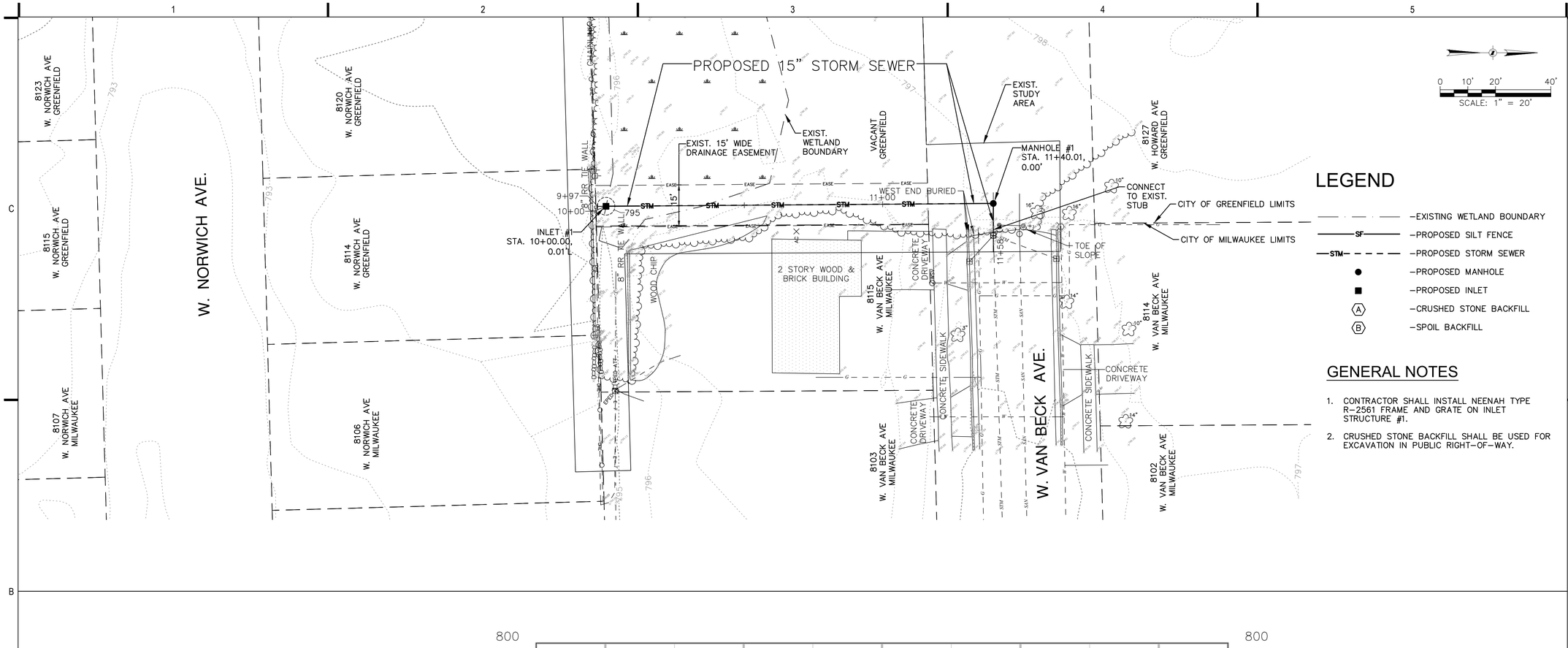
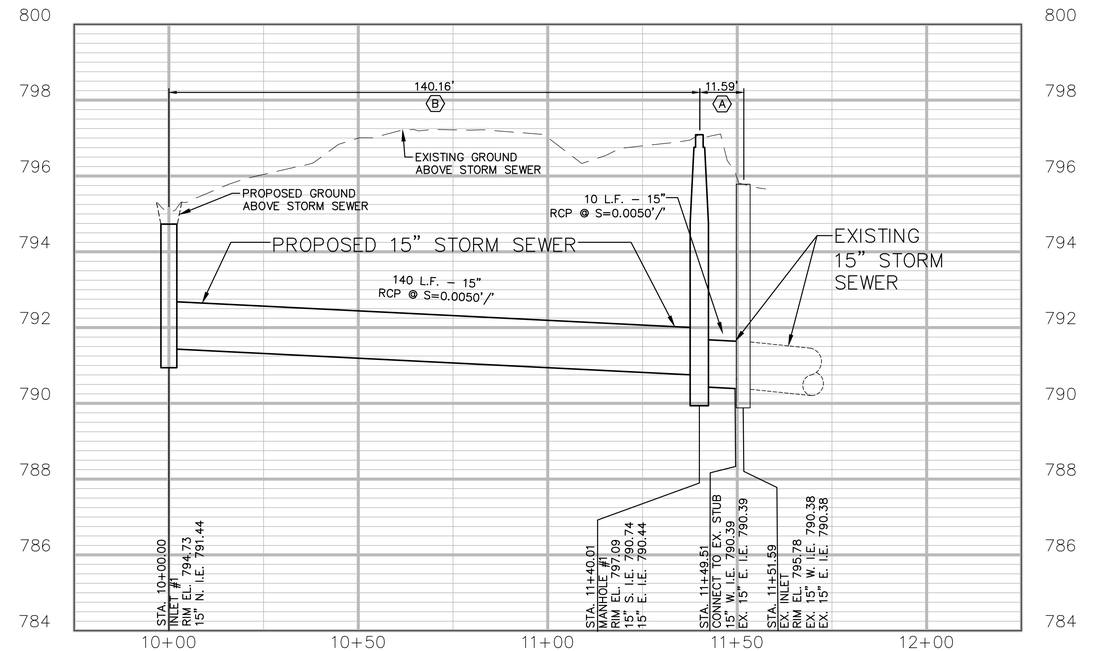



## LEGEND

- —EXISTING WETLAND BOUNDARY
- SF —PROPOSED SILT FENCE
- STM —PROPOSED STORM SEWER
- —PROPOSED MANHOLE
- —PROPOSED INLET
- (A) —CRUSHED STONE BACKFILL
- (B) —SPOIL BACKFILL

## GENERAL NOTES

1. CONTRACTOR SHALL INSTALL NEENAH TYPE R–2561 FRAME AND GRATE ON INLET STRUCTURE #1.
2. CRUSHED STONE BACKFILL SHALL BE USED FOR EXCAVATION IN PUBLIC RIGHT–OF–WAY.




NOTICE:
In accordance with Wisconsin statute 182.0175, damage to transmission facilities, excavator shall be solely responsible to provide advance notice to the designated "ONE CALL SYSTEM" not less than three working days prior to commencement of any excavation required to perform work contained on this drawing, and further, excavator shall comply with all other requirements of this statute relative to excavator's work.

DISCLAIMER:
The underground utilities shown have been located from field survey information and existing drawings. GRAEF makes no guarantees that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. GRAEF further does not warrant that the underground utilities shown are in the exact location indicated. GRAEF has not physically located the underground utilities.

X:\ML\2024\20240142\Design\Civil\00IC_00_C400 Sto PP_0142
6/28/2024 9:08 AM

GRAEF
275 West Wisconsin Avenue
Suite 300
Milwaukee, WI 53203-3318
414 / 259 1500

PROJECT TITLE:
GREENFIELD - VAN BECK AVE. STORM SEWER

CITY OF GREENFIELD
7325 W. FOREST HOME AVE.
GREENFIELD WI, 53220-3356

PROJECT STATUS

| NO. | DATE | REVISIONS | BY |
|---|---|---|---|

PROJECT INFORMATION:

| | |
|---|---|
| PROJECT NUMBER: | 2024-0142 |
| DATE: | 06/27/2024 |
| DRAWN BY: | BAF |
| CHECKED BY: | MNP |
| APPROVED BY: | MNP |
| SCALE: | AS SHOWN |

SHEET TITLE:
STORM SEWER PLAN AND PROFILE

SHEET NUMBER:
C400

275 W. Wisconsin Avenue, Suite 300
Milwaukee, WI 53203
414 / 259 1500
414 / 259 0037 fax
**www.graef-usa.com**

GRAEF

collaborate / formulate / innovate

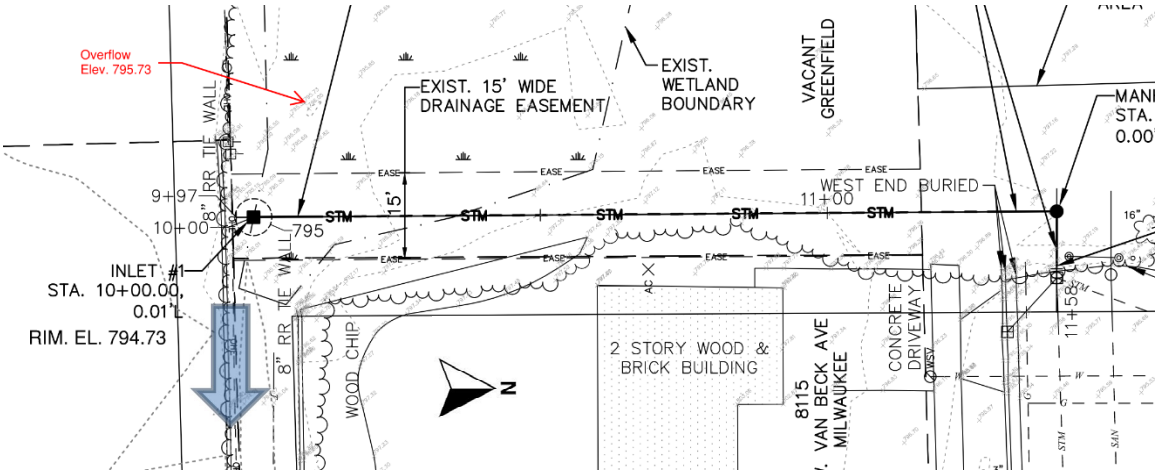
# MEMORANDUM

**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
136.75 ft
169.74 ft
96.11 ft
172.65 ft
Area: 5.24 ac
Perimeter: 1981.88 ft
138.12 ft
113.42 ft
91.14 ft
102.17 ft
91.42 ft
370.37 ft
100 ft

GRAEF
MILWAUKEE, WISCONSIN

**PROJECT #:**

# STORM SEWER DESIGN COMPUTATION SHEET

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

Greenfield- Van Beck Ave. Storm Sewer

**DESIGN STORM:** _____ **YR.** **COMPUTED BY:**

**Manning's n:** 0.013 **CHECKED BY:**

| Structure # | | Trib Area | | Rainfall and Runoff Data | | | | | | Q=CIA | | Pipe Design | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| From | To | Icremental Acres | Total Accumulated Acres | Incremental C | Composite C | Tc Incremental Min | Tc Total Min | I (Intensity) Incremental in/hr | I (Intensity) Total in/hr | Q Inlet cfs | Q Total cfs | Length Ft | Diameter In | Slope % | Material | n | Parts Full Actual d/D | Q Actual cfs | V Actual 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

ej

# Orifice Flow Calculator

What do you need to calculate?

FLOW | GRATE OPEN AREA

Enter open area of grate ($in^2$) 288 $in^2$

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 |