STORMWATER MANAGEMENT FACILITIES
OPERATION AND INSPECTION REPORT

Quarter Section _____03 SW_____ Name of Business/Subdivision   VILLAGE PARK
Property Tax ID Number _____0011146_____ Address of Property

APPLETON AVE &

GARFIELD DR

MENOMONEE FALLS, WI 53051

Dry Pond	X
Wet Pond	
Other	

Description: ___SWP10N001___
___P-0226___

Location Of Pond   SW OF AMPITHEATER

Year Pond Constructed _____2020_____   Year of Last Certification _____N/A_____

Compliance Verification	Design	Actual	Compliant Yes	No	Comments (Condition of Structure)
Primary Outlet Pipe					Outlet Pipe Material
Opening Diameter (inches) (ST015376)	12" RCP	12" RCP	Y		IN GOOD CONDITION.
Upstream Invert	833.63	833.87	Y		
Downstream Invert	833.43	833.66	Y		
Length (feet)	20	18.4	Y		
Slope (%)	1.00 %	1.14 %	Y		
Secondary Outlet Pipe	(If Applicable)				Outlet Pipe Material
Opening Diameter (inches)					
Upstream Invert					
Downstream Invert					
Length (feet)					
Slope (%)					
Riser	(If Applicable)				Riser Material
Opening Diameter (inches) (ST017899-ST017900)					
Elevation					
Upper Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					

Compliance Verification	Design	Actual	Compliant Yes No		Comments
Lower Discharge Control	(If Applicable)				
Opening Diameter (inches)					
Elevation					
Other (Description)					
Opening Type and Size (inches)					
Elevation					
Emergency Spillway					
Elevation	835.80	836.1	Y	-	PROPOSED DRAINAGE MAP (11/13/2019)
Length of spillway (feet)	15.0	15.7	Y	-	SITE UTILITY PLAN (11/13/2019)

Embankment	Present Yes	No	Comments/Maintenance Requirements		
Unauthorized Plantings, trees, or woody vegetation	-	X			
Animal burrows or slope erosion	-	X			

Storm Sewer Outfalls	Type & Size		Location		Comments
Outfall 1					
Outfall 2					
Outfall 3					

Storage Properties	Design	Actual	Compliant Yes No	Not Applicable	Equipment Used
Normal Water Elevation _(Wet Ponds)_	N/A	N/A	-	X	GPS EQUIPMENT: GEOMAX ZENITH35 & CARLSON SURVEYOR2 WITH SURV CE v5.04
Design High Water Elevation	835.96	836.10	Y		
Area at Normal Water Elevation (Ac) (Wet Ponds)	N/A	N/A	-	X	
Area at Design High Water Elevation (Ac)	0.265 AC	0.254 AC	Y		
Active Storage Available (Ac-Ft)*	0.322 ACFT	0.357 ACFT	Y		
Lowest Elevation at Top of Embankment (If Applicable)	837.00	836.63	Y		
Average Elevation at Top of Embankment (If Applicable)	837.00	837.00	Y		
Maximum Bottom Elevation	833.63	833.87	Y		ELEVATIONS TO VARY SLIGHTLY FROM YEAR TO YEAR DUE TO GPS TECHNOLOGY
Average Pond Bottom Elevation	835.00	835.00	Y		
Pond Bottom Area (Ac)	0.027 AC	0.028 AC	Y		
Maximum Pond Depth	3.37 FT	3.13 FT	Y		
Average Pond Depth	2.0 FT	2.0 FT	Y		
Average Permanent Pool Depth _(Wet Ponds)_	N/A	N/A	-	X	

*To Determine Active Storage $V = \left(\left(H/3 \right) \left(A1 + A2 + \left(\left(A1 + A2 \right)^{\wedge}\left(\frac{1}{2} \right) \right) \right) \right)$

Wet Ponds Use H = Height of Section, A1= area at normal water elevation, A2=area at top section

Dry Ponds Use H= Height of Section, A1= pond bottom area, A2=area at top section

Village Park Amphitheater Retention Basin - SWP10N001

Overview

Looking N/NW

Looking E/NE

Outlet ST01380 & Spillway

Village Park Amphitheater Retention Basin - SWP10N001

Repairs Needed (11/08/21)

None

*Sketch Outlet*

Place Photograph of Pond

*Place Photograph of Pond*

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Inspection Firm:	VILLAGE OF MENOMONEE FALLS	Inspector Name:	CHRISTOPHER M. GARIEPY
Phone Number:	(262) 532-4411	Inspection Date:	October 20, 2021
Address:	VILLAGE OF MENOMONEE FALLS		
	W156N8480 PILGRIM RD		
	MENOMONEE FALLS, WI 53051		

Certifying
Professional Name: THOMAS M. HOFFMAN, P.E.
Phone Number: (262) 532-4415

Date: 4/14/2022

Signature:

Affix Seal Here

WISCONSIN
THOMAS M.
HOFFM/
E-333
BROOKFIELD
WIS
PROFESSIONAL ENGINEER
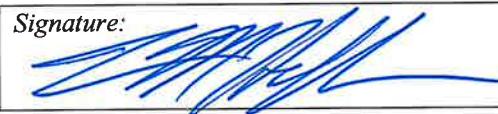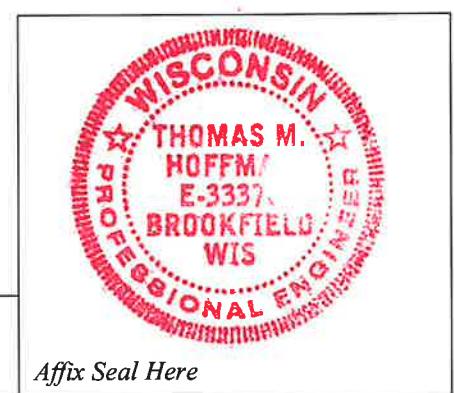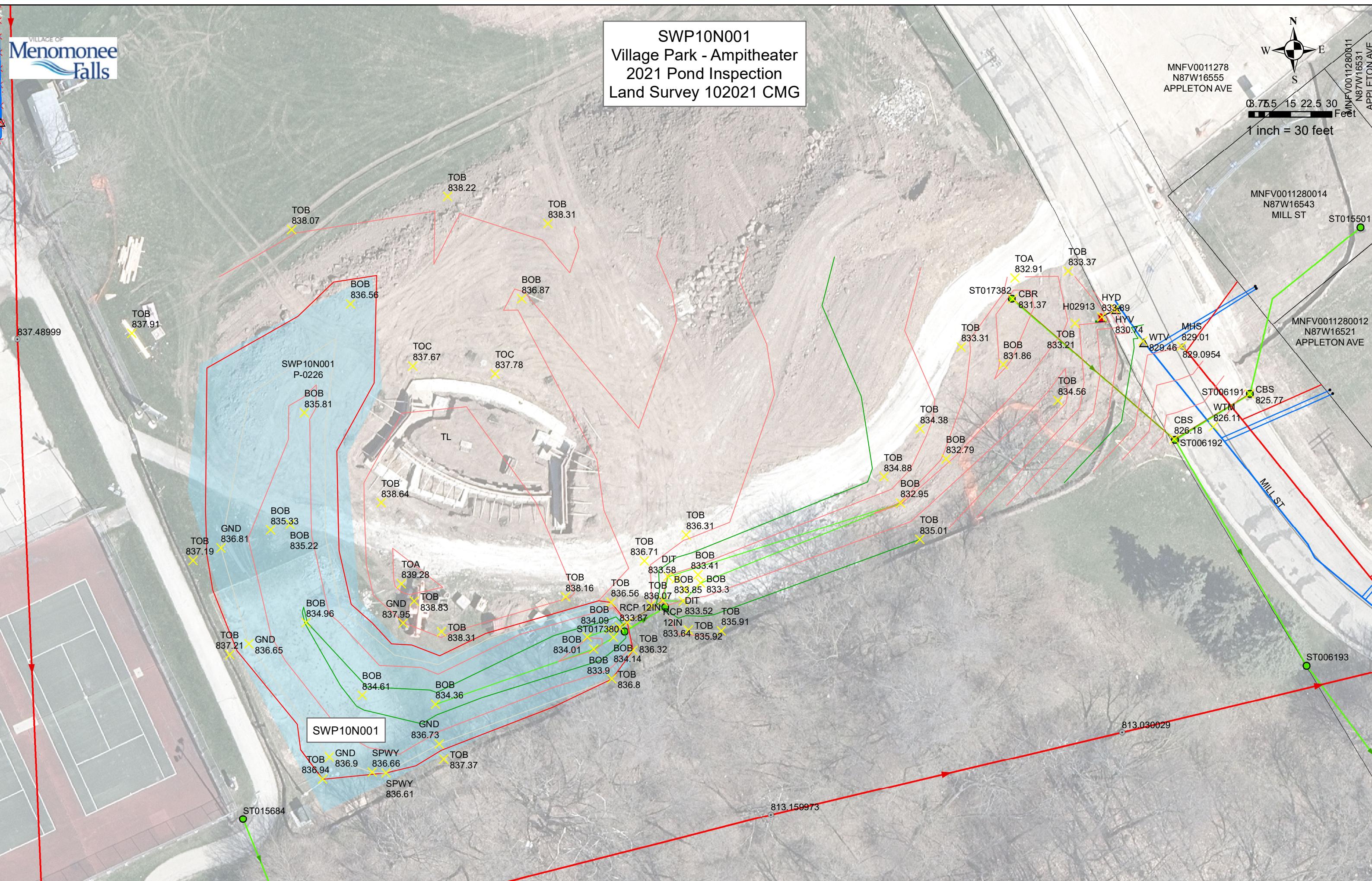
Acre Feet pond storage volume calculations for:

	= Entered Value
	= Calculated Value
	= Description of Elevations Calculated

Year of Inspection: **2021**

Example: H = H2-H1, where H2 > H1

H1 =	835.00	Lower Height Elevation in Feet (Pond Bottom for Dry Pond **OR** Top of Observed Water Level)
H2 =	836.63	Height at Bottom of Spillway (Wet or Dry)
H3 =	837.00	Higher Height Elevation in Feet (Top of Bank Around Pond - Wet or Dry)
H4 =	0.00	Bottom of Wet Pond Elevation in Feet (Wet Ponds Only)

	Sq.Ft.	Acres		
Area 1 =	1,231.00	0.0283	Area of H1	Area 1 = Area at Pond Bottom for Dry Pond **OR** Top of Observed Water Level
Area 2 =	7,677.70	0.1763	Area of H2	Area 2 = Area at Bottom of Spillway
Area 3 =	11,073.70	0.2542	Area of H2	Area 3 = Area at Top of Bank
Area 4 =	-	0.0000	Area of H3	Area 4 = Area at Bottom of Pond (Wet Ponds Only)

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Dry Pond to Bottom of Spillway:

$$V = (((H2-H1)/3)(A1+A2 + (\sqrt{(A1+A2)})))$$

	Feet		Acres		Acres
V=	((H2-H1)/3)	x	(A1+A2	+	√(A1+A2))
V=	0.5433	x	0.2045	+	0.4522
V=	0.5433	x	0.6567		
V=	**0.3568**	**AcFt**			

	sf	acres
	11546	**0.2651**

6115sf

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Dry Pond to Top of Bank at Spillway:

$$V = (((H3-H1)/3)(A1+A3 + (\sqrt{(A1+A3)})))$$

	Feet		Acres		Acres
V=	((H3-H1)/3)	x	(A1+A3	+	√(A1+A3))
V=	0.6667	x	0.2825	+	0.5315
V=	0.6667	x	0.8140		
V=	**0.5426**	**AcFt**			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Water:

$$V = (((H1-H4)/3)(A1+A4 + (\sqrt{(A1+A4)})))$$

	Feet		Acres		Acres
V=	((H4-H1)/3)	x	(A1+A4	+	√(A1+A4))
V=	278.3333	x	0.0283	+	0.1681
V=	278.3333	x	0.1964		
~~V=~~	~~54.6554~~	~~AcFt~~			

Equation to determine Volume (AcFt) of pond storage capacity from
Bottom of Pond to Top of Bank at Spillway:

$$V = (((H3-H4)/3)(A3+A4 + (\sqrt{(A3+A4)})))$$

	Feet		Acres		Acres
V=	((H3-H4)/3)	x	(A3+A4	+	√(A3+A4))
V=	279.0000	x	0.2542	+	0.5042
V=	279.0000	x	0.7584		
~~V=~~	~~211.5983~~	~~AcFt~~			