

These plans are conditionally approved as submitted or noted during plan review and are subject to field inspection. Approved plans must be kept on site and are needed for all inspections. No changes or modifications to these plans. Changes require a revision permit with the revised plans. Trade Permits are required for Trade Work, e.g. Electrical or Plumbing

VKA CAPITOL
 ENGINEERS * PLANNERS * LANDSCAPE ARCHITECTS * SURVEYORS * ESTIMATORS * PHOTOGRAMMETRY
 PROJECT COORDINATOR:
 BRIAN RUHL
 ruhl@vkapitol.com
 VKA CAPITOL, LLC * 4910 MASSACHUSETTS AVENUE, NW, SUITE 10
 WASHINGTON, DC 20016 * PHONE: 202.244.4140
 W.W.W. V.K.A.C.A.P.I.T.O.L.C.O.M.

MARET SCHOOL
 PROPOSED ATHLETIC FIELDS
 SQUARE 2319, LOT 832
 5901 UTAH AVE. NW
 WASHINGTON, D.C. 20015

UTILITY PROFILES

VKA CAPITOL
 DESIGNED BY: KUO
 DRAWN BY: BUR
 DATE: 23-FEB-2023
 SCALE: AS SHOWN
 PROJECT/FILE NO: VC0626D
 SHEET NO: CIV1015

****NOTE****
 THE INFORMATION, DESIGN AND CONTENT OF THE DRAWINGS OR DOCUMENTS ATTACHED HEREIN ARE PROPRIETARY TO VKA CAPITOL, LLC AND CONSTITUTE ITS PROPRIETARY INTELLECTUAL PROPERTY. THE ATTACHED DRAWINGS AND DOCUMENTS MUST NOT BE FORWARDED, SHARED, COPIED, DIGITALLY CONVERTED, MODIFIED, OR USED FOR ANY PURPOSE, IN ANY FORMAT, WITHOUT PRIOR WRITTEN AUTHORIZATION FROM VKA CAPITOL, LLC. VIOLATIONS MAY RESULT IN PROSECUTION. ONLY APPROVED, SCALED AND SEALED PLANS OR DRAWINGS MAY BE UTILIZED FOR CONSTRUCTION PURPOSES.

Storm Drainage Computations																				
Structure		Local Flow				Cumulative Flow				Pipe Information				Profile		Top				
From	To	Area (Ac)	Runoff C Value	CA	Tc (min)	Intensity (I)	Qnew (CFS)	Total Area (Ac)	Total CA	Diameter (in)	Slope (%)	Length (ft)	Material	n Factor	Qmax (CFS)	V (FPS)	Upper Invert	Lower Invert	(ft)	
D235	D230	0.09	0.35	0.03	5.00	7.56	0.23	0.09	0.03	0.22	8	1.93%	53	HDPE	0.012	1.62	2.83	335.55	335.55	335.52
D230	D225	0.00	0.35	0.00	5.31	7.46	0.00	0.09	0.03	0.22	8	1.60%	53	HDPE	0.012	1.69	2.66	335.55	334.68	335.24
D227	D225	0.09	0.35	0.03	5.00	7.56	0.23	0.09	0.03	0.23	8	4.55%	13	HDPE	0.012	2.80	4.02	335.55	335.00	337.53
D225	D220	0.00	0.35	0.00	5.63	7.37	0.00	0.17	0.06	0.44	12	1.06%	39	HDPE	0.012	3.99	2.68	334.36	333.95	338.39
D220	D215	0.00	0.00	0.00	5.87	7.30	0.00	0.17	0.06	0.44	12	1.59%	76	HDPE	0.012	4.88	3.16	327.85	326.95	337.11
D215	D210	0.00	0.00	0.00	6.27	7.18	0.00	0.17	0.06	0.43	12	1.17%	69	HDPE	0.012	4.19	2.78	323.60	322.79	330.60
D210	D205	0.00	0.00	0.00	6.68	7.07	0.00	0.17	0.06	0.43	12	0.82%	227	HDPE	0.012	3.50	2.40	322.70	320.85	328.24
D207	D205	2223.00	1.00	0.05	5.00	7.56	0.35	0.05	0.05	0.35	8	1.84%	84	HDPE	0.012	1.52	2.88	321.94	320.82	324.64
D205	D200	14383.00	0.42	0.19	8.26	6.68	1.28	0.55	0.30	1.99	12	2.08%	155	HDPE	0.012	5.58	5.56	320.84	317.63	325.15
D200	83	0.00	0.00	0.00	8.72	6.57	0.00	0.55	0.30	1.96	8	0.86%	94	GFP	0.012	1.22	0.22	317.63	316.82	320.60
D125	D120	13826.75	0.80	0.25	5.00	7.56	1.90	0.32	0.25	1.90	12	0.03%	30	PVC	0.010	0.77	0.06	310.82	310.81	308.53
D134	D133	13821.00	0.80	0.25	5.00	7.56	1.89	0.32	0.25	1.89	6	0.03%	33	PVC	0.010	0.13	0.04	313.90	313.89	310.63
D133	D132	0.00	0.00	0.00	5.88	7.45	0.00	0.32	0.25	1.25	6	0.03%	33	PVC	0.010	0.13	0.04	312.97	312.96	319.71
D132	D131	0.00	0.00	0.00	31.83	3.83	0.00	0.32	0.25	0.96	6	0.01%	33	PVC	0.010	0.07	0.02	312.06	312.06	318.79
D131	D130	0.00	0.00	0.00	55.70	2.78	0.00	0.32	0.25	0.70	6	0.01%	22	PVC	0.010	0.07	0.02	311.09	311.09	317.82
D130	D120	0.00	0.00	0.00	72.09	2.17	0.00	0.32	0.25	0.59	8	0.00%	60	PVC	0.010	0.09	0.02	310.97	310.97	317.82
D120	D115	27647.75	0.00	0.22	12.99	5.75	1.28	1.27	0.72	4.16	12	3.56%	3	PVC	0.010	8.76	9.54	310.83	310.73	317.82
D162	D163	13270.50	1.00	0.27	5.00	7.56	2.07	0.30	0.27	2.07	60	0.01%	147	HDPE	0.012	23.35	0.60	308.50	308.49	322.44
D164	D163	74624.50	0.00	0.60	5.00	7.56	4.53	1.71	0.60	4.53	24	0.03%	78	HDPE	0.012	3.96	0.08	318.00	317.98	323.29
D163	KT4	0.00	0.00	0.00	21.33	4.68	0.00	1.71	0.60	2.80	24	0.01%	141	HDPE	0.012	2.93	0.98	318.00	317.98	323.34
D180	D175	74624.50	0.00	0.60	5.00	7.56	4.53	1.71	0.60	4.53	12	1.27%	8	HDPE	0.012	4.37	0.35	319.69	319.60	322.98
D175	D170	0.00	0.00	0.00	5.38	7.45	0.00	1.71	0.60	4.47	12	1.25%	58	HDPE	0.012	4.34	0.34	319.57	318.85	323.11
D170	D165	0.00	0.00	0.00	8.11	6.71	0.00	1.71	0.60	4.03	18	0.02%	86	HDPE	0.012	1.75	0.06	318.00	317.98	322.55
D160	D155	3214.00	0.00	0.03	5.00	7.56	0.20	0.07	0.03	0.20	12	72.95%	5	HDPE	0.012	33.06	24.56	305.71	302.50	303.86
D155	D145	93.00	0.00	0.00	5.00	7.56	0.00	0.07	0.03	0.20	18	2.76%	90	HDPE	0.012	18.97	5.03	305.61	304.25	309.35
D150	D145	4909.00	0.00	0.04	5.00	7.56	0.30	0.11	0.04	0.30	12	52.95%	5	HDPE	0.012	28.16	16.63	304.93	302.00	303.86
D145	D110	0.00	0.00	0.00	5.17	7.51	0.00	0.19	0.07	0.49	18	2.37%	68	HDPE	0.012	17.56	3.71	304.63	302.62	308.03
D161	D115	14006.00	1.00	2.89	5.00	7.56	21.86	3.21	2.89	0.85	18	2.11%	98	HDPE	0.012	16.57	4.14	308.50	306.43	311.21
D115	D110	0.00	0.00	0.00	12.89	5.75	0.00	4.48	3.62	5.91	18	5.00%	17	HDPE	0.012	25.51	0.61	306.17	305.52	313.60
D110	D100	0.00	0.00	0.00	5.47	7.41	0.00	4.67	3.68	6.90	18	0.59%	49	RCP	0.015	7.02	4.16	300.61	300.32	311.40
D100	EX50	0.00	0.00	0.00	5.67	7.36	0.00	4.67	3.68	6.90	18	5.48%	147	RCP	0.015	21.37	9.11	300.14	292.08	307.59

Hydraulic Grade Line Computations																									
Structures		Friction Loss					Junction Loss										Results								
Structure	Downstream	WSE	DO (in)	LO	n	R	SF	Hf	Vo	HO	QI	di	Vi	QI ² /VI	V1/2g	HI	Angle	HA	Qsf	Ht	Hing	Final H	Inlet WSE	Rim Elevation	
D235	D230	335	8	0.225	53	0.012	0.11	0.86%	0.46	0.64	0.00	0.23	8	0.65	0.15	0.007	0.002	0	0.00	0	0.00	0.00	0.23	334.98	338.39
D227	D225	335	12	0.444	39	0.012	0.15	0.57%	0.22	0.57	0.00	0.23	8	0.65	0.15	0.007	0.002	0	0.00	0	0.00	0.23	334.98	338.39	
D225	D220	327	12	0.44	76	0.012	0.14	0.91%	0.69	0.56	0.00	0.44	12	0.57	0.25	0.005	0.002	90	0.00	0	0.01	0.01	0.70	327.85	337.11
D220	D215	324	12	0.433	0.012	0.15	0.65%	0.45	0.55	0.00	0.45	12	0.56	0.23	0.005	0.002	0	0.00	0	0.00	0.00	0.45	324.04	330.60	
D215	D210	322	12	0.426	227	0.012	0.16	0.43%	0.98	0.54	0.00	0.43	12	0.55	0.24	0.005	0.002	0	0.00	0	0.00	0.00	0.98	322.63	328.24
D207	D205	318	12	1.991	155	0.012	0.24	1.36%	2.11	2.53	0.02	0.35	8	0.99	0.35	0.035	0.005	0	0.00	1.2814	0.63	0.04	2.15	320.58	325.15
D205	D200	317	8	1.959	94	0.012	0.17	1.24%	2.11	5.61	0.12	1.99	12	2.53	5.05	0.100	0.005	0	0.00	0	0.16	0.16	2.26	319.62	320.60
D200	83																								
D134	D133	313	6	1.248	33	0.010	0.13	2.93%	0.97	6.36	0.16	1.89	6	9.65	18.28	1.446	0.506	0	0.00	0	0.66	0.86	1.83	315.19	319.71
D133	D132	312	6	0.96	33	0.010	0.13	1.73%	0.57	4.89	0.09	1.25	6	6.36	7.93	0.628	0.220	0	0.00	0	0.31	0.41	0.98	313.44	318.79
D132	D131	311	6	0.698	22	0.010	0.13	0.92%	0.20	3.55	0.05	0.96	6	4.89	4.70	0.371	0.130	0	0.00	0	0.18	0.23	0.43	311.92	317.82
D131	D130	312	8	0.595	60	0.010	0.17	0.45%	0.09	1.70	0.01	0.70	6	3.55	2.48	0.196	0.069	0	0.00	0	0.08	0.08	0.17	311.67	317.82
D130	D120	312	12	4.162	3	0.010	0.26	1.44%	0.07	5.30	0.11	0.59	8	1.70	1.01	0.045	0.016	0	0.00	1.2779	0.12	0.16	0.24	311.77	317.82
D164	D163	320	24	2.803	141	0.012	0.61	0.01%	0.02	0.89	0.00	4.53	24	1.44	6.54	0.632	0.011	0	0.00	0	0.01	0.01	0.03	319.61	322.34
D180	D175	320	12	4.47	58	0.012	0.25	1.34%	0.78	5.69	0.13	4.53	12	5.77	26.15	0.517	0.181	0	0.00	0	0.31	0.31	1.08	320.73	323.11
D175	D170	319	18	4.026	86	0.012	0.38	0.13%	0.11	2.28	0.02	4.47	12	5.69	25.44	0.503	0.176	0	0.00	0	0.20	0.20	0.30	319.48	322.55
D160	D155	305	18	0.195	50	0.012	0.05	18.03%	4.02	0.11	0.00	0.20	12	0.25	0.05										