APPENDIX A: IMPACT TABLES

Summary of Impacts to Wetlands and Waterways by Classification

Type	Classification	AC	SF	AC	SF	AC	SF
		Permanent		Temporary		Total	
Wetlands	PEM	2.64	115,107	0.15	6,273	2.79	121,380
	PFO	0.86	37,346	0.27	11,832	1.13	49,178
	PSS	0.01	481	0.00	0	0.01	481
	Grand Total	**3.51**	**152,934**	**0.42**	**18,105**	**3.93**	**171,039**
		LF	SF	LF	SF	LF	SF
		Permanent		Temporary		Total	
Waterways	Ephemeral	1,334	6,225	11	65	1,345	6,290
	Intermittent	11,551	94,158	1,226	8,386	12,777	102,544
	Perennial	27,048	536,697	1,116	314,685	28,164	851,382
	Grand Total	**39,933**	**637,080**	**2,353**	**323,136**	**42,286**	**960,216**

Summary of Impacts to Wetland Buffers by Classification

Classification	AC	SF	AC	SF	AC	SF
	Permanent		Temporary		Total	
PEM	3.36	146,183	0.16	6,908	3.52	153,091
PFO	2.79	121,535	0.08	3,455	2.87	124,990
PSS	0.11	4,841	0.00	0	0.11	4,841
Grand Total	**6.26**	**272,559**	**0.24**	**10,363**	**6.50**	**282,922**

Impacts to Wetlands by Feature ID

Feature ID	Classification	USACE Jurisdiction	MDE Jurisdiction	VDEQ Jurisdiction	Square Feet	Acres	Impact Type
21P	PFO	Yes	Yes	No	709	0.02	Permanent
21T	PFO	Yes	Yes	No	1,054	0.02	Permanent
22E	PEM	No	Yes	No	237	0.01	Permanent
22F	PEM	Yes	Yes	No	928	0.02	Permanent
22G	PFO	Yes	Yes	No	850	0.02	Permanent
22GG	PEM	Yes	Yes	No	804	0.02	Permanent
22OO	PFO	Yes	Yes	No	2,471	0.06	Permanent
22OO	PFO	Yes	Yes	No	9,666	0.22	Temporary
22PP	PFO	Yes	Yes	No	643	0.01	Permanent
22TT	PFO	Yes	No	Yes	2,166	0.05	Temporary
22U	PFO	Yes	Yes	No	1,007	0.02	Permanent
22W	PEM	No	Yes	No	4,099	0.09	Permanent
22W	PEM	Yes	Yes	No	5,842	0.14	Temporary
22X	PFO	Yes	Yes	No	1,120	0.03	Permanent
22Y	PEM	Yes	Yes	No	1,791	0.04	Permanent
23BB	PEM	Yes	Yes	No	1,406	0.03	Permanent
23CC	PFO	Yes	Yes	No	2,985	0.07	Permanent
23F	PEM	Yes	Yes	No	365	0.01	Permanent
23GG	PFO	Yes	Yes	No	1,389	0.03	Permanent
23L	PEM	Yes	Yes	No	253	0.01	Permanent
23LL	PEM	Yes	Yes	No	570	0.01	Permanent
23MM	PFO	Yes	Yes	No	2,932	0.07	Permanent
23W	PEM	Yes	Yes	No	3,981	0.09	Permanent
23W	PEM	Yes	Yes	No	357	0.01	Temporary
23X	PEM	Yes	Yes	No	1,039	0.02	Permanent
24N	PFO	Yes	Yes	No	917	0.02	Permanent
24Q	PFO	Yes	Yes	No	1,744	0.04	Permanent
24X	PEM	Yes	Yes	No	91	0.00	Permanent
25D	PFO	Yes	Yes	No	637	0.01	Permanent
25K	PEM	Yes	Yes	No	34,215	0.79	Permanent
25P	PFO	Yes	Yes	No	85	0.00	Permanent
26A	PFO	Yes	Yes	No	12,406	0.28	Permanent
26D	PEM	Yes	Yes	No	817	0.02	Permanent
26E	PEM	Yes	Yes	No	356	0.01	Permanent
26E	PEM	Yes	Yes	No	74	0.00	Temporary
26F	PEM	Yes	Yes	No	63,439	1.46	Permanent
26H	PEM	Yes	Yes	No	10	0.00	Permanent
27F	PFO	Yes	Yes	No	535	0.01	Permanent
27G	PSS	Yes	Yes	No	481	0.01	Permanent
27M	PFO	Yes	Yes	No	5,862	0.13	Permanent
27Q	PEM	Yes	Yes	No	706	0.02	Permanent

Impacts to Wetland Buffers by Feature ID

Feature ID	Classification	USACE Jurisdiction	MDE Jurisdiction	VDEQ Jurisdiction	Square Feet	Acres	Impact Type
21P	PFO	No	Yes	No	3,844	0.09	Permanent
21Q	PFO	No	Yes	No	2,342	0.05	Permanent
21T	PFO	No	Yes	No	3,935	0.09	Permanent
22E	PEM	No	Yes	No	4,256	0.10	Permanent
22F	PEM	No	Yes	No	10,820	0.25	Permanent
22G	PFO	No	Yes	No	8,444	0.19	Permanent
22GG	PEM	No	Yes	No	4,339	0.10	Permanent
22K	PEM	No	Yes	No	44	0.00	Temporary
22O	PFO	No	Yes	No	1,512	0.03	Permanent
22OO	PFO	No	Yes	No	5,706	0.13	Permanent
22OO	PFO	No	Yes	No	3,455	0.08	Temporary
22PP	PFO	No	Yes	No	5,433	0.12	Permanent
22U	PFO	No	Yes	No	7,449	0.17	Permanent
22W	PEM	No	Yes	No	5,469	0.13	Permanent
22W	PEM	No	Yes	No	5,807	0.13	Temporary
22X	PFO	No	Yes	No	6,040	0.14	Permanent
22Y	PEM	No	Yes	No	9,133	0.21	Permanent
23BB	PEM	No	Yes	No	10,320	0.24	Permanent
23CC	PFO	No	Yes	No	7,657	0.18	Permanent
23F	PEM	No	Yes	No	3,677	0.08	Permanent
23GG	PFO	No	Yes	No	8,384	0.19	Permanent
23L	PEM	No	Yes	No	3,661	0.08	Permanent
23LL	PEM	No	Yes	No	1,476	0.03	Permanent
23MM	PFO	No	Yes	No	4,520	0.10	Permanent
23W	PEM	No	Yes	No	6,751	0.15	Permanent
23W	PEM	No	Yes	No	44	0.00	Temporary
23X	PEM	No	Yes	No	8,732	0.20	Permanent
24N	PFO	No	Yes	No	6,399	0.15	Permanent
24Q	PFO	No	Yes	No	5,471	0.13	Permanent
24R	PFO	No	Yes	No	2,240	0.05	Permanent
24W	PEM	No	Yes	No	264	0.01	Permanent
24X	PEM	No	Yes	No	1,855	0.04	Permanent
25D	PFO	No	Yes	No	3,032	0.07	Permanent
25K	PEM	No	Yes	No	45,608	1.05	Permanent
25M	PEM	No	Yes	No	81	0.00	Permanent
25M	PEM	No	Yes	No	54	0.00	Temporary
25P	PFO	No	Yes	No	1,185	0.03	Permanent
26A	PFO	No	Yes	No	22,370	0.51	Permanent
26D	PEM	No	Yes	No	4,096	0.09	Permanent
26E	PEM	No	Yes	No	3,543	0.08	Permanent
26E	PEM	No	Yes	No	959	0.02	Temporary
26F	PEM	No	Yes	No	18,032	0.41	Permanent
26H	PEM	No	Yes	No	1,374	0.03	Permanent
27E	PFO	No	Yes	No	2,108	0.05	Permanent
27F	PFO	No	Yes	No	3,562	0.08	Permanent
27G	PSS	No	Yes	No	4,841	0.11	Permanent
27M	PFO	No	Yes	No	9,902	0.23	Permanent
27Q	PEM	No	Yes	No	2,656	0.06	Permanent
27S	PEM	No	Yes	No	40	0.00	Permanent

Impacts to Waterways by Feature ID

Feature ID	Classification	Channel Type	USACE Jurisdiction	MDE Jurisdiction	VDEQ Jurisdiction	Square Feet	Linear Feet	Impact Type
20B	Intermittent	Open Channel	Yes	Yes	No	351	83	Permanent
20C	Perennial	Ditch	Yes	Yes	No	112	37	Permanent
20C_C	Intermittent	Culvert	Yes	Yes	No	455	169	Permanent
20D	Perennial	Open Channel	Yes	Yes	No	3,027	390	Permanent
20D_C	Perennial	Culvert	Yes	Yes	No	1,895	180	Permanent
20E	Intermittent	Open Channel	Yes	Yes	No	140	47	Permanent
21B	Perennial	Open Channel	Yes	Yes	No	18,384	1,836	Permanent
21B_C	Perennial	Culvert	Yes	Yes	No	2,746	261	Permanent
21C	Perennial	Open Channel	Yes	Yes	No	117,194	5,539	Permanent
21C_1	Perennial	Open Channel	Yes	Yes	No	54,133	2,132	Permanent
21C_2	Perennial	Open Channel	Yes	Yes	No	30,835	1,233	Permanent
21C_C	Perennial	Culvert	Yes	Yes	No	3,633	252	Permanent
21C_C1	Perennial	Culvert	Yes	Yes	No	4,836	321	Permanent
21C_C2	Perennial	Culvert	Yes	Yes	No	3,824	328	Permanent
21D	Intermittent	Ditch	Yes	Yes	No	105	106	Permanent
21D_1	Intermittent	Ditch	Yes	Yes	No	1,952	291	Permanent
21D_C	Intermittent	Culvert	Yes	Yes	No	1,035	316	Permanent
21D_C1	Intermittent	Culvert	Yes	Yes	No	798	119	Permanent
21F	Intermittent	Open Channel	Yes	Yes	No	1,054	228	Permanent
21F_C	Intermittent	Culvert	Yes	Yes	No	1,837	258	Permanent
21G	Intermittent	Ditch	Yes	Yes	No	128	54	Permanent
21H	Ephemeral	Open Channel	Yes	No	No	366	61	Permanent
21I	Perennial	Open Channel	Yes	Yes	No	22	6	Permanent
21J	Perennial	Ditch	Yes	Yes	No	243	13	Permanent
21K	Intermittent	Open Channel	Yes	Yes	No	28	5	Permanent
21L_C	Perennial	Culvert	Yes	Yes	No	1,743	270	Permanent
21L_D	Perennial	Ditch	Yes	Yes	No	298	40	Permanent
21L_D1	Perennial	Ditch	Yes	Yes	No	83	20	Permanent
21M	Intermittent	Ditch	Yes	Yes	No	57	25	Permanent
21U	Perennial	Open Channel	Yes	Yes	No	2,082	143	Permanent
21V	Intermittent	Open Channel	Yes	Yes	No	827	115	Permanent
21V	Intermittent	Open Channel	Yes	Yes	No	78	10	Temporary
22A	Intermittent	Ditch	Yes	Yes	No	724	269	Permanent
22A_C	Intermittent	Culvert	Yes	Yes	No	439	152	Permanent
22AA	Perennial	Open Channel	Yes	Yes	No	3,545	181	Permanent
22AA	Perennial	Open Channel	Yes	Yes	No	1	1	Temporary
22AA_1	Perennial	Open Channel	Yes	Yes	No	1,439	24	Permanent
22AA_1	Perennial	Open Channel	Yes	Yes	No	2,912	53	Temporary
22AA_2	Perennial	Open Channel	Yes	Yes	No	5,477	99	Permanent
22AA_3	Perennial	Open Channel	Yes	Yes	No	10,295	332	Permanent
22AA_B	Perennial	Bridge	Yes	Yes	No	3,245	42	Permanent
22AA_B1	Perennial	Bridge	Yes	Yes	No	8,112	201	Permanent
22B	Intermittent	Ditch	Yes	Yes	No	99	36	Permanent
22BB	Ephemeral	Open Channel	Yes	No	No	44	24	Permanent
22C	Intermittent	Ditch	Yes	Yes	No	146	51	Permanent
22C_C	Intermittent	Culvert	Yes	Yes	No	203	91	Permanent
22CC	Ephemeral	Open Channel	Yes	No	No	2,135	451	Permanent
22CC	Ephemeral	Open Channel	Yes	No	No	34	6	Temporary
22CC_1	Ephemeral	Open Channel	Yes	No	No	682	184	Permanent
22CC_C	Ephemeral	Culvert	Yes	No	No	442	139	Permanent
22D	Intermittent	Ditch	Yes	Yes	No	305	144	Permanent
22DD	Intermittent	Open Channel	Yes	Yes	No	945	167	Permanent
22EE	Ephemeral	Open Channel	Yes	No	No	647	126	Permanent
22FF	Ephemeral	Open Channel	Yes	No	No	364	126	Permanent
22H	Intermittent	Ditch	Yes	Yes	No	170	78	Permanent
22H_1	Intermittent	Open Channel	Yes	Yes	No	51	10	Permanent
22H_C	Intermittent	Culvert	Yes	Yes	No	760	95	Permanent
22HH	Intermittent	Ditch	Yes	Yes	No	1,157	230	Permanent
22HH_1	Intermittent	Ditch	Yes	Yes	No	925	154	Permanent
22HH_2	Intermittent	Open Channel	Yes	Yes	No	608	117	Permanent
22HH_C	Intermittent	Culvert	Yes	Yes	No	422	47	Permanent
22HH_C	Intermittent	Culvert	Yes	Yes	No	590	67	Temporary
22KK	Perennial	Open Channel	Yes	Yes	No	556	58	Permanent
22M_C	Perennial	Culvert	Yes	Yes	No	1,094	39	Temporary
22MM	Perennial	Open Channel	Yes	Yes	No	14,142	167	Permanent

Impacts to Waterways by Feature ID

Feature ID	Classification	Channel Type	USACE Jurisdiction	MDE Jurisdiction	VDEQ Jurisdiction	Square Feet	Linear Feet	Impact Type
22MM	Perennial	Open Channel	Yes	Yes	No	243,446	855	Temporary
22MM_B	Perennial	Bridge	Yes	Yes	No	11,563	0	Permanent
22MM_B	Perennial	Bridge	Yes	Yes	No	67,060	140	Temporary
22NN	Intermittent	Open Channel	Yes	Yes	No	3,474	276	Temporary
22NN_B	Intermittent	Bridge	Yes	Yes	No	10	8	Permanent
22NN_B	Intermittent	Bridge	Yes	Yes	No	1,589	159	Temporary
22P	Intermittent	Open Channel	Yes	Yes	No	26	10	Permanent
22Q	Perennial	Open Channel	Yes	Yes	No	1,112	136	Permanent
22Q_C	Perennial	Culvert	Yes	Yes	No	1,263	223	Permanent
22QQ	Intermittent	Open Channel	Yes	Yes	No	469	106	Temporary
22T	Intermittent	Open Channel	Yes	Yes	No	127	9	Permanent
22T_1	Intermittent	Open Channel	Yes	Yes	No	261	35	Permanent
22T_2	Intermittent	Open Channel	Yes	Yes	No	497	92	Permanent
22T_B	Intermittent	Bridge	Yes	Yes	No	1,803	153	Permanent
22T_B1	Intermittent	Bridge	Yes	Yes	No	194	28	Permanent
22UU	Intermittent	Open Channel	Yes	No	Yes	10,481	543	Permanent
22V	Intermittent	Ditch	Yes	Yes	No	190	76	Temporary
22V_1	Intermittent	Ditch	Yes	Yes	No	2	1	Permanent
22V_1	Intermittent	Ditch	Yes	Yes	No	91	40	Temporary
22V_2	Intermittent	Ditch	Yes	Yes	No	1,083	255	Temporary
22V_B	Intermittent	Bridge	Yes	Yes	No	331	168	Temporary
22V_B1	Intermittent	Bridge	Yes	Yes	No	2	2	Permanent
22V_B1	Intermittent	Bridge	Yes	Yes	No	67	27	Temporary
22VV	Ephemeral	Open Channel	Yes	No	Yes	358	26	Permanent
22VV	Ephemeral	Open Channel	Yes	No	Yes	31	5	Temporary
22WW	Intermittent	Open Channel	Yes	No	Yes	2,188	56	Permanent
22WW	Intermittent	Open Channel	Yes	No	Yes	424	42	Temporary
22WW_C	Intermittent	Culvert	Yes	No	Yes	1,360	272	Permanent
22Z	Perennial	Open Channel	Yes	Yes	No	3,177	75	Permanent
22Z_1	Perennial	Open Channel	Yes	Yes	No	2,210	81	Permanent
22Z_C	Perennial	Culvert	Yes	Yes	No	3,601	99	Permanent
23A	Perennial	Open Channel	Yes	Yes	No	732	44	Permanent
23A_1	Perennial	Open Channel	Yes	Yes	No	7,762	454	Permanent
23A_2	Perennial	Open Channel	Yes	Yes	No	2,301	200	Permanent
23A_3	Perennial	Open Channel	Yes	Yes	No	21,607	1,460	Permanent
23A_C	Perennial	Culvert	Yes	Yes	No	4,185	216	Permanent
23A_C1	Perennial	Culvert	Yes	Yes	No	5,620	407	Permanent
23A_C2	Perennial	Culvert	Yes	Yes	No	2,977	236	Permanent
23AA	Perennial	Open Channel	Yes	Yes	No	551	104	Permanent
23AA_1	Perennial	Open Channel	Yes	Yes	No	1,332	257	Permanent
23AA_C	Perennial	Culvert	Yes	Yes	No	453	101	Permanent
23AA_C1	Perennial	Culvert	Yes	Yes	No	675	220	Permanent
23D	Intermittent	Ditch	Yes	Yes	No	7,793	775	Permanent
23D_C	Intermittent	Culvert	Yes	Yes	No	2,456	255	Permanent
23DD	Intermittent	Open Channel	Yes	Yes	No	641	98	Permanent
23K	Perennial	Open Channel	Yes	Yes	No	766	89	Permanent
23K_1	Perennial	Open Channel	Yes	Yes	No	598	102	Permanent
23K_C	Perennial	Culvert	Yes	Yes	No	1,711	178	Permanent
23K_C1	Perennial	Culvert	Yes	Yes	No	505	64	Permanent
23K_C1	Perennial	Culvert	Yes	Yes	No	122	20	Temporary
23K_D	Perennial	Ditch	Yes	Yes	No	5,035	691	Permanent
23K_D	Perennial	Ditch	Yes	Yes	No	50	8	Temporary
23M	Ephemeral	Open Channel	Yes	No	No	50	8	Permanent
23N	Intermittent	Open Channel	Yes	Yes	No	2,095	199	Permanent
23N_1	Perennial	Open Channel	Yes	Yes	No	2,225	184	Permanent
23N_C	Intermittent	Culvert	Yes	Yes	No	6,176	583	Permanent
23N_D	Intermittent	Ditch	Yes	Yes	No	275	33	Permanent
23Q_C	Perennial	Culvert	Yes	Yes	No	3,246	203	Permanent
23R_C	Intermittent	Culvert	Yes	Yes	No	635	204	Permanent
23U	Perennial	Ditch	Yes	Yes	No	184	31	Permanent
23U_1	Perennial	Open Channel	Yes	Yes	No	77	18	Permanent
23U_C	Perennial	Culvert	Yes	Yes	No	1,225	317	Permanent
23V	Intermittent	Ditch	Yes	Yes	No	117	51	Permanent
23V_C	Intermittent	Culvert	Yes	Yes	No	2,245	777	Permanent
24A	Perennial	Open Channel	Yes	Yes	No	4,008	138	Permanent

Impacts to Waterways by Feature ID

Feature ID	Classification	Channel Type	USACE Jurisdiction	MDE Jurisdiction	VDEQ Jurisdiction	Square Feet	Linear Feet	Impact Type
24A_1	Perennial	Open Channel	Yes	Yes	No	6,789	224	Permanent
24A_C	Perennial	Culvert	Yes	Yes	No	6,427	320	Permanent
24C	Intermittent	Open Channel	Yes	Yes	No	600	44	Permanent
24D	Perennial	Open Channel	Yes	Yes	No	8,048	697	Permanent
24F_2	Perennial	Open Channel	Yes	Yes	No	3,902	135	Permanent
24F_3	Perennial	Open Channel	Yes	Yes	No	2,276	134	Permanent
24F_C1	Perennial	Culvert	Yes	Yes	No	3,688	191	Permanent
24F_C2	Perennial	Culvert	Yes	Yes	No	7,102	390	Permanent
24K	Intermittent	Open Channel	Yes	Yes	No	449	67	Permanent
24V	Intermittent	Open Channel	Yes	Yes	No	292	52	Permanent
24V_C	Intermittent	Culvert	Yes	Yes	No	2,544	425	Permanent
25E	Perennial	Open Channel	Yes	Yes	No	27,438	360	Permanent
25F	Ephemeral	Open Channel	Yes	No	No	897	141	Permanent
25H	Perennial	Open Channel	Yes	Yes	No	1,589	220	Permanent
25H_1	Perennial	Open Channel	Yes	Yes	No	10,254	336	Permanent
25H_C	Perennial	Culvert	Yes	Yes	No	2,682	420	Permanent
25N	Intermittent	Open Channel	Yes	Yes	No	350	72	Permanent
26B	Intermittent	Open Channel	Yes	Yes	No	5,791	432	Permanent
26B_1	Intermittent	Open Channel	Yes	Yes	No	315	22	Permanent
26B_C	Intermittent	Culvert	Yes	Yes	No	6,809	306	Permanent
26B_C1	Intermittent	Culvert	Yes	Yes	No	489	47	Permanent
26C	Intermittent	Open Channel	Yes	Yes	No	2,814	373	Permanent
26C_1	Intermittent	Open Channel	Yes	Yes	No	388	30	Permanent
26C_C	Intermittent	Culvert	Yes	Yes	No	4,317	360	Permanent
26C_C1	Intermittent	Culvert	Yes	Yes	No	376	22	Permanent
26J	Intermittent	Open Channel	Yes	Yes	No	191	31	Permanent
26K	Intermittent	Open Channel	Yes	Yes	No	3,920	328	Permanent
26L	Intermittent	Open Channel	Yes	Yes	No	69	11	Permanent
27A	Perennial	Open Channel	Yes	Yes	No	4,702	141	Permanent
27A_1	Perennial	Open Channel	Yes	Yes	No	15,652	648	Permanent
27A_2	Perennial	Open Channel	Yes	Yes	No	2,914	89	Permanent
27A_3	Perennial	Open Channel	Yes	Yes	No	3,463	131	Permanent
27A_C	Perennial	Culvert	Yes	Yes	No	10,081	325	Permanent
27A_C1	Perennial	Culvert	Yes	Yes	No	4,089	152	Permanent
27A_C2	Perennial	Culvert	Yes	Yes	No	2,472	85	Permanent
27B	Intermittent	Open Channel	Yes	Yes	No	352	46	Permanent
27C	Ephemeral	Open Channel	Yes	No	No	30	6	Permanent
27D	Intermittent	Open Channel	Yes	Yes	No	1,468	162	Permanent
27H	Intermittent	Open Channel	Yes	Yes	No	207	35	Permanent
27K	Ephemeral	Open Channel	Yes	No	No	210	42	Permanent
27L	Intermittent	Open Channel	Yes	Yes	No	101	19	Permanent
27L_C	Intermittent	Culvert	Yes	Yes	No	1,632	405	Permanent
27N	Intermittent	Open Channel	Yes	Yes	No	98	19	Permanent
27P	Perennial	Open Channel	Yes	Yes	No	529	39	Permanent
28B	Intermittent	Ditch	Yes	Yes	No	3,222	354	Permanent
29A	Perennial	Open Channel	Yes	Yes	No	2,956	169	Permanent
29A_1	Perennial	Open Channel	Yes	Yes	No	280	26	Permanent
29A_2	Perennial	Open Channel	Yes	Yes	No	5,233	280	Permanent
29A_C	Perennial	Culvert	Yes	Yes	No	1,065	48	Permanent
29A_C1	Perennial	Culvert	Yes	Yes	No	3,346	224	Permanent
29A_C2	Perennial	Culvert	Yes	Yes	No	10,415	465	Permanent
29B_C	Perennial	Culvert	Yes	Yes	No	6,703	366	Permanent
29D_D	Intermittent	Ditch	Yes	Yes	No	1,363	119	Permanent
29K	Intermittent	Open Channel	Yes	Yes	No	896	129	Permanent

Summary of Waterways Impacts by Classification and Channel Type

	Classification	LF	SF	LF	SF	LF	SF
		Permanent		Temporary		Total	
Channel Type	**Ephemeral**	**1,334**	**6,225**	**11**	**65**	**1,345**	**6,290**
	Culvert	139	442	0	0	139	442
	Open Channel	1,195	5,783	11	65	1,206	5,848
	Intermittent	**11,551**	**94,158**	**1,226**	**8,386**	**12,777**	**102,544**
	Bridge	191	2,009	354	1,987	545	3,996
	Culvert	4,903	34,988	67	590	4,970	35,578
	Ditch	2,771	18,540	371	1,364	3,142	19,904
	Open Channel	3,686	38,621	434	4,445	4,120	43,066
	Perennial	**27,048**	**536,697**	**1,116**	**314,685**	**28,164**	**851,382**
	Bridge	243	22,920	140	67,060	383	89,980
	Culvert	6,862	102,208	59	1,216	6,921	103,424
	Ditch	832	5,955	8	50	840	6,005
	Open Channel	19,111	405,614	909	246,359	20,020	651,973
Grand Total		**39,933**	**637,080**	**2,353**	**323,136**	**42,286**	**960,216**

Summary of Impacts to Waterways by Classification within USGS HUC8 Watersheds

Watershed Number and Classification	LF	SF	LF	SF	LF	SF
	Permanent		Temporary		Total	
02070008	**39,526**	**633,199**	**2,353**	**323,136**	**41,879**	**956,335**
Ephemeral	1,334	6,225	11	65	1,345	6,290
Intermittent	11,347	93,523	1,226	8,386	12,573	101,909
Perennial	26,845	533,451	1,116	314,685	27,961	848,136
02070010	**407**	**3,881**	**0**	**0**	**407**	**3,881**
Intermittent	204	635	0	0	204	635
Perennial	203	3,246	0	0	203	3,246
Grand Total	**39,933**	**637,080**	**2,353**	**323,136**	**42,286**	**960,216**

Note: All wetlands and their buffers are located within the Middle Potomac-Catoctin HUC8 Watershed.

Summary of Impacts to Wetlands and Waterways by Classification within MD 8-Digit Watersheds

Type	Watershed Number and Classification	AC	SF	AC	SF	AC	SF
		Permanent		Temporary		Total	
Wetlands	**02140202**	**2.20**	**95,980**	**0.36**	**15,582**	**2.56**	**111,562**
	PEM	1.64	71,455	0.14	5,916	1.78	77,371
	PFO	0.55	24,044	0.22	9,666	0.77	33,710
	PSS	0.01	481	0.00	0	0.01	481
	02140207	**1.31**	**56,954**	**0.01**	**357**	**1.32**	**57,311**
	PEM	1.00	43,652	0.01	357	1.01	44,009
	PFO	0.31	13,302	0.00	0	0.31	13,302
	Grand Total	**3.51**	**152,934**	**0.37**	**15,939**	**3.88**	**168,873**
Waterways		LF	SF	LF	SF	LF	SF
		Permanent		Temporary		Total	
	02140202	**8,024**	**143,436**	**2,208**	**319,484**	**10,232**	**462,920**
	Ephemeral	174	604	0	0	174	604
	Intermittent	4,136	40,852	1,174	7,884	5,310	48,736
	Perennial	3,714	101,980	1,034	311,600	4,748	413,580
	02140206	**407**	**3,881**	**0**	**0**	**407**	**3,881**
	Intermittent	204	635	0	0	204	635
	Perennial	203	3,246	0	0	203	3,246
	02140207	**30,605**	**475,376**	**98**	**3,197**	**30,703**	**478,573**
	Ephemeral	1,134	5,263	6	34	1,140	5,297
	Intermittent	6,340	38,642	10	78	6,350	38,720
	Perennial	23,131	431,471	82	3,085	23,213	434,556
	Grand Total	**39,036**	**622,693**	**2,306**	**322,681**	**41,342**	**945,374**

Summary of Impacts to Wetland Buffers by Classification within MD 8-Digit Watersheds

Watershed Number and Classification	AC	SF	AC	SF	AC	SF
	Permanent		Temporary		Total	
02140202	**2.70**	**117,522**	**0.24**	**10,265**	**2.94**	**127,787**
PEM	1.12	48,599	0.16	6,810	1.28	55,409
PFO	1.47	64,082	0.08	3,455	1.55	67,537
PSS	0.11	4,841	0.00	0	0.11	4,841
02140207	**3.56**	**155,037**	**0.00**	**98**	**3.56**	**155,135**
PEM	2.24	97,584	0.00	98	2.24	97,682
PFO	1.32	57,453	0.00	0	1.32	57,453
Grand Total	**6.26**	**272,559**	**0.24**	**10,363**	**6.50**	**282,922**

Summary of Impacts to Wetlands and Waterways by Classification within Virginia and Maryland Counties

Type	Classification	AC	SF	AC	SF	AC	SF
		Permanent		Temporary		Total	
Wetlands	**Fairfax**	**0.00**	**0**	**0.05**	**2,166**	**0.05**	**2,166**
	PFO	0.00	0	0.05	2,166	0.05	2,166
	Montgomery	**3.51**	**152,934**	**0.37**	**15,939**	**3.88**	**168,873**
	PEM	2.64	115,107	0.15	6,273	2.79	121,380
	PFO	0.86	37,346	0.22	9,666	1.08	47,012
	PSS	0.01	481	0.00	0	0.01	481
	Grand Total	**3.51**	**152,934**	**0.42**	**18,105**	**3.93**	**171,039**
		LF	SF	LF	SF	LF	SF
		Permanent		Temporary		Total	
Waterways	**Fairfax**	**897**	**14,387**	**47**	**455**	**944**	**14,842**
	Ephemeral	26	358	5	31	31	389
	Intermittent	871	14,029	42	424	913	14,453
	Perennial	0	0	0	0	0	0
	Montgomery	**39,036**	**622,693**	**2,306**	**322,681**	**41,342**	**945,374**
	Ephemeral	1,308	5,867	6	34	1,314	5,901
	Intermittent	10,680	80,129	1,184	7,962	11,864	88,091
	Perennial	27,048	536,697	1,116	314,685	28,164	851,382
	Grand Total	**39,933**	**637,080**	**2,353**	**323,136**	**42,286**	**960,216**

Note: All wetland buffers are in Montgomery County and are only regulated in Maryland.

Summary of Impacts to Wetlands and Waterways by Classification within MD 12-Digit Watersheds

MD Watershed Number and Classification	AC/LF	SF	AC/LF	SF	AC/LF	SF
	Permanent		Temporary		Total	
021402020845						
Waterway	**1,538**	**34,478**	**2,208**	**319,484**	**3,746**	**353,962**
Ephemeral	126	364	0	0	126	364
Intermittent	886	6,034	1,174	7,884	2,060	13,918
Perennial	526	28,080	1,034	311,600	1,560	339,680
Wetland	**0.26**	**11,368**	**0.36**	**15,508**	**0.62**	**26,876**
PEM	0.14	6,127	0.14	5,842	0.28	11,969
PFO	0.12	5,241	0.22	9,666	0.34	14,907
021402020846						
Waterway	**4,295**	**73,410**	**0**	**0**	**4,295**	**73,410**
Ephemeral	48	240	0	0	48	240
Intermittent	2,637	29,268	0	0	2,637	29,268
Perennial	1,610	43,902	0	0	1,610	43,902
Wetland	**1.94**	**84,612**	**0**	**74**	**1.94**	**84,686**
PEM	1.50	65,328	0	74	1.50	65,402
PFO	0.43	18,803	0	0	0.43	18,803
PSS	0.01	481	0	0	0.01	481
021402020848						
Waterway	**2,180**	**35,479**	**0**	**0**	**2,180**	**35,479**
Intermittent	602	5,481	0	0	602	5,481
Perennial	1,578	29,998	0	0	1,578	29,998
021402060836						
Waterway	**407**	**3,881**	**0**	**0**	**407**	**3,881**
Intermittent	204	635	0	0	204	635
Perennial	203	3,246	0	0	203	3,246
021402070841						
Waterway	**30,616**	**475,445**	**98**	**3,197**	**30,714**	**478,642**
Ephemeral	1,134	5,263	6	34	1,140	5,297
Intermittent	6,351	38,711	10	78	6,361	38,789
Perennial	23,131	431,471	82	3,085	23,213	434,556
Wetland	**1.31**	**56,954**	**0.01**	**357**	**1.32**	**57,311**
PEM	1.00	43,652	0.01	357	1.01	44,009
PFO	0.31	13,302	0.00	0	0.31	13,302
Grand Total Waterways	**39,036**	**622,693**	**2,306**	**322,681**	**41,342**	**945,374**
Grand Total Wetlands	**3.51**	**152,934**	**0.37**	**15,939**	**3.88**	**168,873**

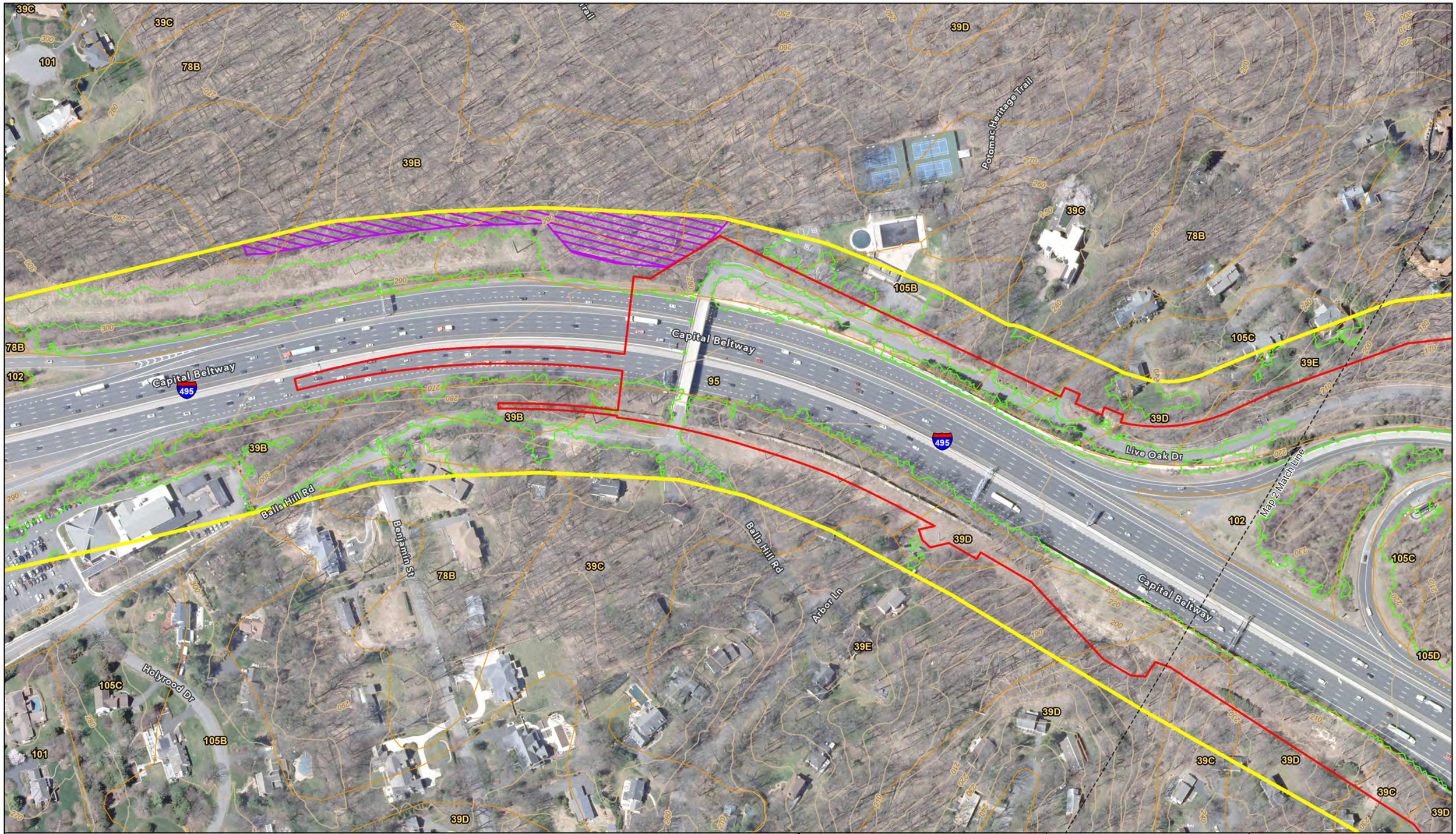
Summary of Impacts to Wetland Buffers
by Classification within MD 12-Digit Watersheds

MD Watershed Number and Classification	AC	SF	AC	SF	AC	SF
	Permanent		Temporary		Total	
021402020845	**1.03**	**44,998**	**0.22**	**9,306**	**1.25**	**54,304**
PEM	0.43	18,858	0.14	5,851	0.57	24,709
PFO	0.60	26,140	0.08	3,455	0.68	29,595
021402020846	**1.67**	**72,524**	**0.02**	**959**	**1.69**	**73,483**
PEM	0.69	29,741	0.02	959	0.71	30,700
PFO	0.87	37,942	0.00	0	0.87	37,942
PSS	0.11	4,841	0.00	0	0.11	4,841
021402070841	**3.56**	**155,037**	**0.00**	**98**	**3.56**	**155,135**
PEM	2.24	97,584	0.00	98	2.24	97,682
PFO	1.32	57,453	0.00	0	1.32	57,453
Grand Total	**6.26**	**272,559**	**0.24**	**10,363**	**6.50**	**282,922**

FEMA 100-Year Floodplain Impacts

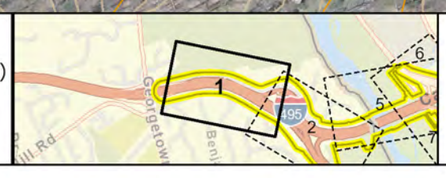
ASSOCIATED WATERWAY	RELATED FEATURES	FIRM PANEL	IMPACT PLATE	HUC 8 NAME	PERMANENT IMPACT (SF)	TEMPORARY IMPACT (SF)	TOTAL IMPACT (SF)	TOTAL IMPACT (AC)
Watts Branch 1	27A, 27A_C, 27D	24031C0333D, 51059C0075E	18	Middle Potomac-Catoctin	14,366	108	14,474	0.33
Watts Branch 2	27A_1, 27A_2, 27A_3, 27A_C1, 27A_C2, 26C_1	24031C0333D, 51059C0075E	17, 18	Middle Potomac-Catoctin	136,456	0	136,456	3.13
Thomas Branch 1	23A, 23A_C	24031C0345D, 51059C0075E	10	Middle Potomac-Catoctin	4,918	0	4,918	0.11
Thomas Branch 2	21C, 21C_1, 21C_2, 21C_C, 21C_C1, 23A_3	24031C0345D, 24031C0435D, 51059C0075E	6, 7, 8, 9	Middle Potomac-Catoctin	581,793	2,313	584,106	13.41
Cabin John Creek	22AA, 22AA_1, 22AA_2, 22AA_B, 22AA_B1, 22DD	24031C0435D, 51059CO160E	5, 6	Middle Potomac-Catoctin	30,058	3,386	33,444	0.77
Potomac River	22HH_2, 22M_C, 22MM, 22MM_B, 22NN, 22NN_B, 22P, 22QQ, 22UU	24031C0435D, 51059CO160E	2, 3	Middle Potomac-Catoctin	158,691	315,859	474,550	10.90
Unnamed tributary to Old Farm Creek	23N, 23N_C, 23U	24031C0342D, 51059C0075E	22	Middle Potomac-Catoctin	8,369	0	8,369	0.19
Booze Creek	22Z, 22Z_C	24031C0435D, 51059CO160E	5	Middle Potomac-Catoctin	42,362	0	42,362	0.97
Muddy Branch	29B, 29B_1, 29B_C, 29P	24031C0327D, 51059C0075E	21	Middle Potomac-Catoctin	67,903	0	67,903	1.56
Rock Run	22HH_2, 22M, 22N	24031C0435D, 51059CO160E	3	Middle Potomac-Catoctin	2,849	0	2,849	0.07
Unnamed tributary to Muddy Branch	29D_D	24031C0327D, 51059C0075E	21	Middle Potomac-Catoctin	3,460	0	3,460	0.08
Unnamed tributary to Watts Branch	26C_1, 26C_C, 26C_C1	24031C0333D, 51059C0075E	17	Middle Potomac-Catoctin	0	1,591	1,591	0.04
Dead Run	N/A	24031C0435D, 51059CO160E	26	Middle Potomac-Catoctin	881	0	881	0.02
				TOTAL	**1,052,106**	**323,257**	**1,375,363**	**31.58**

APPENDIX B: NATURAL RESOURCES INVENTORY MAPS



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 1 of 41
June 2022

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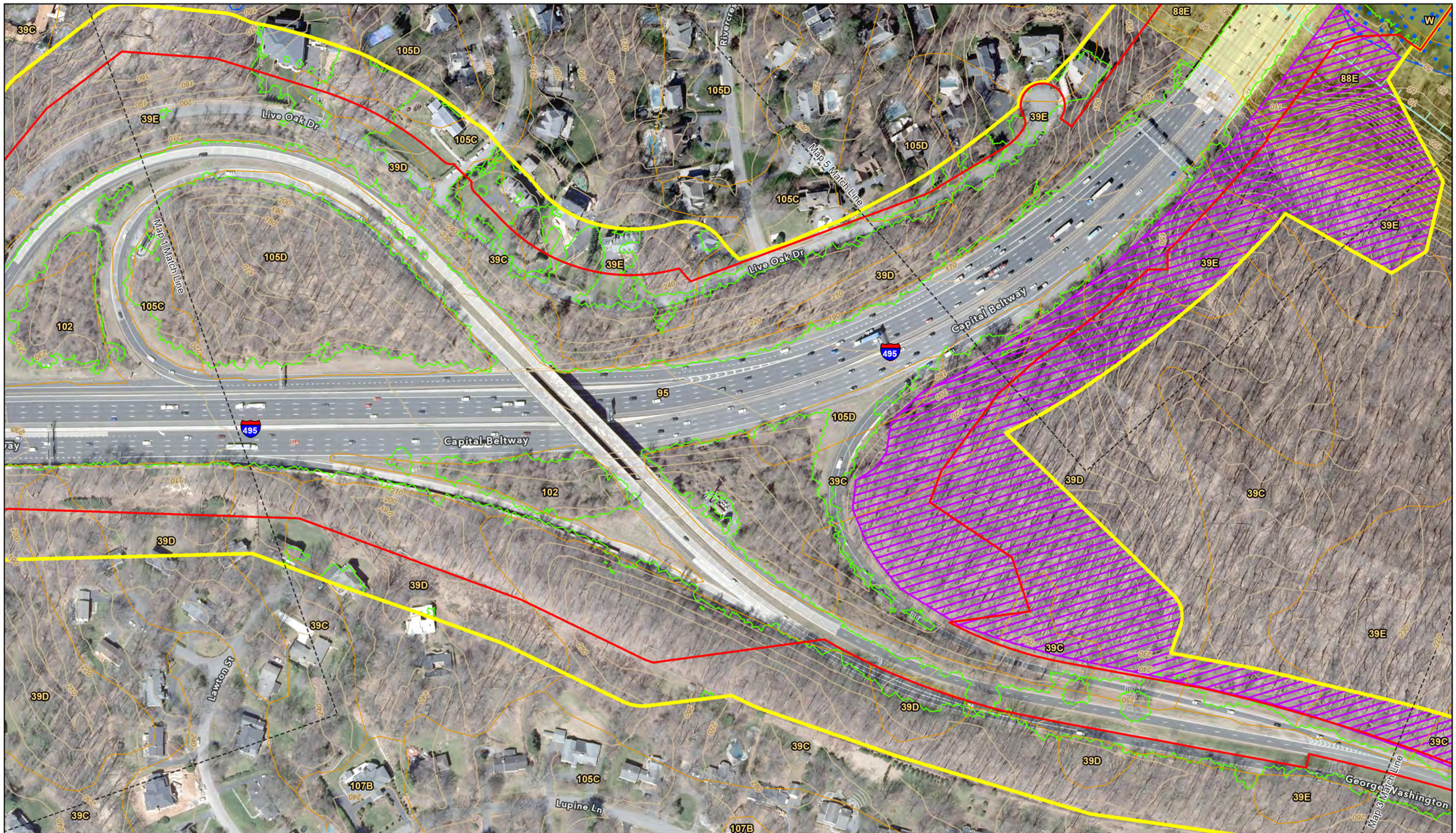

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Natural Resources Inventory

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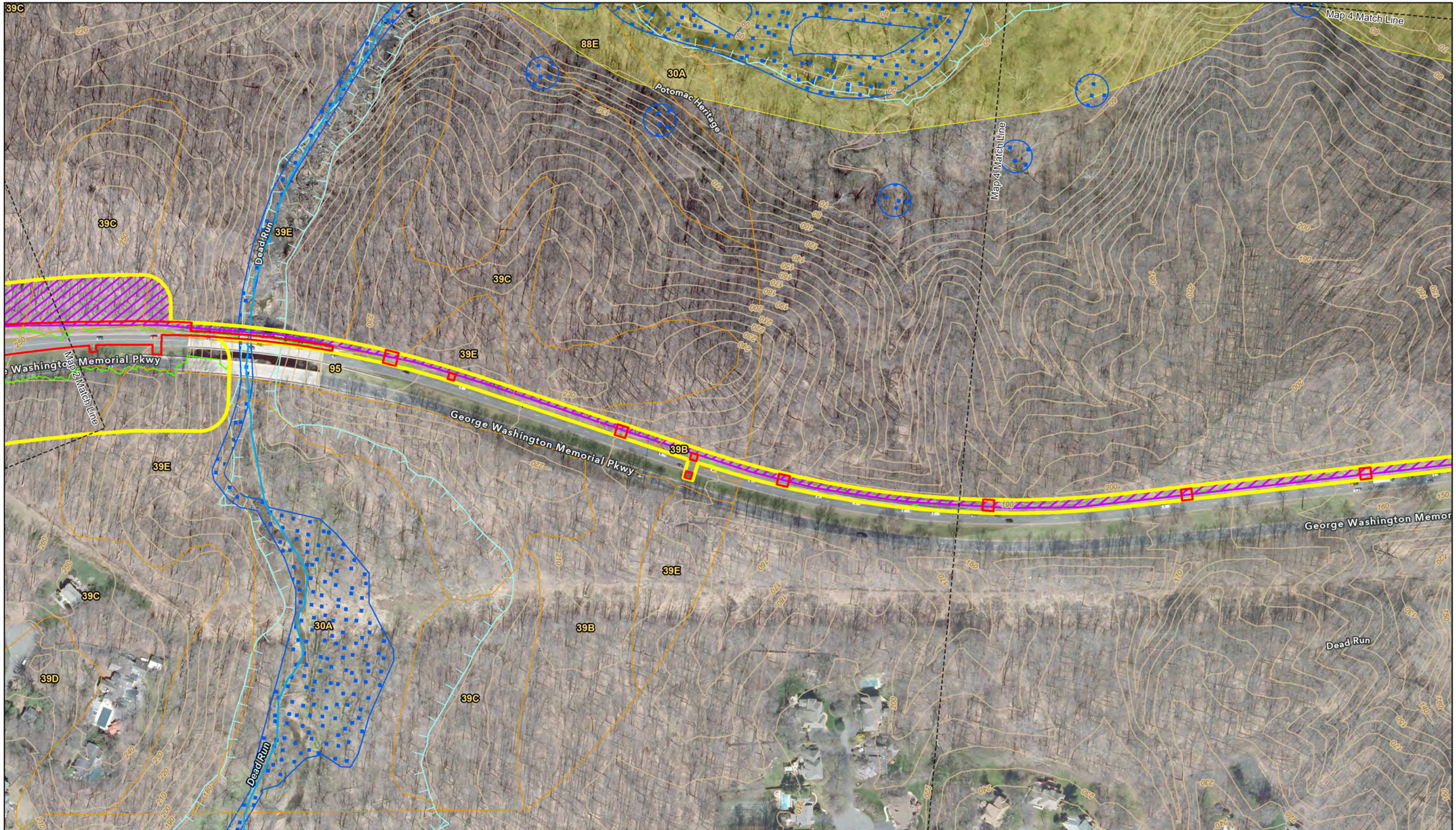
Map 2 of 41
June 2022

495 270 MANAGED LANES STUDY



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Natural Resources Inventory

1 in = 200 ft
Map 3 of 41
June 2022

N W E S

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Potomac Heritage

Turkey Run

Map 3 Match Line

George Washington Memorial Pkwy

George Washington Memorial Pkwy

Dead Run

Turkey Run

Turkey Run

Dead Run

Legend

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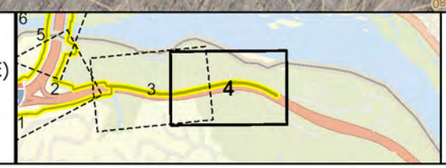
- Contours (10 ft)



Natural Resources Inventory

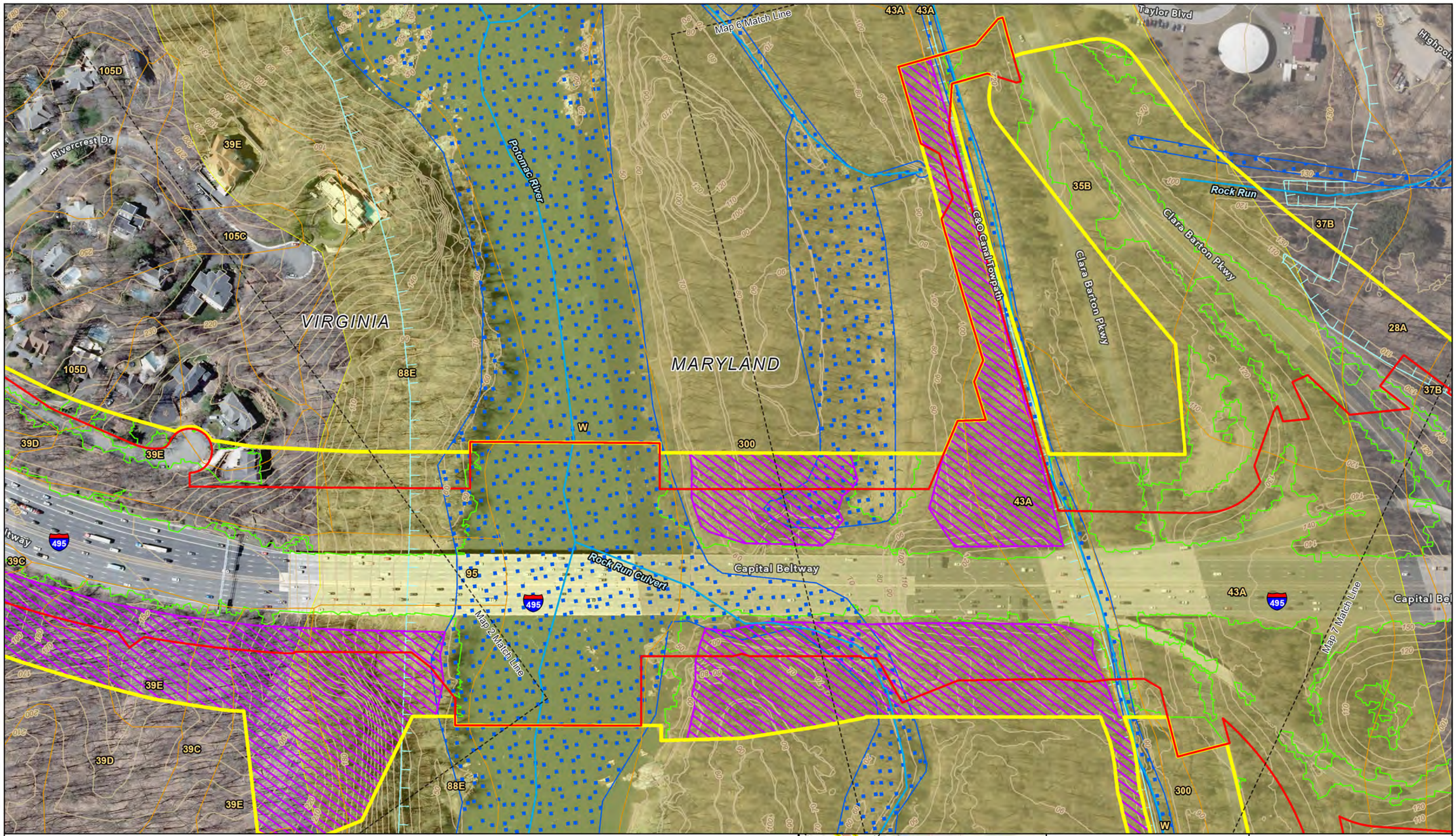
1 in = 200 ft

Map 4 of 41

June 2022

N W E S

270 495 MANAGED LANES STUDY



Legend

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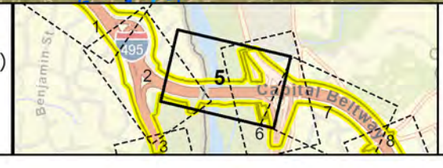
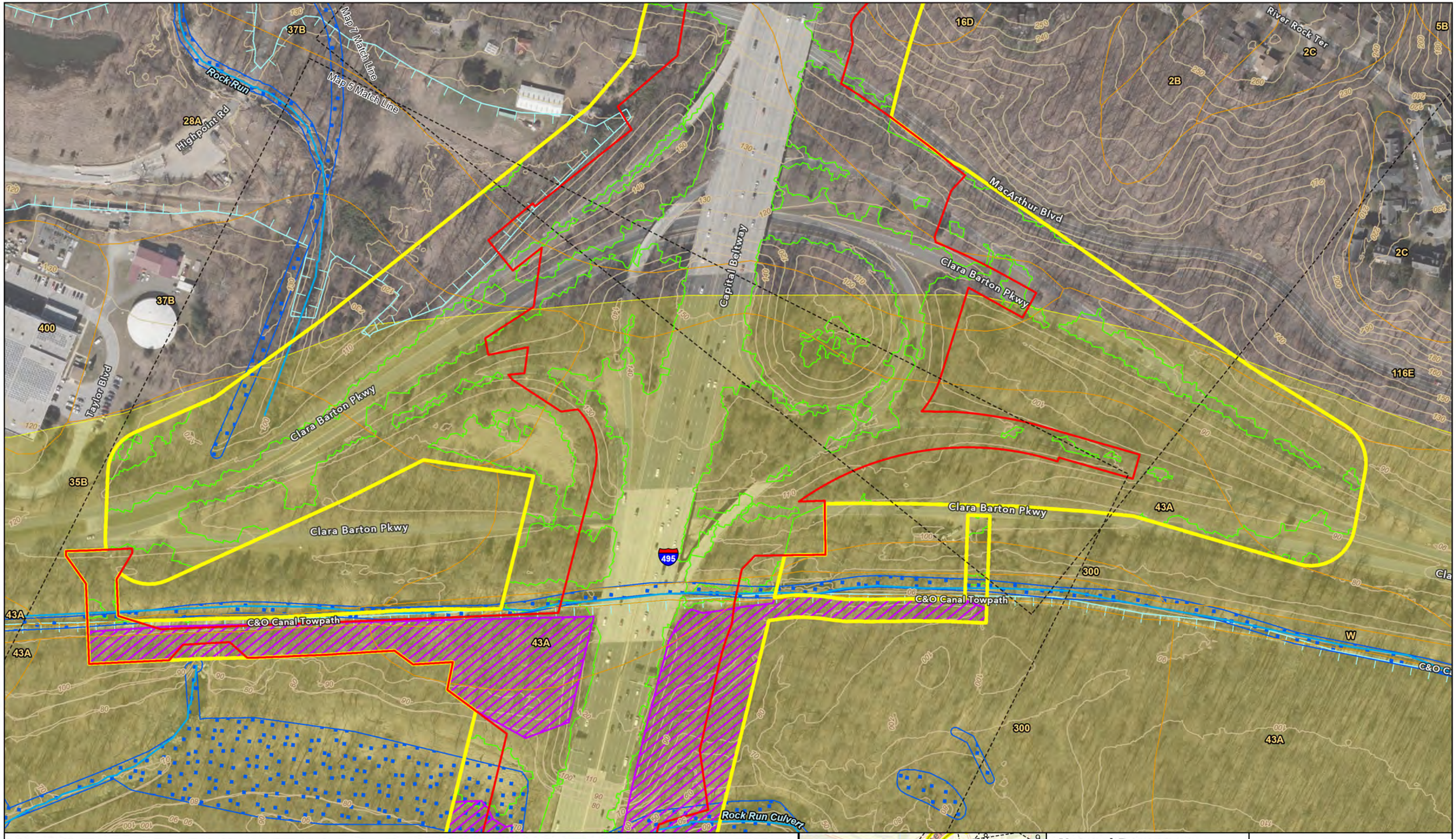


Natural Resources Inventory

1 in = 200 ft
Map 5 of 41
June 2022

495 270 MANAGED LANES STUDY


Map 7 Match Line
Map 5 Match Line
Rock Run
Highpoint Rd
Taylor Blvd
Capital Beltway
MacArthur Blvd
River Rock Ter
Clara Barton Pkwy
C&O Canal Towpath
Rock Run Culvert
495
37B
28A
400
35B
16D
2B
2C
5B
43A
300
116E
Legend
LOD - Preferred Alternative
Corridor Study Boundary
Map Match Line
USGS Rivers and Streams
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Wetlands of Special State Concern
FEMA 100 Year Floodplain
Soils
Potential FIDS Habitat
SSPRA
Tree Canopy
Forest Conservation Act Easements (FCE)
FCE Individual Trees
Contours (10 ft)
Natural Resources Inventory
1 in = 200 ft
Map 6 of 41
June 2022
N
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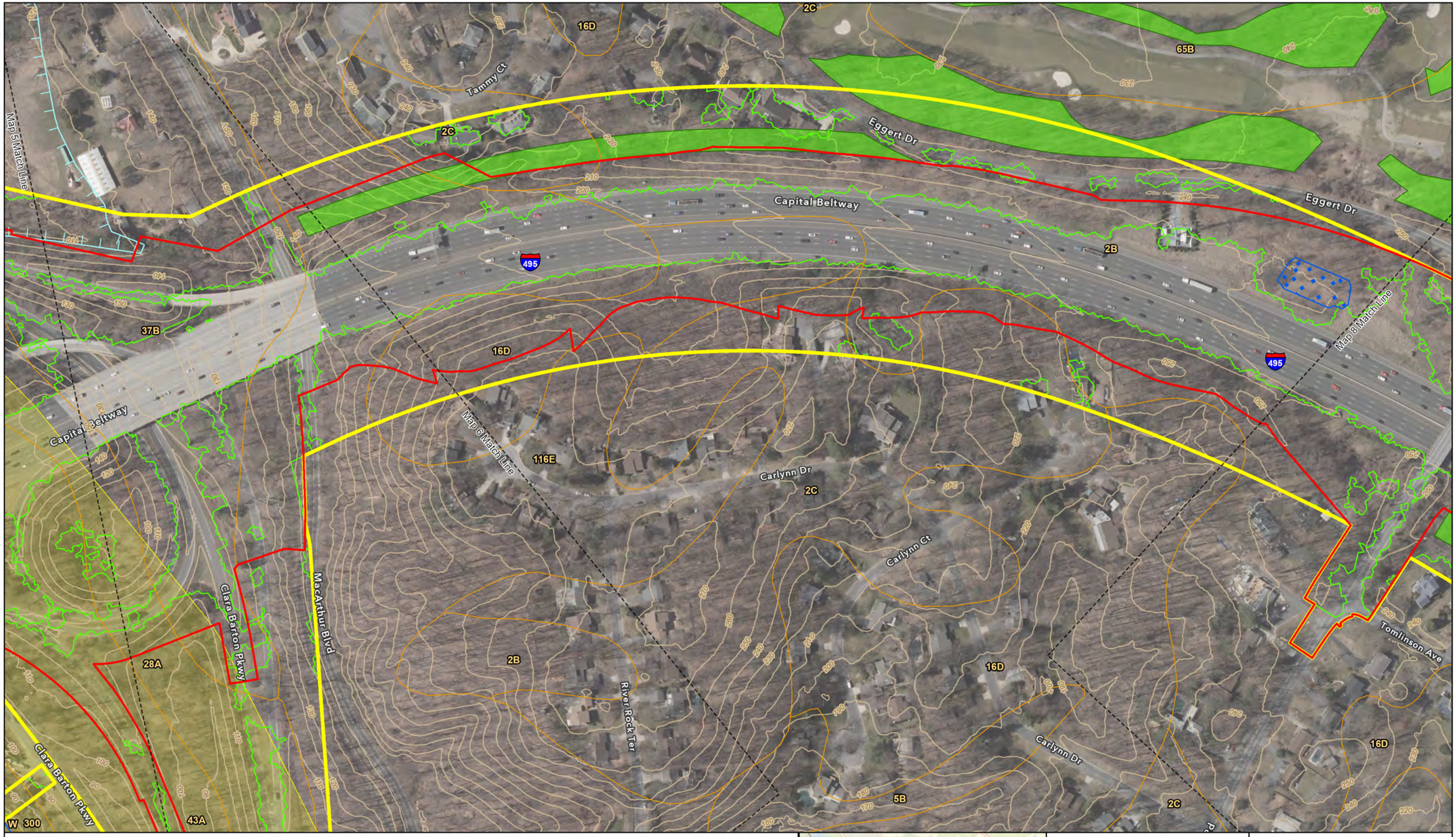
MANAGED LANES STUDY



Legend

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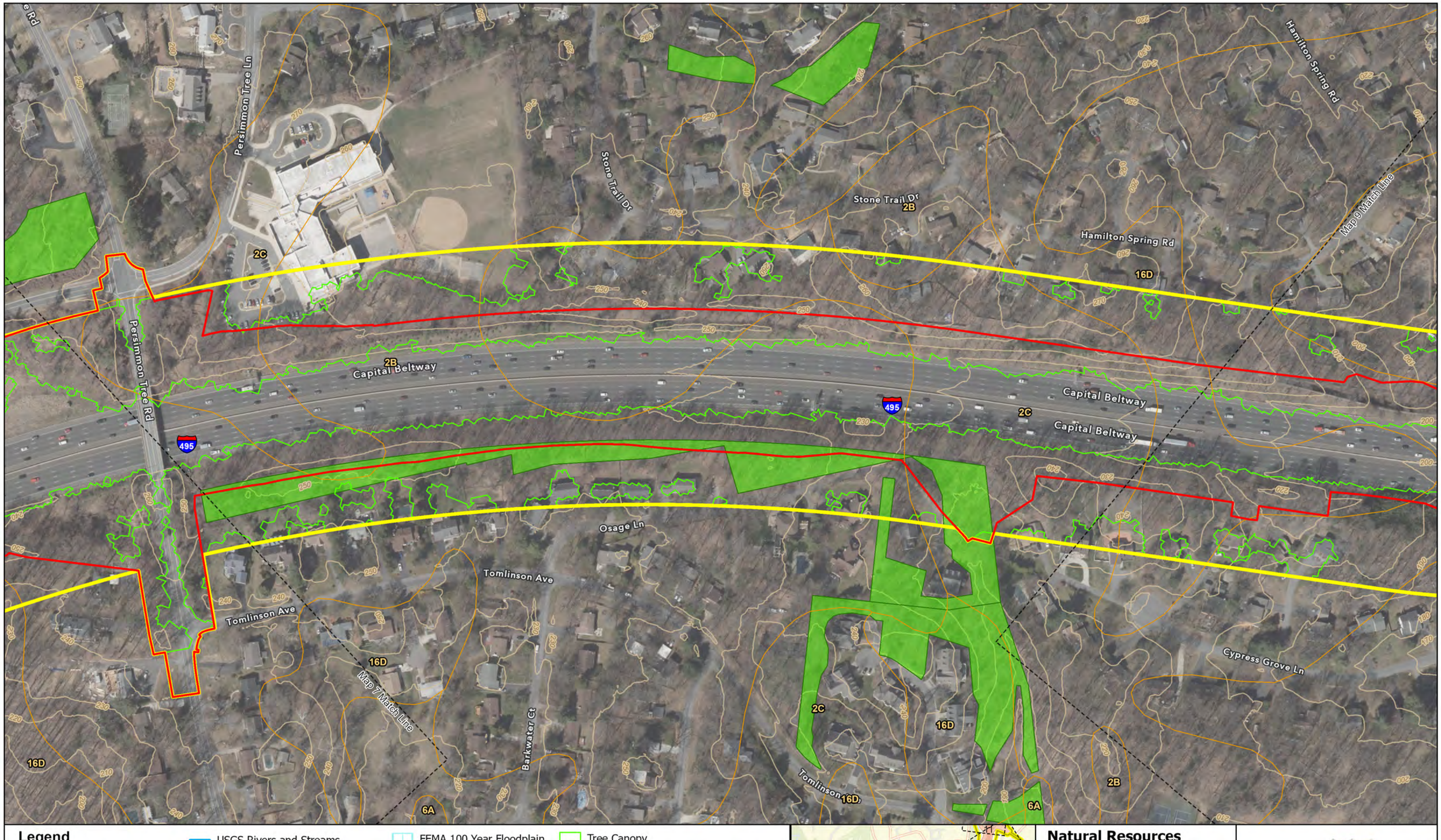
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 7 of 41
June 2022

495 270 MANAGED LANES STUDY



Legend

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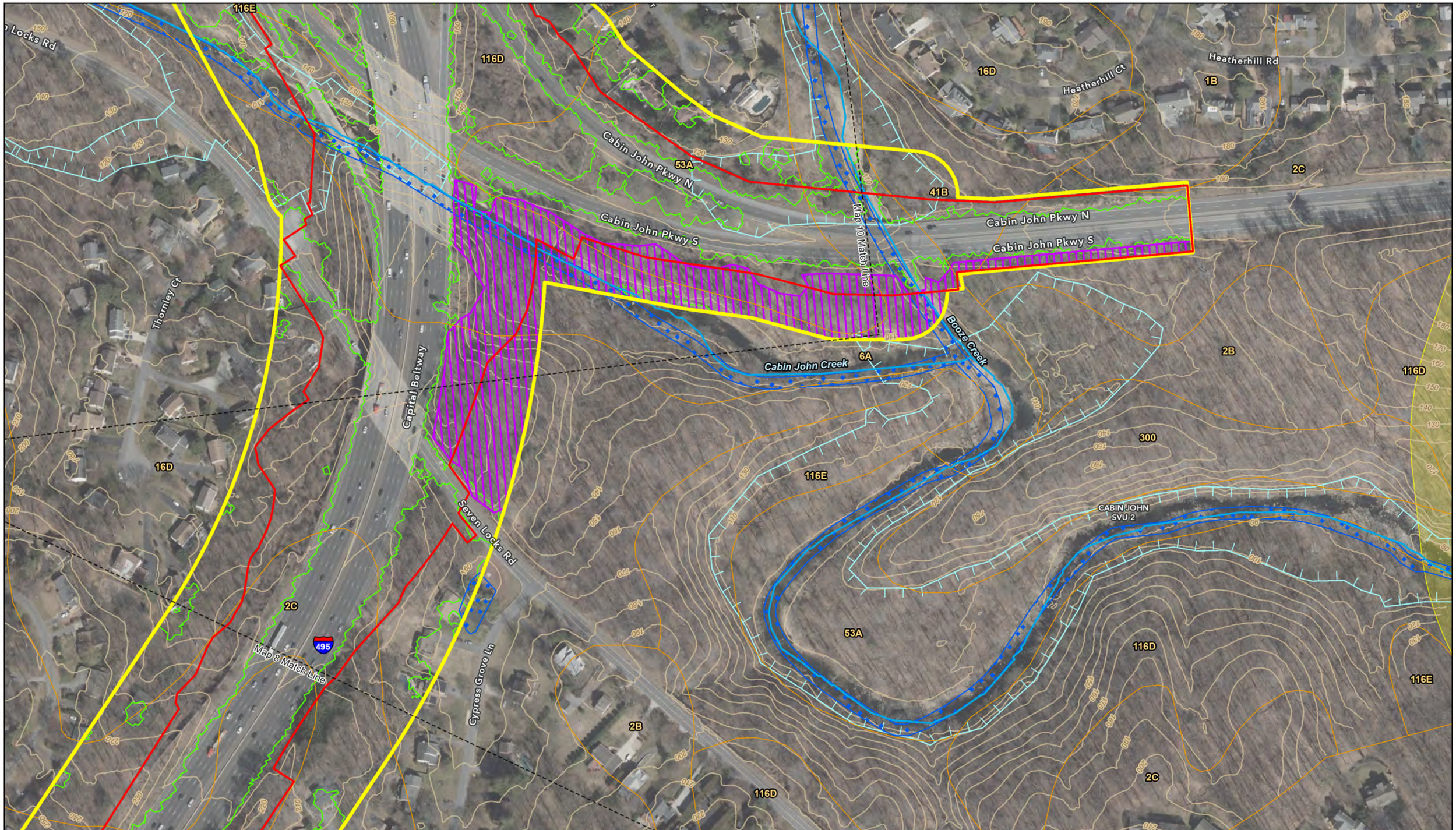
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 8 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
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- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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- FCE Individual Trees
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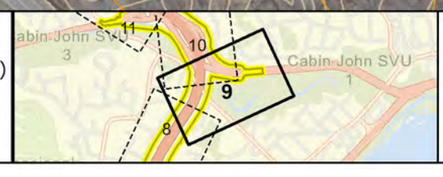
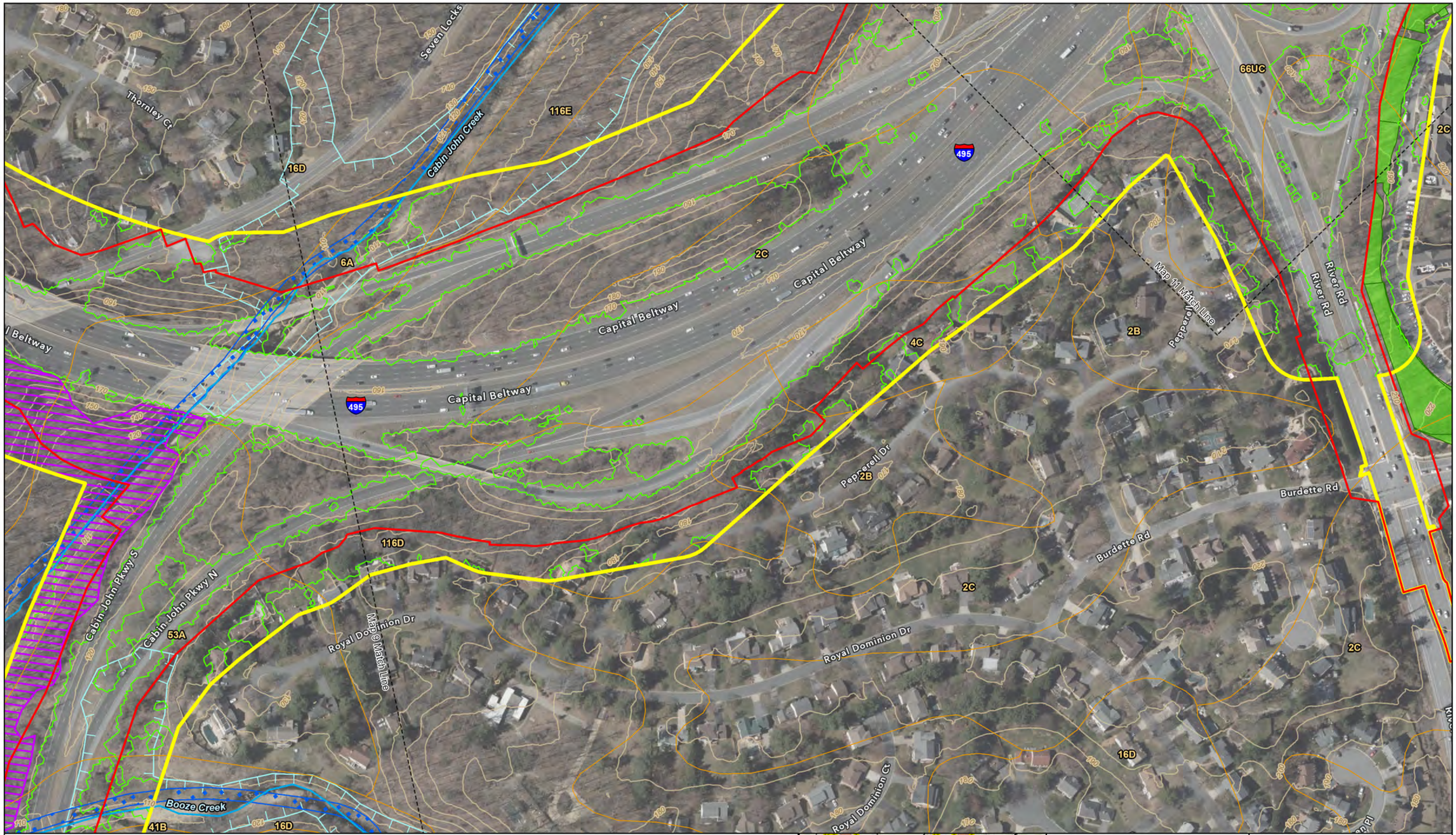


Natural Resources Inventory

1 in = 200 ft
Map 9 of 41
June 2022

270 / 495 MANAGED LANES STUDY



Legend

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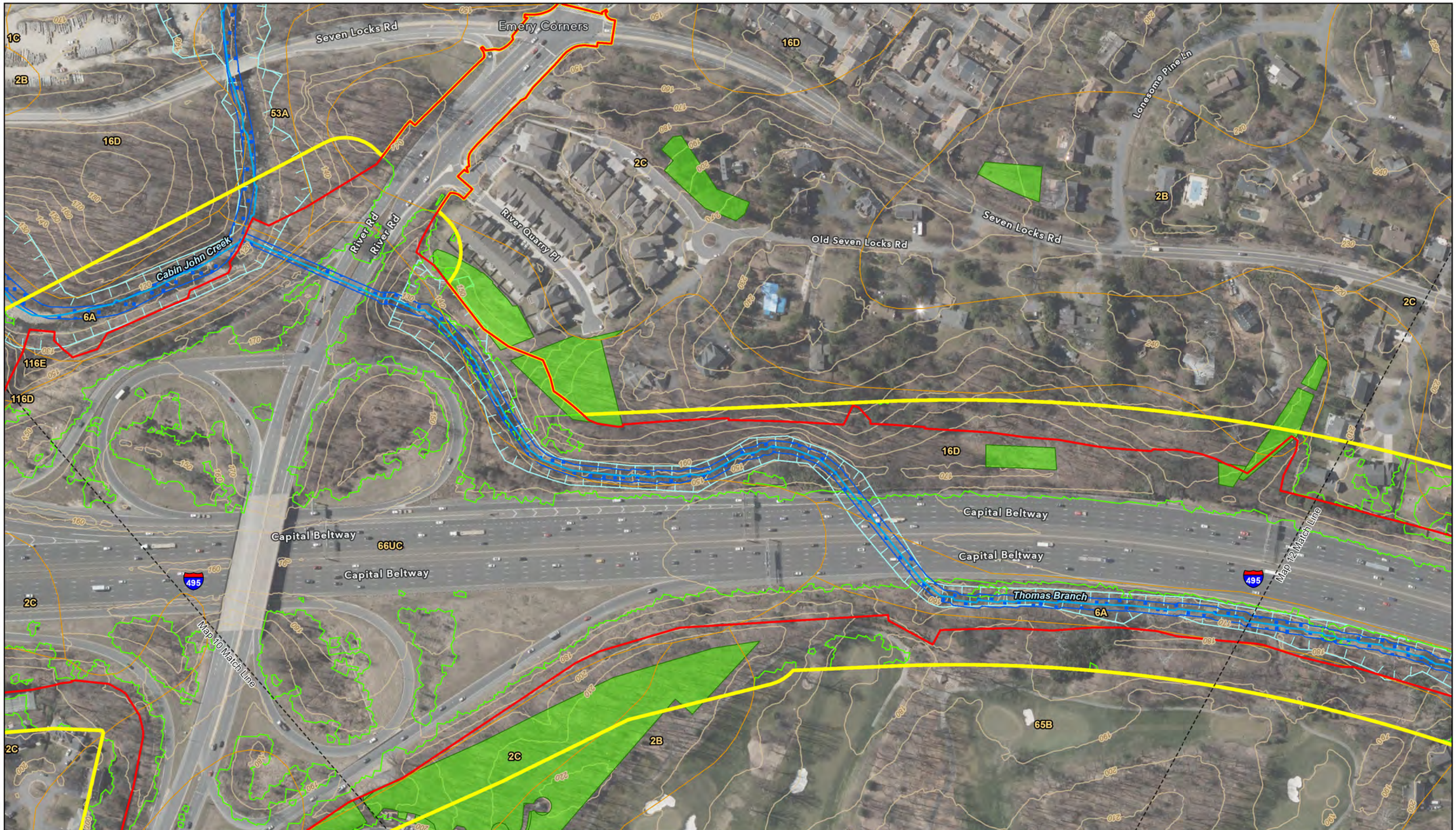
Natural Resources Inventory

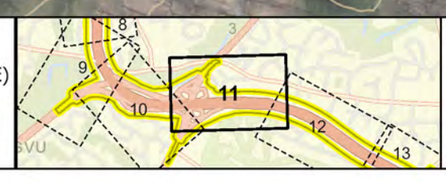
1 in = 200 ft
Map 10 of 41
June 2022

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 11 of 41
June 2022

495 270 MANAGED LANES STUDY

Seven Locks Rd
Cindy Ln
Rd
ght Dr
uintana Ct
Carteret Rd
Map 13 Match Line
2B
2C
2C
2C
16D
Capital Beltway
Capital Beltway
Capital Beltway
Capital Beltway
Capital Beltway
495
495
Thomas Branch
Arrowood Ct
Arrowood Rd
Arrowood Rd
Arrowood Rd
Map 11 Match Line
6A
65B
2C
2B

Legend

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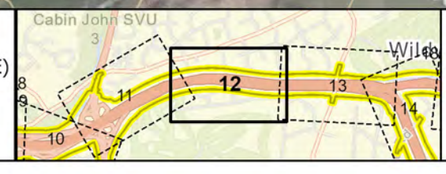
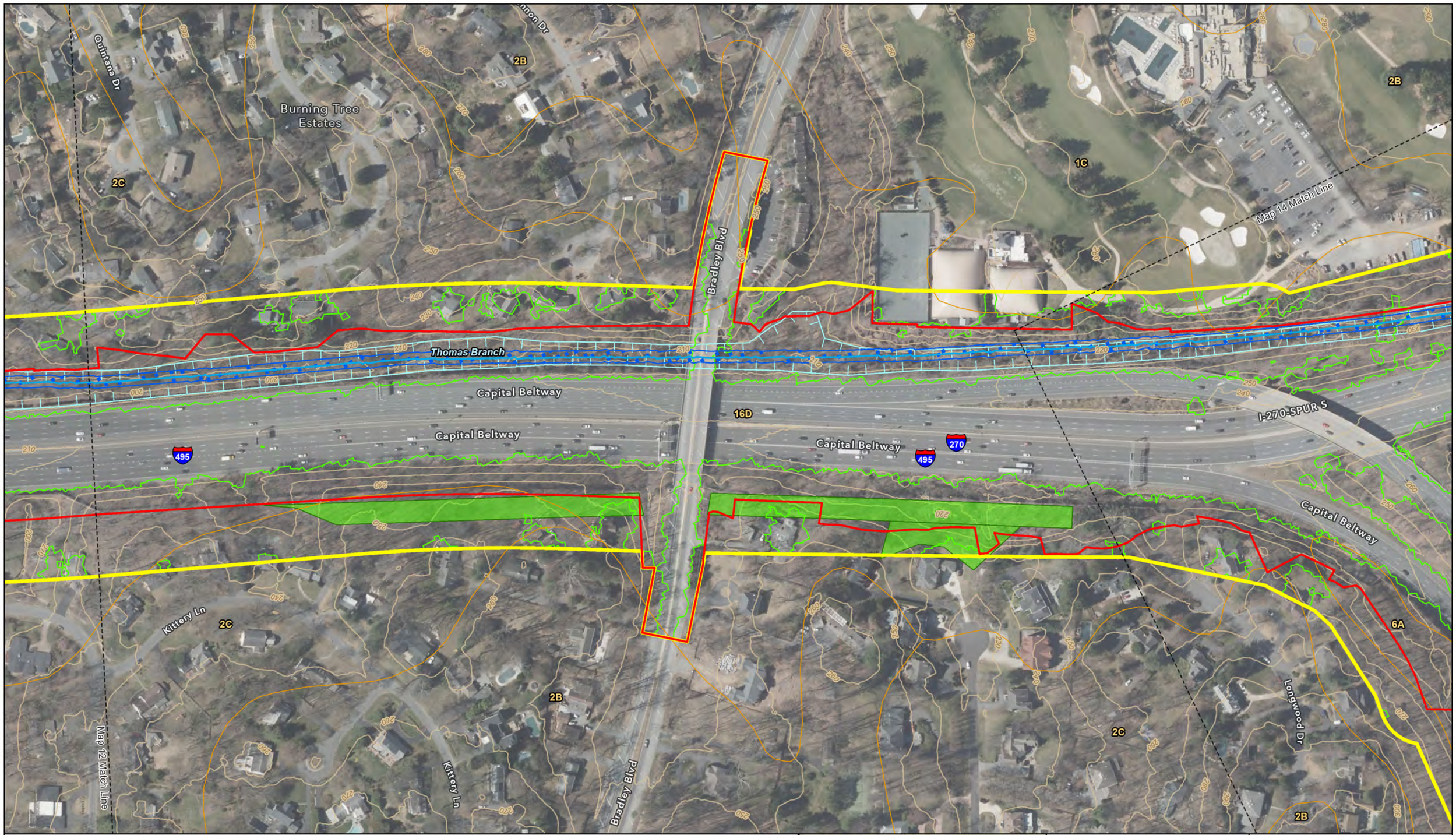


Natural Resources Inventory

1 in = 200 ft
Map 12 of 41
June 2022

495 270 MANAGED LANES STUDY



Legend

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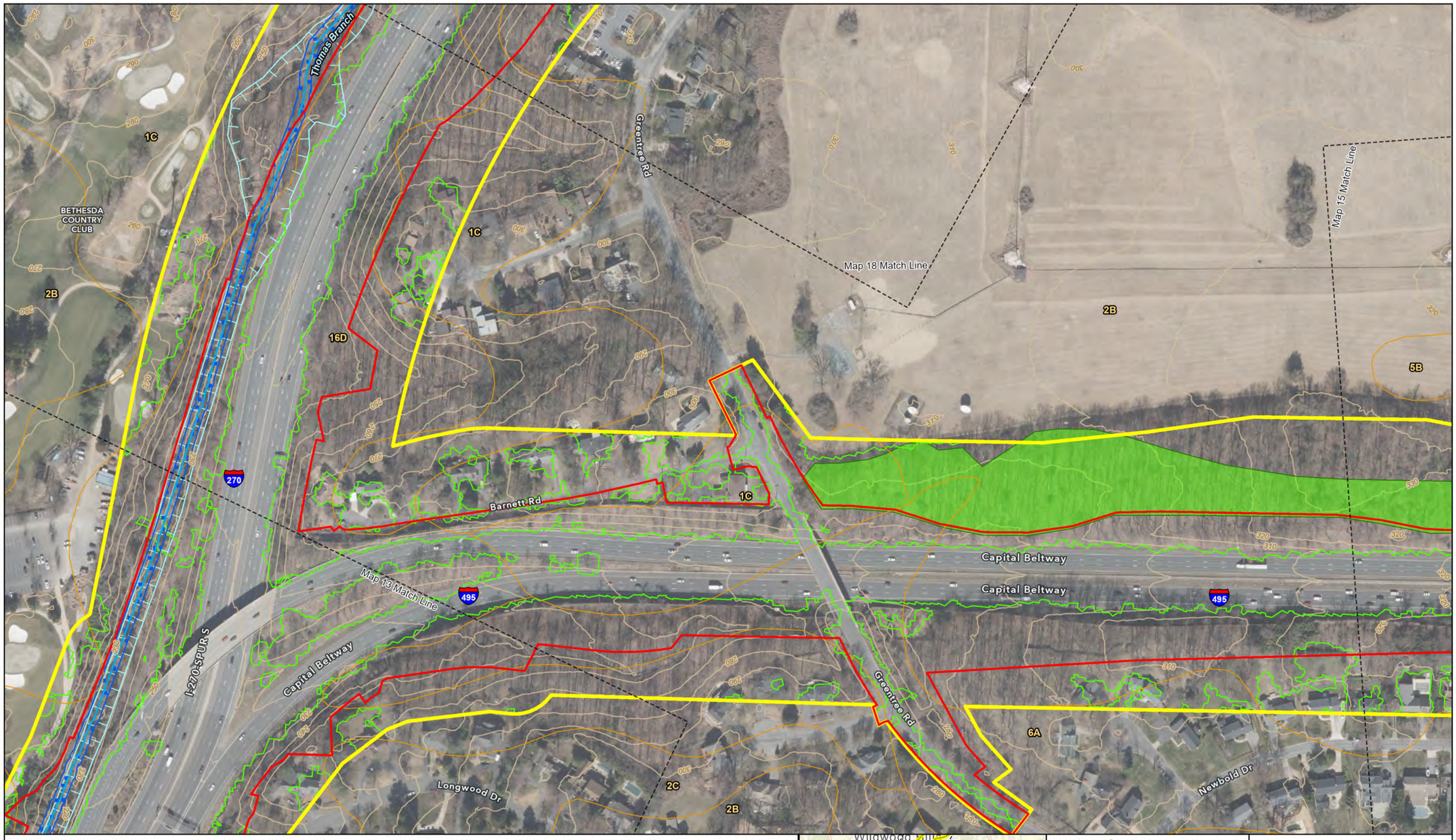
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 13 of 41
June 2022

495 270 MANAGED LANES STUDY



Legend

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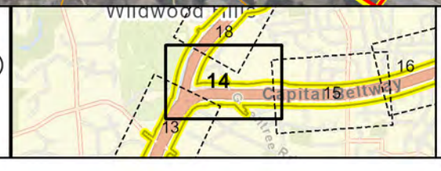
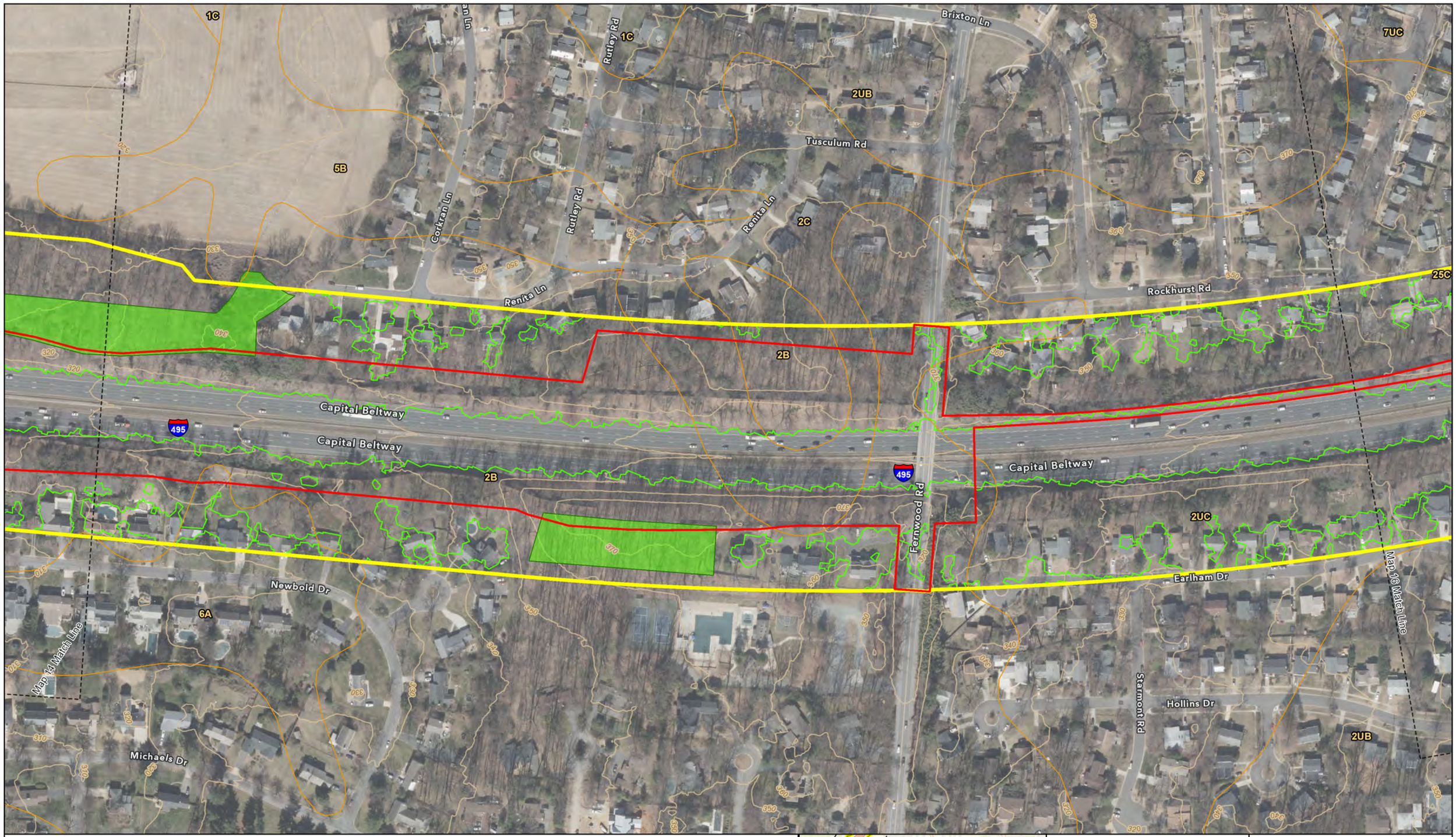


Natural Resources Inventory

1 in = 200 ft
Map 14 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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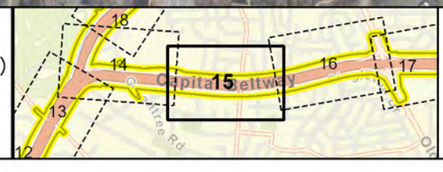

Natural Resources Inventory

1 in = 200 ft
Map 15 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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- SSPRA
- Tree Canopy
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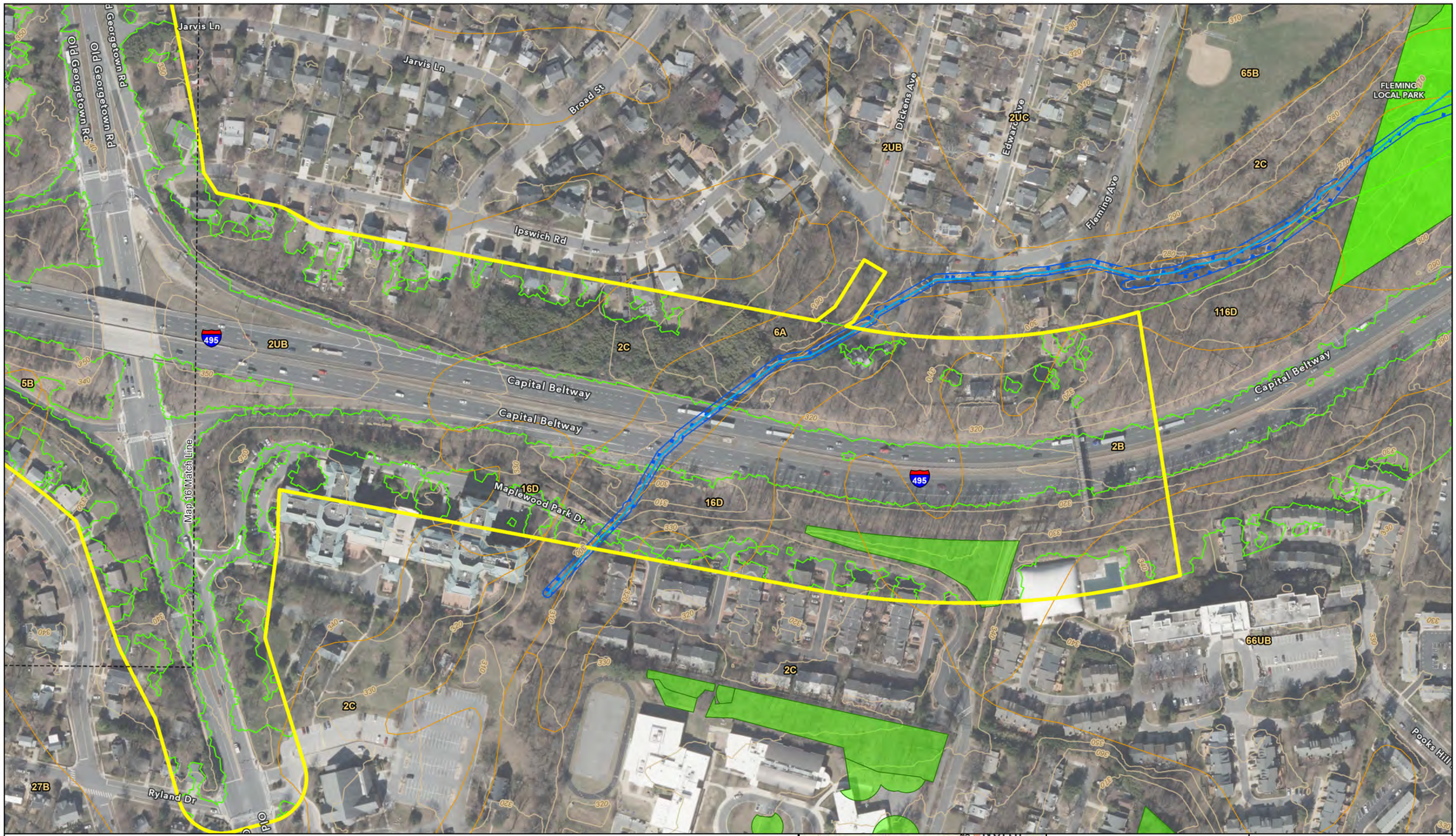
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 16 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
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- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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- SSPRA
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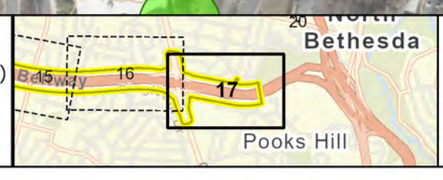
- FCE Individual Trees
- Contours (10 ft)

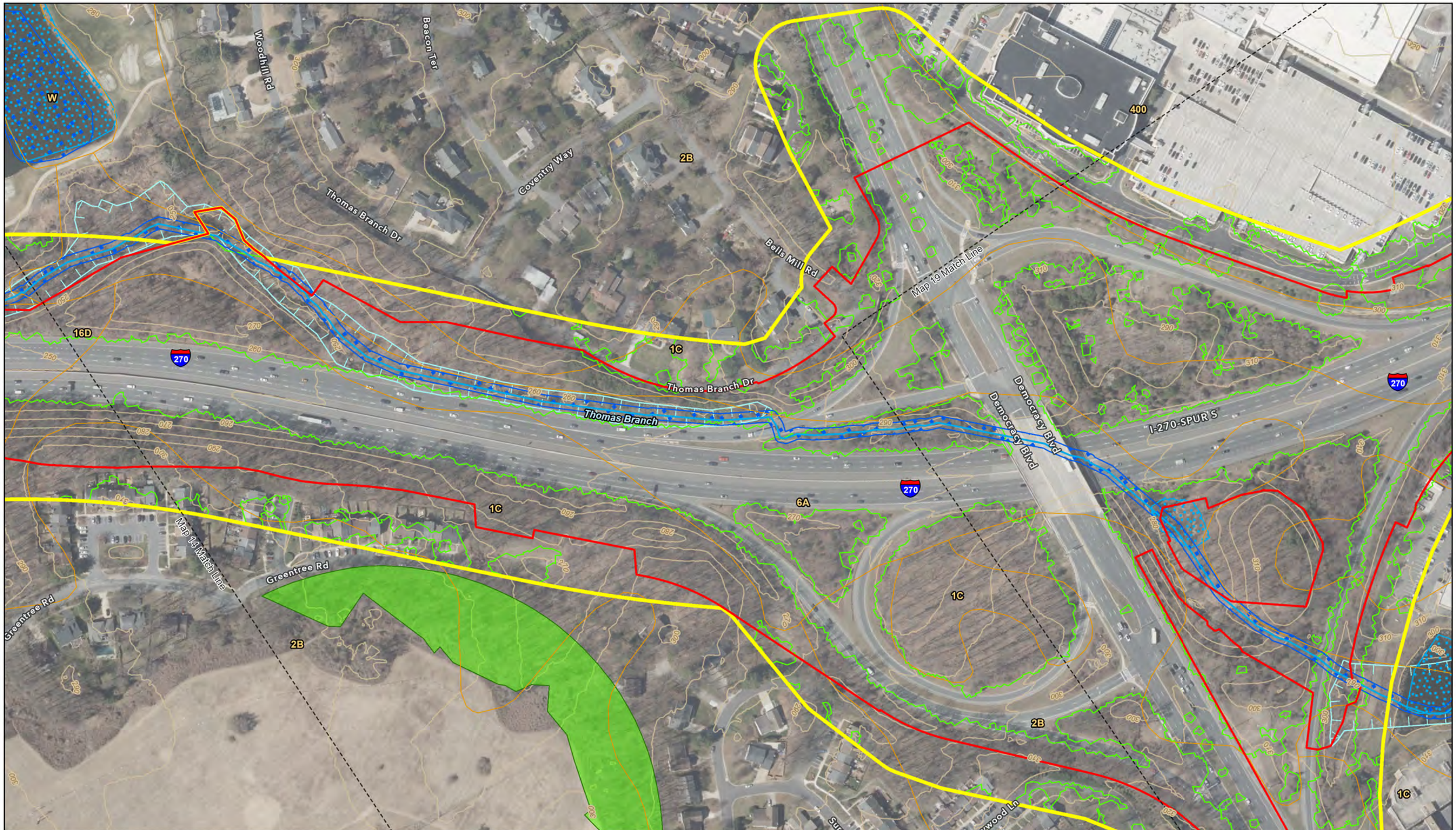


Natural Resources Inventory

1 in = 200 ft
Map 17 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
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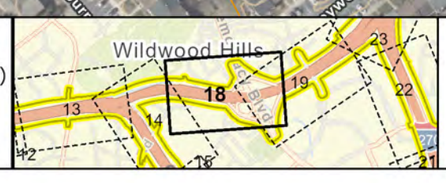
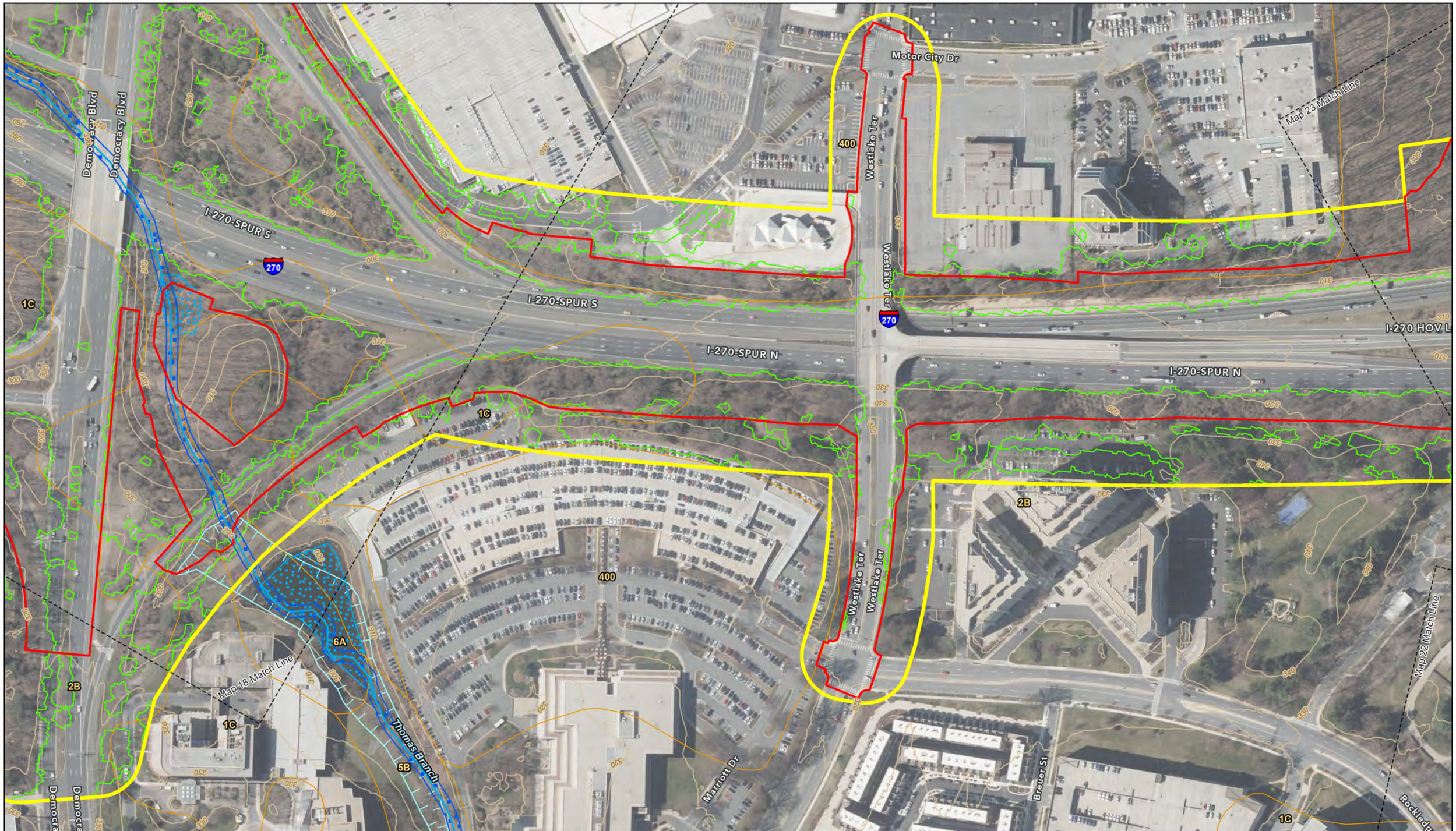


Natural Resources Inventory

1 in = 200 ft
Map 18 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
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- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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- SSPRA
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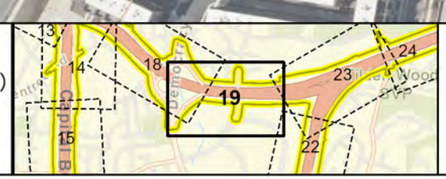
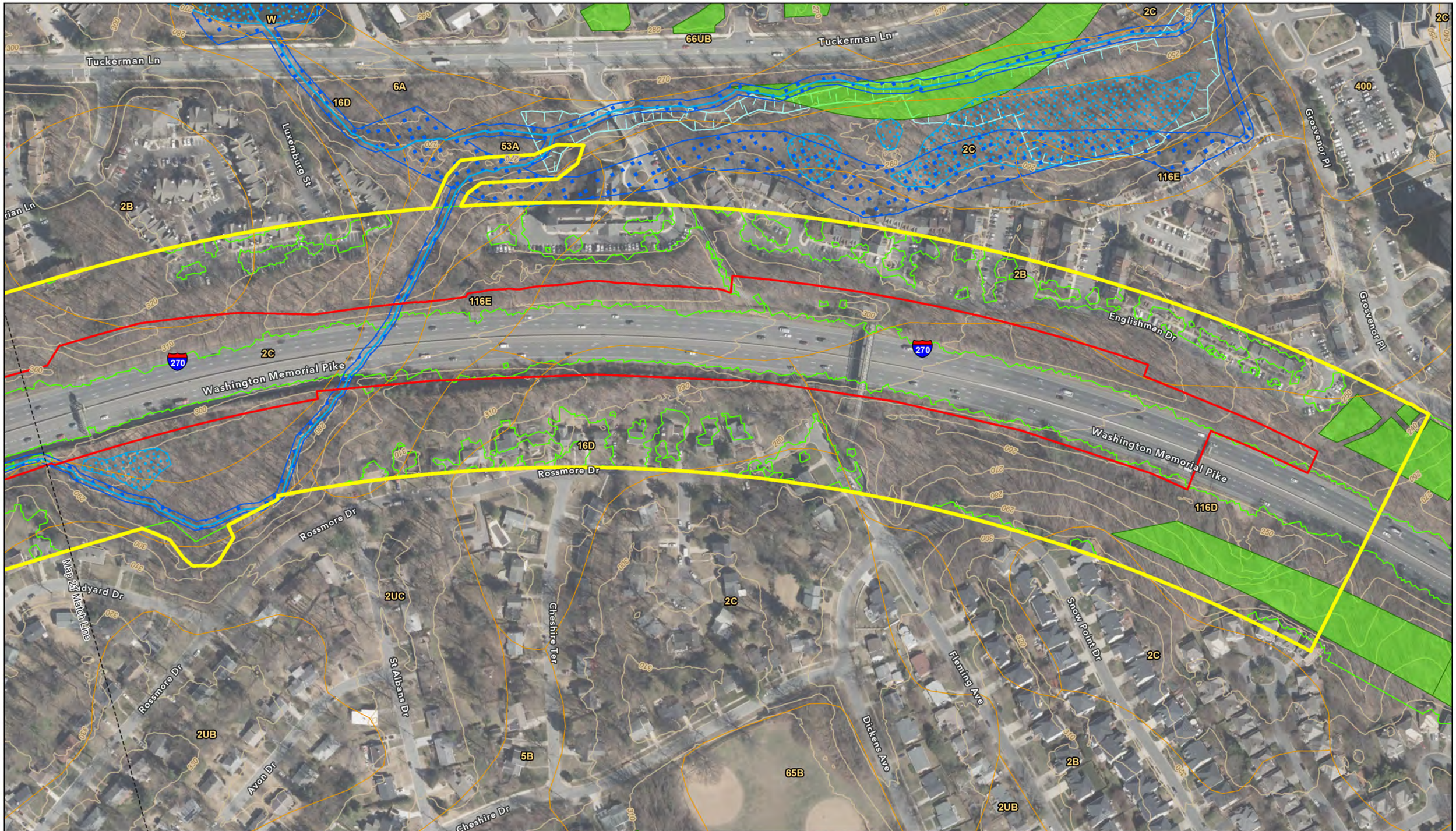


Natural Resources Inventory

1 in = 200 ft
Map 19 of 41
June 2022

W S N E

270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
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- USGS Rivers and Streams
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- SSPRA
- Tree Canopy
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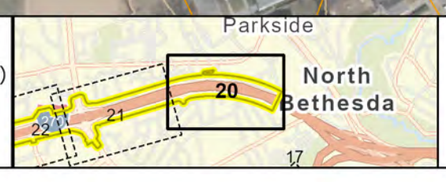
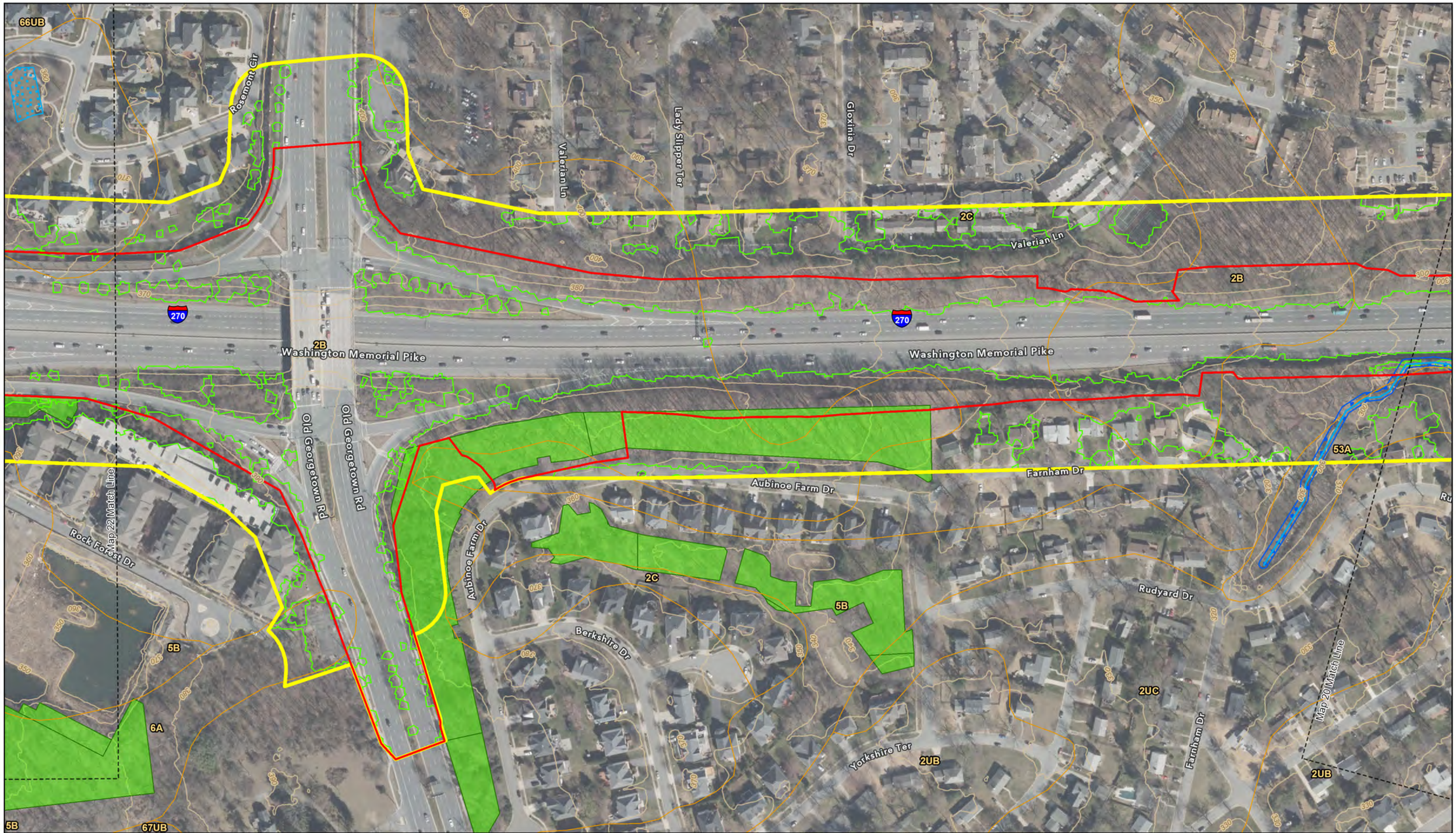
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 20 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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- SSPRA
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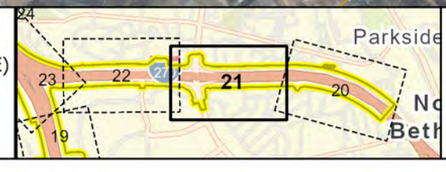
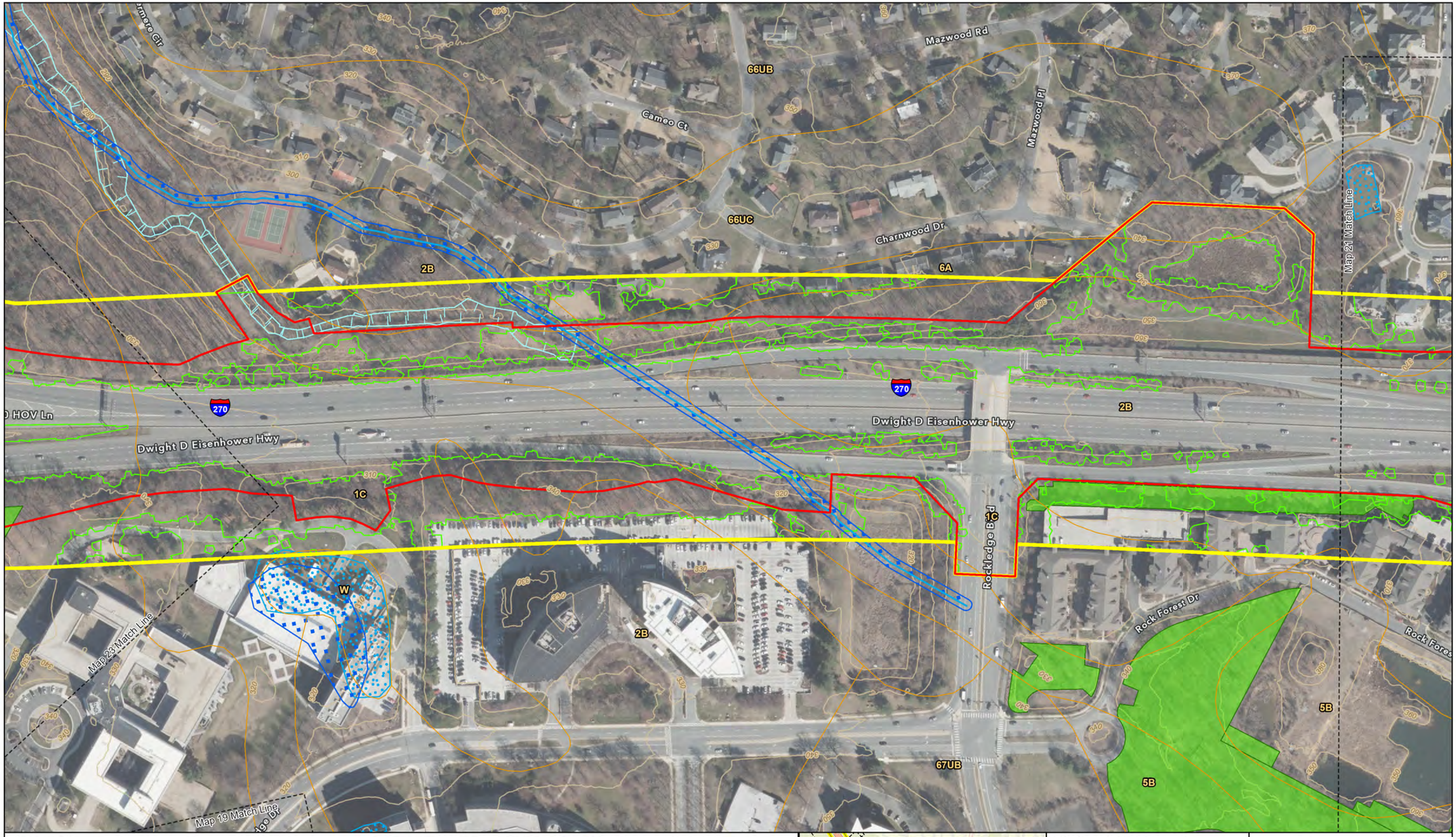


Natural Resources Inventory

1 in = 200 ft
Map 21 of 41
June 2022

N
W
E
S

270
495
MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
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- USGS Rivers and Streams
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- SSPRA
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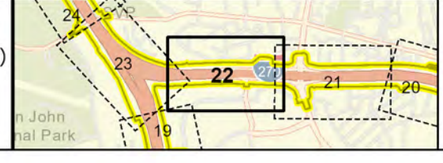
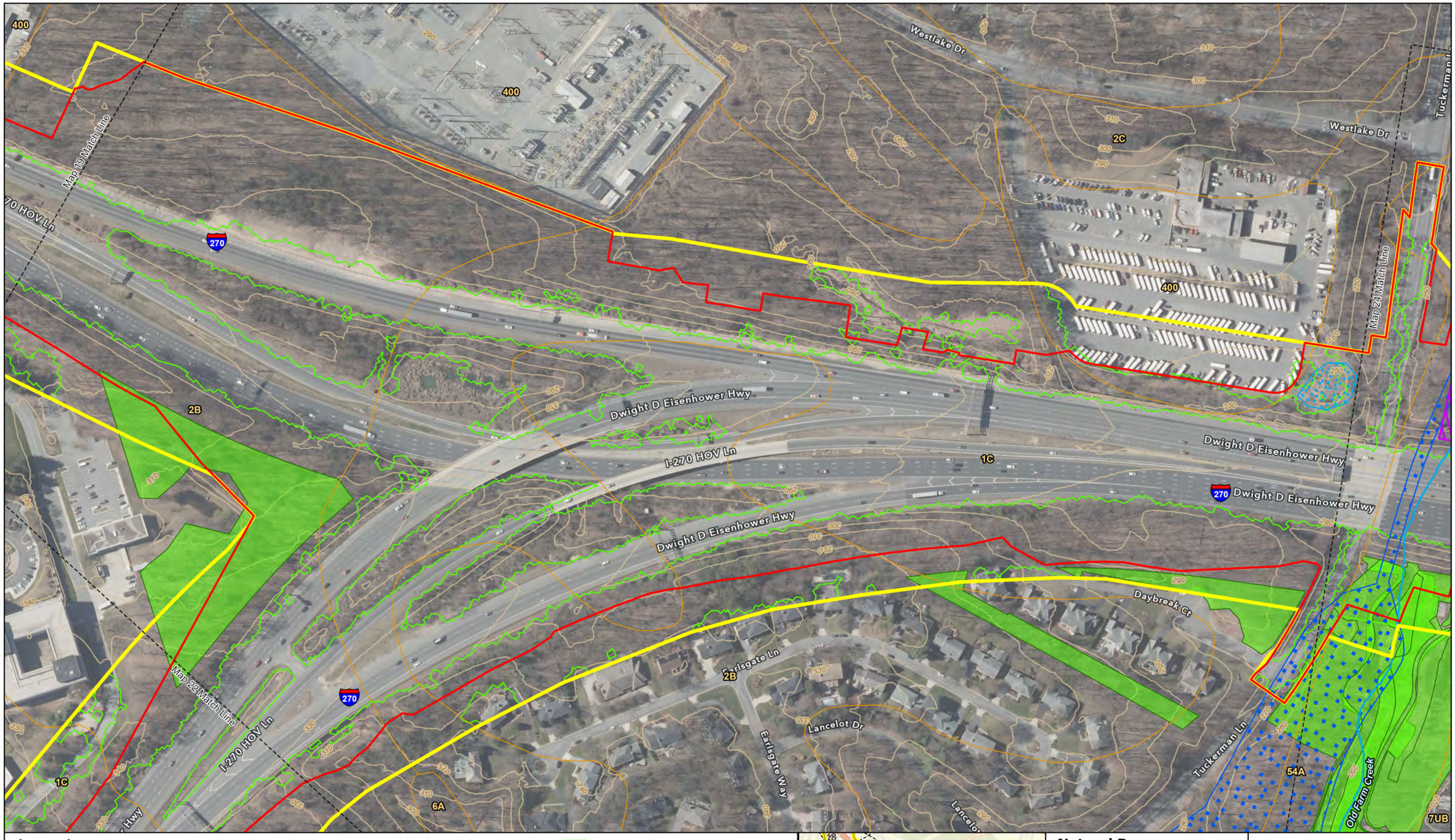


Natural Resources Inventory

1 in = 200 ft
Map 22 of 41
June 2022

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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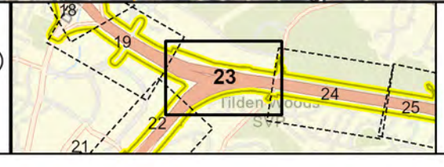
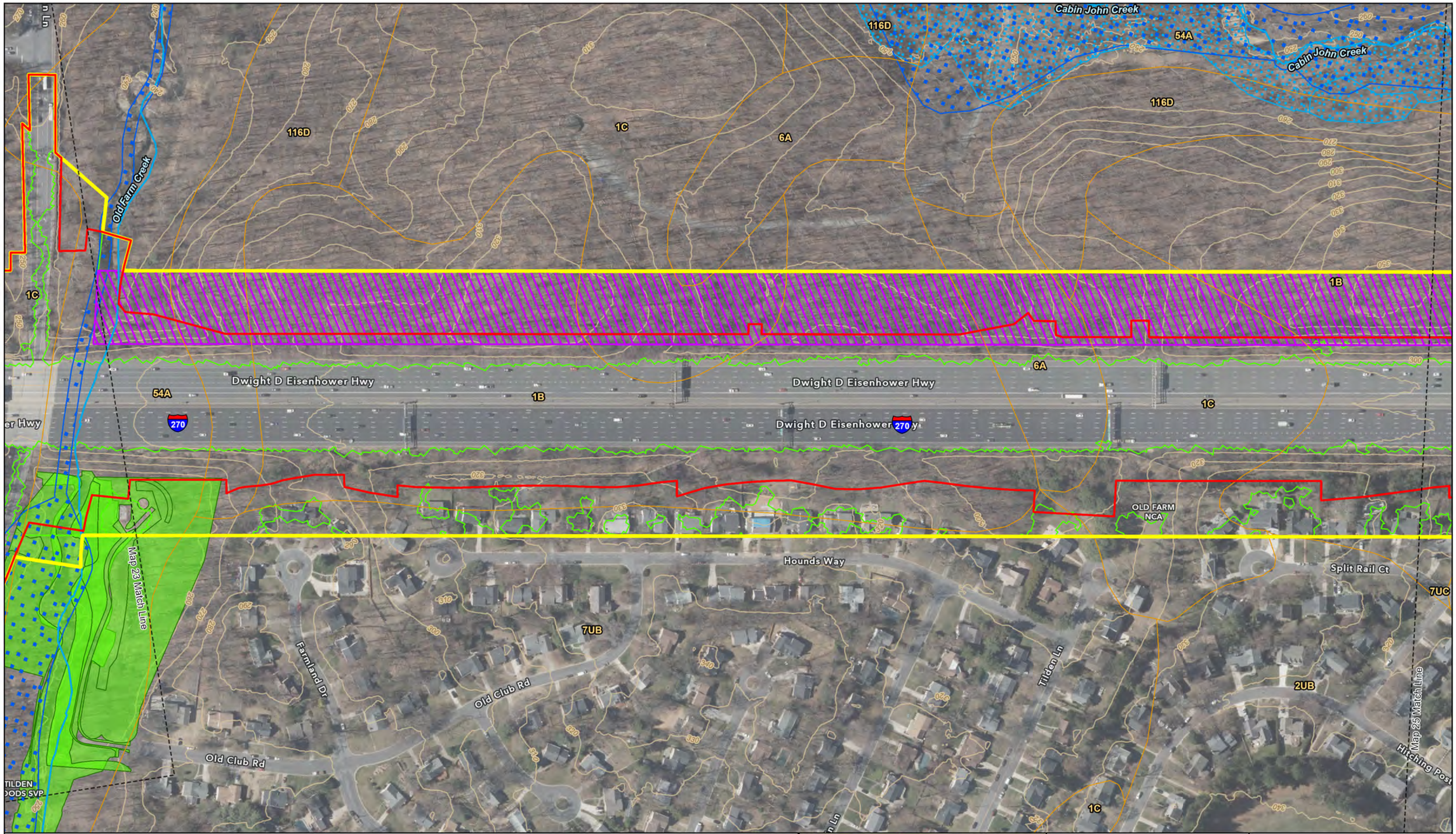
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 23 of 41
June 2022

I-270 I-495 MANAGED LANES STUDY



Legend

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- SSPRA
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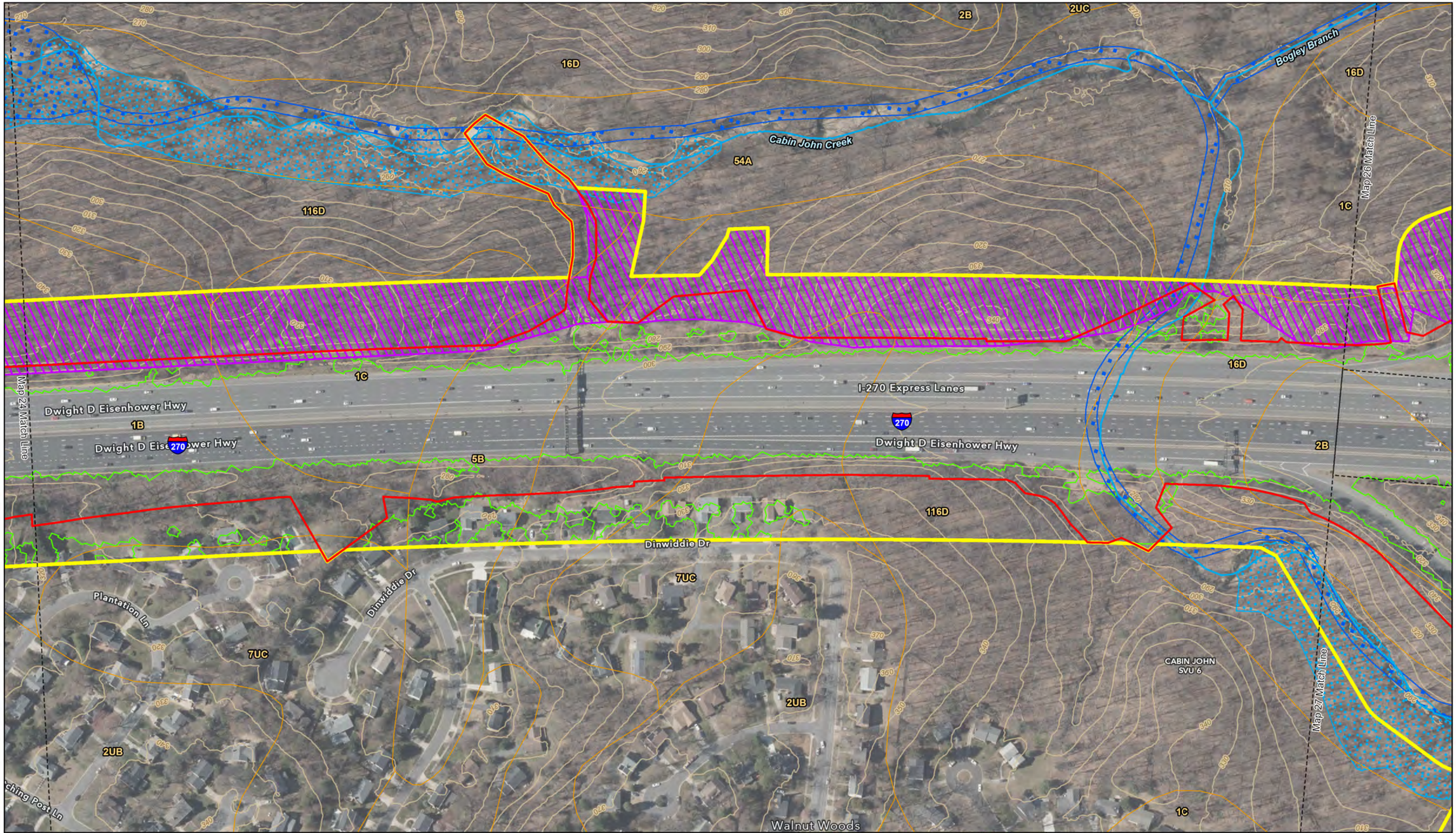
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 24 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

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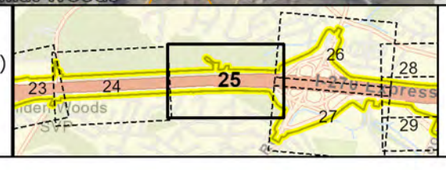
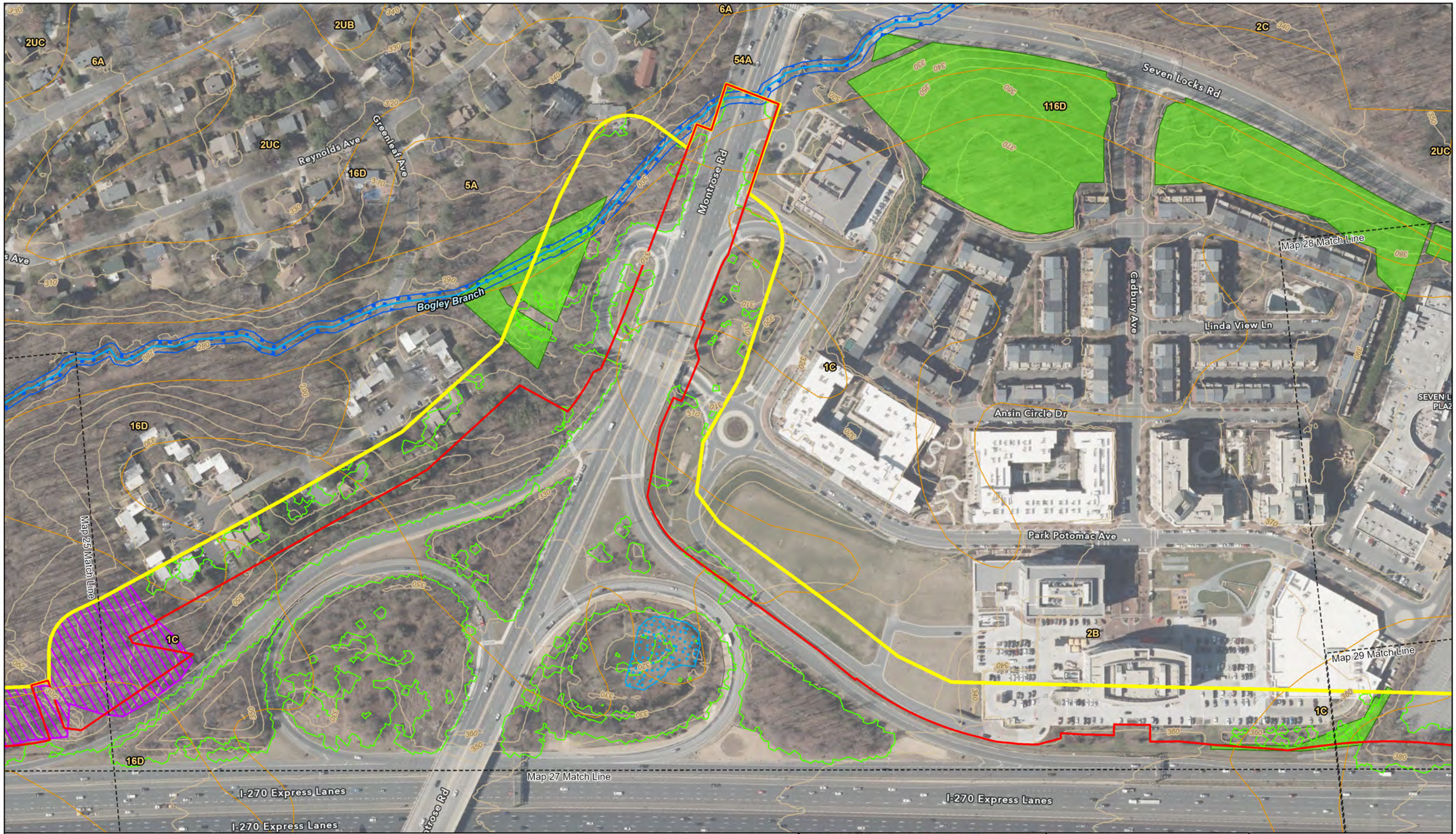


Natural Resources Inventory

1 in = 200 ft
Map 25 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

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- 39B Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
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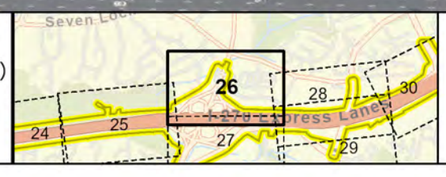
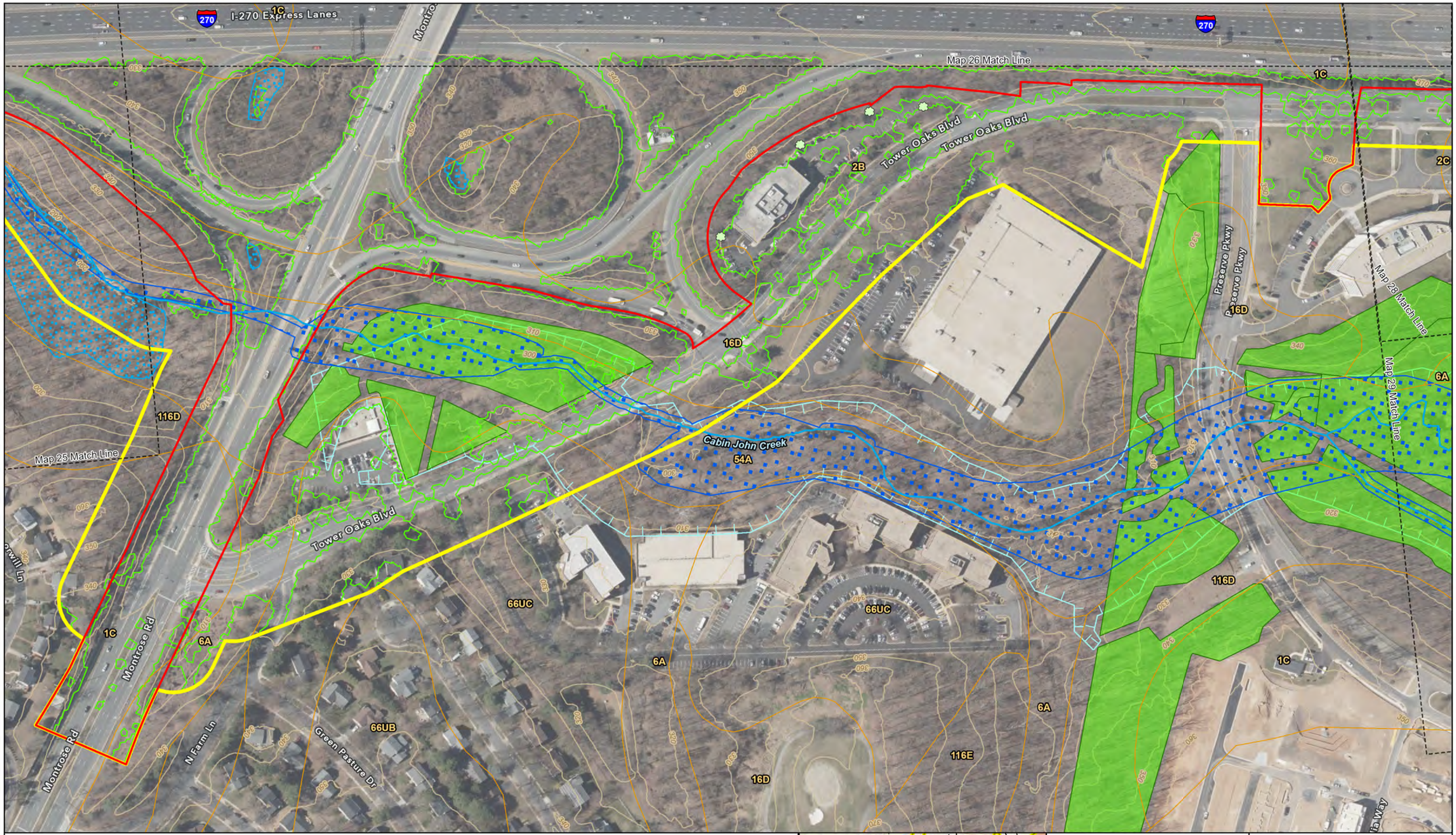


Natural Resources Inventory

1 in = 200 ft
Map 26 of 41
June 2022

270 / 495 MANAGED LANES STUDY



Legend

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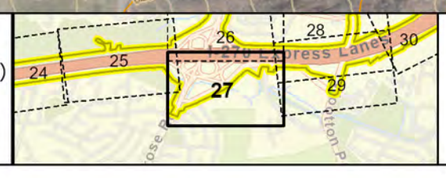
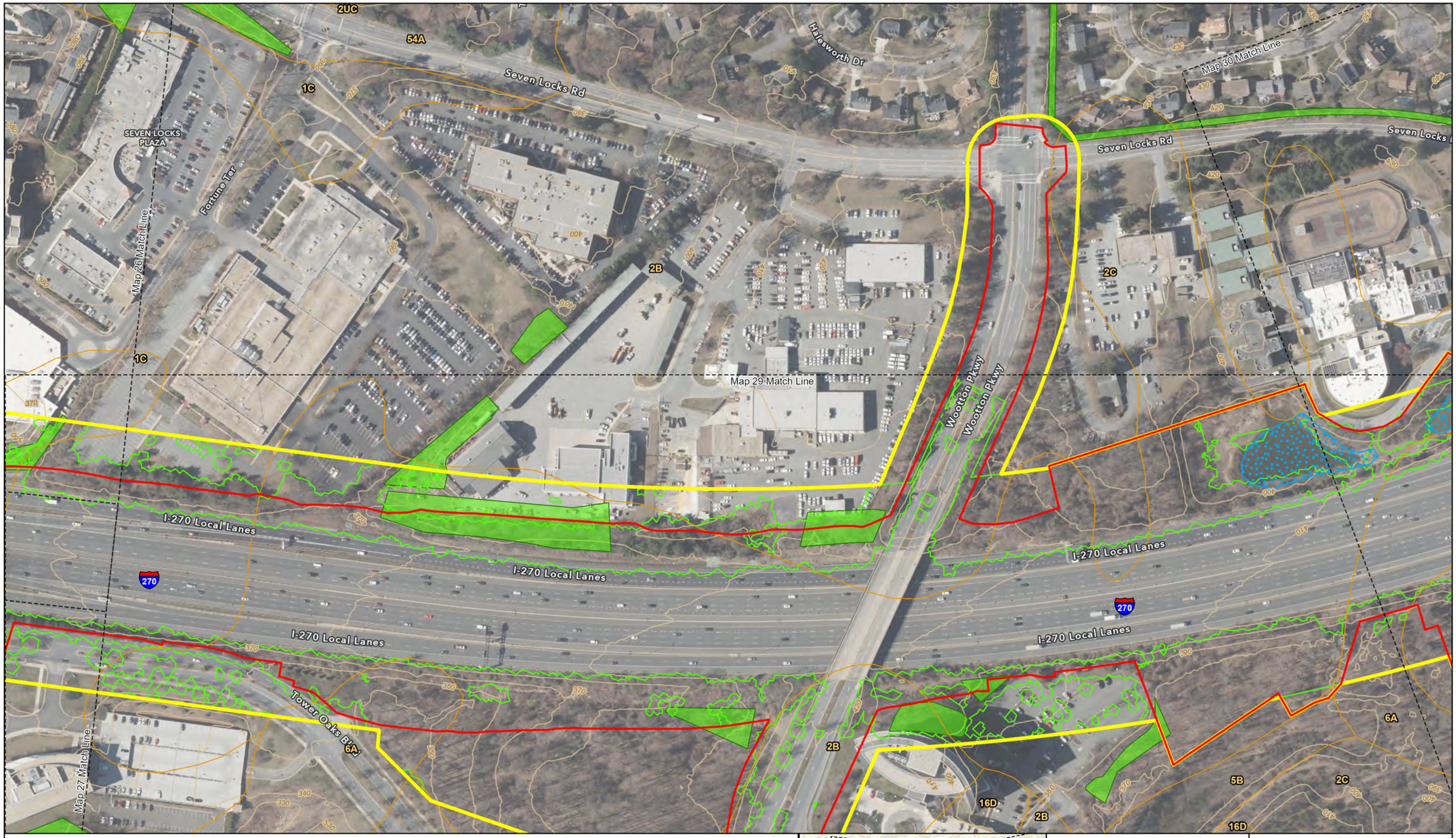


Natural Resources Inventory

1 in = 200 ft
Map 27 of 41
June 2022

270 / 495 MANAGED LANES STUDY



Legend

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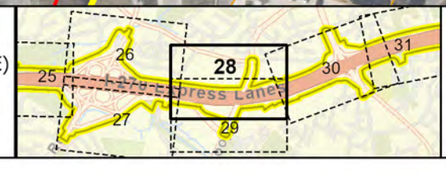

Natural Resources Inventory

1 in = 200 ft
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June 2022

I-270 & I-495 MANAGED LANES STUDY

I-270 Local Lanes

Map 26 Match Line

Map 27 Match Line

Map 28 Match Line

Tower Oaks Blvd

Wootton Pkwy

Cabin John Creek

The Villages At Tower Oaks

1C 2B 2C 6A 54A 116D 16D 5B

Legend

- LOD - Preferred Alternative
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- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 29 of 41
June 2022

270 495 MANAGED LANES STUDY

Cliffe Hill Way
Cliffe Hill Way
Seven Locks Rd
Seven Locks Rd
Map 28 Match Line
Map 29 Match Line
2C
2B
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
6A
270
Great Falls Rd
Great Falls Rd
Watts Branch Pkwy
Saddlebrook
66UB
Woodsend Pl
I-270 Local Lanes
I-270 Local Lanes
25C
6A
65B
Map 31 Match Line
JULIUS WEST MIDDLE SCHOOL
Great Falls Rd
MILLENIUM GARDEN PARK
Marcus Ct
2C
2C
Markwood

Legend

- LOD - Preferred Alternative
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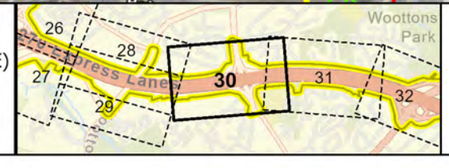
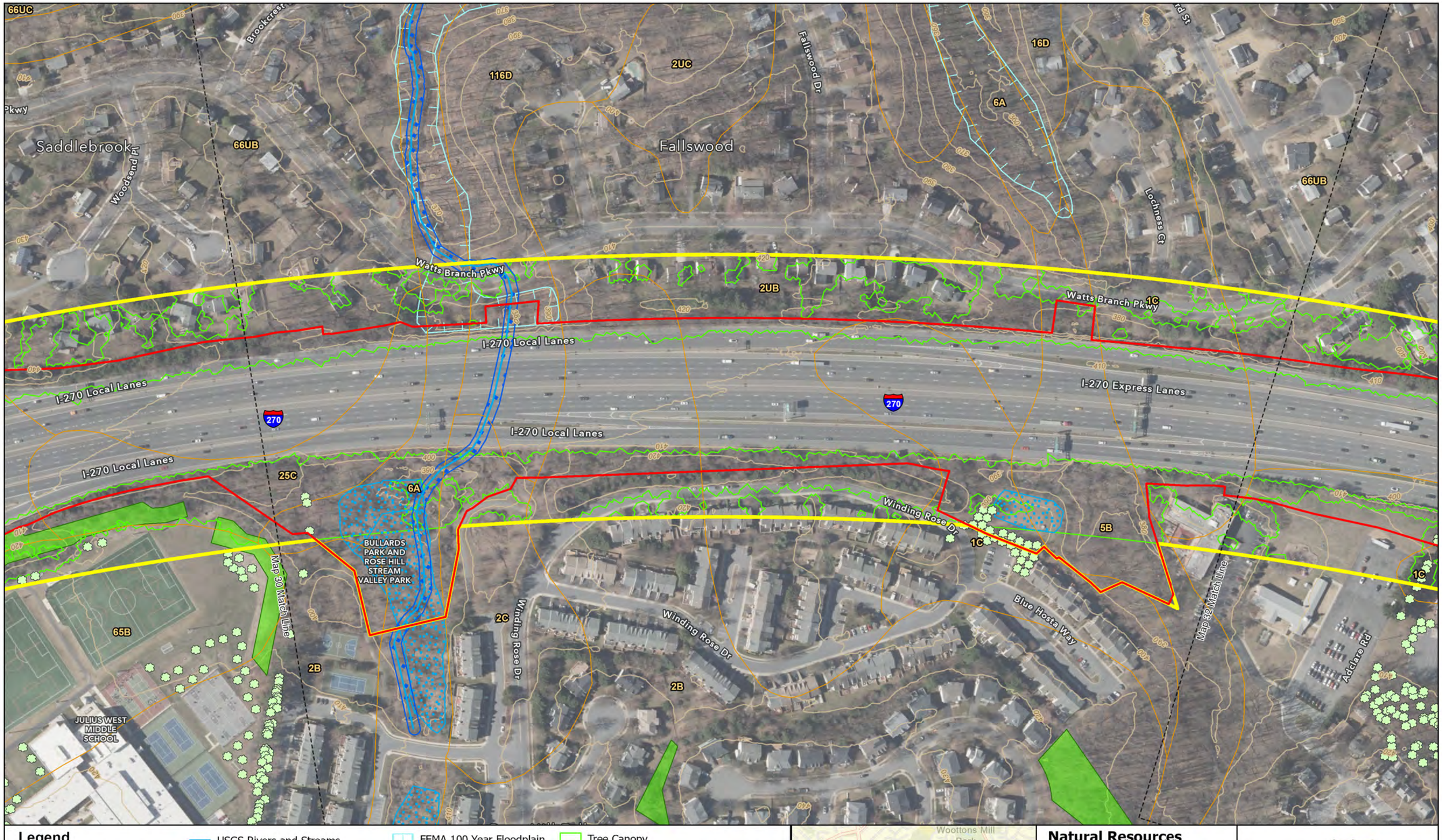


Natural Resources Inventory

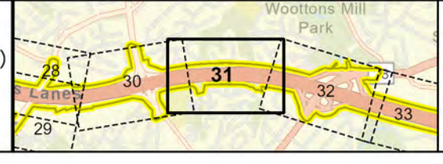
1 in = 200 ft
Map 30 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

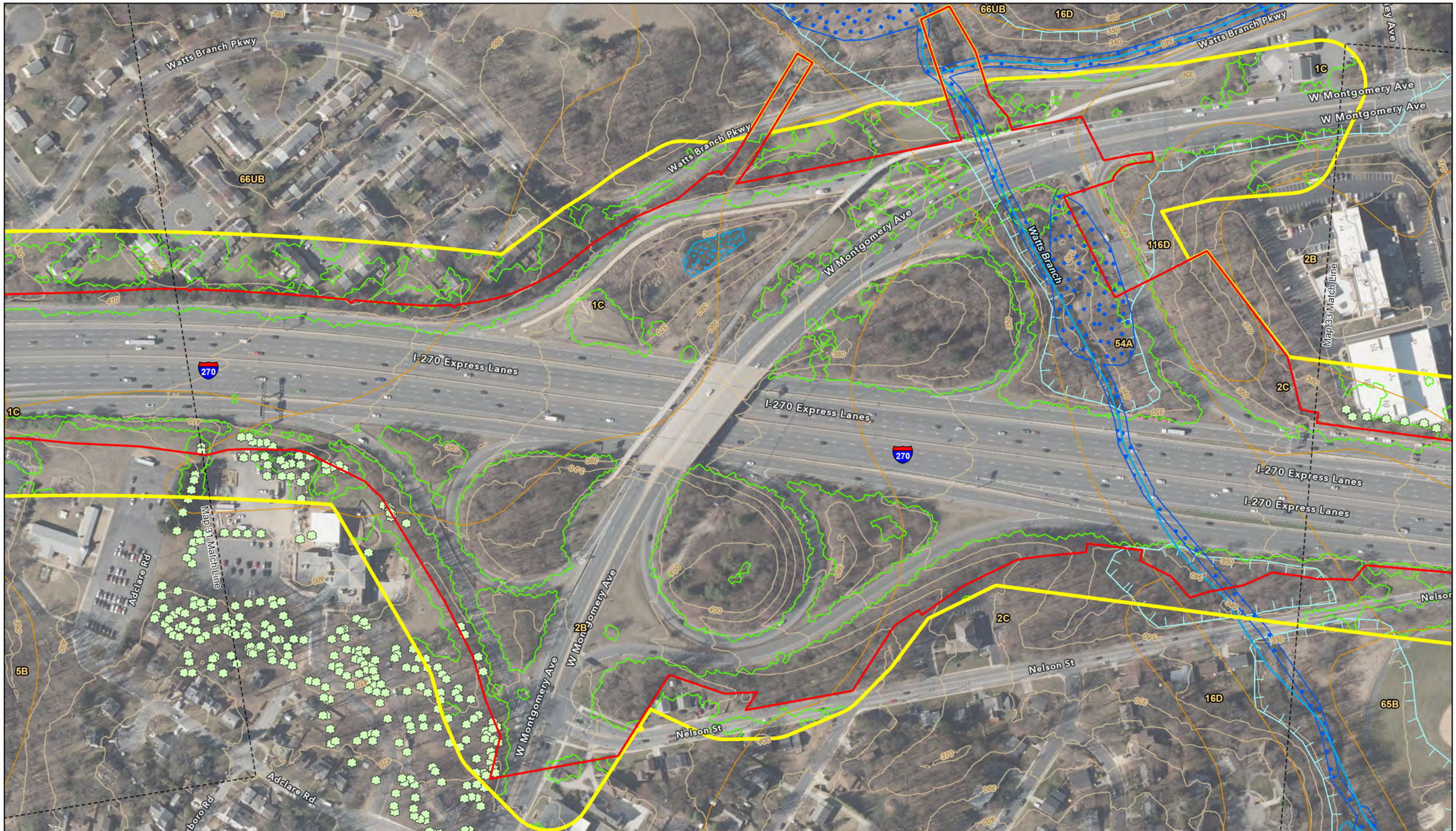
- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 31 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

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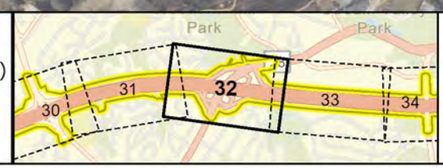
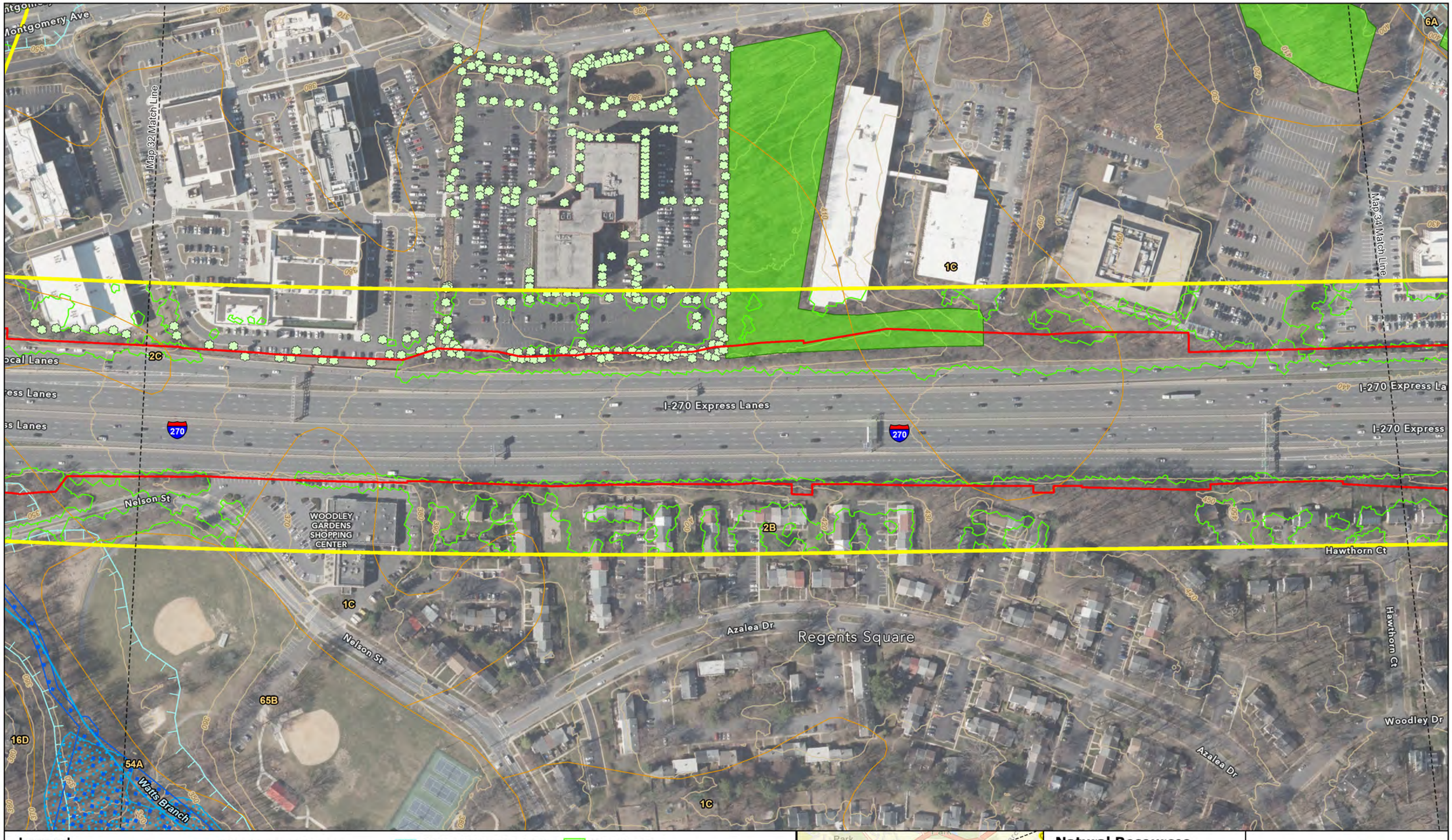


Natural Resources Inventory

1 in = 200 ft
Map 32 of 41
June 2022

270 495 MANAGED LANES STUDY



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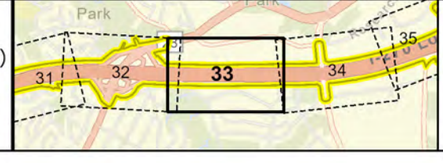
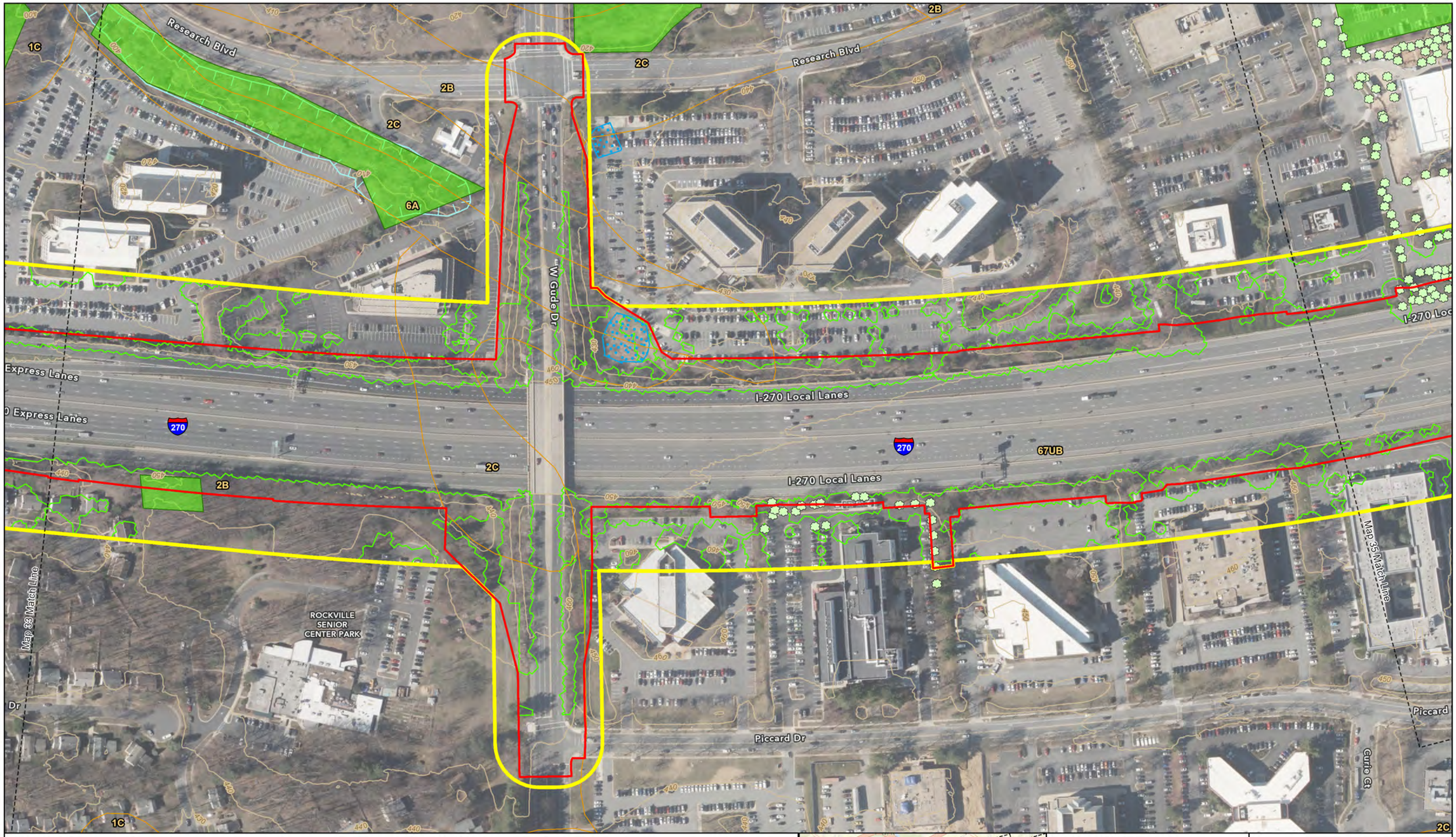


Natural Resources Inventory

1 in = 200 ft
Map 33 of 41
June 2022



Legend

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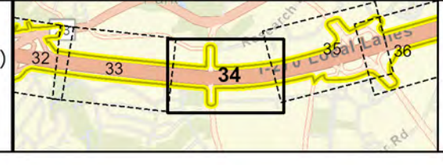
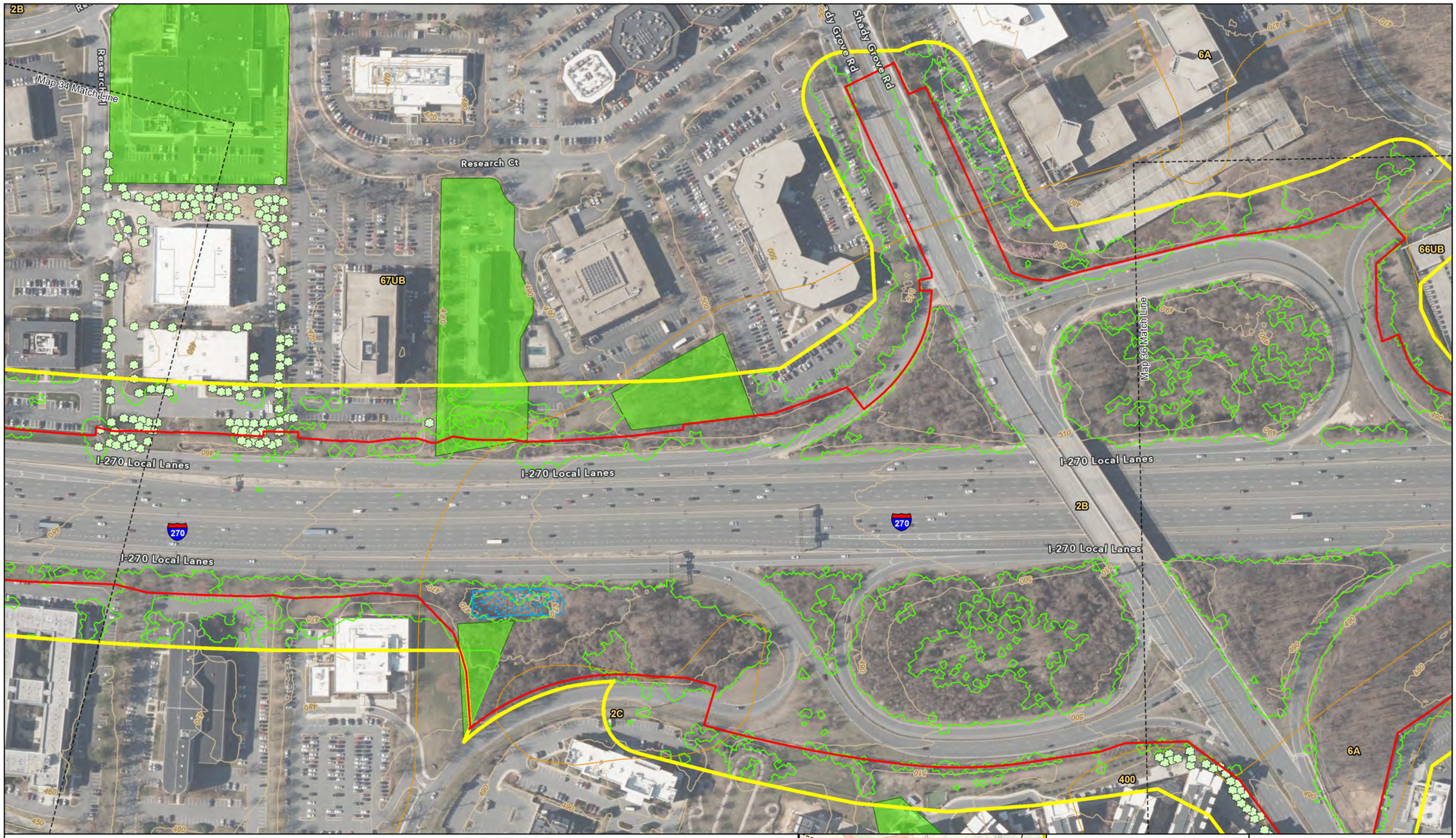


Natural Resources Inventory

1 in = 200 ft
Map 34 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

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- Forest Conservation Act Easements (FCE)
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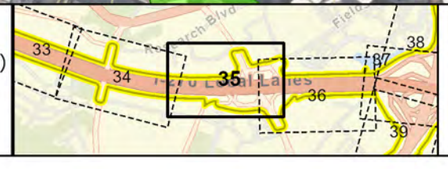
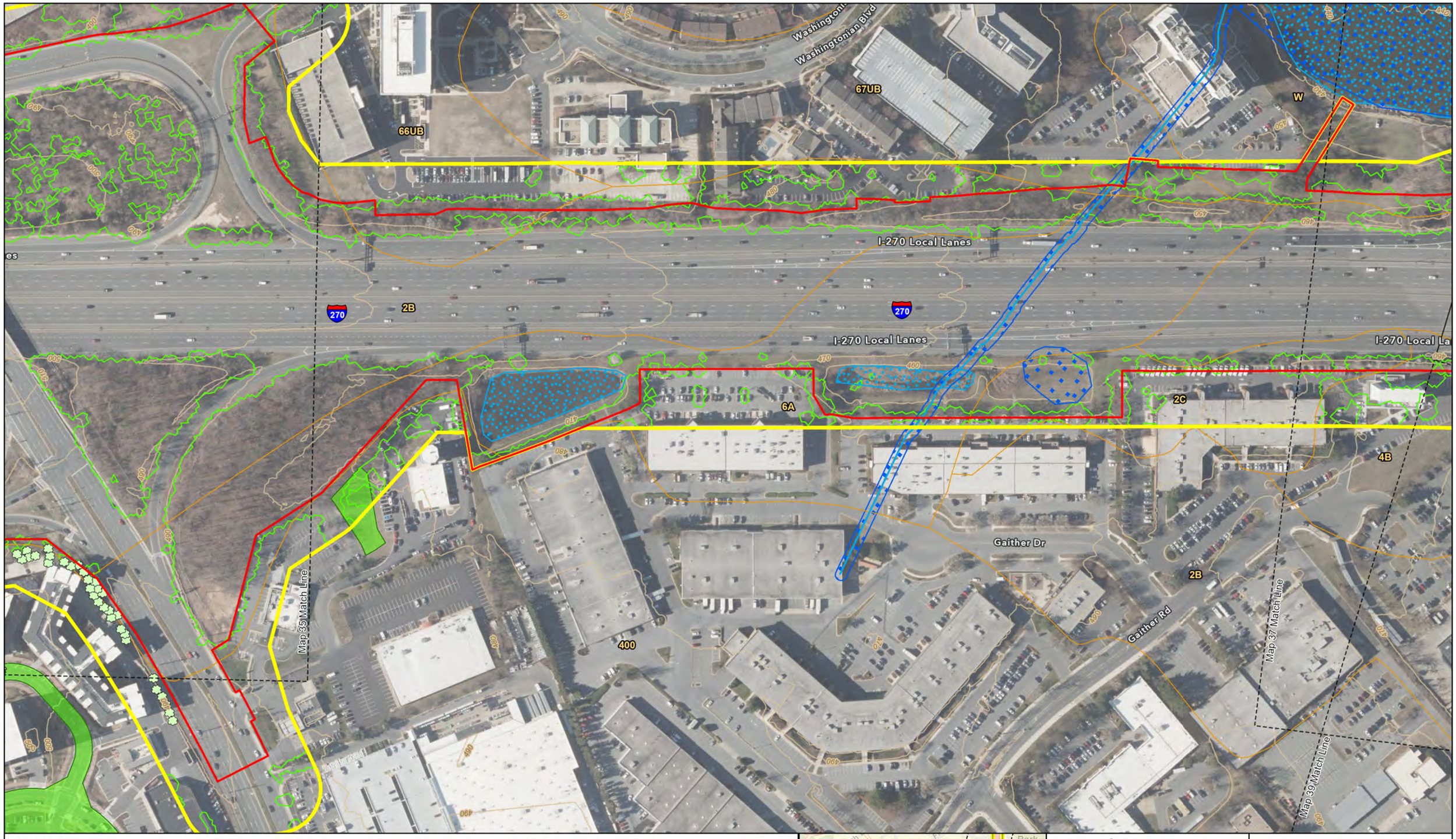


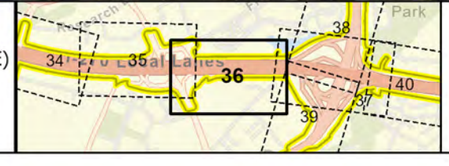
Natural Resources Inventory

1 in = 200 ft
Map 35 of 41
June 2022



Legend

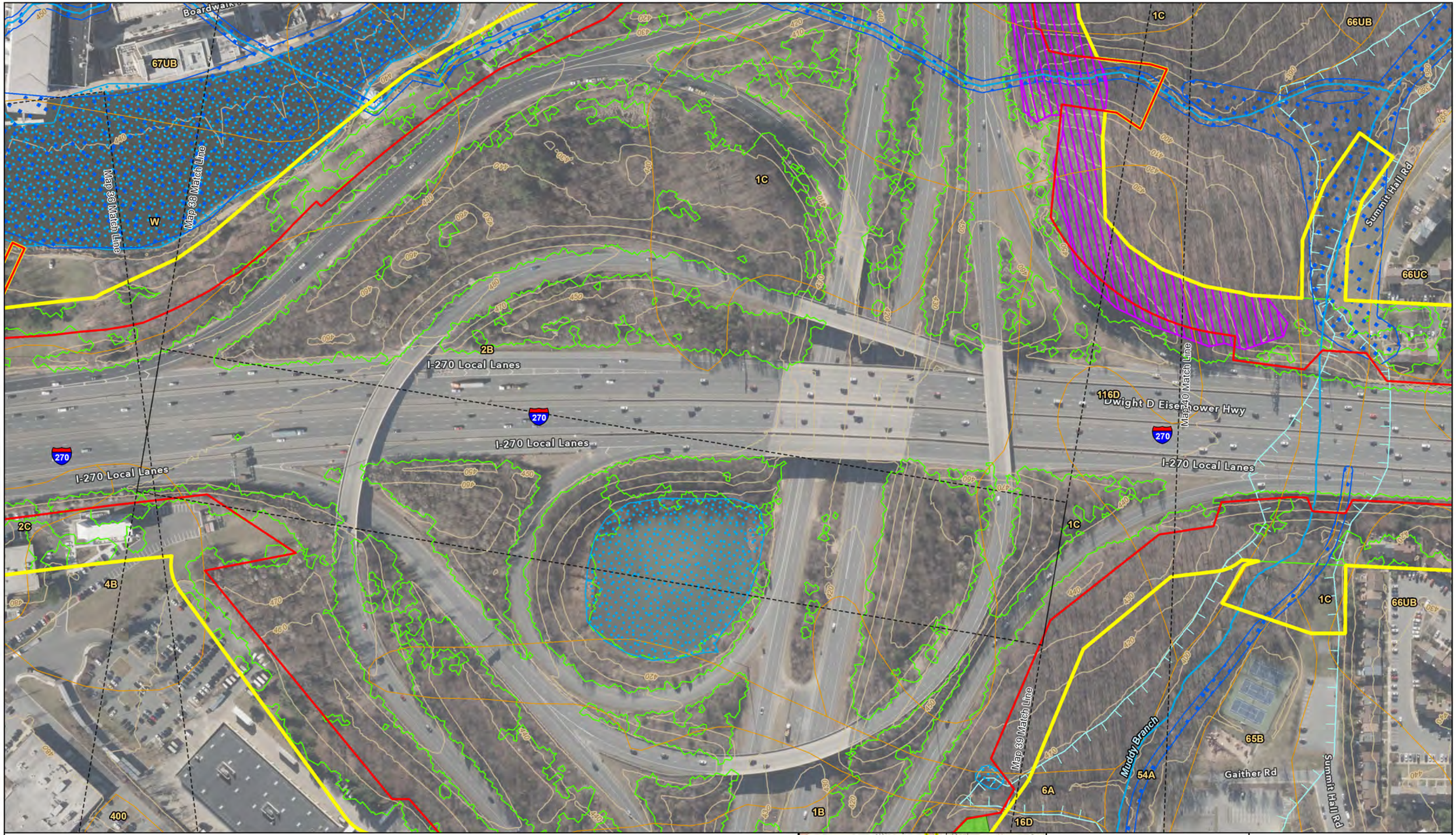
- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

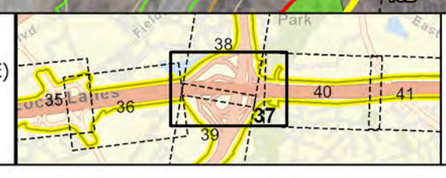
1 in = 200 ft
Map 36 of 41
June 2022

495 270 MANAGED LANES STUDY



Legend

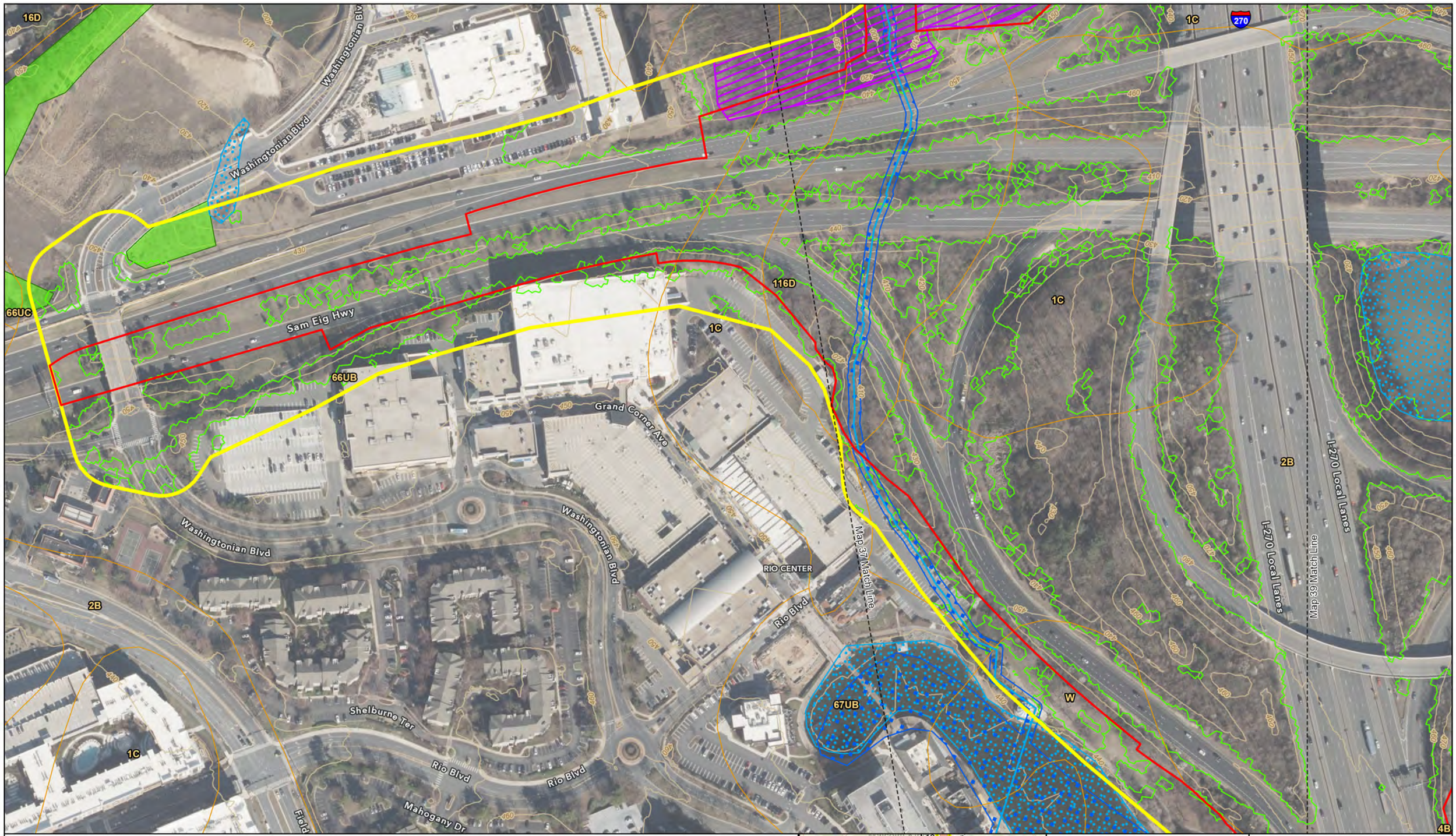
- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- 39B Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)



Natural Resources Inventory

1 in = 200 ft
Map 37 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

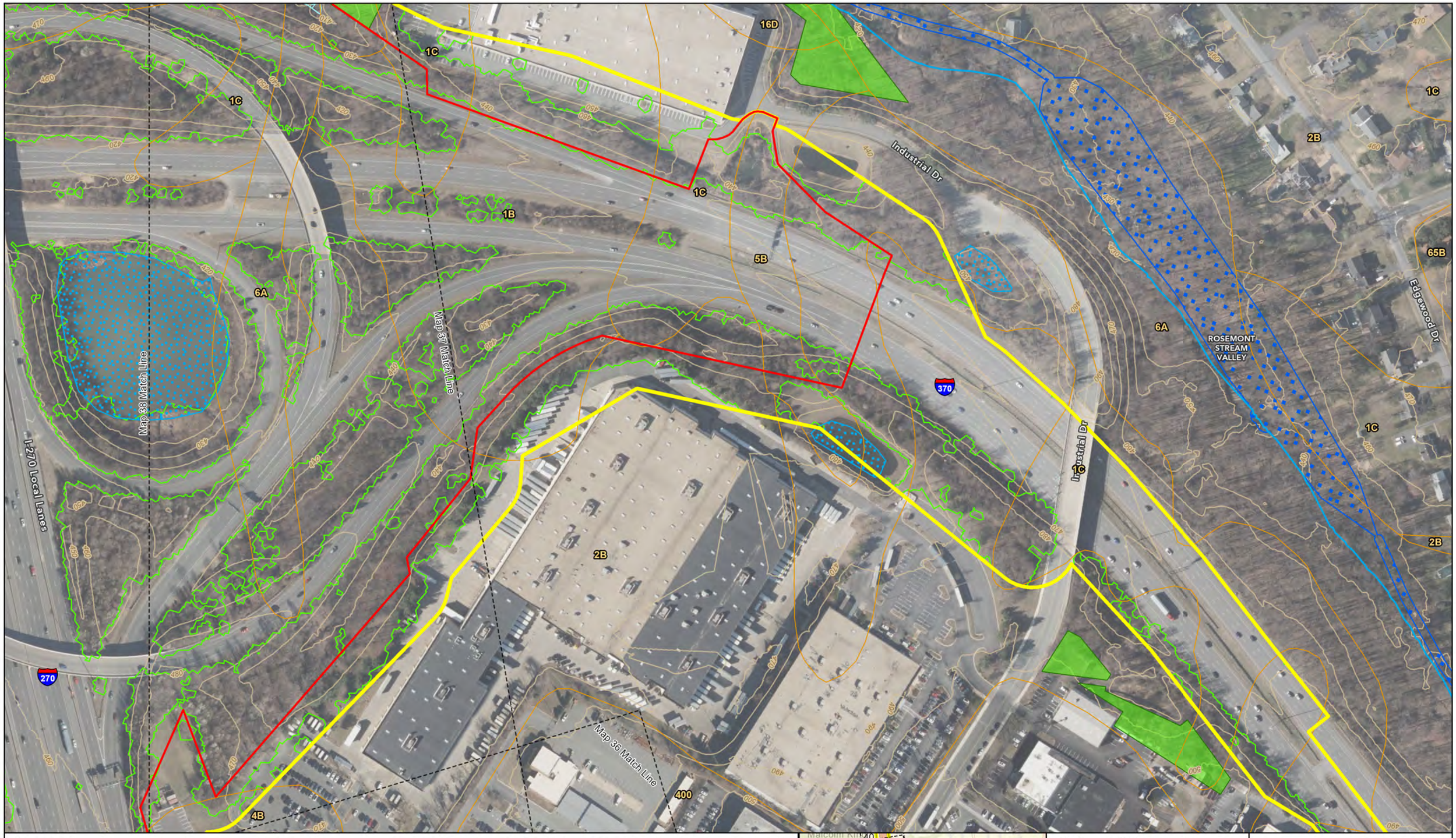
- LOD - Preferred Alternative
- Corridor Study Boundary
- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
- NWI Wetlands and Waterbodies
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- 393 Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 38 of 41
June 2022

N W E S

270 495 MANAGED LANES STUDY



Legend

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- Map Match Line
- USGS Rivers and Streams
- DNR Wetlands and Waterbodies
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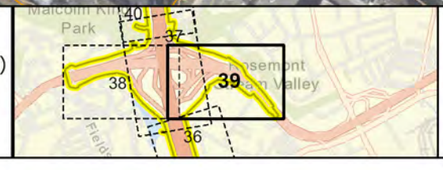
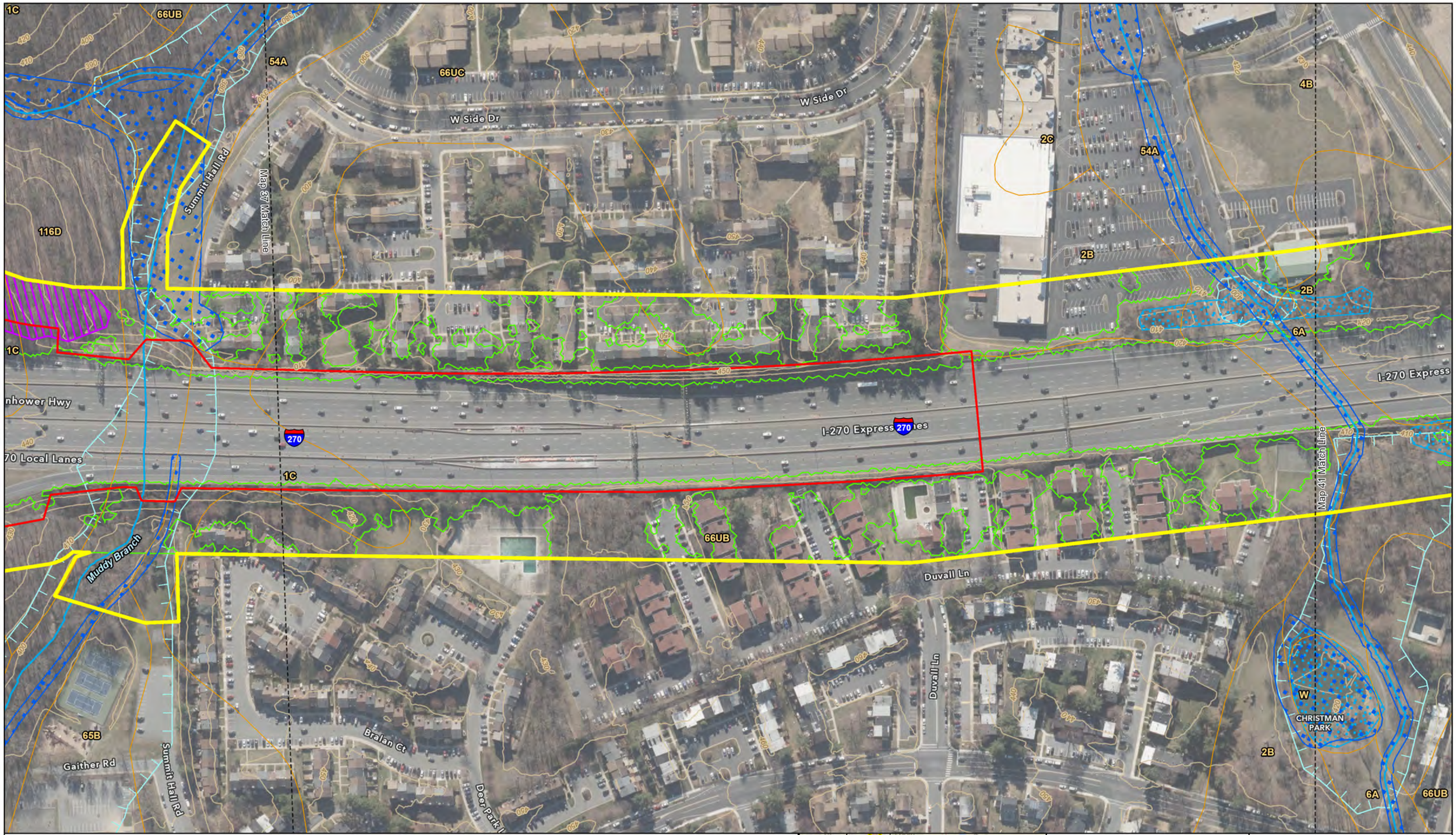


Natural Resources Inventory

1 in = 200 ft
Map 39 of 41
June 2022

N W E S

270 495 MANAGED LANES STUDY



Legend

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- DNR Wetlands and Waterbodies
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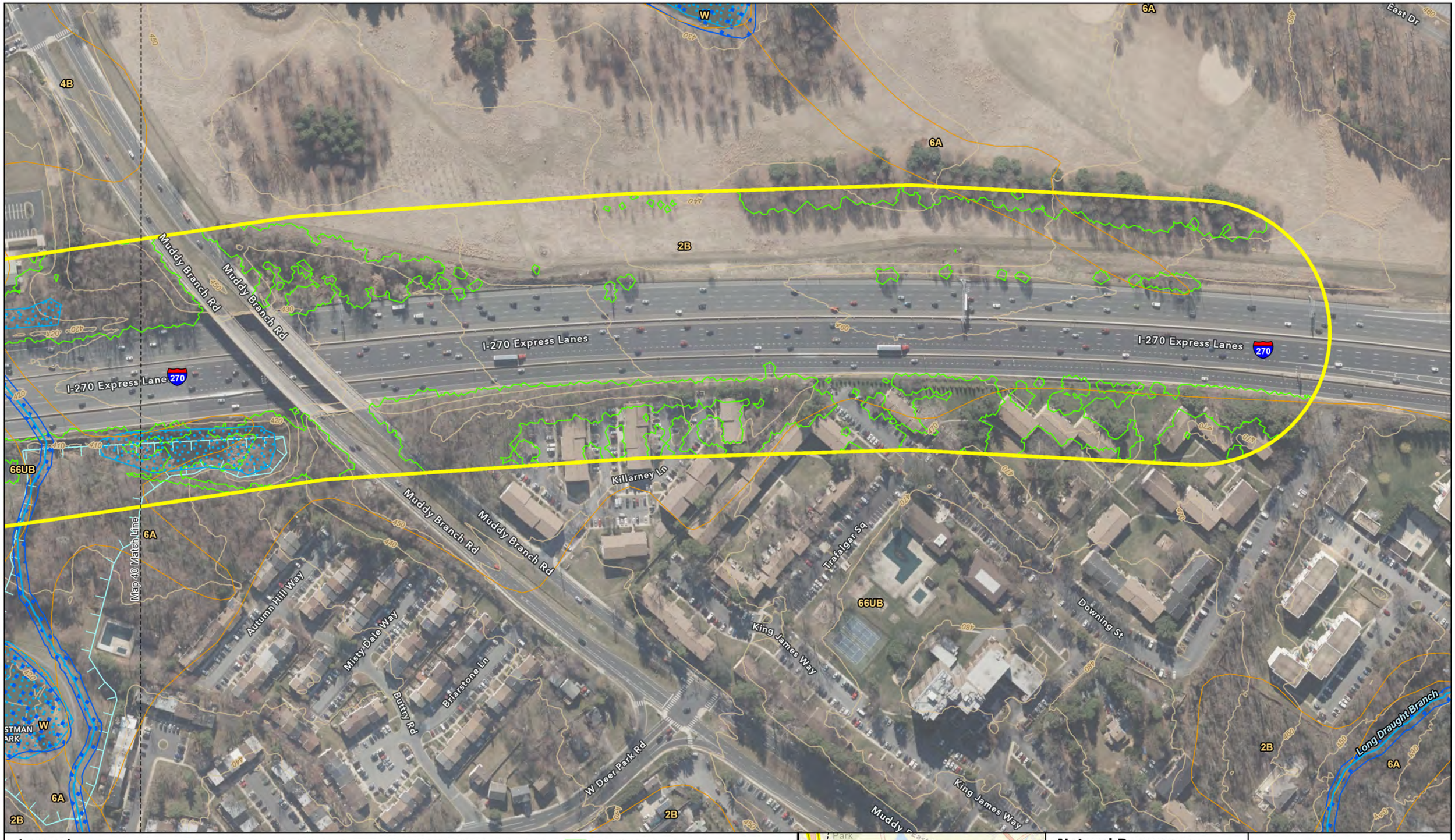
- Wetlands of Special State Concern
- FEMA 100 Year Floodplain
- 89B Soils
- Potential FIDS Habitat
- SSPRA
- Tree Canopy
- Forest Conservation Act Easements (FCE)
- FCE Individual Trees
- Contours (10 ft)

Natural Resources Inventory

1 in = 200 ft
Map 40 of 41
June 2022

270 495 MANAGED LANES STUDY



Legend

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- Map Match Line
- USGS Rivers and Streams
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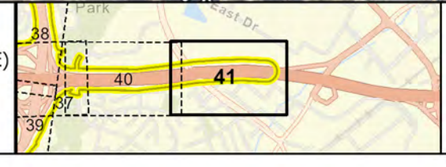


Natural Resources Inventory

1 in = 200 ft
Map 41 of 41
June 2022

270 495 MANAGED LANES STUDY

APPENDIX C: SOILS TABLE

Soils Within the I-495 & I-270 MLS Phase I South Limits

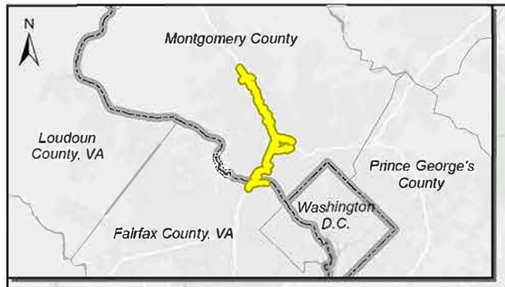
County	Soil Symbol	Description	K-Factor	Hydric Rating	Hydrologic Soil Group	Drainage Class	Prime Farmland?
Fairfax	95	Urban land	--	0	--	--	Not prime farmland
Fairfax	102	Wheaton loam, 2 to 25 percent slopes	0.37	0	C	Well drained	Not prime farmland
Fairfax	105B	Wheaton-Glenelg complex, 2 to 7 percent slopes	0.37	0	C	Well drained	Not prime farmland
Fairfax	105C	Wheaton-Glenelg complex, 7 to 15 percent slopes	0.37	0	C	Well drained	Not prime farmland
Fairfax	105D	Wheaton-Glenelg complex, 15 to 25 percent slopes	0.37	0	C	Well drained	Not prime farmland
Fairfax	39B	Glenelg silt loam, 2 to 7 percent slopes	0.37	0	B	Well drained	All areas are prime farmland
Fairfax	39C	Glenelg silt loam, 7 to 15 percent slopes	0.37	0	B	Well drained	Farmland of statewide importance
Fairfax	39D	Glenelg silt loam, 15 to 25 percent slopes	0.37	0	B	Well drained	Farmland of statewide importance
Fairfax	39E	Glenelg silt loam, 25 to 45 percent slopes	0.37	0	B	Well drained	Not prime farmland
Fairfax	78B	Meadowville loam, 2 to 7 percent slopes	0.2	0	A	Well drained	All areas are prime farmland
Fairfax	88E	Rhodhiss-Rock outcrop complex, 25 to 45 percent slopes	0.24	0	A	Well drained	Not prime farmland
Montgomery	300	Rock outcrop-Blocktown complex	--	0	--	--	Not prime farmland
Montgomery	400	Urban land	--	0	D	--	Not prime farmland

County	Soil Symbol	Description	K-Factor	Hydric Rating	Hydrologic Soil Group	Drainage Class	Prime Farmland?
Montgomery	116D	Blocktown channery silt loam, 15 to 25 percent slopes, very rocky	0.28	5	D	Well drained	Not prime farmland
Montgomery	116E	Blocktown channery silt loam, 25 to 45 percent slopes, very rocky	0.28	5	D	Well drained	Not prime farmland
Montgomery	16D	Brinklow-Blocktown channery silt loams, 15 to 25 percent slopes	0.24	5	C	Well drained	Not prime farmland
Montgomery	1B	Gaila silt loam, 3 to 8 percent slopes	0.43	5	B	Well drained	All areas are prime farmland
Montgomery	1C	Gaila silt loam, 8 to 15 percent slopes	0.43	5	B	Well drained	Farmland of statewide importance
Montgomery	25C	Legore silt loam, 8 to 15 percent slopes	--	0	C	Well drained	Farmland of statewide importance
Montgomery	27B	Neshaminy silt loam, 3 to 8 percent slopes	0.37	0	B	Well drained	All areas are prime farmland
Montgomery	28A	Watchung silty clay loam, 0 to 3 percent slopes	0.43	100	C/D	Poorly drained	Not prime farmland
Montgomery	2B	Glenelg silt loam, 3 to 8 percent slopes	0.37	0	B	Well drained	All areas are prime farmland
Montgomery	2C	Glenelg silt loam, 8 to 15 percent slopes	0.37	0	B	Well drained	Farmland of statewide importance
Montgomery	2UB	Glenelg-Urban land complex, 0 to 8 percent slopes	0.28	0	B	Well drained	Not prime farmland
Montgomery	2UC	Glenelg-Urban land complex, 8 to 15 percent slopes	0.28	0	B	Well drained	Not prime farmland

County	Soil Symbol	Description	K-Factor	Hydric Rating	Hydrologic Soil Group	Drainage Class	Prime Farmland?
Montgomery	35B	Chrome and Conowingo soils, 3 to 8 percent slopes	0.37	0	C	Well drained	Not prime farmland
Montgomery	37B	Travilah silt loam, 3 to 8 percent slopes	0.37	5	C/D	Somewhat poorly drained	Not prime farmland
Montgomery	41B	Elsinboro silt loam, 3 to 8 percent slopes	0.49	0	B	Well drained	All areas are prime farmland
Montgomery	43A	Elk silt loam, 0 to 3 percent slopes, occasionally flooded	0.49	0	B	Well drained	All areas are prime farmland
Montgomery	4B	Elioak silt loam, 3 to 8 percent slopes	0.37	0	C	Well drained	All areas are prime farmland
Montgomery	4C	Elioak silt loam, 8 to 15 percent slopes	0.37	0	C	Well drained	Farmland of statewide importance
Montgomery	53A	Codorus silt loam, 0 to 3 percent slopes, occasionally flooded	0.32	15	C	Moderately well drained	Not prime farmland
Montgomery	54A	Hatboro silt loam, 0 to 3 percent slopes, frequently flooded	--	100	B/D	Poorly drained	Not prime farmland
Montgomery	5B	Glenville silt loam, 3 to 8 percent slopes	0.37	10	C/D	Moderately well drained	All areas are prime farmland
Montgomery	65B	Wheaton silt loam, 0 to 8 percent slopes	0.43	0	B	Well drained	Farmland of statewide importance
Montgomery	66UB	Wheaton-Urban land complex, 0 to 8 percent slopes	0.43	5	B	Well drained	Not prime farmland
Montgomery	66UC	Wheaton-Urban land complex, 8 to 15 percent slopes	0.43	5	B	Well drained	Not prime farmland

County	Soil Symbol	Description	K-Factor	Hydric Rating	Hydrologic Soil Group	Drainage Class	Prime Farmland?
Montgomery	67UB	Urban land-Wheaton complex, 0 to 8 percent slopes	--	5	D	--	Not prime farmland
Montgomery	6A	Baile silt loam, 0 to 3 percent slopes	0.37	85	C/D	Poorly drained	Not prime farmland
Montgomery	7UB	Gaila-Urban land complex, 0 to 8 percent slopes	0.43	5	D	Well drained	Not prime farmland
Montgomery	7UC	Gaila-Urban land complex, 8 to 15 percent slopes	0.43	5	D	Well drained	Not prime farmland
Montgomery	W	Water	--	0	--	--	Not prime farmland

APPENDIX D: OVERVIEW AND KEY MAPS



Montgomery County, MD

Prince George's County, MD

Fairfax County, VA

Washington, D.C.

LEGEND

- Phase 1 South Portion of the Corridor Study Boundary
- Map Sheet
- State Boundary
- County Boundary

0 0.5 1 2 Miles

June 2022

Overview Map

270 495 MANAGED LANES STUDY

SUBSEGMENT 29
SUBSEGMENT 27
SUBSEGMENT 28
SUBSEGMENT 26
SUBSEGMENT 25
SUBSEGMENT 23
SUBSEGMENT 24
SUBSEGMENT 23
SUBSEGMENT 19
SUBSEGMENT 21
SUBSEGMENT 20
SUBSEGMENT 22

370
270
270
495
495
495
29

Montgomery County, MD
Fairfax County, VA
Potomac
Washington, D.C.
Prince George's County, MD

LEGEND

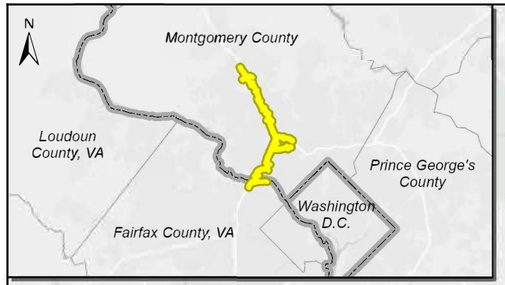
Phase 1 South Portion of the Corridor Study Boundary
Field Subsegment Break
State Boundary
County Boundary

0 0.5 1 2 Miles

June 2022

Delineation Subsegment Overview Map

270 495 MANAGED LANES STUDY



Washington Metropolitan (021402)

Montgomery County, MD

Prince George's County, MD

Fairfax County, VA

Washington, D.C.

LEGEND

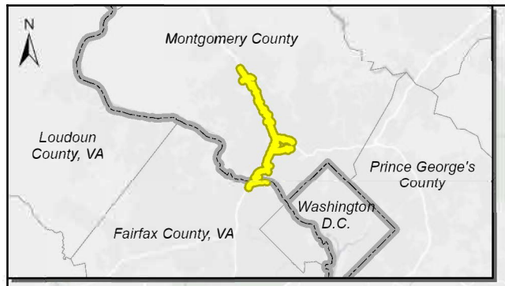
- Phase 1 South Portion of the Corridor Study Boundary
- State Boundary
- County Boundary
- MDE 6-Digit Watershed Boundary

0 0.5 1 2 Miles

June 2022

MDE 6-Digit Watersheds

I-270 / I-495 MANAGED LANES STUDY



Potomac River Montgomery County (02140202)

Rock Creek (02140206)

Cabin John Creek (02140207)

Montgomery County, MD

Prince George's County, MD

Fairfax County, VA

Washington, D.C.

LEGEND

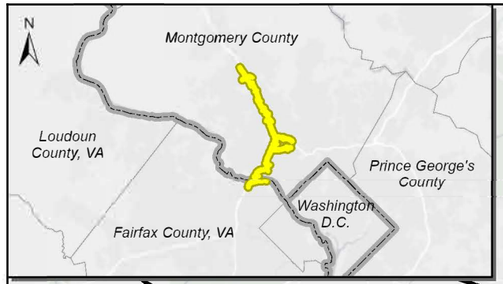
- Phase 1 South Portion of the Corridor Study Boundary
- State Boundary
- County Boundary
- MDE 8-Digit Watershed Boundary

0 0.5 1 2 Miles

June 2022

MDE 8-Digit Watersheds

I-270 / I-495 MANAGED LANES STUDY



Muddy Branch (021402020848)

Watts Branch (021402020846)

Cabin John Creek (021402070841)

Potomac River/Rock Run (021402020845)

Rock Creek (021402060836)

Montgomery County, MD

Prince George's County, MD

Fairfax County, VA

Washington, D.C.

LEGEND

- Phase 1 South Portion of the Corridor Study Boundary
- State Boundary
- County Boundary
- MDNR 12-Digit Watershed Boundary

0 0.5 1 2 Miles

June 2022

MDNR 12-Digit Watersheds

270 495 MANAGED LANES STUDY

APPENDIX E: DELINEATED FEATURES TABLE

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
Subsegment 19									
19J_1	W157M	Perennial	Waterway 19J is a perennial channel located east of the I-495/MD 187 interchange that flows northeast into a culvert under I-495 and out of the study area.	-	Silt, sand, gravel, muck Width: 3-15 ft Depth: 2-12 in	Right: forest, shrubs Left: forest, dense bamboo	Yes	Yes	No
19J_2							Yes	Yes	No
19J_C							Yes	Yes	No
19J_C1							Yes	Yes	No
Subsegment 20									
20B	-	Intermittent	Waterway 20B is an intermittent channel located south of the I-495 inner loop that originates at a 2-foot culvert under I-495 and flows southwest out of the study area through another 2-foot pipe.	-	Silt, cobble, gravel, riprap Width: 5 ft Depth: 3 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
20C	-	Perennial	Waterway 20C begins as an intermittent culvert and transitions to a perennial channel located south of the I-495 inner loop and east of Greentree Road that flows south through a 4-foot culvert and converges with Waterway 20D.	-	Silt, cobble, sand, gravel Width: 1-3 ft Depth: 6 in	Right: Scrub-shrub Left: Scrub-shrub	Yes	Yes	No
20C_C	-	Intermittent					Yes	Yes	No
20D	-	Perennial	Waterway 20D is a perennial channel located south of I-495 and east of Greentree Road that flows north from outside of the study area and converges with Waterway 20C at a 4-foot culvert.	-	Silt, sand, gravel, concrete Width: 5 ft Depth: 6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
20D_C							Yes	Yes	No
20E	-	Intermittent	Waterway 20E is an intermittent channel located south of the I-495 inner loop and north of Newbold Drive that flows south from a culvert under I-495 into a 2-foot pipe.	-	Silt, sand, gravel, riprap Width: 3 ft Depth: 2 ft	Right: bamboo hedgerow Left: bamboo hedgerow	Yes	Yes	No
20F_C	-	Perennial	Waterway 20F_C is a perennial culvert located underneath the southern spur of the I-270/I-495 interchange, west of Old Georgetown Rd (MD-187). Waterways upstream and downstream of 20F_C are underground and non-jurisdictional.	-	Concrete Width: 6.5 ft Depth: 3 in	Right: pipe/concrete Left: pipe/concrete	Yes	Yes	No
Subsegment 21									
21B	W148M	Perennial	Waterway 21B is a perennial channel located east of the I-495 inner loop and west of Longwood Drive that flows west under I-495 into Waterway 21J. Waterway 21B flows through subsegments 20 and 21.	-	Mud Width: 6 ft Depth: Unknown	Right: forest Left: forest	Yes	Yes	No
21B_C							Yes	Yes	No
21C	W103M	Perennial	Waterway 21C is a perennial channel known as Thomas Branch that flows south parallel to the I-270 spur and the I-495 outer loop and into Cabin John Creek.	-	Silt, sand, cobble Width: 15-30 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
21C_1	W142M						Yes	Yes	No
21C_2	W109M						Yes	Yes	No
21C_C	W142M						Yes	Yes	No
21C_C1	W142M						Yes	Yes	No
21C_C2	W109M						Yes	Yes	No
21D	-	Intermittent	Waterway 21D is an intermittent channel that originates in the northeast cloverleaf of the MD 195/I-495 interchange and flows through a 3-foot pipe under I-495 in the northwest cloverleaf of the same interchange, under a ramp, and into Waterway 21C.	-	Concrete, silt, sand Width: 1-3 ft Depth: 6 in	Right: scrub-shrub and meadow grasses Left: hedgerow and scrub-shrub	Yes	Yes	No
21D_1	W110M (downstream)						Yes	Yes	No
21D_C	-						Yes	Yes	No
21D_C1	W110M (downstream)						Yes	Yes	No
21F	-	Intermittent	Waterway 21F is an intermittent channel that originates east of I-495 south of the terminus of Cindy Lane and flows southeast under I-495 into Waterway 21C.	-	Silt, sand, cobble, gravel, riprap Width: 5-8 ft Depth: 8 in	Right: forest Left: forest	Yes	Yes	No
21F_C							Yes	Yes	No
21G	-	Intermittent	Waterway 21G is an intermittent channel located east of the I-495 inner loop, north of the MD 195/I-495 interchange that flows west into Waterway 21C.	-	Silt, concrete, riprap Width: 2-5 ft Depth: 3 in	Right: forest Left: forest	Yes	Yes	No
21H	-	Ephemeral	Waterway 21H is an ephemeral channel located east of the I-495 inner loop and southwest of the terminus of Arrowood Road that flows west into Waterway 21C.	-	Silt, cobble, gravel, concrete Width: 4 ft Depth: 1 ft	Right: scrub-shrub Left: scrub-shrub	Yes	No	No
21I	-	Perennial	Waterway 21I is a perennial channel located northwest of the I-495/I-270 split that flows west into Waterway 21C. Channel substrate consists of silt, sand, and gravel.	-	Silt, sand, gravel Width: 5-7 ft Depth: 3 in	Right: hedgerow Left: hedgerow	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
21J	-	Perennial	Waterway 21J is a perennial channel located west of the I-495 outer loop and north of MD 191 that flows west into Waterway 21C.	-	Silt, sand, gravel, riprap Width: 10-20 ft Depth: 2-6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
21K	-	Intermittent	Waterway 21K is an intermittent channel located west of the I-495 outer loop and north of MD 191 that flows west into Waterway 21C.	-	Silt, sand, cobble, gravel, placed stone Width: 1-12 ft Depth: 0.5-1.5 ft	Right: hedgerow Left: hedgerow	Yes	Yes	No
21L_C	-	Perennial	Waterway 21L_D is a perennial ditch that originates east of the I-495 inner loop southwest of Kittery Lane and flows west under I -495 and into Waterway 21C.	-	Silt, sand, cobble, gravel, riprap Width: 4-6 ft Depth: 1-8 in	Right: herbaceous vegetation Left: herbaceous vegetation	Yes	Yes	No
21L_D							Yes	Yes	No
21L_D1							Yes	Yes	No
21M	-	Intermittent	Waterway 21M is an intermittent channel located west of the I-495 outer loop and east of Groton Road that flows east into Waterway 21C.	-	Concrete Width: 1-4 ft Depth: 0.5 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
21P	-	PFO	Wetland 21P a PFO located east of the I-495 inner loop and west of the terminus of Arrowood Court in the floodplain of Waterway 21C.	Red maple (*Acer rubrum*) Northern spicebush (*Lindera benzoin*) Sweet wood-reed (*Cinna arundinacea*) Green ash (*Fraxinus pennsylvanica*) River-bank grape (*Vitis riparia*)	-	-	Yes	Yes	No
21Q	-	PFO	Wetland 21Q is a PFO located east of the I-495 inner loop and southwest of the terminus of Arrowood Court in the floodplain of Waterway 21C.	American elm (*Ulmus americana*) Red maple Northern spicebush Lizard's-tail (*Saururus cernuus*)	-	-	Yes	Yes	No
21R	-	Ephemeral	Waterway 21R is an ephemeral channel located east of the I-495 inner loop and southwest of the terminus of Arrowood Road that drains uplands and flows west into Waterway 21H.	-	Silt, cobble, gravel Width: 3-8 ft Depth: 4-8 in	Right: forest Left: forest	Yes	No	No
21T	-	PFO	Wetland 21T is a PFO located east of the I-495 inner loop and northwest of the terminus of Arrowood Court on a terrace in the floodplain of Waterway 21C.	American sycamore (*Platanus occidentalis*) Red maple Bristly lady's-thumb (*Persicaria longiseta*) Winter creeper (*Euonymus fortunei*) Curly dock (*Rumex crispus*) Japanese stilt grass (*Microstegium vimineum*)	-	-	Yes	Yes	No
21U	-	Perennial	Waterway 21U is a perennial channel located east of the I-495 inner loop and west of Armat Drive that flows west from a culvert into Waterway 21B.	-	Silt, sand, cobble, gravel, riprap Width: 5-15 ft Depth: 3-6 in	Right: forest Left: forest	Yes	Yes	No
21V	-	Intermittent	Waterway 21V is an intermittent channel located west of the I-495 outer loop and north of Bradley Boulevard that flows east from outside of the study area into Waterway 21C.	-	Silt, sand, cobble, gravel Width: 4-6 ft Depth: 3-6 in	Right: forest Left: forest	Yes	Yes	No
Subsegment 22									
22A	-	Intermittent	Waterway 22A is an intermittent channel located within the southwest cloverleaf of the MD 195/I-495 interchange that flows south through a 3-foot concrete pipe into Waterway 22C.	-	Concrete Width: 3 ft Depth: 6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
22A_C							Yes	Yes	No
22AA	W111M	Perennial	Waterway 22AA is a perennial channel known as Cabin John Creek that flows south under I-495 west of Cabin John Parkway and east of Seven Locks Road.	-	Silt, sand, cobble, bedrock Width: 30 ft Depth: 10 in	Right: forest Left: forest	Yes	Yes	No
22AA_1							Yes	Yes	No
22AA_2							Yes	Yes	No
22AA_3							Yes	Yes	No
22AA_B							Yes	Yes	No
22AA_B1							Yes	Yes	No
22AAA	WOUS SK	Perennial	Waterway 22AAA is a perennial channel located within the Capital Beltway/George Washington Memorial Parkway interchange.	-	Silt, sand, gravel, cobble, boulder Width: N/A Depth: N/A	Right: forest Left: forest	Yes	No	Yes
22AAA_C							Yes	No	Yes

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
22B	-	Intermittent	Waterway 22B is an intermittent channel located west of the I-495 outer loop south of the MD 195/I-495 interchange that flows west into Waterway 22C.	-	Riprap Width: 3 ft Depth: 6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
22BB	-	Ephemeral	Waterway 22BB is an ephemeral channel located north of the I-495 outer loop and south of Thornley Court that flows east into Waterway 22CC.	-	Silt, cobble, sand, gravel Width: 1-4 ft Depth 0-4 in	Right: forest Left: forest	Yes	No	No
22BBB	SP	PFO	Wetland 22BBB is a PFO located east of the I-495 inner loop that abuts Waterway 22ZZ.	Red maple Green ash Northern spicebush Japanese stilt grass	-	-	Yes	No	Yes
22C	-	Intermittent	Waterway 22C is an intermittent channel located west of the I-495 outer loop south of the MD 195/I-495 interchange that flows west into a 3-foot concrete pipe and into Waterway 22D.	-	Riprap Width: 3 ft Depth: 6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
22C_C							Yes	Yes	No
22CC	-	Ephemeral	Waterway 22CC is an ephemeral channel located north of the I-495 outer loop and south of Thornley Court that flows northeast under Seven Locks Road into Waterway 22DD.	-	Silt, cobble, sand, gravel, concrete Width: 2- 6 ft Depth: 1-6 in	Right: forest Left: forest	Yes	No	No
22CC_1							Yes	No	No
22CC_C							Yes	No	No
22CCC	-	PFO	Wetland is a PFO located southwest of the I-495/Clara Barton Parkway interchange adjacent to Wetland 22W.	Red maple Green ash Northern spicebush Rambler rose (*Rosa multiflora*) Common pawpaw (*Asimina triloba*) Japanese stiltgrass Sweet wood-reed Horsebrier (*Smilax rotundifolia*) Japanese honeysuckle (*Lonicera japonica*)	-	-	Yes	Yes	No
22D	-	Intermittent	Waterway 22D is an intermittent channel located west of the I-495 outer loop south of the MD 195/I-495 interchange that flows west under a concrete liner into Waterway 22E.	-	Concrete Width: 2 ft Depth: 1 in	Right: hedgerow Left: forest	Yes	Yes	No
22DD	-	Intermittent	Waterway 22DD is an intermittent channel located north of the I-495 outer loop and east of Thornley Court that flows east under Seven Locks Road and then north into Waterway 22AA.	-	Silt, cobble, sand, gravel, concrete Width: 2-8 ft Depth: 1-12 in	Right: forest Left: forest	Yes	Yes	No
22DD_C							Yes	Yes	No
22DDD	-	Perennial	Waterway 22DDD is a perennial channel located east of the I-495 inner loop and flows south to north under George Washington Memorial Parkway and into the Potomac River outside of the corridor study boundary.	-	Silt, cobble, sand, gravel Width: 20-50 ft Depth: 2+ ft	Right: forest Left: forest	Yes	No	Yes
22E	01-B	PEM	Wetland 22E is a PEM located northwest of the I-495 outer loop and southwest of the intersection of Eggert Road and Persimmon Tree Road.	Wand panic grass (*Panicum virgatum*) Rough barnyard grass (*Echinochloa muricata*)	-	-	No	Yes	No
22EE	-	Ephemeral	Waterway 22EE is an ephemeral channel located north of the I-495 outer loop and south of Thornley Court that flows north into Waterway 22CC.	-	Silt, sand, concrete Width: 4-10 ft Depth: 0-4 in	Right: forest Left: forest	Yes	No	No
22F	01-L	PEM	Wetland 22F is a PEM located in the median of Cabin John Parkway, south of I-495, that abuts Waterway 22H.	Marsh primrose-willow (*Ludwigia palustris*) Small carp grass (*Arthraxon hispidus*)	-	-	Yes	Yes	No
22FF	-	Ephemeral	Waterway 22FF is an ephemeral channel located south of the I-495 inner loop and northwest of the terminus of Cypress Grove Lane that flows south out of the study area.	-	Silt, sand, gravel Width: 3-5 ft Depth: 0-6 in	Right: forest Left: forest	Yes	No	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
22G	01-K	PFO	Wetland 22G is a PFO located in the median of Cabin John Parkway, south of I-495, that abuts Waterway 22H.	Black willow (*Salix nigra*) Green ash Rambler rose Red maple Lamp rush Crow garlic (*Allium vineale*) Japanese honeysuckle	-	-	Yes	Yes	No
22GG	01-O	PEM	Wetland 22GG is a PEM located east of Cabin John Parkway and south of the I-495 inner loop.	Red maple Pin oak (*Quercus palustris*) Lamp rush Wand panic grass	-	-	Yes	Yes	No
22H	01-M	Intermittent	Waterway 22H is an intermittent channel located within the median of Cabin John Parkway, south of I-495, that flows west through a culvert under Cabin John Parkway into Waterway 22AA.	-	Concrete Width: 2-4 ft Depth: 1-8 in	Right: forest Left: emergent vegetation, mowed lawn	Yes	Yes	No
22H_1							Yes	Yes	No
22H_C							Yes	Yes	No
22HH	01-C	Intermittent	Waterway 22HH is an intermittent channel located west of the I-495 outer loop and north of MacArthur Boulevard that flows south into Waterway 22N.	-	Sand, gravel, concrete Width: 5 ft Depth: 3-5 in	Right: forest Left: forest	Yes	Yes	No
22HH_1							Yes	Yes	No
22HH_2							Yes	Yes	No
22HH_C							Yes	Yes	No
22I	01-G	PFO	Wetland 22I is a PFO located north of Clara Barton Parkway and west of I-495 that abuts Waterway 22J.	Swamp white oak (*Quercus bicolor*) Red maple Chinese privet (*Ligustrum sinense*) Smooth blackhaw (*Viburnum prunifolium*) Sweet wood-reed Japanese honeysuckle Horsebrier	-	-	Yes	Yes	No
22II	-	PFO	Wetland 22II is a PFO located west of the I-495 outer loop and southeast of Lilly Stone Drive.	River birch (*Betula nigra*) Green ash White grass (*Leersia virginica*)	-	-	Yes	Yes	No
22J	01-F	Intermittent	Waterway 22J is an intermittent channel located north of Clara Barton Parkway and west of I-495 that flows south through a culvert into Waterway 22I.	-	Silt, sand, cobble, gravel Width: 1-4 ft Depth: 1-6 in	Right: forest, mowed lawn Left: forest, paved road	Yes	Yes	No
22J_C							Yes	Yes	No
22JJ	-	PFO	Wetland 22JJ is a PFO located southwest of the MD 195/I-495 interchange in the floodplain of Waterway 22AA.	Red maple Black tupelo (*Nyssa sylvatica*) Japanese stilt grass	-	-	Yes	Yes	No
22K	W125M	PEM	Wetland 22K is a PEM located north of Clara Barton Parkway and west of I-495 that abuts Waterway 22J.	Dotted smartweed (*Persicaria punctata*) Spotted lady's thumb (*Persicaria maculosa*)	-	-	Yes	Yes	No
22KK	-	Perennial	Waterway 22KK is a perennial channel located south of the I-495/Cabin John Parkway interchange that flows east into Waterway 22AA.	-	Silt, sand, cobble, gravel Width: 8-15 ft Depth: 3-15 in	Right: forest Left: forest	Yes	Yes	No
22L	01-J	PEM	Wetland 22L is a PEM located north of Clara Barton Parkway and west of I-495. A portion of this wetland is considered a vernal pool.	Dotted smartweed Sweet wood-reed	-	-	Yes	Yes	No
22L_VP							Yes	Yes	No
22LL_VP	-	PFO	Wetland 22LL is a PFO located southeast of the I-495/Clara Barton Parkway interchange. The entire wetland is considered a vernal pool.	Ash-leaf maple (*Acer negundo*) American elm Northern spicebush Dotted smartweed Creeping-Jenny (*Lysimachia nummularia*)	-	-	Yes	Yes	No
22M	01-D	Perennial	Waterway 22M is a perennial channel known as Rock Run located northwest of the Clara Barton Parkway on-ramp from the I-495 outer loop that flows south from outside the study area to a box-culvert under Clara Barton Parkway.	-	Silt, sand, cobble, gravel Width: 30 ft Depth: 6 in - 1 ft	Right: forest Left: forest	Yes	Yes	No
22M_1							Yes	Yes	No
22M_C							Yes	Yes	No
22M_C1							Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
22MM	-	Perennial	Waterway 22MM is a perennial TNW known as the Potomac River located south of the I-495/Clara Barton Parkway interchange that flows east under I-495.	-	Silt, sand, muck, cobble, gravel, bedrock Width: > 400 ft Depth: > 10 ft	Right: forest Left: forest	Yes	Yes	No
22MM_B							Yes	Yes	No
22N	01-C	Perennial	Waterway 22N is a perennial channel located northwest of the Clara Barton Parkway on-ramp from the I-495 outer loop that flows southwest to Waterway 22M.	-	Silt, cobble, gravel, concrete Width: 5 ft Depth: 3 in	Right: forest Left: forest	Yes	Yes	No
22NN	-	Intermittent	Waterway 22NN is an intermittent channel located southwest of the I-495/Clara Barton Parkway interchange that flows south from Wetland 22OO to Waterway 22MM.	-	Silt, sand, gravel, muck Width: 8-10 ft Depth: 0 – 6 in	Right: forest Left: bare area under I-495	Yes	Yes	No
22NN_B							Yes	Yes	No
22O	01-E	PFO	Wetland 22O is a PFO located northwest of the Clara Barton Parkway on-ramp from the I-495 outer loop that abuts Waterway 22N.	American sycamore Ash-leaf maple Sweet wood-reed Deer-tongue rosette grass (*Dichanthelium clandestinum*) Water horsetail (*Equisetum fluviatile*)	-	-	Yes	Yes	No
22OO	-	PFO	Wetland 22OO is a PFO located southwest of the I-495/Clara Barton Parkway interchange that abuts Waterway 22NN.	American sycamore Ash-leaf maple Reed canary grass (*Phalaris arundinacea*)	-	-	Yes	Yes	No
22P	-	Intermittent	Waterway 22P is an intermittent channel located northwest of the Clara Barton Parkway on-ramp from the I-495 outer loop that flows northwest into Waterway 22N.	-	Silt, sand Width: 3 ft Depth: 3 in	Right: forest Left: forest	Yes	Yes	No
22PP	01-P	PFO	Wetland 22PP is a PFO located southwest of the I-495/Clara Barton Parkway Interchange, just south of the C&O canal.	American elm Amur honeysuckle (*Lonicera maackii*) Swamp smartweed (*Persicaria hydropiperoides*)	-	-	Yes	Yes	No
22Q	-	Perennial	Waterway 22Q is a perennial channel located east of the I-495 inner loop and south of Clara Barton Parkway that flows east from a culvert under the Clara Barton Parkway on-ramp to the I-495 inner loop into another culvert under Clara Barton Parkway.	-	Silt, sand Width: 4 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
22Q_1	01-I						Yes	Yes	No
22Q_C	-						Yes	Yes	No
22QQ	-	Intermittent	Waterway 22QQ is an intermittent channel located southeast of the I-495/Clara Barton Parkway interchange that flows south into a side channel of Waterway 22MM.	-	Sand, muck Width: 2-6 ft Depth: 0-1.5 in	Right: forest Left: forest	Yes	Yes	No
22R	01-H	PFO	Wetland 22R is a PFO located east of the I-495 inner loop and south of Clara Barton Parkway that abuts Waterway 22Q.	Red maple American sycamore Common pawpaw Black tupelo Japanese stilt grass Sweet wood-reed Japanese honeysuckle	-	-	Yes	Yes	No
22RR	-	Perennial	Waterway 22RR is a perennial channel located east of Seven Locks road and north of the I-495 outer loop that flows east into Waterway 22AA.	-	Silt, sand, cobble, gravel Width: 6-15 ft Depth: 2-10 in	Right: forest Left: forest	Yes	Yes	No
22S	-	Intermittent	Waterway 22S is an intermittent channel located north of the Clara Barton Parkway on-ramp from the I-495 outer loop that flows east into Waterway 22M.	-	Silt, sand, cobble, gravel, placed stone slabs Width: 1-7 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
22SS	WOUS CC/CD	Perennial	Waterway 22SS is a perennial channel located northwest of the Capital Beltway/George Washington Memorial Parkway interchange that flows north.	-	Silt, sand, gravel, cobble Width: 25 ft Depth: N/A	Right: forest Left: forest	Yes	No	Yes
22T	W122M	Intermittent	Waterway 22T is an intermittent channel located north of Clara Barton Parkway and south of MacArthur Boulevard that flows west from Wetland 22U, under I-495, and into Waterway 22HH.	-	Silt, cobble, sand, concrete, riprap Width: 3-6 ft Depth: 3 in	Right: forest Left: forest	Yes	Yes	No
22T_1							Yes	Yes	No
22T_2							Yes	Yes	No
22T_B							Yes	Yes	No
22T_B1							Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
22TT	DC	PFO	Wetland 22TT is a PFO located east of the I-495 outer loop that abuts Waterway 22UU and Waterway 22MM.	Red maple Green ash Northern spicebush Japanese stilt grass	-	-	Yes	No	Yes
22U	W121M	PFO	Wetland 22U is a PFO located east of the I-495 inner loop, north of Clara Barton Parkway, and south of MacArthur Boulevard that abuts Waterway 22T.	Red maple Slippery elm (*Ulmus rubra*) Black willow Ash-leaf maple	-	-	Yes	Yes	No
22UU	WOUS DF	Intermittent	Waterway 22UU is an intermittent channel located west of the I-495 outer loop that flows north into Waterway 22MM.	-	Riprap Width: 20 ft Depth: N/A	Right/Left: forest, maintained, impervious surface	Yes	No	Yes
22V	-	Intermittent	Waterway 22V is an intermittent channel located south of Clara Barton Parkway that flows east under I-495 and into a roadside swale, followed by an 18-inch pipe.	-	Silt, sand, cobble, gravel Width: 1-4 ft Depth: 6 in	Right: hedgerow, riprap Left: hedgerow, riprap	Yes	Yes	No
22V_1							Yes	Yes	No
22V_2							Yes	Yes	No
22V_B							Yes	Yes	No
22V_B1							Yes	Yes	No
22VV	WOUS DJ	Ephemeral	Waterway 22VV is an ephemeral channel located east of the I-495 inner loop that flows west.	-	Silt Width: 20 ft Depth: N/A	Right: forest Left: forest	Yes	No	Yes
22W	W132M	PEM	Wetland 22W is a PEM (the C&O Canal Towpath) located southwest of the I-495/Clara Barton Parkway interchange.	Duck-potato (*Sagittaria latifolia*) Straw-color flat sedge (*Cyperus strigosus*) Narrow-leaf cat-tail (*Typha angustifolia*) Ribbon-leaf pondweed (*Potemogeton epihydrus*)	-	-	Yes	Yes	No
22WW	WOUS DK	Intermittent	Waterway 22WW is an intermittent channel located east of the I-495 inner loop that flows northwest.	-	Silt, sand, gravel Width: 25 ft Depth: N/A	Right: forest Left: forest	Yes	No	Yes
22WW_C							Yes	No	Yes
22X	-	PFO	Wetland 22X is a PFO located within the cloverleaf of the I-495 inner loop on-ramp from Clara Barton Parkway.	Red maple Eastern poison ivy (*Toxicodendron radicans*) Sweet wood-reed Asian bittersweet (*Celastrus orbiculatus*)	-	-	Yes	Yes	No
22XX	WOUS DL	Intermittent	Waterway 22XX is an intermittent channel located east of the I-495 inner loop that flows northwest into Waterway 22WW.	-	Silt, sand, gravel Width: 10 ft Depth: N/A	Right: forest Left: forest	Yes	No	No
22Y	01-H	PEM	Wetland 22Y is a PEM located within the cloverleaf of the I-495 inner loop on-ramp from Clara Barton Parkway, that abuts Waterway 22Q.	Green ash River birch Lamp rush (*Juncus effusus*) Sweet wood-reed Deer-tongue rosette grass Japanese stilt grass	-	-	Yes	Yes	No
22Z	01-N	Perennial	Waterway 22Z is a perennial channel known as Booze Creek that flows southwest through a triple box culvert under Cabin John Parkway to Waterway 22AA.	-	Sand, cobble, gravel Width: 40 ft Depth: 6 ft	Right: forest Left: forest	Yes	Yes	No
22Z_1							Yes	Yes	No
22Z_C							Yes	Yes	No
22ZZ	WOUS SH	Perennial	Waterway 22ZZ is a perennial channel located east of the I-495 inner loop that flows east.	-	Silt, sand, gravel, cobble Width: 20 ft Depth: N/A	Right/Left: forest, unmaintained herbaceous, impervious surface	Yes	No	Yes
22ZZ_C							Yes	No	Yes

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
Subsegment 23									
23A	WUS 01	Perennial	Waterway 23A is a perennial channel known as Thomas Branch that flows south parallel to the I-270 spur and the I-495 outer loop and into Cabin John Creek.	-	Silt, sand, cobble Width: 15-30 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
23A_1							Yes	Yes	No
23A_2							Yes	Yes	No
23A_3							Yes	Yes	No
23A_C							Yes	Yes	No
23A_C1							Yes	Yes	No
23A_C2							Yes	Yes	No
23AA	-	Perennial	Waterway 23AA is a perennial channel located southeast of the I-270/Democracy Boulevard interchange that originates at a culvert under the I-270 on-ramp and flows south through another culvert.	-	Silt, sand Width: 2-3 ft Depth: 2-4 in	Right: forest Left: forest	Yes	Yes	No
23AA_1							Yes	Yes	No
23AA_C							Yes	Yes	No
23AA_C1							Yes	Yes	No
23BB	-	PEM	Wetland 23BB is a PEM located southeast of the I-270/Democracy Boulevard interchange that abuts Waterway 23AA.	Sweet-gum (*Liquidambar styraciflua*) Eastern poison ivy Japanese stilt grass	-	-	Yes	Yes	No
23C	-	Intermittent	Waterway 23C is an intermittent channel located southwest of the I-270/Democracy Boulevard interchange that flows east into Waterway 23A.	-	Silt, muck, leaf litter Width: 4 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
23CC	-	PFO	Wetland 23CC is a PFO located west of the I-270 south spur and northeast of Motor City drive that abuts Waterway 23E.	Green ash American elm Northern spicebush Northern bush honeysuckle (*Diervilla lonicera*) Eastern poison ivy Swamp smartweed	-	-	Yes	Yes	No
23D	WUS 02	Intermittent	Waterway 23D is an intermittent channel located southeast of the I-270/Democracy Boulevard interchange that flows from 23-SWM8, under I-270, and into Thomas Branch.	-	Silt, sand, cobble, gravel Width: 7 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
23D_C							Yes	Yes	No
23DD	-	Intermittent	Waterway 23DD is an intermittent channel located west of the I-270 south spur and east of Westlake Drive that flows north into Waterway 23K.	-	Silt, sand, cobble Width: 4 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
23E	-	Intermittent	Waterway 23E is an intermittent channel located west of the I-270 south spur and northeast of Motor City Drive that flows west from Wetland 23CC and out of the study area.	-	Silt, sand, gravel, riprap Width: 6 ft Depth: 3 ft	Right: forest Left: forest	Yes	Yes	No
23EE	-	PFO	Wetland 23EE is a PFO located between the Old Georgetown Road on ramp to I-270 eastbound and Aubinoe Farm Drive.	American elm Red maple Amur honeysuckle Japanese stilt grass Fox grape (*Vitis labrusca*) Unknown grass species (*Poa sp.*)	-	-	No	Yes	No
23F	-	PEM	Wetland 23F is a PEM located west of the I-270 south spur and east of Westlake Drive that abuts Waterway 23K.	Green ash Black tupelo Japanese stilt grass	-	-	Yes	Yes	No
23FF	-	Intermittent	Waterway 23FF is an intermittent channel located south of the I-270 east spur and north of the Rudyard Drive/Rossmore Drive intersection that flows east into Waterway 23QQ.	-	Silt, sand, cobble, and gravel Width: 7 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
23G	WUS 34	Perennial	Waterway 23G is a perennial channel located south of the Grosvenor Place/Englishman Drive intersection that flows adjacent to and under I-270 and out of the study area.	-	Silt, sand, cobble Width: 8-10 ft Depth: 6-12 in	Right: forest Left: forest	Yes	Yes	No
23G_1							Yes	Yes	No
23G_C							Yes	Yes	No
23GG	-	PFO	Wetland 23GG is a PFO located west of I-270 and southeast of the Tuckerman Lane/Westlake Drive intersection.	Red maple Northern spicebush Greater water dock (*Rumex britannica*) New York fern (*Parathelypteris noveboracensis*) Japanese honeysuckle	-	-	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
23H	-	Ephemeral	Waterway 23H is an ephemeral channel located southeast of Englishman Drive that flows south into Waterway 23G.	-	Silt, gravel Width: 5 ft Depth: 2 ft	Right: forest Left: forest	Yes	No	No
23HH	-	PFO	Wetland 23HH is a PFO located west of the I-270 south spur that drains into Waterway 23K.	Black tupelo American hornbeam (*Carpinus caroliniana*)			Yes	Yes	No
23J	-	PFO	Wetland 23J is located southwest of the Rockledge Drive overpass over I-270 that drains into Waterway 23N and surrounds Wetland 23KK.	Speckled alder (*Alnus incana*) Black willow American sycamore			Yes	Yes	No
23K	-	Perennial	Waterway 23K is a perennial channel located west of the I-270 south spur and east of Westlake Drive that originates at a stormwater management pond and flows north into Waterway 24A. Waterway 23K flows through subsegments 23 and 24.	-	Silt, sand, cobble, gravel Width: 9 ft Depth: 3 ft	Right: forest Left: forest	Yes	Yes	No
23K_1							Yes	Yes	No
23K_C							Yes	Yes	No
23K_C1							Yes	Yes	No
23K_D							Yes	Yes	No
23KK	-	PEM	Wetland 23KK is a PEM located southwest of the Rockledge Drive overpass I-270 that drains into Waterway 23N.	Narrowleaf cat-tail Arrowleaf tearthumb (*Persicaria sagittata*)			Yes	Yes	No
23L	-	PEM	Wetland 23L is a PEM located inside the Democracy Boulevard on ramp to I-270 northbound.	Broad-leaf cat-tail (*Typha latifolia*) Japanese stilt grass	-	-	Yes	Yes	No
23LL	-	PEM	Wetland 23LL is a PEM located north of the east spur of I-270 and south of Windemere Circle, adjacent to Waterway 23N.	Small-spike false nettle (*Boehmeria cylindrica*) Japanese stilt grass Lamp rush	-	-	Yes	Yes	No
23M	-	Ephemeral	Waterway 23M is an ephemeral channel located southeast of Earlsgate Lane and north of I-270 that flows north into Waterway 23N.	-	Silt Width: 8 ft Depth: 6 in	Right: forest Left: forest	Yes	No	No
23MM	-	PFO	Wetland 23MM is a PFO located west of I-270 and south of Thomas Branch Drive in the floodplain of Waterway 23A (Thomas Branch).	American sycamore Red maple Tuliptree (*Liriodendron tulipifera*)	-	-	Yes	Yes	No
23N	-	Intermittent	Waterway 23N is an intermittent channel located between Windermere Circle and I-270 that flows northwest out of the study area into Old Farm Creek. Waterway 23N becomes perennial (23N_1) downstream of its confluence with waterway 23U.	-	Sand, cobble, gravel, riprap Width: 9 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
23N_1		Perennial					Yes	Yes	No
23N_C		Intermittent					Yes	Yes	No
23N_D		Intermittent					Yes	Yes	No
23NN	-	Perennial	Waterway 23NN is a perennial channel located north of the intersection of Rudyard Drive and Farham Drive that flows from Waterway 23R into Waterway 23Q.	-	Sand, cobble, gravel, bedrock Width: 8 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
23P	-	PFO	Wetland 23P is a PFO located northeast of the intersection of Snow Point Drive and Fleming Avenue.	Green ash Red maple Northern spicebush Northern bush honeysuckle Jack-in-the-pulpit (*Arisaema triphyllum*)	-	-	Yes	Yes	No
23PP	-	Intermittent	Waterway 23PP is an intermittent channel located south of I-270 and north of Rudyard Drive that flows into Waterway 23QQ.	-	Sand, cobble, gravel Width: 6 ft Depth: 1 ft	Right: forest Left: shrub	Yes	Yes	No
23Q	WUS 33	Perennial	Waterway 23Q is a perennial channel located north of the intersection of Rudyard Drive and Farnham Drive that flows outside the study area downstream.	-	Sand, cobble, gravel, bedrock, riprap Width: 15 ft Depth: 6 ft	Right: forest Left: forest	Yes	Yes	No
23Q_2							Yes	Yes	No
23Q_C							Yes	Yes	No
23QQ	-	Ephemeral	Waterway 23QQ is an ephemeral channel located south of I-270 and north of Rossmore Drive that flows into Waterway 23RR.	-	Silt, sand Width: 2 ft Depth: 6 in	Right: forest Left: forest	Yes	No	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
23R	-	Intermittent	Waterway 23R is an intermittent channel located east of the I-270/Old Georgetown Road interchange that enters the study area from a culvert and flows east under I-270 and out of the study area.	-	Silt, cobble, gravel, bedrock Width: 15 ft Depth: 8 ft	Right: forest Left: forest	Yes	Yes	No
23R_1							Yes	Yes	No
23R_2							Yes	Yes	No
23R_C							Yes	Yes	No
23RR	-	Intermittent	Waterway 23RR is an intermittent channel located south of I-270 and north of Rossmore Drive that flows into Waterway 23Q.	-	Silt, sand, cobble, gravel Width: 2 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
23S	-	Intermittent	Waterway 23S is an intermittent channel located northeast of the Snow Point Drive/Fleming Avenue intersection that flows east into Waterway 23G.	-	Cobble, gravel, riprap Width: 8 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
23SS	-	Ephemeral	Waterway 23SS is an ephemeral channel located south of I-270 and north of Rossmore Drive that flows from Wetland 23WW into Waterway 23Q.	-	Silt, sand Width: 3 ft Depth: 6 in	Right: forest Left: forest	Yes	No	No
23T	-	Ephemeral	Waterway 23T is an ephemeral channel located between Thornbush Lane and I-270 that flows into Waterway 23G.	-	Silt, cobble, gravel Width: 2 ft Depth: 1 ft	Right: forest Left: forest	Yes	No	No
23U	-	Perennial	Waterway 23U is a perennial channel located between Windermere Circle and I-270 that flows north into Waterway 23N.	-	Sand, cobble, gravel, riprap Width: 6 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
23U_1							Yes	Yes	No
23U_C							Yes	Yes	No
23UU	-	Intermittent	Waterway 23UU is an intermittent channel located south of I-270 and north of Rossmore Drive that flows into Waterway 23Q.	-	Sand, cobble, gravel, riprap Width: 4 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
23V	SB12/NB01-D	Intermittent	Waterway 23V is an intermittent channel located northeast of the I-270 Spur/Westlake Terrace intersection that originates from a culvert and flows west under I-270.	-	Silt Width: 2 – 8 ft Depth: 1 in	Right: forest Left: forest	Yes	Yes	No
23V_C							Yes	Yes	No
23W	PEM 10	PEM	Wetland 23W is a PEM located northeast of the I-270/Democracy Boulevard interchange that flows to Waterway 23A.	Green ash Pin oak Common persimmon (*Diospyros virginiana*) Reed canary grass Uptight sedge (*Carex stricta*)	-	-	Yes	Yes	No
23WW	-	PFO	Wetland 23WW is a PFO wetland located south of I-270 and north of Rossmore Drive that drains into Waterway 23SS.	American elm Linden viburnum (*Viburnum dilatatum*) Green ash Japanese stilt grass Frost grape (*Vitis vulpina*) Japense honeysuckle	-	-	Yes	Yes	No
23X	PEM 02	PEM	Wetland 23X is a PEM located southwest of the I-270/Tuckerman Lane intersection that abuts Waterway 23J.	Red maple American sycamore Green ash Northern spicebush Skunk-cabbage (*Symplocarpus foetidus*) Virginia-creeper (*Parthenocissus quinquefolia*) Fox grape	-	-	Yes	Yes	No
23Z	-	Intermittent	Waterway 23Z is an intermittent channel located west of the I-270 south spur and northeast of Motor City Drive that flows north from a parking lot into Waterway 23E.	-	Silt, sand Width: 8 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
Subsegment 24									
24A	-	Perennial	Waterway 24A is a perennial channel located north of the I-270/Tuckerman Lane intersection that flows west out of the study area into Cabin John Creek.	-	Cobble, gravel, sand, silt Width: 20 ft Depth: 6 in	Right: forest, scrub-shrub, maintained Left: forest, scrub-shrub	Yes	Yes	No
24A_1							Yes	Yes	No
24A_C							Yes	Yes	No
24C	-	Intermittent	Waterway 24C is an intermittent channel located in Cabin John Regional Park that flows west out of the study area into Cabin John Creek.	-	Cobble, gravel, sand, silt Width: 3.5 ft Depth: 5 in	Right: forest, scrub-shrub Left: forest, scrub-shrub	Yes	Yes	No
24D	-	Perennial	Waterway 24D is a perennial channel located north of Waterway 24C in Cabin John Regional Park that flows west out of the study area into Cabin John Creek.	-	Cobble, gravel, sand, silt, riprap Width: 3 ft Depth: 4 in	Right: herbaceous Left: forest, scrub-shrub	Yes	Yes	No
24F	-	Perennial	Waterway 24F is a perennial channel located southeast of the I-270/Montrose Road interchange that flows south into a culvert under I-270 and west out of the study area. Waterway 24F flows through subsegments 24 and 25.	-	Cobble, gravel, sand, silt Width: 15 ft Depth: 6 in	Right: forest, scrub-shrub Left: forest, scrub-shrub	Yes	Yes	No
24F_1	WUS 14						Yes	Yes	No
24F_2	WUS 14						Yes	Yes	No
24F_3	WUS 14						Yes	Yes	No
24F_C	-						Yes	Yes	No
24F_C1	WUS 14						Yes	Yes	No
24F_C2	WUS 14						Yes	Yes	No
24H	WUS 15	Perennial	Waterway 24H is a perennial channel located west of the I-270/Montrose Road interchange that flows south out of the study area into Waterway 24J.	-	Cobble, gravel, sand, silt Width: 5 ft Depth: 1 in	Right/Left: forest, scrub-shrub, wetland	Yes	Yes	No
24J	-	Perennial	Waterway 24J is a perennial channel located west of the I-270/Montrose Road interchange that flows southeast out of the study area into Cabin John Creek.	-	Cobble, sand, silt Width: 14 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
24K	-	Intermittent	Waterway 24K is an intermittent channel located southeast of the I-270/Montrose Road interchange that flows southwest into Waterway 24F.	-	Silt, sand Width: 3 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
24L	-	Intermittent	Waterway 24L is an intermittent channel located southeast of the I-270/Montrose Road interchange that flows southwest into Waterway 24F and abuts Wetland 24R.	-	Gravel, silt, sand Width: 1-2 ft Depth: 1-2 in	Right: forest Left: forest	Yes	Yes	No
24M	-	PEM	Wetland 24M is a PEM located northeast of the I-270/Tuckerman Lane intersection.	Red maple American sycamore River birch Broad-leaf cat-tail Reed canary grass	-	-	Yes	Yes	No
24N	-	PFO	Wetland 24N is a PFO located in Cabin John Regional Park, half a mile south of the I-270/Montrose Road interchange.	Red maple American elm Northern spicebush Japanese stilt grass Eastern poison ivy	-	-	Yes	Yes	No
24P	-	Ephemeral	Waterway 24P is an ephemeral channel located southwest of the I-270/Montrose Road interchange that flows west into Cabin John Creek.	-	Sand Width: 4 ft Depth: 6 in	Right: forest Left: forest	Yes	No	No
24Q	-	PFO	Wetland 24Q is a PFO located in Cabin John Regional Park half a mile south of the I-270/Montrose Road interchange that abuts Waterway 24D.	Red maple American sycamore Northern spicebush Japanese stilt grass	-	-	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
24R	-	PFO	Wetland 24R is a PFO located southeast of the I-270/Montrose Road interchange, adjacent to Waterway 24F and 24L.	Red maple Pin oak Northern spicebush Rambler rose Japanese stilt grass Rice cut grass (*Leersia oryzoides*) Eastern poison ivy	-	-	Yes	Yes	No
24T	-	Intermittent	Waterway 24T is an intermittent channel located west of I-270 and east of Gainsborough Road that flows south into Waterway 24U.	-	Silt, sand, gravel, cobble Width: 6 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
24U	-	Perennial	Waterway 24U is a perennial channel located west of I-270 and east of Gainsborough Road that flows south out of the study area.	-	Silt, sand, gravel, cobble Width: 20 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
24V	-	Intermittent	Waterway 24V is an intermittent channel located east of I-270 and west of Dinwiddie Drive that flows through a culvert under I-270 into Waterway 24D.	-	Concrete Width: 3 ft Depth: 3 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
24V_C							Yes	Yes	No
24W	-	PEM	Wetland 24W is a PEM located east of I-270, north of Tuckerman Ln, and in the floodplain of Waterway 24A.	Small-spike false nettle Japanese stilt grass	-	-	Yes	Yes	No
24X	-	PEM	Wetland 24X is a PEM located west of I-270, north of Tuckerman Ln, and in the floodplain of Waterway 24A.	American elm American sycamore Northern spicebush Sweet wood-reed Japanese stilt grass Unknown grass species	-	-	Yes	Yes	No
Subsegment 25									
25A	-	Perennial	Waterway 25A is a perennial channel located east of the I-270/Montrose Road interchange that originates at a culvert and flows west into Waterway 24F.	-	Silt sand, riprap Width: 8 ft Depth: 4 ft	Right: forest Left: forest, scrub-shrub	Yes	Yes	No
25A_1	WUS 13						Yes	Yes	No
25A_C	-						Yes	Yes	No
25B	PFO 05	PFO	Wetland 25B is a PFO located east of the I-270/Montrose Road interchange that abuts Waterway 24F.	Silver maple (*Acer saccharinum*) Red maple Pin oak Northern spicebush Japanese barberry (*Berberis thunbergii*) Sensitive fern (*Onoclea sensibilis*) Japanese stilt grass	-	-	Yes	Yes	No
25C	WUS 14A	Intermittent	Waterway 25C is an intermittent channel located east of the I-270/Montrose Road interchange that originates at a culvert and flows east into Waterway 24F.	-	Silt, cobble, riprap Width: 8 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
25D	PFO 06	PFO	Wetland 25D is a PFO located east of the I-270/Montrose Road interchange that abuts Waterway 24F.	River birch Red maple American sycamore Southern arrow-wood (*Viburnum dentatum*) Lamp rush Deer-tongue rosette grass	-	-	Yes	Yes	No
25E	-	Perennial	Waterway 25E is a perennial channel pond located south of the I-270/Falls Road interchange within 25-SWM1 that flows into Waterway 25H and then east under I-270.	-	Silt, sand, muck Width: 150 ft Depth: Unknown	Right: wetland Left: wetland	Yes	Yes	No
25F	-	Ephemeral	Waterway 25F is an ephemeral channel located east of I-270 and southwest of the intersection of Wootton Parkway and Tower Oaks Boulevard that flows east under Tower Oaks Boulevard and out of the study area.	-	Sand, silt, cobble, clay Width: 10 ft Depth: 5 ft	Right: forest Left: forest	Yes	No	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
25G	-	Intermittent	Waterway 25G is an intermittent channel located southeast of the Preserve Parkway/Tower Oaks Boulevard intersection that flows northeast from a culvert and out of the study area.	-	Sand, cobble, gravel Width: 8-12 ft Depth: 6 ft	Right: forest Left: forest	Yes	Yes	No
25H	WUS 16	Perennial	Waterway 25H is a perennial channel located south of the I-270/Falls Road interchange within 25-SWM1.	-	Silt, sand, gravel Width: 3-4 ft Depth: 3-6 ft	Right/Left: wetlands, stormwater management areas	Yes	Yes	No
25H_1	-						Yes	Yes	No
25H_C	WUS 16						Yes	Yes	No
25K	-	PEM	Wetland 25K is a PEM located south of the I-270/Falls Road interchange within 25-SWM1 and abutting Waterway 25H.	American sycamore Groundseltree (*Baccharis halimifolia*) Crimson-eyed rose-mallow (*Hibiscus moscheutos*) Narrow-leaf cat-tail Lamp rush Shallow sedge (*Carex lurida*)	-	-	Yes	Yes	No
25L	-	Intermittent	Waterway 25L is an intermittent channel located east of I-270 and Tower Oaks Boulevard and south of Preserve Parkway that flows northeast from 25-SWM8 into Waterway 25G.	-	Silt, sand, gravel Width: 4 ft Depth: 1.5 ft	Right: forest Left: forest	Yes	Yes	No
25M	-	PEM	Wetland 25M is a PEM located west of I-270 and south of Wootton Parkway.	Chufa (*Cyperus esculentus*) Japanese honeysuckle	-	-	No	Yes	No
25N	-	Intermittent	Waterway 25N is an intermittent channel located east of I-270, west of Grand Oak Way, and flows into 25H.	-	Silt, gravel Width: 4-5 ft Depth: 3-6 in	Right: wetland Left: berm and wetland	Yes	Yes	No
25P	-	PFO	Wetland 25P is a PFO located east of I-270, west of Grand Oak Way, and adjacent to Waterway 25H.	River birch Common persimmon Sweet-gum American sycamore	-	-	Yes	Yes	No
Subsegment 26									
26A	PEM 08	PFO	Wetland 26A is a PFO located southeast of the I-270/West Montgomery Avenue interchange that abuts Waterway 26B.	Green ash Red maple Black tupelo Southern arrow-wood Eurasian-buttercup (*Ficaria verna*) White grass	-	-	Yes	Yes	No
26B	WUS 18	Intermittent	Waterway 26B is an intermittent channel located south of the I-270/West Montgomery Avenue interchange that flows southwest under I-270.	-	Silt, sand, cobble, riprap Width: 8 ft Depth: 4 ft	Right: forest Left: forest	Yes	Yes	No
26B_1							Yes	Yes	No
26B_C							Yes	Yes	No
26B_C1							Yes	Yes	No
26C	-	Intermittent	Waterway 26C is an intermittent channel flow located south of Winding Rose Drive that flows northwest and then west under I-270.	-	Sand, cobble, gravel, riprap Width: 9 ft Depth: 1 ft	Right: forest Left: scrub-shrub	Yes	Yes	No
26C_1	WUS 17						Yes	Yes	No
26C_C	WUS 17						Yes	Yes	No
26C_C1	WUS 17						Yes	Yes	No
26D	-	PEM	Wetland 26D is a PEM located east of Watts Branch Parkway that abuts Waterway 26C.	Silver maple Green ash Common persimmon Twinsisters (*Lonicera tatarica*) Rambler rose White grass Japanese stilt grass	-	-	Yes	Yes	No
26E	PFO 09	PEM	Wetland 26E is a PEM located east of Watts Branch Parkway that abuts Waterway 26C.	Fowl blue grass (*Poa palustris*)	-	-	Yes	Yes	No
26F	PEM 06	PEM	Wetland 26F is a PEM located south of Winding Rose Drive and abutting Waterway 26C.	Red maple Black willow Pinkweed (*Persicaria pensylvanica*) Rice cut grass Virginia-creeper	-	-	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
26G	WUS 17A	Ephemeral	Waterway 26G is a channel with ephemeral and intermittent flow located northwest of the I-270/Great Falls Road interchange that flows north from Wetland 26H.	-	Silt, cobble, sand, and gravel Width: 6 ft Depth: 3 ft	Right: forest Left: forest	Yes	No	No
26G_1	WUS 17A	Intermittent					Yes	Yes	No
26H	PEM 11	PEM	Wetland 26H is a PEM located northeast of the I-270/Great Falls Road interchange.	Green ash Common persimmon Black walnut (*Juglans nigra*) Northern bush honeysuckle Sensitive fern Spotted touch-me-not (*Impatiens capensis*) Eastern poison ivy	-	-	Yes	Yes	No
26J	-	Intermittent	Waterway 26J is an intermittent channel located south of Winding Rose Drive and abutting Wetland 26F.	-	Riprap Width: 8 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
26K	-	Intermittent	Waterway 26K is an intermittent channel located east of I-270, west of Blaze Climber Way, and flows through Wetland 26F.	-	Silt Width: 4 ft Depth: 0 - 1 ft	Right: wetland, park, trails Left: wetland	Yes	Yes	No
26L	-	Intermittent	Waterway 26L is an intermittent channel located east of I-270, west of Blaze Climber Way, and flows from a SWM facility into the southern edge of Wetland 26F.	-	Riprap Width: 6 ft Depth: 6 in	Right: wetland Left: wetland	Yes	Yes	No
Subsegment 27									
27A	WUS 19	Perennial	Waterway 27A is Watts Branch, a perennial channel located north of the I-270/West Montgomery Avenue interchange that flows southwest out of the study area.	-	Bedrock, cobble, gravel, concrete, sand, silt Width: 17 ft Depth: 7 in	Right: forest, scrub-shrub, wetland Left: forest, scrub-shrub, wetland	Yes	Yes	No
27A_1							Yes	Yes	No
27A_2							Yes	Yes	No
27A_3							Yes	Yes	No
27A_C							Yes	Yes	No
27A_C1							Yes	Yes	No
27A_C2							Yes	Yes	No
27B	WUS 19F	Intermittent	Waterway 27B is an intermittent channel located northeast of the I-270/West Montgomery Avenue interchange that flows northwest from a culvert into Waterway 27A.	-	Silt, sand, cobble, riprap Width: 5 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
27C	WUS 19C	Ephemeral	Waterway 27C is an ephemeral channel located within Wetland 27F that enters the study area through a culvert under Nelson Street and flows southwest into Waterway 27D.	-	Silt, sand Width: 3 ft Depth: 6 in	Right: forest Left: forest	Yes	No	No
27D	WUS 19D	Intermittent	Waterway 27D is an intermittent channel located between I-270 and Nelson Street that flows south from Wetland 27F into Waterway 27A.	-	Riprap Width: 4 ft Depth: 1 ft	Right: forest Left: forest	Yes	Yes	No
27E	PFO 13	PFO	Wetland 27E is a PFO located between I-270 and Nelson Street that abuts Waterway 27B.	Green ash Red maple Common buttonbush (*Cephalanthus occidentalis*) Skunk-cabbage	-	-	Yes	Yes	No
27F	WP001	PFO	Wetland 27F is a PFO located north of the I-270/West Montgomery Avenue interchange between I-270 and Nelson Street that abuts Waterway 27C and Waterway 27D.	Green ash Pin oak Twinsisters Eastern poison ivy Skunk-cabbage	-	-	Yes	Yes	No
27G	PSS 01	PSS	Wetland 27G is a PSS located northwest of the I-270/ West Montgomery Avenue interchange that abuts Waterway 27H.	Black walnut Black cherry (*Prunus serotina*) Green ash Smooth blackhaw Skunk-cabbage Eastern poison ivy	-	-	Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
27H	WUS 19A	Intermittent	Waterway 27H is an intermittent channel located northeast of the I-270/West Montgomery Avenue interchange that flows southwest from Wetland 27G into Waterway 27A.	-	Silt, muck, gravel Width: 3 ft Depth: 6 in	Right: herbaceous Left: herbaceous	Yes	Yes	No
27K	SB7NB2-B	Ephemeral	Waterway 27K is an ephemeral channel located between Watts Branch Avenue and West Montgomery Avenue that flows northwest into Waterway 27A.	-	Silt, sand, cobble, gravel Width: 3 ft Depth: 1 ft	Right: hedgerow Left: hedgerow	Yes	No	No
27L	NB3-A	Intermittent	Waterway 27L is an intermittent channel located south of the I-270/Shady Grove Road interchange that flows southeast from Wetland 27M and under I-270.	-	Silt, sand, cobble, riprap Width: 2-4 ft Depth: 6 in	Right: hedgerow Left: hedgerow	Yes	Yes	No
27L_C							Yes	Yes	No
27M	-	PFO	Wetland 27M is a PFO located between I-270 and the ramp to Redland Boulevard.	Red maple Sensitive fern	-	-	Yes	Yes	No
27N	WUS 19B	Intermittent	Waterway 27N is an intermittent channel located north of the I-270/West Montgomery Avenue interchange that flows west into waters 27A.	-	Silt Width: 2.5 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
27P	-	Perennial	Waterway 27P is a perennial channel located west of the I-270/W Montgomery Ave interchange near Watts Branch Parkway. Waterway 27P flows into Waterway 27A.	-	Silt, sand, gravel Width: 12 ft Depth: 4 ft	Right: forest Left: wetland/scrub and roadway	Yes	Yes	No
27Q	-	PEM	Wetland 27Q is a PEM located west of the I-270/W Montgomery Ave interchange near Watts Branch Parkway. Wetland 27Q abuts Waterway 27P and Waterway 27A.	Sweet wood-reed	-	-	Yes	Yes	No
27R	-	Intermittent	Waterway 27R is an intermittent channel located west of the intersection of Watts Branch Parkway and Viers Drive and flows from a non-jurisdictional waterway into Wetland 27S.	-	Riprap Width: 5 ft Depth: 2 ft	Right: woodland/scrub Left: woodland/scrub	Yes	Yes	No
27S	-	PEM	Wetland 27S is a PEM located west of the intersection of Watts Branch Parkway and Viers Drive and abuts Waterway 27R.	Fowl blue grass	-	-	No	Yes	No
Subsegment 28									
28A	-	Perennial	Waterway 28A is a ponded perennial channel located southwest of the I-270/I-370 interchange that flows northwest into Waterway 29A.	-	Riprap Width: 140-385 ft Depth: 2-10 ft	Right: maintained park Left: commercial development	Yes	Yes	No
28B	WUS 21	Intermittent	Waterway 28B is an intermittent channel located southwest of the I-270/I-370 interchange that flows northwest into Waterway 29A.	-	Concrete Width: 6 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
Subsegment 29									
29A	WUS 20	Perennial	Waterway 29A is a perennial channel located northwest of the I-270/I-370 interchange that flows north from a stormwater pond into Muddy Branch. Waterway 29A flows through subsegments 28 and 29.	-	Silt, sand, cobble, gravel, riprap Width: 20 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
29A_1	WUS 20						Yes	Yes	No
29A_2	-						Yes	Yes	No
29A_C	WUS 20						Yes	Yes	No
29A_C1	WUS 20						Yes	Yes	No
29A_C2	WUS 20						Yes	Yes	No
29B	WUS 23	Perennial	Waterway 29B is a perennial channel that flows under I-270 through a culvert located southwest of Bralan Court.	-	Bedrock, sand, cobble, gravel Width: 20 ft Depth: 2 ft	Right: forest Left: forest	Yes	Yes	No
29B_1							Yes	Yes	No
29B_C							Yes	Yes	No
29C	WUS 35	Intermittent	Waterway 29C is an intermittent channel located east of I-270 and south of Muddy Branch Road that flows southwest under I-270 and continues outside the study area into Muddy Branch.	-	Cobble, gravel, riprap Width: 6 ft Depth: 1.5 ft	Right: forest Left: mowed	Yes	Yes	No
29D	WUS 23A	Intermittent	Waterway 29D is an intermittent channel located northeast of the I-270/I-370 interchange south of Gaither Road that flows northwest from a stormwater pond, under I-370, and continues outside the study area into Muddy Branch.	-	Silt, sand, cobble, riprap Width: 4 ft Depth: 3 ft	Right: forest Left: forest	Yes	Yes	No
29D_D							Yes	Yes	No

Wetland and Waterway Features Table

FEATURE ID	PREVIOUS FEATURE #	CLASSIFICATION	DESCRIPTION	DOMINANT VEGETATION	CHANNEL (Approximate widths/depths)	COVER TYPE (Left & Right Banks)	USACE JURISDICTION	MDE JURISDICTION	VDEQ JURISDICTION
29E	WUS 35B	Perennial	Waterway 29E is a perennial channel located east of I-270 and south of Muddy Branch Road that flows southeast from a stormwater pond into Waterway 29C.	-	Silt, cobble, gravel Width: 5 ft Depth: 1 ft	Right: scrub-shrub Left: scrub-shrub	Yes	Yes	No
29E_1	WUS 35						Yes	Yes	No
29E_C	WUS 35						Yes	Yes	No
29F	WUS 35C	Perennial	Waterway 29F is a perennial channel located east of I-270 and south of Muddy Branch Road that flows southwest from a stormwater pond into Waterway 29C.	-	Silt, cobble, sand, riprap Width: 4 ft Depth: 1 ft	Right: forest, wetland Left: forest	Yes	Yes	No
29G	PEM 09	PEM	Wetland 29G is a PEM located east of Muddy Branch Road and I-270, adjacent to Waterway 29E.	Black willow Spotted touch-me-not Rice cut grass	-	-	Yes	Yes	No
29H	WUS 35A	Intermittent	Waterway 29H is an intermittent ditch located southwest of the I-270/Muddy Branch Road intersection that flows west from a stormwater inlet into Waterway 29C.	-	Silt, gravel, and riprap Width: 6 ft Depth: 2 ft	Right: mowed Left: mowed	Yes	Yes	No
29J	PEM 12	PEM	Wetland 29J is a PEM located east of Muddy Branch Road and I-270, adjacent to Waterway 29C and 29F.	American sycamore Willow oak Spotted touch-me-not Small-spike false nettle Common marsh bedstraw (*Galium palustre*)	-	-	Yes	Yes	No
29K	-	Intermittent	Waterway 29K is an intermittent channel located west of Industrial Drive and north of I-370 that flows north through 29-SWM3 and out of the study area.	-	Silt Width: 3 ft Depth: 6 in	Right: forest Left: forest	Yes	Yes	No
29L	-	PFO	Wetland 29L is a PFO located east of I-270, west of Gaither Road, and adjacent to Waterway 29B.	Green ash Ash-leaf maple Unknown honeysuckle species (*Lonicera* sp.) Horsebrier Unknown sedge species (*Carex* sp.) Unknown grass specices Sweet wood-reed Japanese honeysuckle	-	-	Yes	Yes	No
29M	-	PFO	Wetland 29M is a PFO located east of I-270, west of Gaither Road, and abuts Waterway 29P.	Pin oak American hornbeam Green ash Nanny-berry (*Virbunum lentago*) Ash-leaf maple Unknown honeysuckle species (*Lonicera sp.*) Unknown sedge species (*Carex sp.*) Eastern poison ivy	-	-	Yes	Yes	No
29N	-	PFO	Wetland 29N is a PFO located west of I-270, south of Summit Hall Road, and abuts Waterway 29B.	Red maple Northern spicebush Sweet wood-reed Eastern woodland sedge (*Carex blanda*)	-	-	Yes	Yes	No
29P	-	Intermittent	Waterway 29P is an intermittent channel located east of I-270, west of Gaither Road, and flows into Waterway 29B.	-	Silt, cobble, bedrock Width: 6 ft Depth: 6 in	Right: forest/maintained lawn Left: forest	Yes	Yes	No

APPENDIX F: DELINEATED FEATURES MAPS

Capital Beltway

Capital Beltway

Potomac Heritage Trail

Live Oak Dr

22ZZ_C
Perennial

Map 2 Match Line

Capital Beltway

Balls Hill Rd

Benjamin St

Balls Hill Rd

Arbor Ln

Holyrood Dr

22ZZ
Perennial

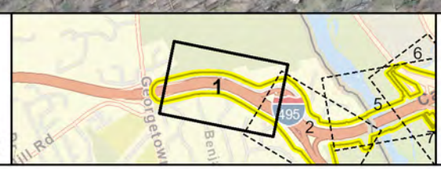
22BBB-WET

22BBB
PFO

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 1 of 41

270
495
MANAGED LANES STUDY

22SS
Perennial

22AAA_C
Perennial

Live Oak Dr

22ZZ_C
Perennial

22AAA
Perennial

Rivercrest

22MM
Perennial

22UU
Intermittent

22WW_C
Intermittent

22VV
Ephemeral

22WW
Intermittent

Live Oak Dr

Capital Beltway

Map 5 Match Line

22XX
Intermittent

Capital Beltway

Map 1 Match Line

22ZZ
Perennial

Lawton St

Lupine Ln

George Washington

Map 3 Match Line

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

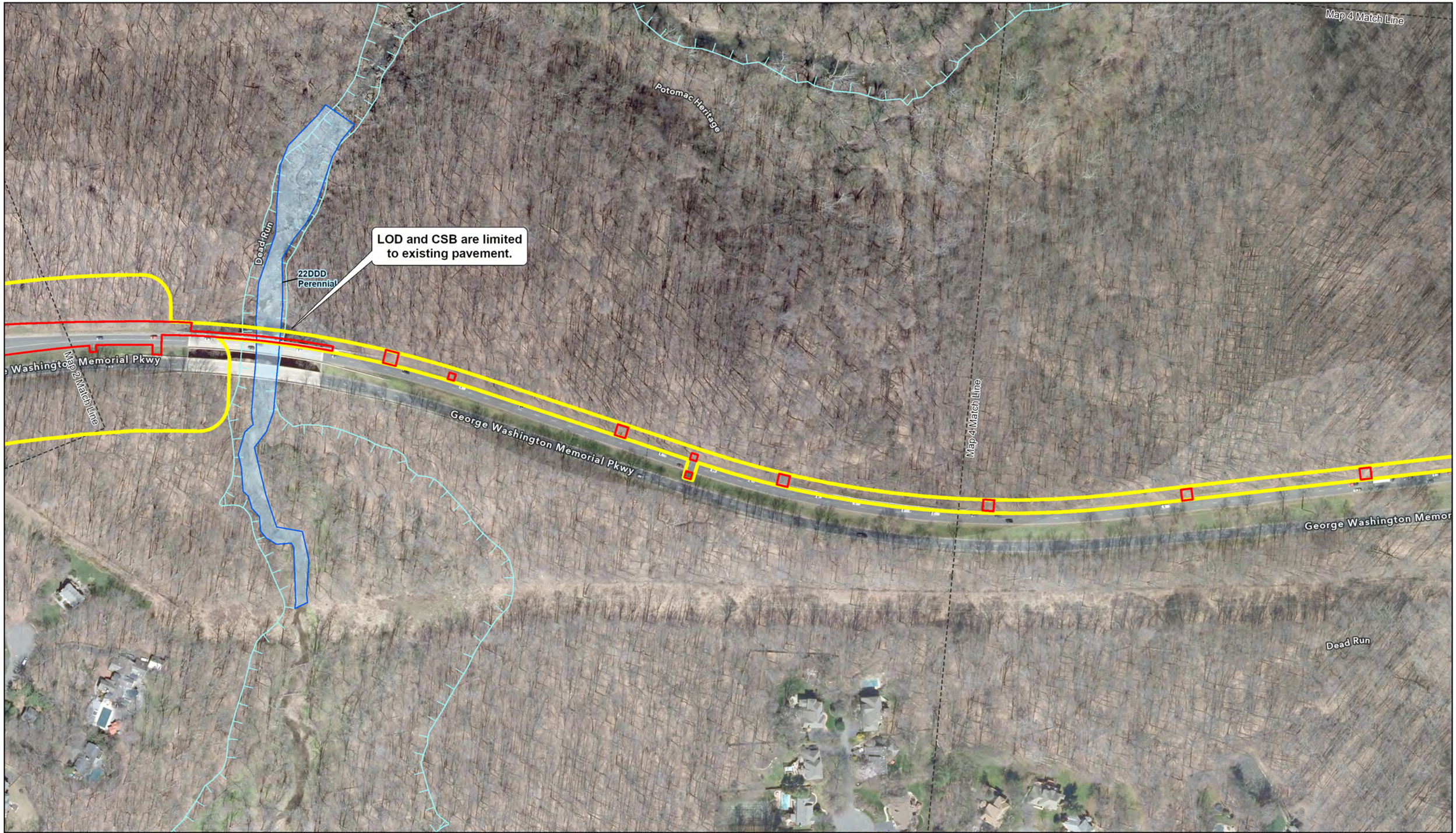
June 2022

Delineated Features

1 in = 200 ft

Map 2 of 41

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 3 of 41

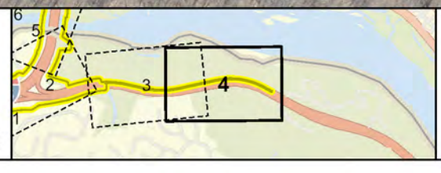
N W E S

495 270 MANAGED LANES STUDY

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



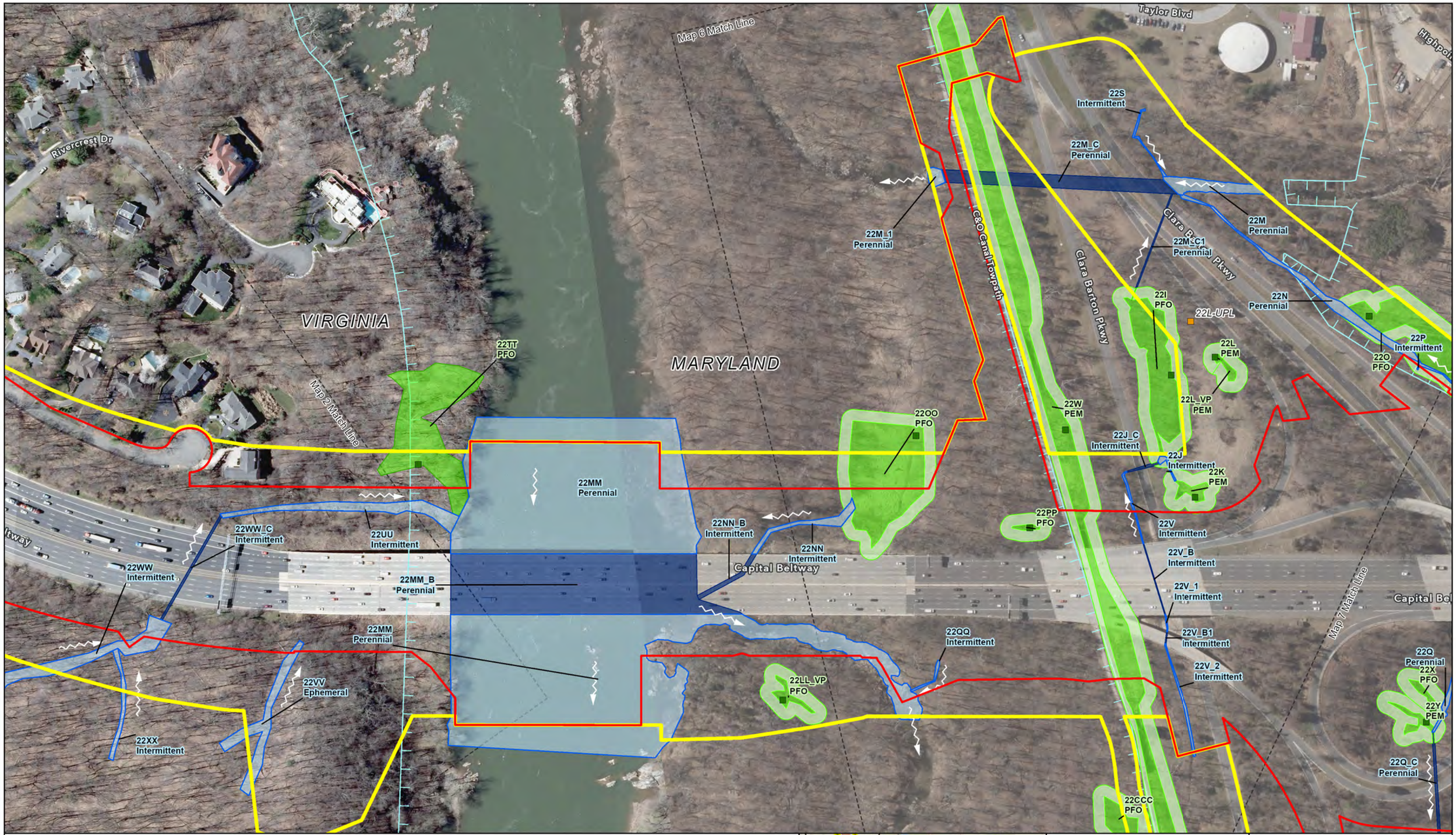
Delineated Features

1 in = 200 ft

Map 4 of 41

N W E S

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

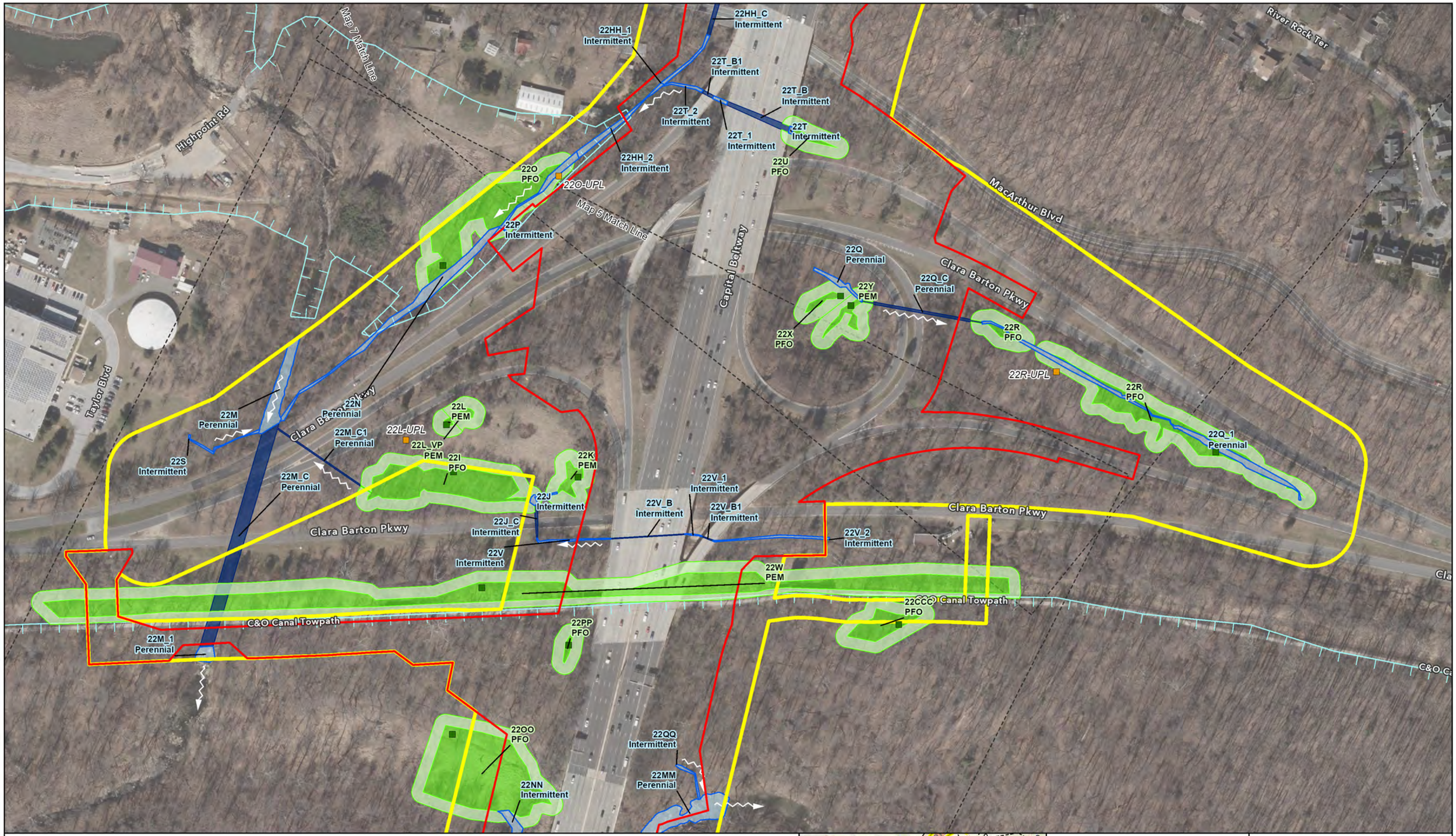
June 2022

Delineated Features

1 in = 200 ft

Map 5 of 41

270 / 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 6 of 41

N W E S

270 495 MANAGED LANES STUDY

Tammy Ct
Eggert Dr
Capital Beltway
Eggert Dr
22O PFO
22N Perennial
22HH Intermittent
22HH_1 Intermittent
22HH_C Intermittent
22HH_2 Intermittent
22T_B1 Intermittent
22T_2 Intermittent
22T_B Intermittent
22T_1 Intermittent
22T Intermittent
22U PFO
22E-UPL
22E PEM
22-SWM1
22SWM-2
Map 5 Match Line
Capital Beltway
Map 6 Match Line
Carlynn Dr
Carlynn Ct
Map 8 Match Line
Tomlinson Ave
22Q Perennial
22X PFO
22Y PEM
22Q_C Perennial
Clara Barton Pkwy
MacArthur Blvd
22R PFO
22Q_1 Perennial
22R-UPL
River Rock Ter
Carlynn Dr
Clara Barton Pkwy
22W PEM
22R PFO

Legend

- LOD - Preferred Alternative
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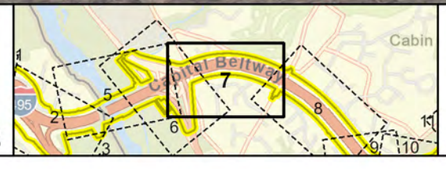
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

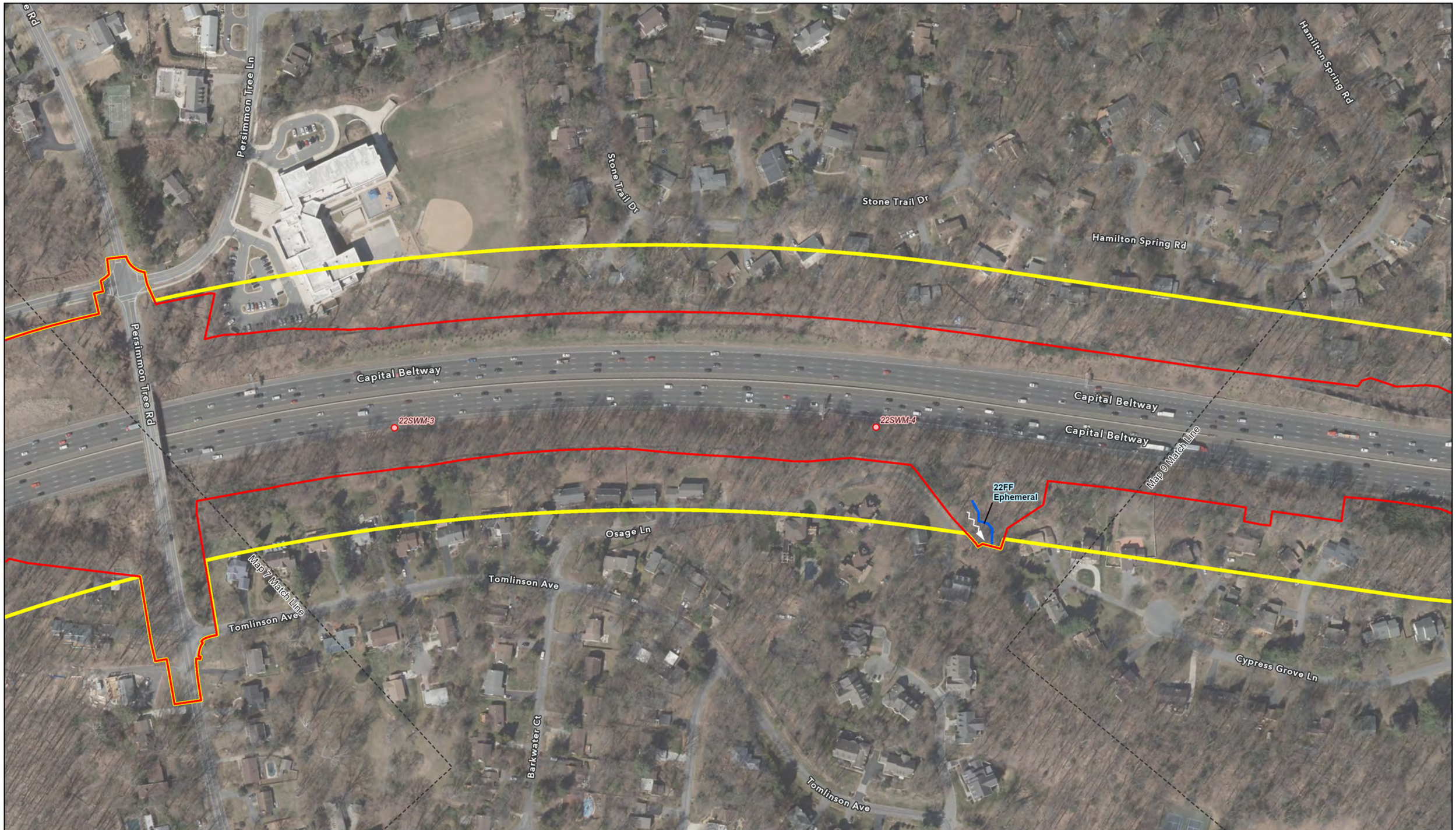


Delineated Features

1 in = 200 ft

Map 7 of 41

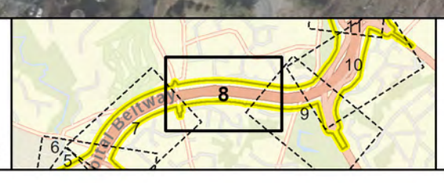
495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



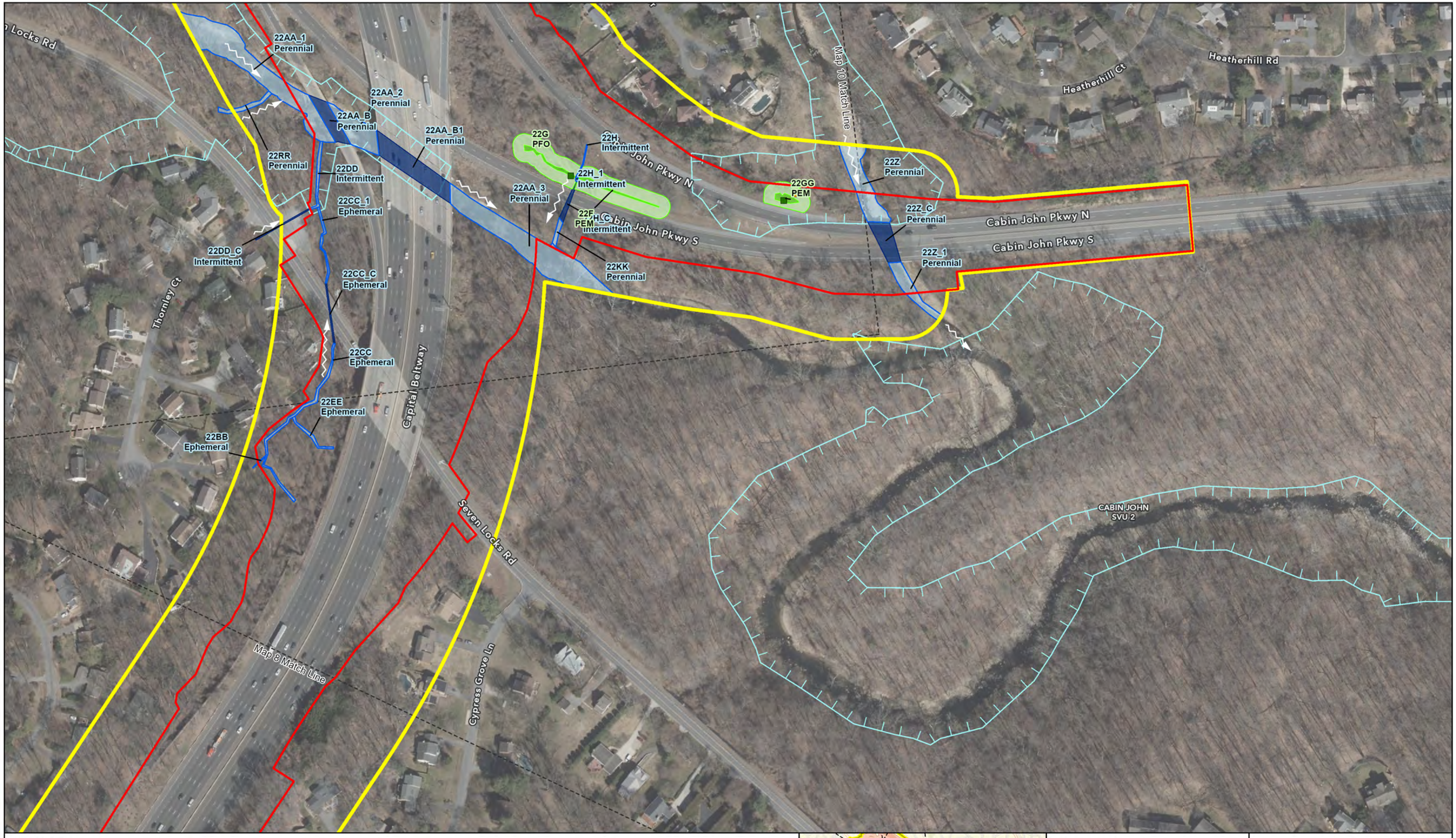
Delineated Features

1 in = 200 ft

Map 8 of 41

N W E S

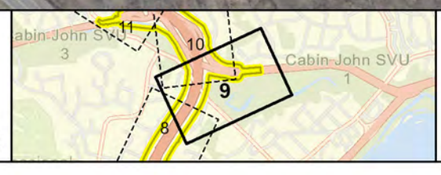
270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

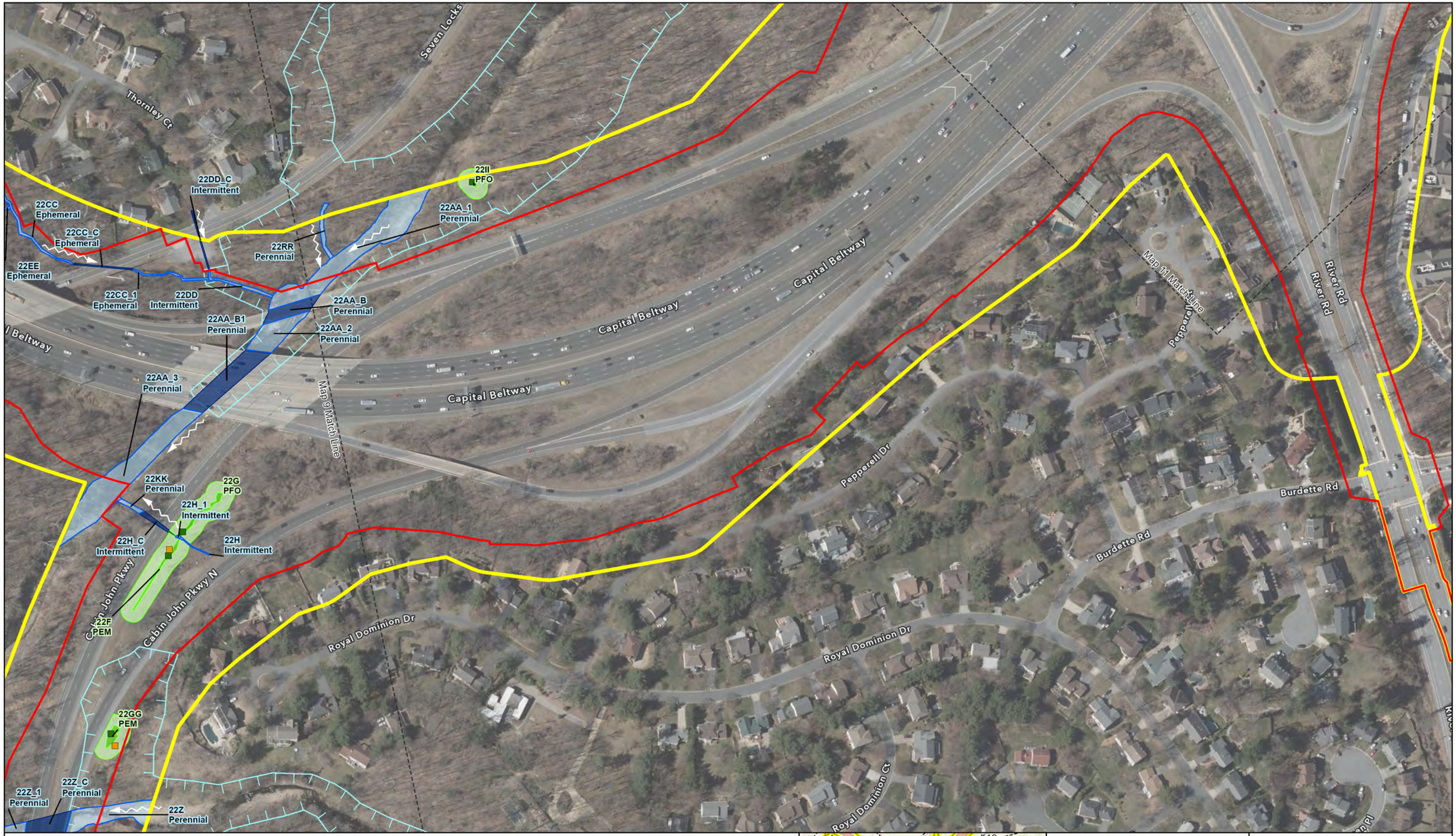


Delineated Features

1 in = 200 ft

Map 9 of 41

495 270 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 10 of 41

495 270 MANAGED LANES STUDY

Seven Locks Rd
Emery Corners
Lonesome Pine Ln
River Rd
River Quarry Pl
Old Seven Locks Rd
Seven Locks Rd
21C_C2
Perennial
22AA
Perennial
22JJ
PFO
22C_C
Intermittent
22D
Intermittent
22C
Intermittent
22A_C
Intermittent
22A
Intermittent
22B
Intermittent
21D_1
Intermittent
21D_C1
Intermittent
21D_C
Intermittent
21D
Intermittent
Capital Beltway
Capital Beltway
Capital Beltway
Map 10 Match Line
21C_2
Perennial
21C_C1
Perennial
21G
Intermittent
21C_1
Perennial
21F
Intermittent
21F_C
Intermittent
Map 12 Match Line
21C_1
Perennial
21R
Ephemeral
21H
Ephemeral
21Q
PFO

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 11 of 41

W S N E

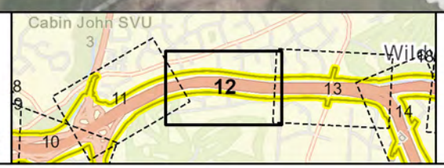
270 495 MANAGED LANES STUDY

Seven Locks Rd
Cindy Ln
Carteret Rd
Quintana Ct
Capital Beltway
21M
Intermittent
21C_C
Perennial
21C_1
Perennial
21P
PFO
21T
PFO
21Q
PFO
21H
Ephemeral
21R
Ephemeral
21C
Perennial
21L_D1
Perennial
21L_C
Perennial
21L_D
Perennial
Map 11 Match Line
Map 13 Match Line
Arrowood Ct
Arrowood Rd

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

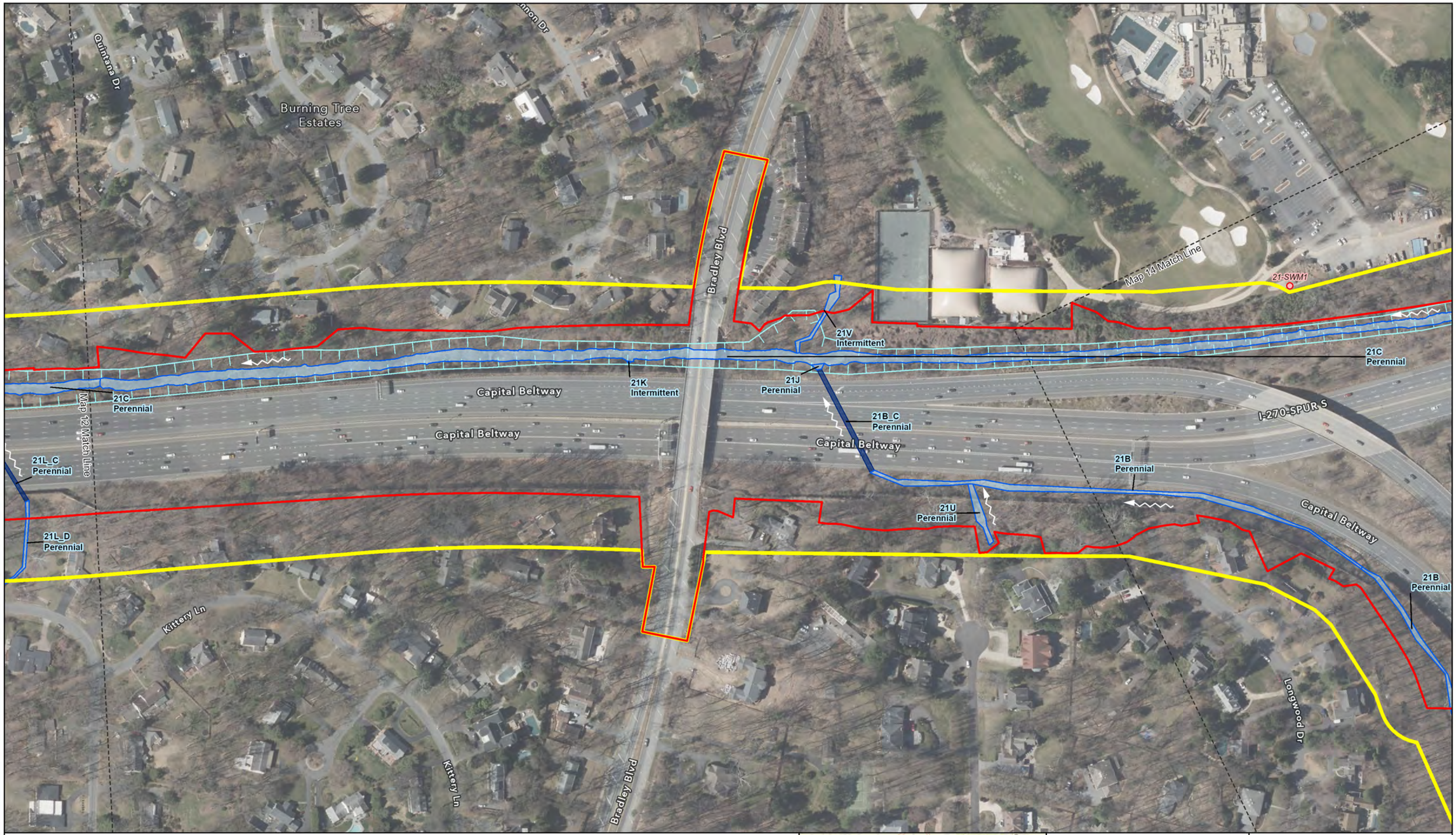


Delineated Features

1 in = 200 ft

Map 12 of 41

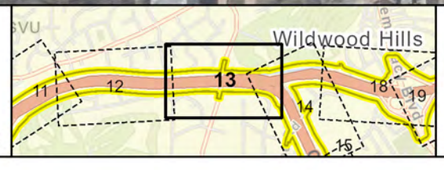
270 / 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

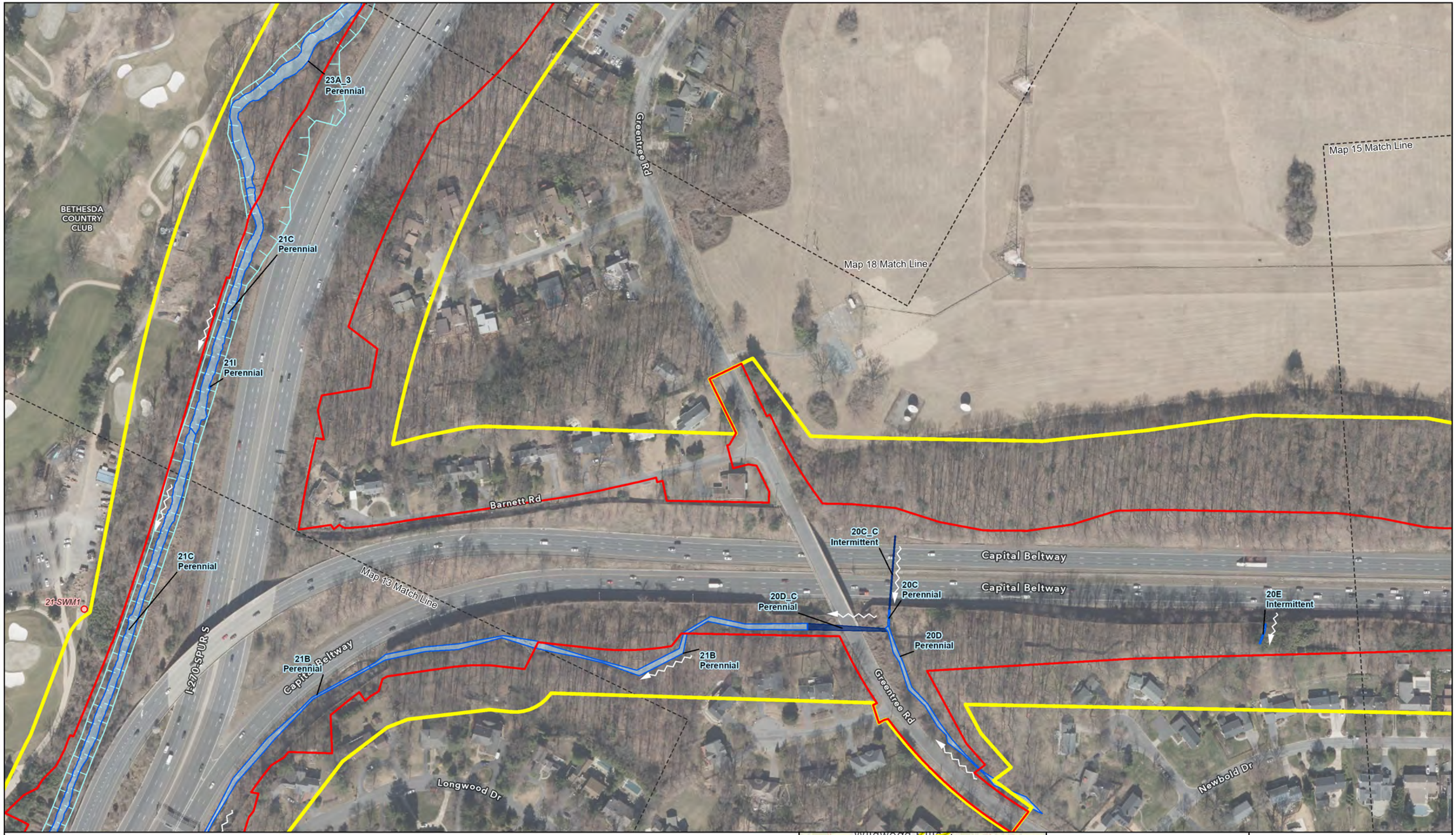


Delineated Features

1 in = 200 ft

Map 13 of 41

270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 14 of 41

N W E S

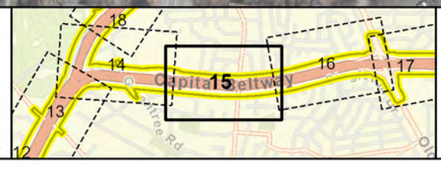
270 495 MANAGED LANES STUDY

Brixton Ln
Rutley Rd
Tusculum Rd
Corkran Ln
Renita Ln
Rockhurst Rd
Capital Beltway
20B
Intermittent
Fernwood Rd
Map 16 Match Line
Earlham Dr
Newbold Dr
Map 14 Match Line
Starmont Rd
Hollins Dr
Michaels Dr

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 15 of 41

N W E S

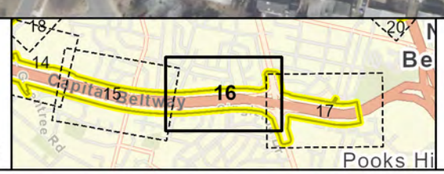
270 495 MANAGED LANES STUDY

Map 15 Match Line
De Paul Dr
Carnegie Dr
Stoneham Rd
Rockhurst Rd
Rockhurst Rd
Capital Beltway
Capital Beltway
Singleton Dr
Singleton Dr
Ashburton
Ashburton Ln
Marquette Dr
Juilliard Dr
Belhaven Rd
Old Georgetown Rd
Old Georgetown Rd
Old Georgetown Rd
Map 17 Match Line
Kingsford Rd
20F_C
Perennial

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



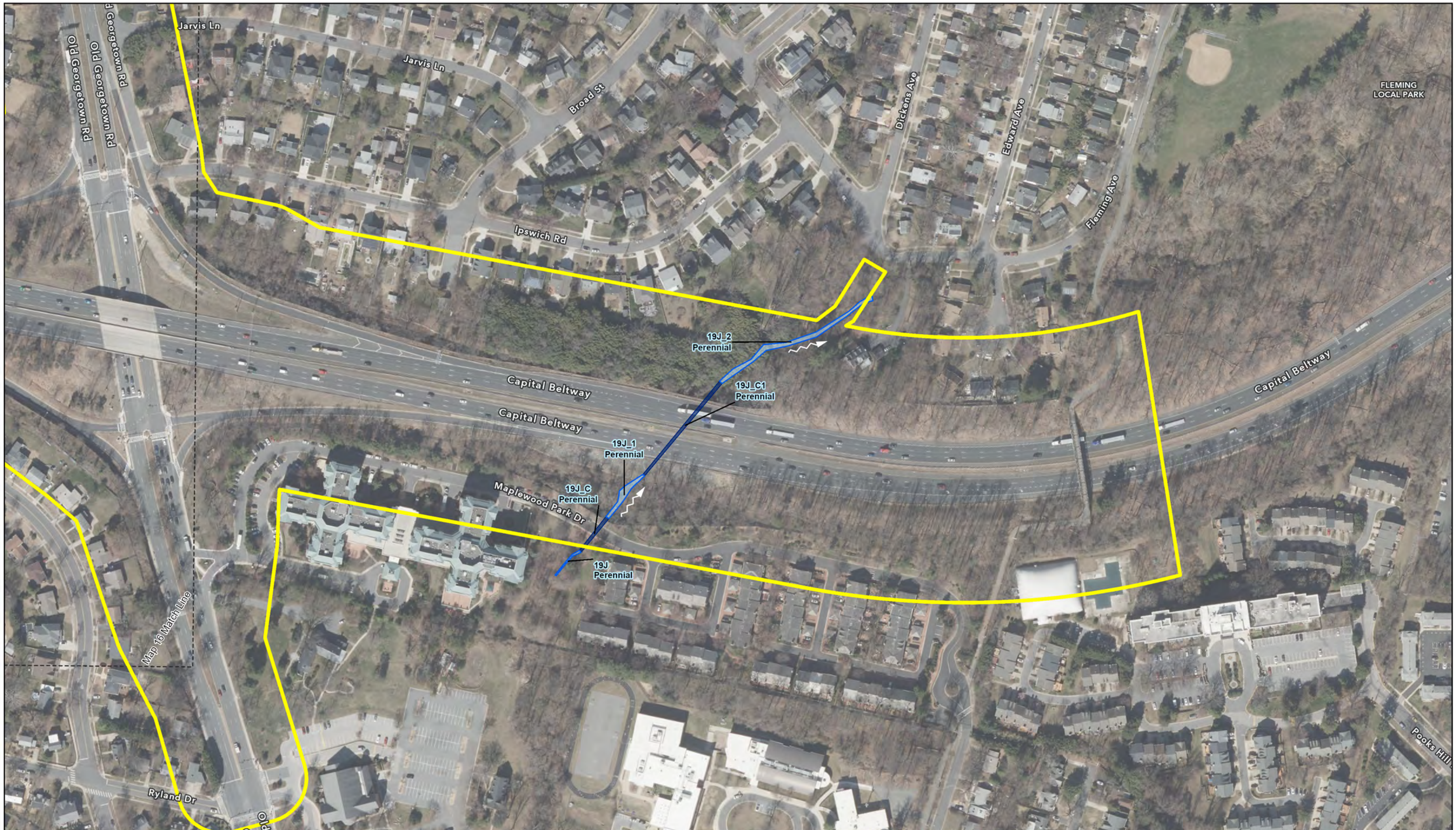
Delineated Features

1 in = 200 ft

Map 16 of 41

N W E S

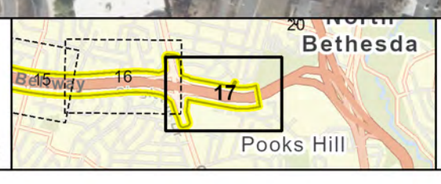
270 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



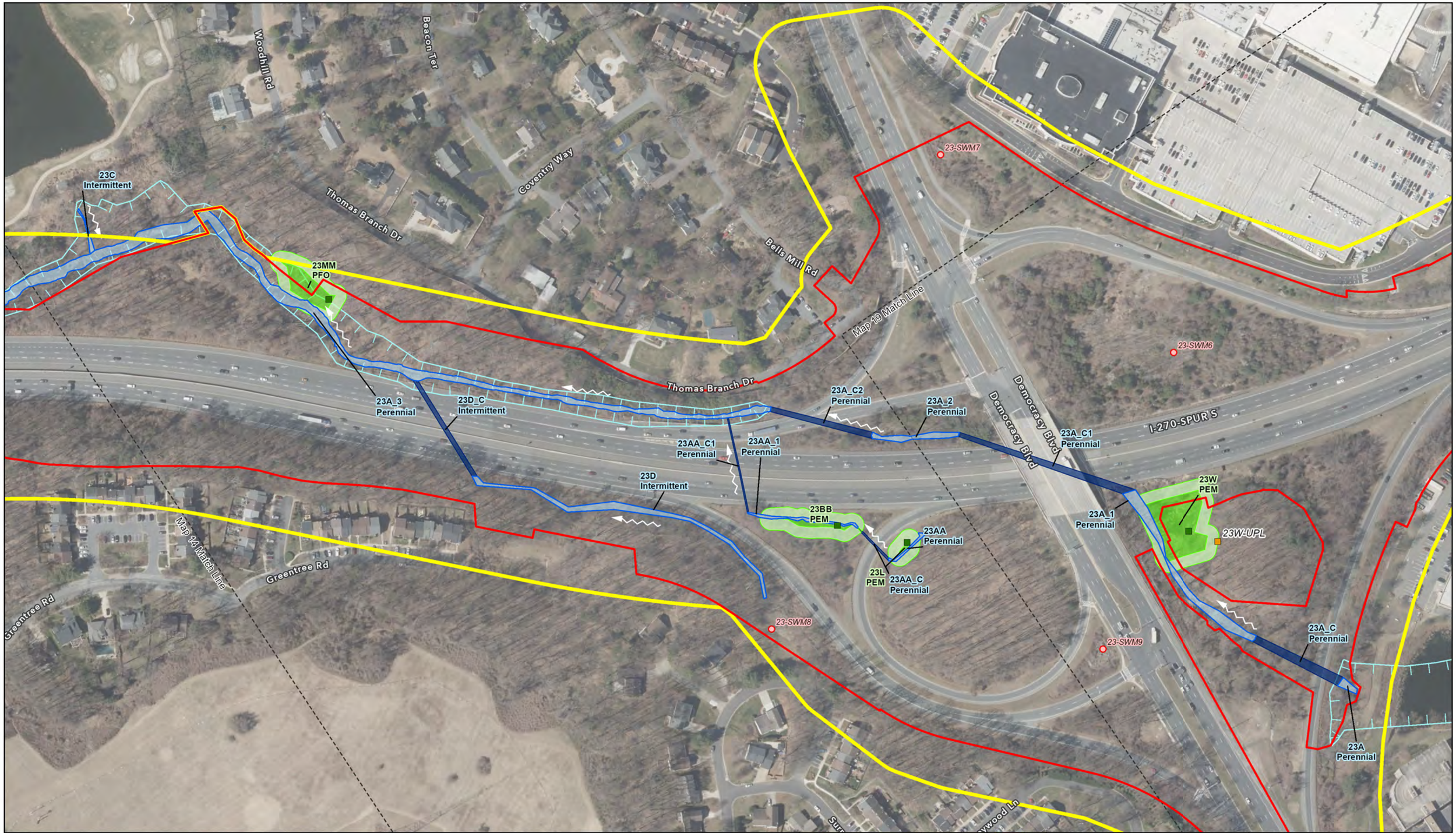
Delineated Features

1 in = 200 ft

Map 17 of 41

N W E S

270 495 MANAGED LANES STUDY



Legend

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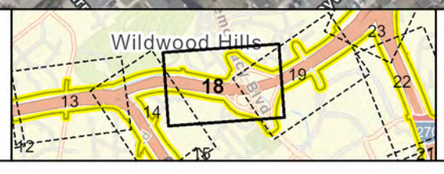
- Flow Direction

June 2022

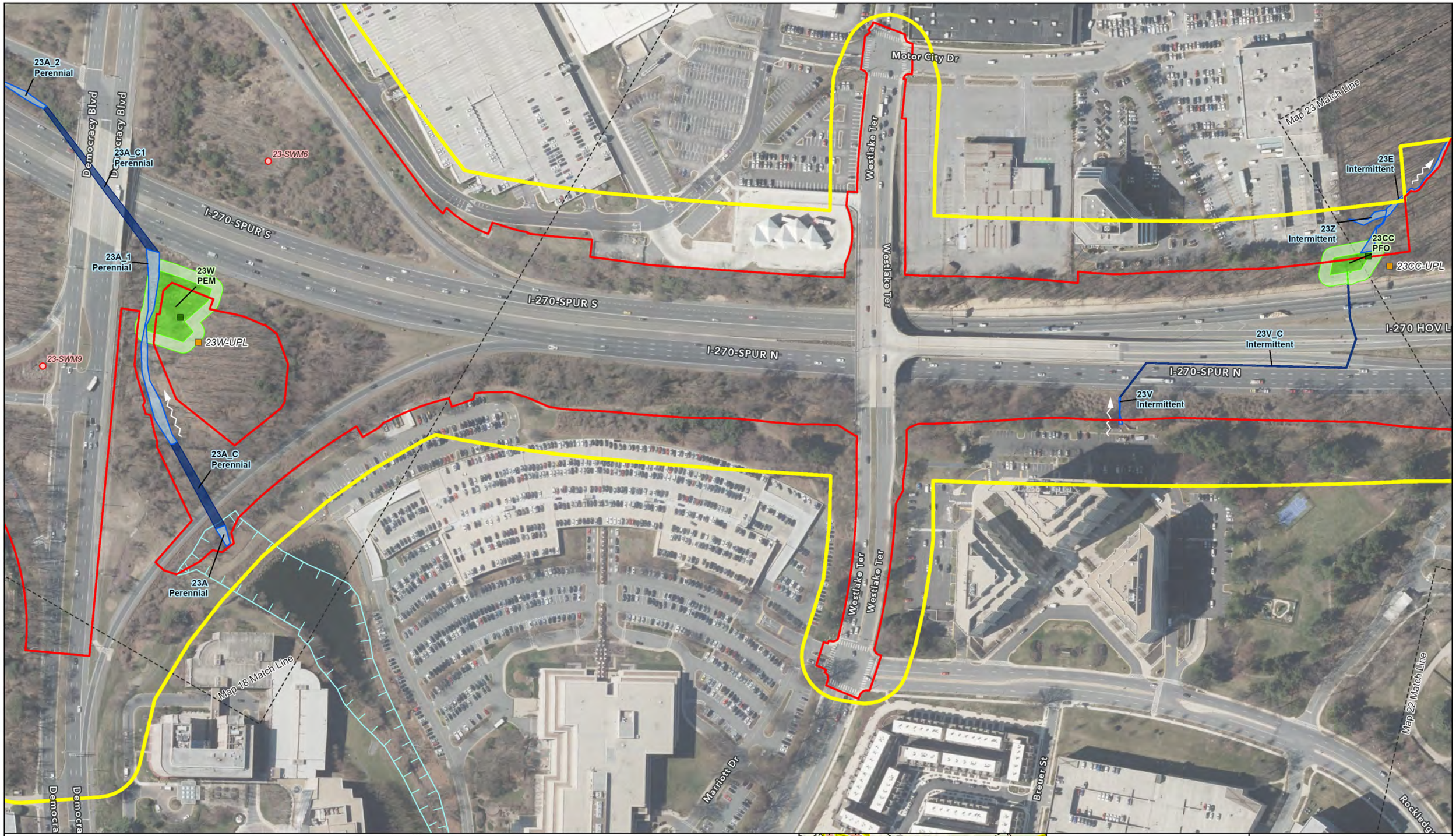


Delineated Features

1 in = 200 ft

Map 18 of 41

270 495 MANAGED LANES STUDY



Legend

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- FEMA 100-Year Floodplain
- Delineated Wetland
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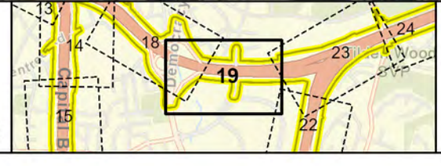
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

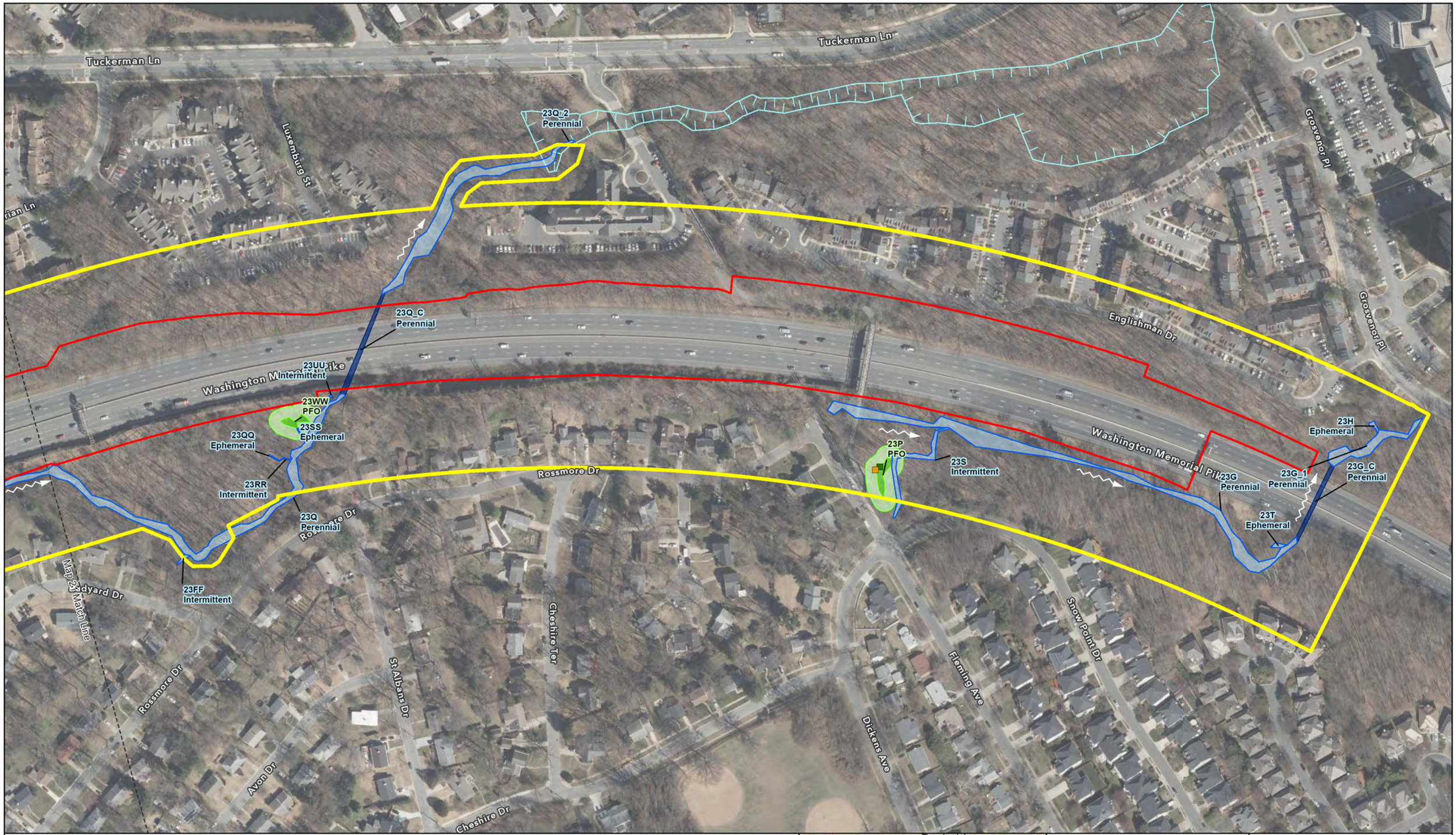


Delineated Features

1 in = 200 ft

Map 19 of 41

270 495 MANAGED LANES STUDY



Legend

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- FEMA 100-Year Floodplain
- Delineated Wetland
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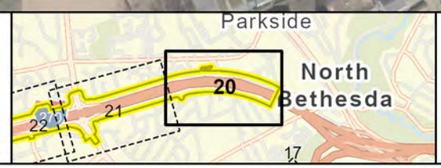
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 20 of 41

270 / 495 MANAGED LANES STUDY

Rosemont Cir
Valerian Ln
Lady Slipper Ter
Gloxinia Dr
Valerian Ln
23R_2
Intermittent
23R_1
Intermittent
23R_C
Intermittent
23PP
Intermittent
23NN
Perennial
23R
Intermittent
23Q
Perennial
Washington Memorial Pike
Washington Memorial Pike
Old Georgetown Rd
Old Georgetown Rd
23EE
PFO
Farnham Dr
Aubinoe Farm Dr
Aubinoe Farm Dr
Rock Forest Dr
Berkshire Dr
Rudyard Dr
Map 20 Match Line
Map 22 Match Line
Yorkshire Ter
Farnham Dr

Legend

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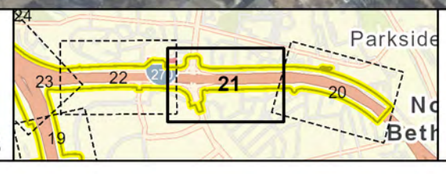
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft
Map 21 of 41

N E S W

270 495 MANAGED LANES STUDY

Mazwood Rd
Mazwood Pl
Cameo Ct
Charnwood Dr
23-SWM4
23LL
PEM
23N_1
Perennial
23U
Perennial
23U_C
Perennial
23N
Intermittent
23N_C
Intermittent
Dwight D Eisenhower Hwy
Map 23 Match Line
23U_1
Perennial
Map 21 Match Line
23N_D
Intermittent
23KK
PEM
23J/23KK-UP
23J
PFO
Rockledge Blvd
Rock Forest Dr
Map 19 Match Line

Legend

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- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

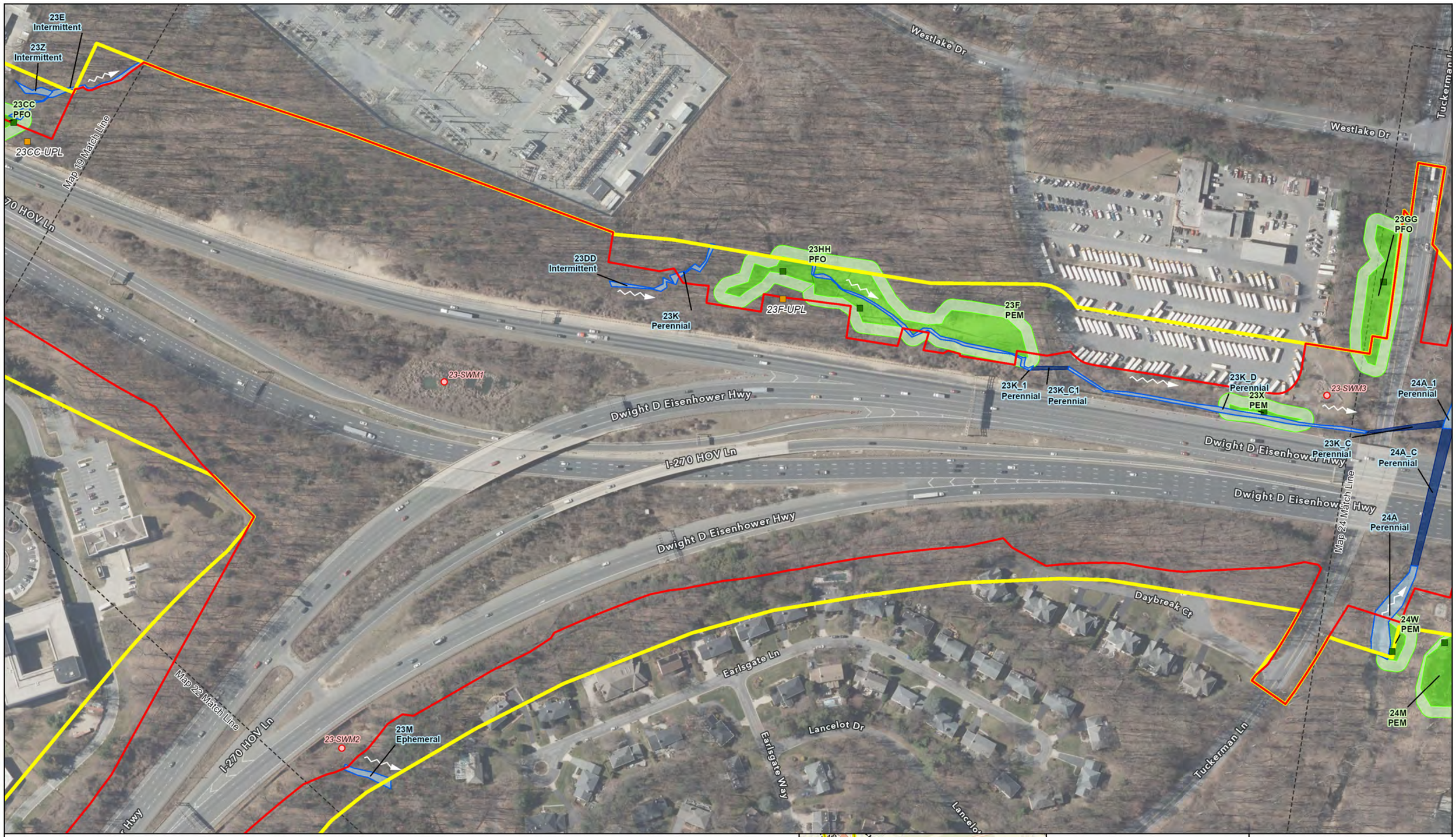
Delineated Features

1 in = 200 ft

Map 22 of 41

N E S W

270 495 MANAGED LANES STUDY



Legend

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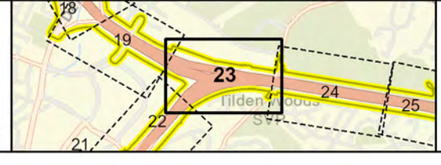
- Upland Data Point
- Wetland Data Point
- Flow Direction



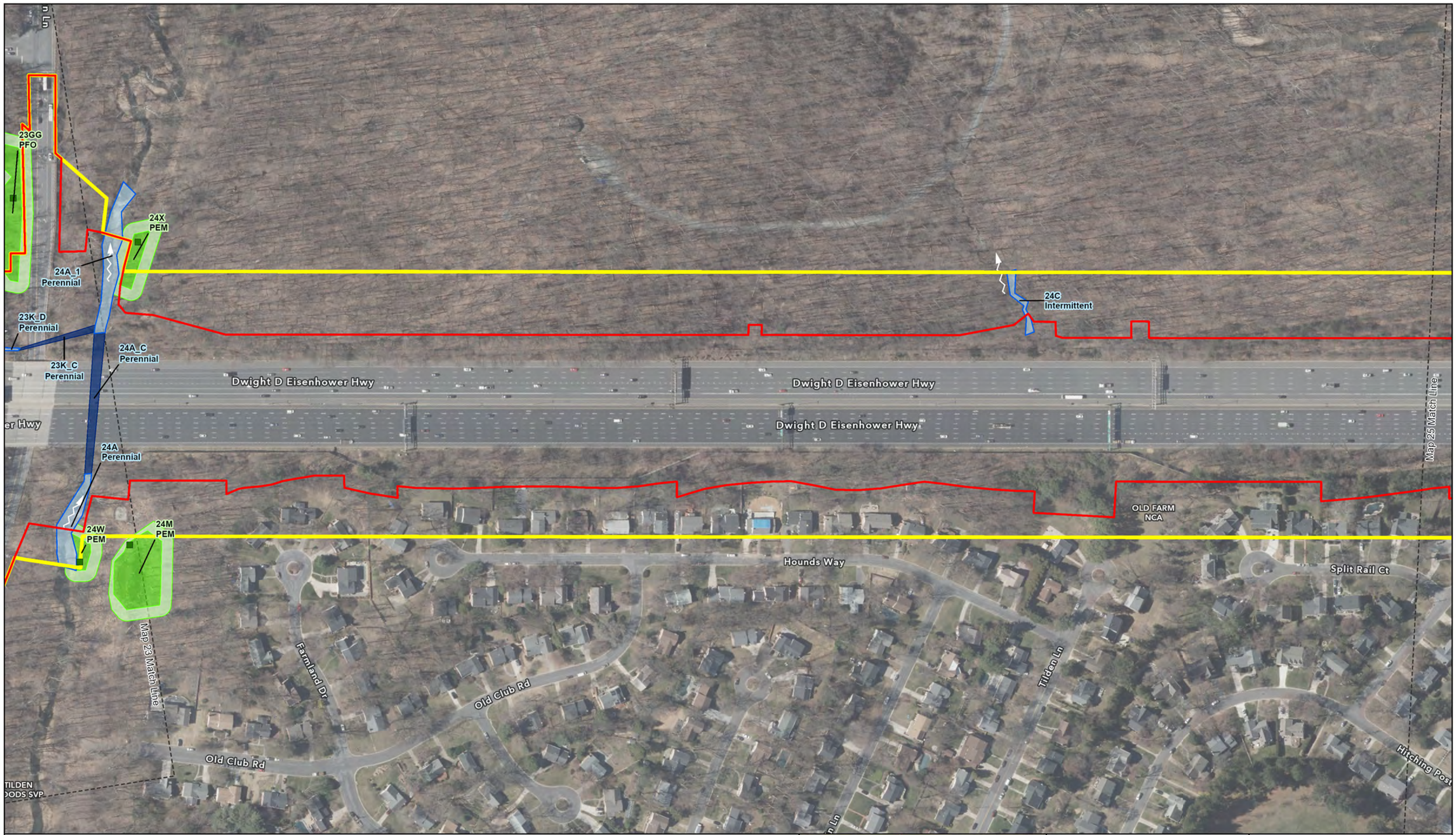
June 2022

Delineated Features

1 in = 200 ft

Map 23 of 41

I-495 I-270 MANAGED LANES STUDY



Legend

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- Wetland Data Point
- Existing SWM Point
- Flow Direction

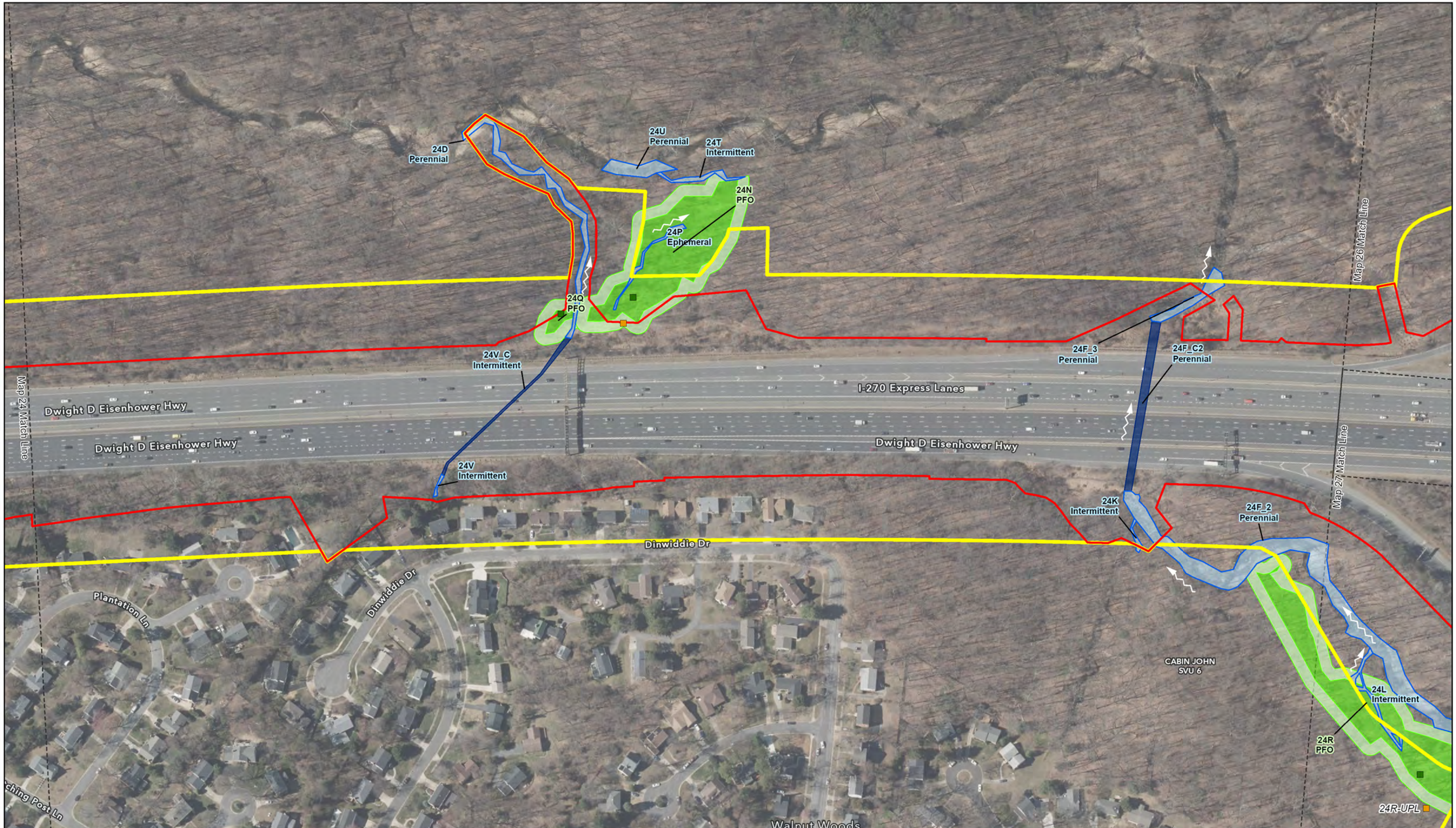
June 2022

Delineated Features

1 in = 200 ft

Map 24 of 41

270 / 495 MANAGED LANES STUDY



Legend

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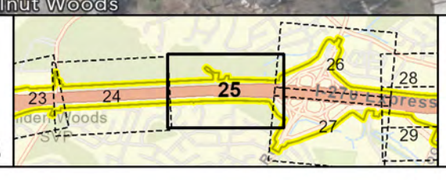
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

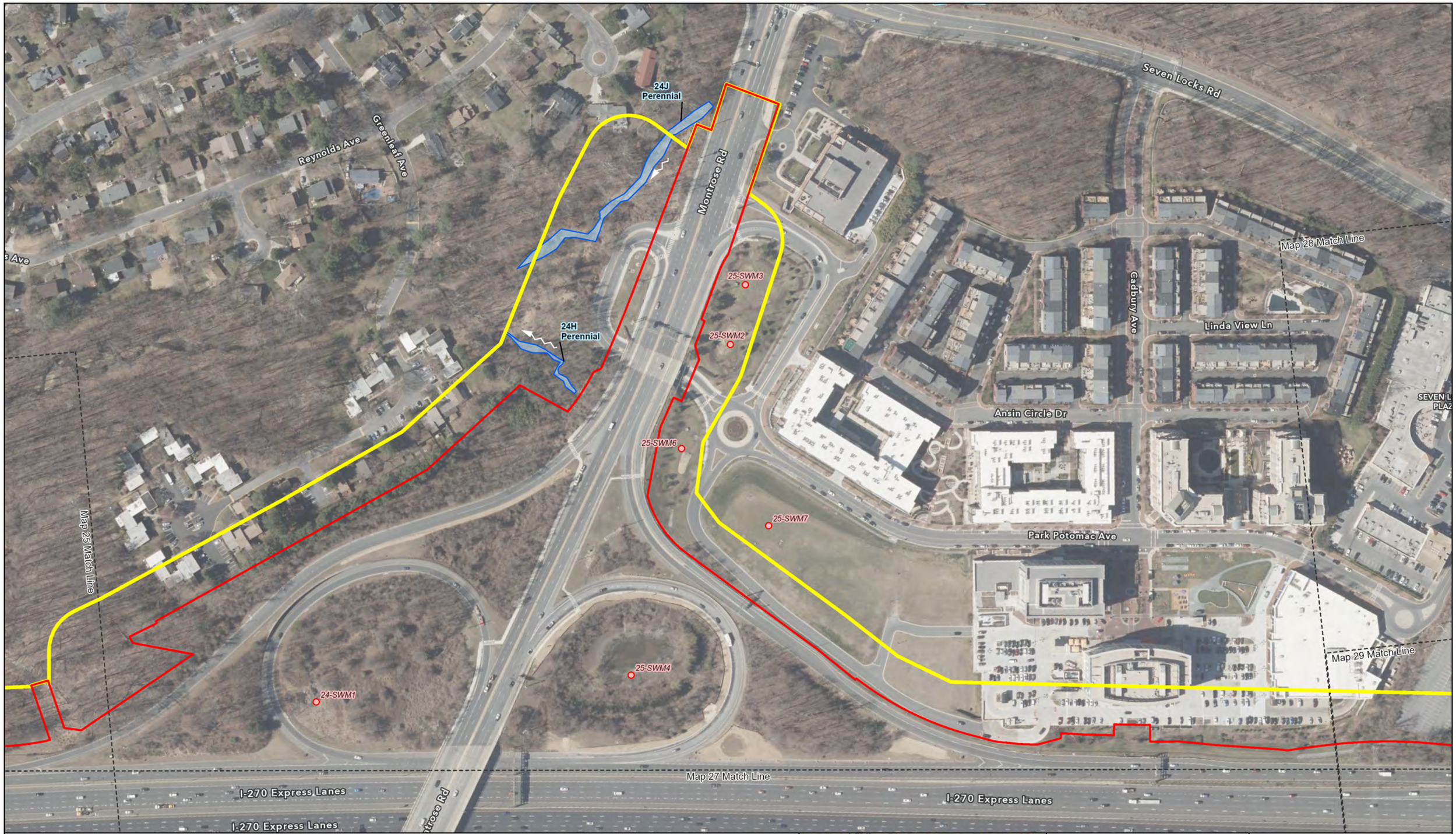


Delineated Features

1 in = 200 ft

Map 25 of 41

I-270 / I-495 MANAGED LANES STUDY



Legend

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- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
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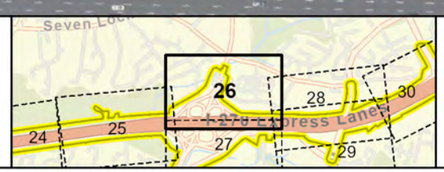
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 26 of 41

270 / 495 MANAGED LANES STUDY

I-270 Express Lanes

Map 26 Match Line

Map 25 Match Line

Map 28 Match Line

Map 29 Match Line

24-SWM2

25-SWM5

24SWM-3

25-SWM8

24F_2
Perennial

24L
Intermittent

24F_C1
Perennial

25C
Intermittent

24R
PFO

24R-UPL

24F_1
Perennial

25B
PFO

25B
PFO

24F_C
Perennial

24F
Perennial

25A_1
Perennial

25A_C
Perennial

25A
Perennial

25L
Intermittent

25G
Intermittent

Tower Oaks Blvd

Tower Oaks Blvd

Tower Oaks Blvd

Preserve Pkwy

Preserve Pkwy

Montrose Rd

Montrose Rd

Montrose Rd

N Farm Ln

Green Pasture Dr

Legend

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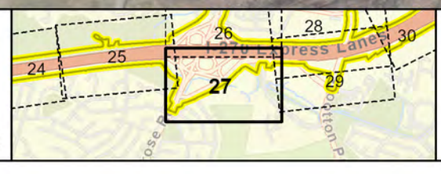
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 27 of 41

270 495 MANAGED LANES STUDY

Seven Locks Rd
Halesworth Dr
Map 30 Match Line
Seven Locks Rd
Seven Locks
SEVEN LOCKS PLAZA
Fortune Ter
Map 29 Match Line
Wootton Pkwy
Wootton Pkwy
25H_1
Perennial
25K
PEM
25E
Perennial
25M
PEM
25H_C
Perennial
Map 27 Match Line
I-270 Local Lanes
Map 26 Match Line
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
25D
PFO
25H
Perennial
25D-UPL
25P
PFO
25N
Intermittent
25F
Ephemeral
Tower Oaks Blvd

Legend

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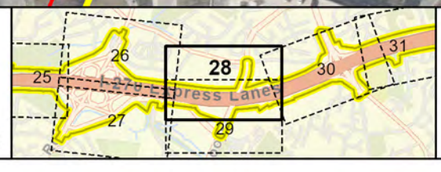
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

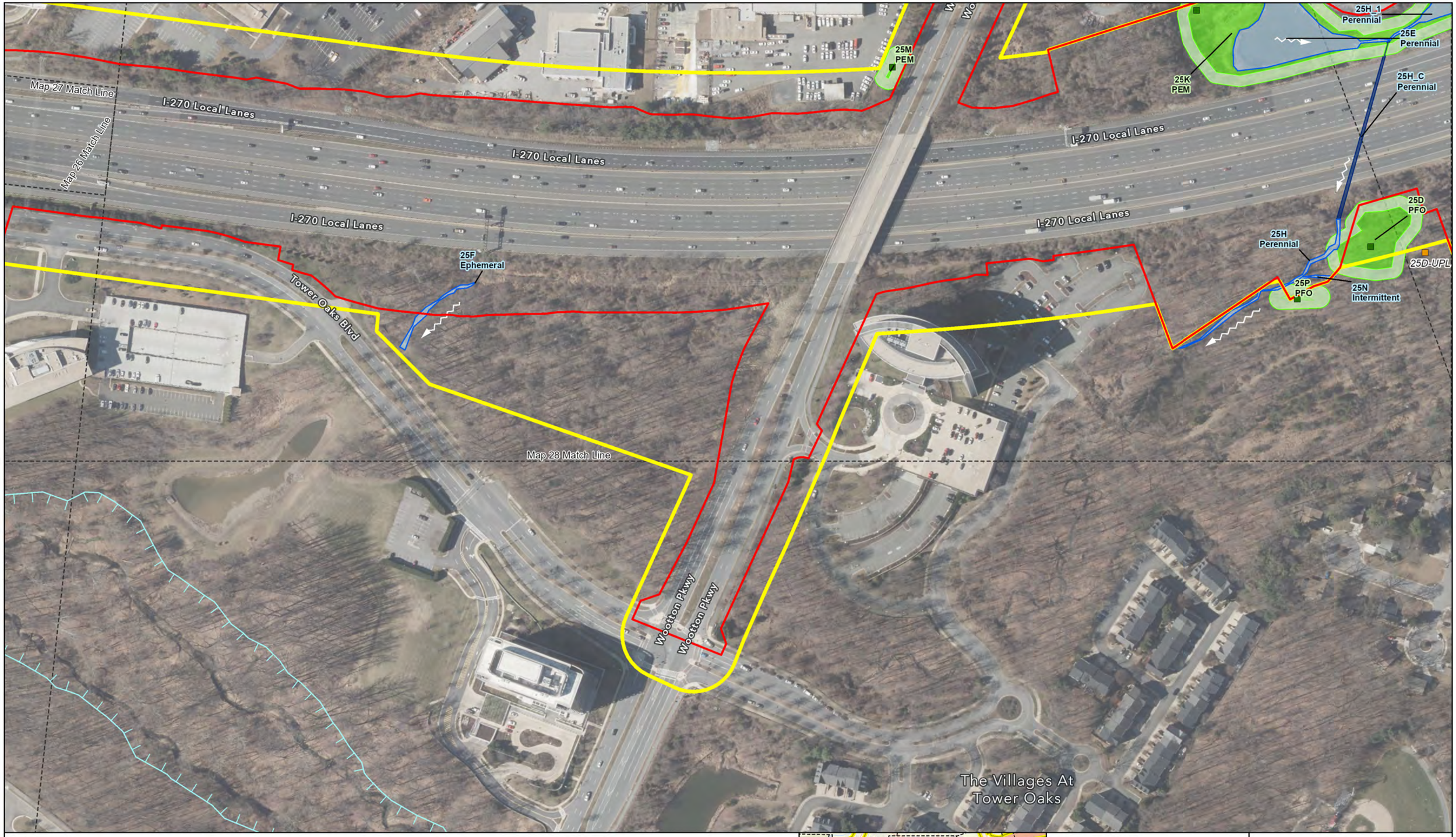


Delineated Features

1 in = 200 ft

Map 28 of 41

I-270 495 MANAGED LANES STUDY



Legend

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- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 29 of 41

I-270 / I-495 MANAGED LANES STUDY

Cliffe Hill Way
Seven Locks Rd
Cliffe Hill Way
Seven Locks Rd
Map 28 Match Line
Map 29 Match Line
25K
PEM
25H_1
Perennial
25E
Perennial
25H_C
Perennial
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
I-270 Local Lanes
25D
PFO
25D-UPL
Great Falls Rd
Great Falls Rd
Watts Branch Pkwy
Saddlebrook
Woodsend Pl
I-270 Local Lanes
I-270 Local Lanes
26H
PEM
26G
Ephemeral
26G_1
Intermittent
Map 31 Match Line
JULIUS WEST
MIDDLE
SCHOOL
Marcus Ct
MILLENIUM
GARDEN PARK
Markwood

Legend

- LOD - Preferred Alternative
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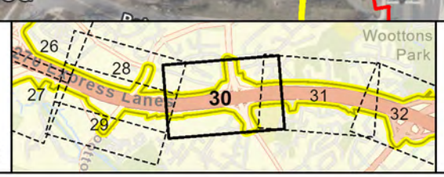
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

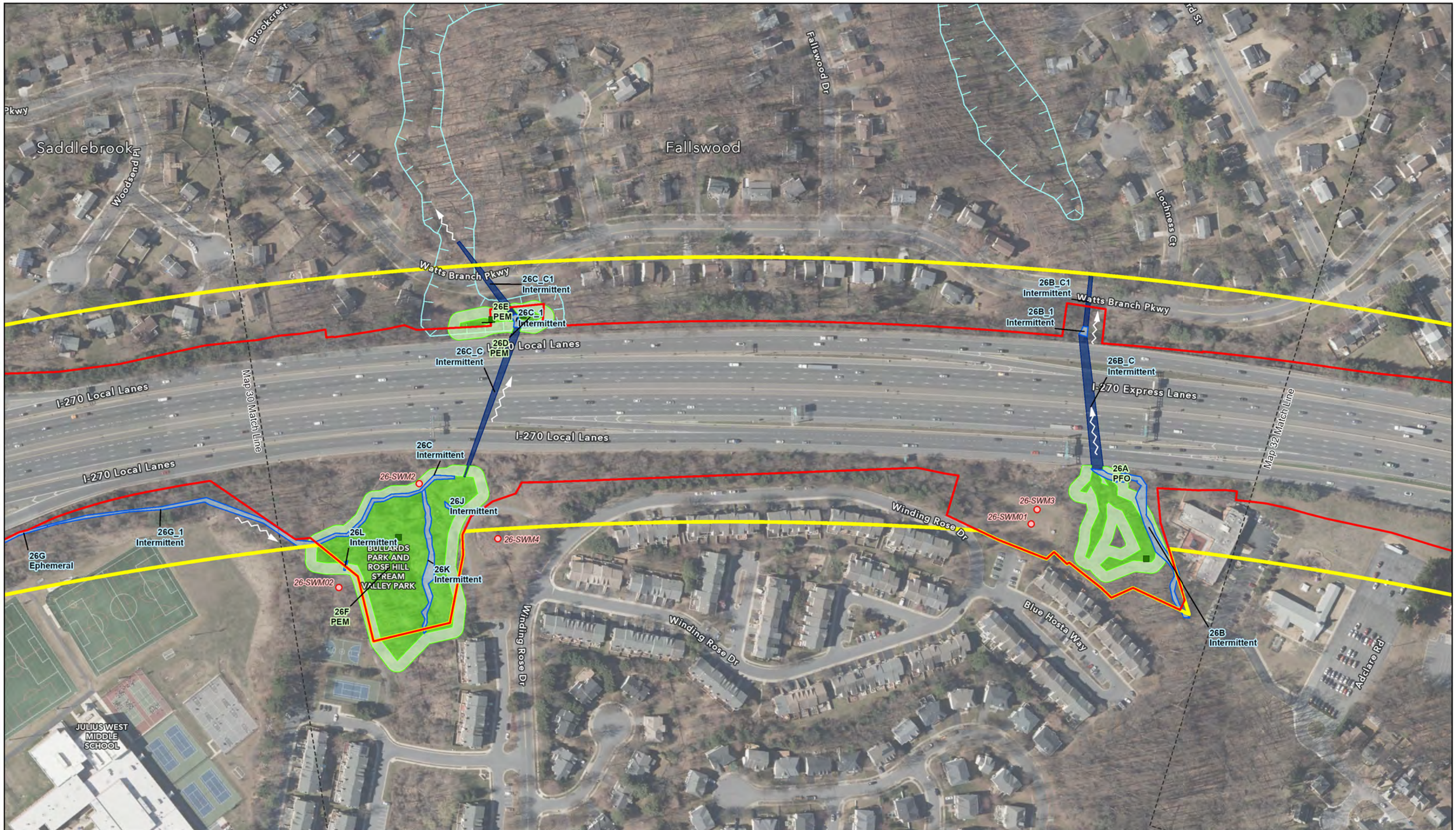
June 2022



Delineated Features

1 in = 200 ft
Map 30 of 41

I-270 / I-495 MANAGED LANES STUDY



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- Wetland Data Point
- Existing SWM Point
- Flow Direction

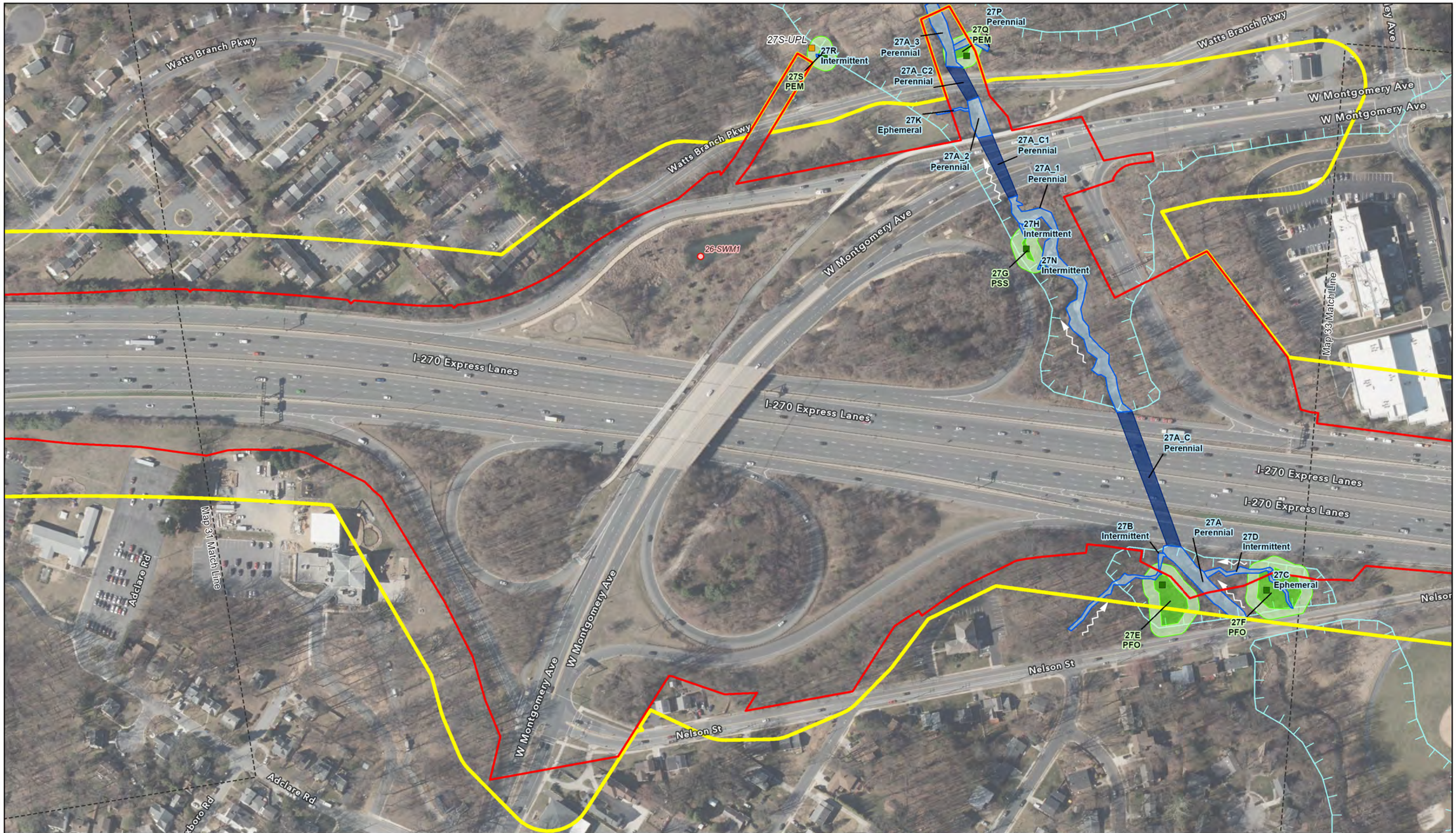
Delineated Features

1 in = 200 ft

Map 31 of 41

June 2022

I-270 & I-495 MANAGED LANES STUDY



Legend

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- Wetland Data Point
- Existing SWM Point
- Flow Direction

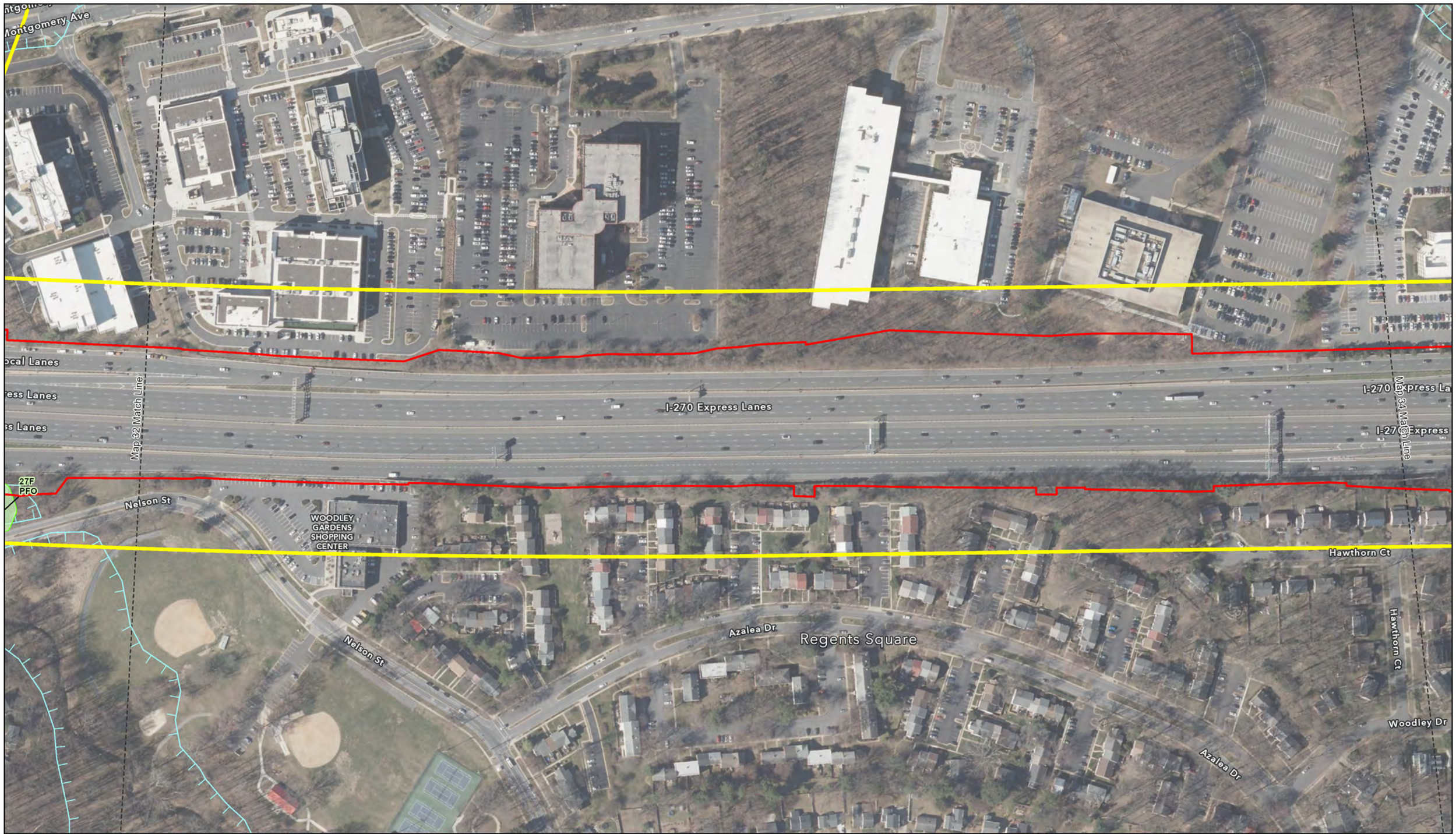
June 2022

Delineated Features

1 in = 200 ft

Map 32 of 41

270 495 MANAGED LANES STUDY



Legend

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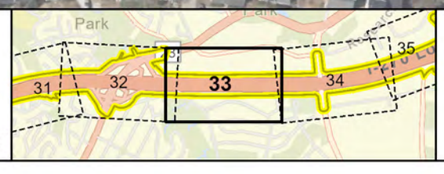
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 33 of 41

270 495 MANAGED LANES STUDY

Research Blvd
Research Blvd
W Gude Dr
27-SWM6
I-270 Local Lanes
Express Lanes
Map 33 Match Line
Map 35 Match Line
27-SWM9
27-SWM10
ROCKVILLE SENIOR CENTER PARK
Piccard Dr
Piccard
Curie Ct

Legend

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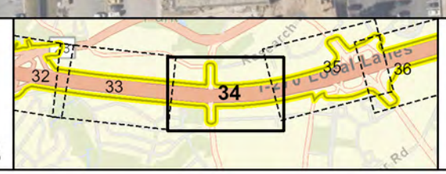
June 2022



Delineated Features

1 in = 200 ft
Map 34 of 41

I-270 / I-495 MANAGED LANES STUDY

Research Pl

Map 34 Match Line

Research Ct

Shady Grove Rd

Shady Grove Rd

Map 36 Match Line

27-SWM8

27-SWM3

27-SWM2

27-SWM1

I-270 Local Lanes

I-270 Local Lanes

I-270 Local Lanes

I-270 Local Lanes

I-270 Local Lanes

27L_C
Intermittent

27L
Intermittent

27-SWM5

27-SWM7

27-SWM4

27M
PFO

27M-UPL

Legend

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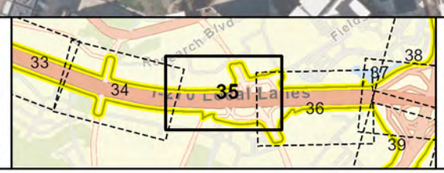
June 2022

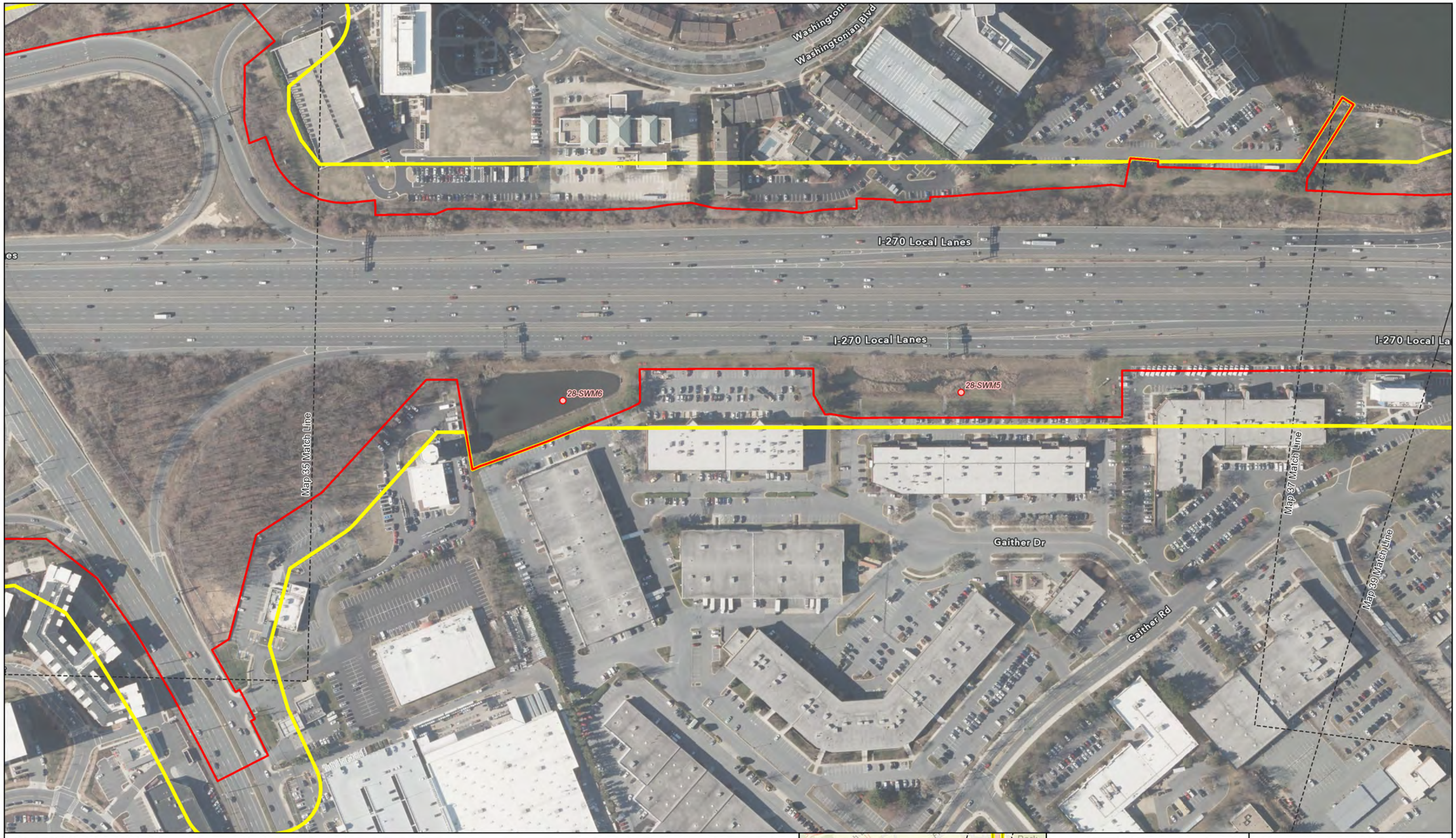


Delineated Features

1 in = 200 ft

Map 35 of 41

270 495 MANAGED LANES STUDY



Legend

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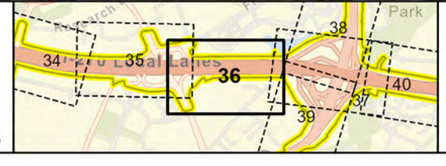
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

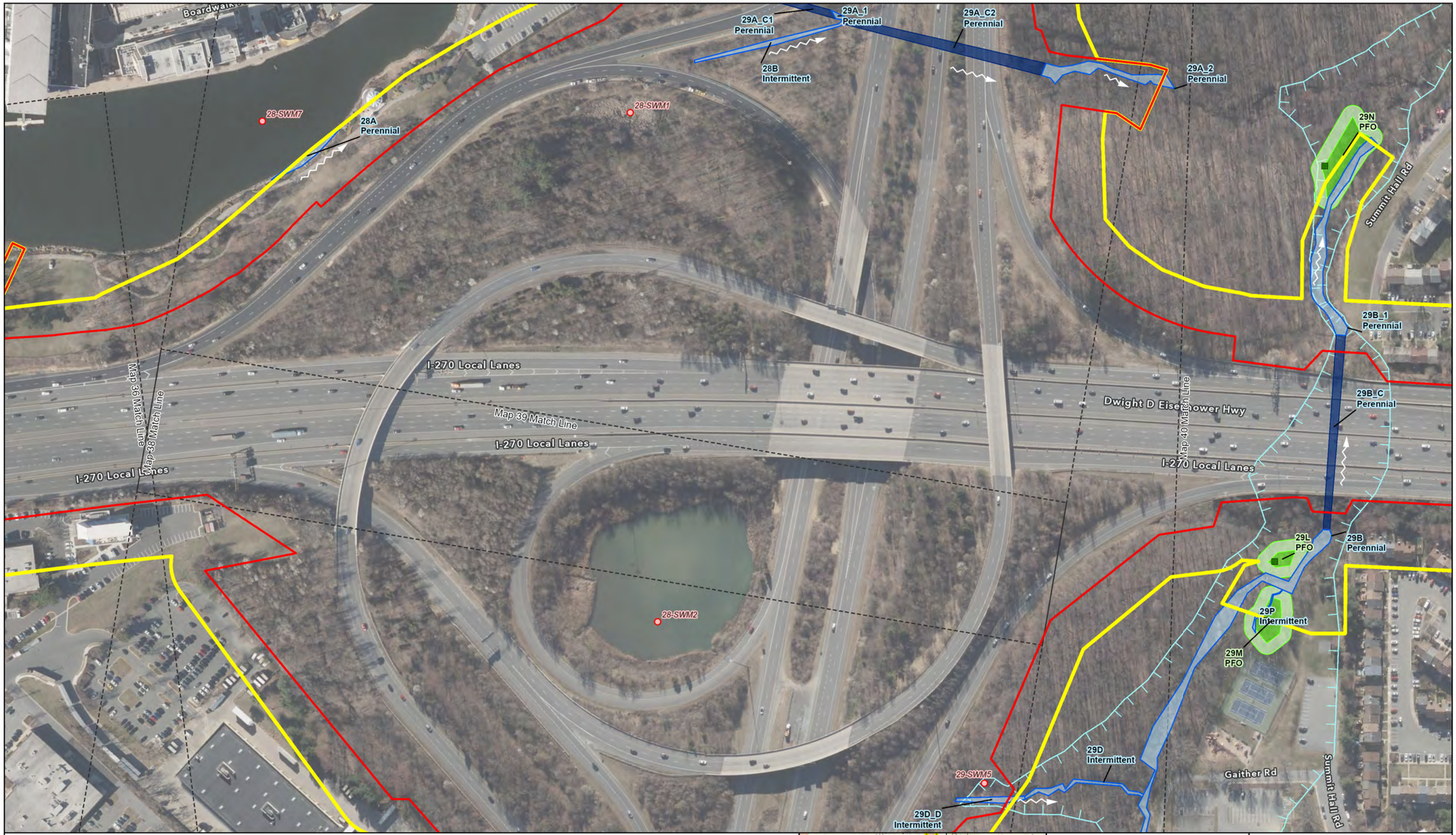


Delineated Features

1 in = 200 ft

Map 36 of 41

270 / 495 MANAGED LANES STUDY



Legend

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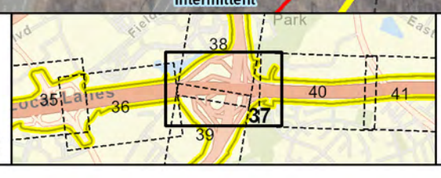
- Flow Direction

June 2022

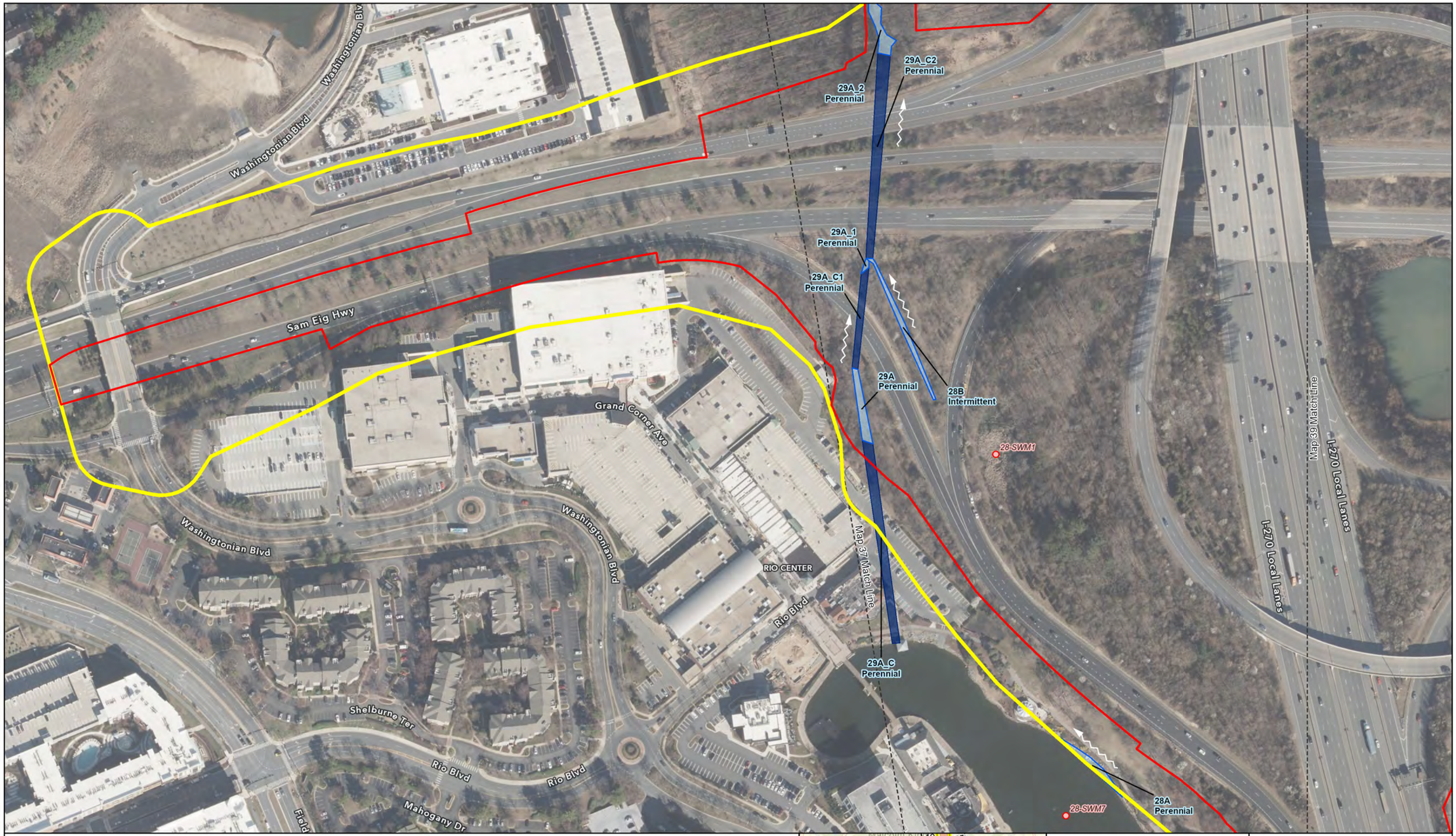


Delineated Features

1 in = 200 ft

Map 37 of 41

270 / 495 MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

Map 38 of 41

I-270 495 MANAGED LANES STUDY

29D_D
Intermittent

29-SWM3

29-SWM4

29K
Intermittent

Industrial Dr

28-SWM2

28-SWM3

ROSEMONT
STREAM
VALLEY

Edgewood Dr

Map 38 Match Line

Map 37 Match Line

I-270 Local Lanes

28-SWM4

Industrial Dr

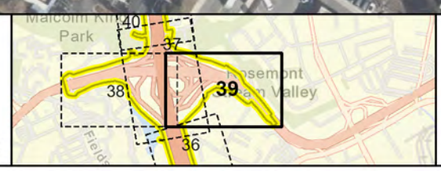
28-SWM8

Map 36 Match Line

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



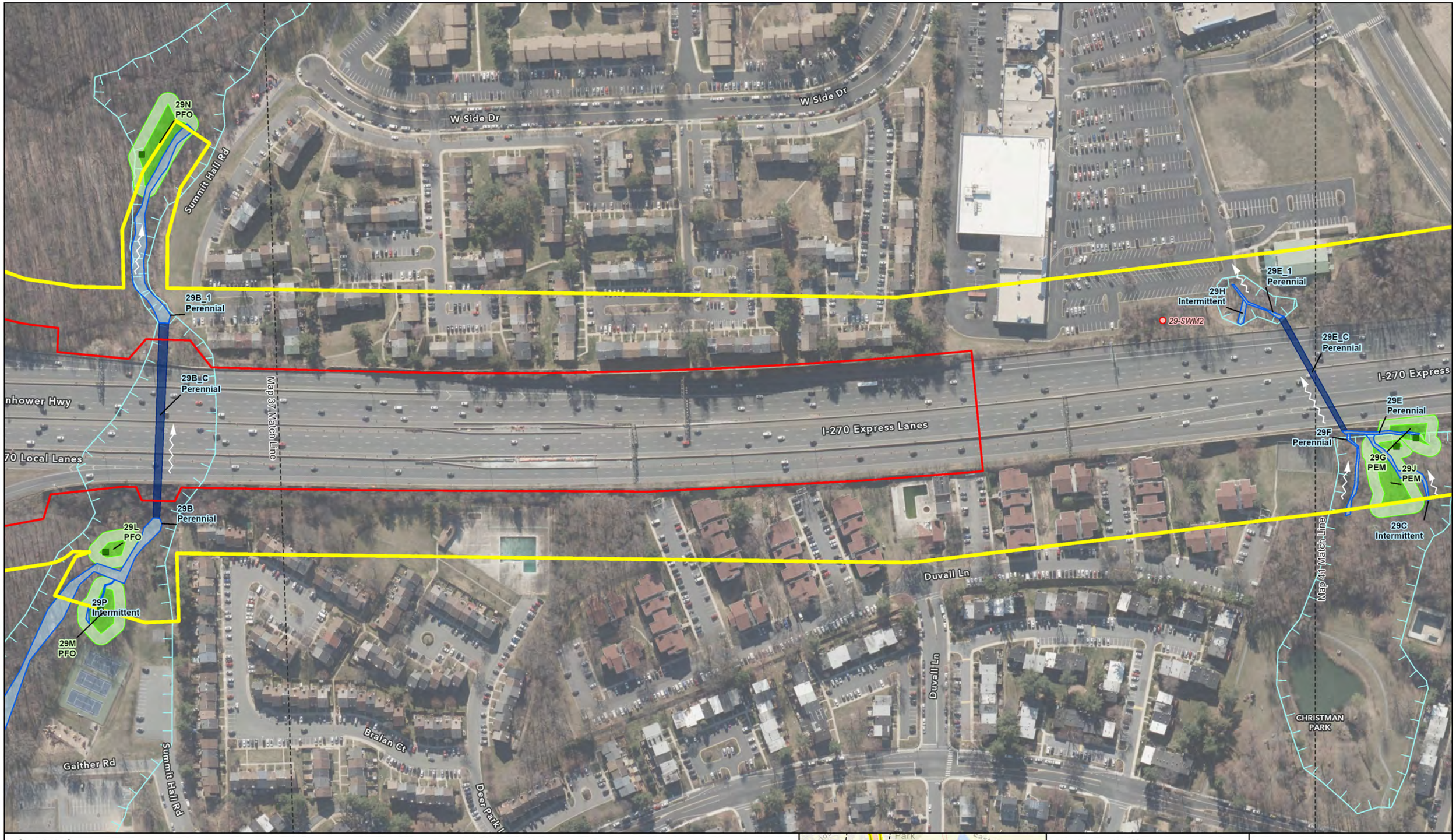
Delineated Features

1 in = 200 ft

Map 39 of 41

N
W
E
S

270
495
MANAGED LANES STUDY



Legend

- LOD - Preferred Alternative
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- Delineated Stream (Culvert or Bridge Section)
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- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022

Delineated Features

1 in = 200 ft

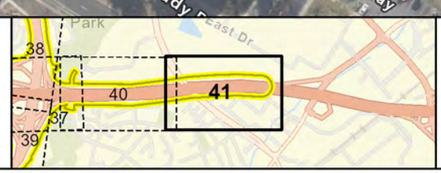
Map 40 of 41

270 495 MANAGED LANES STUDY

Legend

- LOD - Preferred Alternative
- Corridor Study Boundary
- Delineated Stream
- Delineated Stream (Culvert or Bridge Section)
- FEMA 100-Year Floodplain
- Delineated Wetland
- Wetland Buffer 25 ft
- Upland Data Point
- Wetland Data Point
- Existing SWM Point
- Flow Direction

June 2022



Delineated Features

1 in = 200 ft

Map 41 of 41