

GENERAL NOTES

FINAL PLAN

- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS SHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKING AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATION SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- STREET LIGHTING PLACEMENT AND THE TYPE OF FIXTURE AND POLE SHALL BE IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME III (1993) AND AS MODIFIED BY "GUIDELINES FOR STREET LIGHTS IN RESIDENTIAL AREAS. A MINIMUM SPACING OF 20' SHALL BE MAINTAINED BETWEEN ANY STREET LIGHT AND ANY TREE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM AERIAL SURVEY (SUPPLEMENTED BY FIELD SURVEY) WITH TWO-FOOT CONTOUR INTERVALS PREPARED BY VANMAR ASSOCIATES, INC., DATED FEBRUARY 2005.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 0911 AND 15CA WERE USED FOR THIS PROJECT.
- WATER IS PRIVATE.
- SEWER IS PRIVATE.
- THE PURPOSE OF BUILDABLE PRESERVATION PARCEL A-1 IS TO SUPPORT ONE DWELLING, FOREST CONSERVATION EASEMENTS 1 & 2 TOTALING 14.894 ACRES.
- THE PURPOSES OF NON-BUILDABLE PRESERVATION PARCELS B-1, C, D, & E ARE TO SUPPORT SWM FACILITIES.
- STORMWATER MANAGEMENT WILL BE PROVIDED BY NON-ROOF TOP DISCONNECT CREDIT AND FOUR ON-SITE WATER QUALITY FACILITIES. THE FACILITIES, LOCATED IN NON-BUILDABLE PRESERVATION PARCELS B-1, C, D, & E, WILL BE OWNED AND MAINTAINED BY THE HOA. HOWARD COUNTY WILL BE THE INTENDED EASEMENT HOLDER OF THE FOUR NON-PRESERVATION PARCELS. THE EASEMENT HOLDERS FOR BUILDABLE PRESERVATION PARCEL A-1 WILL BE HOWARD COUNTY AND THE HOA.
- THE EXISTING UTILITIES ARE BASED ON FIELD SURVEY LOCATION AND FIELD OBSERVATION. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONFIRM THE EXISTING UTILITIES WITHIN THE LIMITS OF CONSTRUCTION.
- THE FLOODPLAIN STUDY FOR THIS PROJECT WAS PREPARED BY VANMAR ASSOCIATES, INC., JULY 2005 AND APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- THE WETLANDS DELINEATION STUDY FOR THIS PROJECT WAS PREPARED BY WILDMAN ENVIRONMENTAL SERVICES, INC. JULY 2005 AND APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- THE TRAFFIC STUDY WAS FOR THIS PROJECT WAS PREPARED BY STREET TRAFFIC STUDIES, LTD. JULY 2005, SUPPLEMENTED ON MARCH 2006 AND APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- THE NOISE STUDY FOR THIS PROJECT WAS PREPARED BY WIDMAN ENVIRONMENTAL SERVICES JULY 2005 AND APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- THE GEOTECHNICAL REPORT FOR THIS PROJECT WAS PREPARED BY GTA JULY 2005.
- THE PRELIMINARY STORMWATER MANAGEMENT FACILITY REPORT WAS PREPARED BY VANMAR ASSOCIATES, INC. JULY 2005, REVISED OCTOBER 2005 & JANUARY 2006 AND APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- THE FOREST CONSERVATION EASEMENT HAS BEEN ESTABLISHED TO FULFILL THE REQUIREMENTS OF SECTION 16.1200 OF THE HOWARD COUNTY CODE AND FOREST CONSERVATION ACT. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE FOREST CONSERVATION EASEMENT; HOWEVER, FOREST MANAGEMENT PRACTICES AS DEFINED IN THE DEED OF FOREST CONSERVATION EASEMENT ARE ALLOWED. FOREST CONSERVATION PLAN WAS APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- LANDSCAPING AND STREET TREES ARE PROVIDED IN ACCORDANCE WITH SECTION 16.124 OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY LANDSCAPE MANUAL AND AS SHOWN ON THE LANDSCAPE PLAN. TREES WITH DIAMETERS AS SHOWN ARE PERMITTED WITHIN WETLANDS, STREAMS OR THEIR REQUIRED BUFFERS, FLOODPLAIN AREA AND FOREST CONSERVATION EASEMENT AREAS.
- DRIVEWAYS SHALL BE PROVIDED PRIOR TO ISSUANCE OF A USE AND OCCUPANCY PERMIT FOR ANY NEW DWELLINGS TO ENSURE SAFE ACCESS FOR FIRE AND EMERGENCY VEHICLES PER THE FOLLOWING MINIMUM REQUIREMENTS:
 - WIDTH - 12' (14' SERVING MORE THAN ONE RESIDENCE)
 - SURFACE - 6" OF COMPACTED CRUSHER RUN BASE W/TAR AND CHIP COATING (1-1/2" MIN)
 - GEOMETRY - MAX. 15% GRADE, MAX. 10% GRADE CHANGE AND MIN. 45' TURNING RADIUS
 - DRAINAGE ELEMENTS - CAPABLE OF SAFELY PASSING 100 - YEAR FLOOD WITH NO MORE THAN 1 FOOT DEPTH OVER DRIVEWAY SURFACE
- PROJECT BACKGROUND INFORMATION:

SUBDIVISION NAME:	TERRAPIN CREEK (FORMERLY SCHWABE FARM)
ZONING:	RC-DEO
TAX MAP:	15
GRID:	4 & 5
PARCEL:	12 & 43
GROSS TRACT AREA:	59.7970 ACRES
TOTAL AREA OF STEEP SLOPES:	0.5020 ACRES
TOTAL AREA FLOODPLAIN AREA:	2.3482 ACRES
NET AREA OF PROPERTY TRACT:	56.3489 ACRES
- NUMBER OF LOTS: 22
PRELIMINARY PLANS: APPROVED 7/11/06 (FINAL PLAN TO BE SUBMITTED BY NOVEMBER 17, 2006)
- A WAIVER OF DESIGN MANUAL VOLUME I, SECTION 5.2.1.A TO ALLOW CONTRIBUTING LENGTHS OF MORE THAN 150 FEET TO MEET THE SHEET FLOW TO BUFFER CREDIT WAS APPROVED ON MARCH 31, 2006. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: (1) FOR ALL AREAS IN QUESTION, STORMWATER RUNOFF WILL FLOW TOWARD THE REAR OF THE LOTS, THROUGH THE FOREST CONSERVATION EASEMENT THEN INTO THE 100 YEAR FLOODPLAIN EASEMENT AND FINALLY INTO THE STREAM. LEVEL SPREADERS ARE PROPOSED WHERE AVERAGE SLOPES OF 5% CANNOT BE OBTAINED.
- A WAIVER OF DESIGN MANUAL VOLUME III, SECTION 2.4.1 AND SECTION 2.3.1.B.1. THE REQUEST TO SECTION 2.4.1 TO ALLOW A MODIFIED SECTION FOR A PUBLIC ACCESS STREET AND PUBLIC ACCESS PLACE. THE WAIVER TO SECTION 2.3.1.B.1 TO ALLOW THE OBJECT HEIGHT FOR A STOPPING SIGHT DISTANCE CALCULATION TO BE 2 FEET WAS APPROVED ON FEBRUARY 8, 2006. APPROVAL IS SUBJECT TO THE FOLLOWING CONDITIONS: (1) THE PROPOSED MODIFIED ROAD SECTION PROVIDES FOR WIDER SHOULDER FOR COURT A (NOW TERRAPIN CREEK ROAD) AND FOR COURT B (NOW MILO COURT) OF 9 FEET. (2) THE USE OF A 2 FOOT HIGH OBJECT IS THE CURRENT STANDARD ADOPTED BY AASHTO, FOURTH EDITION, 2001. THE COUNTY DESIGN MANUAL VOLUME III REFERENCES THE USE OF AASHTO METHODS WHEN DETERMINING STOPPING SIGHT DISTANCE PROVIDED. STOPPING SIGHT DISTANCE WAS APPROVED PER PRELIMINARY SKETCH PLANS 7/11/06.
- A WAIVER OF DESIGN MANUAL VOLUME IV, DETAILS R-1.01 AND R-5.01. APPROVAL WAS PROVIDED ON JULY 15, 2006 TO ALLOW THE USE OF 22' OF ROADWAY PAVING INSTEAD OF 24'.
- A WAIVER OF DESIGN MANUAL VOLUME IV, DETAIL D-6.01. APPROVAL WAS PROVIDED ON JULY 15, 2006 TO INCREASE THE LOW RISE SWM CONTROL STRUCTURE WIDTH FROM THE STANDARD 5' TO 7'.
- THIS PROJECT IS SUBJECT TO THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS PER COUNCIL BILL No. 45-2003 AND THE ZONING REGULATIONS AS AMENDED BY COUNCIL BILL No. 75-2003.
- A DEMOLITION PERMIT MUST BE PROVIDED FOR STRUCTURES TO BE REMOVED AT THE FINAL PLAN STAGE. 95% COMPACTION REQUIRED IN FILL AREA PER AASHTO-T80 SPECIFICATIONS.
- THE FOLLOWING HOWARD COUNTY STANDARD NOTES ARE PROVIDED AS FOLLOWS:
 - A 5-FOOT HORIZONTAL CLEARANCE AND A 1-FOOT VERTICAL CLEARANCE SHALL BE MAINTAINED FROM ALL EXISTING AND PROPOSED WATER LINES, SEWER LINES, FIRE HYDRANTS, STORM DRAINS AND RELATED APPURTENANCES WHEN INSTALLING CABLE, TRANSFORMER PEDESTALS, GAS LINES, UTILITY POLES, AND GUIDE WIRES.
 - ANY PEDESTAL PLACED IN CONFLICT WITH SIDEWALK OR COUNTY OWNED/MAINTAINED UTILITY WILL BE MOVED AT THE COMPANY'S EXPENSE.
- SIGN POSTS: ALL SIGN POST USED FOR TRAFFIC CONTROL SIGNS INSTALLED IN THE COUNTY RIGHT-OF-WAY SHALL BE MOUNTED ON A 2" GALVANIZED STEEL PERFORATED SQUARE TUBE POST (14 GAUGE) INSERTED INTO A 2-1/2" GALVANIZED STEEL PERFORATED SQUARE TUBE SLEEVE (12 GAUGE) - 3' LONG. A GALVANIZED STEEL POLE CAP SHALL BE MOUNTED ON TOP OF EACH POST.
- FOREST CONSERVATION IS FULFILLED BY RETENTION OF 15.1890 ACRES OF FOREST AND A 132,309.14 SQUARE FEET WITH THE DEVELOPER'S AGREEMENT

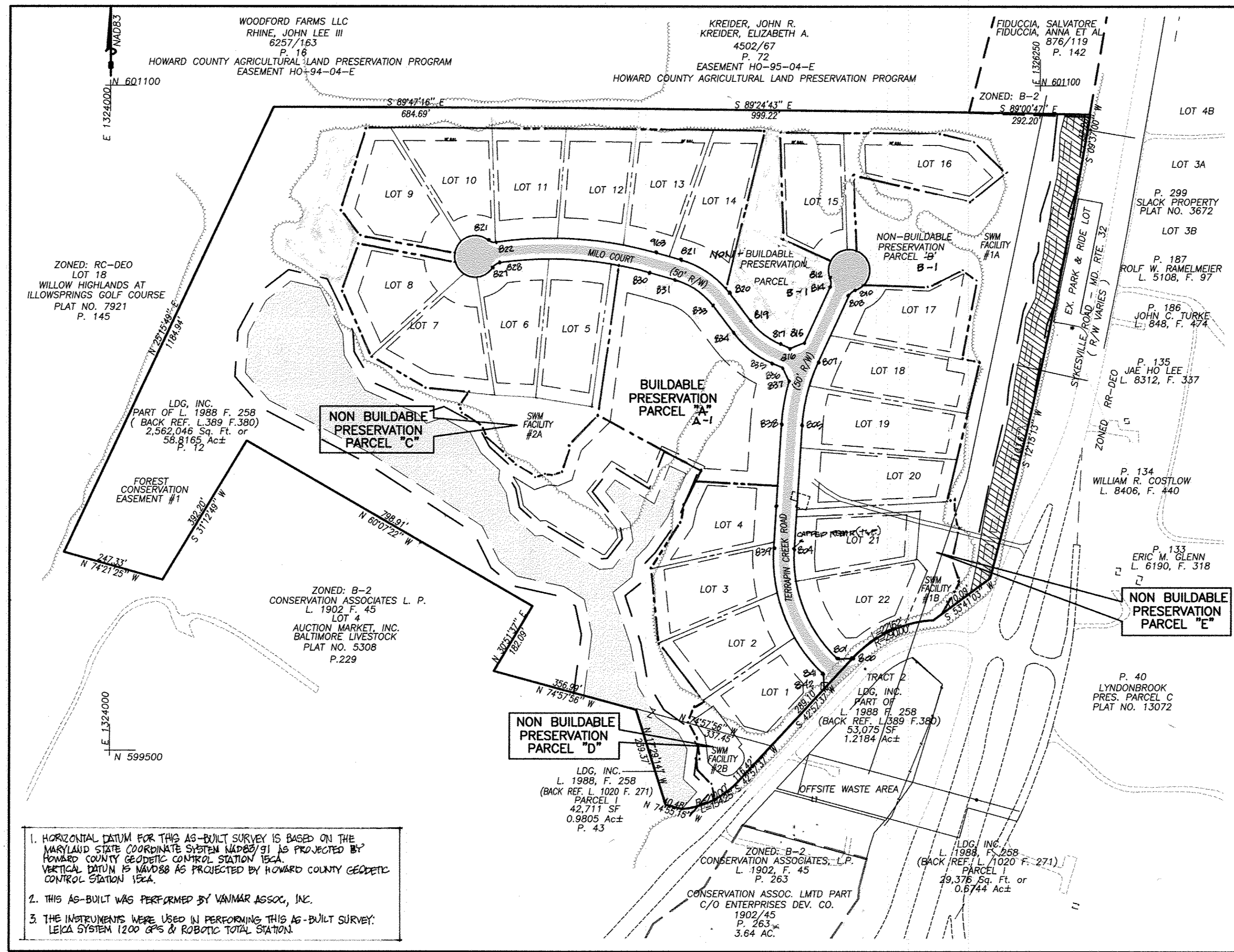
TERRAPIN CREEK

(FORMERLY SCHWABE FARM) SINGLE FAMILY DETACHED

ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND

FINAL ROAD CONSTRUCTION, STORM DRAIN, AND STORMWATER MANAGEMENT PLANS

PT. NO.	REMARKS	ELEVATION
000	REBAR & CAP	556.65
001	REBAR & CAP	556.64
002	REBAR & CAP	516.93
003	REBAR & CAP	570.64
004	REBAR & CAP	590.01
005	REBAR & CAP	585.55
006	REBAR & CAP	583.74
007	REBAR & CAP	584.93
008	REBAR & CAP	584.06
009	REBAR & CAP	589.48
010	CONC. MON.	521.16
011	REBAR & CAP	592.22
012	REBAR & CAP	595.96
013	REBAR & CAP	602.36
014	REBAR & CAP	607.46
015	REBAR & CAP	608.00
016	REBAR & CAP	606.62
017	REBAR & CAP	608.07
018	REBAR & CAP	607.93
019	REBAR & CAP	602.59
020	REBAR & CAP	602.64
021	REBAR & CAP	607.93
022	REBAR & CAP	607.93
023	REBAR & CAP	596.29
024	REBAR & CAP	591.45
025	REBAR & CAP	590.76
026	REBAR & CAP	589.52
027	REBAR & CAP	591.94
028	REBAR & CAP	554.78
029	CONC. MON.	556.64
030	REBAR & CAP	610.02



LOCATION MAP

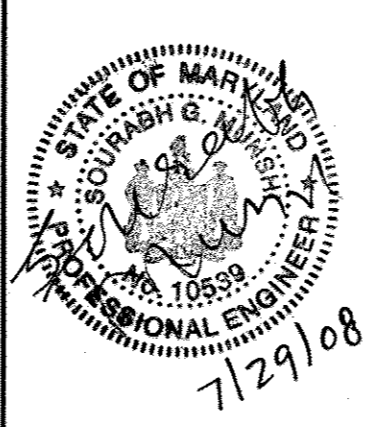
SCALE: 1" = 200'

AS-BUILT CERTIFICATION
I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.
Ronald E. Thompson
Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 5/13/2012

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. 10539, Expiration Date: 8-17-08.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

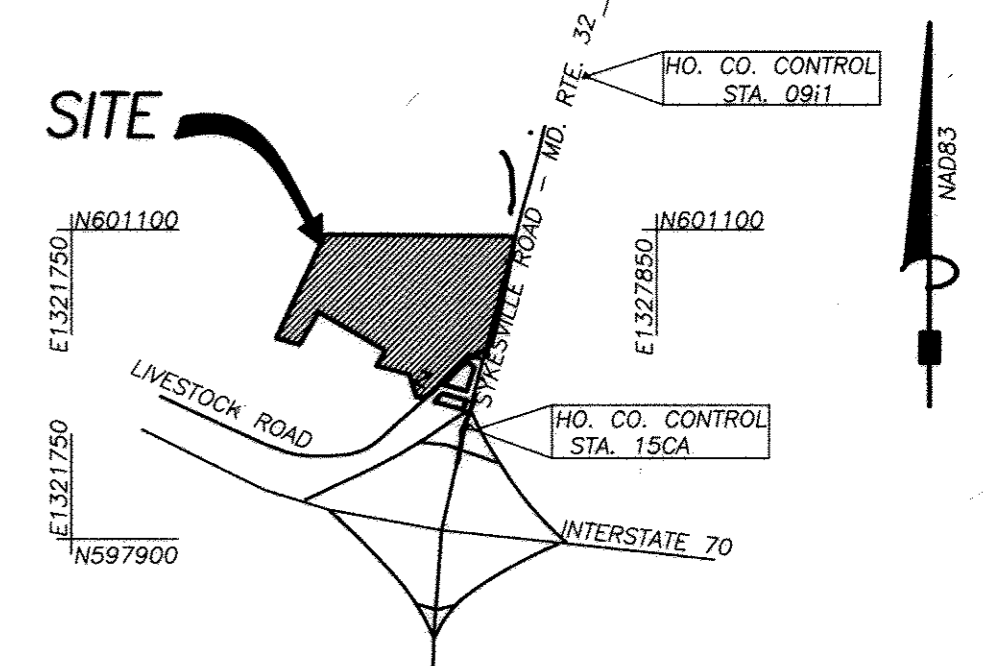
VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS
02/26/07	RESPONSE TO HOWARD CO. DECEMBER 2006 COMMENTS
05/18/07	RESPONSE TO HOWARD CO. MARCH 2007 COMMENTS
08/09/07	RESPONSE TO HOWARD CO. JUNE 2007 COMMENTS
10/10/07	RESPONSE TO HOWARD CO. AUGUST 2007 COMMENTS
12/14/07	RESPONSE TO HOWARD CO. OCTOBER 2007 COMMENTS
1/22/11	Buildable Preservation Parcel A (Now A-1) Non-Buildable Preservation Parcel B (Now B-1)

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William R. McManis
William R. McManis
CHIEF, BUREAU OF HIGHWAYS
DATE: 8-25-08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Paula Hancock
Paula Hancock
CHIEF, DEVELOPMENT ENGINEERING DIVISION
DATE: 9/23/08



VICINITY MAP SCALE: 1"=2000'

NOTES
THIS SURVEY IS IN THE MARYLAND STATE PLANE COORDINATE SYSTEM BASED ON GPS OBSERVATIONS INCORPORATING THE FOLLOWING HOWARD COUNTY, MARYLAND CONTROL STATIONS:
STATION 0911 N 602689.2972 E 1326821.4643
STATION 15CA N 598862.6225 E 1325913.7532

BENCH MARKS (NAD83)
BENCHMARK NO. 1 - HO. CO. NO. 091
HOWARD COUNTY CONCRETE MONUMENT LOCATED ON NORTHSIDE OF RTE. 32 500 FEET NORTH OF RTE. 99.
N 602689.2972 E 1326821.4643 ELEV. 652.625
BENCHMARK NO. 2 - HO. CO. NO. 15CA
HOWARD COUNTY STAMPED DISK LOCATED IN ISLAND RTE. 32 RAMPS TO /FROM INTERSTATE 70 WESTBOUND LANES
N 598862.6225 E 1325913.7532 ELEV. 515.439

INDEX OF SHEETS

SHEET 1 OF 25 - COVERSHEET	
SHEET 2 OF 25 - PLAN & PROFILE-TERRAPIN CREEK ROAD-	RP-1
SHEET 3 OF 25 - PLAN & PROFILE-MILO COURT-	RP-2
SHEET 4 OF 25 - PLAN & CROSS SECTION-LIVESTOCK ROAD-	RP-3
SHEET 5 OF 25 - ROADWAY PROFILES & DETAILS-	RP-4
SHEET 6 OF 25 - GRADING & STORM DRAIN/DRAINAGE AREA MAP-	GSD-1
SHEET 7 OF 25 - GRADING & STORM DRAIN/DRAINAGE AREA MAP-	GSD-2
SHEET 8 OF 25 - GRADING & STORM DRAIN/DRAINAGE AREA MAP-	GSD-3
SHEET 9 OF 25 - GRADING & STORM DRAIN/DRAINAGE AREA MAP-	GSD-4
SHEET 10 OF 25 - SEDIMENT & EROSION CONTROL PLAN-	SC-1
SHEET 11 OF 25 - SEDIMENT & EROSION CONTROL PLAN-	SC-2
SHEET 12 OF 25 - SEDIMENT & EROSION CONTROL PLAN-	SC-3
SHEET 13 OF 25 - SEDIMENT & EROSION CONTROL PLAN-	SC-4
SHEET 14 OF 25 - SEDIMENT & EROSION CONTROL PLAN-	SC-5
SHEET 15 OF 25 - STORM DRAIN PROFILES, NOTES & SCHEDULES-	SD-1
SHEET 16 OF 25 - SWM PLAN, PROFILES, & DETAILS-POND#1A-	SWM-1
SHEET 17 OF 25 - SWM PLAN, PROFILES, & DETAILS-POND#1B-	SWM-2
SHEET 18 OF 25 - SWM PLAN, PROFILES, & DETAILS-POND#2A-	SWM-3
SHEET 19 OF 25 - SWM PLAN, PROFILES, & DETAILS-POND#2B-	SWM-4
SHEET 20 OF 25 - STORMWATER MANAGEMENT SPECIFICATIONS & DETAILS	SWM-5
SHEET 21 OF 25 - SWM PLAN, BORING LOGS	SWM-6
SHEET 22 OF 25 - SWM PLAN, LANDSCAPE-FACILITIES 1A,1B,2A & 2B	SWM-LS1
SHEET 23 OF 25 - LANDSCAPE PLAN & STREET TREE PLAN-	LS-1
SHEET 24 OF 25 - LANDSCAPE PLAN, PERIMETERS-	LS-2
SHEET 25 OF 25 - FOREST CONSERVATION PLAN-	FCP-1

DENSITY TABULATION CHART

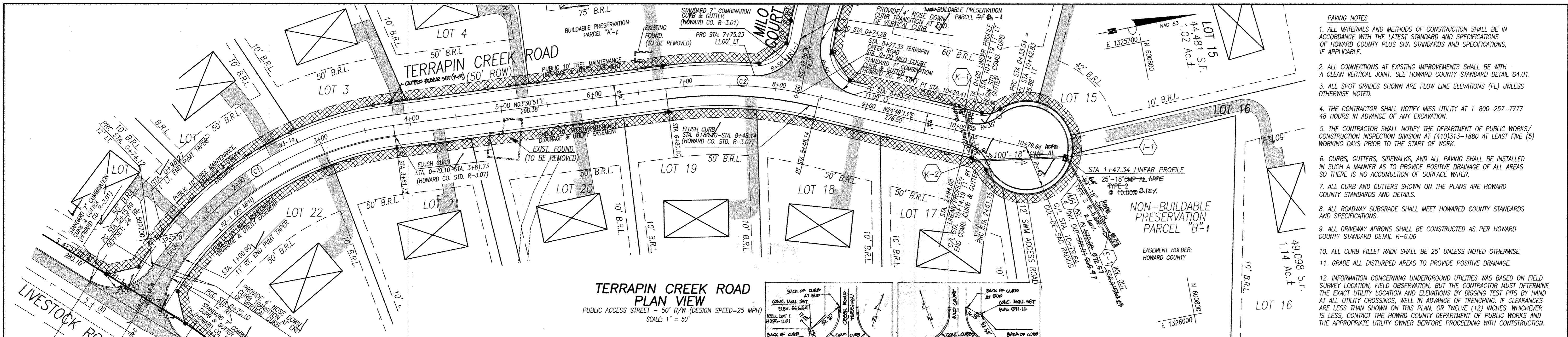
GROSS AREA OF PROPERTY:	59.7970 Ac±
100 YR. FLOODPLAIN AREA:	2.3482 Ac±
2% or GREATER SLOPE AREA (OUTSIDE OF FLOODPLAIN):	0.5020 Ac±
NET TRACT AREA:	56.3489 Ac±
MAX. DWELLING UNITS ALLOWED AT 1 UNIT PER 4.0 AC. (BASED DENSITY-GROSS AREA):	14 LOTS
MAX. DWELLING UNITS ALLOWED W/CEO'S AT 1 UNIT PER 2 NET ACRES MAXIMUM DENSITY:	28 LOTS
PROPOSED NO. OF DWELLING UNITS (INCLUDING 1 BUILDABLE PRESERVATION PARCEL):	23
TOTAL NO. OF CEO UNITS TO BE RECEIVED (23-15):	9 CEO UNITS

"AS-BUILT"
OWNER / DEVELOPER
LDG. INC.
LEE PLAZA, SUITE 200
8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910
(301) 585-7000

CONSTRUCTION PLANS COVER SHEET

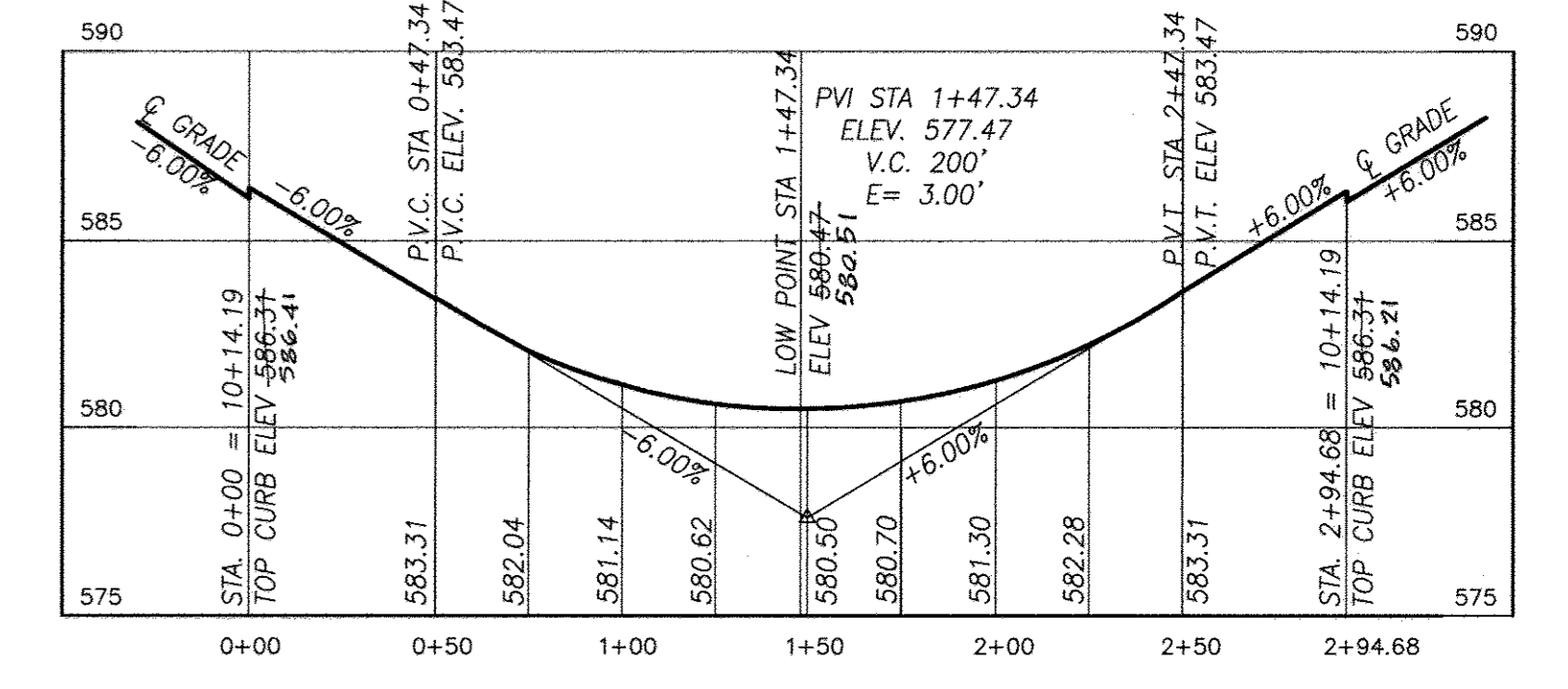
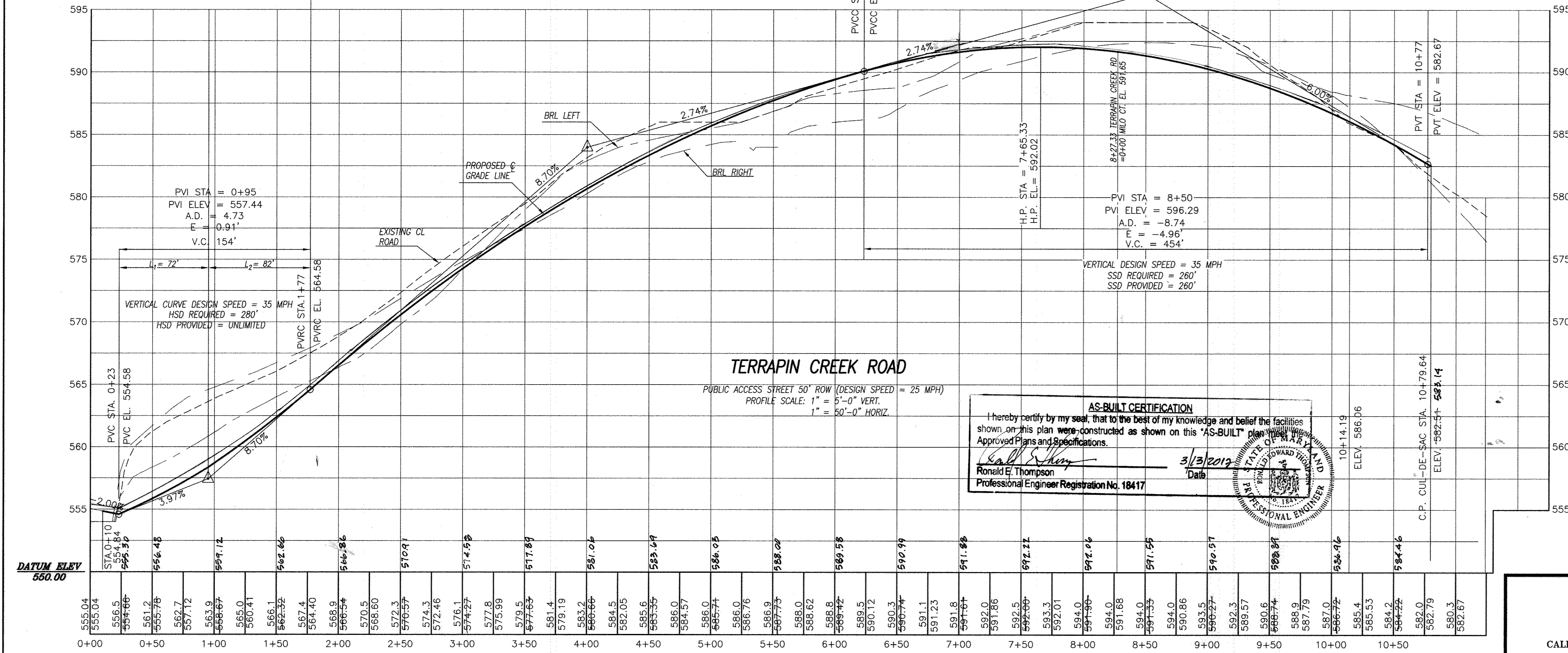
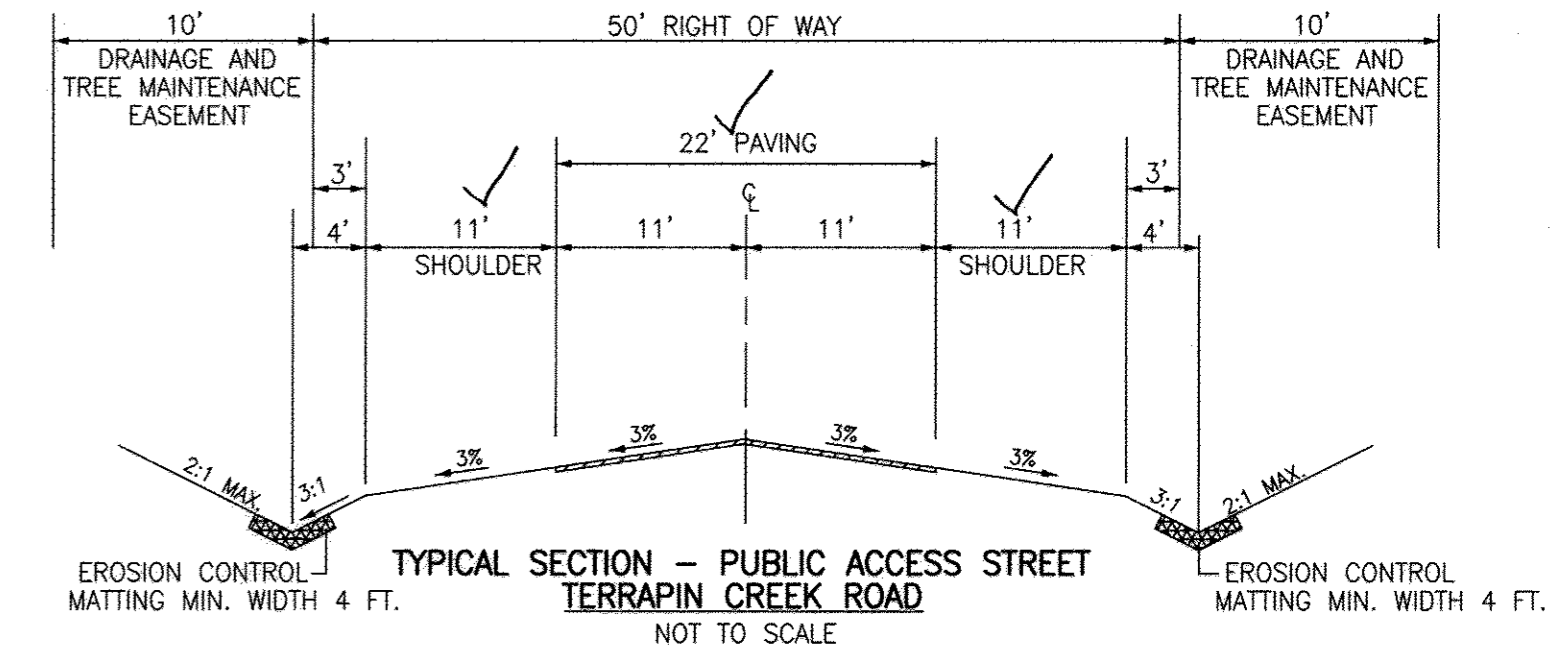
TERRAPIN CREEK (FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258
TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3
HOWARD COUNTY, MARYLAND
NOVEMBER, 2006 SHEET 1 OF 25
DPZ FILES: SP-06-002



NOTE: 95% COMPACTION AS PER AASHTO-T180 IS REQUIRED FOR ALL FILL AREA.

NUMBER	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHORD DIRECTION	CH. LENGTH	PC STATION	PT STATION
C1	357.00	315.08	50°34'05"	168.63	S 21°46'11" E	304.95	0+66.65	3+81.73
C2	451.88	168.04	21°18'22"	85.00	S 14°10'05" W	167.07	6+80.10	8+48.14



AS-BUILT CERTIFICATION
I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan in accordance with the Approved Plans and Specifications.

Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 3/13/2019

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. 10539, Expiration Date: 8-17-09.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

- PAVING NOTES
1. ALL MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARD AND SPECIFICATIONS OF HOWARD COUNTY PLUS SHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
 2. ALL CONNECTIONS AT EXISTING IMPROVEMENTS SHALL BE WITH A CLEAN VERTICAL JOINT. SEE HOWARD COUNTY STANDARD DETAIL 64.01.
 3. ALL SPOT GRADES SHOWN ARE FLOW LINE ELEVATIONS (FL) UNLESS OTHERWISE NOTED.
 4. THE CONTRACTOR SHALL NOTIFY MISS UTILITY AT 1-800-257-7777 48 HOURS IN ADVANCE OF ANY EXCAVATION.
 5. THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/ CONSTRUCTION INSPECTION DIVISION AT (410)313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
 6. CURBS, GUTTERS, SIDEWALKS, AND ALL PAVING SHALL BE INSTALLED IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE OF ALL AREAS SO THERE IS NO ACCUMULATION OF SURFACE WATER.
 7. ALL CURBS AND GUTTERS SHOWN ON THE PLANS ARE HOWARD COUNTY STANDARDS AND DETAILS.
 8. ALL ROADWAY SUBGRADE SHALL MEET HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
 9. ALL DRIVEWAY APRONS SHALL BE CONSTRUCTED AS PER HOWARD COUNTY STANDARD DETAIL R-6.06
 10. ALL CURB FILLET RADII SHALL BE 25' UNLESS NOTED OTHERWISE.
 11. GRADE ALL DISTURBED AREAS TO PROVIDE POSITIVE DRAINAGE.
 12. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS BASED ON FIELD SURVEY LOCATION, FIELD OBSERVATION, BUT THE CONTRACTOR MUST DETERMINE THE EXACT UTILITY LOCATION AND ELEVATIONS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN, OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Candida Hunt
CHIEF, DIVISION OF LAND DEVELOPMENT
9/24/18
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William R. Wall
CHIEF, BUREAU OF HIGHWAYS
8-23-08
DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
110 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751

PROFESSIONAL ENGINEER
Ronald E. Thompson
7/29/08

DATE	REVISIONS
1/22/16	Buildable Preservation Parcel "A" (Now A-1) Non-Buildable Preservation Parcel B (Now B-1)

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

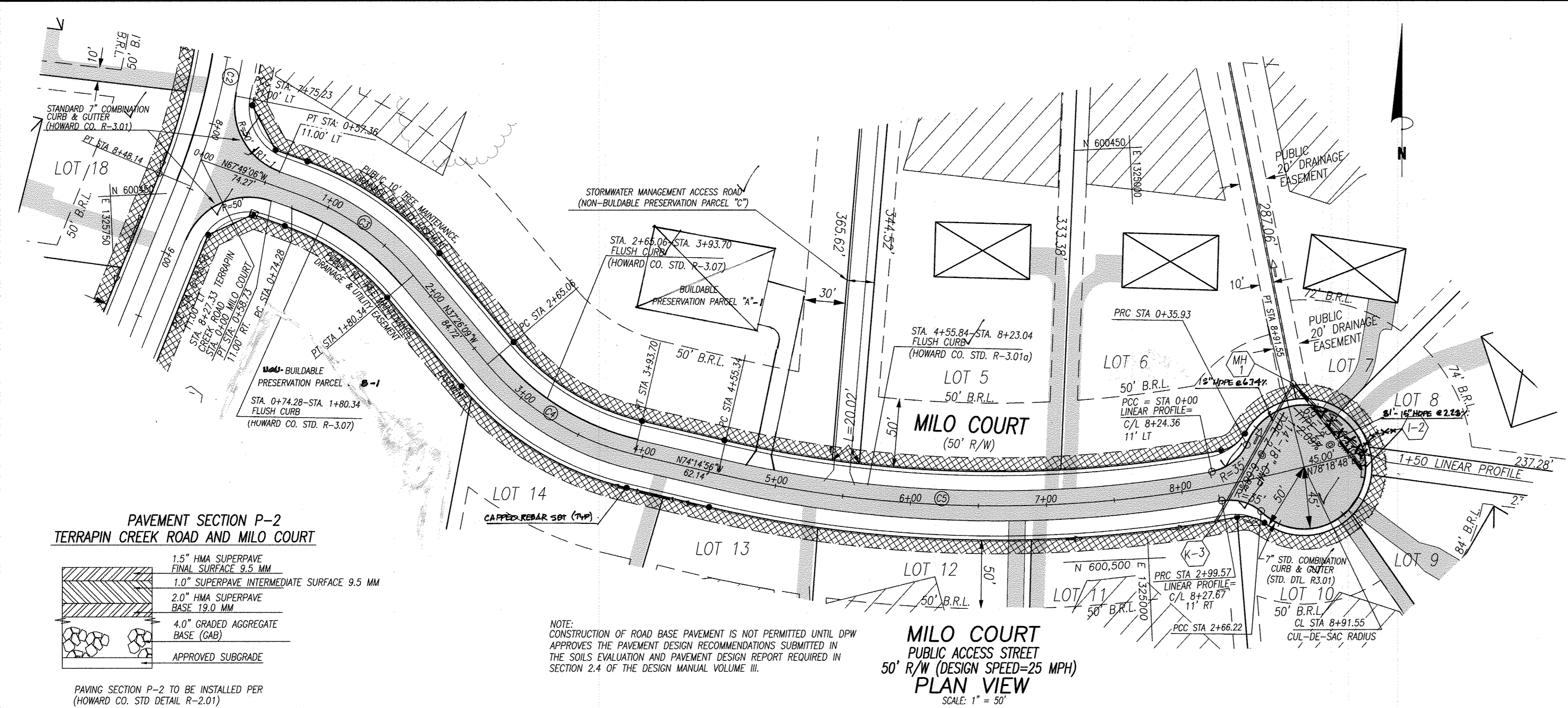
(PUBLIC ACCESS STREET)
TERRAPIN CREEK ROAD
PLAN & PROFILE

TERRAPIN CREEK
(FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

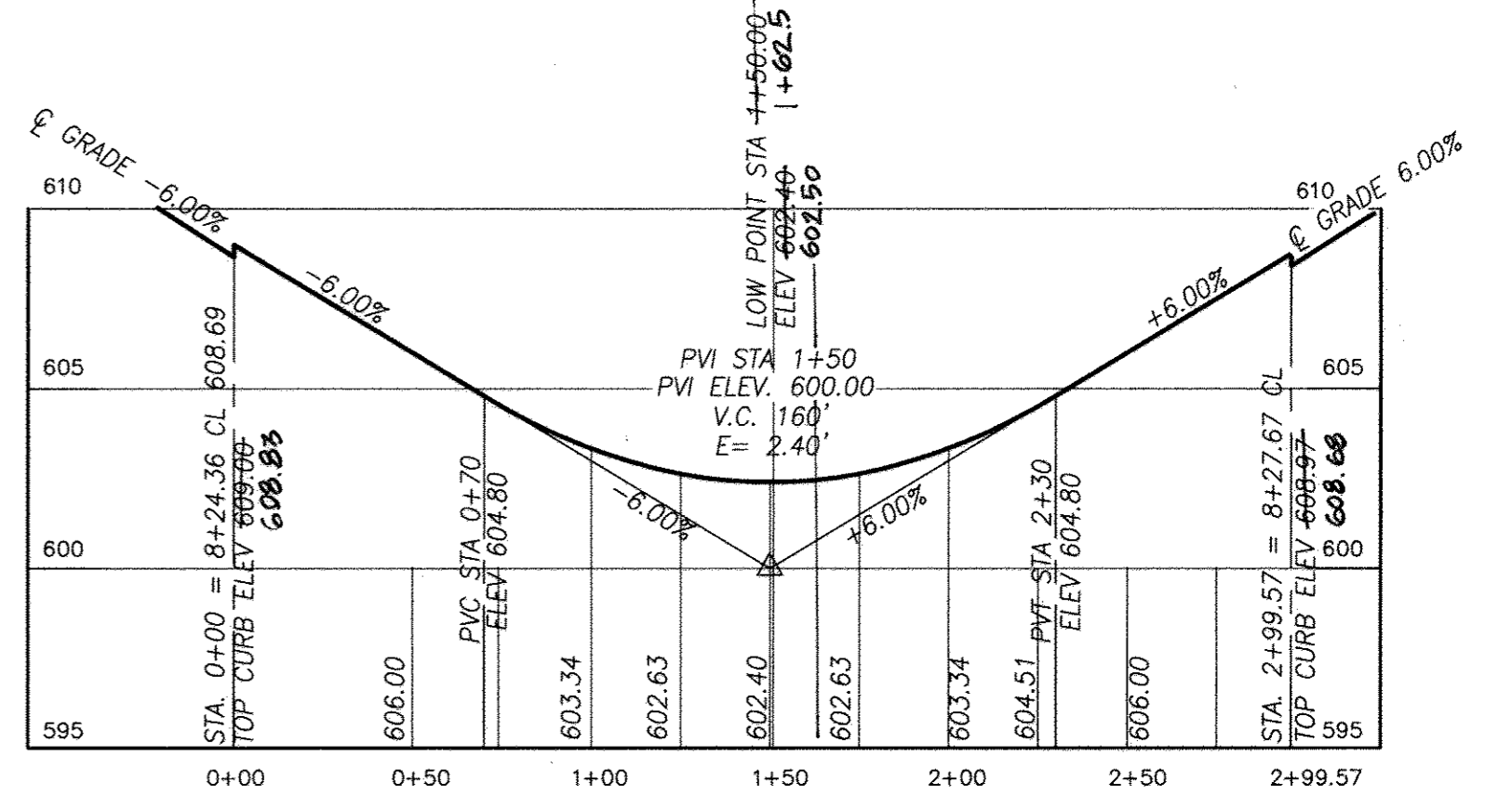
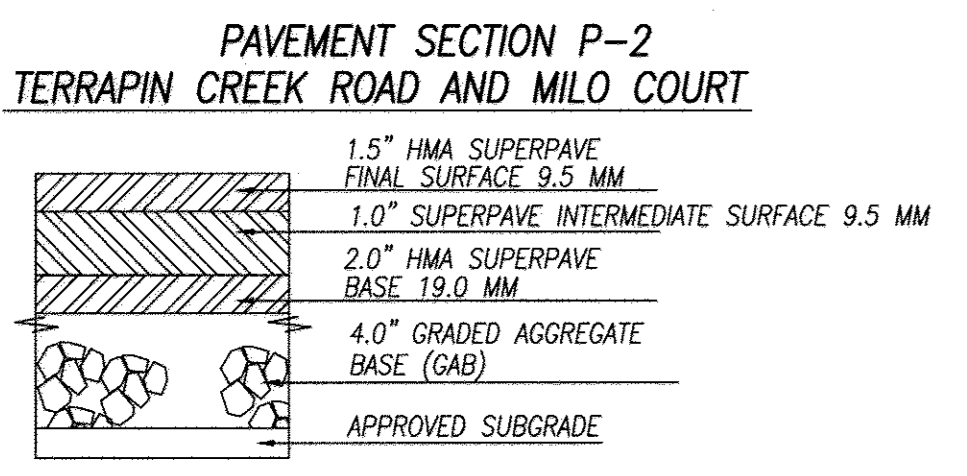
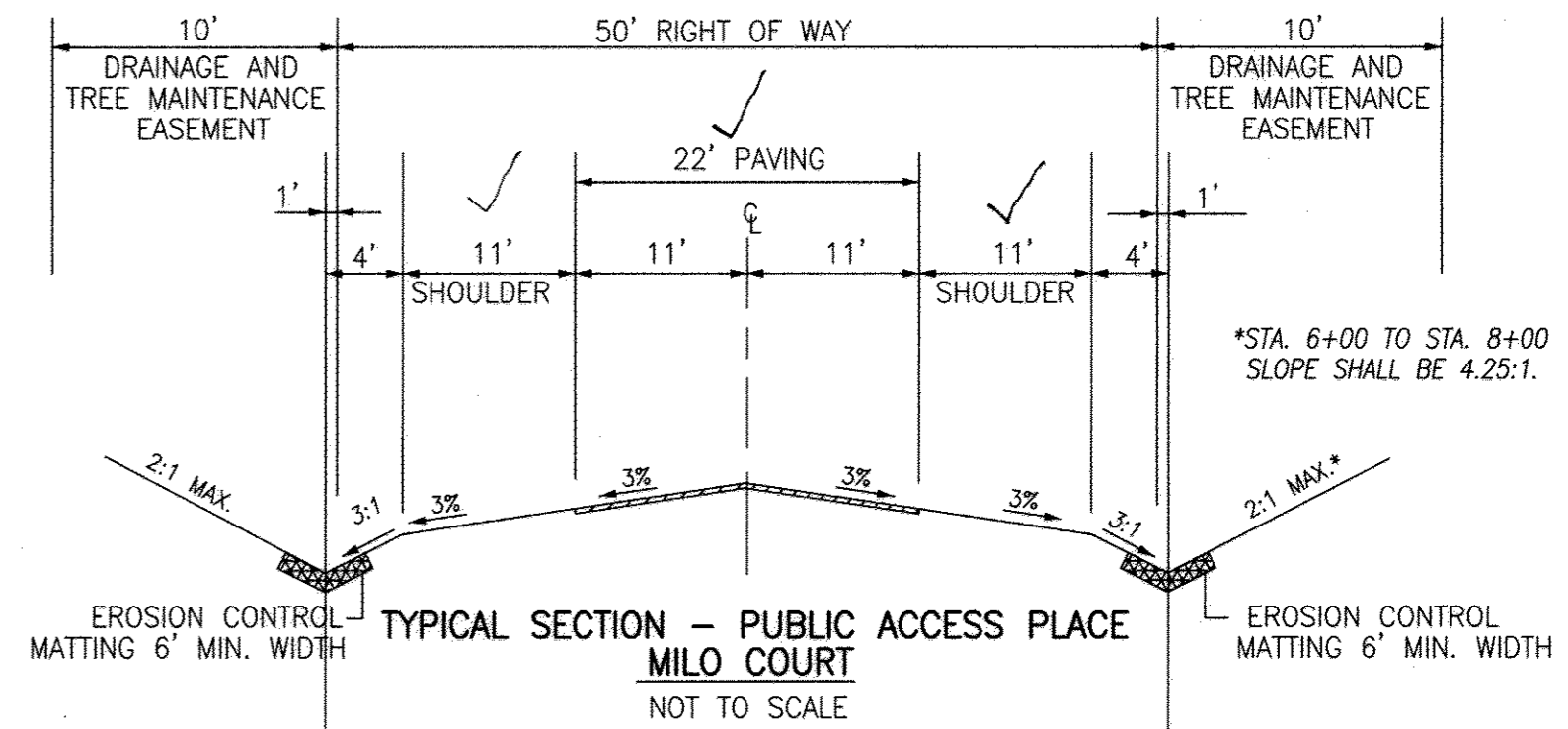
TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
AUGUST, 2006 SHEET 2 OF 25

DPZ FILES: SP-06-002
INEX No. RP-1
F-07-086



CENTERLINE CURVE DATA MILo COURT								
NUMBER	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHORD DIRECTION	CH. LENGTH	PC STATION	PT STATION
C3	200.00	106.06	30°22'57"	34.31	S 52°37'38" E	104.82	0+74.28	1+80.34
C4	200.22	128.64	36°48'46"	66.63	N 55°50'32" W	126.44	2+65.06	3+93.70
C5	910.00	435.57	27°25'28"	222.04	N 87°50'28" W	431.42	4+55.84	8+91.41

NOTES: SEE SHEET 2 FOR PAVING NOTES.



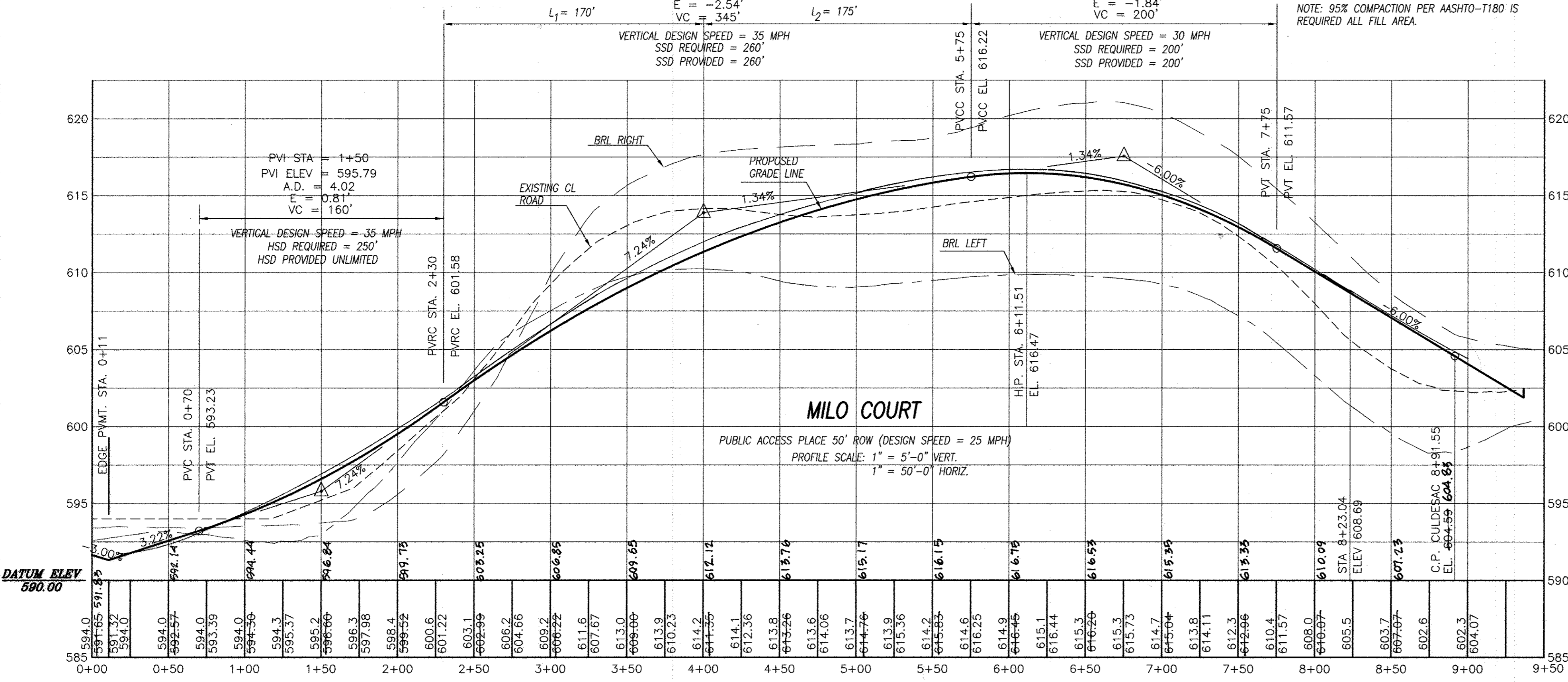
NOTE: CONSTRUCTION OF ROAD BASE PAVEMENT IS NOT PERMITTED UNTIL DPW APPROVES THE PAVEMENT DESIGN RECOMMENDATIONS SUBMITTED IN THE SOILS EVALUATION AND PAVEMENT DESIGN REPORT REQUIRED IN SECTION 2.4 OF THE DESIGN MANUAL VOLUME III.

**MILo COURT
PUBLIC ACCESS STREET
50' R/W (DESIGN SPEED=25 MPH)
PLAN VIEW**
SCALE: 1" = 50'

PVI STA = 4+00
PVI ELEV = 613.89
A.D. = -5.90
E = -2.54'
VC = 345'

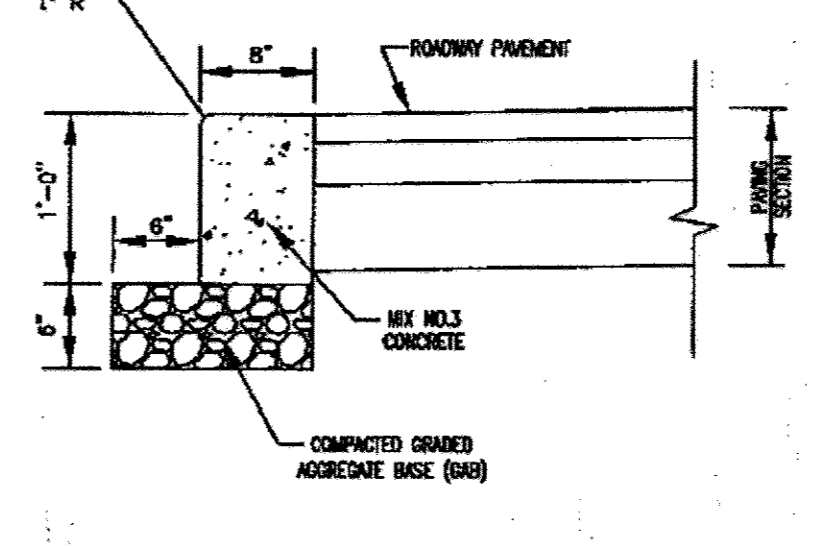
PVI STA = 6+75
PVI ELEV = 617.58
A.D. = -7.33
E = -1.84'
VC = 200'

NOTE: 95% COMPACTION PER AASHTO-T180 IS REQUIRED ALL FILL AREA.

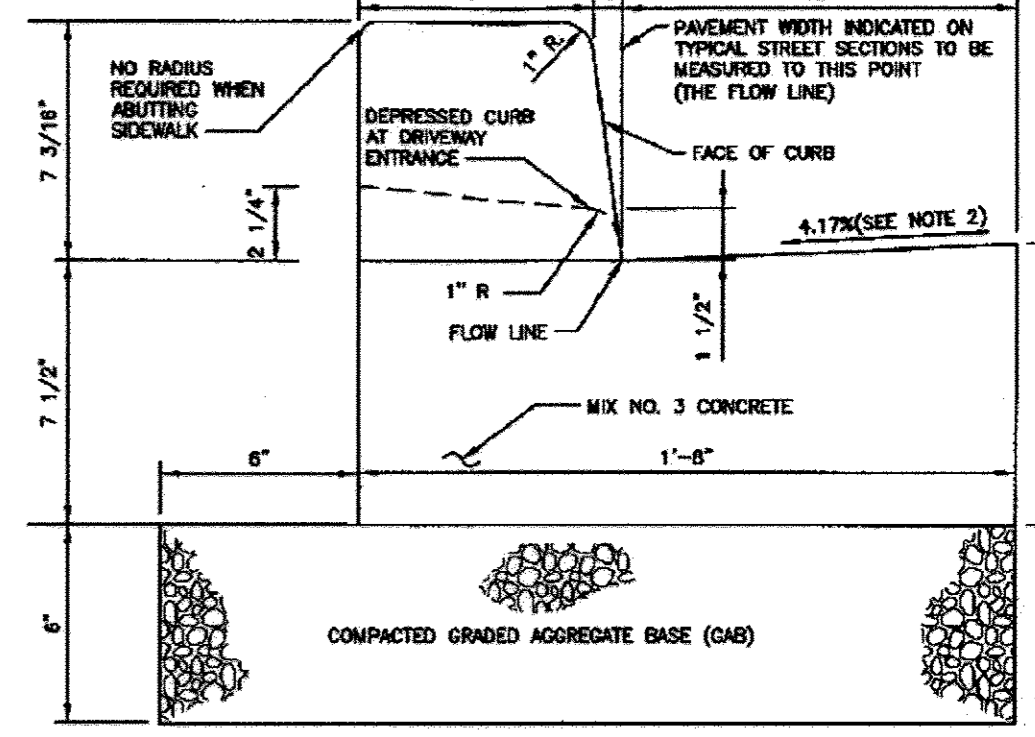


MILo COURT

PUBLIC ACCESS PLACE 50' ROW (DESIGN SPEED = 25 MPH)
PROFILE SCALE: 1" = 5'-0" VERT.
1" = 50'-0" HORIZ.



**FLUSH CURB DETAIL
HOWARD COUNTY STD. R-3.07**



**7" COMBINATION CURB AND GUTTER
HOWARD COUNTY STD. R-3.01
"AS-BUILT"**

AS-BUILT CERTIFICATION
I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 18411
Date: 3/13/2012

SECTION NUMBER	ROAD AND "STREET" CLASSIFICATION
P-2	RESIDENTIAL ZONES LOCAL, CUL-DE-SAC STS., ALLEYS AND PRIVATE ROADS SERVING INDIVIDUAL LOTS TAVELWAYS APARTMENTS AND COMMERCIAL-INDUSTRIAL ZONES WITH NO MORE THAN 10 HEAVY TRUCKS PER DAY**

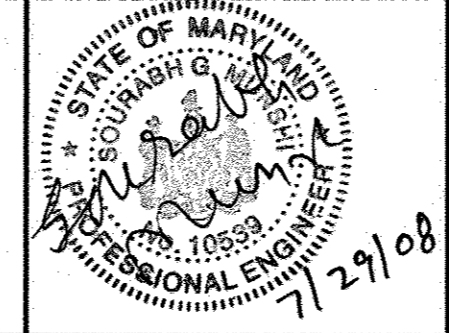
CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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. 105539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
9/23/08
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
8-25-08
DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829-2890 (301)851-5015 (410) 549-2751



DATE	REVISIONS
11/21/10	Buildable Preservation Parcel A (Now A-1)
8/3/11	Non-Buildable Preservation Parcel B (Now B-1) HOUSE LOCATION AND DRIVEWAY ADDED TO BUILDABLE PRESERVATION PARCEL A-1.

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

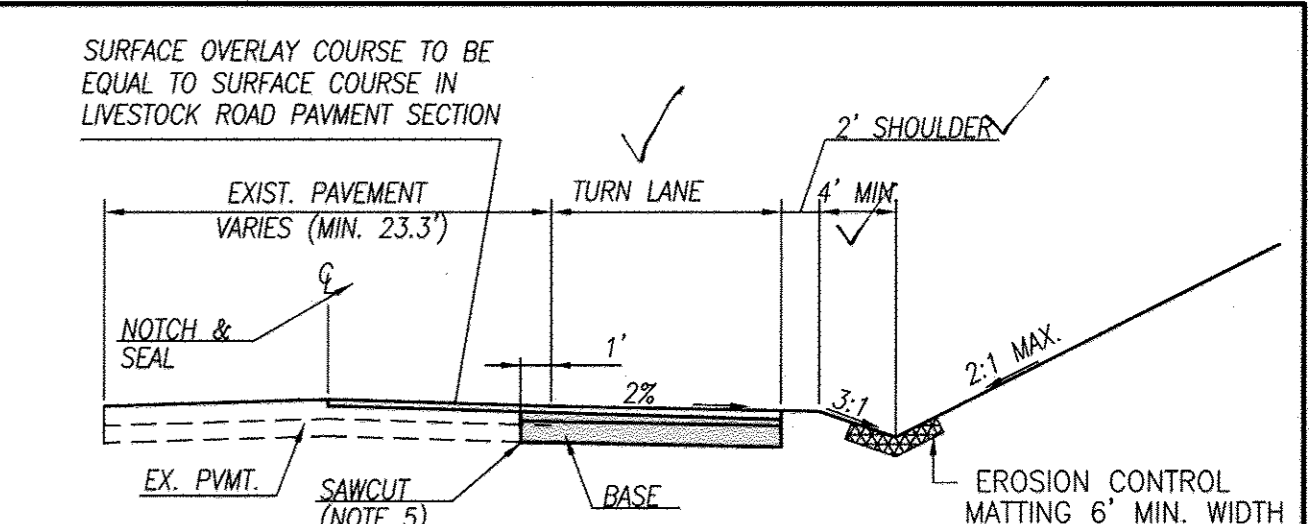
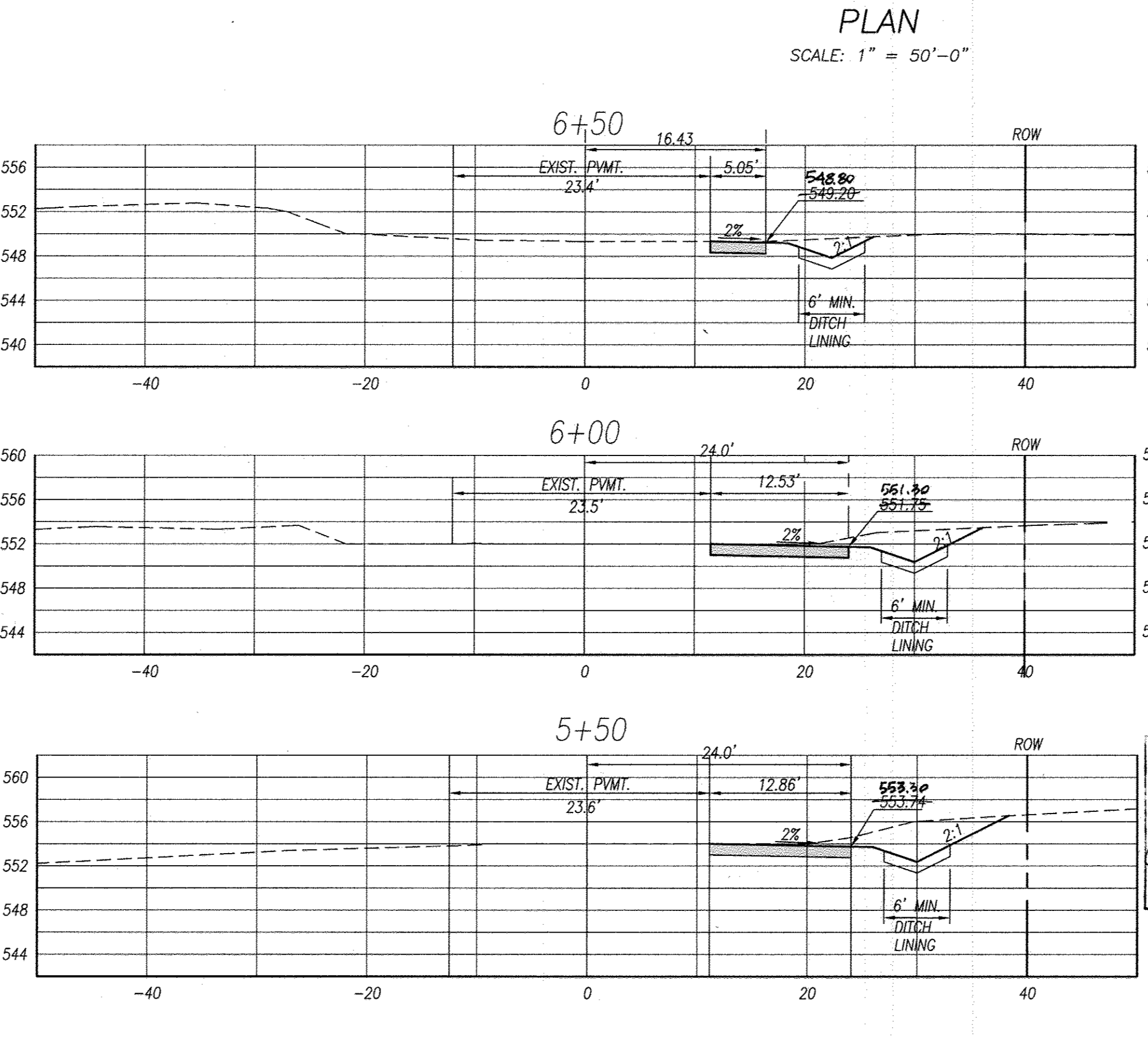
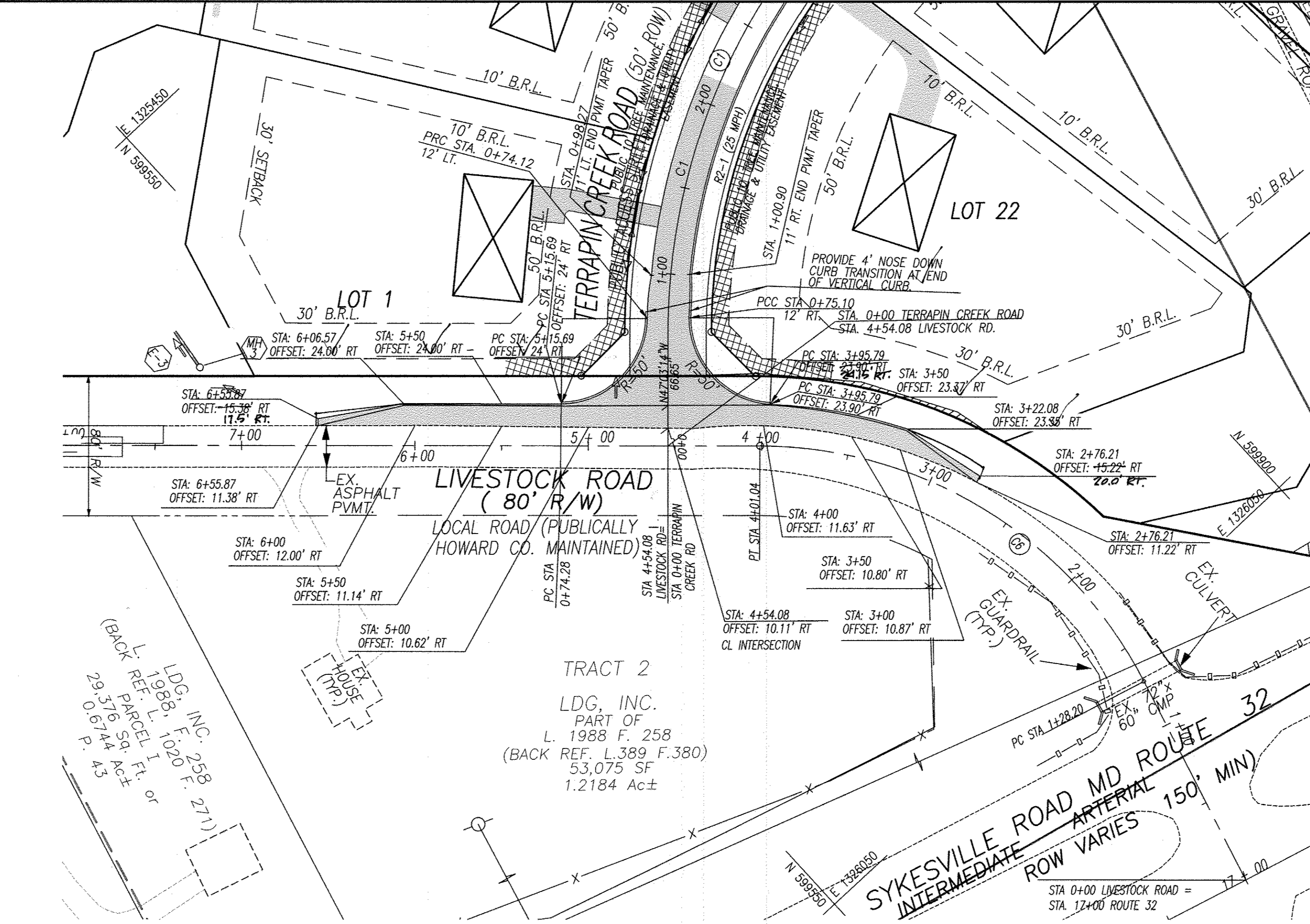
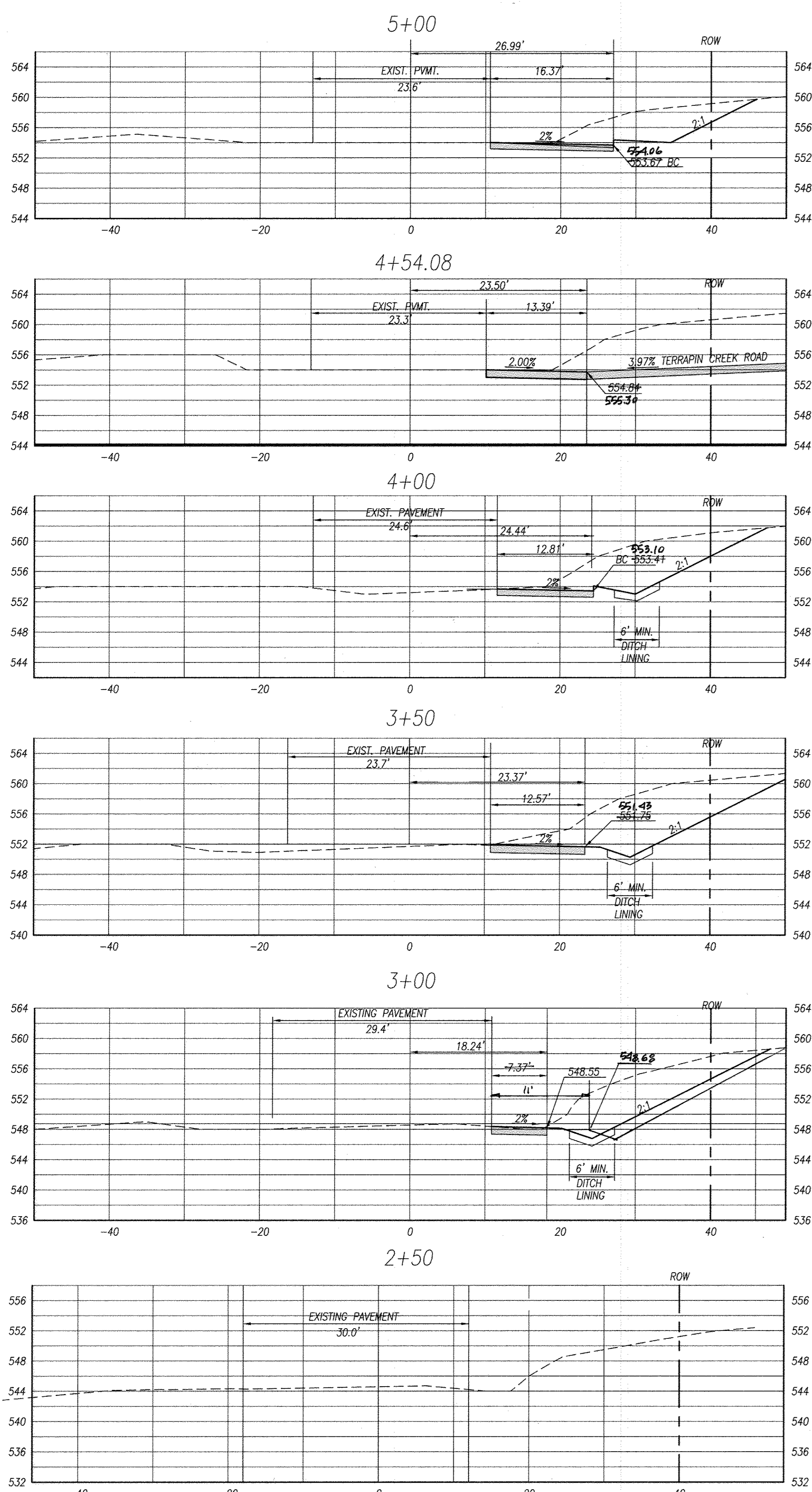
**(PUBLIC ACCESS PLACE)
MILo COURT
PLAN & PROFILE**

**TERRAPIN CREEK
(FORMERLY SCHWABE FARM)**

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-A, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT NO. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
AUGUST, 2006 SHEET 3 OF 25

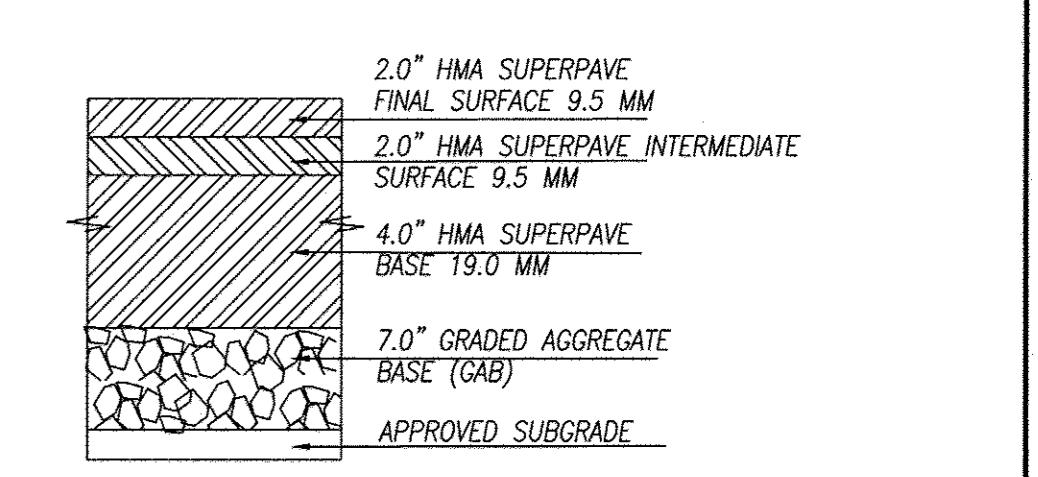
DPZ FILES: SP-06-002 INDEX No. RP-2



TYPICAL SECTION
LIVESTOCK ROAD
N.T.S.

- NOTES:
- EXISTING PAVEMENT CROSS SLOPE VARIES. SEE CROSS SECTIONS.
 - EXISTING PAVEMENT WIDTH VARIES. SEE CROSS SECTIONS.
 - WIDEN ROADWAY TO PROVIDE 12' TURN LANE - SEE CROSS SECTIONS FOR WIDTH (DETAIL OF PAVEMENT WIDENING).
 - TURN LANE CROSS SLOPE VARIES WITHIN LIMITS OF TERRAPIN CREEK ROAD INTERSECTION.
 - PROVIDE MINIMUM 1' WIDTH FULL DEPTH SAW CUT IN EXISTING PAVEMENT FOR ROAD WIDENING.
 - SEE PAVING NOTES (SHEET 2).

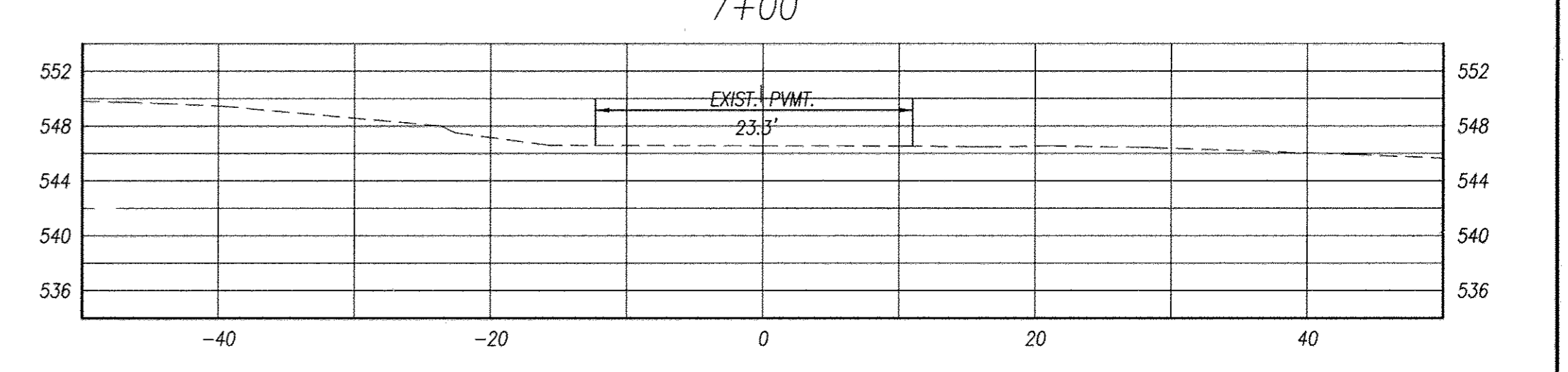
LIVESTOCK ROAD PAVEMENT SECTION P-4



SECTION NUMBER	ROAD AND STREET CLASSIFICATION
P-4	COMMERCIAL - INDUSTRIAL ZONES MINOR COLLECTOR

CURVE TABLE								
CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	TANGENT	CHD DIRECTION	CHD LENGTH	PC STATION	PT STATION
C6	250.00	272.84	62°31'49"	151.79	S74°17'39"W	259.50	1+28.20	4+01.04

CENTERLINE COORDINATE TABLE			
STA. 0+00 LIVESTOCK ROAD	/	STA. 17+00 RTE 32	N 599,732.98 E 1,326,201.69
STA. 0+00 TERRAPIN CREEK ROAD	/	STA. 4+54.08 LIVESTOCK ROAD	N 599,658.35 E 1,325,492.18



CROSS SECTIONS
SCALE: HORIZ: 1" = 10'-0"
VERT: 1" = 10'-0"

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. 10539, Expiration Date: 8-17-09.

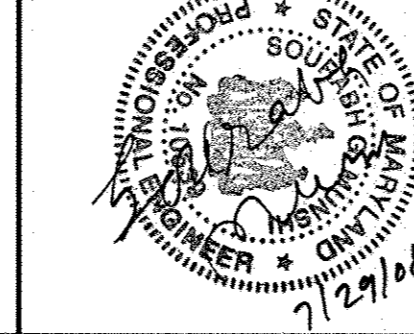
AS-BUILT CERTIFICATION
I hereby certify by my seal and signature that my knowledge and belief the facilities shown on this plan were constructed in accordance with this "AS-BUILT" plan meet the approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 18411
Date 3/12/2012

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cynthia Hamer
CHIEF, DIVISION OF LAND DEVELOPMENT
7/23/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Willa Z. White
CHIEF, BUREAU OF HIGHWAYS
8-25-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829-2890 (301) 851-5015 (410) 549-2751



DATE	REVISIONS
1/22/14	Buildable Preservation Parcel A - (Now A-1)
	Buildable Preservation Parcel B - (Now B-1)

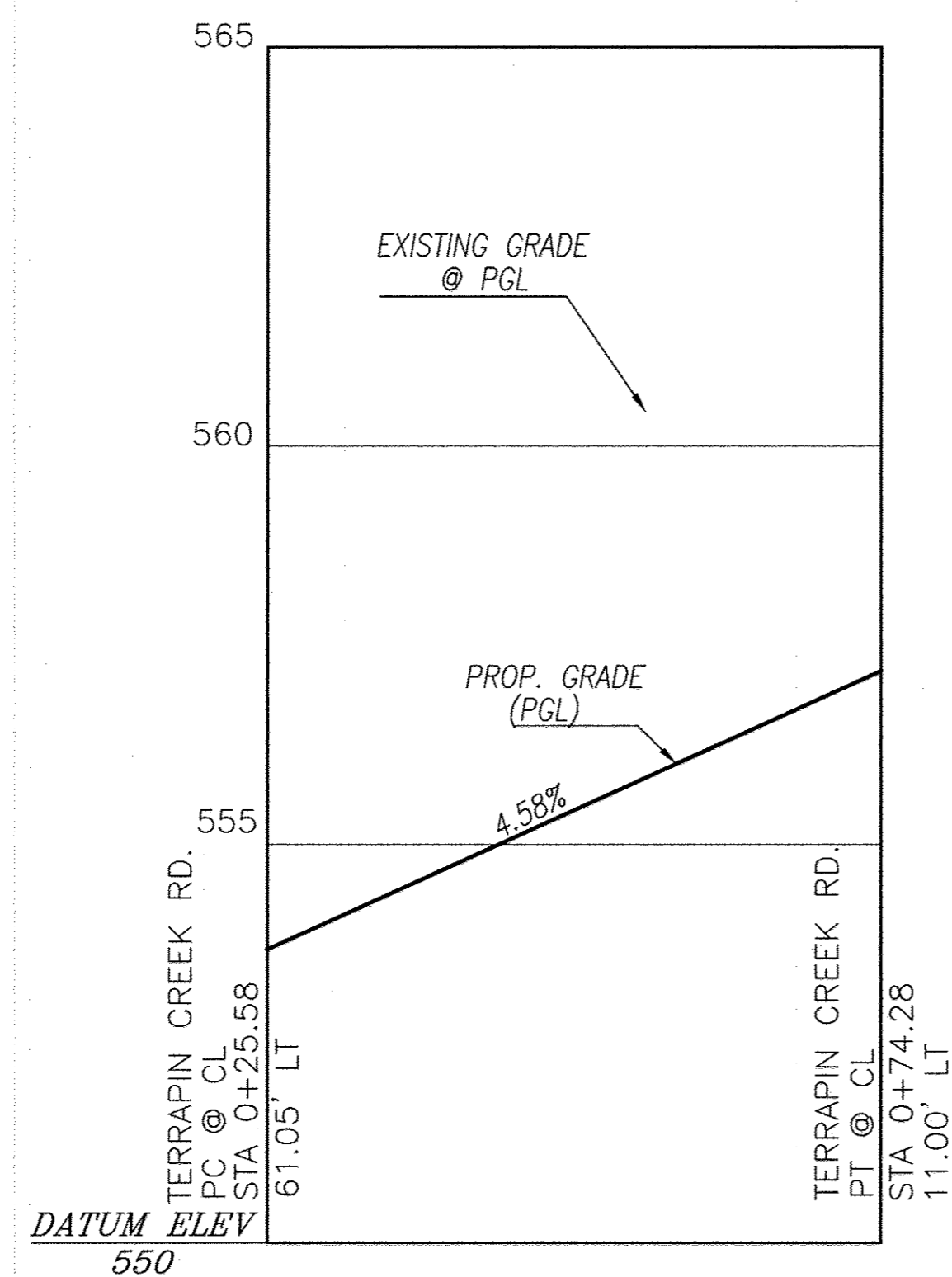
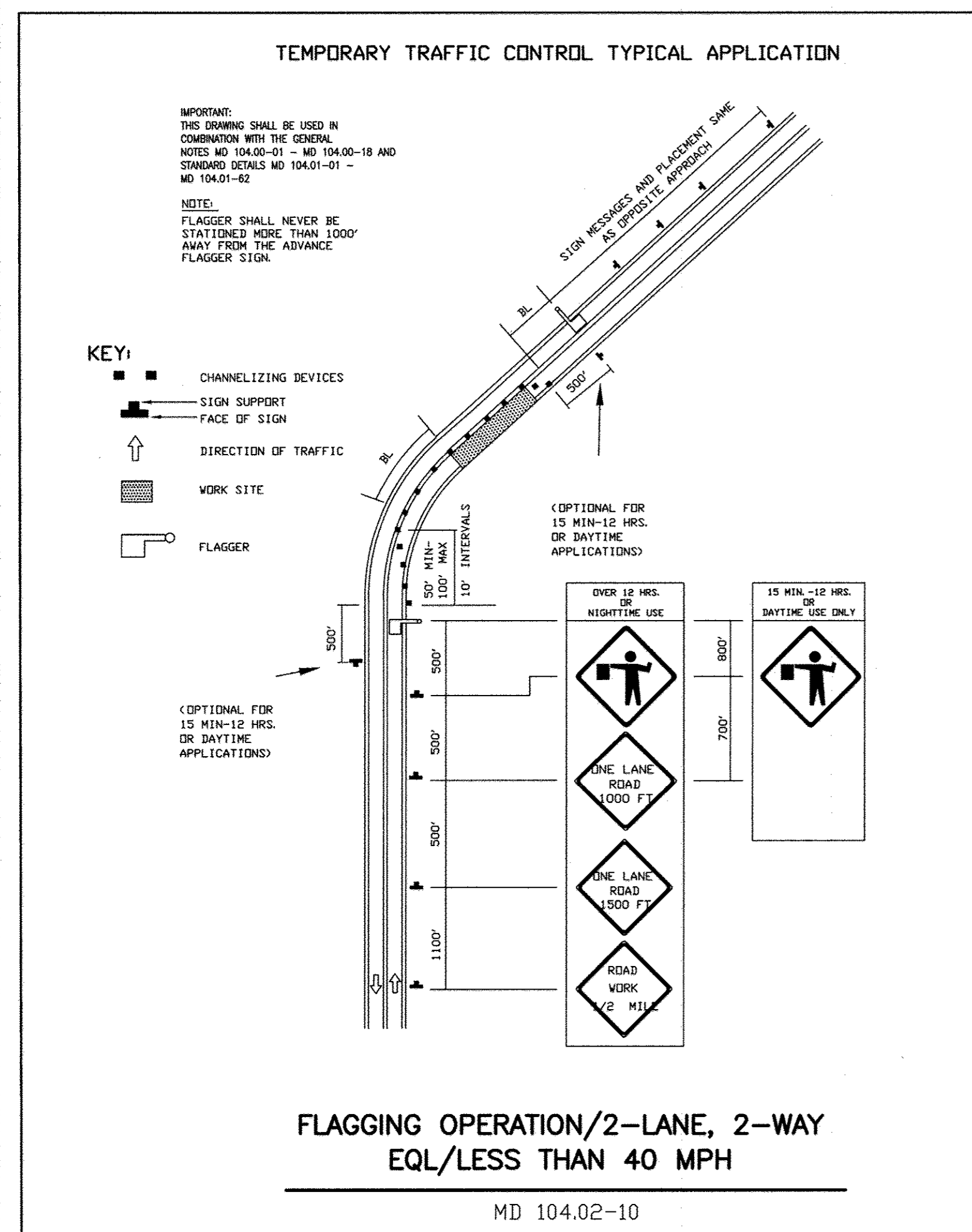
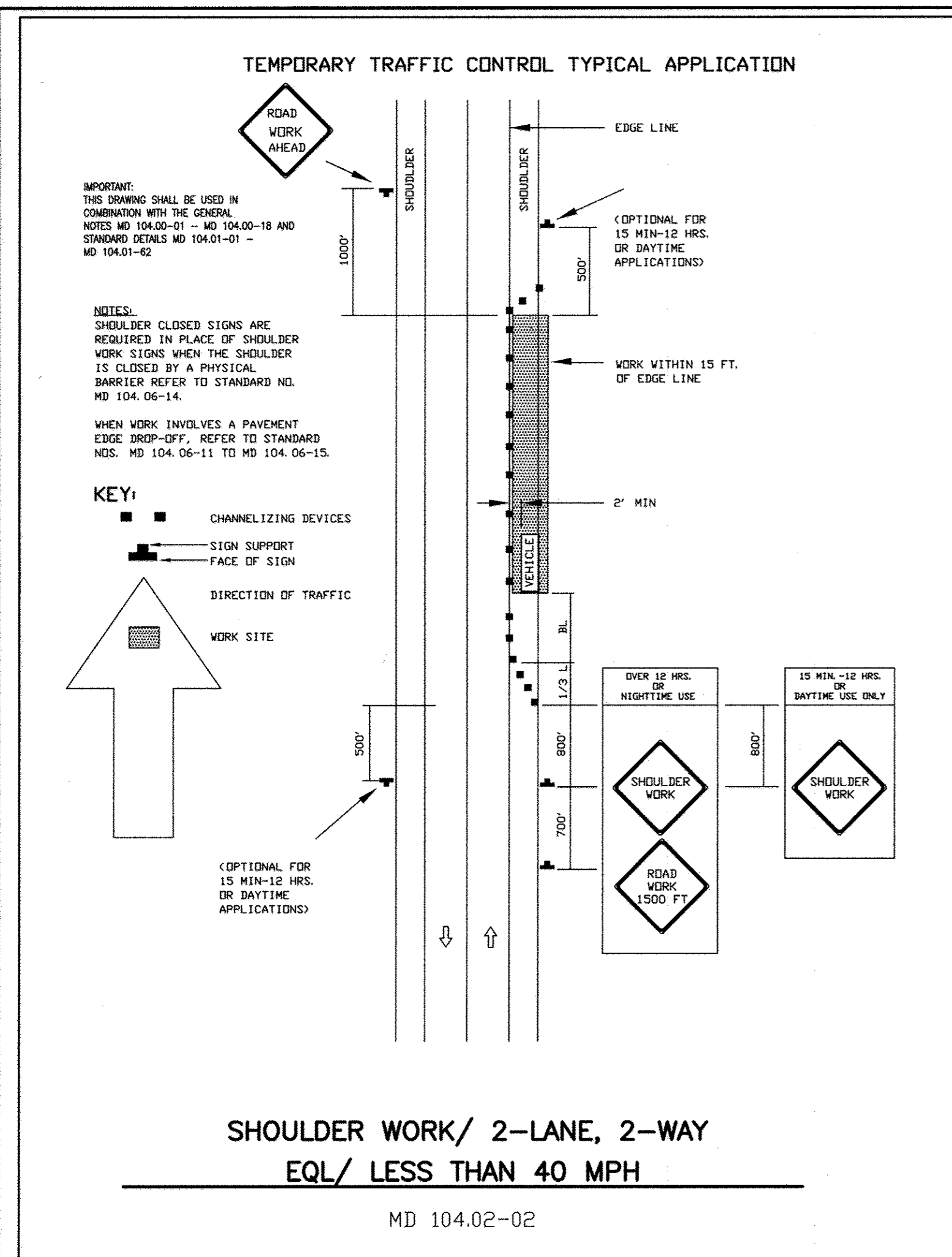
OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

(PUBLIC ACCESS STREET)
LIVESTOCK ROAD
PLAN & CROSS SECTIONS
TERRAPIN CREEK
(FORMERLY SCHWABE FARM)

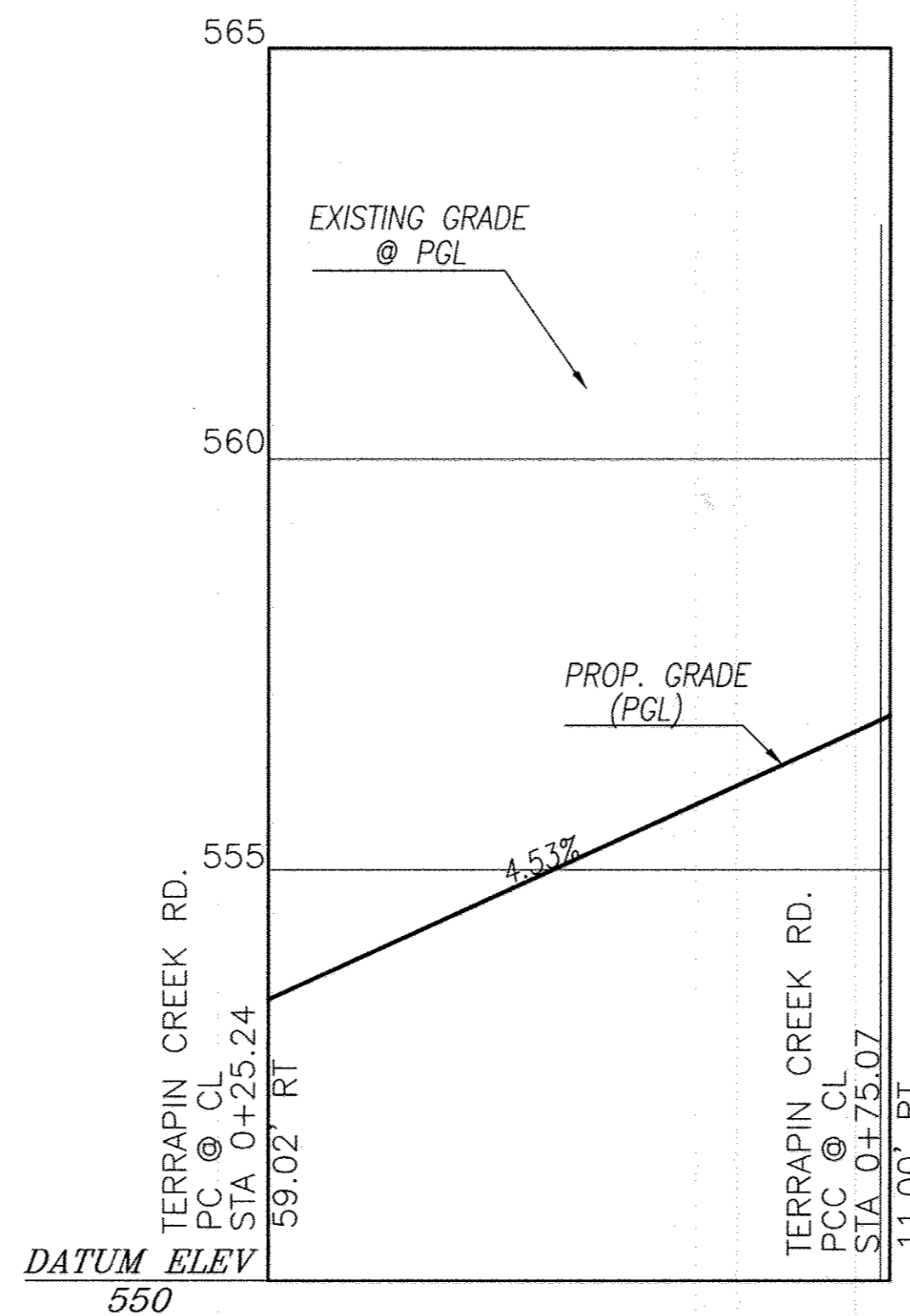
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1
AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E
PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN
LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
NOVEMBER, 2006 SHEET 4 OF 25

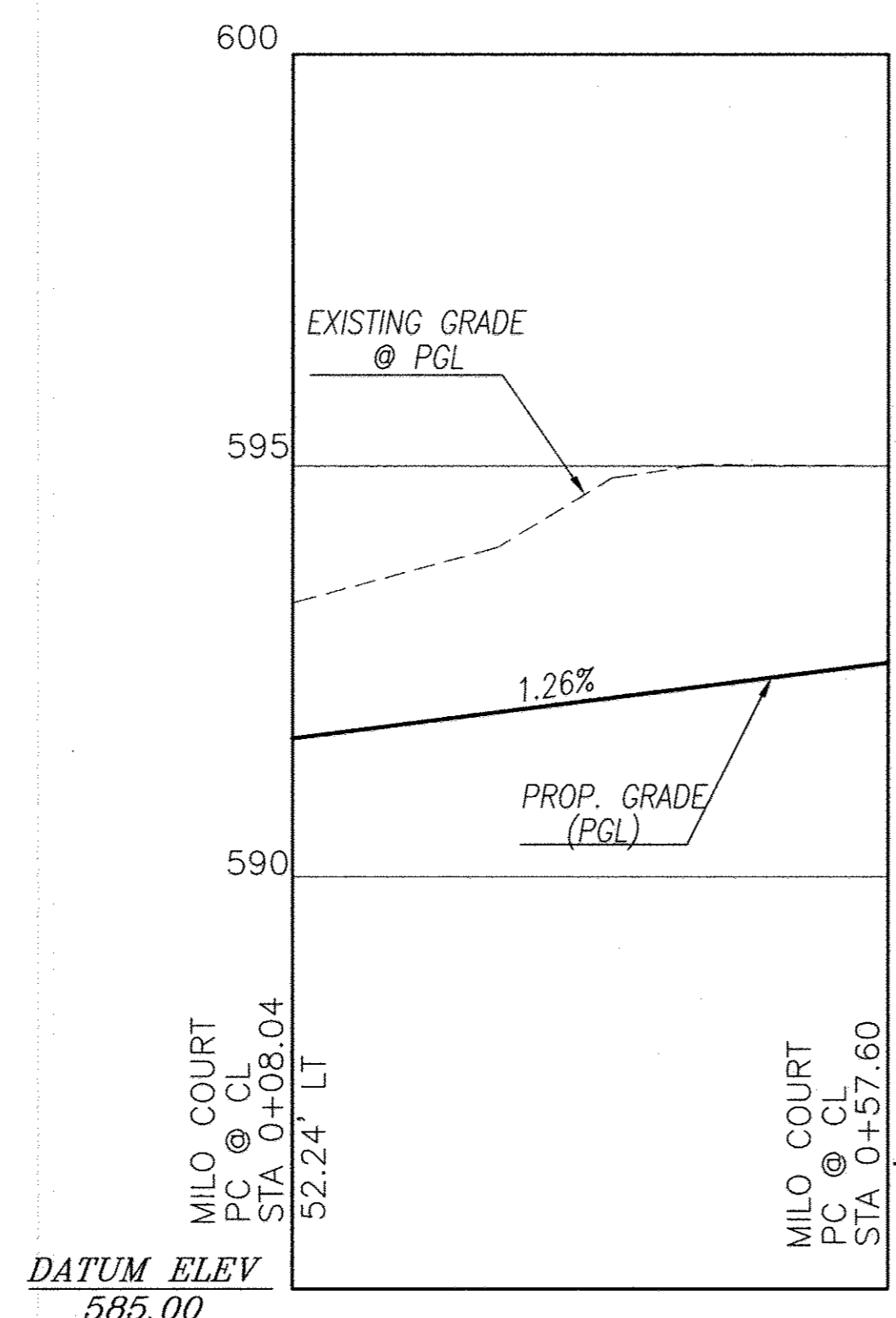
DPZ FILES: SP-06-002



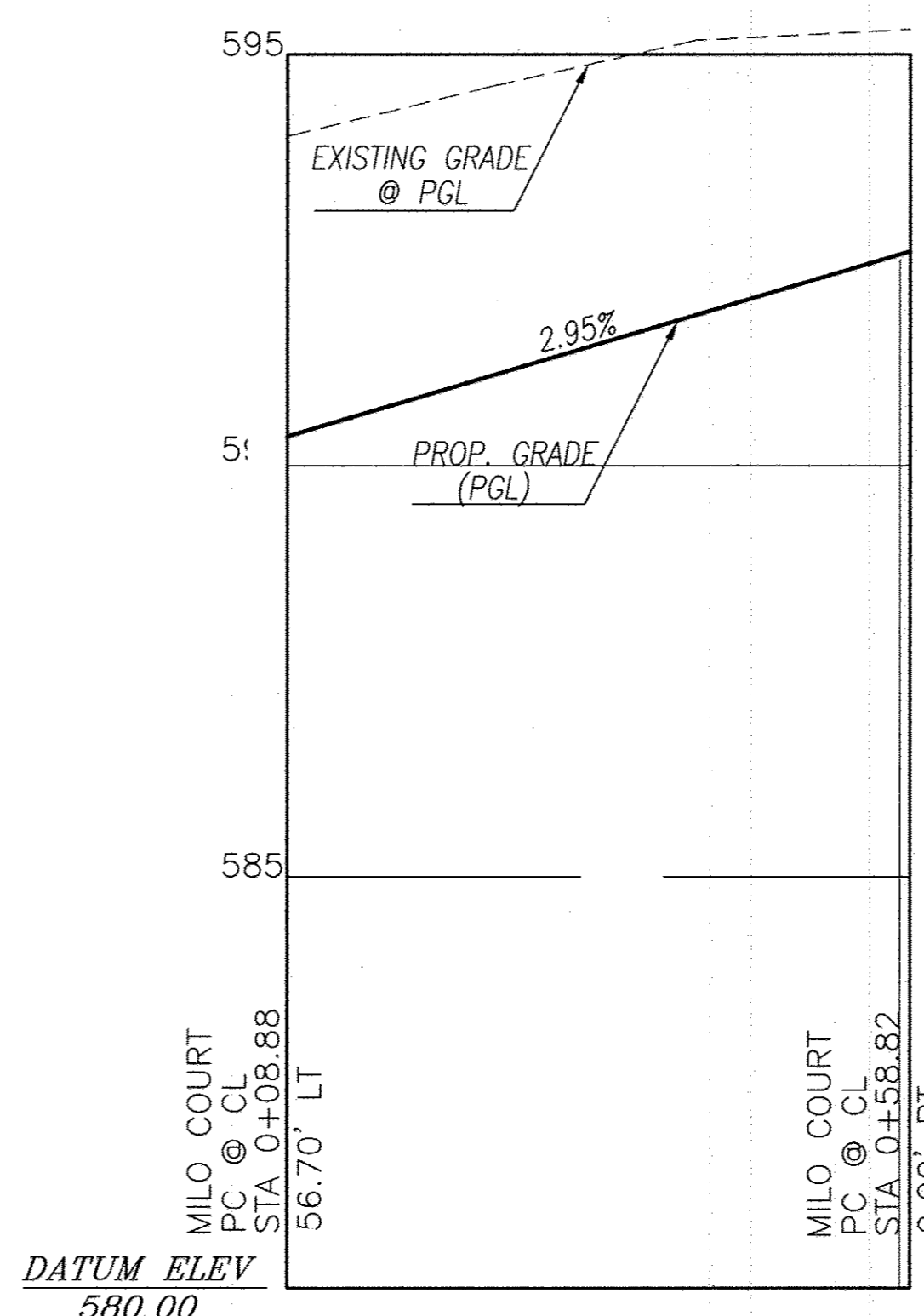
**EDGE OF PAVEMENT RETURN
PROFILE LEFT AT TERRAPIN ROAD
AND LIVESTOCK ROAD**
SCALE: 1" = 2'-0" VERT.
1" = 20'-0" HORIZ.



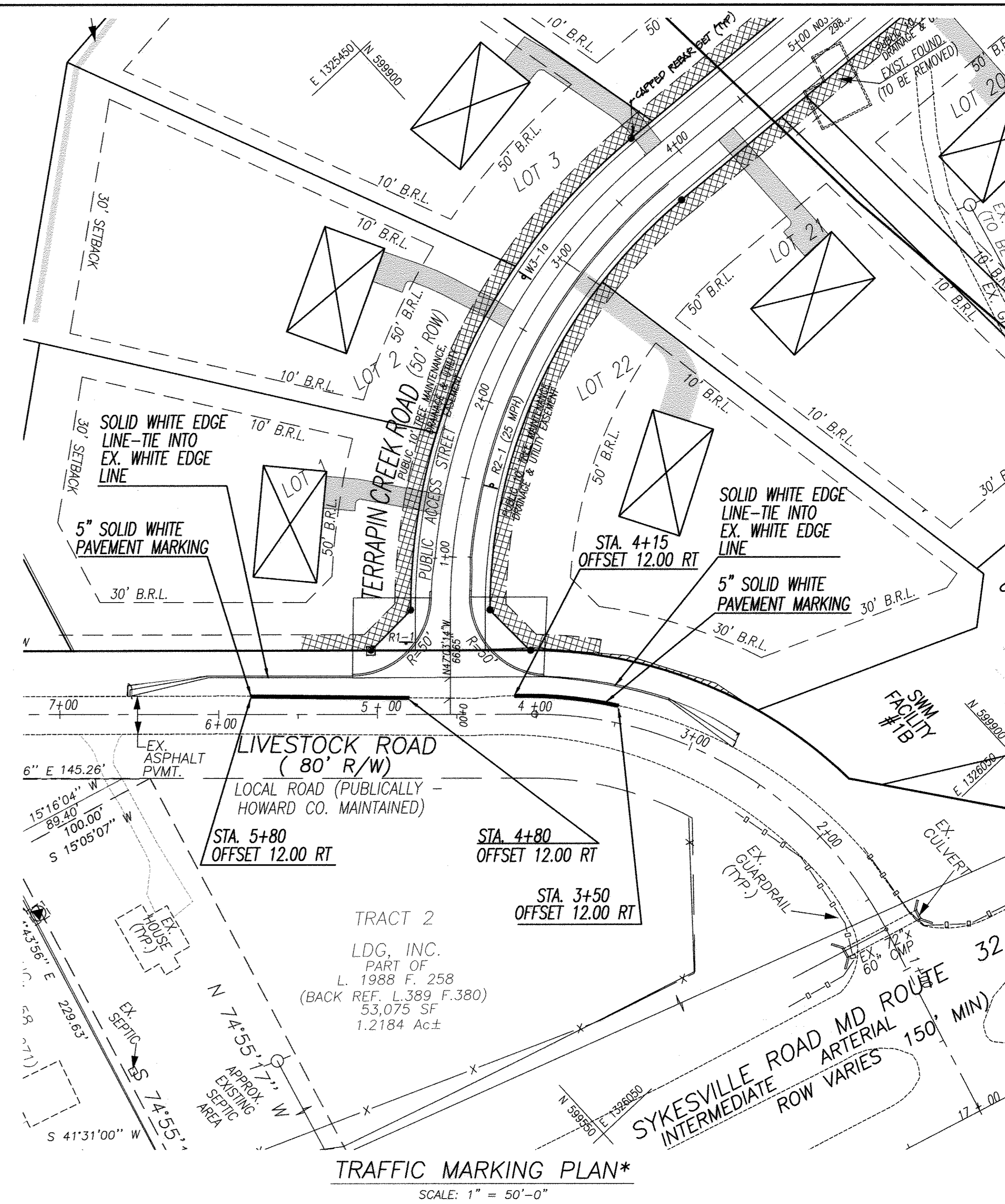
**EDGE OF PAVEMENT RETURN
PROFILE RIGHT AT TERRAPIN ROAD
AND LIVESTOCK ROAD**
SCALE: 1" = 2'-0" VERT.
1" = 20'-0" HORIZ.



**EDGE OF PAVEMENT RETURN
PROFILE LEFT AT MILO COURT AND
TERRAPIN CREEK ROAD**
SCALE: 1" = 2'-0" VERT.
1" = 20'-0" HORIZ.



**EDGE OF PAVEMENT RETURN
PROFILE RIGHT AT MILO COURT AND
TERRAPIN CREEK ROAD**
SCALE: 1" = 2'-0" VERT.
1" = 20'-0" HORIZ.



TRAFFIC SIGN CHART		
SIGN	LOCATION	
R1-1	TERRAPIN CREEK ROAD	STA. 0+45 LT
R2-1	TERRAPIN CREEK ROAD	STA. 1+50 RT
W3-1a	TERRAPIN CREEK ROAD	STA. 2+80 LT
R1-1	MILO COURT	STA. 0+35 LT

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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. 10539, Expiration Date: 8-17-09.

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301) 831 5015 (410) 549 2751



DATE	REVISIONS
1/22/10	Buildable Preservation Parcel A (now A-1)
	Buildable Preservation Parcel B (now B-1)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton, 9/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William R. Mott, 8-25-08
CHIEF, BUREAU OF HIGHWAYS

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" ROADWAY PROFILES & DETAILS

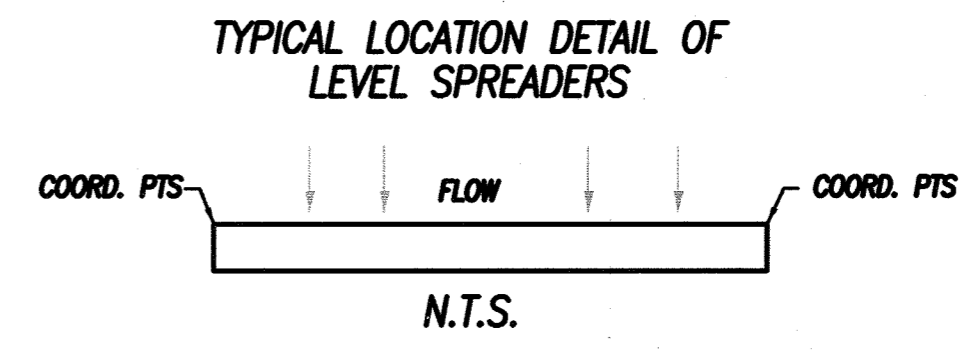
TERRAPIN CREEK (FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

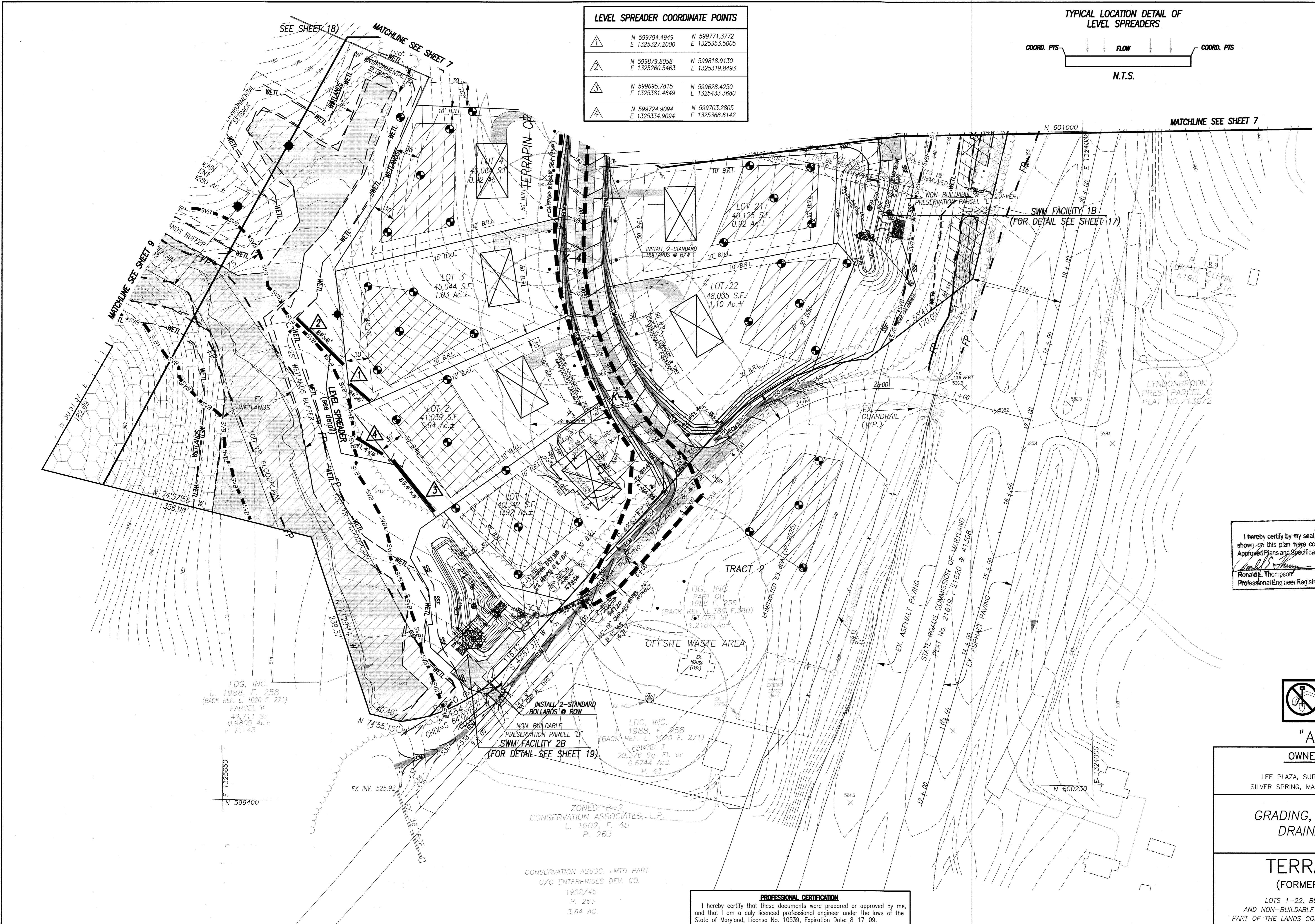
TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
AUGUST, 2006 SHEET 5 OF 25

DPZ FILES: SP-06-002 INDEX No. RP-4

LEVEL SPREADER COORDINATE POINTS			
▲	N 599794.4949 E 1325327.2000	N 599771.3772 E 1325353.5005	
▲	N 599879.8058 E 1325260.5463	N 599818.9130 E 1325319.8493	
▲	N 599695.7815 E 1325381.4649	N 599628.4250 E 1325433.3680	
▲	N 599724.9094 E 1325334.9094	N 599703.2805 E 1325368.6142	



LEGEND:	
WETLANDS	WETLANDS
FOREST CONSERVATION EASEMENT	
100 YR FLOOD PLAIN	FP
75' STREAM BUFFER LINE	
NO WOODY ZONE LIMITS	NWZ
LIMIT OF DISTURBANCE	LOD
SEPTIC SYSTEM AREA	
PROPOSED WELL LOCATION	
OVERHEAD UTILITIES	O/H
25' WETLAND BUFFER LINE	
CONSERVATION SIGNAGE	
EXISTING TREE LINE	
STORM DRAIN DRAINAGE AREA	K-1
PERMANENT EARTH DIKE	
STRUCTURE NO.	
SILT FENCE	SF
SUPER SILT FENCE	SSF
STABILIZED CONSTRUCTION ENTRANCE	SCS
PROPOSED PERC LOCATION	
PUBLIC EASEMENT	
TREE PROTECTION FENCING	



REVISIONS 2/13/12
Ronald E. Thompson, P.E.

I hereby certify by my seal, based on the best of my knowledge and belief the facilities shown on this plan were constructed as shown. This "AS-BUILT" plan meets the Approved Plans and Specifications.

Ronald E. Thompson
Ronald E. Thompson
Professional Engineer Registration No. 18417
Date: 3/13/2012

ALL STORMWATER MANAGEMENT FACILITIES ARE TO BE OWNED BY THE HOA.

ALL LEVEL SPREADERS SHALL BE MAINTAINED BY THE OWNER OF EACH RESPECTIVE LOT. LEVEL SPREADERS LOCATED ON HOA OWNED PROPERTY SHALL BE MAINTAINED BY THE HOA.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

"AS-BUILT"

OWNER / DEVELOPER

LDC, INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

GRADING, STORM DRAIN & DRAINAGE AREA MAP

TERRAPIN CREEK
(FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-A, C, D AND E PART OF THE LANDS CONVEYED TO LDC, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 6 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Siida Hamster
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 9/23/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. McMill
CHIEF, BUREAU OF HIGHWAYS
DATE: 8-25-07

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 829-2800 (301)831-5015 (410) 549-2751

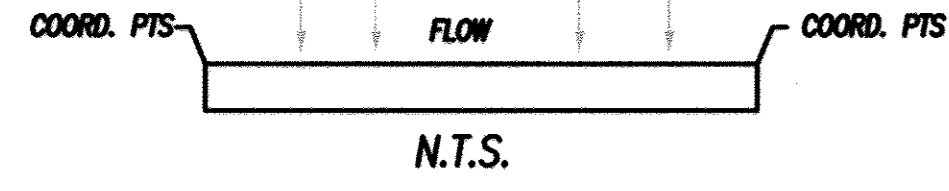
PROFESSIONAL CERTIFICATION
I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

Ronald E. Thompson
PROFESSIONAL ENGINEER
DATE: 11/22/10
7/29/08

DATE	REVISIONS
11/22/10	Buildable Preservation Parcel A-1 (now A-1)
12/19/10	Non-Buildable Preservation Parcel B (now B-1)
8/3/12	RECLINE SWM FACILITIES & PERMANENT EARTH DIKE
	RECLINE HOUSE RECONSTRUCTION & TERRAIN

LEVEL SPREADER COORDINATE POINTS			
△	N 600106.7193 E 1326051.4260	N 600450.8204 E 1326119.2481	
△	N 600456.2760 E 1326083.7610	N 600459.1785 E 1326084.5490	

TYPICAL LOCATION DETAIL OF LEVEL SPREADERS



N.T.S.

LEGEND:

- WETLANDS
- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAN
- 75' STREAM BUFFER LINE
- NO WOODY ZONE LIMITS
- LIMIT OF DISTRIBUTANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STORM DRAIN DRAINAGE AREA
- PERMANENT EARTH DIKE
- STRUCTURE NO.
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PERC LOCATION
- PUBLIC EASEMENT
- TREE PROTECTION FENCING

ALL STORMWATER MANAGEMENT FACILITIES ARE TO BE OWNED BY THE HOA.

ALL LEVEL SPREADERS SHALL BE MAINTAINED BY THE OWNER OF EACH RESPECTIVE LOT. LEVEL SPREADERS LOCATED ON HIGH OWNED PROPERTY SHALL BE MAINTAINED BY THE HOA.

DA #	ZONING	AREA	C FACTOR	SOIL	% IMPERVIOUS
K-4	RC-DEO	0.73 AC	0.37	B	24.7%
K-3	RC-DEO	1.05 AC	0.24	B	4.8%
I-1	RC-DEO	0.17 AC	0.87	*	100%
I-2	RC-DEO	1.22 AC	0.29	B	12.0%
K-1	RC-DEO	2.00 AC	0.26	B	7.5%
K-2	RC-DEO	0.23 AC	0.41	B	30.4%
I-3	RC-DEO	5.71 AC	0.21	B	0%

*NOTE: DRAINAGE AREA CONFIRMED TO ROADWAY CUL-DE-SACS

ASSISTANT CERTIFICATION
I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed in accordance with the approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 16417
Date: 7/13/2017

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" GRADING, STORM DRAIN & DRAINAGE AREA MAP

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-1, C AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1998 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 7 OF 25
DPZ FILES: SP-06-002 INEX No. GSD-2 F-07-086

STORM WATER MANAGEMENT CREDITS			
LOTS	CREDIT TYPE	CREDIT TAKEN	COMMENTS
17-20	SHEET FLOW TO BUFFER	WATER QUALITY RECHARGE	USING LEVEL SPREADERS

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. 10539, Expiration Date: 8-17-09.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

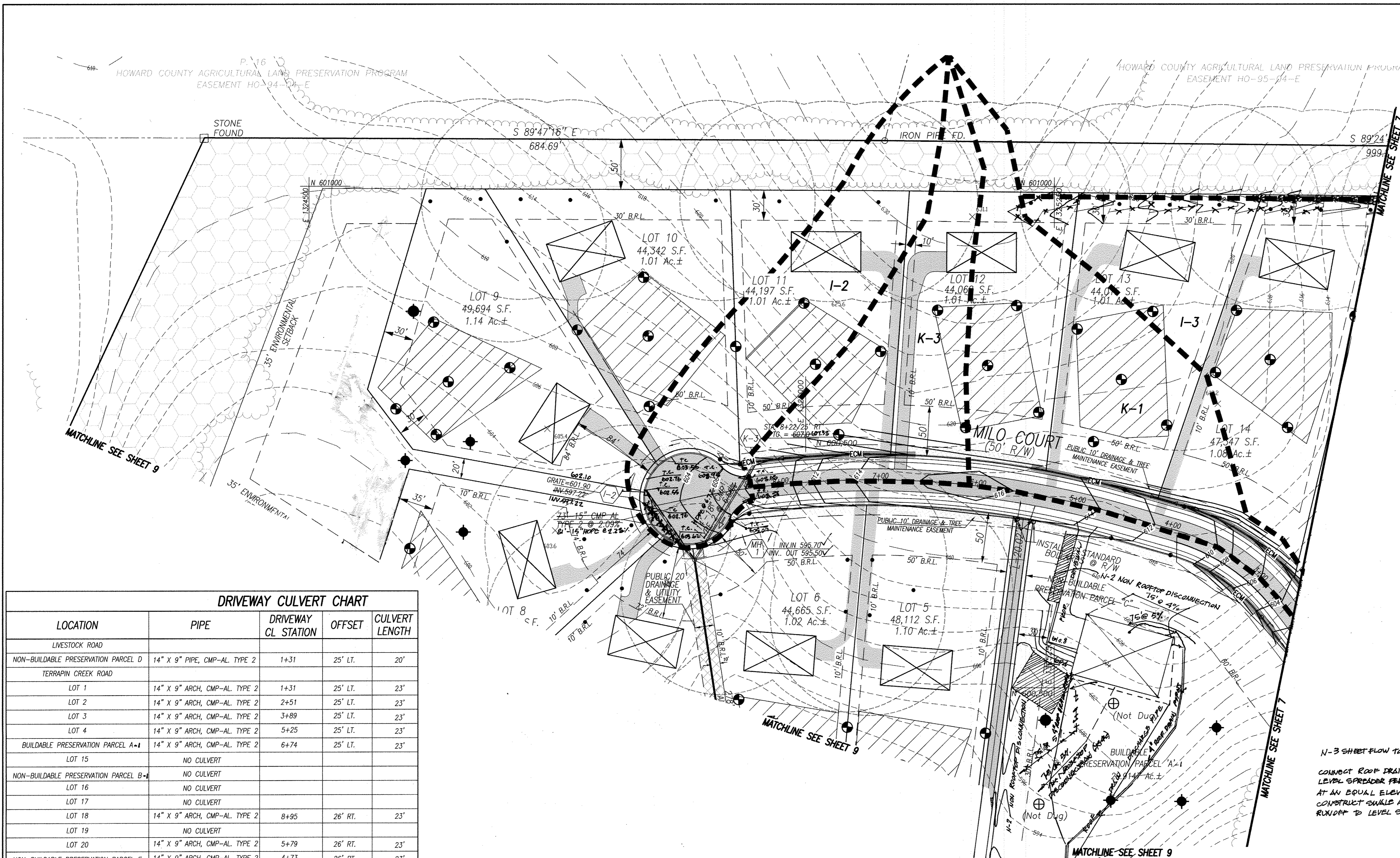
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chad K. Harris
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 7/23/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Mark R. ...
CHIEF, BUREAU OF HIGHWAYS
DATE: 8-25-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)851 5015 (410) 549 2751

PROFESSIONAL CERTIFICATION
Ronald E. Thompson
Professional Engineer
7/29/08

DATE	REVISIONS
11/21/10	Buildable Preservation Parcel A (Now A-1)
8/15/16	Non-Buildable Preservation Parcel B (Now B-1)
8/4/16	PROPOSED HOUSE & DRIVEWAY REMOVED.
12/19/16	ADD MILL SWM FACILITY 1A, EXTEND 6" PVC PIPE & 6" UNDER DRAIN PIPE.
7/24/18	RELINE SWM FACILITIES & PERMANENT EARTH DIKE
	RELINE HOUSE SITE LOT 16



LEGEND:

- WETLANDS
- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAN
- 75' STREAM BUFFER LINE
- NO WOODY ZONE LIMITS
- LIMIT OF DISTURBANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STORM DRAIN DRAINAGE AREA
- PERMANENT EARTH DIKE
- STRUCTURE NO.
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PERC LOCATION
- PUBLIC EASEMENT
- TREE PROTECTION FENCING

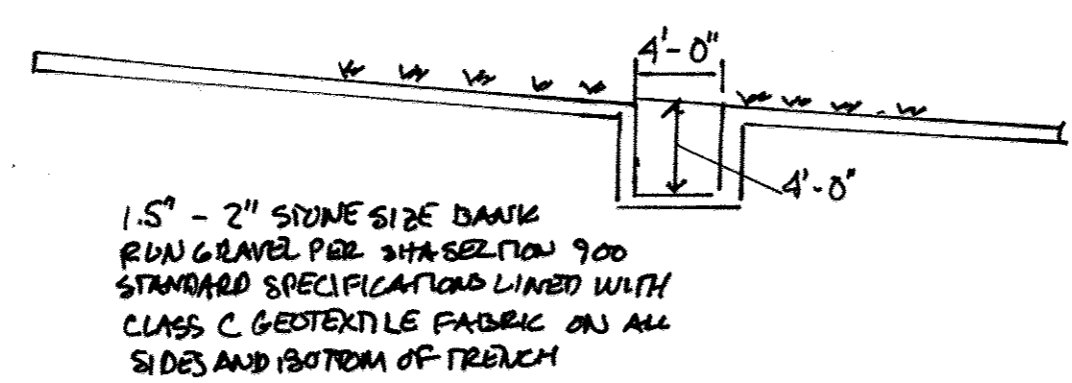
NOTE: STA. 6+00 - STA. 8+00
DITCH RETURN SLOPE - RIGHT SIDE
SHALL BE 4.25:1.

ALL STORMWATER MANAGEMENT FACILITIES
ARE TO BE OWNED BY THE HOA.

ALL LEVEL SPREADERS SHALL BE
MAINTAINED BY THE OWNER OF EACH
RESPECTIVE LOT. LEVEL SPREADERS LOCATED
ON HOA OWNED PROPERTY SHALL BE
MAINTAINED BY THE HOA.

N-3 SHEET FLOW TO CONSERVATION AREA
CONNECT ROOF DRAINS AND PIPE TO LEVEL SPREADER. CONSTRUCT
LEVEL SPREADER PER DETAIL (SHT 14) AND CONSTRUCT LEVEL SPREADER
AT AN EQUAL ELEVATION (CONTOUR 59.0).
CONSTRUCT SWALE ALONG SWIM ACCESS DRIVE TO DIRECT DRIVEWAY
RUNOFF TO LEVEL SPREADER.

DRIVEWAY CULVERT CHART					
LOCATION	PIPE	DRIVEWAY CL. STATION	OFFSET	CULVERT LENGTH	
LIVESTOCK ROAD					
NON-BUILDABLE PRESERVATION PARCEL D	14" X 9" PIPE, CMP-AL TYPE 2	1+31	25' LT.	20'	
TERRAPIN CREEK ROAD					
LOT 1	14" X 9" ARCH, CMP-AL TYPE 2	1+31	25' LT.	23'	
LOT 2	14" X 9" ARCH, CMP-AL TYPE 2	2+51	25' LT.	23'	
LOT 3	14" X 9" ARCH, CMP-AL TYPE 2	3+89	25' LT.	23'	
LOT 4	14" X 9" ARCH, CMP-AL TYPE 2	5+25	25' LT.	23'	
BUILDABLE PRESERVATION PARCEL A-1	14" X 9" ARCH, CMP-AL TYPE 2	6+74	25' LT.	23'	
LOT 15	NO CULVERT				
NON-BUILDABLE PRESERVATION PARCEL B-1	NO CULVERT				
LOT 16	NO CULVERT				
LOT 17	NO CULVERT				
LOT 18	14" X 9" ARCH, CMP-AL TYPE 2	8+95	26' RT.	23'	
LOT 19	NO CULVERT				
LOT 20	14" X 9" ARCH, CMP-AL TYPE 2	5+79	26' RT.	23'	
NON-BUILDABLE PRESERVATION PARCEL E	14" X 9" ARCH, CMP-AL TYPE 2	4+73	26' RT.	23'	
LOT 21	14" X 9" ARCH, CMP-AL TYPE 2	4+29	26' RT.	23'	
LOT 22	14" X 9" ARCH, CMP-AL TYPE 2	2+97	26' RT.	23'	
MILO COURT					
NON-BUILDABLE PRESERVATION PARCEL C	NO CULVERT				
LOT 5	NO CULVERT				
LOT 6	NO CULVERT				
LOT 7	NO CULVERT				
LOT 8	NO CULVERT				
LOT 9	NO CULVERT				
LOT 10	NO CULVERT				
LOT 11	NO CULVERT				
LOT 12	NO CULVERT				
LOT 13	NO CULVERT				
LOT 14	14" X 9" ARCH, CMP-AL TYPE 2	4+16	25' RT.	23'	



1.5" - 2" STONE SIZE BANK
RUN GRAVEL PER S&S SECTION 900
STANDARD SPECIFICATIONS LINED WITH
CLASS C GEOTEXTILE FABRIC ON ALL
SIDES AND BOTTOM OF TRENCH

LEVEL SPREADER
NTS

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. 10539, Expiration Date: 8-17-09.

AS-BUILT CERTIFICATION
I hereby certify by my seal, that to the best of my knowledge and belief the facilities
shown on this plan were constructed in accordance with the
Approved Plans and Specifications.
Ronald E. Thompson
Professional Engineer Registration No. 18611
Date: 1/13/2014

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
9/25/08
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
8-25-08
DATE

YANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751

STATE OF MARYLAND
PROFESSIONAL ENGINEER
7/29/08

DATE
1/22/14
8/3/16
12/19/16
6/2/17

REVISIONS
Buildable Preservation Parcel A-1 (Now A-1)
Non-Buildable Preservation Parcel B-1 (Now B-1)
REDEFINE SWIM FACILITIES & PERMANENT EARTH DIKE
REDEFINE PRESERVATION LOT A SWIM

"AS-BUILT"
OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

GRADING, STORM DRAIN & DRAINAGE AREA MAP

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1
AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E
PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN
LIBER 1988 AT FOLIO 258

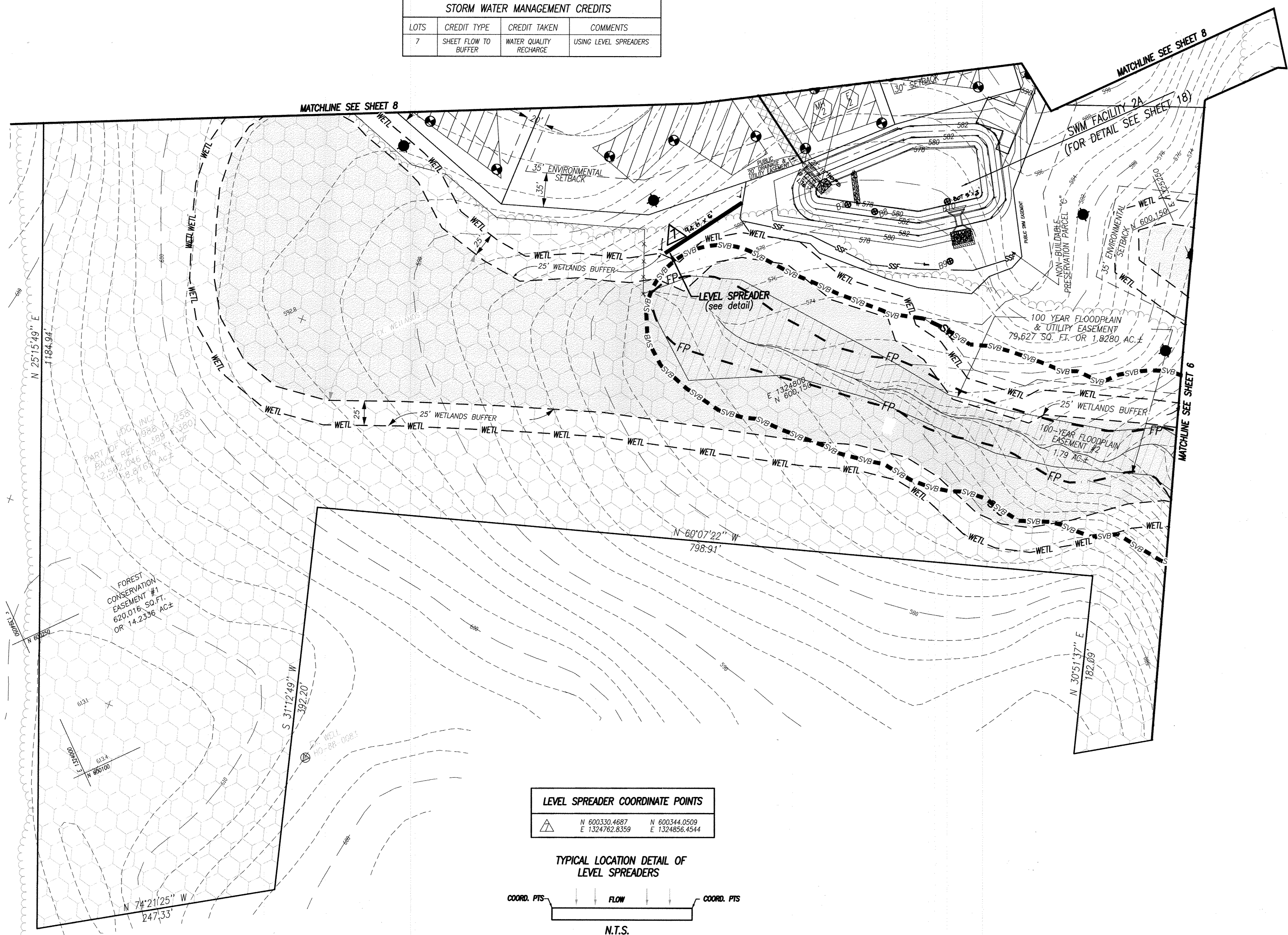
TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 8 OF 25

DPZ FILES: SP-06-002 INDEX No. GSD-3
F-07-086

STORM WATER MANAGEMENT CREDITS			
LOTS	CREDIT TYPE	CREDIT TAKEN	COMMENTS
7	SHEET FLOW TO BUFFER	WATER QUALITY RECHARGE	USING LEVEL SPREADERS

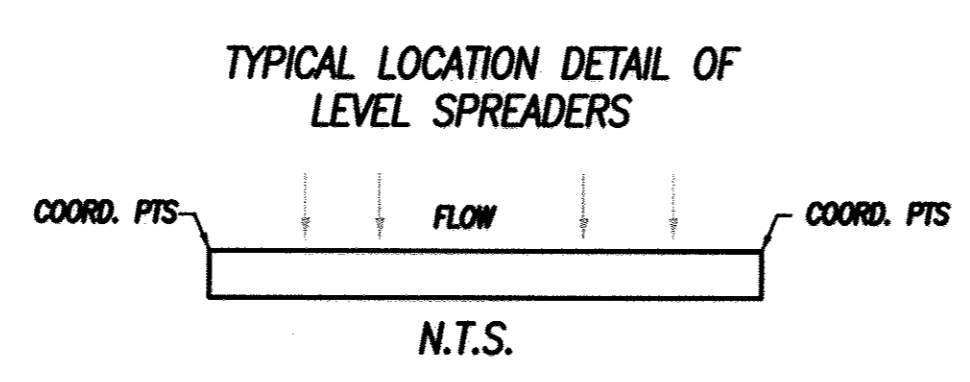
LEGEND:

WETLANDS	
FOREST CONSERVATION EASEMENT	
100 YR FLOOD PLAIN	
75' STREAM BUFFER LINE	
NO WOODY ZONE LIMITS	
LIMIT OF DISTURBANCE	
SEPTIC SYSTEM AREA	
PROPOSED WELL LOCATION	
OVERHEAD UTILITIES	
25' WETLAND BUFFER LINE	
CONSERVATION SIGNAGE	
EXISTING TREE LINE	
STORM DRAIN DRAINAGE AREA	
PERMANENT EARTH DIKE	
STRUCTURE NO.	
SILT FENCE	
SUPER SILT FENCE	
STABILIZED CONSTRUCTION ENTRANCE	
PROPOSED PERC LOCATION	
PUBLIC EASEMENT	
TREE PROTECTION FENCING	



LEVEL SPREADER COORDINATE POINTS

N 600330.4687	N 600344.0509
E 1324762.8359	E 1324856.4544



I hereby certify by my seal that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.

Ronald H. Thompson
 Ronald H. Thompson
 Professional Engineer Registration No. 10539 Date: 3/13/2017

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" GRADING, STORM DRAIN & DRAINAGE AREA MAP

TERRAPIN CREEK (FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
 SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
 ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 NOVEMBER, 2006 SHEET 9 OF 25

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. 10539, Expiration Date: 8-17-09.

CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS BEFORE START OF CONSTRUCTION

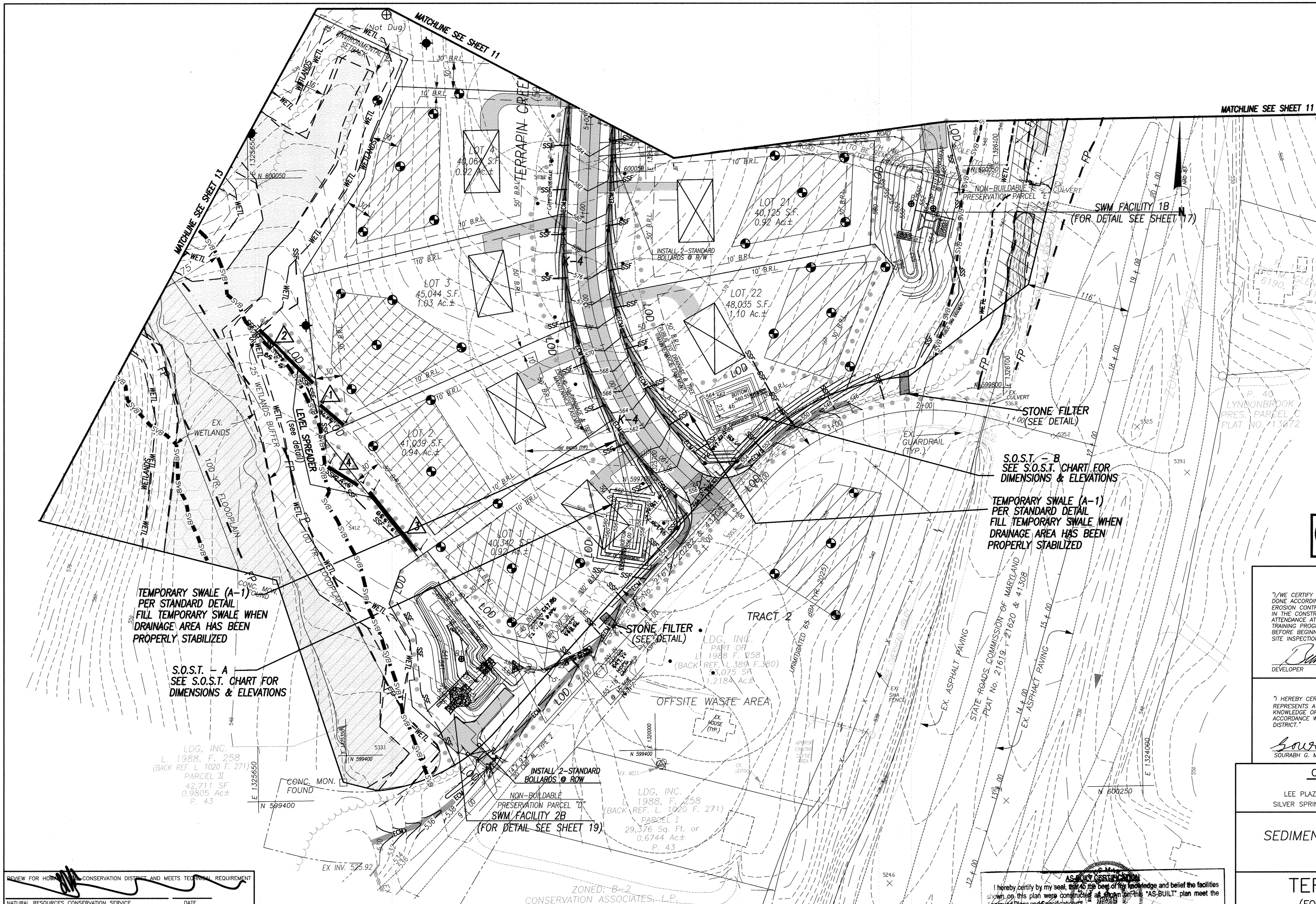
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Harant 9/21/08
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. ... 8-25-08
 CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. box 328
 Mount Airy, Maryland 21771
 (301) 929-2890 (301) 851-5015 (410) 549-2751

PROFESSIONAL ENGINEER
Ronald H. Thompson
 7/24/08

DATE	REVISIONS
1/22/16	Buildable Preservation Parcel A-1 (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
12/19/16	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE



- LEGEND:**
- FOREST CONSERVATION EASEMENT
 - 100 YR FLOOD PLAIN
 - 75' STREAM BUFFER LINE
 - NO WOODY ZONE LIMITS
 - LIMIT OF DISTURBANCE
 - SEPTIC SYSTEM AREA
 - PROPOSED WELL LOCATION
 - OVERHEAD UTILITIES
 - 25' WETLAND BUFFER LINE
 - CONSERVATION SIGNAGE
 - EXISTING TREE LINE
 - STRUCTURE NO.
 - SILT FENCE
 - SUPER SILT FENCE
 - STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED PERC LOCATION
 - EROSION CONTROL MATTING
 - PUBLIC EASEMENT
 - TREE PROTECTION FENCING

NOTE:
INSTALL MIN. 6" WIDTH OF EROSION MATTING IN ALL ROADSIDE DRAINAGE DITCHES/SWALES PER DETAIL ON SHEET 14

NOTE:
INSTALL SUPER SILT FENCE EVERY 50' IN ROADSIDE DRAINAGE SWALES

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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

Dem Hee 7/30/08
DEVELOPER DATE

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

Sourabh G. Munshi 7/29/08
SOURABH G. MUNSHI, P.E. DATE

OWNER / DEVELOPER
LDG. INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" SEDIMENT & EROSION CONTROL PLAN

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG. INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 10 OF 25

REVIEW FOR HOWARD COUNTY CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John K. Roberts 7/16/08
HOWARD COUNTY CONSERVATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton 9/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
John P. ... 9/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. ... 8-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

ZONED: B-2
CONSERVATION ASSOCIATES, L.P.
L. 1902, F. 45
P. 263

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
510 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751

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. 18417, Expiration Date: 8-17-09.

STATE OF MARYLAND
SOURABH G. MUNSHI
PROFESSIONAL ENGINEER
7/29/08

I hereby certify by my seal, to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the approved Plans and Specifications.
Ronald E. Thompson 8/13/2008
Ronald E. Thompson
Professional Engineer Registration No. 18417

DATE	REVISIONS
11/22/16	Buildable Preservation Parcel A. (Now A-1)
12/17/16	Non-Buildable Preservation Parcel B (Now B-1)
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

C:\hardcopy\106197-4203 Schwabe Farm\106197-4203 CONSTRUCTION.dwg, 7/25/2008 12:24:33 PM

CALL "MISS UTILITY" AT
1-800-287-7777
48 HOURS BEFORE START OF CONSTRUCTION

HOWARD COUNTY AGRICULTURAL LAND PRESERVATION EASEMENT, HO-95-04-E P. 142

LEGEND:

- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAIN
- 75' STREAM BUFFER LINE
- NO WOODY ZONE LIMITS
- LIMIT OF DISTURBANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STRUCTURE NO.
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PERC LOCATION
- EROSION CONTROL MATTING
- PUBLIC EASEMENT
- TREE PROTECTION FENCING
- EARTH DIKE

NOTE:
INSTALL MIN. 6" WIDTH OF EROSION MATTING IN ALL ROADSIDE DRAINAGE DITCHES/SWALES PER DETAIL ON SHEET 14

NOTE:
INSTALL SUPER SILT FENCE EVERY 50' IN ROADSIDE DRAINAGE SWALES



SEDIMENT BASIN-A
SEDIMENT BASIN-A WILL BE CONSTRUCTED IN THE LOCATION OF THE SWM FACILITY 1A. UPON STABILIZATION OF ROADWAY CONSTRUCTION, THE REMAINING FACILITY ELEMENTS OF THE SWM FACILITY MAY BE CONSTRUCTED. SEDIMENT BASIN SHALL BE CONSTRUCTED AS DETAILED IN SEQUENCE OF CONSTRUCTION #8. SEE SHEET 12 FOR SEDIMENT BASIN CHART & TEMPORARY DEWATERING DETAIL.

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

Bruce Lee 7/30/08
DEVELOPER DATE

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

Sourabh G. Munshi 7/29/08
SOURABH G. MUNSHI, P.E. DATE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT"
SEDIMENT & EROSION CONTROL
PLAN

TERRAPIN CREEK
(FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 11 OF 25

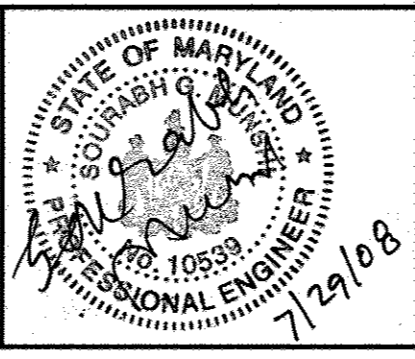
REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
NATURAL RESOURCES CONSERVATION SERVICE DATE
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.
John R. Roberts 9/16/08
HOWARD COUNTY CONSERVATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cinda Hunter 7/24/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE
Michael J. ... 9/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

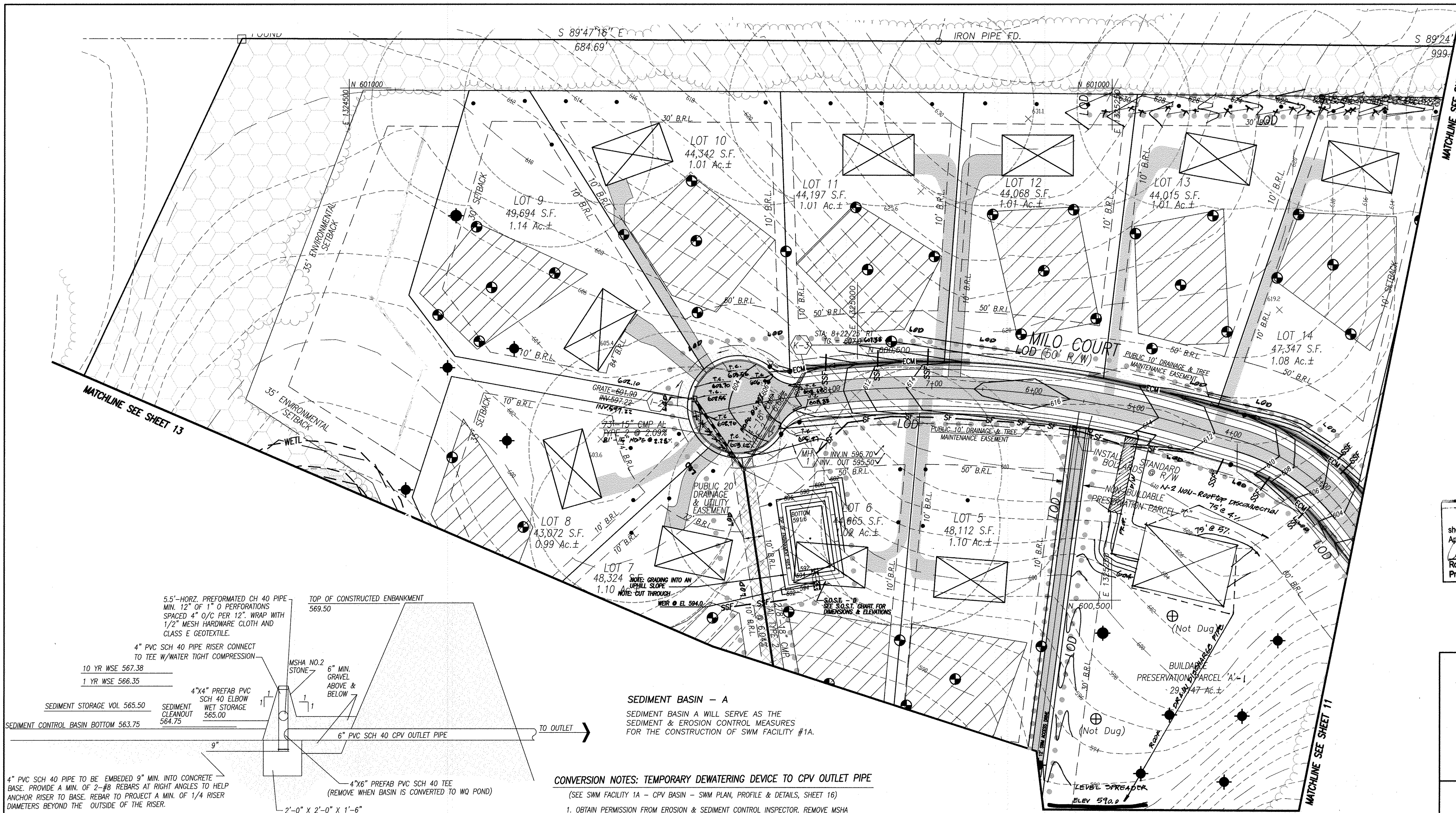
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. ... 8-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 829 2880 (301)851 5015 (410) 549 2751

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. 10539, Expiration Date: 8-17-09.



DATE	REVISIONS
1/22/16	Buildable Preservation Parcel A (Now A-1)
8/9/16	Non-Buildable Preservation Parcel B (Now B-1)
8/4/16	PROPOSED HOUSE & DRIVEWAY REMOVED FROM BUILDABLE PRESERVATION PARCEL A-1.
12/19/16	ADD PERC SWM FACILITY 1A, EXTEND 6" PVC PIPE & 6" UNDER DRAIN PIPE.
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE



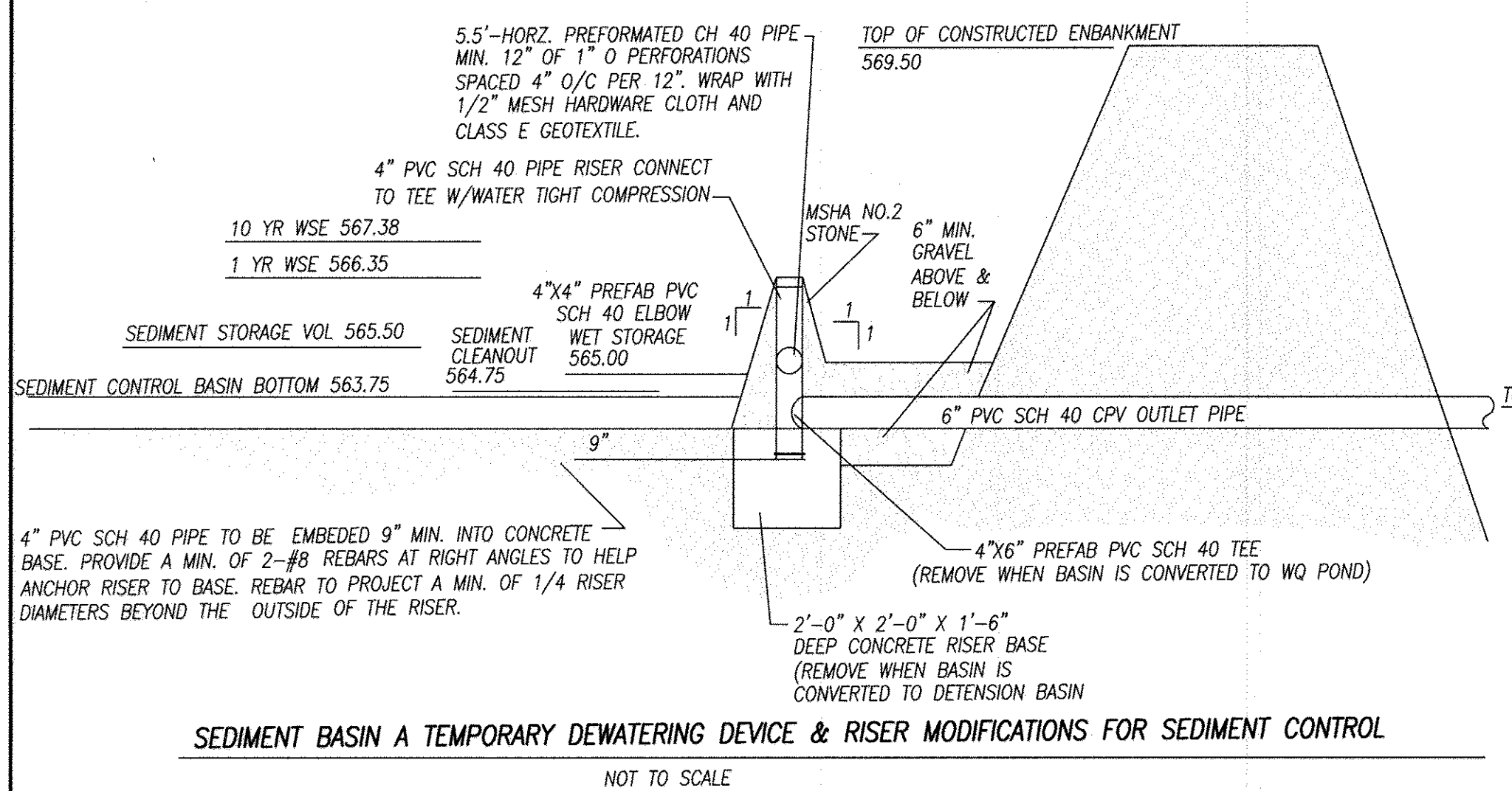
LEGEND:

- FOREST CONSERVATION EASEMENT
- 100 YR FLOOD PLAIN
- 75' STREAM BUFFER LINE
- NO WOODY ZONE LIMITS
- LIMIT OF DISTRIBUTANCE
- SEPTIC SYSTEM AREA
- PROPOSED WELL LOCATION
- OVERHEAD UTILITIES
- 25' WETLAND BUFFER LINE
- CONSERVATION SIGNAGE
- EXISTING TREE LINE
- STRUCTURE NO.
- SILT FENCE
- SUPER SILT FENCE
- STABILIZED CONSTRUCTION ENTRANCE
- PROPOSED PERC LOCATION
- EROSION CONTROL MATTING
- PUBLIC EASEMENT
- TREE PROTECTION FENCING

NOTE: INSTALL MIN. 6" WIDTH OF EROSION MATTING IN ALL ROADSIDE DRAINAGE DITCHES/SWALES PER DETAIL SHEET 14

AS-BUILT CERTIFICATION
 I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed in accordance with the "AS-BUILT" plan meet the Approved Plans and Specifications.
 Ronald E. Thorpeon
 Professional Engineer Registration No. 10617
 Date: 8/10/2017

NOTE: INSTALL SUPER SILT FENCE EVERY 50' IN ROADSIDE DRAINAGE SWALES



SEDIMENT BASIN - A
 SEDIMENT BASIN A WILL SERVE AS THE SEDIMENT & EROSION CONTROL MEASURES FOR THE CONSTRUCTION OF SWM FACILITY #1A.

CONVERSION NOTES: TEMPORARY DEWATERING DEVICE TO CPV OUTLET PIPE
 (SEE SWM FACILITY 1A - CPV BASIN - SWM PLAN, PROFILE & DETAILS, SHEET 16)

- OBTAIN PERMISSION FROM EROSION & SEDIMENT CONTROL INSPECTOR. REMOVE MSHA NO. 2 STONE, 4" PVC RISER, 4"x4" PVC TEE, 4"x4" PVC ELBOW, 4" PVC PERFORATED PIPE FROM THE RISER TO THE EARTH BERM. MAINTAIN 6" PVC SCH 40 CPV OUTLET PIPE. REPLACE OR REPAIR ANY DAMAGE TO CONTROL STRUCTURE RESULTING FROM THE REMOVAL OF THE DEWATERING DEVICE & APPURTENANCES.
- BRING BASIN TO PROPOSED GRADES AS SHOWN ON THE SWM PLAN.
- DRESS UP & STABILIZE DISTURBED AREA AS REQUIRED.

DEVELOPER'S CERTIFICATE:
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN OF DEVELOPMENT FOR SEDIMENT AND EROSION CONTROL, AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 Developer: [Signature] DATE: 7/30/08

ENGINEER'S CERTIFICATE:
 I HEREBY CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.
 Engineer: Sourabh G. Munshi, P.E. DATE: 7/29/08

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

SEDIMENT BASIN CHART

BASIN	DRAINAGE AREA (AC)	TOTAL VOLUME (CF)	BASIN VOLUME (CF)	REQ WET VOLUME (CF)	1-YR WS ELEV	10-YR WS ELEV	BOTTOM BASIN ELEV.	BASIN CLEANOUT ELEV.	MINIMUM POOL ELEV.	MINIMUM SPILLWAY CREST ELEV.	RISER CREST ELEV	TOP OF EMBANKMENT ELEV	Q1 EXISTING	Q1 CONSTRUCTION	Q1 ULTIMATE
(SWM#3 CPV BASIN)	2.17	7,812	40,903	3,906	566.35	567.38	563.75	564.75	565.00	566.35	565.50	569.00	0.10 cfs.	1.00 cfs.	2.55 cfs.

STONE OUTLET SEDIMENT TRAP (S.O.S.T.) CHART

TRAP	DRAINAGE AREA (ACRES)	TOTAL VOLUME (CF)	WET VOLUME (CF)	DRY VOLUME (CF)	BOTTOM DIMENSIONS (LENGTH) (WIDTH)	WEIR LENGTH	BOTTOM TRAP ELEV.	WET STORAGE ELEV.	WEIR CREST ELEV.	TOP OF EMBANKMENT
TRAP A	1.23	4,428	2,214	2,214	51.0' 26.0'	5.0'	556.00	557.25	558.50	560.00
TRAP B	0.70	3,600	1,800	1,800	46.0' 23.0'	5.0'	560.55	562.00	563.45	564.50
TRAP D	1.56	5,616	2,808	2,808	59.0' 29.5'	6.5'	591.60	593.00	594.40	595.50
TRAP B	0.70	3,600	1,800	1,800	46.0' 23.0'	5.0'	560.55	562.00	563.45	564.50

REVIEW FOR HOWARD COUNTY CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT
 NATURAL RESOURCES CONSERVATION SERVICE DATE: 9/16/08
 HOWARD COUNTY CONSERVATION DATE: 9/16/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] DATE: 9/23/08
 [Signature] DATE: 9/16/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] DATE: 8-25-08

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 510 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829-2890 (301) 831-5015 (410) 549-2751

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. 10559, Expiration Date: 8-17-09.

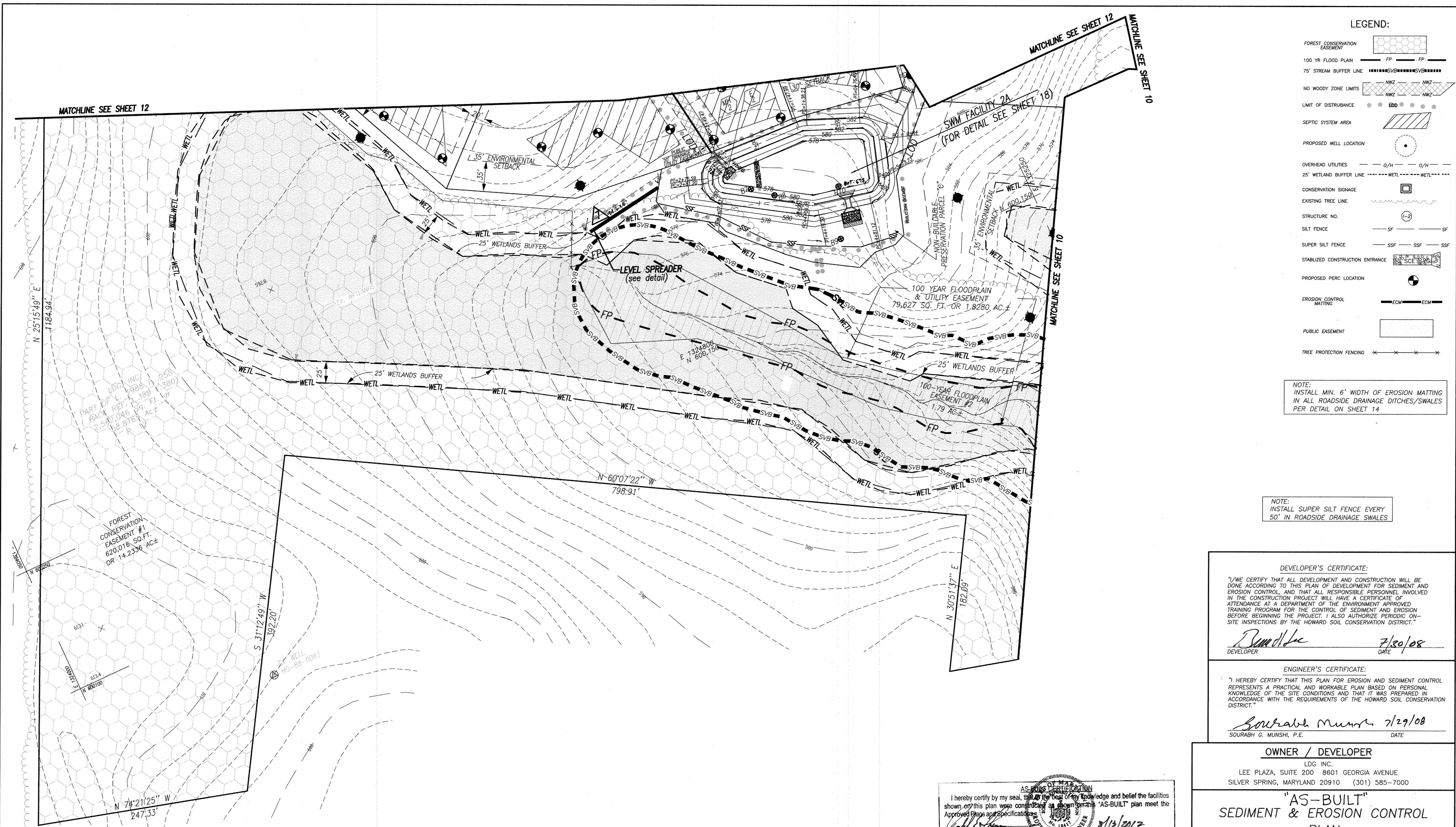
CALL "MISS UTILITY" AT 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

REVISIONS

DATE	REVISIONS
1/22/16	Buildable Preservation Parcel A (Now A-1)
8/3/16	Now Buildable Preservation Parcel B (Now B-1)
12/19/16	REDLINE HOUSE LOCATION WITH ITS SWM IN BUILDABLE PRESERVATION PARCEL A-1 REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

"AS-BUILT" SEDIMENT & EROSION CONTROL PLAN

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
 LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B4, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258
 TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
 SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
 ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 NOVEMBER, 2006 SHEET 12 OF 25



- LEGEND:**
- FOREST CONSERVATION EASEMENT
 - 100 YR FLOOD PLAIN
 - 75' STREAM BUFFER LINE
 - NO WOODY ZONE LIMITS
 - LIMIT OF DISTURBANCE
 - SEPTIC SYSTEM AREA
 - PROPOSED WELL LOCATION
 - OVERHEAD UTILITIES
 - 25' WETLANDS BUFFER LINE
 - CONSERVATION SIGNAGE
 - EXISTING TREE LINE
 - STRUCTURE NO.
 - SILT FENCE
 - SUPER SILT FENCE
 - STABILIZED CONSTRUCTION ENTRANCE
 - PROPOSED PERC LOCATION
 - EROSION CONTROL MATTING
 - PUBLIC EASEMENT
 - TREE PROTECTION FENCING

NOTE:
INSTALL MIN. 6" WIDTH OF EROSION MATTING IN ALL ROADSIDE DRAINAGE DITCHES/SWALES PER DETAIL ON SHEET 14

NOTE:
INSTALL SUPER SILT FENCE EVERY 50' IN ROADSIDE DRAINAGE SWALES

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

Daniel Lee 7/30/08
DEVELOPER DATE

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

Sourabh G. Munshi 7/29/08
SOURABH G. MUNSHI, P.E. DATE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" SEDIMENT & EROSION CONTROL PLAN

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-1C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 13 OF 25

I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.

Ronald E. Thompson 8/13/2017
Ronald E. Thompson Date
Professional Engineer Registration No. 18447

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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. 10539, Expiration Date: 8-17-09.

REVIEW FOR HOWARD SOIL CONSERVATION DISTRICT AND MEETS TECHNICAL REQUIREMENT

NATURAL RESOURCES CONSERVATION SERVICE DATE

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

John D. Roberts 9/16/08
HOWARD COUNTY CONSERVATION DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Quincy K. Smith 7/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

William J. Smith 9/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

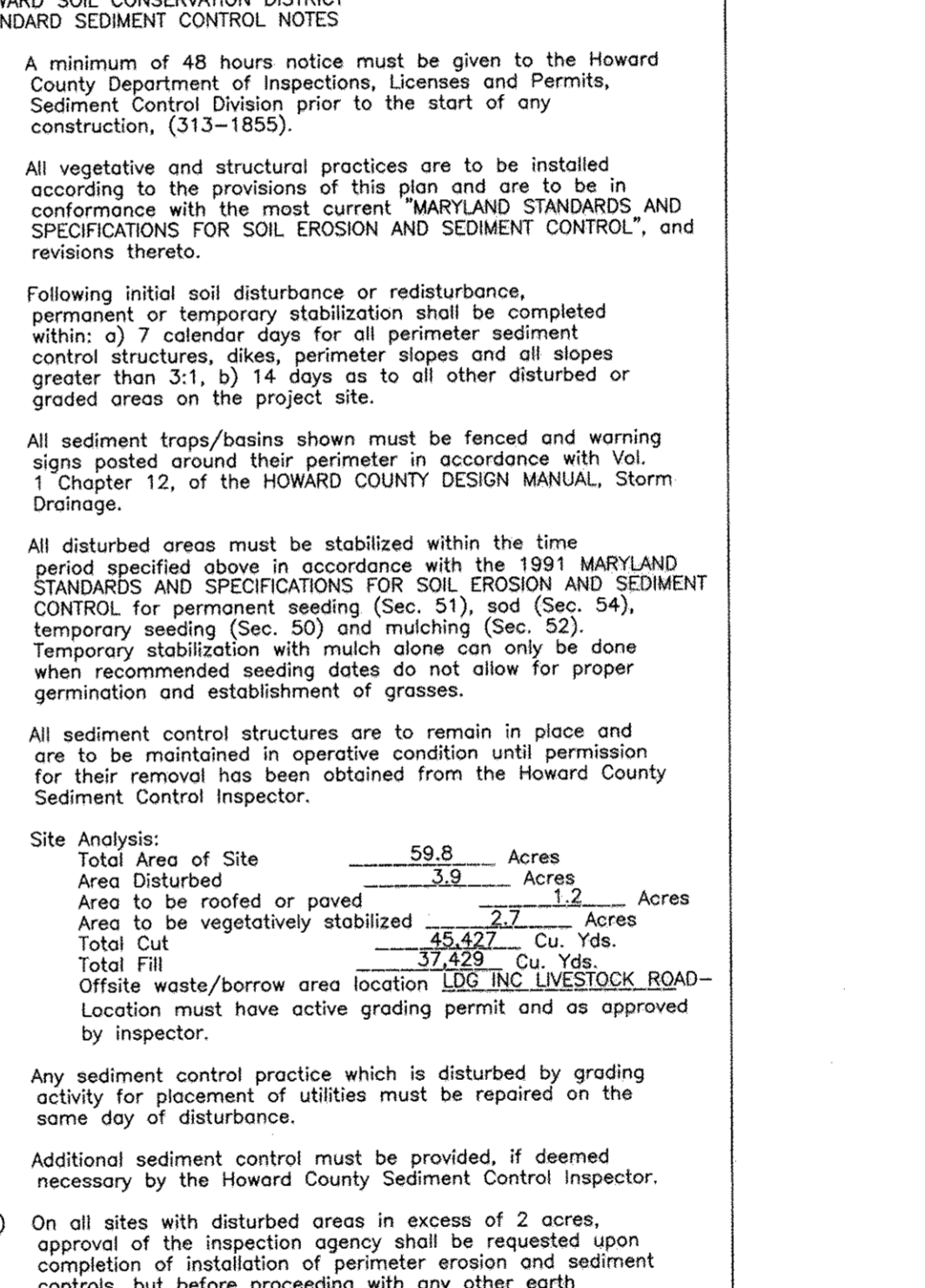
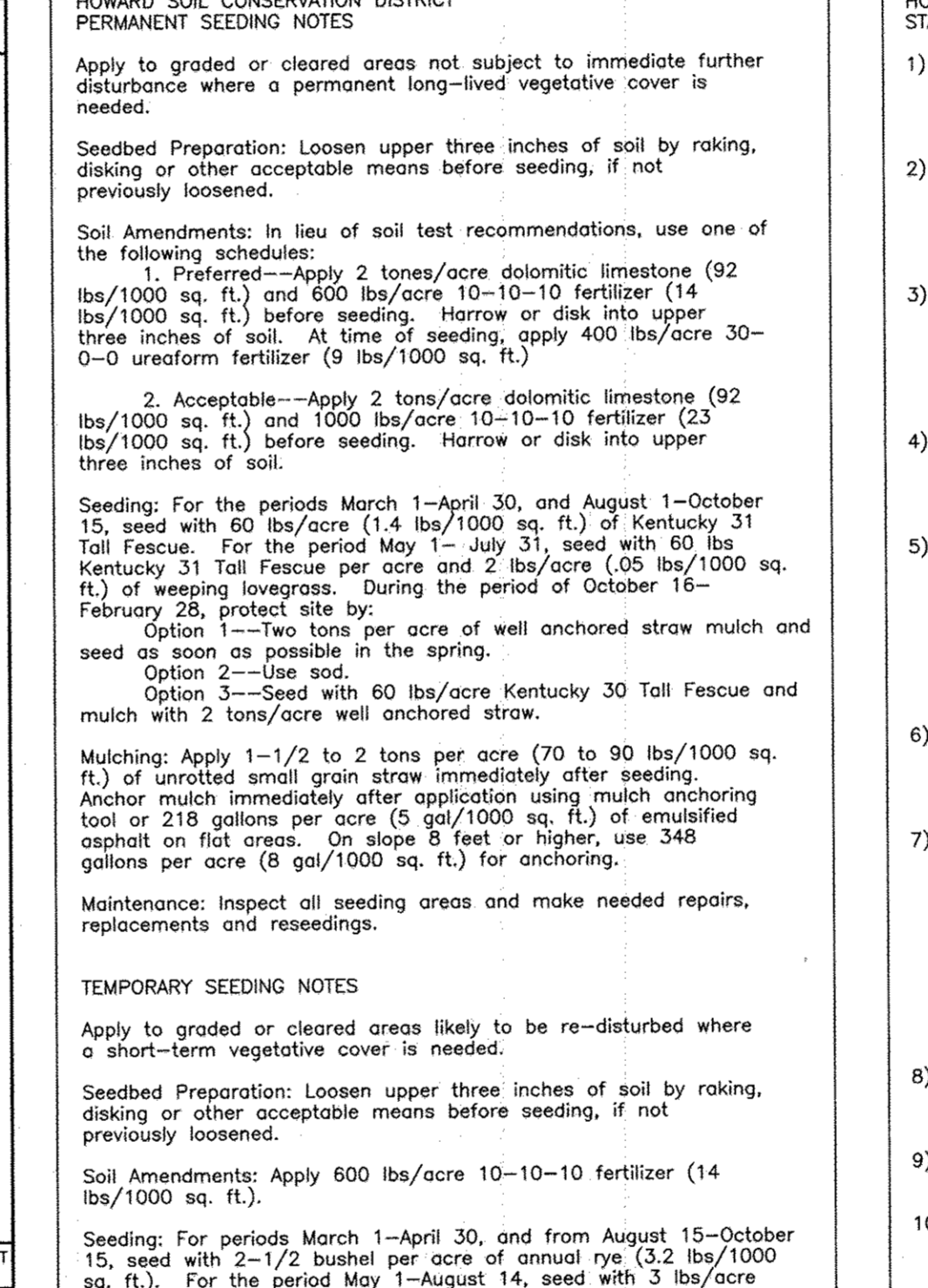
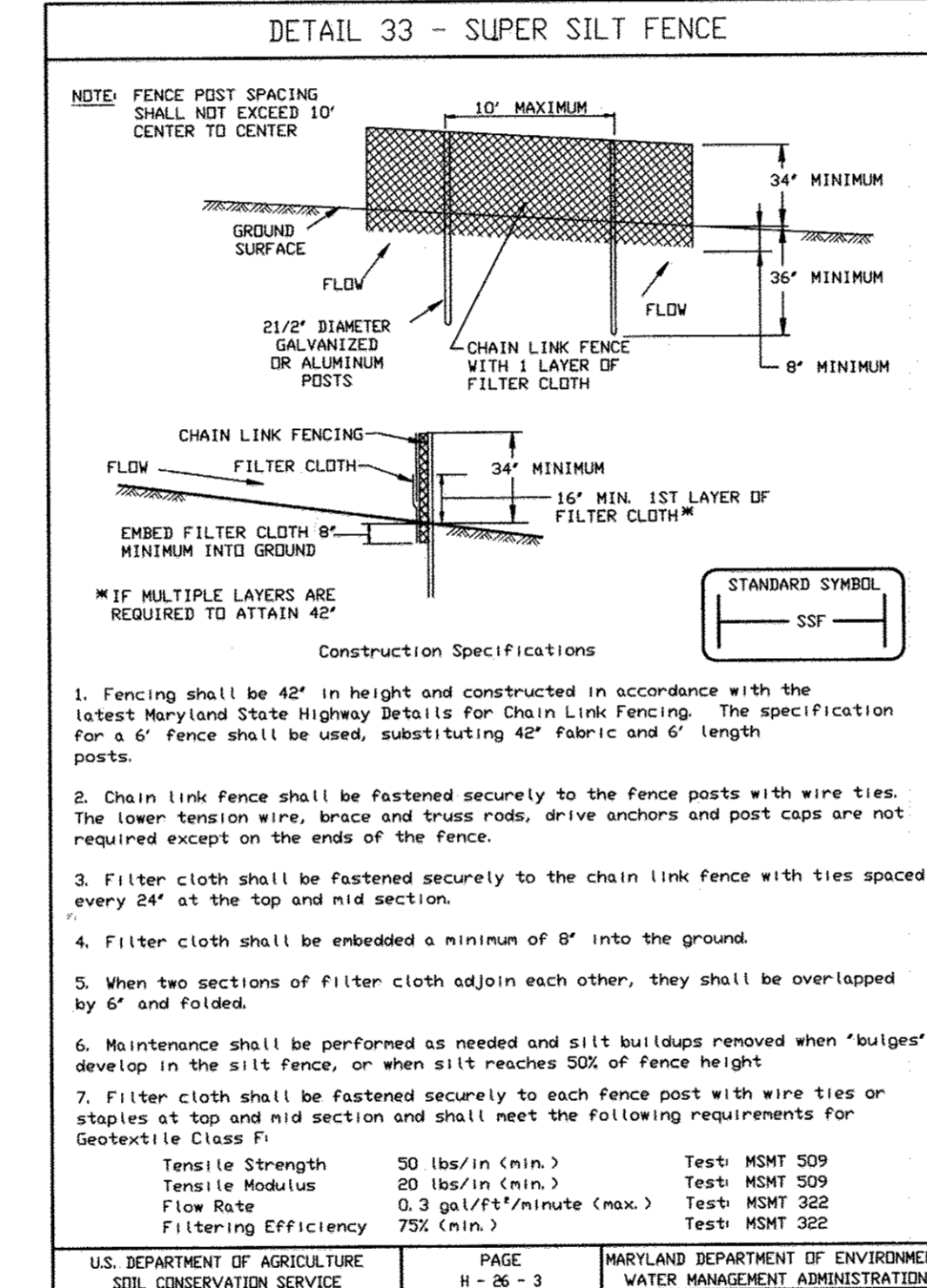
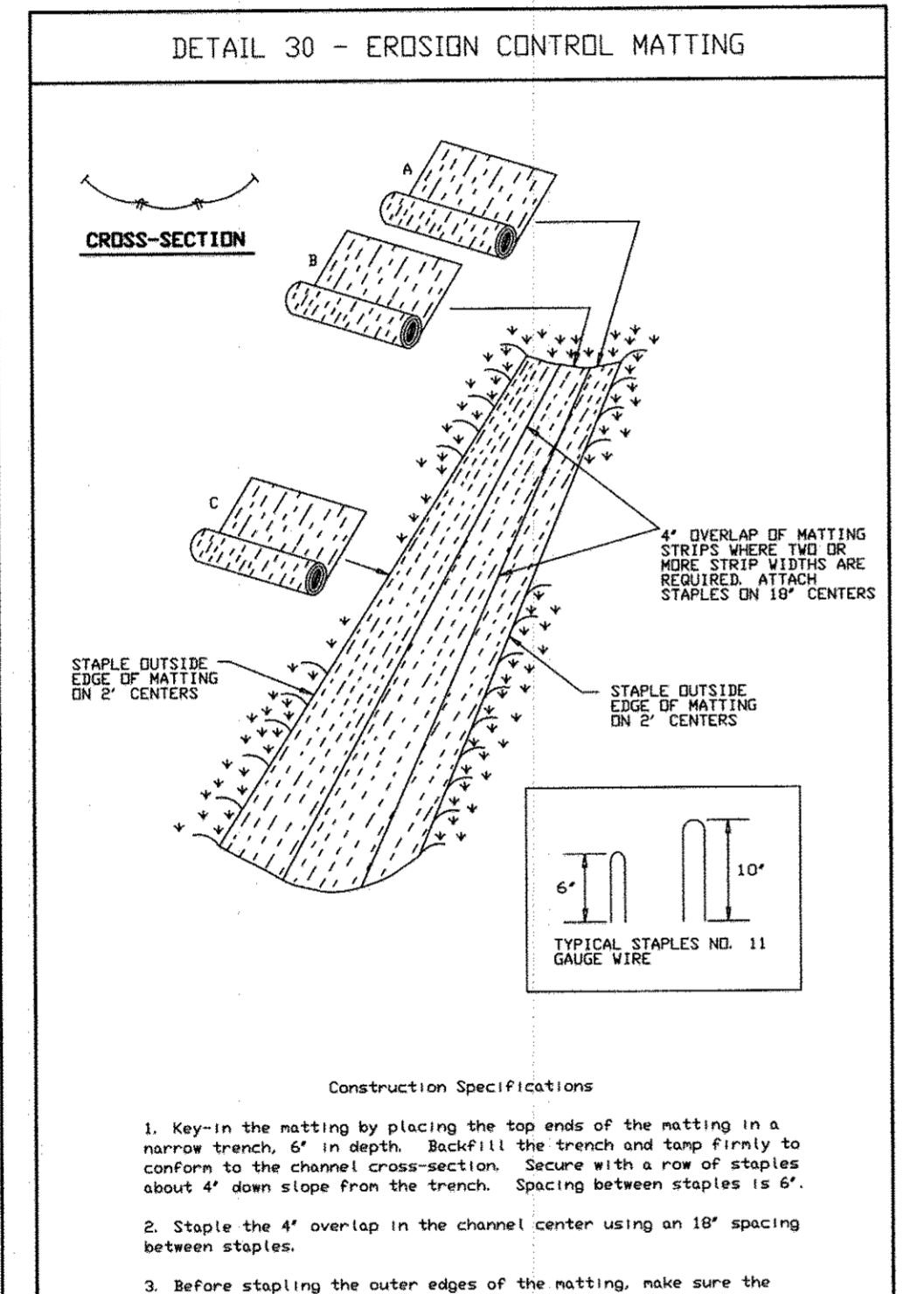
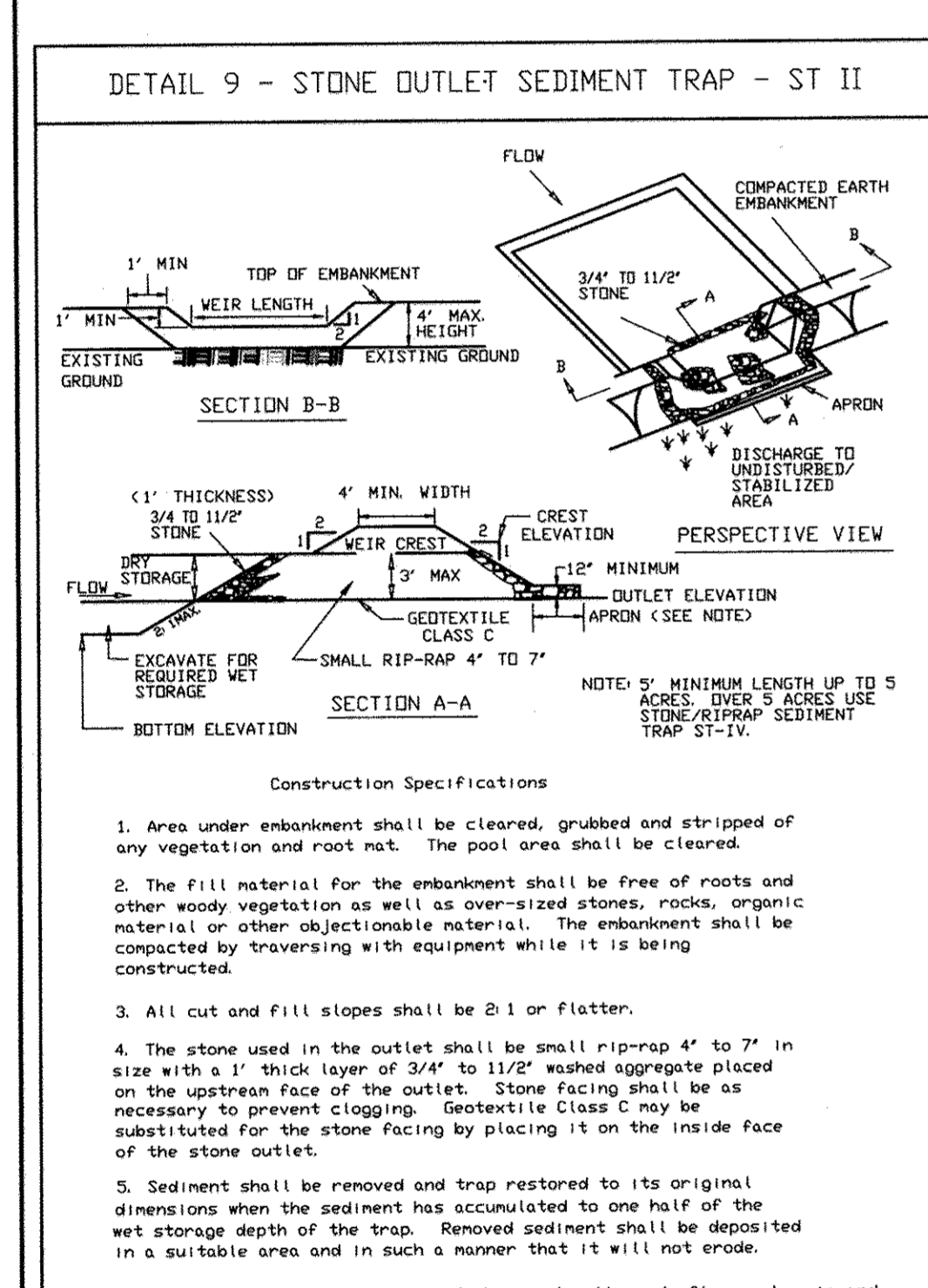
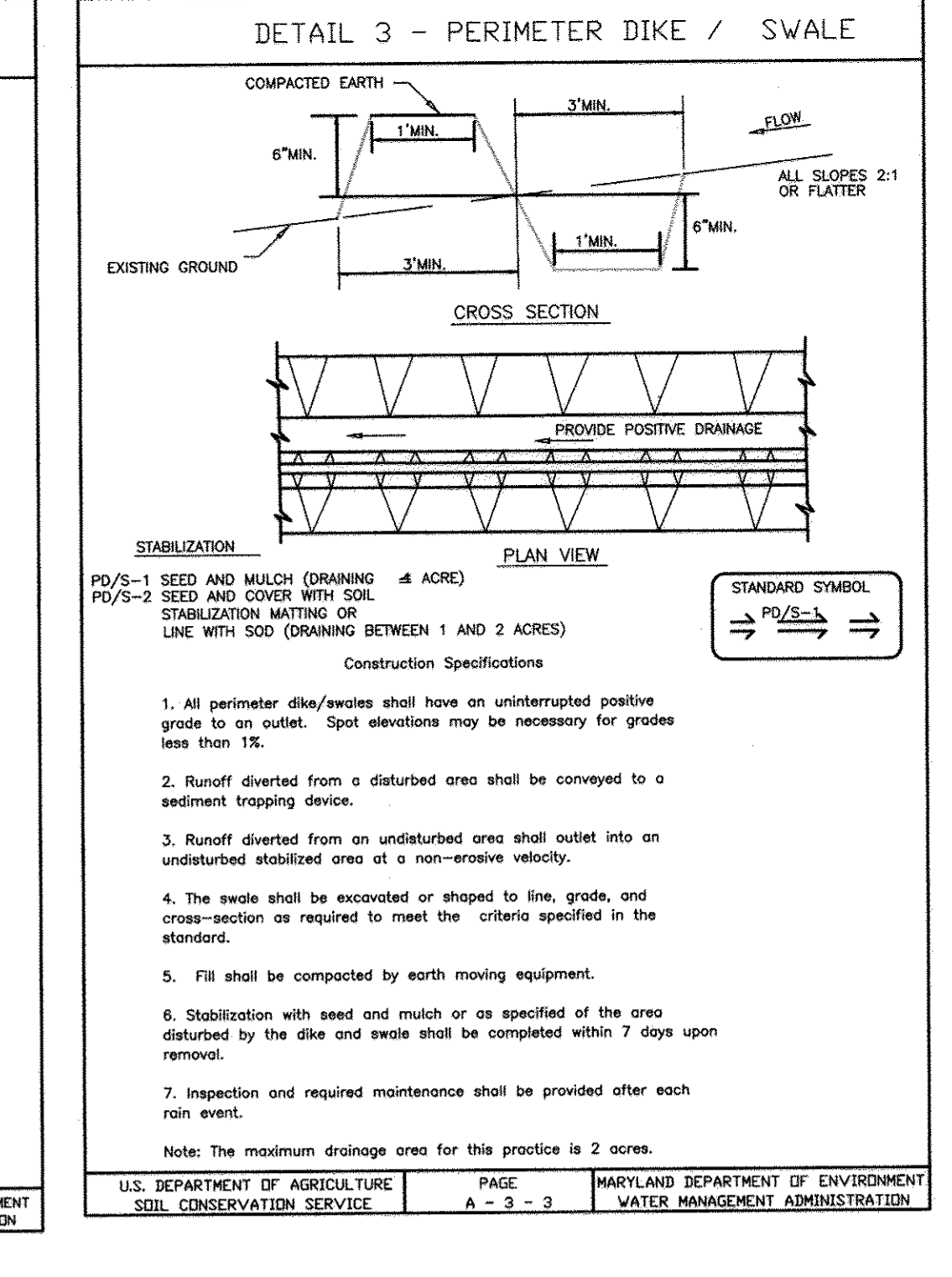
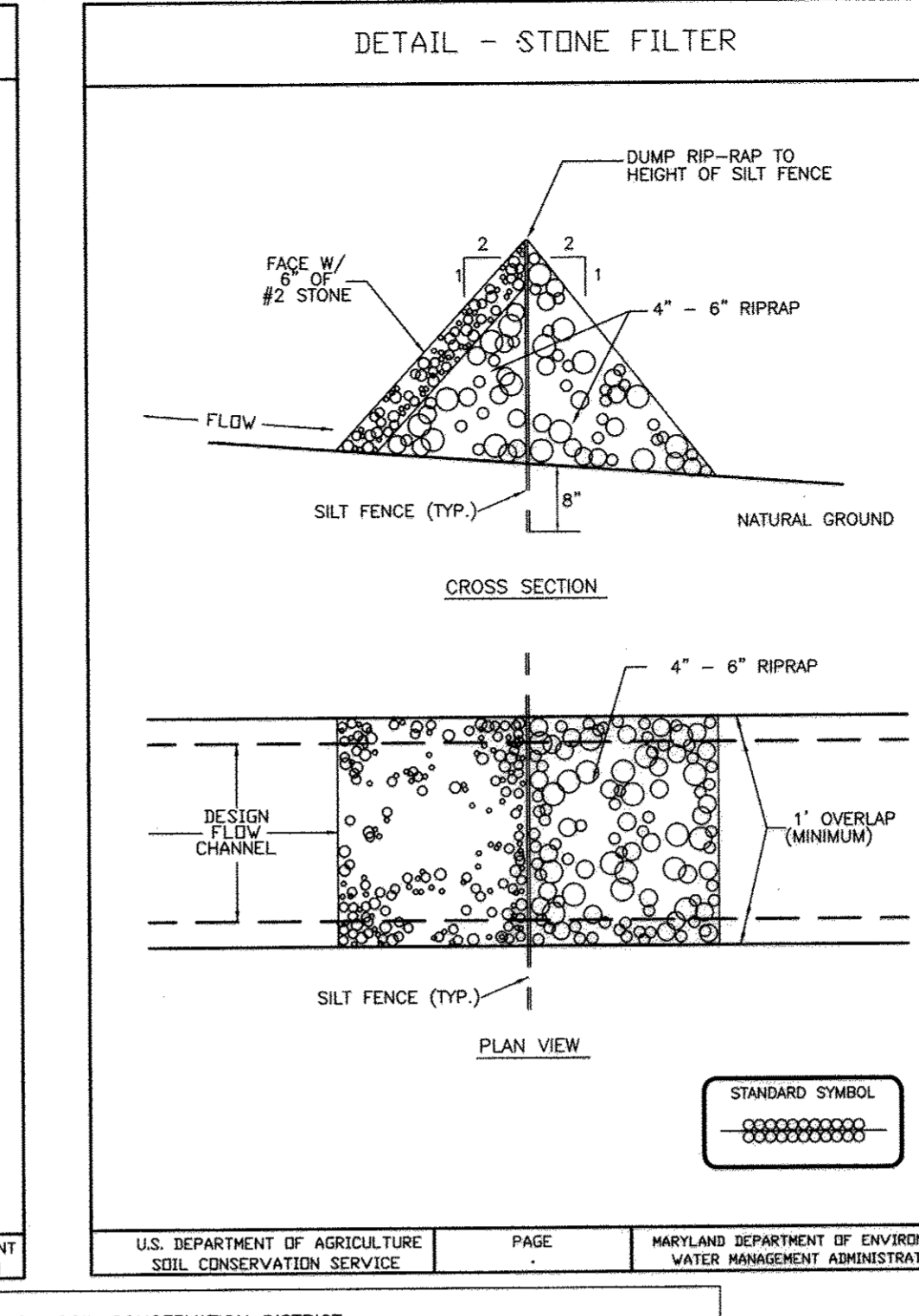
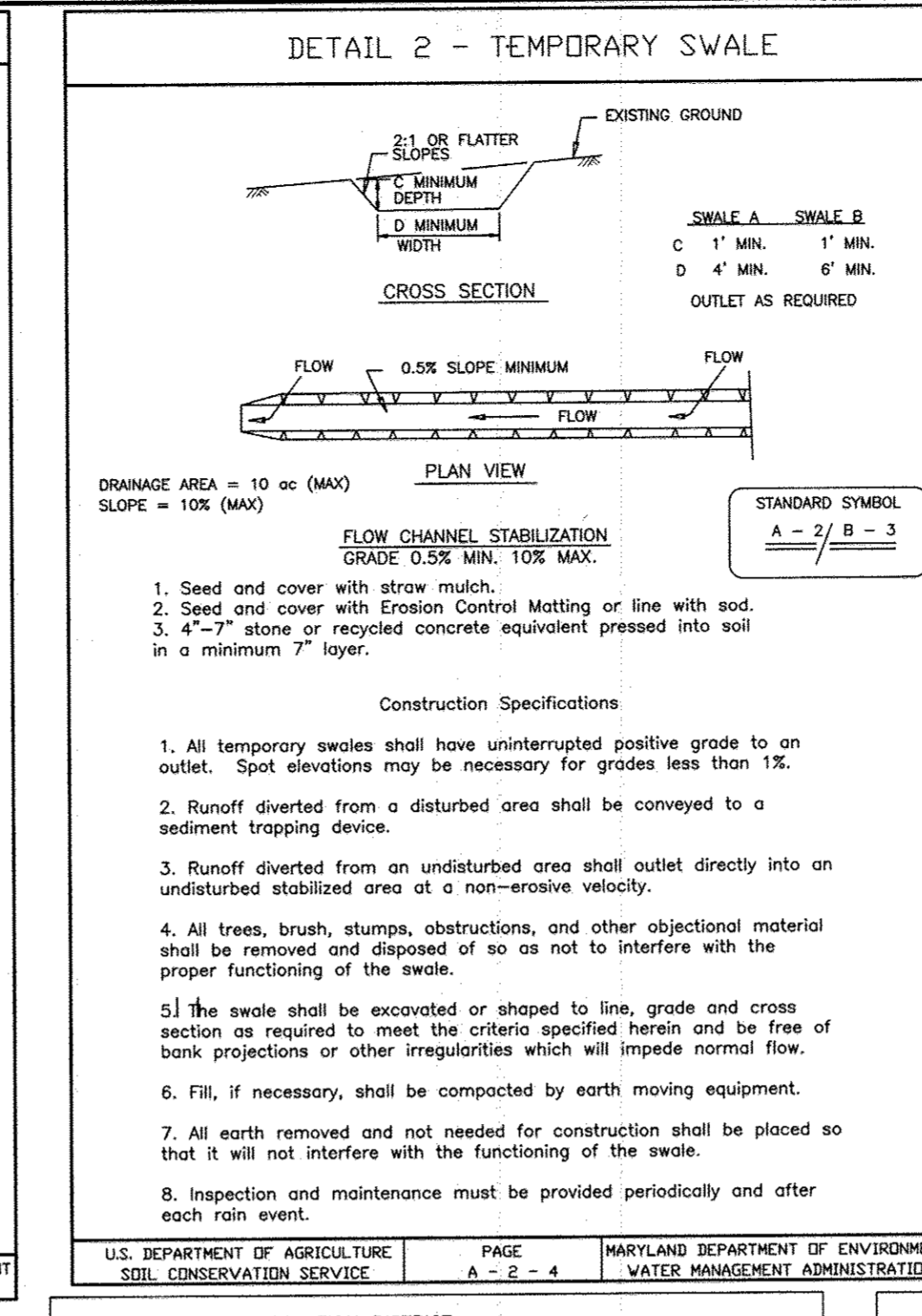
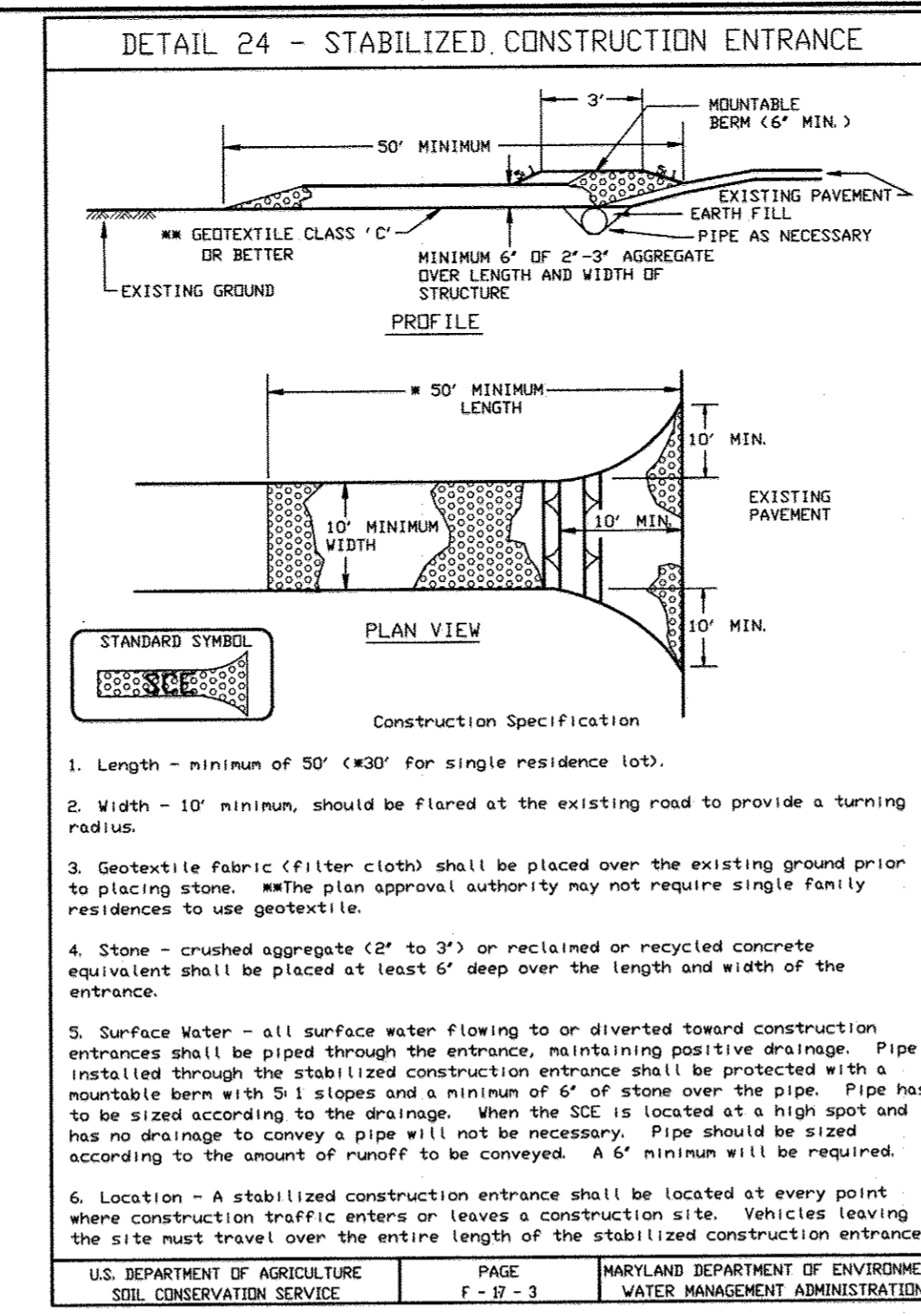
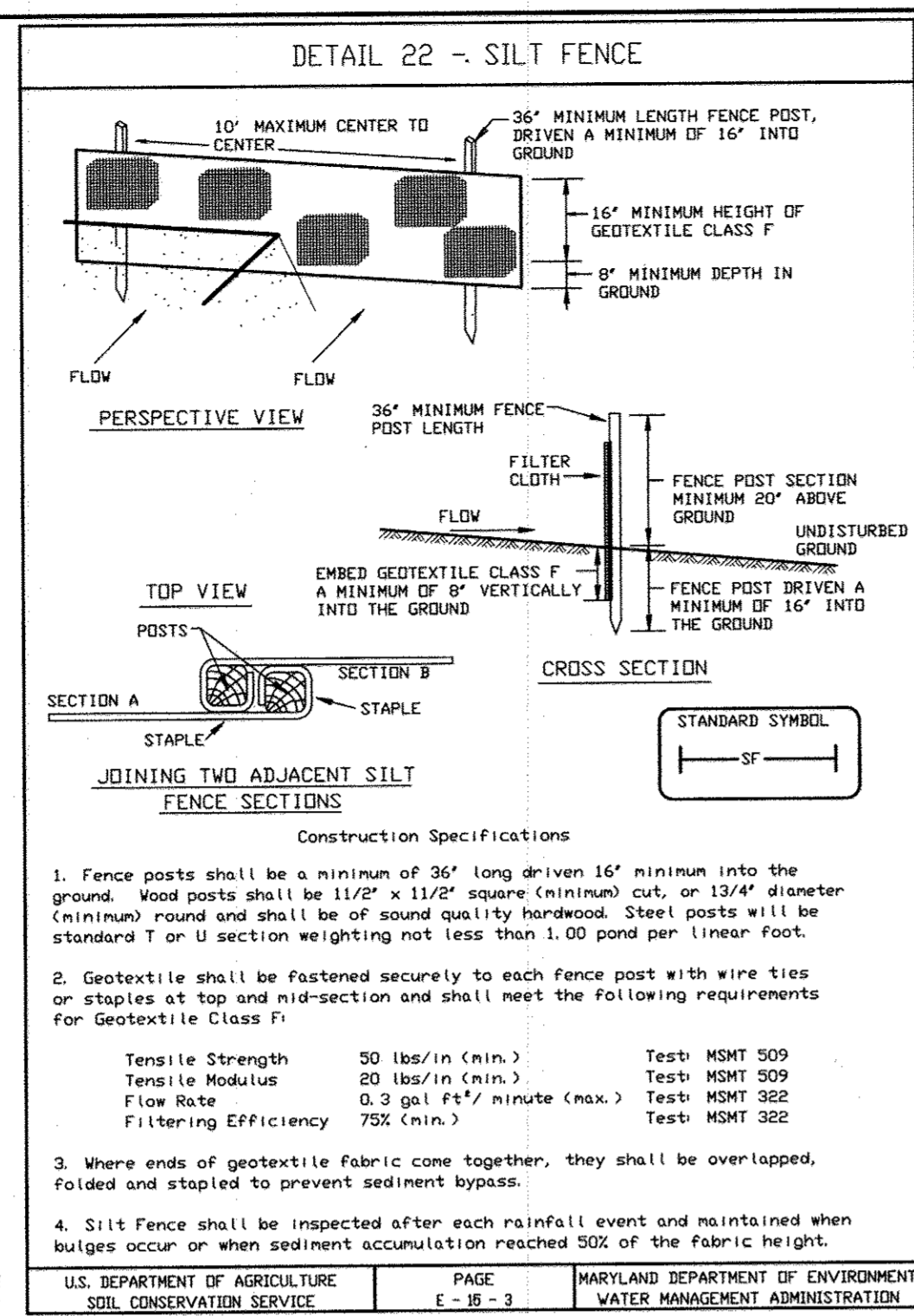
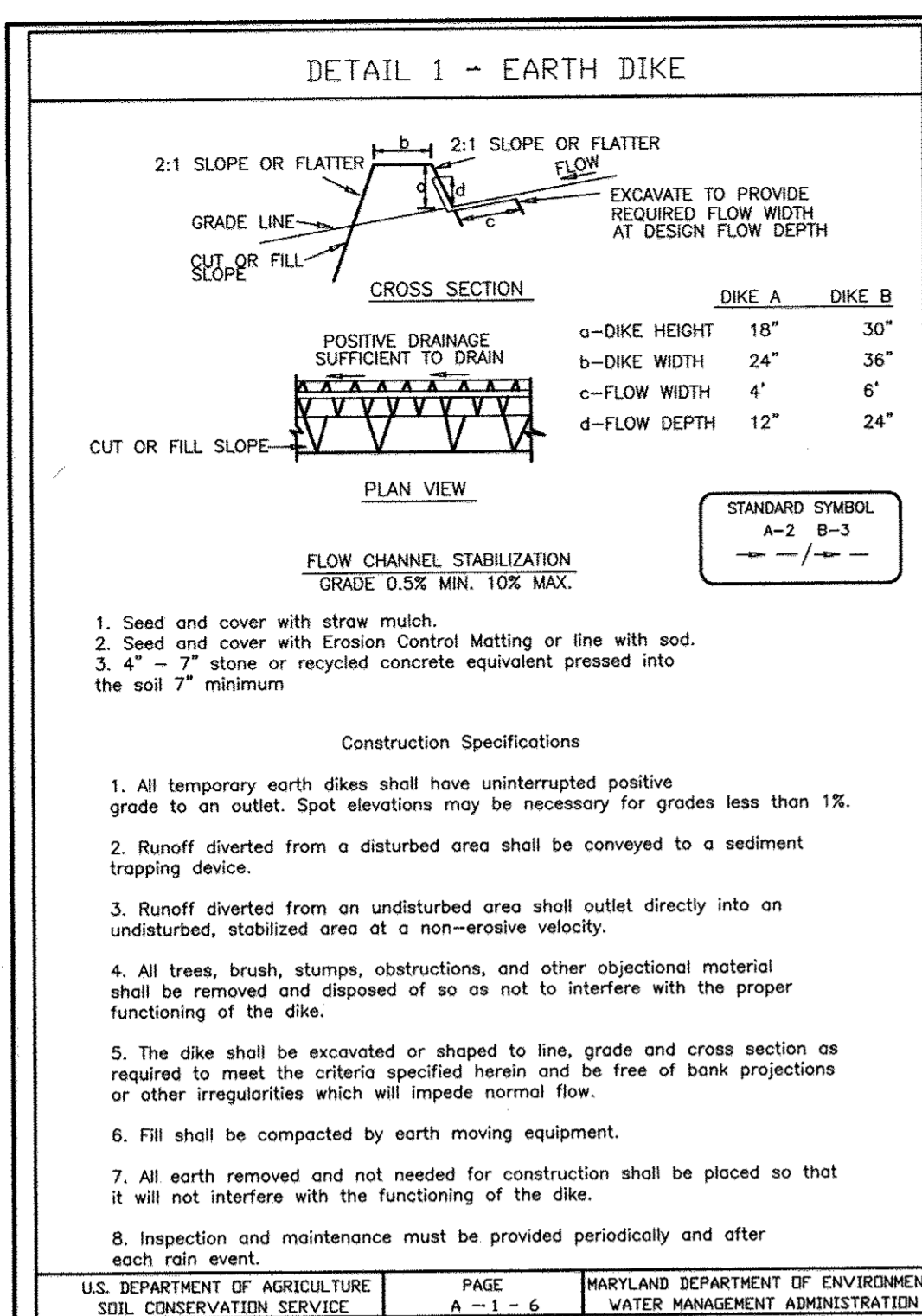
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William J. Smith 8-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 829 2880 (301) 831 5015 (410) 549 2751

STATE OF MARYLAND
SOURABH G. MUNSHI
PROFESSIONAL ENGINEER
7/29/08

DATE	REVISIONS
11/22/16	Buildable Preservation Parcel A (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE



DEVELOPER'S CERTIFICATE:

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

Daniel Lee
DEVELOPER
7/30/08
DATE

ENGINEER'S CERTIFICATE:

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

Sourabh C. Munshi, P.E.
SOURABH C. MUNSHI, P.E.
7/29/08
DATE

OWNER / DEVELOPER

LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

Reviewed for HOWARD SCD and meets Technical Requirements

USDA—Natural Resources Conservation Service Date

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

[Signature] 9/16/08
Howard SCD Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 9/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

[Signature] 9/16/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

CALL "MISS UTILITY" AT

1-800-257-7777

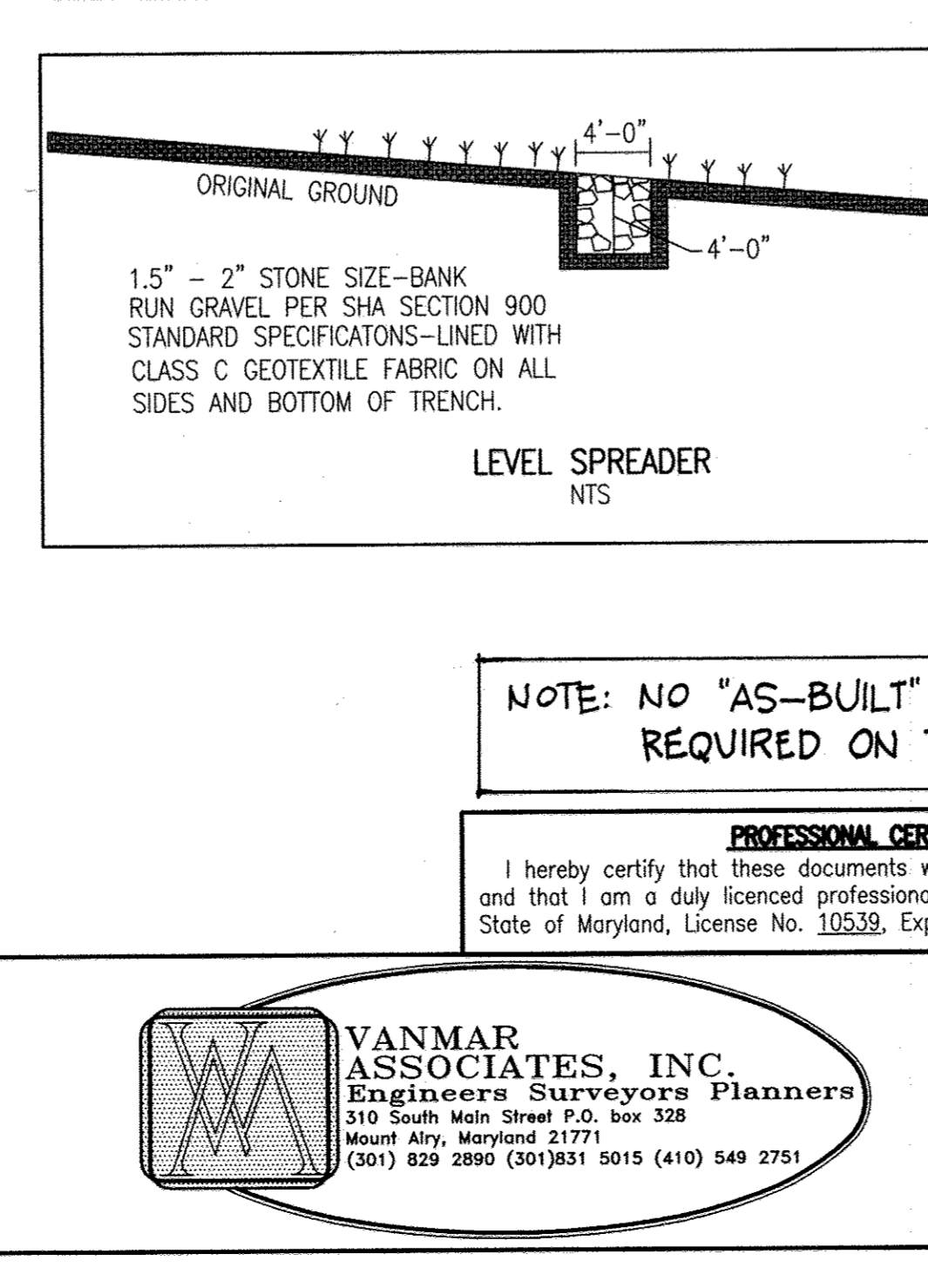
48 HOURS BEFORE START OF CONSTRUCTION

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. 10539. Expiration Date: 8-17-09

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

[Signature] 8-23-08
CHIEF, BUREAU OF HIGHWAYS DATE



NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

STATE OF MARYLAND

[Signature] 7/29/08
DATE

REVISIONS

DATE	REVISIONS
7/29/08	Buildable Preservation Parcel A (Now A-1) Non Buildable Preservation Parcel B (Now B-1)

TERRAPIN CREEK (FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT NO. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 14 OF 25

DPZ FILES: SP-06-002 INDEX NO. SC-5 F-07-086

OWNER / DEVELOPER

LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

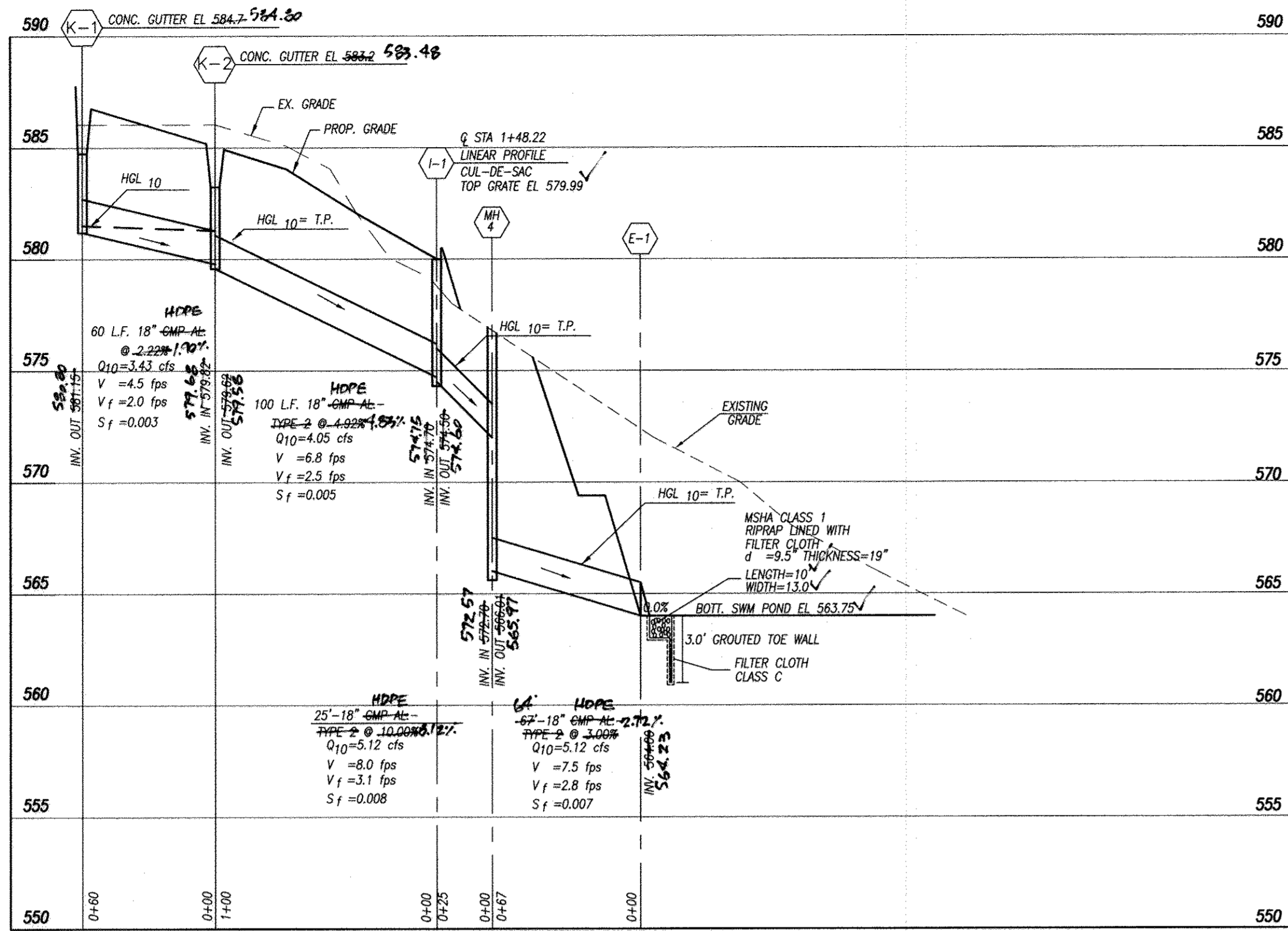
"AS-BUILT" SEDIMENT & EROSION CONTROL NOTES & DETAILS

TERRAPIN CREEK (FORMERLY SCHWABE FARM)

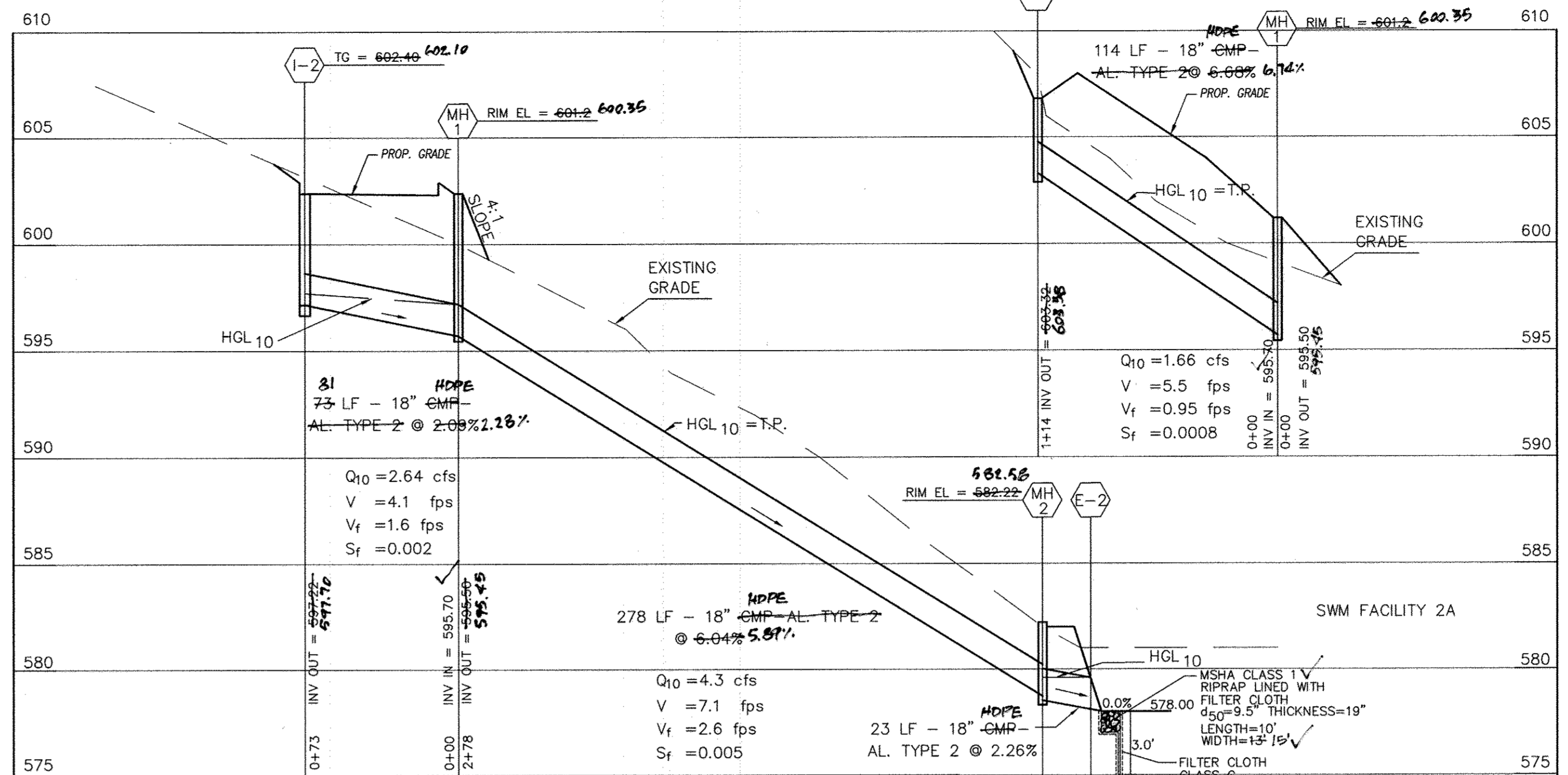
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SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 14 OF 25

DPZ FILES: SP-06-002 INDEX NO. SC-5 F-07-086



**TERRAPIN CREEK ROAD
 CUL-DE-SAC OUTLET PIPE
 TO SWM FACILITY 1A**
 SCALE: HORIZ: 1" = 50'
 VERT: 1" = 5'



**MILO COURT
 CUL-DE-SAC OUTLET PIPE TO SWM FACILITY 2A**
 SCALE: HORIZ: 1" = 50'
 VERT: 1" = 5'

STORM DRAIN NOTES

1. ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH LATEST STANDARD SPECIFICATION OF HOWARD COUNTY PLUS SHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
2. FOR TYPES OF STRUCTURES, REFER TO THE STANDARD STORM DRAINAGE DETAILS OF HOWARD COUNTY.
3. WHERE THE DROP ON THE MAIN LINE THROUGH A STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1:121 OR FLATTER, A ROUNDED CHANNEL SHALL BE BUILT TO THE CROWN OF THE PIPES.
4. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATION AND ELEVATIONS OF THE MAINS BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN ON THIS PLAN OR TWELVE (12) INCHES, WHICHEVER IS LESS, CONTACT THE INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
5. CONTRACTOR MAKING ADJUSTMENTS TO EXISTING UTILITIES MUST BE APPROVED AND WORK UNDER THE SUPERVISION OF THE UTILITY COMPANY AND/OR HOWARD CO. DEPT. OF PUBLIC WORKS. REQUIRED MATERIALS MUST BE APPROVED BY THE APPROPRIATE UTILITY OWNER OR AND THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
6. ALL INLETS SHALL BE PROVIDED WITH WEEP HOLES AND FOUNDATION DRAINAGE MATERIALS PER HOWARD CO. STANDARDS.
7. WHERE ANY PART OF THE STORM DRAIN SYSTEM IS LOCATED IN FILL SECTION, PROVIDE SLEET FILL MATERIAL COMPACTED TO 95% AASHTO T-180 DENSITY FROM ORIGINAL UNDISTURBED GROUND UP TO STRUCTURE BOTTOM SLABS AND PIPE BEDDING. PROVIDE BEDDING PER HOWARD COUNTY STD. DETAIL #62.01.
8. ELEVATIONS SHOWN ON PROFILES ARE AT PIPE INVERTS, UNLESS OTHERWISE NOTED.
9. GRADE ALL DISTURBED AREAS TO PROVIDE POSITIVE DRAINAGE.
10. ALL STANDARD STORM DRAINAGE STRUCTURES ARE SUBJECT TO MODIFICATION BY THE FIELD INSPECTOR TO MEET FIELD REQUIREMENTS.
11. CONTRACTOR SHALL NOTIFY MISS UTILITY (1-800-257-7777), 48 HOURS IN ADVANCE OF ANY EXCAVATION.

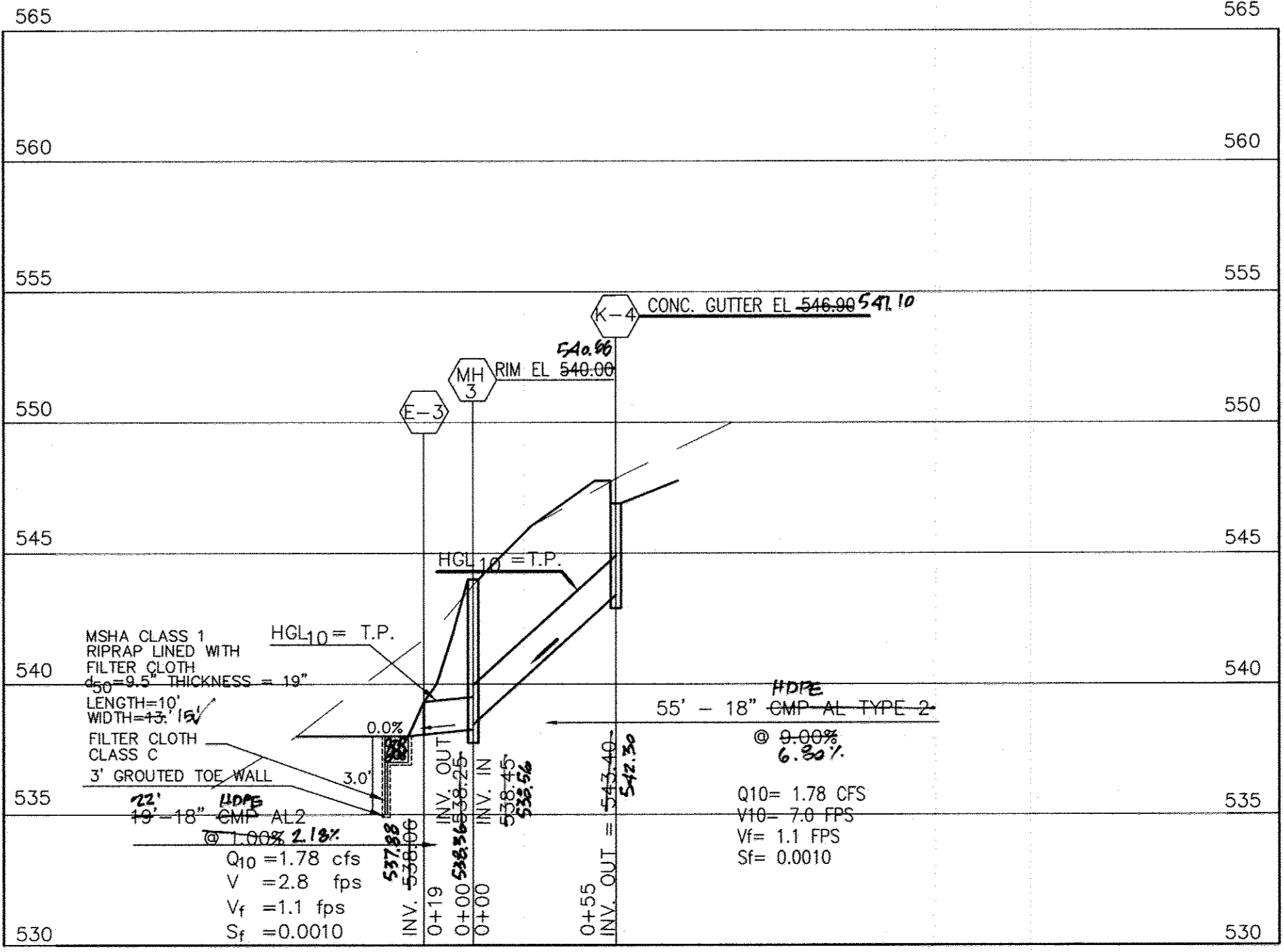
NOTES:

1. PIPE LENGTH SHOWN ON SCHEDULE ARE BASED ON PROFILED LENGTHS FROM CENTERLINE OF THE STRUCTURES FOR PRECAST TYPE STRUCTURES.
2. PIPES SHOWN HEREON ARE CORRUGATED ALUMINUM ALLOY CULVERT PIPE PER HOWARD CO. STANDARDS AND SPECIFICATIONS OR APPROVED EQUAL.
3. ALL PRECAST STRUCTURES SHALL MEET HOWARD CO. STANDARDS AND SPECIFICATIONS OR APPROVED EQUAL.

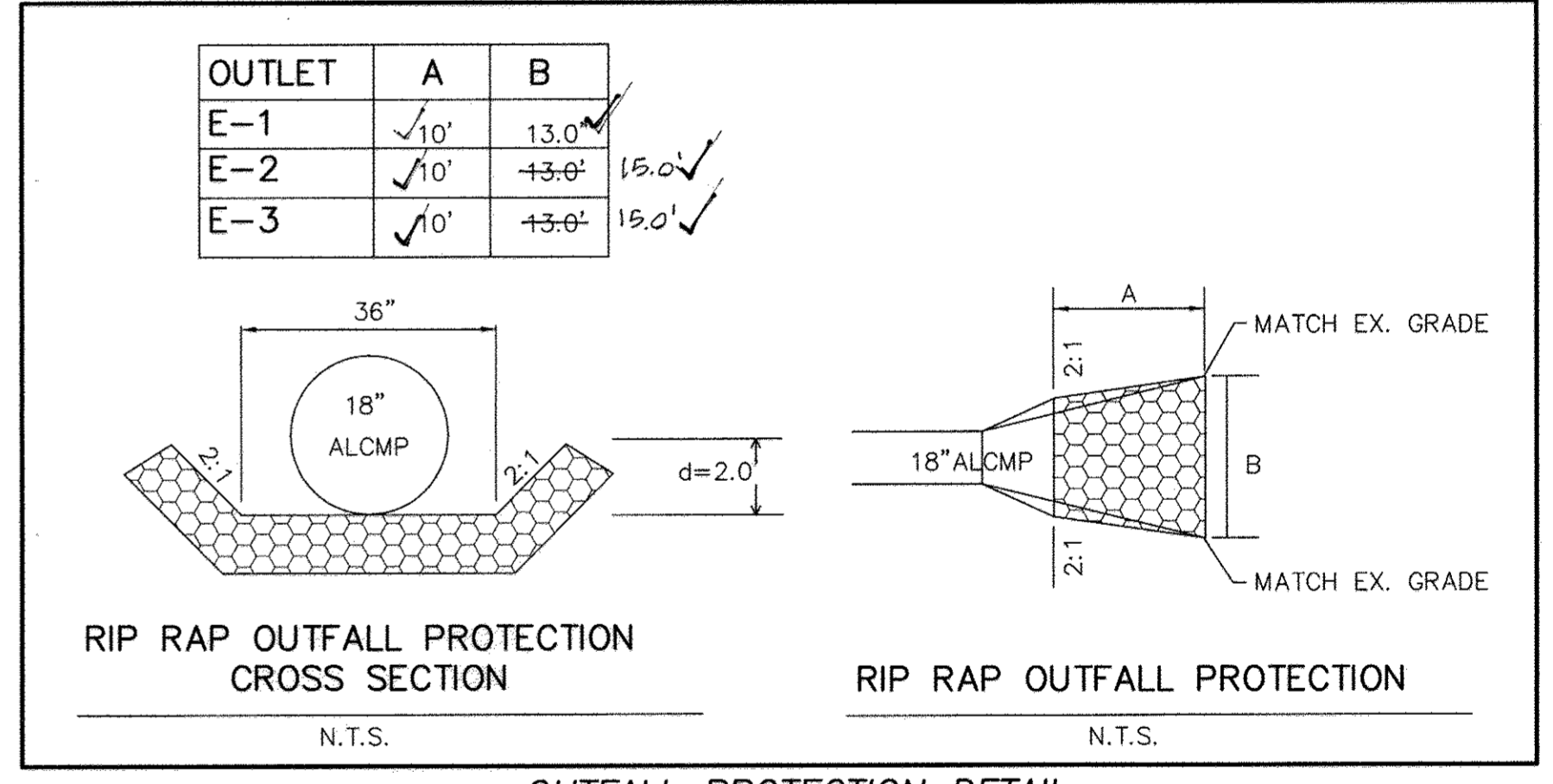
AS-BUILT CERTIFICATION
 I hereby certify by my seal, that the design, knowledge and belief the facilities shown on this plan were constructed in accordance with the "AS-BUILT" plan meet the Approved Plans and Specifications.
 Ronald E. Thompson
 Professional Engineer Registration No. 10417
 Date: 2/12/2012

STRUCTURE SCHEDULE

STR. NO.	STRUCTURE TYPE	STRUCTURE LOCATION	STRUCTURE ELEVATION	INVERT (IN)	INVERT (OUT)	REMARKS
K-2	TYPE "K" INLET HOWARD CO. STD. D- 4.12	TERRAPIN CREEK ROAD @ STA. 10+27 24' RT	583.2 583.48 TOP CONC. GUTTER	579.82 579.68	579.62 579.58	LOCATED IN SUMP WITH 2'W BERM
I-1	PRECAST STD. "WR" INLET HOWARD CO. STD. D- 4.35	TERRAPIN CREEK RD CUL-DE-SAC N 600695.4400 E 1325806.0500	580.47 579.99	574.70 574.75	574.50 574.60	LOCATED IN SUMP
E-1	18" METAL END SECTION SHA STD. MD 370.01	N 600715.6961 E 1326056.5646	XXXX	XXXX	564.00 564.25	PIPE OUTLET
I-2	PRECAST STD. "WR" INLET HOWARD CO. STD. D- 4.35	MILO COURT CUL-DE-SAC N 600682.0900 E 1324839.9200	602.40 602.10	XXXX	597.22 597.10	LOCATED IN SUMP
MH-1	SHALLOW BRICK MANHOLE HOWARD CO. STD. G-9.05	N 600,627.4564 E 1,324,888.2949	601.2 600.55	595.70	595.50 595.35	TOP OF COVER ABOVE GRADE
MH-2	SHALLOW BRICK MANHOLE HOWARD CO. STD. G-9.05	N 600,351.3745 E 1,324,930.3745	582.22 581.55	578.72 578.06	578.52 578.68	TOP OF COVER ABOVE GRADE
E-2	18" METAL END SECTION SHA STD. MD. 370.01	N 600,608.0700 E 1,324,892.4000	XXXX	XXXX	578.00 578.21	PIPE OUTLET
K-1	TYPE "K" INLET HOWARD CO. STD. D- 4.12	TERRAPIN CREEK ROAD @ STA. 10+05 25' LT	584.7 584.80 TOP CONC. GUTTER	XXXX	581.15 580.80	LOCATED IN SUMP WITH 2'W BERM
K-4	TYPE "K" INLET HOWARD CO. STD. D-4.12	LIVESTOCK ROAD N 599511.2734 E 1325628.1633	546.90 547.20 TOP CONC. GUTTER	XXXX	543.40 542.30	LOCATED IN SUMP WITH 2'W BERM
MH-3	4'-0" STANDARD AND SHALLOW HOWARD CO. STD. G-5.12	N 599,491.4307 E 1325575.2500	544.00 545.66	538.45 538.56	538.25 538.36	LOCATED IN SUMP WITH 2'W BERM
E-3	18" METAL END SECTION SHA STD. MD 307.01	N 599494.8005 E 1325550.4782	XXXX	XXXX	532.00 537.88	PIPE OUTLET
K-3	TYPE "K" INLET HOWARD CO. STD. D-4.12	MILO COURT @ STA. 8+22 25' RT	607.00 607.38 TOP CONC. GUTTER	XXXX	603.32 603.38	LOCATED IN SUMP WITH 2'W BERM
MH-4	4'-0" STANDARD AND SHALLOW HOWARD CO. STD. G-5.12	N 600736.9758 E 1326018.8361	577.00 576.37	572.00 572.51	562.01 565.97	LOCATED IN SUMP WITH 2'W BERM



**STORM DRAIN PROFILE
 K-4 TO OUTFALL E-3**
 SCALE: HORIZ: 1" = 50'
 VERT: 1" = 5'



OUTFALL PROTECTION DETAIL

PIPE SCHEDULE

SIZE	TYPE	LENGTH
18"	CMP - ALUM TYPE-2	820 L. F.
24"	RCP CL IV	24 L. F.
14"x9"	CMP - ALUM TYPE 2	20 L. F.*

*DRIVEWAY ACCESS TO SWM FACILITY 2B ALL OTHER DRIVEWAY ACCESS TO BE CONSTRUCTED WITH INDIVIDUAL LOTS.

**CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION**

"AS - BUILT"

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

**STORM DRAIN
 PROFILES
 NOTES & DETAILS**

**TERRAPIN CREEK
 (FORMERLY SCHWABE FARM)**

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1
 AND NON-BUILDABLE PRESERVATION PARCELS B1, C, D AND E
 PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN
 LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
 SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
 ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
 SCALE: AS SHOWN
 NOVEMBER, 2006 SHEET 15 OF 25

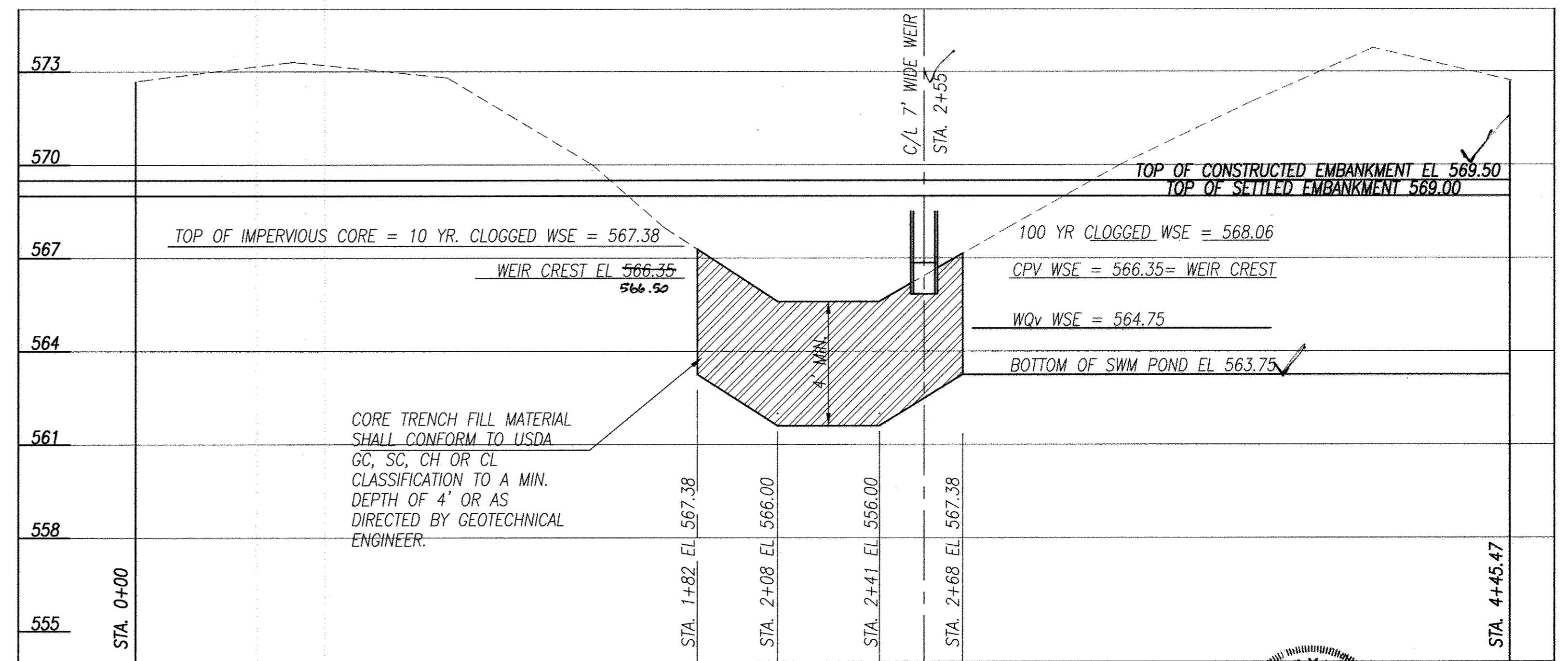
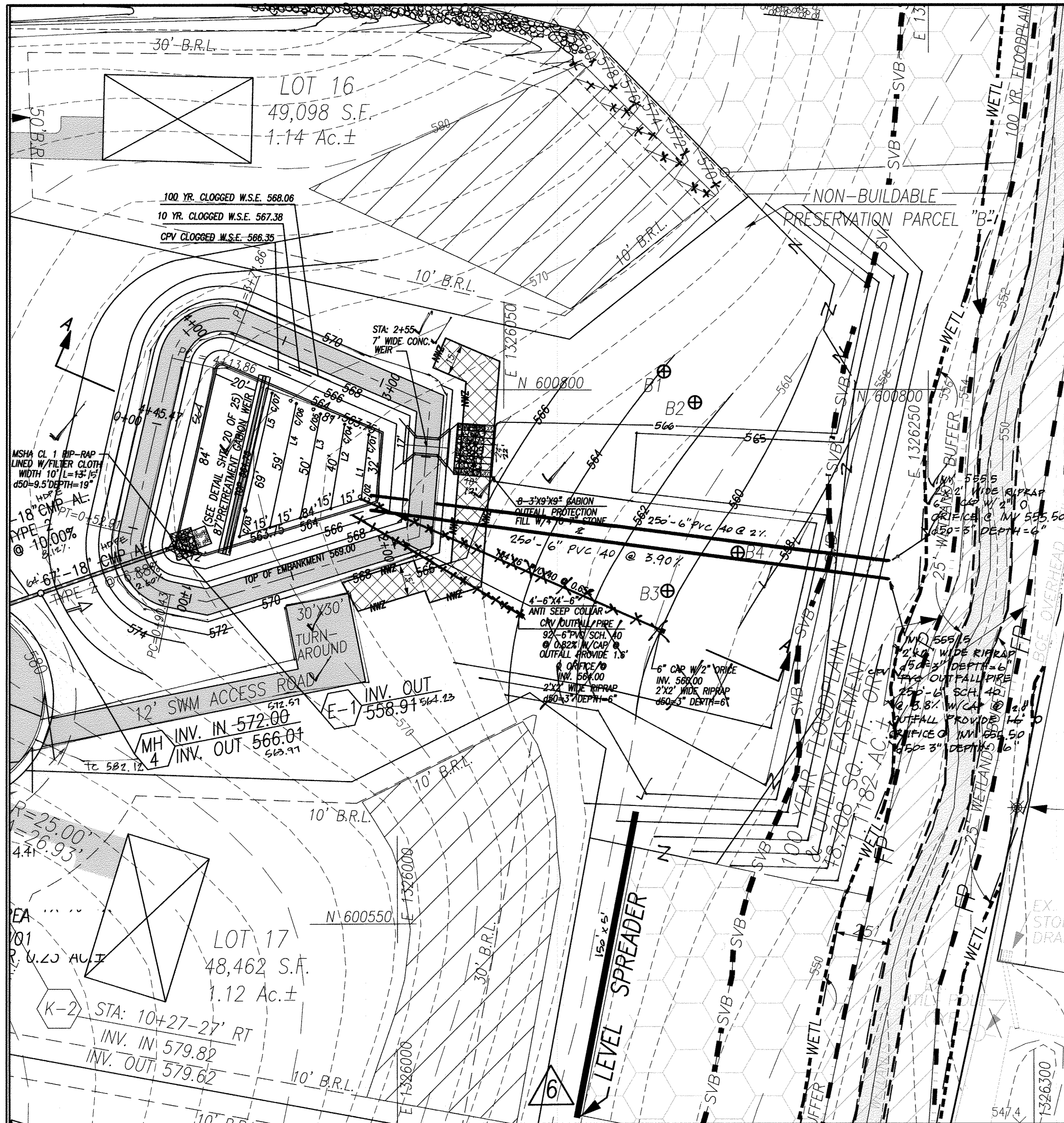
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/23/08
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 8-25-08
 CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 528
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)831 5015 (410) 549 2751

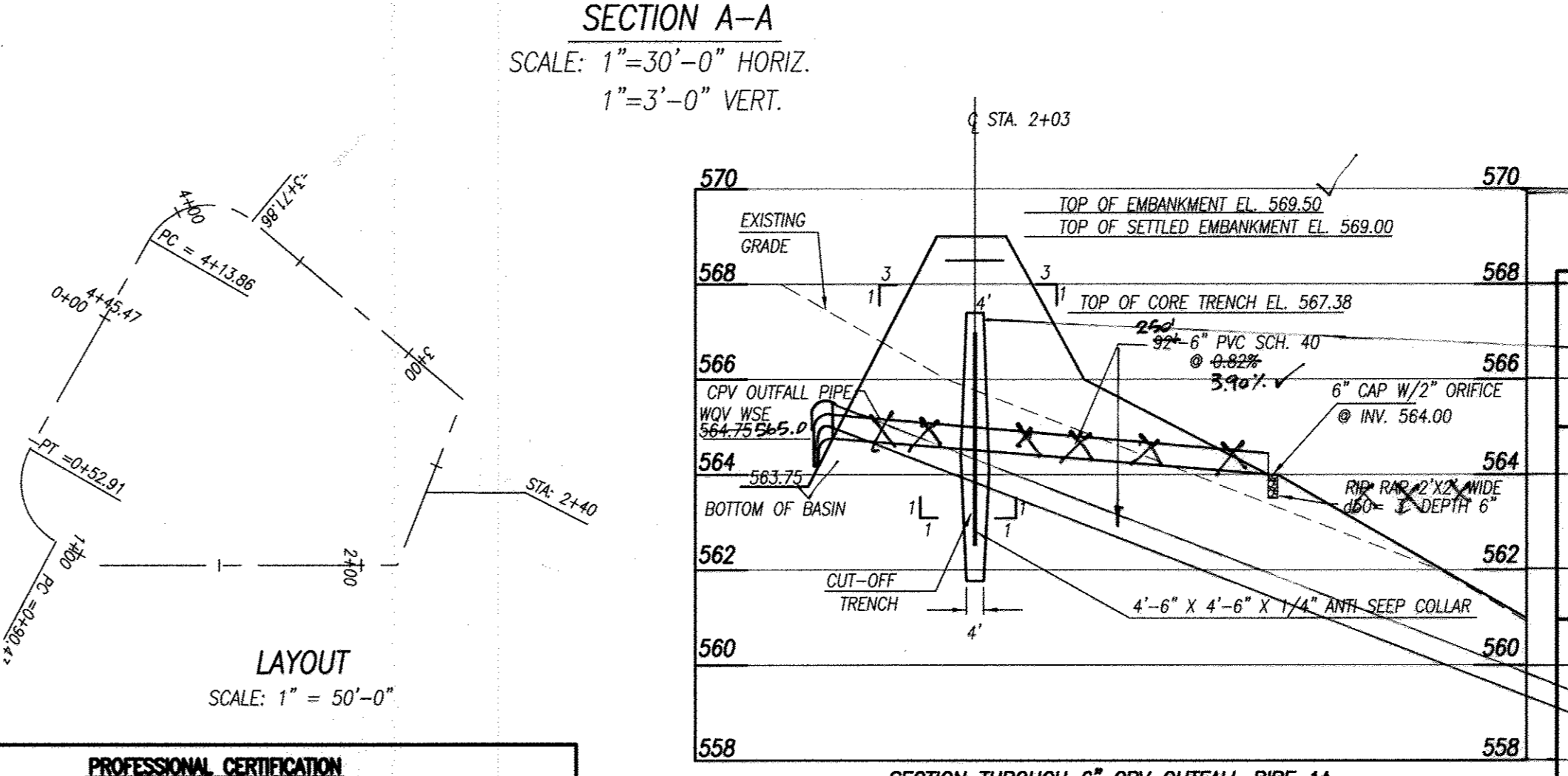
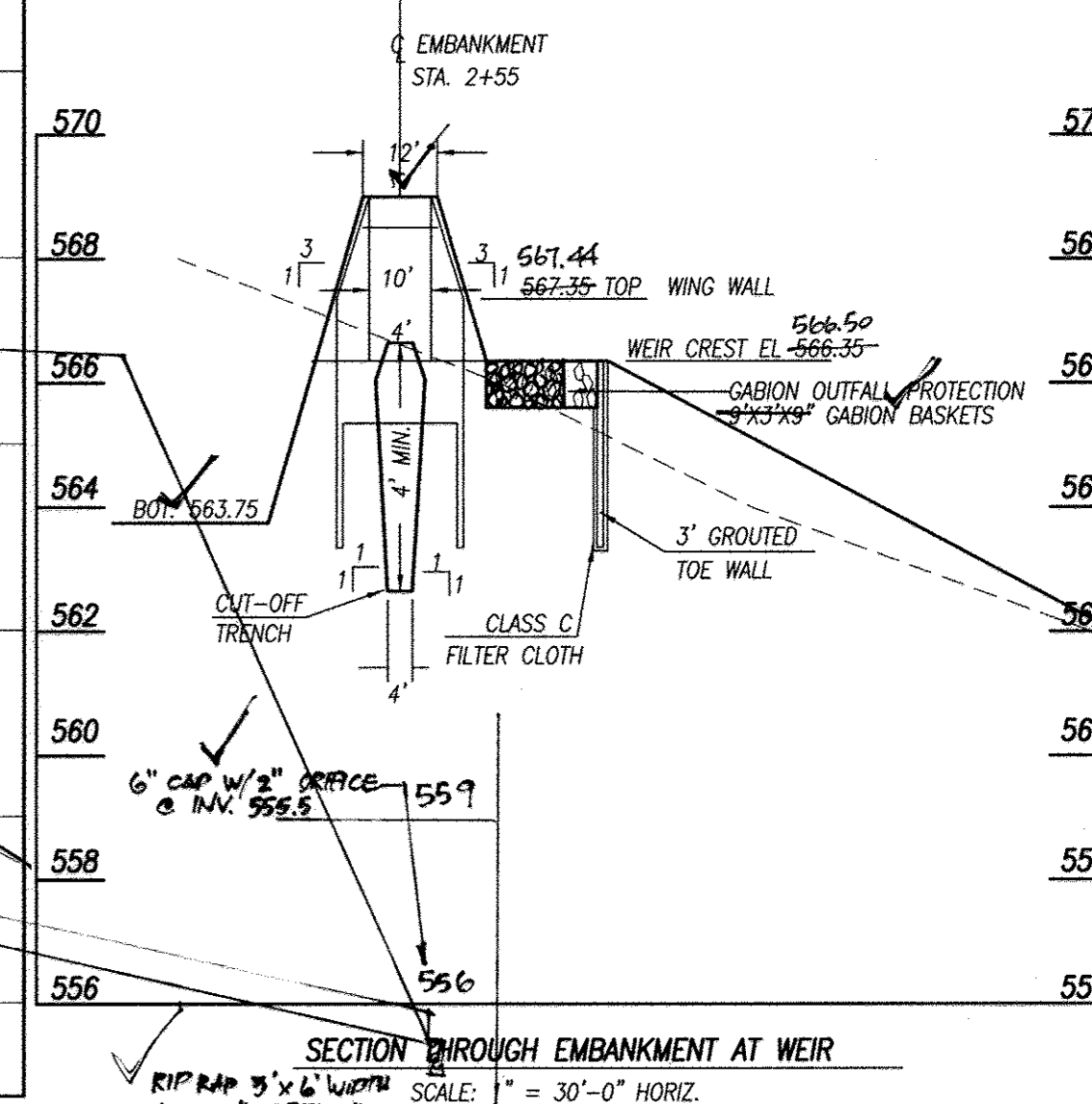
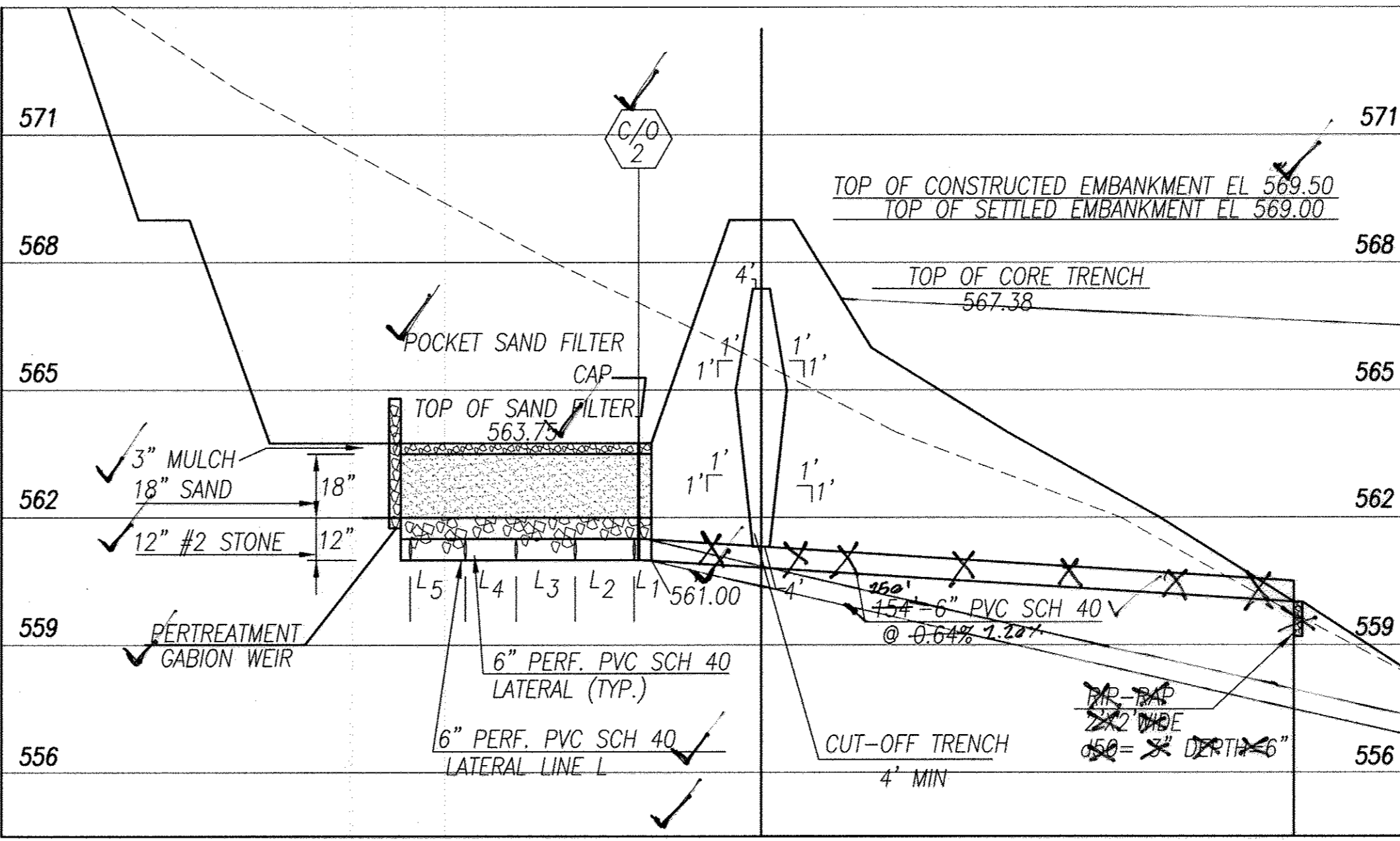
PROFESSIONAL CERTIFICATION
 I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

DATE	REVISIONS
1/22/10	Buildable Preservation Parcel A (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE



I hereby certify by my seal that I have prepared, and believe the facilities shown on this plan were constructed in accordance with the approved Plans and Specifications.

Professional Engineer
Rorold E. Thompson
Professional Engineer Registration No. 18417
Date: 3/13/2017



"AS-BUILT"

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

B2 - ESTIMATED SURFACE OF GROUND WATER=ELEV. 558.2

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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. 19539, Expiration Date: 8-17-09.

YANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS
11/21/16	Buildable Preservation Parcel A-1 (Now A-1)
8/4/16	Non-Buildable Preservation Parcel B-1 (Now B-1)
12/19/16	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Land Development
DATE: 2/23/18

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
DATE: 8-25-08

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 860966 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

FACILITY 1A
STORMWATER MANAGEMENT PLAN
& PROFILES

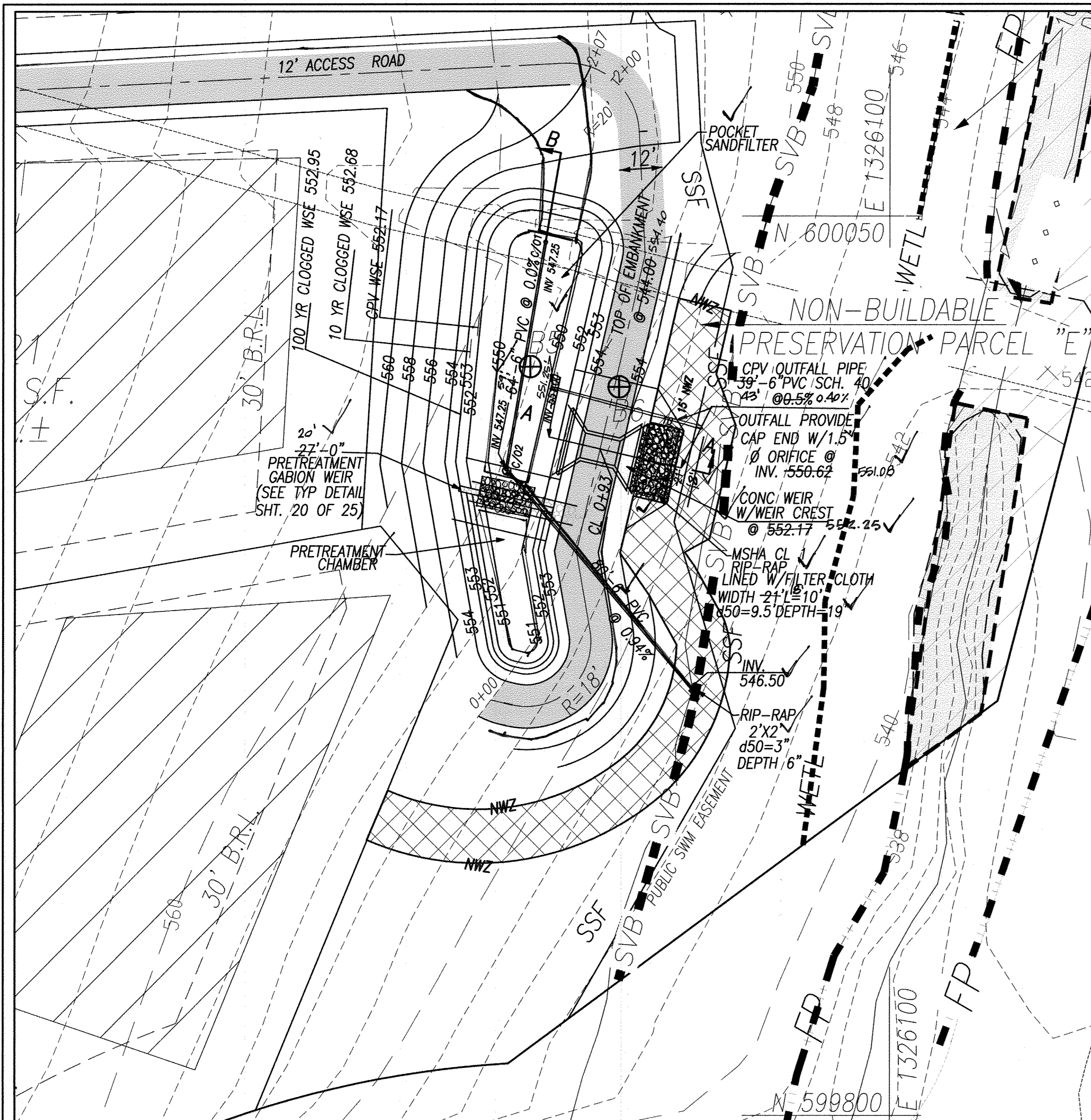
TERRAPIN CREEK
(FORMERLY SCHWABE FARM)

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SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
NOVEMBER, 2006 SHEET 16 OF 25

DPZ FILES: SP-06-002

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NOTE: ALL EMBANKMENTS = 3:1

**SWM FACILITY 1B POCKET SAND FILTER
(NON-BUILDABLE PRESERVATION PARCEL E)**

1"=20'

FACILITY 1B	
MODIFICATION TO HD. CO. STD. DETAIL D-6.01 LOW RISE SWM CONTROL STRUCTURE (SEE DETAIL SHEET 20 OF 25)	
WEIR WIDTH	BOTTOM SLAB REINFORCEMENT
7'	No. 4 @ 12" BOTH WAYS

B5 - ESTIMATED SURFACE OF GROUND WATER=ELEV. 540.0

LAYOUT
SCALE: 1" = 50'-0"

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hamilton 9/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William F. Marshall 8-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

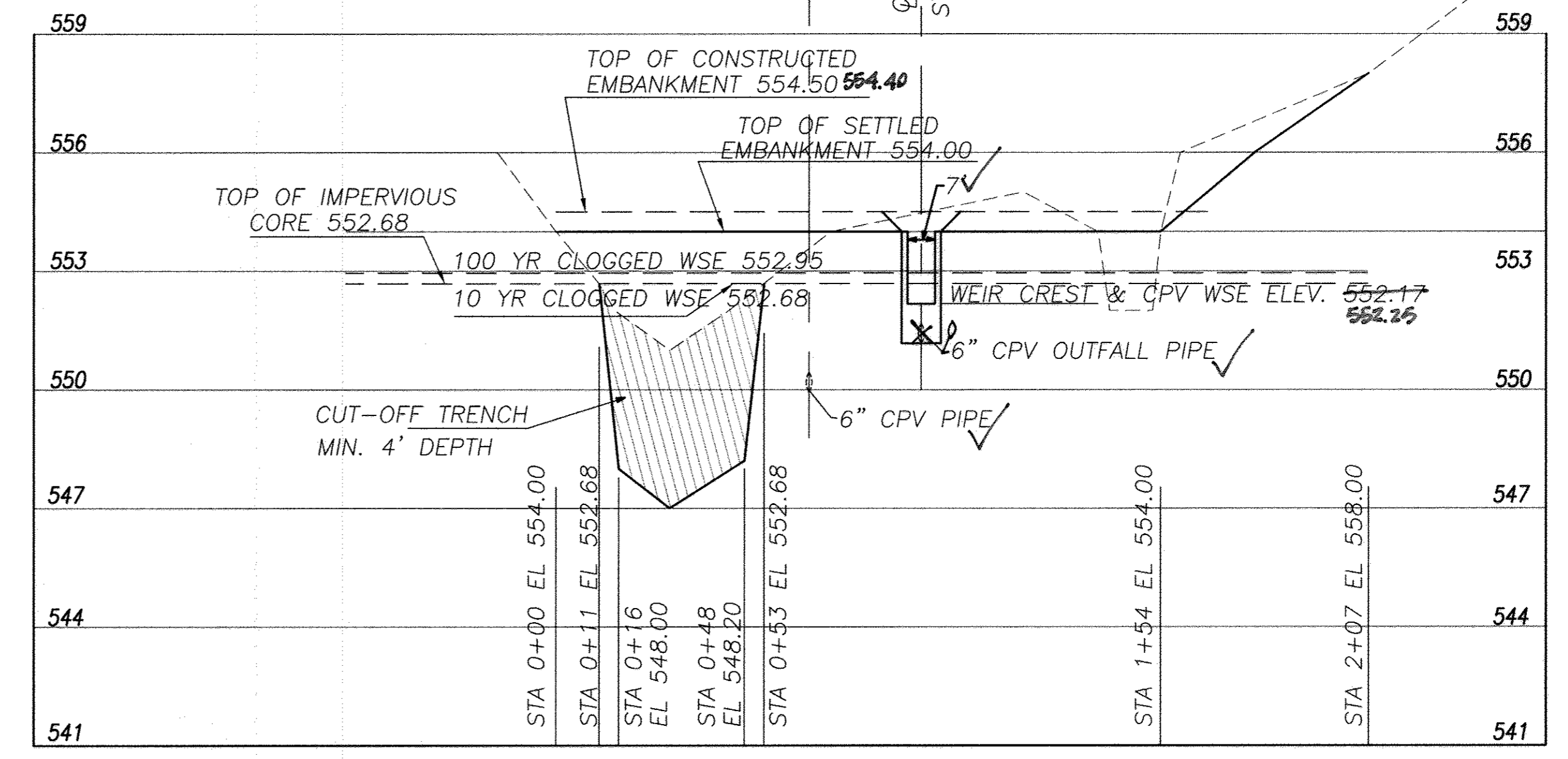
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and that I am a duly licensed professional engineer under the laws of the
State of Maryland, License No. 10539, Expiration Date: 8-17-09.

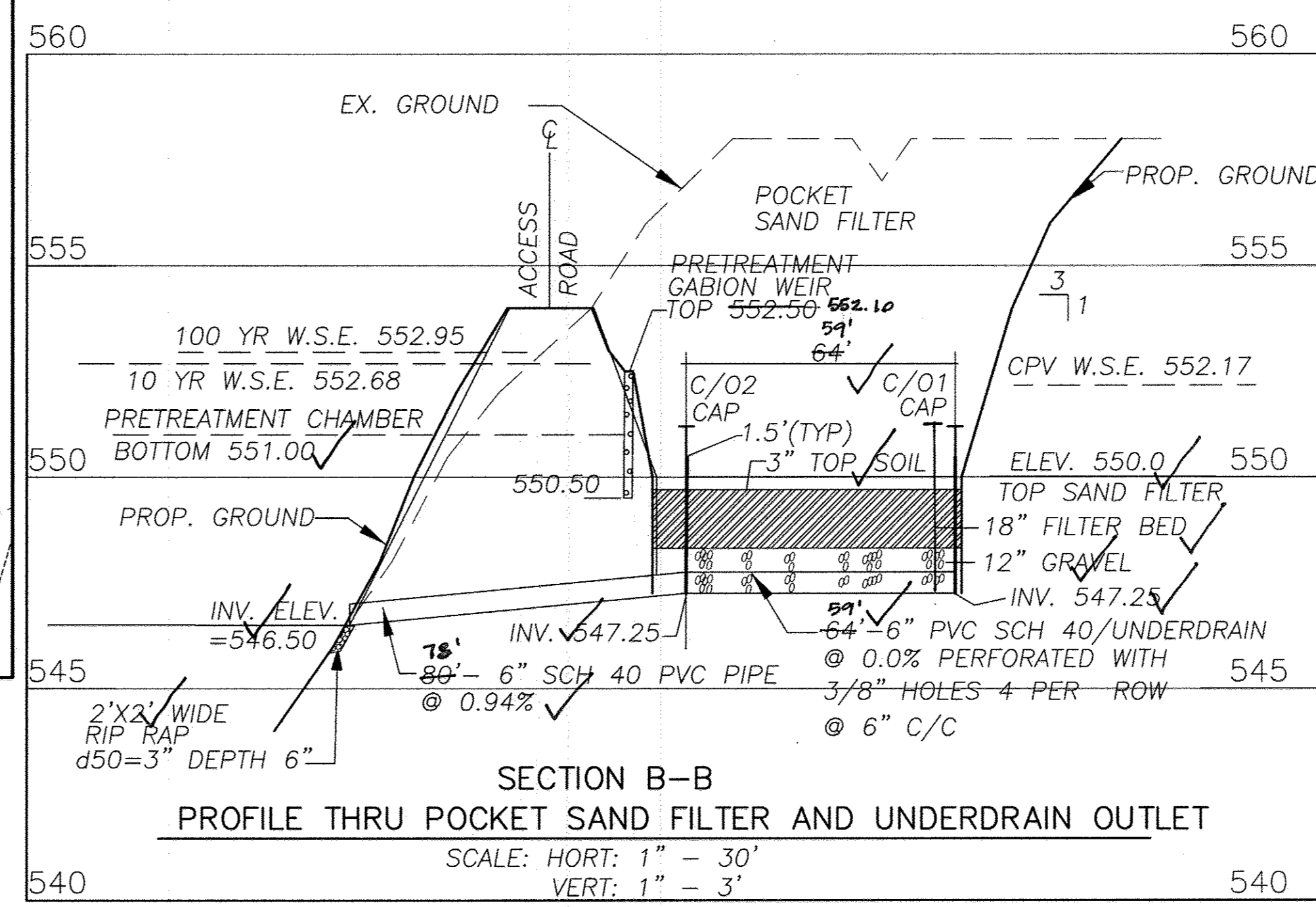
PROFESSIONAL ENGINEER
Ronald E. Thompson 7/27/08
Professional Engineer Registration No. 10471

I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.
Ronald E. Thompson 3/13/2012
Professional Engineer Registration No. 10471

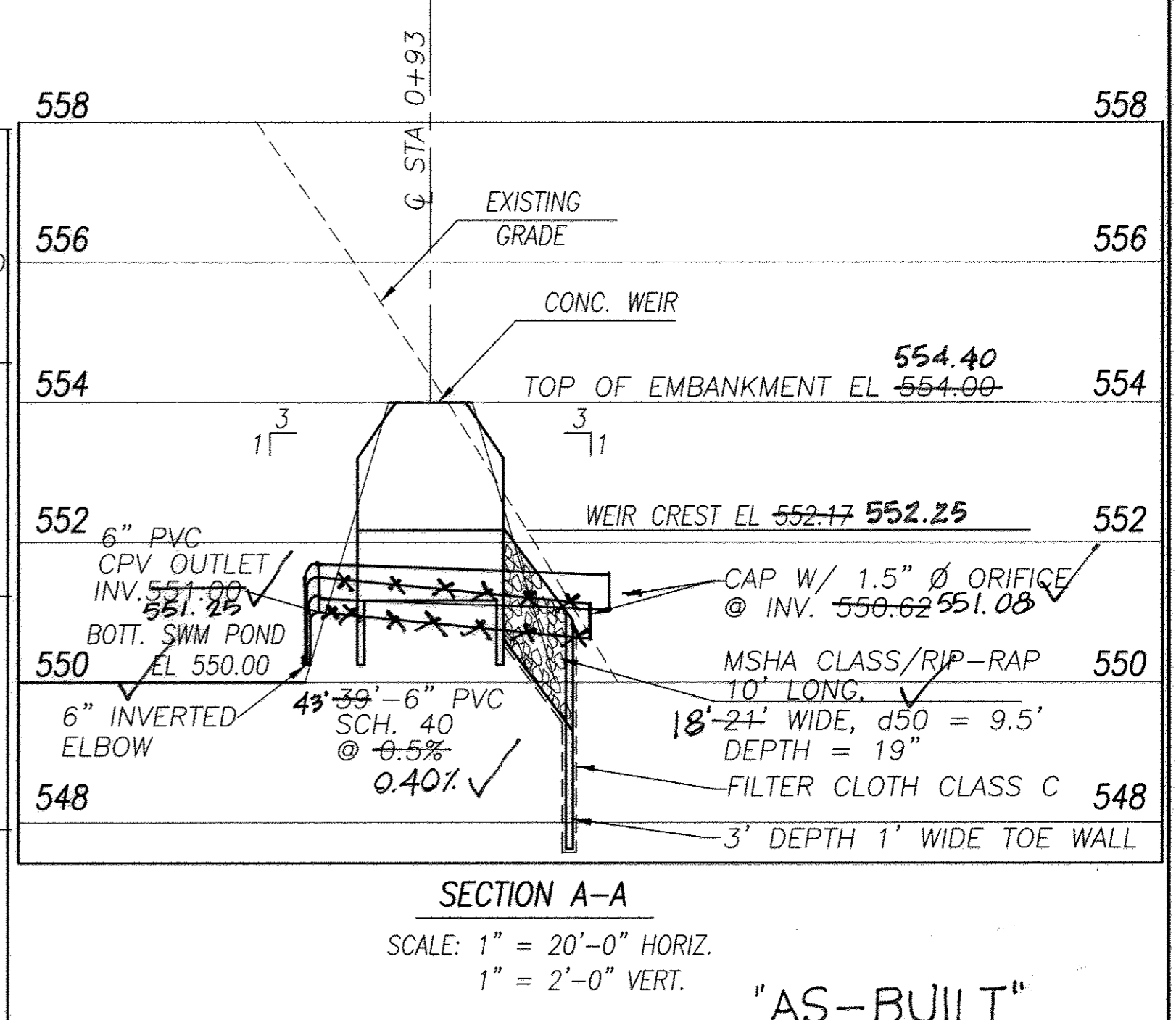
CALL "MISS UTILITY" AT
1-800-267-7777
48 HOURS BEFORE START OF CONSTRUCTION



**PROFILE ALONG CENTERLINE OF
EMBANKMENT SWM FACILITY 1B**
SCALE: 1"=30'-0" HORIZ.
1"=3'-0" VERT.



**SECTION B-B
PROFILE THRU POCKET SAND FILTER AND UNDERDRAIN OUTLET**
SCALE: HORT: 1" = 30'
VERT: 1" = 3'



SECTION A-A
SCALE: 1" = 20'-0" HORIZ.
1" = 2'-0" VERT.
"AS-BUILT"

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

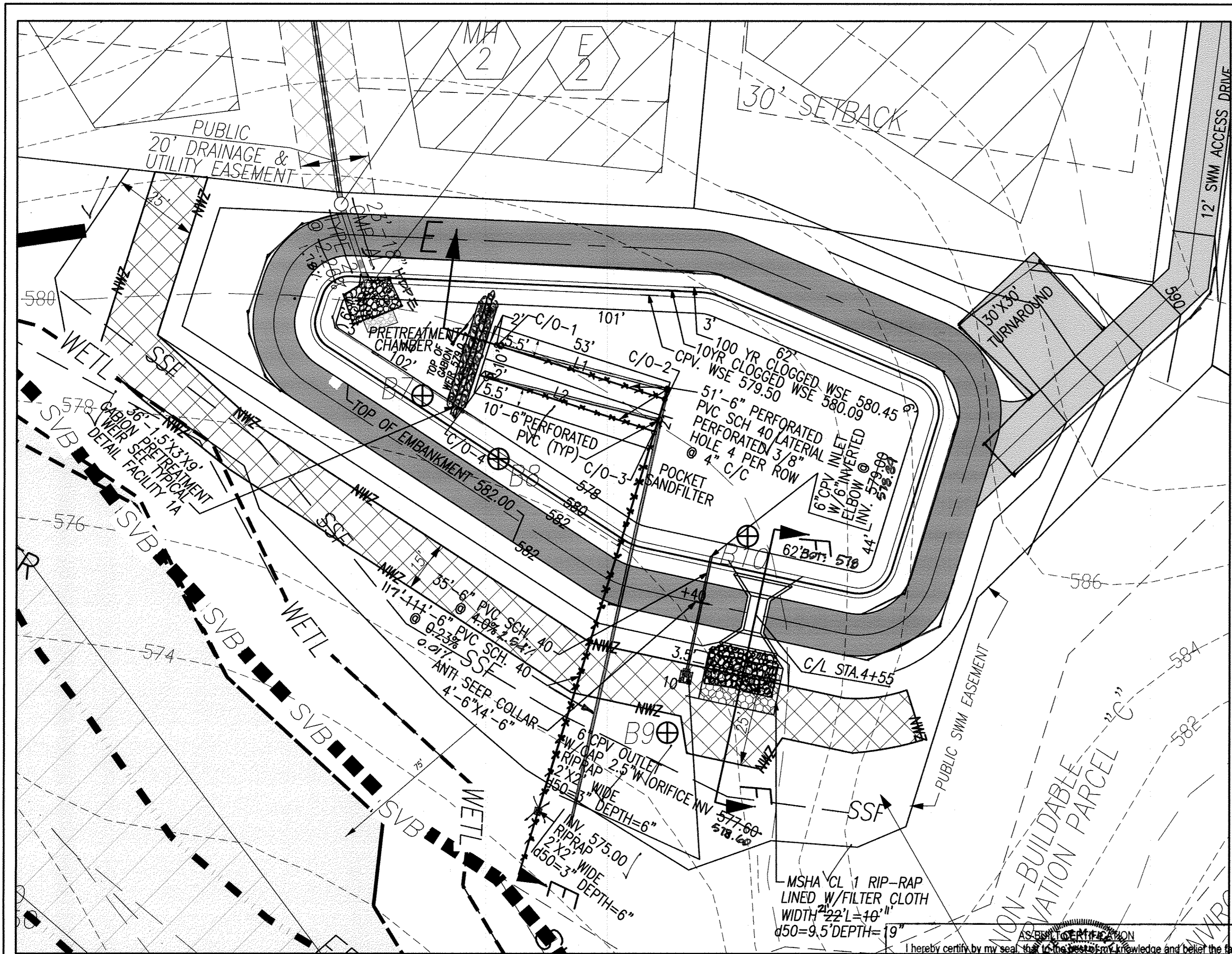
**FACILITY 1B
STORMWATER MANAGEMENT PLAN
& PROFILES**

**TERRAPIN CREEK
(FORMERLY SCHWABE FARM)**

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1
AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E
PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN
LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
NOVEMBER, 2006 SHEET 17 OF 25

DPZ FILES: SP-06-002 INDEX No. SWM-2
F-07-086

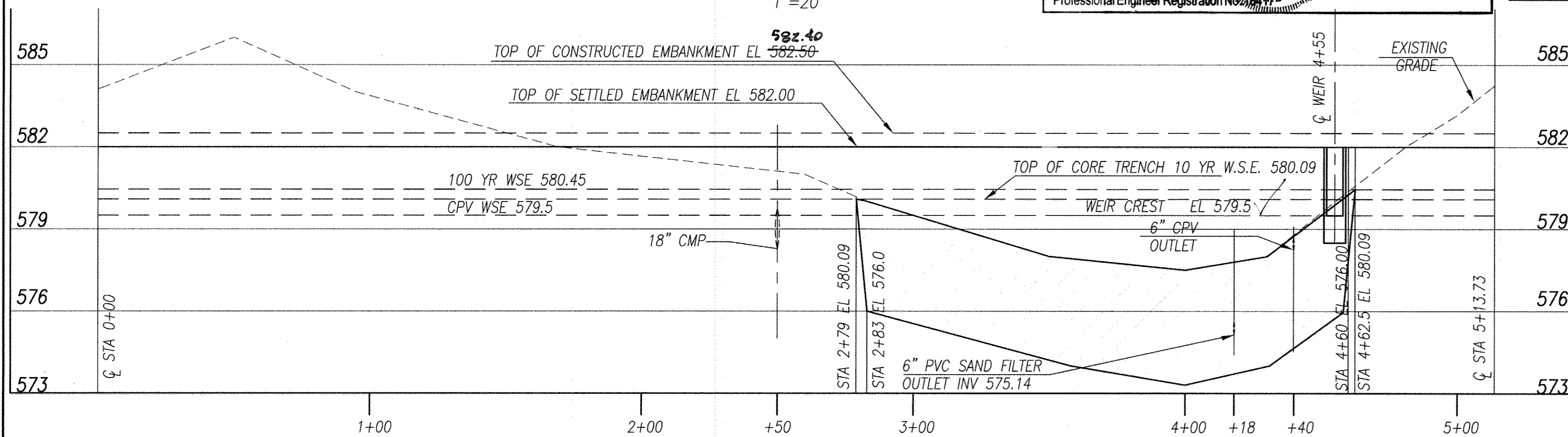


NOTE: ALL EMBANKMENTS = 3:1

SWM FACILITY 2A "POCKET SAND FILTER (NON-BUILDABLE PRESERVATION PARCEL E)

I hereby certify by my seal that the information shown on this plan was prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland, License No. 10539, Expiration Date: 8-17-09.

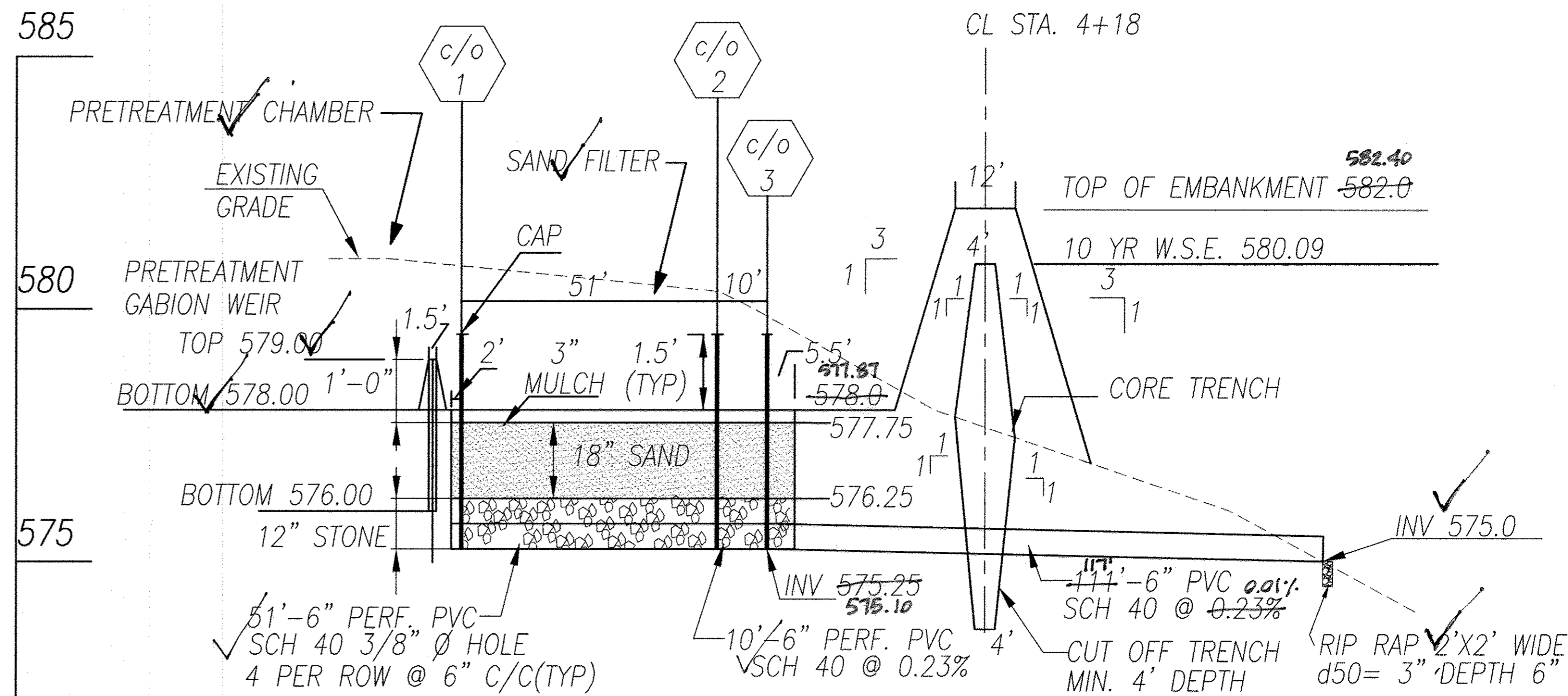
Ronald F. Thompson
Professional Engineer Registration No. 10539
Date: 3/13/2017



PROFILE ALONG CENTERLINE OF EMBANKMENT SWM FACILITY 2A

SCALE: 1"=30'-0" HORIZ.
1"=3'-0" VERT.

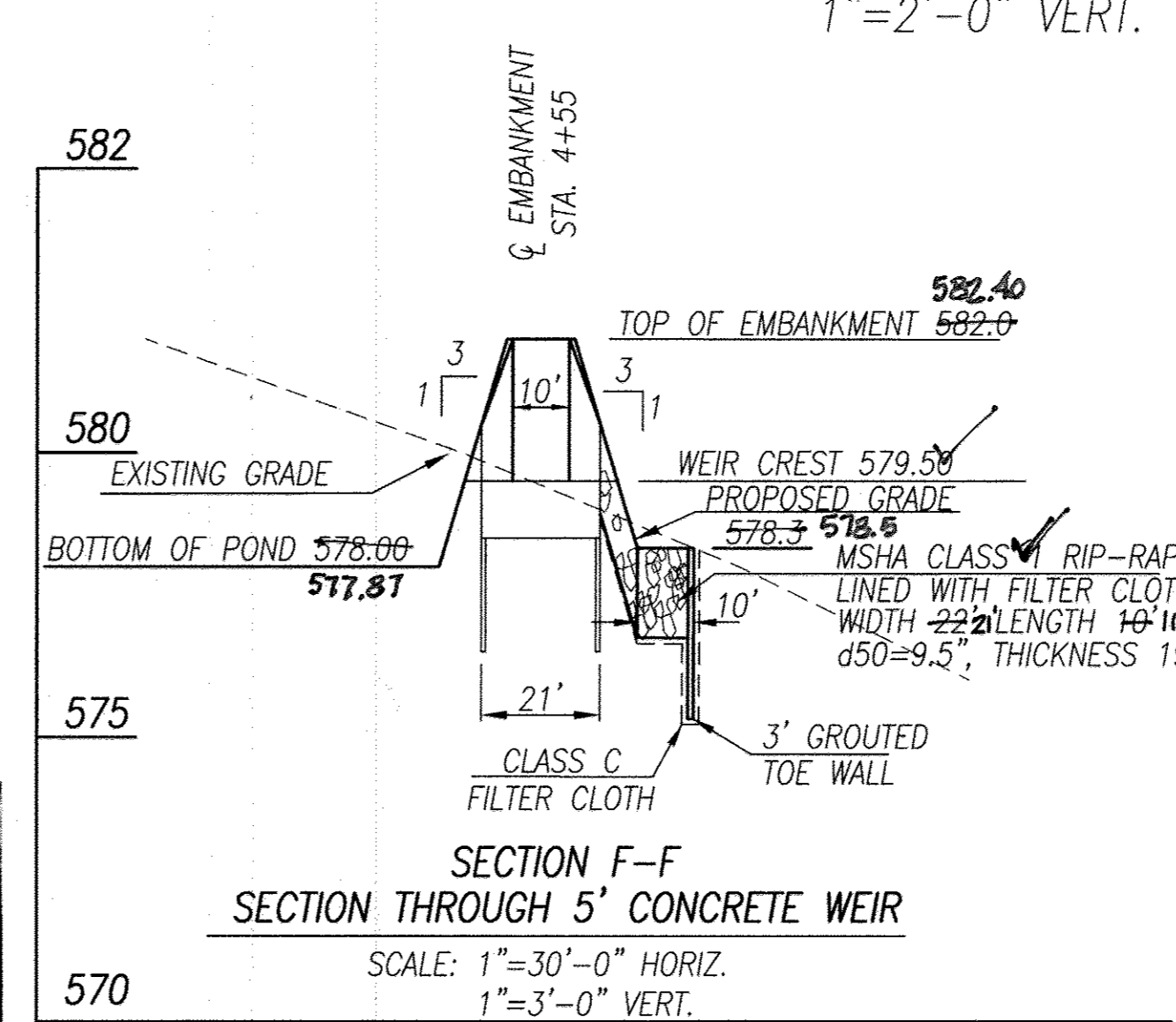
B7 - ESTIMATED SURFACE OF GROUND WATER=ELEV. 572.7



**SECTION E-E
SECTION THROUGH SAND FILTER**

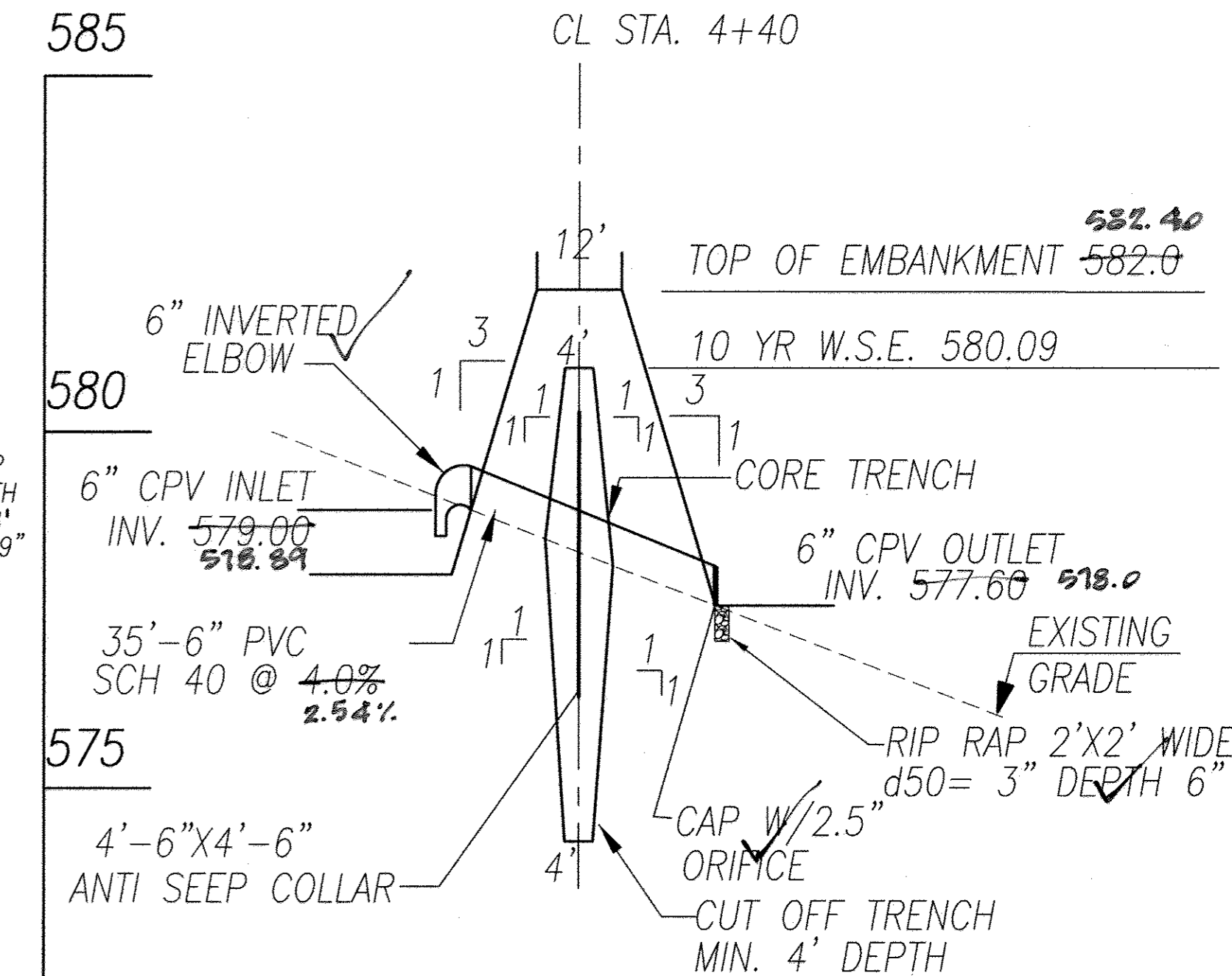
SCALE: 1"=20'-0" HORIZ.
1"=2'-0" VERT.

NOTE: ALL EMBANKMENTS = 3:1



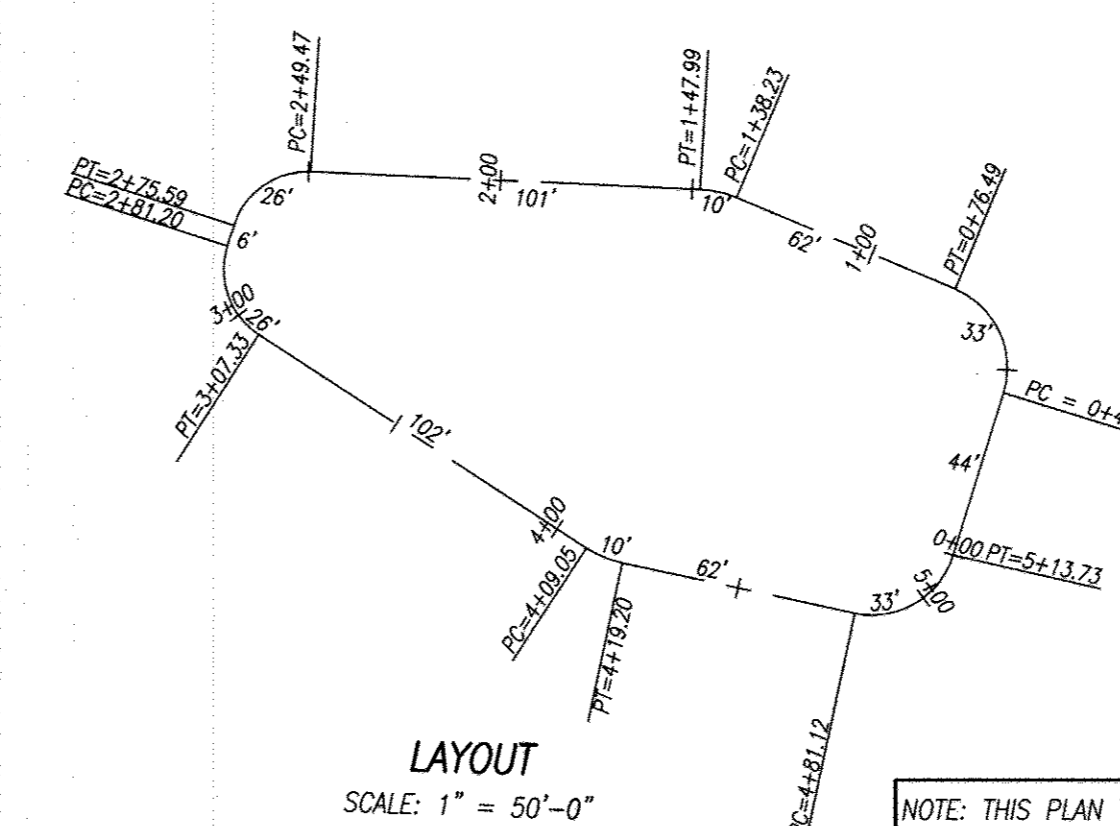
**SECTION F-F
SECTION THROUGH 5' CONCRETE WEIR**

SCALE: 1"=30'-0" HORIZ.
1"=3'-0" VERT.



SECTION THROUGH 6" CPV OUTLET

SCALE: 1"=20'-0" HORIZ.
1"=2'-0" VERT. "AS-BUILT"



LAYOUT
SCALE: 1"=50'-0"

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT
DATE: 9/24/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William Z. Marshall
CHIEF, BUREAU OF HIGHWAYS
DATE: 8-25-08

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301)831 5015 (410) 549 2751

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. 10539, Expiration Date: 8-17-09.

Ronald F. Thompson
PROFESSIONAL ENGINEER
DATE: 7/29/08

DATE	REVISIONS
1/22/16	Buildable Preservation Parcel A-1 (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
12/19/16	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE
12/19/16	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

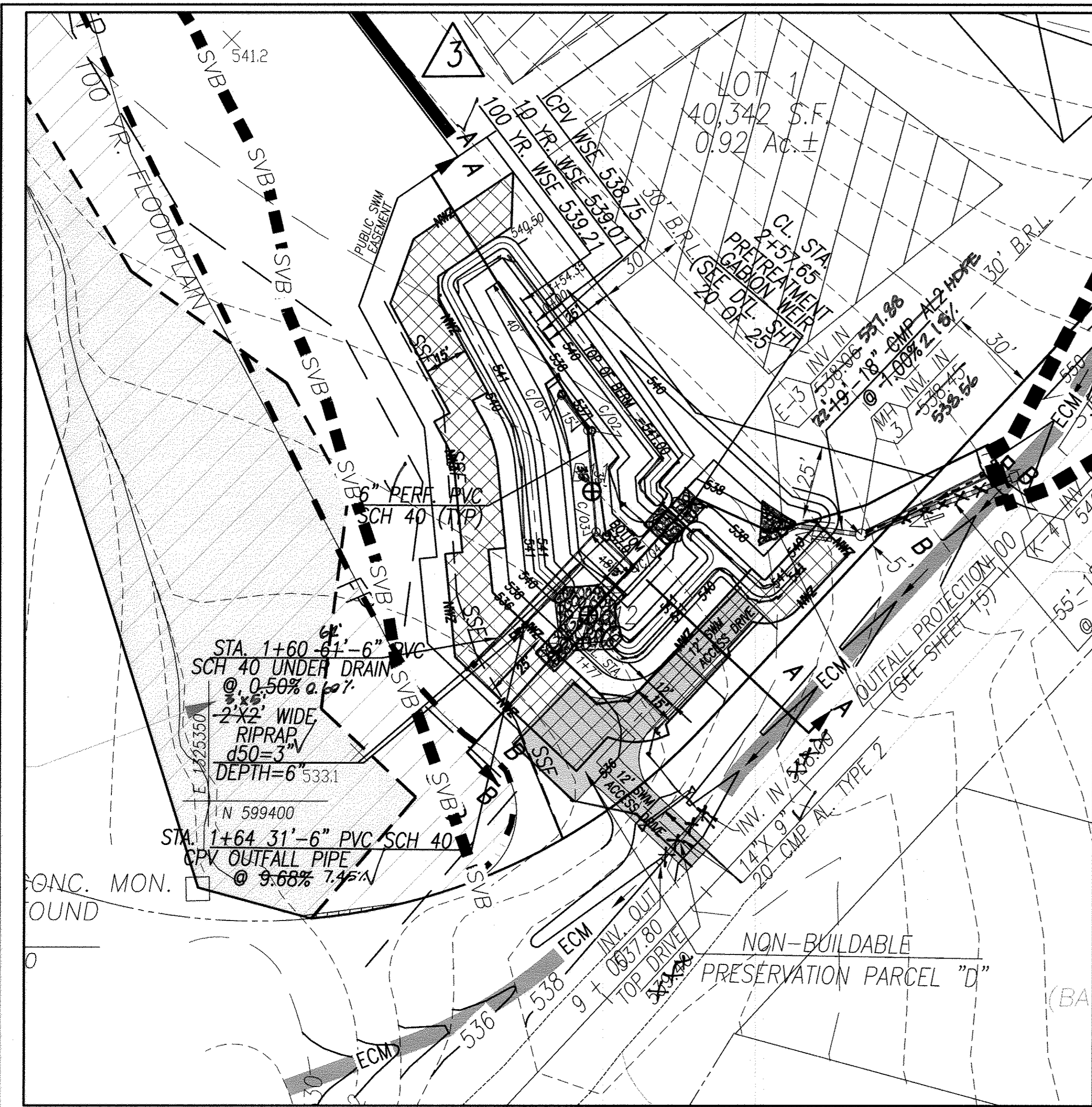
**FACILITY 2A
STORMWATER MANAGEMENT PLAN
& PROFILES**

**TERRAPIN CREEK
(FORMERLY SCHWABE FARM)**

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B,C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
NOVEMBER, 2006 SHEET 18 OF 25

DPZ FILES: SP-06-002

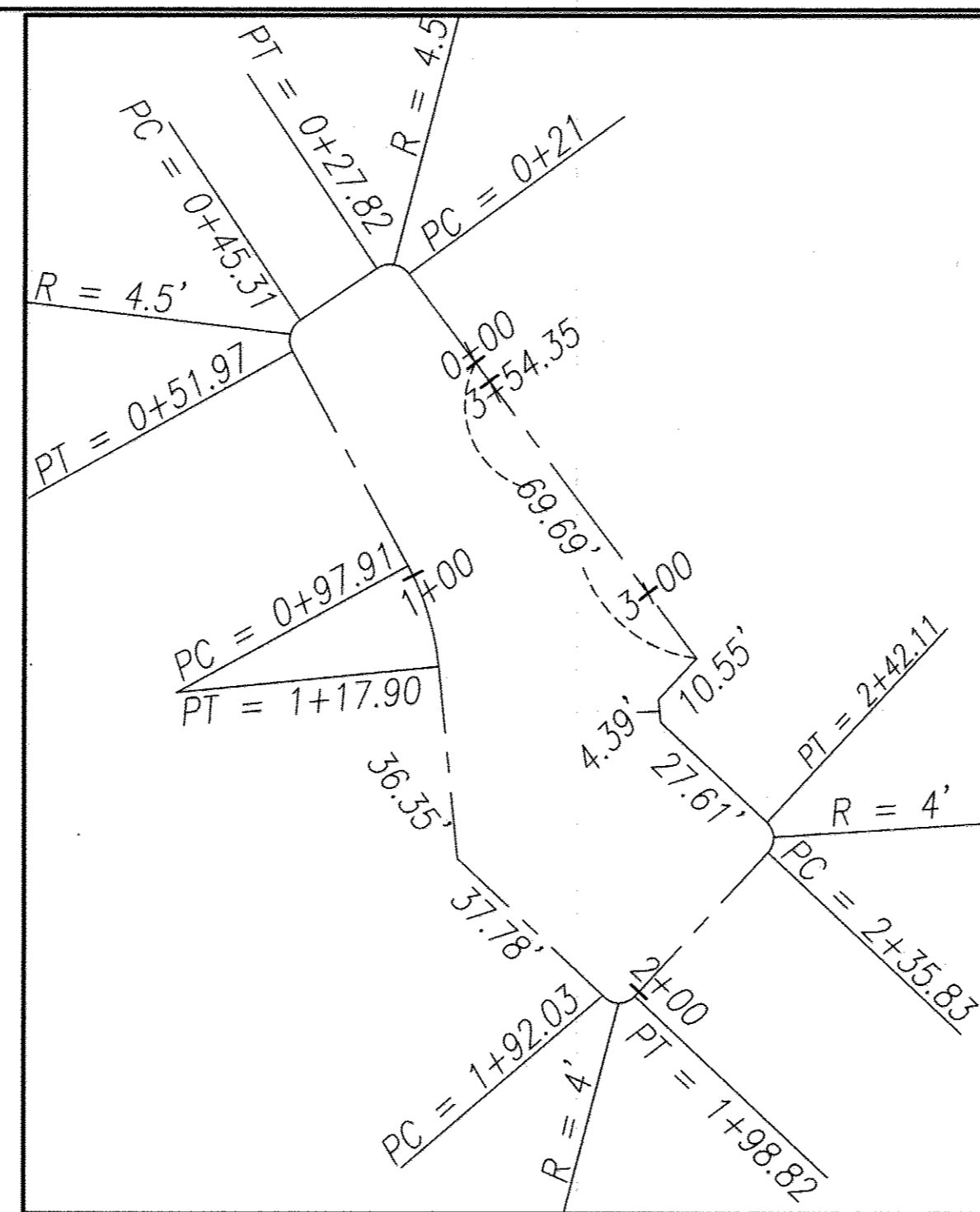


SWM FACILITY 2B "POCKET SAND FILTER"
(NON-BUILDABLE PRESERVATION PARCEL D)

1"=30'

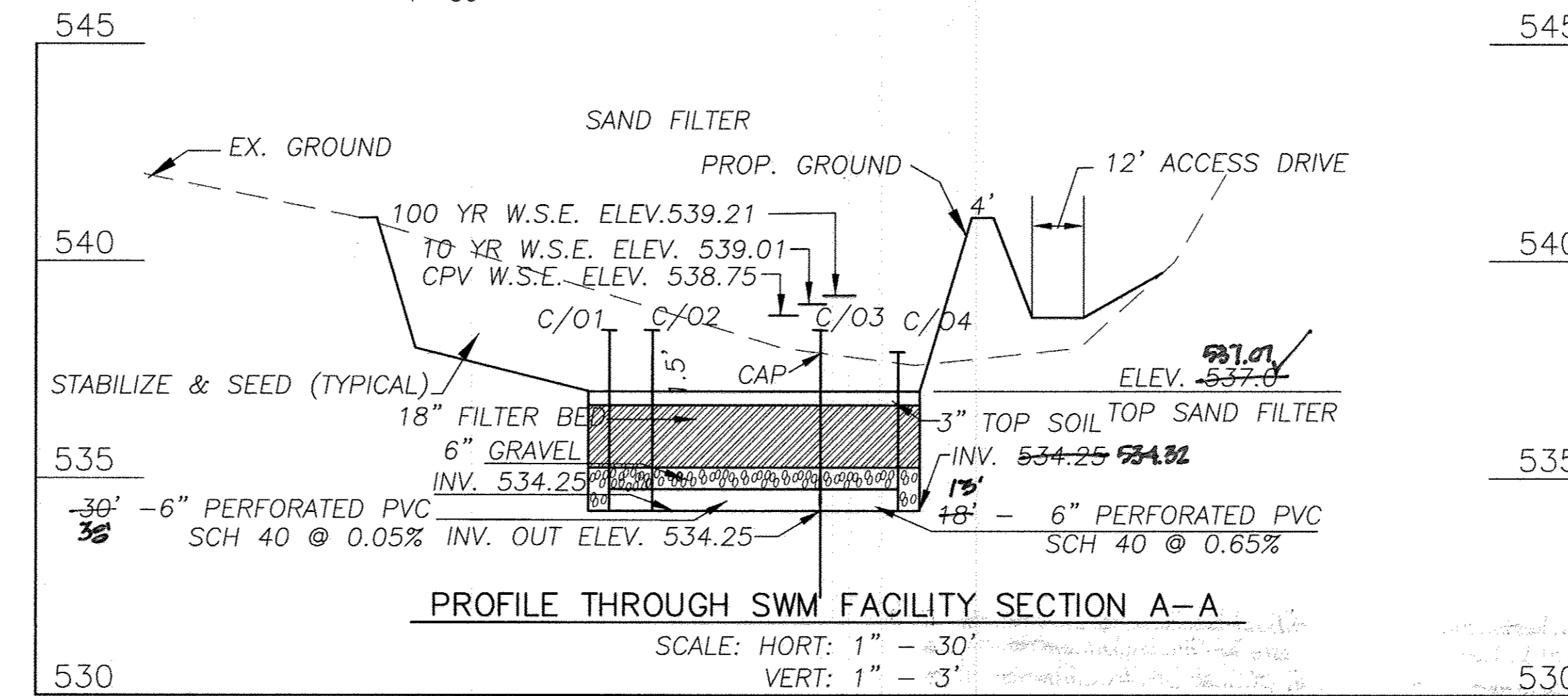
NOTE: ALL EMBANKMENTS = 3:1

NOTE: SWM FACILITY 2B 12' ACCESS ROAD WILL BE CONSTRUCTED OF 6" CRUSHER RUN AGGREGATE (CR-6), COMPACTED



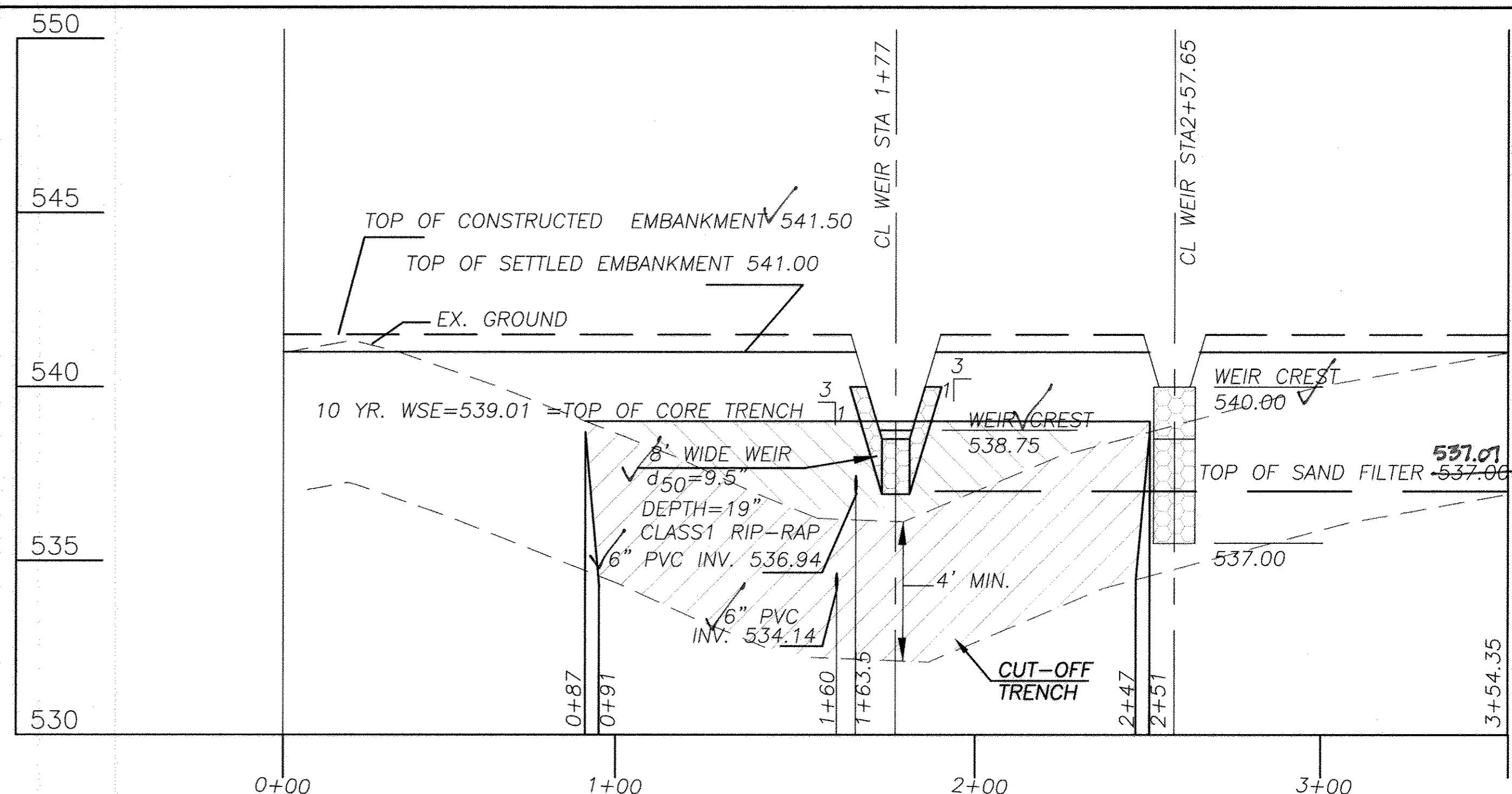
CENTERLINE STATIONING
SWM FACILITY 2B

1"=30'



PROFILE THROUGH SWM FACILITY SECTION A-A

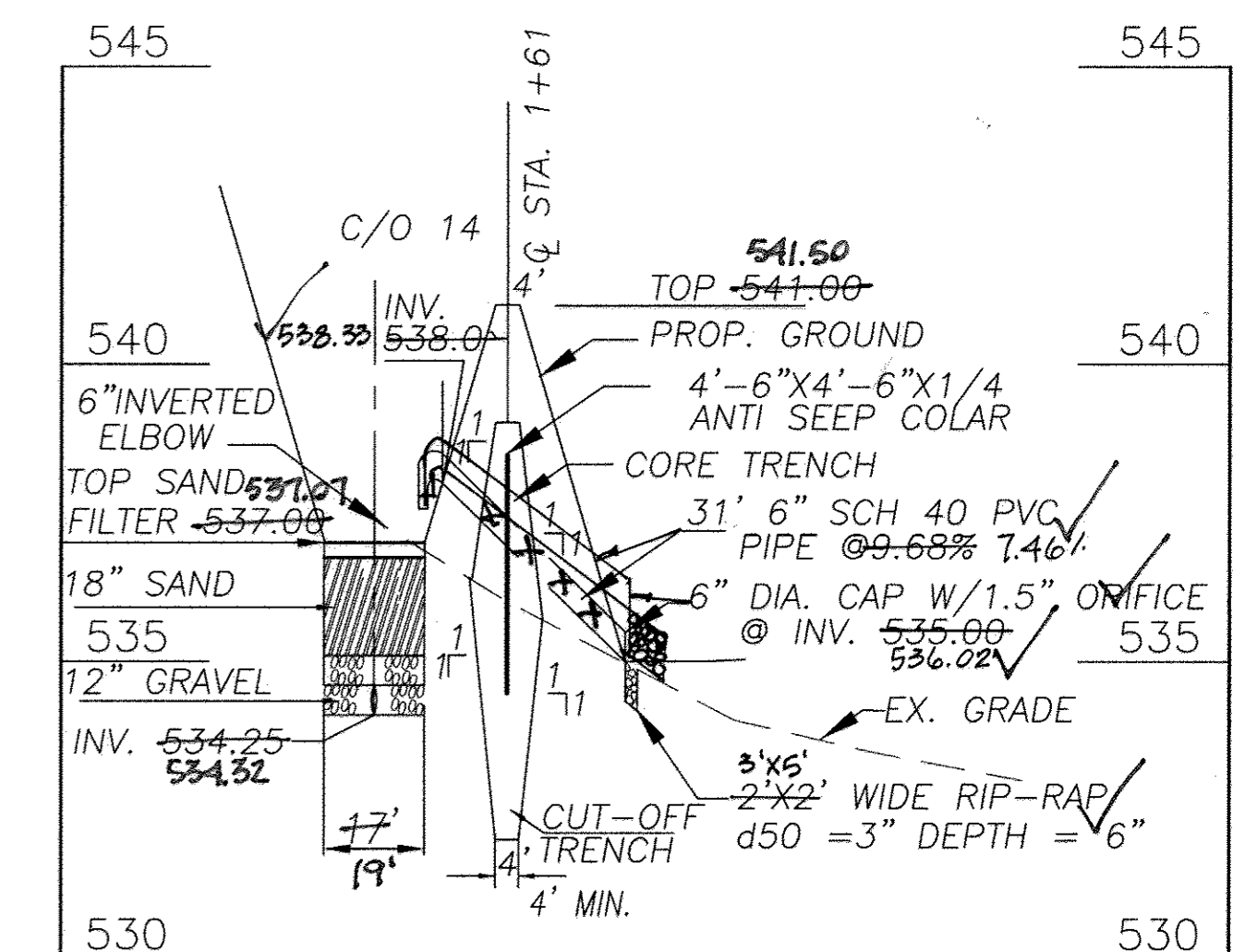
SCALE: HORT: 1" = 30'
VERT: 1" = 3'



C/L PROFILE TOP OF EMBANKMENT
FACILITY 2B

SCALE: HORT: 1" = 50'
VERT: 1" = 5'

NOTE: ALL EMBANKMENTS = 3:1



PROFILE-CPV OUTLET PIPE

SCALE: HORT: 1" = 30'
VERT: 1" = 3'

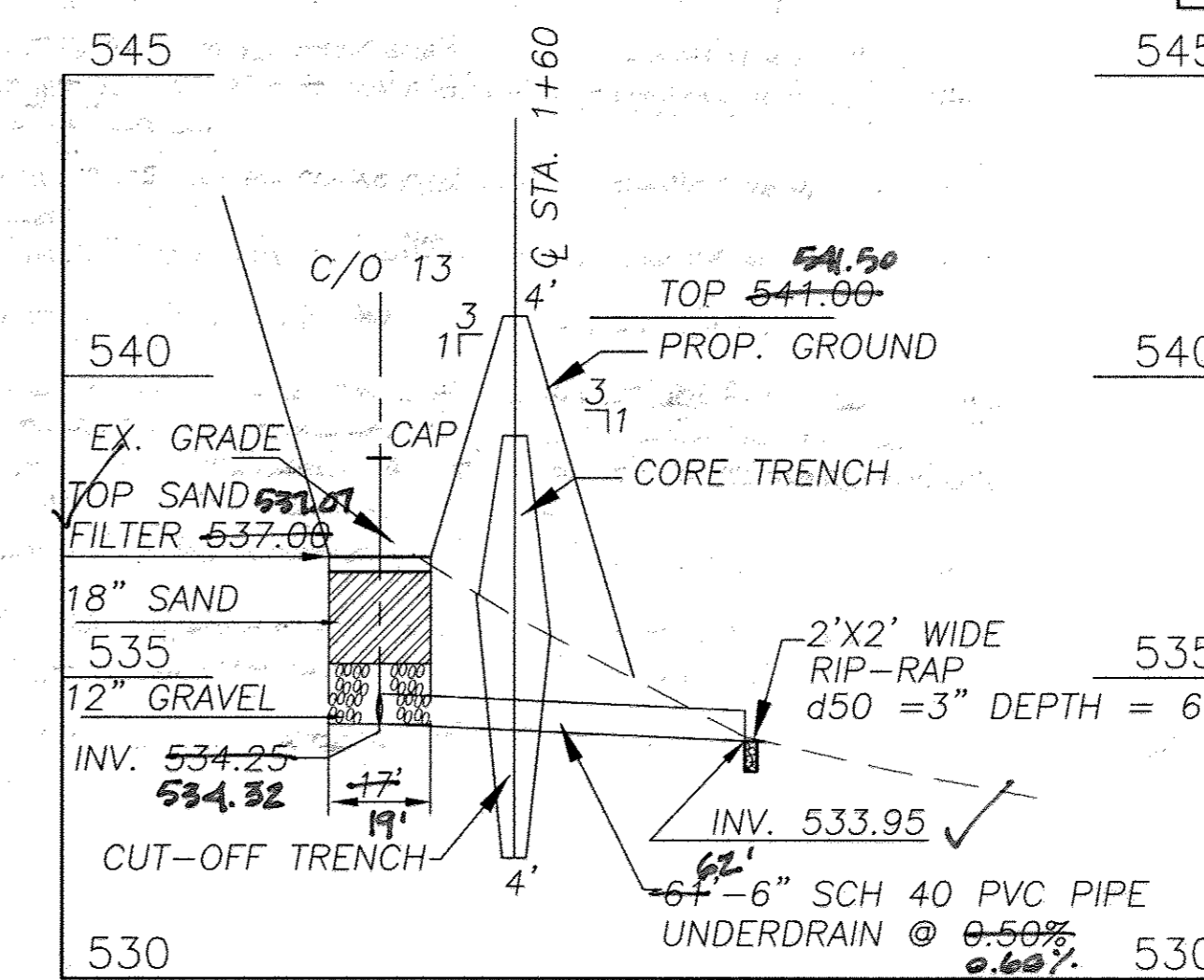
SWM FACILITY WEIR SPECIFICATIONS					
WEIR LOCATION	WEIR LENGTH	WEIR CREST	TOP OF BERM	MATCHED RIPRAP STONE-Y	CLASS RIP-RAP CLASSIFICATIONS
PRETREATMENT SAND FILTER	8'	540.00	541.00	d50=9.5"	GABION BASKET
SAND FILTER	8'	538.50	541.00	GABION BASKET	

B11 - ESTIMATED SURFACE OF GROUND WATER=ELEV. 531.2

NOTE: THIS PLAN TO BE USED FOR STORMWATER MANAGEMENT ONLY. ALL OTHER INFORMATION SHOWN FOR REFERENCE PURPOSE ONLY. SEE APPROPRIATE CONSTRUCTION DRAWINGS FOR OTHER INFORMATION.

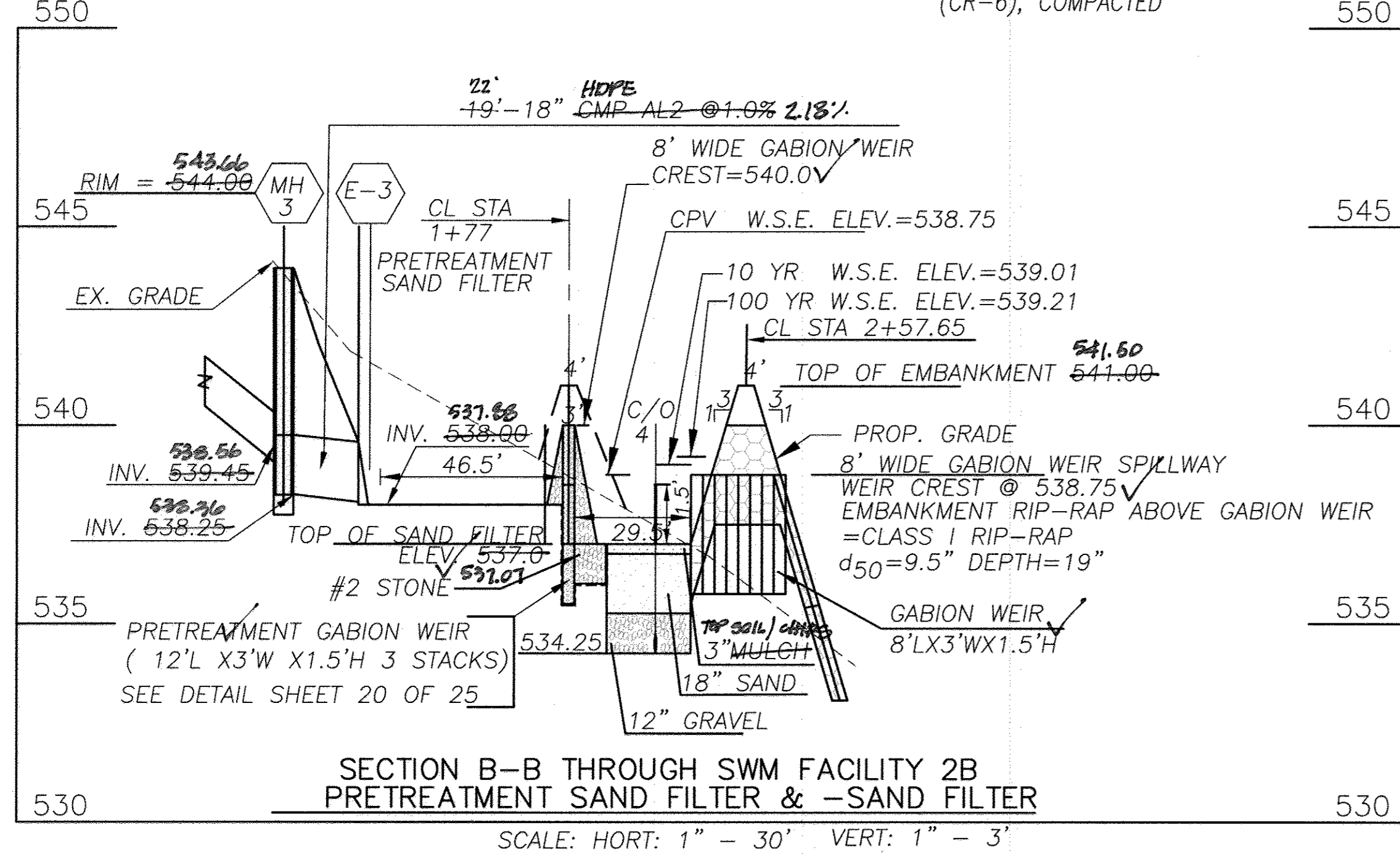
CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

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. 10539, Expiration Date: 8-17-09.



UNDERDRAIN OUTLET PIPE

SCALE: HORT: 1" = 30'
VERT: 1" = 3'



SECTION B-B THROUGH SWM FACILITY 2B
PRETREATMENT SAND FILTER & SAND FILTER

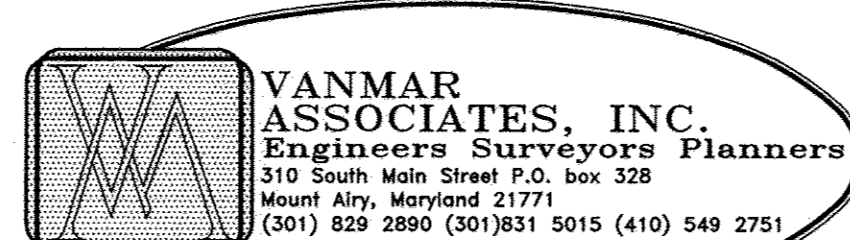
SCALE: HORT: 1" = 30'
VERT: 1" = 3'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Charles Hamilton
CHIEF, DIVISION OF LAND DEVELOPMENT
9/23/08
DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS

William R. ...
CHIEF, BUREAU OF HIGHWAYS
8-25-08
DATE



DATE	REVISIONS
11/21/16	Buildable Preservation Parcel A- (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

DATE	REVISIONS
11/21/16	Buildable Preservation Parcel A- (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-1)
	REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

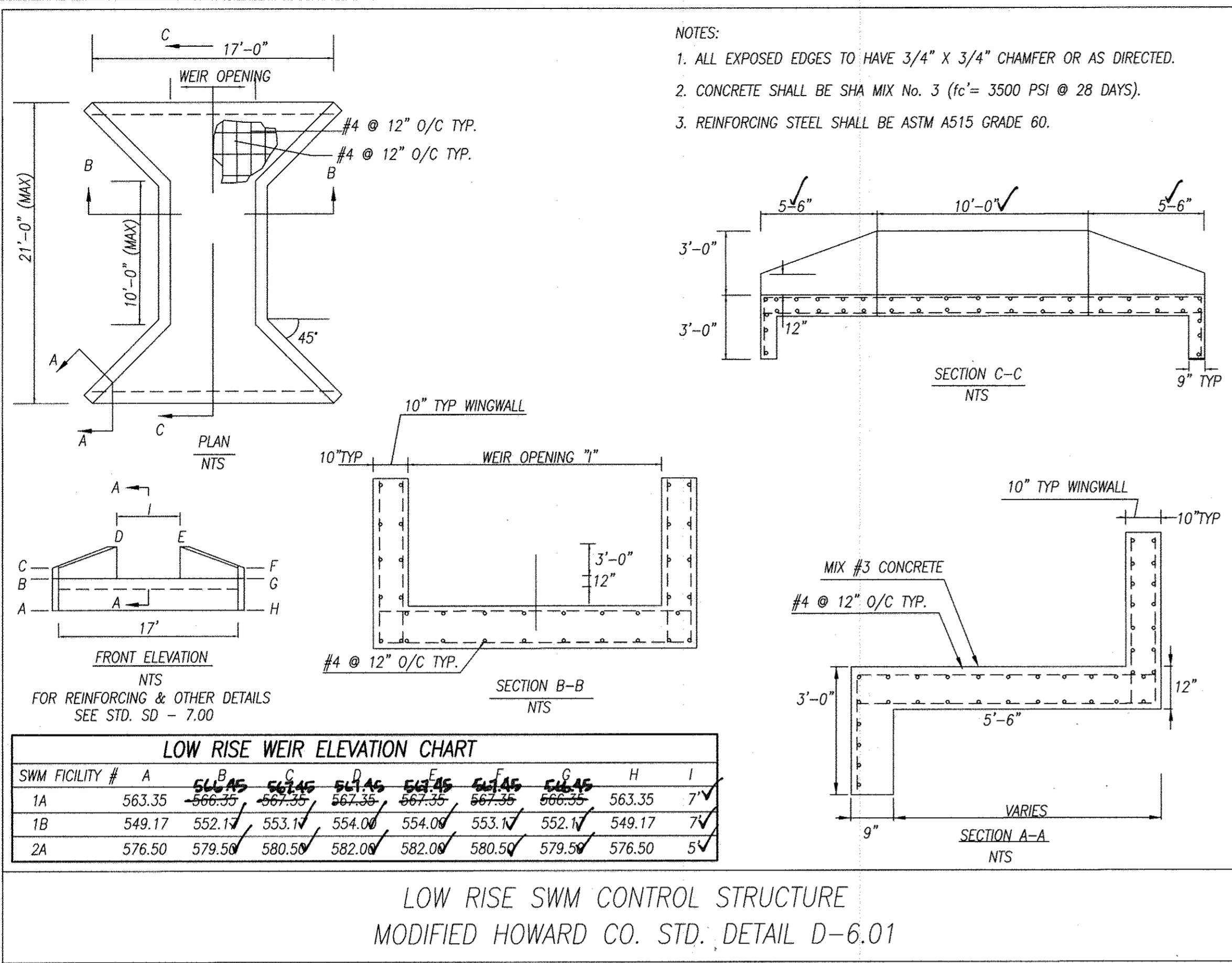
I hereby certify by my seal, that to the best of my knowledge and belief the facilities shown on this plan were constructed as shown on this "AS-BUILT" plan meet the Approved Plans and Specifications.
Ronald E. Thompson
Ronald E. Thompson
Professional Engineer Registration No. 10539

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

AS-BUILT FACILITY 2B
STORMWATER MANAGEMENT PLAN & PROFILES

TERRAPIN CREEK
(FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
NOVEMBER, 2006 SHEET 19 OF 25
DPZ FILES: SP-06-002 INDEX No. SWM-4



SEQUENCE OF CONSTRUCTION

- (2 WEEKS)
1. OBTAIN ALL REQUIRED GRADING, MDE PERMITS, APPROVALS AND LICENSES FROM APPROPRIATE AGENCIES.
- (1 DAY)
2. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1850 AT LEAST TWENTY-FOUR (24) HOURS PRIOR TO STARTING WORK.
- (2 DAYS)
3. INSTALL STABILIZED CONSTRUCTION ENTRANCE. CONFIRM ALL TREE CONSERVATIONS SIGNS AND TREE PROTECTION FENCES HAVE BEEN INSTALLED PER F-03-87.
- (6 WEEKS)
4. CONSTRUCT STONE OUTLET SEDIMENT TRAPS A, B, X, D (S.O.S.T.) AS FOLLOWS:
A. INSTALL SILT FENCE BELOW CPV DETENTION BASIN.
B. CLEAR AND GRUB AREA FOR SEDIMENT TRAPS.
C. CONSTRUCT PERIMETER DIKE.
D. EXCAVATE/CONSTRUCT SEDIMENT TRAPS & WEIRS.
E. CONSTRUCT TEMPORARY SWALES AS SHOWN ON THE PLANS.
- (8 WEEKS)
5. INSTALL REMAINING SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES FOR CONSTRUCTION OF SHEETS 12-15. CONSTRUCT SEDIMENT TRAPS AND SEDIMENT BASIN A (SWM BASIN #1A) AS FOLLOWS:
A. INSTALL SILT FENCE BELOW CPV DETENTION BASIN.
B. INSTALL TEMPORARY EMBANKMENT DIKE AS SHOWN ON THE PLAN.
C. CLEAR AND GRUB AREA.
D. CONSTRUCT OUTFLOW DEVICES INCLUDING WEIRS, OUTFLOW PIPES AND CLOG PROTECTION FOR OUTFLOW PIPES.
E. COMPLETE EMBANKMENT FILLS AND EXCAVATE FOR CPV DETENTION BASIN PER PLAN. CPV DETENTION BASIN WILL BE UTILIZED AS SEDIMENT CONTROL BASIN DURING ROADWAY CONSTRUCTION WITH SEDIMENT BASIN CONVERTED TO CPV DETENTION BASIN AT THE END OF STABILIZATION OF ROADWAY CONSTRUCTION. RESPECTIVELY, FOR SEDIMENT CONTROL-GRADE CPV DETENTION BASIN TO FINAL GRADES SHOWN ON SEDIMENT CONTROL PLANS AND GRADING/SWM PLANS.
F. INSTALL INFLOW PROTECTION DEVICES AND ALL OTHER ASSOCIATED SEDIMENT CONTROL APPURTENANCES.
G. REMOVAL OF ANY CONTROLS MAY NOT OCCUR UNTIL PERMISSION IS GRANTED BY INSPECTOR.
H. UPON COMPLETION OF ALL SEDIMENT CONTROL MEASURES, SECURE PERMISSION FROM INSPECTOR BEFORE PROCEEDING.
- (6 WEEKS)
6. BEGIN CONSTRUCTION OF SUBDIVISION ROADWAYS. REMOVE TOPSOIL IN APPROVED STOCKPILE LOCATIONS. COMPLETE ROADWAY GRADING AFTER INSTALLATION OF STORM DRAINS AND CONSTRUCTION THROUGH INITIAL BITUMINOUS PAVING COURSE AND STABILIZE ROADWAY DITCHES.
- (2 WEEKS)
7. INSTALL STORM DRAINS AND CONSTRUCT DRAINAGE SWALE. STABILIZE DRAINAGE SWALE IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- (8 WEEKS)
8. CONSTRUCT STORMWATER MANAGEMENT FACILITIES 1A, 1B, 2A, 2B AS FOLLOWS:
A. NOTIFY HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1850 AT LEAST FIVE (5) WORKING DAYS PRIOR TO STARTING THIS WORK.
B. THE SCHEDULE AND SEQUENCE OF ALL SWM FACILITIES SHOULD BE COORDINATED WITH OTHER SITE CONSTRUCTION ELEMENTS AND CONSTRUCTION SHOULD NOT BEGIN UNTIL COMPLETION OF SITE GRADING ELEMENTS AND STABILIZATION OF SUBDIVISION ROADWAYS.
C. SWM FOREBAY, PRETREATMENT, SAND FILTER FACILITIES SHALL BE CONSTRUCTED ONLY AFTER STABILIZATION OF ALL ROADWAY, DRAINAGE AND UTILITY CONSTRUCTION.
D. PRIOR TO STARTING CONSTRUCTION ON SWM FACILITY #1A, CONSTRUCT TEMPORARY CLEARWATER EARTH DIKE ABOVE FACILITY, DRAINAGE AND UTILITY CONSTRUCTION.
E. CLEAR AND GRUB AREA FOR SWM FACILITIES. REMOVE TOPSOIL TO APPROVED STOCKPILE LOCATIONS.
F. INITIAL SWM FACILITY EXCAVATION SHOULD BE CARRIED TO WITHIN 1 FOOT OF THE FINAL ELEVATION OF THE BASIN FLOOR. FINAL EXCAVATION TO THE FINISHED GRADE SHOULD BE DEFERRED UNTIL ALL DISTURBED AREAS OF THE WATERSHED HAVE BEEN STABILIZED OR PROTECTED. THE FINAL PHASE FLOOR.
EXCAVATION SHOULD REMOVE ALL ACCUMULATED SEDIMENT. RELATIVELY LIGHT TRACKED EQUIPMENT IS RECOMMENDED FOR THIS OPERATION TO AVOID COMPACTION OF THE SWM FACILITY ON THE PLANS.
G. INSTALL SWM FACILITY UNDERDRAINS, AND OTHER SWM ELEMENTS PER THE INDIVIDUAL SWM FACILITY DESIGN AS SHOWN.
H. AFTER THE FINAL GRADING IS COMPLETED, THE SWM FACILITY FLOOR SHOULD BE DEEPLY TILLED BY MEANS OF ROTARY TILLERS OR DISC HARROWS TO PROVIDE A WELL-AERATED, HIGHLY POROUS SURFACE TEXTURE.
I. STABILIZE SWM FACILITIES BY SELECTION OF SUITABLE VEGETATIVE MATERIALS AND APPLICATION OF REQUIRED FERTILIZER AND MULCHES SHALL BE DONE IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
J. UPON STABILIZATION OF SWM CPV DETENTION BASIN #1A, CONSTRUCT PERMANENT EARTH DIKE A-2 AT THE REAR OF LOTS 12-16.
K. COMPLETE CONSTRUCTION OF SWM #1A, #1B, #2A, #2B ELEMENTS AND STABILIZE PRIOR TO REMOVAL OF SEDIMENT AND EROSION CONTROL MEASURES AND DEVICES.
L. REMOVE TEMPORARY CLEARWATER EARTH DIKES, CONSTRUCT SWM FACILITY #1A ACCESS ROAD AND STABILIZE.
- (2 WEEKS)
9. INSTALL CUL-DE-SAC CURB & GUTTER AND COMPLETE ROADWAY PAVING.
- (1 WEEK)
10. UPON COMPLETION OF ROADWAY CONSTRUCTION AND STABILIZATION OF SWM MANAGEMENT FACILITIES, REMOVE STONE OUTLET SEDIMENT TRAPS AND TEMPORARY SWALES. FILL ALL DISTURBED AREAS AND STABILIZE AREAS IN ACCORDANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- (2 WEEKS)
11. NOTIFY HOWARD COUNTY OFFICE OF INSPECTIONS AND PERMITS FOR FINAL INSPECTION OF COMPLETED PROJECT.

SWM STORAGE REQUIREMENT SUMMARY AND TREATMENT STRATEGY

DRAINAGE AREA & FACILITY	Rev (%Area Method)		WQv (75% of WQv)		Cpv		Qp10	Qf100
	Required	Provided	Required	Provided	Required go	Provided go		
1A	0.37 AC	6.35 AC	4247 CFT	4280 CFT	0.11 CFS	0.11 CFS	N/A	N/A
1B	0.39 AC	0.41 AC	2091 CFT	2659 CFT	0.05 CFS	0.06 CFS	N/A	N/A
2A	0.46 AC	3.35 AC	2940 CFT	3055 CFT	0.22 CFS	0.07 CFS	N/A	N/A
1B	0.34 AC	5.24 AC	2674 CFT	2676 CFT	0.07 CFS	0.04 CFS	N/A	N/A

Rev - REQUIREMENTS HAVE BEEN MET BY USING THE % AREA METHOD WITH DISCONNECTION TECHNIQUES.
WQv - REQUIREMENTS HAVE BEEN MET BY UTILIZING CREDITS AND PROVIDING POCKET SAND FILTERS FOR REMAINING VOLUME REQUIRED.
Cpv - REQUIREMENTS HAVE BEEN MET VIA DETENTION PONDS.
Qp & Qf - 10 & 100-YEAR CONTROL IS NOT REQUIRED DUE TO STORMWATER DISCHARGING TO 100-YEAR FLOODPLAIN EASEMENT.

FACILITY SUMMARY & NOTES
FACILITY 1A - POCKET SAND FILTER
FACILITY 1B - POCKET SAND FILTER
FACILITY 2A - POCKET SAND FILTER
FACILITY 2B - POCKET SAND FILTER

NOTE:
A) ALL SAND FILTERS ARE PRIVATELY OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.
B) UNDER DRAINS WITHIN SWM FACILITY SHALL BE OWNED AND MAINTAINED BY THE HOMEOWNERS ASSOCIATION.

Geotechnical Conclusions & Recommendations for Stormwater Management Facilities-Geotech-GTA, Inc.

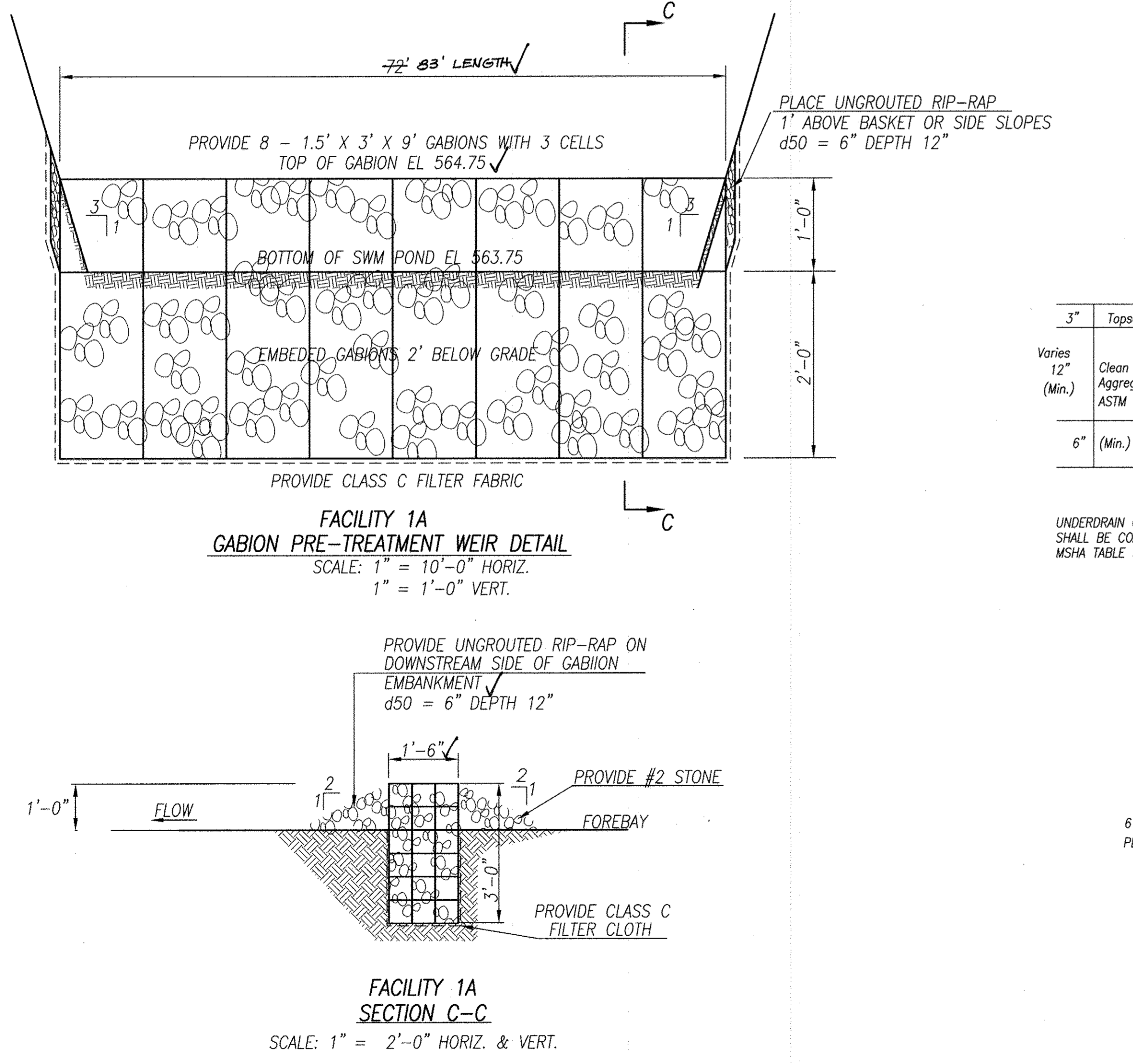
Based on the plans, we understand that excavations ranging from 0 to 8 feet will be required to achieve the proposed facility bottom elevations. Highly Weathered Rock is encountered in boring B-09 at a depth of 6 feet and the surface of the weathered rock is expected to be variable across the site. As a result, rock excavation methods, including blasting, may be required locally within the proposed excavations. However, based on our observations of the borings, the majority of the proposed excavations are expected to be accomplished utilizing standard earth excavation procedures. Blasting must be carefully controlled to limit fracturing rock below the proposed embankments.

The borings indicated that the soils at the anticipated facility subgrade elevations will generally be firm. However, loose soils or blasted rock may be encountered, and some undercutting of the subgrades and replacement with new compacted fill may be necessary. A design net allowable bearing pressure of 1,500 psf is recommended for the proposed SWM structures, which should be verified at the time of construction.

Prior to the placement of compacted fill or the construction of the structures, subgrades should be striped and observed by the geotechnical engineer. Soils should be placed in 8 inch lifts and should be compacted to at least 95 percent of the maximum dry density as determined by ASTM D-698. Soils along conduits should be placed in 4 inch lifts to provide proper compaction with smaller equipment. Compactive effort of fill soils should be monitored with in-place density testing as performed under the direction of a professional engineer. Fill may consist of on-site Silt Sand (SM) or Sandy SILT (ML) materials compacted to 95% of the Standard Proctor (ASTM D-698).

Groundwater was encountered in boring except boring B-06, and is generally anticipated to be encountered within some of the proposed trench excavations. Shallow groundwater above the proposed elevation of the bottom of the sand filter may require the sand filters to be relocated or redesigned. If groundwater is encountered, dewatering of the excavations would be required during the construction phase.

Laboratory testing indicates that the moisture contents of the samples tested ranged from about 5 to 66 percent. Based on local experience, the moisture content of the majority of the soils are expected to be in the workable range for compaction, however some of the soils from below the water surface may have elevated moisture contents, and moisture conditioning may be required prior to the application of compactive effort. A summer construction season is therefore recommended to reduce the cost associated with drying soils. A contingency fund for drying or wetting of the soils should be established.



GABION PRE-TREATMENT WEIR AS-BUILT

FACILITY	LENGTH	WIDTH	HEIGHT	RIP-RAP/STONE
1A	√ 83'	1.5' ✓	1.0' ✓	NO
1B	√ 20'	1.5' ✓	1.0' ✓	YES
2A	√ 36'	1.5' ✓	1.0' ✓	YES
2B	√ 11'	1.5' ✓	1.0' ✓	YES

STORMWATER MANAGEMENT FACILITY MAINTENANCE SCHEDULE (1A, 1B, 2A, 2B)

- The stormwater wetland facility shall be inspected annually after major storms. Inspections shall be performed during wet weather to determine if the facility is functioning properly.
- The top and side slopes of the embankment shall be mowed a minimum of once per year, when vegetation reaches 18" in height or as needed.
- Filters that have a grass cover shall be mowed a minimum of three (3) times per growing season to maintain a maximum grass height of less than 12 inches.
- Debris and litter shall be removed during regular mowing operations and as needed.
- Visible signs of erosion in the facility shall be repaired as soon as it is noticed.
- Remove silt when it exceeds four (4) inches depth in the forebay.
- When water ponds on the surface of the filter bed for more than 72 hours, the top few inches of discolored material shall be replaced with fresh material. Proper cleaning and disposal of the removed materials and liquid must be followed by the owner.
- A logbook shall be maintained to determine the rate at which the facility drains.
- The maintenance logbook shall be available to Howard County for inspection to insure compliance with operation and maintenance criteria.
- Once the performance characteristics of the infiltration system have been verified, the monitoring schedule can be reduced to an annual basis unless the performance data indicates that a more frequent schedule is required.

I hereby certify by my seal, that I have examined the knowledge and belief the facilities shown on this plan were constructed in accordance with the "AS-BUILT" plan meet the approved plans and specifications.
Ronald E. Thompson
Professional Engineer Registration No. 14944
Date: 3/13/2017

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. 10639, Expiration Date: 8-17-09.

CALL "MISS UTILITY" AT 1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chief, Division of Land Development
9/23/08

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
Chief, Bureau of Highways
8-25-08

YANMAR ASSOCIATES, INC.
Engineers & Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829-2890 (301)831-5015 (410) 549-2751

Professional Engineer Seal for Ronald E. Thompson, License No. 14944, State of Maryland.

DATE	REVISIONS
10/6/2014	SOIL CONSERVATION RESIGNATURE
11/2/11	Buildable Preservation Parcel A- (Now A-1)
12/19/16	Non-Buildable Preservation Parcel B (Now B-D) REDLINE SWM FACILITIES & PERMANENT EARTH DIKE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

STORMWATER MANAGEMENT SPECIFICATIONS & DETAILS "AS-BUILT"

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: AS SHOWN
NOVEMBER, 2006 SHEET 20 OF 25

LOG OF BORING NO. B-01

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-02

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-03

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-04

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-05

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

SOIL BORING TEST LOCATION S.W.M. FACILITY TEST PIT NO. Table listing 1A through 2B test pit numbers.

LOG OF BORING NO. B-06

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-07

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-08

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-09

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-10

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-11

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-12

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

LOG OF BORING NO. B-01

Table with columns: SAMPLE NO., DATE SAMPLED, DEPTH (FEET), CORRECTED DEPTH (FEET), ELEVATION (FEET), SOIL TYPE, DESCRIPTION, REMARKS. Includes project details for Schwabe Farm, Howard County, Maryland.

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. 10539, Expiration Date: 8-17-09.



REVISIONS table with columns: DATE, REVISIONS. Contains two entries: 1/22/16, Buildable Preservation Parcel A (Now A-1) Non Buildable Preservation Parcel B (Now B-1).

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT 1-800-257-7777 48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER LGD INC. LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE SILVER SPRING, MARYLAND 20910 (301) 585-7000

"AS-BUILT" STORMWATER MANAGEMENT BORING LOGS

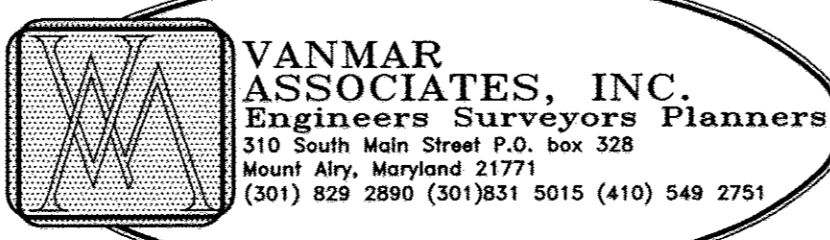
TERRAPIN CREEK (FORMERLY SCHWABE FARM)

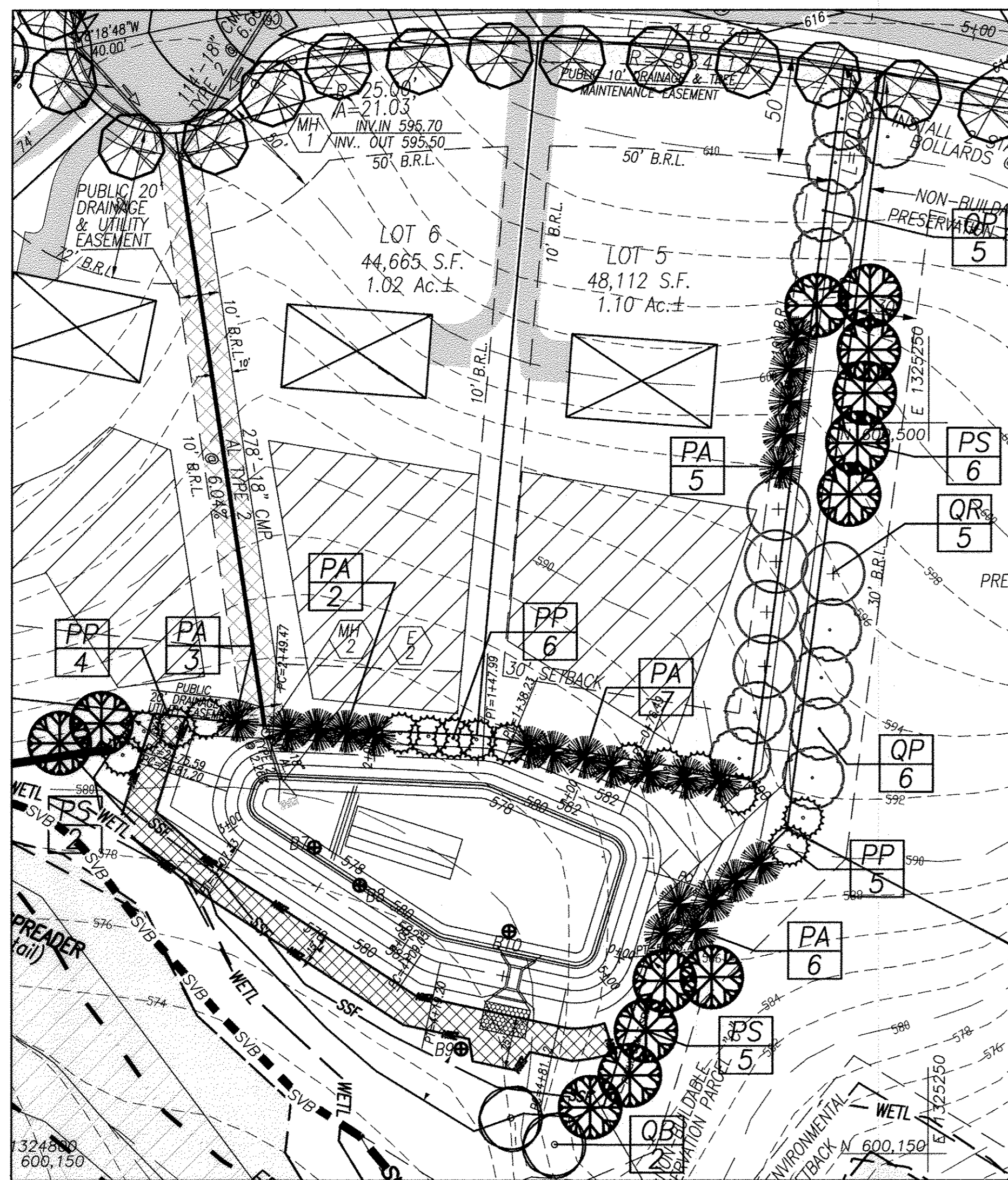
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-H, D AND E PART OF THE LANDS CONVEYED TO LGD, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43 SITUATED ON SYKESVILLE AND LIVESTOCK ROAD ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND SCALE: AS SHOWN NOVEMBER, 2006 SHEET 21 OF 25

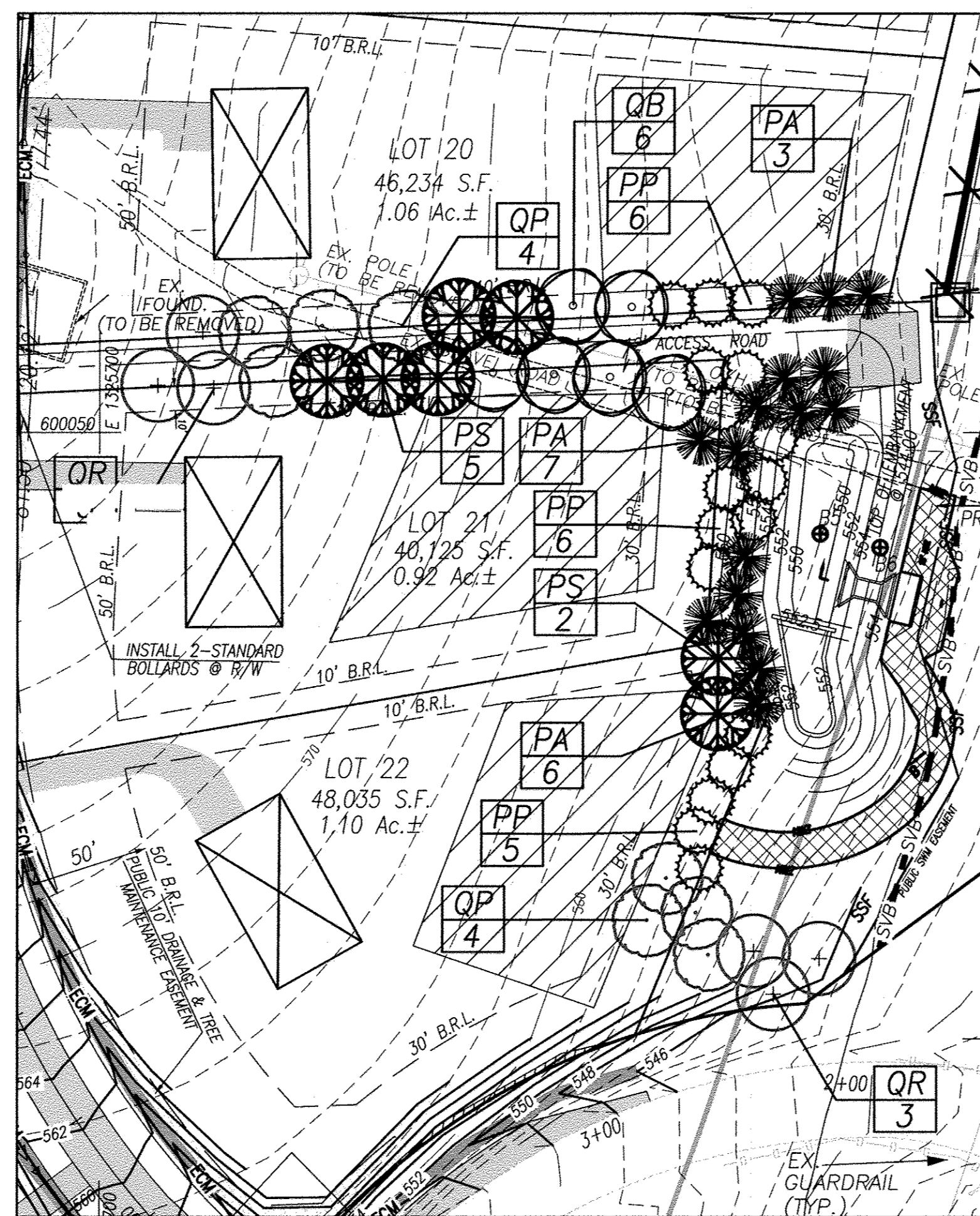
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. Chief, Division of Land Development. Date: 9/23/08.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS. Chief, Bureau of Highways. Date: 7-21-08.

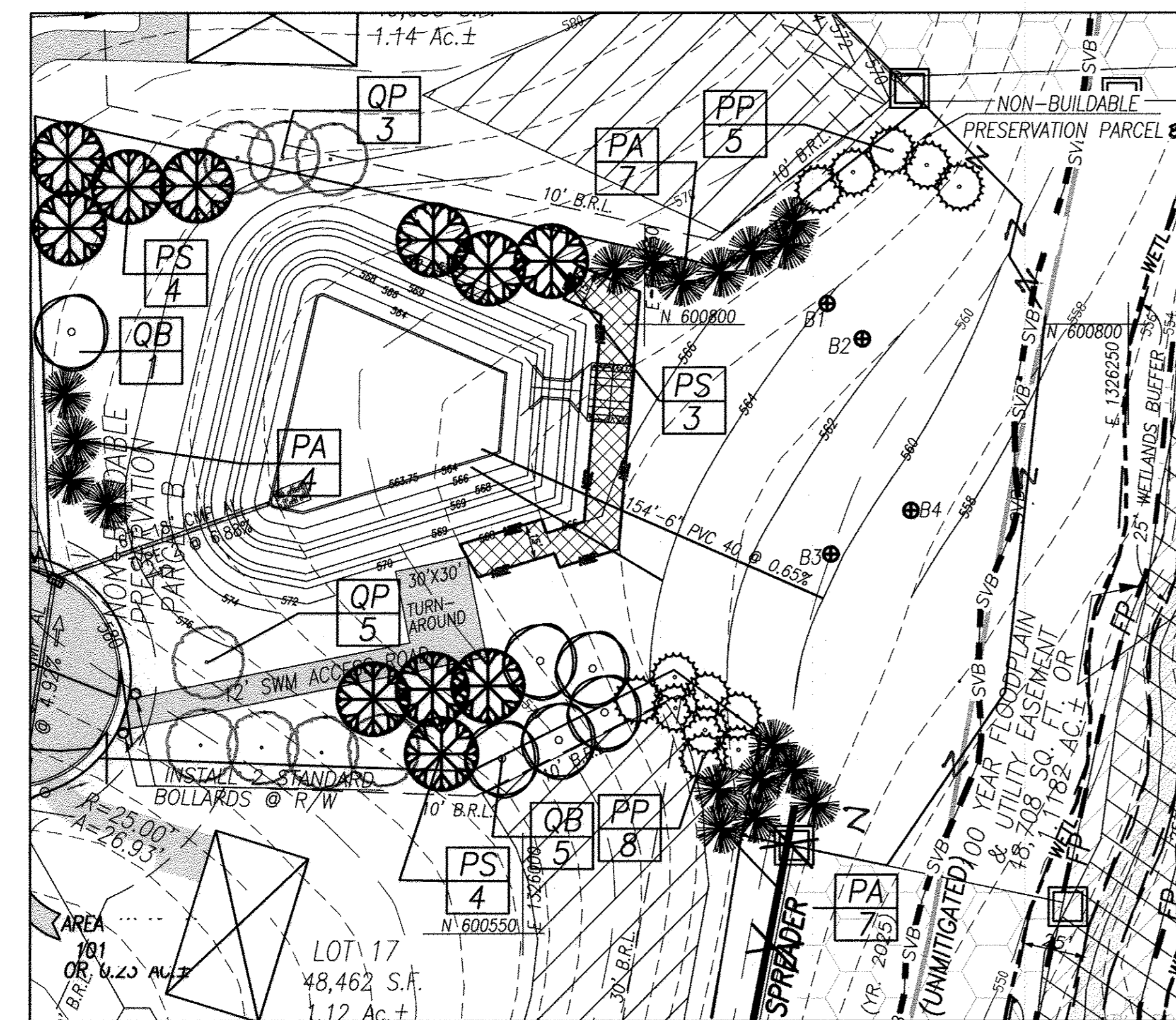




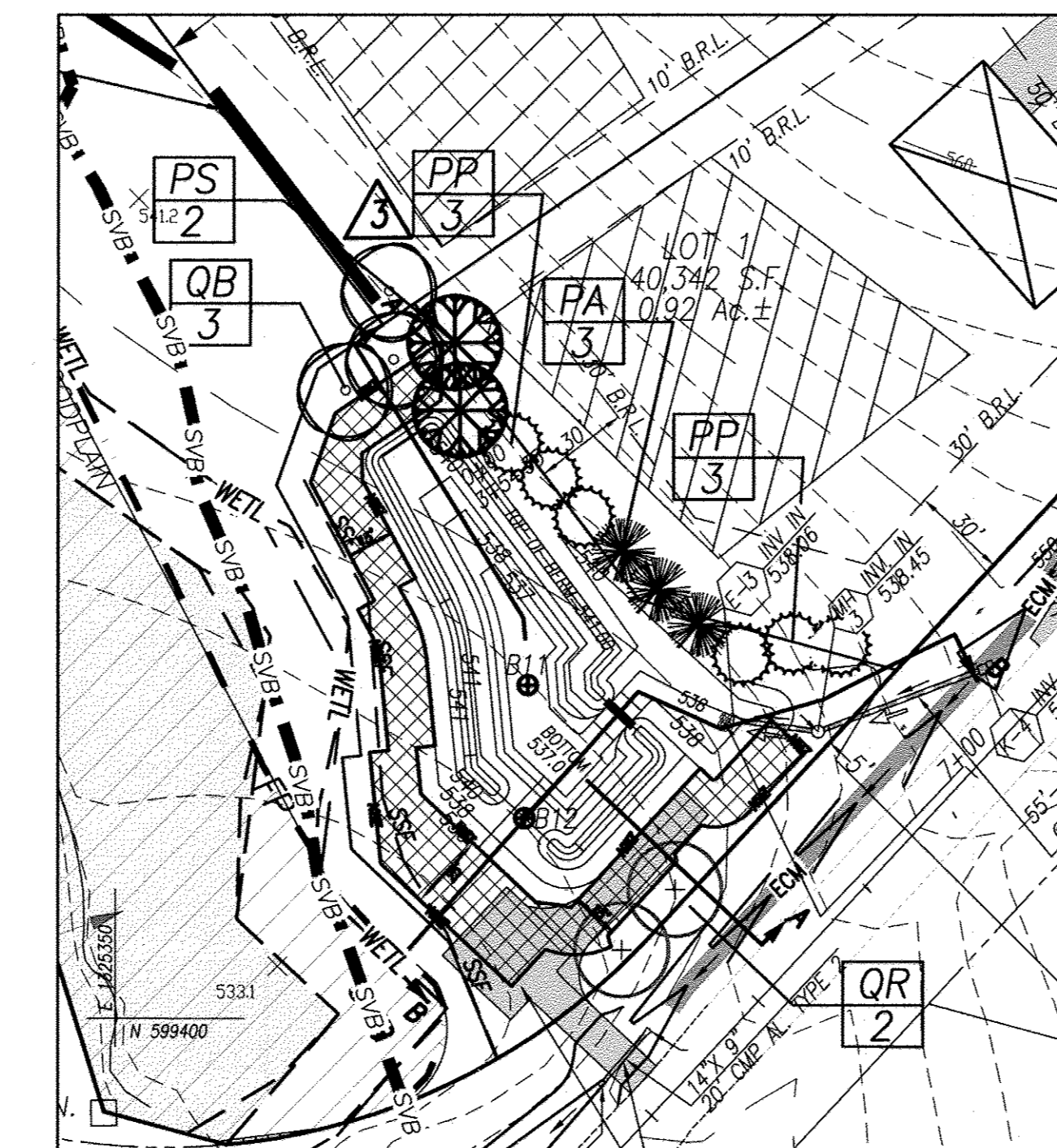
THIS PLAN FOR LANDSCAPE USE ONLY SWM FACILITY 2A



THIS PLAN FOR LANDSCAPE USE ONLY SWM FACILITY 1B



THIS PLAN FOR LANDSCAPE USE ONLY SWM FACILITY 1A



THIS PLAN FOR LANDSCAPE USE ONLY SWM FACILITY 2B

***General Landscaping Guidance for All Stormwater BMP's**

1. Trees, shrubs, and/or any type of woody vegetation are not allowed on the embankment.
2. Plant trees and shrubs at least 15ft away from the toe of slope of a dam.
3. Plant trees and shrubs at least 25ft away from perforated pipes.
4. Plant trees and shrubs at least 25ft away from principal spillway structure.
5. Provide 15ft clearance from a non-clogging, low flow orifice.
6. Use erosion control mats and fabrics in channels to reduce the potential for erosion.
7. Divert flows temporarily from seeded areas until stabilized.
8. Do not block maintenance access to structures with trees and shrubs.
9. To reduce thermal warming, shade inflow and outflow channels as well as southern exposures of ponds.
10. For planting success, soils should be loosened to a depth of 3 to 5 inches.
11. Soils should be loosened regardless of plant type.
12. Whenever possible, topsoil should be spread to a depth of 4-8 inches and lightly compacted to a minimum thickness of 4 inches.
13. Be sure to provide a source of water, especially in dry periods.
14. Native plant species should be specified over exotic or foreign species.
15. Species layout should generally be random and natural.
16. A canopy should be established with an understory of shrubs and herbaceous material.
17. Existing and proposed utilities must be identified and considered.

*These guidelines were taken from the 2000 Maryland Stormwater Design Manual.

SCHEDULE D STORMWATER MANAGEMENT AREA LANDSCAPING				
SWM FACILITY NUMBER	1A	2A	2B	1B
LINEAR FEET OF PERIMETER	1225	1521	329	1314
TYPE OF BUFFER	B	B	B	B
NUMBER OF TREES REQUIRED	55.1	68.44	14.81	59.13
SHADE TREES	24.5	30.42	6.58	26.28
EVERGREEN TREES	30.6	38.02	8.23	32.85
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO
NUMBER OF TREES PROVIDED	56	69	16	60
SHADE TREES	25	31	7	27
EVERGREEN TREES	31	38	9	33
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0

SWM FACILITY 1A, 1B, 2A, & 2B - PLANTING SCHEDULE FOR REQ. BUFFER

SYMBOL	QTY.				BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
	1A	1B	2A	2B				
PS	11	7	13	2	<i>Platanus x. acerifolia</i> 'Bloodgood' 'Bloodgood' London Planetree	2-2.5" CAL.	B&B	AS SHOWN
QB	6	6	2	3	<i>Quercus bicolor</i> Swamp White Oak	2-2.5" CAL.	B&B	AS SHOWN
QP	8	8	11	N/A	<i>Quercus palustris</i> Pin Oak	2-2.5" CAL.	B&B	AS SHOWN
QR	N/A	6	5	2	<i>Quercus rubra</i> Red Oak	2-2.5" CAL.	B&B	AS SHOWN
PA	18	16	23	3	<i>Picea abies</i> Norway Spruce	6-8' HT.	B&B	AS SHOWN
PP	13	17	15	6	<i>Picea pungens</i> Colorado Spruce	6-8' HT.	B&B	AS SHOWN

"AS-BUILT"

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

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

Bum H. Lee 7/30/08
DEVELOPER/BUILDER DATE

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

**SWM LANDSCAPE PLAN
FACILITIES 2A & 2B**

**TERRAPIN CREEK
(FORMERLY SCHWABE FARM)**
LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1
AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E
PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN
LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 50'
NOVEMBER, 2006 SHEET 22 OF 25

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cinda Harris 9/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. ... 8-25-08
CHIEF, BUREAU OF HIGHWAYS DATE

YANMAR ASSOCIATES, INC.
Engineers, Surveyors, Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 829-2890 (301)851-5015 (410) 549-2751

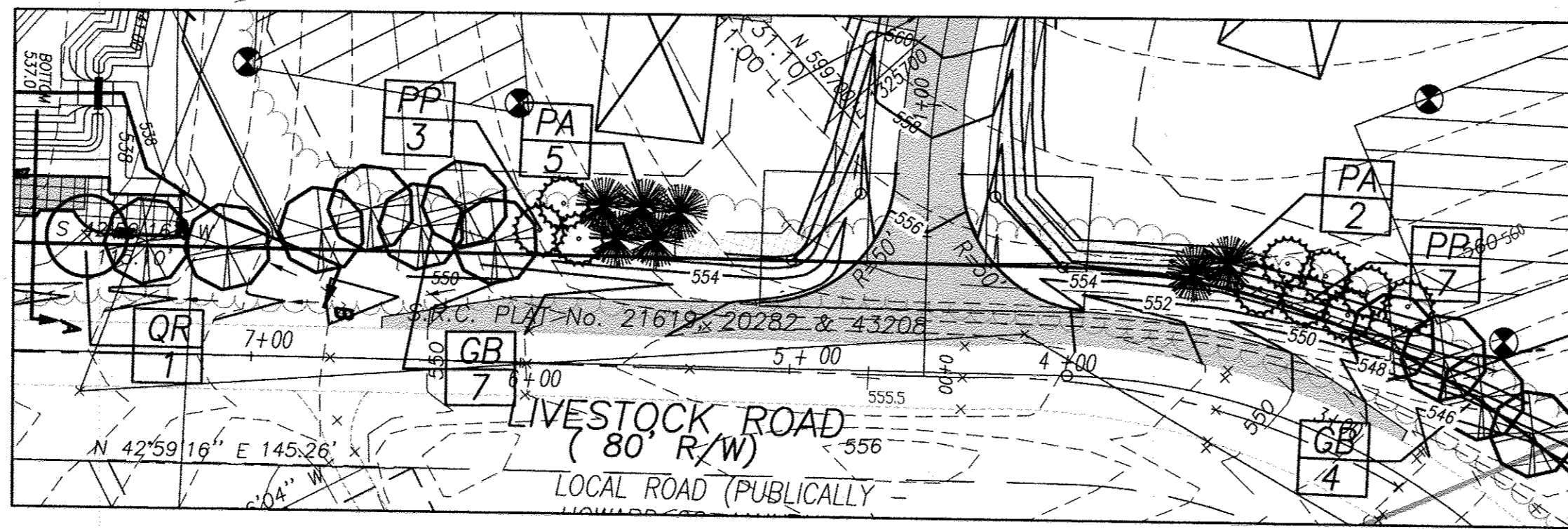


CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

DATE	REVISIONS
11/22/16	Buildable Preservation Parcel A: (NDW A-1)
	Non-Buildable Preservation Parcel B: (NDW B-1)

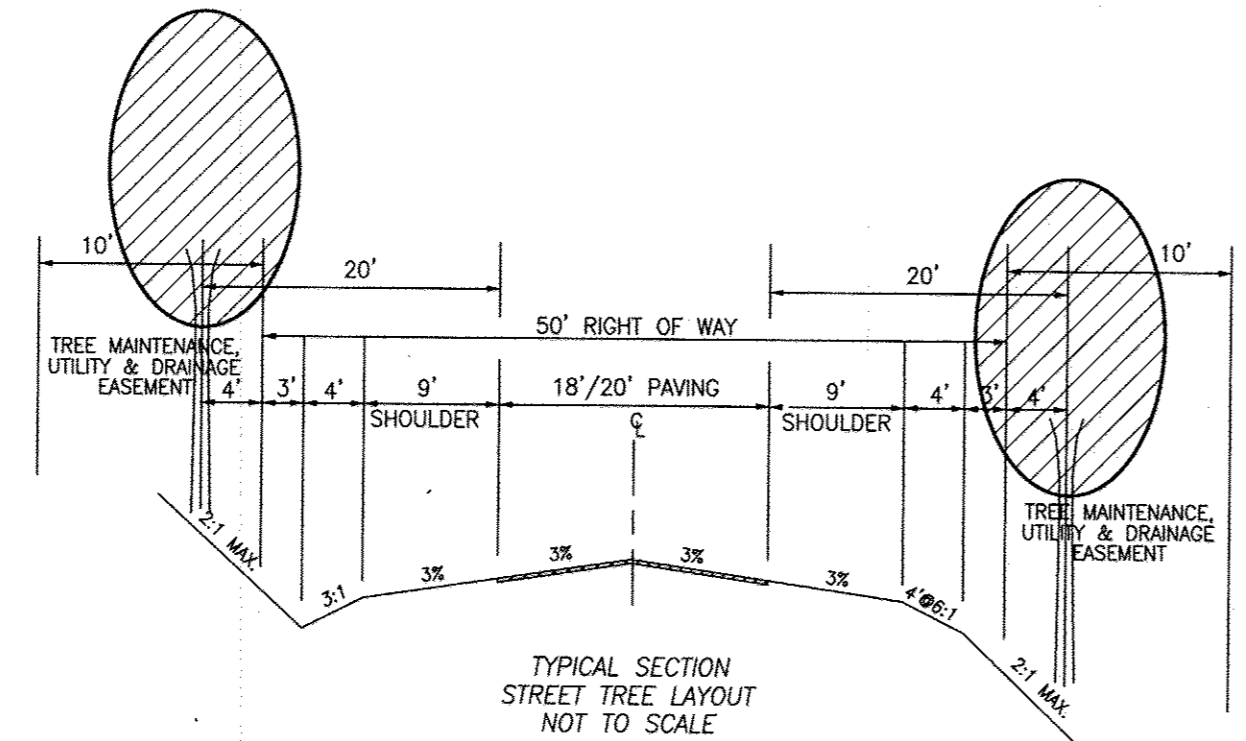
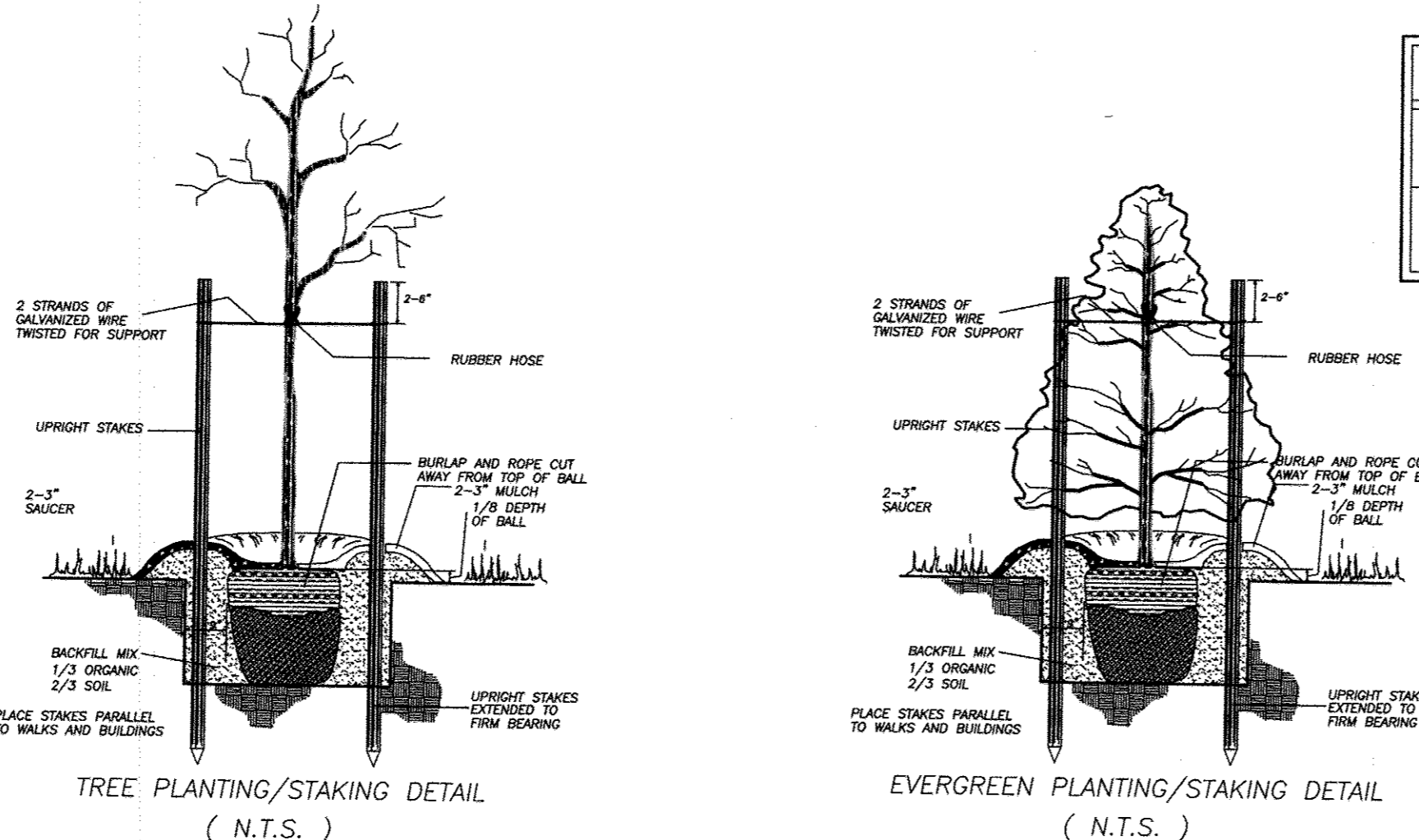
LANDSCAPE NOTES

- Plants shall conform to current *American Standards for Nursery Stock* by American Association of Nurserymen (AAN), particularly with regards to site, growth and size of ball and density of branch structure. Contractor to ensure conformance to national and local buildings codes and ordinances.
- All plants (B&B or container) shall be properly identified by weatherproof labels securely attached hereto before delivery to the project site. Labels shall identify plants by name, species, and size. Labels shall not be removed until the final inspection by the owners representative.
- Any material and/or work may be rejected by the owners representative if it does not meet the requirements of the specifications. The contractor shall remove all rejected materials from the site.
- The contractor shall furnish all plants in quantities and sizes to complete the work as specified in plant schedule. The landscape contractor shall be responsible to verify all plant quantities on the plans prior to commencement of work. Quantities in the plant schedule are for the contractors convenience only and do not constitute the final count.
- Substitutions in plant species or size shall not be permitted except with the written approval of the owners representative.
- Plants shall be located as shown on the drawings and as designated in the field by the owners representative. Tree locations to be field adjusted as required to maintain 10' minimum clearance from all utilities, street lights, and driveways. All locations are to be approved by the owners representative before excavation. The contractor shall note that in the case of a discrepancy between the scaled and figured dimensions shown on these plans, the figured dimension shall govern.
- The location of existing utilities shown hereon are approximate only. Contractor shall excavate to verify the existence, location, and depth of any utilities (constructed and existing) and shall notify the engineer of any discrepancies prior to the beginning of all work, excavation, grading, landscaping, etc.
- Contractor shall locate and mark all underground utility lines and irrigation systems prior to excavating plant beds or pits. All utility easement areas where no planting shall take place shall also be marked on the plan, prior to locating and digging the tree pits. If utility lines are encountered in excavation of tree pits, other locations for the trees shall be selected by the owners representative. Such changes shall be made by the contractor without additional compensation. No changes of location shall be made without the approval of the owners representative. Any utility (whether shown or not) damaged due to construction shall be repaired immediately. The contractor shall be responsible for removing or replacing any existing fences, driveways, etc., damaged or removed by the contractor during construction. All offsite disturbed areas shall be returned to their original condition.
- All equipment and tools shall be placed so as not to interfere or hinder pedestrian and vehicular traffic flow.
- During planting operations, excess and waste materials shall be promptly and frequently removed from the site.
- All tree pits are to be excavated to a minimum depth to allow the tree root ball to be a minimum of 4" higher than finish grade, the tree root ball is to rest on undisturbed soil, or a compacted bed must be prepared for the tree root ball to rest on which will not subside causing the tree to sink below finish grade. All tree pits are to be a minimum of 12" larger on every side of the trees root ball.
- The topsoil to be used to fill the tree pits is to be plant specific. The topsoil for trees shall consist of a maximum of 2/3 existing topsoil from the site, which is cleaned and free of clay, a minimum of 1/3 organic material. These materials are to be mixed prior to backfilling when planting.
- The contractor is responsible to ensure that all tree pits are well drained. The landscape contractor, without cost to the owner, will replace all plant material which is affected by poor drainage.
- All lawn areas are to be seeded with grass seed appropriate for the sunlight conditions which exist on the site.
- All lawn areas are to be tilled to a depth of 6" and all foreign material removed which will inhibit the healthy growth of the lawn. All old grass and grass roots are to be removed from the site. New topsoil of a minimum 4" is to be placed over the areas to be seeded. The grass areas are to be fine graded to ensure that no undulations occur on the lawn. The lawns are to be graded in such a way as to appear perfectly well tailored and even. The lawn topsoil is to be rolled and lightly irrigated prior to placing of the seed. The seed is not to be laid on frozen or soaked soil.
- Existing trees are to be protected during the preparation of the lawn areas. The roots of the trees are to be undisturbed during the cleaning of the topsoil.
- All plants are to be handled with the best care and attention to ensure that the plants are not bruised, broken, torn, or damaged in any way which will affect the plants general appearance and well being.
- All trees are to be planted with the accepted standards of the American Association of Nurserymen. The trees are to be properly watered and backfilled during planting. All care must be taken to ensure that the trees are upright, a tree's best side is exposed to the point of greatest visibility.
- The trees must be staked in accordance with acceptable nursery practice to ensure that they are secure in the ground and will grow straight and uniform. The trees are to be wrapped if the contractor deems it necessary to protect the trees from sun scald or insect attack.
- Contractor is to provide a 1-year guarantee for all plant material and other work done on site.
- Quantities as shown on the plan shall govern over plant list quantities. Contractor to verify pplant list totals with quantities shown on plan.
- Do not plant within 20' of a property line abutting and agricultural use.
- Plant material source: Within 100 mile radius of Maryland if possible.
- VanMar Associates, Inc. is not responsible for the contractor's utilization of men, materials, equipment, or safety measures in performance of any work for this construction. The contractor assumes all responsibility for performing the work correctly and in conformance with all code requirements.
- Should the contractor discover discrepancies between the plans and field conditions, the "work" shall be stopped immediately and the engineer notified immediately to resolve the situation. Should the contractor make field corrections or adjustments without notifying the engineer, then the contractor assumes all responsibility for those changes.
- It is the intent of these plans and specifications to provide 100% completed work and this shall be the project scope. It shall be distinctly understood that failure to notify the engineer of discrepancies found on these plans and specifications, specifically and work which would naturally and/or normally be required to complete the project shall not relieve the contractor of his responsibility to perform such work.
- This plan has been prepared in accordance with the provisions of Section 16.124 of the Howard County Code and the Landscape Manual.
- At the time of installation, all shrubs and other plantings herewith listed and approved for this site, shall be of the proper height requirements in accordance with the Howard County Landscape Manual. In addition, no substitutions or relocation of required plantings may be made without prior review and approval from the Department of Planning and Zoning. Any deviation from this approved Landscape Plan may result in denial or delay in the release of landscape surety until such time as all required materials are planted and/or revisions are made to applicable plans and certificates.
- Financial surety for the required landscaping has been posted with the Developer's Agreement in the amount of \$59,700.00.
 128 Shade Trees @ \$300 each = \$40,500
 128 Evergreen Trees @ \$150 each = \$19,200
 Total = \$59,700



STREET TREE REQUIREMENT SCHEDULE

COURT 'B' - 1860'	REQUIRED 46.5	PROVIDED 48
COURT 'A' - 2240'	REQUIRED 56	PROVIDED 56



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES			
	#2=A	#3=B	#1=A	#4=A	#5=A	#6=A
LANDSCAPE TYPE						
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1140'	987'	1976'	2217'	1185'	2934'
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 1140' EX. FOREST	YES, 310' EX. FOREST	YES, 1976' EX. FOREST	YES, 2217' EX. FOREST	YES, 1185' EX. FOREST	YES, 1083' EX. FOREST
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO
NUMBER OF PLANTS REQUIRED	0	677	0	0	0	31
SHADE TREES	0	14	0	0	0	0
EVERGREEN TREES	0	17	0	0	0	0
SHRUBS	0	0	0	0	0	0
NUMBER OF PLANTS PROVIDED	0	14	0	0	0	31
SHADE TREES	0	17	0	0	0	0
EVERGREEN TREES	0	0	0	0	0	0
OTHER TREES (2:1 SUBSTITUTION) SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0

*SEE SHEET 24 FOR INDIVIDUAL LOT PERIMETER LENGTHS IN SCHEDULE A CHART

PLANTING SCHEDULE

SYMBOL	QTY.	BOTANICAL NAME COMMON NAME	SIZE	CONDITION	SPACING
GB	59	Ginkgo biloba 'Autumn Gold' 'Autumn Gold' Ginkgo	2-2.5' CAL.	B&B	AS SHOWN
QR	32	Quercus palustris Pin Oak	2-2.5' CAL.	B&B	AS SHOWN
ZS	57	Zelkova serrata 'Green Vase' 'Green Vase' Japanese Zekova	2-2.5' CAL.	B&B	AS SHOWN
PA	7	Picea abies Norway Spruce	6-8' HT.	B&B	AS SHOWN
PP	10	Picea pungens Colorado Spruce	6-8' HT.	B&B	AS SHOWN

"AS-BUILT"
 NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT
 1-800-257-7777
 48 HOURS BEFORE START OF CONSTRUCTION

DEVELOPER'S/BUILDER'S CERTIFICATE:
 I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION OF A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.
 DEVELOPER/BUILDER: [Signature] DATE: 7/30/08

OWNER / DEVELOPER
 LDG INC.
 LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
 SILVER SPRING, MARYLAND 20910 (301) 585-7000

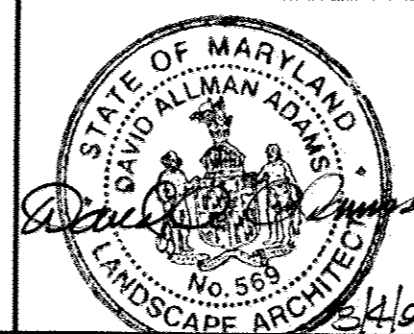
LANDSCAPE PLAN & STREET TREE PLAN

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
 LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
 SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
 ELECTION DISTRICT NO. 3, HOWARD COUNTY, MARYLAND
 SCALE: 1" = 50'
 NOVEMBER, 2006 SHEET 23 OF 25

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. 10539, Expiration Date: 8-17-09.

VANMAR ASSOCIATES, INC.
 Engineers Surveyors Planners
 310 South Main Street P.O. Box 328
 Mount Airy, Maryland 21771
 (301) 829 2890 (301)831 5015 (410) 549 2751



DATE	REVISIONS
1/22/16	Buildable Preservation Parcel A (Now A-1) Non Buildable Preservation Parcel B (Now B-1)

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 [Signature] 9/23/08
 CHIEF, DIVISION OF LAND DEVELOPMENT

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
 [Signature] 8-25-08
 CHIEF, BUREAU OF HIGHWAYS

STREET TREE REQUIREMENT SCHEDULE

COURT 'B' - 1860' REQUIRED	46.5
PROVIDED	48
COURT 'A' - 2240' REQUIRED	56
PROVIDED	56

SCHEDULE D

STORMWATER MANAGEMENT AREA LANDSCAPING

SWM FACILITY NUMBER	1A	2A	2B	1B
LINEAR FEET OF PERIMETER	1225	1521	329	1314
TYPE OF BUFFER	B	B	B	B
NUMBER OF TREES REQUIRED	55.1	68.44	14.81	59.13
SHADE TREES	24.5	30.42	6.58	26.28
EVERGREEN TREES	30.6	38.02	8.23	32.85
CREDIT FOR EXISTING VEGETATION (NO, YES AND %)	NO	NO	NO	NO
CREDIT FOR OTHER LANDSCAPING (NO, YES AND %)	NO	NO	NO	NO
NUMBER OF TREES PROVIDED	56	69	16	60
SHADE TREES	25	31	7	27
EVERGREEN TREES	31	38	9	33
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0

"AS-BUILT"

NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.



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Builder
DEVELOPER/BUILDER
7/30/08
DATE

OWNER / DEVELOPER

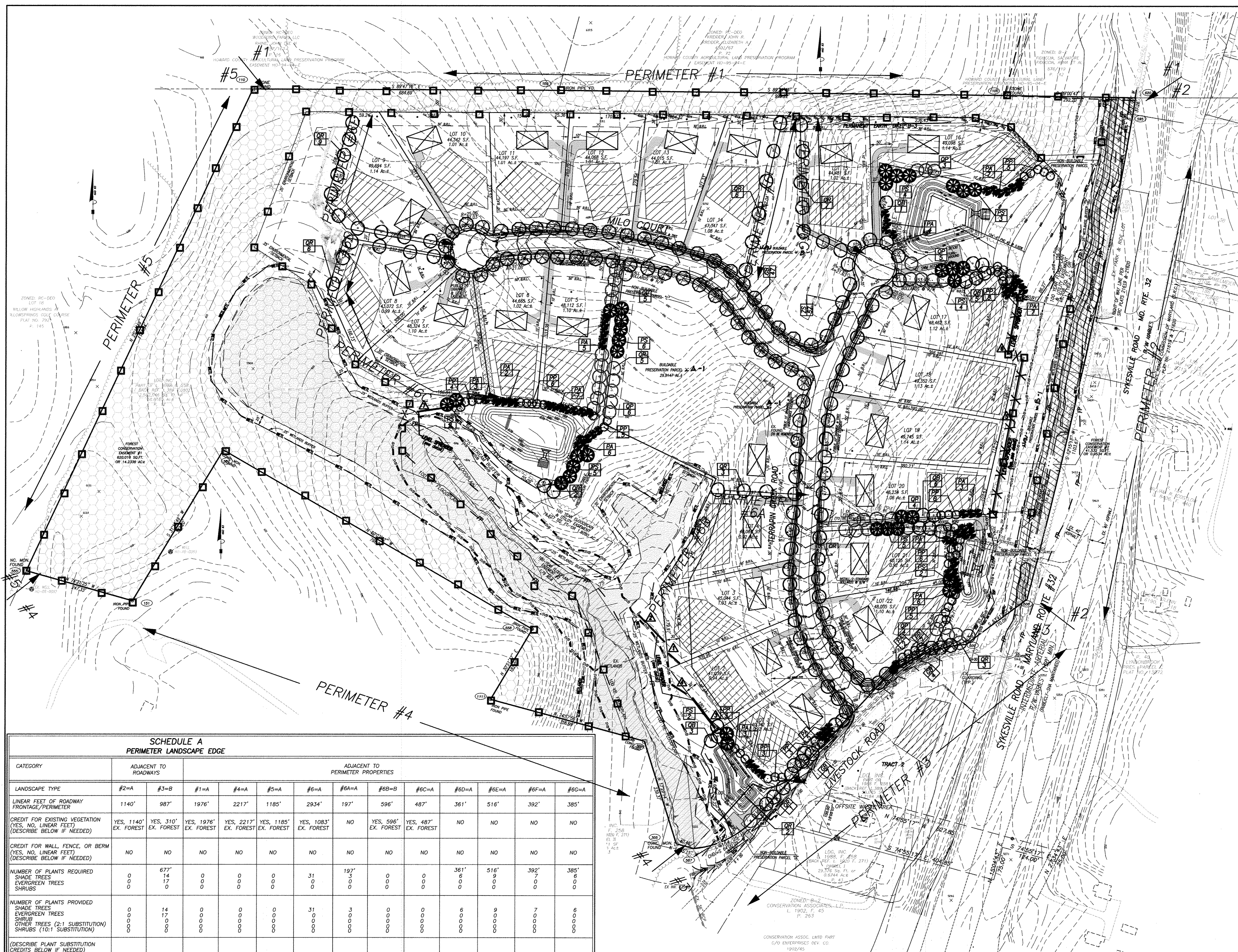
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

LANDSCAPE PLAN PERIMETERS

TERRAPIN CREEK (FORMERLY SCHWABE FARM)

LOTS 1-22, BUILDABLE PRESERVATION PARCEL A-1 AND NON-BUILDABLE PRESERVATION PARCELS B-1, C, D AND E PART OF THE LANDS CONVEYED TO LDG, INC. BY DEED RECORDED IN LIBER 1988 AT FOLIO 258

TAX MAP: 15; GRID: 4 & 5; PARCELS: 12 & 43
SITUATED ON SYKESVILLE AND LIVESTOCK ROAD
ELECTION DISTRICT No. 3, HOWARD COUNTY, MARYLAND
SCALE: 1" = 100'
AUGUST, 2006 SHEET 24 OF 25



SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS		ADJACENT TO PERIMETER PROPERTIES											
	#2=A	#3=B	#1=A	#4=A	#5=A	#6=A	#6A=A	#6B=B	#6C=A	#6D=A	#6E=A	#6F=A	#6G=A	
LANDSCAPE TYPE														
LINEAR FEET OF ROADWAY FRONTAGE/PERIMETER	1140'	987'	1976'	2217'	1185'	2934'	197'	596'	487'	361'	516'	392'	385'	
CREDIT FOR EXISTING VEGETATION (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	YES, 1140' EX. FOREST	YES, 310' EX. FOREST	YES, 1976' EX. FOREST	YES, 2217' EX. FOREST	YES, 1185' EX. FOREST	YES, 1083' EX. FOREST	NO	YES, 596' EX. FOREST	YES, 487' EX. FOREST	NO	NO	NO	NO	
CREDIT FOR WALL, FENCE, OR BERM (YES, NO, LINEAR FEET) (DESCRIBE BELOW IF NEEDED)	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	NO	
NUMBER OF PLANTS REQUIRED	0	677'	0	0	0	31	197'	0	0	361'	516'	392'	385'	
SHADE TREES	0	14	0	0	0	31	3	0	0	6	9	7	6	
EVERGREEN TREES	0	17	0	0	0	0	0	0	0	0	0	0	0	
SHRUBS	0	0	0	0	0	0	0	0	0	0	0	0	0	
NUMBER OF PLANTS PROVIDED	0	14	0	0	0	31	3	0	0	6	9	7	6	
SHADE TREES	0	17	0	0	0	0	0	0	0	0	0	0	0	
EVERGREEN TREES	0	0	0	0	0	0	0	0	0	0	0	0	0	
SHRUBS	0	0	0	0	0	0	0	0	0	0	0	0	0	
OTHER TREES (2:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0	0	
SHRUBS (10:1 SUBSTITUTION)	0	0	0	0	0	0	0	0	0	0	0	0	0	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Chris Hines
CHIEF, DIVISION OF LAND DEVELOPMENT
7/23/08
DATE

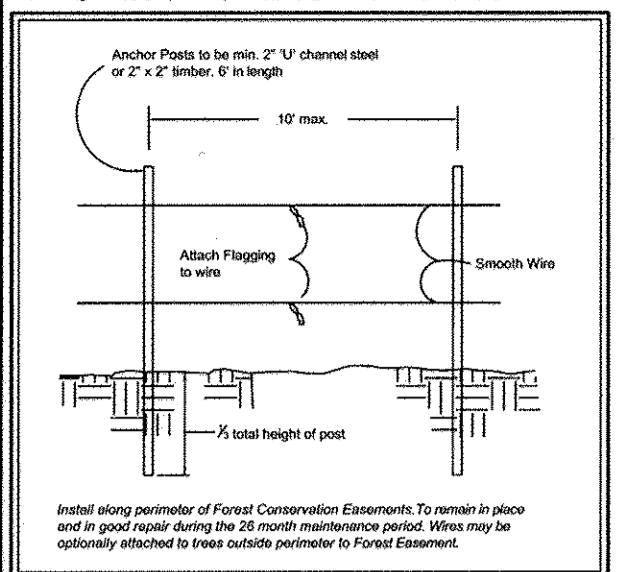
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. Smith
CHIEF, BUREAU OF HIGHWAYS
8-25-08
DATE

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. Box 328
Mount Airy, Maryland 21771
(301) 829 2890 (301) 831 5015 (410) 549 2751



DATE: 1/22/16
REVISIONS:
Buildable Preservation Parcel A (Now A-1)
Non-Buildable Preservation Parcel B (Now B-1)

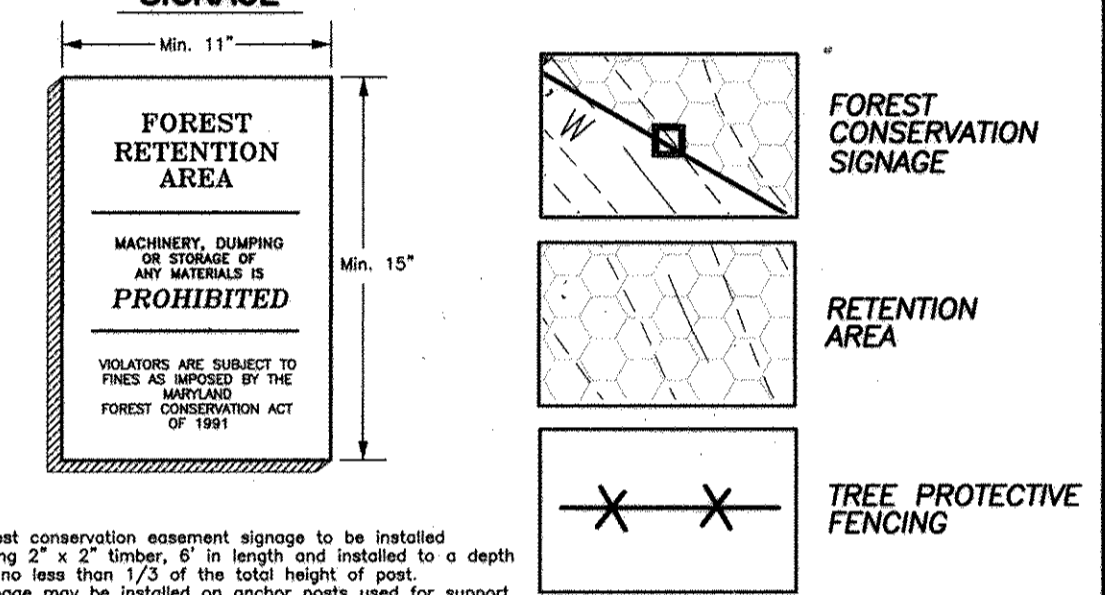
PROTECTIVE FENCING DETAIL



GENERAL NOTES

- These perpetual forest easements are established in accordance with the Howard County Forest Conservation Manual, as specifically set forth in the terms of the recorded forest easement.
- There is a 100 year floodplain shown on site.
- Tree protection signs shall be installed as shown on plan and inspected prior to any grading or disturbance activities on site.
- A forest conservation easement will be placed around each forest preservation area and a deed of easement will be recorded specifying long-term protection of the area.
- The owner will execute a forest public works agreement.
- A preconstruction meeting is to be arranged as follows:
After the boundaries of the limits of disturbance have been staked and flagged, and the forest protection devices have been installed, and before any disturbance has taken place on site, a pre construction meeting at the construction site shall take place. The developer, contractor or project manager, and appropriate local inspectors should attend. The purpose of this meeting will be to:
A. Identify the locations of the forest retention areas, specimen trees, limits of construction, employee parking areas, and equipment staging areas on site plans.
B. Inspect all flagged boundaries, protection devices, and sediment and erosion control devices on site.
C. Make all necessary adjustments.
D. Assign responsibilities as appropriate and discuss penalties.
- This plan sheet is to show the on site forest retention, afforestation, easement area and location of signs only.
- All contractors performing work on this site shall notify "Miss Utility" 48 hours prior to any construction or grading by calling 1-800-257-7777 for the location of all utilities.
- The contractors performing work in the site are responsible for protecting existing native & noninvasive plantings during construction.
- All planting, pruning, and maintenance shall be according to the National Arborist Standards and the Howard County Forest Conservation Manual, latest edition.
- The forest conservation easements shown hereon have been established to fulfill the requirements of Section 16.1200 of the Howard County Subdivision and Land Development Regulations, and Forest Conservation Act. No clearing, grading, or construction is permitted within the forest conservation easements. Any unauthorized activities that result in additional clearing, or that affect proposed planting/retention areas shown on the forest conservation plan may result in a request for recalculation of forest conservation requirements and designation of additional planting/retention areas if needed to meet the obligations of the forest conservation program. Any future subdivision, development, or change in land use may be subject to additional requirements of the Howard County Forest Conservation Program.
- Forest conservation requirements per Section 16.1202 of the Howard County Code and Forest Conservation Act for this subdivision have been fulfilled through the retention of 16,147 AC of existing forest in an easement located on Buildable Preservation Parcel 'A' and a \$132,309.14 surety posted with the developer's agreement.

FOREST RETENTION SIGNAGE



NOTES:

- Forest conservation easement signs to be installed using 2" x 2" timber, 6' in length and installed to a depth of no less than 1/3 of the total height of post.
- Signage may be installed on anchor posts used for support of Tree Protection Fence, and post may remain after construction is complete and mesh is removed.
- Boundaries of Retention area should be staked and flagged prior to installing device.
- SPACE SIGNS AS SHOWN

FOREST CONSERVATION WORKSHEET

NET TRACT AREA	
A. TOTAL TRACT AREA:	A= 59.8000
B. DEDUCTIONS:	B= 2.9462
C. NET TRACT AREA:	C= 56.8538
LAND USE CATEGORY	
INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING AND LIMIT TO ONLY ONE ENTRY	
D. AFFORESTATION THRESHOLD (NET TRACT AREA X 20%):	D= 11.3708
E. CONSERVATION THRESHOLD (NET TRACT AREA X 25%):	E= 14.2135
EXISTING FOREST COVER	
F. EXISTING FOREST COVER WITHIN THE NET TRACT AREA:	F= 19.0816
G. AREA OF FOREST ABOVE CONSERVATION THRESHOLD:	G= 4.8876
BREAK EVEN POINT	
H. BREAK EVEN POINT:	H= 15.1877
I. FOREST CLEARING PERMITTED WITHOUT MITIGATION:	I= 3.8944
BREAK EVEN POINT	
J. TOTAL AREA OF FOREST TO BE CLEARED:	J= 3.8944
K. TOTAL AREA OF FOREST TO BE RETAINED:	K= 15.1877
PLANTING REQUIREMENTS	
L. REFORESTATION FOR CLEARING ABOVE THE CONSERVATION THRESHOLD:	L= 0.0000
M. REFORESTATION FOR CLEARING BELOW THE CONSERVATION THRESHOLD:	M= 0.0000
N. CREDIT FOR RETENTION ABOVE THE CONSERVATION THRESHOLD:	N= 0.0000
P. TOTAL REFORESTATION REQUIRED:	P= 0.0000
Q. TOTAL AFFORESTATION REQUIRED:	Q= 0.0000
R. TOTAL PLANTING REQUIRED:	R= 0.0000

CONSERVATION ASSOCIATES, L.P.
1902/45
BALTIMORE, MARYLAND
AUCTION MARKET, INC.
PLAT NO. 15-008
P. 229

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. 10539, Expiration Date: 8-17-09.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
Cindy Hauer 7/23/08
CHIEF, DIVISION OF LAND DEVELOPMENT
William J. Smith 9/8/08
CHIEF, DEVELOPMENT ENGINEERING DIVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS
William J. Smith 8-25-08
CHIEF, BUREAU OF HIGHWAYS

VANMAR ASSOCIATES, INC.
Engineers Surveyors Planners
310 South Main Street P.O. box 328
Mount Airy, Maryland 21771
(301) 629-2890 (301) 831-5015 (410) 549-2751



DATE	REVISIONS
1/2/10	Buildable Preservation Parcel A- (Now A-1) Non-Buildable Preservation Parcel B (Now B-1)

"AS-BUILT"
NOTE: NO "AS-BUILT" INFORMATION IS REQUIRED ON THIS SHEET.

CALL "MISS UTILITY" AT
1-800-257-7777
48 HOURS BEFORE START OF CONSTRUCTION

OWNER / DEVELOPER
LDG INC.
LEE PLAZA, SUITE 200 8601 GEORGIA AVENUE
SILVER SPRING, MARYLAND 20910 (301) 585-7000

FOREST CONSERVATION PLAN

TERRAPIN CREEK (FORMERLY SCHWABE FARM)
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