

BLANDAIR REGIONAL PARK - PHASE J

ENVIRONMENTAL CONCEPT PLAN

HOWARD COUNTY, MARYLAND

CAPITAL PROJECT # J-4237

DPZ # ECP-11-023

ENVIRONMENTAL DESIGN DESIGN NARRATIVE

THE SITE WAS EVALUATED FOR STORMWATER MANAGEMENT, AS REQUIRED BY THE STORMWATER MANAGEMENT ACT OF 2007 AND THE HOWARD COUNTY DESIGN MANUAL VOLUME I. THESE REGULATIONS REQUIRE THAT ENVIRONMENTAL SITE DESIGN (ESD) BE IMPLEMENTED TO THE MAXIMUM EXTENT POSSIBLE FOR EVERY NEW PROJECT. ENVIRONMENTAL SITE DESIGN IS A SITE DESIGN STRATEGY TO:

- OPTIMIZE CONSERVATION OF NATURAL FEATURES.
- MINIMIZE IMPERVIOUS SURFACES.
- SLOWING DOWN RUNOFF TO MAINTAIN DISCHARGE TIMING AND INCREASE INFILTRATION AND EVAPOTRANSPIRATION.
- USING OTHER NONSTRUCTURAL PRACTICES AND INNOVATIVE TECHNOLOGIES AS APPROVED BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT (MDE).

BY IMPLEMENTING ESD, THE ULTIMATE GOAL IS TO MAINTAIN THE RUNOFF CHARACTERISTICS OF THE SITE TO MIMIC PREDEVELOPMENT WOODS IN GOOD CONDITIONS.

IN THIS PROJECT, THE OVERALL EXISTING DRAINAGE AREAS ARE MOSTLY MAINTAINED TO NATURAL DRAINAGE CONDITIONS. THE LIMIT OF DISTURBANCE IS MINIMIZED BY PLACING ESD PRACTICES PARALLEL TO THE ROAD AND ARE UTILIZED TO THE MAXIMUM EXTENT POSSIBLE. THE ROADWAY GEOMETRY IS BASED ON SHA AND HOWARD COUNTY STANDARDS AND WIDTHS ARE BASED ON SAFE TRAVEL REQUIREMENTS. PAVEMENT WIDTHS ARE REDUCED WHERE POSSIBLE. ALTERNATIVE SURFACES WERE CONSIDERED, BUT DUE TO THE HEAVY DUTY TRAFFIC AND SAFETY REQUIREMENTS, PERVIOUS PAVEMENTS ARE NOT FEASIBLE. WITH EXCEPTION OF THE ONE SHALLOW WETLANDS POND, NO OTHER STRUCTURAL STORMWATER MANAGEMENT FACILITY IS REQUIRED. HOWARD COUNTY DEPARTMENT OF PARKS AND RECREATION WILL MAINTAIN ALL OF THE PROPOSED ESD PRACTICES.

THE ALIGNMENT OF THE PROPOSED ROAD AND RAMP SYSTEM ARE LOCATED TO MINIMIZE DISTURBANCE TO EXISTING NATURAL FEATURES SUCH AS FOREST AREAS AND WETLAND AREAS. WHERE THERE ARE IMPACTS TO THESE FEATURES, REFORESTATION AND STREAM MITIGATION WILL BE PERFORMED TO COMPENSATE FOR IMPACTED AREAS.

EROSION AND SEDIMENT CONTROLS ARE INTEGRATED INTO THE DESIGN WHERE THE SWALES ARE INITIALLY USED TO CONVEY SEDIMENT LADEN RUNOFF INTO SEDIMENT TRAPS AND BASINS. BASINS ARE ULTIMATELY CONVERTED INTO STORMWATER MANAGEMENT PONDS.

THE SITE WILL MAXIMIZE THE USE OF ESD PRACTICES BY INCORPORATING BIO-SWALES, GRASS SWALES AND MICROBIORETENTION AREAS WHERE ALLOWABLE. AS THE PROPOSED ROAD SYSTEM IS A PUBLIC MAJOR COLLECTOR, IT IS NOT FEASIBLE TO USE ANY TYPE OF PERVIOUS PAVEMENT DUE TO ECONOMIC, MAINTENANCE AND SAFETY ISSUES.

TO SIZE THE ESD PRACTICES, RCN VALUES ARE DETERMINED BASED ON A SITE AREA'S LAND USE OF WOODS IN GOOD CONDITION. PE TARGETS ARE THEN ESTABLISHED FROM THE VALUES SET IN TABLE 5.3 OF THE ENVIRONMENTAL SITE DESIGN CRITERIA. A TARGET ESD VOLUME IS THEN CALCULATED FOR THE DRAINAGE AREA BASED ON THE PE AND THE PROPOSED SITE IMPERVIOUS.

INDIVIDUAL ESD PRACTICES ARE THEN LOCATED WITHIN THE DRAINAGE AREA AND SIZED BASED ON THE DRAINAGE AREA AND IMPERVIOUS AREA FLOWING TO THE PRACTICE. THE TOTAL OF THE ESD VOLUMES CAPTURED BY EACH ESD PRACTICE WITHIN THE DRAINAGE AREA SHOULD MEET THE TARGET ESD VOLUME INITIALLY CALCULATED FOR THE ENTIRE DRAINAGE AREA.

BY MEETING ESD VOLUMES, WATER QUALITY VOLUME (WQV) AND RECHARGE VOLUME (REV) AND CHANNEL PROTECTION VOLUME (CPV) ARE SATISFIED. AREAS WHERE NOT ENOUGH ESD PRACTICES ARE IMPLEMENTED DUE TO SITE CONSTRAINTS WILL HAVE THE REMAINING ESD VOLUME MANAGED IN A STRUCTURAL STORMWATER MANAGEMENT FACILITY.

FOR THIS PROJECT, A TOTAL OF 44 INDIVIDUAL ESD PRACTICES ARE PROPOSED. TWO EXTENDED DETENTION PONDS WILL MANAGE THE 10 AND 100-YEAR STORM FOR FLOOD CONTROL WILL BE PROVIDED AS THE UNNAMED TRIBUTARY TO LITTLE PATUXENT RIVER HAS A 100-YEAR FLOODPLAIN. A SHALLOW WETLANDS POND WILL PROVIDE ADDITIONAL ESD VOLUME IN DRAINAGE AREA 9, WHERE FEASIBLE ESD PRACTICES HAVE BEEN MAXIMIZED.

WETLAND AND STREAM DISTURBANCES ARE NECESSARY DUE TO THE REQUIRED ROAD ALIGNMENTS. DISTURBANCES TO THE FOREST AREAS AND STEEP SLOPES ARE MINIMIZED WHERE POSSIBLE.

GENERAL NOTES

1. APPROVAL OF THIS ENVIRONMENTAL CONCEPT PLAN DOES NOT CONSTITUTE APPROVAL OF ASSOCIATED SUBDIVISION OR SITE DEVELOPMENT PLANS. REVIEW OF THIS PROJECT FOR COMPLIANCE WITH THE HOWARD COUNTY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS AND THE HOWARD COUNTY ZONING REGULATIONS SHALL OCCUR AT THE SUBDIVISION AND SITE PLAN STAGES.

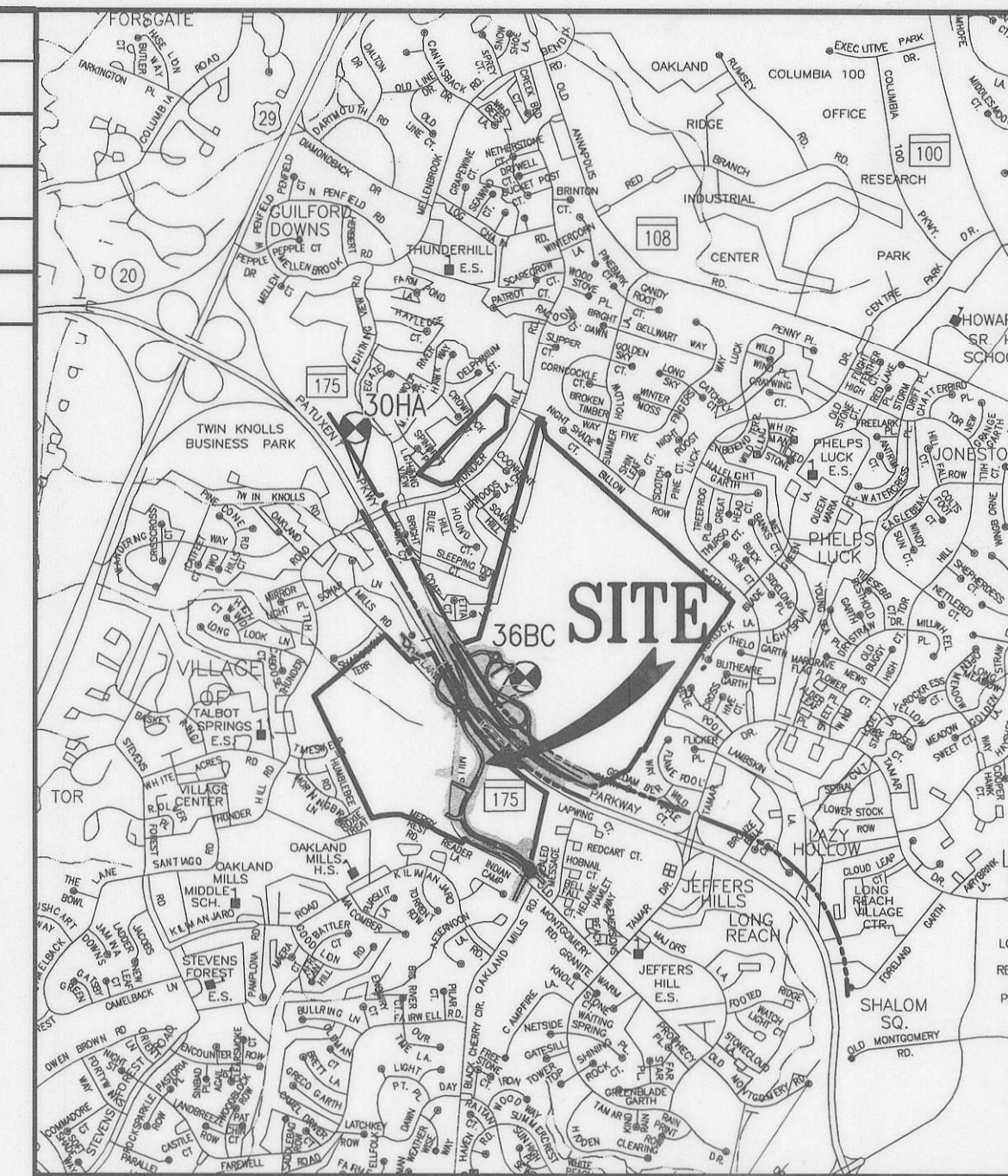
REVISIONS	

BENCHMARK DATA

30HA: N 566030.6258, E 1357989.5444, ELEV. 386.983
 36BC: N 563264.1261, E 1359585.7197, ELEV. 409.981

LIST OF DRAWINGS

1. ESD0.1 COVER SHEET
2. ESD1.1 OVERALL DRAINAGE AREA PLAN
3. ESD1.2 OVERALL ENVIRONMENTAL CONCEPT PLAN
4. ESD1.3 ESD CONCEPT PLAN A
5. ESD1.4 ESD CONCEPT PLAN B
6. ESD1.5 ESD CONCEPT PLAN C
7. ESD1.6 SEDIMENT CONTROL CONCEPT PLAN A
7. ESD1.7 SEDIMENT CONTROL CONCEPT PLAN B
7. ESD1.8 SEDIMENT CONTROL CONCEPT PLAN C



ADC MAP: 16
 GRID: A6,A7

VICINITY MAP

1" = 2000'

SITE ANALYSIS DATA CHART

TOTAL PROPERTY AREA: 298.08 ACRES
 AREA OF PLAN SUBMISSION: 47.1 ACRES
 LIMIT OF DISTURBED AREA: 47.1 ACRES
 WETLANDS AND BUFFERS: 15.37 ACRES
 FLOODPLAINS: 3.40 ACRES
 EXISTING FORESTS: 105.64 ACRES
 STEEP SLOPES >15%: 19.1 ACRES
 PROPOSED IMPERVIOUS AREAS: 29.1 ACRES

PRESENT ZONING DESIGNATION: RC-DEO

PROPOSED USES: REGIONAL PARK, ATHLETIC FIELDS, PLAYGROUND, PICNIC SHELTER, COMFORT STATION

APPLICABLE DPZ FILE NUMBERS: SDP-10-007, WP-10-013

LEGEND

- WOODSLINE
- SITE AREA
- 100-YR FLOODPLAIN
- STREAM
- 75' STREAM BUFFER
- PROPERTY LINE



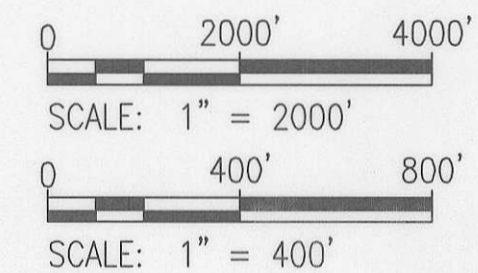
LOCATION MAP

1" = 400'



WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231
 Phone: 410-235-3450 Fax: 410-243-9716

GRAPHIC SCALES



SIGNATURE



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. 19376
 EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL PARK - PHASE J

COVER SHEET

Drawing No.

ESDO.1

Scale: AS SHOWN

Date: 01/18/2011 Sheet 1 of 9

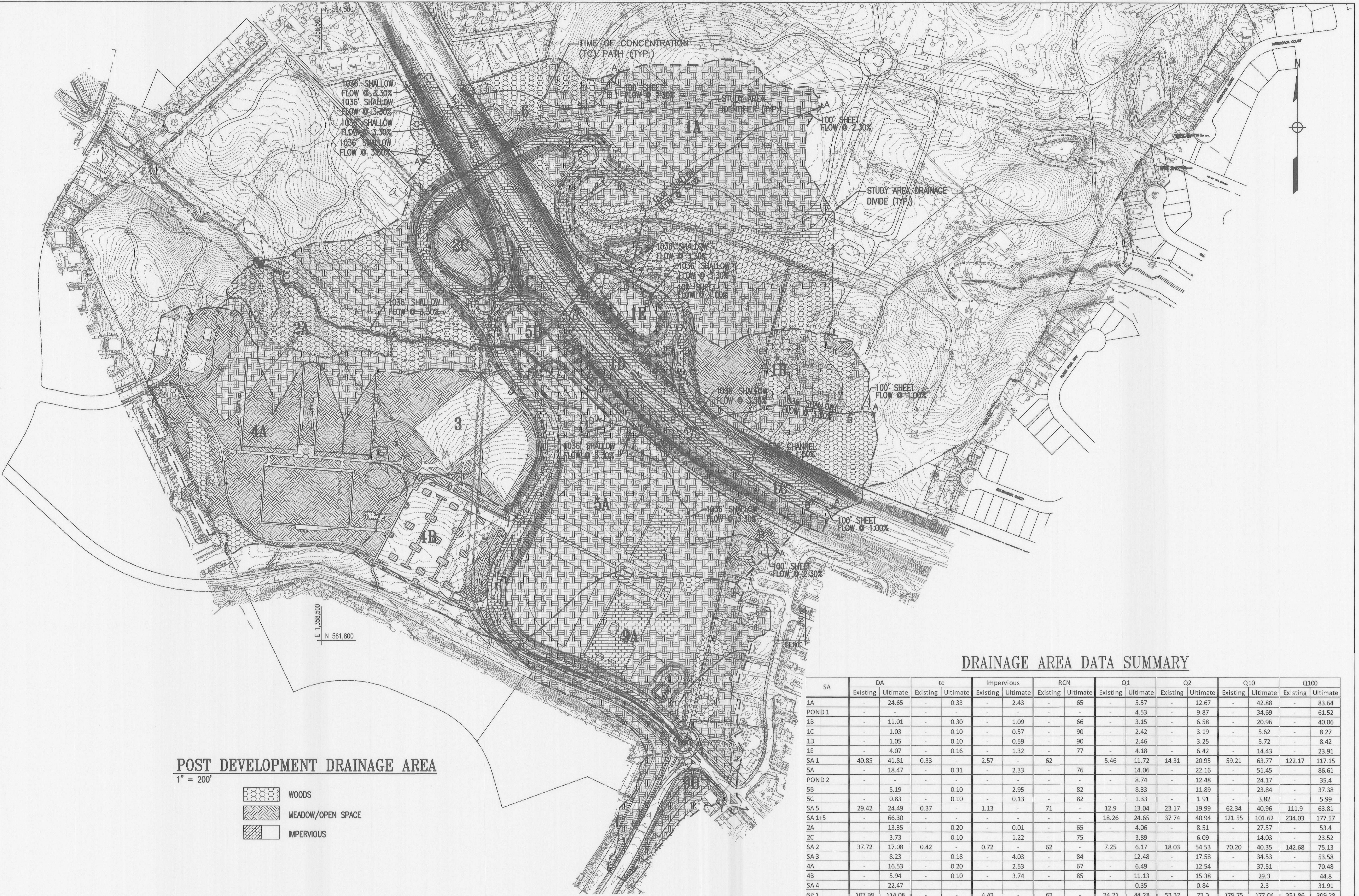
Des: CYH Drawn: CYH Check: AUO

ECP-11-023

OWNER:	DEVELOPER:	PERMIT INFORMATION CHART					
		WATER CODE:	SEWER CODE:	BUILDING:	STREET ADDRESS:	SECTION/AREA:	PARCEL:
HOWARD COUNTY DEPARTMENT OF RECREATION AND PARKS 7120 OAKLAND MILLS ROAD COLUMBIA, MD 21046 ATTN: MR. RAUL DELERME VOICE 410-313-4689 FAX 410-313-4646	HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS 9250 BENDIX ROAD COLUMBIA, MD 21045 ATTN: MR. MARK KOVACH VOICE 410-313-6153 FAX 410-313-6144	PUBLIC	PUBLIC	N/A	N/A	N/A	N/A
		PROJECT NAME: BLANDAIR REGIONAL PARK - PHASE J					
		L/F 4391/55 5203/439	GRID #5	ZONING RC-DEO	TAX MAP BLOCK 36	ELEC. DIST. 5	CENSUS TRACT 3/7 60603

FILENAME: W:\ECP-11-023\CD\DWG\ESDO.1.DWG

APPROVED: DEPARTMENT OF PUBLIC WORKS	
DIRECTOR OF PUBLIC WORKS	DATE
CHIEF, BUREAU OF ENGINEERING	DATE
CHIEF, TRANSPORTATION AND SPECIAL PROJECTS	DATE



POST DEVELOPMENT DRAINAGE AREA
1" = 200'

- WOODS
- MEADOW/OPEN SPACE
- IMPERVIOUS

Soil Symbol	HSG	Soil Description
GnB	C	Glenville-Baile silt loams, 0-8% slopes
GgB	B	Glenelg loam, 3-8% slopes
GgC	B	Glenelg loam, 8-15% slopes
ChB	B	Glenelg-Urban land complex, 0-8% slopes
MaC	B	Manor loam, 8-15% slopes
RuB	C	Russett and Beltsville soils, 2-5% slopes
UoF	D	Udorthents, Highway, 0-65%

DRAINAGE AREA DATA SUMMARY

SA	DA		tc		Impervious		RCN		Q1		Q2		Q10		Q100	
	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate	Existing	Ultimate
1A	-	24.65	-	0.33	-	2.43	-	65	-	5.57	-	12.67	-	42.88	-	83.64
POND 1	-	-	-	-	-	-	-	-	-	4.53	-	9.87	-	34.69	-	61.52
1B	-	11.01	-	0.30	-	1.09	-	66	-	3.15	-	6.58	-	20.96	-	40.06
1C	-	1.03	-	0.10	-	0.57	-	90	-	2.42	-	3.19	-	5.62	-	8.27
1D	-	1.05	-	0.10	-	0.59	-	90	-	2.46	-	3.25	-	5.72	-	8.42
1E	-	4.07	-	0.16	-	1.32	-	77	-	4.18	-	6.42	-	14.43	-	23.91
SA 1	40.85	41.81	0.33	-	2.57	-	62	-	5.46	11.72	14.31	20.95	59.21	63.77	122.17	117.15
5A	-	18.47	-	0.31	-	2.33	-	76	-	14.06	-	22.16	-	51.45	-	86.61
POND 2	-	-	-	-	-	-	-	-	-	8.74	-	12.48	-	24.17	-	35.4
5B	-	5.19	-	0.10	-	2.95	-	82	-	8.33	-	11.89	-	23.84	-	37.38
5C	-	0.83	-	0.10	-	0.13	-	82	-	1.33	-	1.91	-	3.82	-	5.99
SA 5	29.42	24.49	0.37	-	1.13	-	71	-	12.9	13.04	23.17	19.99	62.34	40.96	111.9	63.81
SA 1+5	-	66.30	-	-	-	-	-	-	18.26	24.65	37.74	40.94	121.55	101.62	234.03	177.57
2A	-	13.35	-	0.20	-	0.01	-	65	-	4.06	-	8.51	-	27.57	-	53.4
2C	-	3.73	-	0.10	-	1.22	-	75	-	3.89	-	6.09	-	14.03	-	23.52
SA 2	37.72	17.08	0.42	-	0.72	-	62	-	7.25	6.17	18.03	54.53	70.20	40.35	142.68	75.13
SA 3	-	8.23	-	0.18	-	4.03	-	84	-	12.48	-	17.58	-	34.53	-	53.58
4A	-	16.53	-	0.20	-	2.53	-	67	-	6.49	-	12.54	-	37.51	-	70.48
4B	-	5.94	-	0.10	-	3.74	-	85	-	11.13	-	15.38	-	29.3	-	44.8
SA 4	-	22.47	-	-	-	-	-	-	-	0.35	-	0.84	-	2.3	-	31.91
SP 1	107.99	114.08	-	-	4.42	-	62	-	24.71	44.28	53.37	72.3	179.75	177.04	351.86	309.28
SA 6	9.46	-	0.18	0.17	1.58	1.58	67	69	3.77	4.43	7.40	8.11	22.23	22.6	41.68	41.16
SA 7	2.92	-	0.16	0.21	0.58	0.45	77	75	2.99	1.87	4.61	2.96	10.35	7.01	17.14	11.91
9A	11.53	8.23	-	0.20	0.46	2.08	69	77	5.25	8.8	9.44	13.59	25.80	30.71	46.59	51.04
POND 3	-	-	-	-	-	-	-	-	-	4.69	-	7.39	-	18.18	-	32.44
9B	-	7.86	-	0.10	-	2.29	-	72	-	6.53	-	10.8	-	26.71	-	46.26
SP 2	17.83	16.09	0.33	-	2.40	-	71	-	8.63	9.26	15.21	15.3	40.58	38.48	72.55	67.37

REVISIONS	

HOWARD COUNTY
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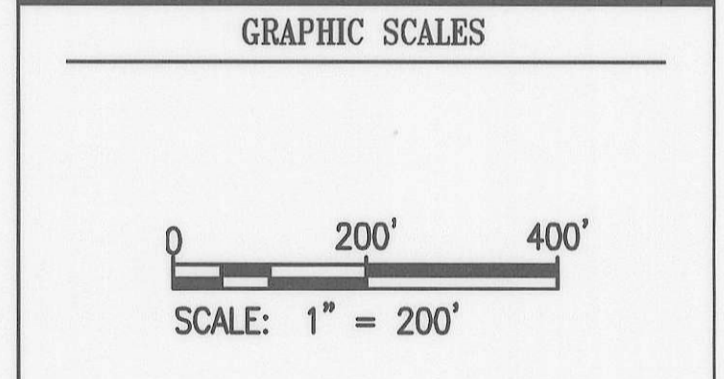
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PROPERTY

TAX MAP 36, GRID 5, PARCEL 3,72

ZONING: RC-DEO

ELECTION DISTRICT 3/7



SIGNATURE

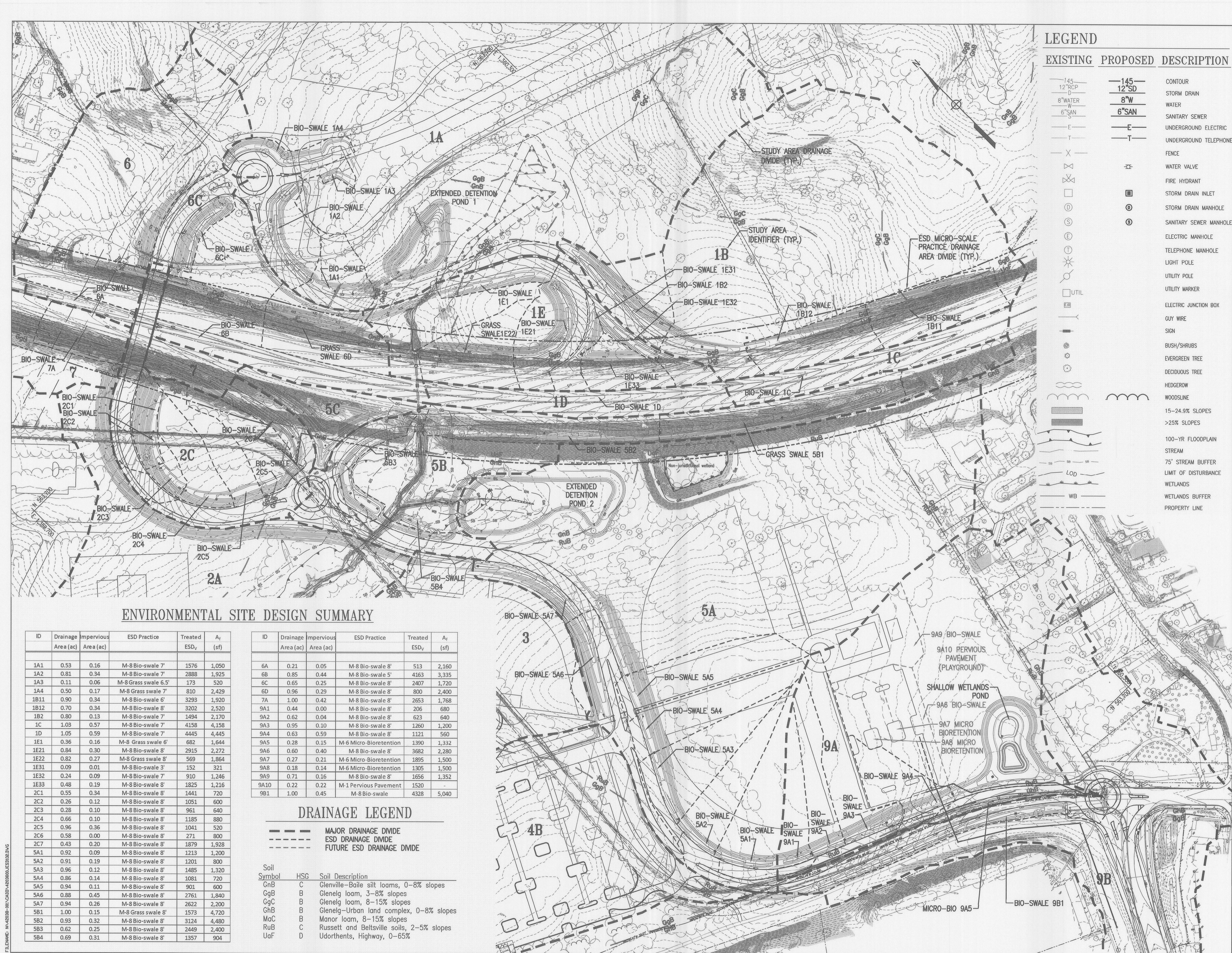
PROFESSIONAL CERTIFICATION:
I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 19376
EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL PARK - PHASE J

OVERALL DRAINAGE AREA PLAN
POST DEVELOPMENT

Drawing No.
ESD1.1

Scale: 1" = 200'
Date: 01/18/2011 Sheet 2 of 9
Des: CYH Drawn: CYH Check: AUO



LEGEND		EXISTING	PROPOSED	DESCRIPTION
145	12"SD	145	12"SD	CONTOUR
12"RCP		8"W		STORM DRAIN
D		6"SAN		WATER
8"WATER		E		SANITARY SEWER
6"SAN		T		UNDERGROUND ELECTRIC
E		X		UNDERGROUND TELEPHONE
T		-X-		FENCE
		⊘		WATER VALVE
		⊙		FIRE HYDRANT
		⊚		STORM DRAIN INLET
		⊛		STORM DRAIN MANHOLE
		⊜		SANITARY SEWER MANHOLE
		⊝		ELECTRIC MANHOLE
		⊞		TELEPHONE MANHOLE
		⊠		LIGHT POLE
		⊡		UTILITY POLE
		⊣		UTILITY MARKER
		⊥		ELECTRIC JUNCTION BOX
		⊦		GUY WIRE
		⊧		SIGN
		⊨		BUSH/SHRUBS
		⊩		EVERGREEN TREE
		⊪		DECIDUOUS TREE
		⊫		HEDGEROW
		⊬		WOODSLINE
		15-24.9% SLOPES		15-24.9% SLOPES
		>25% SLOPES		>25% SLOPES
		100-YR FLOODPLAIN		100-YR FLOODPLAIN
		STREAM		STREAM
		75' STREAM BUFFER		75' STREAM BUFFER
		LIMIT OF DISTURBANCE		LIMIT OF DISTURBANCE
		WETLANDS		WETLANDS
		WETLANDS BUFFER		WETLANDS BUFFER
		PROPERTY LINE		PROPERTY LINE

REVISIONS	

HOWARD COUNTY
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WR&A
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 Phone: 410-235-3490 Fax: 410-243-5716

PROPERTY
 TAX MAP 36, GRID 5, PARCEL 3,72
 ZONING: RC-DEO
 ELECTION DISTRICT 3/7

GRAPHIC SCALES
 0 50' 100' 200'
 SCALE: 1" = 100'

SIGNATURE

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BLANDAIR REGIONAL PARK - PHASE J

DRAINAGE AREA PLAN
 ENVIRONMENTAL SITE DESIGN
 Drawing No.
ESD1.2
 Scale: 1" = 100'
 Date: 01/18/2011 Sheet 3 of 9
 Des: CYH Drawn: CYH Check: AUO
 ECP-11-023

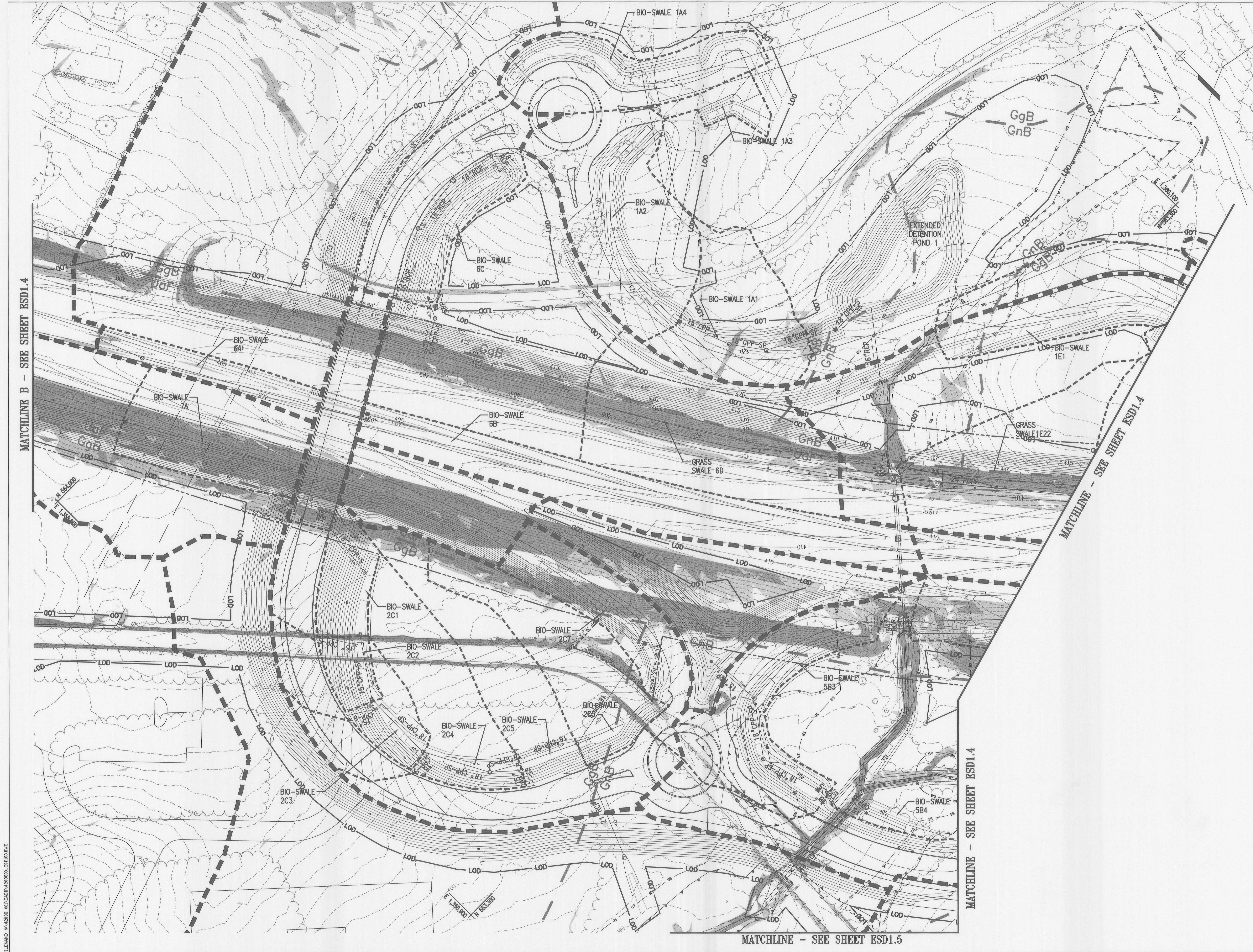
ENVIRONMENTAL SITE DESIGN SUMMARY

ID	Drainage Area (ac)	Impervious Area (ac)	ESD Practice	Treated ESD _v	A _t (sf)
1A1	0.53	0.16	M-8 Bio-swale 7'	1576	1,050
1A2	0.81	0.34	M-8 Bio-swale 7'	2888	1,925
1A3	0.11	0.06	M-8 Bio-swale 6.5'	173	520
1A4	0.50	0.17	M-8 Grass swale 7'	810	2,429
1B11	0.90	0.34	M-8 Bio-swale 6'	3293	1,920
1B12	0.70	0.34	M-8 Bio-swale 8'	3202	2,520
1B2	0.80	0.13	M-8 Bio-swale 7'	1494	2,170
1C	1.03	0.57	M-8 Bio-swale 7'	4158	4,158
1D	1.05	0.59	M-8 Bio-swale 7'	4445	4,445
1E1	0.36	0.16	M-8 Grass swale 6'	682	1,644
1E21	0.84	0.30	M-8 Bio-swale 8'	2915	2,272
1E22	0.82	0.27	M-8 Grass swale 8'	569	1,864
1E31	0.09	0.01	M-8 Bio-swale 3'	152	321
1E32	0.24	0.09	M-8 Bio-swale 7'	910	1,246
1E33	0.48	0.19	M-8 Bio-swale 8'	1825	1,216
2C1	0.55	0.34	M-8 Bio-swale 8'	1441	720
2C2	0.26	0.12	M-8 Bio-swale 8'	1051	600
2C3	0.28	0.10	M-8 Bio-swale 8'	961	640
2C4	0.66	0.10	M-8 Bio-swale 8'	1185	880
2C5	0.96	0.36	M-8 Bio-swale 8'	1041	520
2C6	0.58	0.00	M-8 Bio-swale 8'	271	800
2C7	0.43	0.20	M-8 Bio-swale 8'	1879	1,928
5A1	0.92	0.09	M-8 Bio-swale 8'	1213	1,200
5A2	0.91	0.19	M-8 Bio-swale 8'	1201	800
5A3	0.96	0.12	M-8 Bio-swale 8'	1485	1,320
5A4	0.86	0.14	M-8 Bio-swale 8'	1081	720
5A5	0.94	0.11	M-8 Bio-swale 8'	901	600
5A6	0.88	0.45	M-8 Bio-swale 8'	2761	1,840
5A7	0.94	0.26	M-8 Bio-swale 8'	2622	2,200
5B1	1.00	0.15	M-8 Grass swale 8'	1573	4,720
5B2	0.93	0.32	M-8 Bio-swale 8'	3124	4,280
5B3	0.62	0.25	M-8 Bio-swale 8'	2449	2,400
5B4	0.69	0.31	M-8 Bio-swale 8'	1357	904

ID	Drainage Area (ac)	Impervious Area (ac)	ESD Practice	Treated ESD _v	A _t (sf)
6A	0.21	0.05	M-8 Bio-swale 8'	513	2,160
6B	0.85	0.44	M-8 Bio-swale 5'	4163	3,335
6C	0.65	0.25	M-8 Bio-swale 8'	2407	1,720
6D	0.96	0.29	M-8 Bio-swale 8'	800	2,400
7A	1.00	0.42	M-8 Bio-swale 8'	2653	1,768
9A1	0.44	0.00	M-8 Bio-swale 8'	206	680
9A2	0.62	0.04	M-8 Bio-swale 8'	623	640
9A3	0.95	0.10	M-8 Bio-swale 8'	1260	1,200
9A4	0.63	0.59	M-8 Bio-swale 8'	1121	560
9A5	0.28	0.15	M-6 Micro-Bioretenion	1390	1,332
9A6	0.60	0.40	M-8 Bio-swale 8'	3682	2,280
9A7	0.27	0.21	M-6 Micro-Bioretenion	1895	1,500
9A8	0.18	0.14	M-6 Micro-Bioretenion	1305	1,500
9A9	0.71	0.16	M-8 Bio-swale 8'	1656	1,352
9A10	0.22	0.22	M-1 Pervious Pavement	1520	-
9B1	1.00	0.45	M-8 Bio-swale	4328	5,040

DRAINAGE LEGEND

---	MAJOR DRAINAGE DIVIDE	
- - - -	ESD DRAINAGE DIVIDE	
- - - -	FUTURE ESD DRAINAGE DIVIDE	
Soil Symbol	HSG	Soil Description
GnB	C	Glennville-Baile silt loams, 0-8% slopes
GgB	B	Glennelg loam, 3-8% slopes
GgC	B	Glennelg loam, 8-15% slopes
GhB	B	Glennelg-Urban land complex, 0-8% slopes
MoC	B	Manor loam, 8-15% slopes
RuB	C	Russett and Beltsville soils, 2-5% slopes
UoF	D	Udorthents, Highway, 0-65%



MATCHLINE B - SEE SHEET ESD1.4

MATCHLINE - SEE SHEET ESD1.4

MATCHLINE - SEE SHEET ESD1.4

MATCHLINE - SEE SHEET ESD1.5

REVISIONS	

HOWARD COUNTY

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WR&A

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 Phone: 410-235-3490 Fax: 410-243-5716

PROPERTY

TAX MAP 36, GRID 5, PARCEL 3.72

ZONING: RC-DE0

ELECTION DISTRICT 3/7

GRAPHIC SCALES

0 25' 50' 100'

SCALE: 1" = 50'

SIGNATURE

PROFESSIONAL CERTIFICATION:
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 EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL PARK - PHASE J

ESD CONCEPT PLAN A

Drawing No.

ESD1.3

Scale: 1" = 50'

Date: 01/18/2011 Sheet 4 of 9

Des: CYH Drawn: CYH Check: AUO

REVISIONS	

HOWARD COUNTY
 DEPARTMENT OF RECREATION AND PARKS
 7120 OAKLAND MILLS ROAD
 COLUMBIA, MD 21046
 PHONE: 410-313-4689

DEPARTMENT OF PUBLIC WORKS
 9250 BENDIX ROAD
 ELLICOTT CITY, MD 21043
 PHONE: 410-313-6153

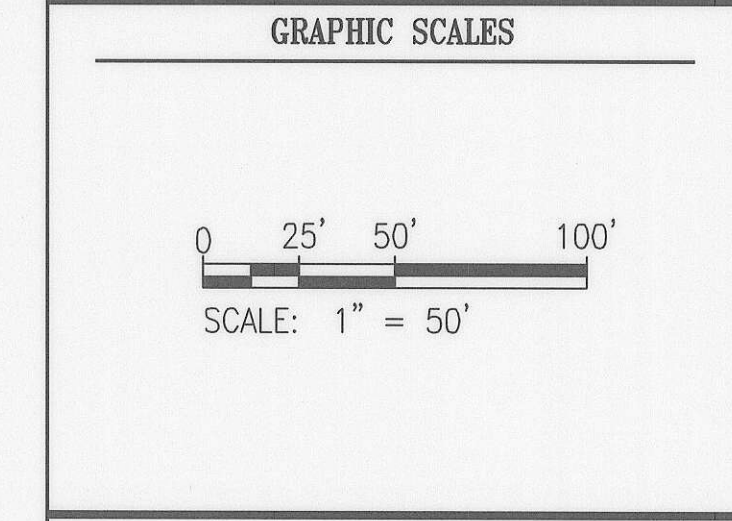
WR&A
 WHITMAN, REQUARDT & ASSOCIATES, LLP
 801 South Caroline Street, Baltimore, Maryland 21231
 Phone: 410-235-3450 Fax: 410-243-5716

PROPERTY

TAX MAP 36, GRID 5, PARCEL 3,72

ZONING: RC-DEO

ELECTION DISTRICT 3/7



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BLANDAIR REGIONAL PARK - PHASE J

ESD CONCEPT PLAN B

Drawing No.

ESD1.4

Scale: 1" = 50'

Date: 01/18/2011 Sheet 5 of 9

Des: CYH Drawn: CYH Check: AUO

MATCHLINE A - SEE SHEET THIS SHEET

MATCHLINE - SEE SHEET ESD 1.3

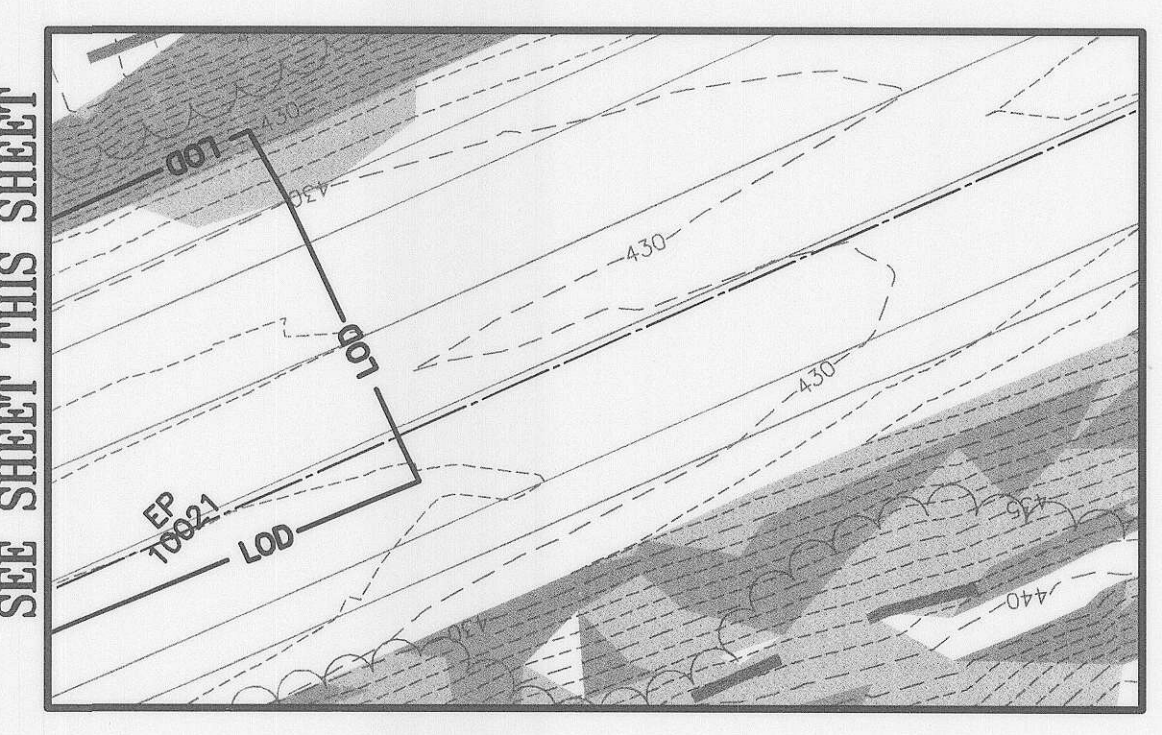
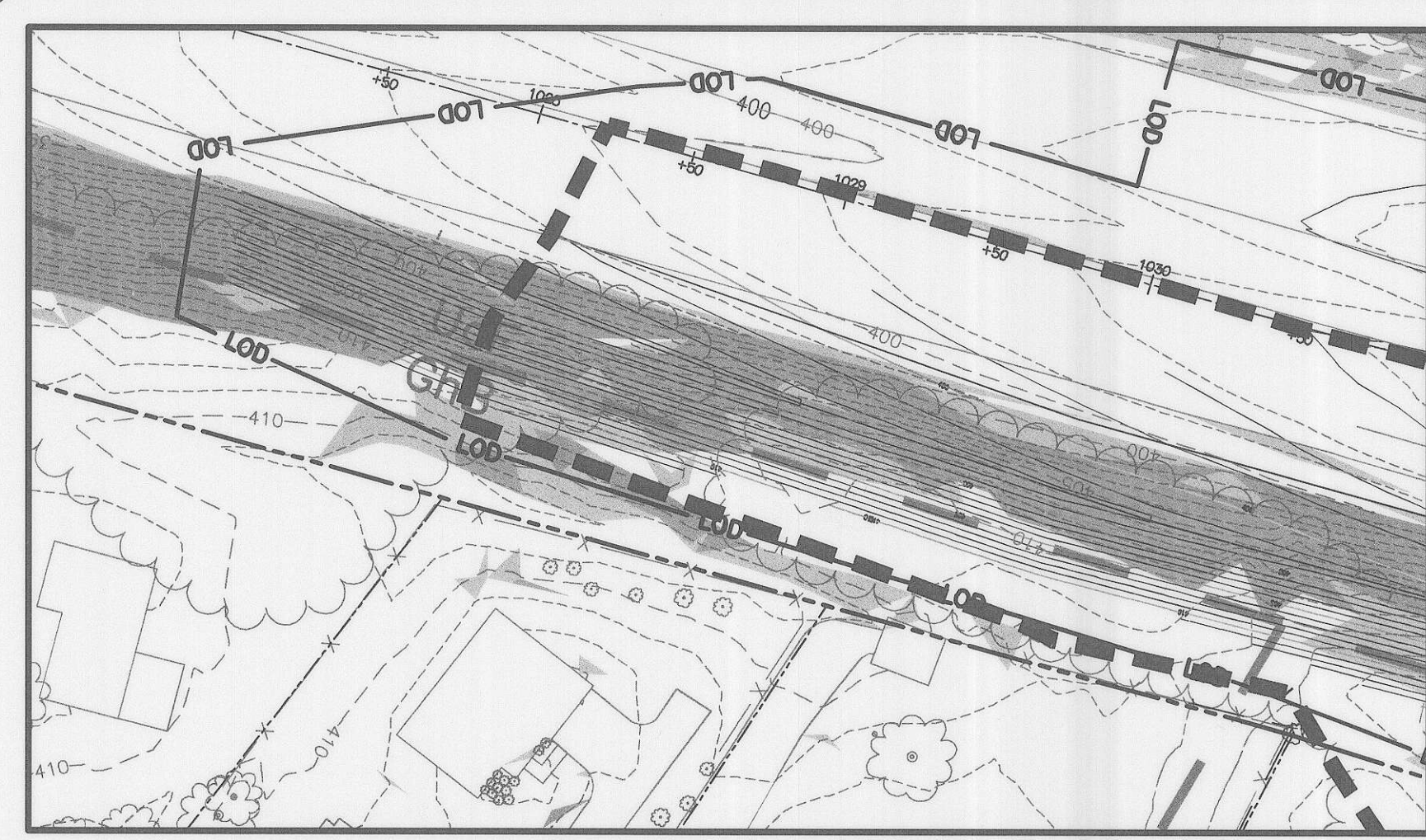
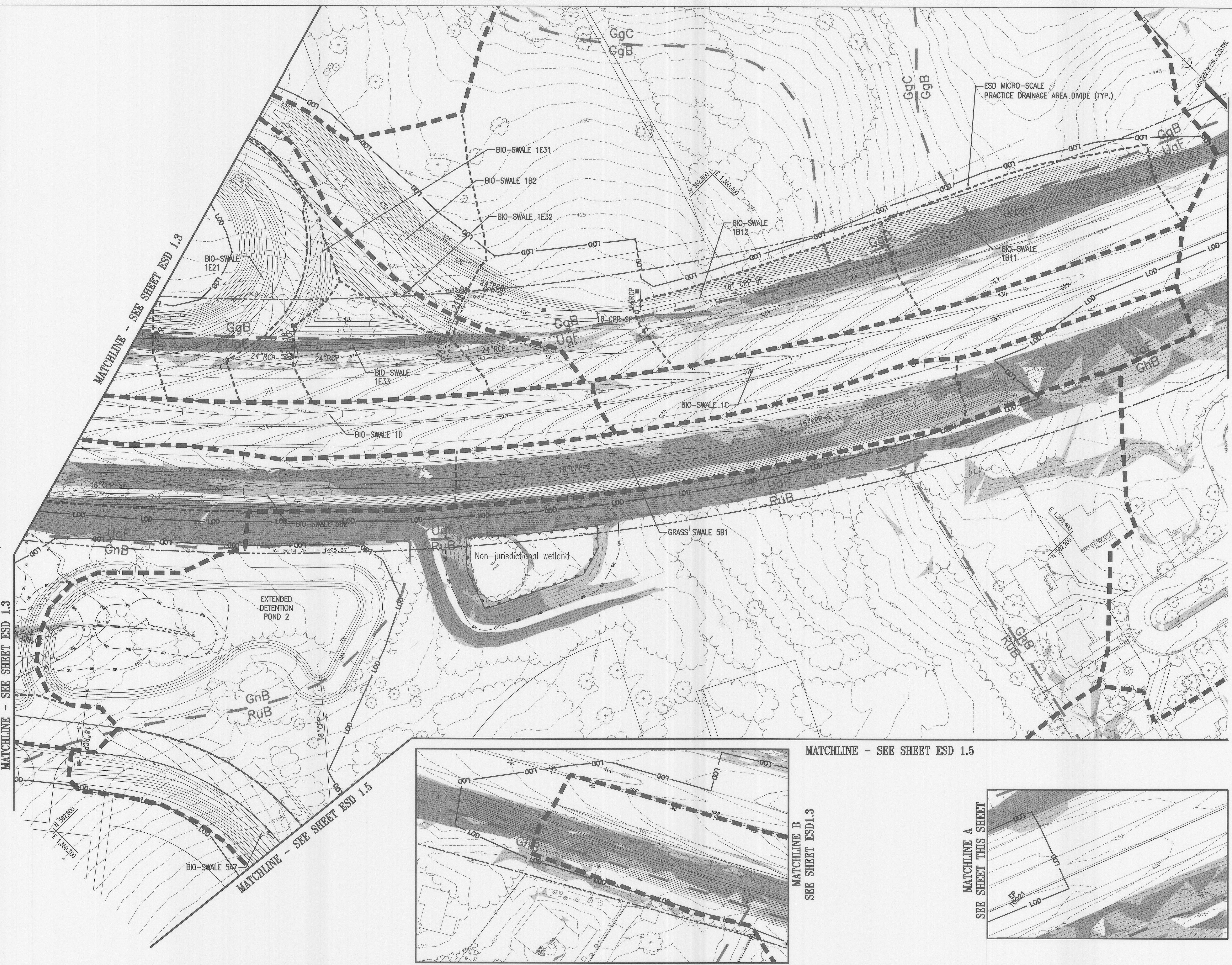
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MATCHLINE - SEE SHEET ESD 1.5

MATCHLINE - SEE SHEET ESD 1.5

MATCHLINE B
SEE SHEET ESD 1.3

MATCHLINE A
SEE SHEET THIS SHEET



FILENAME: W:\42098-BLANDAIR-PARK\DESIGN\ESD1.4.DWG

MATCHLINE - SEE SHEET ESD 1.4

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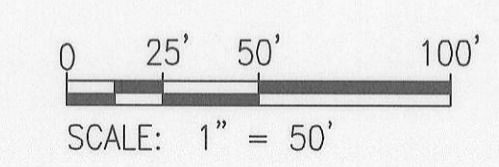


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& ASSOCIATES, LLP
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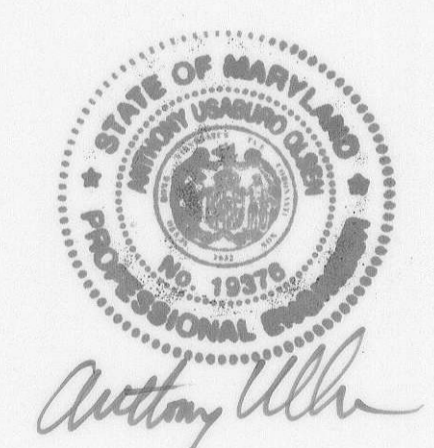
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TAX MAP 36, GRID 5, PARCEL 3,72
ZONING: RC-DEO
ELECTION DISTRICT 3/7

GRAPHIC SCALES



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EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL PARK - PHASE J

ESD CONCEPT PLAN C

Drawing No.

ESD1.5

Scale: 1" = 50'

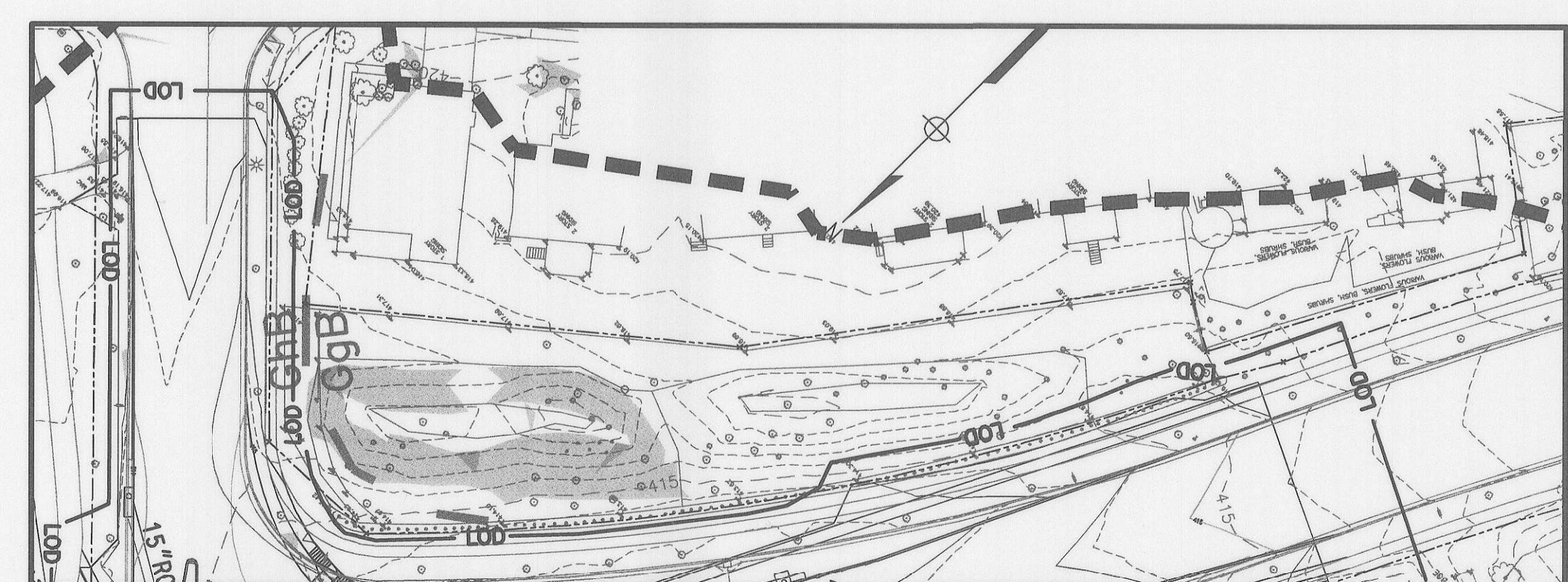
Date: 01/18/2011 Sheet 6 of 9
Des: CYH Drawn: CYH Check: AUO



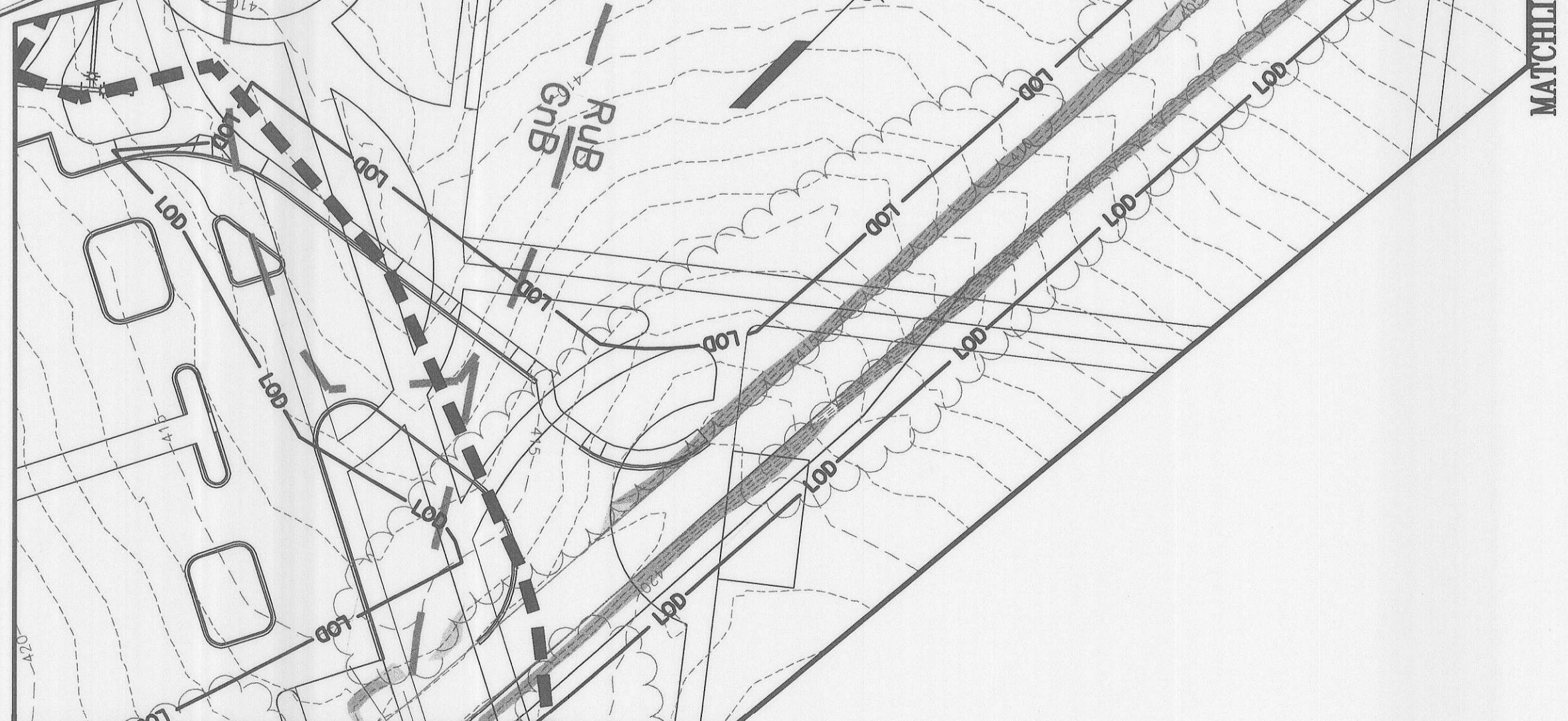
MATCHLINE A - SEE THIS SHEET

MATCHLINE B - SEE THIS SHEET

MATCHLINE - SEE SHEET ESD1.3



MATCHLINE B - SEE THIS SHEET



MATCHLINE A - SEE THIS SHEET



MATCHLINE B - SEE SHEET ESD1.7

MATCHLINE - SEE SHEET ESD1.7

MATCHLINE - SEE SHEET ESD1.8

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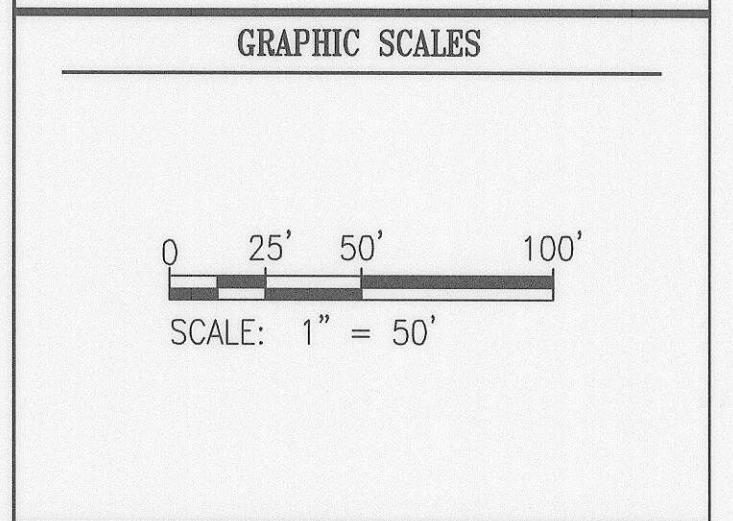
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 801 South Caroline Street, Baltimore, Maryland 21231
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PROPERTY

TAX MAP 36, GRID 5, PARCEL 3,72

ZONING: RC-DEO

ELECTION DISTRICT 3/7



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 EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL PARK - PHASE J

SEDIMENT CONTROL CONCEPT PLAN A

Drawing No.
ESD1.6

Scale: 1" = 50'
 Date: 01/18/2011 Sheet 7 of 9
 Des: CYH Drawn: CYH Check: AUO

- LEGEND**
- SILT FENCE
 - SUPER SILT FENCE
 - EARTHDIKE
 - STABILIZED CONSTRUCTION ENTRANCE
 - INLET PROTECTION
 - LIMIT OF DISTURBANCE

- NOTES:**
- CONSTRUCT SWALES IN DAILY SEGMENTS AND PERMANENTLY STABILIZE WITH EROSION CONTROL MATTIN AT THE ND OF EACH WORK DAY.
 - STABILIZE ALL SLOPES 3:1 AND STEEPER WITH EROSION CONTROL MATTING.

NOTES:

1. CONSTRUCT SWALES IN DAILY SEGMENTS AND PERMANENTLY STABILIZE WITH EROSION CONTROL MATTIN AT THE ND OF EACH WORK DAY.
2. STABILIZE ALL SLOPES 3:1 AND STEEPER WITH EROSION CONTROL MATTING.

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7120 OAKLAND MILLS ROAD
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PROPERTY
TAX MAP 36, GRID 5, PARCEL 3,72
ZONING: RC-DEO
ELECTION DISTRICT 3/7

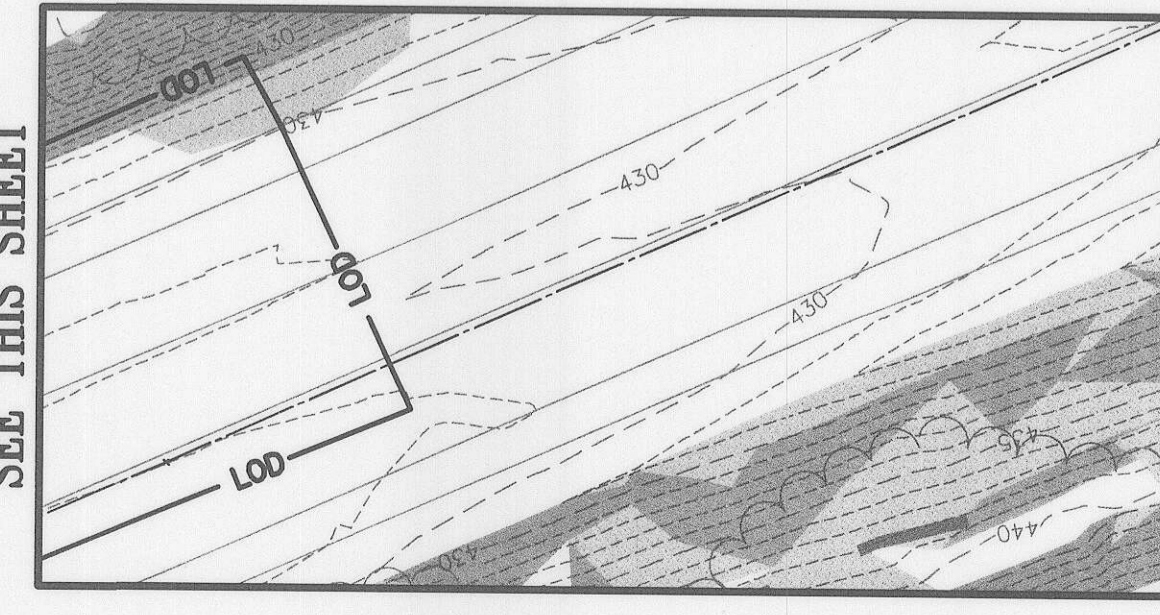
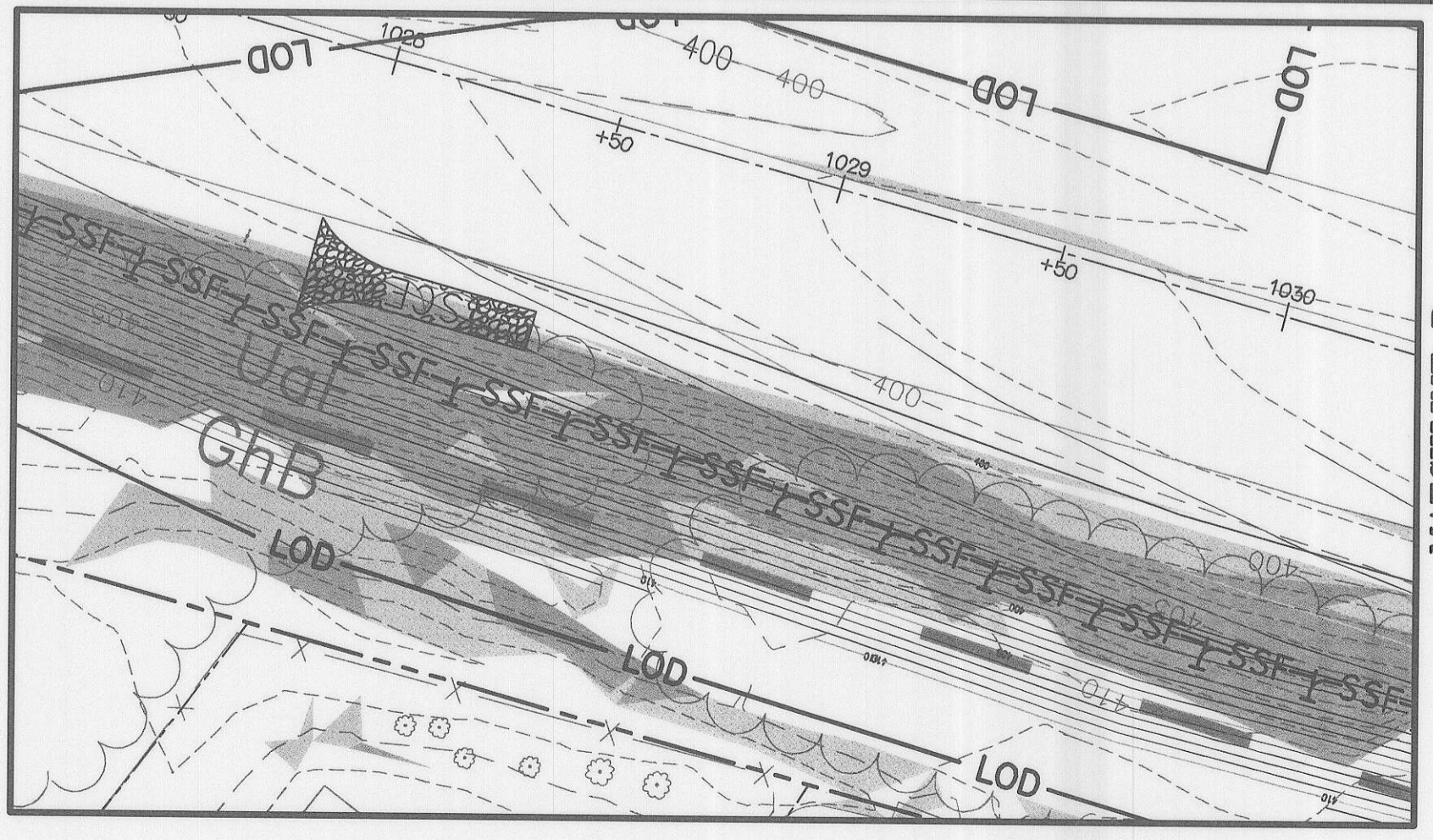
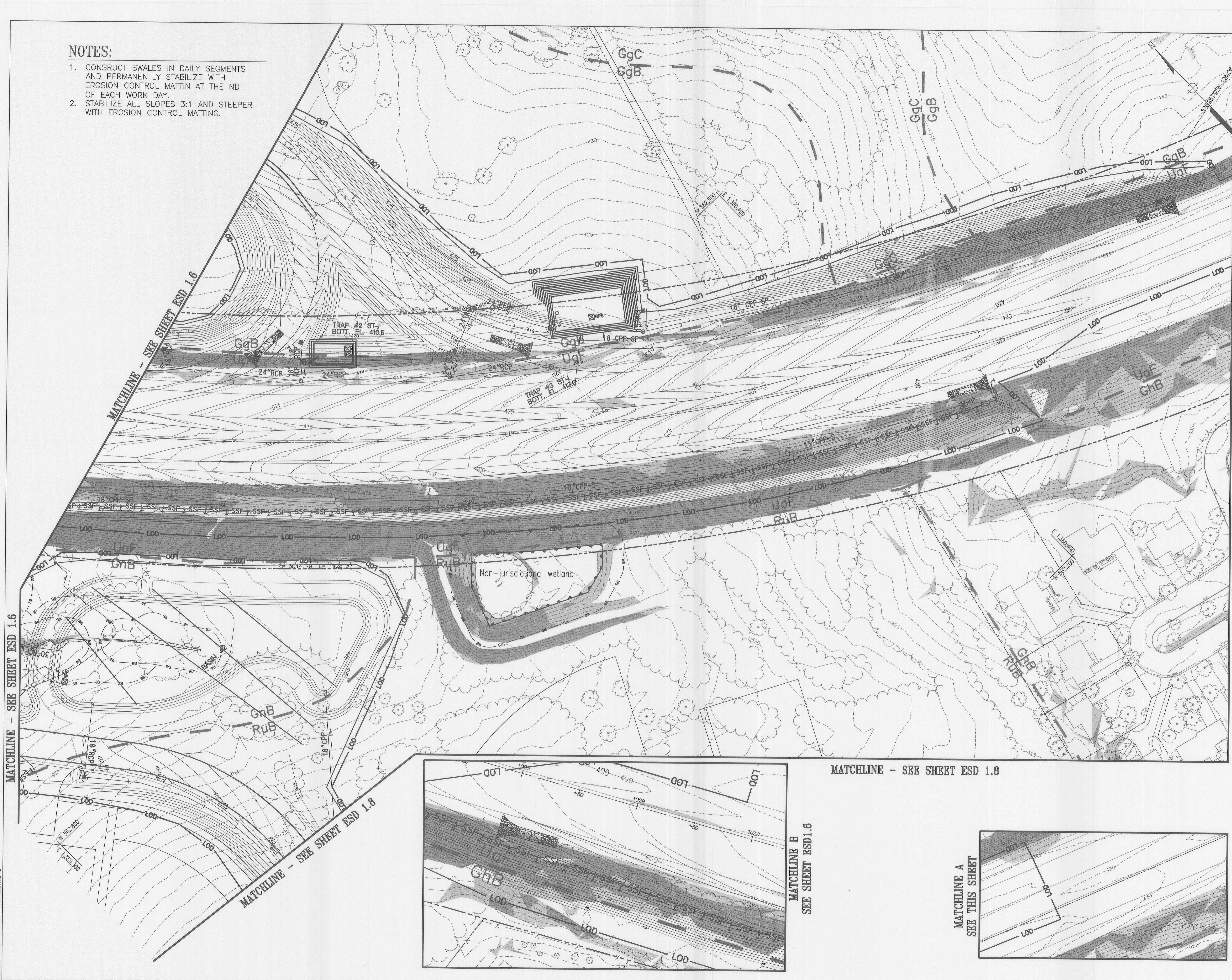
GRAPHIC SCALES
 SCALE: 1" = 50'

SIGNATURE
 <i>Anthony Alther</i>
<small>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. 19376 EXPIRATION DATE: 09/22/2011</small>

BLANDAIR REGIONAL PARK - PHASE J

SEDIMENT CONTROL CONCEPT PLAN B
Drawing No.
ESD1.7

Scale: 1" = 50'		
Date: 01/18/2011	Sheet 8 of 9	
Des: CYH	Drawn: CYH	Check: AUO



MATCHLINE - SEE SHEET ESD 1.6

MATCHLINE - SEE SHEET ESD 1.6

MATCHLINE - SEE SHEET ESD 1.8

MATCHLINE - SEE SHEET ESD 1.8

MATCHLINE A - SEE THIS SHEET

MATCHLINE - SEE SHEET ESD 1.7

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HOWARD COUNTY

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COLUMBIA, MD 21046
PHONE: 410-313-4689

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ELLCOTT CITY, MD 21043
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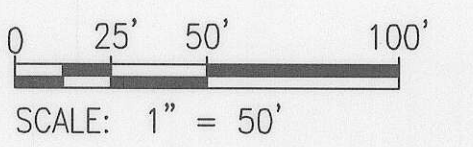


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Phone: 410-235-3450 Fax: 410-243-8716

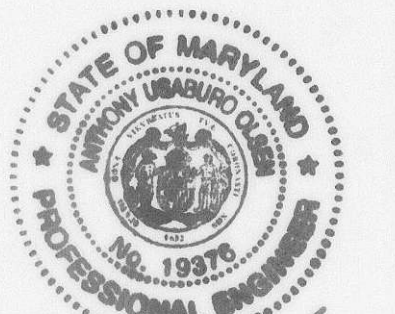
PROPERTY

TAX MAP 36, GRID 5, PARCEL 3,72
ZONING: RC-DEO
ELECTION DISTRICT 3/7

GRAPHIC SCALES



SIGNATURE



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EXPIRATION DATE: 09/22/2011

BLANDAIR REGIONAL
PARK - PHASE J

SEDIMENT CONTROL
CONCEPT PLAN C

Drawing No.

ESD1.8

Scale: 1" = 50'

Date: 01/18/2011 Sheet 9 of 9

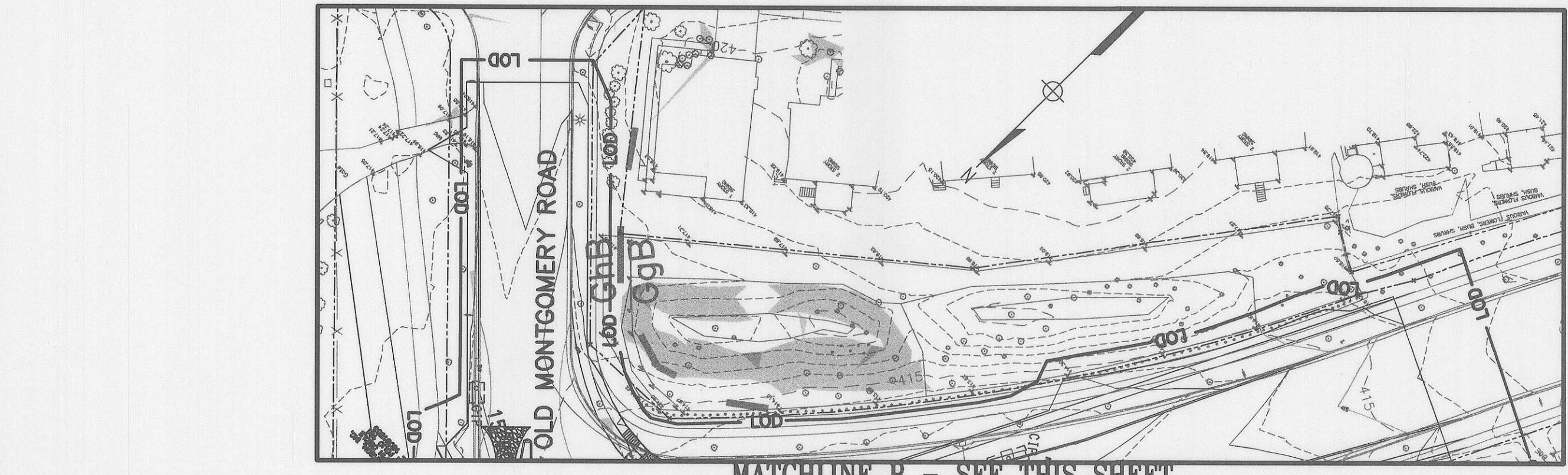
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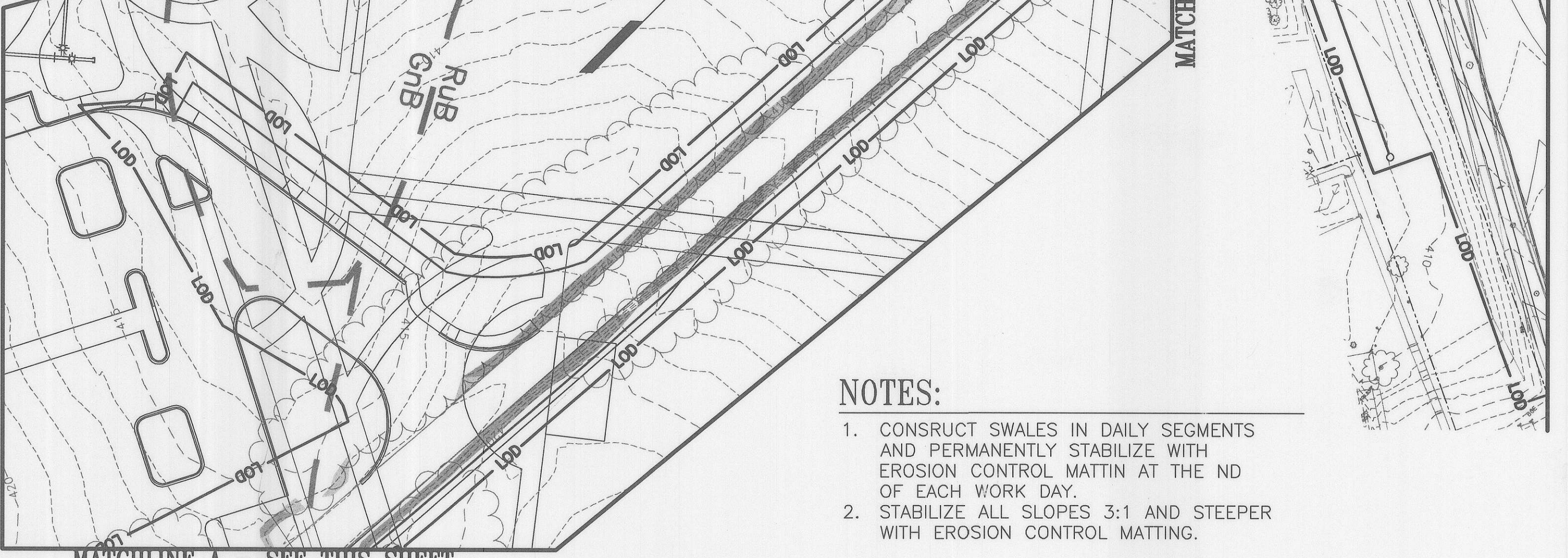


MATCHLINE A - SEE THIS SHEET

MATCHLINE B - SEE THIS SHEET



MATCHLINE B - SEE THIS SHEET



MATCHLINE A - SEE THIS SHEET

NOTES:

1. CONSTRUCT SWALES IN DAILY SEGMENTS AND PERMANENTLY STABILIZE WITH EROSION CONTROL MATTIN AT THE ND OF EACH WORK DAY.
2. STABILIZE ALL SLOPES 3:1 AND STEEPER WITH EROSION CONTROL MATTING.

FILENAME: H:\PROJECTS\2011\CA210\ESD1.8.DWG