

Detention Basin Storage (AS-BUILT)

Surface Ponding

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * [\text{A1} + \text{A2} + \text{sqrt}(\text{A1} * \text{A2})]$$

DETENTION AREA

ELEVATION (ft)	AREA (SF)	INCREMENTAL (SF)	INCREMENTAL VOLUME (CF)	TOTAL VOLUME (CF)	TOTAL VOLUME (AC-FT)
859.33	100.00	0.00	0.00	0.000	0.000
860.00	1405.07	1879.91	419.85	419.847	0.010
861.00	1783.00	4770.86	1590.29	2010.132	0.046
862.00	2199.24	5962.44	1987.48	3997.613	0.092
863.00	2666.65	7287.57	2429.19	6426.804	0.148
864.00	3561.00	9309.19	3103.06	9529.869	0.219
865.00	4466.49	12015.61	4005.20	13535.074	0.311
866.00	5855.94	15436.67	5145.56	18680.632	0.429

AS-BUILT DETENTION BASIN VOLUME =

0.4288

AC-FT

18680.63

CF



STORMWATER STORAGE - ASBUILT

Upstream	Downstream	Material	Diameter (in)	Length (ft)	Capacity (cf)	Capacity (ac-ft)
1.1	1.2	HDPE	18	219	386.8	0.0089
1.2	1.3	HDPE	24	121	379.5	0.0087
1.3	1.4	HDPE	24	123	386.2	0.0089
1.4	1.5	HDPE	24	200	628.0	0.0144
1.5	1.6	HDPE	24	58	182.1	0.0042
1.6	1.7	HDPE	24	146	458.4	0.0105
1.7	1.8	HDPE	24	46	144.4	0.0033

Pipe total:	2565.53 CF 0.0589 AC-FT
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Detention Basin Storage (PROPOSED)

Surface Ponding

$$\text{Volume} = (1/3) * (\text{EL2} - \text{EL1}) * [A1 + A2 + \sqrt{A1 * A2}]$$

DETENTION AREA

ELEVATION (ft)	AREA (SF)	INCREMENTAL (SF)	INCREMENTAL VOLUME (CF)	TOTAL VOLUME (CF)	TOTAL VOLUME (AC-FT)
859.75	0.00	0.00	0.00	0.000	0.000
860.00	1087.50	1087.50	90.63	90.625	0.002
861.00	1614.77	4027.44	1342.48	1433.103	0.033
862.00	2260.39	5785.66	1928.55	3361.657	0.077
863.00	3028.06	7904.67	2634.89	5996.546	0.138
864.00	3908.85	10377.29	3459.10	9455.644	0.217
865.00	5296.09	13754.84	4584.95	14040.591	0.322
866.00	6770.64	18054.88	6018.29	20058.884	0.460

PROPOSED DETENTION BASIN VOLUME =	0.4605	AC-FT
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20058.88	CF
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AS-BUILT POND VOLUME =	0.4288	AC-FT
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18680.63	CF
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AS-BUILT PIPE VOLUME =	0.0589	AC-FT
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2565.53	CF
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TOTAL AS-BUILT VOLUME=	0.4877	AC-FT
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21246.16	CF
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