BEFORE YOU DIG CALL
1-800-257-7777 OR DIAL 811

MISS UTILITY
CALL BEFORE YOU DIG

STILLMEADOW STREAM & OUTFALL RESTORATION
CONSTRUCTION DRAWINGS
HARFORD COUNTY, MARYLAND

GENERAL NOTES

1. TOPOGRAPHIC SURVEY WAS PERFORMED BY BAYLAND CONSULTANTS AND DESIGNERS, INC. IN MAY AND JUNE 2017. COORDINATES SHOWN HERE ON ARE REFERRED TO MARYLAND COORDINATE SYSTEM (NAD 83/1991) AND ARE BASED ON RTK GPS VIRTUAL NETWORK. ELEVATIONS SHOWN HERE ON ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAD 88) AND ARE BASED ON RTK GPS VIRTUAL NETWORK.

POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
STILLMEADOW DRIVE				
TPS 3	633,076.15	1,497,499.06	6.62	REBAR/CAP
TPS 6	632,922.65	1,497,873.11	17.29	REBAR/CAP
TPS 11	632,843.18	1,498,479.56	53.97	REBAR/CAP
ROXBURY COURT				
TPS 3	632,647.91	1,499,008.70	88.24	REBAR/CAP
TPS 5	632,012.87	1,498,848.29	82.36	REBAR/CAP
TPS 7	632,019.93	1,498,602.61	85.46	REBAR/CAP

2. CONTOURS SHOWN OUTSIDE LIMIT OF WORK ARE BASED ON HARFORD COUNTY 2013 GIS TOPOGRAPHY.
3. EXISTING UTILITIES SHOWN OUTSIDE THE LIMIT OF WORK ARE BASED ON HARFORD COUNTY GIS & HAVE NOT BEEN FIELD LOCATED.
4. PROPERTY LINES AND EASEMENTS SHOWN ARE BASED ON HARFORD COUNTY 2017 CADASTRAL DATA
5. ONLY TREES WITH A 12" DIAMETER OR GREATER WITHIN THE LIMITS OF WORK WERE FIELD LOCATED.
6. WETLAND DELINEATION WAS PERFORMED BY BAYLAND CONSULTANTS AND DESIGNERS, INC IN JUNE 2017.
7. THE STREAM IS AN UNNAMED TRIBUTARY TO FOSTER BRANCH (GUNPOWDER WATERSHED MD BASIN CODE: 02130801) AND IS A USE I STREAM WITH A STREAM CLOSURE PERIOD OF MARCH 1ST TO JUNE 15TH.
8. FEMA FIRMS FM24025C0263E AND FM24025C0264E EFFECTIVE APRIL 19, 2106 SHOWS THAT NO PROPOSED WORK IS WITHIN THE 100-YEAR FLOODPLAIN.
9. THE PROJECT IS LOCATED WITHIN THE CRITICAL AREA.

GENERAL CONSTRUCTION NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE HARFORD COUNTY STANDARD SPECIFICATIONS OR DETAILS FOR CONSTRUCTION UNLESS OTHERWISE NOTED. THE STATE HIGHWAY ADMINISTRATION'S HIGHWAY'S STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS AND THE BOOK OF STANDARDS FOR HIGHWAY & INCIDENTAL STRUCTURES SHALL BE USED IF NO HARFORD COUNTY STANDARD OR DETAIL EXIST.
2. THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO THEIR SATISFACTION PRIOR TO CONSTRUCTION. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS AND ANY DAMAGE TO THEM SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTORS OWN EXPENSE.
3. THE CONTRACTOR SHALL CONTACT "MISS UTILITY" AT 1-800-257-7777 A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.
4. MECHANICAL EXCAVATION SHALL NOT BE CONDUCTED WITHIN 3 FEET HORIZONTALLY OR WITHIN 2 FEET VERTICALLY OF KNOWN UTILITY LOCATIONS. HAND OR SOFT DIGGING SHALL BE DONE WITHIN THESE LIMITS. UNDERGROUND UTILITIES, ONCE UNCOVERED, SHALL BE PROTECTED FROM BEING STRUCK BY EQUIPMENT.
5. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NATURALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF THEIR RESPONSIBILITY TO COMPLETE SUCH WORK.
6. ALL TREES WITH A DIAMETER GREATER THAN 12 INCHES WITHIN THE LIMIT OF DISTURBANCE SHALL NOT BE REMOVED UNLESS PRIOR APPROVAL IS OBTAINED OR EXPLICITLY SHOWN ON THE PLANS TO BE REMOVED. ALL TREES TO REMAIN WITHIN THE LIMIT OF DISTURBANCE THAT ARE NOT TO BE REMOVED SHALL BE PROTECTED.
7. ALL FILL AREAS SHALL BE CLEANED OF ALL VEGETATION AND DEBRIS, SCARIFIED TO A MINIMUM DEPTH OF 12 INCHES PRIOR TO THE PLACEMENT OF FILL. FILL MATERIAL SHALL BE PLACED IN CONTROLLED LIFTS WITH A MAXIMUM THICKNESS OF 8" PRIOR TO COMPACTION THAT IS CONTINUOUS OVER THE ENTIRE AREA OF FILL. EACH LAYER OF FILL SHALL BE COMPACTED WITH THE MINIMUM NUMBER OF PASSES NECESSARY TO PRODUCE A FULL ASYMPTOTIC COMPACTION.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL MATERIALS TESTING INCLUDING CONCRETE, FLOWABLE FILL, HOT MIX ASPHALT AND FILL COMPACTION. ALL MATERIALS TESTING SHALL BE PERFORMED BY THE CONTRACTOR AND SHALL BE COMPENSATED FOR AS PART OF THE APPROPRIATE PAY ITEM.
9. SEE STANDARD GEOTECHNICAL NOTES FOR FILL COMPACTION TESTING REQUIREMENTS.
10. ALL DISTURBED AREAS SHALL HAVE PERMANENT OR TEMPORARY STABILIZATION COMPLETED WITHIN:

    10.A. END OF THE WORK DAY FOR AREAS WITHIN WATERWAYS.
    10.B. THREE CALENDAR DAYS ON SLOPES GREATER THAN 3:1 AND TO THE SURFACE OF ALL PERIMETER SEDIMENT CONTROLS.
    10.C. SEVEN CALENDAR DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS.
    10.D. ALL STABILIZATION MUST BE IN ACCORDANCE WITH MARYLAND DEPARTMENT OF AGRICULTURE (MDA) FERTILIZER LAW.

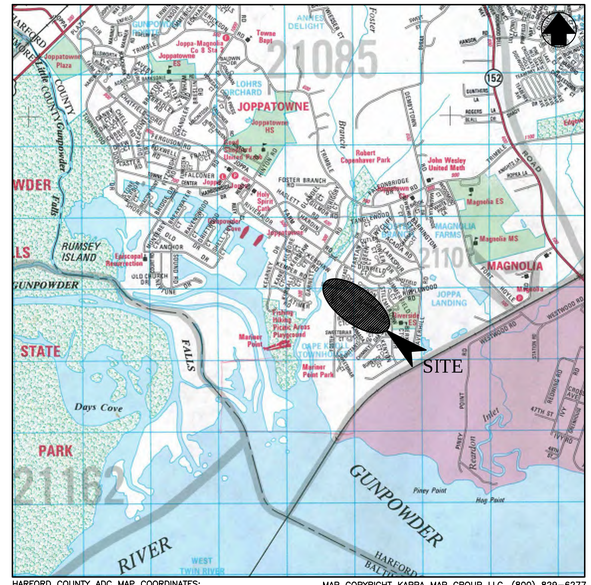
11. ALL DISTURBED AREAS WITH SLOPES GREATER THAN 3:1 SHALL BE STABILIZED WITH 100% BIODEGRADABLE SOIL STABILIZATION MATTING THAT HAS A SUFFICIENT DESIGN SHEAR STRESS FOR THE APPLICATION OR AS SHOWN ON THE APPROVED SEDIMENT AND EROSION CONTROL PLANS.
12. ALL PERMANENTLY STABILIZED AREAS SHALL INCLUDE A MINIMUM OF 4" OF TOPSOIL PER THE 2011 MDE SPECIFICATIONS.
13. ALL STAKING, RESTAKING, AND CUT SHEETS SHALL BE PERFORMED BY A REGISTERED LAND SURVEYOR OR PROFESSIONAL ENGINEER AT THE CONTRACTOR'S EXPENSE.
14. ALL CONSTRUCTION TO BE PERFORMED IN ACCORDANCE WITH STATE OF MARYLAND OCCUPATIONAL SAFETY LAWS.
15. CONTRACTOR MUST ENSURE THAT COPIES OF FEDERAL, STATE, AND CITY PERMITS ARE POSTED ON SITE PRIOR TO THE START OF ANY WORK.
16. ALL ROADS SHALL BE CLEANED AND CLEARED BY THE END OF EACH DAY. ANY MUD OR ROCKS TRACKED ON THE ROADWAYS SHALL BE SWEPT BEFORE THE END OF SHIFT EACH DAY.
17. CONTRACTOR SHALL RESTORE ALL AREAS IMPACTED BY CONSTRUCTION ACTIVITY. THIS SHALL INCLUDE BUT IS NOT LIMITED TO GRASS AREAS, ROADS, PAVED AREAS, ETC...

SHEET LIST

SHEET	DESCRIPTION
1	COVER SHEET
2	KEY SHEET
3	SMSR GEOMETRIC LAYOUT
4	SMSR GEOMETRIC LAYOUT
5	SMSR GEOMETRIC LAYOUT
6	SMSR EXISTING CONDITIONS & DEMOLITION PLAN
7	SMSR EXISTING CONDITIONS & DEMOLITION PLAN
8	SMSR EXISTING CONDITIONS & DEMOLITION PLAN
9	SMSR EXISTING TREE TABLES
10	SMSR SITE PLAN
11	SMSR SITE PLAN
12	SMSR SITE PLAN
13	SMSR PROFILES
14	SMSR PROFILES
15	SMSR CROSS SECTIONS
16	SMSR CROSS SECTIONS
17	SMSR CROSS SECTIONS
18	SMSR CROSS SECTIONS
19	SMSR CROSS SECTIONS
20	SMSR CROSS SECTIONS
21	SMSR CROSS SECTIONS
22	SMSR CROSS SECTIONS
23	SMSR EROSION AND SEDIMENT CONTROL PLAN

SHEET LIST

SHEET	DESCRIPTION
24	SMSR EROSION AND SEDIMENT CONTROL PLAN
25	SMSR EROSION AND SEDIMENT CONTROL PLAN
26	SMSR LANDSCAPE & BUFFER MANAGEMENT PLAN
27	SMSR LANDSCAPE & BUFFER MANAGEMENT PLAN
28	SMSR LANDSCAPE & BUFFER MANAGEMENT PLAN
29	SMSR LANDSCAPE & BUFFER MANAGEMENT PLAN
30	RC EXISTING CONDITIONS & DEMOLITION PLAN
31	RC SITE PLAN
32	RC PROFILES AND DETAILS
33	RC EROSION AND SEDIMENT CONTROL PLAN
34	RC PLANTING PLAN
35	RC PLANTING SCHEDULE
36	SPSC NOTES & DETAILS
37	STREAM DETAILS & NOTES
38	STREAM DETAILS & NOTES
39	SEDIMENT CONTROL NOTES AND DETAILS
40	SEDIMENT CONTROL NOTES AND DETAILS
41	RC EXISTING TREE TABLE & NOTES
42	PLANTING DETAILS & NOTES
43	DRAINAGE AREA MAP



HARFORD COUNTY ADC MAP COORDINATES:
MAP 28 GRID F-6, F-7, G-6, G-7

MAP COPYRIGHT KAPPA MAP GROUP LLC, (800) 829-6277
USED WITH PERMISSION, PERMITTED USE NUMBER 10222014

LOCATION MAP
SCALE: 1"=2000'

DEVELOPER

HARFORD COUNTY DEPARTMENT OF PUBLIC WORKS
DIVISION OF HIGHWAYS AND STORMWATER MANAGEMENT
212 SOUTH BOND STREET, 3RD FLOOR
BEL AIR, MARYLAND 21014
CONTACT: GLEN HEBEL
PH: (410) 638-3509 EXT 1344

ENGINEER

BAYLAND CONSULTANTS & DESIGNERS, INC.
7455 NEW RIDGE ROAD, SUITE T
HANOVER, MARYLAND 21076
PH: 410-694-9401
FAX: 410-694-9405

LEGEND

TRAVERSE POINT — TPS# 3
EX. PROPERTY LINE/RIGHT-OF-WAY
EX. MAJOR CONTOUR — 70
EX. MINOR CONTOUR — 69
EX. TOP OF BANK — TOB
EX. 25' WETLAND BUFFER — WB
EX. WIRE FENCE — X
EX. PLASTIC FENCE
EX. WOOD FENCE
EX. THALWEG
EX. 100-YR FEMA FLOODPLAIN — FEMA
EX. 100-YR FLOODPLAIN
EX. CRITICAL AREA
EX./PR. DRAINAGE AREA
EX. SOIL — BeC
EX. SEWER & MANHOLE — EX. 12" SG
EX. STORM DRAIN, INLET, & MANHOLE — EX. 12" SD
EX. STORM DRAIN TO BE REMOVED
EX. WATER & VALVE
EX. TREE
EX. TREE TO BE REMOVED
EX. TREE TO BE PROTECTED
EX. FIRE HYDRANT
EX. SIGN
EX. LIGHT POLE
EX. TELEPHONE PEDESTAL
EX. BORING
EX. WETLANDS
EX. RIPRAP
PR. RIPRAP
PR. LIMITS OF CLEARING
PR. MAJOR CONTOUR — 70
PR. MINOR CONTOUR — 69
PR. ODD CONTOUR — 68.5
PR. 100-YR FLOODPLAIN
PR. BANK FULL — BF
PR. STREAM ℄ — 0+00 0+15
PR. STORM DRAIN
PR. SILL BOULDER CONTROL STRUCTURE
PR. SPSC RIFFLE/POOL
PR. LOG-BOULDER STEP\POOL
PR. RIFFLE/POOL

OWNER'S/DEVELOPER'S CERTIFICATION

I/WE CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAY OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

OWNER/DEVELOPER SIGNATURE DATE

PRINTED NAME

ENGINEER'S CERTIFICATION

I CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HARFORD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HARFORD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

ENGINEER'S SIGNATURE DATE

CHRISTOPHER STEPP 31146
PRINTED NAME MD P.E. REGISTRATION NO.

AS-BUILT CERTIFICATION

I HEREBY CERTIFY THAT THE FACILELY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.

ENGINEER'S SIGNATURE DATE

CHRISTOPHER STEPP 31146
PRINTED NAME MD P.E. REGISTRATION NO.

CERTIFY MEANS TO STATE OR DECLARE A PROFESSIONAL OPINION BASED UPON ON-SITE INSPECTIONS AND MATERIAL TESTS WHICH ARE CONDUCTED DURING CONSTRUCTION. THE ON-SITE INSPECTIONS AND MATERIAL TESTS ARE THOSE INSPECTIONS AND TESTS DEEMED SUFFICIENT AND APPROPRIATE BY COMMONLY ACCEPTED ENGINEERING STANDARDS. CERTIFY DOES NOT MEAN OR IMPLY A GUARANTEE BY THE ENGINEER NOR DOES AN ENGINEER'S CERTIFICATION RELIEVE ANY OTHER PARTY FROM MEETING REQUIREMENTS IMPOSED BY CONTRACT, EMPLOYMENT, OR OTHER MEANS, INCLUDING MEETING COMMONLY ACCEPTED INDUSTRY PRACTICES.

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 33146, EXPIRATION DATE: 01/14/2019.

HARFORD SOIL CONSERVATION DISTRICT
SMALL POND APPROVAL

DISTRICT OFFICIAL DATE

TECHNICAL REVIEW FOR DISTRICT

HARFORD COUNTY DEPT. OF PUBLIC WORKS DATE

POND DESIGN CERTIFICATION FOR SMALL POND NUMBER

I CERTIFY THAT THIS DESIGN PLAN FOR THE CONSTRUCTION OF THE EMBANKMENT AND/OR EXCAVATED POND(S) REPRESENTS A HAZARD CLASS "A" POND(S) AND WAS DESIGNED IN ACCORDANCE WITH THE REQUIREMENTS OF THE USDA, NATURAL RESOURCES CONSERVATION SERVICE – MARYLAND STANDARDS AND SPECIFICATIONS FOR PONDS (MD-378). I HAVE REVIEWED THIS PLAN WITH THE OWNER/DEVELOPER.

SIGNATURE
NAME CHRISTOPHER STEPP
ADDRESS 7455 NEW RIDGE ROAD, SUITE T
HANOVER, MD 21076
MD P.E. LICENSE # 33146
PHONE # (410) 694-9401

CAPITAL PROJECT APPROVAL

REVIEWED & APPROVAL RECOMMENDED
PROJECT ENGINEER DATE

APPROVAL RECOMMENDED
CHIEF ENGINEER DATE

APPROVAL RECOMMENDED
DEPUTY DIRECTOR OF PUBLIC WORKS DATE

APPROVAL
DIRECTOR OF PUBLIC WORKS DATE

SWM APPROVAL

HARFORD COUNTY BILLING NUMBER 99974
THESE PLANS HAVE BEEN REVIEWED BY HARFORD COUNTY AND MEET THE TECHNICAL REQUIREMENTS FOR STORMWATER MANAGEMENT ONLY.

REVIEWED & APPROVAL RECOMMENDED
WATER RESOURCES ENGINEERING DATE

APPROVAL RECOMMENDED
CHIEF ENGINEER DATE

APPROVAL RECOMMENDED
DEPUTY DIRECTOR OF PUBLIC WORKS DATE

APPROVAL
DIRECTOR OF PUBLIC WORKS DATE

60% DESIGN

SEE SHEET 2 FOR SITE INFORMATION AND SITE ANALYSIS

S/C PLAN # _____ GRA # _____-____

EG-SWMENG-_____-____ #_____

CLEAR CREEKS CONSULTING
1317 Knopp Road, Jarrettsville, Maryland 21084 (410) 692-2164

BayLand Consultants & Designers, Inc.
"Integrating Engineering and Environment"
7455 New Ridge Road, Suite T Phone: (410) 694-9401
Hanover, Maryland 21076 Fax: (410) 694-9105
www.baylandinc.com
BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
COVER SHEET

DRAWN BY: JP
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : AS SHOWN
SHEET 1 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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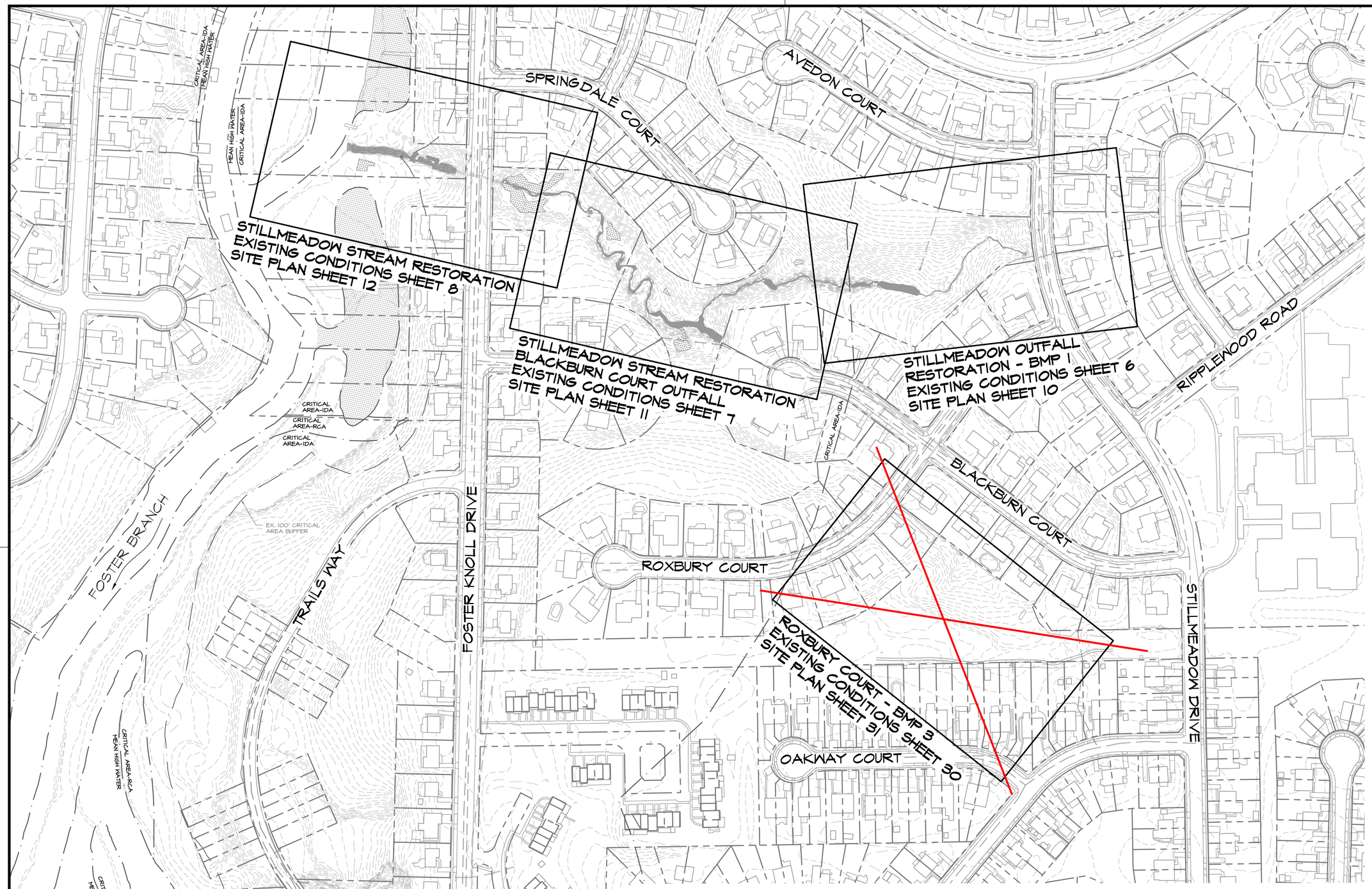

PLAN VIEW

SCALE: 1" = 100'

0 50 100 200

1 INCH = 100 FEET

SITE INFORMATION

STILLMEADOW STREAM & OUTFALL RESTORATION/ROXBURY COURT

1. OWNER INFORMATION:	FOSTER BRANCH HOMEOWNERS ASSOCIATION 1 INC JOPPA FARM/STILLMEADOW RD JOPPA, MD 21085
2. TAX MAP:	69
3. PARCEL:	207
4. DEED REFERENCE:	848/226
5. PLAT REFERENCE:	18/99
6. PROPERTY AREA:	11.50 AC

STILLMEADOW STREAM & OUTFALL RESTORATION

1. OWNER INFORMATION:	STEWART NASH E S FOSTER KNOLL DRIVE JOPPA, MD 21085
2. TAX MAP:	69
3. PARCEL:	217
4. DEED REFERENCE:	
5. PLAT REFERENCE:	1535/588
6. PROPERTY AREA:	23/94
	1.53 AC

SITE ANALYSIS

STILLMEADOW STREAM & OUTFALL RESTORATION

1. TOTAL SITE AREA:	1.91 AC
1.1. PROPOSED DISTURBED AREA:	1.91 AC
2. TOTAL AREA TO BE STABILIZED:	1.91 AC
2.1. TOTAL EX. IMP AREA:	0.00 AC
2.2. TOTAL EX. IMP. AREA TO REMAIN:	0.00 AC
2.3. TOTAL PR. IMPERVIOUS AREA:	0.00 AC
2.4. TOTAL POOL AREA	0.46 AC
2.5. TOTAL TO BE STABILIZED WITH VEGETATION:	1.45 AC
3. PROPOSED IMPERVIOUS AREA:	0.00 AC
4. ESTIMATED CUT:	1,735 CY
5. ESTIMATED FILL:	1,445 CY

ROXBURY COURT

1. TOTAL SITE AREA:	11.50 AC
1.1. PROPOSED DISTURBED AREA:	1.10 AC
2. TOTAL AREA TO BE STABILIZED:	1.10 AC
2.1. TOTAL EX. IMP AREA:	0.00 AC
2.2. TOTAL EX. IMP. AREA TO REMAIN:	0.00 AC
2.3. TOTAL PR. IMPERVIOUS AREA:	0.00 AC
2.4. TOTAL POOL AREA	0.20 AC
2.5. TOTAL TO BE STABILIZED WITH VEGETATION:	0.90 AC
3. PROPOSED IMPERVIOUS AREA:	0.00 AC
4. ESTIMATED CUT:	5,970 CY
5. ESTIMATED FILL:	260 CY

NOTES:

1. THE EARTHWORK QUANTITIES SHOWN HEREON ARE FOR INFORMATION PURPOSES ONLY. BAYLAND MAKES NO GUARANTEES OF ACCURACY OF QUANTITIES OR BALANCE OF SITE. THE DEVELOPER AND CONTRACTOR SHALL TAKE FULL RESPONSIBILITY OF ACTUAL EARTHWORK QUANTITIES ENCOUNTERED DURING CONSTRUCTION.

2. THE QUANTITY OF EXCAVATION HAS BEEN ESTIMATED BASED ON THE EXISTING CONDITIONS SURVEY SHOWN AND SHALL SERVE AS BASIS FOR PAYMENT. THE TOTAL QUANTITY SHALL BE CONSIDERED FIXED AND THE CONTRACTOR SHALL BE PAID THE TOTAL QUANTITY AT COMPLETION OF GRADING WITHOUT RECALCULATION OF ACTUAL QUANTITIES. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO VERIFY ANY CHANGE IN EXISTING CONDITIONS AND DETERMINE THE EFFORT NECESSARY TO ACHIEVE THE GRADE SHOWN WITHIN THE PAYMENT QUANTITIES LISTED.

60% DESIGN

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
KEY SHEET

DRAWN BY: JP
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 100'
SHEET 2 OF 43
DATE : 06/05/18

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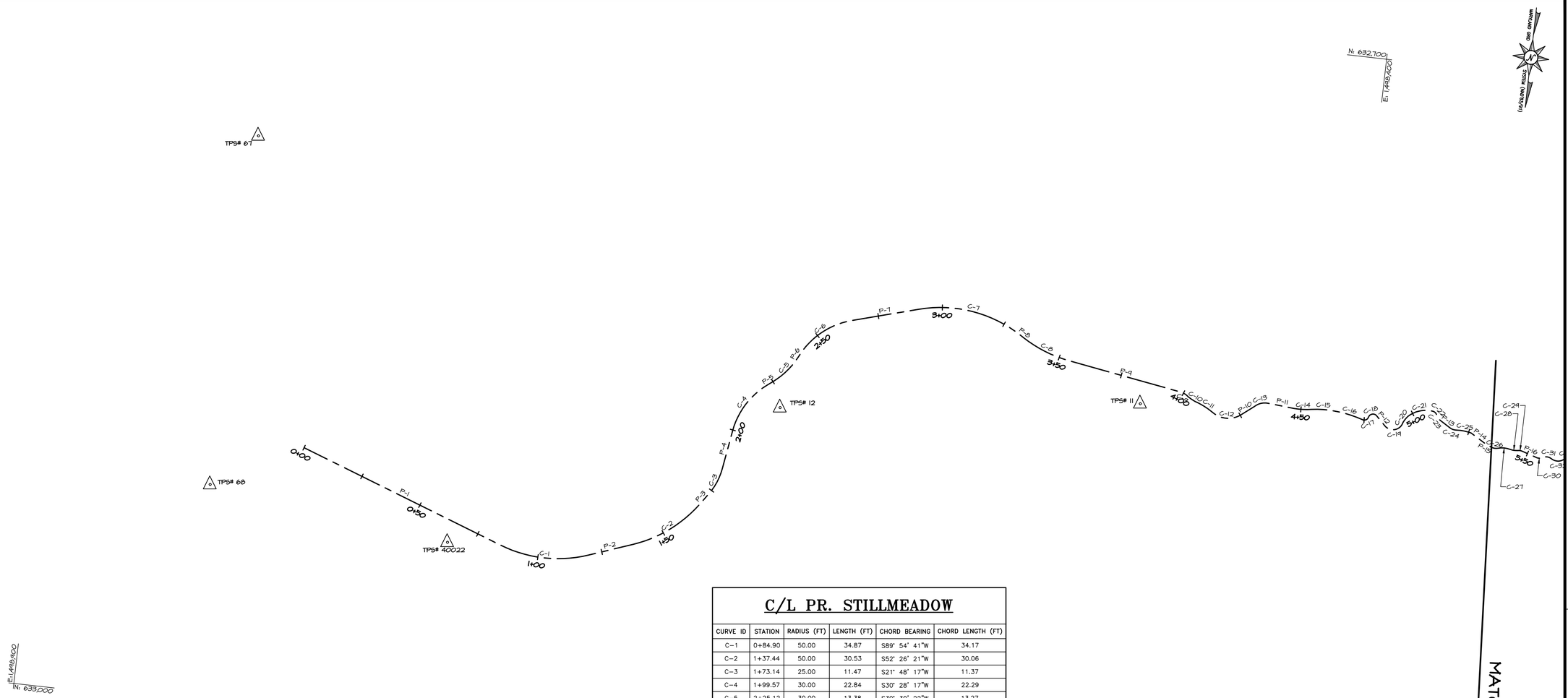
ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE : 1 inch



C/L PR. STILLMEADOW

POINT ID	STATION	NORTHING	EASTING	BEARING	DISTANCE (FT)
P-1	0+00.00	632,896.69	1,498,798.84	N70° 06' 36"W	84.90
P-2	1+19.77	632,925.52	1,498,684.84	S69° 55' 58"W	17.68
P-3	1+67.98	632,901.13	1,498,644.40	S34° 56' 44"W	5.17
P-4	1+84.61	632,886.34	1,498,637.22	S8° 39' 49"W	14.96
P-5	2+22.41	632,852.35	1,498,623.67	S52° 16' 44"W	2.72
P-6	2+38.50	632,840.45	1,498,613.08	S26° 44' 00"W	1.45
P-7	2+64.69	632,823.81	1,498,593.91	S73° 59' 00"W	26.25
P-8	3+32.61	632,822.10	1,498,528.58	N58° 15' 59"W	1.55
P-9	3+53.84	632,829.75	1,498,508.95	N80° 48' 56"W	45.15
P-10	4+25.30	632,843.09	1,498,440.39	S51° 45' 36"W	6.07
P-11	4+37.23	632,837.44	1,498,430.29	N85° 08' 07"W	10.13
P-12	4+80.84	632,837.33	1,498,388.39	N46° 02' 35"W	5.33
P-13	5+13.31	632,836.76	1,498,363.10	N58° 55' 56"W	3.90
P-14	5+25.98	632,839.97	1,498,351.18	N59° 30' 10"W	6.34
P-15	5+32.32	632,843.19	1,498,345.72	N65° 17' 54"W	2.51

C/L PR. STILLMEADOW

CURVE ID	STATION	RADIUS (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)
C-1	0+84.90	50.00	34.87	S89° 54' 41"W	34.17
C-2	1+37.44	50.00	30.53	S52° 26' 21"W	30.06
C-3	1+73.14	25.00	11.47	S21° 48' 17"W	11.37
C-4	1+99.57	30.00	22.84	S30° 28' 17"W	22.29
C-5	2+25.12	30.00	13.38	S39° 30' 22"W	13.27
C-6	2+39.95	30.00	24.74	S50° 21' 30"W	24.04
C-7	2+90.94	50.00	41.67	N82° 08' 30"W	40.47
C-8	3+34.16	50.00	19.68	N69° 32' 28"W	19.55
C-9	3+98.99	6.74	3.39	N63° 21' 46"W	3.35
C-10	4+02.38	15.94	4.73	N65° 12' 16"W	4.71
C-11	4+07.10	28.75	6.33	N63° 03' 37"W	6.32
C-12	4+13.44	9.32	11.86	S88° 54' 30"W	11.08
C-13	4+31.37	6.39	5.86	S70° 26' 33"W	5.66
C-14	4+47.37	28.54	6.83	S86° 26' 19"W	6.81
C-15	4+54.19	34.93	8.73	S87° 36' 07"W	8.70
C-16	4+62.92	45.01	11.33	N79° 30' 55"W	11.30
C-17	4+74.25	1.69	2.96	S62° 44' 12"W	2.60
C-18	4+77.20	1.85	3.64	S70° 05' 16"W	3.08
C-19	4+86.17	4.00	7.75	S78° 52' 06"W	6.59
C-20	4+93.92	9.05	4.04	S29° 36' 56"W	4.00
C-21	4+97.95	11.30	10.15	S72° 15' 26"W	9.81
C-22	5+08.10	1.98	2.04	N51° 49' 12"W	1.95
C-23	5+10.14	4.90	3.17	N43° 16' 47"W	3.12
C-24	5+17.20	4.38	3.09	N75° 51' 45"W	3.02
C-25	5+20.29	17.62	5.69	N85° 20' 37"W	5.67
C-26	5+34.83	4.04	3.45	N83° 06' 50"W	3.35

60% DESIGN

GEOMETRIC LAYOUT

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW GEOMETRIC LAYOUT

DRAWN BY: EM
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 3 OF 43
DATE : 06/05/18

EG-SWMENG-_____-____ #_____

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BAYLAND JOB NO. 4_3801

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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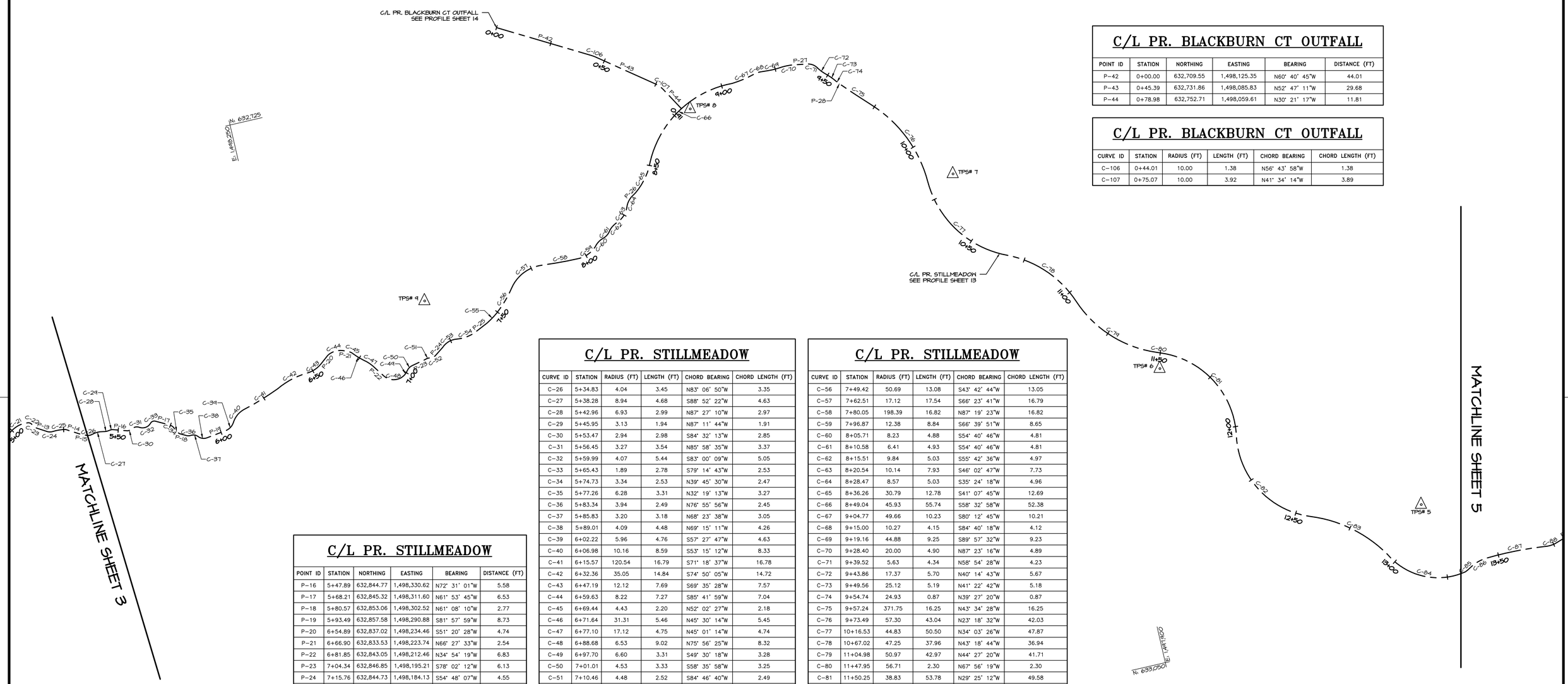

C/L PR. BLACKBURN CT OUTFALL

POINT ID	STATION	NORTHING	EASTING	BEARING	DISTANCE (FT)
P-42	0+00.00	632,709.55	1,498,125.35	N60° 40' 45"W	44.01
P-43	0+45.39	632,731.86	1,498,085.83	N52° 47' 11"W	29.68
P-44	0+78.98	632,752.71	1,498,059.61	N30° 21' 17"W	11.81

C/L PR. BLACKBURN CT OUTFALL

CURVE ID	STATION	RADIUS (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)
C-106	0+44.01	10.00	1.38	N56° 43' 58"W	1.38
C-107	0+75.07	10.00	3.92	N41° 34' 14"W	3.89

C/L PR. STILLMEADOW

POINT ID	STATION	NORTHING	EASTING	BEARING	DISTANCE (FT)
P-16	5+47.89	632,844.77	1,498,330.62	N72° 31' 01"W	5.58
P-17	5+68.21	632,845.32	1,498,311.60	N61° 53' 45"W	6.53
P-18	5+80.57	632,853.06	1,498,302.52	N61° 08' 10"W	2.77
P-19	5+93.49	632,857.58	1,498,290.88	S81° 57' 59"W	8.73
P-20	6+54.89	632,837.02	1,498,234.46	S51° 20' 28"W	4.74
P-21	6+66.90	632,833.53	1,498,223.74	N66° 27' 33"W	2.54
P-22	6+81.85	632,833.05	1,498,212.46	N34° 54' 19"W	6.83
P-23	7+04.34	632,846.85	1,498,195.21	S78° 02' 12"W	6.13
P-24	7+15.76	632,844.73	1,498,184.13	S54° 48' 07"W	4.55
P-25	7+36.74	632,838.76	1,498,164.78	S65° 09' 23"W	6.73
P-26	8+33.50	632,796.12	1,498,084.16	S57° 47' 25"W	2.75
P-27	9+33.31	632,755.18	1,498,000.94	N80° 32' 40"W	6.22
P-28	9+55.61	632,767.27	1,497,983.54	N42° 19' 19"W	1.62

C/L PR. STILLMEADOW

CURVE ID	STATION	RADIUS (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)
C-26	5+34.83	4.04	3.45	N83° 06' 50"W	3.35
C-27	5+38.28	8.94	4.68	S88° 52' 22"W	4.63
C-28	5+42.96	6.93	2.99	N87° 27' 10"W	2.97
C-29	5+45.95	3.13	1.94	N87° 11' 44"W	1.91
C-30	5+53.47	2.94	2.98	S84° 32' 13"W	2.85
C-31	5+56.45	3.27	3.54	N85° 58' 35"W	3.37
C-32	5+59.99	4.07	5.44	S83° 00' 09"W	5.05
C-33	5+65.43	1.89	2.78	S79° 14' 43"W	2.53
C-34	5+74.73	3.34	2.53	N39° 45' 30"W	2.47
C-35	5+77.26	6.28	3.31	N32° 19' 13"W	3.27
C-36	5+83.34	3.94	2.49	N76° 55' 56"W	2.45
C-37	5+85.83	3.20	3.18	N68° 23' 38"W	3.05
C-38	5+89.01	4.09	4.48	N69° 15' 11"W	4.26
C-39	6+02.22	5.96	4.76	S57° 27' 47"W	4.63
C-40	6+06.98	10.16	8.59	S53° 15' 12"W	8.33
C-41	6+15.57	120.54	16.79	S71° 18' 37"W	16.78
C-42	6+32.36	35.05	14.84	S74° 50' 05"W	14.72
C-43	6+47.19	12.12	7.69	S69° 35' 28"W	7.57
C-44	6+59.63	8.22	7.27	S85° 41' 59"W	7.04
C-45	6+69.44	4.43	2.20	N52° 02' 27"W	2.18
C-46	6+71.64	31.31	5.46	N45° 30' 14"W	5.45
C-47	6+77.10	17.12	4.75	N45° 01' 14"W	4.74
C-48	6+88.68	6.53	9.02	N75° 56' 25"W	8.32
C-49	6+97.70	6.60	3.31	S49° 30' 18"W	3.28
C-50	7+01.01	4.53	3.33	S58° 35' 58"W	3.25
C-51	7+10.46	4.48	2.52	S84° 46' 40"W	2.49
C-52	7+12.98	3.24	2.77	S76° 38' 00"W	2.69
C-53	7+20.30	8.03	7.60	S72° 32' 25"W	7.32
C-54	7+27.90	16.17	8.84	S82° 21' 32"W	8.73
C-55	7+43.47	38.78	5.95	S56° 52' 20"W	5.95

C/L PR. STILLMEADOW

CURVE ID	STATION	RADIUS (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)
C-56	7+49.42	50.69	13.08	S43° 42' 44"W	13.05
C-57	7+62.51	17.12	17.54	S66° 23' 41"W	16.79
C-58	7+80.05	198.39	16.82	N87° 19' 23"W	16.82
C-59	7+96.87	12.38	8.84	S66° 39' 51"W	8.65
C-60	8+05.71	8.23	4.88	S54° 40' 46"W	4.81
C-61	8+10.58	6.41	4.93	S54° 40' 46"W	4.81
C-62	8+15.51	9.84	5.03	S55° 42' 36"W	4.97
C-63	8+20.54	10.14	7.93	S46° 02' 47"W	7.73
C-64	8+28.47	8.57	5.03	S35° 24' 18"W	4.96
C-65	8+36.26	30.79	12.78	S41° 07' 45"W	12.69
C-66	8+49.04	45.93	55.74	S58° 32' 58"W	52.38
C-67	9+04.77	49.66	10.23	S80° 12' 45"W	10.21
C-68	9+15.00	10.27	4.15	S84° 40' 18"W	4.12
C-69	9+19.16	44.88	9.25	S89° 57' 32"W	9.23
C-70	9+28.40	20.00	4.90	N87° 23' 16"W	4.89
C-71	9+39.52	5.63	4.34	N58° 54' 28"W	4.23
C-72	9+43.86	17.37	5.70	N40° 14' 43"W	5.67
C-73	9+49.56	25.12	5.19	N41° 22' 42"W	5.18
C-74	9+54.74	24.93	0.87	N39° 27' 20"W	0.87
C-75	9+57.24	371.75	16.25	N43° 34' 28"W	16.25
C-76	9+73.49	57.30	43.04	N23° 18' 32"W	42.03
C-77	10+16.53	44.83	50.50	N34° 03' 26"W	47.87
C-78	10+67.02	47.25	37.96	N43° 18' 44"W	36.94
C-79	11+04.98	50.97	42.97	N44° 27' 20"W	41.71
C-80	11+47.95	56.71	2.30	N67° 56' 19"W	2.30
C-81	11+50.25	38.83	53.78	N29° 25' 12"W	49.58
C-82	12+04.03	37.89	52.78	N29° 38' 44"W	48.62
C-83	12+56.81	58.74	38.55	N50° 45' 24"W	37.86
C-84	12+95.36	29.36	37.94	N64° 20' 20"W	35.35
C-85	13+33.30	12.36	2.60	S63° 14' 38"W	2.59

60% DESIGN

GEOMETRIC LAYOUT

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE GEOMETRIC LAYOUT

DRAWN BY: EM
DESIGNED BY: RP/JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 4 OF 43
DATE : 06/05/18

EG-SWMENG-_____-____ #_____

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BAYLAND JOB NO. 4_3801

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE: 1 inch

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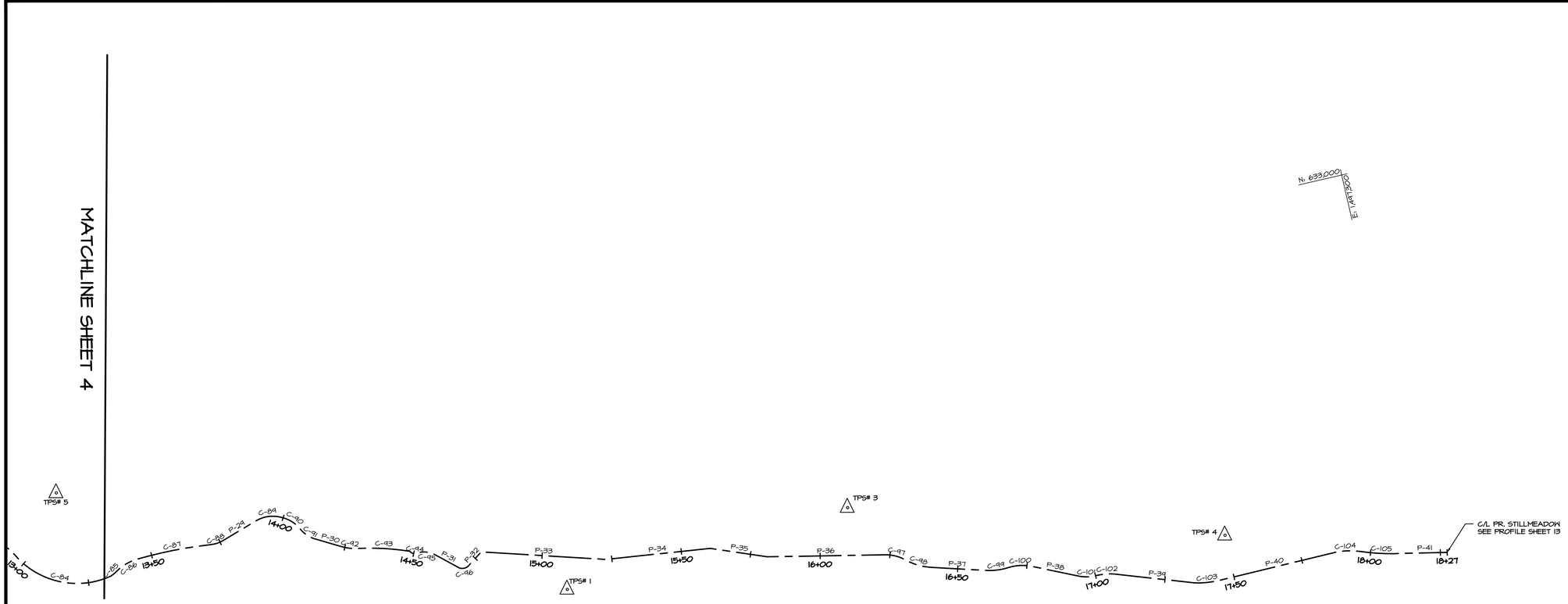

C/L PR. STILLMEADOW

POINT ID	STATION	NORTHING	EASTING	BEARING	DISTANCE (FT)
P-29	13+76.79	633,037.16	1,497,718.96	S72° 10' 49"W	12.30
P-30	14+14.75	633,044.59	1,497,686.58	N60° 50' 12"W	8.91
P-31	14+57.95	633,059.34	1,497,646.72	N48° 19' 58"W	8.99
P-32	14+71.86	633,065.64	1,497,635.60	S55° 45' 56"W	6.33
P-33	14+78.19	633,062.08	1,497,630.37	N73° 31' 06"W	44.62
P-34	15+22.81	633,074.74	1,497,587.58	N83° 02' 31"W	37.61
P-35	15+60.42	633,079.30	1,497,550.24	N68° 33' 45"W	20.58
P-36	15+81.01	633,086.82	1,497,531.08	N77° 59' 31"W	42.04
P-37	16+40.10	633,103.60	1,497,475.11	N73° 50' 24"W	19.28
P-38	16+76.98	633,111.55	1,497,439.34	N65° 15' 19"W	16.19
P-39	17+08.47	633,121.34	1,497,409.78	N70° 43' 36"W	27.12
P-40	17+44.93	633,131.45	1,497,374.94	S89° 23' 36"W	40.86
P-41	18+11.31	633,136.76	1,497,309.35	N78° 19' 47"W	16.14

C/L PR. STILLMEADOW

CURVE ID	STATION	RADIUS (FT)	LENGTH (FT)	CHORD BEARING	CHORD LENGTH (FT)
C-85	13+33.30	12.36	2.60	S63° 14' 38"W	2.59
C-86	13+35.89	16.92	8.83	S72° 26' 33"W	8.73
C-87	13+44.72	157.85	26.24	N88° 17' 29"W	26.21
C-88	13+70.96	11.40	5.83	S84° 31' 49"W	5.77
C-89	13+89.09	11.89	10.94	N85° 13' 31"W	10.56
C-90	14+00.03	11.51	7.22	N44° 03' 56"W	7.10
C-91	14+07.25	11.32	7.51	N45° 01' 15"W	7.37
C-92	14+23.67	16.51	5.93	N70° 12' 45"W	5.89
C-93	14+29.59	88.30	18.72	N73° 52' 51"W	18.68
C-94	14+48.31	2.71	4.03	N71° 37' 22"W	3.67
C-95	14+52.35	8.73	5.60	N67° 55' 14"W	5.50
C-96	14+66.93	3.09	4.92	N85° 47' 28"W	4.42
C-97	16+23.05	14.64	7.81	N63° 07' 24"W	7.72
C-98	16+30.86	21.87	9.24	N60° 18' 28"W	9.17
C-99	16+59.37	21.86	9.01	N83° 27' 10"W	8.95
C-100	16+68.39	16.88	8.59	N79° 24' 09"W	8.50
C-101	16+93.17	13.57	6.81	N76° 54' 31"W	6.74
C-102	16+99.98	20.81	8.49	N79° 50' 22"W	8.43
C-103	17+35.60	32.12	9.34	N82° 52' 48"W	9.30
C-104	17+85.80	26.30	10.51	N80° 38' 23"W	10.44
C-105	17+96.31	76.40	15.00	N74° 19' 53"W	14.98

60% DESIGN

GEOMETRIC LAYOUT

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE GEOMETRIC LAYOUT

EG-SWMENG-_____-____ #_____

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BAYLAND JOB NO. 4_3801

DRAWN BY: EM
DESIGNED BY: RP/JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 5 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE : 1 inch

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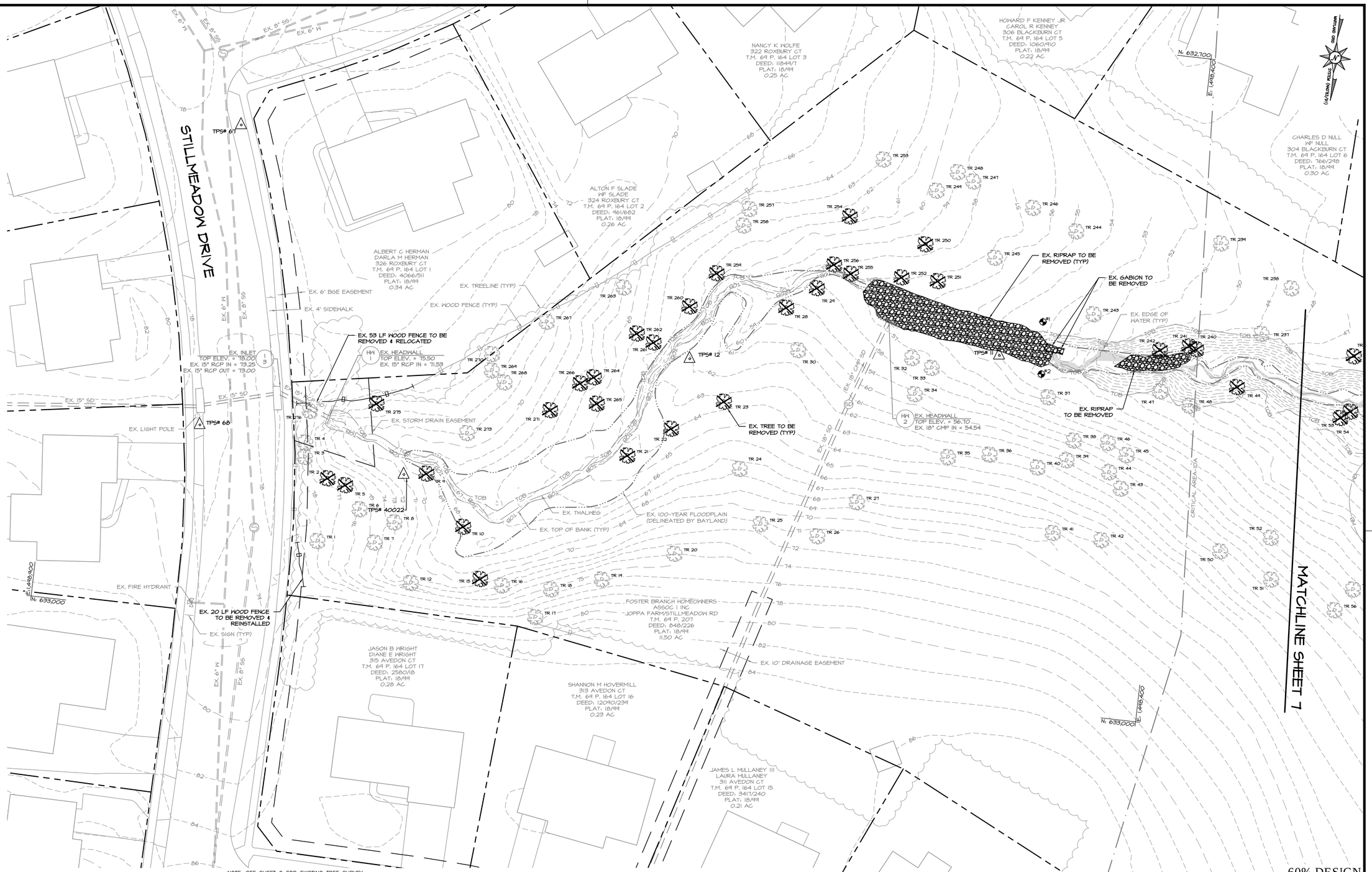

NOTE: SEE SHEET 9 FOR EXISTING TREE SURVEY

PLAN VIEW

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

60% DESIGN

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE EXISTING CONDITIONS

DRAWN BY: EM
DESIGNED BY: MKB
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 6 OF 43
DATE : 06/05/18

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ADC MAP :
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SCALE 1 inch

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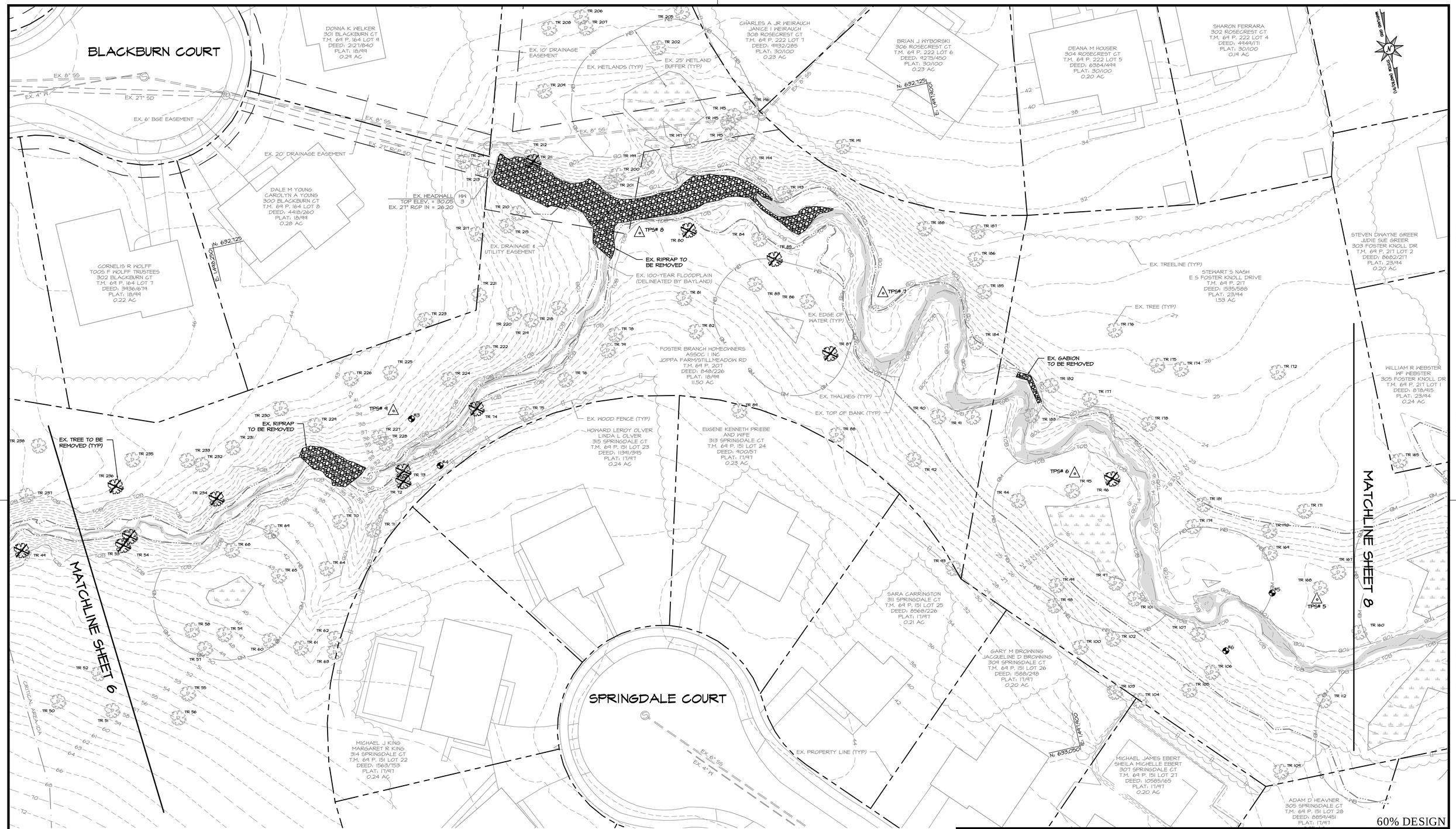

NOTE: SEE SHEET 9 FOR EXISTING TREE SURVEY

PLAN VIEW

SCALE: 1" = 20'

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SHEET 7 OF 43
DATE : 06/05/18

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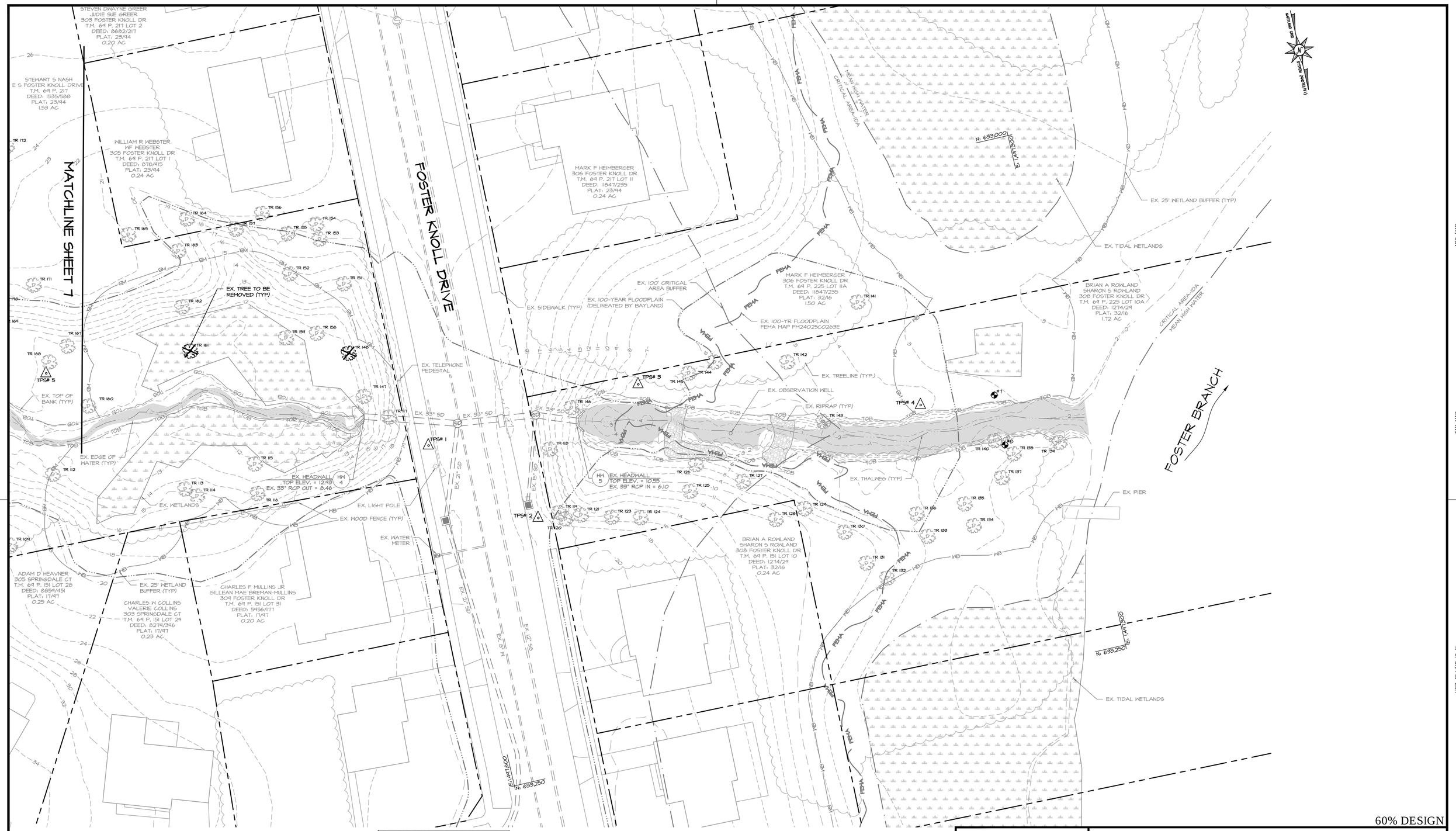

NOTE: SEE FLOODPLAIN EXHIBIT APPENDIX K FOR FULL EXTENTS OF EX. 100-YEAR FLOODPLAIN.

NOTE: SEE SHEET 9 FOR EXISTING TREE SURVEY

PLAN VIEW

SCALE: 1" = 20'

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STILLMEADOW DRIVE EXISTING CONDITIONS

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SHEET 8 OF 43
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HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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EXISTING TREE SURVEY

TREE NUMBER	DBH (INCHES)	LATIN NAME	COMMON NAME	CONDITION/NOTES
TR 1	23.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 2*	22.5	QUERCUS RUBRA	NORTHERN RED OAK	FAIR (VINES)
TR 3	16.2	PRUNUS SEROTINA	BLACK CHERRY	FAIR (VINES)
TR 4	14.0	PRUNUS SEROTINA	BLACK CHERRY	GOOD
TR 5*	28.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 6	17.6	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 7	19.5	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 8	23.5	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 9*	25.8	QUERCUS ALBA	WHITE OAK	GOOD
TR 10*	14.4	QUERCUS ALBA	WHITE OAK	POOR
TR 11	20.6	QUERCUS ALBA	WHITE OAK	GOOD
TR 12	15.1	ACER RUBRUM	RED MAPLE	GOOD
TR 13	17.8	ACER RUBRUM	RED MAPLE	GOOD
TR 14	14.3	ACER RUBRUM	RED MAPLE	GOOD
TR 15*	13.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 16	24.7	QUERCUS RUBRA	NORTHERN RED OAK	FAIR
TR 17	23.2	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 18	14.7	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 19	12.7	CARYA TOMENTOSA	MOCKERNUT HICKORY	GOOD
TR 20	13.6	QUERCUS ALBA	WHITE OAK	GOOD
TR 21*	20.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 22*	15.5	QUERCUS PRINUS	CHESTNUT OAK	FAIR (VINES)
TR 23*	22.0	QUERCUS ALBA	WHITE OAK	FAIR (VINES)
TR 24	25.2	QUERCUS ALBA	WHITE OAK	GOOD
TR 25	37.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 26	21.3	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 27	17.8	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 28*	27.1	LIRIODENDRON TULIPIFERA	TULIP POPLAR	FAIR (CAVITY)
TR 29*	28.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 30	23.8, 17.5	QUERCUS PRINUS	CHESTNUT OAK	MULTI-STEM, GOOD
TR 31	18.4	QUERCUS ALBA	WHITE OAK	FAIR
TR 32	26.5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 33	12.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 34	20.6	QUERCUS ALBA	WHITE OAK	GOOD
TR 35	32.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 36	23.9	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 37	12.9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 38	18.3	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 39	21.6	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 40	27.1	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 41	20.0	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 42	14.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 43	18.7	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 44	25.0	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 45	25.2	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 46	18.0	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 47	20.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 48	13.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 49*	19.3	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 50	17.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 51	24.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 52	25.6	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 53*	19.3	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 54*	13.1	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 55	22.0	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 56	16.7	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 57	20.1	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 58	12.4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 59	16.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 60	34.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 61	15.6	ACER RUBRUM	RED MAPLE	GOOD
TR 62	19.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 63	16.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 64	16.4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 65	26.8	QUERCUS ALBA	WHITE OAK	GOOD
TR 66	12.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	LEANING ACROSS STREAM, GOOD
TR 67	17.5	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	POOR
TR 68	17.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 69	14.7	QUERCUS ALBA	WHITE OAK	GOOD

* TREES TO BE REMOVED

TREE NUMBER	DBH (INCHES)	LATIN NAME	COMMON NAME	CONDITION/NOTES
TR 70	12.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 71	15.1	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 72*	16.7	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 73*	18.5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 74*	13.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 75	21.9	ACER RUBRUM	RED MAPLE	GOOD
TR 76	13.9	ACER RUBRUM	RED MAPLE	POOR
TR 77	21.9	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 78	21.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 79	14.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 80*	27.7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 81	35.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 82	20.5	QUERCUS ALBA	WHITE OAK	GOOD
TR 83	15.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 84	15.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 85*	18.7	NYSSA SYLVATICA	BLACK TUPELO	POOR
TR 86	22.9	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 87*	24.2	QUERCUS ALBA	WHITE OAK	GOOD
TR 88	26.3	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 89	14.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 90	31.4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 91	14.7	QUERCUS ALBA	WHITE OAK	GOOD
TR 92	20.5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 93	23.3	QUERCUS RUBRA	NORTHERN RED OAK	FAIR (VINES)
TR 94	21.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 95	27.5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 96*	26.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 97	21.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 98	19.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 99	22.4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 100	33.8	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 101	17.3	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 102	14.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 103	13.4	ACER RUBRUM	RED MAPLE	GOOD
TR 104	26.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 105	32.0	QUERCUS ALBA	WHITE OAK	GOOD
TR 106	18.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 107	14.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 108	14.8	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 109	20.8	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 110	31.0	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 111	16.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 112	21.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 113	19.9	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 114	19.1	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 115	20.3	ACER RUBRUM	RED MAPLE	GOOD
TR 116	37.4	QUERCUS ALBA	WHITE OAK	MULTI-STEM ABOVE BH, GOOD
TR 117	24.0	MORUS RUBRA	RED MULBERRY	GOOD
TR 118	16.1	ROBINIA PSEUDOACACIA	BLACK LOCUST	GOOD
TR 119	12.6	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 120	14.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 121	17.5	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 122	12.3	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 123	14.7	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 124	20.2	QUERCUS ALBA	WHITE OAK	GOOD
TR 125	22, 19.4	QUERCUS PRINUS	CHESTNUT OAK	MULTI-STEM, GOOD
TR 126	15.6	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 127	19.6	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 128	19.2	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 129	19.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 130	20.7	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 131	12.9	ILEX OPACA	AMERICAN HOLLY	GOOD
TR 132	27.1	QUERCUS PRINUS	CHESTNUT OAK	POOR
TR 133	12.6, 5.4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	MULTI-STEM, GOOD
TR 134	13.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 135	17.1	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 136	13.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 137	18.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR
TR 138	16.2	PRUNUS SEROTINA	BLACK CHERRY	POOR

TREE NUMBER	DBH (INCHES)	LATIN NAME	COMMON NAME	CONDITION/NOTES
TR 139	16.5	ROBINIA PSEUDOACACIA	BLACK LOCUST	FAIR
TR 140	15.9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 141	20.2	ACER RUBRUM	RED MAPLE	GOOD
TR 142	17.7	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 143	15.8	PRUNUS SEROTINA	BLACK CHERRY	GOOD
TR 144	13.1	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR (CAVITY)
TR 145	19.9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR (DEAD TOP)
TR 146	13.0	ROBINIA PSEUDOACACIA	BLACK LOCUST	GOOD
TR 147	13.6	ACER RUBRUM	RED MAPLE	GOOD
TR 148*	13.4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 149	14.8	PRUNUS SEROTINA	BLACK CHERRY	GOOD
TR 150	13.6	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 151	17.5	ROBINIA PSEUDOACACIA	BLACK LOCUST	GOOD
TR 152	16.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 153	16.7	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 154	12.4	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 155	24.0	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 156	17.8, 11.0	QUERCUS ALBA	WHITE OAK	MULTI-STEM, GOOD
TR 157	22.0	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 158	24.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 159	13.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 160	14.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 161*	13.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 162	13.7	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 163	27.5	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 164	13.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 165	12.8	QUERCUS ALBA	WHITE OAK	GOOD
TR 166	13.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 167	27.6	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR (CAVITY)
TR 168	26.3	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 169	25.8	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR (CAVITY)
TR 170	28.6	QUERCUS ALBA	WHITE OAK	GOOD
TR 171	34.2	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 172	16.6	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 173	12.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 174	21.0	QUERCUS ALBA	WHITE OAK	GOOD
TR 175	21.0	QUERCUS ALBA	WHITE OAK	GOOD
TR 176	17.0	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 177	12.3	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 178	23.1	QUERCUS ALBA	WHITE OAK	GOOD
TR 179	12.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 180	14.4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 181	37.0	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 182	18.6	QUERCUS ALBA	WHITE OAK	GOOD
TR 183	13.8	QUERCUS PRINUS	CHESTNUT OAK	LEANING ACROSS STREAM, GOOD
TR 184	28.3	QUERCUS ALBA	WHITE OAK	GOOD
TR 185	33.1	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 186	12.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 187	12.9	QUERCUS ALBA	WHITE OAK	GOOD
TR 188	18.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 189	16.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 190	13.4	PRUNUS SEROTINA	BLACK CHERRY	GOOD
TR 191	12.3	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 192	13.6	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	LEANING ACROSS STREAM, GOOD
TR 193	14.9	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 194	18.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 195	17.5, 10.3, 15.5, 14.0, 9.3	ACER RUBRUM	RED MAPLE	MULTI-STEM, GOOD
TR 196	14.0	ACER RUBRUM	RED MAPLE	GOOD
TR 197	15.4	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 198	16.6	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	GOOD
TR 199	15.1	PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	GOOD
TR 200	17.7	ACER RUBRUM	RED MAPLE	GOOD
TR 201	16.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 202	28.5	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 203	15.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 204	32.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 205	14.4	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 206	14.6	ACER RUBRUM	RED MAPLE	GOOD

TREE NUMBER	DBH (INCHES)	LATIN NAME	COMMON NAME	CONDITION/NOTES
TR 207	27.4	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 208	21.3	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 209	13.5	ACER RUBRUM	RED MAPLE	GOOD
TR 210	16.6	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 211*	12.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 212	12.2	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 213	13.0, 12.0	ROBINIA PSEUDOACACIA	BLACK LOCUST	MULTI-STEM, FAIR (VINES)
TR 214	14.5	PRUNUS SEROTINA	BLACK CHERRY	POOR (VINES)
TR 215	13.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	FAIR (VINES)
TR 216	16.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	FAIR (VINES)
TR 217	19.2	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 218	20.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	FAIR (VINES)
TR 219	22.6	QUERCUS RUBRA	NORTHERN RED OAK	GOOD
TR 220	21.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 221	16.4	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 222	15.9	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 223	16.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 224	24.2	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 225	14.4	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 226	21.8	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 227	13.7	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 228	22.1	QUERCUS ALBA	WHITE OAK	GOOD
TR 229	27.7	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 230	23.8	QUERCUS ALBA	WHITE OAK	GOOD
TR 231	15.4	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 232	14.8	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 233	19.0	NYSSA SYLVATICA	BLACK TUPELO	GOOD
TR 234*	13.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 235	15.0	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 236*	13.0	ACER RUBRUM	RED MAPLE	GOOD
TR 237	16.1	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 238	14.8	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 239	13.8	QUERCUS ALBA	WHITE OAK	FAIR
TR 240*	18.7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 241*	15.4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 242*	13.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 243	14.5	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 244	12.0	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 245	21.4	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 246	30.1	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 247	28.0	QUERCUS ALBA	WHITE OAK	GOOD
TR 248	14.5	LIQUIDAMBAR STYRACIFLUA	SWEET GUM	GOOD
TR 249	17.4	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 250*	20.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 251*	31.0	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 252*	23.9	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 253	30.8	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 254*	21.1	QUERCUS PRINUS	CHESTNUT OAK	FAIR
TR 255*	25.1	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 256*	16.3	LIRIODENDRON TULIPIFERA	TULIP POPLAR	FAIR
TR 257	12.1	ACER RUBRUM	RED MAPLE	FAIR (VINES)
TR 258	27.6	QUERCUS FALCATA	SOUTHERN RED OAK	GOOD
TR 259*	25.0	QUERCUS ALBA	WHITE OAK	GOOD
TR 260*	28.7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 261*	23.1	QUERCUS ALBA	WHITE OAK	GOOD
TR 262*	19.6	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 263	26.7	QUERCUS VELUTINA	BLACK OAK	FAIR (VINES)
TR 264*	25.7	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 265*	12.4	QUERCUS VELUTINA	BLACK OAK	FAIR (VINES)
TR 266*	31.7	QUERCUS VELUTINA	BLACK OAK	FAIR (VINES)
TR 267	41.0	QUERCUS FALCATA	SOUTHERN RED OAK	FAIR (VINES)
TR 268	19.2	QUERCUS VELUTINA	BLACK OAK	GOOD
TR 269	33.5	LIRIODENDRON TULIPIFERA	TULIP POPLAR	GOOD
TR 270	13.9	QUERCUS ALBA	WHITE OAK	FAIR (VINES)
TR 271*	12.8, 10.7	QUERCUS PRINUS	CHESTNUT OAK	MULTI-STEM ,FAIR (VINES)
TR 272	15.5	QUERCUS PRINUS	CHESTNUT OAK	GOOD
TR 273	25.8	QUERCUS VELUTINA	BLACK OAK	FAIR (VINES)
TR 274	14.8	LIRIODENDRON TULIPIFERA	TULIP POPLAR	FAIR (CAVITY)
TR 275*	18.0	MORUS RUBRA	RED MULBERRY	FAIR (VINES)
TR 276	19.9	PINUS STROBUS	EASTERN WHITE PINE	FAIR (VINES)

60% DESIGN

REVISIONS

EG-SWMENG-_____-____ #_____

CLEAR CREEKS CONSULTING
1317 Knopp Road, Jarrettsville, Maryland 21080 (410) 692-2164

BayLand Consultants & Designers, Inc.
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www.baylandinc.com
BAYLAND JOB NO. 4_3801

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
SMSR EXISTING TREE TABLES

DRAWN BY: JP
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : AS SHOWN
SHEET 9 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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NOTES:

1. CONTRACTOR SHALL REUSE EXISTING CL I RIPRAP FOR PROPOSED STRUCTURES WITHIN THE PROJECT LIMITS WHEN PERMITTED, AS DOCUMENTED IN THE SPECIFICATIONS.
2. ROCKS SHOWN ON PLAN AND PROFILE VIEW ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES. SEE SPSC ROCK SIZING TABLE SHEET 36 AND STONE SIZING TABLE SHEET 38 FOR ACTUAL ROCK DIMENSIONS.

BMP ANALYSIS

DRAINAGE AREA:	7.35 ACRES
IMPERVIOUS AREA:	2.51 ACRES (34.1%)
LOCATION:	HARFORD COUNTY, MD
TARGET WQv STORAGE:	0.22 AC-FT
TARGET Cpv STORAGE:	0.38 AC-FT
TOTAL TARGET TREATMENT:	0.60 AC-FT
TOTAL TREATMENT PROVIDED:	0.61 AC-FT
RAINFALL DEPTH TREATED:	2.60 INCHES
IMPERVIOUS AREA TREATED:	3.51 ACRES
OUTFALL STABILIZATION:	400 LF
IMPERVIOUS ACRE CREDIT:	2.00 ACRES
TOTAL IMPERVIOUS AREA TREATED:	5.51 ACRES

SITE PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

EG-SWMENG-_____-____ #_____

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www.baylandinc.com

BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE SITE PLAN

DRAWN BY: EM
DESIGNED BY: MKB
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 10 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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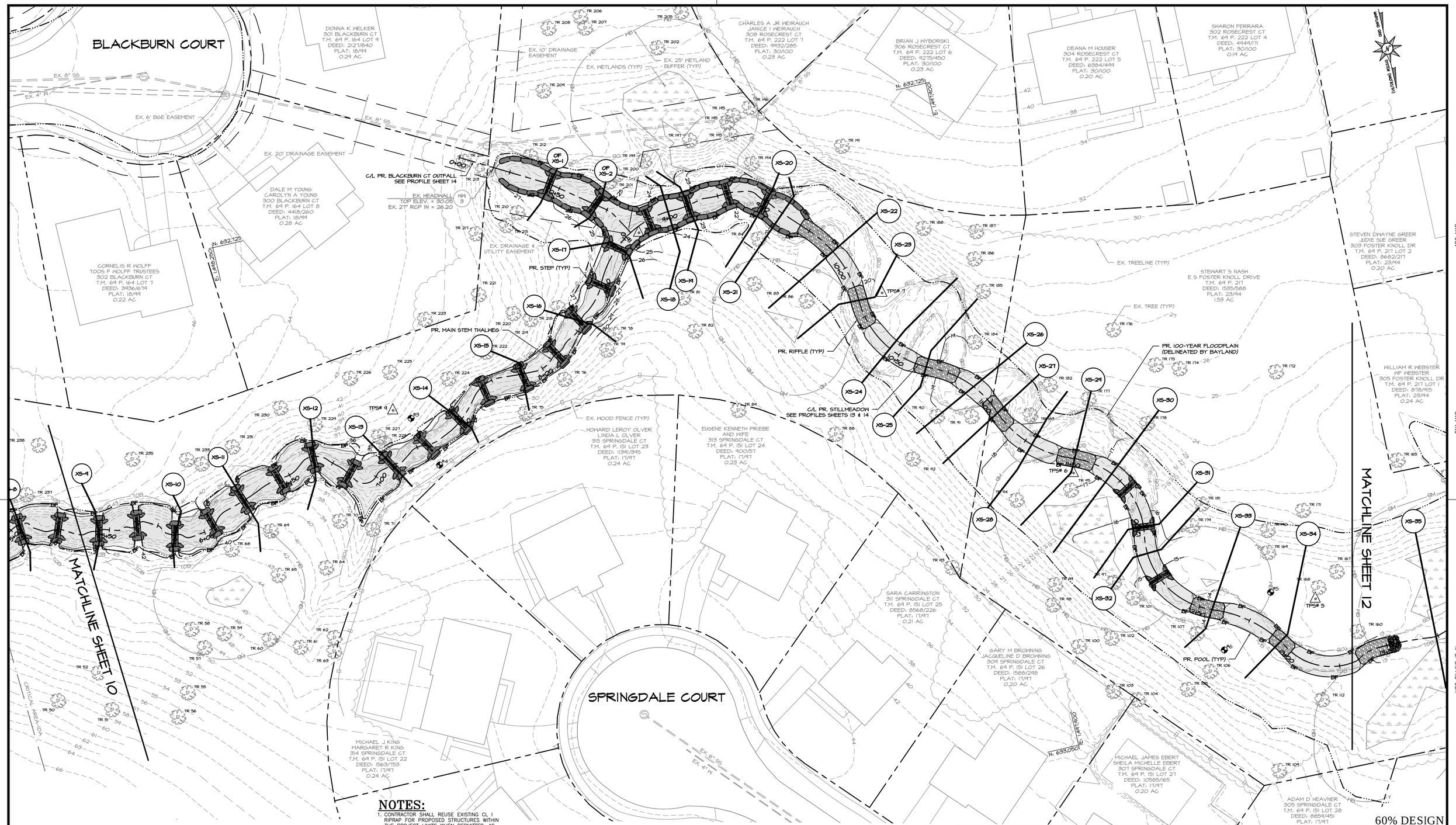

60% DESIGN

NOTES:

1. CONTRACTOR SHALL REUSE EXISTING CL I RIPRAP FOR PROPOSED STRUCTURES WITHIN THE PROJECT LIMITS WHEN PERMITTED, AS DOCUMENTED IN THE SPECIFICATIONS.
2. ROCKS SHOWN ON PLAN AND PROFILE VIEW ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES. SEE SPSC ROCK SIZING TABLE SHEET 36 AND STONE SIZING TABLE SHEET 38 FOR ACTUAL ROCK DIMENSIONS.

SITE PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

EG-SWMENG-_____-____ #_____

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE SITE PLAN

DRAWN BY: JP
DESIGNED BY: RP/JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 11 OF 43
DATE : 06/05/18

CLEAR CREEKS CONSULTING
1317 Knopp Road, Jarrettsville, Maryland 21084
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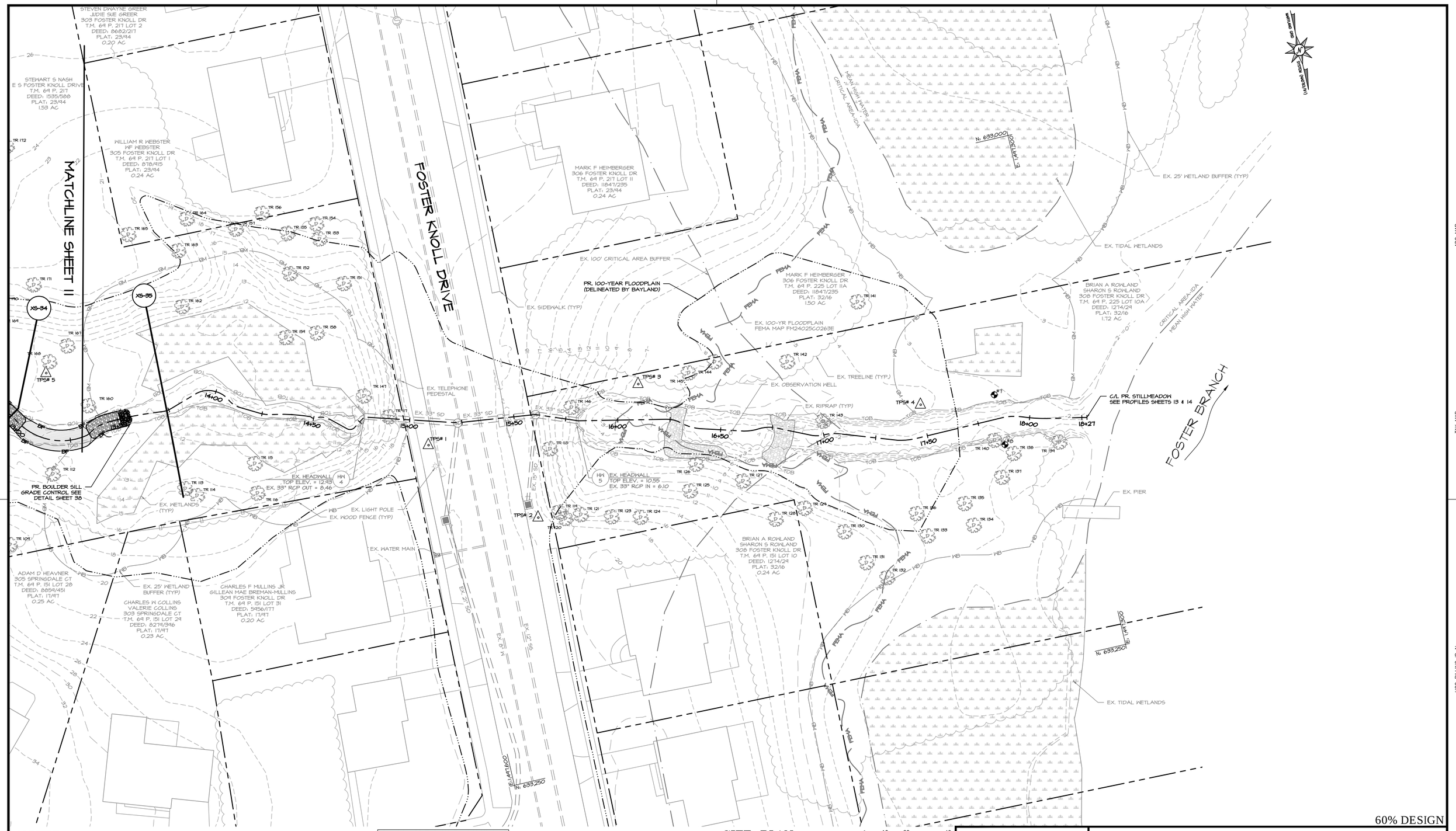
Hanover, Maryland 21076
Phone: (410) 694-9401
Fax: (410) 694-9105
www.baylandinc.com

BAYLAND JOB NO. 4_3801

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE : 1 inch

Z:\4_3801_STILLMEADOW_STREAM_&_OUTFALL\STILLMEADOW_SR\CAD Files\Sheet Files\4_3801_SMDBC_SP05.dwg



NOTE: SEE FLOODPLAIN EXHIBIT APPENDIX K FOR FULL EXTENTS OF EX. 100-YEAR FLOODPLAIN.

NOTES:

1. CONTRACTOR SHALL REUSE EXISTING CL I RIPRAP FOR PROPOSED STRUCTURES WITHIN THE PROJECT LIMITS WHEN PERMITTED, AS DOCUMENTED IN THE SPECIFICATIONS.
2. ROCKS SHOWN ON PLAN AND PROFILE VIEW ARE SYMBOLIC AND DO NOT REPRESENT INDIVIDUAL STONES. SEE SPSC ROCK SIZING TABLE SHEET 36 AND STONE SIZING TABLE SHEET 38 FOR ACTUAL ROCK DIMENSIONS.

SITE PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

60% DESIGN

EG-SWMENG-_____-____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE SITE PLAN

DRAWN BY: JP
DESIGNED BY: RP/JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 12 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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STILLMEADOW DRIVE
SEQUENCE OF CONSTRUCTION

	DAYS
STILLMEADOW DRIVE GENERAL	
1. HOLD A PRE-CONSTRUCTION MEETING WITH CONTRACTORS, INSPECTORS & ENGINEERS AS NEEDED.	1 DAY
2. 48 HOURS PRIOR TO THE START OF CONSTRUCTION, NOTIFY HARFORD COUNTY S/C INSPECTOR AND MDE, AS REQUIRED, PER STATE PERMITS.	
3. THE CONTRACTOR SHALL CALL "MISS UTILITY" (1-800-257-7777) A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.	
PHASE 1 – CONSTRUCTION ACCESS AND EROSION AND SEDIMENT CONTROL	
1. CLEAR AND GRUB AS NECESSARY TO ESTABLISH LIMITS OF DISTURBANCE AND INSTALL PERIMETER HIGH VISIBILITY FENCE.	2 DAYS
2. CLEAR AND GRUB AS NECESSARY TO INSTALL STILLMEADOW DRIVE STABILIZED CONSTRUCTION ENTRANCE, HAUL ROAD, TEMPORARY STOCKPILE AREAS, AND ASSOCIATED SEDIMENT AND EROSION CONTROL DEVICES.	1 DAY
3. INSTALL STILLMEADOW DRIVE STABILIZED CONSTRUCTION ENTRANCE AND TEMPORARY STOCKPILE AREA TO FACILITATE INSTALLATION OF THE HAUL ROAD. INSTALL SUPER SILT FENCE, TEMPORARY STONE OUTLET STRUCTURE, AND TREE PROTECTION FOR THE PHASE 1 PROPOSED GRADING.	1 DAY
4. GRADE OUTFALL POOL AND INSTALL THE SANDBAG DIKE, CLEARWATER DIVERSION PIPE, AND HAUL ROAD.	2 DAYS
5. REMOVE AND STOCKPILE EXISTING CLASS I RIPRAP AND MASS GRADE THE DOWNSTREAM SLOPES TO INSTALL THE HAUL ROAD AND CLEARWATER DIVERSION PIPE. STOCKPILE SUITABLE MATERIAL FOR PROPOSED DOWNSTREAM EARTHWORK. STABILIZE ANY DISTURBED EARTH. REMOVE SUPER SILT FENCE AND THE TEMPORARY STONE OUTLET STRUCTURE.	5 DAYS
6. CLEAR AND GRUB AS NECESSARY TO INSTALL THE FOSTER KNOLL DRIVE STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY CONSTRUCTION ACCESS ROAD, TEMPORARY STOCKPILE AREAS, TEMPORARY STREAM CROSSINGS, AND ASSOCIATED SEDIMENT AND EROSION CONTROL DEVICES.	2 DAYS
7. INSTALL FOSTER KNOLL DRIVE STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY CONSTRUCTION ACCESS ROAD, TEMPORARY STREAM CROSSINGS, TEMPORARY STOCKPILE AREAS, TREE PROTECTIONS AND ASSOCIATED SEDIMENT AND EROSION CONTROL DEVICES.	
PHASE 2 – RIFFLE POOL SYSTEM AND LOG-BOULDER STEP POOL SYSTEM	
1. CLEAR AND GRUB TO FACILITATE CHANNEL CONSTRUCTION AND INSTALLATION OF ALL PHASE 2 SEDIMENT AND EROSION CONTROL DEVICES.	1 DAY
2. INSTALL ALL PHASE 2 SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION DRAWINGS.	1 DAY
3. START PUMP DIVERSION OPERATION IN ORDER TO DEWATER THE PHASE 2 WORK AREA.	
4. STARTING AT THE DOWNSTREAM END OF PHASE 2 AND WORKING UPSTREAM ALONG THE STREAM	25 DAYS
a. GRADE THE BANKS, AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	
b. INSTALL IN-STREAM STRUCTURES, AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	
7. SHUT DOWN AND REMOVE THE PHASE 2 PUMP DIVERSION AND DOWNSTREAM SANDBAG DIKE.	1 DAY
8. RAKE ALL DISTURBED AREAS ALONG BANKS, APPLY PERMANENT SEED MIX AND, FERTILIZER. INSTALL COIR FIBER BLANKETS ALONG BANKS, AS OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	2 DAYS
9. DISK AND RAKE ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE THE IMMEDIATE CONSTRUCTION AREA.	1 DAY
10. APPLY PERMANENT SEED MIX AND FERTILIZER FOR ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE THE IMMEDIATE CONSTRUCTION AREA.	1 DAY
PHASE 3 – LOG-BOULDER STEP POOL SYSTEM	
1. CLEAR AND GRUB TO FACILITATE CHANNEL CONSTRUCTION AND INSTALLATION OF ALL PHASE 3 SEDIMENT AND EROSION CONTROL DEVICES.	1 DAY
2. INSTALL ALL PHASE 3 SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION DRAWINGS.	1 DAY
3. START PUMP DIVERSION OPERATION IN ORDER TO DEWATER THE PHASE 3 WORK AREA.	
4. STARTING AT THE DOWNSTREAM END OF PHASE 3 AND WORKING UPSTREAM ALONG THE STREAM	22 DAYS
a. GRADE THE BANKS, AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	
b. INSTALL IN-STREAM STRUCTURES, AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	
7. SHUT DOWN AND REMOVE THE PHASE 3 PUMP DIVERSION AND PHASE 3 SANDBAG DIKES.	1 DAY
8. RAKE ALL DISTURBED AREAS ALONG BANKS, APPLY PERMANENT SEED MIX AND, FERTILIZER. INSTALL COIR FIBER BLANKETS ALONG BANKS, AS OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	2 DAYS
9. DISK AND RAKE ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE THE IMMEDIATE CONSTRUCTION AREA.	1 DAYS
10. APPLY PERMANENT SEED MIX AND FERTILIZER FOR ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE THE IMMEDIATE CONSTRUCTION AREA.	1 DAYS
PHASE 4 – STEP POOL STORM CONVEYANCE (SPSC)	
1. CLEAR AND GRUB TO FACILITATE SPSC INSTALLATION OF SEDIMENT AND EROSION CONTROL DEVICES.	1 DAY
2. INSTALL ALL SEDIMENT AND EROSION CONTROL DEVICES AS SHOWN ON THE CONSTRUCTION DRAWINGS.	1 DAY
3. STARTING AT THE DOWNSTREAM END OF PHASE 4 AND WORKING UPSTREAM TOWARDS THE EXISTING STILLMEADOW DRIVE	15 DAYS
a. GRADE AND INSTALL THE SPSC'S AND CASCADES AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	
b. RAKE ALL DISTURBED AREAS, APPLY PERMANENT SEED MIX AND FERTILIZER, AS OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	
5. DISK AND RAKE ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE OF THE IMMEDIATE CONSTRUCTION AREA.	1 DAY
6. APPLY PERMANENT SEED MIX AND FERTILIZER FOR ALL DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE OF THE IMMEDIATE CONSTRUCTION AREA.	1 DAY
7. INSTALL ALL PLANT MATERIAL, AS SHOWN IN THE PLANTING PLANS AND OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	1 DAY
PHASE 5 – GENERAL	
1. REMOVE REMAINING TEMPORARY STOCKPILE AREAS, CONSTRUCTION ACCESS ROADS, TEMPORARY BRIDGE CROSSING, EROSION AND SEDIMENT CONTROL DEVICES, STABILIZED CONSTRUCTION ENTRANCE, ORANGE SAFETY FENCE ALONG LIMITS OF DISTURBANCE (LOD), AND TREE PROTECTIONS.	1 DAY
2. DISK AND RAKE ALL REMAINING DISTURBED AREAS WITHIN THE FLOODPLAIN AND SLOPES OUTSIDE OF IMMEDIATE CONSTRUCTION AREA.	1 DAY
3. APPLY PERMANENT SEED MIX AND FERTILIZER FOR ALL REMAINING DISTURBED AREAS WITHIN THE FLOODPLAIN AND OUTSIDE OF THE IMMEDIATE CONSTRUCTION AREA.	1 DAY
4. INSTALL REMAINING WOODY PLANT MATERIAL, AS SHOWN IN THE PLANTING PLANS AND OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	2 DAYS
TOTAL	102 DAYS

NOTES:
1. THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY INSTALLATION OF SEDIMENT CONTROLS AND GENERAL INSTRUCTION TO THE CONTRACTOR. THE SEQUENCE MAY BE ADJUSTED IN THE FIELD WITH THE SEDIMENT CONTROL INSPECTOR'S PERMISSION TO ACCOMMODATE CONTRACTOR'S MEANS AND METHODS.
2. CONTRACTOR SHALL ONLY REMOVE EROSION AND SEDIMENT CONTROL DEVICES WITH SEDIMENT CONTROL INSPECTOR'S PERMISSION.

SEDIMENT CONTROL LEGEND

LIMIT OF DISTURBANCE	LOD
LIMIT OF DISTURBANCE/ HIGH VISIBILITY FENCE	LOD HVF
HIGH VISIBILITY FENCE	HVF
SUPER SILT FENCE	SSF
DIVERSION/DEWATERING PIPE	
SANDBAG DIKE	
TEMPORARY STONE OUTFALL STRUCTURE	
STABILIZED CONSTRUCTION ENTRANCE	SCE
CONSTRUCTION ACCESS ROAD	
HAUL ROAD	

SUMMARY OF ESC QUANTITIES

PHASE 1

STABILIZED CONSTRUCTION ENTRANCE:	2	EA
CONSTRUCTION ACCESS ROAD:	785	LF
HAUL ROAD:	410	LF
HIGH VISIBILITY FENCE:	3050	LF
DIVERSION PIPE:	350	LF
SAND BAG DIKE:	60	LF
SUPER SILT FENCE:	70	LF
FILTER LOG:	125	LF
WETLAND PROTECTION MATTING:	130	LF
TEMPORARY STONE OUTLET STRUCTURE:	1	EA

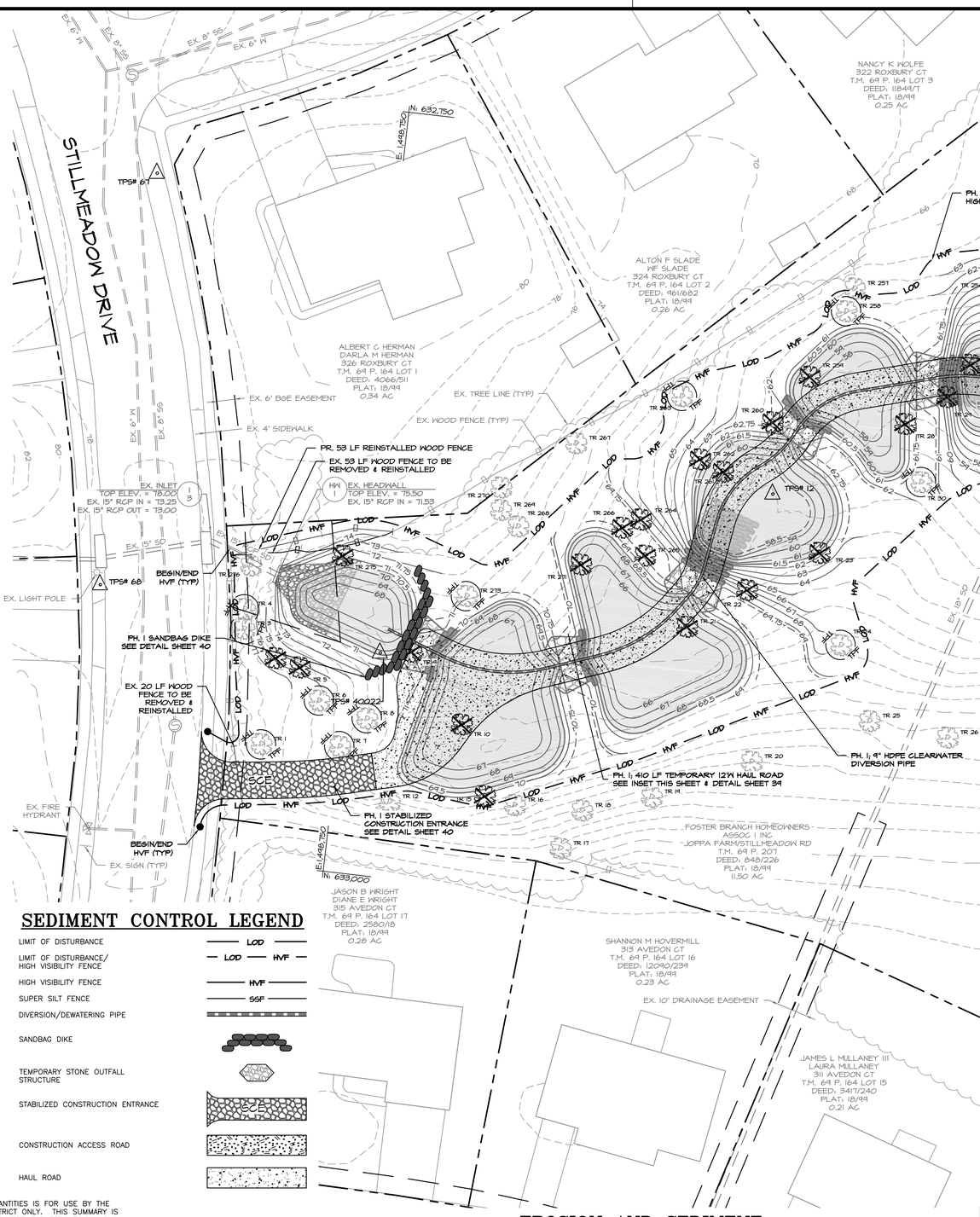
PHASE 3

DIVERSION PIPE:	540	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SUMP PIT:	1	EA
SAND BAG DIKE:	50	LF
MOUNTABLE BERM:	2	EA

PHASE 4

DIVERSION PIPE:	30	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SUMP PIT:	1	EA
SAND BAG DIKE:	25	LF

NOTES:
1. THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE HARFORD COUNTY SOIL CONSERVATION DISTRICT ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES.
2. STOCKPILE HEIGHT CANNOT EXCEED 15'. STOCKPILE MAX SLOPE CANNOT EXCEED 2:1. IF ADDITIONAL STOCKPILE AREAS ARE NEEDED WITHIN THE LOD, THE CONTRACTOR MUST GET APPROVAL FROM THE INSPECTOR. ADDITIONAL STOCKPILES MUST BE WRAPPED WITH SILT FENCE.
3. NO DISTURBED AREA SHALL BE LEFT OVERNIGHT. STABILIZE ON DAILY BASIS.
4. MATTING SHOWN SHALL BE INSTALLED OVER EX. WETLANDS WHERE CONSTRUCTION ACCESS IS REQUIRED.
5. FOR EROSION AND SEDIMENT CONTROL DETAILS, SEE SHEETS 39 & 40.

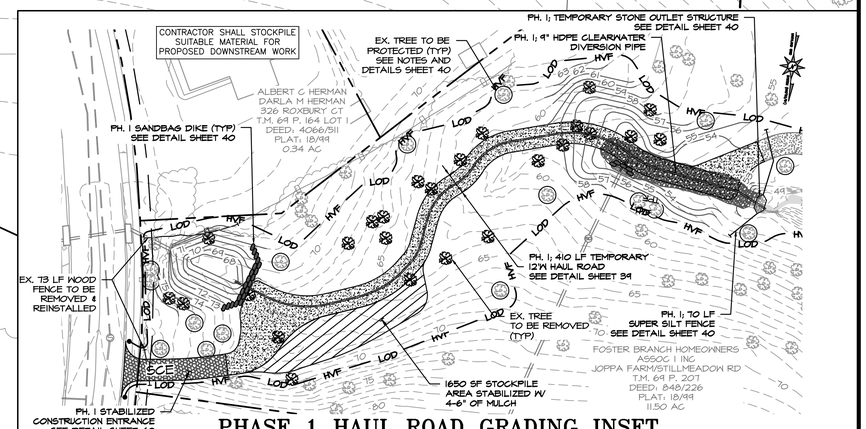


EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET



PHASE 1 HAUL ROAD GRADING INSET

SCALE: 1" = 40'

60% DESIGN

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY: BF/EM	CONTRACT NO : 16-153
DESIGNED BY: MKB	SCALE : 1" = 20'
REVIEWED BY: CJS	SHEET 23 OF 43
	DATE : 06/05/18

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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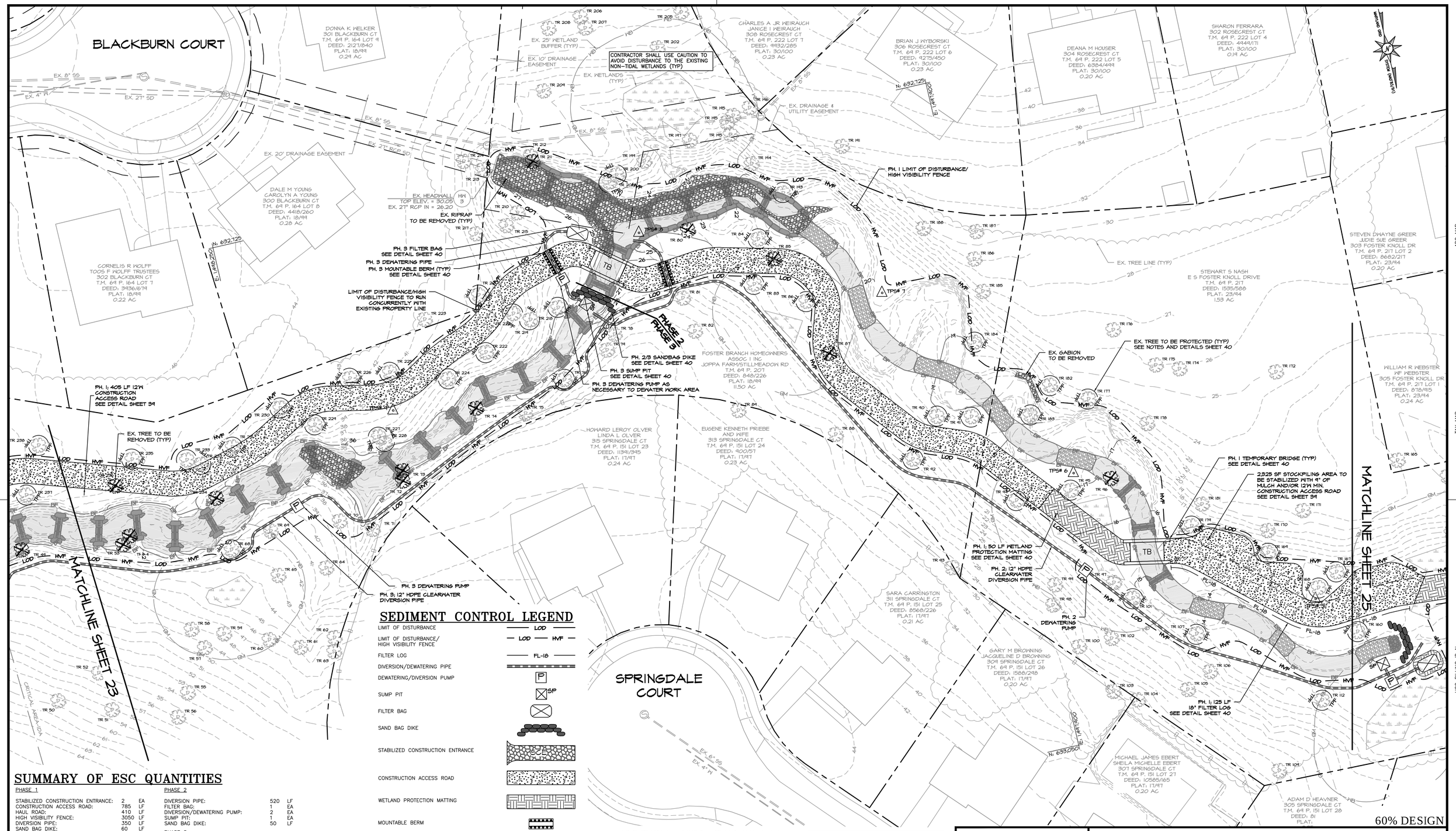

SEDIMENT CONTROL LEGEND

LIMIT OF DISTURBANCE	LOD
LIMIT OF DISTURBANCE/ HIGH VISIBILITY FENCE	LOD HVF
FILTER LOG	FL-18
DIVERSION/DEWATERING PIPE	
DEWATERING/DIVERSION PUMP	P
SUMP PIT	SP
FILTER BAG	
SAND BAG DIKE	
STABILIZED CONSTRUCTION ENTRANCE	SCE
CONSTRUCTION ACCESS ROAD	
WETLAND PROTECTION MATTING	
MOUNTABLE BERM	
TEMPORARY CONSTRUCTION BRIDGE	TB

SUMMARY OF ESC QUANTITIES

PHASE 1

STABILIZED CONSTRUCTION ENTRANCE:	2	EA
CONSTRUCTION ACCESS ROAD:	785	LF
HAUL ROAD:	410	LF
HIGH VISIBILITY FENCE:	3050	LF
DIVERSION PIPE:	350	LF
SAND BAG DIKE:	60	LF
SUPER SILT FENCE:	70	LF
FILTER LOG:	125	LF
WETLAND PROTECTION MATTING:	130	LF
TEMPORARY STONE OUTLET STRUCTURE:	1	EA

PHASE 2

DIVERSION PIPE:	520	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SUMP PIT:	1	EA
SAND BAG DIKE:	50	LF

PHASE 3

DIVERSION PIPE:	540	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SUMP PIT:	1	EA
SAND BAG DIKE:	50	LF
MOUNTABLE BERM:	2	EA

NOTES:

1. THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE HARFORD COUNTY SOIL CONSERVATION DISTRICT ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES.
2. STOCKPILE HEIGHT CANNOT EXCEED 15'. STOCKPILE MAX SLOPE CANNOT EXCEED 2:1. IF ADDITIONAL STOCKPILE AREAS ARE NEEDED WITHIN THE LOD, THE CONTRACTOR MUST GET APPROVAL FROM THE INSPECTOR. ADDITIONAL STOCKPILES MUST BE WRAPPED WITH SILT FENCE.
3. NO DISTURBED AREA SHALL BE LEFT OVERNIGHT. STABILIZE ON DAILY BASIS.
4. MATTING SHOWN SHALL BE INSTALLED OVER EX. WETLANDS WHERE CONSTRUCTION ACCESS IS REQUIRED.
5. FOR EROSION AND SEDIMENT CONTROL DETAILS, SEE SHEETS 39 & 40.

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

SEE SHEET 23 FOR SEQUENCE OF CONSTRUCTION

0 10 20 40

1 INCH = 20 FEET

60% DESIGN

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY:	BF/EM	CONTRACT NO :	16-153
DESIGNED BY:	RP/JP	SCALE :	1" = 20'
REVIEWED BY:	CJS	SHEET	24 OF 43
		DATE :	06/05/18

ADC MAP :

TAX MAP :

HCG BILLING ID No.:

HCG DWG ID No.:

SCALE : 1 inch

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SEE SHEET 23 FOR SEQUENCE OF CONSTRUCTION

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

SUMMARY OF ESC QUANTITIES

PHASE 1

STABILIZED CONSTRUCTION ENTRANCE:	2	EA
CONSTRUCTION ACCESS ROAD:	785	LF
HAUL ROAD:	410	LF
HIGH VISIBILITY FENCE:	3050	LF
DIVERSION PIPE:	350	LF
SAND BAG DIKE:	60	LF
SUPER SILT FENCE:	70	LF
FILTER LOG:	125	LF
WETLAND PROTECTION MATTING:	130	LF
TEMPORARY STONE OUTLET STRUCTURE:	1	EA

PHASE 2

DIVERSION PIPE:	520	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SUMP PIT:	1	EA
SAND BAG DIKE:	50	LF

NOTES:

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5. FOR EROSION AND SEDIMENT CONTROL DETAILS, SEE SHEETS 39 & 40.

SEDIMENT CONTROL LEGEND

LIMIT OF DISTURBANCE	LOD
LIMIT OF DISTURBANCE/ HIGH VISIBILITY FENCE	LOD HVF
HIGH VISIBILITY FENCE	HVF
FILTER LOG	FL-18
DIVERSION/DEWATERING PIPE	
DEWATERING/DIVERSION PUMP	P
SUMP PIT	SP
FILTER BAG	
SAND BAG DIKE	
STABILIZED CONSTRUCTION ENTRANCE	
CONSTRUCTION ACCESS ROAD	
WETLAND PROTECTION MATTING	
MOUNTABLE BERM	

60% DESIGN

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY: BF/EM
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 25 OF 43
DATE : 06/05/18

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

ADC MAP :
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HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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HARFORD COUNTY ADC MAP COORDINATES:
MAP 28 GRID F-6, F-7, G-6, G-7

MAP COPYRIGHT KAPPA MAP GROUP LLC, (800) 829-6277
USED WITH PERMISSION, PERMITTED USE NUMBER 10222014

LOCATION MAP

SCALE: 1"=2000'

GENERAL NOTES

1. THE PURPOSE OF THIS LANDSCAPE & BUFFER MANAGEMENT PLAN IS AS FOLLOWS:
   A. TO REFOREST TO THE MAXIMUM EXTENT PRACTICABLE ALL DISTRUBED AREAS OUTSIDE OF THE CRITICAL AREA
   B. TO COMPLY WITH THE BUFFER MITIGATION REQUIREMENTS WITHIN THE CRITICAL AREA.
2. PROJECT AREA WITHIN THE CRITICAL AREA DESIGNATION IS INTENSE DEVELOPMENT AREA (IDA).
3. ACCESS TO THE SITE IS PROVIDED VIA STILLMEADOW DRIVE AND FOSTER KNOLL DRIVE.
4. ALL PLANT MATERIALS SHALL BE NURSERY GROWN AND SHALL CONFORM TO AMERICAN ASSOCIATION OF NURSERYMEN, INC. STANDARDS.
5. CONTRACTOR IS RESPONSIBLE TO VERIFY ALL UTILITY LOCATIONS PRIOR TO PLANTING MATERIAL. IF CONFLICTS ARISE, BAYLAND, INC. MUST BE NOTIFIED PRIOR TO ANY GROUND BREAKING.
6. PERMANENT SEEDING SHALL BE COMPLETED FEBRUARY 15 AND APRIL 30. SEEDING MAY OCCUR DURING OTHER TIMES OF THE YEAR BUT MAY REQUIRE SUPPLEMENTAL WATERING AND SEEDING TO INSURE ADEQUATE COVERAGE.
7. CONTAINER PLANTINGS WILL BE ACCOMPLISHED BETWEEN FEBRUARY 15 AND APRIL 30 (SPRING PLANTING SEASON) OR OCTOBER 1ST AND DECEMBER 15TH (FALL PLANTING SEASON).
8. TREES & SHRUBS PLANTING MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST FREE TOPSOIL PLANTING MIXTURES ARE USED.
9. NO CONTAINER-GROWN MATERIAL SHALL BE PLANTED IF NOT ACCLIMATED TO THE CURRENT WEATHER CONDITIONS. CONTRACTOR IS RESPONSIBLE FOR GENERAL MAINTENANCE INCLUDING WATERING.
10. LIVE STAKES SHALL BE INSTALLED DURING A PERIOD OF DORMANCY.
11. ALL PLANTING MATERIAL AND PLANTING METHODS SHALL CONFORM TO CONSTRUCTION SPECIFICATIONS AND DETAILS.
12. DISTURBED AREAS WITHIN THE LIMITS OF DISTURBANCE SHALL BE STABILIZED PER THE DETAILS AND SPECIFICATIONS FOR VEGETATIVE ESTABLISHMENT (SHEET 9).

SEQUENCE OF IMPLEMENTATION

1. CONTRACTOR SHALL ARRANGE PRE-PLANTING MEETINGS WITH COUNTY PLANNING & ZONING DEPARTMENT STAFF AT LEAST 5 DAYS IN ADVANCE OF DISTURBANCES OF ANY LAND ON SITE.
2. INSTALL PLANTS IN ACCORDANCE WITH DETAILS AND SPECIFICATIONS.
3. MONITOR THE PLANTINGS OFTEN TO REDUCE PLANT STRESS SUCH AS WATER DEFICIENCY, NUTRIENT DEFICIENCY, INVASIVE SPECIES COMPETITION, PEST DAMAGE, AND DISEASE.
4. THE CONTRACTOR SHALL OBSERVE MINIMAL SITE PREPARATION/DISTRUBANCE, PROTECTION OF PLANTS AFTER DELIVERY UNTIL THEY ARE PLANTED, PROPER DIGGING AND HANDLING OF PLANT MATERIALS, PROPER EXCAVATION OF PLANTING AREAS, PLANTING OPERATIONS, STABILIZATION OF THE PLANTING AREAS WITH MULCH AFTER PLANTING, STAKING AND PRUNING, AND INSTALLATION OF BUFFER PROTECTION SIGNAGE.

MAINTENANCE PLAN

1. WATER ONLY AS NECESSARY BUT AT LEAST ONCE EVERY 10 DAYS WITHOUT RAINFALL FROM MAY THROUGH SEPTEMBER, DEPENDING ON SOIL MOISTURE LEVELS. MONITOR TO ENSURE THAT OVER-WATERING DOES NOT OCCUR.
2. USE LOW NITROGEN AND SLOW RELEASE FERTILIZERS AND APPLY IN LATE FALL OR EARLY SPRING.
3. INSPECTIONS FOR SURVIVAL SHALL BE PERFORMED ANNUALLY AND PLANTS REPLACED AS NEEDED IN THE NEXT APPROPRIATE PLANTING SEASON. THE GOAL IS THAT AT THE END OF THE 2-YEAR OR 5-YEAR PERIOD, THE SURVIVAL REQUIREMENTS CAN BE MET. IF THE COUNTY DETERMINES THAT SURVIVAL IS NOT ADEQUATE, THE MONITORING PERIOD MAY BE EXTENDED AND ADDITIONAL INSPECTIONS MAY BE REQUIRED AT THE DISCRETION OF THE COUNTY.

LONG TERM PROTECTION PLAN

1. THE PLANTINGS WILL BE PLANTED AND A BOND WILL BE POSTED COVERING THE COST OF SURVIVAL GUARANTEE PRIOR TO STARTING CONSTRUCTION.
2. AT THE END OF THE 2-YEAR MONITORING PERIOD FOR PLANTED LANDSCAPE STOCK, 100% OF THE PLANTS ARE REQUIRED TO SURVIVE PER COMAR 27.01.09.01-2J. ANY LANDSCAPE STOCK PLANT OR PLANTS THAT DID NOT SURVIVE SHALL BE REPLACED.

BUFFER MANAGEMENT & PROTECTION STANDARDS

1. REMOVAL OF VEGETATION WITHIN THE BUFFER IS PROHIBITED. CUTTING AND CLEARING OF NATURAL VEGETATION WITHIN THE BUFFER SHALL BE AS SHOWN ON THIS BUFFER MANAGEMENT PLAN AS SUBMITTED AND/OR AS SUBSEQUENTLY AMENDED AND APPROVED BY THE COUNTY PLANNING AND ZONING OFFICE. ADDITIONAL INFORMATION CAN BE OBTAINED BY CONTACTING THE HARFORD COUNTY DEPARTMENT OF PLANNING AND ZONING OFFICE AT 220 SOUTH MAIN STREET, BEL AIR MARYLAND 21014.
2. THE 100-FOOT BUFFER FOR THE PROPOSED DESIGN SHALL BE ESTABLISHED IN ACCORDANCE WITH THIS PLAN. ALL EXISTING AND PLANTED VEGETATION WITHIN THE BUFFER SHALL BE MAINTAINED AND SURVIVAL OF PLANTED AND NATURALLY REGENERATED AREAS OF THE BUFFER SHALL BE AS DESCRIBED IN THIS PLAN.

BUFFER MANAGEMENT PLAN APPROVAL

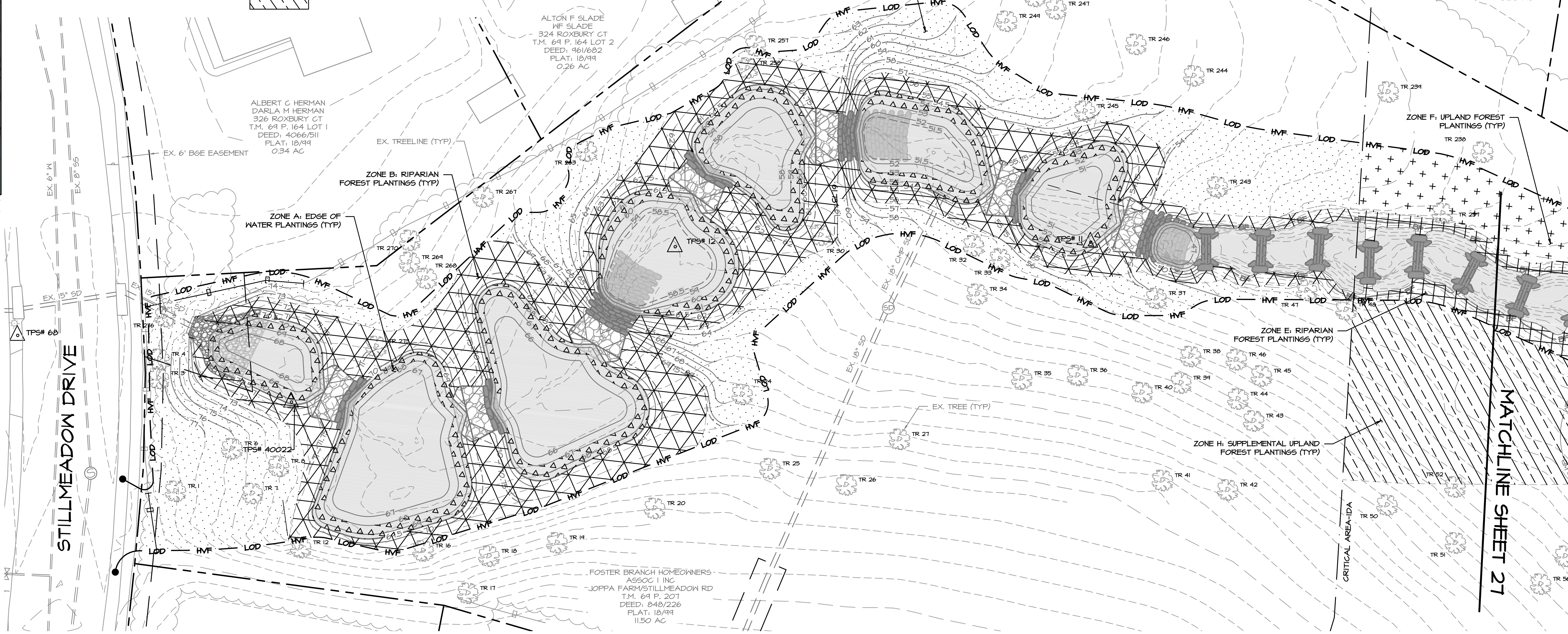
THIS MAJOR BUFFER MANAGEMENT PLAN HAS BEEN REVIEWED AND APPROVED FOR CONSISTENCY WITH THE LOCAL CRITICAL AREA PROGRAM AND PROVISIONS OF COMAR 27.01.09.01-1-7

STAFF NAME ________ STAFF TITLE ________ DATE ________

PLANTING KEY

NON-CRITICAL AREA PLANTINGS
- ZONE A: EDGE OF WATER PLANTINGS
- ZONE B: RIPARIAN FOREST PLANTINGS
- ZONE C: UPLAND FOREST PLANTINGS

CRITICAL AREA PLANTINGS
- ZONE D: CHANNEL FRINGE PLANTINGS
- ZONE E: RIPARIAN FOREST PLANTINGS
- ZONE F: UPLAND FOREST PLANTINGS
- ZONE G: SUPPLEMENTAL RIPARIAN FOREST
- ZONE H: SUPPLEMENTAL UPLAND FOREST



PLANTING PLAN

SCALE: 1" = 20'

1 INCH = 20 FEET

NOTE: ALL DISTURBED AREAS AND PLANTING ZONES SHALL BE STABILIZED PER PERMANENT STABILIZATION SPECIFICATIONS ON SHEET 39.

SEE THIS SHEET AND SHEETS 28 - 29 FOR PLANTING SCHEDULES

ZONE B: RIPARIAN FOREST PLANTING SCHEDULE - 9,226 SF

BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING	QUANTITY
OVERSTORY TREES						
ACER RUBRUM	RED MAPLE	FAC	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	4
BETULA NIGRA	RIVER BIRCH	FACW	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
QUERCUS PALUSTRIS	PIN OAK	FACW	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
QUERCUS PHELLOS	WILLOW OAK	FACW	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
QUERCUS BICOLOR	SWAMP WHITE OAK	FACW	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
LIQUIDAMBAR STYRACIFLUA	SWEETGUM	FAC	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	4
PLATANUS OCCIDENTALIS	AMERICAN SYCAMORE	FACW	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
ULMUS AMERICANA	AMERICAN ELM	FAC	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	4
NYSSA SYLVATICA	BLACK GUM	FAC	4-5 FT	CONTAINER	NATURALIZED AT 12' OC	5
UNDERSTORY TREES						
ASIMINA TRILOBA	PAW PAW	FAC	3-4 FT	CONTAINER	NATURALIZED AT 10' OC	5
CARPINUS CAROLINIANA	IRONWOOD	FAC	3-4 FT	CONTAINER	NATURALIZED AT 10' OC	5
MAGNOLIA VIRGINIANA	SWEETBAY MAGNOLIA	FACW	3-4 FT	CONTAINER	NATURALIZED AT 10' OC	5
AMELANCHIER CANADENSIS	SERVICEBERRY	FAC	3-4 FT	CONTAINER	NATURALIZED AT 10' OC	5
SHRUBS						
CLETHRA ALNIFOLIA	COASTAL SWEETPEPPERBUSH	FACW	3-4 FT	CONTAINER	NATURALIZED AT 8' OC	6
ILEX VERTICILATTA	WINTERBERRY	FACW	3-4 FT	CONTAINER	NATURALIZED AT 8' OC	6
VACCINIUM CORYMBOSUM	HIGHBUSH BLUEBERRY	FACW	3-4 FT	CONTAINER	NATURALIZED AT 8' OC	6
LINDERA BENZOIN	SPICEBUSH	FACW	3-4 FT	CONTAINER	NATURALIZED AT 8' OC	6
SEEDING						
NATIVE SEED MIX (ERNMX 154 OR EQUIVALENT)	NATIVE FLOODPLAIN SEED MIX	N/A	N/A	SEED	N/A	4.5 LB

ZONE A: EDGE OF WATER PLANTING SCHEDULE - 3,315 SF

QUANTITY	BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING
OVERSTORY TREES						
6	CHAMAECYPARIS THYOIDES	ATLANTIC WHITE CEDAR	OBL	4-5 FT	CONTAINER	RANDOM - 12' OC
13	SALIX NIGRA	BLACK WILLOW	OBL	4-5 FT	CONTAINER	RANDOM - 12' OC
10	TAXODIUM DISTICHUM	BALD CYPRESS	OBL	4-5 FT	CONTAINER	RANDOM - 12' OC
SHRUBS						
14	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	OBL	2-3 FT	CONTAINER	RANDOM - 8' OC
10	ITEA VIRGINICA	VIRGINIA SWEETSPIRE	OBL	2-3 FT	CONTAINER	RANDOM - 8' OC
HERBACEOUS						
20	ASCLEPIAS INCARNATA	SWAMP MILKWEED	OBL	QUART	CONTAINER	RANDOM - 3' OC
15	ONOCLEA SENSIBILIS	SENSITIVE FERN	FACW	QUART	CONTAINER	RANDOM - 3' OC
50	IRIS VERSICOLOR	BLUE FLAG	OBL	PLUG	CONTAINER/TRAY	RANDOM - 18" OC
50	HIBISCUS MOSCHEUTOS	ROSE MALLOW	OBL	PLUG	CONTAINER/TRAY	RANDOM - 18" OC
50	JUNCUS EFFUSUS	SOFT RUSH	OBL	PLUG	CONTAINER/TRAY	RANDOM - 18" OC
50	SAURURUS CERNUUS	LIZARD'S TAIL	OBL	PLUG	CONTAINER/TRAY	RANDOM - 18" OC
50	VERONIA NOVEBORACENSIS	NEW YORK IRONWEED	FACW	PLUG	CONTAINER/TRAY	RANDOM - 18" OC

60% DESIGN

EG-SWMENG-_______-____ | #______

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Hanover, Maryland 21076
Phone: (410) 694-9401
Fax: (410) 694-9105
www.baylandinc.com

BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE LANDSCAPE & BUFFER MANAGEMENT PLAN

DRAWN BY: JT/EM
DESIGNED BY: MKB
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 26 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE : 1 inch

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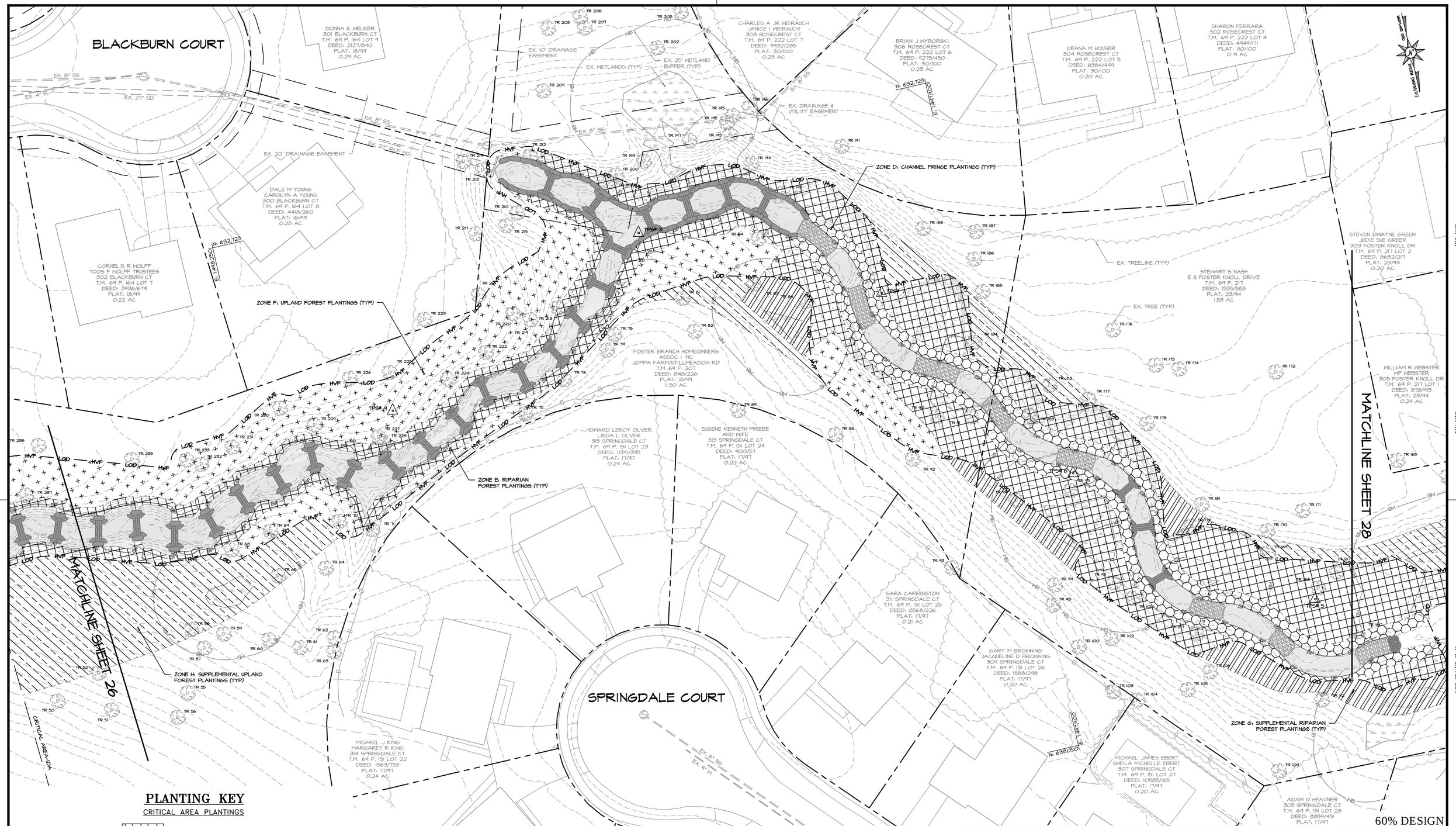

PLANTING KEY

CRITICAL AREA PLANTINGS

- ZONE D: CHANNEL FRINGE PLANTINGS
- ZONE E: RIPARIAN FOREST PLANTINGS
- ZONE F: UPLAND FOREST PLANTINGS
- ZONE G: SUPPLEMENTAL RIPARIAN FOREST PLANTINGS
- ZONE H: SUPPLEMENTAL UPLAND FOREST PLANTINGS

SEE SHEET 29 FOR PLANTING SCHEDULE

PLANTING PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

60% DESIGN

EG-SWMENG-_____-____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE LANDSCAPE & BUFFER MANAGEMENT PLAN

DRAWN BY: JT/EM
DESIGNED BY: RP/JP
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 27 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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ZONE C : UPLAND FOREST PLANTING SCHEDULE – 9,593 SF						
BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING	QUANTITY
OVERSTORY TREES						
QUERCUS ALBA	WHITE OAK	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	6
QUERCUS RUBRA	NORTHERN RED OAK	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	6
CARYA TOMENTOSA	MOCKERNUT HICKORY	UPL	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	5
FAGUS GRANDIFOLIA	AMERICAN BEECH	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	5
PRUNUS SEROTINA	BLACK CHERRY	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	4
LIRIODENDRON TULIPIFERA	TULIP POPLAR	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	4
NYSSA SYLVATICA	BLACK GUM	FAC	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	4
PINUS STROBUS	EASTERN WHITE PINE	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC	6
UNDERSTORY TREES						
CERCIS CANADENSIS	EASTERN REDBUD	UPL	3–4 FT	CONTAINER	NATURALIZED AT 10' OC	6
CHIONANTHUS VIRGINICUS	WHITE FRINGETREE	UPL	3–4 FT	CONTAINER	NATURALIZED AT 10' OC	6
ILEX OPACA	AMERICAN HOLLY	FAC	3–4 FT	CONTAINER	NATURALIZED AT 10' OC	5
JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	FACU	3–4 FT	CONTAINER	NATURALIZED AT 10' OC	4
CORNUS FLORIDA	FLOWERING DOGWOOD	FACU	3–4 FT	CONTAINER	NATURALIZED AT 10' OC	6
SHRUBS						
VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY	FACU	1–2 FT	CONTAINER	NATURALIZED AT 6' OC	9
ILEX GLABRA	INKBERRY	FACW	3–4 FT	CONTAINER	NATURALIZED AT 8' OC	9
KALMIA LATIFOLIA	MOUNTAIN LAUREL	FACU	3–4 FT	CONTAINER	NATURALIZED AT 8' OC	9
SEEDING						
NATIVE SEED MIX (ERNMX 140 OR EQUIVALENT)	NATIVE UPLAND SEED MIX	N/A	N/A	SEED	N/A	4.5 LB
COVER/NURSE CROP, SEE TABLE FOR RATE & DATES		N/A	N/A	SEED	N/A	

PLANTING KEY

CRITICAL AREA PLANTINGS

- ZONE D: CHANNEL FRINGE PLANTINGS
- ZONE E: RIPARIAN FOREST PLANTINGS
- ZONE F: UPLAND FOREST PLANTINGS
- ZONE G: SUPPLEMENTAL RIPARIAN FOREST
- ZONE H: SUPPLEMENTAL UPLAND FOREST

SEE SHEET 29 FOR PLANTING SCHEDULE

PLANTING PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

60% DESIGN

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
STILLMEADOW DRIVE PLANTING PLAN

EG–SWMENG–_____–____ #_____

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BAYLAND JOB NO. 4_3801

DRAWN BY: JT/EM
DESIGNED BY: JP
REVIEWED BY: CJS

CONTRACT NO : 16–153
SCALE : 1" = 20'
SHEET 28 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE = 1 inch

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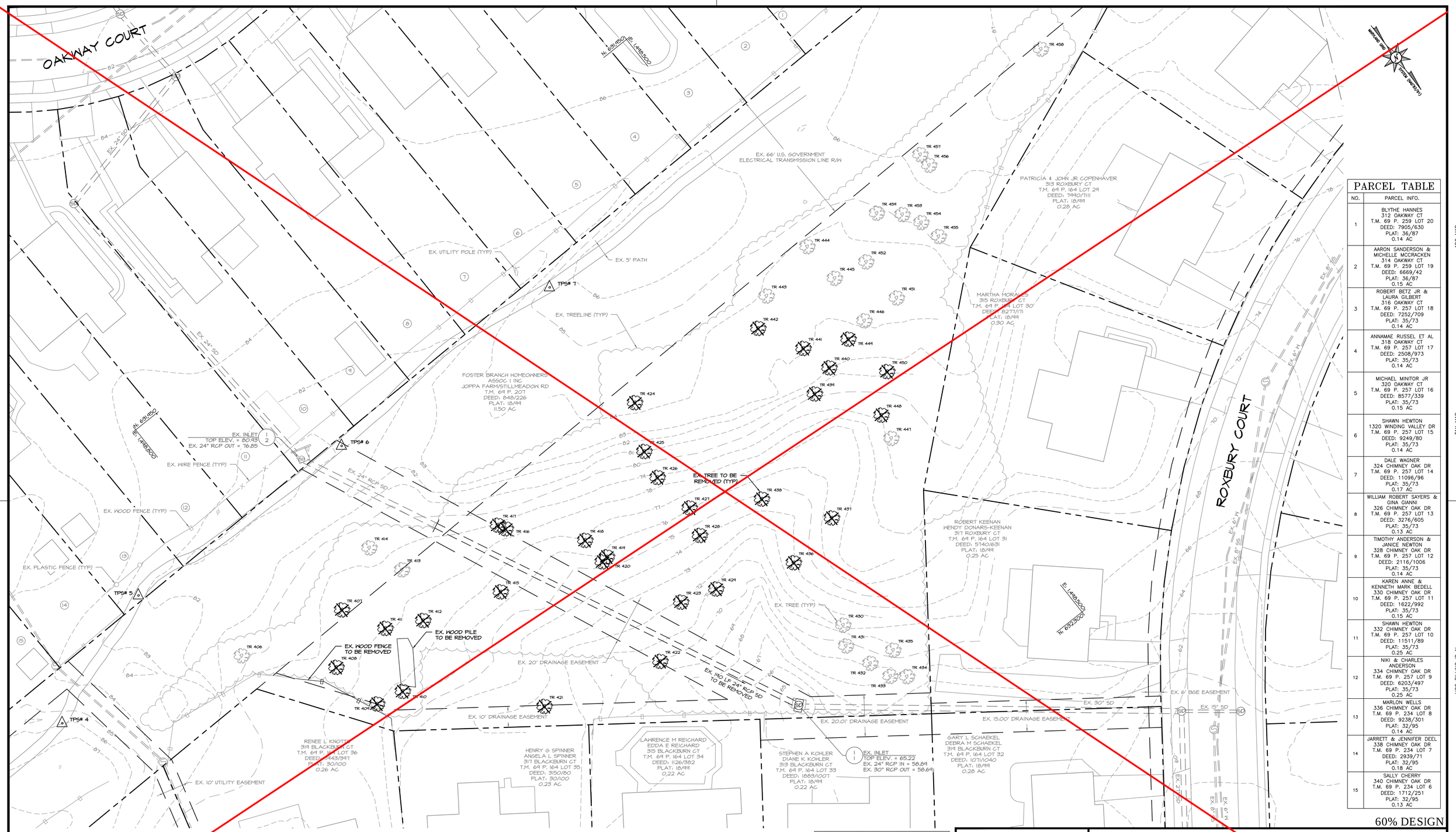

PARCEL TABLE

NO.	PARCEL INFO.
1	BLYTHE HANNES 312 OAKWAY CT T.M. 69 P. 259 LOT 20 DEED: 7905/630 PLAT: 36/87 0.14 AC
2	AARON SANDERSON & MICHELLE MCCRACKEN 314 OAKWAY CT T.M. 69 P. 259 LOT 19 DEED: 6669/42 PLAT: 36/87 0.15 AC
3	ROBERT BETZ JR & LAURA GILBERT 316 OAKWAY CT T.M. 69 P. 257 LOT 18 DEED: 7252/709 PLAT: 35/73 0.14 AC
4	ANNAMAE RUSSEL ET AL 318 OAKWAY CT T.M. 69 P. 257 LOT 17 DEED: 2508/973 PLAT: 35/73 0.14 AC
5	MICHAEL MINITOR JR 320 OAKWAY CT T.M. 69 P. 257 LOT 16 DEED: 8577/339 PLAT: 35/73 0.15 AC
6	SHAWN HEWTON 1320 WINDING VALLEY DR T.M. 69 P. 257 LOT 15 DEED: 9249/80 PLAT: 35/73 0.14 AC
7	DALE WAGNER 324 CHIMNEY OAK DR T.M. 69 P. 257 LOT 14 DEED: 11096/96 PLAT: 35/73 0.17 AC
8	WILLIAM ROBERT SAYERS & GINA GIANNI 326 CHIMNEY OAK DR T.M. 69 P. 257 LOT 13 DEED: 3276/605 PLAT: 35/73 0.13 AC
9	TIMOTHY ANDERSON & JANICE NEWTON 328 CHIMNEY OAK DR T.M. 69 P. 257 LOT 12 DEED: 2116/1006 PLAT: 35/73 0.14 AC
10	KAREN ANNE & KENNETH MARK BEDELL 330 CHIMNEY OAK DR T.M. 69 P. 257 LOT 11 DEED: 1622/992 PLAT: 35/73 0.15 AC
11	SHAWN HEWTON 332 CHIMNEY OAK DR T.M. 69 P. 257 LOT 10 DEED: 11511/89 PLAT: 35/73 0.25 AC
12	NIKI & CHARLES ANDERSON 334 CHIMNEY OAK DR T.M. 69 P. 257 LOT 9 DEED: 6203/497 PLAT: 35/73 0.25 AC
13	MARLON WELLS 336 CHIMNEY OAK DR T.M. 69 P. 234 LOT 8 DEED: 9238/301 PLAT: 32/95 0.14 AC
14	JARRETT & JENNIFER DEEL 338 CHIMNEY OAK DR T.M. 69 P. 234 LOT 7 DEED: 2939/71 PLAT: 32/95 0.18 AC
15	SALLY CHERRY 340 CHIMNEY OAK DR T.M. 69 P. 234 LOT 6 DEED: 1712/251 PLAT: 32/95 0.13 AC

60% DESIGN

0 10 20 40

1 INCH = 20 FEET

PLAN VIEW

SCALE: 1" = 20'

NOTE: SEE SHEET 41 FOR EXISTING TREE SURVEY

EG-SWMENG-_____-_____ #_____

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REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT EXISTING CONDITIONS

DRAWN BY: EM
DESIGNED BY: EM
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 30 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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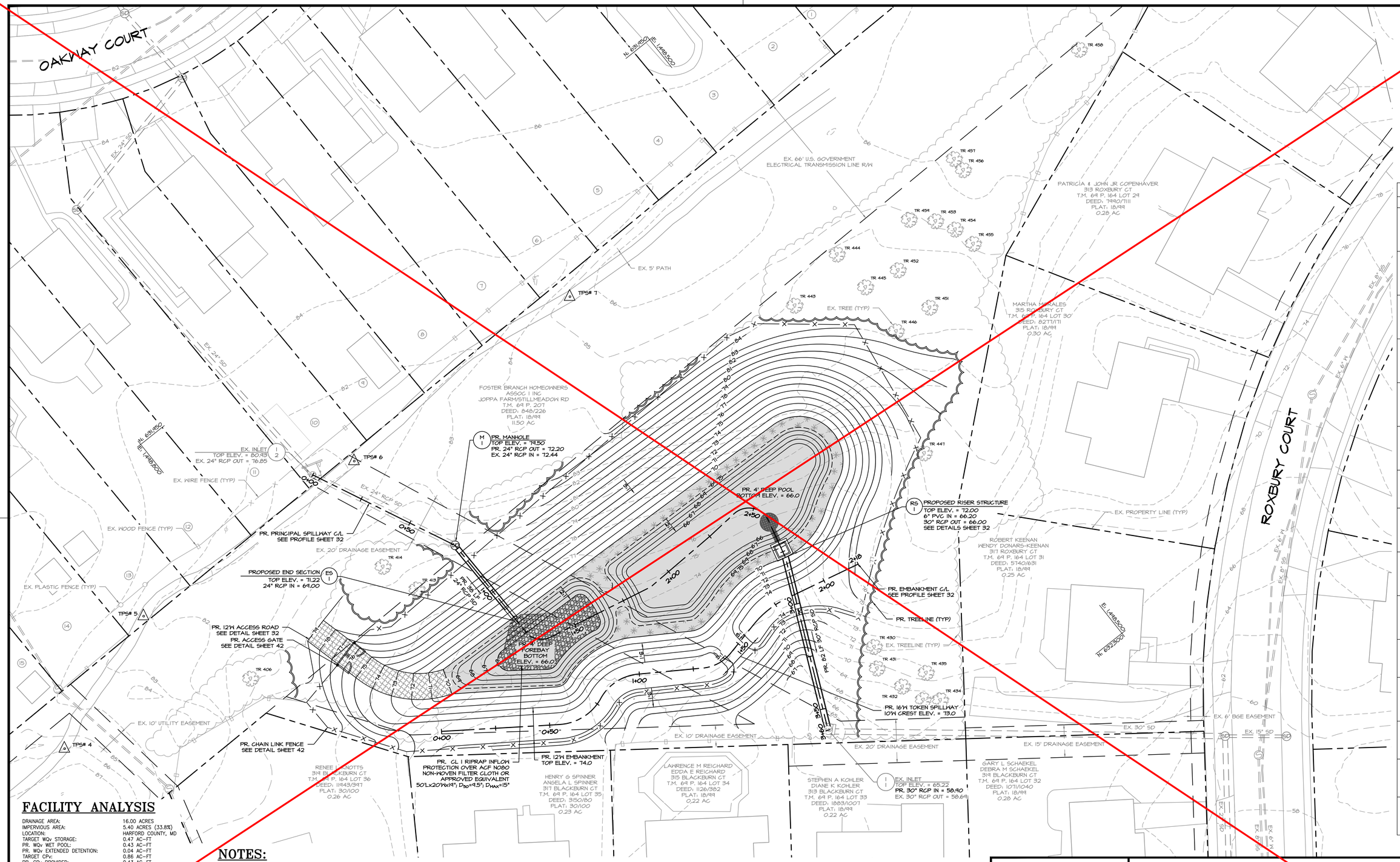

PARCEL TABLE

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15	SALLY CHERRY 340 CHIMNEY OAK DR T.M. 69 P. 234 LOT 6 DEED: 1712/251 PLAT: 32/95 0.13 AC

60% DESIGN

FACILITY ANALYSIS

DRAINAGE AREA:	16.00 ACRES
IMPERVIOUS AREA:	5.40 ACRES (33.8%)
LOCATION:	HARFORD COUNTY, MD
TARGET WQv STORAGE:	0.47 AC-FT
PR. WQv WET POOL:	0.43 AC-FT
PR. WQv EXTENDED DETENTION:	0.04 AC-FT
TARGET CPv:	0.86 AC-FT
PR. CPv PROVIDED:	0.43 AC-FT
TOTAL TREATMENT PROVIDED:	0.90 AC-FT
RAINFALL DEPTH TREATED:	1.91 INCHES
IMPERVIOUS AREA TREATED:	6.63 ACRES
REQ. 24HR DRAWDOWN ORIFICE SIZE:	3.50 INCH
EX 10-YR PEAK DISCHARGE:	26.12 CFS
PR 10-YR WSE:	72.54
PR 10-YR STORAGE:	1.06 AC-FT
PR 10-YR PEAK DISCHARGE:	25.52 CFS
EX 100-YR PEAK DISCHARGE:	45.13 CFS
PR 100-YR WSE:	72.79
PR 100-YR STORAGE:	1.13 AC-FT
PR 100-YR PEAK DISCHARGE:	44.49 CFS
FREEBOARD REQUIRED:	1.00 FT
FREEBOARD PROVIDED:	1.21 FT (100-YR)
MD-378 STRUCTURE CLASS:	CLASS 'A'
STORAGE HEIGHT PRODUCT:	9.05 AC-FT-FT
PR ANNUAL POLLUTANT LOAD REMOVAL:	
TOTAL NITROGEN:	77.9 LBS/YR
TOTAL PHOSPHORUS:	8.5 LBS/YR
TOTAL SUSPENDED SOLIDS:	2.5 TONS/YR

NOTES:

CONTRACTOR SHALL REUSE EXISTING CL I RIPRAP FROM STREAM RESTORATION FOR PROPOSED RIPRAP PROTECTIONS & PROVIDE ADDITIONAL RIPRAP AS NECESSARY TO ACHIEVE THE DIMENSIONS SPECIFIED

NO WOODY VEGETATION OR TREES ARE ALLOWED WITHIN 15' FROM THE TOE OF THE EMBANKMENT OR WITHIN 25' OF THE RISER STRUCTURE

SWM LEGEND

PR. PERMANENT POOL
ELEV. 70.0

PR. HIGH MARSH
ELEV. 69.75 TO ELEV. 70.0
(WATER DEPTH 0"-3")

0 10 20 40
1 INCH = 20 FEET

SITE PLAN

SCALE: 1" = 20'

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT SITE PLAN

DRAWN BY: EM
DESIGNED BY: CJS/EM
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 31 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE - 1 inch

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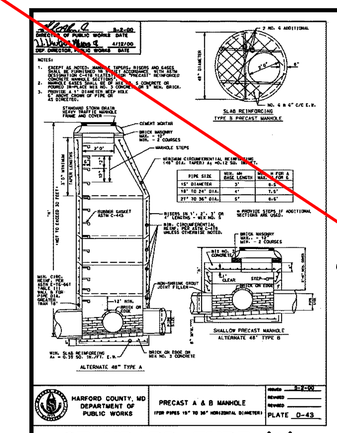
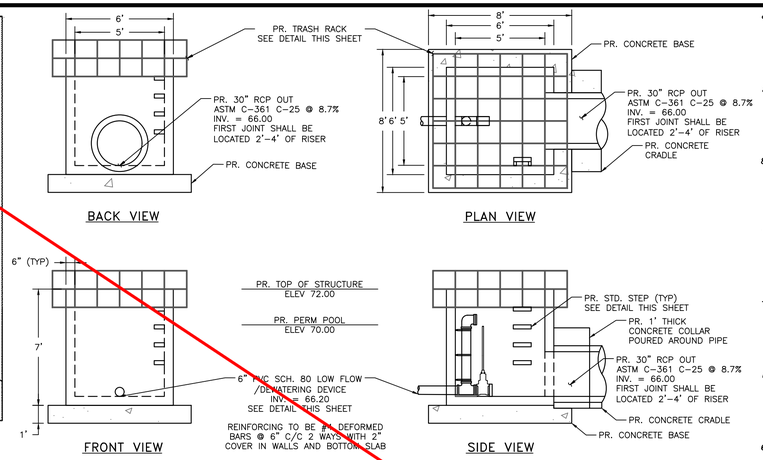


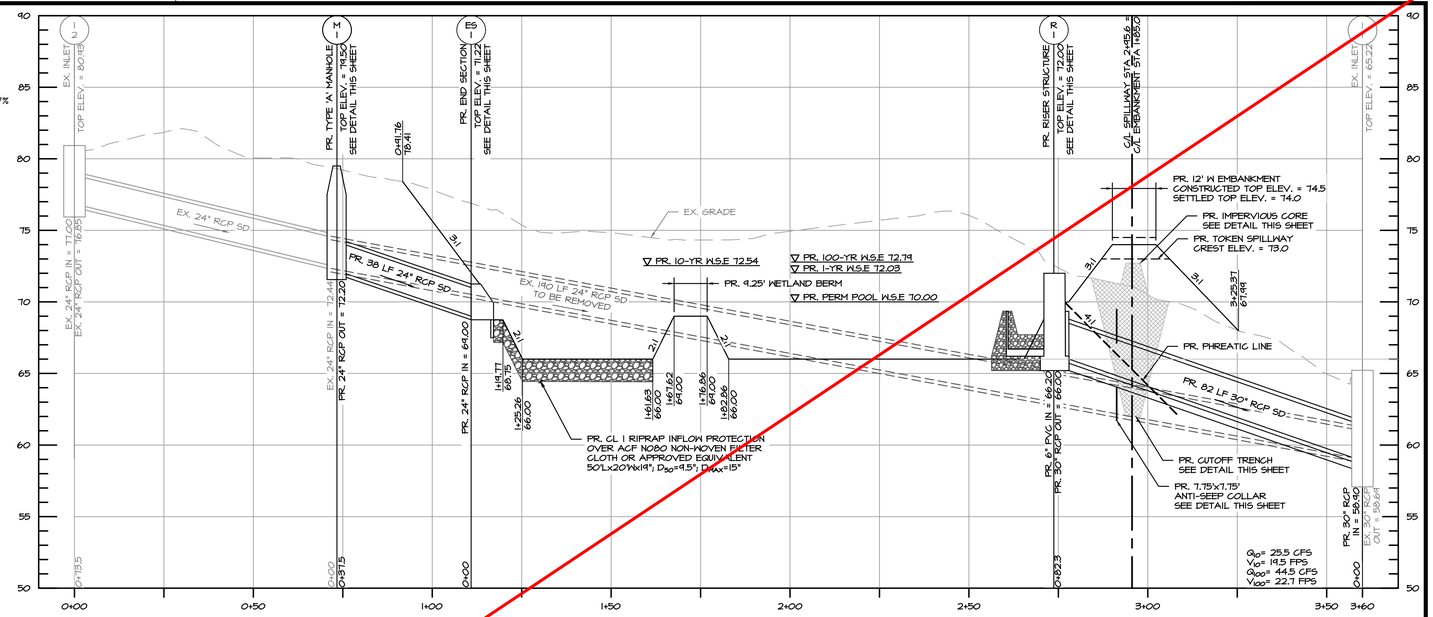
STANDARD TYPE 'A' MANHOLE DETAIL

SCALE: NOT TO SCALE



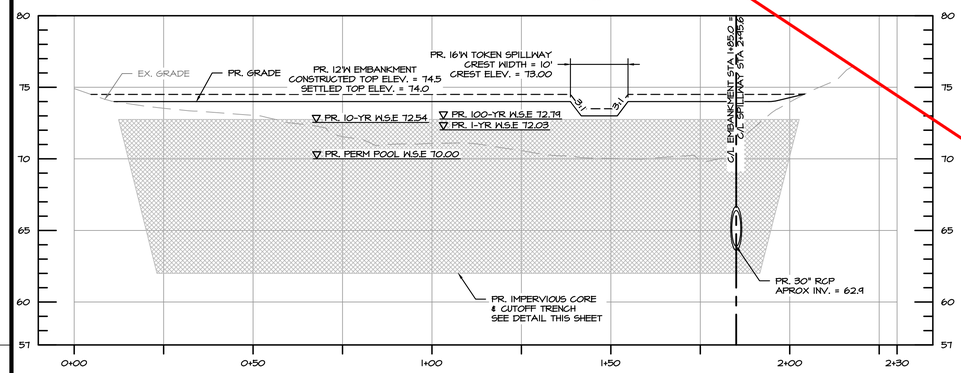
PROPOSED RISER DETAIL

SCALE: 1" = 4'



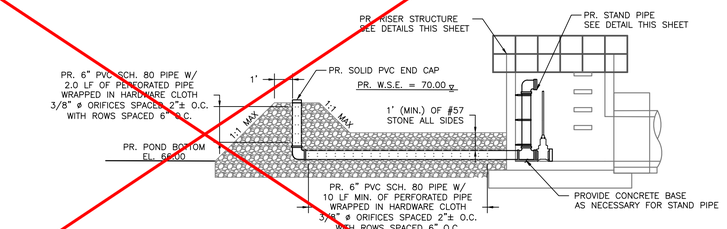
PROFILE PR. PRINCIPAL SPILLWAY C/L STA: 0+00 TO STA: 3+60

SCALE: HORZ. 1" = 20'
VERT. 1" = 5'



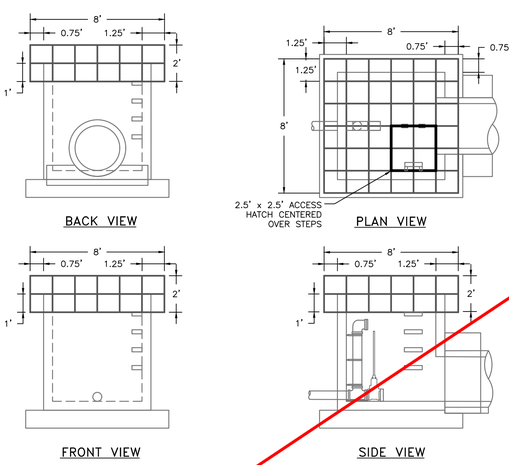
PROFILE PR. EMBANKMENT C/L STA: 0+00 TO STA: 2+30

SCALE: HORZ. 1" = 20'
VERT. 1" = 5'



LOW FLOW/DEWATERING DEVICE DETAIL

SCALE: 1" = 2'

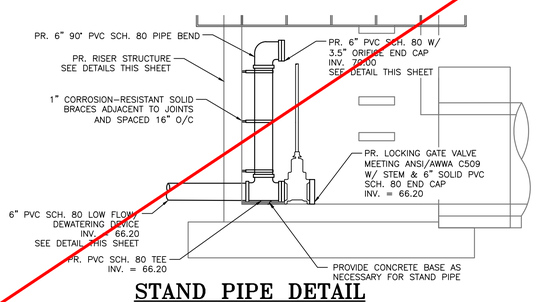


GENERAL NOTES

1. FIELD MEASURE THE STRUCTURE DIMENSIONS PRIOR TO FABRICATION FOR EXACT FIT OF TRASH RACK.
2. FABRICATE USING 1" STRUCTURAL STEEL TUBING OR #5 STEEL REBAR WITH 4" WIDE STEEL ANCHOR PLATE FOR SECURING TRASH RACK TO RISER.
3. ALL JOINTS SHALL BE BUTT WELDED.
4. TRASH RACK SHALL BE HOT-DIPPED GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A-123.
5. TRASH RACK SHALL SECURED TO RISER STRUCTURE USING ½" DIA x 5" LONG HOT-DIPPED GALVANIZED OR SS STEEL ANCHOR BOLTS. @ 2' MINIMUM SPACING.

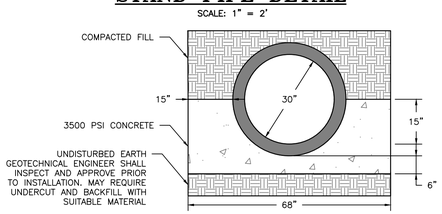
TRASH RACK DETAIL

SCALE: 1" = 4'



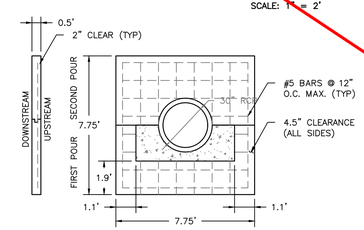
STAND PIPE DETAIL

SCALE: 1" = 2'



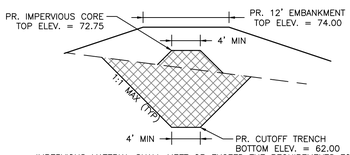
CONCRETE CRADLE DETAIL

SCALE: 1" = 2'



ANTI-SEEP COLLAR DETAIL

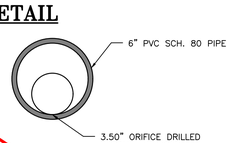
SCALE: 1" = 2'



IMPERVIOUS MATERIAL SHALL MEET OR EXCEED THE REQUIREMENTS FOR FILL MATERIAL AS SPECIFIED IN MD-378 CONSTRUCTION SPECIFICATIONS TO AND IS SUBJECT TO GEOTECHNICAL ENGINEER APPROVAL

PROPOSED IMPERVIOUS CORE/ CUTOFF TRENCH DETAIL

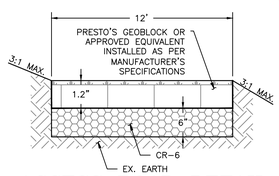
SCALE: 1" = 10'



NOTE: SECURELY FASTEN PVC END CAP TO PVC PIPE WITH WATERTIGHT EPOXY SEALANT

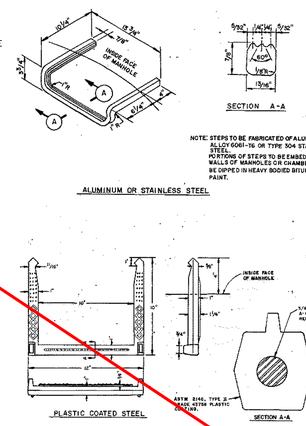
BMP 3 PVC ORIFICE END CAP DETAIL

SCALE: NOT TO SCALE



ACCESS ROAD DETAIL

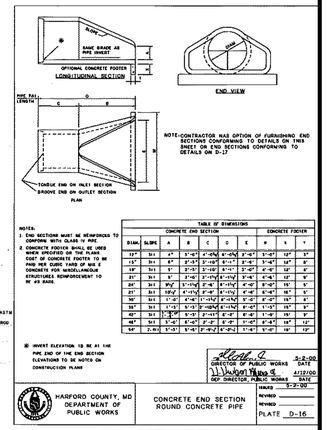
SCALE: NOT TO SCALE



NOTE: STEPS TO BE FABRICATED OF ALUMINUM ALLOY 6061-T6 OR TYPE 304 STAINLESS STEEL. PORTIONS OF STEPS TO BE EMBEDDED IN WALLS OF MANHOLES OR CHAMBERS TO BE DIPPED IN HEAVY BODIED BITUMINOUS PAINT.

STANDARD STEP DETAIL

SCALE: NOT TO SCALE



NOTE: CONTRACTOR HAS OPTION OF FURNISHING END SECTIONS CONFORMING TO DETAILS ON THIS SHEET OR END SECTIONS CONFORMING TO DETAILS ON D-17

TABLE OF DIMENSIONS											
		CONCRETE END SECTION							CONCRETE FOOTER		
DIAM.	SLOPE	A	B	C	D	E	W	X	Y		
12"	3:1	4"	1'-4"	2'-4"	8"-1¾"	2'-8"	1'-2"	12"	3"		
15"	3:1	5"	1'-7½"	2'-10"	8"-1¾"	3'-0"	1'-4"	12"	3"		
18"	3:1	6"	2'-1½"	3'-10"	8"-1¾"	3'-8"	2'-0"	12"	3"		
21"	3:1	7"	2'-4½"	4'-1½"	8"-1¾"	4'-4"	2'-4"	12"	3"		
24"	3:1	8¼"	2'-7½"	4'-4"	8"-1¾"	4'-8"	2'-8"	15"	3"		
27"	3:1	10¼"	4'-1½"	5'-8"	8"-1¾"	5'-4"	3'-0"	18"	3"		
30"	3:1	11½"	4'-3"	6'-1½"	8"-1¾"	5'-8"	3'-4"	18"	3"		
36"	3:1	1'-1½"	5'-1½"	6'-10½"	8"-1¾"	6'-8"	4'-0"	21"	3"		
42"	3:1	1'-3½"	5'-10"	7'-11½"	8"-1¾"	7'-8"	4'-8"	24"	3"		
48"	3:1	1'-6"	6'-6"	8'-8"	8"-1¾"	8'-4"	5'-4"	27"	3"		
54"	3:1	1'-9"	7'-3"	9'-6"	8"-1¾"	9'-0"	6'-0"	30"	3"		

NOTES:
1. END SECTIONS MUST BE REINFORCED TO PREVENT DEFORMATION OF THE PIPE.
2. CONCRETE FOOTER SHALL BE USED WHEN SPECIFIED ON THE PLANS. COST OF CONCRETE FOOTER TO BE PAID PER CUBIC YARD OF MIX E CONCRETE FOR MISCELLANEOUS STRUCTURES REINFORCEMENT TO BE AS SHOWN.

@ INVERT ELEVATION TO BE AT THE PIPE END OF THE END SECTION. ELEVATIONS TO BE NOTED ON CONSTRUCTION PLANS

HARFORD COUNTY, MD
DEPARTMENT OF
PUBLIC WORKS

CONCRETE END SECTION
ROUND CONCRETE PIPE

PLATE D-16

STANDARD END SECTION DETAIL

SCALE: NOT TO SCALE

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT PROFILES AND DETAILS

DRAWN BY: EM
DESIGNED BY: EM/CJS
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : AS SHOWN
SHEET 32 OF 43
DATE : 06/05/18

EG-SWMENG-_____-____ #_____

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ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE : 1 inch

ROXBURY COURT
SEQUENCE OF CONSTRUCTION

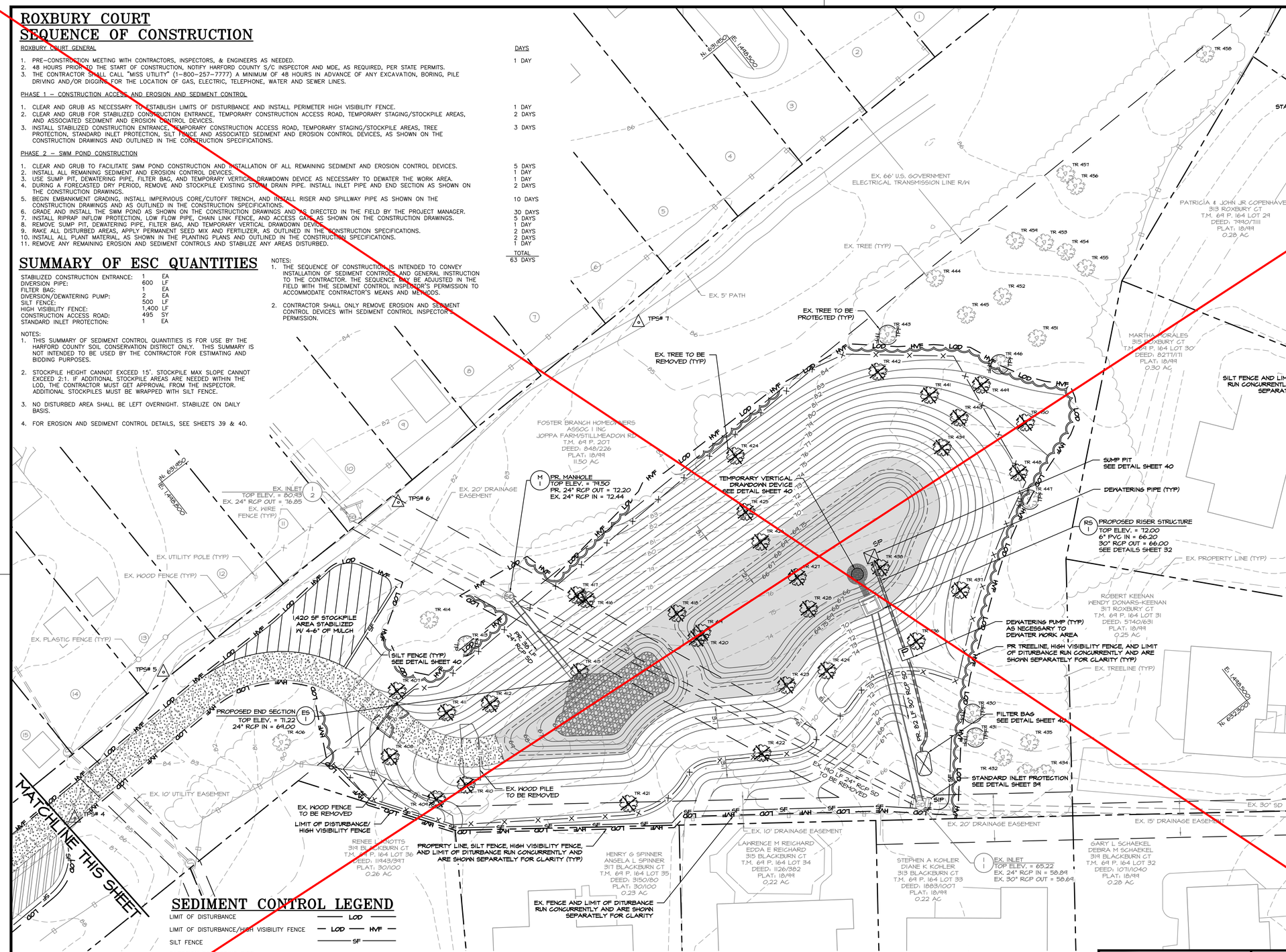
	DAYS
ROXBURY COURT GENERAL	
1. PRE-CONSTRUCTION MEETING WITH CONTRACTORS, INSPECTORS, & ENGINEERS AS NEEDED.	1 DAY
2. 48 HOURS PRIOR TO THE START OF CONSTRUCTION, NOTIFY HARFORD COUNTY S/C INSPECTOR AND MDE, AS REQUIRED, PER STATE PERMITS.	
3. THE CONTRACTOR SHALL CALL "MISS UTILITY" (1-800-257-7777) A MINIMUM OF 48 HOURS IN ADVANCE OF ANY EXCAVATION, BORING, PILE DRIVING AND/OR DIGGING FOR THE LOCATION OF GAS, ELECTRIC, TELEPHONE, WATER AND SEWER LINES.	
PHASE 1 – CONSTRUCTION ACCESS AND EROSION AND SEDIMENT CONTROL	
1. CLEAR AND GRUB AS NECESSARY TO ESTABLISH LIMITS OF DISTURBANCE AND INSTALL PERIMETER HIGH VISIBILITY FENCE.	1 DAY
2. CLEAR AND GRUB FOR STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY CONSTRUCTION ACCESS ROAD, TEMPORARY STAGING/STOCKPILE AREAS, AND ASSOCIATED SEDIMENT AND EROSION CONTROL DEVICES.	2 DAYS
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, TEMPORARY CONSTRUCTION ACCESS ROAD, TEMPORARY STAGING/STOCKPILE AREAS, TREE PROTECTION, STANDARD INLET PROTECTION, SILT FENCE AND ASSOCIATED SEDIMENT AND EROSION CONTROL DEVICES, AS SHOWN ON THE CONSTRUCTION DRAWINGS AND OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	3 DAYS
PHASE 2 – SWM POND CONSTRUCTION	
1. CLEAR AND GRUB TO FACILITATE SWM POND CONSTRUCTION AND INSTALLATION OF ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES.	5 DAYS
2. INSTALL ALL REMAINING SEDIMENT AND EROSION CONTROL DEVICES.	1 DAY
3. USE SUMP PIT, DEWATERING PIPE, FILTER BAG, AND TEMPORARY VERTICAL DRAWDOWN DEVICE AS NECESSARY TO DEWATER THE WORK AREA.	1 DAY
4. DURING A FORECASTED DRY PERIOD, REMOVE AND STOCKPILE EXISTING STORM DRAIN PIPE. INSTALL INLET PIPE AND END SECTION AS SHOWN ON THE CONSTRUCTION DRAWINGS.	2 DAYS
5. BEGIN EMBANKMENT GRADING, INSTALL IMPERVIOUS CORE/CUTOFF TRENCH, AND INSTALL RISER AND SPILLWAY PIPE AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	10 DAYS
6. GRADE AND INSTALL THE SWM POND AS SHOWN ON THE CONSTRUCTION DRAWINGS AND AS DIRECTED IN THE FIELD BY THE PROJECT MANAGER.	30 DAYS
7. INSTALL RIPRAP INFLOW PROTECTION, LOW FLOW PIPE, CHAIN LINK FENCE, AND ACCESS GATE, AS SHOWN ON THE CONSTRUCTION DRAWINGS.	5 DAYS
8. REMOVE SUMP PIT, DEWATERING PIPE, FILTER BAG, AND TEMPORARY VERTICAL DRAWDOWN DEVICE.	1 DAY
9. RAKE ALL DISTURBED AREAS, APPLY PERMANENT SEED MIX AND FERTILIZER, AS OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	2 DAYS
10. INSTALL ALL PLANT MATERIAL, AS SHOWN IN THE PLANTING PLANS AND OUTLINED IN THE CONSTRUCTION SPECIFICATIONS.	2 DAYS
11. REMOVE ANY REMAINING EROSION AND SEDIMENT CONTROLS AND STABILIZE ANY AREAS DISTURBED.	1 DAY
TOTAL	63 DAYS

NOTES:
1. THE SEQUENCE OF CONSTRUCTION IS INTENDED TO CONVEY INSTALLATION OF SEDIMENT CONTROLS AND GENERAL INSTRUCTION TO THE CONTRACTOR. THE SEQUENCE MAY BE ADJUSTED IN THE FIELD WITH THE SEDIMENT CONTROL INSPECTOR'S PERMISSION TO ACCOMMODATE CONTRACTOR'S MEANS AND METHODS.
2. CONTRACTOR SHALL ONLY REMOVE EROSION AND SEDIMENT CONTROL DEVICES WITH SEDIMENT CONTROL INSPECTOR'S PERMISSION.

SUMMARY OF ESC QUANTITIES

STABILIZED CONSTRUCTION ENTRANCE:	1	EA
DIVERSION PIPE:	600	LF
FILTER BAG:	1	EA
DIVERSION/DEWATERING PUMP:	2	EA
SILT FENCE:	500	LF
HIGH VISIBILITY FENCE:	1,400	LF
CONSTRUCTION ACCESS ROAD:	495	SY
STANDARD INLET PROTECTION:	1	EA

NOTES:
1. THIS SUMMARY OF SEDIMENT CONTROL QUANTITIES IS FOR USE BY THE HARFORD COUNTY SOIL CONSERVATION DISTRICT ONLY. THIS SUMMARY IS NOT INTENDED TO BE USED BY THE CONTRACTOR FOR ESTIMATING AND BIDDING PURPOSES.
2. STOCKPILE HEIGHT CANNOT EXCEED 15'. STOCKPILE MAX SLOPE CANNOT EXCEED 2:1. IF ADDITIONAL STOCKPILE AREAS ARE NEEDED WITHIN THE LOD, THE CONTRACTOR MUST GET APPROVAL FROM THE INSPECTOR. ADDITIONAL STOCKPILES MUST BE WRAPPED WITH SILT FENCE.
3. NO DISTURBED AREA SHALL BE LEFT OVERNIGHT. STABILIZE ON DAILY BASIS.
4. FOR EROSION AND SEDIMENT CONTROL DETAILS, SEE SHEETS 39 & 40.



NO.	PARCEL INFO.
1	BLYTHE HANNES 312 OAKWAY CT T.M. 69 P. 259 LOT 20 DEED: 7905/630 PLAT: 36/87 0.14 AC
2	AARON SANDERSON & MICHELLE MCCRACKEN 314 OAKWAY CT T.M. 69 P. 259 LOT 19 DEED: 6669/42 PLAT: 36/87 0.15 AC
3	ROBERT BETZ JR & LAURA GILBERT 316 OAKWAY CT T.M. 69 P. 257 LOT 18 DEED: 7252/709 PLAT: 35/73 0.14 AC
4	ANNAMAE RUSSEL ET AL 318 OAKWAY CT T.M. 69 P. 257 LOT 17 DEED: 2508/973 PLAT: 35/73 0.14 AC
5	MICHAEL MINITOR JR 320 OAKWAY CT T.M. 69 P. 257 LOT 16 DEED: 8577/339 PLAT: 35/73 0.15 AC
6	SHAWN HEWTON 1320 WINDING VALLEY DR T.M. 69 P. 257 LOT 15 DEED: 9249/80 PLAT: 35/73 0.14 AC
7	DALE WAGNER 324 CHIMNEY OAK DR T.M. 69 P. 257 LOT 14 DEED: 11096/96 PLAT: 35/73 0.17 AC
8	WILLIAM ROBERT SAYERS & GINA GIANNI 326 CHIMNEY OAK DR T.M. 69 P. 257 LOT 13 DEED: 3276/605 PLAT: 35/73 0.13 AC
9	TIMOTHY ANDERSON & JANICE NEWTON 328 CHIMNEY OAK DR T.M. 69 P. 257 LOT 12 DEED: 2116/1006 PLAT: 35/73 0.14 AC
10	KAREN ANNE & KENNETH MARK BEDELL 330 CHIMNEY OAK DR T.M. 69 P. 257 LOT 11 DEED: 1622/992 PLAT: 35/73 0.15 AC
11	SHAWN HEWTON 332 CHIMNEY OAK DR T.M. 69 P. 257 LOT 10 DEED: 11511/89 PLAT: 35/73 0.25 AC
12	NIKI & CHARLES ANDERSON 334 CHIMNEY OAK DR T.M. 69 P. 257 LOT 9 DEED: 6203/497 PLAT: 35/73 0.25 AC
13	MARLON WELLS 336 CHIMNEY OAK DR T.M. 69 P. 234 LOT 8 DEED: 9238/301 PLAT: 32/95 0.14 AC
14	JARRETT & JENNIFER DEEL 338 CHIMNEY OAK DR T.M. 69 P. 234 LOT 7 DEED: 2939/71 PLAT: 32/95 0.18 AC
15	SALLY CHERRY 340 CHIMNEY OAK DR T.M. 69 P. 234 LOT 6 DEED: 1712/251 PLAT: 32/95 0.13 AC

SEDIMENT CONTROL LEGEND

LIMIT OF DISTURBANCE	LOD
LIMIT OF DISTURBANCE/HIGH VISIBILITY FENCE	LOD HVF
SILT FENCE	SF
DIVERSION/DEWATERING PIPE	
DEWATERING/DIVERSION PUMP	P
STABILIZED CONSTRUCTION ENTRANCE	
CONSTRUCTION ACCESS ROAD	
SUMP PIT	SP
TEMPORARY VERTICAL DRAWDOWN DEVICE	
FILTER BAG	
STANDARD INLET PROTECTION	SIP

NOTE: NO WOODY VEGETATION OR TREES ARE ALLOWED WITHIN 15' FROM THE TOE OF THE EMBANKMENT OR WITHIN 25' OF THE RISER STRUCTURE

EROSION AND SEDIMENT CONTROL PLAN

SCALE: 1" = 20'

0 10 20 40
1 INCH = 20 FEET

60% DESIGN

EG-SWMENG-_____-_____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT EROSION AND SEDIMENT CONTROL PLAN

DRAWN BY: EM
DESIGNED BY: CJS/EM
REVIEWED BY: CJS

CONTRACT NO : 16-153
SCALE : 1" = 20'
SHEET 33 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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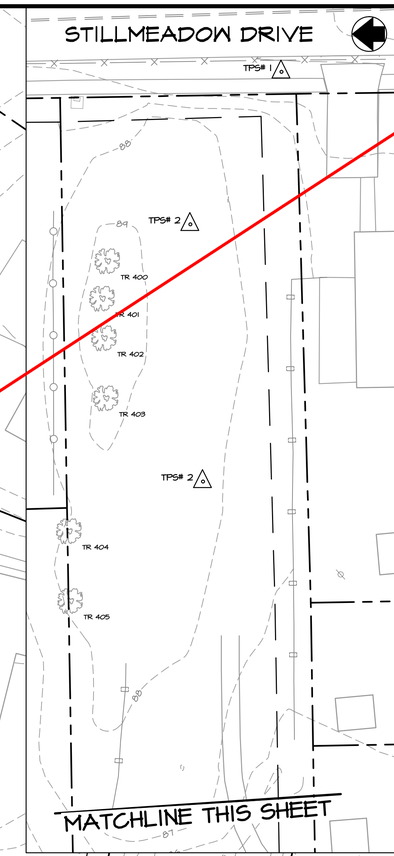

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60% DESIGN

SEE SHEET 42 FOR PLANTING DETAILS

SEE SHEET 35 FOR PLANTING SCHEDULE

PLANTING PLAN

SCALE: 1" = 20'

0 10 20 40

1 INCH = 20 FEET

LEGEND

- PR. WETLAND BENCH ELEV. 69.75 TO 70.00 (WATER DEPTH 0"–3")
- PR. PERMANENT POOL ELEV. 70.00
- PLANTING ZONE A UPLAND FOREST
- PLANTING ZONE B SHRUB WETLAND
- PLANTING ZONE C UPLAND MEADOW
- PLANTING ZONE D WETLAND MEADOW

EG–SWMENG–_____–____ #_____

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BAYLAND JOB NO. 4_3801

REVISIONS

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT PLANTING PLAN

DRAWN BY: EM
DESIGNED BY: CJS/EM
REVIEWED BY: CJS

CONTRACT NO : 16–153
SCALE : 1" = 20'
SHEET 34 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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ROXBURY COURT PLANTING SCHEDULE

ZONE A PLANTING SCHEDULE – 13,730 SF

ZONE A: UPLAND FOREST PLANTING SCHEDULE – 13,730 SF						
QUANTITY	BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING
OVERSTORY TREES						
8	DIOSPYROS VIRGINIANA	PERSIMMON	FAC	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	QUERCUS ALBA	WHITE OAK	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	QUERCUS FALCATA	SOUTHERN RED OAK	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	QUERCUS RUBRA	NORTHERN RED OAK	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	PRUNUS SEROTINA	BLACK CHERRY	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	PINUS TAEDA	LOBLOLLY PINE	FAC	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
8	PINUS STROBUS	EASTERN WHITE PINE	FACU	4–5 FT	CONTAINER	NATURALIZED AT 12' OC
UNDERSTORY TREES						
8	CERCIS CANADENSIS	EASTERN RED BUD	UPL	3–4 FT	CONTAINER	NATURALIZED AT 10' OC
5	SASSAFRAS ALBIDUM	SASSAFRAS	FACU	3–4 FT	CONTAINER	NATURALIZED AT 10' OC
8	JUNIPERUS VIRGINIANA	EASTERN RED CEDAR	FACU	3–4 FT	CONTAINER	NATURALIZED AT 10' OC
8	ILEX OPACA	AMERICAN HOLLY	FAC	3–4 FT	CONTAINER	NATURALIZED AT 10' OC
8	RHUS TYPHINA	STAGHORN SUMAC	UPL	3–4 FT	CONTAINER	NATURALIZED AT 10' OC
SHRUBS						
9	HAMAMELIS VIRGINIANA	AMERICAN WITCHHAZEL	FACU	3–4 FT	CONTAINER	NATURALIZED AT 8' OC
9	MORELLA PENNSYLVANICA	NORTHERN BAYBERRY	FAC	3–4 FT	CONTAINER	NATURALIZED AT 6' OC
9	VACCINIUM ANGUSTIFOLIUM	LOWBUSH BLUEBERRY	FACU	1–2 FT	CONTAINER	NATURALIZED AT 6' OC
9	VIBURNUM PRUNIFOLIUM	BLACKHAW	FACU	3–4 FT	CONTAINER	NATURALIZED AT 8' OC
SEEDING						
6.5 LBS	NATIVE SEED MIX (ERNMX 140 OR EQUIVALENT)	NATIVE UPLAND SEED MIX	N/A	N/A	SEED	N/A
COVER/NURSE CROP, SEE TABLE FOR RATE & DATES			N/A	N/A	SEED	N/A

ZONE B PLANTING SCHEDULE – 1,445 SF

ZONE B: SHRUB WETLAND PLANTING SCHEDULE – 1,445 SF						
QUANTITY	BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING
SHRUBS						
4	ILEX VERTICILATTA	WINTERBERRY	FACW	3–4 FT	CONTAINER	NATURALIZED AT 8' OC
4	VIBURNUM DENTATUM	SOUTHERN ARROWWOOD	FAC	3–4 FT	CONTAINER	NATURALIZED AT 8' OC
3	CEPHALANTHUS OCCIDENTALIS	BUTTONBUSH	OBL	2–3 FT	CONTAINER	NATURALIZED AT 8' OC
HERBACEOUS						
20	LOBELIA CARDINALIS	CARDINALFLOWER	FACW	QUART	CONTAINER	3' OC
50	CALTHA PALUSTRIS	YELLOW MARSH MARIGOLD	OBL	PLUGS	TRAY	1.5' OC
50	IRIS VERSICOLOR	BLUE FLAG IRIS	OBL	PLUGS	TRAY	1.5' OC
50	HIBISCUS MOSCHEUTOS	SWAMP ROSE MALLOW	OBL	PLUGS	TRAY	1.5' OC
50	LEERSIA ORYZOIDES	RICE CUTGRASS	OBL	PLUGS	TRAY	1.5' OC
20	CHELONE GLABRA	WHITE TURTLEHEAD	OBL	PLUGS	TRAY	1.5' OC
50	ACORUS AMERICANUS	SWEETFLAG	OBL	PLUGS	TRAY	1.5' OC
SEEDING						
1.0 LB	NATIVE SEED MIX (ERNMX 154 OR EQUIVALENT)	NATIVE WETLAND SEED MIX	N/A	N/A	SEED	N/A
COVER/NURSE CROP, SEE TABLE FOR RATE & DATES			N/A	N/A	SEED	N/A

ZONE C PLANTING SCHEDULE – 12,290 SF

ZONE C: UPLAND MEADOW PLANTING SCHEDULE – 12,290 SF						
SEEDING						
6.0 LBS	NATIVE SEED MIX (ERNMX 140 OR EQUIVALENT)	NATIVE UPLAND SEED MIX	N/A	N/A	SEED	N/A
COVER/NURSE CROP, SEE TABLE FOR RATE & DATES			N/A	N/A	SEED	N/A

NATIVE UPLAND SEED MIX COMPOSITION

NATIVE UPLAND SEED MIX COMPOSITION		
% COMPOSTION	BOTANICAL NAME	COMMON NAME
38.00%	SCHIZACHYRIUM SCOPARIUM	LITTLE BLUESTEM
15.00%	ELYMUS RIPARIUS	RIVERBANK WILDRYE
15.00%	FESTUCA RUBRA	CREEPING RED FESCUE
10.00%	PANICUM CLANDESTINUM	DEERTONGUE
5.00%	ECHINACEA PURPUREA	PURPLE CONEFLOWER
4.00%	CHAMAECRISTA FASCICULATA	PARTRIDGE PEA
3.00%	RUDBECKIA HIRTA	BLACKEYED SUSAN
2.00%	ELYMUS HYSTRIX	BOTTLEBRUSH GRASS
2.00%	LIATRIS SPICATA	BLAZING STAR
1.50%	LESPEDEZA VIRGINICA	SLENDER LESPEDEZA
1.30%	ASTER PRENANTHOIDES	ZIGZAG ASTER
1.00%	ANEMONE VIRGINIANA	THIMBLEWEED
0.50%	AQUILEGIA CANADENSIS	EASTERN COLUMBINE
0.50%	BAPTISIA AUSTRALIS	BLUE FALSE INDIGO
0.50%	JUNCUS TENUIS	PATH RUSH
0.50%	RUDBECKIA FULGIDA VAR. FULGIDA	ORANGE CONEFLOWER
0.20%	BAPTISIA TINCTORIA	YELLOW FALSE INDIGO

ZONE D PLANTING SCHEDULE – 1,675 SF

ZONE D: WETLAND MEADOW – 1,675 SF						
QUANTITY	BOTANICAL NAME/ TECHNICAL DESCRIPTION	COMMON NAME	INDICATOR STATUS	SIZE	TYPE	SPACING
HERBACEOUS						
45	LOBELIA CARDINALIS	CARDINALFLOWER	FACW	QUART	CONTAINER	3' OC
50	CALTHA PALUSTRIS	YELLOW MARSH MARIGOLD	OBL	PLUGS	TRAY	1.5' OC
100	IRIS VERSICOLOR	BLUE FLAG IRIS	OBL	PLUGS	TRAY	1.5' OC
100	HIBISCUS MOSCHEUTOS	SWAMP ROSE MALLOW	OBL	PLUGS	TRAY	1.5' OC
100	LEERSIA ORYZOIDES	RICE CUTGRASS	OBL	PLUGS	TRAY	1.5' OC
40	CHELONE GLABRA	WHITE TURTLEHEAD	OBL	QUART	CONTAINER	3' OC
50	ACORUS AMERICANUS	SWEETFLAG	OBL	PLUGS	TRAY	1.5' OC
SEEDING						
1.0 LB	NATIVE SEED MIX (ERNMX 154 OR EQUIVALENT)	NATIVE WETLAND SEED MIX	N/A	N/A	SEED	N/A
COVER/NURSE CROP, SEE TABLE FOR RATE & DATES			N/A	N/A	SEED	N/A

WETLAND BENCH PLANTING SCHEDULE – 1,625 SF

WETLAND BENCH PLANTING SCHEDULE – 1,625 SF						
HABIT	QUANTITY	BOTANICAL NAME	COMMON NAME	INDICATOR STATUS	SIZE	SPACING
HERBACEUOUS	25 QUART	ASCLEPIAS INCARNATA**	SWAMP MILKWEED	OBL	QUART	RANDOM – PER DETAIL
	100 PLUG 25 QUART	CAREX VULPINOIDEA	FOX SEDGE	OBL	PLUG & QUART	RANDOM – PER DETAIL
	25 QUART	CHELONE GLABRA**	WHITE TURTLEHEAD	OBL	QUART	RANDOM – PER DETAIL
	100 PLUG 25 QUART	IRIS VERSICOLOR	BLUE FLAG	OBL	PLUG & QUART	RANDOM – PER DETAIL
	60 PLUG 15 QUART	SCIRPUS CYPERINUS	WOOLGRASS	OBL	PLUG & QUART	RANDOM – PER DETAIL
** PLANT THESE SPECIES AT HIGHER ELEVATIONS WITHIN PLANTING AREA						

COVER/NURSE CROP SEEDING TABLE

COVER/NURSE CROP SEEDING TABLE			
SEEDING RATE	BOTANICAL NAME	COMMON NAME	SEEDING DATE
30 LB/AC	SECALE CEREAL	CEREAL RYE	11/1–2/28
30 LB/AC	AVENA SATIVA	GRAIN OATS	3/1–4/30
10 LB/AC	SETARIA ITALICA	FOXTAIL MILLET	5/1–8/31
10 LB/AC	LOLIUM MULTFLORUM	ANNUAL RYEGRASS	9/1–10/31

NATIVE WETLAND SEED MIX COMPOSITION

NATIVE WETLAND SEED MIX COMPOSITION		
% COMPOSITION	BOTANICAL NAME	COMMON NAME
20.60%	PANICUM CLANDESTINUM	DEERTONGUE
20.00%	ELYMUS RIPARIUS	RIVERBANK WILDRYE
10.00%	ANDROPOGON GERARDII	BIG BLUESTEM
10.00%	CAREX LURIDA	LURID (SHALLOW) SEDGE
10.00%	CAREX VULPINOIDEA	FOX SEDGE
8.00%	CAREX SCOPARIA	BLUNT BROOM SEDGE
8.00%	PANICUM VIRGATUM	SWITCHGRASS
4.00%	VERBENA HASTATA	BLUE VERVAIN
3.00%	JUNCUS EFFUSUS	SOFT RUSH
1.00%	ASCLEPIAS INCARNATA	SWAMP MILKWEED
1.00%	ASTER NOVAE–ANGLIAE	NEW ENGLAND ASTER
1.00%	DESMODIUM PANICULATUM	PANICLEDLEAF TICKTREFOIL
1.00%	EUPATORIUM FISTULOSUM	JOE PYE WEED
0.70%	EUPATORIUM PERFOLIATUM	BONESET
0.50%	HELENIUM AUTUMNALE	COMMON SNEEZEWEED
0.50%	MONARDA FISTULOSA	WILD BERGAMOT
0.50%	VERNONIA NOVEBORACENSIS	NEW YORK IRONWEED

60% DESIGN

REVISIONS

EG–SWMENG–_____–____ #_____

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BAYLAND JOB NO. 4_3801

HARFORD COUNTY, MARYLAND

STILLMEADOW STREAM & OUTFALL RESTORATION
ROXBURY COURT PLANTING SCHEDULE

DRAWN BY: EM
DESIGNED BY: CJS/EM
REVIEWED BY: CJS

CONTRACT NO : 16–153
SCALE : AS SHOWN
SHEET 35 OF 43
DATE : 06/05/18

ADC MAP :
TAX MAP :
HCG BILLING ID No.:
HCG DWG ID No.:
SCALE 1 inch

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