

30" STRUCTURES DB-1 AND DB-2 1. FOR STRUCTURES DB-1 AND DB-2 ONLY Stormwater Pipe Design Storm Pipe Design to SWMP 1-2 <u>Projected Flow</u> **Projected Flow** Impervious Area: 26310 SF Impervious Area: 10831 SF Compacted Area: 4134 SF Compacted Area: 1245 SF Total Area: 30444 SF = 0.6989 Acres Total Area: 12076 SF = 0.2772 Acres Unitless Coefficient, C: 0.8185 Unitless Coefficient, C: 0.8381 10-Year Rainfall Intensity, I: 5.85 In/Hr 10-Year Rainfall Intensity, I: 5.85 In/Hr **Projected Flow, Q_{10-YEAR}:** $3.\overline{347}$ CFS <4.014 CFS. OK. **Projected Flow, Q_{10-YEAR}:** 1.359 CFS \rightarrow 1.359 CFS **Proposed Pipe Parameters** <u>Proposed Pipe Parameters</u> Manning's n: 0.011 Manning's n: Pipe Diameter: 15 In = 1.25 Ft 0.6666667 Ft Pipe Diameter: \rightarrow Pipe Radius: 7.5 In = 0.625 Ft 4 In = 0.3333333 Ft → Pipe Radius: → Pipe Area: 176.71 $\ln^2 = 1.2272 \text{ SF}$ \rightarrow Pipe Area: 50.27 In^2 = 0.3491 SF Pipe Length: 36.40 Ft Pipe Length: 36.40 Ft Pipe Slope: 2.06 % = 0.0206 Ft/Ft Pipe Slope: 3.61 % = 0.0361 Ft/Ft Hydrology Check **Hydrology Check** Hydraulic Radius, R: 3.75 In = 0.3125 FtHydraulic Radius, R: 2.00 In = 0.1666667 Ft Friction Slope, S_f : 0.002 Ft/Ft = 0.19 % Friction Slope, S_f : 0.009011 Ft/Ft = 0.90 % \rightarrow Design Acceptable. → Design Acceptable. Travel Time: 0.08 Mins Travel Time: 0.09 Mins Flow Depth: 5.86 In = 0.488333333 Ft $4 \ln =$ 0.3333333 Ft Flow Depth: Flow Velocity: 7.98 FPS Flow Velocity: 7.79 FPS → Design Acceptable. → Design Acceptable. **ACO DRAIN** Graphical Peak Discharge Thu Dec 06 12:46:44 2018 KlassikDrain - K200 Galvanized steel edge rail channel system By: C. WILLIAMS Date: 12/06/18 Project: 1-YEAR POST Location: DAMASCUS AUTO ZONE Checked: TRENCH DRAIN Developed 1. Data: Drainage area:..... A = 3462.0000Sq Ft Runoff Curve Number:.....CN = 98 Time of Concentration:.....Tc = 0.17Storm Type:.... = II

4" round 15.75" 202 0.49
4" round 15.75" 202 0.49
6" round 9.84" 320 0.71
6" round 25.75" 437 0.99
4" round 23.76" 254 0.36
4" round 31.83" 297 0.66
4" round 31.83" 658 1.47
4" round 31.83" 658 1.47
4" round 30.40" 290 0.65
6" round 30.40" 290 0.65
6" round 30.40" 290 0.65
6" round 31.82" 658 1.47
4" round 31.82" 658 1.47
4" round 31.82" 658 1.47
4" round 31.82" 651 1.46
8" round 31.82" 651 1.46
8" round 30.32" 661 1.44
4" round 30.32" 661 1.44
4" round 30.32" 640 1.43
4" round 23.19" 251 0.55
4" round 23.19" 251 0.56

Pond and swamp areas spread

2. Frequency.....yr = 1

4. Initial abstraction, Ia..... = 0.0408

5. Compute Ia/P..... = 0.0157

7. Runoff, Q.....in = 2.3702

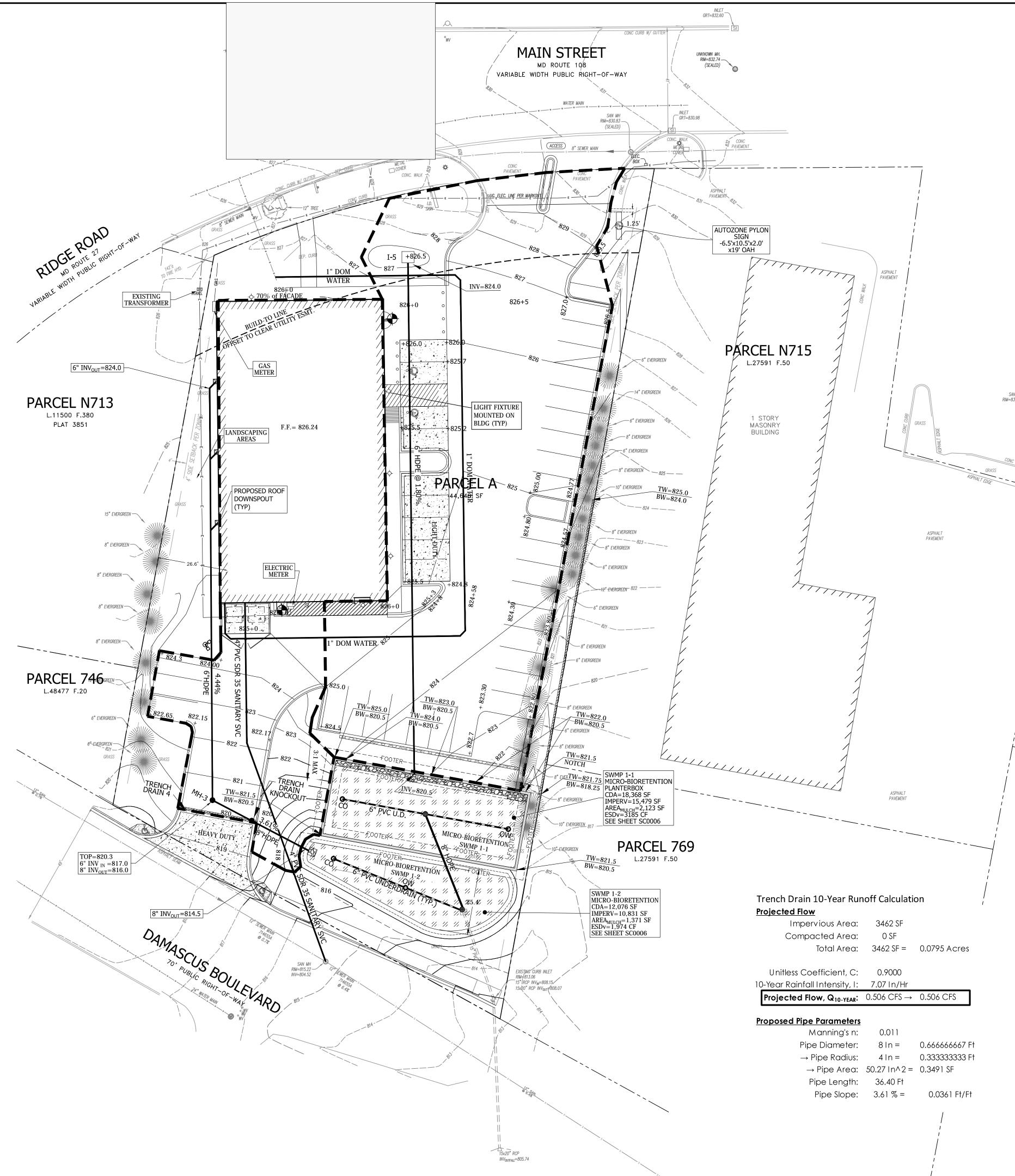
6. Unit peak discharge, qu.....csm/in = 846.89

8. Pond & swap adjustment factor,...Fp = 1.00

9. Peak Discharge,qp.....cfs = 0.2493

throughout watershed..... = 0.00 percent of A

0.0000 Sq Ft





OWNER/APPLICANT

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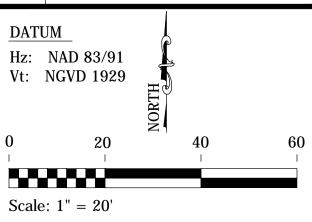
PARCEL A
"DUNDERAVE LLC
DAMASCUS"
PLAT No. 21853

No. 9936 MAIN STREET DAMASCUS

ELECTION DISTRICT No. 13 MONTGOMERY COUNTY, MD



Date	Revision
2018-01-04	STORMWATER MANAGEMENT CONCEPT
2018-02-12	APPROVAL FOR STORMWATER MANAGEMENT CONCE
2018-02-21	SWM / SED - 1st SUBMISSION
2018-03-13	RIGHT OF WAY PLAN FOR DRIVEWAY PERMIT
	SWM / SED - 1st ROUND ePlans COMMENTS
2018-06-29	MDSHA: Courtesy Submittal
2018-08-14	MC-DPS: 2nd Round ePlans Comments
2018-08-14	Contractor Bid Set
2018-10-31	Issue per MCDPS revisions
2018-11-2	Bid Set Revision
2018-11-21	ISSUE: FDA PLAN



STORM DRAIN PLAN

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