAVY BRUSH REMOVAL/CONTROL MAY BE REQUIRED PRIOR TO INSTALLATION OF PLANTING.

- ALL WHIPS ARE REQUIRED TO BE INSTALLED WITH TREE SHELTERS PER HOWARD COUNTY FCA REQUIREMENTS.

- PLANTING UNITS DEFINED BY THE SPACING REQUIREMENTS ESTABLISHED IN THE FCA MANUAL. ONE PLANT UNIT IS DEFINED AS EITHER A WHIP WITHOUT SHELTER. THE MANUAL STATES THAT 700 SEEDLINGS/WHIPS WITHOUT SHELTERS ARE REQUIRED PER ACRE, OR 350 WHIPS W/SHELTERS, OR 200 1" CALIPER TREES, OR 100 2" CALIPER TREES. BY CONVERSION IT HAS BEEN DETERMINED THAT A SEEDLING OR WHIP WITHOUT SHELTER = 1 UNIT, WHIP WITH SHELTER = 2 UNITS, 1" CALIPER TREE = 3.5 UNITS AND 2" CALIPER TREE = 7 UNITS. THE USE OF PLANT UNITS SIMPLIFIES THE PLANT DENSITY CALCULATIONS WHEN MIXING STOCK SIZE.

PLANTING/SOIL SPECIFICATIONS

1. INSTALLATION OF BAREROOT/PLUG PLANT STOCK SHALL TAKE PLACE BETWEEN MARCH 15 - APRIL 20; B&B/CONTAINER STOCK MARCH 15 -MAY 30 OR SEPTEMBER 15 - NOVEMBER 15.

2. DISTURBED AREAS SHALL BE SEEDED AND STABILIZED AS PER GENERAL CONSTRUCTION PLAN FOR PROJECT. PLANTING AREAS NOT IMPACTED BY SITE GRADING SHALL HAVE NO ADDITIONAL TOPSOIL INSTALLED.

3. BAREROOT PLANTS SHALL BE INSTALLED SO THAT THE TOP OF ROOT MASS IS LEVEL WITH THE TOP OF EXISTING GRADE. ROOTS SHALL BE DIPPED IN AN ANTI-DESICCANT GEL PRIOR TO PLANTING. BACKFILL IN THE PLANTING PITS SHALL CONSIST OF 3 PARTS EXISTING SOIL TO 1 PART FINE FINES OR EQUIVALENT.

4. FERTILIZER SHALL CONSIST OF AGRIPLAN 22-8-2, OR EQUIVALENT, APPLIED AS PER MANUFACTURER'S SPECIFICATIONS, FOR WOODY PLANTS. HERBACEOUS PLANT SHALL BE FERTILIZED WITHIN SEVEN (7) DAYS OF PLANTING.

5. PLANT MATERIAL SHALL BE TRANSPORTED TO THE SITE IN A TARPED OR COVERED TRUCK. PLANTS SHALL BE KEPT MOIST PRIOR TO PLANTING.

6. THE CONTRACTOR SHALL REMOVE ALL NON-ORGANIC DEBRIS ASSOCIATED WITH THE PLANTING OPERATION FROM THE SITE.

SEQUENCE OF CONSTRUCTION

1. SEDIMENT CONTROL SHALL BE INSTALLED IN ACCORDANCE WITH GENERAL CONSTRUCTION PLAN FOR SITE.

2. PLANTS SHALL BE INSTALLED AS PER PLANT SCHEDULE AND THE PLANTING/SOIL SPECIFICATIONS FOR THE PROJECT.

3. UPON COMPLETION OF THE PLANTING, SIGNAGE SHALL BE INSTALLED AS SHOWN.

4. PLANTINGS SHALL BE MAINTAINED AND GUARANTEED IN ACCORDANCE WITH THE MAINTENANCE AND GUARANTEE REQUIREMENTS FOR PROJECT.

MAINTENANCE OF PLANTINGS

1. MAINTENANCE OF PLANTINGS SHALL LAST FOR A PERIOD OF TWO YEARS.

2. PLANTINGS MUST BE WATERED 2 GALLONS OF WATER, EITHER THROUGH PRECIPITATION OR WATERING, WEEKLY DURING THE 1ST GROWING SEASON, EITHER DURING SECOND GROWING SEASON, ONCE A MONTH DURING MAY-SEPTEMBER, IF NEEDED.

3. INVASIVE EXOTICS AND NOXIOUS WEEDS, OLD FIELD SUCCESSIONAL SPECIES WILL BE RETAINED.

4. PLANTS SHALL BE EXAMINED A MINIMUM TWO TIMES DURING THE GROWING SEASON FOR SERIOUS PLANT PESTS AND DISEASES. SERIOUS PROBLEMS WILL BE TREATED WITH THE APPROPRIATE AGENT.

5. DEAD BRANCHES WILL BE PRUNED FROM PLANTINGS.

GUARANTEE REQUIREMENTS

1. A 90 PERCENT SURVIVAL RATE OF THE REFORESTATION PLANTINGS WILL BE REQUIRED AFTER ONE GROWING SEASON. ALL PLANT MATERIAL BELOW THE 90 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED AT THE BEGINNING OF THE SECOND GROWING SEASON. AT THE END OF THE SECOND GROWING SEASON, A 75 PERCENT SURVIVAL RATE WILL BE REQUIRED. ALL PLANT MATERIAL BELOW THE 75 PERCENT SURVIVAL THRESHOLD WILL BE REPLACED BY THE BEGINNING OF THE NEXT GROWING SEASON.

EDUCATION OF NEW OCCUPANTS

1. THE DEVELOPER SHALL PROVIDE EDUCATIONAL INFORMATION TO ALL PROPERTY OWNERS WITHIN THE NEW DEVELOPMENT/HOME ABOUT THE PROPER USE OF FOREST CONSERVATION AREAS.

2. AT THE END OF THE POST-CONSTRUCTION MANAGEMENT AND PROTECTION PERIOD THE DEVELOPER SHALL SUBMIT A CERTIFICATION TO THE COUNTY THAT ALL FOREST CONSERVATION AREAS HAVE REMAINED INTACT OR HAVE BEEN RESTORED TO APPROPRIATE CONDITION, THAT THE STIPULATED SURVIVAL RATES HAVE BEEN ACHIEVED, AND THAT ANY PERMANENT PROTECTION MEASURES REQUIRED BY THE PLAN ARE IN PLACE.

3. ACCEPTANCE, THE COUNTY WILL INFORM THE DEVELOPER OF THEIR RELEASE THE DEVELOPMENT OF FUTURE OBLIGATIONS RELATED TO THE FOREST CONSERVATION ACT.

SEQUENCE OF CONSTRUCTION-FOREST CONSERVATION

1. PRECONSTRUCTION MEETING /SITE WALK WITH CONTRACTORS AND OTHER RESPONSIBLE PARTIES TO DEFINE PROTECTION MEASURES TO BE UTILIZED AND TO POINT OUT PROTECTED TREES TO BE SAVED.

2. STAKE OUT LIMITS OF DISTURBANCE AND TREE PROTECTION FENCING LOCATIONS.

3. INSTALL TREE PROTECTION FENCING; FENCING TO BE INSPECTED BY THE PROJECT ENGINEER OR THE PROJECT ECOLOGIST AND HOWARD COUNTY PLANNING AND ZONING.

4. PROCEED WITH TREE REMOVAL AND SITE IMPROVEMENTS AS PER APPROVED SEDIMENT CONTROL PLAN - TO BE INSPECTED BY HOWARD COUNTY PLANNING AND ZONING.

5. TEMPORARY TREE PROTECTION DEVICES SHALL BE REMOVED AFTER ALL FINISHED GRADING AND UTILITY CONSTRUCTION HAS OCCURRED AND WITH APPROVAL FROM THE HOWARD COUNTY OFFICE OF PLANNING AND ZONING.

DEVELOPER'S/BUILDER'S CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE (1) YEAR GUARANTEE OF PLANT MATERIAL, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 08-28-19
SIGNATURE OF DEVELOPER

FOREST CONSERVATION EASEMENT TABLE

| EASEMENT | RETENTION | REFORESTATION | TOTAL |
|--------------|-----------|---------------|---------|
| FCE#1 | 0.23 AC | 0.00 AC | 0.23 AC |
| CREDITED | 0.22 AC | | 0.22 AC |
| NON-CREDITED | 0.01 AC | | 0.01 AC |

| FCE#2 | 0.00 AC | 0.30 AC | 0.30 AC |
|--------------|---------|---------|---------|
| CREDITED | | 0.28 AC | 0.28 AC |
| NON-CREDITED | | 0.02 AC | 0.02 AC |

REFORESTATION/AFFORESTATION PROVIDED

0.28 ACRES

1" CALIPER TREES

56 TREES @ 200 TREES PER ACRE OR EQUAL

REFORESTATION PLANTING SCHEDULE FOREST CONSERVATION EASEMENT 0.28 ACRES

| EASEMENT #2: 0.28 AC. (REFORESTATION) @ 200 TREES/AC. = 56 TREES | | | |
|--|---|---------|-----------|
| QTY. | BOTANICAL NAME | SIZE | SPACING |
| 12 | BETULA NIGRA RIVER BIRCH | 1" CAL. | 15' x 15' |
| 11 | PLATANUS OCCIDENTALIS AMERICAN SYCAMORE | 1" CAL. | 15' x 15' |
| 11 | NYSSA SYLVATICA BLACK GUM | 1" CAL. | 15' x 15' |
| 11 | QUERCUS RUBRA | 1" CAL. | 15' x 15' |
| 11 | TAXODIUM DISTICHUM COMMON BALD CYPRESS | 1" CAL. | 15' x 15' |

FOREST RETENTION AREAS AND NOTES

1. THERE ARE NO WETLANDS OR WETLAND BUFFERS ON THIS SITE.

2. NO RARE, THREATENED OR ENDANGERED SPECIES WERE OBSERVED ON THIS SITE.

3. THERE ARE NO FORESTED AREAS ADJACENT TO FLOODPLAINS OR STREAM BUFFERS.

4. CHANGES IN GRADING AND RUNOFF WITHIN CONSTRUCTION (INSTALLATION AREAS WILL NOT ADVERSELY AFFECT THE SOILS WITHIN THE FOREST RETENTION AREA. SEDIMENT CONTROL MEASURES WILL REDIRECT CONCENTRATED FLOW RUNOFF TO STORMWATER MANAGEMENT FACILITIES, RETAIN SEDIMENT WITHIN THE CONSTRUCTION SITE, AND/OR REDIRECT CLEAN WATER AWAY FROM CONSTRUCTION AREAS.

5. THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT, HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED.

LANDSCAPE SCHEDULE NOTE:

1. ALL PLANT MATERIAL SHALL BE FULL AND HEAVY. BE WELL FORMED AND SYMMETRICAL. CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HRD PLANTING SPECIFICATIONS.

2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.

3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS.

TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.

4. CONTRACTOR SHALL SUBMIT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

LANDSCAPE NOTES

1. 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.

2. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THE FINAL PLAN.

3. SURETY FOR THE PROPOSED LANDSCAPING SHALL BE BASED ON THE NUMBER OF PLANTINGS REQUIRED.

4. THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. SURETY WILL BE POSTED FOR THE LANDSCAPE REQUIREMENTS FOR THIS PROJECT ARE 39 SHADE TREES, 58 EVERGREENS, 250 LF FENCE, 10 SPECIMEN TREE REPLACEMENT PLANTINGS (WP-17-067), 10 SHADE RESIDENTIAL INTERNAL PLANTINGS AND 4 SHADE TREES FOR PARKING PLANTINGS.

5. PUBLIC STREET TREES ARE PROVIDED FOR THIS PROJECT IN ACCORDANCE WITH SECTION 16.124(e)(1) OF THE SUBDIVISION REGULATIONS AND THE LANDSCAPE MANUAL. THE REQUIRED STREET TREES FOR THIS PROJECT IS 41 STREET TREES.

6. THE OWNER, TENANT AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR MAINTENANCE OF THE REQUIRED LANDSCAPING PLANT MATERIALS, BERM, FENCES AND WALLS. 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 REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

7. AT THE TIME OF INSTALLMENT, ALL SHRUBS AND OTHER PLANTINGS LISTED HERewith AND APPROVED FOR THIS SITE SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR REPLACEMENTS OF REQUIRED PLANT MATERIALS SHALL BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY. ALL REQUIRED LANDSCAPING MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATES.

LANDSCAPE SCHEDULE - REQUIRED PLANTING

| SYMB | KEY | SCHED. 'A' QUANTITY | SCHED. 'B' QUANTITY | SCHED. 'C' QUANTITY | STREET TREE QUANTITY | SPECIMEN TREE QUANTITY | TOTAL QUANTITY | BOTANICAL NAME | SIZE | CAT |
|------|-----|---------------------|---------------------|---------------------|----------------------|------------------------|----------------|-----------------------------------|---------------|-------|
| AR | 34 | | | | | | 34 | ACER RUBRUM 'OCTOBER GLORY' | 2 1/2"-3" CAL | B & B |
| AG | 4 | | | | | | 4 | ACER GINALA AMUR MAPLE | 2 1/2"-3" CAL | B & B |
| GG | 48 | | | | | | 48 | TRILIA 'GREEN GIANT' | 3" CAL | B & B |
| JS | 10 | | | | | | 10 | JUNIPERUS SCOPULARUM 'BLUE ARROW' | 6"-8" HGT. | B & B |
| PO | | | | | 34 | | 34 | QUERCUS PALustris 'PIN OAK' | 2 1/2"-3" CAL | B & B |
| AN | | | | | 7 | | 7 | ACER GINALA AMUR MAPLE | 2 1/2"-3" CAL | B & B |
| AM | | 4 | 10 | | | | 14 | ACER GINALA AMUR MAPLE | 2 1/2"-3" CAL | B & B |

INTERNAL PLANTING

OR EQUAL SUBSTITUTION ALLOWED BY THE HOWARD COUNTY LANDSCAPE MANUAL

SPECIMEN TREE REPLACEMENT - PLANTING SCHEDULE

| KEY | QUAN. | BOTANICAL NAME | SIZE | REM. |
|------|-----------------------------|----------------|-------|------|
| OG 5 | ACER RUBRUM 'OCTOBER GLORY' | 3" CAL. | B & B | |
| QP 5 | QUERCUS PALustris 'PIN OAK' | 3" CAL. | B & B | |
| | SWAMP SPANISH OAK | | | |

Specimen Tree Chart

| Key (Y/N) | Species | Size (in dbh) | CRZ (over-reach) | Comments | |
|-----------|--------------|---------------|------------------|---------------------------------------|---------------|
| 1 | Red maple | 37 | 62.5 | good condition | TO BE REMOVED |
| 2 | Red maple | 30 | 45 | good condition | TO BE REMOVED |
| 3 | Red maple | 34 | 51 | fair condition, limb dieback | TO BE REMOVED |
| 4 | Red maple | 30.5 | 45.75 | good condition | TO BE REMOVED |
| 5 | Red maple | 31.5 | 47.25 | poor condition, major trunk rot | TO BE REMOVED |
| 6 | Red maple | 30.5 | 45.75 | fair condition, limb dieback | TO REMAIN |
| 7 | Tulip poplar | 32.5 | 48.75 | good condition | TO REMAIN |
| 8 | Sycamore | 30 | 45 | fair condition, leaning, narrow crown | TO REMAIN |

NOTE:

1. BOTTOM OF SIGNS TO BE HIGHER THAN TOP OF TREE PROTECTION FENCE.

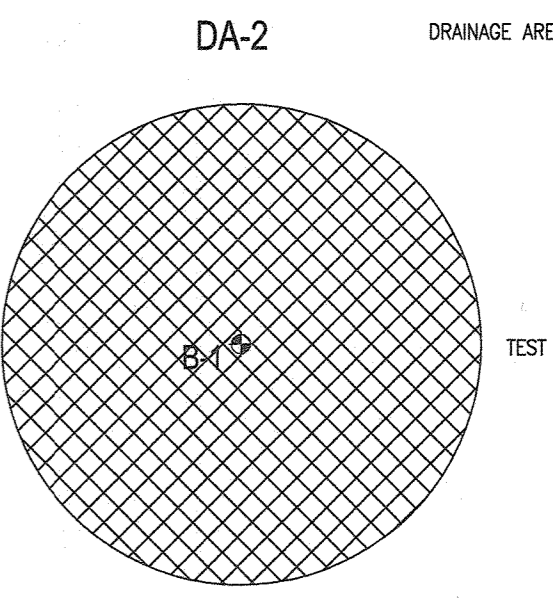
2. SIGNS TO BE PLACED APPROXIMATELY 5



| SWM Facility Dimensions | | |
|-------------------------|--------|--------|
| Facility | Length | Width |
| MBR-1 | 32.12' | 7' |
| BIO-SWALE | 100' | 2' |
| MBR-3 | 38' | 10' |
| MBR-4 | 39.5' | 7' |
| MBR-5 | 30.42' | 25.34' |
| MBR-6 | 42.09' | 15.86' |
| MBR-7 | 38.93' | 22.28' |
| MBR-8 | 43.2' | 23' |

LEGEND:

- PROPERTY LINE
- RIGHT-OF-WAY LINE
- ADJACENT PROPERTY LINE
- EXISTING EDGE OF PAVING
- EXISTING SANITARY MANHOLE
- EXISTING SANITARY LINE
- EXISTING FIRE HYDRANT
- EXISTING WATER LINE
- EXISTING TREELINE
- EXISTING SPECIMEN TREES
- PROPOSED TREELINE
- 20' PUBLIC WATER & UTILITY EASEMENT
- VARIABLE WIDTH PUBLIC SEWER, WATER & UTILITY EASEMENT
- 20' PUBLIC SEWER & UTILITY EASEMENT
- 28' PRIVATE ACCESS EASEMENT FOR THE BENEFIT OF TAX MAP 50, PARCEL 97
- EXISTING 10' CONTOUR
- EXISTING 2' CONTOUR
- SOILS
- PROPOSED 10' CONTOUR
- PROPOSED 2' CONTOUR
- PROPOSED MICRO-BIORETENTION FACILITY (M-6)
- PROPOSED BIO-SWALE FACILITY (M-8)
- DRAINAGE AREA DIVIDE
- DRAINAGE AREA DESCRIPTION
- TEST PIT



STORMWATER MANAGEMENT DRAINAGE AREA MAP
SCALE: 1"=50'

OWNER
MAGNOLIA MANOR, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

DEVELOPER
TRINITY HOMES MARYLAND, LLC
3675 PARK AVE., SUITE 301
ELLCOTT CITY, MD 21043
(410) 480-0023

| | | |
|---|--|---------|
| 1 | REVISE STORM DRAIN BASED ON FIELD CONDITIONS | 6-21-21 |
| | REVISION | DATE |

FINAL SUPPLEMENTAL PLAN

STORMWATER MANAGEMENT DRAINAGE AREA MAP

FALCON PLACE

LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
6TH ELECTION DISTRICT
892 REF: 692-17-015, S-17-001, WP-17-067
P-18-001, CONTRACT NO. 24-5033-D, A-18-002

TYPED: R-SC
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410-461-7666
ELLCOTT CITY, MD 21043 FAX: 410-461-8961

PROFESSIONAL CERTIFICATE

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. 16193 EXPIRATION DATE: 09-27-2023

DESIGN BY: RHY
DRAWN BY: LG
CHECKED BY: RHY
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 16-15

12 SHEET OF 14

SOILS LEGEND

| SYMBOL | NAME / DESCRIPTION | GROUP | K-FACTOR | ERODIBLE |
|--------|--|-------|----------|----------|
| CcC | CHILLUM LOAM, 5 TO 10 PERCENT SLOPES | B | 0.43 | YES |
| Fs | FALLSINGTON SANDY LOAMS, 0 TO 2 PERCENT SLOPES, NORTHERN COASTAL PLAIN | D | 0.24 | NO |
| MkF | MANOR-BRINKLOW COMPLEX, 25 TO 65 PERCENT SLOPES, VERY ROCKY | B | 0.32 | YES |
| UcB | URBAN LAND-CHILLUM-BELTSVILLE COMPLEX, 0 TO 5 PERCENT SLOPES | D | 0.37 | NO |

-SOILS INFORMATION FROM USDA WEB SOIL SURVEY WEBSITE
-HOWARD COUNTY SOILS MAP NUMBER 28 - LAUREL NW

OR THOSE SOILS WITH A SOIL ERODIBILITY FACTOR K GREATER THAN 0.35 AND WITH A SLOPE GREATER THAN 5 PERCENT.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
John
CHIEF, BUREAU OF HIGHWAYS MK
DATE: 10/8/2019

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 10-25-19

Kent
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 10-30-19

APPENDIX B.4.C SPECIFICATIONS FOR MICRO-BIORETENTION, RAIN GARDEN, LANDSCAPE INFILTRATION & INFILTRATION BERMS

1. MATERIAL SPECIFICATIONS
THE ALLOWABLE MATERIALS TO BE USED IN THESE PRACTICES ARE DETAILED IN TABLE B.4.1.

2. FILTERING MEDIA OR PLANTING SOIL
THE SOIL SHALL BE A UNIFORM MIX, FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN TWO INCHES. NO OTHER MATERIALS OR SUBSTANCES SHALL BE MIXED OR DUMPED WITHIN THE MICRO-BIORETENTION PRACTICE THAT MAY BE HARMFUL TO PLANT GROWTH, OR PRODE A HINDRANCE TO THE PLANTING OR MAINTENANCE OPERATIONS. THE PLANTING SOIL SHALL BE FREE OF BERMIUDA GRASS, QUACKGRASS, JOHNSON GRASS, OR OTHER NOXIOUS WEEDS AS SPECIFIED UNDER COMAR 15.08.01.02.

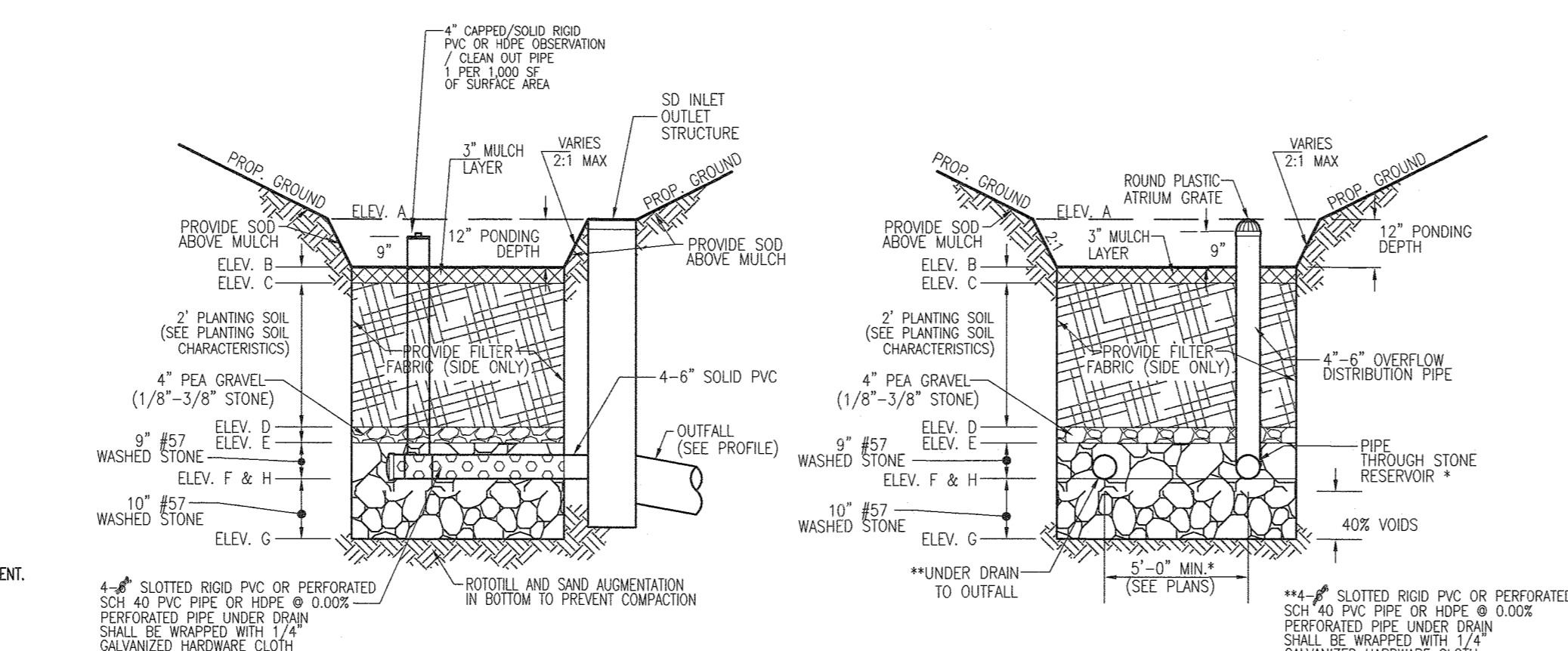
3. COMPACTION
IT IS VERY IMPORTANT TO MINIMIZE COMPACTION OF BOTH THE BASE OF BIORETENTION PRACTICES AND THE REQUIRED BACKFILL. WHEN POSSIBLE, USE EXCAVATION RIGS TO REMOVE ORIGINAL SOIL. IF PRACTICES ARE EXCAVATED USING LOADERS, THE CONTRACTOR SHOULD USE WIDE TRACK OR MARSH TRACK EQUIPMENT, OR LIGHT EQUIPMENT WITH TURF TYPE TIRES. USE OF EQUIPMENT WITH NARROW TRACKS OR RUBBER TIRES, RUBBER TIRES WITH LARGE TRACKS, OR HIGH-PRESSURE TIRES WILL CAUSE EXCESSIVE COMPACTION RESULTING IN REDUCED INFILTRATION RATES AND IS NOT ACCEPTABLE. COMPACTION WILL SIGNIFICANTLY CONTRIBUTE TO DESIGN FAILURE.

4. PLANT MATERIAL
RECOMMENDED PLANT MATERIAL FOR MICRO-BIORETENTION PRACTICES CAN BE FOUND IN APPENDIX A, SECTION A.2.3.

5. PLANT INSTALLATION
COMPOST IS A BETTER ORGANIC MATERIAL SOURCE, IS LESS LIKELY TO FLOAT, AND SHOULD BE PLACED IN THE INVERT AND OTHER LOW AREAS. MULCH SHOULD BE PLACED IN SURROUNDING TO A UNIFORM THICKNESS OF 2" TO 3". SHREDDED OR CHIPPED HARDWOOD MULCH IS THE ONLY ACCEPTED MULCH. PINE MULCH AND WOOD CHIPS WILL FLOAT AND MOVE TO THE PERIMETER OF THE BIORETENTION AREA DURING A STORM EVENT AND ARE NOT ACCEPTABLE. SHREDDED MULCH MUST BE WELL AGED (6 TO 12 MONTHS) FOR ACCEPTANCE.

6. UNDERDRAINS
UNDERDRAINS SHOULD MEET THE FOLLOWING CRITERIA:
* PIPE - SHOULD BE 4" TO 6" DIAMETER, SLOTTED OR PERFORATED RIGID PLASTIC PIPE (ASTM F 758, TYPE PS 28, OR AMS10-M-278) IN A GRAVEL LAYER. THE PERFORATED MATERIAL IS SLOTTED, 4" RIGID PIPE (E.C. PVC PIPE).
* 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 (NO. 57 STONE PREFERRED) SHALL BE AT LEAST 3" THICK ABOVE AND BELOW THE UNDERDRAN.
* THE MAIN COLLECTOR PIPE SHALL BE AT A MINIMUM 0.5% SLOPE.
* A RIGID, NON-PERFORATED OBSERVATION WELL MUST BE PROVIDED (ONE PER EVERY 1,000 SQUARE FEET) TO PROVIDE A CLEAN-OUT POINT 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 UNDERDRAN TO PREVENT MIGRATION OF FINES IN TO THE UNDERDRAN. THIS LAYER MAY BE CONSIDERED PART OF THE FILTER BED WHEN BED THICKNESS EXCEEDS 24".

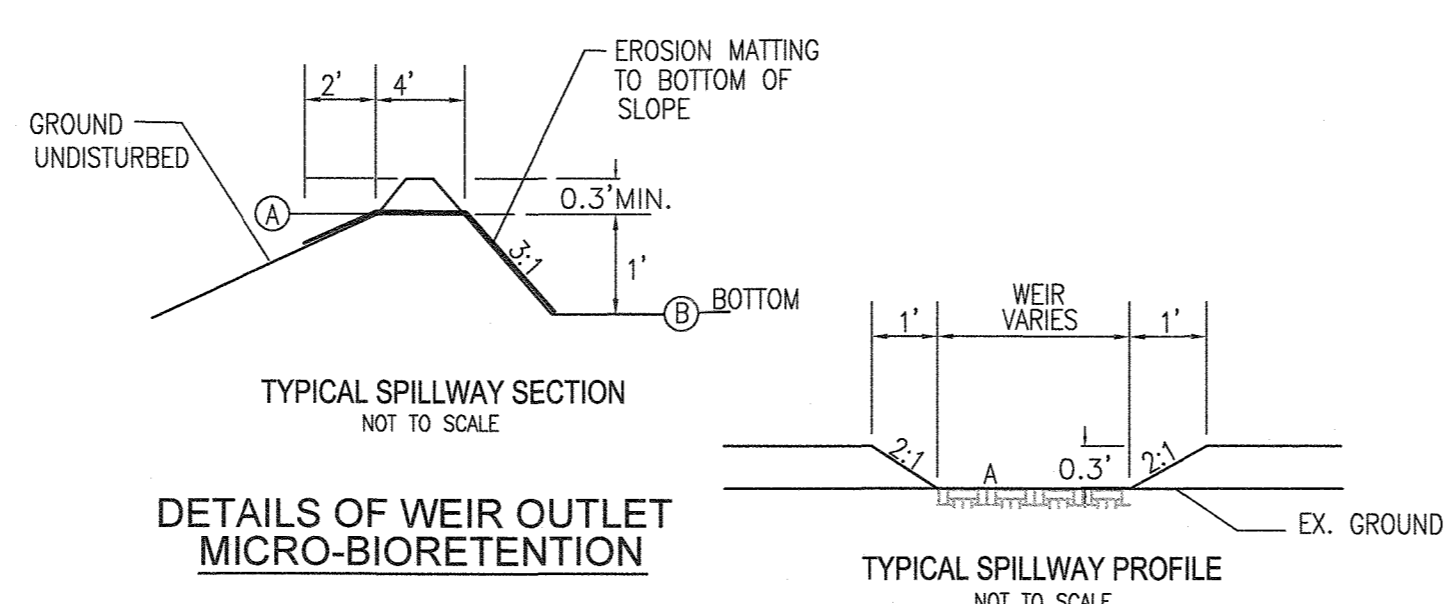
7. MISCELLANEOUS
THESE PRACTICES MAY NOT BE CONSTRUCTED UNTIL ALL CONTRIBUTING GRASS AREA HAS BEEN STABILIZED.



MBR FACILITY #s 3-8 MICRO-BIORETENTION (UNDERDRAIN)
NOT TO SCALE

MBR FACILITY #s 3-8 MICRO-BIORETENTION (OVERFLOW)
NOT TO SCALE

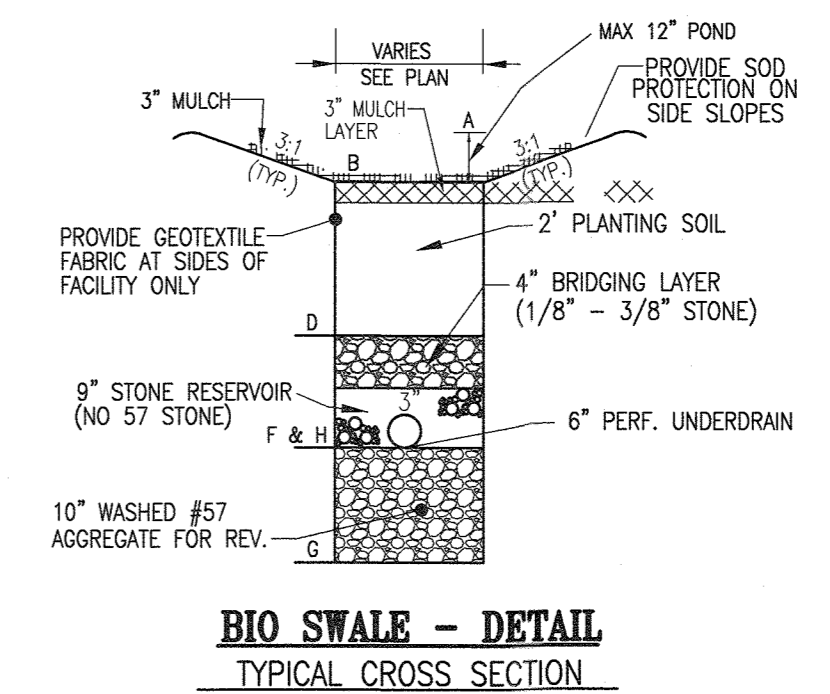
MICROBIORETENTION NOTES:
1. ONLY THE SIDES OF MICRO BIORETENTION ARE TO BE WRAPPED IN FILTER FABRIC. FILTER FABRIC BETWEEN LAYER OR AT THE BOTTOM OF THE MICRO BIORETENTION WILL CAUSE THE MBR TO FAIL AND THEREFORE SHALL NOT BE INSTALLED.
2. WRAP THE PERFORATED MBR UNDERDRAN PIPE WITH 1/4" MESH (#44) OR SMALLER GALVANIZED HARDWARE CLOTH. SEE APPENDIX B.4.C.6.
3. PROVIDE 6" MINIMUM SPACING BETWEEN UNDER DRAN AND PERFORATED PIPE THROUGH STONE RESERVOIR OR SPACE PIPE EQUALLY ACROSS BOTTOM FOR SMALL BIOS. (SEE PLANS)



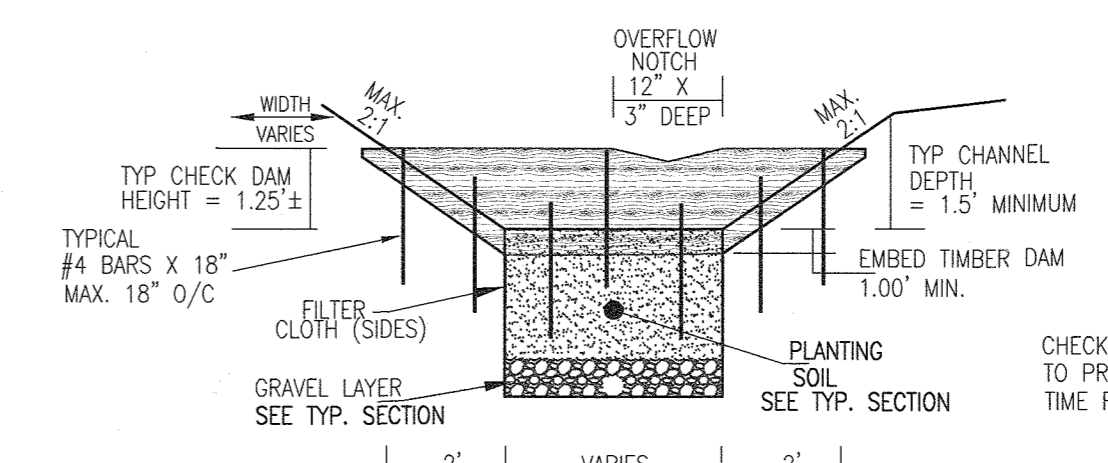
TYPICAL SPILLWAY SECTION
NOT TO SCALE

TYPICAL SPILLWAY PROFILE
NOT TO SCALE

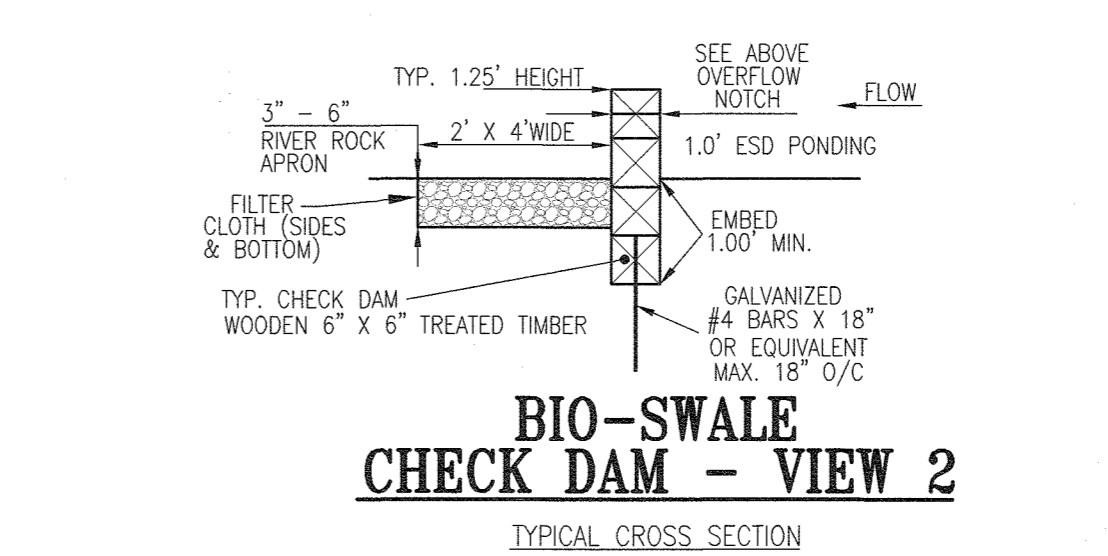
DETAILS OF WEIR OUTLET MICRO-BIORETENTION



BIO-SWALE - DETAIL
TYPICAL CROSS SECTION
(NOT TO SCALE)



BIO-SWALE CHECK DAM - VIEW 1
TYPICAL CROSS SECTION
(NOT TO SCALE)



BIO-SWALE CHECK DAM - VIEW 2
TYPICAL CROSS SECTION

OPERATION AND MAINTENANCE SCHEDULE FOR LANDSCAPE INFILTRATION (M-3), MICRO-BIORETENTION (M-8), RAIN GARDENS (M-7), BIURETENTION SWALE (M-8), AND ENHANCED FILTERS (M-9)

1. THE OWNER SHALL MAINTAIN THE PLANT MATERIAL, MULCH LAYER AND SOIL LAYER ANNUALLY. 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 PRUNING. ACCEPTABLE REPLACEMENT PLANT MATERIAL IS LIMITED TO THE FOLLOWINGS: 2000 MARYLAND STORMWATER DESIGN MANUAL, VOLUME II, TABLE A.4.1 AND 2.
2. THE OWNER SHALL PERFORM A PLANT IN THE SPRING AND IN THE FALL OF EACH YEAR. DURING THE INSPECTION, THE OWNER SHALL REMOVE DEAD AND DISEASED VEGETATION CONSISTENT BEYOND TREATMENT. REPLACE DEAD PLANT MATERIAL WITH ACCEPTABLE REPLACEMENT PLANT MATERIAL. TREAT DISEASED TREES AND SHRUBS, AND REPLACE ALL DEFICIENT STAKES AND WIRES.
3. THE OWNER SHALL INSPECT THE MULCH EACH SPRING. THE MULCH SHALL BE REPLACED EVERY TWO TO THREE YEARS. THE PREVIOUS MULCH LAYER SHALL BE REMOVED BEFORE THE NEW LAYER IS APPLIED.
4. THE OWNER SHALL CORRECT SOIL EROSION ON AN AS NEEDED BASIS, WITH A MINIMUM OF ONCE PER MONTH AND AFTER EACH HEAVY STORM.

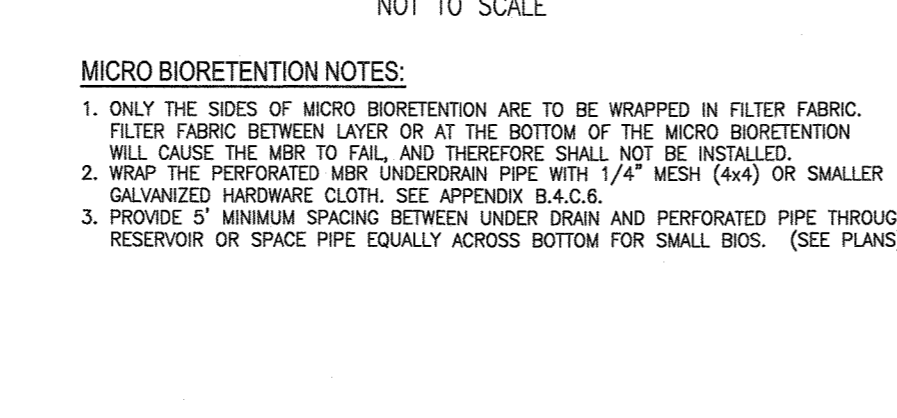
| Material | Specification | Size | Notes |
|---|--|--|---|
| Plantings | see Appendix A, Table A.4 | n/a | plantings are site-specific |
| Planting soil [2' to 4' deep] | loamy sand (60-65%) & compost (35-40%) or sandy loam (30%), coarse sand (20%) & compost (40%) | n/a | USDA soil types loamy sand or sandy loam; clay content < 5% |
| Organic content | Min. 10% by dry weight (ASTM D 2974) | n/a | |
| Mulch | shredded hardwood | n/a | aged 6 months, minimum no pine or wood chips |
| Pea gravel diaphragm | pea 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 | n/a | PE Type I nonwoven |
| Gravel (underdrains and infiltration berms) | AASHTO M-43 | NO. 57 OR NO. 6 AGGREGATE (3/8" to 3/4") | |
| Underdrain piping | F 758, Type PS 28 or AASHTO M-278 | 4" to 6" rigid schedule 40 PVC or SDR35 | Slotted or perforated pipe, 3/8" perf. @ 6" on center, 4 holes per row; minimum of 3" of gravel over pipes; 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 _c = 3500 psi @ 28 days, normal weight, air-entrained; reinforcing to meet ASTM-615-60 | 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 state 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 350.R.89; vertical loading (H-10 or H-20); allowable horizontal loading (based on soil pressures); and analysis of potential cracking. |
| Sand | AASHTO-M-6 or ASTM-C-33 | 0.02" to 0.04" | Sand substitutions such as Diabase and Graystone (AASHTO) #10 are not acceptable. No calcium carbonated or dolomitic sand substitutions are acceptable. No "rock dust" can be used for sand. |

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
CHIEF, BUREAU OF HIGHWAYS *Mig* 10/8/2019
DATE

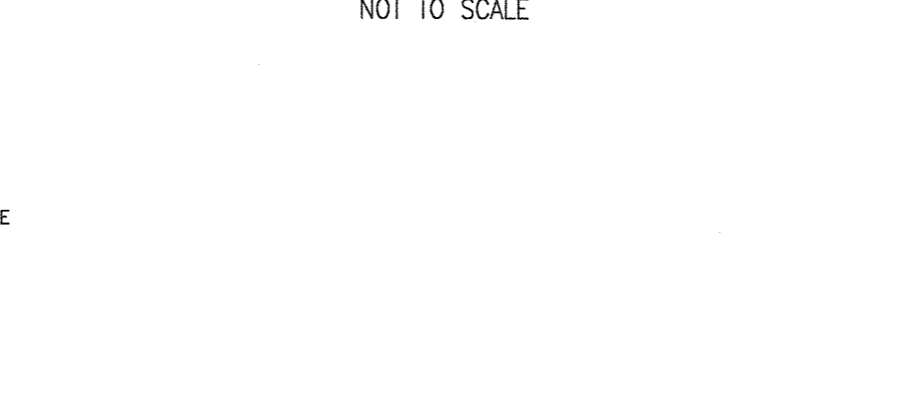
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION *W* 10-26-19
DATE

CHIEF, DIVISION OF LAND DEVELOPMENT *Karl* 10-30-19
DATE

MBR FACILITY #1 SMALL MICRO BIORETENTION (UNDERDRAIN)
NOT TO SCALE



MBR FACILITY #1 SMALL MICRO BIORETENTION (OVERFLOW)
NOT TO SCALE



| FALCON PLACE | | | | | | | |
|----------------------|-------|-------------------|----------------|-------------------------------|-----------------------|-----------|---------------|
| STORMWATER TEST PITS | | | | | | | |
| TEST PIT | MBR-# | SURFACE ELEVATION | PROPOSED GRADE | BOTTOM FACILITY GRADE +4 FEET | BORING DEPTH PROPOSED | CONDITION | |
| B-1 | 1 | 233.25 | 225.92 | 229.1 | 10 | 10 | DRY / NO ROCK |
| B-2 | 4 | 234.20 | 232.00 | 224.1 | 10 | 10 | DRY / NO ROCK |
| B-3 | 6 | 227.20 | 224.60 | 215.8 | 10 | 10 | DRY / NO ROCK |
| B-4 | 8 | 225.51 | 222.80 | 213.6 | 10 | 10 | DRY / NO ROCK |
| B-5 | 7 | 224.98 | 222.80 | 213.1 | 10 | 10 | DRY / NO ROCK |
| B-6 | 5 | 228.10 | 226.20 | 217.3 | 10 | 10 | DRY / NO ROCK |
| B-7 | 3 | 232.28 | 231.80 | 222.2 | 10 | 10 | DRY / NO ROCK |

CERTIFIED TEST PITS HAVE BEEN PROVIDED TO VERIFY THE LOCATIONS OF GROUNDWATER AND/OR ROCK. OPEN TEST PITS WERE OBSERVED BY TRINITY HOMES ON AUGUST 2017.

| SWM Facility Dimensions | | |
|-------------------------|--------|--------|
| Facility | Length | Width |
| MBR-1 | 32.12' | 7' |
| BIO-SWALE | 100' | 2' |
| MBR-3 | 38' | 10' |
| MBR-4 | 39.5' | 7' |
| MBR-5 | 30.42' | 25.34' |
| MBR-6 | 42.09' | 15.86' |
| MBR-7 | 38.93' | 22.28' |
| MBR-8 | 43.2' | 23' |

| BIO-SWALE - DESIGN ELEVATION CHART | | | | | | | | | | |
|------------------------------------|---|----------------------|-------------------------|-----------------------------|------------------------------|--------------------------------|-----------------------------|-------------------------------|-------------------------|-----------------------------------|
| Swale Facility (SWM #) | Low PT. Ponding/Grate Elevation ELEV. A | Top of Mulch ELEV. B | Bottom of Mulch ELEV. C | Bottom of Plant Mix ELEV. D | Bottom of Pea Gravel ELEV. E | Bottom of Stone (ESDv) ELEV. F | Height of Stone (Rev) (ft.) | Bottom of Stone (Rev) ELEV. G | Size of Underdrain (in) | Invert of Underdrain INV. ELEV. H |
| 2 | 234.50 | 233.50 | 233.25 | 231.25 | 230.92 | 230.17 | 0.83 | 229.34 | 6.00 | 230.17 |

| MICRO-BIORETENTION DATA CHART | | | | | | | | | | |
|-------------------------------|---------------------------------|----------------------|-------------------------|-----------------------------|------------------------------|--------------------------------|-----------------------------|-------------------------------|-------------------------|-----------------------------------|
| MBR Facility (SWM #) | Ponding/Grate Elevation ELEV. A | Top of Mulch ELEV. B | Bottom of Mulch ELEV. C | Bottom of Plant Mix ELEV. D | Bottom of Pea Gravel ELEV. E | Bottom of Stone (ESDv) ELEV. F | Height of Stone (Rev) (ft.) | Bottom of Stone (Rev) ELEV. G | Size of Underdrain (in) | Invert of Underdrain INV. ELEV. H |
| 1 | 235.00 | 234.00 | 233.75 | 231.75 | 231.42 | 230.67 | 0.83 | 229.84 | 6.00 | 230.67 |
| 3 | 232.80 | 231.80 | 231.55 | 229.55 | 229.22 | 228.47 | 0.83 | 227.64 | 6.00 | 228.47 |
| 4 | 232.50 | 231.50 | 231.25 | 229.75 | 229.42 | 228.67 | 0.83 | 227.84 | 6.00 | 228.67 |
| 5 | 226.70 | 225.70 | 225.45 | 223.95 | 223.62 | 222.87 | 0.83 | 222.04 | 6.00 | 222.87 |
| 6 | 225.87 | 224.87 | 224.62 | 223.12 | 222.80 | 222.13 | 0.83 | 221.30 | 4.00 | 222.13 |
| 7 | 223.00 | 222.00 | 221.75 | 219.75 | 219.42 | 218.67 | 0.83 | 217.84 | 6.00 | 218.67 |
| 8 | 223.00 | 222.00 | 221.75 | 219.75 | 219.42 | 218.67 | 0.83 | 217.84 | 6.00 | 218.67 |

| OWNER | | DEVELOPER | |
|---|--|--|--|
| MAGNOLIA MANOR, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21104 (410) 480-0023 | | TRINITY HOMES MARY LAND, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21104 (410) 480-0023 | |
| REVISION | | DATE | |

FINAL SUPPLEMENTAL PLAN
STORMWATER MANAGEMENT NOTES AND DETAILS
FALCON PLACE
LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02
5TH ELECTION DISTRICT
P-18-001, CONTRACT NO. 24-5033-D, AA-18-002

ZONED: R-3C
PARCELS: 100 & 428
HOWARD COUNTY, MARYLAND

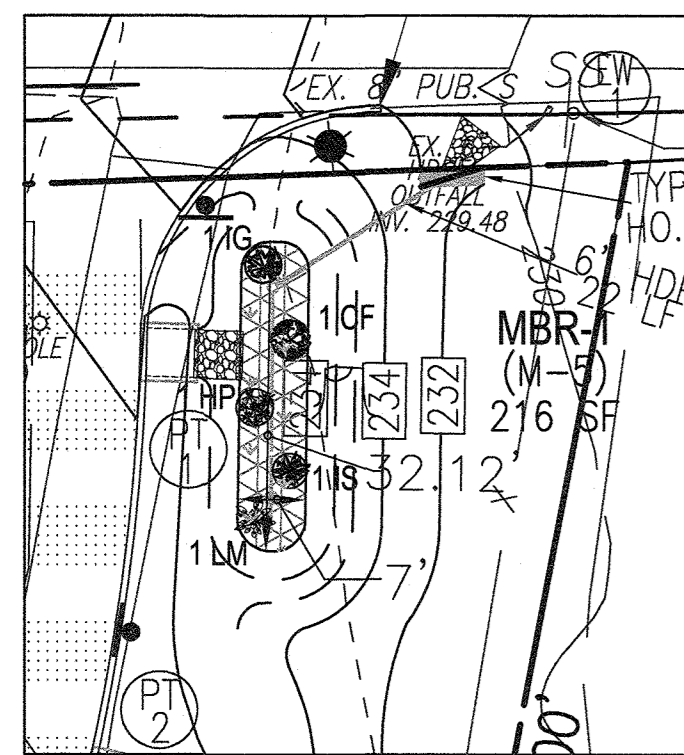
ROBERT H. VOGEL ENGINEERING, INC.
ENGINEERS • SURVEYORS • PLANNERS
3300 N. RIDGE ROAD, SUITE 110 TEL: 410.461.7666
ELLICOTT CITY, MD 21104 FAX: 410.646.1896

DESIGN BY: RHV
DRAWN BY: LG
CHECKED BY: RHV
DATE: SEPTEMBER 2019
SCALE: AS SHOWN
W.O. NO.: 16-15

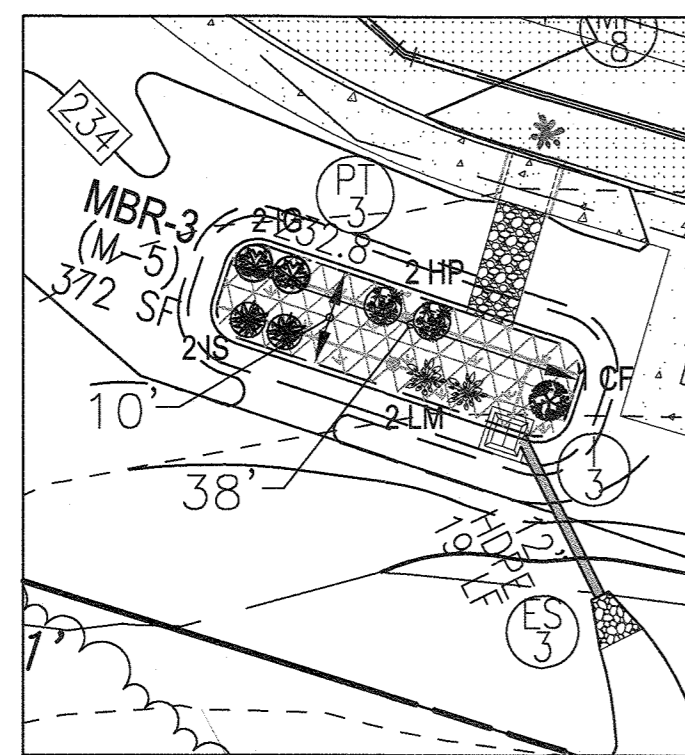
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 161618 EXPIRATION DATE: 09-27-2023

PROFESSIONAL CERTIFICATE

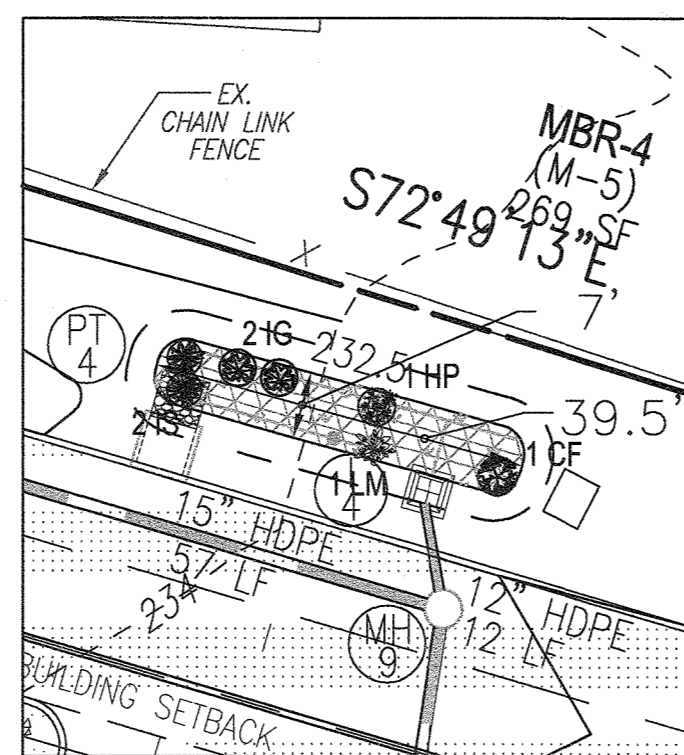
13 SHEET OF 14



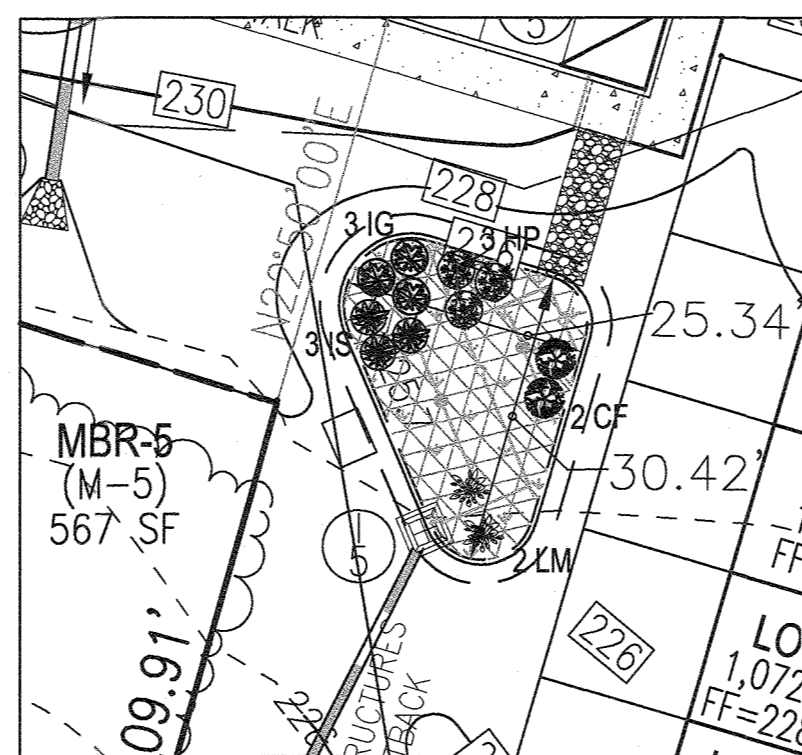
MBR 1 PLANTING SCALE: 1"=20'



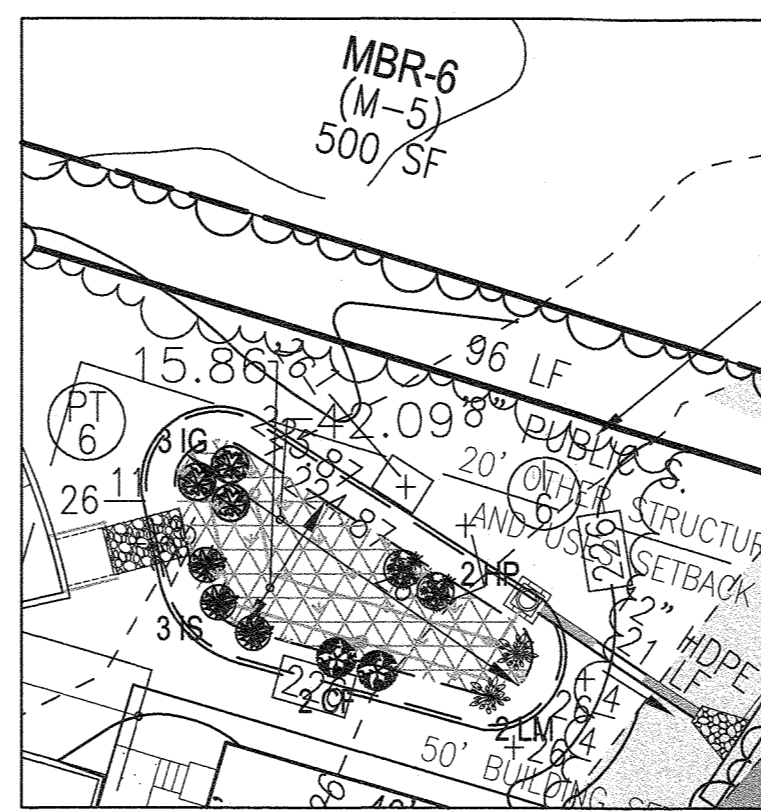
MBR 3 PLANTING SCALE: 1"=20'



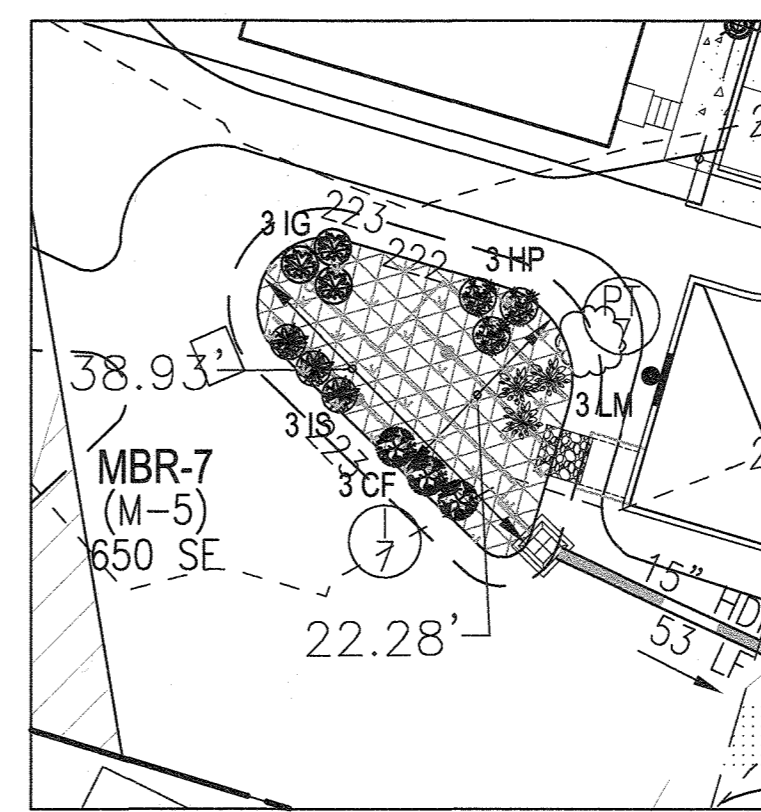
MBR 4 PLANTING SCALE: 1"=20'



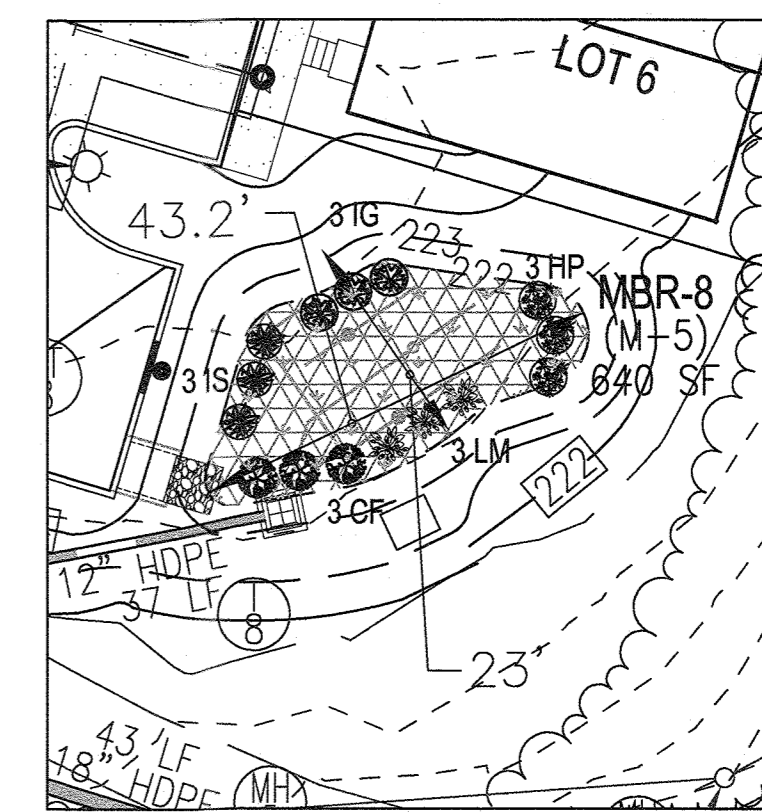
MBR 5 PLANTING SCALE: 1"=20'



MBR 6 PLANTING SCALE: 1"=20'



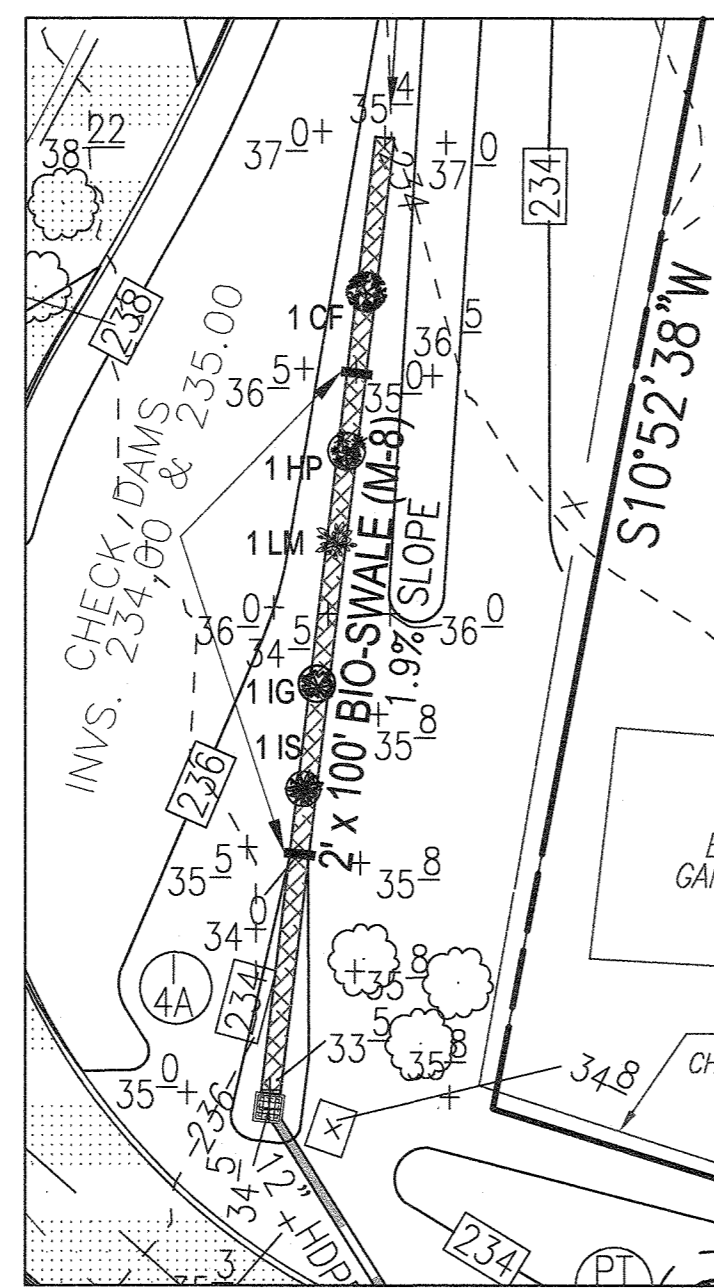
MBR 7 PLANTING SCALE: 1"=20'



MBR 8 PLANTING SCALE: 1"=20'

MICRO-BIORETENTION PLANTING SCHEDULE NOTES

- 1. ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AND SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH HOWARD COUNTY PLANTING SPECIFICATIONS.
2. CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
3. FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
4. CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.
5. MICROBIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED ACRE (0.229 STEMS PER SQUARE FOOT). ABOVE PLANTING RATIOS ARE TO BE APPLIED TO THE AREAS PROVIDED IN THE ES&D SUMMARY. FILTER AREA SHALL BE 50% COVERED BY PLANTINGS AT FULL GROWTH



BIOSWALE 2 PLANTING SCALE: 1"=20'

* SIDEWALK INLET SHALL EXTEND 12" BEYOND SIDEWALK SEE DETAIL SHEET 9. (TYP)

RECREATION OPEN SPACE TABULATION:

IN ACCORDANCE WITH SECTION 16.121(A)(4) OF THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS RECREATION OPEN SPACE IS NOT REQUIRED FOR PROJECTS WITH 10 DWELLING UNITS.

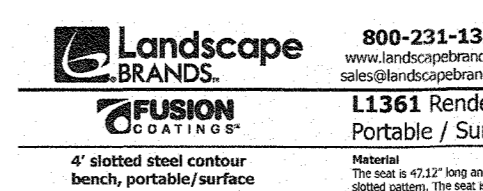
TOTAL RECREATION OPEN SPACE REQUIRED FOR "FALCON PLACE" = SINGLE FAMILY ATTACHED (SFA) = 400 SF/UNIT X 10 UNITS = 4,000 SF

TOTAL RECREATION OPEN SPACE PROVIDED FOR "FALCON PLACE" = PLAY EQUIPMENT (PE) = 2,214 SF + PLAY EQUIPMENT (PE) = 2,214 SF

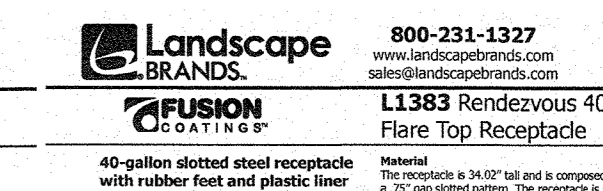
RECREATION OPEN SPACE AREAS: 1. P/O OPEN SPACE 11 = 2,214 SF AMENITIES: PRIVATE PARK: -2 BENCHES (200sf ea.) -PLAY EQUIPMENT (2,000sf ea = 4,000sf).

TOTAL CREDIT = 4,000 + 400 = 4,400sf TOTAL = 2,214 SF LAND AREA TOTAL CREDIT = 4,400 SF OF AMENITY CREDITS TOTAL RECREATION OPEN SPACE PROVIDED = 6,614 SF

TYPICAL BENCH OR EQUAL SUBSTITUTION



TYPICAL TRASH RECEPTACLE OR EQUAL SUBSTITUTION



Appendix A. Landscaping Guidance for Stormwater BMPs Specific Landscaping Criteria

Table A.4 Commonly Used Species for Bioretention Areas

Table with 3 columns: Trees, Shrubs, and Herbaceous Species. Lists various plant species suitable for bioretention areas.

Note 1: For more options on plant selection for bioretention, consult Bioretention Manual (ET&B, 1993) or the Design of Stormwater Filtering Systems (Clayton and Schaefer, 1997).

- 1. TABLE A.4 IS TAKEN FROM THE "2000 MARYLAND STORMWATER DESIGN MANUAL VOLUME II - APPENDIX
2. CONTRACTOR SHALL BE FAMILIAR WITH APPENDIX B.4.C. CONSTRUCTION SPECIFICATIONS AND TABLE B.4.1 MATERIAL SPECIFICATIONS. IN ADDITION THE "2000 MARYLAND STORMWATER DESIGN MANUAL - VOLUME II - APPENDIX A OFFERS ADDITIONAL HELPFUL INFORMATION.
3. NO TREES SHALL BE PLANTED WITHIN A MICRO-BIORETENTION FACILITY. USE ONLY SHRUB OR HERBACEOUS SPECIES.
4. ABOVE TABLE A.4 IS FOR INFORMATIONAL PURPOSES ONLY. LANDSCAPE CONTRACTOR SHALL CHOOSE FROM THE ABOVE TABLE OR USE APPROVED EQUAL SPECIES WHICH ARE TOLERANT TO FLUCTUATING WATER LEVELS.
5. PLANTINGS SHOWN HEREON ARE THE RESPONSIBILITY OF THE DEVELOPER TO INSTALL DURING THE CONSTRUCTION OF THIS FINAL PLAN.

BIORETENTION PLANTING SCHEDULE

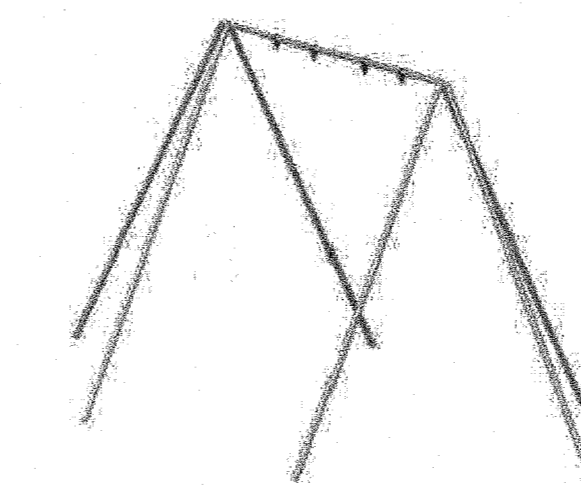
Table with 4 columns: KEY, QTY, BOTANICAL NAME/COMMON NAME, SIZE, REMARKS. Lists plant quantities and specifications for bioretention areas.

PERENNIALS/GROUND COVER PLANTING SCHEDULE

Table with 4 columns: LEGEND, QTY, BOTANICAL NAME/COMMON NAME, SIZE, REMARKS. Lists perennial and ground cover plant quantities and specifications.

MICRO-BIORETENTION PLANTING table with columns: MBR/BIOWALE #, AREA, STEMS REQUIRED (0.229), PLANTINGS PROVIDED (IG, IS, HP, LM, CF), PERENNIALS/GROUND COVER (BA, AG), TOTAL.

BIORETENTION AREAS ARE TO BE PLANTED BASED ON A MINIMUM DENSITY OF 1000 STEMS PER PLANTED



4 SWING SET OR EQUAL SUBSTITUTION

MANUFACTURER INFORMATION: BIRD BURKE COMPANY, LLC P.O. BOX 546 FOND DU LAC, WI 54636-0546 PHONE: 920-621-8220

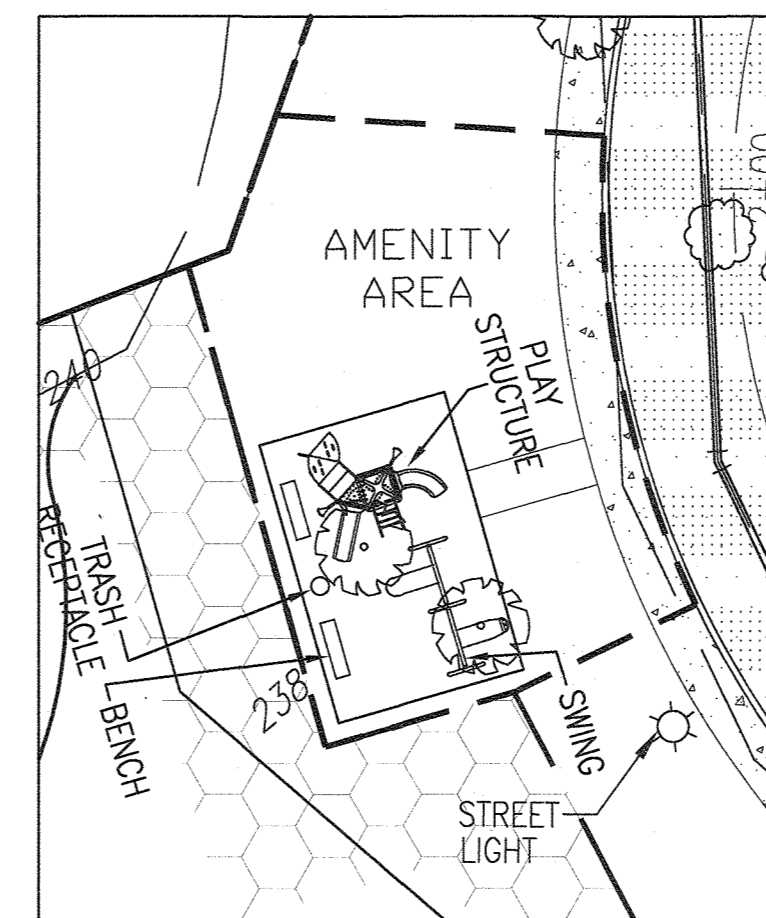
NOTES: 1. OR APPROVED EQUAL 2. SEE MATERIALS PLAN FOR FALL ZONES 3. INSTALL PER MANUFACTURER'S INSTRUCTIONS 4. ALL STRUCTURAL ITEMS SHALL BE DESIGNED BY A STRUCTURAL ENGINEER AND APPROVED AS NECESSARY BASED ON A SITE SPECIFIC GEOTECHNICAL REPORT.

7 SCHOOL AGE CHILD PLAY STRUCTURE

* OR EQUAL SUBSTITUTION

OWNER: MAGNOLIA MANOR, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21043 (410) 480-0023

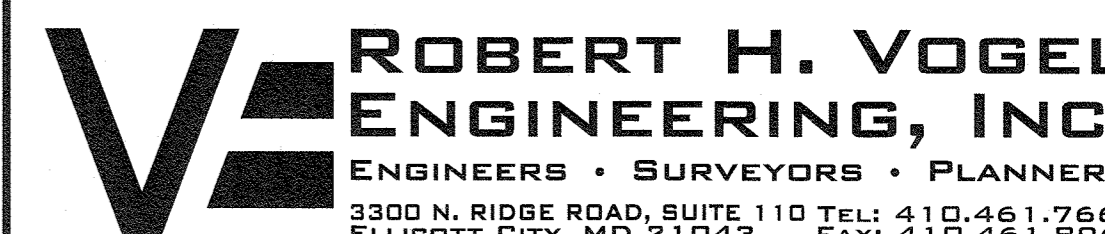
DEVELOPER: TRINITY HOMES MARY LAND, LLC 3675 PARK AVE., SUITE 301 ELLICOTT CITY, MD 21043 (410) 480-0023



AMENITY AREA SCALE: 1"=20'

FINAL SUPPLEMENTAL PLAN MICRO-BIORETENTION & BIOSWALE FACILITY CONSTRUCTION & PLANTING NOTES AND DETAILS FALCON PLACE LOTS 1-10 & OPEN SPACE LOTS 11-12

TAX MAP: 50 GRID: 02 6TH ELECTION DISTRICT: 15 S-17-001, WP-17-067, P-18-001, CONTRACT NO. 24-5033-D, AA-18-002



DESIGN BY: RHW DRAWN BY: LG CHECKED BY: RHW DATE: SEPTEMBER 2019 SCALE: AS SHOWN W.O. NO.: 15-15



PROFESSIONAL CERTIFICATE 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. 16193 EXPIRATION DATE: 08-27-2020

14 SHEET OF 14