



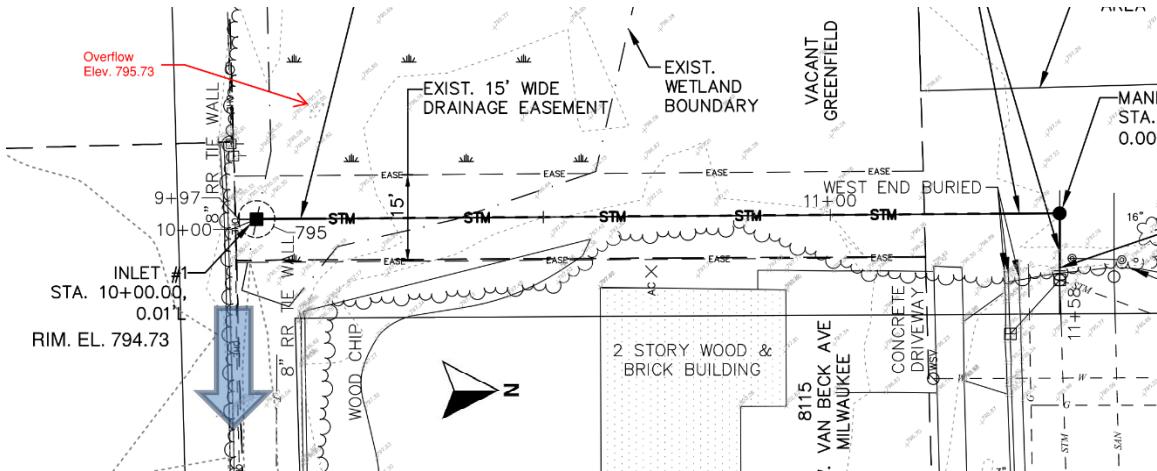
collaborate / formulate / innovate

MEMORANDUM

TO: File
FROM: Joy M Corona, PE, CFM
DATE: July 23, 2024

SUBJECT: Van Beck / Norwich, City of Greenfield

Approximately 5.25-ac are tributary to a depressional area in the vicinity of the unimproved W Van Beck Avenue ROW. The depression ponds until approximately 795.73 when it overtops to the SE.



The 5-ac watershed generates approximately 6.5-cfs during the 10-yr event (without accounting for attenuation in the depression). The proposed 15" storm sewer at 0.5% can accommodate approximately 6-cfs which should sufficiently convey the 10-yr event if the depressional capacity was explicitly modeled. Runoff in excess of the storm sewer capacity will continue east as under current conditions.

I Want To...

+

-



122.81 ft
122.25 ft
107.33 ft
107.05 ft
96.11 ft
136.75 ft
172.65 ft
113.42 ft
102.17 ft
370.37 ft
91.42 ft
91.14 ft

Area: 5.24 ac
Perimeter: 1981.88 ft

798

100 ft



STORM SEWER DESIGN COMPUTATION SHEET

(Peak flow by Rational Method, NOAA Atlas 14 Rainfall Data)

Greenfield- Van Beck Ave. Storm Sewer

DESIGN STORM: YR.

Manning's n: 0.013

COMPUTED BY:

CHECKED BY:

PROJECT #:

Structure #				Trib Area		Rainfall and Runoff Data						Q=CIA		Pipe Design					
From	To	Incremental	Total	Incremental C	Composite C	Tc Incremental	Tc Total	I (Intensity) Incremental	I (Intensity) Total	Q Inlet	Q Total	Length	Diameter	Slope	Material	n	Parts Full Actual	Q Actual	V Actual
		Acres	Acres			Min	Min	in/hr	in/hr	cfs	cfs	Ft	In	%		d/D	cfs	fps	
10 year		5.25	5.25	0.35	0.35	15	15.0	4.12	4.12	7.57	7.57	140	15	0.50	pvc	0.01	1.00	5.94	4.84
5 year		5.25	5.25	0.35	0.35	15	15.0	3.53	3.53	6.49	6.49	140	15	0.50	pvc	0.01	1.00	5.94	4.84
2 year		5.25	5.25	0.35	0.35	15	15.0	2.79	2.79	5.12	5.12	140	15	0.50	pvc	0.01	1.00	5.94	4.84
1 year		5.25	5.25	0.35	0.35	15	15.0	2.33	2.33	4.28	4.28	140	15	0.50	pvc	0.01	1.00	5.94	4.84

R-2561, Inlet Beehive Capacity



Orifice Flow Calculator

What do you need to calculate?

FLOW

GRATE OPEN AREA

Enter open area of grate (in²)

288

in²

RESET

CALCULATE RESULTS

WATER DEPTH (IN):	FLOW CAPACITY (CFS):
4	6.2
5	6.9
6	7.6
7	8.2
8	8.8
9	9.3
10	9.8
11	10.3
12	10.7
13	11.2
14	11.6
15	12.0
16	12.4