Village of Mukwonago

Notice of Meeting and Agenda

PLAN COMMISSION MEETING
Tuesday, February 8, 2022

Time: **6:30 pm**
Place: **Mukwonago Municipal Building, Board Room, 440 River Crest Ct**

1. Call to Order

2. Roll Call

3. Comments from the Public

Please be advised, per Wisconsin Statute Sec. 19.84(2), information and comment will be received from the public by the Plan Commission. The Public Comment Session is granted to the public at the start of each Plan Commission meeting. The Public Comment Session shall last no longer than fifteen (15) minutes and individual presentations are limited to three (3) minutes per speaker. However, these time limits may be extended at the discretion of the Chief Presiding Officer. The Plan Commission may not respond to or have any discussion on information received during the public comment session unless it is placed upon the Agenda for a subsequent meeting. Public comments should be addressed to the Plan Commission as a body. Presentations shall not deal in personalities personal attacks on members of the Plan Commission, the applicant for any project or Village Employees. Comments shall not be used to engage others in a debate in this forum. All comments, questions and concerns should be presented in a respectful professional manner. Any questions to an individual member of the Plan Commission or Staff will be deemed out of order by the Presiding Officer.

4. Approval of Minutes

4.1 Approval of minutes from January 11, 2022 meeting.
20220111 PlanCommissionMinutesdraft.pdf

5. New Business

Discussion and Possible Action on the Following Items

5.1 Discussion and possible recommendation to Village Board for **RESOLUTION 2022-12** to approve a Site Plan and Architectural Review for solar panels for Alexandria Lescher, applicant, 1248 Riverton Dr; MUKV 1965-040-001.
SPAR - Staff Report - 1248 Riverton - Solar Panels w attachments.pdf
RESOLUTION 2022-12 SPAR - 1248 Riverton - Solar Pannels.pdf

5.2 Discussion and possible recommendation to Village Board for **RESOLUTION 2022-11** to approve a Site Plan and Architectural Review for solar panels for James L Wagnitz applicant, 1222 Riverton Dr; MUKV 1965-052.
SPAR - Staff Report - 1222 Riverton - Solar Panels - w attachments.pdf
RESOLUTION 2022-11 SPAR - 1222 Riverton - Solar Pannels.pdf

5.3 Discussion and possible recommendation to Village Board **RESOLUTION 2022-10** to approve a Site Plan and Architectural Review for solar panels for Jeremy Stengel applicant, 637 August Drive, MUKV 1978-052.
Staff Report -SPAR - 637 August Drive - Solar Panels.pdf

RESOLUTION 2022-10 SPAR - 637 August Drive - Solar Pannels.pdf

5.4 Discussion and possible recommendation to Village Board for **RESOLUTION 2022-09** to approve a Site Plan and Architectural Review for solar panels for David S Schultz applicant, 512 West Lawn, MUKV 1960-105.
SPAR - Staff Report - 512 Westlawn - Solar Panels - w attachments.pdf
RESOLUTION 2022-09 SPAR - 512 Westlawn - Solar Pannels.pdf

5.5 Discussion and possible recommendation to Village Board on **RESOLUTION 2022-13** to approve an extraterritorial 2 lot Certified Survey Map drafted on January 7, 2022 by Jeffery A. Nipple subject to documentation of the Town Board approval, TM Highview LLC, applicant; Parcel Number MUKT 1952-998.
Staff Report - ETR CSM -TM Highview LLC - MUKT 1952-998.pdf
RESOLUTION 2022-13 ETR CSM - TM Highview LLC - MUKT 1952998.pdf

5.6 Discussion and possible recommendation to the Village Board for **ORDINANCE 999** to amend the Zoning Map of the Village of Mukwonago for multiple properties and addresses.
Staff Report - Ordinance - Zoning Code Update.pdf
ORDINANCE 999 Amend Zoning Map Multiple - Multipl TMS#.pdf

5.7 Discussion and possible recommendation to the Village Board for **ORDINANCE 1000** to amend the Zoning Code related to solar panels in multiple zoning districts within the Village of Mukwonago.
Staff Report - Ordinance Solar Panels.pdf
ORDINANCE 1000 - Solar Panels.pdf

5.8 Discussion and possible approval for **PC-RESOLUTION 2022-01** to Amend the Comprehensive Plan (Minor) and Discussion and Possible Recommendation to the Village Board for **ORDINANCE 1001** to Amend the Compressive Plan (Minor) for Parcels #VM00029 and MUKV 2011985.
Staff Report - PC Res - VB Ord - Minor Land Use Plan Update.pdf
PC RESOLUTION 2022-01 - Amend Land Use Plan Multiple - minor.pdf
ORDINANCE 1001 -Amend Land Use Plan Multiple - minor.pdf

5.9 Discussion and possible recommendation to the Village Board for **ORDINANCE 1002** to repeal and recreate Chapter 100, Division 7, Floodplain District and Standards (Sections 100-271 through 100-281) of Municipal Code village of Mukwonago.
Staff Report - Ordiance - Chap 100 Div 7 -Flood.pdf
ORDINANCE 1002 - Repeal and Recreate.pdf

6. Adjournment

Membership:

Eric Brill, James Decker, Karl Kettner, Mark Penzkover, Time Rutenbeck, Jason Wamser, Fred Winchowky, and Village Planner John Fellows (Advisory)

It is possible that a quorum of, members of other governmental bodies of the municipality may be in attendance at the above stated meeting to gather information. No action will be taken by any governmental body at the above stated meeting other than the governmental body specifically referred to above in this notice. Please note, upon reasonable notice, efforts will be made to accommodate the needs of individuals with disabilities through appropriate aids and services. For additional information or to request this service, contact the Municipal Clerk's Office, (262) 363-6420.

MINUTES OF THE PLAN COMMISSION MEETING
Tuesday, January 11, 2022

Call to Order
President Winchowky called the meeting to order at 6:30 p.m. located in the Board Room of the Mukwonago Municipal Building, 440 River Crest Ct.

Roll Call
Commissioners present: Fred Winchowky, Chairman
Jim Decker
Jason Wamser
Eric Brill
Tim Rutenbeck
Mark Penzkover
Karl Kettner

Commissioners excused:

Also present: John Fellows, Village Planner
Linda Gourdoux, Deputy Clerk/Treasurer

Comments from the Public
Opened at 6:30 pm

Email from David Boebel, 815 Parkview Ln, Regarding:

"6.3 Discussion and possible recommendation to Village Board for RESOLUTION 2022- 03 to approve Site Plan and Architectural Review for solarpanels for Marvin Smith, applicant; 410 Shore Drive; Parcel MUKV 1976-034.

Solar panel installations require a building permit. Nothing more.

There is no need for rigorous engineering review of solar panel installations. Roofsin Waukesha County are designed to support 30 psf of snow load. A bare solar panel adds 2.2 psf. The primary question for homeowners and insurance companies is whether the integrity of the base structure is maintained during theinstallation of the solar panels — not whether the extra 10% load exceeds the allowable safety factor of basic roof construction in our community.

There is an excellent article at:
https://origin-and-cause.com/articles/weight-of-snow-claims-deflecting-blame/ which demonstrates that the majority of roof failures due to snow loads (and byextension, solar panel installations) are due to inferior design and workmanship.

Protection of Village interests in such installations lies entirely within thecapability of the building inspector.

Solar panels are going to be as common as satellite dishes and restricting access to adoption of solar power discriminates against a large number of homesites in the Village which by necessity may be oriented unfavorably with regard to the requirement to screen solar collectors from street view. The community as a wholewill have to accept the increasing presence of solar collectors as it adjusts to the environmental and economic realities of the cost of maintaining an expensive electric power grid. The aesthetic restriction in the Municipal Code flies in the faceof common sense and the necessity of allowing new technologies to be adopted inthe Village.

Administration of this ordinance will increasingly drain Village resources — technology will change and challenge the spirit and letter of this ordinance. Addingcost and complication to the installation of solar power in the Village is counterproductive and needs to be rethought.

Section 100-102 (2) c. of the Municipal Code
"Solar collectors, both roof-mounted and as an accessory structure are permittedprovided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector."

Solar panel installations do not need to be screened from street view.

Solar panel installations do not need Plan Commission approval.

Municipal Code § 100-4 Intent. [Ord. No. 572, § I(9.0103), 2-6-1996]
"It is the intent of this chapter to … facilitate the use of solar energy devices andother innovative development techniques;"
https://ecode360.com/36704002."
Closed at 6:32 pm

Minutes

Motion made by Decker/Brill to approve the minutes of the December 14, 2021 meeting, carried.

Public Hearing

Public Hearing to consider a request for Outdoor Seating with Food and Drink Service, with a permitted or conditional use as a conditional use pursuant to Section100-351, 100-152(F)(2) and 100-157 of the Village of Mukwonago Zoning Ordinance.

No Comments from the Public
Closed at 6:33 pm

New Business

Discussion and possible recommendation to the Village Board RESOLUTION 2022-01 to approve Outdoor Dining with food and drink service with a permitted or conditional use for Bee Well Café, (Calaya Nelson), applicant; 100 Main Street, Suite 1, Parcel MUKV 1976-109-001.

Fellows gave overview of project
Motion by Wamser/Kettner to approve **RESOLUTION 2022-01** for Outdoor Dining with food and drink service with a permitted or conditional use for Bee Well Café, (Calaya Nelson), applicant; 100 Main Street, Suite 1, Parcel MUKV 1976-109-001, carried.

Discussion and possible recommendation to Village Board for RESOLUTION 2022-02 to approve Site Plan and Architectural Review (SPAR) for a Outdoor Dinning for Bee Well Café, (Calaya Nelson) applicant; 100 Main Street, Suite 1; Parcel MUKV 1976-109-001.

Fellows gave overview of project
Motion by Decker/Penzkover to approve **RESOLUTION 2022-02** for Site Plan and Architectural Review (SPAR) for a Outdoor Dinning for Bee Well Café, (Calaya Nelson) applicant; 100 Main Street, Suite 1; Parcel MUKV 1976-109-001, with the addition to #11 adding trash containers, carried.

Discussion and possible recommendation to Village Board for RESOLUTION 2022-03 to approve Site Plan and Architectural Review for solar panels for Marvin Smith, applicant; 410 Shore Drive; Parcel MUKV 1976-034.

Fellows gave overview of project
Motion Penzkover/Decker to approve **RESOLUTION 2022-03** for Site Plan and Architectural Review for solar panels for Marvin Smith, applicant; 410 Shore Drive; Parcel MUKV 1976-034, carried.

Discussion and possible recommendation to Village Board for RESOLUTION 2022-04 to approve Site Plan and Architectural Review for solar panels for Michael J Laufenberg, applicant; 626 Oakland Ave; Parcel MUKV 1970-995.

Fellows gave overview of project

Michael Laufenberg, homeowner, available for questions

Motion Penzkover/Decker to approve **RESOLUTION 2022-04** for Site Plan and Architectural Review for solar panels for Michael J Laufenberg, applicant; 626 Oakland Ave; Parcel MUKV 1970-995, carried

Discussion and possible recommendation to Village Board for RESOLUTION 2022-05 to approve Site Plan and Architectural Review for site improvements for Harjinder Khasria/Village Pumper, applicant; 710 and 712 Main Street; Parcel MUKV 1976- 208-001.

Fellows gave overview of project

Pete Weston, architect, available for questions

Motion Decker/Penzkover to approve **RESOLUTION 2022-05** for Site Plan and Architectural Review for site improvements for HarjinderKhasria/Village Pumper, applicant; 710 and 712 Main Street; Parcel MUKV 1976- 208-001, with changes to planter base and height, carried

Discussion and possible recommendation to Village Board for RESOLUTION 2022-06 to approve Site Plan and Architectural Review for an outdoor cooler and dumpster coral modification for Kwik Trip, Inc.; 1220 N Rochester St; Parcel MUKV 1962-993-001.

Fellows gave overview of project

Motion Decker/Kettner to approve **RESOLUTION 2022-06** for Site Plan and Architectural Review for an outdoor cooler and dumpster coral modification for Kwik Trip, Inc.; 1220 N Rochester St; Parcel MUKV 1962-993-001, carried

Discussion and possible recommendation to the Village Board for ORDINANCE 998to approve a Zoning Map Amendment for Vlaznim Islami aka Viktor Islami Sani Islami for 927 S Main Street and Unnamed S Main Street; Parcels MUKV 2009-964-004 and MUKV 2009-964-001.

Fellows gave overview

Motion Decker/Kettner to approve **ORDINANCE 998** for a Zoning Map Amendment for Vlaznim Islami aka Viktor Islami Sani Islami for 927 S Main Street and Unnamed S Main Street; Parcels MUKV 2009-964-004 and MUKV 2009-964-001, carried, Penzkover abstain

Discussion and consideration of approval for a parking exception for Vlaznim Islamiaka Viktor Islami Sani Islami for 927 S Main Street and Unnamed S Main Street; Parcel Numbers MUKV 2009-964-004 and MUKV 2009-964-001.

Fellows gave overview

David Baum, architect, gave overview

Motion Decker/Brill to approve a parking exception for Vlaznim Islamiaka Viktor Islami Sani Islami for 927 S Main Street and Unnamed S Main Street; Parcel Numbers MUKV 2009-964-004 and MUKV 2009-964-001, carried, Penzkover abstain

Discussion and possible recommendation to the Village Board for RESOLUTION 2022-07 to approve Site Plan and Architectural Review for Vlaznim Islami aka ViktorIslami Sani Islami for 927 S Main Street and Unnamed S Main Street; Parcels MUKV 2009-964-004 and MUKV 2009-964-001.

Fellows gave overview

David Baum, architect, gave overview

Motion Decker/Wamser to approve **RESOLUTION 2022-07** for Site Plan and Architectural Review for Vlaznim Islami aka ViktorIslami Sani Islami for 927 S Main Street and

Unnamed S Main Street; Parcels MUKV 2009-964-004 and MUKV 2009-964-001, with the additional comment “approval for general development plan, to be followed by detailed plans”, carried, Penzkover abstain

Adjournment

Meeting adjourned at 7:56 p.m.

Respectfully Submitted,
Linda Gourdoux, WCMC
Deputy Clerk/Treasurer

PLANNING COMMISSION

February 8, 2022 at 6:30pm
Mukwonago, WI

SITE PLAN AND ARCHITECTURAL REVIEW AND CONDITIONAL USE PERMIT

1248 Riverton
Parcel Number: MUKV 1965-040-001

Case Summary

Parcel Data

Proposal:	Solar Panels
Applicant:	ALEXANDRIA LESCHER
Request:	Site Plan and Architectural Review
Staff Recommendation:	Approve with Conditions

Parcel Characteristics / Conditions

Acreage:	0.3705 acres
Current Use:	Single Family
Proposed Use:	Single Family
Reason for Request:	Solar Panels visible from public right of way
Land Use Classification:	Historic Residential – 12,000 Sq. Ft.
Zoning Classification:	R-2 Single Family Village Residential District
Census Tract:	2039.02

Site Plan and Architectural Review Request

Architectural/ Site Review

Site Modifications	The applicant is proposing to add solar panels onto their existing single-family home. The municipal code requires planning commission approval prior to issuance of a building permit. The code also requires solar panels to be screen from street view. Section 100-102 (2) c.
Utilities	No modifications at this time.
Stormwater Management	No modifications at this time.
Wetlands	None
Signage	No modifications at this time.
Parking	No modifications at this time.
Landscaping	No modifications at this time.
Trash Enclosure	No modifications at this time.
Fencing	No modifications at this time.
Outdoor Lighting	No modifications at this time.
Misc. Performance Standards	None

Staff Review

Engineering	No concerns at this time
Public Works	No concerns at this time
Utilities	No concerns at this time
Police	No concerns at this time
Fire	No concerns at this time
Building Inspection	No concerns at this time
Planning	No concerns at this time

Recommendation

Site Plan and Architectural Review

Staff recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution.

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.
8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

Attachments

1. Maps 2. Plans 3. Resolution

Village of Mukwonago GIS

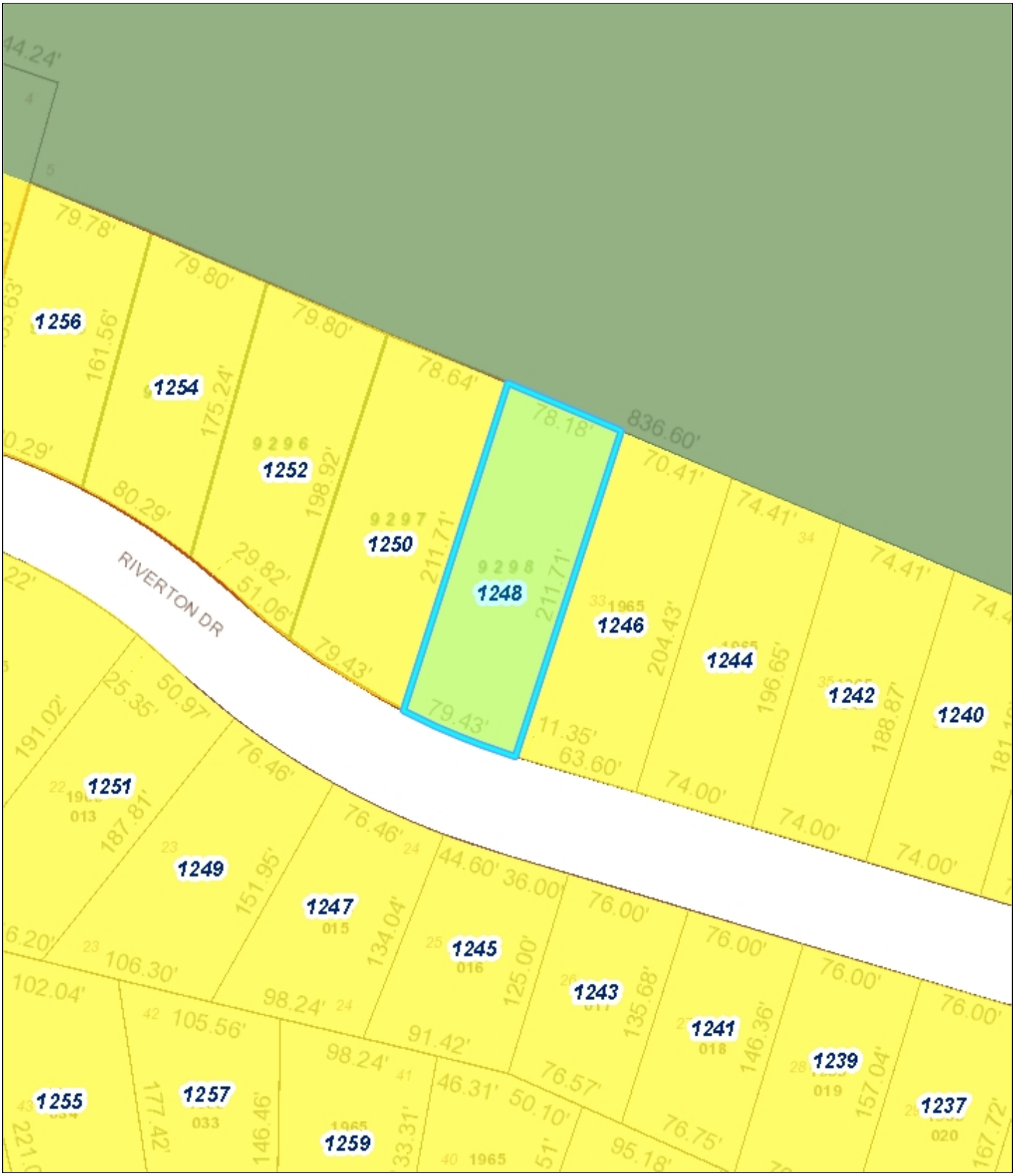
Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 100 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

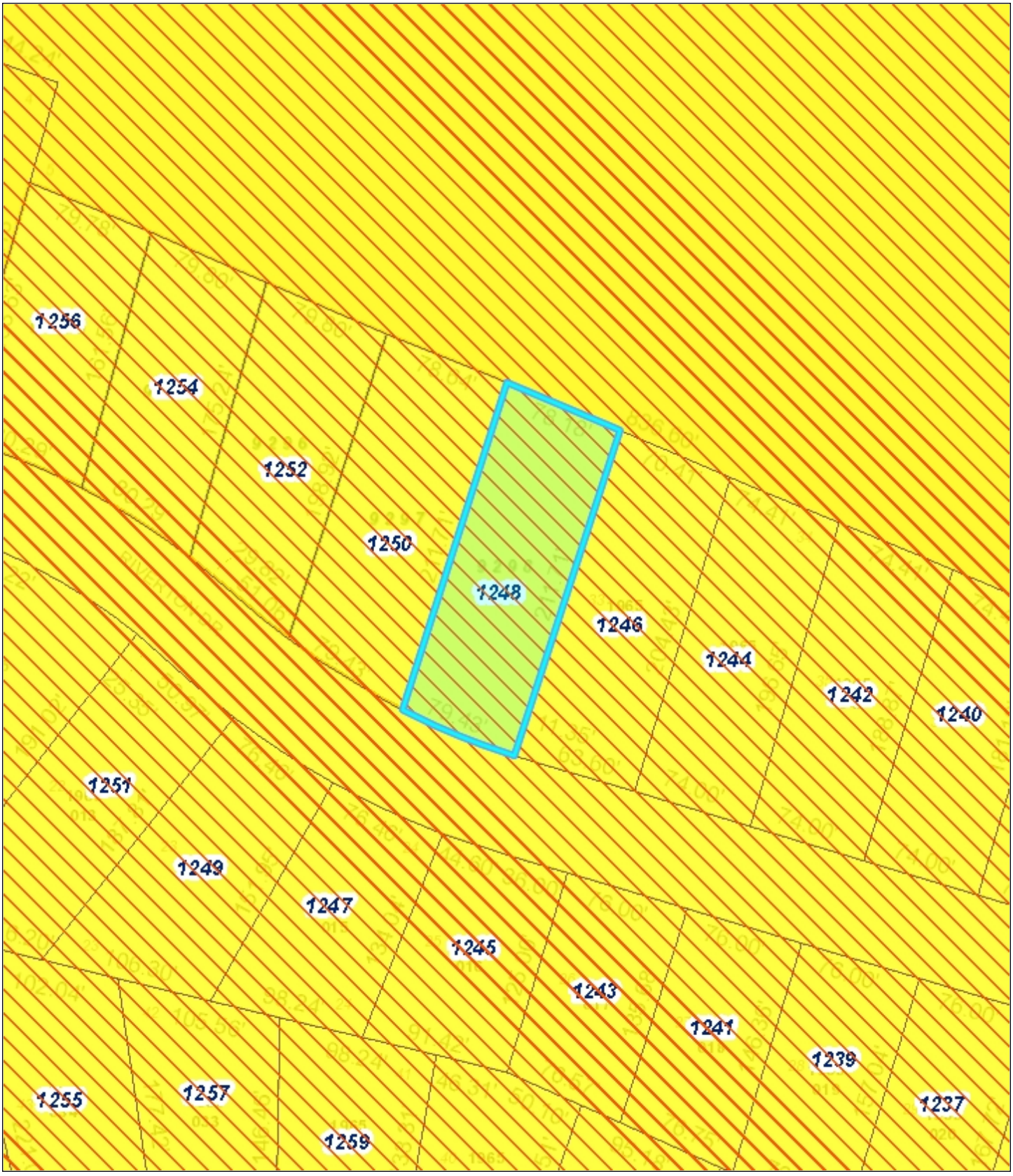
Land Use

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Zoning

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

LUCENT ENGINEERING
Solar Professional Engineering Consulting 2021.12.19

Lucent Engineering, P.C.
814 E 1475 N
Lehi, UT 84043
m: (309) 645-0999
admin@lucenteng.co

December 29, 2021

Everlight Solar
PO Box 930550
Verona, WI 53593

RE: Engineering Services
Lescher Residence
1248 Riverton Dr, Mukwonago, WI
4.93 kW System
Solo Job #1755778

To Whom It May Concern,

We have reviewed the following information regarding the solar panel installation for this project. Alterations to these documents or plans shall not be made without direct written consent of the Engineer of Record.

A. Assumptions from Field Observation provided by Everlight Solar

The following structural design regarding the proposed alterations have been prepared from these assumptions. The verification of the field observations is the responsibility of the contractor. **Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the sealed plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies.**

	Roof
Roof Finish :	Asphalt Shingle
Roof Underlayment :	Plywood
Roof Profile :	Gable
Roof Structural System :	Metal Plate Trusses
Truss Top Chord/Setup :	2 x 4 / Fink
Chord/Rafter Wood Grade :	Doug-Fir #2 or better
Truss/Rafter Spacing :	24" o.c.
Roof Slope :	25 deg
Max Top Chord/Rafter Span :	6.06 ft
Bearing Wall Type :	Convl Lt-Frame Constr
Foundation :	Permanent Concrete
Stories :	Two

B. Building Design Criteria

Code :	Wisc. UDC (ASCE 7-10)	Ground Snow Load :	30 psf
Roof Live Load :	20 psf (0 psf at panels)	Risk Category :	II
Min. Roof Snow Load :	30 psf	Occupancy Class :	R-3
Ult Wind Speed :	115 mph	Roof Dead Load :	6.3 psf
Exposure Category :	C	PV Dead Load :	3 psf
		Total Dead Load :	9.3 psf

C. Summary of Existing Structure Results

Roof
After review of the field observations and based on our calculations and in accordance with the applicable building codes and current industry standards, the existing roof structure supporting the proposed alterations consisting of the solar array has been determined to be:

- Adaquate to support the additional imposed loads. **No structural upgrades are required.**

D. Solar Panel Support Bracket Anchorage

1. Solar panels shall be designed, mounted, and installed in accordance with the most recent "Quickbolt Manual", which can be found on the Quickbolt website (http://quickbolt.com).
2. Manufacturer's Panel Bracket Connection to Roof Chord/Rafter Member:

Fastener :	(1) 5/16" Lag Screw per Bracket
NDS Withdrawl Value :	266 lbs/inch
Min. Thread Length and Pentration Depth :	2.5"

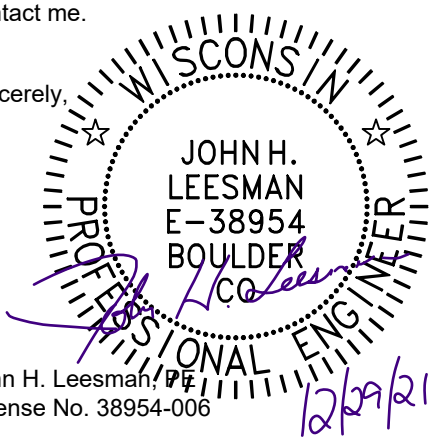
3. Considering the existing roof's slope, size, spacing, condition, and calculated loads, the panel bracket supports shall be placed no greater than 48 in. o/c.
4. Panel supports connections shall be staggered to distribute load to adjacent trusses.

E. Overall Summary

Based on the information supplied to us at the time of this report, on the evaluation of the existing structure, and solar array panel bracket connection, it is our opinion that the roof system will adequately support the additional loads imposed by the solar array. This evaluation conforms to Wisc. UDC and current industry standards.

Should you have any questions regarding this letter or if you require further information, do not hesitate to contact me.

Sincerely,



John H. Leesman, PE
License No. 38954-006

Limits of Scope of Work and Liablity

The existing structure is assumed to have been designed and constructed following appropriate codes at the time of erection and assumed to have appropriated permits. The calculations performed are only for the roof framing supporting the solar array installation referenced in the stamped plans and were completed according to generally recognized structural analysis standards and procedures, professional engineering, and design experience opinions and judgements. Existing deficiencies which are unknown or were not observed during the time the site observation are not included in this scope of work. All solar panel modules, racking, and mounting equipment shall be designed and installed per the manufacturer's approved installation specifications. The Engineer of Record and the engineering consulting firm assume no responsibility for misuse or improper installation. This analysis is not stamped for water leakage. Framing was determined on information in provided plans and/or photos, along with engineering judgement. Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies prior to starting construction. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation. The contactor shall also verify that there are no damage/deficiencies (i.e., dry rot, water damage, termite damage, framing member/connection damage, etc.) to framing that was not addressed in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any concerns prior to starting construction.

AERIAL VIEW:

STREET VIEW:

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Alexandria Lescher

1248 Riverton Dr

Mukwonago, WI 53149

AC SYSTEM SIZE: 4.932 kW AC

DC SYSTEM SIZE: 6.12 kW DC

Lat, 42.8816225

Long, -88.3143828

(17) Silfab SIL-360 NX mono PERC PV MODULES

(9) AP Systems YC600 INVERTER(S)

We Energies

SHEET INDEX:

DRAWN BY: SoloCAD

DATE:
December 28, 2021

COVER PAGE - PV01

GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES.
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

EQUIPMENT:
AC SYSTEM SIZE: 4.932 kW AC
DC SYSTEM SIZE: 6.12 kW DC
(17) Silfab SIL-360 NX mono PERC PV MODULES
(9) AP Systems YC600 INVERTER(S)
RACKING: Quickbolt 2 (QB2) - 48" O.C.

APPLICABLE GOVERNING CODES

2017 NEC/ WISCONSIN SPS 316

WISCONSIN UNIFORM DWELLING CODE SPS 320-325

SPS 321 CONSTRUCTION STANDARDS

SITE SPECIFICATIONS

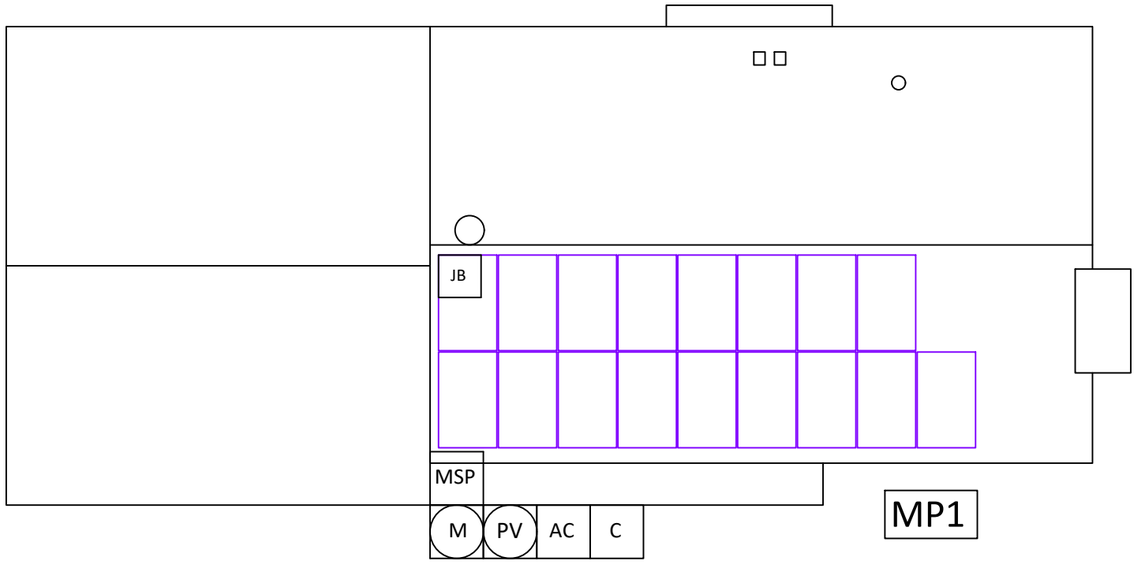
OCCUPANCY: R-3

ZONING: RESIDENTIAL

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER CO
PROFESSIONAL ENGINEER
12/29/21

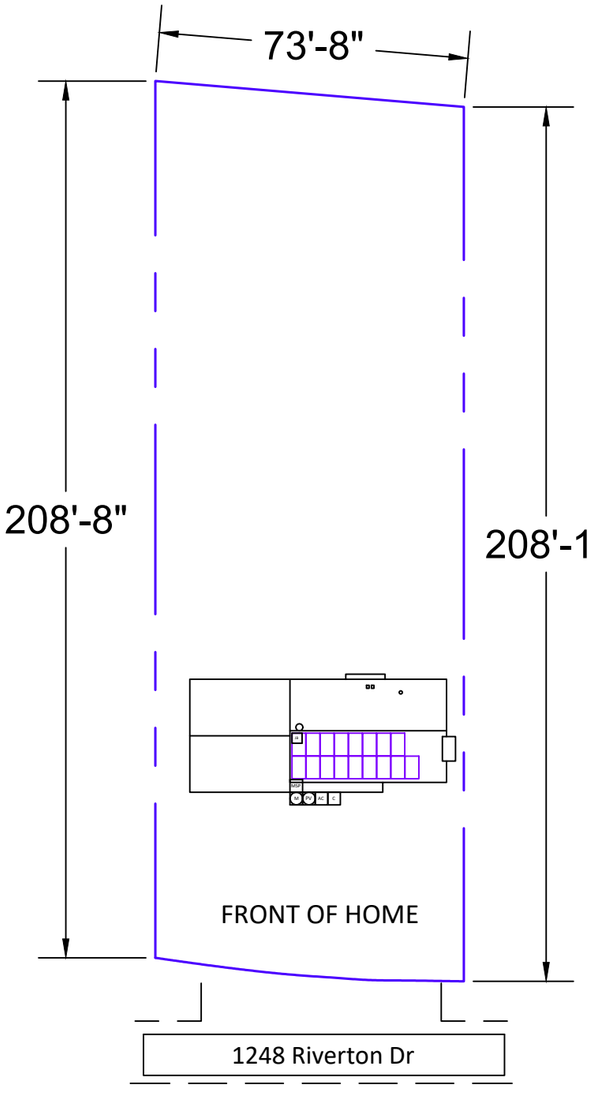
N

CLOSE UP OF HOME



FRONT OF HOME

ARRAY DETAILS:		
MOUNTING PLANE:	**AZIMUTH:**	**TILT:**
MP1	199°	25°



Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Alexandria Lescher

1248 Riverton Dr

Mukwonago, WI 53149

AC SYSTEM SIZE: 4.932 kW AC

DC SYSTEM SIZE: 6.12 kW DC

Lat, 42.8816225

Long, -88.3143828

(17) Silfab SIL-360 NX mono PERC PV MODULES

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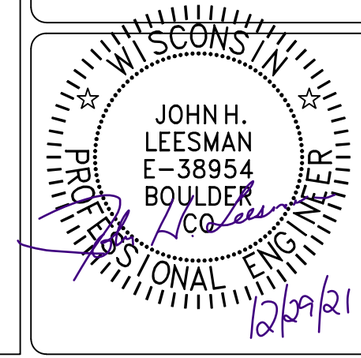
We Energies



EQUIPMENT LEGEND:

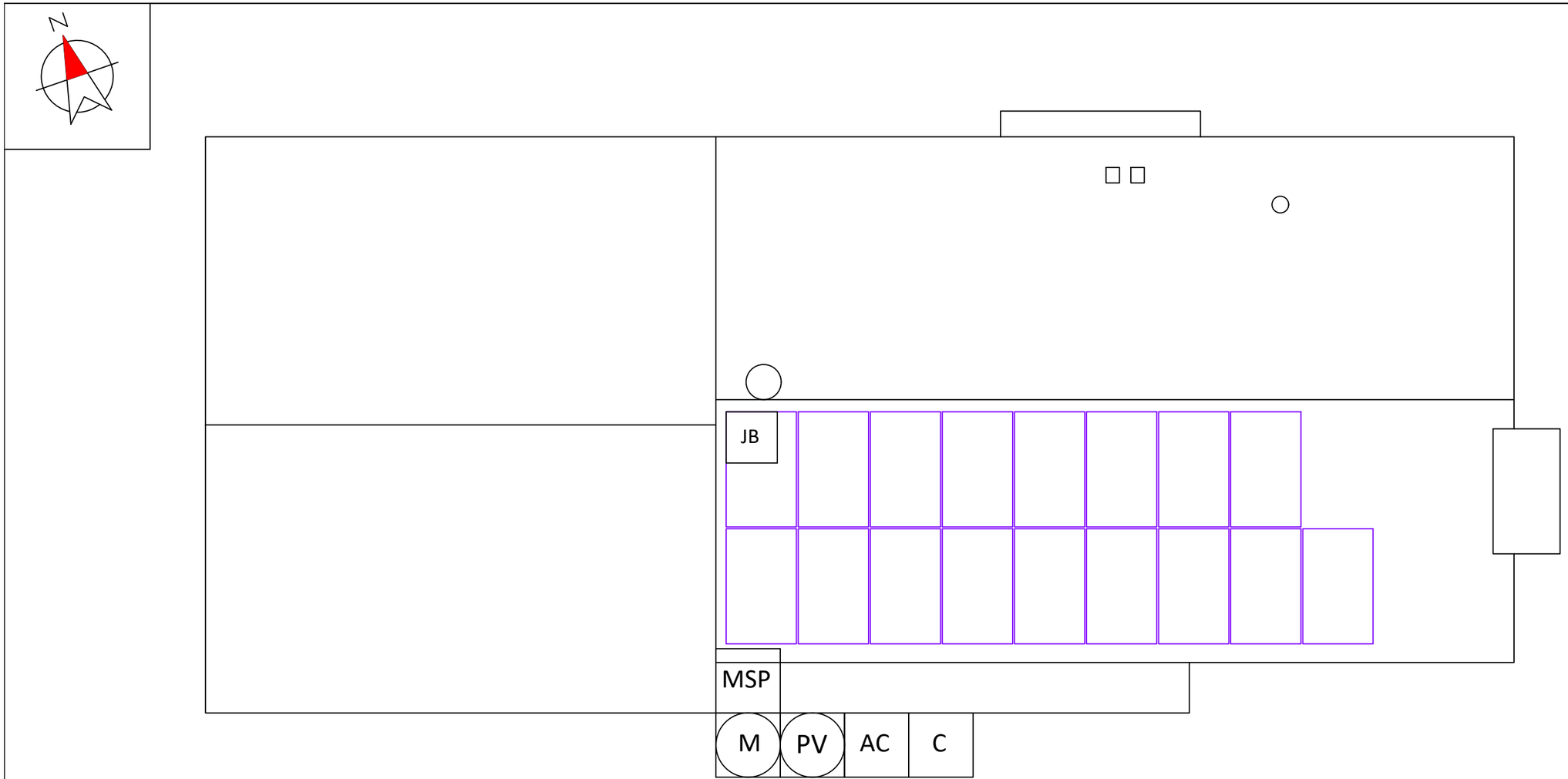
- M — UTILITY METER
- MSP — MAIN SERVICE PANEL
- AC — VISIBLE, LOCKABLE, LABELED AC DISCONNECT
- PV — METER SOCKET (FOR UTILITY PV METER)
- INV — INVERTER
- C — COMBINER BOX
- SUB — SUB PANEL
- LC — LOAD CENTER
- FIRE ACCESS PATHWAY (3' TYP)
- PROPERTY LINE
- BATT — BATTERY(IES)

VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

DRAWN BY: SoloCAD

DATE: December 28, 2021

SITE PLAN - PV02



Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Alexandria Lescher

1248 Riverton Dr

Mukwonago, WI 53149

AC SYSTEM SIZE: 4.932 kW AC

DC SYSTEM SIZE: 6.12 kW DC

Lat, 42.8816225

Long, -88.3143828

(17) Silfab SIL-360 NX mono PERC PV MODULES

(9) AP Systems YC600 INVERTER(S)

We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER
CO
PROFESSIONAL ENGINEER
12/29/21

EQUIPMENT INFORMATION:		ROOF INFO:		PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
RAIL MANUFACTURER:	IronRidge	ROOF TYPE:	Asphalt Shingle	PV MODULE COUNT:	17
RAIL PART NUMBER:	XR-10	ROOF FRAMING:	Manufactured Truss	ARRAY AREA:	MODULE COUNT * 19.72 ft² = 335.24
ATTACHMENTS	Quickbolt 2 (QB2)	RAFTER/TOP CHORD SIZE:	2x4	ROOF AREA:	1657 ft²
ATTACHMENT QTY:	30	RAFTER/TOP CHORD SPACING:	24"	PERCENT OF ROOF COVERED:	20%
SPLICE QTY:	6	ATTACHMENT SPACING:	48''	ARRAY WEIGHT:	MODULE COUNT * 44 lbs = 748 lbs
MIDCLAMP QTY:	30			DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 24.93
ENDCLAMP QTY:	8			POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.23 lbs/ft²

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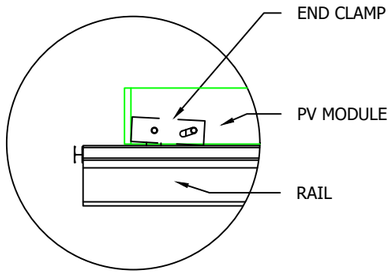
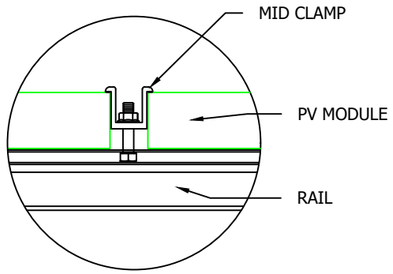
DATE:
December 28, 2021

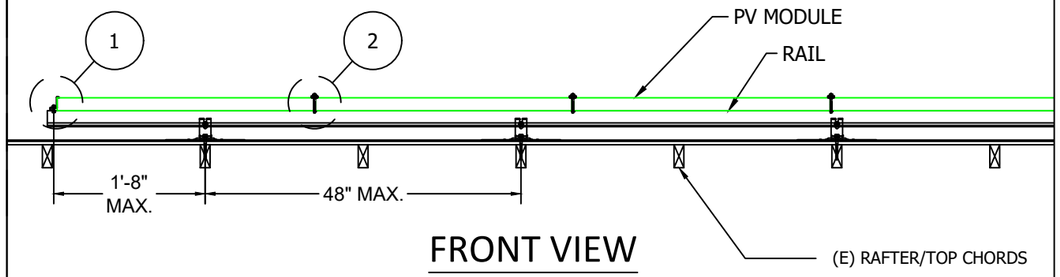
ROOF ATTACHMENTS - PV03



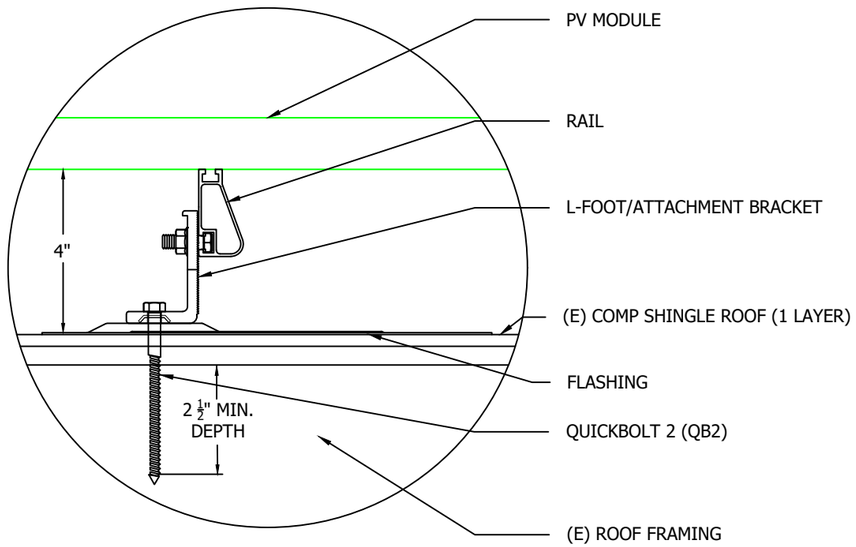
1 END CLAMP DETAILS



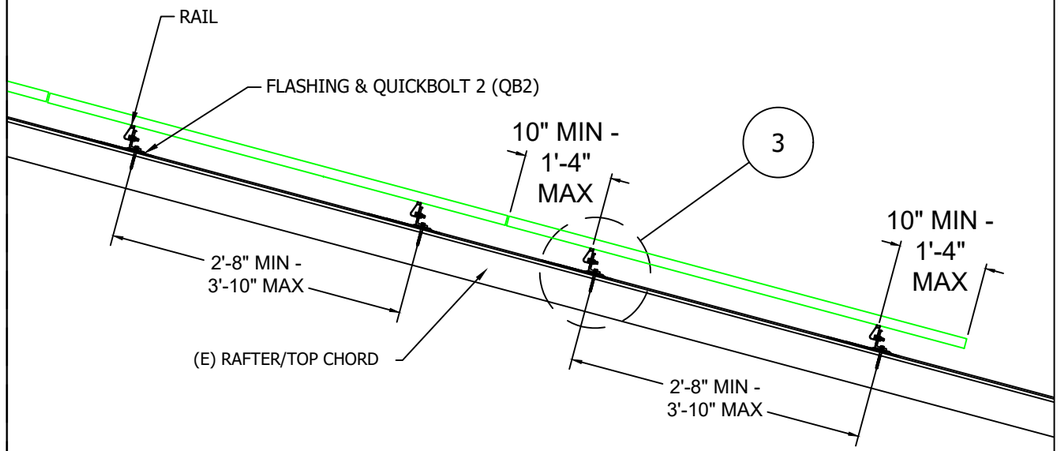
2 MID CLAMP DETAILS



FRONT VIEW



3 DETAIL, MOUNTING AND FLASHING



SIDE VIEW

EQUIPMENT INFORMATION:		ROOF INFO:		PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
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RAIL PART NUMBER:	XR-10	ROOF FRAMING:	Manufactured Truss	ARRAY AREA:	MODULE COUNT * 19.72 ft² = 335.24
ATTACHMENTS	Quickbolt 2 (QB2)	RAFTER/TOP CHORD SIZE:	2x4	ROOF AREA:	1657 ft²
ATTACHMENT QTY:	30	RAFTER/TOP CHORD SPACING:	24"	PERCENT OF ROOF COVERED:	20%
SPLICE QTY:	6	ATTACHMENT SPACING:	48''	ARRAY WEIGHT:	MODULE COUNT * 44 lbs = 748 lbs
MIDCLAMP QTY:	30			DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 24.93
ENDCLAMP QTY:	8			POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.23 lbs/ft²

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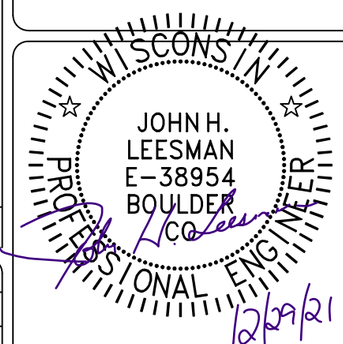
Long, -88.3143828
(17) Silfab SIL-360 NX mono PERC PV MODULES
(9) AP Systems YC600 INVERTER(S)
We Energies



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DATE: December 28, 2021

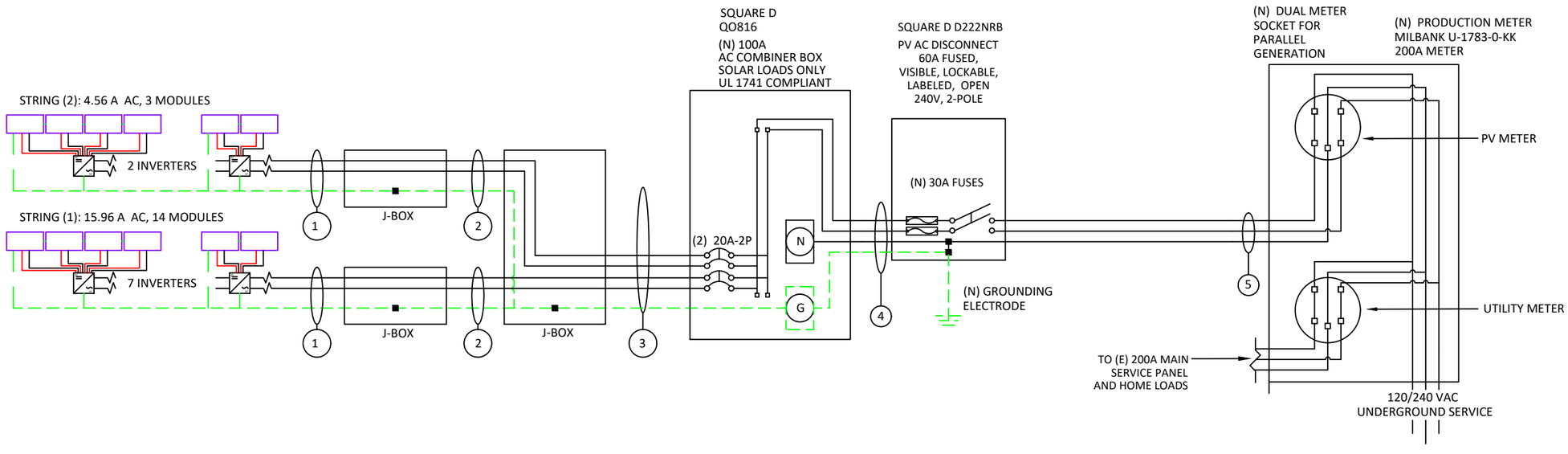
MOUNTING DETAIL - PV04

Silfab SIL-360 NX mono PERC Specs	
POWER MAX (PMAX):	360W
OPEN CIRCUIT VOLTAGE (VOC):	40.4V
MAX POWER-POINT CURRENT (IMP):	7.8A
MAX POWER-POINT VOLTAGE (VMP):	33.1V
SHORT CIRCUIT CURRENT (ISC):	8.2A
SERIES FUSE RATING:	20A

AP Systems YC600 Specs	
MAX INPUT VOLTAGE:	7 V
MAX DC SHORT CIRCUIT CURRENT:	12 A
MAXIMUM OUTPUT POWER:	548 W
MAXIMUM OUTPUT CURRENT:	2.28 A
NOM. OUTPUT VOLTAGE:	240 V
MAX UNITS PER 20A CIRCUIT:	14
1-Phase, 60 HZ, UL 1741 Listed	

Equipment Schedule			
TYPE:	QTY:	DESCRIPTION:	RATING:
MODULES:	(17)	Silfab SIL-360 NX mono PERC	360 W
INVERTERS:	(9)	AP Systems YC600	548 W
AC DISCONNECT(S):	(1)	PV AC DISCONNECT, 240V, 2-POLE	60A

Conduit & Conductor Schedule				
TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)	
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THWN-2, or THHN COPPER - (GROUND)	
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THHN/THWN-2 - (GROUND)	
4	(3)	10 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT
	(1)	10 AWG	THWN-2 COPPER - (GROUND)	
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	3/4" EMT
	(0)	NONE	N/A - NO GROUND WIRE PRESENT	



VISIBLE, LOCKABLE,
LABELED AC DISCONNECT
LOCATED WITHIN 10'
OF UTILITY METER

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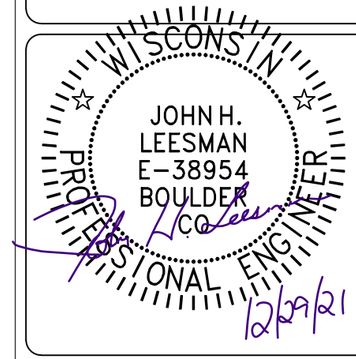

DRAWN BY: SoloCAD

DATE:
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LINE DIAGRAM - PV05

STRING CALCULATIONS		
AP Systems YC600	STRING #1	STRING #2
MAX AC CURRENT:	15.96A	4.56A
MICRO INVERTERS IN SERIES	7	2
NOMINAL STRING VOLTAGE:	240V	240V
MAX AC OUTPUT POWER	3836W	1096W
ARRAY DC POWER:	6120W	
TOTAL MAX AC CURRENT:	20.52A	

NUMBER OF CURRENT CARRYING CONDUCTORS	PERCENT OF VALUES
4-6	.80
7-9	.70
10-20	.50

SYSTEM OCPD CALCULATIONS	
INVERTER MODEL(S):	AP Systems YC600
# OF INVERTERS:	9
MAX OUTPUT CURRENT:	2.28A
(# OF INVERTERS) X (MAX OUTPUT CURRENT) X 125% <= OCPD RATING	
(9 X 2.28 A X 1.25) = 25.65A <= 30A, OK	

SUPPLY SIDE INTERCONNECTION	
MAIN BUSBAR RATING:	200A
MAIN DISCONNECT RATING:	200A
PV OCPD RATING:	30A
SERVICE RATING >= PV OCPD	
200A >= 30A, OK	

Conduit & Conductor Schedule

TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE	CONDUCTOR RATING	CONDUCTOR TEMP. RATE	AMBIENT TEMP	TEMP. DERATE	# OF CONDUCTORS DERATE	CONDUCTOR RATING W/DERATES	CONDUIT FILL
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR	30A	90°C	32°C	0.96	N/A - FREE AIR	28.8A	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)								
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT	40A	90°C	32°C	0.96	1	38.4A	11.9%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT	40A	90°C	32°C	0.96	0.8	30.72A	19.8%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
4	(3)	10 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT	35A	75°C	32°C	0.96	1	33.6A	15.9%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	3/4" EMT	65A	75°C	32°C	0.96	1	62.4A	28.61%
	(0)	NONE	N/A - NO GROUND WIRE PRESENT								

GROUNDING & GENERAL NOTES:

1. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
2. DC GEC AND AC EGC TO BE SPLICED TO EXISTING ELECTRODE
3. ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
4. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
5. AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

INTERCONNECTION NOTES

1. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9] & [NEC 230.95]
2. SUPPLY SIDE INTERCONNECTION ACCORDING TO [NEC705.12(A)]

DISCONNECT NOTES

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED “LINE SIDE” (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.
3. FUSED AC DISCONNECT TO BE USED.

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We Energies

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DATE:
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ELECTRICAL CALCS - PV06

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1
FOR PV DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION.
[NEC 690.13(B)]

WARNING
THIS EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

LABEL 2
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(b)]

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 3
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(c)]

WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 4
EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES
[NEC 705.12(B)(3)]

PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT: 21
NOMINAL OPERATING AC VOLTAGE: 240

LABEL 5
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.
[NEC 690.54, NEC 690.13 (B)]

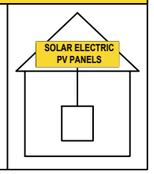
LABELING NOTES:
1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21(B)(3)]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 6
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.
[NEC 690.31(G)(3&4)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

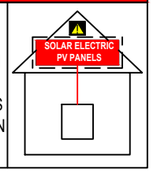
TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



LABEL 7
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS WITHIN THE ARRAY REMAIN ENERGIZED IN SUNLIGHT

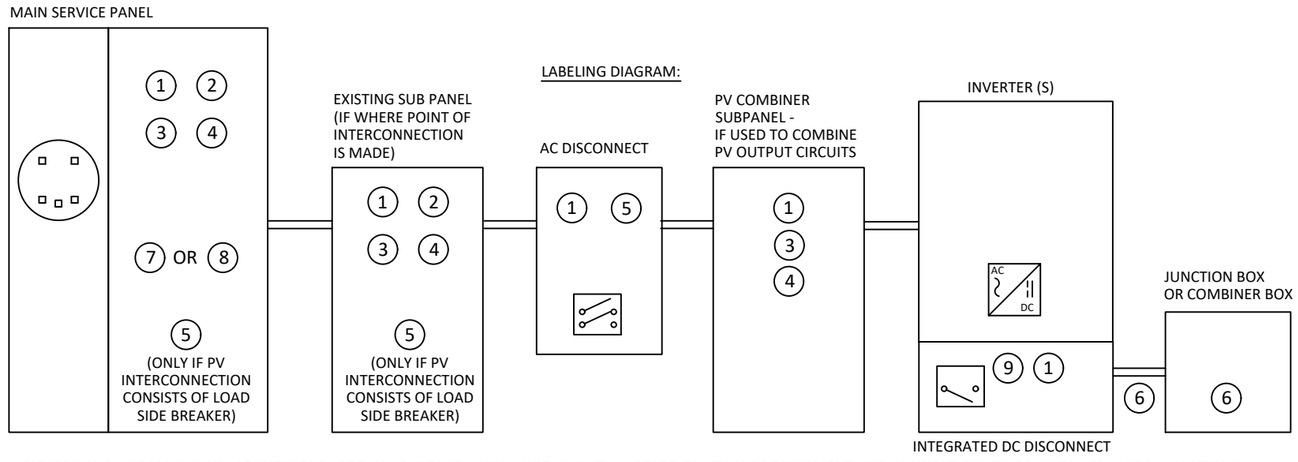


LABEL 8
FOR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(b)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 9
SIGN LOCATED AT RAPID SHUT DOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

LABELING DIAGRAM:



*ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ON THE ELECTRICAL DIAGRAM PAGE.

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We Energies

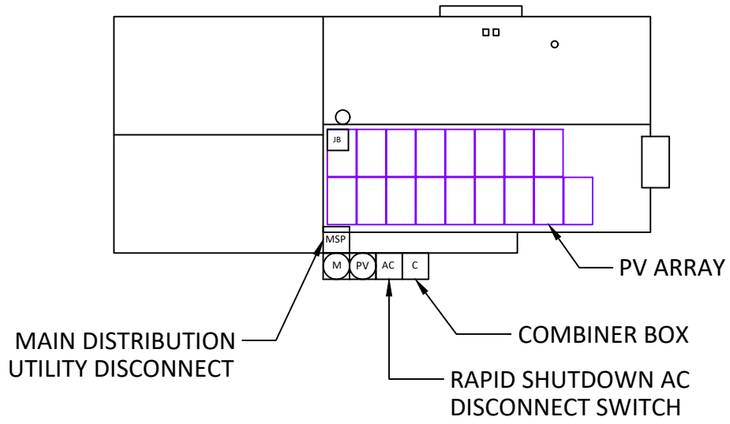
DRAWN BY: SoloCAD
DATE:
December 28, 2021

LABELS - PV07

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:

SYSTEM UTILIZES
MICROINVERTERS LOCATED
UNDER EACH SOLAR MODULE



FRONT OF HOME

1248 Riverton Dr, Mukwonago WI 53149

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

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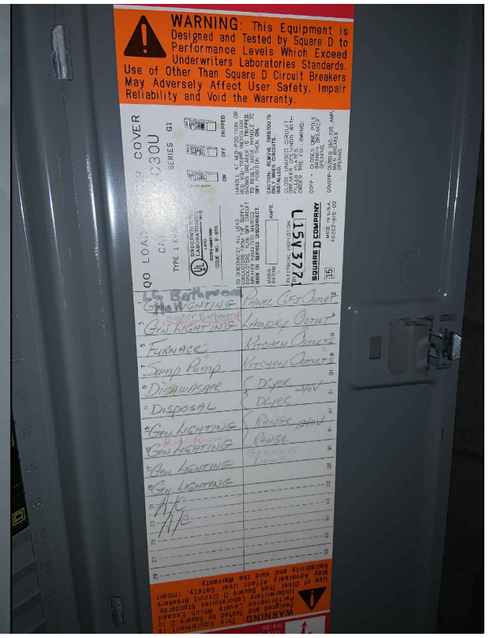
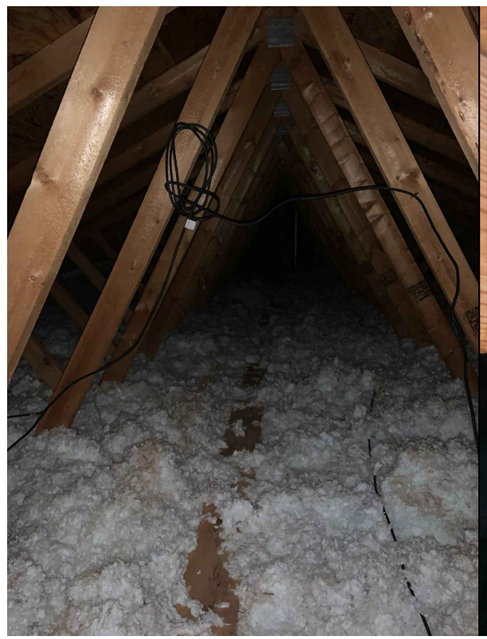
PLACARD - PV08

SITE PHOTOS:





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DRAWN BY: SoloCAD

DATE:
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SITE PHOTOS - PV09

SITE PHOTOS:

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FRONT/BACK VIEWS - PV09.1

SITE PHOTOS:

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SIDE VIEWS - PV09.2

SITE PHOTOS:

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DATE:
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METER/OPEN MSP - PV09.3

SIL-360 NX

Proud Partner of Everlight Solar

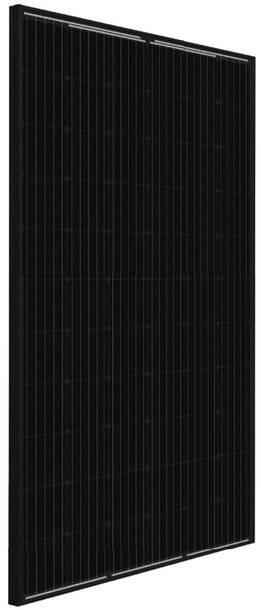
HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE

CHUBB*
* Chubb provides error and omission insurance to Silfab Solar Inc.

INDUSTRY LEADING WARRANTY
All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION
Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY
Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



BAA / ARRA COMPLIANT
Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

LIGHT AND DURABLE
Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS
Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC OPERATIONS
Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING
All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT
PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-360 NX mono PERC	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	360	258
Maximum power voltage (Vpmax)	V	36.6	33.1
Maximum power current (Ipmax)	A	9.9	7.8
Open circuit voltage (Voc)	V	44.5	40.4
Short circuit current (Isc)	A	10.5	8.2
Module efficiency	%	19.7	17.6
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m2 • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
• Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

Temperature Ratings	SIL-360 NX mono PERC
Temperature Coefficient Isc	+0.064 %/°C
Temperature Coefficient Voc	-0.28 %/°C
Temperature Coefficient Pmax	-0.36 %/°C
NOCT (± 2°C)	46 °C
Operating temperature	-40/+85 °C

Mechanical Properties and Components	SIL-360 NX mono PERC	
	Metric	Imperial
Module weight	20±0.2 kg	44±0.4 lbs
Dimensions (H x L x D)	1832 mm x 1000 mm x 38 mm	72.13 in x 39.4 in x 1.5 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5/112.8 lb/ft^2
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	66 - Si mono-PERC - 5 busbar 158.75 x 158.75 mm	66 - Si mono-PERC - 5 busbar 62.25 x 62.25 in
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating
Cables and connectors (refer to installation manual)	1200 mm ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated	

Warranties	SIL-360 NX mono PERC			
Module product workmanship warranty	25 years**			
Linear power performance guarantee	30 years			
	≥ 97.1% end 1st year	≥ 91.6% end 12th year	≥ 85.1% end 25th year	≥ 82.6% end 30th year

Certifications	SIL-360 NX mono PERC
Product	ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2***. IEC 61730-1/-2***, CSA C22.2#61730-1/-2, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2
Factory	ISO9001:2015

All states except California
- Modules Per Pallet: 26
- Pallets Per Truck: 34
- Modules Per Truck: 884

California
- Modules Per Pallet: 26
- Pallets Per Truck: 32
- Modules Per Truck: 832

*⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

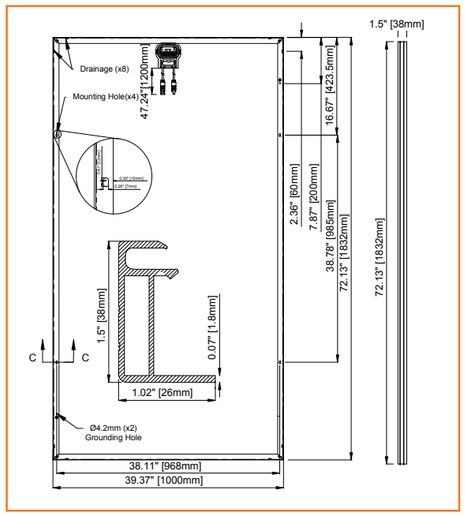
***Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.

Everlight Solar
Tel 833-786-4387
www.everlightsolar.com

Silfab Solar Inc.
240 Courtneypark Drive East
Mississauga ON L5T 2Y3 Canada
Tel +1 905-255-2501 | Fax +1 905-696-0267
info@silfabsolar.com | www.silfabsolar.com

Silfab Solar Inc.
800 Cornwall Ave
Bellingham WA 98225 USA
Tel +1 360-569-4733



APsystems YC600 Microinverter Datasheet

INPUT DATA (DC)

Module Compatibility	60 & 72 Cell PV Modules
MPPT Voltage Range	22V-48V
Operation Voltage Range	16V-55V
Maximum Input Voltage	55V
Maximum Input Current	12A x 2
Maximum Total PV Array Short Circuit Current	15A

OUTPUT DATA (AC)

	240V	208V
Maximum Continuous Output Power	548VA	548VA
Peak Output Power	600VA	600VA
Nominal Output Voltage	240V	208V
Nominal Output Current	2.28A	2.63A
Nominal Output Frequency	60Hz	60Hz
Adjustable Output Voltage Range	211-264V	183-229V
Adjustable Output Frequency Range	59.3 - 60.5Hz	59.3 - 60.5Hz
Power Factor (Adjustable)	0.8 leading...0.8 lagging	0.8 leading...0.8 lagging
Total Harmonic Distortion	<3%	<3%
Maximum Units per Branch	7 (14 PV modules)	6 (12 PV modules)

EFFICIENCY

Peak Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	60mW

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Dimensions (WxHxD) inches	10.24" x 7.4" x 1.24"
Dimensions (WxHxD) mm	260mm x 188mm x 31.5mm
Weight	5.7 lbs (2.6kg)
AC BUS Maximum Current	20A
Connector Type	MC4 Type
Enclosure Rating	NEMA 6 (IP67)
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Wireless Zigbee
Transformer Design	High Frequency Transformers, Galvanic Isolation
Monitoring	Via EMA**Online Portal
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4, ICES-003
Safety & Grid Connection Compliance	UL1741, UL1741 SA (240V version only), CA Rule 21 (240V version only), IEEE1547, CSA C22.2 No.107.1-01, NEC 2017 690.12, 690.11

* Depending on the local regulations.
**APsystems online Energy Management Analysis (EMA) platform

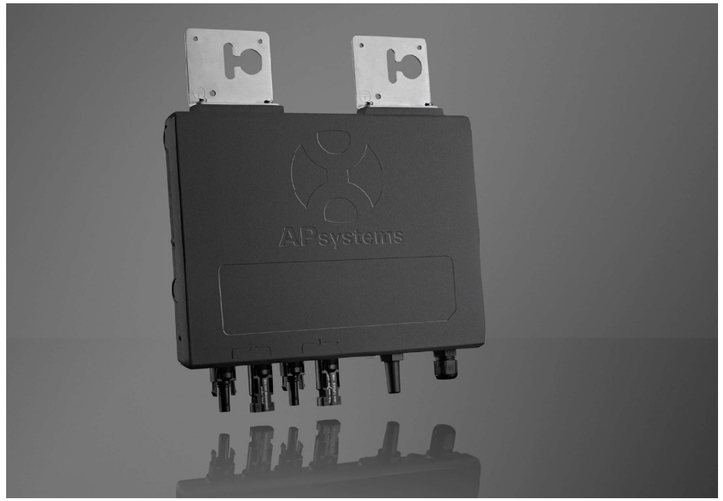
Specifications subject to change without notice – please ensure you are using the most recent version found at APsystems.com

600 Ericksen Ave NE, Suite 200, Seattle, WA 98110 | 844.666.7035 | APsystems.com

APsystems ALTENERGY POWER

APsystems ALTENERGY POWER

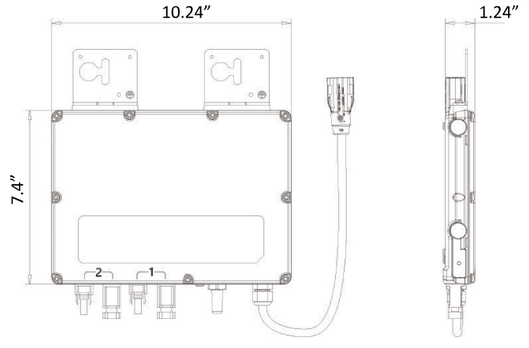
Leading the Industry in
Solar Microinverter Technology



YC600
Microinverter

- Dual-module microinverter with independent MPPT
- Utility-interactive with Reactive Power Control (RPC)
- CA Rule 21 compliant
- Continuous power of 274VA per channel, 300VA peak
- Accommodates modules from 250-365W+
- Wide MPPT voltage range (22V-48V)
- Meets NEC 2014/2017 690.12 Rapid Shutdown requirements
- ZigBee communication & free monitoring

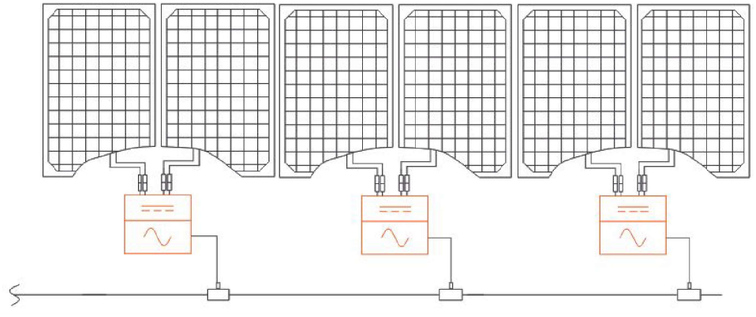
DIMENSIONS



With its groundbreaking design and features, the YC600 is the pinnacle of microinverter technology. A single-phase, smart grid-compliant microinverter, the YC600 serves two modules with dual, independent MPPT. Zigbee wireless communication over a mesh network offers faster data speeds than PLC and a wider MPPT voltage range results in a greater energy harvest for homeowners.

A true utility-interactive microinverter with Reactive Power Control (RPC) technology, the YC600 meets CA Rule 21 requirements and is inherently NEC 2014/2017 Rapid Shutdown compliant. The unit also builds on the successful APsystems line of multi-module microinverters, simplifying installation and reducing logistics costs.

WIRING SCHEMATIC



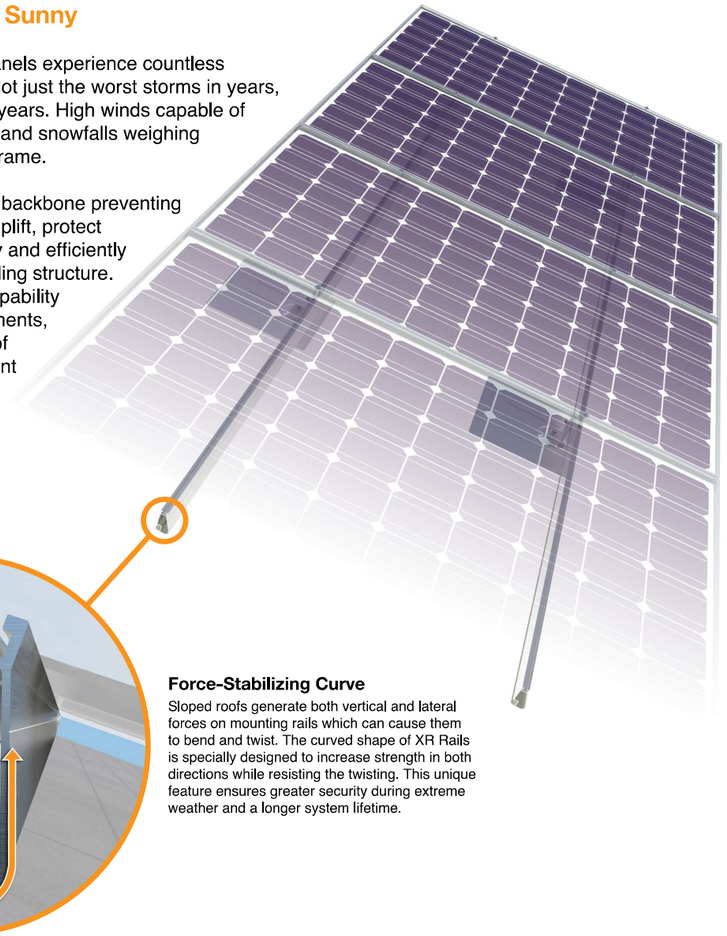
IRONRIDGE

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.

IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10

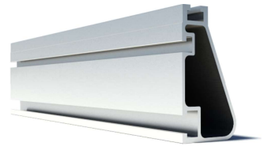
XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

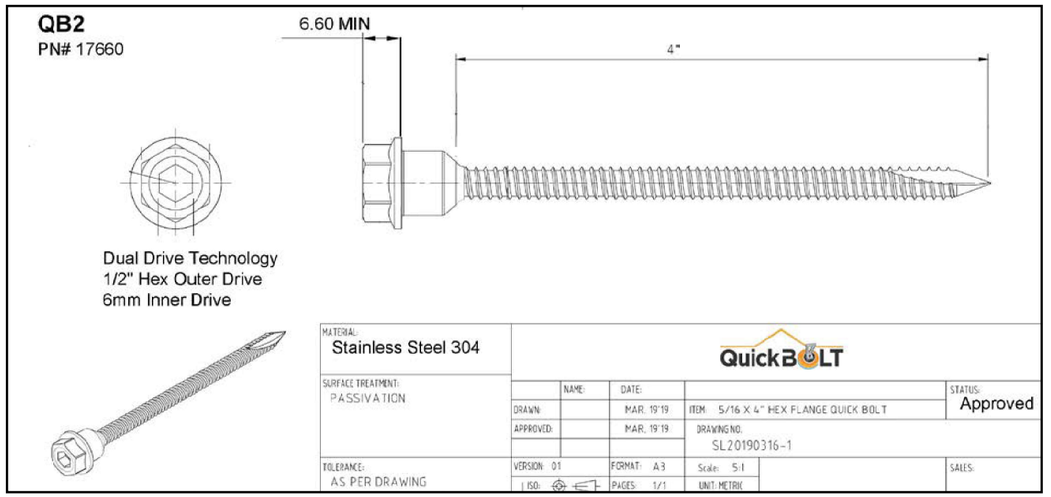
The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

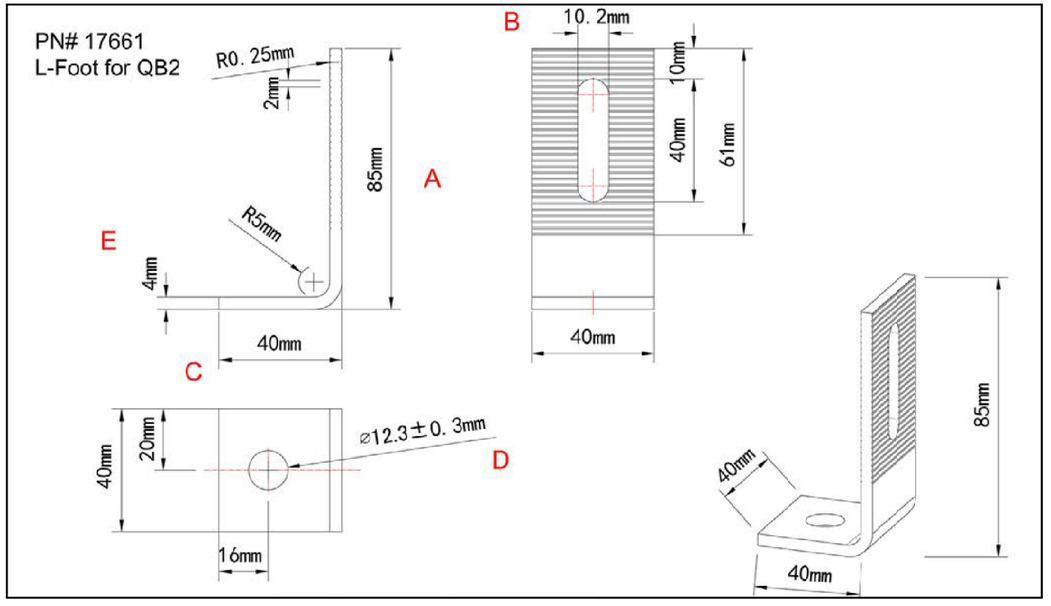
Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

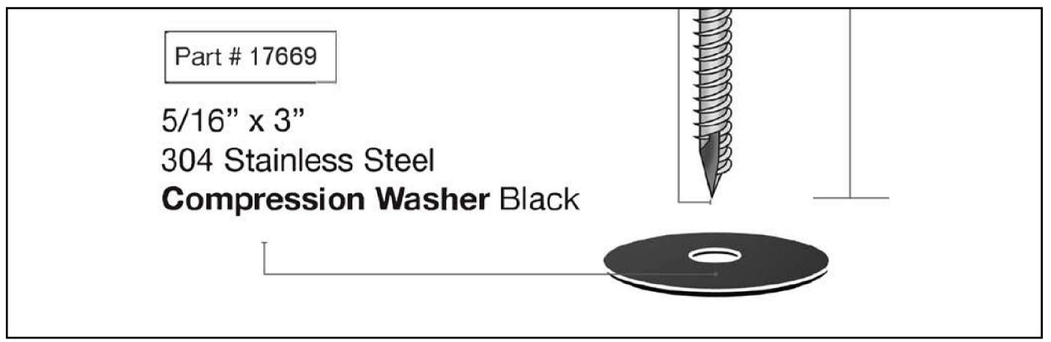
*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

SPEC SHEET

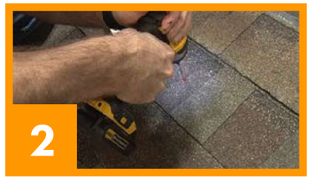
Part #	Box Quantity
17660	4” QB2 (25)
17662	3” Microflashing® (25); 4” QB2 (25); L-Foot (25)

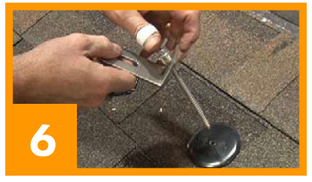






INSTALL INSTRUCTIONS





QB2 (17662)

RECOMMENDED MATERIALS

- Tools to locate and mark rafter
- Drill with a 15/64" drill bit
- MFG approved sealant (optional)
- 1/2" Nut Setter

INSTALLATION INSTRUCTIONS

1. Locate and mark the rafter
2. Predrill the hole
3. Optional: Fill the predrilled hole with MFG approved sealant
4. Optional: Place a ring of sealant around the bottom of the Microflashing® washer
5. Place the Microflashing®
6. Insert the Bolt into the L-Foot
7. Drive the Bolt until the Microflashing® is compressed

BUILDING CODE LETTER

February 26, 2019

To whom this may concern,

QuickBOLT is committed to excellence. The parts tested are durable goods, meaning the material composition and detailed specifications of the parts do not change. Therefore, all stamps are current. Any part tested will have the same results no matter what year the tests are performed.

SolarRoofHook is the previous name of QuickBOLT. Any test result referencing SolarRoofHook is referring to a QuickBOLT product.

All our parts were tested by a third-party test facility, in possession of a current engineering license for the state where the tests were performed for the following.

1. Uplift test
2. Downward load test
3. Lateral Test – Asphalt Mounts, and Metal Mounts only
4. ASTM E2440 and ASTM E330 Waterproof Tests - QuickBOLT only

The following is an excerpt from:

CALIFORNIA BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
guide to Engineering & Land Surveying for City and County Officials
Page 12, Line 27

27. If the license has expired between the time the engineering documents were prepared and the time when the local agency's review is performed, do the documents need to be re-sealed by a licensee with a current license? (B&P Code §§ 6733, 6735, 6735.3, 6735.4)

As long as the license was current at the time the engineering documents were prepared, the documents do not need to be re-sealed prior to review by the local agency. However, any changes (updates or modifications) to the documents that are made following the review by the local agency would have to be prepared by a licensed engineer with a current license and those changes would have to be signed and sealed.

We trust the information provided will resolve any request for the test reports submitted to have a stamp from the current year.

Regards,

Rick Gentry
Executive Vice President

UL CERTIFICATION

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15
Issued to:	QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP 5830 Las Positas Rd Livermore, CA 94551
This is to certify that representative samples of	COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS (See Adendum for Additional Information.)
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.
Standard(s) for Safety:	UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16988 16990 16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520 17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543 17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559 17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585 17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612 17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628 17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649 17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686 17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711 17712 17717 17718 17759 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS 17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15894SS 15891SS 15987BSS 17660 17661 17662 17663

Ratings: Overcurrent Protection Rating – 25 Amps

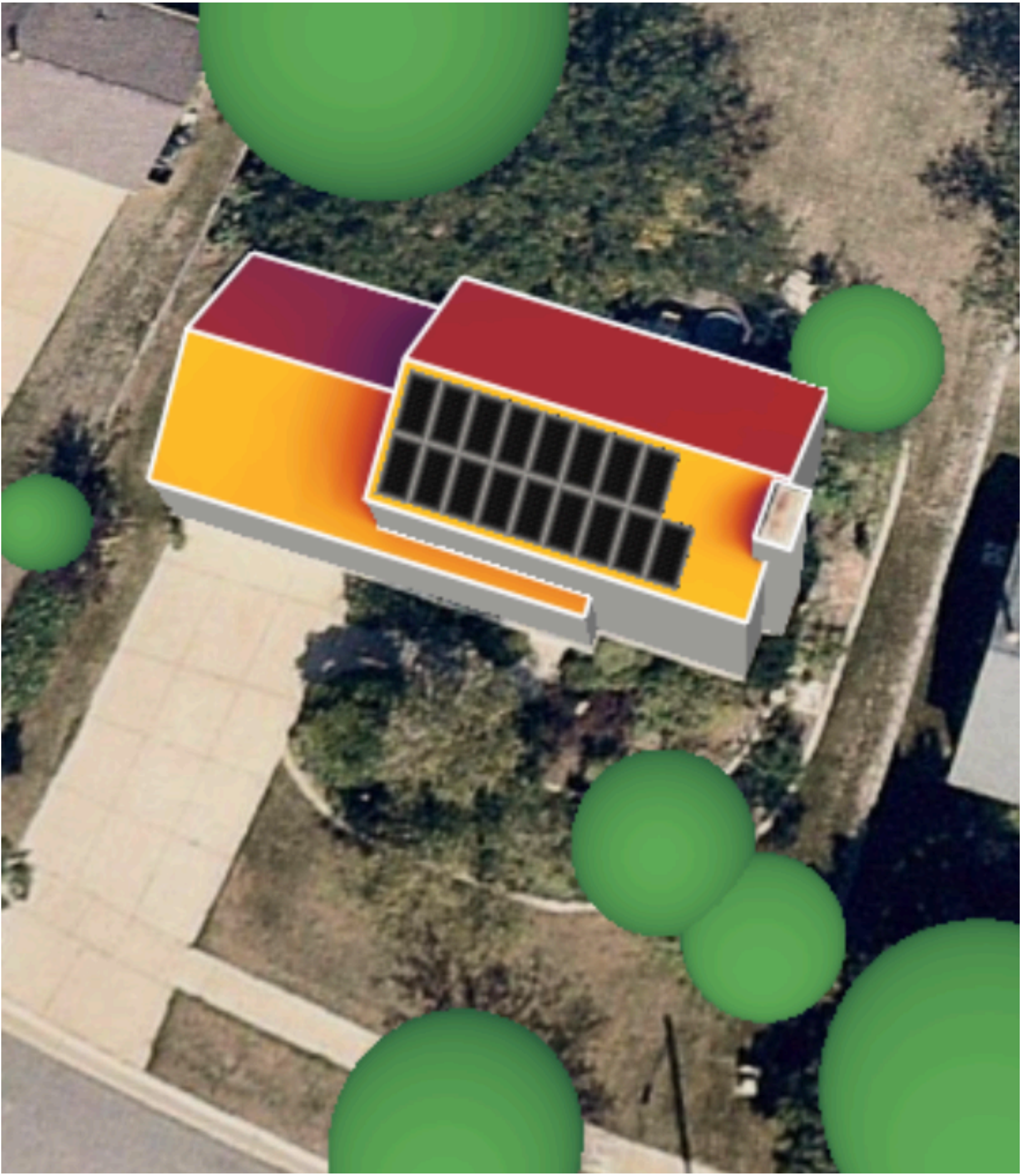
Bruce Mahrenholz, Director North American Certification Program

UL LLC

U1783-O-KK

Catalog Number	U1783-O-KK
Marketing Product Description	4 Terminal Ringless Plain Top Horn Bypass 2 Position Single Pedestal Direct Bury
UPC	784572134287
Length (IN)	4.5
Width (IN)	8.188
Height (IN)	74
Brand Name	Milbank
Type	Ringless Meter Socket
Application	Meter Socket
Standard	UL Listed;Type 3R
Voltage Rating	Up to 240 Volts Alternating Current
Amperage Rating	200 Continuous Ampere
Phase	1 Phase
Frequency Rating	60 Hertz
Size	4.5L x 8.188W x 74H
Number Of Cutouts	0
Cutout Size	No Main Breaker
Cable Entry	Underground
Terminal	Single Mechanical
Insulation	Glass Polyester
Mounting	Pedestal
Enclosure	G90 Galvanized Steel with Powder Coat Finish
Jaw Quantity	4 Terminal
Bypass Type	Horn Bypass
Number of Meter Positions	2 Positions
Equipment Ground	2 Barrel Ground Lug
Hub Opening	Plain Top
Line Side Wire Range	6 AWG - 350 kcmil
Load Side Wire Range	6 AWG - 350 kcmil
Number Of Receptacles	0

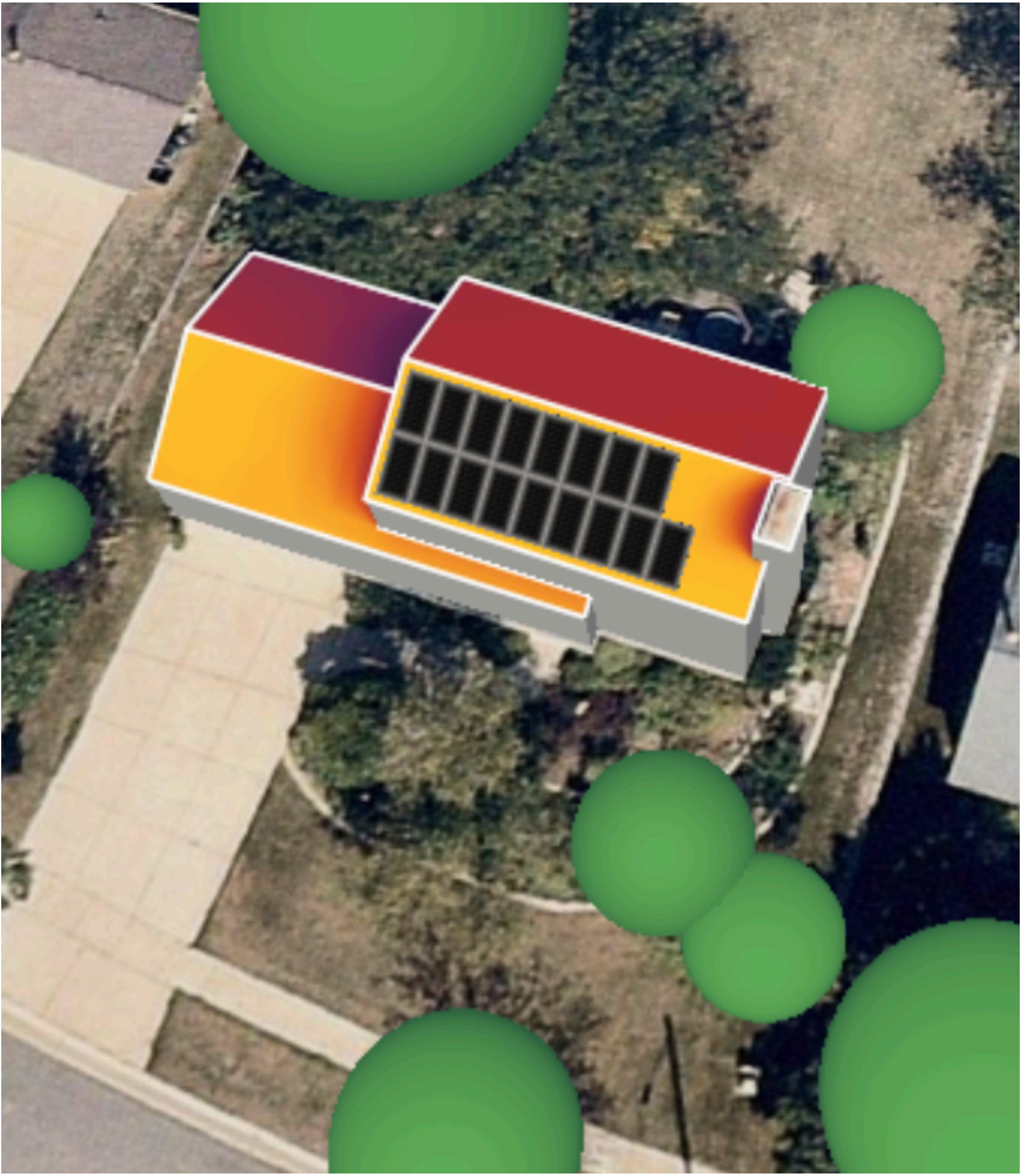
Please consult serving utility for their requirements prior to ordering or installing, as specifications and approvals vary by utility and may require local electrical inspector approval. All installations must be installed by a licensed electrician and must comply with all national and local codes, laws and regulations. Milbank reserves the right to make changes in specifications and features shown without notice or obligation.



1248 Riverton Dr

1248 Riverton Dr, Mukwonago, WI 53149

Building



VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

RESOLUTION NO. 2022-12

A RESOLUTION FOR SITE PLAN AND ARCHITECTURAL REVIEW FOR ALEXANDRIA LESCHER, 1248 RIVERTON DRIVE, PARCEL MUKV 1965-040-001.

WHEREAS, pursuant to Section 100-601, and 100-153 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval for an additional and building and site modifications, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by the ALEXANDRIA LESCHER

WHEREAS, the use is permitted within the R-2 Single Family Village Residential District in which the subject property is located, and

WHEREAS, the plan of operation and plans have been reviewed and recommended by the Village Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for structures at 1248 RIVERTON DR, based upon the plan of operation and plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED this site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.

8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

NOW THEREFORE BE IT RESOLVED, that the Village of Mukwonago,

Approved and Adopted this 16th day of February 2022 by the Village Board of the Village of Mukwonago, Wisconsin.

APPROVED:

_____
Fred H. Winchowky, Village President

ATTESTATION:

_____
Diana Dykstra, MMC
Village Clerk-Treasurer

PLANNING COMMISSION

February 8, 2022 at 6:30pm
Mukwonago, WI

SITE PLAN AND ARCHITECTURAL REVIEW AND CONDITIONAL USE PERMIT

1222 Riverton
Parcel Number: MUKV 1965-052

Case Summary

Parcel Data

Proposal:	Solar Panels
Applicant:	JAMES L WAGNITZ
Request:	Site Plan and Architectural Review
Staff Recommendation:	Approve with Conditions

Parcel Characteristics / Conditions

Acreage:	0.39 acres
Current Use:	Single Family
Proposed Use:	Single Family
Reason for Request:	Solar Panels visible from public right of way
Land Use Classification:	Historic Residential – 12,000 Sq. Ft.
Zoning Classification:	R-2 Single Family Village Residential District
Census Tract:	2039.02

Site Plan and Architectural Review Request

Architectural/ Site Review

Site Modifications	The applicant is proposing to add solar panels onto their existing single-family home. The municipal code requires planning commission approval prior to issuance of a building permit. The code also requires solar panels to be screen from street view. Section 100-102 (2) c.
Utilities	No modifications at this time.
Stormwater Management	No modifications at this time.
Wetlands	None
Signage	No modifications at this time.
Parking	No modifications at this time.
Landscaping	No modifications at this time.
Trash Enclosure	No modifications at this time.
Fencing	No modifications at this time.
Outdoor Lighting	No modifications at this time.
Misc. Performance Standards	None

Staff Review

Engineering	No concerns at this time
Public Works	No concerns at this time
Utilities	No concerns at this time
Police	No concerns at this time
Fire	No concerns at this time
Building Inspection	No concerns at this time
Planning	No concerns at this time

Recommendation

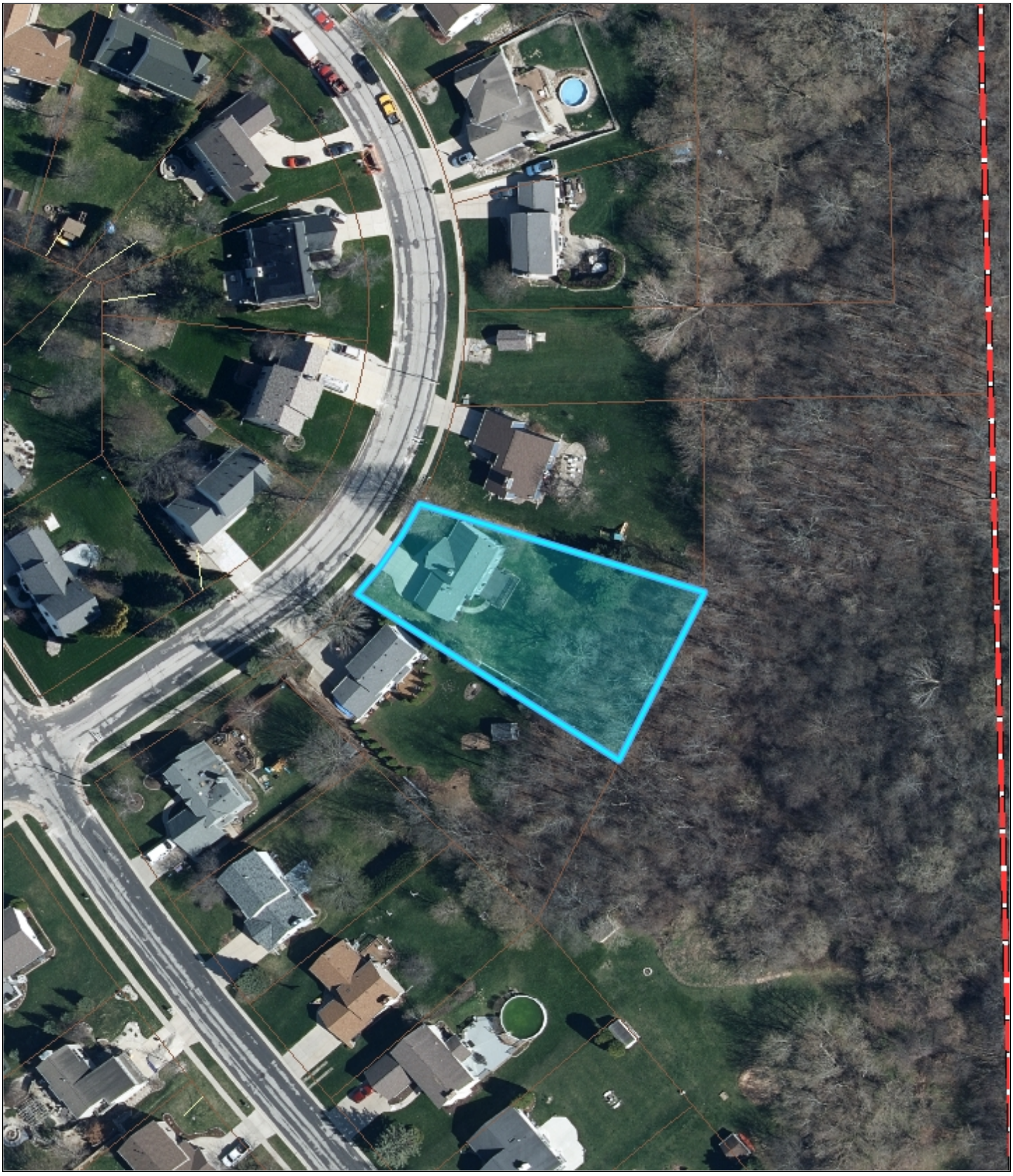
Site Plan and Architectural Review

Staff recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution.

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.
8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

Attachments

1. Maps 2. Plans 3. Resolution



Village of Mukwonago GIS

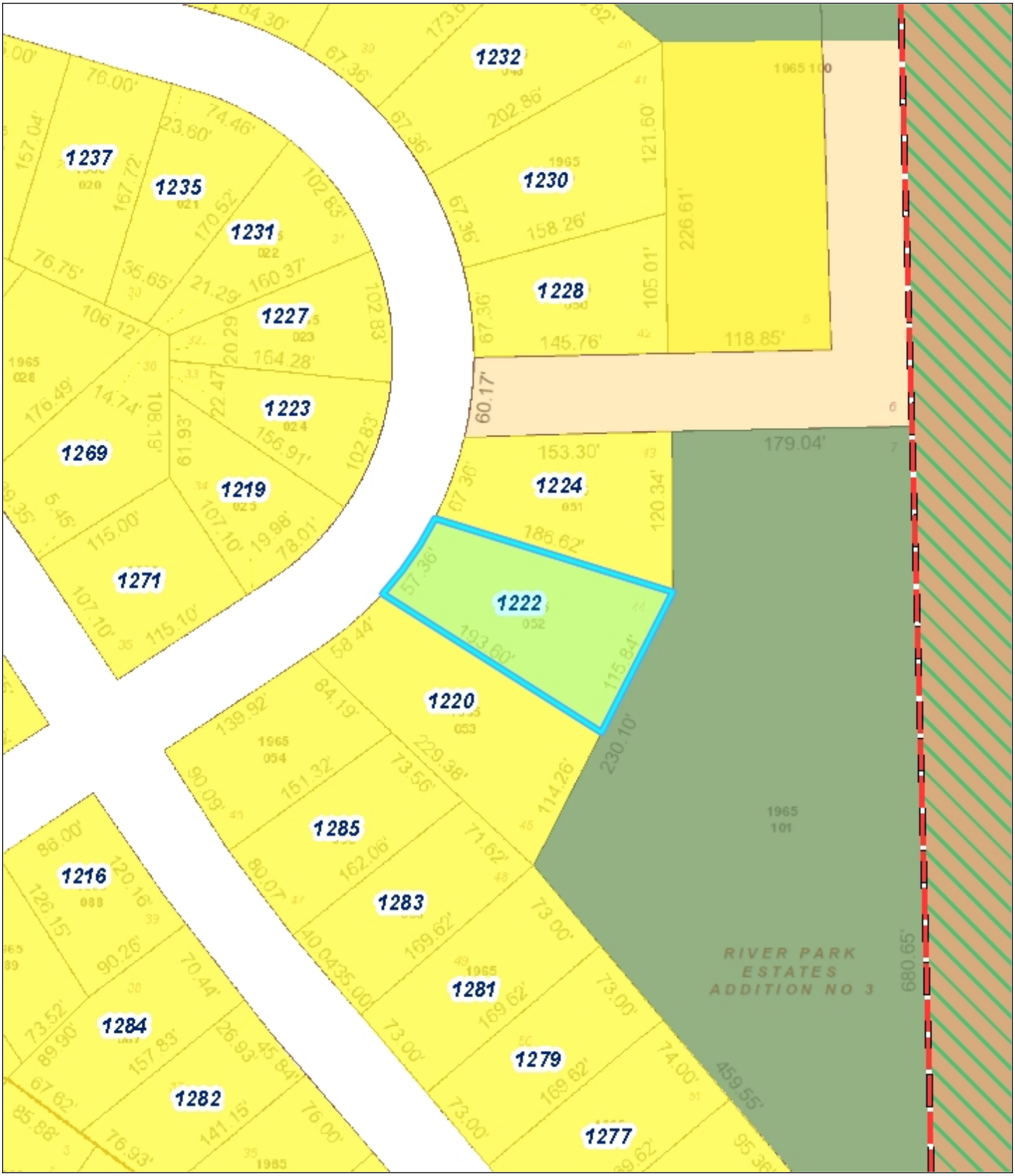
Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Land Use

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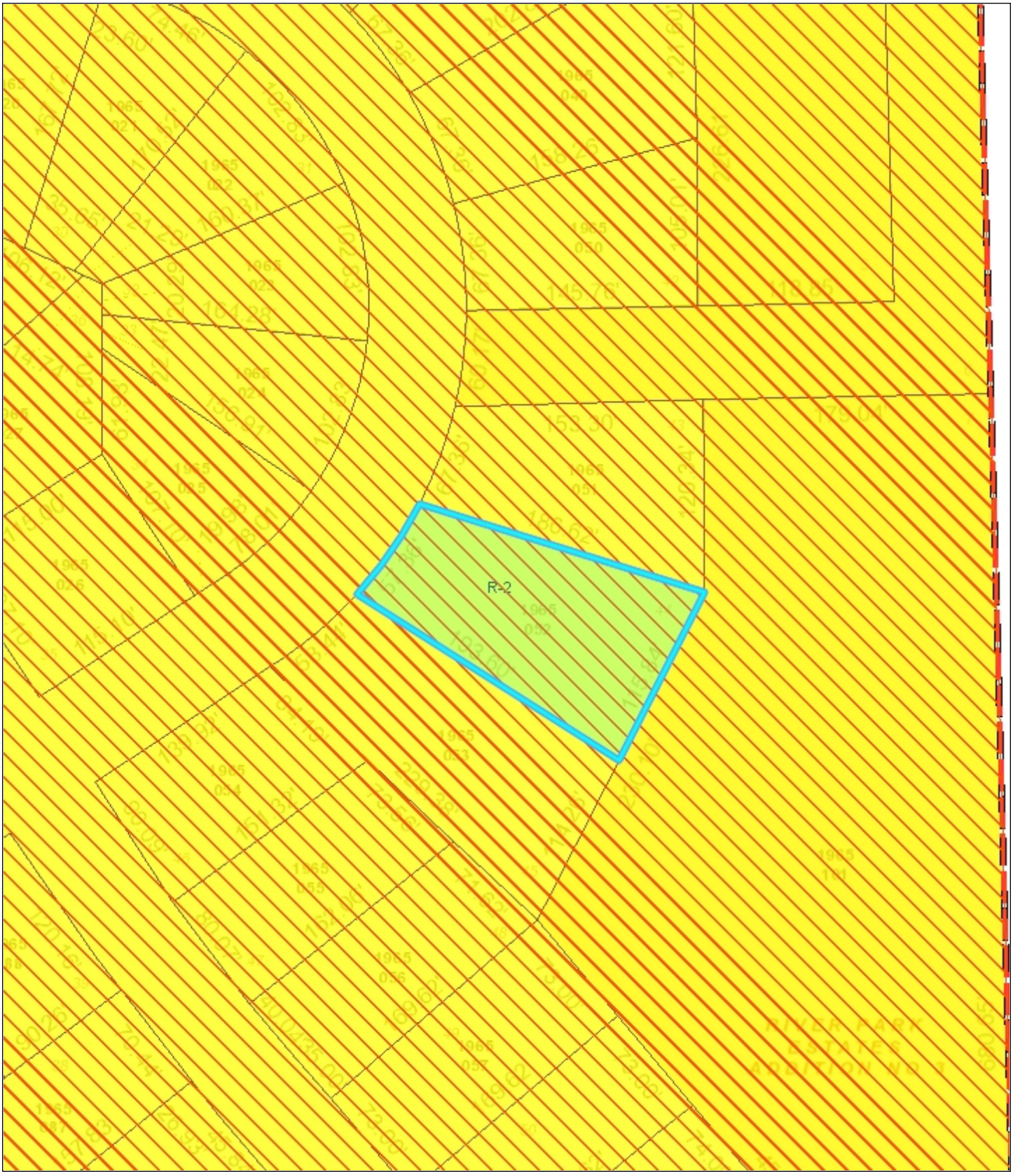
SCALE: 1" = 100 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Zoning

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SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

LUCENT ENGINEERING
Solar Professional Engineering Consulting 2021.12.10

Lucent Engineering, P.C.
814 E 1475 N
Lehi, UT 84043
m: (309) 645-0999
admin@lucenteng.co

December 16, 2021

Everlight Solar
PO Box 930550
Verona, WI 53593

John Leesman
Digitally signed by John Leesman
DN: CN=John Leesman, dnQualifier=A01410D0000017B12F005B900010DA0, O=Lucent Engineering P.C., C=US
Location: Boulder, CO
Reason: I am the author of this document
Date: 2021.12.16 10:00:33-07'00'

RE: Engineering Services
Wagnitz Residence
1222 Riverton Dr, Mukwonago, WI
4.38 kW System
Solo Job #1737800

To Whom It May Concern,

We have reviewed the following information regarding the solar panel installation for this project. Alterations to these documents or plans shall not be made without direct written consent of the Engineer of Record.

A. Assumptions from Field Observation provided by Everlight Solar

The following structural design regarding the proposed alterations have been prepared from these assumptions. The verification of the field observations is the responsibility of the contractor. **Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the sealed plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies.**

	Roof A	Roof B
Roof Finish :	Asphalt Shingle	Asphalt Shingle
Roof Underlayment :	OSB	OSB
Roof Profile :	Gable	Gable
Roof Structural System :	Rafter	Rafter
Truss Top Chord/Setup :	2 x 8 / Rafter	2 x 8 / Rafter
Chord/Rafter Wood Grade :	Doug-Fir #1 or better	Doug-Fir #1 or better
Truss/Rafter Spacing :	16" o.c.	24" o.c.
Roof Slope :	23 deg	40 deg
Max Top Chord/Rafter Span :	14.64 ft	10.44 ft
Bearing Wall Type :	Convl Lt-Frame Constr	CLFC
Foundation :	Permanent Concrete	Permanent Concrete
Stories :	Single	Single

B. Building Design Criteria

Code :	Wisc. UDC (ASCE 7-10)	Risk Category :	II
Roof Live Load :	20 psf (0 psf at panels)	Occupancy Class :	R-3
Min. Roof Snow Load :	30 psf	Roof Dead Load :	7.2 psf
Ult Wind Speed :	115 mph	PV Dead Load :	3 psf
Exposure Category :	C	Total Dead Load :	10.2 psf

C. Summary of Existing Structure Results

Roof A & B
After review of the field observations and based on our calculations and in accordance with the applicable building codes and current industry standards, the existing roof structure supporting the proposed alterations consisting of the solar array has been determined to be:

- Adaquate to support the additional imposed loads. **No structural upgrades are required.**

D. Solar Panel Support Bracket Anchorage

1. Solar panels shall be designed, mounted, and installed in accordance with the most recent "Quickbolt Manual", which can be found on the Quickbolt website (http://quickbolt.com).
2. Manufacturer's Panel Bracket Connection to Roof Chord/Rafter Member:

Fastener :	(1) 5/16" Lag Screw per Bracket
NDS Withdrawl Value :	266 lbs/inch
Min. Thread Length and Pentration Depth :	2.5"

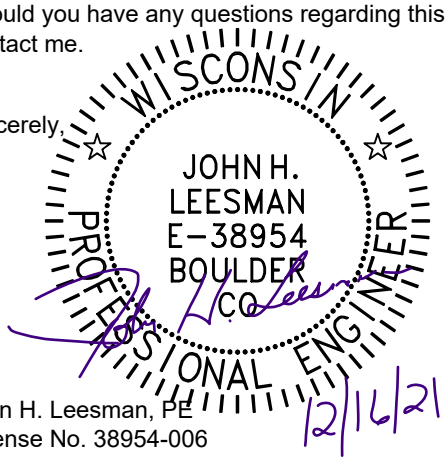
3. Considering the existing roof's slope, size, spacing, condition, and calculated loads, the panel bracket supports shall be placed no greater than 48 in. o/c.
4. Panel supports connections shall be staggered to distribute load to adjacent trusses.

E. Overall Summary

Based on the information supplied to us at the time of this report, on the evaluation of the existing structure, and solar array panel bracket connection, it is our opinion that the roof system will adequately support the additional loads imposed by the solar array. This evaluation conforms to Wisc. UDC and current industry standards.

Should you have any questions regarding this letter or if you require further information, do not hesitate to contact me.

Sincerely,



John H. Leesman, PE
License No. 38954-006

Limits of Scope of Work and Liablity

The existing structure is assumed to have been designed and constructed following appropriate codes at the time of erection and assumed to have appropriated permits. The calculations performed are only for the roof framing supporting the solar array installation referenced in the stamped plans and were completed according to generally recognized structural analysis standards and procedures, professional engineering, and design experience opinions and judgements. Existing deficiencies which are unknown or were not observed during the time the site observation are not included in this scope of work. All solar panel modules, racking, and mounting equipment shall be designed and installed per the manufacturer's approved installation specifications. The Engineer of Record and the engineering consulting firm assume no responsibility for misuse or improper installation. This analysis is not stamped for water leakage. Framing was determined on information in provided plans and/or photos, along with engineering judgement. Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies prior to starting construction. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation. The contactor shall also verify that there are no damage/deficiencies (i.e., dry rot, water damage, termite damage, framing member/connection damage, etc.) to framing that was not addressed in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any concerns prior to starting construction.

AERIAL VIEW:

STREET VIEW:

GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES.
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

EQUIPMENT:
AC SYSTEM SIZE: 4.384 kW AC
DC SYSTEM SIZE: 5.4 kW DC
(15) Silfab SIL-360 NX mono PERC PV MODULES
(8) AP Systems YC600 INVERTER(S)
RACKING: IronRidge - 48" O.C.

APPLICABLE GOVERNING CODES

2017 NEC/ Wisconsin SPS 316
Wisconsin Uniform Dwelling Code SPS 320-325
SPS 321 Construction Standards

SITE SPECIFICATIONS

OCCUPANCY: R-3
ZONING: RESIDENTIAL

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER CO
PROFESSIONAL ENGINEER
12/16/21

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Jim Wagnitz
1222 Riverton Dr
Mukwonago, WI 53149
AC SYSTEM SIZE: 4.384 kW AC
DC SYSTEM SIZE: 5.4 kW DC
Lat, 42.8799557
Long, -88.3122945
(15) Silfab SIL-360 NX mono PERC PV MODULES
(8) AP Systems YC600 INVERTER(S)

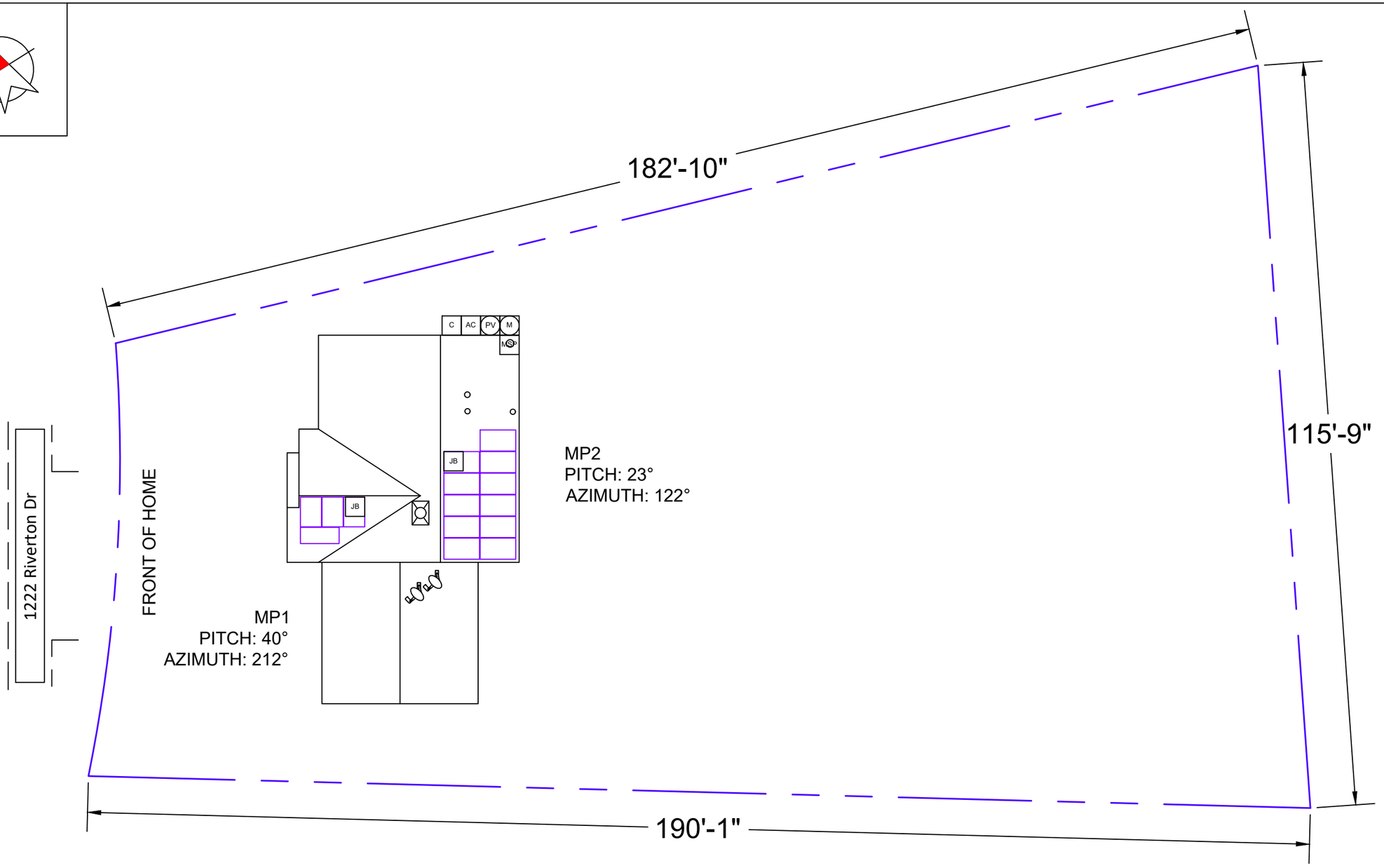
We Energies

SHEET INDEX:

DRAWN BY: SoloCAD

DATE:
December 15, 2021

COVER PAGE - PV01



Everlight Solar

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We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER
CO
PROFESSIONAL ENGINEER
12/16/21

EQUIPMENT LEGEND:

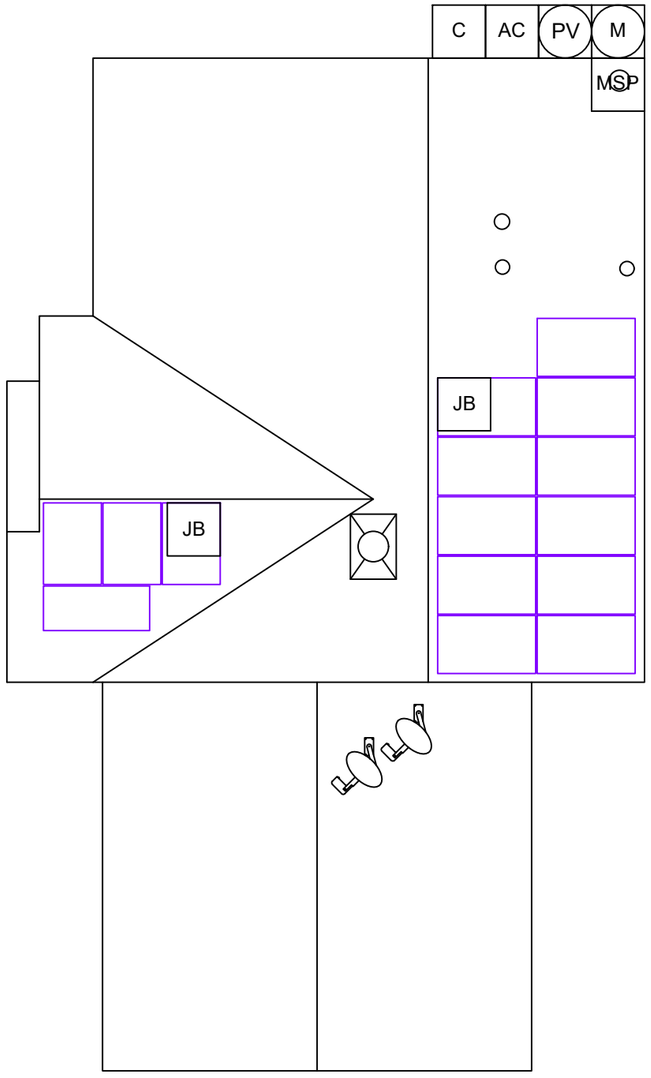
- M — UTILITY METER
- MSP — MAIN SERVICE PANEL
- AC — VISIBLE, LOCKABLE, LABELED AC DISCONNECT
- PV — METER SOCKET (FOR UTILITY PV METER)
- INV — INVERTER
- C — COMBINER BOX
- SUB — SUB PANEL
- LC — LOAD CENTER
- FIRE ACCESS PATHWAY (3' TYP)
- PROPERTY LINE
- BATT — BATTERY(IES)

VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

DRAWN BY: SoloCAD

DATE: December 15, 2021

SITE PLAN - PV02



EQUIPMENT INFORMATION:	
RAIL MANUFACTURER	IronRidge
RAIL PART NUMBER	XR-10
ATTACHMENTS	Quickbolt 2 (QB2)
ATTACHMENT QTY	32
SPLICE QTY	4
MIDCLAMP QTY	22
ENDCLAMP QTY	16

ROOF INFO:	
ROOF TYPE	asphalt_shingle
ROOF FRAMING	traditional_framing
RAFTER/TOP CHORD SIZE	2x8
RAFTER/TOP CHORD SPACING	16"
ATTACHMENT SPACING	48

PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
PV MODULE COUNT:	15
ARRAY AREA:	MODULE COUNT * 18.06ft² = 270.9
ROOF AREA:	1800 ft²
PERCENT OF ROOF COVERED:	15%
ARRAY WEIGHT:	MODULE COUNT * 50lbs = 750
DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 23.44
POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.77 lbs/ft²

Everlight Solar

CONTRACTOR INFORMATION:
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Verona, WI 53593
License# DCQ-111802116
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We Energies

WISCONSIN JOHN H. LEESMAN E-38954 BOULDER CO PROFESSIONAL ENGINEER 12/16/21

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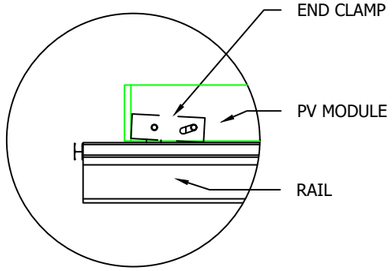
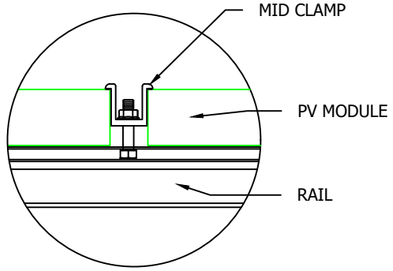
DATE: December 15, 2021

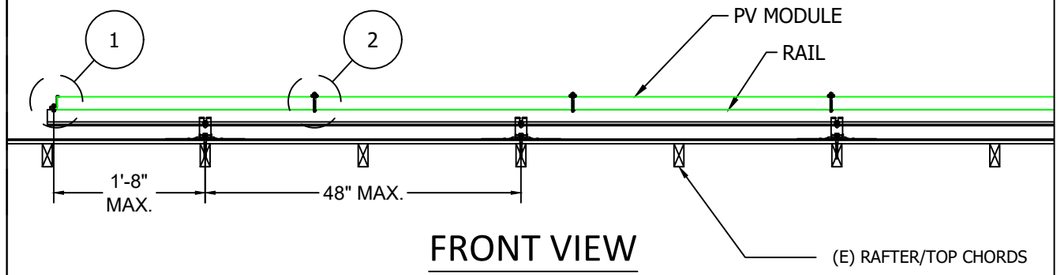
ROOF ATTACHMENTS - PV03



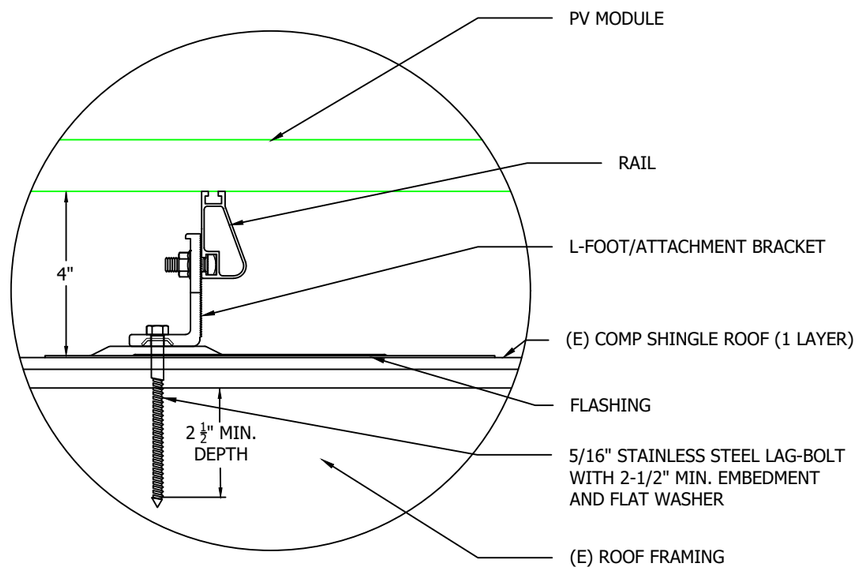
1 END CLAMP DETAILS



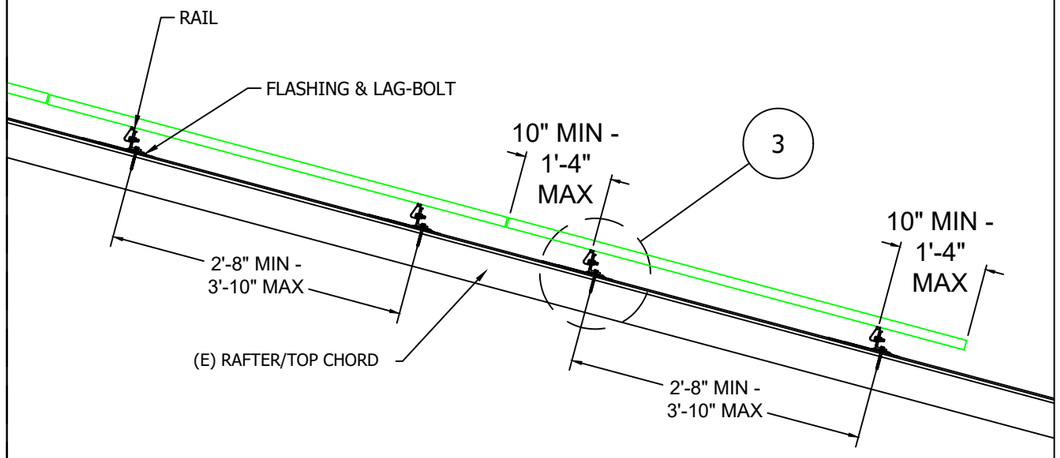
2 MID CLAMP DETAILS



FRONT VIEW



3 DETAIL, MOUNTING AND FLASHING



SIDE VIEW

EQUIPMENT INFORMATION:	
RAIL MANUFACTURER	IronRidge
RAIL PART NUMBER	XR-10
ATTACHMENTS	Quickbolt 2 (QB2)
ATTACHMENT QTY	32
SPLICE QTY	4
MIDCLAMP QTY	22
ENDCLAMP QTY	16

ROOF INFO:	
ROOF TYPE	asphalt_shingle
ROOF FRAMING	traditional_framing
RAFTER/TOP CHORD SIZE	2x8
RAFTER/TOP CHORD SPACING	16"
ATTACHMENT SPACING	48

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We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER
CO
PROFESSIONAL ENGINEER
12/16/21

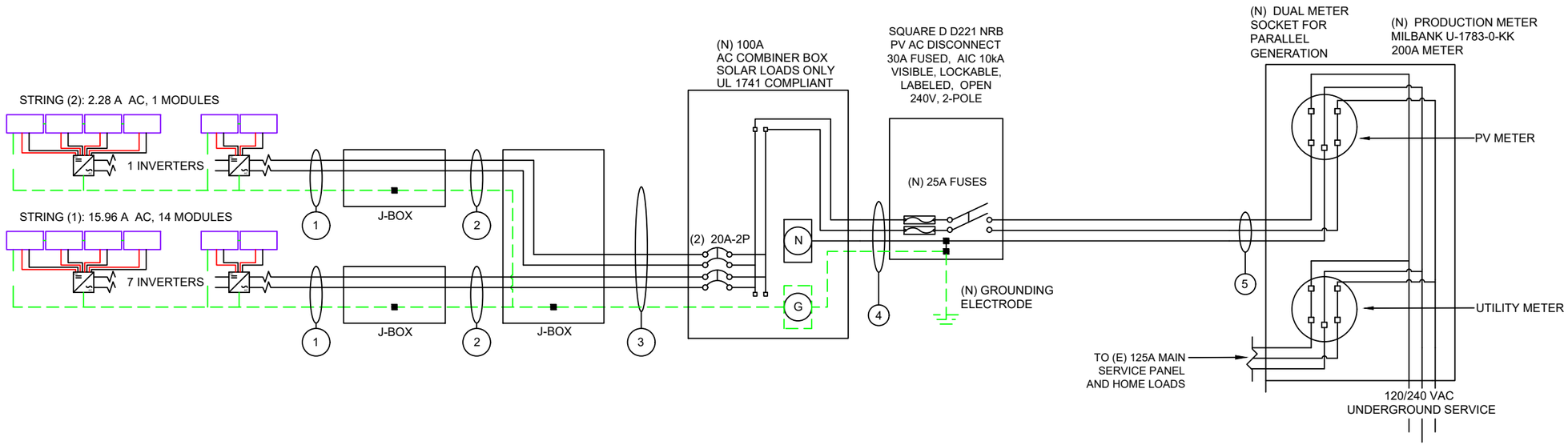
DRAWN BY: SoloCAD

DATE:
December 15, 2021

MOUNTING DETAIL - PV04

EQUIPMENT SCHEDULE:			
TYPE:	QTY:	DESCRIPTION:	RATING:
MODULES:	(15)	Silfab SIL-360 NX mono PERC	360 W
INVERTERS:	(8)	AP Systems YC600	548 W
AC DISCONNECT(S):	(1)	PV AC DISCONNECT, 240V, 2-POLE	30A

Conduit & Conductor Schedule									
TAG	WIRE GAUGE	DESCRIPTION	QTY	CONDUIT SIZE	CONDUCTOR RATING	# OF CONDUCTORS DERATE	TEMP. DERATE	CONDUCTOR RATING W/DERATES	CONDUIT FILL
1	12-2	TC-ER, THWN-2, COPPER (L 1, L 2)	(2)	N/A - FREE AIR	30A	N/A - FREE AIR	0.96	28.8A	N/A - FREE AIR
	6 AWG	BARE, COPPER (GROUND)	(1)						
2	10 AWG	THWN-2, or THHN, or 10/2 NM-B COPPER - (L 1, L 2)	(2)	3/4" EMT	40A	1	0.96	38.4A	11.9%
	10 AWG	THWN-2, or THHN, or 10/2 NM-B COPPER - (GROUND)	(1)						
3	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	(4)	3/4" EMT	40A	0.8	0.96	30.72A	19.8%
	10 AWG	THHN/THWN-2 - (GROUND)	(1)						
4	10 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	(3)	3/4" EMT	35A	1	0.96	33.6A	15.9%
	10 AWG	THWN-2 COPPER - (GROUND)	(1)						
5	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	(3)	3/4" EMT	65A	1	0.96	62.4A	28.61%
	NONE	N/A - NO GROUND WIRE PRESENT	(0)						



GROUNDING & GENERAL NOTES:

1. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
2. EGC TO BE SPLICED TO NEW OR EXISTING ELECTRODE
3. ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
4. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
5. AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

INTERCONNECTION NOTES

1. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9] & [NEC 230.95]
2. SUPPLY SIDE INTERCONNECTION ACCORDING TO [NEC705.12(A)]

DISCONNECT NOTES

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED “LINE SIDE” (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.
3. FUSED AC DISCONNECT TO BE USED.

VISIBLE, LOCKABLE,
LABELED AC DISCONNECT
LOCATED WITHIN 10'
OF UTILITY METER

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

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Long, -88.3122945

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(8) AP Systems YC600 INVERTER(S)

We Energies

DRAWN BY: SoloCAD

DATE:
December 15, 2021

LINE DIAGRAM - PV05

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1
FOR PV DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION.
[NEC 690.13(B)]

WARNING
THIS EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

LABEL 2
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(b)]

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 3
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(c)]

WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 4
EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES [NEC 705.12(B)(3)]

PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT: 18
NOMINAL OPERATING AC VOLTAGE: 240

LABEL 5
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.
[NEC 690.54, NEC 690.13 (B)]

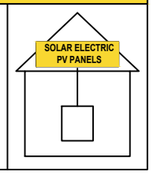
LABELING NOTES:
1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21(B)(3)]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 6
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.
[NEC 690.31(G)(3&4)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

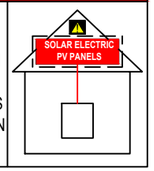
TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



LABEL 7
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS WITHIN THE ARRAY REMAIN ENERGIZED IN SUNLIGHT

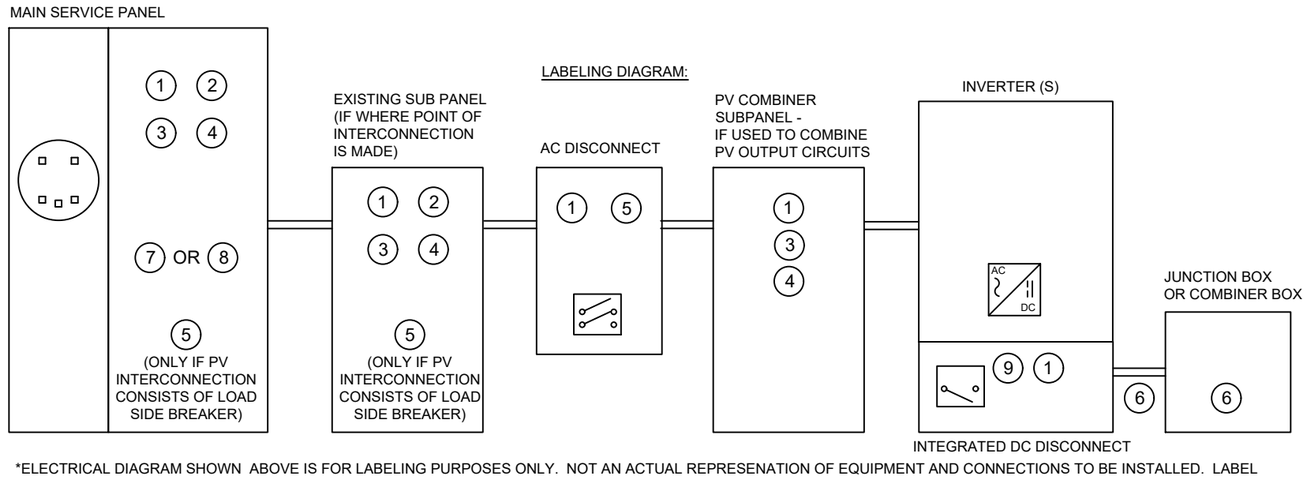


LABEL 8
FOR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(b)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 9
SIGN LOCATED AT RAPID SHUT DOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

LABELING DIAGRAM:



*ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ON THE ELECTRICAL DIAGRAM PAGE.

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Jim Wagnitz
1222 Riverton Dr
Mukwonago, WI 53149
AC SYSTEM SIZE: 4.384 kW AC
DC SYSTEM SIZE: 5.4 kW DC
Lat, 42.8799557
Long, -88.3122945
(15) Silfab SIL-360 NX mono PERC PV MODULES
(8) AP Systems YC600 INVERTER(S)

We Energies

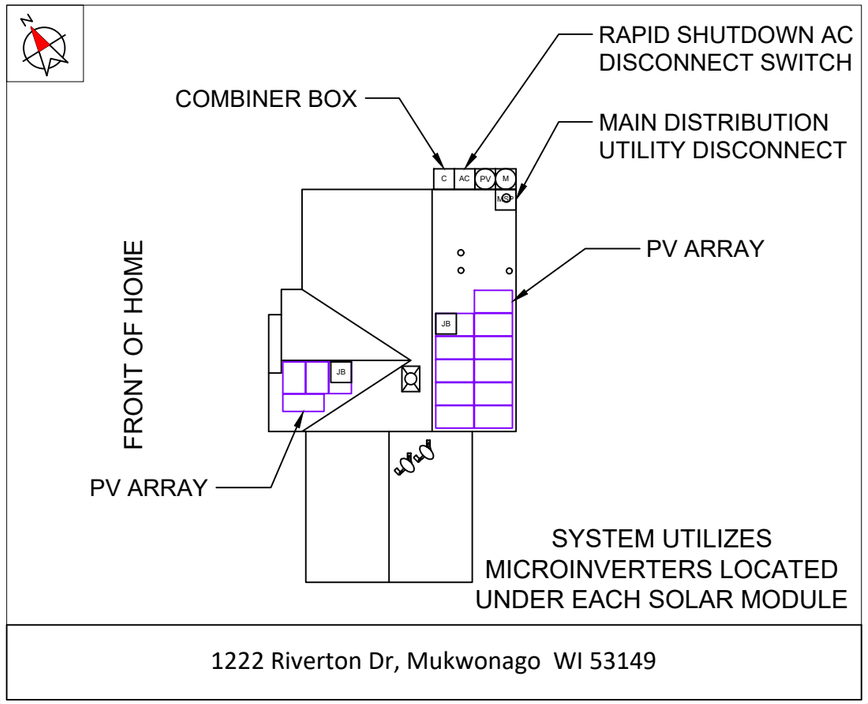
DRAWN BY: SoloCAD

DATE:
December 15, 2021

LABELS - PV06

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:



1222 Riverton Dr, Mukwonago WI 53149

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

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We Energies

DRAWN BY: SoloCAD

DATE:
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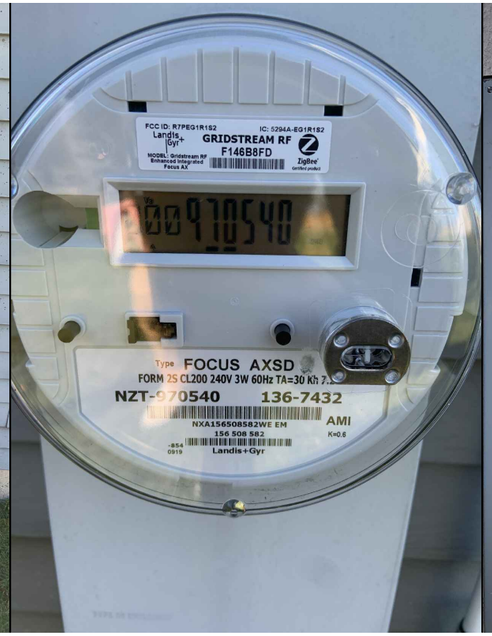
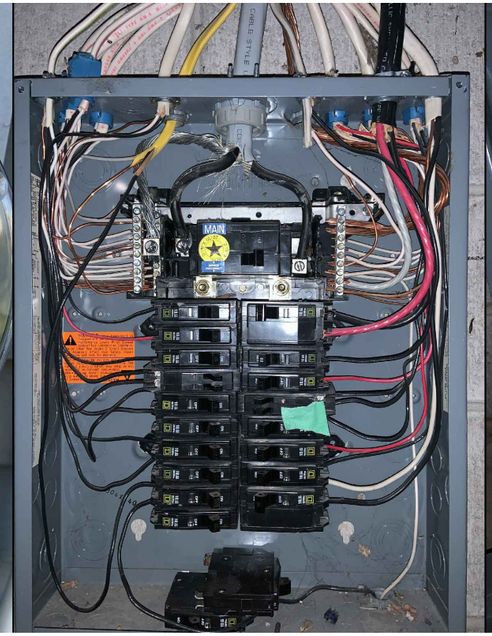
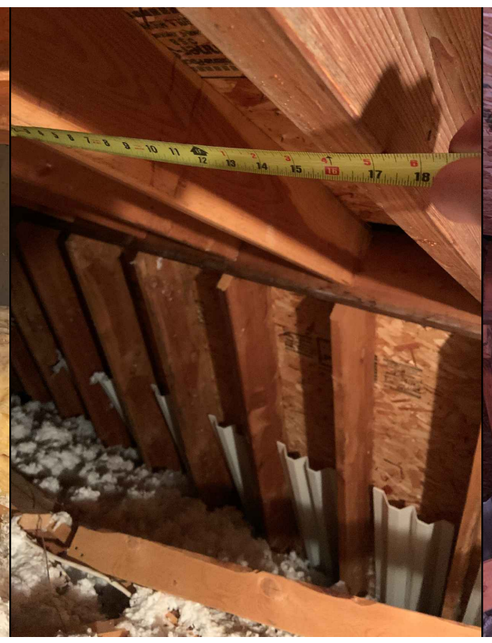
PLACARD - PV07

SITE PHOTOS:







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DATE:
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SITE PHOTOS - PV08

SITE PHOTOS:

Everlight Solar

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We Energies

DRAWN BY: SoloCAD

DATE:
December 15, 2021

FRONT/BACK VIEWS - PV08.1

SITE PHOTOS:

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(8) AP Systems YC600 INVERTER(S)

We Energies

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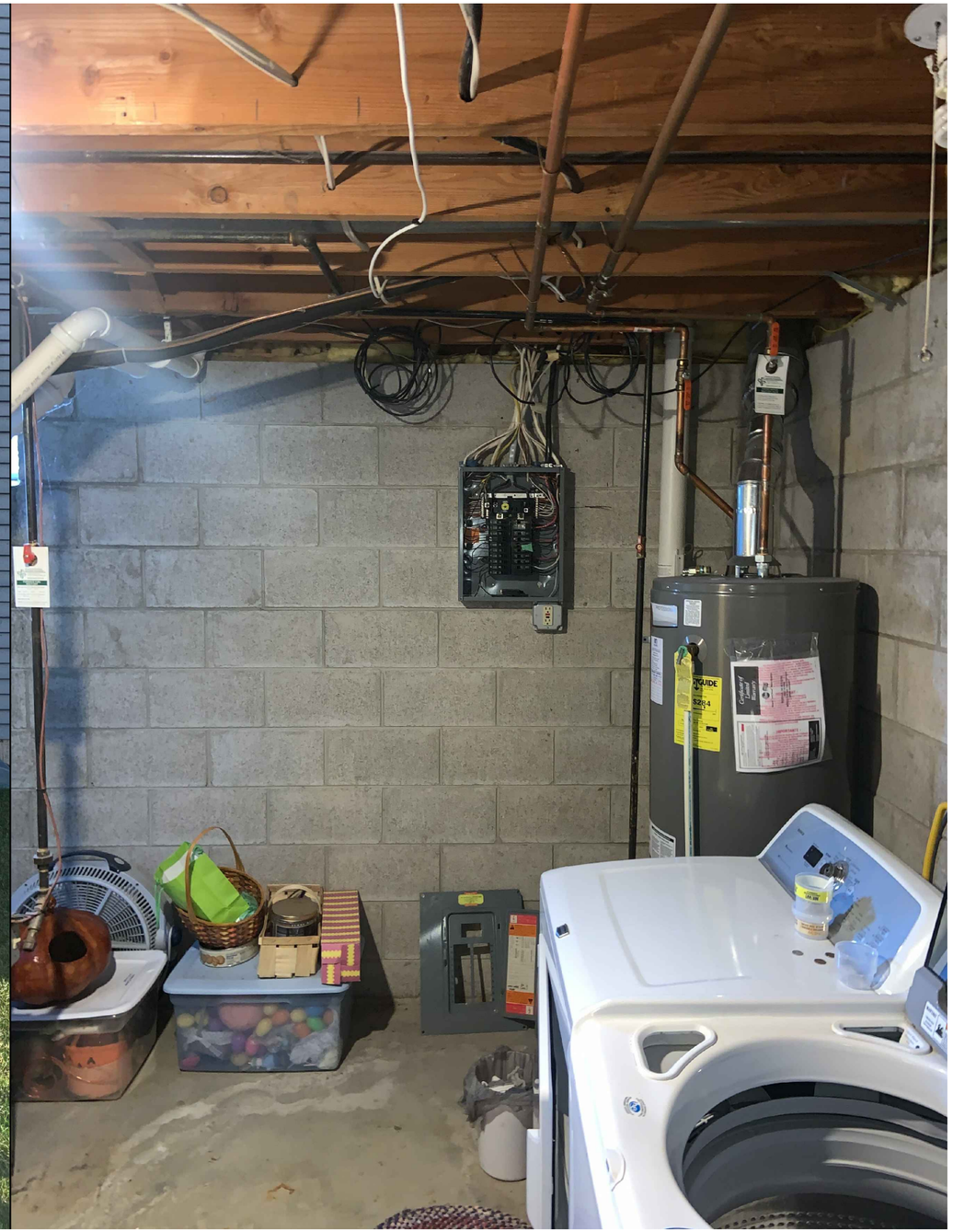
DATE:
December 15, 2021

SIDE VIEWS - PV08.2

SITE PHOTOS:



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We Energies

DRAWN BY: SoloCAD

DATE:
December 15, 2021

METER/OPEN MSP - PV08.3

SIL-360 NX

BAA ARRA · 25 YEAR PRODUCT WARRANTY · AUTOMATED MANUFACTURING · JUST-IN-TIME · DNV·GL TOP PERFORMER · TIER 1 BANKABLE $$$ · HIGH EFFICIENCY

Proud Partner of Everlight Solar

HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE

CE · Intertek · Intertek · IEC · Fraunhofer ISE

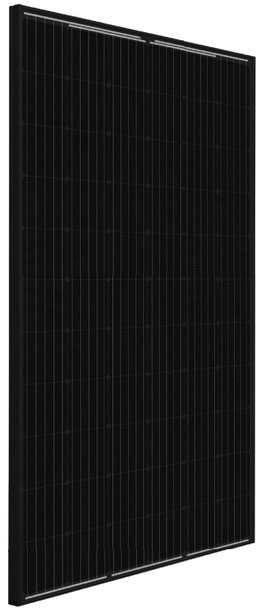
CHUBB*

* Chubb provides error and omission insurance to Silfab Solar Inc.

INDUSTRY LEADING WARRANTY
All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION
Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY
Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



BAA / ARRA COMPLIANT
Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

LIGHT AND DURABLE
Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS
Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC OPERATIONS
Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING
All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT
PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-360 NX mono PERC	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	360	258
Maximum power voltage (Vpmax)	V	36.6	33.1
Maximum power current (Ipmax)	A	9.9	7.8
Open circuit voltage (Voc)	V	44.5	40.4
Short circuit current (Isc)	A	10.5	8.2
Module efficiency	%	19.7	17.6
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m2 • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
• Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

Temperature Ratings	SIL-360 NX mono PERC
Temperature Coefficient Isc	+0.064 %/°C
Temperature Coefficient Voc	-0.28 %/°C
Temperature Coefficient Pmax	-0.36 %/°C
NOCT (± 2°C)	46 °C
Operating temperature	-40/+85 °C

Mechanical Properties and Components	SIL-360 NX mono PERC	
	Metric	Imperial
Module weight	20±0.2 kg	44±0.4 lbs
Dimensions (H x L x D)	1832 mm x 1000 mm x 38 mm	72.13 in x 39.4 in x 1.5 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5/112.8 lb/ft^2
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	66 - Si mono-PERC - 5 busbar 158.75 x 158.75 mm	66 - Si mono-PERC - 5 busbar 62.25 x 62.25 in
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating
Cables and connectors (refer to installation manual)	1200 mm ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated	

Warranties	SIL-360 NX mono PERC			
Module product workmanship warranty	25 years**			
Linear power performance guarantee	30 years			
	≥ 97.1% end 1st year	≥ 91.6% end 12th year	≥ 85.1% end 25th year	≥ 82.6% end 30th year

Certifications	SIL-360 NX mono PERC
Product	ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2***. IEC 61730-1/-2***, CSA C22.2#61730-1/-2, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2
Factory	ISO9001:2015

All states except California
- Modules Per Pallet: 26
- Pallets Per Truck: 34
- Modules Per Truck: 884

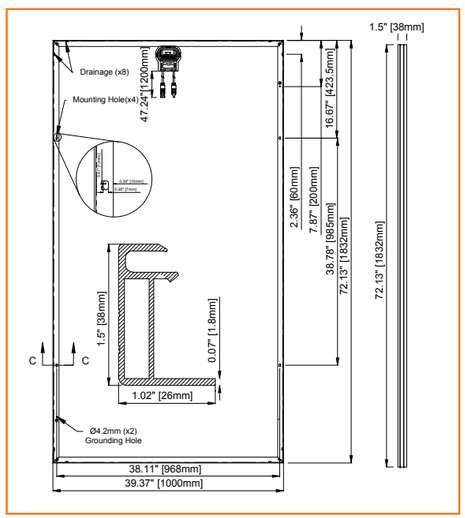
California
- Modules Per Pallet: 26
- Pallets Per Truck: 32
- Modules Per Truck: 832

*⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

***Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.



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Mississauga ON L5T 2Y3 Canada
Tel +1 905-255-2501 | Fax +1 905-696-0267
info@silfabsolar.com | www.silfabsolar.com

Silfab Solar Inc.
800 Cornwall Ave
Bellingham WA 98225 USA
Tel +1 360-569-4733

APsystems YC600 Microinverter Datasheet

INPUT DATA (DC)

Module Compatibility	60 & 72 Cell PV Modules
MPPT Voltage Range	22V-48V
Operation Voltage Range	16V-55V
Maximum Input Voltage	55V
Maximum Input Current	12A x 2
Maximum Total PV Array Short Circuit Current	15A

OUTPUT DATA (AC)

	240V	208V
Maximum Continuous Output Power	548VA	548VA
Peak Output Power	600VA	600VA
Nominal Output Voltage	240V	208V
Nominal Output Current	2.28A	2.63A
Nominal Output Frequency	60Hz	60Hz
Adjustable Output Voltage Range	211-264V	183-229V
Adjustable Output Frequency Range	59.3 - 60.5Hz	59.3 - 60.5Hz
Power Factor (Adjustable)	0.8 leading...0.8 lagging	0.8 leading...0.8 lagging
Total Harmonic Distortion	<3%	<3%
Maximum Units per Branch	7 (14 PV modules)	6 (12 PV modules)

EFFICIENCY

Peak Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	60mW

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Dimensions (WxHxD) inches	10.24" x 7.4" x 1.24"
Dimensions (WxHxD) mm	260mm x 188mm x 31.5mm
Weight	5.7 lbs (2.6kg)
AC BUS Maximum Current	20A
Connector Type	MC4 Type
Enclosure Rating	NEMA 6 (IP67)
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Wireless Zigbee
Transformer Design	High Frequency Transformers, Galvanic Isolation
Monitoring	Via EMA**Online Portal
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4, ICES-003
Safety & Grid Connection Compliance	UL1741, UL1741 SA (240V version only), CA Rule 21 (240V version only), IEEE1547, CSA C22.2 No.107.1-01, NEC 2017 690.12, 690.11

* Depending on the local regulations.
**APsystems online Energy Management Analysis (EMA) platform

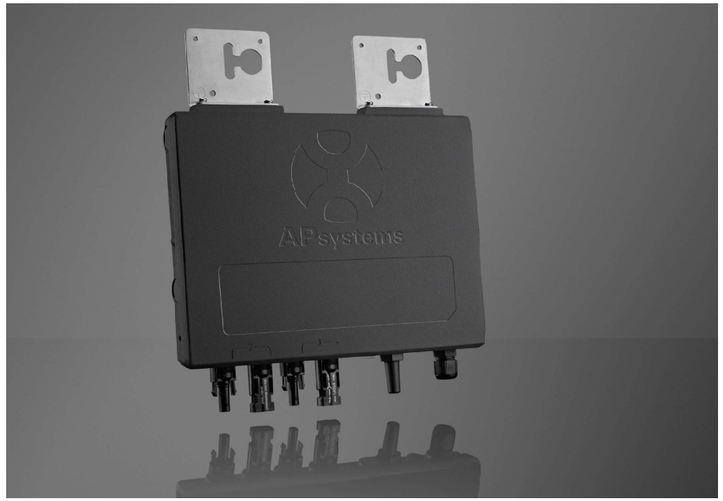
Specifications subject to change without notice – please ensure you are using the most recent version found at APsystems.com

600 Ericksen Ave NE, Suite 200, Seattle, WA 98110 | 844.666.7035 | **APsystems.com**

APsystems ALTENERGY POWER

APsystems ALTENERGY POWER

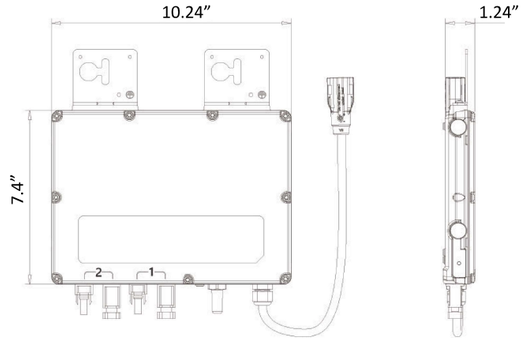
Leading the Industry in
Solar Microinverter Technology



YC600
Microinverter

- Dual-module microinverter with independent MPPT
- Utility-interactive with Reactive Power Control (RPC)
- CA Rule 21 compliant
- Continuous power of 274VA per channel, 300VA peak
- Accommodates modules from 250-365W+
- Wide MPPT voltage range (22V-48V)
- Meets NEC 2014/2017 690.12 Rapid Shutdown requirements
- ZigBee communication & free monitoring

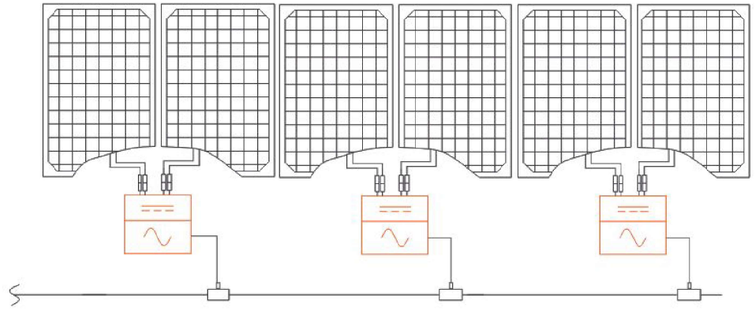
DIMENSIONS



With its groundbreaking design and features, the YC600 is the pinnacle of microinverter technology. A single-phase, smart grid-compliant microinverter, the YC600 serves two modules with dual, independent MPPT. Zigbee wireless communication over a mesh network offers faster data speeds than PLC and a wider MPPT voltage range results in a greater energy harvest for homeowners.

A true utility-interactive microinverter with Reactive Power Control (RPC) technology, the YC600 meets CA Rule 21 requirements and is inherently NEC 2014/2017 Rapid Shutdown compliant. The unit also builds on the successful APsystems line of multi-module microinverters, simplifying installation and reducing logistics costs.

WIRING SCHEMATIC

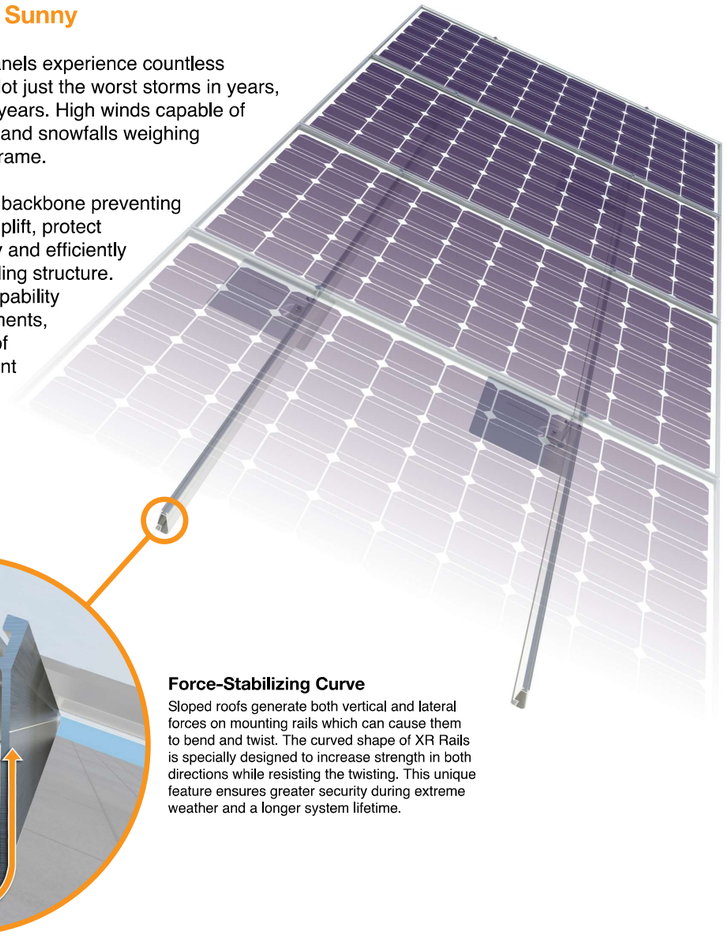


XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.

IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10

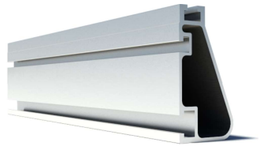
XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

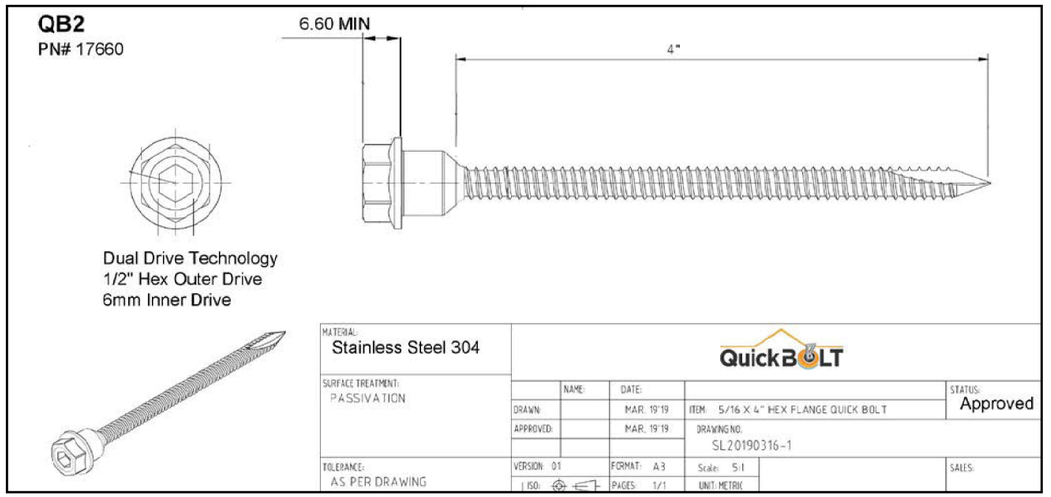
The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

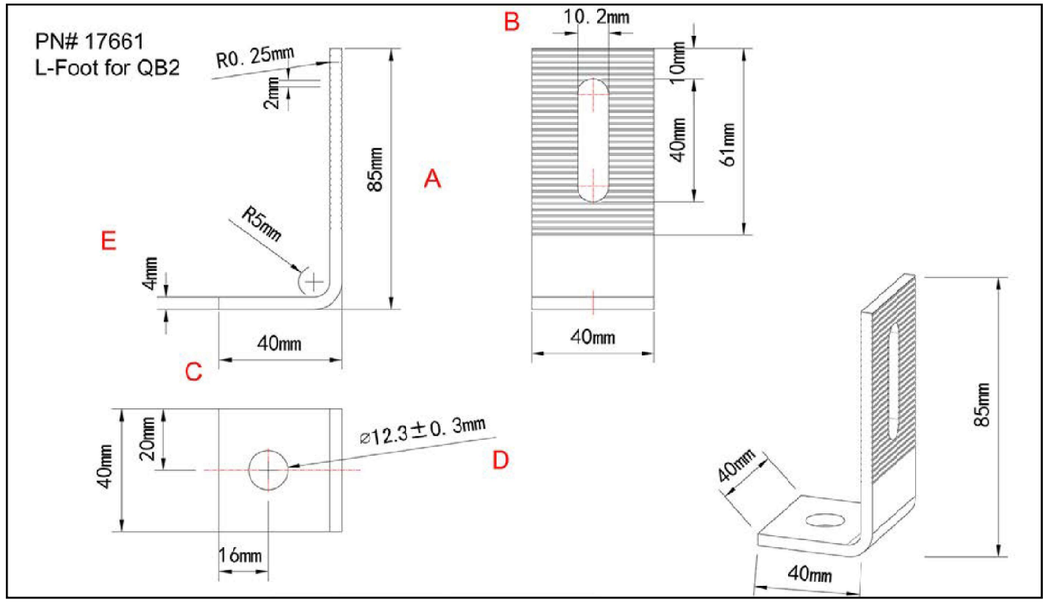
Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

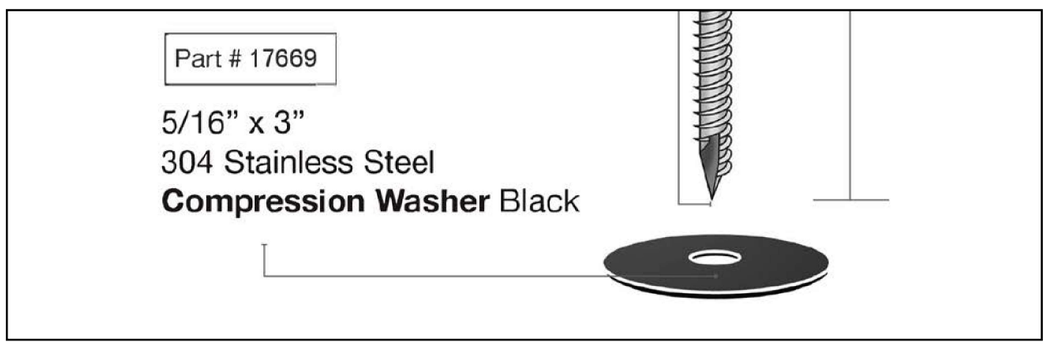
*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

SPEC SHEET

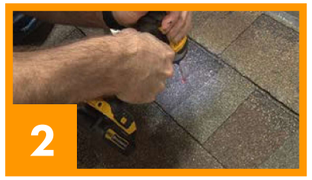
Part #	Box Quantity
17660	4” QB2 (25)
17662	3” Microflashing® (25); 4” QB2 (25); L-Foot (25)

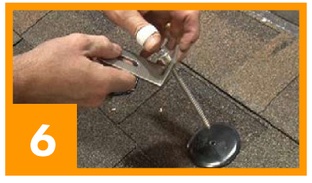






INSTALL INSTRUCTIONS





QB2 (17662)

RECOMMENDED MATERIALS

- Tools to locate and mark rafter
- Drill with a 15/64" drill bit
- MFG approved sealant (optional)
- 1/2" Nut Setter

INSTALLATION INSTRUCTIONS

1. Locate and mark the rafter
2. Predrill the hole
3. Optional: Fill the predrilled hole with MFG approved sealant
4. Optional: Place a ring of sealant around the bottom of the Microflashing® washer
5. Place the Microflashing®
6. Insert the Bolt into the L-Foot
7. Drive the Bolt until the Microflashing® is compressed

5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

BUILDING CODE LETTER

February 26, 2019

To whom this may concern,

QuickBOLT is committed to excellence. The parts tested are durable goods, meaning the material composition and detailed specifications of the parts do not change. Therefore, all stamps are current. Any part tested will have the same results no matter what year the tests are performed.

SolarRoofHook is the previous name of QuickBOLT. Any test result referencing SolarRoofHook is referring to a QuickBOLT product.

All our parts were tested by a third-party test facility, in possession of a current engineering license for the state where the tests were performed for the following.

1. Uplift test
2. Downward load test
3. Lateral Test – Asphalt Mounts, and Metal Mounts only
4. ASTM E2440 and ASTM E330 Waterproof Tests - QuickBOLT only

The following is an excerpt from:

CALIFORNIA BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
guide to Engineering & Land Surveying for City and County Officials
Page 12, Line 27

27. If the license has expired between the time the engineering documents were prepared and the time when the local agency's review is performed, do the documents need to be re-sealed by a licensee with a current license? (B&P Code §§ 6733, 6735, 6735.3, 6735.4)

As long as the license was current at the time the engineering documents were prepared, the documents do not need to be re-sealed prior to review by the local agency. However, any changes (updates or modifications) to the documents that are made following the review by the local agency would have to be prepared by a licensed engineer with a current license and those changes would have to be signed and sealed.

We trust the information provided will resolve any request for the test reports submitted to have a stamp from the current year.

Regards,

Rick Gentry
Executive Vice President

5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
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UL CERTIFICATION

CERTIFICATE OF COMPLIANCE

Certificate Number 20191115-E493748
Report Reference E493748-20170817
Issue Date 2019-NOVEMBER-15

Issued to: QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP
5830 Las Positas Rd
Livermore, CA 94551

This is to certify that representative samples of COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS
(See Adendum for Additional Information.)

Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.

Standard(s) for Safety: UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Program
UL LLC

5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

CERTIFICATE OF COMPLIANCE

Certificate Number 20191115-E493748
Report Reference E493748-20170817
Issue Date 2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16988 16990 16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520 17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543 17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559 17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585 17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612 17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628 17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649 17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686 17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711 17712 17717 17718 17759 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS 17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15894SS 15891SS 15987BSS 17660 17661 17662 17663

Ratings: Overcurrent Protection Rating – 25 Amps

Bruce Mahrenholz, Director North American Certification Program
UL LLC

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Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
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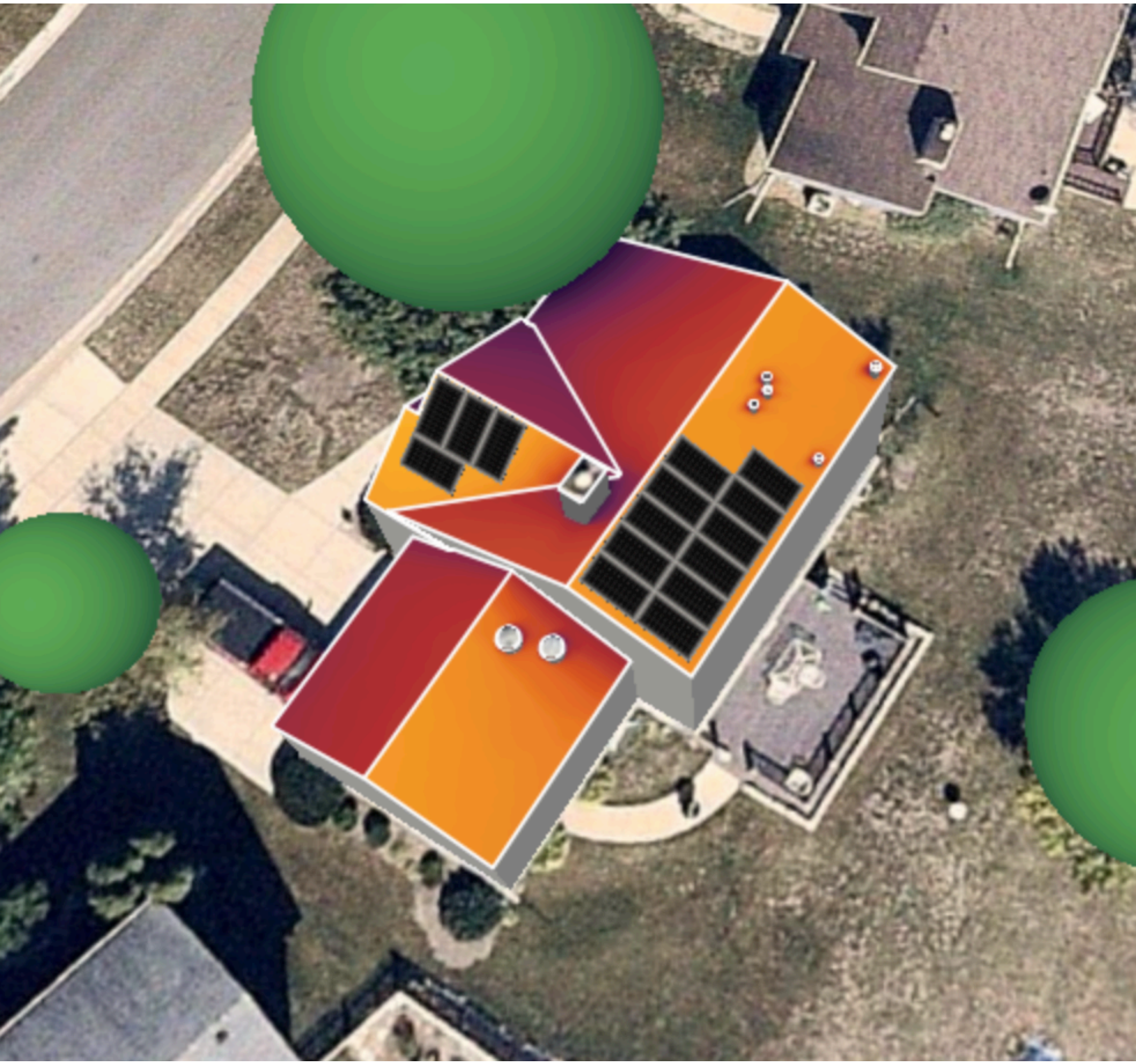


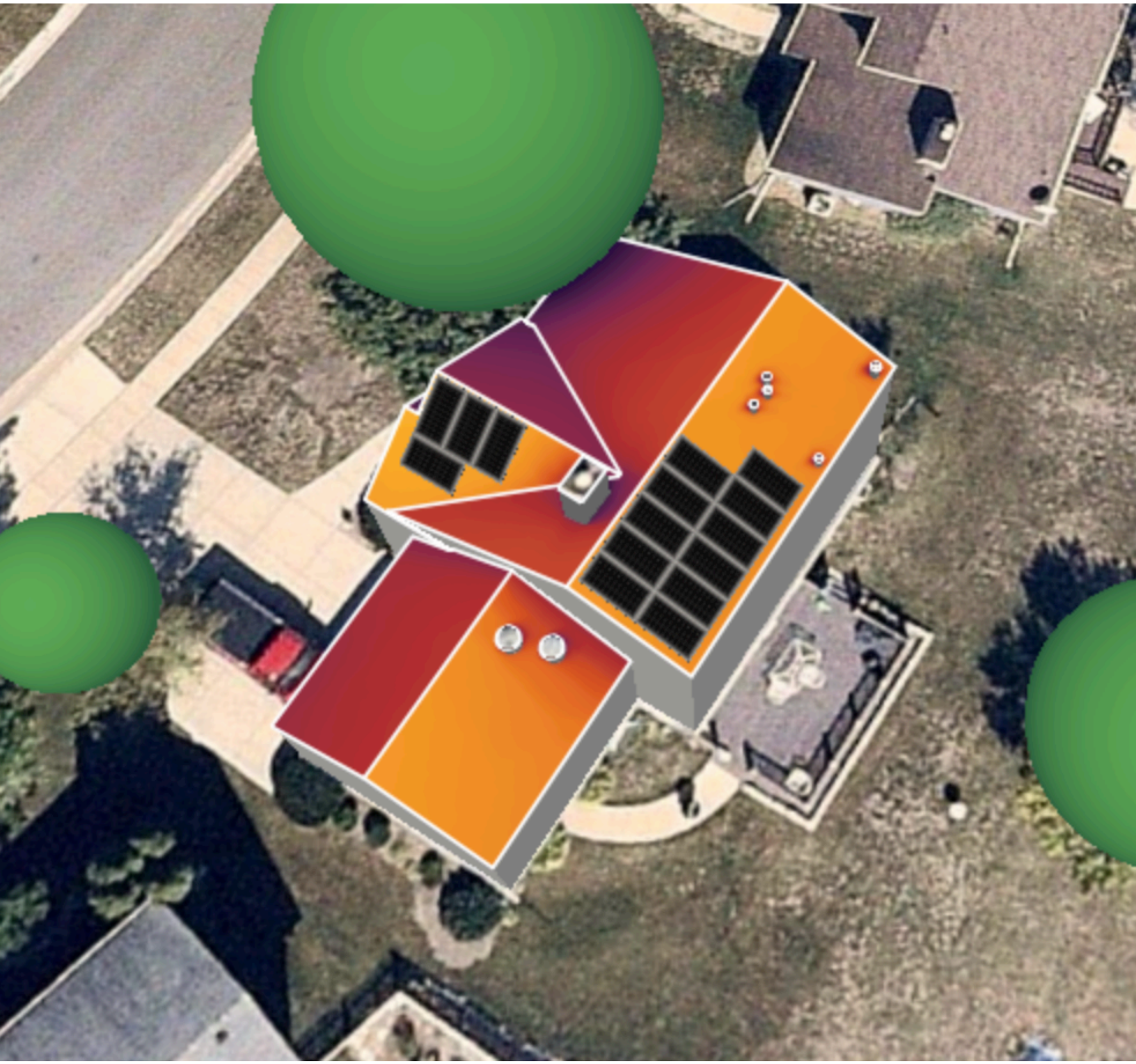

1220 Riverton Dr
Mukwonago, Wisconsin
Google
Street View - Aug 2012
1222 Ri
Mukwo

1222 Riverton Dr

1222 Riverton Dr, Mukwonago, WI 53149

Building


1220 Riverton Dr
Mukwonago, Wisconsin
Google
Street View - Aug 2012
1222 Ri
Mukwo



1222 Riverton Dr

1222 Riverton Dr, Mukwonago, WI 53149

Building

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

RESOLUTION NO. 2022-11

A RESOLUTION FOR SITE PLAN AND ARCHITECTURAL REVIEW FOR JAMES L WAGNITZ 1222 RIVERTON DRIVE, PARCEL MUKV 1965-052

WHEREAS, pursuant to Section 100-601, and 100-153 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval for an additional and building and site modifications, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by the JAMES L WAGNITZ

WHEREAS, the use is permitted within the R-2 Single Family Village Residential District in which the subject property is located, and

WHEREAS, the plan of operation and plans have been reviewed and recommended by the Village Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for structures at 1222 Riverton Dr, based upon the plan of operation and plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED this site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.

8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

NOW THEREFORE BE IT RESOLVED, that the Village of Mukwonago,

Approved and Adopted this 16th day of February 2022 by the Village Board of the Village of Mukwonago, Wisconsin.

APPROVED:

_____
Fred H. Winchowky, Village President

ATTESTATION:

_____
Diana Dykstra, MMC
Village Clerk-Treasurer

PLANNING COMMISSION

February 8, 2022 at 6:30pm
Mukwonago, WI

SITE PLAN AND ARCHITECTURAL REVIEW AND CONDITIONAL USE PERMIT

637 August Drive
Parcel Number: MUKV 1978-052

Case Summary

Parcel Data

Proposal:	Solar Panels
Applicant:	JEREMY STENGEL
Request:	Site Plan and Architectural Review
Staff Recommendation:	Approve with Conditions

Parcel Characteristics / Conditions

Acreage:	0.5171 acres
Current Use:	Single Family
Proposed Use:	Single Family
Reason for Request:	Solar Panels visible from public right of way
Land Use Classification:	Medium Lot Single Family II
Zoning Classification:	R-1 Single Family Community Residential District
Census Tract:	2039.01

Site Plan and Architectural Review Request

Architectural/ Site Review

Site Modifications	The applicant is proposing to add solar panels onto their existing single-family home. The municipal code requires planning commission approval prior to issuance of a building permit. The code also requires solar panels to be screen from street view. Section 100-102 (2) c.
Utilities	No modifications at this time.
Stormwater Management	No modifications at this time.
Wetlands	None
Signage	No modifications at this time.
Parking	No modifications at this time.
Landscaping	No modifications at this time.
Trash Enclosure	No modifications at this time.
Fencing	No modifications at this time.
Outdoor Lighting	No modifications at this time.
Misc. Performance Standards	None

Staff Review

Engineering	No concerns at this time
Public Works	No concerns at this time
Utilities	No concerns at this time
Police	No concerns at this time
Fire	No concerns at this time
Building Inspection	No concerns at this time
Planning	No concerns at this time

Recommendation

Site Plan and Architectural Review

Staff recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution.

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
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8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

Attachments

1. Maps 2. Plans 3. Resolution

Village of Mukwonago GIS

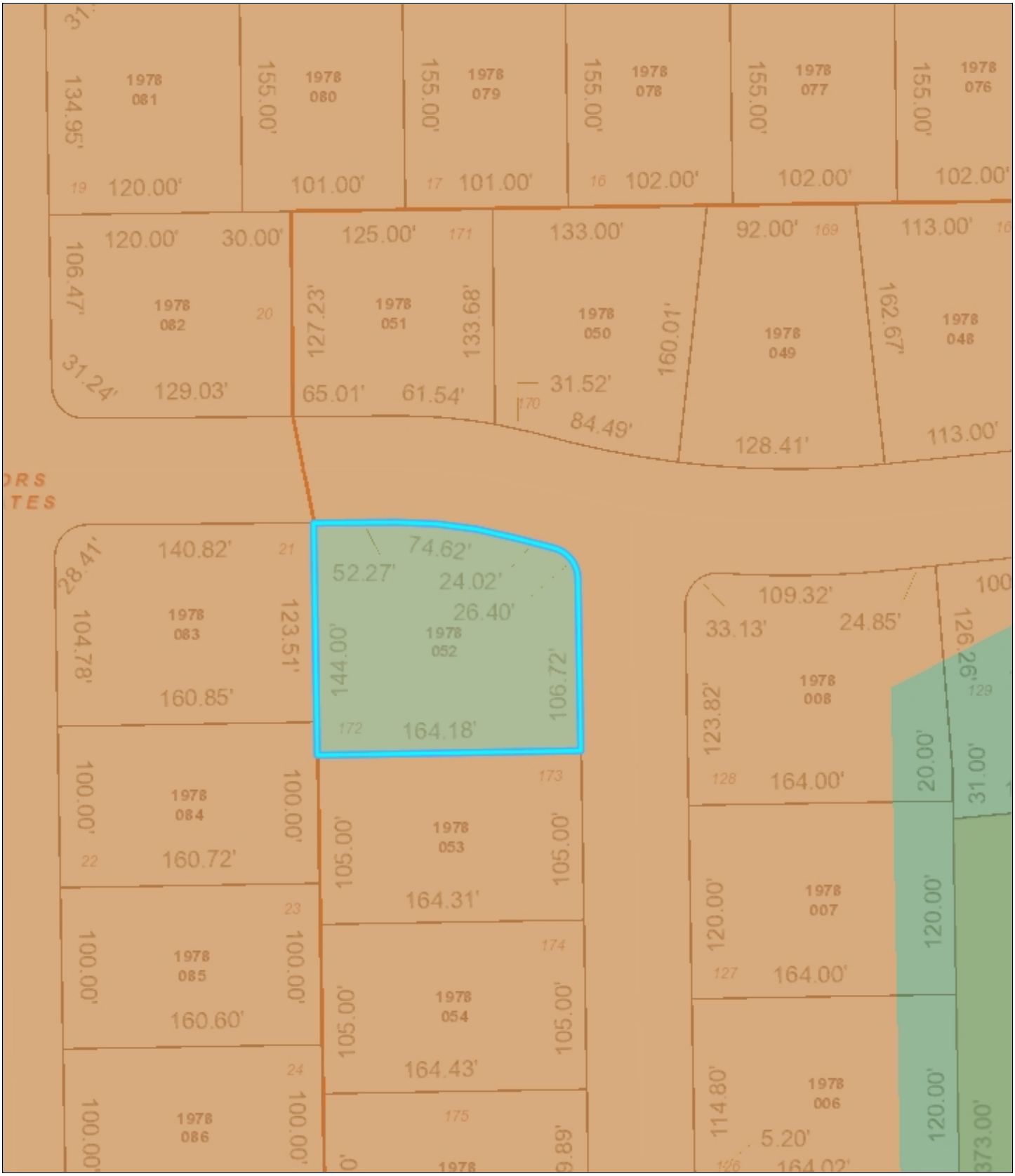
Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Land Use

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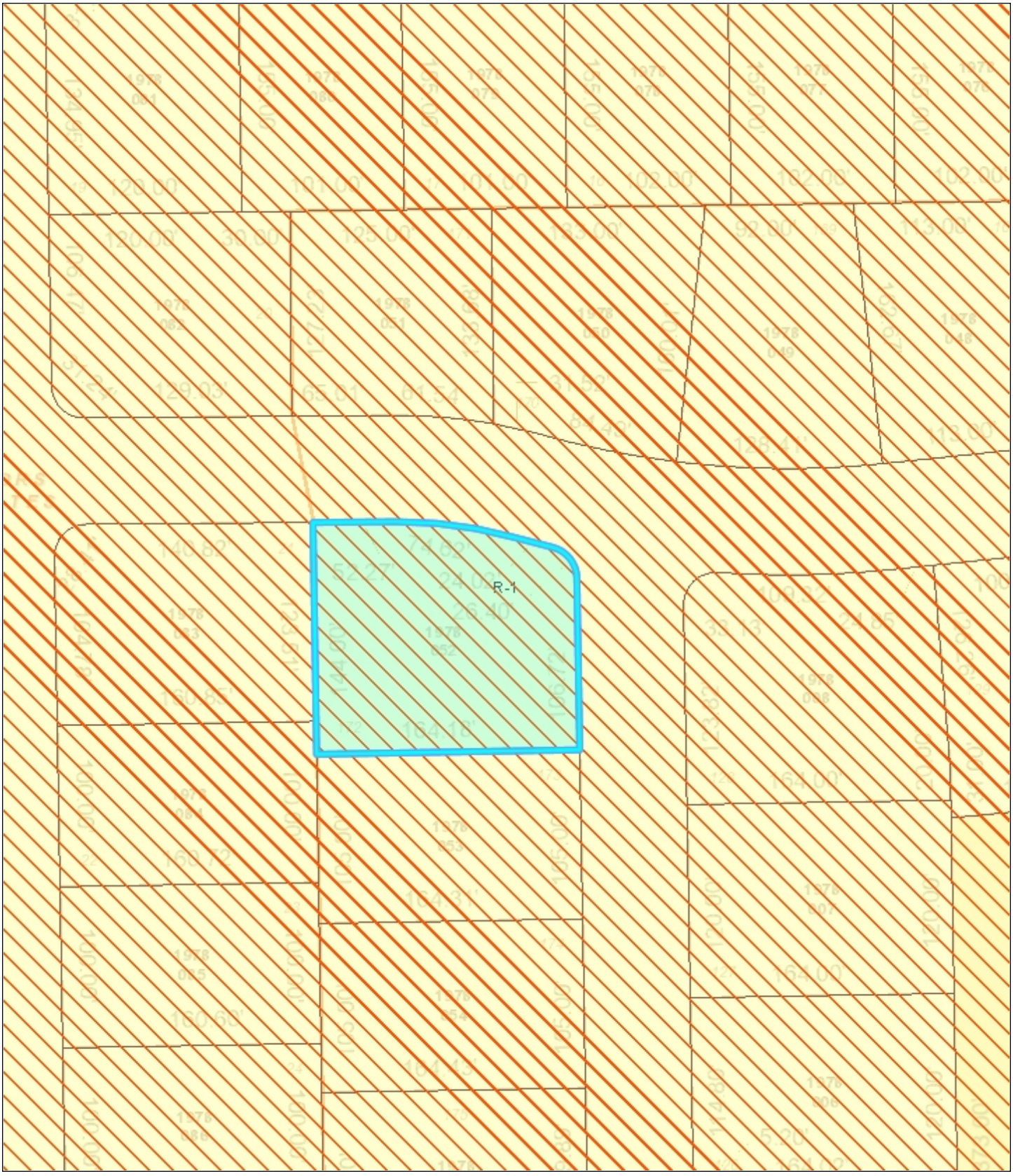
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Zoning

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SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

LUCENT ENGINEERING
Solar Professional Engineering Consulting 2021.11.17

Lucent Engineering, P.C.
814 E 1475 N
Lehi, UT 84043
m: (309) 645-0999
admin@lucenteng.co

December 2, 2021

Everlight Solar
PO Box 930550
Verona, WI 53593

RE: Engineering Services
Stengel Residence
637 Augusta Dr, Mukwonago, WI
8.77 kW System
Solo Job #1696718

To Whom It May Concern,

We have reviewed the following information regarding the solar panel installation for this project. Alterations to these documents or plans shall not be made without direct written consent of the Engineer of Record.

A. Assumptions from Field Observation provided by Everlight Solar

The following structural design regarding the proposed alterations have been prepared from these assumptions. The verification of the field observations is the responsibility of the contractor. **Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the sealed plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies.**

	Roof
Roof Finish :	Asphalt Shingle
Roof Underlayment :	OSB
Roof Profile :	Hip Gable
Roof Structural System :	Metal Plate Trusses
Truss Top Chord/Setup :	2 x 4 / Howe
Chord/Rafter Wood Grade :	Doug-Fir #1 or better
Truss/Rafter Spacing :	24" o.c.
Roof Slope :	35 deg
Max Top Chord/Rafter Span :	7.2 ft
Bearing Wall Type :	Convl Lt-Frame Constr
Foundation :	Permanent Concrete
Stories :	Single

B. Building Design Criteria

Code :	Wisc. UDC (ASCE 7-10)	Risk Category :	II
Roof Live Load :	20 psf (0 psf at panels)	Occupancy Class :	R-3
Min. Roof Snow Load :	30 psf	Roof Dead Load :	6.5 psf
Ult Wind Speed :	115 mph	PV Dead Load :	3 psf
Exposure Category :	C	Total Dead Load :	9.5 psf

C. Summary of Existing Structure Results

Roof
After review of the field observations and based on our calculations and in accordance with the applicable building codes and current industry standards, the existing roof structure supporting the proposed alterations consisting of the solar array has been determined to be:

- Adaquate to support the additional imposed loads. **No structural upgrades are required.**

D. Solar Panel Support Bracket Anchorage

1. Solar panels shall be designed, mounted, and installed in accordance with the most recent "Quickbolt Manual", which can be found on the Quickbolt website (http://quickbolt.com).
2. Manufacturer's Panel Bracket Connection to Roof Chord/Rafter Member:

Fastener :	(1) 5/16" Lag Screw per Bracket
NDS Withdrawl Value :	266 lbs/inch
Min. Thread Length and Pentration Depth :	2.5"

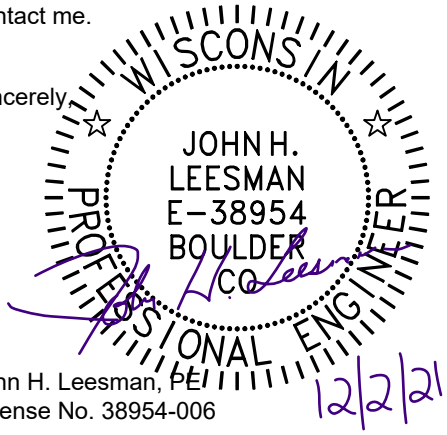
3. Considering the existing roof's slope, size, spacing, condition, and calculated loads, the panel bracket supports shall be placed no greater than 48 in. o/c.
4. Panel supports connections shall be staggered to distribute load to adjacent trusses.

E. Overall Summary

Based on the information supplied to us at the time of this report, on the evaluation of the existing structure, and solar array panel bracket connection, it is our opinion that the roof system will adequately support the additional loads imposed by the solar array. This evaluation conforms to Wisc. UDC and current industry standards.

Should you have any questions regarding this letter or if you require further information, do not hesitate to contact me.

Sincerely,



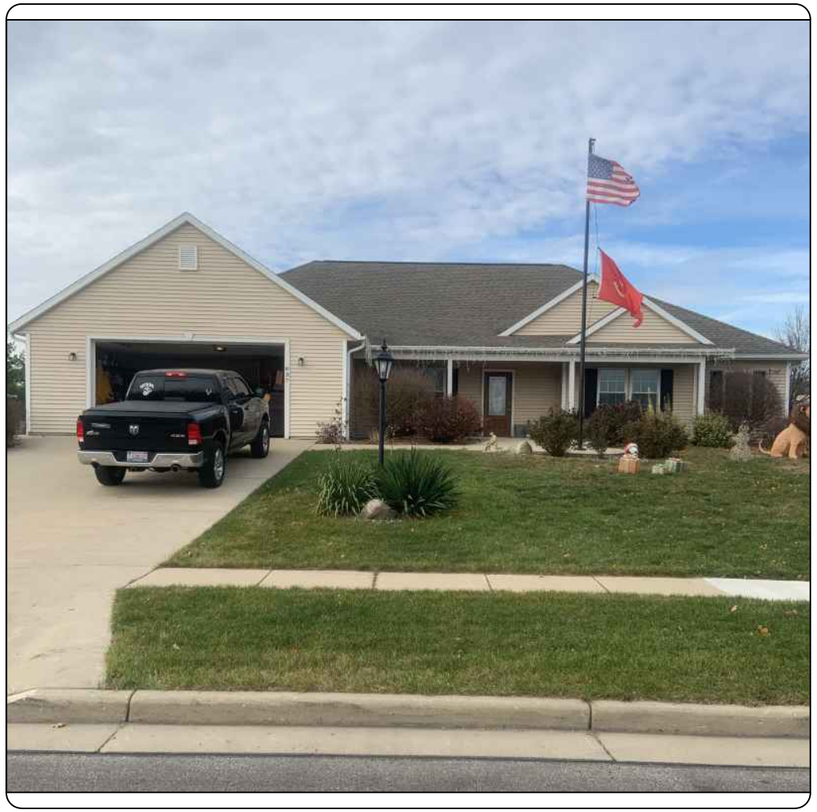
John H. Leesman, PE
License No. 38954-006

Limits of Scope of Work and Liablity

The existing structure is assumed to have been designed and constructed following appropriate codes at the time of erection and assumed to have appropriated permits. The calculations performed are only for the roof framing supporting the solar array installation referenced in the stamped plans and were completed according to generally recognized structural analysis standards and procedures, professional engineering, and design experience opinions and judgements. Existing deficiencies which are unknown or were not observed during the time the site observation are not included in this scope of work. All solar panel modules, racking, and mounting equipment shall be designed and installed per the manufacturer's approved installation specifications. The Engineer of Record and the engineering consulting firm assume no responsibility for misuse or improper installation. This analysis is not stamped for water leakage. Framing was determined on information in provided plans and/or photos, along with engineering judgement. Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies prior to starting construction. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation. The contactor shall also verify that there are no damage/deficiencies (i.e., dry rot, water damage, termite damage, framing member/connection damage, etc.) to framing that was not addressed in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any concerns prior to starting construction.

AERIAL VIEW:

STREET VIEW:



GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES.
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

EQUIPMENT:
AC SYSTEM SIZE: 8.768 kW AC
DC SYSTEM SIZE: 11.52 kW DC
(32) Silfab SIL-360 NX mono PERC PV MODULES
(16) AP Systems YC600 INVERTER(S)
RACKING: IronRidge - 48" O.C.

APPLICABLE GOVERNING CODES

2017 NEC/ Wisconsin SPS 316
Wisconsin Uniform Dwelling Code SPS 320-325
SPS 321 Construction Standards

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER CO
PROFESSIONAL ENGINEER
12/2/21

SITE SPECIFICATIONS

OCCUPANCY: R-3
ZONING: RESIDENTIAL

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

Jermey Stengel
637 Augusta Dr
Mukwonago, WI 53149
AC SYSTEM SIZE: 8.768 kW AC
DC SYSTEM SIZE: 11.52 kW DC
Lat, 42.86997587
Long, -88.3634216
(32) Silfab SIL-360 NX mono PERC PV MODULES
(16) AP Systems YC600 INVERTER(S)

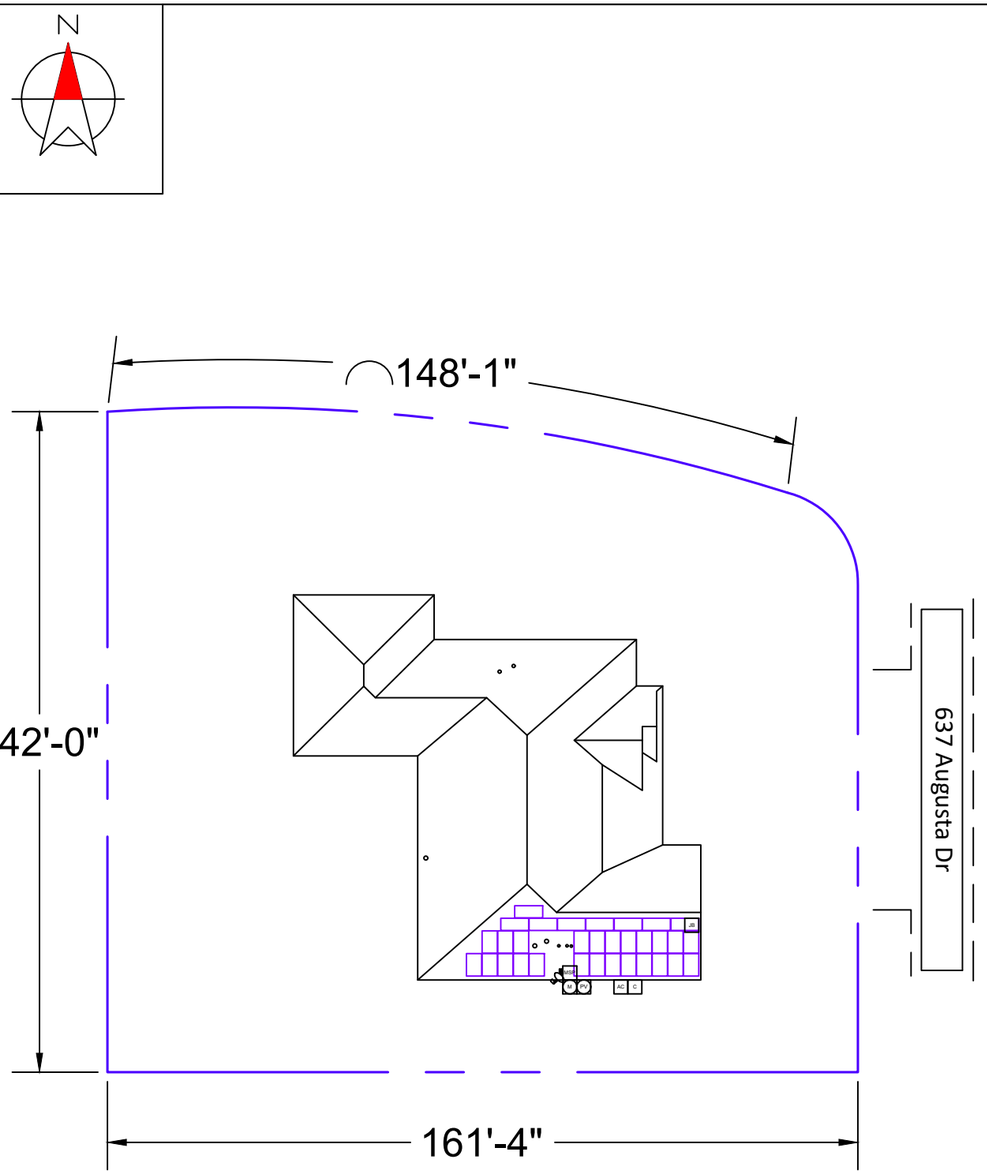
We Energies

SHEET INDEX:

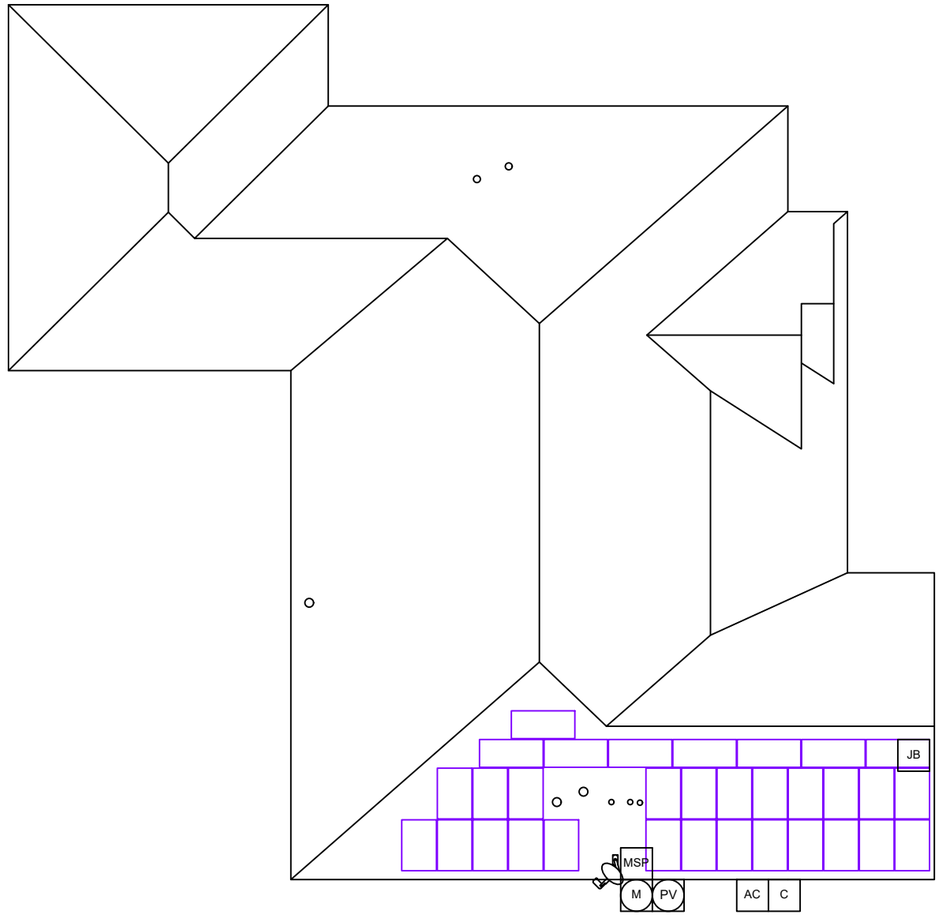
DRAWN BY: SoloCAD

DATE:
December 2, 2021

COVER PAGE - PV01



CLOSE UP OF HOME



MP1
PITCH: 35°
AZIMUTH: 180°

Everlight Solar

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PO Box 930550
Verona, WI 53593
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We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER
CO
PROFESSIONAL ENGINEER
12/2/21

EQUIPMENT LEGEND:

M	UTILITY METER	AC	VISIBLE, LOCKABLE, LABELED AC DISCONNECT	INV	INVERTER	SUB	SUB PANEL
MSP	MAIN SERVICE PANEL	PV	METER SOCKET (FOR UTILITY PV METER)	C	COMBINER BOX	LC	LOAD CENTER

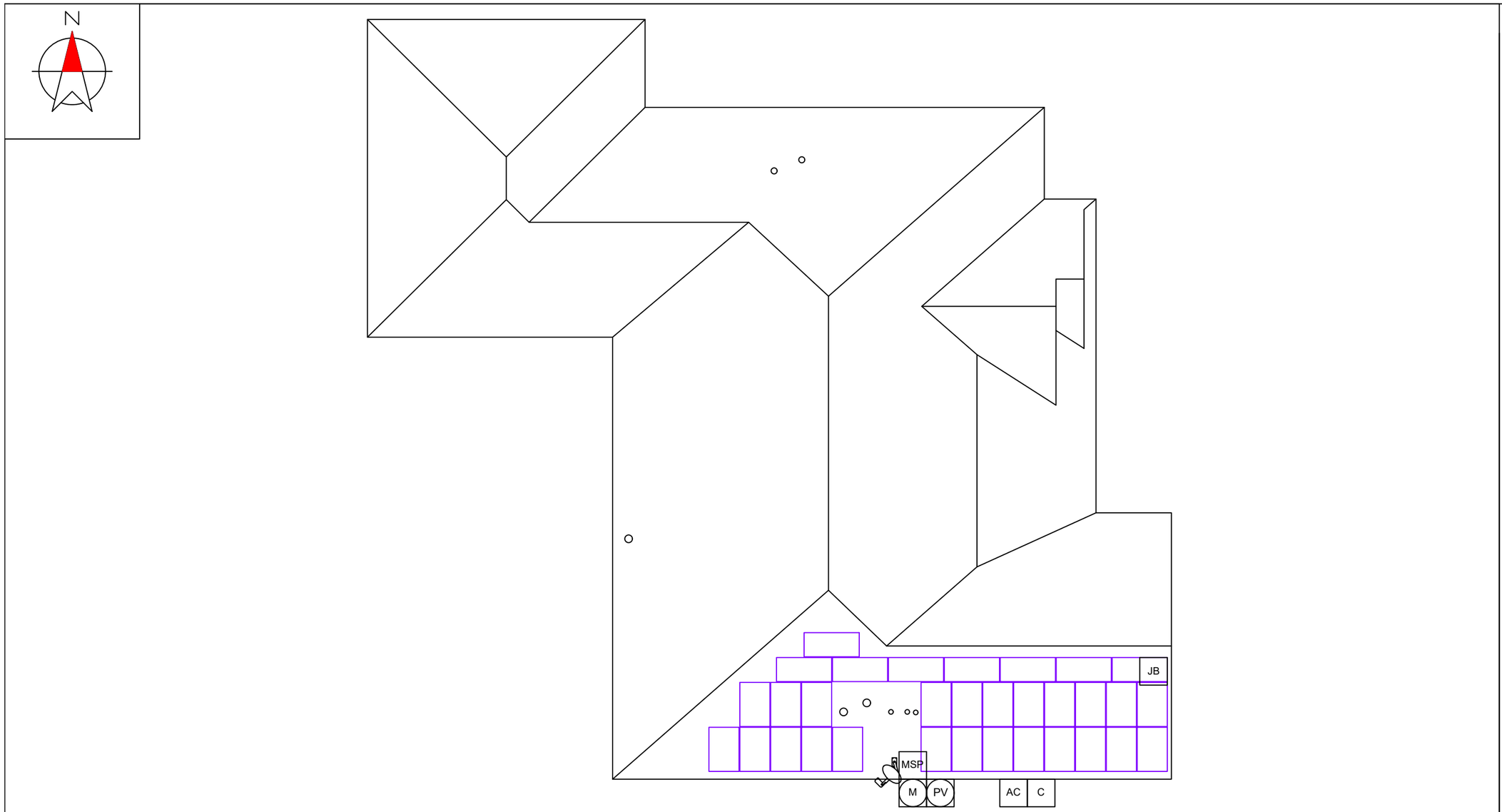
FIRE ACCESS PATHWAY (3' TYP)
PROPERTY LINE
BATT BATTERY(IES)

VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

DRAWN BY: SoloCAD

DATE: December 2, 2021

SITE PLAN - PV02



EQUIPMENT INFORMATION:	
RAIL MANUFACTURER	IronRidge
RAIL PART NUMBER	XR-10
ATTACHMENTS	Quickbolt 2 (QB2)
ATTACHMENT QTY	70
SPLICE QTY	12
MIDCLAMP QTY	52
ENDCLAMP QTY	24

ROOF INFO:	
ROOF TYPE	asphalt_shingle
ROOF FRAMING	manufactured_truss
RAFTER/TOP CHORD SIZE	2x4
RAFTER/TOP CHORD SPACING	24"
ATTACHMENT SPACING	48

PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
PV MODULE COUNT:	32
ARRAY AREA:	MODULE COUNT * 18.06ft² = 577.92
ROOF AREA:	4994 ft²
PERCENT OF ROOF COVERED:	12%
ARRAY WEIGHT:	MODULE COUNT * 50lbs = 1600
DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 22.86
POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.77 lbs/ft²

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

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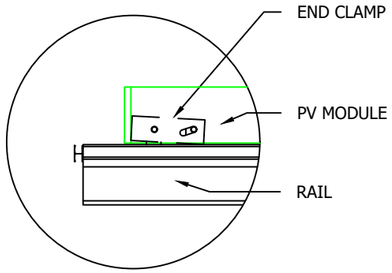
We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER
CO
PROFESSIONAL ENGINEER
12/2/21

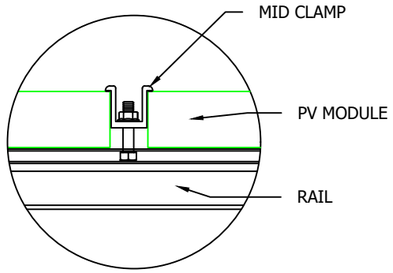
DRAWN BY: SoloCAD

DATE:
December 2, 2021

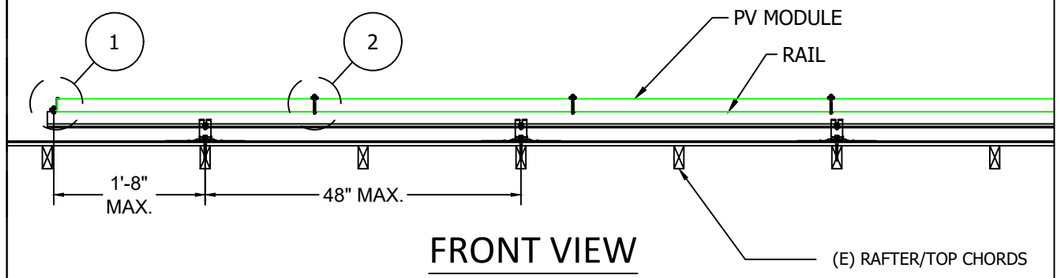
ROOF ATTACHMENTS - PV03



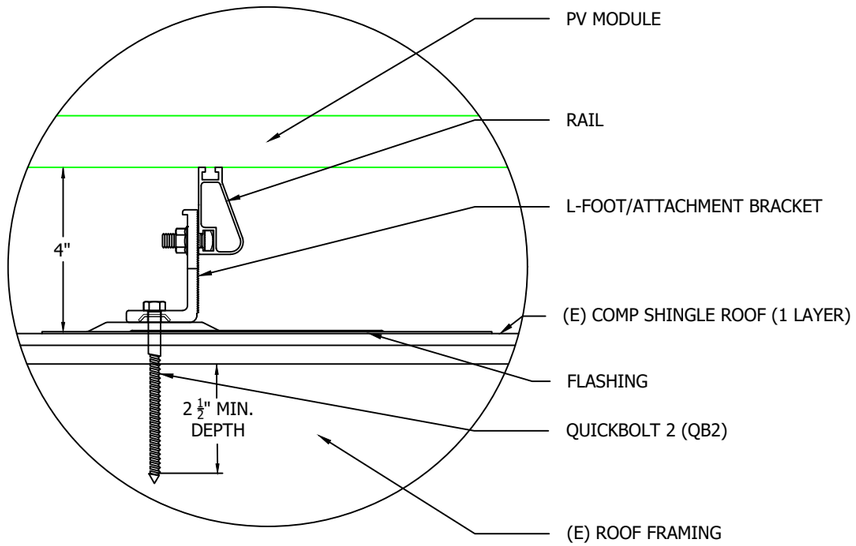
1 END CLAMP DETAILS



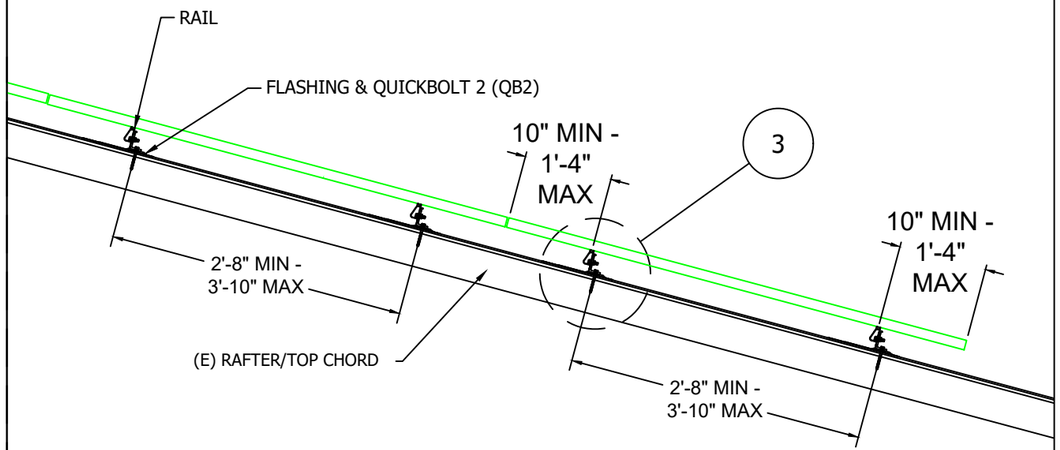
2 MID CLAMP DETAILS



FRONT VIEW



3 DETAIL, MOUNTING AND FLASHING



SIDE VIEW

EQUIPMENT INFORMATION:	
RAIL MANUFACTURER	IronRidge
RAIL PART NUMBER	XR-10
ATTACHMENTS	Quickbolt 2 (QB2)
ATTACHMENT QTY	70
SPLICE QTY	12
MIDCLAMP QTY	52
ENDCLAMP QTY	24

ROOF INFO:	
ROOF TYPE	asphalt_shingle
ROOF FRAMING	manufactured_truss
RAFTER/TOP CHORD SIZE	2x4
RAFTER/TOP CHORD SPACING	24"
ATTACHMENT SPACING	48

PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
PV MODULE COUNT:	32
ARRAY AREA:	MODULE COUNT * 18.06ft² = 577.92
ROOF AREA:	4994 ft²
PERCENT OF ROOF COVERED:	12%
ARRAY WEIGHT:	MODULE COUNT * 50lbs = 1600
DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 22.86
POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.77 lbs/ft²

Everlight Solar

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DC SYSTEM SIZE: 11.52 kW DC
Lat, 42.86997587
Long, -88.3634216
(32) Silfab SIL-360 NX mono PERC PV MODULES
(16) AP Systems YC600 INVERTER(S)

We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER CO
PROFESSIONAL ENGINEER
12/2/21

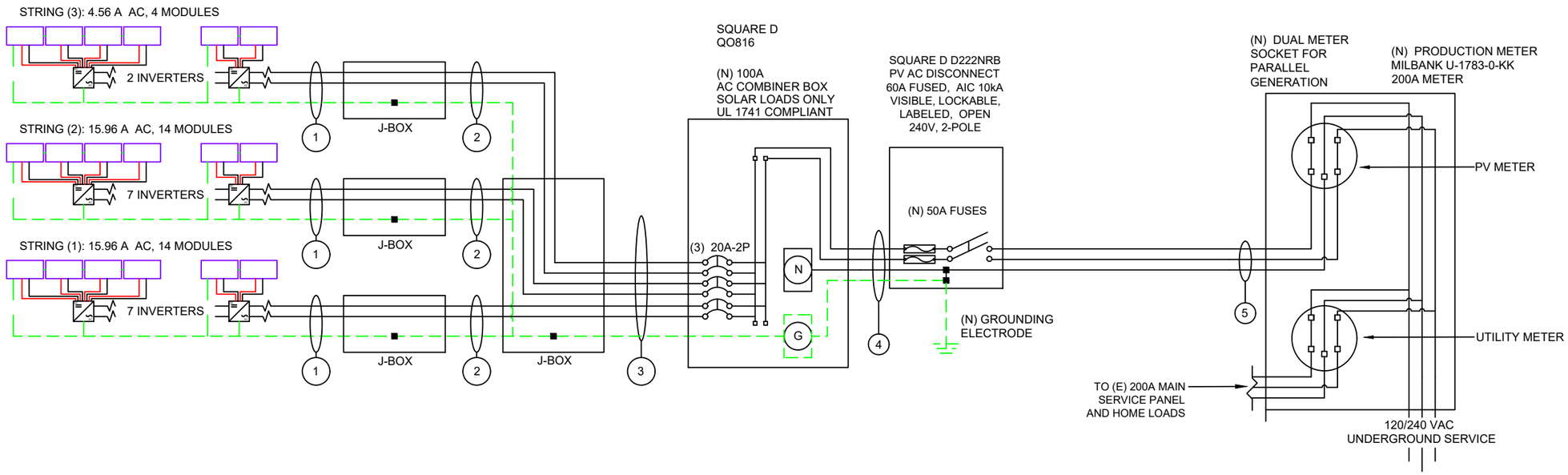
DRAWN BY: SoloCAD

DATE:
December 2, 2021

MOUNTING DETAIL - PV04

EQUIPMENT SCHEDULE:			
TYPE:	QTY:	DESCRIPTION:	RATING:
MODULES:	(32)	Silfab SIL-360 NX mono PERC	360 W
INVERTERS:	(16)	AP Systems YC600	548 W
AC DISCONNECT(S):	(1)	PV AC DISCONNECT, 240V, 2-POLE	60A

Conduit & Conductor Schedule									
TAG	WIRE GAUGE	DESCRIPTION	QTY	CONDUIT SIZE	CONDUCTOR RATING	# OF CONDUCTORS DERATE	TEMP. DERATE	CONDUCTOR RATING W/DERATES	CONDUIT FILL
1	12-2	TC-ER, THWN-2, COPPER (L 1, L 2)	(2)	N/A - FREE AIR	30A	N/A - FREE AIR	0.96	28.8A	N/A - FREE AIR
	6 AWG	BARE, COPPER (GROUND)	(1)						
2	10 AWG	THWN-2, or THHN, or 10/2 NM-B COPPER - (L 1, L 2)	(2)	3/4" EMT	40A	1	0.96	38.4A	11.9%
	10 AWG	THWN-2, or THHN, or 10/2 NM-B COPPER - (GROUND)	(1)						
3	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	(6)	3/4" EMT	40A	0.8	0.96	30.72A	27.8%
	10 AWG	THHN/THWN-2 - (GROUND)	(1)						
4	6 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	(3)	3/4" EMT	65A	1	0.96	62.4A	35.5%
	10 AWG	THWN-2 COPPER - (GROUND)	(1)						
5	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	(3)	3/4" EMT	65A	1	0.96	62.4A	28.61%
	NONE	N/A - NO GROUND WIRE PRESENT	(0)						



GROUNDING & GENERAL NOTES:

1. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
2. EGC TO BE SPLICED TO NEW OR EXISTING ELECTRODE
3. ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
4. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
5. AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

INTERCONNECTION NOTES

1. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9] & [NEC 230.95]
2. SUPPLY SIDE INTERCONNECTION ACCORDING TO [NEC705.12(A)]

DISCONNECT NOTES

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED “LINE SIDE” (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.
3. FUSED AC DISCONNECT TO BE USED.

VISIBLE, LOCKABLE,
LABELED AC DISCONNECT
LOCATED WITHIN 10'
OF UTILITY METER

Everlight Solar

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SITE INFORMATION

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Long, -88.3634216

(32) Silfab SIL-360 NX mono PERC PV MODULES

(16) AP Systems YC600 INVERTER(S)

We Energies

DRAWN BY: SoloCAD

DATE:
December 2, 2021

LINE DIAGRAM - PV05

WARNING

ELECTRIC SHOCK HAZARD

TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1
FOR PV DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION.
[NEC 690.13(B)]

WARNING

THIS EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

LABEL 2
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(b)]

WARNING

INVERTER OUTPUT CONNECTION

DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 3
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(c)]

WARNING

DUAL POWER SUPPLY

SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 4
EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES [NEC 705.12(B)(3)]

PHOTOVOLTAIC AC DISCONNECT

RATED AC OUTPUT CURRENT: 36
NOMINAL OPERATING AC VOLTAGE: 240

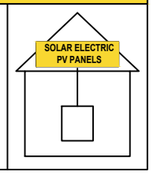
LABEL 5
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.
[NEC 690.54, NEC 690.13 (B)]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 6
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.
[NEC 690.31(G)(3&4)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

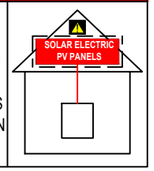
TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



LABEL 7
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS WITHIN THE ARRAY REMAIN ENERGIZED IN SUNLIGHT

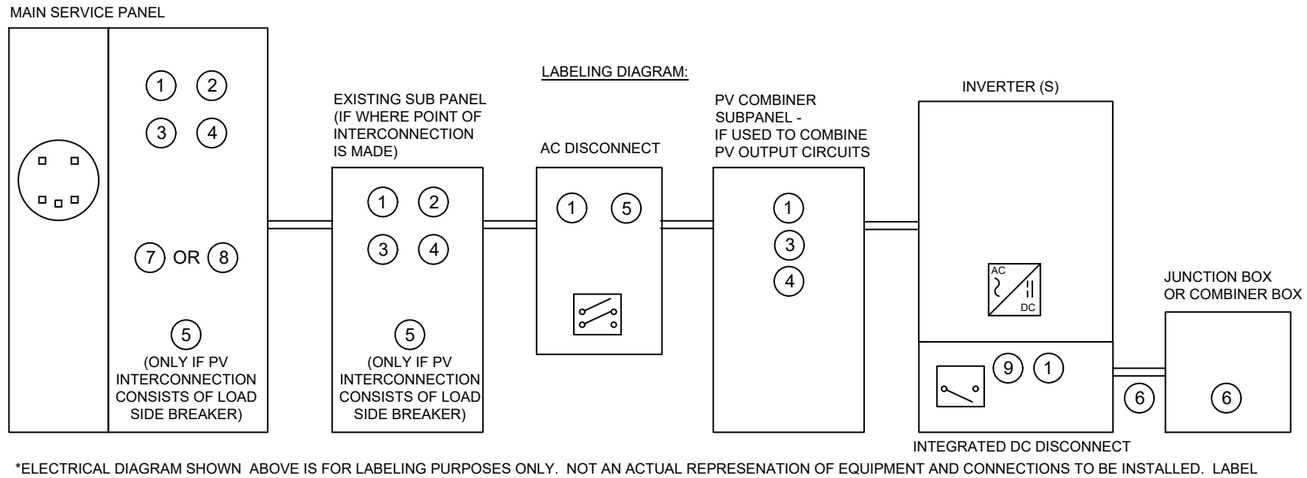


LABEL 8
FOR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(b)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 9
SIGN LOCATED AT RAPID SHUT DOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

LABELING DIAGRAM:



*ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ON THE ELECTRICAL DIAGRAM PAGE.

LABELING NOTES:

1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21(B)(3)]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

Everlight Solar

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We Energies

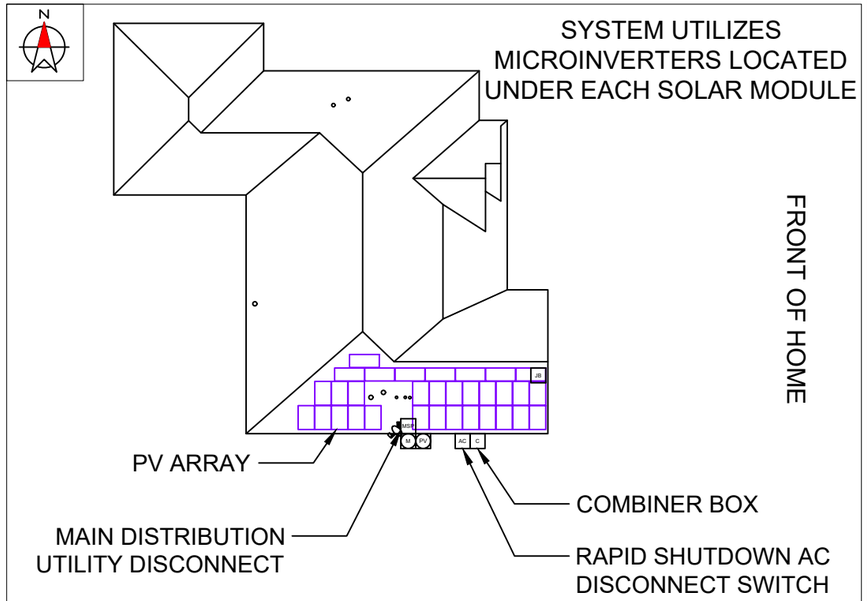
DRAWN BY: SoloCAD

DATE:
December 2, 2021

LABELS - PV06

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:



637 Augusta Dr, Mukwonago WI 53149

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

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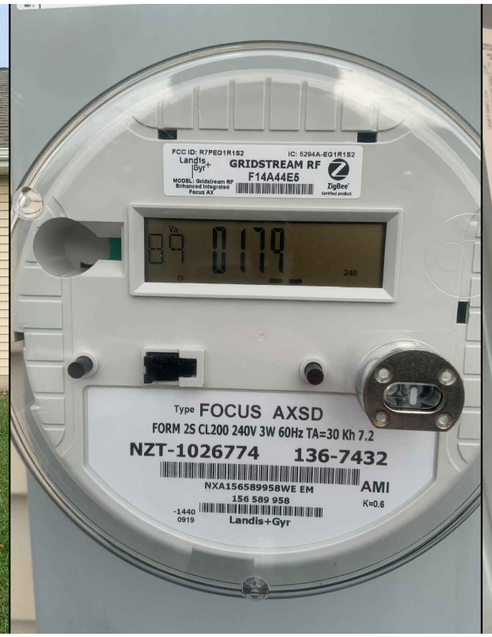
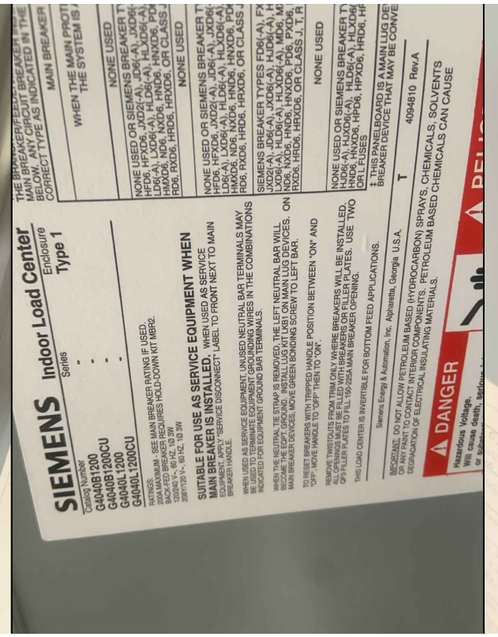
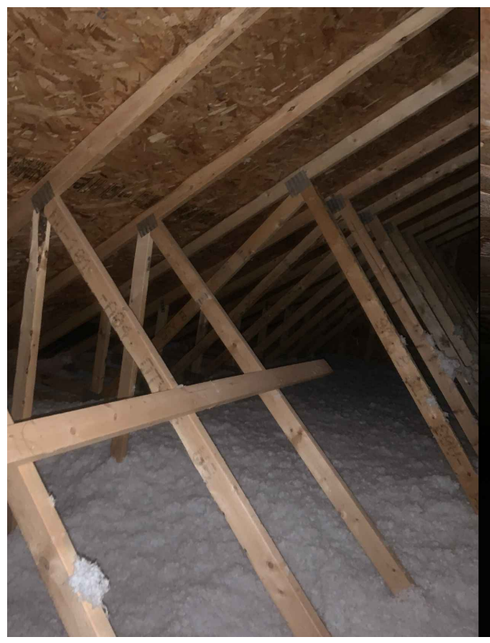
PLACARD - PV07

SITE PHOTOS:







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SITE PHOTOS - PV08

SITE PHOTOS:

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We Energies

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FRONT/BACK VIEWS - PV08.1

SITE PHOTOS:

Everlight Solar

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DATE:
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SIDE VIEWS - PV08.2

SITE PHOTOS:

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December 2, 2021

METER/OPEN MSP - PV08.3

SIL-360 NX

Proud Partner of Everlight Solar

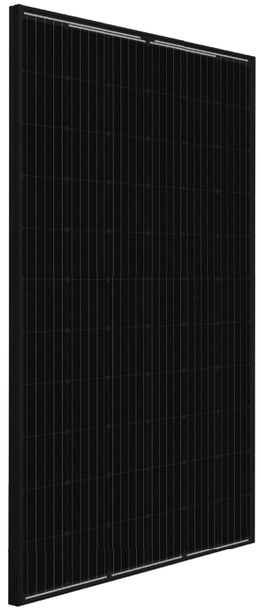
HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE

CHUBB*
* Chubb provides error and omission insurance to Silfab Solar Inc.

INDUSTRY LEADING WARRANTY
All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION
Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY
Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



BAA / ARRA COMPLIANT
Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

LIGHT AND DURABLE
Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS
Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC OPERATIONS
Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING
All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT
PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-360 NX mono PERC	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	360	258
Maximum power voltage (Vpmax)	V	36.6	33.1
Maximum power current (Ipmax)	A	9.9	7.8
Open circuit voltage (Voc)	V	44.5	40.4
Short circuit current (Isc)	A	10.5	8.2
Module efficiency	%	19.7	17.6
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m2 • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
• Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

Temperature Ratings	SIL-360 NX mono PERC
Temperature Coefficient Isc	+0.064 %/°C
Temperature Coefficient Voc	-0.28 %/°C
Temperature Coefficient Pmax	-0.36 %/°C
NOCT (± 2°C)	46 °C
Operating temperature	-40/+85 °C

Mechanical Properties and Components	SIL-360 NX mono PERC	
	Metric	Imperial
Module weight	20±0.2 kg	44±0.4 lbs
Dimensions (H x L x D)	1832 mm x 1000 mm x 38 mm	72.13 in x 39.4 in x 1.5 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5/112.8 lb/ft^2
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	66 - Si mono-PERC - 5 busbar 158.75 x 158.75 mm	66 - Si mono-PERC - 5 busbar 62.25 x 62.25 in
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating
Cables and connectors (refer to installation manual)	1200 mm ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated	

Warranties	SIL-360 NX mono PERC			
Module product workmanship warranty	25 years**			
Linear power performance guarantee	30 years			
	≥ 97.1% end 1st year	≥ 91.6% end 12th year	≥ 85.1% end 25th year	≥ 82.6% end 30th year

Certifications	SIL-360 NX mono PERC
Product	ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2***. IEC 61730-1/-2***, CSA C22.2#61730-1/-2, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2
Factory	ISO9001:2015

All states except California
- Modules Per Pallet: 26
- Pallets Per Truck: 34
- Modules Per Truck: 884

California
- Modules Per Pallet: 26
- Pallets Per Truck: 32
- Modules Per Truck: 832

*⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

***Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.

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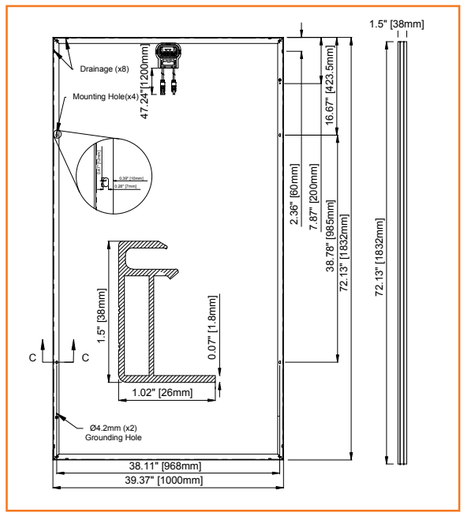


APsystems YC600 Microinverter Datasheet

INPUT DATA (DC)

Module Compatibility	60 & 72 Cell PV Modules
MPPT Voltage Range	22V-48V
Operation Voltage Range	16V-55V
Maximum Input Voltage	55V
Maximum Input Current	12A x 2
Maximum Total PV Array Short Circuit Current	15A

OUTPUT DATA (AC)

	240V	208V
Maximum Continuous Output Power	548VA	548VA
Peak Output Power	600VA	600VA
Nominal Output Voltage	240V	208V
Nominal Output Current	2.28A	2.63A
Nominal Output Frequency	60Hz	60Hz
Adjustable Output Voltage Range	211-264V	183-229V
Adjustable Output Frequency Range	59.3 - 60.5Hz	59.3 - 60.5Hz
Power Factor (Adjustable)	0.8 leading...0.8 lagging	0.8 leading...0.8 lagging
Total Harmonic Distortion	<3%	<3%
Maximum Units per Branch	7 (14 PV modules)	6 (12 PV modules)

EFFICIENCY

Peak Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	60mW

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Dimensions (WxHxD) inches	10.24" x 7.4" x 1.24"
Dimensions (WxHxD) mm	260mm x 188mm x 31.5mm
Weight	5.7 lbs (2.6kg)
AC BUS Maximum Current	20A
Connector Type	MC4 Type
Enclosure Rating	NEMA 6 (IP67)
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Wireless Zigbee
Transformer Design	High Frequency Transformers, Galvanic Isolation
Monitoring	Via EMA**Online Portal
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4, ICES-003
Safety & Grid Connection Compliance	UL1741, UL1741 SA (240V version only), CA Rule 21 (240V version only), IEEE1547, CSA C22.2 No.107.1-01, NEC 2017 690.12, 690.11

* Depending on the local regulations.
**APsystems online Energy Management Analysis (EMA) platform

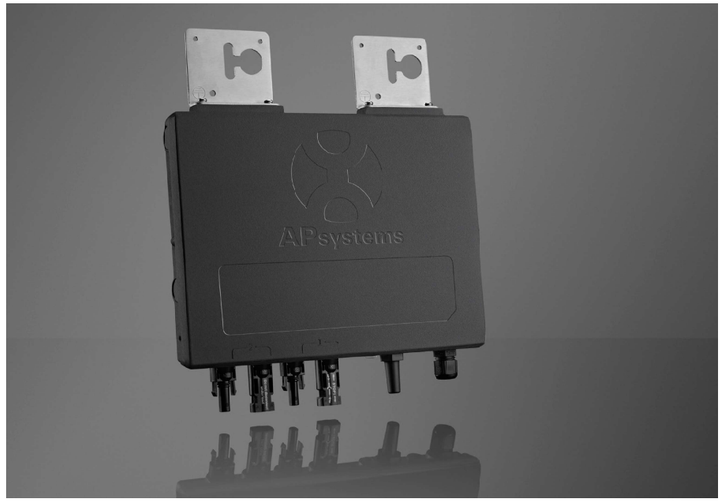
Specifications subject to change without notice – please ensure you are using the most recent version found at APsystems.com

600 Ericksen Ave NE, Suite 200, Seattle, WA 98110 | 844.666.7035 | APsystems.com

APsystems
ALTENERGY POWER

APsystems
ALTENERGY POWER

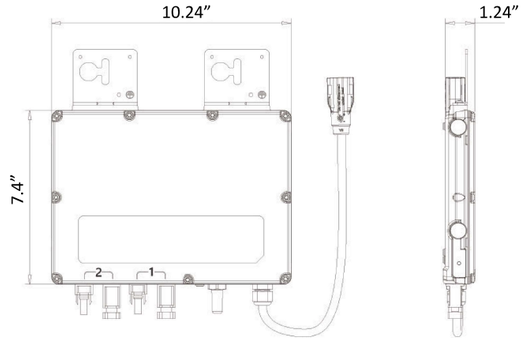
Leading the Industry in
Solar Microinverter Technology



YC600
Microinverter

- Dual-module microinverter with independent MPPT
- Utility-interactive with Reactive Power Control (RPC)
- CA Rule 21 compliant
- Continuous power of 274VA per channel, 300VA peak
- Accommodates modules from 250-365W+
- Wide MPPT voltage range (22V-48V)
- Meets NEC 2014/2017 690.12 Rapid Shutdown requirements
- ZigBee communication & free monitoring

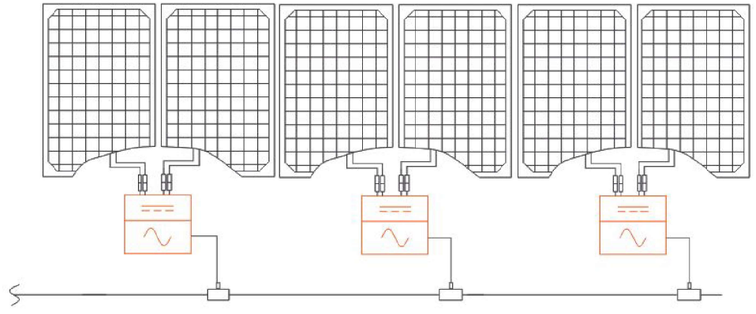
DIMENSIONS



With its groundbreaking design and features, the YC600 is the pinnacle of microinverter technology. A single-phase, smart grid-compliant microinverter, the YC600 serves two modules with dual, independent MPPT. Zigbee wireless communication over a mesh network offers faster data speeds than PLC and a wider MPPT voltage range results in a greater energy harvest for homeowners.

A true utility-interactive microinverter with Reactive Power Control (RPC) technology, the YC600 meets CA Rule 21 requirements and is inherently NEC 2014/2017 Rapid Shutdown compliant. The unit also builds on the successful APsystems line of multi-module microinverters, simplifying installation and reducing logistics costs.

WIRING SCHEMATIC



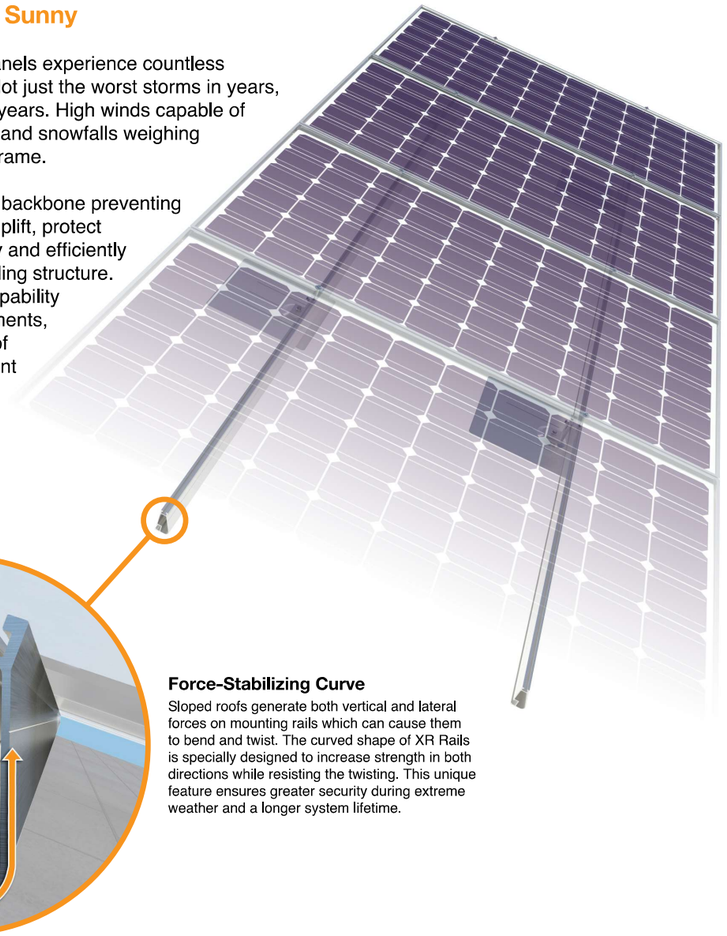
IRONRIDGE

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.

IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10

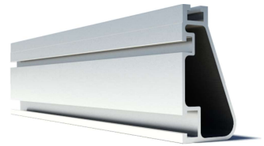
XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6’ spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10’ spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It’s built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12’ spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

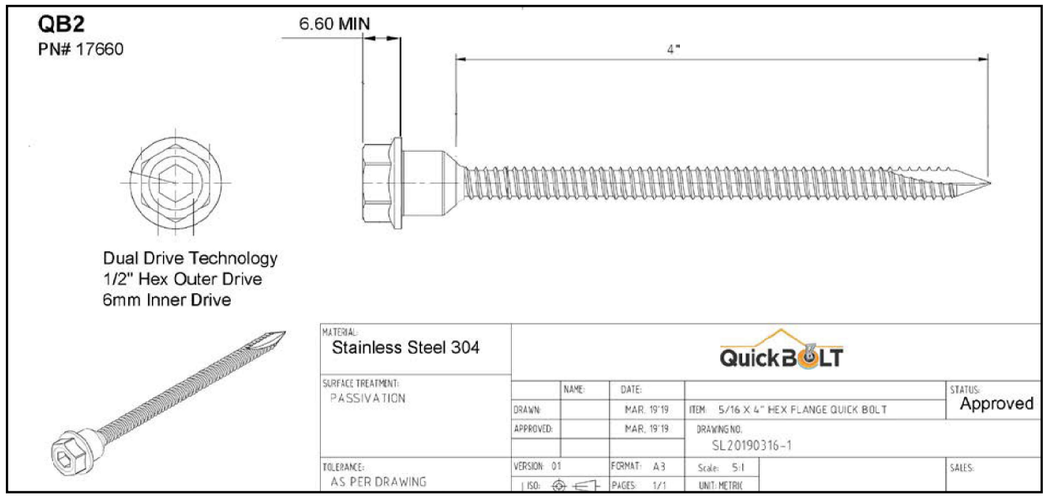
The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

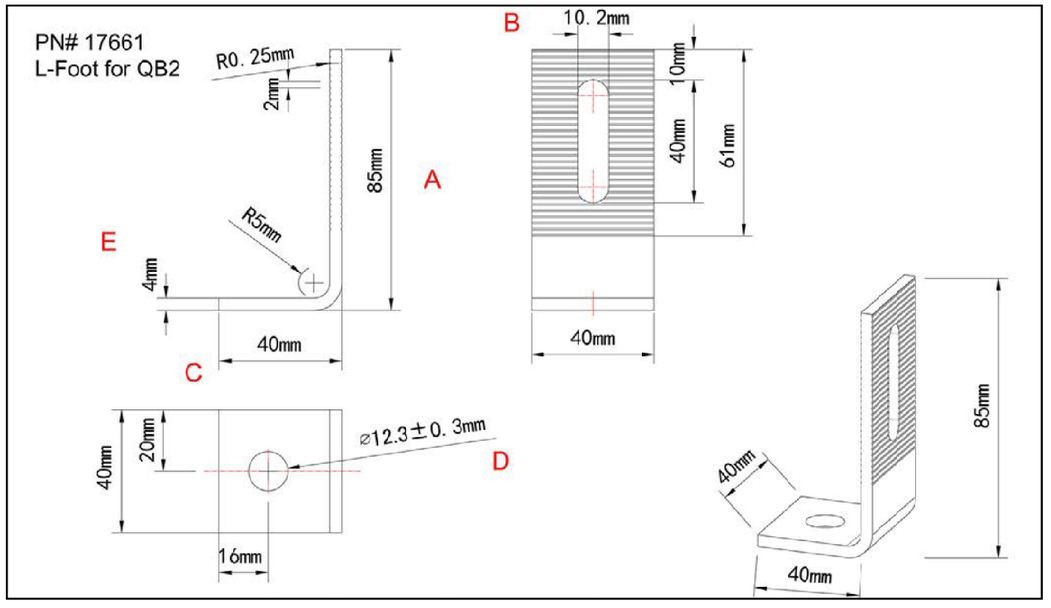
Load		Rail Span					
Snow (PSF)	Wind (MPH)	4’	5’ 4”	6’	8’	10’	12’
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

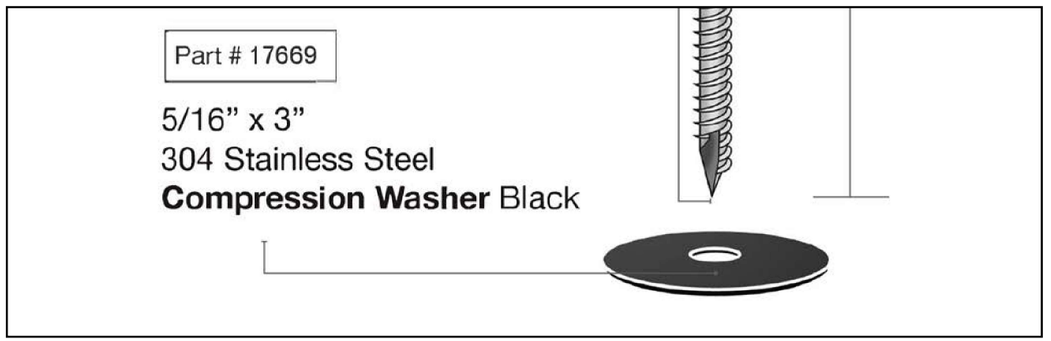
*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

SPEC SHEET

Part #	Box Quantity
17660	4” QB2 (25)
17662	3” Microflashing® (25); 4” QB2 (25); L-Foot (25)

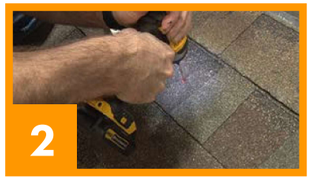






5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

INSTALL INSTRUCTIONS



QB2 (17662)

RECOMMENDED MATERIALS

- Tools to locate and mark rafter
- Drill with a 15/64" drill bit
- MFG approved sealant (optional)
- 1/2" Nut Setter

INSTALLATION INSTRUCTIONS

1. Locate and mark the rafter
2. Predrill the hole
3. Optional: Fill the predrilled hole with MFG approved sealant
4. Optional: Place a ring of sealant around the bottom of the Microflashing® washer
5. Place the Microflashing®
6. Insert the Bolt into the L-Foot
7. Drive the Bolt until the Microflashing® is compressed

5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
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QuickBOLT is a division of Quickscrews International Corp.

BUILDING CODE LETTER

February 26, 2019

To whom this may concern,

QuickBOLT is committed to excellence. The parts tested are durable goods, meaning the material composition and detailed specifications of the parts do not change. Therefore, all stamps are current. Any part tested will have the same results no matter what year the tests are performed.

SolarRoofHook is the previous name of QuickBOLT. Any test result referencing SolarRoofHook is referring to a QuickBOLT product.

All our parts were tested by a third-party test facility, in possession of a current engineering license for the state where the tests were performed for the following.

1. Uplift test
2. Downward load test
3. Lateral Test – Asphalt Mounts, and Metal Mounts only
4. ASTM E2440 and ASTM E330 Waterproof Tests - QuickBOLT only

The following is an excerpt from:

CALIFORNIA BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
guide to Engineering & Land Surveying for City and County Officials
Page 12, Line 27

27. If the license has expired between the time the engineering documents were prepared and the time when the local agency's review is performed, do the documents need to be re-sealed by a licensee with a current license? (B&P Code §§ 6733, 6735, 6735.3, 6735.4)

As long as the license was current at the time the engineering documents were prepared, the documents do not need to be re-sealed prior to review by the local agency. However, any changes (updates or modifications) to the documents that are made following the review by the local agency would have to be prepared by a licensed engineer with a current license and those changes would have to be signed and sealed.

We trust the information provided will resolve any request for the test reports submitted to have a stamp from the current year.

Regards,

Rick Gentry
Executive Vice President

5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

UL CERTIFICATION

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15
Issued to:	QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP 5830 Las Positas Rd Livermore, CA 94551
This is to certify that representative samples of	COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS (See Adendum for Additional Information.)
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.
Standard(s) for Safety:	UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16988 16990 16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520 17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543 17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559 17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585 17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612 17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628 17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649 17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686 17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711 17712 17717 17718 17759 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS 17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15894SS 15891SS 15987BSS 17660 17661 17662 17663

Ratings: Overcurrent Protection Rating – 25 Amps

Bruce Mahrenholz, Director North American Certification Program

UL LLC

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

RESOLUTION NO. 2022-10

A RESOLUTION FOR SITE PLAN AND ARCHITECTURAL REVIEW FOR JEREMY STENGEL 637 AUGUST DRIVE, PARCEL MUKV 1978-052

WHEREAS, pursuant to Section 100-601, and 100-153 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval for an additional and building and site modifications, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by the JEREMY STENGEL

WHEREAS, the use is permitted within the R-1 Single Family Community Residential District in which the subject property is located, and

WHEREAS, the plan of operation and plans have been reviewed and recommended by the Village Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for structures at 637 August Drive, based upon the plan of operation and plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED this site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.

8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

NOW THEREFORE BE IT RESOLVED, that the Village of Mukwonago,

Approved and Adopted this 16th day of February 2022 by the Village Board of the Village of Mukwonago, Wisconsin.

APPROVED:

_____
Fred H. Winchowky, Village President

ATTESTATION:

_____
Diana Dykstra, MMC
Village Clerk-Treasurer

PLANNING COMMISSION

February 8, 2022 at 6:30pm
Mukwonago, WI

SITE PLAN AND ARCHITECTURAL REVIEW AND CONDITIONAL USE PERMIT

512 Westlawn
Parcel Number: MUKV 1960-105

Case Summary

Parcel Data

Proposal:	Solar Panels
Applicant:	DAVID S SCHULTZ
Request:	Site Plan and Architectural Review
Staff Recommendation:	Approve with Conditions

Parcel Characteristics / Conditions

Acreage:	0.3452 acres
Current Use:	Single Family
Proposed Use:	Single Family
Reason for Request:	Solar Panels visible from public right of way
Land Use Classification:	Medium Lot Single Family II
Zoning Classification:	R-1 Single Family Community Residential District
Census Tract:	2039.01

Site Plan and Architectural Review Request

Architectural/ Site Review

Site Modifications	The applicant is proposing to add solar panels onto their existing single-family home. The municipal code requires planning commission approval prior to issuance of a building permit. The code also requires solar panels to be screen from street view. Section 100-102 (2) c.
Utilities	No modifications at this time.
Stormwater Management	No modifications at this time.
Wetlands	None
Signage	No modifications at this time.
Parking	No modifications at this time.
Landscaping	No modifications at this time.
Trash Enclosure	No modifications at this time.
Fencing	No modifications at this time.
Outdoor Lighting	No modifications at this time.
Misc. Performance Standards	None

Staff Review

Engineering	No concerns at this time
Public Works	No concerns at this time
Utilities	No concerns at this time
Police	No concerns at this time
Fire	No concerns at this time
Building Inspection	No concerns at this time
Planning	No concerns at this time

Recommendation

Site Plan and Architectural Review

Staff recommends the Planning Commission Approve a resolution for the Site Plan and Architectural Review, as set forth in the attached resolution.

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
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8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

Attachments

1. Maps 2. Plans 3. Resolution

Village of Mukwonago GIS

Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

Village of Mukwonago GIS

Land Use

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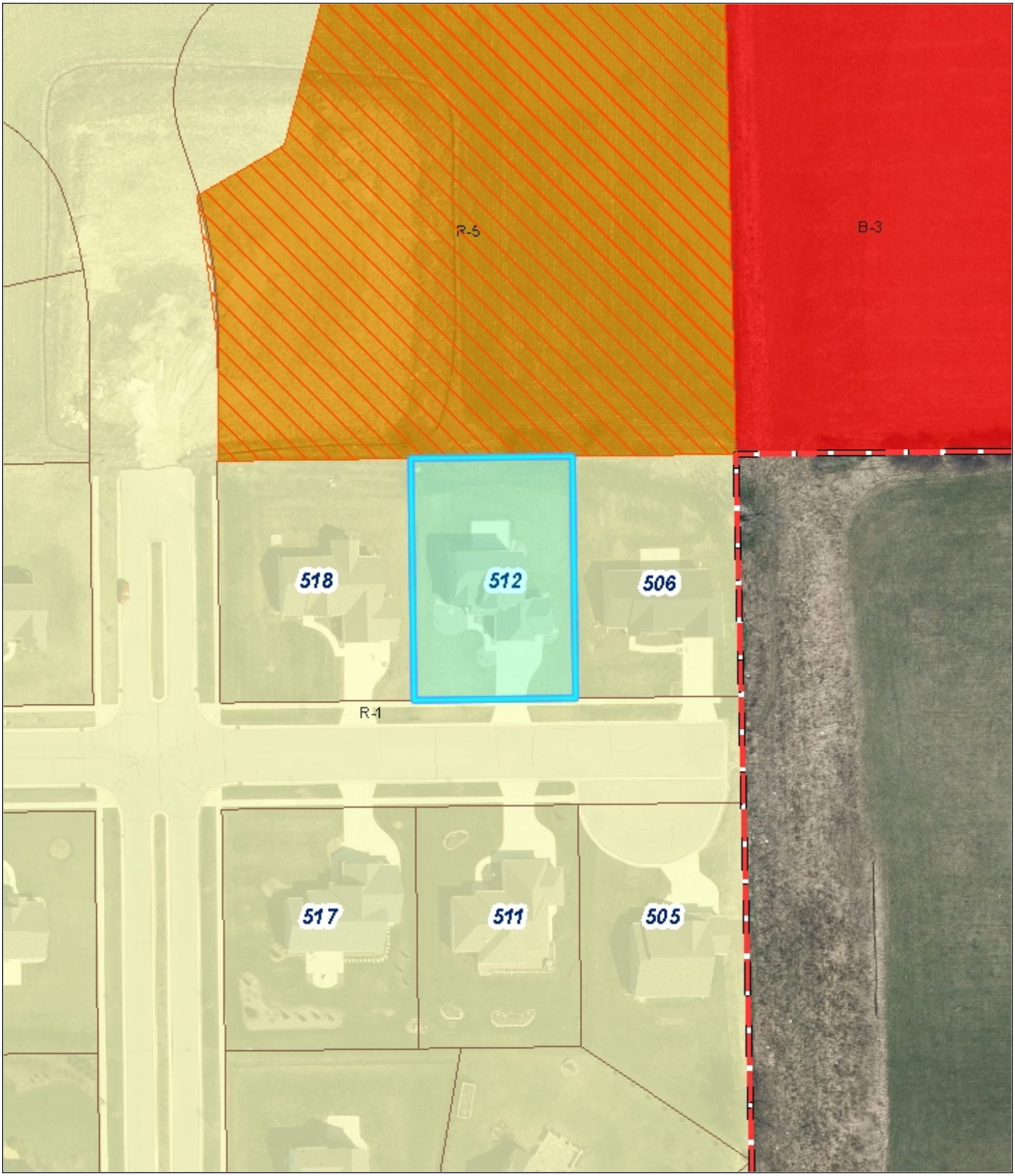
SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Zoning

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 83 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

LUCENT ENGINEERING
Solar Professional Engineering Consulting 2021.12.19

Lucent Engineering, P.C.
814 E 1475 N
Lehi, UT 84043
m: (309) 645-0999
admin@lucenteng.co

January 7, 2022

Everlight Solar
PO Box 930550
Verona, WI 53593

John Leesman

Digitally signed by John Leesman
DN: CN=John Leesman, dnQualifier=A01410D0000017B12F005B900010DA0, O=Lucent Engineering P.C., C=US
Location: Boulder, CO
Reason: I am the author of this document
Date: 2022.01.07 21:21:34-07'00'

RE: Engineering Services
Schultz Residence
512 Westlawn Ave, Mukwonago, WI
6.03 kW System
Solo Job #1766773

To Whom It May Concern,

We have reviewed the following information regarding the solar panel installation for this project. Alterations to these documents or plans shall not be made without direct written consent of the Engineer of Record.

A. Assumptions from Field Observation provided by Everlight Solar

The following structural design regarding the proposed alterations have been prepared from these assumptions. The verification of the field observations is the responsibility of the contractor. **Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the sealed plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies.**

	Roof A	Roof B
Roof Finish :	Asphalt Shingle	Asphalt Shingle
Roof Underlayment :	OSB	OSB
Roof Profile :	Gable	Gable
Roof Structural System :	Metal Plate Trusses	Metal Plate Trusses
Truss Top Chord/Setup :	2 x 4 / Fink	2 x 4 / Fink
Chord/Rafter Wood Grade :	Spruce-Pine-Fir MSR 1650f-1.5E or better	Spruce-Pine-Fir MSR 1650f-1.5E or better
Truss/Rafter Spacing :	24" o.c.	24" o.c.
Roof Slope :	27 deg	45 deg
Max Top Chord/Rafter Span :	8.39 ft	7.08 ft
Bearing Wall Type :	Convl Lt-Frame Constr	CLFC
Foundation :	Permanent Concrete	Permanent Concrete
Stories :	Two	Single

B. Building Design Criteria

Code :	Wisc. UDC (ASCE 7-10)	Ground Snow Load :	30 psf
Roof Live Load :	20 psf (0 psf at panels)	Risk Category :	II
Min. Roof Snow Load :	30 psf	Occupancy Class :	R-3
Ult Wind Speed :	115 mph	Roof Dead Load :	6.5 psf
Exposure Category :	C	PV Dead Load :	3 psf
		Total Dead Load :	9.5 psf

C. Summary of Existing Structure Results

Roof A & B
After review of the field observations and based on our calculations and in accordance with the applicable building codes and current industry standards, the existing roof structure supporting the proposed alterations consisting of the solar array has been determined to be:

- Adaquate to support the additional imposed loads. **No structural upgrades are required.**

D. Solar Panel Support Bracket Anchorage

1. Solar panels shall be designed, mounted, and installed in accordance with the most recent "Quickbolt Manual", which can be found on the Quickbolt website (http://quickbolt.com).
2. Manufacturer's Panel Bracket Connection to Roof Chord/Rafter Member:

Fastener :	(1) 5/16" Lag Screw per Bracket
NDS Withdrawl Value :	205 lbs/inch
Min. Thread Length and Pentration Depth :	2.5"

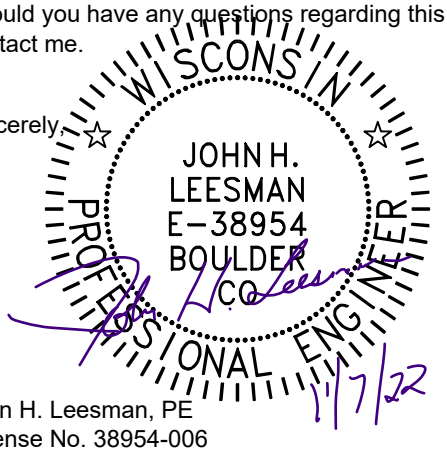
3. Considering the existing roof's slope, size, spacing, condition, and calculated loads, the panel bracket supports shall be placed no greater than 48 in. o/c.
4. Panel supports connections shall be staggered to distribute load to adjacent trusses.

E. Overall Summary

Based on the information supplied to us at the time of this report, on the evaluation of the existing structure, and solar array panel bracket connection, it is our opinion that the roof system will adequately support the additional loads imposed by the solar array. This evaluation conforms to Wisc. UDC and current industry standards.

Should you have any questions regarding this letter or if you require further information, do not hesitate to contact me.

Sincerely,



John H. Leesman, PE
License No. 38954-006

Limits of Scope of Work and Liablity

The existing structure is assumed to have been designed and constructed following appropriate codes at the time of erection and assumed to have appropriated permits. The calculations performed are only for the roof framing supporting the solar array installation referenced in the stamped plans and were completed according to generally recognized structural analysis standards and procedures, professional engineering, and design experience opinions and judgements. Existing deficiencies which are unknown or were not observed during the time the site observation are not included in this scope of work. All solar panel modules, racking, and mounting equipment shall be designed and installed per the manufacturer's approved installation specifications. The Engineer of Record and the engineering consulting firm assume no responsibility for misuse or improper installation. This analysis is not stamped for water leakage. Framing was determined on information in provided plans and/or photos, along with engineering judgement. Prior to commencement of work, the contractor shall verify the framing sizes, spacings, and spans noted in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any discrepancies prior to starting construction. If during solar panel installation, the roof framing members appear unstable or deflect non-uniformly, our office should be notified before proceeding with the installation. The contactor shall also verify that there are no damage/deficiencies (i.e., dry rot, water damage, termite damage, framing member/connection damage, etc.) to framing that was not addressed in the stamped plans, calculations, and/or certification letter and notify the Engineer of Record of any concerns prior to starting construction.

AERIAL VIEW:

STREET VIEW:

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

David Schultz
512 Westlawn Ave
Mukwonago, WI 53149
AC SYSTEM SIZE: 6.028 kW AC
DC SYSTEM SIZE: 7.92 kW DC
Lat, 42.8787327
Long, -88.3459233999999
(22) Silfab SIL-360 NX mono PERC PV MODULES
(11) AP Systems YC600 INVERTER(S)
We Energies

SHEET INDEX:

DRAWN BY: SoloCAD

DATE:
January 6, 2022

COVER PAGE - PV01

GENERAL NOTES

1. INSTALLATION OF SOLAR PHOTOVOLTAIC SYSTEM SHALL BE IN ACCORDANCE WITH NEC ARTICLE 690, AND ALL OTHER APPLICABLE NEC CODES WHERE NOTED OR EXISTING.
2. PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL COMPLY WITH NEC ARTICLE 110.
3. ALL WIRES, INCLUDING THE GROUNDING ELECTRODE CONDUCTOR SHALL BE PROTECTED FROM PHYSICAL DAMAGE IN ACCORDANCE WITH NEC ARTICLE 250
4. THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE; THIS SYSTEM IS UTILITY INTERACTIVE PER UL 1741 AND DOES NOT INCLUDE STORAGE BATTERIES OR OTHER ALTERNATIVE STORAGE SOURCES.
5. ALL DC WIRES SHALL BE SIZED ACCORDING TO [NEC 690.8]
6. DC CONDUCTORS SHALL BE WITHIN PROTECTED RACEWAYS IN ACCORDANCE WITH [NEC 690.31]
7. ALL SIGNAGE TO BE PLACED IN ACCORDANCE WITH LOCAL JURISDICTIONAL BUILDING CODE.

PHOTOVOLTAIC (PV) SYSTEM SPECIFICATIONS

EQUIPMENT:
AC SYSTEM SIZE: 6.028 kW AC
DC SYSTEM SIZE: 7.92 kW DC
(22) Silfab SIL-360 NX mono PERC PV MODULES
(11) AP Systems YC600 INVERTER(S)
RACKING: Quickbolt 2 (QB2) - 48" O.C.

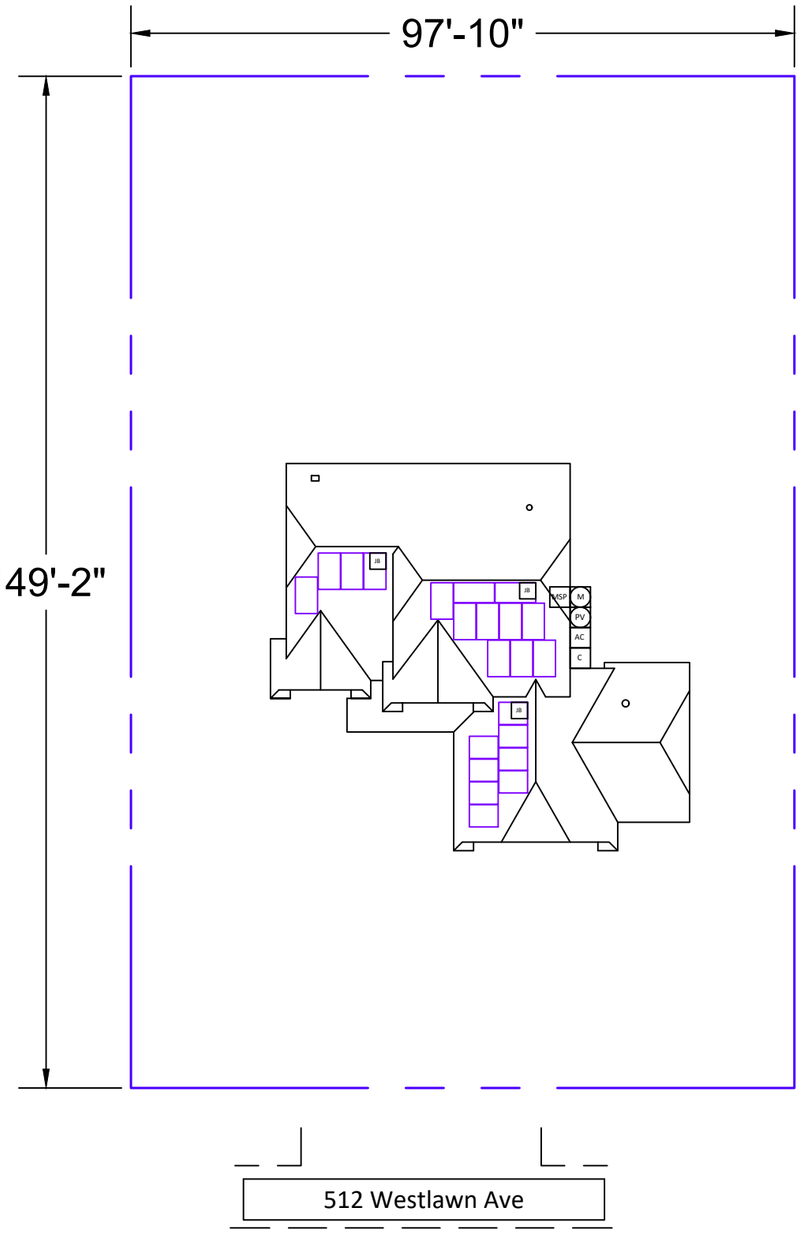
WISCONSIN
JOHN H. LEESMAN
E-38954
BOULDER CO
PROFESSIONAL ENGINEER
1/7/22

APPLICABLE GOVERNING CODES

2017 NEC/ WISCONSIN SPS 316
WISCONSIN UNIFORM DWELLING CODE SPS 320-325
SPS 321 CONSTRUCTION STANDARDS

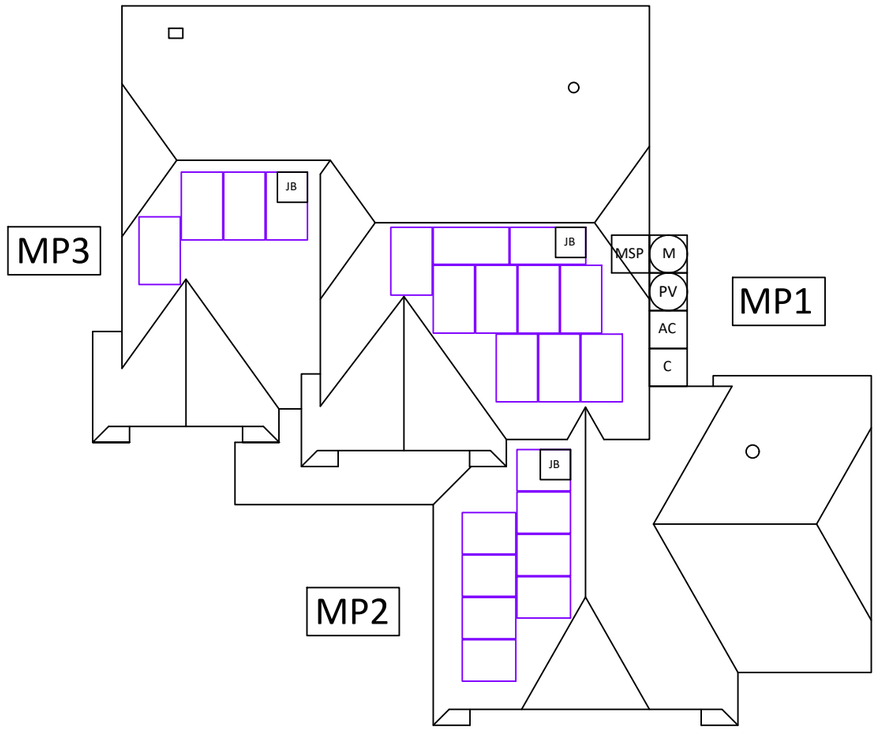
SITE SPECIFICATIONS

OCCUPANCY: R-3
ZONING: RESIDENTIAL



ARRAY DETAILS:		
MOUNTING PLANE:	**AZIMUTH:**	**TILT:**
MP1	180°	27°
MP2	270°	45°
MP3	180°	27°

CLOSE UP OF HOME



FRONT OF HOME

Everlight Solar

CONTRACTOR INFORMATION:
Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

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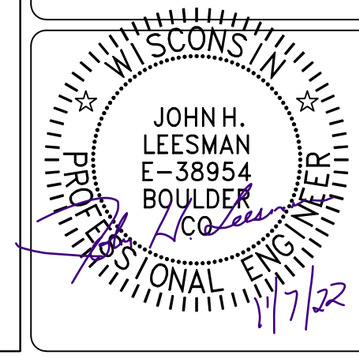


EQUIPMENT LEGEND:

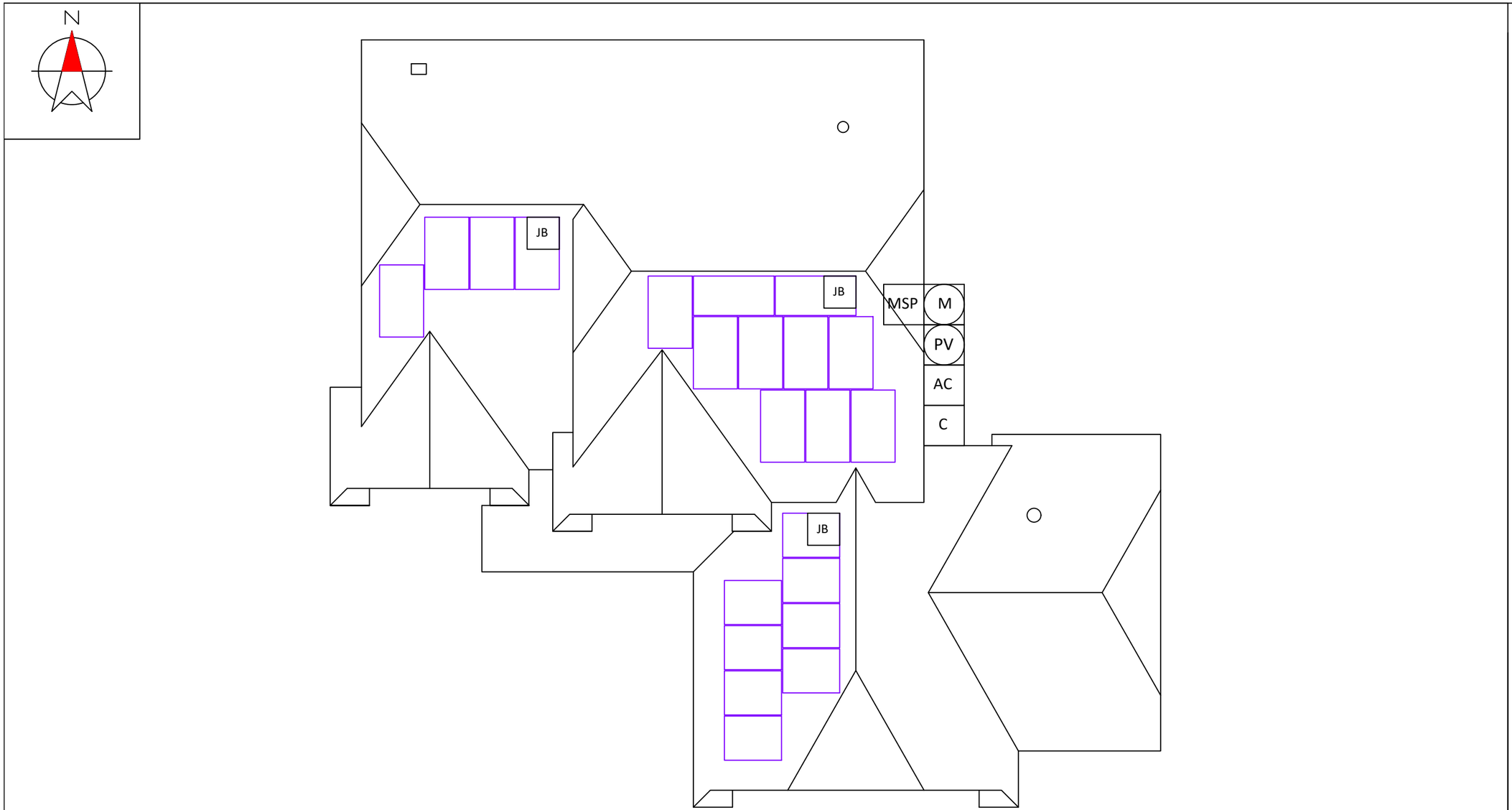
- M — UTILITY METER
- MSP — MAIN SERVICE PANEL
- AC — VISIBLE, LOCKABLE, LABELED AC DISCONNECT
- PV — METER SOCKET (FOR UTILITY PV METER)
- INV — INVERTER
- C — COMBINER BOX
- SUB — SUB PANEL
- LC — LOAD CENTER
- FIRE ACCESS PATHWAY (3' TYP)
- PROPERTY LINE
- BATT — BATTERY(IES)

VISIBLE, LOCKABLE, LABELED AC DISCONNECT LOCATED WITHIN 10' OF UTILITY METER

DRAWN BY: SoloCAD

DATE: January 6, 2022

SITE PLAN - PV02



EQUIPMENT INFORMATION:		ROOF INFO:		PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
RAIL MANUFACTURER:	IronRidge	ROOF TYPE:	Asphalt Shingle	PV MODULE COUNT:	22
RAIL PART NUMBER:	XR-10	ROOF FRAMING:	Manufactured Truss	ARRAY AREA:	MODULE COUNT * 19.72 ft² = 433.84
ATTACHMENTS	Quickbolt 2 (QB2)	RAFTER/TOP CHORD SIZE:	2x4	ROOF AREA:	2321 ft²
ATTACHMENT QTY:	52	RAFTER/TOP CHORD SPACING:	24"	PERCENT OF ROOF COVERED:	19%
SPLICE QTY:	0	ATTACHMENT SPACING:	48''	ARRAY WEIGHT:	MODULE COUNT * 44 lbs = 968 lbs
MIDCLAMP QTY:	28			DISTRIBUTED LOAD:	ARRAY LBS/ATTACHMENTS = 18.62
ENDCLAMP QTY:	32			POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.23 lbs/ft²

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SITE INFORMATION

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Long, -88.3459233999999

(22) Silfab SIL-360 NX mono PERC PV MODULES

(11) AP Systems YC600 INVERTER(S)

We Energies

WISCONSIN
JOHN H. LEESMAN
E-38954
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PROFESSIONAL ENGINEER
1/7/22

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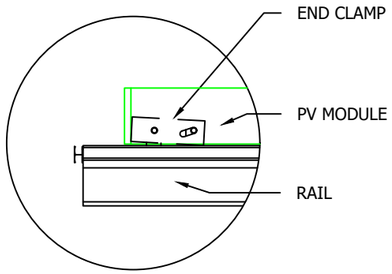
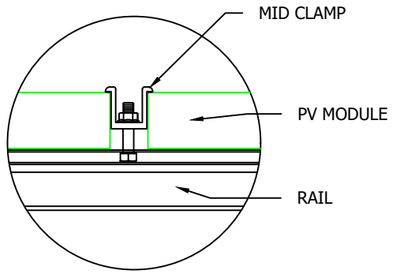
DATE: January 6, 2022

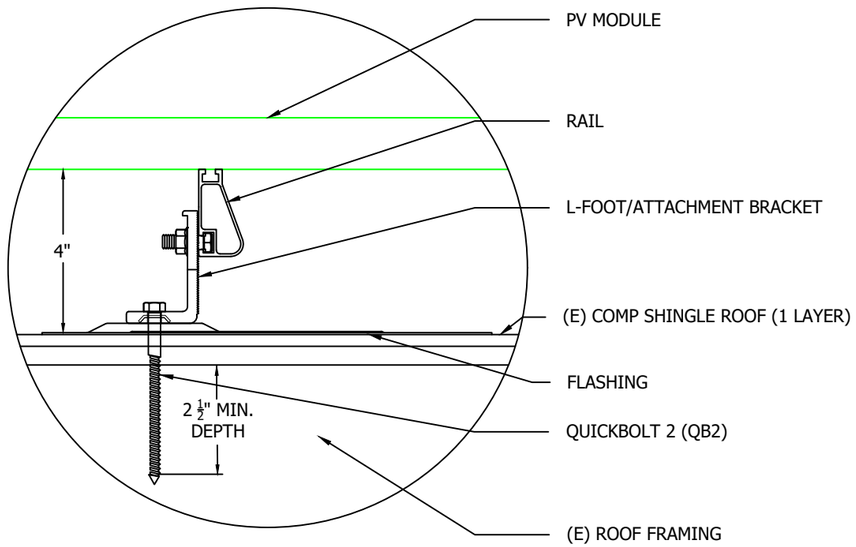
ROOF ATTACHMENTS - PV03



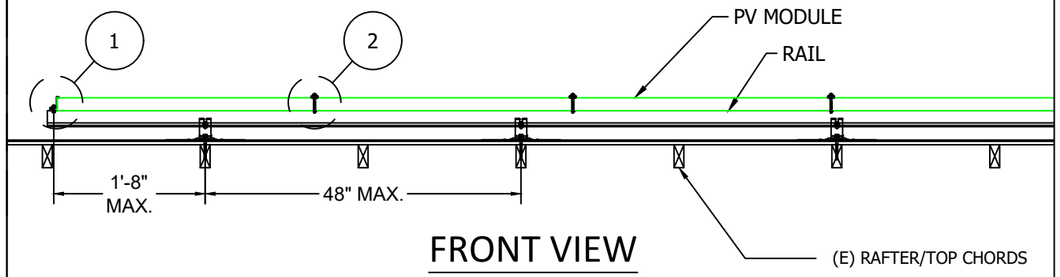
1 END CLAMP DETAILS



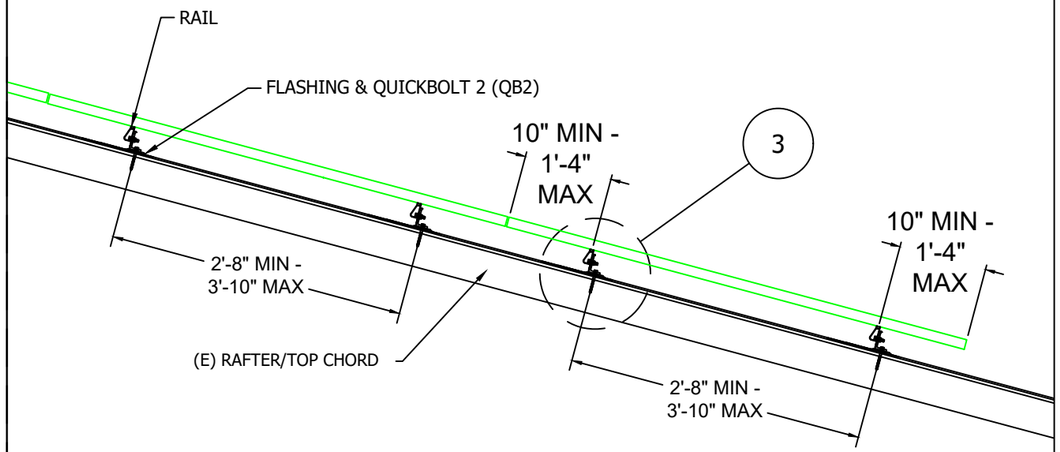
2 MID CLAMP DETAILS



3 DETAIL, MOUNTING AND FLASHING



FRONT VIEW



SIDE VIEW

EQUIPMENT INFORMATION:		ROOF INFO:		PHOTOVOLTAIC ARRAY STRUCTURAL CRITERIA:	
RAIL MANUFACTURER:	IronRidge	ROOF TYPE:	Asphalt Shingle	PV MODULE COUNT:	22
RAIL PART NUMBER:	XR-10	ROOF FRAMING:	Manufactured Truss	ARRAY AREA:	MODULE COUNT * 19.72 ft² = 433.84
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SPLICE QTY:	0	ATTACHMENT SPACING:	48''	ARRAY WEIGHT:	MODULE COUNT * 44 lbs = 968 lbs
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ENDCLAMP QTY:	32			POINT LOAD: (lbs/ft²)	(ARRAY) WEIGHT/AREA = 2.23 lbs/ft²

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DRAWN BY: SoloCAD

DATE: January 6, 2022

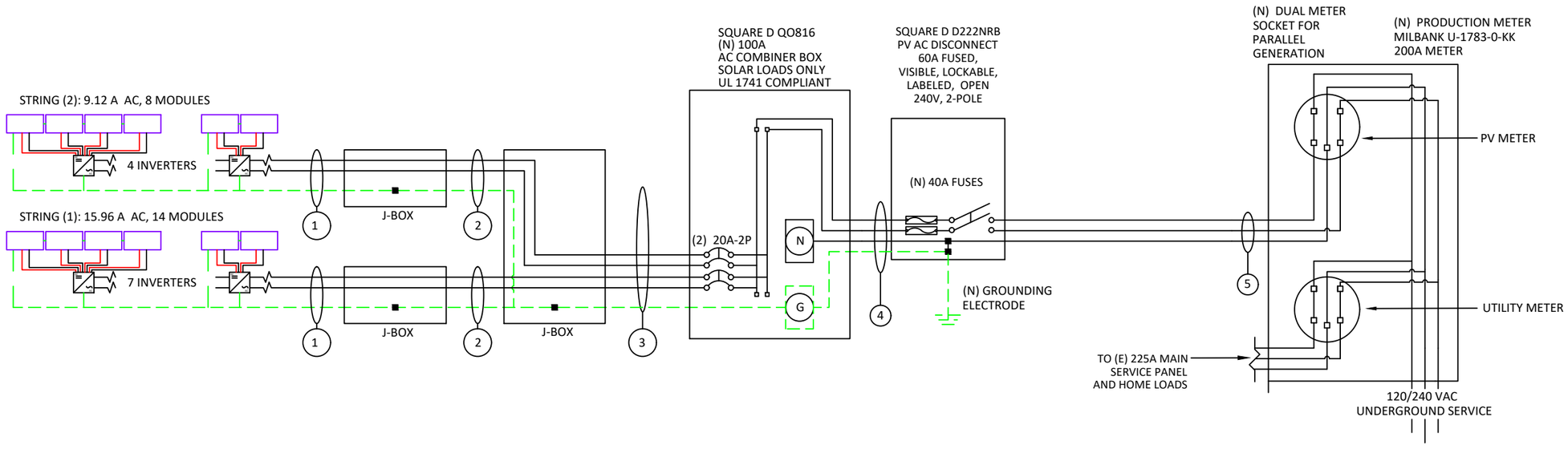
MOUNTING DETAIL - PV04

Silfab SIL-360 NX mono PERC Specs	
POWER MAX (PMAX):	360W
OPEN CIRCUIT VOLTAGE (VOC):	40.4V
MAX POWER-POINT CURRENT (IMP):	7.8A
MAX POWER-POINT VOLTAGE (VMP):	33.1V
SHORT CIRCUIT CURRENT (ISC):	8.2A
SERIES FUSE RATING:	20A

AP Systems YC600 Specs	
MAX INPUT VOLTAGE:	7 V
MAX DC SHORT CIRCUIT CURRENT:	12 A
MAXIMUM OUTPUT POWER:	548 W
MAXIMUM OUTPUT CURRENT:	2.28 A
NOM. OUTPUT VOLTAGE:	240 V
MAX UNITS PER 20A CIRCUIT:	14
1-Phase, 60 HZ, UL 1741 Listed	

Equipment Schedule			
TYPE:	QTY:	DESCRIPTION:	RATING:
MODULES:	(22)	Silfab SIL-360 NX mono PERC	360 W
INVERTERS:	(11)	AP Systems YC600	548 W
AC DISCONNECT(S):	(1)	PV AC DISCONNECT, 240V, 2-POLE	60A

Conduit & Conductor Schedule				
TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)	
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THWN-2, or THHN COPPER - (GROUND)	
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT
	(1)	10 AWG	THHN/THWN-2 - (GROUND)	
4	(3)	8 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT
	(1)	10 AWG	THWN-2 COPPER - (GROUND)	
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	3/4" EMT
	(0)	NONE	N/A - NO GROUND WIRE PRESENT	



VISIBLE, LOCKABLE,
LABELED AC DISCONNECT
LOCATED WITHIN 10'
OF UTILITY METER

Everlight Solar

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(22) Silfab SIL-360 NX mono PERC PV MODULES

(11) AP Systems YC600 INVERTER(S)

We Energies

DRAWN BY: SoloCAD

DATE:
January 6, 2022

LINE DIAGRAM - PV05

STRING CALCULATIONS		
AP Systems YC600	STRING #1	STRING #2
MAX AC CURRENT:	15.96A	9.12A
MICRO INVERTERS IN SERIES	7	4
NOMINAL STRING VOLTAGE:	240V	240V
MAX AC OUTPUT POWER	3836W	2192W
ARRAY DC POWER:	7920W	
TOTAL MAX AC CURRENT:	25.08A	

NUMBER OF CURRENT CARRYING CONDUCTORS	PERCENT OF VALUES
4-6	.80
7-9	.70
10-20	.50

SYSTEM OCPD CALCULATIONS	
INVERTER MODEL(S):	AP Systems YC600
# OF INVERTERS:	11
MAX OUTPUT CURRENT:	2.28A
(# OF INVERTERS) X (MAX OUTPUT CURRENT) X 125% <= OCPD RATING	
(11 X 2.28 A X 1.25) = 31.35A <= 40A, OK	

SUPPLY SIDE INTERCONNECTION	
MAIN BUSBAR RATING:	225A
MAIN DISCONNECT RATING:	200A
PV OCPD RATING:	40A
SERVICE RATING >= PV OCPD	
225A >= 40A, OK	

Conduit & Conductor Schedule

TAG	QTY	WIRE GAUGE	DESCRIPTION	CONDUIT SIZE	CONDUCTOR RATING	CONDUCTOR TEMP. RATE	AMBIENT TEMP	TEMP. DERATE	# OF CONDUCTORS DERATE	CONDUCTOR RATING W/DERATES	CONDUIT FILL
1	(2)	12-2	TC-ER, THWN-2, COPPER (L1, L2)	N/A - FREE AIR	30A	90°C	32°C	0.96	N/A - FREE AIR	28.8A	N/A - FREE AIR
	(1)	6 AWG	BARE, COPPER (GROUND)								
2	(2)	10 AWG	THWN-2, or THHN COPPER - (L1, L2)	3/4" EMT	40A	90°C	32°C	0.96	1	38.4A	11.9%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
3	(4)	10 AWG	THHN/THWN-2, COPPER - (L1, L2)	3/4" EMT	40A	90°C	32°C	0.96	0.8	30.72A	19.8%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
4	(3)	8 AWG	THWN-2 COPPER - (L1, L2, NEUTRAL)	3/4" EMT	50A	75°C	32°C	0.96	1	48A	24.6%
	(1)	10 AWG	THWN-2 COPPER - (GROUND)								
5	(3)	6 AWG	THWN-2 COPPER - (L1,L2,NEUTRAL)	3/4" EMT	65A	75°C	32°C	0.96	1	62.4A	28.61%
	(0)	NONE	N/A - NO GROUND WIRE PRESENT								

GROUNDING & GENERAL NOTES:

1. PV INVERTER IS UNGROUNDED, TRANSFORMER-LESS TYPE.
2. DC GEC AND AC EGC TO BE SPLICED TO EXISTING ELECTRODE
3. ANY EXISTING WIRING INVOLVED WITH PV SYSTEM CONNECTION THAT IS FOUND TO BE INADEQUATE PER CODE SHALL BE CORRECTED PRIOR TO FINAL INSPECTION.
4. JUNCTION BOX QUANTITIES, AND PLACEMENT SUBJECT TO CHANGE IN THE FIELD - JUNCTION BOXES DEPICTED ON ELECTRICAL DIAGRAM REPRESENT WIRE TYPE TRANSITIONS.
5. AC DISCONNECT NOTED IN EQUIPMENT SCHEDULE OPTIONAL IF OTHER AC DISCONNECTING MEANS IS LOCATED WITHIN 10' OF SERVICE DISCONNECT.

INTERCONNECTION NOTES

1. GROUND FAULT PROTECTION IN ACCORDANCE WITH [NEC 215.9] & [NEC 230.95]
2. SUPPLY SIDE INTERCONNECTION ACCORDING TO [NEC705.12(A)]

DISCONNECT NOTES

1. DISCONNECTING SWITCHES SHALL BE WIRED SUCH THAT WHEN THE SWITCH IS OPENED THE CONDUCTORS REMAINING LIVE ARE CONNECTED TO THE TERMINALS MARKED “LINE SIDE” (TYPICALLY THE UPPER TERMINALS)
2. AC DISCONNECT MUST BE ACCESSIBLE TO QUALIFIED UTILITY PERSONNEL, BE LOCKABLE, AND BE A VISIBLE-BREAK SWITCH.
3. FUSED AC DISCONNECT TO BE USED.

Everlight Solar

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We Energies

DRAWN BY: SoloCAD

DATE:
January 6, 2022

ELECTRICAL CALCS - PV06

WARNING
ELECTRIC SHOCK HAZARD
TERMINALS ON THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

LABEL 1
FOR PV DISCONNECTING MEANS WHERE THE LINE AND LOAD TERMINALS MAY BE ENERGIZED IN THE OPEN POSITION.
[NEC 690.13(B)]

WARNING
THIS EQUIPMENT IS FED BY MULTIPLE SOURCES. TOTAL RATING OF ALL OVERCURRENT DEVICES, EXCLUDING MAIN SUPPLY OVERCURRENT DEVICE, SHALL NOT EXCEED AMPACITY OF BUSBAR.

LABEL 2
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(b)]

WARNING
INVERTER OUTPUT CONNECTION
DO NOT RELOCATE THIS OVERCURRENT DEVICE

LABEL 3
PLACED ADJACENT TO THE BACK-FED BREAKER FROM THE INVERTER IF TIE IN CONSISTS OF LOAD SIDE CONNECTION TO BUSBAR.
[NEC 705.12(B)(2)(3)(c)]

WARNING
DUAL POWER SUPPLY
SOURCES: UTILITY GRID AND PV SOLAR ELECTRIC SYSTEM

LABEL 4
EQUIPMENT CONTAINING OVERCURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUSBAR OR CONDUCTOR SUPPLIED FROM MULTIPLE SOURCES SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES
[NEC 705.12(B)(3)]

PHOTOVOLTAIC AC DISCONNECT
RATED AC OUTPUT CURRENT: 25
NOMINAL OPERATING AC VOLTAGE: 240

LABEL 5
AT POINT OF INTERCONNECTION, MARKED AT AC DISCONNECTING MEANS.
[NEC 690.54, NEC 690.13 (B)]

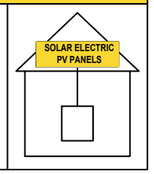
LABELING NOTES:
1. LABELS CALLED OUT ACCORDING TO ALL COMMON CONFIGURATIONS. ELECTRICIAN TO DETERMINE EXACT REQUIREMENTS IN THE FIELD PER CURRENT NEC AND LOCAL CODES AND MAKE APPROPRIATE ADJUSTMENTS.
2. LABELING REQUIREMENTS BASED ON THE 2017 NATIONAL ELECTRIC CODE, OSHA STANDARD 19010.145, ANSI Z535.
3. MATERIAL BASED ON THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
4. LABELS TO BE OF SUFFICIENT DURABILITY TO WITHSTAND THE ENVIRONMENT INVOLVED [NEC 110.21(B)(3)]
5. LABELS TO BE A MINIMUM LETTER HEIGHT OF 3/8", WHITE ON RED BACKGROUND; REFLECTIVE, AND PERMANENTLY AFFIXED [IFC 605.11.1.1]

WARNING: PHOTOVOLTAIC POWER SOURCE

LABEL 6
AT DIRECT-CURRENT EXPOSED RACEWAYS, CABLE TRAYS, COVERS AND ENCLOSURES OF JUNCTION BOXES, AND OTHER WIRING METHODS; SPACED AT MAXIMUM 10FT SECTION OR WHERE SEPARATED BY ENCLOSURES, WALLS, PARTITIONS, CEILINGS, OR FLOORS.
[NEC 690.31(G)(3&4)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

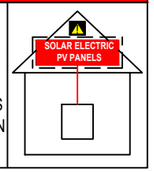
TURN RAPID SHUTDOWN SWICH TO THE "OFF" POSITION TO SHUT DOWN PV SYSTEM AND REDUCE SHOCK HAZARD IN ARRAY



LABEL 7
FOR PV SYSTEMS THAT SHUT DOWN THE ARRAY AND CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(A)]

SOLAR PV SYSTEM EQUIPPED WITH RAPID SHUTDOWN

TURN RAPID SHUTDOWN SWITCH TO THE "OFF" POSITION TO SHUT DOWN CONDUCTORS OUTSIDE THE ARRAY. CONDUCTORS WITHIN THE ARRAY REMAIN ENERGIZED IN SUNLIGHT

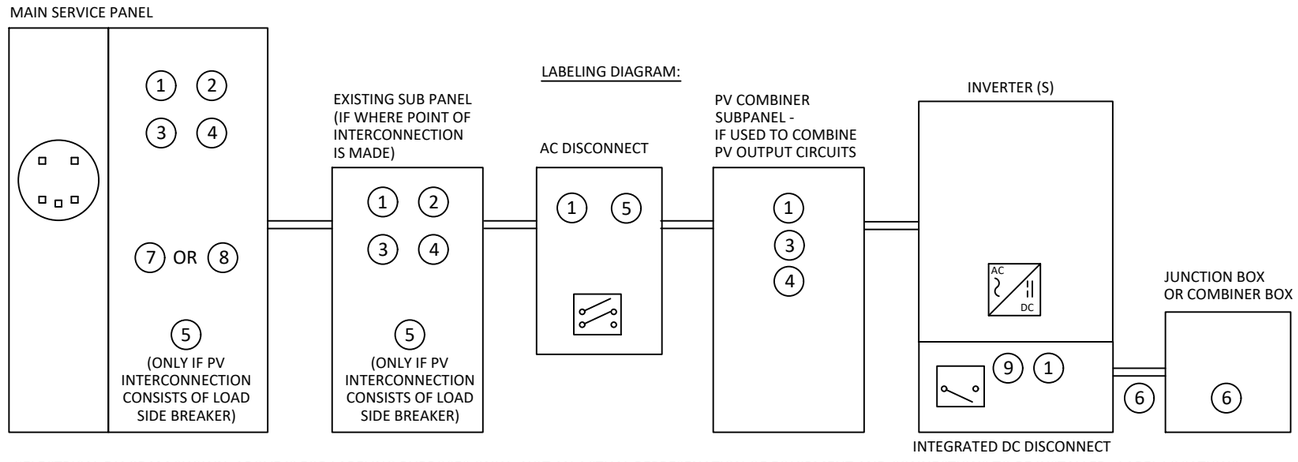


LABEL 8
FOR PV SYSTEMS THAT ONLY SHUT DOWN CONDUCTORS LEAVING THE ARRAY:
SIGN TO BE LOCATED ON OR NO MORE THAN 3 FT AWAY FROM SERVICE DISCONNECTING MEANS TO WHICH THE PV SYSTEMS ARE CONNECTED AND SHALL INDICATE THE LOCATION OF ALL IDENTIFIED RAPID SHUTDOWN SWITCHES IF NOT AT THE SAME LOCATION.
[NEC 690.56(C)(1)(b)]

RAPID SHUTDOWN SWITCH FOR SOLAR PV SYSTEM

LABEL 9
SIGN LOCATED AT RAPID SHUT DOWN DISCONNECT SWITCH [NEC 690.56(C)(3)].

LABELING DIAGRAM:



*ELECTRICAL DIAGRAM SHOWN ABOVE IS FOR LABELING PURPOSES ONLY. NOT AN ACTUAL REPRESENATION OF EQUIPMENT AND CONNECTIONS TO BE INSTALLED. LABEL LOCATIONS PRESENTED MAY VERY DEPENDING ON TYPE OF INTERCONNECTION METHOD AND LOCATION PRESENTED ON THE ELECTRICAL DIAGRAM PAGE.

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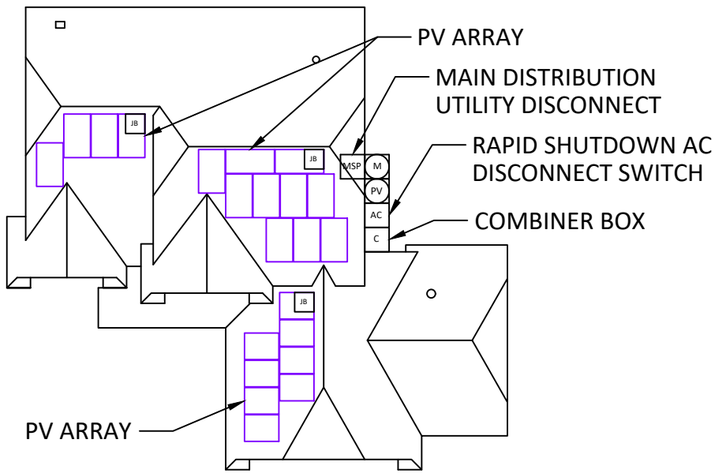
DRAWN BY: SoloCAD
DATE: January 6, 2022
LABELS - PV07

CAUTION

POWER TO THIS BUILDING IS ALSO SUPPLIED FROM ROOF MOUNTED SOLAR ARRAYS WITH SAFETY DISCONNECTS AS SHOWN:

SYSTEM UTILIZES
MICROINVERTERS LOCATED
UNDER EACH SOLAR MODULE



FRONT OF HOME

512 Westlawn Ave, Mukwonago WI 53149

DIRECTORY

PERMANENT PLAQUE OR DIRECTORY PROVIDING THE LOCATION OF THE SERVICE DISCONNECTING MEANS AND THE PHOTOVOLTAIC SYSTEM.

(ALL PLAQUES AND SIGNAGE WILL BE INSTALLED AS OUTLINED WITHIN: NEC 690.56(B)&(C), [NEC 705.10])

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Long, -88.3459233999999

(22) Silfab SIL-360 NX mono PERC PV MODULES

(11) AP Systems YC600 INVERTER(S)

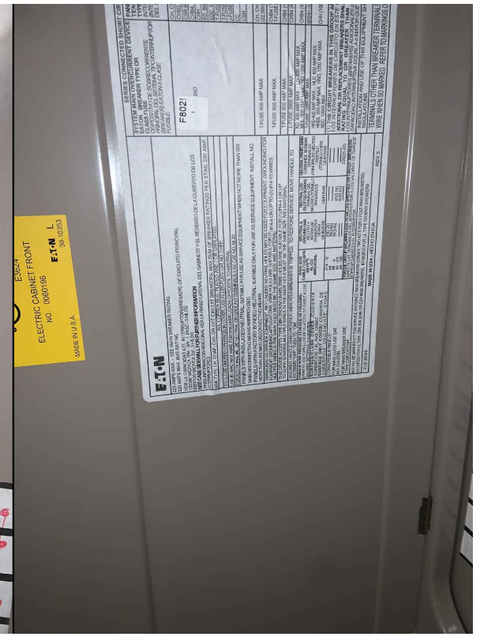
We Energies

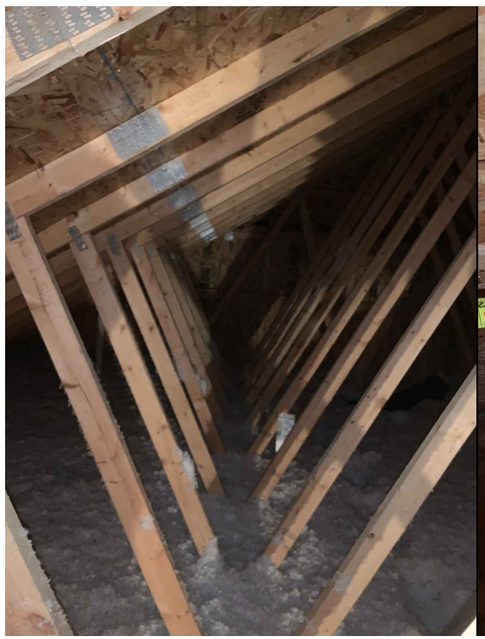
DRAWN BY: SoloCAD

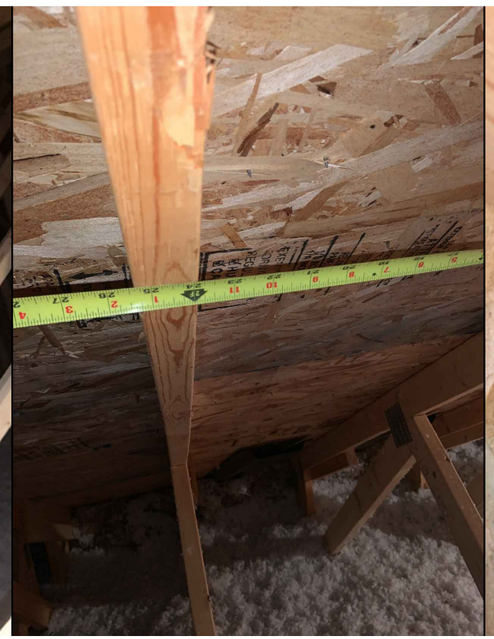
DATE:
January 6, 2022

PLACARD - PV08

SITE PHOTOS:







Everlight Solar

CONTRACTOR INFORMATION:

Everlight Solar Construction
PO Box 930550
Verona, WI 53593
License# DCQ-111802116
833.786.4387 ext. 701

SITE INFORMATION

David Schultz

512 Westlawn Ave

Mukwonago, WI 53149

AC SYSTEM SIZE: 6.028 kW AC

DC SYSTEM SIZE: 7.92 kW DC

Lat, 42.8787327

Long, -88.3459233999999

(22) Silfab SIL-360 NX mono PERC PV MODULES

(11) AP Systems YC600 INVERTER(S)

We Energies

DRAWN BY: SoloCAD

DATE:
January 6, 2022

SITE PHOTOS - PV09

SITE PHOTOS:

Everlight Solar

CONTRACTOR INFORMATION:

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Verona, WI 53593
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DATE:
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FRONT/BACK VIEWS - PV09.1

SITE PHOTOS:

Everlight Solar

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We Energies

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DATE:
January 6, 2022

SIDE VIEWS - PV09.2

SITE PHOTOS:

Everlight Solar

CONTRACTOR INFORMATION:

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(11) AP Systems YC600 INVERTER(S)

We Energies

DRAWN BY: SoloCAD

DATE:
January 6, 2022

METER/OPEN MSP - PV09.3

SIL-360 NX

Proud Partner of Everlight Solar

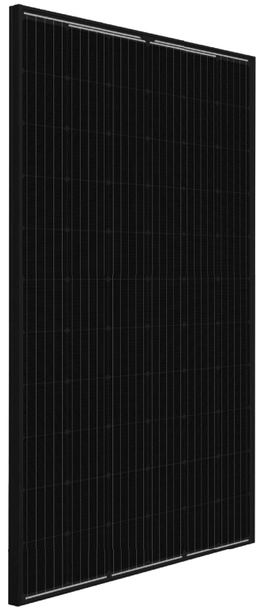
HIGH EFFICIENCY PREMIUM MONO-PERC PV MODULE

CHUBB*
* Chubb provides error and omission insurance to Silfab Solar Inc.

INDUSTRY LEADING WARRANTY
All our products include an industry leading 25-year product workmanship and 30-year performance warranty.

35+ YEARS OF SOLAR INNOVATION
Leveraging over 35+ years of worldwide experience in the solar industry, Silfab is dedicated to superior manufacturing processes and innovations such as Bifacial and Back Contact technologies, to ensure our partners have the latest in solar innovation.

NORTH AMERICAN QUALITY
Silfab is the leading automated solar module manufacturer in North America. Utilizing premium quality materials and strict quality control management to deliver the highest efficiency, premium quality PV modules.



BAA / ARRA COMPLIANT
Silfab panels are designed and manufactured to meet Buy American Act Compliance. The US State Department, US Military and FAA have all utilized Silfab panels in their solar installations.

LIGHT AND DURABLE
Engineered to accommodate high wind load conditions for test loads validated up to 4000Pa uplift. The light-weight frame is exclusively designed for wide-ranging racking compatibility and durability.

QUALITY MATTERS
Total automation ensures strict quality controls during the entire manufacturing process at our ISO certified facilities.

DOMESTIC OPERATIONS
Our 500+ North American team is ready to help our partners win the hearts and minds of customers, providing customer service and product delivery that is direct, efficient and local.

AESTHETICALLY PLEASING
All black sleek design, ideal for high-profile residential or commercial applications.

PID RESISTANT
PID Resistant due to advanced cell technology and material selection. In accordance to IEC 62804-1.

Electrical Specifications		SIL-360 NX mono PERC	
Test Conditions		STC	NOCT
Module Power (Pmax)	Wp	360	258
Maximum power voltage (Vpmax)	V	36.6	33.1
Maximum power current (Ipmax)	A	9.9	7.8
Open circuit voltage (Voc)	V	44.5	40.4
Short circuit current (Isc)	A	10.5	8.2
Module efficiency	%	19.7	17.6
Maximum system voltage (VDC)	V	1000	
Series fuse rating	A	20	
Power Tolerance	Wp	0 to +10	

Measurement conditions: STC 1000 W/m2 • AM 1.5 • Temperature 25 °C • NOCT 800 W/m² • AM 1.5 • Measurement uncertainty ≤ 3%
• Sun simulator calibration reference modules from Fraunhofer Institute. Electrical characteristics may vary by ±5% and power by 0 to +10W.

Temperature Ratings	SIL-360 NX mono PERC
Temperature Coefficient Isc	+0.064 %/°C
Temperature Coefficient Voc	-0.28 %/°C
Temperature Coefficient Pmax	-0.36 %/°C
NOCT (± 2°C)	46 °C
Operating temperature	-40/+85 °C

Mechanical Properties and Components	SIL-360 NX mono PERC	
	Metric	Imperial
Module weight	20±0.2 kg	44±0.4 lbs
Dimensions (H x L x D)	1832 mm x 1000 mm x 38 mm	72.13 in x 39.4 in x 1.5 in
Maximum surface load (wind/snow)*	4000 Pa rear load / 5400 Pa front load	83.5/112.8 lb/ft^2
Hail impact resistance	ø 25 mm at 83 km/h	ø 1 in at 51.6 mph
Cells	66 - Si mono-PERC - 5 busbar 158.75 x 158.75 mm	66 - Si mono-PERC - 5 busbar 62.25 x 62.25 in
Glass	3.2 mm high transmittance, tempered, DSM anti-reflective coating	0.126 in high transmittance, tempered, DSM anti-reflective coating
Cables and connectors (refer to installation manual)	1200 mm ø 5.7 mm, MC4 from Staubli	47.2 in, ø 0.22 (12AWG), MC4 from Staubli
Backsheet	High durability, superior hydrolysis and UV resistance, multi-layer dielectric film, fluorine-free PV backsheet	
Frame	Anodized Aluminum (Black)	
Bypass diodes	3 diodes-30SQ045T (45V max DC blocking voltage, 30A max forward rectified current)	
Junction Box	UL 3730 Certified, IEC 62790 Certified, IP67 rated	

Warranties	SIL-360 NX mono PERC			
Module product workmanship warranty	25 years**			
Linear power performance guarantee	30 years			
	≥ 97.1% end 1st year	≥ 91.6% end 12th year	≥ 85.1% end 25th year	≥ 82.6% end 30th year

Certifications	SIL-360 NX mono PERC
Product	ULC ORD C1703, UL1703, CEC listed***, UL 61215-1/-1-1/-2, UL 61730-1/-2, IEC 61215-1/-1-1/-2***. IEC 61730-1/-2***, CSA C22.2#61730-1/-2, IEC 62716 Ammonia Corrosion; IEC61701:2011 Salt Mist Corrosion Certifed, UL Fire Rating: Type 2
Factory	ISO9001:2015

All states except California
- Modules Per Pallet: 26
- Pallets Per Truck: 34
- Modules Per Truck: 884

California
- Modules Per Pallet: 26
- Pallets Per Truck: 32
- Modules Per Truck: 832

*⚠ Warning. Read the Safety and Installation Manual for mounting specifications and before handling, installing and operating modules.

**12 year extendable to 25 years subject to registration and conditions outlined under "Warranty" at www.silfabsolar.com.

***Certification and CEC listing in progress.

PAN files generated from 3rd party performance data are available for download at: www.silfabsolar.com/downloads.

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www.everlightsolar.com

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Bellingham WA 98225 USA
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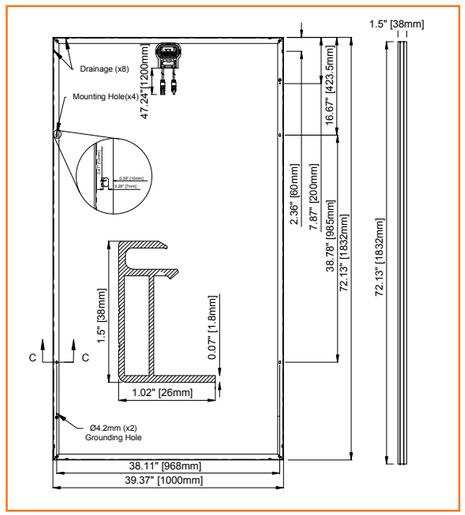


APsystems YC600 Microinverter Datasheet

INPUT DATA (DC)

Module Compatibility	60 & 72 Cell PV Modules
MPPT Voltage Range	22V-48V
Operation Voltage Range	16V-55V
Maximum Input Voltage	55V
Maximum Input Current	12A x 2
Maximum Total PV Array Short Circuit Current	15A

OUTPUT DATA (AC)

	240V	208V
Maximum Continuous Output Power	548VA	548VA
Peak Output Power	600VA	600VA
Nominal Output Voltage	240V	208V
Nominal Output Current	2.28A	2.63A
Nominal Output Frequency	60Hz	60Hz
Adjustable Output Voltage Range	211-264V	183-229V
Adjustable Output Frequency Range	59.3 - 60.5Hz	59.3 - 60.5Hz
Power Factor (Adjustable)	0.8 leading...0.8 lagging	0.8 leading...0.8 lagging
Total Harmonic Distortion	<3%	<3%
Maximum Units per Branch	7 (14 PV modules)	6 (12 PV modules)

EFFICIENCY

Peak Efficiency	96.7%
CEC Weighted Efficiency	96.5%
Nominal MPPT Efficiency	99.5%
Night Power Consumption	60mW

MECHANICAL DATA

Operating Ambient Temperature Range	-40°F to +149°F (-40°C to +65°C)
Storage Temperature Range	-40°F to +185°F (-40°C to +85°C)
Dimensions (WxHxD) inches	10.24" x 7.4" x 1.24"
Dimensions (WxHxD) mm	260mm x 188mm x 31.5mm
Weight	5.7 lbs (2.6kg)
AC BUS Maximum Current	20A
Connector Type	MC4 Type
Enclosure Rating	NEMA 6 (IP67)
Cooling	Natural Convection - No Fans

FEATURES & COMPLIANCE

Communication	Wireless Zigbee
Transformer Design	High Frequency Transformers, Galvanic Isolation
Monitoring	Via EMA**Online Portal
Emissions & Immunity (EMC) Compliance	FCC PART 15, ANSI C63.4, ICES-003
Safety & Grid Connection Compliance	UL1741, UL1741 SA (240V version only), CA Rule 21 (240V version only), IEEE1547, CSA C22.2 No.107.1-01, NEC 2017 690.12, 690.11

* Depending on the local regulations.
**APsystems online Energy Management Analysis (EMA) platform

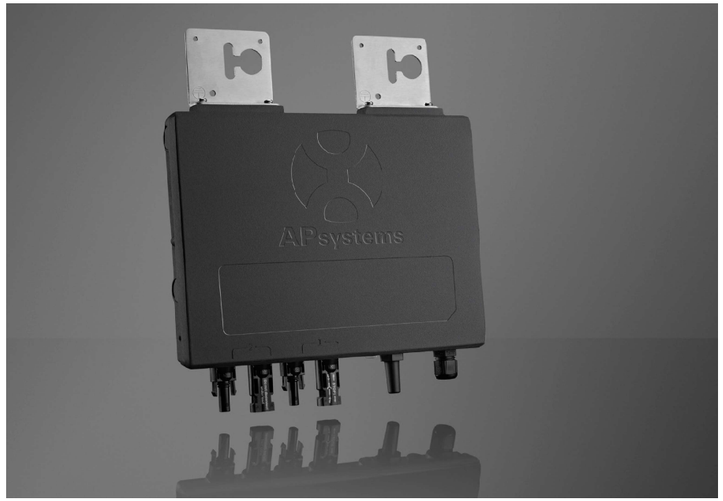
Specifications subject to change without notice – please ensure you are using the most recent version found at APsystems.com

600 Ericksen Ave NE, Suite 200, Seattle, WA 98110 | 844.666.7035 | APsystems.com

APsystems ALTENERGY POWER

APsystems ALTENERGY POWER

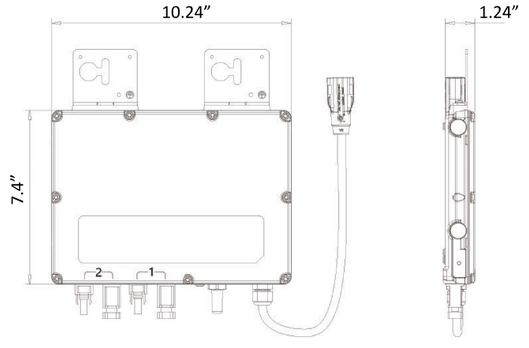
Leading the Industry in
Solar Microinverter Technology



YC600
Microinverter

- Dual-module microinverter with independent MPPT
- Utility-interactive with Reactive Power Control (RPC)
- CA Rule 21 compliant
- Continuous power of 274VA per channel, 300VA peak
- Accommodates modules from 250-365W+
- Wide MPPT voltage range (22V-48V)
- Meets NEC 2014/2017 690.12 Rapid Shutdown requirements
- ZigBee communication & free monitoring

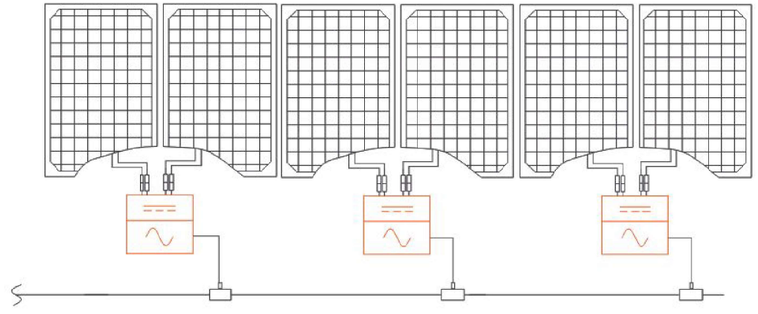
DIMENSIONS



With its groundbreaking design and features, the YC600 is the pinnacle of microinverter technology. A single-phase, smart grid-compliant microinverter, the YC600 serves two modules with dual, independent MPPT. Zigbee wireless communication over a mesh network offers faster data speeds than PLC and a wider MPPT voltage range results in a greater energy harvest for homeowners.

A true utility-interactive microinverter with Reactive Power Control (RPC) technology, the YC600 meets CA Rule 21 requirements and is inherently NEC 2014/2017 Rapid Shutdown compliant. The unit also builds on the successful APsystems line of multi-module microinverters, simplifying installation and reducing logistics costs.

WIRING SCHEMATIC



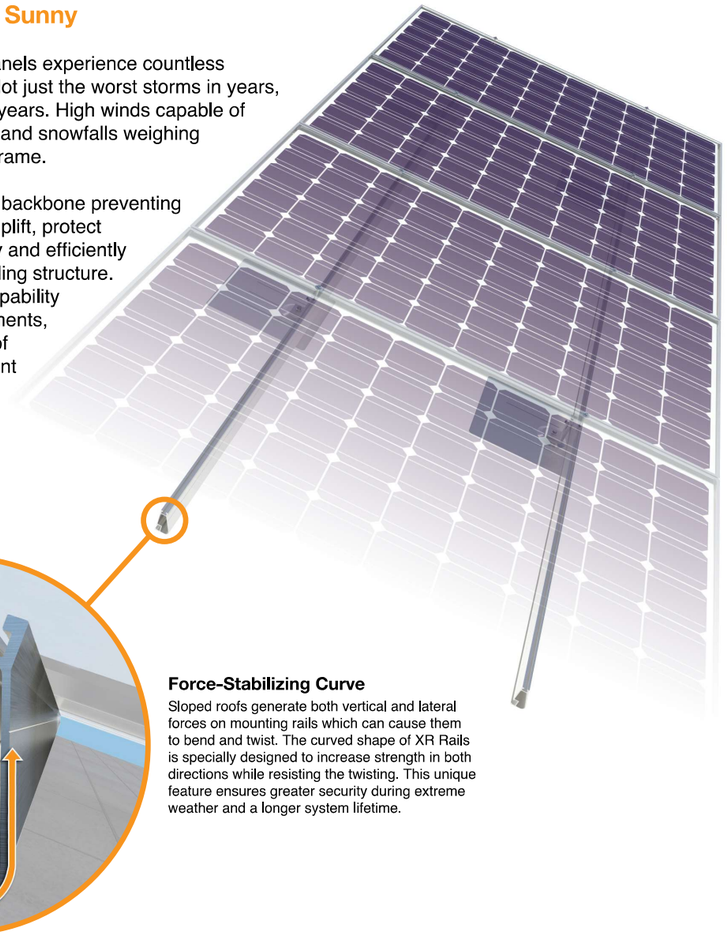
IRONRIDGE

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.

IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of 6000-series aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10

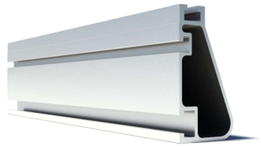
XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves spans up to 6 feet, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear & black anodized finish
- Internal splices available

XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 10 feet.

- 10' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available



XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans up to 12 feet for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

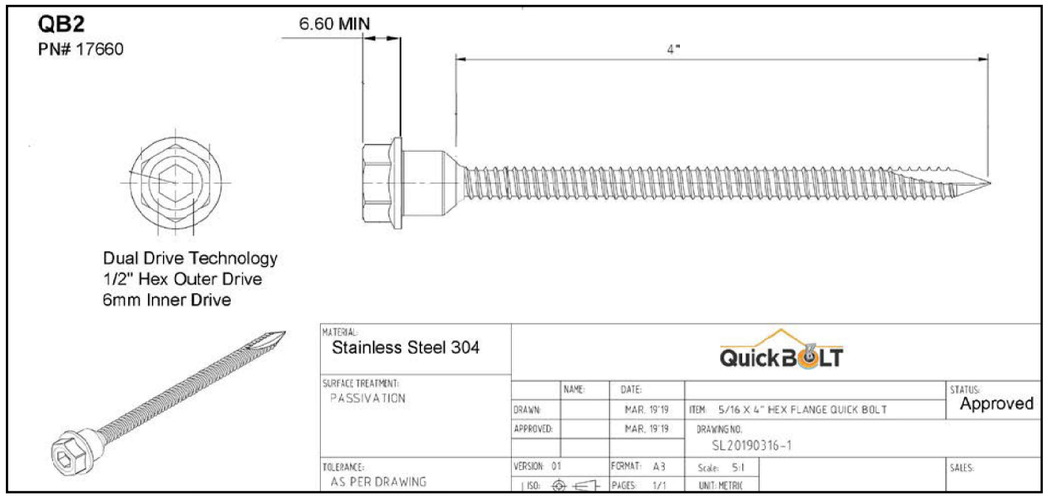
The table below was prepared in compliance with applicable engineering codes and standards.* Values are based on the following criteria: ASCE 7-16, Gable Roof Flush Mount, Roof Zones 1 & 2e, Exposure B, Roof Slope of 8 to 20 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed certification letters.

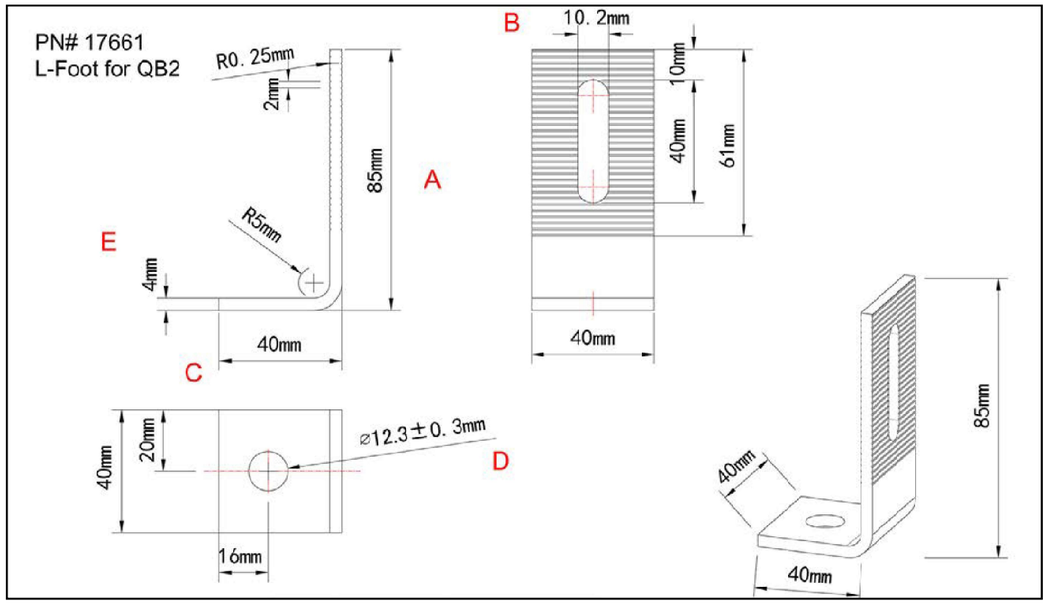
Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	90	XR10		XR100		XR1000	
	120						
	140						
	160						
20	90						
	120						
	140						
	160						
30	90						
	160						
40	90						
	160						
80	160						
120	160						

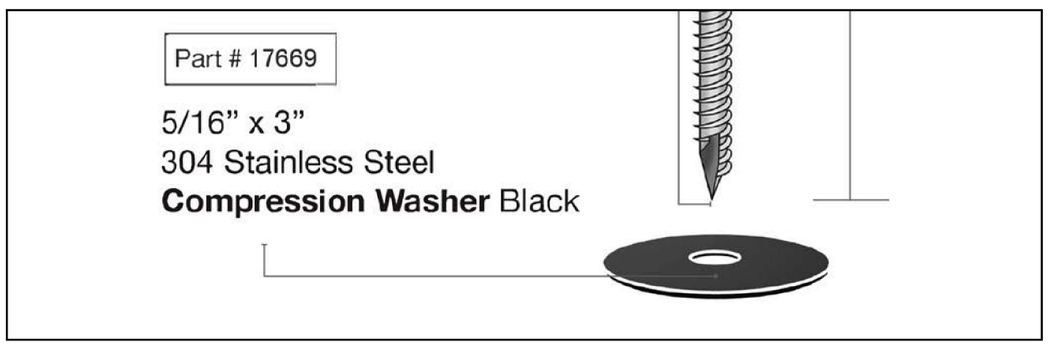
*Table is meant to be a simplified span chart for conveying general rail capabilities. Use approved certification letters for actual design guidance.

SPEC SHEET

Part #	Box Quantity
17660	4” QB2 (25)
17662	3” Microflashing® (25); 4” QB2 (25); L-Foot (25)

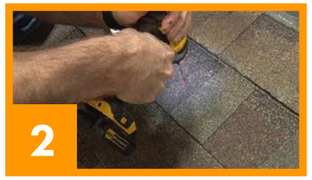


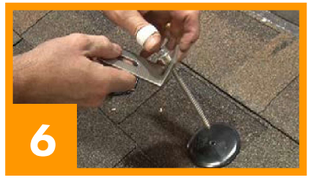




5830 Las Positas Road, Livermore CA 94551 | 3948 Airway Drive, Rock Hill SC 29732
Phone: (844) 671-6045 | Fax: (800) 689-7975 | www.quickbolt.com
QuickBOLT is a division of Quickscrews International Corp.

INSTALL INSTRUCTIONS





QB2 (17662)

RECOMMENDED MATERIALS

- Tools to locate and mark rafter
- Drill with a 15/64" drill bit
- MFG approved sealant (optional)
- 1/2" Nut Setter

INSTALLATION INSTRUCTIONS

1. Locate and mark the rafter
2. Predrill the hole
3. Optional: Fill the predrilled hole with MFG approved sealant
4. Optional: Place a ring of sealant around the bottom of the Microflashing® washer
5. Place the Microflashing®
6. Insert the Bolt into the L-Foot
7. Drive the Bolt until the Microflashing® is compressed

BUILDING CODE LETTER

February 26, 2019

To whom this may concern,

QuickBOLT is committed to excellence. The parts tested are durable goods, meaning the material composition and detailed specifications of the parts do not change. Therefore, all stamps are current. Any part tested will have the same results no matter what year the tests are performed.

SolarRoofHook is the previous name of QuickBOLT. Any test result referencing SolarRoofHook is referring to a QuickBOLT product.

All our parts were tested by a third-party test facility, in possession of a current engineering license for the state where the tests were performed for the following.

1. Uplift test
2. Downward load test
3. Lateral Test – Asphalt Mounts, and Metal Mounts only
4. ASTM E2440 and ASTM E330 Waterproof Tests - QuickBOLT only

The following is an excerpt from:

CALIFORNIA BOARD FOR PROFESSIONAL ENGINEERS AND LAND SURVEYORS
guide to Engineering & Land Surveying for City and County Officials
Page 12, Line 27

27. If the license has expired between the time the engineering documents were prepared and the time when the local agency's review is performed, do the documents need to be re-sealed by a licensee with a current license? (B&P Code §§ 6733, 6735, 6735.3, 6735.4)

As long as the license was current at the time the engineering documents were prepared, the documents do not need to be re-sealed prior to review by the local agency. However, any changes (updates or modifications) to the documents that are made following the review by the local agency would have to be prepared by a licensed engineer with a current license and those changes would have to be signed and sealed.

We trust the information provided will resolve any request for the test reports submitted to have a stamp from the current year.

Regards,

Rick Gentry
Executive Vice President

UL CERTIFICATION

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15
Issued to:	QUICKBOLT A DIVISION OF QUICKSCREWS INTERNATIONAL CORP 5830 Las Positas Rd Livermore, CA 94551
This is to certify that representative samples of	COMPONENT - MOUNTING SYSTEMS, MOUNTING DEVICES, CLAMPING DEVICES AND GROUND LUGS FOR USE WITH PHOTOVOLTAIC MODULES AND PANELS (See Adendum for Additional Information.)
	Have been investigated by UL in accordance with the component requirements in the Standard(s) indicated on this Certificate. UL Recognized components are incomplete in certain constructional features or restricted in performance capabilities and are intended for installation in complete equipment submitted for investigation to UL LLC.
Standard(s) for Safety:	UL 2703 Standard for Mounting Systems, Mounting Devices, Clamping/Retention Devices, and Ground Lugs for Use with Flat-Plate Photovoltaic Modules and Panels.
Additional Information:	See the UL Online Certifications Directory at www.ul.com/database for additional information

This *Certificate of Compliance* does not provide authorization to apply the UL Recognized Component Mark.

Only those products bearing the UL Recognized Component Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Recognized Component Mark on the product.

Bruce Mahrenholz, Director North American Certification Program

UL LLC

CERTIFICATE OF COMPLIANCE

Certificate Number	20191115-E493748
Report Reference	E493748-20170817
Issue Date	2019-NOVEMBER-15

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Addendum -

Models/Product

USR – Component, Roof Mounting Hook Units, Models 15891 15893 15987 16000 16988 16990 16991 16993 17508 17509 17510 17511 17512 17513 17514 17515 17516 17517 17518 17519 17520 17521 17522 17523 17524 17525 17526 17527 17536 17537 17538 17539 17540 17541 17542 17543 17544 17545 17546 17547 17548 17549 17550 17551 17552 17553 17554 17555 17556 17558 17559 17560 17568 17569 17570 17571 17572 17573 17574 17575 17576 17577 17578 17579 17580 17585 17586 17587 17588 17589 17592 17596 17600 17601 17606 17607 17608 17609 17610 17611 17612 17613 17614 17615 17616 17617 17618 17620 17621 17622 17623 17624 17625 17626 17627 17628 17629 17630 17631 17632 17633 17636 17637 17638 17639 17642 17643 17646 17647 17648 17649 17650 17651 17659 17664 17667 17669 17670 17671 17672 17673 17678 17679 17680 17681 17686 17687 17688 17689 17700 17701 17702 17703 17704 17705 17706 17707 17708 17709 17710 17711 17712 17717 17718 17759 15891-10 15891BLK-10 15987A 15987B 17667SS 17672SS 17680SS 17688SS 17713SS 17720 17721SS 17723 17724SS 17726 17727SS 17729 17730SS 15894SS 15891SS 15987BSS 17660 17661 17662 17663

Ratings: Overcurrent Protection Rating – 25 Amps

Bruce Mahrenholz, Director North American Certification Program

UL LLC

U1783-O-KK

Catalog Number	U1783-O-KK
Marketing Product Description	4 Terminal Ringless Plain Top Horn Bypass 2 Position Single Pedestal Direct Bury
UPC	784572134287
Length (IN)	4.5
Width (IN)	8.188
Height (IN)	74
Brand Name	Milbank
Type	Ringless Meter Socket
Application	Meter Socket
Standard	UL Listed;Type 3R
Voltage Rating	Up to 240 Volts Alternating Current
Amperage Rating	200 Continuous Ampere
Phase	1 Phase
Frequency Rating	60 Hertz
Size	4.5L x 8.188W x 74H
Number Of Cutouts	0
Cutout Size	No Main Breaker
Cable Entry	Underground
Terminal	Single Mechanical
Insulation	Glass Polyester
Mounting	Pedestal

Enclosure	G90 Galvanized Steel with Powder Coat Finish
Jaw Quantity	4 Terminal
Bypass Type	Horn Bypass
Number of Meter Positions	2 Positions
Equipment Ground	2 Barrel Ground Lug
Hub Opening	Plain Top
Line Side Wire Range	6 AWG - 350 kcmil
Load Side Wire Range	6 AWG - 350 kcmil
Number Of Receptacles	0

Please consult serving utility for their requirements prior to ordering or installing, as specifications and approvals vary by utility and may require local electrical inspector approval. All installations must be installed by a licensed electrician and must comply with all national and local codes, laws and regulations. Milbank reserves the right to make changes in specifications and features shown without notice or obligation.

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

RESOLUTION NO. 2002-09

A RESOLUTION FOR SITE PLAN AND ARCHITECTURAL REVIEW FOR DAVID S SCHULTZ 512 WESTLAWN AVE, PARCEL MUKV 1960-105

WHEREAS, pursuant to Section 100-601, and 100-153 of the Zoning Code, an application for a site plan and architectural review has been filed for the approval for an additional and building and site modifications, which application was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application has been submitted by the DAVID S SCHULTZ

WHEREAS, the use is permitted within the R-1 Single Family Community Residential District in which the subject property is located, and

WHEREAS, the plan of operation and plans have been reviewed and recommended by the Village Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the site plan and architectural review for structures at 512 Westlawn Ave based upon the plan of operation and plans submitted to the Village.

NOW, THEREFORE, BE IT FURTHER RESOLVED this site plan and architectural review approval shall be subject to the following conditions:

1. Prior to any land disturbing activity, the applicant must submit a complete and final set of plans to the Building Inspections Office. All Village department heads must verify in writing whether they have approved the final plans within their purview. Any outstanding matters must be resolved to staff's satisfaction.
2. Prior to any land-disturbing activity, the applicant must reimburse the Village for any outstanding charges and establish an escrow account with the Village as may be required.
3. The applicant must obtain all required building permits within nine months of this date, and start construction within six months of the date of building permit issuance and continue in good faith to completion.
4. All work related to this project must comply with all project plans approved by the Village.
5. The developer must comply with all requirements related to impact fees imposed by the Village.
6. The developer shall comply with all parts of the Municipal Code as it relates to this project.
7. If the approved plans need to be revised to address any of the conditions of approval or to conform to Building and Fire Safety Codes, the Zoning Administrator and the Supervisor of Inspections are authorized to approve minor modifications so long as the overall project elements remain unchanged. If they determine that the revision is substantial, the plans must be submitted to the Plan Commission for review and approval.

8. Any future modification as required by ordinance, standards, or policy shall require an update to this site plan and architectural review.

NOW THEREFORE BE IT RESOLVED, that the Village of Mukwonago,

Approved and Adopted this 16th day of February 2022 by the Village Board of the Village of Mukwonago, Wisconsin.

APPROVED:

_____
Fred H. Winchowky, Village President

ATTESTATION:

_____
Diana Dykstra, MMC
Village Clerk-Treasurer

PLANNING COMMISSION

February 8, 2021 at 6:30pm
Mukwonago, WI

Extraterritorial CSM Review

S92 W32265 County Road NN, Town of Mukwonago
TM Highview LLC
MUKT 1952-998

Case Summary

Parcel Data

Proposal:	Extraterritorial CSM Review
Applicant:	TM HIGH VIEW LLC
Request:	Request approval of an extraterritorial CSM
Staff Recommendation:	Approve with Conditions

Parcel Characteristics / Conditions

Acreage:	Lot 1 – 37.48 Acres, Lot 2 – 4.01 Acres
Current Use:	Farmland / Farmstead
Proposed Use:	Lot 1 Farmland, Lot 2 Farmstead
Village Ultimate Boundary:	The parcel is within the Village Boundary Agreement Area
Reason for Request:	Splitting off the homestead and farm structure area from agricultural lands
Land Use Classification:	Planned for large Lot single Family (37,500 SF lots)

Project Summary

The proposed CSM is to create two lots from the existing lot. The reason for the land division is to separate the home and agricultural budlings from the agricultural lands.

Staff Review

Public Works	No issues.
Utilities	No issues.
Police	No issues.
Fire	No issues.
Building Inspection	No issues.
Engineering/Planning	See attached letter /comments below: 1. Per Wisconsin Administrative Code Chapter, A-E 7 – No comments.

2. Per Wisconsin Statute Chapter 236.34 (1m) (c) – The location of the land by government lot, recorded private claim, quarter-quarter section, section, township, range and county noted under the CERTIFIED SURVEY MAP heading. The description that is listed is missing the Northwest ¼ on all four pages.
3. Per Wisconsin Statute Chapter 236.20 (2) – Where the exterior boundary lines show bearings or lengths which vary from those recorded in abutting plats or certified surveys, "recorded as" bearings and distances shall be shown. Along the Westerly boundary the "recorded as" bearing for Whispering Oaks Subdivision needs to noted.
4. Per Wisconsin Statute Chapter 236.20 (3)(d) – The names of adjoining streets, highways and subdivisions shown in their proper place. The property to the East on page 1 is listed as unplatted lands, the north half of the area is CSM 9028, the Southern half is unplatted lands per the Waukesha County GIS.
5. Per the Village of Mukwonago Code of Ordinances Chapter 45.94 (6) – The setbacks or building lines required by the planning commission. This may be required per the planning commission.
6. Per the Village of Mukwonago Code of Ordinances Chapter 45.94 (10) – The location, area, depth, and type of the soil absorption wastes disposal system for each building site. The locations of the soil borings are shown, but the depth and soil type are not. These may be best shown on a separate document/form.
    - The vicinity map is incorrect, it should mirror the land described in the heading and Surveyor's Certificate.
    - On page 2, the dashed line should be under CTH 'NN'.
    - On page 1, the word natural is misspelled.

Recommendation

Approval with Conditions. State law allows the Village to review the CSM to ensure compliance with the Village Comprehensive Plan. The Village Comprehensive Plan designates the property as within the ultimate Village Boundary. As the lots sized of each property will be over 7 acres and the village comprehensive plans calls for 3.6 lots per acre there should not be any issues in the future for division of this land to conform to the comprehensive plan. Therefore, as the proposed CSM conforms to the comprehensive plan, staff recommends approval with the following condition:

1. Although the Village of Mukwonago has reviewed the subdivision plat/certified survey map, the surveyor is entirely responsible for the thoroughness and accuracy of the survey and related matters and compliancewith all state and local codes, ordinances, and procedures. Modifications to the survey may be required should errors or changed conditions be found at a future date.
2. Before releasing the CSM for recording, the petitioner shall submit payment for any application fees established by the Village.
3. The petitioner must obtain the approval of the Village Engineer prior to recording. The Village Engineer may ask for any modifications as necessary in addition to those listed in condition #6 below.
4. Prior to Village signature placement on the CSM, the Town of Mukwonago shall provide the Village Planner with documentation of Town approval.

5. The CSM shall have placed upon signature lines for the Village President and Village Clerk for Plan Commission and Village Board Approvals and subsequent signatures prior to recording.
6. The following items shall be corrected on the CSM prior to being returned to the Village for signatures:
    1. Per Wisconsin Administrative Code Chapter, A-E 7 – No comments.
    2. Per Wisconsin Statute Chapter 236.34 (1m) (c) – The location of the land by government lot, recorded private claim, quarter-quarter section, section, township, range and county noted under the CERTIFIED SURVEY MAP heading. The description that is listed is missing the Northwest ¼ on all four pages.
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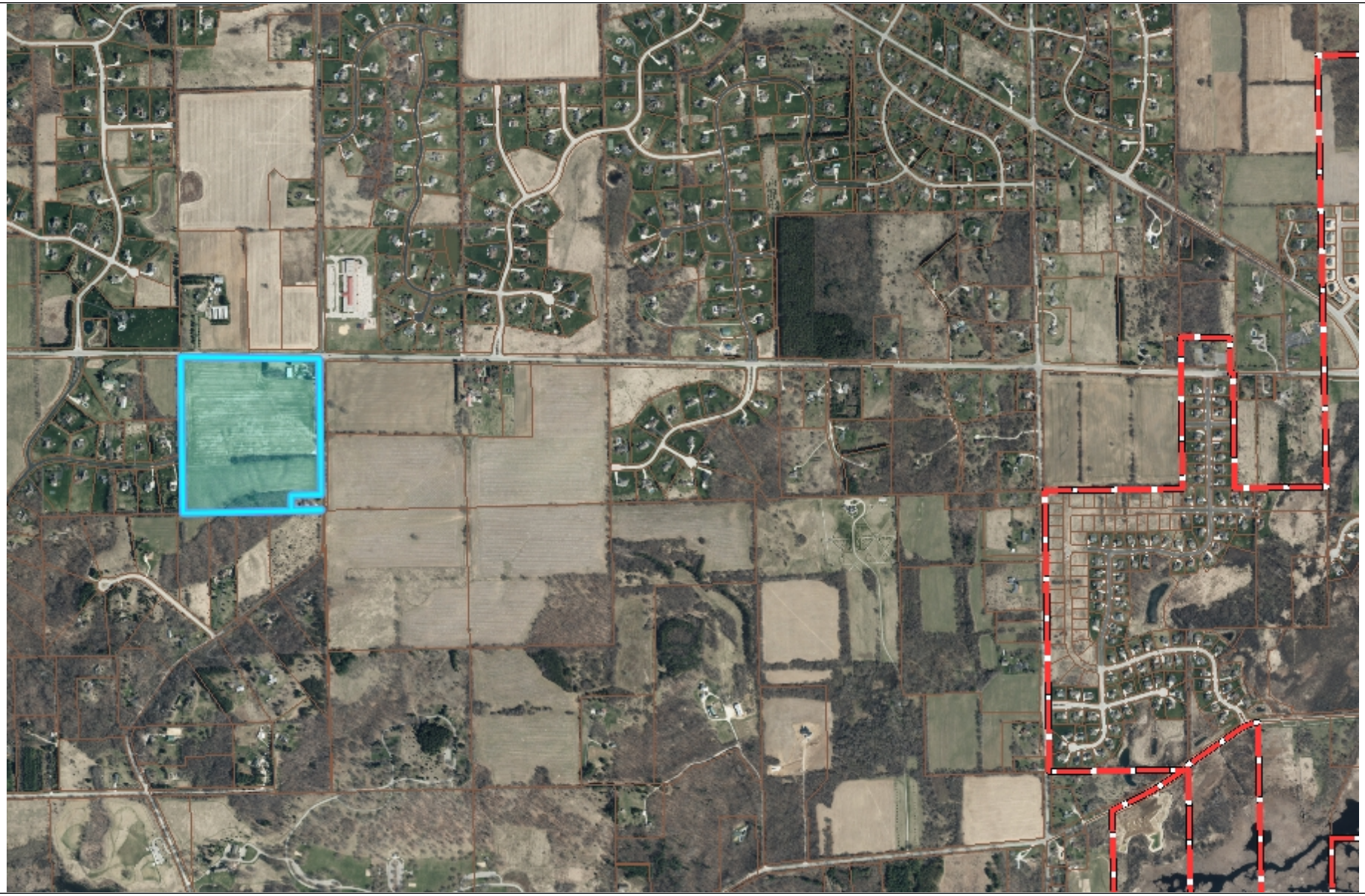
        - The vicinity map is incorrect, it should mirror the land described in the heading and Surveyor's Certificate.
        - On page 2, the dashed line should be under CTH 'NN'.
        - On page 1, the word natural is misspelled.

Attachments

1. Maps
2. CSM



Village of Mukwonago GIS

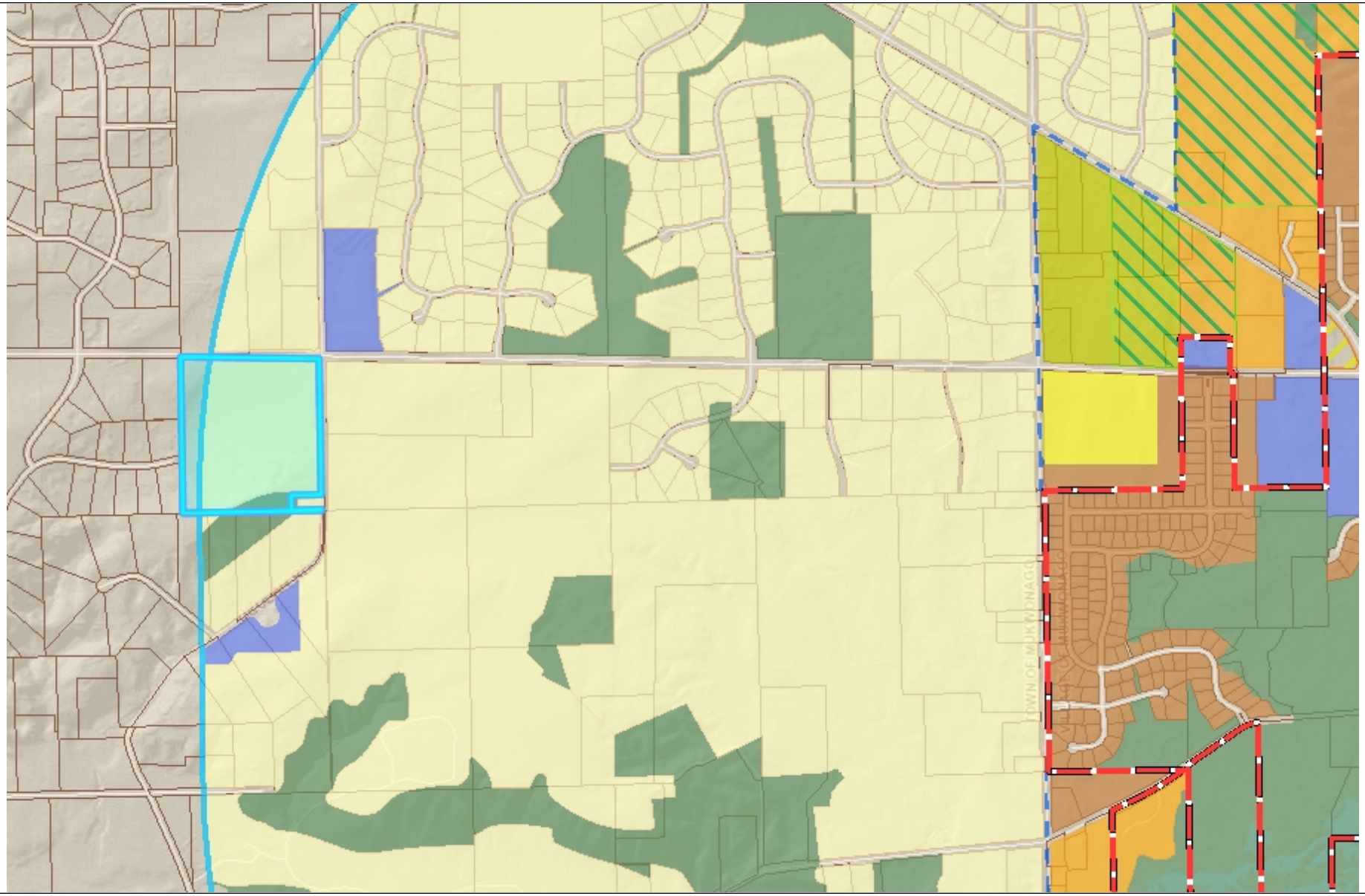
Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 1333 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Land Use

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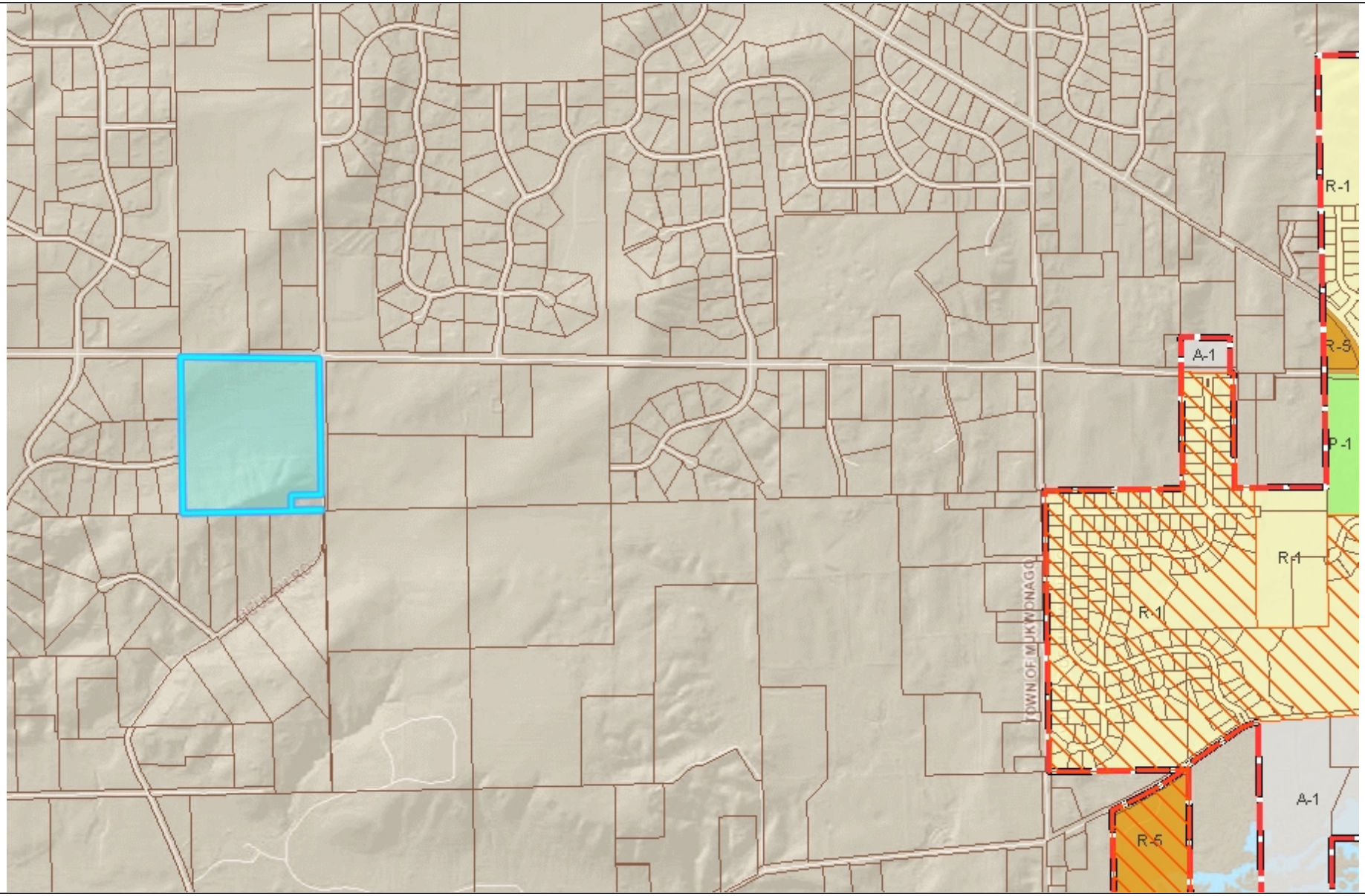
SCALE: 1" = 1333 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022



Village of Mukwonago GIS

Zoning

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 1333 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/18/2022

January 14, 2022

Village of Mukwonago
440 River Crest Ct.
Mukwonago, WI 53149

RE: 2 Lot Certified Survey Map Project Summary

Dear Village Planner,

I have submitted a 2 lot Certified Survey Map located in the Town of Mukwonago for review by the Village because the Village has extraterrorial jurisdiction. The creation of Lot 2 is to divide this 4 acre lot from the remaining parcel so that at some point in the future it will be economically feasible for me to propose an 11 lot subdivision that meets the Town's ordinance.

Included with this project summary is a copy of the January 5, 2022 minutes from the Town of Mukwonago approving the Preliminary CSM, a proposed concept plan of the future subdivision, a Revocable Occupancy Permit with Waukesha County and the soil boring report.

The Town of Mukwonago has sent this same 2 lot CSM to their engineer, Sean Sullivan, of Ruekert/Mielke and knowing that the Village Engineer is Jered Wegner, also from Ruekert/Mielke, I feel there is no need to have an additional review from the same company.

Sincerely,

Tom McAdams, owner
TM Highveiw LLC

ARC™

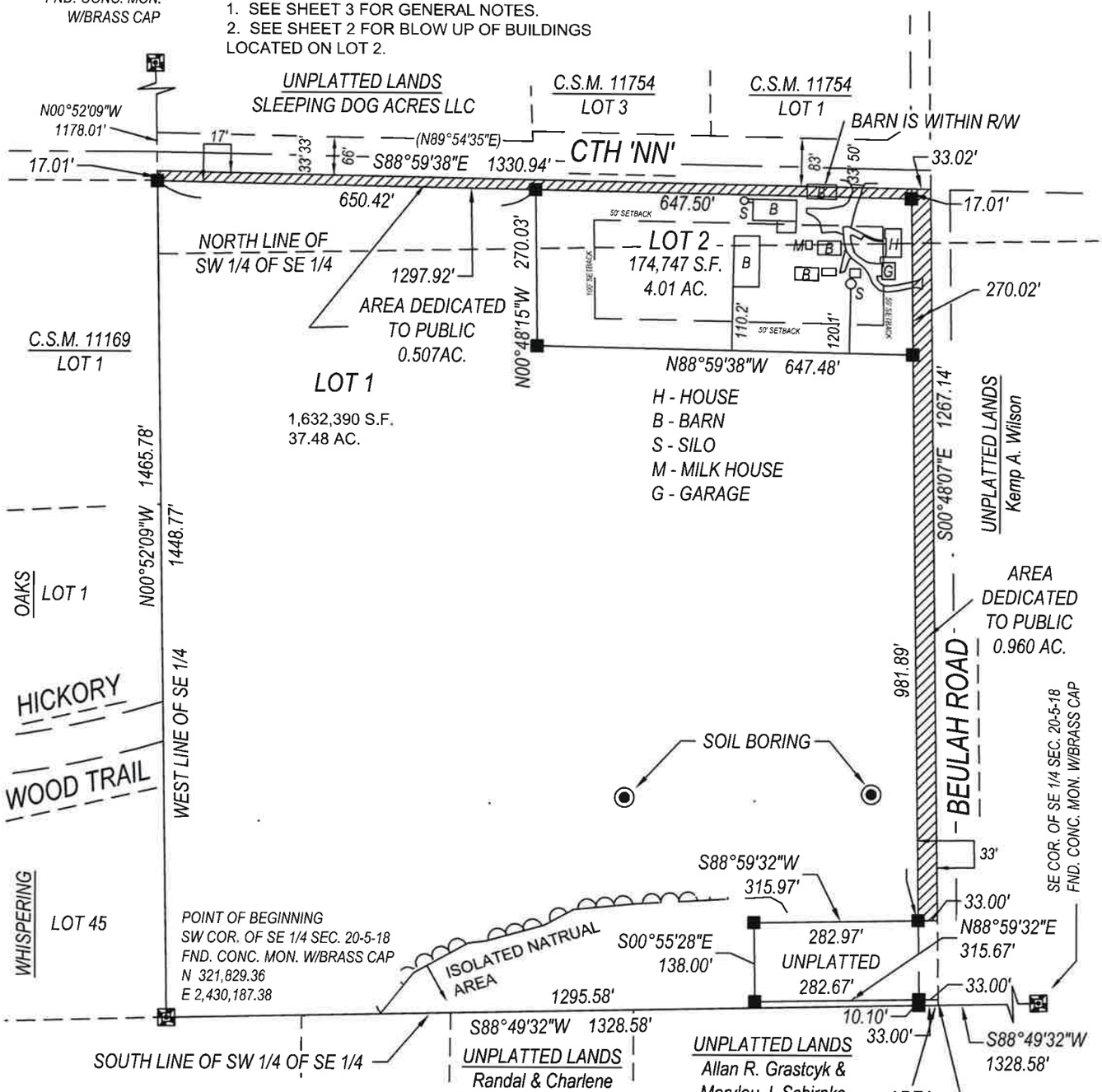
(262) 542-8200

FORM ARC-101

CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

NOTES:
1. SEE SHEET 3 FOR GENERAL NOTES.
2. SEE SHEET 2 FOR BLOW UP OF BUILDINGS LOCATED ON LOT 2.



LEGEND

O	FOUND 1" IRON PIPE
■	SET 5/8" REBAR W/ CAP, 18" LENGTH
(XX R)	RECORDED AS
	MONUMENT FOUND

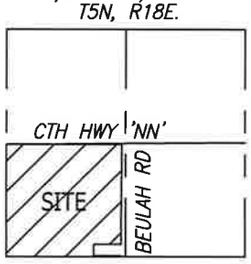
SURVEYOR:
JEFFREY A. NIPPLE
440 MILWAUKEE AVE,
BURLINGTON WI. 53105

OWNER/SUBDIVIDER:
TM HIGH VIEW LLC
S92 W32265 CTY RD 'NN'
MUKWONAGO, WI 53149

GRAPHIC SCALE

0' 250' 500'
125' 375'
1 INCH = 250 FEET

VICINITY MAP
SE 1/4 SW 1/4 SEC. 20 T5N, R18E.



BEARINGS ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM,SOUTH ZONE (NAD '27) - GRID NORTH. THE SOUTH LINE OF THE SE 1/4 OF SEC. 20-5-18 IS ASSUMED TO BEAR S 88°49'32" W

WISCONSIN JEFFREY A. NIPPLE S-1929 ELKHORN, WI 1/14/22 LAND SURVEYOR

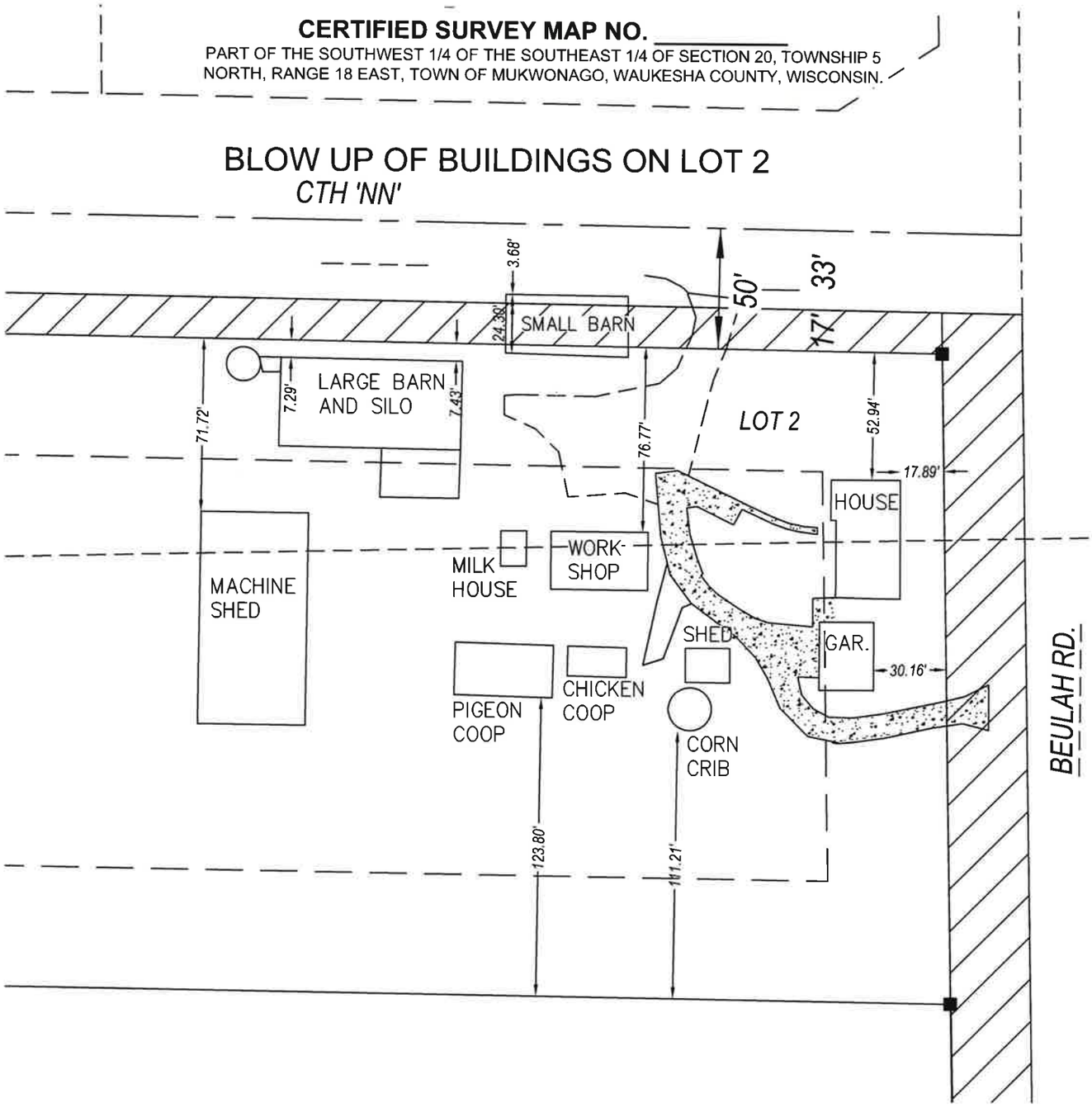
INSTRUMENT DRAFTED BY JEFFREY A. NIPPLE, P.L.S. #1929

21.5093
DATE 01/07/2022
SHEET 1 OF 4

CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

BLOW UP OF BUILDINGS ON LOT 2



LEGEND

- ○ FOUND 1" IRON PIPE
- ■ SET 5/8" REBAR W/ CAP, 18" LENGTH
- (XX R) RECORDED AS

GRAPHIC SCALE

0' 60' 120'

30' 90'

1 INCH = 60 FEET

WISCONSIN JEFFREY A. NIPPLE S-1929 ELKHORN, WI LAND SURVEYOR

SURVEYOR:
JEFFREY A. NIPPLE
440 MILWAUKEE AVE,
BURLINGTON WI. 53105

OWNER/SUBDIVIDER:
TM HIGH VIEW LLC
S92 W32265 CTY RD 'NN'
MUKWONAGO, WI 53149

INSTRUMENT DRAFTED BY JEFFREY A. NIPPLE, P.L.S. #1929

DATE 01/07/2022
SHEET 2 OF 4

CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

SURVEYOR'S CERTIFICATE:

I, JEFFREY A. NIPPLE, PROFESSIONAL LAND SURVEYOR, HEREBY CERTIFY THAT I HAVE SURVEYED AND MAPPED THE FOLLOWING LAND HEREIN DESCRIBED:

BEING PART OF THE SOUTHWEST 1/4 AND THE NORTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN, DESCRIBED AS FOLLOWS:

BEGINNING AT THE SOUTHWEST CORNER OF THE SOUTHEAST 1/4 OF SAID SECTION 20; THENCE N 0°52'09" W ALONG THE WEST LINE OF SAID SOUTHEAST 1/4, 1465.78 FEET TO THE SOUTH LINE OF COUNTY TRUNK HIGHWAY 'NN' (CTH 'NN'); THENCE S 88°59'38" E ALONG SAID SOUTH LINE OF CTH 'NN', 1297.92 FEET TO THE WEST LINE OF BEULAH ROAD; THENCE CONTINUING S 88°59'38" E, 33.02 FEET TO THE CENTERLINE OF SAID BEULAH ROAD; THENCE S 0°48'07" E ALONG SAID CENTERLINE OF BEULAH ROAD, 1267.14 FEET; THENCE S 88°59'32" W, 33.00 FEET TO THE WEST LINE OF BEULAH ROAD; THENCE CONTINUING S 88°59'32" W, 282.97 FEET; THENCE S 0°55'28" E, 138.00 FEET; THENCE N 88°59'32" E, 282.67 FEET TO THE WEST LINE OF BEULAH ROAD; THENCE CONTINUING N 88°59'32" E, 33.00 FEET TO THE CENTERLINE OF BEULAH ROAD; THENCE S 0°48'07" E ALONG SAID CENTERLINE OF BEULAH ROAD, 10.00 FEET TO THE SOUTH LINE OF SAID SOUTHEAST 1/4 OF SECTION 20; THENCE S 88°49'32" W ALONG SAID SOUTH LINE OF THE SOUTHEAST 1/4, 33.00 FEET TO THE WEST LINE OF BEULAH ROAD; THENCE CONTINUING S 88°49'32" W ALONG SAID SOUTH LINE OF THE SOUTHEAST 1/4, 1295.58 FEET TO THE SOUTHWEST CORNER OF SAID SOUTHEAST 1/4 AND THE POINT OF BEGINNING.

SAID PARCEL CONTAINS 1,871,374 SQUARE FEET OR 42.961 ACRES, MORE OR LESS.

I FURTHER CERTIFY THAT I HAVE MADE SAID LAND DIVISION AND DEDICATION BY THE DIRECTION OF TM HIGH VIEW, LLC, OWNER OF SAID LANDS. THAT SUCH LAND DIVISION IS A CORRECT REPRESENTATION OF ALL THE EXTERIOR BOUNDARIES OF THE LANDS SURVEYED AND THE DIVISION THEREOF.

THAT I HAVE FULLY COMPLIED WITH THE PROVISIONS OF CHAPTER 236 OF THE WISCONSIN STATUTES AND SECTION 34 OF THE TOWN OF MUKWONAGO MUNICIPAL CODE IN SURVEYING, DIVIDING, AND MAPPING THE SAME.

DATED THIS 14th DAY OF January, 2022.

Jeffrey A. Nipple 1/14/22
JEFFREY A. NIPPLE
PROFESSIONAL LAND SURVEYOR #S-1929

GENERAL NOTES:

1. SUBJECT LANDS ARE WITHIN THE MUKWONAGO FIRE SERVICE AREA.
2. THERE IS NO FLOODPLAIN ON THIS PARCEL.
3. THERE ARE NO WETLANDS, NAVIGABLE WATER BODY OR SHORELAND JURISDICTION ON THIS PROPERTY.
4. THE ISOLATED NATURAL AREA WAS DETERMINED BY SURVEYING THE DRIP LINE OF THE TREES.
5. THERE ARE NO HISTORICAL OR CULTURAL FEATURES PER STATE HISTORICAL SOCIETY OF WISCONSIN, DIVISION OF HISTORIC PRESERVATION ARCHEOLOGICAL SITE INVENTORY.
6. THERE IS NO LANDFILL, MANURE, OR OTHER WASTE STORAGE FACILITY ON THIS SITE PER REGISTRY OF WASTE DISPOSAL SITES OF WISCONSIN.
7. THERE IS NO KNOWLEDGE OF ANY DRAIN TILE ON PROPERTY.
8. THIS CSM IS IN A STATE DESIGNATED GROUNDWATER MANAGEMENT AREA.
9. THE CHICKEN COOP AND CORN CRIB ARE TO BE REMOVED WITHIN 1 YEAR OF THE SIGNING OF THIS CERTIFIED SURVEY MAP.
10. NO ADDITIONAL ACCESSORY BUILDINGS ALLOWED.
11. NO COMMERCIAL USE OF ANY BUILDINGS ALLOWED.
12. THE OWNER WILL ENTER INTO A PERMISSIVE USE AGREEMENT WITH WAUKEHSA COUNTY.
13. THE EXISTING HOUSE, GARAGE, LARGE AND SMALL BARNS ARE NON-CONFORMING AND ARE LOCATED WITHIN THE BUILDING SETBACK.
14. THERE ARE NO WELLS OR SEPTIC SYSTEMS WITHIN 50 FEET OF THE PROPERTY.

CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

OWNER'S CERTIFICATE:

AS OWNERS, WE, TM HIGH VIEW, LLC, A WISCONSIN COMPANY, HEREBY CERTIFY THAT WE HAVE CAUSED THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP TO BE SURVEYED, MAPPED, DIVIDED AND DEDICATED AS REPRESENTED ON THIS MAP.

AS OWNERS, WE FURTHER CERTIFY THAT THIS PLAT IS REQUIRED BY S. 236.10 OR S.236.12 TO BE SUBMITTED TO THE FOLLOWING FOR APPROVAL:

1. TOWN OF MUKWONAGO
2. VILLAGE OF MUKWONAGO

DATED THIS _____ DAY OF _____, 2022

_____
THOMAS McADAMS - PRESIDENT, TM HIGH VIEW, LLC

STATE OF _____) ss
COUNTY OF _____)

PERSONALLY CAME BEFORE ME THIS _____ DAY OF _____, 2022

THE ABOVE NAMED _____,
TO ME KNOWN TO BE THE PERSONS WHO EXECUTED THE FOREGOING INSTRUMENT AND ACKNOWLEDGED THE SAME.

_____
NOTARY PUBLIC

MY COMMISSION EXPIRES:_____

TOWN BOARD OF MUKWONAGO, TOWN BOARD APPROVAL:

APPROVED BY THE TOWN BOARD OF THE TOWN OF MUKWONAGO

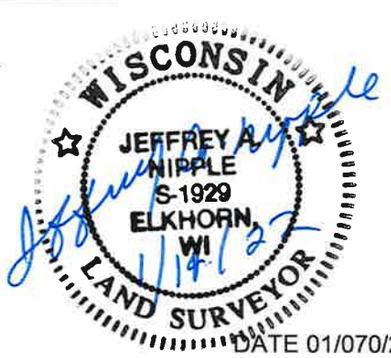
ON THIS _____ DAY OF _____, 2022.

_____ _____
PETER TOPCZEWSKI, TOWN CHAIRMAN KATHY KARLEWITZ, CLERK

VILLAGE BOARD OF MUKWONAGO, TOWN BOARD APPROVAL:

THIS CERTIFIED SURVEY MAP LOCATED WITHIN THE EXTRA-TERRITORIAL JURISDICTION OF THE VILLAGE OF MUKWONAGO IS HEREBY APPROVED BY THE VILLAGE BOARD ON THIS _____ DAY OF _____, 2022

_____ _____
FRED WINCHOKY, PRESIDENT DIANA DYKSTRA, CLERK



DATE 01/070/2022

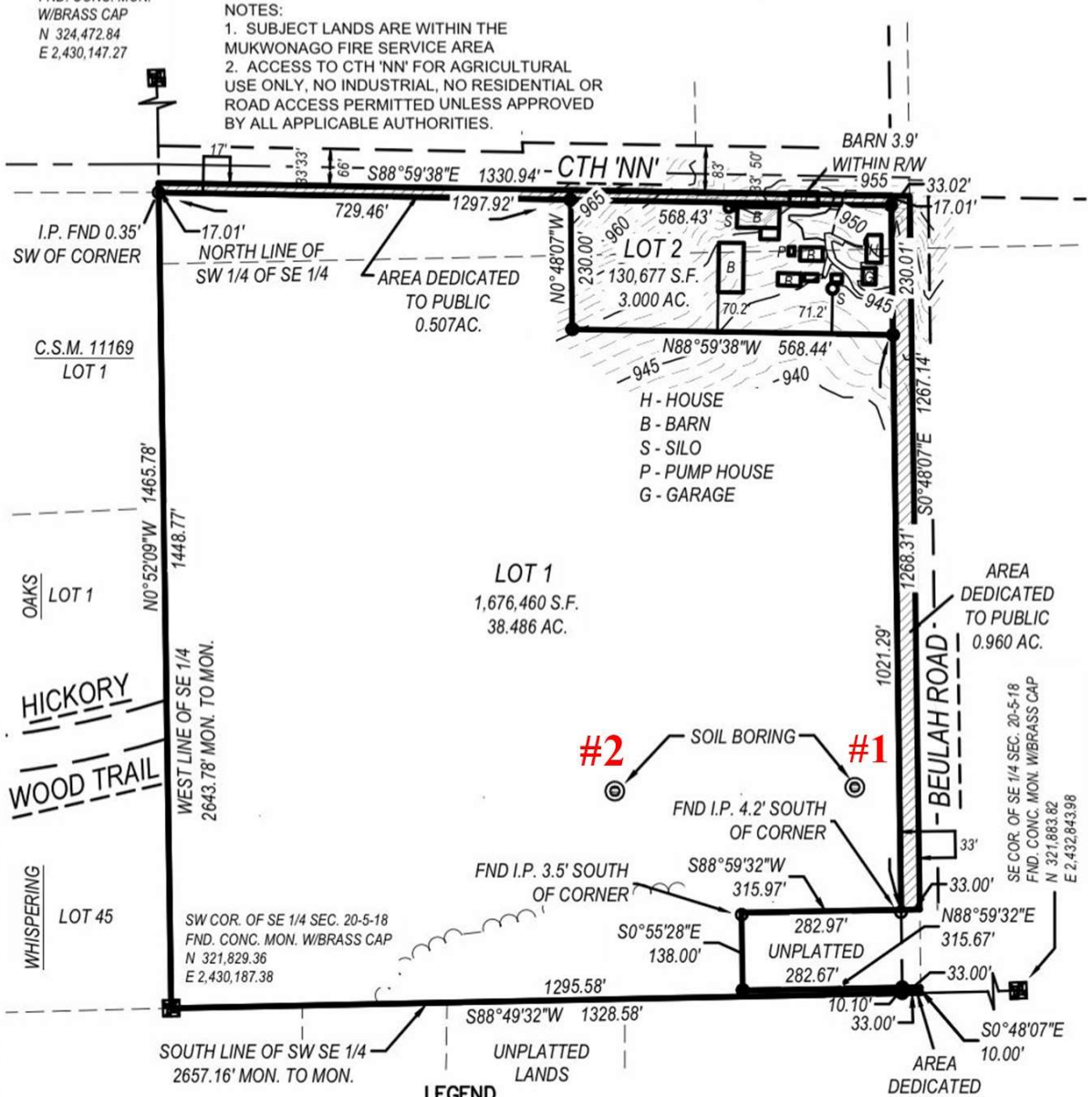
INSTRUMENT DRAFTED BY JEFFREY A. NIPPLE, P.L.S. #1929

CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.

NW COR. OF SE 1/4 SEC. 20-5-18 FND. CONC. MON. W/BRASS CAP N 324,472.84 E 2,430,147.27

NOTES:
1. SUBJECT LANDS ARE WITHIN THE MUKWONAGO FIRE SERVICE AREA
2. ACCESS TO CTH 'NN' FOR AGRICULTURAL USE ONLY, NO INDUSTRIAL, NO RESIDENTIAL OR ROAD ACCESS PERMITTED UNLESS APPROVED BY ALL APPLICABLE AUTHORITIES.



LEGEND

- O FOUND 1" IRON PIPE
- ● SET 3/4" REBAR – 1.502 Lbs./LF
- (XX R) RECORDED AS

SURVEYOR:
PETER J. NIELSON
5482 S. WESTRIDGE DR.
NEW BERLIN, WI 53151

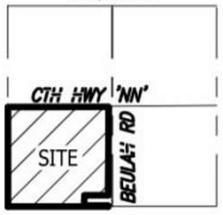
OWNER/SUBDIVIDER:
TM HIGH VIEW LLC
S92 W32265 CTY RD 'NN'
MUKWONAGO, WI 53149

GRAPHIC SCALE
0' 150' 300'
75' 225'
1 INCH = 150 FEET

BEARINGS ARE BASED ON THE WISCONSIN STATE PLANE COORDINATE SYSTEM,SOUTH ZONE (NAD '27) - GRID NORTH. THE SOUTH LINE OF THE SE 1/4 OF SEC. 20-5-18 IS ASSUMED TO BEAR S 88°49'32" W

WISCONSIN
PETER J. NIELSON
S-2527
MILWAUKEE, WI
LAND SURVEYOR

VICINITY MAP
SE 1/4 SEC. 20 T5N, R18E.



INSTRUMENT DRAFTED BY PETER J. NIELSON, P.L.S. #2527

DATE 9/8/2021
SHEET 1 OF 3

P:\shared\1 - Projects\2021\21.5093 - Tom McAdams - S92 W32265 Cty Rd NN - Twn of Mukwonago - TX @ MUKT1952998\CAD\Design\21.5093 S1.dwg

Wisconsin Department of Safety and Professional Services
Division of Industry Services

SOIL EVALUATION REPORT

in accordance with SPS 383, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County: WAUKESHA
Parcel I.D.:
Reviewed by: Date:

Property Owner	Property Location
TOM McADAMS	Govt. Lot SW 1/4 SE 1/4 S 20 T 5 N R 18 ☒ E (or) ☐ W
Property Owner's Mailing Address	Lot # / Block # / Subd. Name or CSM#
S94 W33665 LITTLEFIELD CT	
City / State / Zip Code / Phone Number	☐ City ☐ Village ☒ Town / Nearest Road
MUKWONAGO / WI / 53149 / (414) 8810943	MUKWONAGO / BEULAH Rd

☐ New Construction Use: ☐ Residential / Number of bedrooms _____ Code derived design flow rate _____ GPD
☐ Replacement ☐ Public or commercial - Describe: _____
Parent material _____ Flood Plain elevation if applicable _____ ft.
General comments and recommendations: PRELIMINARY BORINGS

1 Boring # ☐ Boring ☒ Pit Ground surface elev. _____ ft. Depth to limiting factor 45 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2
Ap	0-5	10YR 3/3	—	SL	2FSBK	MFR	AS	2F	0.6	1.0
B	5-16	7.5YR 4/4	—	GSCL	2FSBK	MFR	AW	2F	0.4	0.6
C_1	16-30	10YR 6/4	—	GSL	1FSBK	MFR	AW	1F	0.4	0.7
C_2	30-45	10YR 6/4	—	GS	OSG	ML	CW	—	0.7	1.6
C_3	45-87	10YR 6/4	C2d SPOTS 7.5YR 5/8	GSLSILCB	1FPL	MFR	—	—	0.4	0.6

2 Boring # ☐ Boring ☒ Pit Ground surface elev. _____ ft. Depth to limiting factor 31 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2
Ap	0-10	10YR 3/3	—	SL	2FSBK	MFR	AS	2F	0.6	1.0
E	10-15	10YR 6/2	—	SL	1FSBK	MFR	AS	1F	0.4	0.7
B	15-31	7.5YR 4/4	—	GSCL	2FSBK	MFR	AW	1F	0.4	0.6
C	31-75	10YR 6/4	Fld SPOTS 7.5YR 5/8	GSLSILCB	1FPL	MFR	—	—	0.4	0.6

* Effluent #1 = BOD_5 > 30 ≤ 220 mg/L and TSS >30 ≤ 150 mg/L * Effluent #2 = BOD_5 ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print)	Signature	CST Number
ANN CATALDO	Ann Cataldo	245389
Address	Date Evaluation Conducted	Telephone Number
S15 W33670 WOLF Rd OCONOMOWOC WI 53066	7-9-21	2602968 2550

Document No.

REVOCABLE OCCUPANCY PERMIT

THIS AGREEMENT between the **WAUKESHA COUNTY DEPARTMENT OF PUBLIC WORKS,** hereinafter called the **DEPARTMENT,** and
TM HIGH VIEW LLC hereinafter called the **PERMITTEE**, constitutes a granting of the right to the occupancy of portions of the highway right of way along **C.T.H. "NN".**

The agreement allows the PERMITTEE to maintain an existing barn structure within the described public right of way in Waukesha County, Wisconsin as detailed on the attached legal description.

Should this permit be revoked at a future date, no compensation is due to the PERMITTEE.

This space is reserved for recording data

Return to:
The Waukesha County Dept of Public Works
Attn: Jason Mayer
515 W. Moreland Blvd. Room 220
Waukesha WI 53188

Parcel Identification Number/ MUKT 1952998
Lot 2 CSM#

Date

State of Wisconsin)

COUNTY

Signature

On the above date, this instrument was acknowledged before me by the named person(s).

Tom McAdams, TM HIGH VIEW LLC

Print Name and Title

(Signature, Notary Public, State of Wisconsin)

(Print or Type Name, Notary Public, State of Wisconsin)

(Date Commission Expires)

WAUKESHA COUNTY

Date

State of Wisconsin)

Waukesha COUNTY

Signature

On the above date, this instrument was acknowledged before me by the named person(s). Allison Bussler

ALLISON BUSSLER

Print Name

(Signature, Notary Public, State of Wisconsin)

KAREN LYNN BRAUN

(Print or Type Name, Notary Public, State of Wisconsin)

Director - Waukesha County Department of Public Works

Title

(Date Commission Expires)

LEGAL DESCRIPTION OF PERMIT AREA

Owner: **Tom McAdams, TM HIGH VIEW LLC**

Public Highway right of way adjacent to S92 W32265 Cty. Rd. NN, being a part of the Southwest ¼ of the Southeast ¼ of Section 20, Township 5 North, Range 18 East, Town of Mukwonago, Waukesha County, Wisconsin.

(See Exhibit as Page 4)

Conditions for Occupation of the Right of Way

1. The barn structure within the above described area may remain in place provided if does not interfere with grading, utilities, clear zones, pedestrian facilities or create a visual obstruction for vehicles using driveways and side streets. The determination of the suitability of the material within the described areas shall be the responsibility of the DEPARTMENT.

2. The PERMITTEE or assignees shall be responsible for all necessary maintenance of the barn structure to satisfy the requirements of this permit.

3. Subsequent revisions to the barn structure within the permit area shall be approved by the DEPARTMENT.

4. Advertising signs or other decorative structures cannot be placed within the County right of way.

5. Municipal and public utilities may be placed within the occupancy area when permitted by the County. The utilities will be responsible for restoration of the disturbed area.

6. The PERMITTEE shall hold the County harmless for liability resulting from private use of the right of way.

7. The DEPARTMENT and/or its agents shall not be responsible for any damage or expense as a result of maintenance operations to the highway that is incurred by the PERMITTEE as a result of this authorization.

8. This agreement is not assignable without written approval from the DEPARTMENT.

Owner: **Tom McAdams, TM HIGH VIEW LLC**

Requirements for Removal

Section 86.04, Wisconsin Statutes, contains specific provisions for encroachments upon a highway right of way. Under this section of the Statutes, the DEPARTMENT may order the removal of the encroachment. The DEPARTMENT specifically reserves those rights granted to it under Section 86.04, Wisconsin Statutes. Reasons for removal include but are not limited to the following:

A. In the event that there is a change in the use of the highway right of way, such that the use of the highway right of way is inconsistent with the encroachment of the barn structure upon the right of way, the DEPARTMENT will require the encroachment to be removed at the expense of the PERMITTEE.

B. Should the DEPARTMENT determine that the encroachment obstructs drainage, increases the difficulty of street maintenance, creates conditions adverse to the best interests of the highway user, the general public or presents a threat to highway safety, then the DEPARTMENT will give written notice that the encroachment be removed.

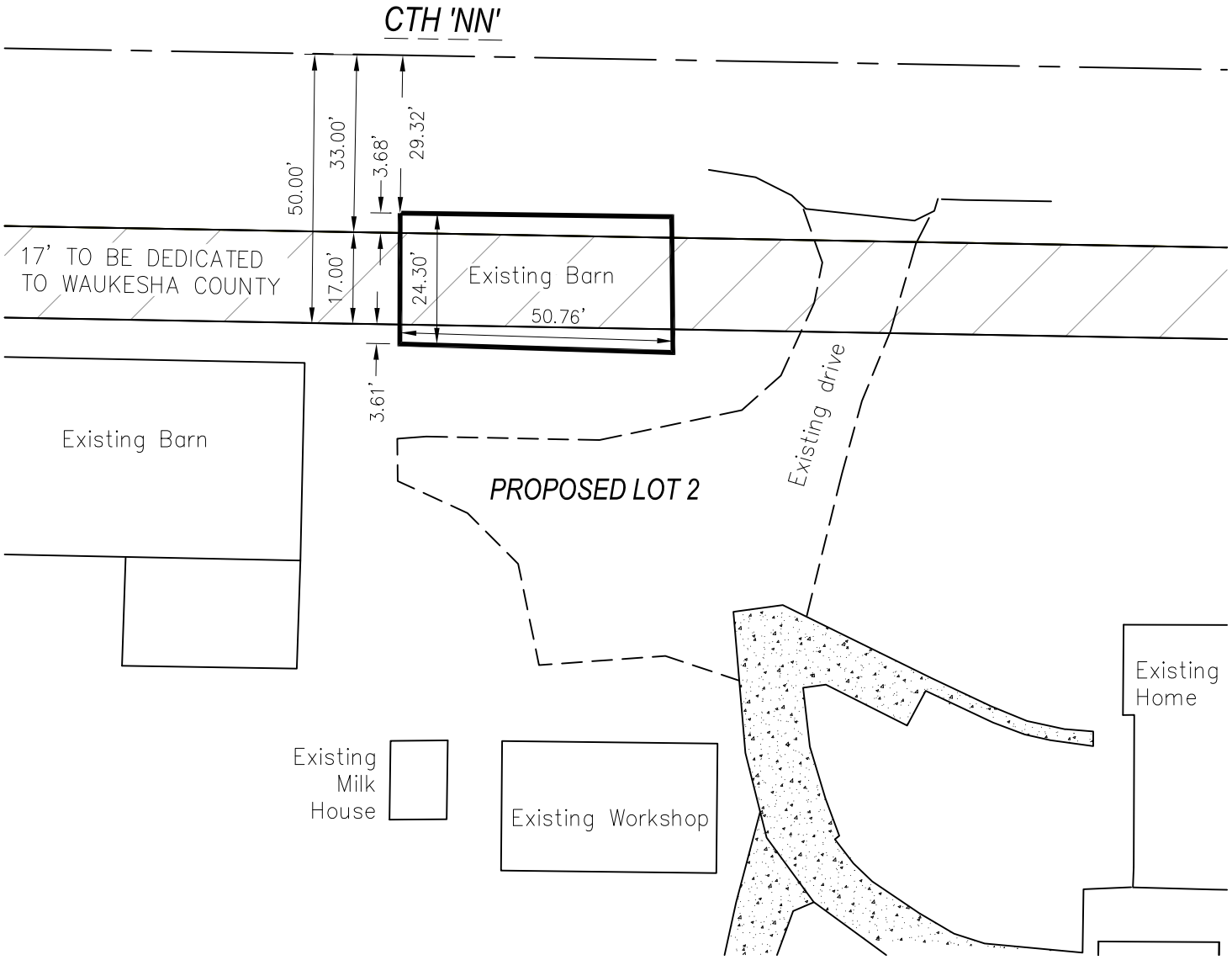
C. Failure of the PERMITTEE to maintain the permit area described herein shall be reason to terminate this permit at the DEPARTMENTS sole discretion.

D. Failure by the PERMITTEE to comply with the provisions of this permit is cause for the DEPARTMENT to terminate this permit and to require the PERMITTEE to take immediate action to implement the removal of the encroachment from the right of way.

EXHIBIT

LOT 2 OF CERTIFIED SURVEY MAP NO. _____

PART OF THE SOUTHWEST 1/4 OF THE SOUTHEAST 1/4 OF SECTION 20, TOWNSHIP 5 NORTH, RANGE 18 EAST, TOWN OF MUKWONAGO, WAUKESHA COUNTY, WISCONSIN.



GRAPHIC SCALE

0' 40' 80'

20' 60'

1 INCH = 40 FEET

OWNER:
TM HIGH VIEW LLC
S92 W32265 CTY RD 'NN'
MUKWONAGO, WI 53149

INSTRUMENT DRAFTED BY JULIE RHODE

In addition, #4; The buildings to be kept in good rural accessory designation conditions.

Plan Commission action: Motion by Commission Yerke to recommend to the Town Board the designation of buildings 1,2,3,5,6,8,9 in the application as rural accessory buildings based on the finding that they meet the criteria established in the Town's zoning code, provided the property owner files deed restrictions as approved by the Town planner when the certified survey map is recorded by Waukesha County and the Town's building inspector determines that the buildings are currently structurally sound. Buildings 4 and 7 to be removed.

The Town put the prospective buyers on notice, and any future buyers to be put on notice, there will be no commercial use on the property and there will be no further out buildings allowed. These two restrictions to be included in the Deed Restrictions Second by Commission Usarek, Chairman Topczewski voted nay, the others all voted aye.

Town Board action: Motion by Supervisor Boucher to accept the Plan Commission's recommendation. Second by Supervisor Wrasman, Chairman Topczewski voted nay, the others all voted aye.

9. Two-lot certified survey map for concept review for property located at S92W32265 CTH NN (MUKT1952998); TM High View LLC, developer (Tom McAdams, agent) (application 2021-29)

Mr. Schwecke gave an overview of the proposal and requirements from his staff report dated December 30, 2021. A joint discussion followed.
Plan Commission action: Motion by Commissioner Schuette to approve the conceptual design of the two-lot CSM, subject to the following conditions:
1. The sheet numbers are incorrect.
2. The layout of the lots in the final CSM must substantially comply with the layout depicted in the conceptual CSM. (**OR** as revised at the meeting)
3. The final CSM must comply with the Town's land division regulations (ch. 34), and any requirements in ch. 236, Wis. Stats.
4. The final CSM submittal must include the Review Checklist as adopted by the Town of Mukwonago, including the requirements for septic systems.
5. The Town engineer must review the CSM and approve of the same.
6. Floodplain limits must be shown on the face of the CSM. If none exist, so note.
7. A signature block must be added for the Village of Mukwonago.
8. The surveyor's seal, signature, and date must appear on all sheets of the final CSM. The same revision date must also be noted on each sheet.
9. The petitioner must obtain all necessary approvals as specified in s. 236.34(1), Wis. Stats.
10. The petitioner must remove the accessory buildings to comply with the maximum number/floor area for the A-1 district or submit an application for a rural building determination and/or a special exception for additional floor area.
11. The petitioner should either obtain a permissive use agreement with the county (or equivalent) for the barn in the ROW or written confirmation from the county indicating such agreement is not needed.
12. The final CSM must include an explanatory note regarding the nonconforming structures within the front-yard setback.
13. The petitioner must obtain verification from Waukesha County that the existing septic on lot 2

complies with all current standards and requirements.
14. The concept layout for the future division of Lot 1 is for informational purposes and is in no way binding on the Town in any manner should the petitioner submit a subdivision proposal.
Second by Commissioner Yerke, all in favor; motion passed.

10. Discussion related to potential amendments to the zoning code

The Planner read thru the proposed changes to the ordinance. Discussion followed.

Plan Commission action: Motion by Chairman Topczewski direct staff to initiate a petition to set a public hearing date for the meeting February 2, 2022 for the text amendment. Also, to direct staff to initiate a petition to amend the Town Map and to notify those residents affected by the changes.
Petition to notify neighbors. Second by Commissioner Schuett, all in favor; motion passed.

11. Miscellaneous correspondences (none)

12. Recommendations for future agendas (no packet materials). Discussion to possibly go back to Zoom meetings, or hybrid meetings

Miscellaneous updates (if any) none

A. Phantom Lake Management District

B. Fox River Commission

Next regular meeting date

February 2, 2022

Adjournment

Plan Commission action: Motion by Chairman Topczewski, second by Commissioner Schuett to adjourn at 8:15p.m. All ayes, motion passed.

Town Board action: Motion by Chairman Topczewski, second by Supervisor Yerke to adjourn at 8:15p.m. All ayes, motion passed.

Respectfully submitted,

Gail Obradovich Deputy/Clerk-Treasurer

UNAPPROVED

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

RESOLUTION NO. 2022-13

RESOLUTION APPROVING THE EXTRATERRITORIAL REVIEW OF A TWO-LOT CERTIFIED SURVEY MAP WITHIN THE TOWN OF MUKWONAGO TAX KEY MUKT 1952-998

WHEREAS, pursuant to the Village of Mukwonago Land Division Ordinance and the State of Wisconsin Plat Act (Chapter 236), an application for extraterritorial review of a Certified Survey Map for the property with the current tax key numbers of **MUKT 1952-998,** located within the Town of Mukwonago, was filed in the office of the Village Clerk, Village of Mukwonago, Wisconsin, and

WHEREAS, the application was submitted by TM Highview LLC, and

WHEREAS, the subject property, located along S92 W32265 County Road NN, Town of Mukwonago with the 1.5-mile extraterritorial plat review area surrounding the corporate boundary of the Village of Mukwonago, and

WHEREAS, the Plat Act allows the Village the opportunity to review any land division that is within the 1.5-mile extraterritorial plat review area for compliance with the Village Comprehensive Plan, and

WHEREAS, the subject property, is located within the ultimate village boundary.

WHEREAS, a 2-lot CSM is being created out of the existing parcel and recommended by the Village Plan Commission.

NOW, THEREFORE, BE IT RESOLVED by the Village Board of the Village of Mukwonago, Wisconsin hereby approves the 2-Lot Certified Survey Map dated January 7th 2022 prepared by Jeffery A Nipple subject to documentation of Town Board approval and the following conditions.

1. Although the Village of Mukwonago has reviewed the subdivision plat/certified survey map, the surveyor is entirely responsible for the thoroughness and accuracy of the survey and related matters and compliancewith all state and local codes, ordinances, and procedures. Modifications to the survey may be required should errors or changed conditions be found at a future date.
2. Before releasing the CSM for recording, the petitioner shall submit payment for any application fees established by the Village.
3. The petitioner must obtain the approval of the Village Engineer prior to recording. The Village Engineer may ask for any modifications as necessary in addition to those listed in condition #6 below.
4. Prior to Village signature placement on the CSM, the Town of Mukwonago shall provide the Village Planner with documentation of Town approval.
5. The CSM shall have placed upon signature lines for the Village President and Village Clerk for Plan Commission and Village Board Approvals and subsequent signatures prior

to recording.

6. The following items shall be corrected on the CSM prior to being returned to the Village for signatures:
    1. Per Wisconsin Administrative Code Chapter, A-E 7 – No comments.
    2. Per Wisconsin Statute Chapter 236.34 (1m) (c) – The location of the land by government lot, recorded private claim, quarter-quarter section, section, township, range and county noted under the CERTIFIED SURVEY MAP heading. The description that is listed is missing the Northwest ¼ on all four pages.
    3. Per Wisconsin Statute Chapter 236.20 (2) – Where the exterior boundary lines show bearings or lengths which vary from those recorded in abutting plats or certified surveys, "recorded as" bearings and distances shall be shown. Along the Westerly boundary the "recorded as" bearing for Whispering Oaks Subdivision needs to noted.
    4. Per Wisconsin Statute Chapter 236.20 (3)(d) – The names of adjoining streets, highways and subdivisions shown in their proper place. The property to the East on page 1 is listed as unplatted lands, the north half of the area is CSM 9028, the Southern half is unplatted lands per the Waukesha County GIS.
    5. Per the Village of Mukwonago Code of Ordinances Chapter 45.94 (6) – The setbacks or building lines required by the planning commission. This may be required per the planning commission.
    6. Per the Village of Mukwonago Code of Ordinances Chapter 45.94 (10) – The location, area, depth, and type of the soil absorption wastes disposal system for each building site. The locations of the soil borings are shown, but the depth and soil type are not. These may be best shown on a separate document/form.
        - The vicinity map is incorrect, it should mirror the land described in the heading and Surveyor's Certificate.
        - On page 2, the dashed line should be under CTH 'NN'.
        - On page 1, the word natural is misspelled.

NOW THEREFORE BE IT RESOLVED, that the Village of Mukwonago,

Approved and adopted this 16th day of February 2022 by the Village Board of the Village of Mukwonago, Wisconsin.

APPROVED:

_____
Fred H. Winchowky, Village President

ATTESTATION:

_____
Diana Dykstra, MMC
Village Clerk-Treasurer

PLANNING COMMISSION

February 8, 2021 at 6:30pm
Mukwonago, WI

Ordinance – Amending the Zoning Map

Modifications of the Zoning Map for Multiple Parcels

Project Summary

The Village of Mukwonago zoning code has not been updated or revised in a significant period of time. Currently the zoning code is being updated. This process began in 2021 and it is anticipated to be complete in 2023.

As part of the zoning code update the zoning map of the Village will be updated with new names, new districts.

As such the consultant and staff have analyzed the existing zoning map in conjunction with the comprehensive plan. The following changes if adopted under the current zoning map will also for the new zoning map to be created more smoothly and allow for better coordination with the comprehensive plan.

Changes

From A-1 Agricultural District to P-1 Public and Semipublic District

MUKV1959988010 - S93W30740 HIGHWAY NN
Owner: Owner: Village of Mukwonago
LOT 1 CSM #9046 VOL 81/198 REC AS DOC #2589806 PT SW1/4 SEC 22 T5N R18E

MUKV1977999001 - COUNTY ROAD LO
Owner: Village of Mukwonago
PT NE1/4 & SE1/4 SEC 27 T5N R18E; COM E1/4 COR; S89°26'W 1329.98 FT; S 280 FT THE BGN; N 130 FT; N 149.87 FT; S89°26'W 1329.98 FT; N 468.36 FT; N85°38' E 988.68 FT ALG CURVE 272.61 FT; N53°28'E 613.85 FT ALG CURVE N70°48'E 267.27 FT; N88°09'E 681.58 FT; S 1087.14 FT TO BGN :: DOC #1081540 & DOC #1081541

MUKV1979995001 – No Address Assigned
Owner: Village of Mukwonago
N1/2 NW1/4 SE1/4 & N1/2 NE1/4 SE1/4 SEC 27 T5N R18E :: DOC #1714562

MUKV1979989 - COUNTY ROAD LO
Owner: Village of Mukwonago
PT SE1/4 NW1/4 & NE1/4 SW1/4 SEC 27 T5N R18E PCL 6 COM SW COR SW1/4 N89°42'E 1331.14 FT; N 1313.36 FT; N89°51'E 662.72 FT THE BGN; N89°51'E 668.69 FT; N0°01'E 880.46 FT; N42°12'E 470.33 FT; N89°59'W 192.72 FT; N0°01'E 468.44 FT; S87°08'W 623.12 FT; S84°26'W 42.78 FT; S0°08'W 1744.60 FT TO BGN :: DOC #1334435

#VM 00029 – No Address Assigned
Owner: FRIENDS OF EAST TROY RAILROAD MUSEUM INC
PT NW 1/4 SEC 2 T4N R18E DESC AS: COM NW COR NW 1/4 SEC 2, N89D57'56"E 511.92' TO POB, N89D57'56"E 368.09' TO C/L HWY ES, S37D57'05"W 174.79', S56D26'36"W 325.58' TO C/L HWY J, S81D27'48"W 191.41', N30D01'55"E 399.65' TO POB. EXC SLY 33' & ELY 33' FOR HWY. 83357 SQ FT (NET) VILLAGE OF MUKWONAGO ANNEXED UNDER #822030 OMITS P ET 2-3C, P ET 2-3C1 & P ET 2-3D

MUKV2011985 - 1450 MAIN ST
Owner: FRIENDS OF EAST TROY RAILROAD MUSEUM INC
PT SW1/4 SEC 35 T5N R18E; COM AT PT S88°50'E 511.92 FT FROM NW COR SEC 2 T4N R18E; S88°50'E 368.23 FT; N39°09'E 105.89 FT; N55°28'W 290.25 FT; N58°46'W 32.00 FT; S31°14'W 38.00 FT; N58°46'W 11.50 FT; S31°14'W 268.01 FT TO BGN :: DOC# 2018861 & DOC# 2166958

From P-1 Public and Semipublic District to A-1 Agricultural District

A364100001 - 1545 MAIN ST
STRAWBERRY ORCHARDS LLC
LOT 1 CERTIFIED SURVEY NO. 3641 AS RECORDED IN VOL 21 OF C.S. ON PAGE 296 WCR. LOCATED IN NW 1/4 & SW 1/4 NW 1/4 SEC 2 T4N R18E. 163146 SQ FT OUT OF #VM-11

From A-1 Agricultural District /M-2 Light Industrial District /M-4 Medium /Heavy Industrial to A-1 Agricultural District

MUKV 2012994 – Address Not Assigned
HMS PARTNERS LLC
PT SE1/4 SEC 35 T5N R18E; COM SE COR; N0°45'54"E 1872.26 FT; S44°19'29"W 1277.35 FT; S50°02'07"W 201 FT; S44°19'29"W 1107.10 FT; S88°48'46"E 1795.50 FT TO BGN :: EX RR :: DOC #4380104

From R-1 Single Family Community Residential District and P-1 Public and Semipublic District to P-1 Public and Semipublic District

MUKV2134998003 – Address Not Assigned
Owner: Village of Mukwonago

PT NW1/4 SEC 30 T5N R19E :: ALSO PT NE1/4 SEC 25 T5N R18E; COM NW COR SEC 30 N87°15'E 490 FT TO HIGH WATER LI FOX RIVER; SELY ALG RIVER TO W HIGH WATER LI MUKWONAGO RIVER; SLY ALG RIVER TO N LI SE1/4 NW1/4 SEC 30 T5N R19E; S87°46'W 550 FT; S01°21'E 295 FT TO N HIGH WATER LI MUKWONAGO RIVER; SWLY ALG RIVER TO E LI NE1/4 SEC 25 T5N R18E; S01°13'E 270 FT; N89°35'W 1812.71 FT; N 600.15 FT; S89°35'E 1463.58 FT; N30°22'W 260.19 FT; N05°20'E 100.41 FT; N20°46'E 543.27 FT; N74°12'E 173.36 FT; N60°46'E 287.77 FT; N56°23'E 139.91 FT; N49°04'E 322.08 FT; N25°32'W 486.51 FT; N65°02'W 247.26 FT; N65°21'W 219.23 FT; N55°55'E 105.35 FT TO BGN :: EX COM SE COR CSM #7041; N 496.47 FT THE BGN; N 103.67 FT N89°35'E 184.05 FT; S 99.63 FT; S89°08'W 184.01 FT TO BGN :: ALSO EX COM SE COR CSM #7041; N 600.15 FT; S89°35'E 252.42 FT THE BGN; S89°35'E 20.01 FT; S01°47'E 19.23 FT; S88°12'W 20 FT; N01°47'W 20 FT TO BGN :: EX CSM #8526 :: ALSO PT SW1/4 NE1/4 SEC 25 T5NR18E; COM SE COR CSM #7041; N00°51'W 600.15 FT; S89°35'E 252.42 FT THE BGN; S89°35'E 20.01 FT; S01°47'E 19.23 FT; S88°12'W 20.00 FT; N01°47'W 20.00 FT TO BGN :: EX DOC #2600132 :: DOC #2180797 & DOC #2600131

MUKV1969076 - TWO RIVERS CT
Owner: Village of Mukwonago

OUTLOT 1 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC #2356791

From R-1 Single Family Community Residential District to P-1 Public and Semipublic District

MUKV1969062 – Address Not Assigned
Owner: Village of Mukwonago

OUTLOT 1 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E :: DOC #2335481

MUKV1969077 No Address Assigned
Owner: Village of Mukwonago

OUTLOT 2 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC #2356791

MUKV2091085002 – Address Not Assigned
WAUKESHA COUNTY
OUTLOT 2 FOX RIVER VIEW PT SW1/4 & SE1/4 SEC 19 & NW1/4 SEC 30 T5N R19E (DEDICATED TO WAUKESHA COUNTY PER PLAT) :: INCLUDING BURIAL LANDS AS DESCRIBED IN NOTICE OF LOCATION OF CATALOGUED BURIAL SITE EXECUTED BY THE STATE HISTORICAL SOCIETY OF WISCONSIN AND RECORDED AS DOC #3212088

MUKV2091089 – Address Not Assigned
Owner: Village of Mukwonago
OUTLOT 6 FOX RIVER VIEW PT SW1/4 & SE1/4 SEC 19 & NW1/4 SEC 30 T5N R19E :: DOC #3200496

From R-1 Single Family Community Residential District and P-1 Public and Semipublic District to R-1 Single Family Community Residential District

MUKV1969025 -416 EASTERN TRL
Owner: CONNIE R COYLE
LOT 18 BLK 6 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E

MUKV1969023 - 426 EASTERN TRL
Owner: JIM DARBY
LOT 16 BLK 6 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E :: DOC #4355641

MUKV1969070 - 1341 TWO RIVERS CT
Owner: ANDREW CIGANEK
LOT 26 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E 0.910 AC DOC# 3715550

MUKV1969069 - 1338 TWO RIVERS CT
Owner: ANDREW R YERGENS & SHELLY A YERGENS JT REV TRUST
LOT 25 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC# 4182004

MUKV1969068 - 1332 TWO RIVERS CT
Owner: HARTWIG TRUST
LOT 24 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E 1.366 AC DOC# 3322411

MUKV1969067 - 1326 TWO RIVERS CT
Owner: BRIAN SWIRTH
LOT 23 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E R2885/3305

MUKV1969066 - 1320 TWO RIVERS CT
Owner: LOUIS BURG
LOT 22 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E DOC# 2790910

MUKV1969065 - 1314 TWO RIVERS CT
Owner: MARK A ZABOROWSKI
LOT 21 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC# 4143905

MUKV1969064 -1308 TWO RIVERS CT
Owner: KENNETH A WERNER JR
LOT 20 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E DOC# 2815397

MUKV1968142 626 TWO RIVERS DR
Owner: GREGORY J WILLETT
LOT 13 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E 1.1297 AC DOC# 3482848

MUKV1968141 630 TWO RIVERS DR
Owner: LUCAS G LEMASTER
LOT 12 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E

MUKV1968140 - 634 TWO RIVERS DR
Owner: SHAWN MCNULTY
LOT 11 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2912593

MUKV1968139 - 638 TWO RIVERS DR
Owner: JASON R PARSELL

LOT 10 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E :: DOC# 4113379

MUKV1968138 - 642 TWO RIVERS DR
Owner: JOHN E LEPINSKI
LOT 9 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E 0.8002 AC DOC# 3632084

MUKV1968137 - 646 TWO RIVERS DR
Owner: BRAD SMITH
LOT 8 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2814156

MUKV1968136 - 650 TWO RIVERS DR
Owner: TIMOTHY MAHER
LOT 7 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2601340

MUKV1968135 - 704 TWO RIVERS DR
Owner: JOAN DUBEY
LOT 6 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E

MUKV1968134 - 712 TWO RIVERS DR
Owner: ROBERT C JOY
LOT 5 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 4042130 & DOC# 4082094

MUKV1968133 - 720 TWO RIVERS DR
Owner: JOSEPH KOWALCZYK
LOT 4 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2536266

MUKV1968132 - 728 TWO RIVERS DR
Owner: JOHN BUSSE JR
LOT 3 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2676113

MUKV1968131 - 736 TWO RIVERS DR
Owner: CYNTHIA M SCHIFERL
LOT 2 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E :: DOC# 4228964

MUKV1968130 - 744 TWO RIVERS DR
Owner: JONATHAN G HURLEY
LOT 1 BLK 5 & OUTLOT 1 BLK 9 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 3899387

From R-2 Single-Family Village Residential to R-1 Single Family Community Residential District

MUKV1974977 – 577 Eagle Lake Ave
Owner: JOSEPH C MENDEZ
PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT N 566.28 FT N89°E 74.25 FT S 567.60 FT W 74.25 FT TO BGN 0.966 AC ALSO 28 FT STRIP DOC# 3116776

MUKV1974976 – 503 Eagle Lake Ave
Owner: KRISTIN J PETERSON
E 120 FT OF PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N OF & 74.25 FT E OF W1/4 POST N 567.6 FT N89°E 74.25 FT S 568.92 FT W 74.25 FT TO BGN ALSO COM 505.62 FT N OF & 148.50 FT E OF W1/4 POST N 568.92 FT N89°E 74.25 FT S 570.24 FT W 74.25 FT TO BGN DOC# 3603451

MUKV1974975 – 493 Eagle Lake Ave
Owner: JASON DREGER

PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 222.55 FT N 570.24 FT N89°E 74.25 FT S 571.56 FT W 74.25 FT TO BGN DOC# 3057094

MUKV1974974 – 487 Eagle Lake Ave
Owner: TERRY HASS

PT NW1/4 SEC 26 T5N R18E; COM 7 CH 66 LINKS (505.56 FT) N & 4 CH 50 LINKS (297 FT) E OF W1/4 POST; N 8 CH 66 LINKS (571.56 FT) TO CNTR OF HWY; N89°E 1 CH 25 LINKS (82.5 FT); S 8 CH 68 1/4 LINKS (573.04 FT); W 1 CH 25 LINKS (82.5 FT) TO BGN :: DOC# 4222578

MUKV1974973 – 477 Eagle Lake Ave
Owner: RICHARD R HIERL

PT NW1/4 SEC 26 T5N R18E; COM AT POINT 505.56 FT N & 379.50 FT E OF 1/4 POST ON W SI OF SAID SEC 26; N PARALLEL TO W LI OF SEC 573.04 FT TO CTR OF HWY; N89°E IN CTR OF HWY 82.50 FT; S PARALLEL TO W LI OF SEC 574.53 FT; W 82.50 FT TO BGN :: DOC #4379879

MUKV1974972 – 467 Eagle Lake Ave
Owner: CRAIG WILSON

PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N & 462.00 FT E OF W1/4 POST N 574.53 FT N89°E 82.50 FT S 577.99 FT W 82.50 FT TO BGN DOC# 3170440

MUKV1974971 – 459 Eagle Lake Ave
Owner: DANIEL LEISTER

PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 544.50 FT N 576.01 FT N89°E 82.50 FT S 577.50 FT W 82.50 FT TO BGN DOC# 3951221

MUKV1974970- No Address
Owner: WAUKESHA COUNTY

PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 627 FT N 577.50 FT S81 E 76.56 FT S 566.28 FT W 75.90 FT TO BGN 0.715 AC EX R24/71 R999/268

MUKV1974969 – 512 Bay St
Owner: NICHOLAS K NEWBY

PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N & 627 FT E OF W1/4 POST N 130.02 FT E 75.90 FT S 130.02 FT W 75.90 FT TO BGN DOC# 4039326 & DOC# 4043584

MUKV1974985 – 430 Eagle Lake Ave
Owner: DEBBIE D JAMES

PT NW1/4 SEC 26 T5N R18E; COM NW COR; S 1/2°W 883.08 FT; N89°30'E 726 FT THE BGN; S 1/2°W 676.5 FT; S86°E 92.6 FT; N 1/2°E 684.5 FT; S89°30'W 92.42 FT TO BGN :: DOC# 4131729 & DOC# 4170782

MUKV1974984 – 440 Eagle Lake Ave
Owner: ROSS PILAK

T NW1/4 SEC 26 T5N R18E; COM AT PT CTR OF HWY 16.24 CH (1071.84') N OF 1/4 POST W SI SEC 26 & 11 CH (726') N89°E OF W LI SEC 26; N 10 CH (660'); S89°W 100 FT; S 10 CH (660') TO CNTR OF HWY; N89°E 100 FT TO BGN :: DOC #4343503

MUKV1974983 – 450 Eagle Lake Ave
Owner: RAYMOND SCHMIDT

PT NW1/4 SEC 26 T5N R18E; COM IN CTR OF HWY 16 CHAINS & 24 LINKS (1071.84 FT) N OF W1/4 POST & 6 CHAINS (396 FT) N89°E FROM W LI SEC 26; N89°E 175 FT THE BGN; N 250 FT; S89°W 100 FT; N 410 FT; N89°E 155 FT; S 660 FT; S89°W 55 FT TO BGN :: DOC# 4230284

MUKV1974982 – 460 Eagle Lake Ave
Owner: JOHN W STRIZIC

PT NW1/4 SEC 26 T5N R18E COM 1071.84 FT N OF W1/4 POST & 396.00 FT N89° E FROM W SEC LI; N89° E 75 FT THE BGN; N 250 FT; N89° E 100 FT; S 250 FT; S89° W 100 FT TO BGN DOC# 4067838

MUKV1974981 - 470 EAGLE LAKE AVE
Owner: JOHN W STRIZIC

PT NW1/4 SEC 26 T5N R18E COM 1071.84 FT N OF W1/4 POST & 396.00 FT N89° E FROM W SEC LI; N 660.00 FT; N89° E 75 FT; S 660 FT; S89° W 75 FT TO BGN DOC# 4067838

MUKV1974980 490 EAGLE LAKE AVE
Owner: NYSSE REVOCABLE TRUST

PT NW1/4 SEC 26 T5N R18E; COM AT A POINT ON W LI OF SAID 1/4 SEC N 1071.84 FT FROM THE W1/4 POST OF SAID SEC; N89°35'36"E ALG CNTR LI OF HWY 252.0 FT THE BGN; N89°35'36"E ALG SAID CNTR LI 144.0 FT; N & PARALLEL TO W LI OF SAID 1/4 SEC 268.0 FT; S89°35'36"W 144.0 FT; S 268.0 FT TO BGN

MUKV1974979004 500 EAGLE LAKE AVE
Owner: MARY JO LA TONA

LOT 4 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E

MUKV1974979003 618 MEADOW VIEW CT
Owner: ALAN FORD
LOT 3 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E

MUKV1974979002 612 MEADOW VIEW CT
Owner: ANDREW GRIPPEN
LOT 2 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E :: DOC #4345683

MUKV1974979001 606 MEADOWVIEW CT
Owner: JEFFREY SCOTT RUDOLPH
LOT 1 CSM #9632 VOL 88/277 REC AS DOC #3066894 PT NW1/4 SEC 26 T5N R18E :: DOC #4348624

From A-1 Agricultural District to R-10 Multi Family District

MUKV1962989015
Owner: LOT OWNERS OF THE GLEN OF MUKWONAGO CONDOMINIUM
1ST ADDENDUM TO CONDOMINIUM PLAT OF THE GLEN OF MUKWONAGO (PHASE 1) EX UNITS 37 & 38 PT NW1/4 SEC 23 T5N R18E

Recommendation

Staff recommend the Planning Commission recommend to the Village board the adoption of an ordinance as drafted.

Attachments

1. Ordinance

Village of Mukwonago GIS

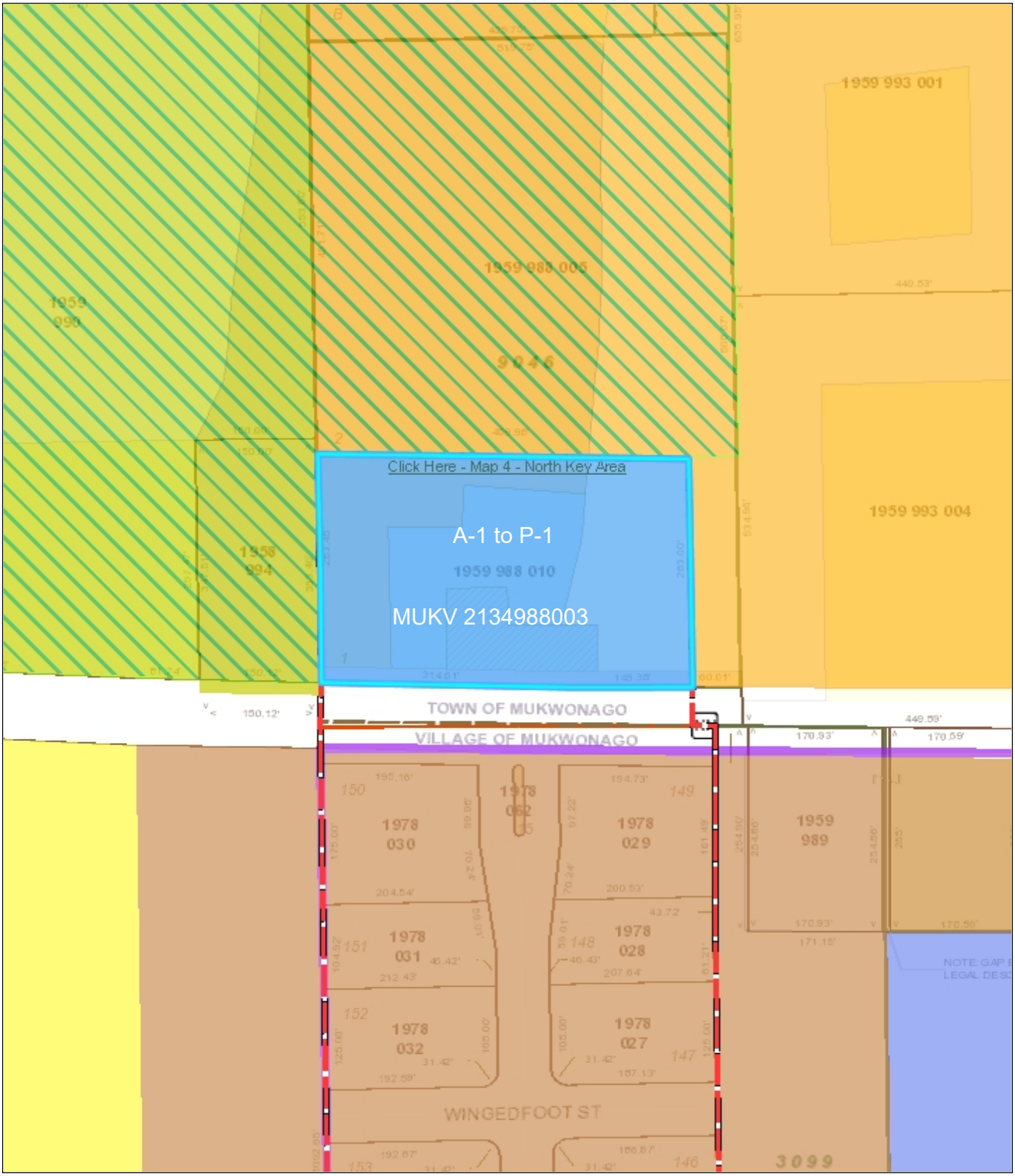
MUKV1959988010 - Aerial Map

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 167 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/7/2022



Village of Mukwonago GIS

MUKV1959988010 - Current Land Use Map

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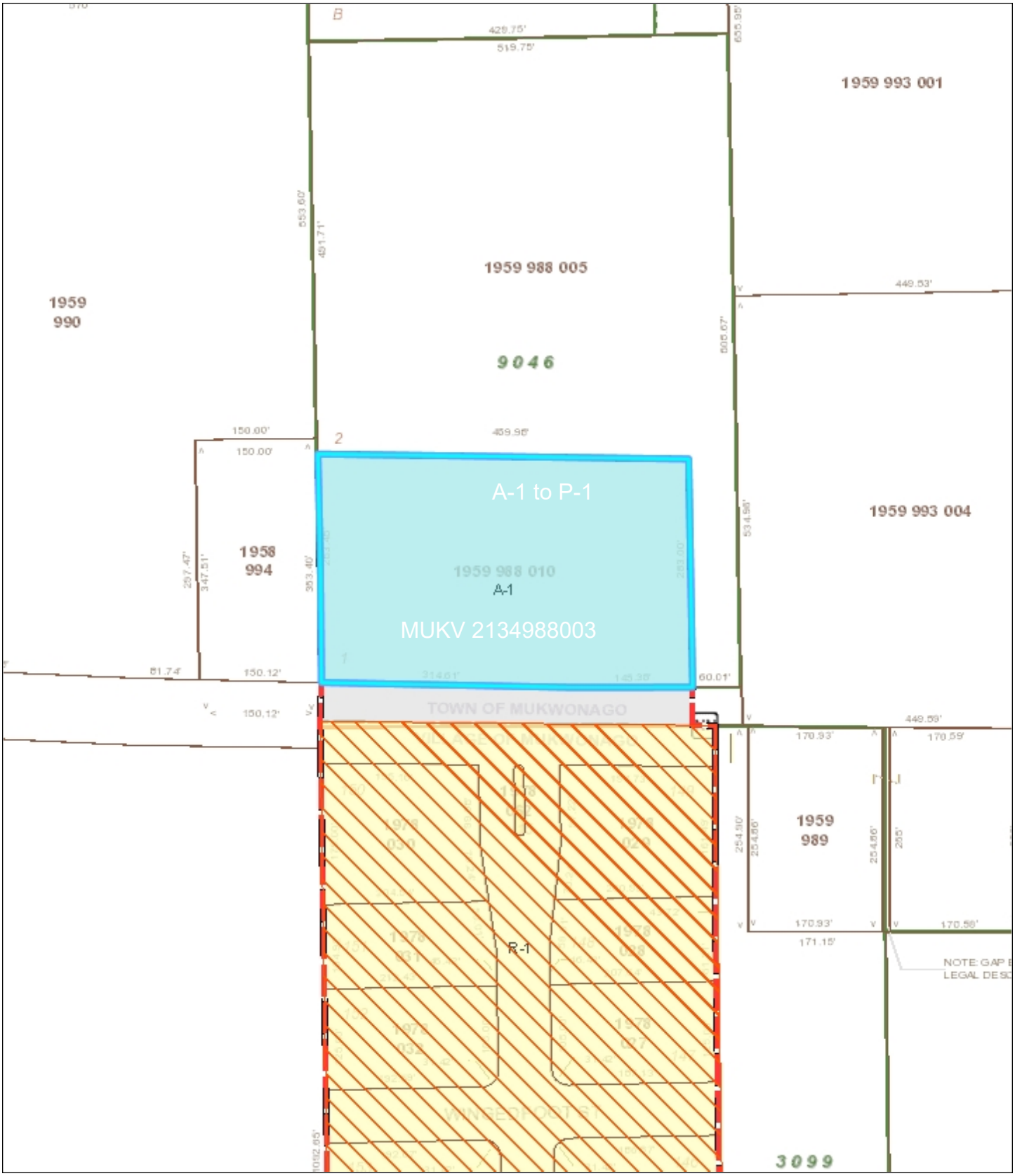

Village of Mukwonago GIS

MUKV1959988010 - Current Zoning Map

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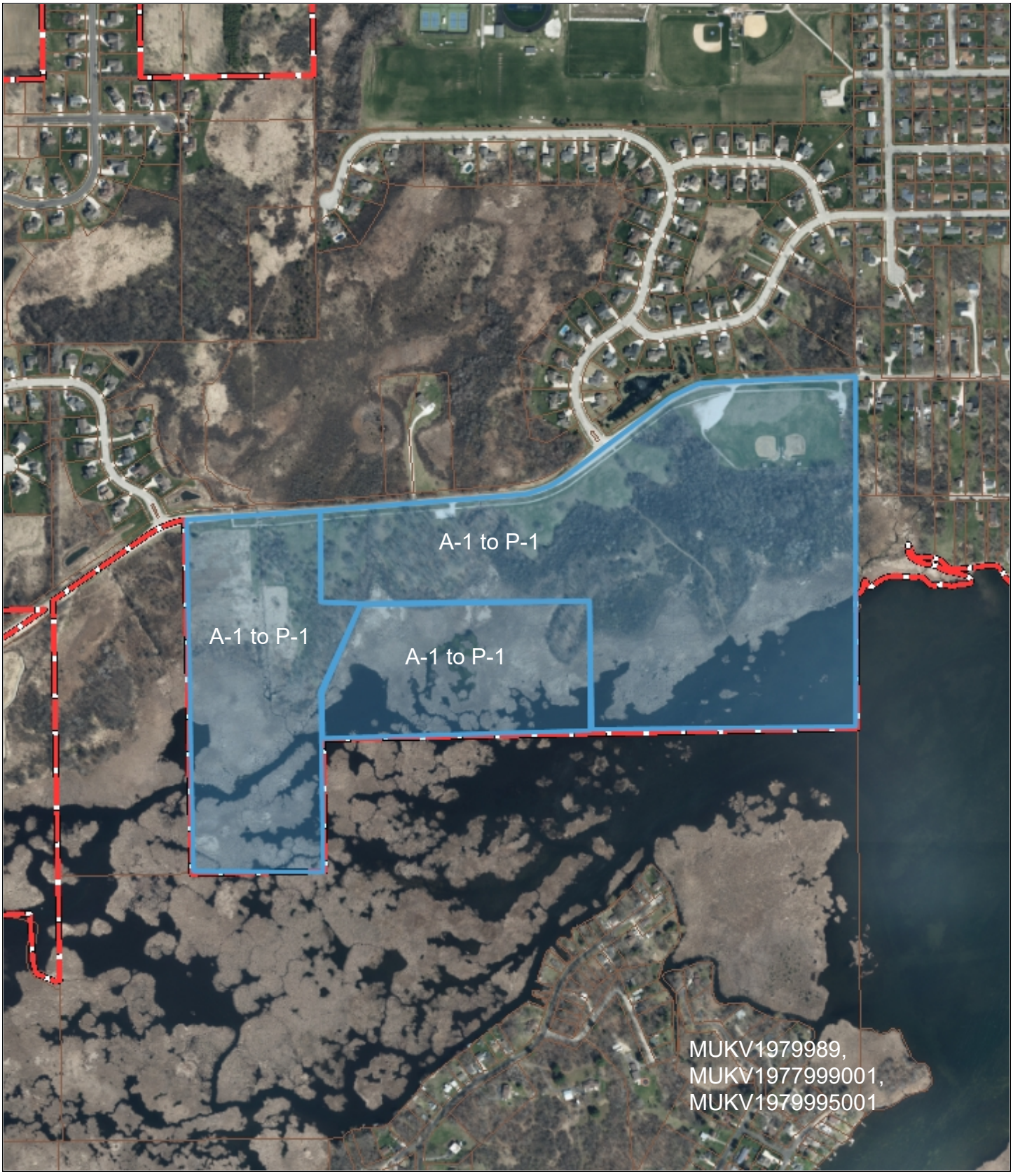

Village of Mukwonago GIS

MUKV1979989, MUKV1977999001, MUKV1979995001 - Aerial Map

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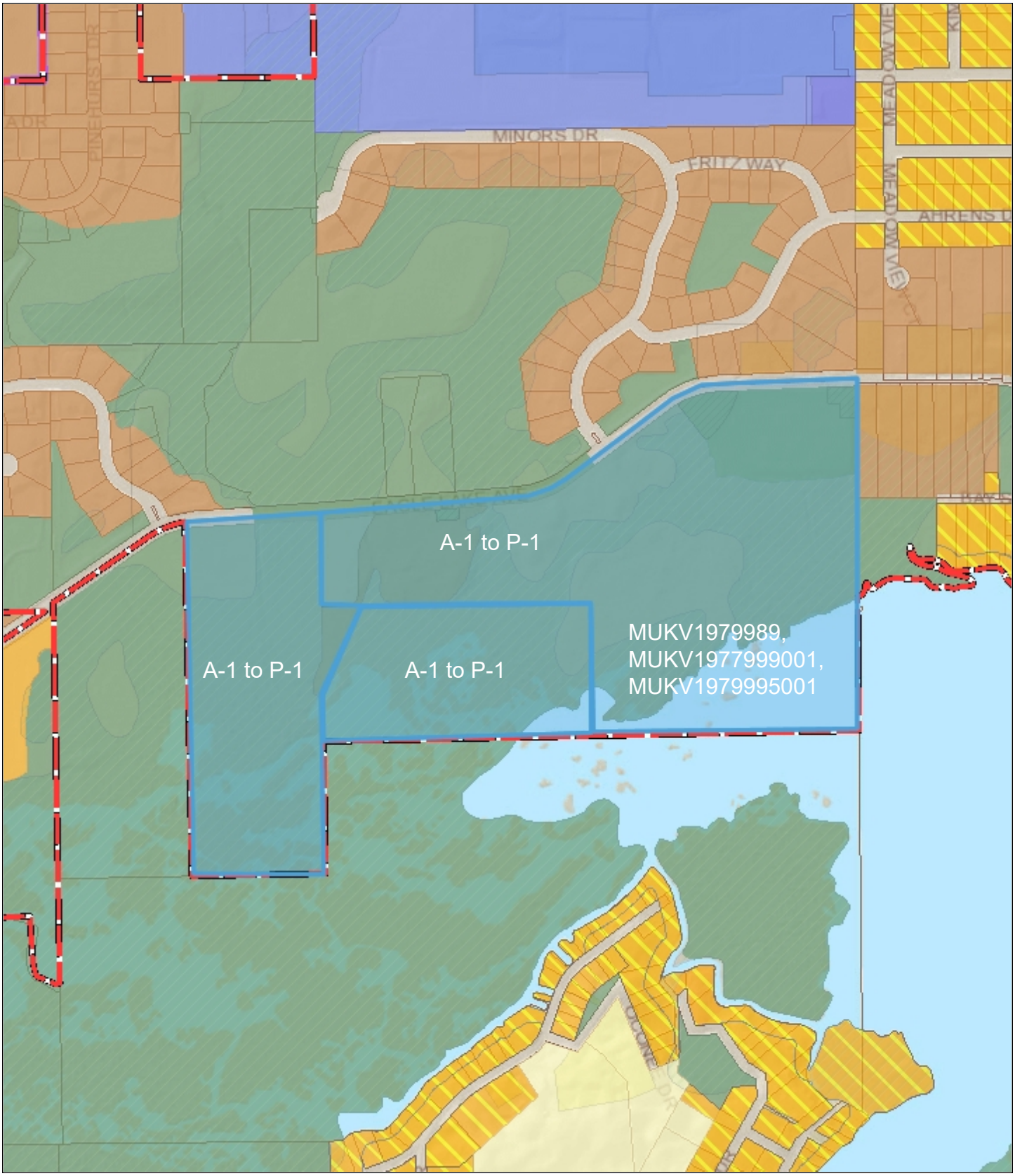

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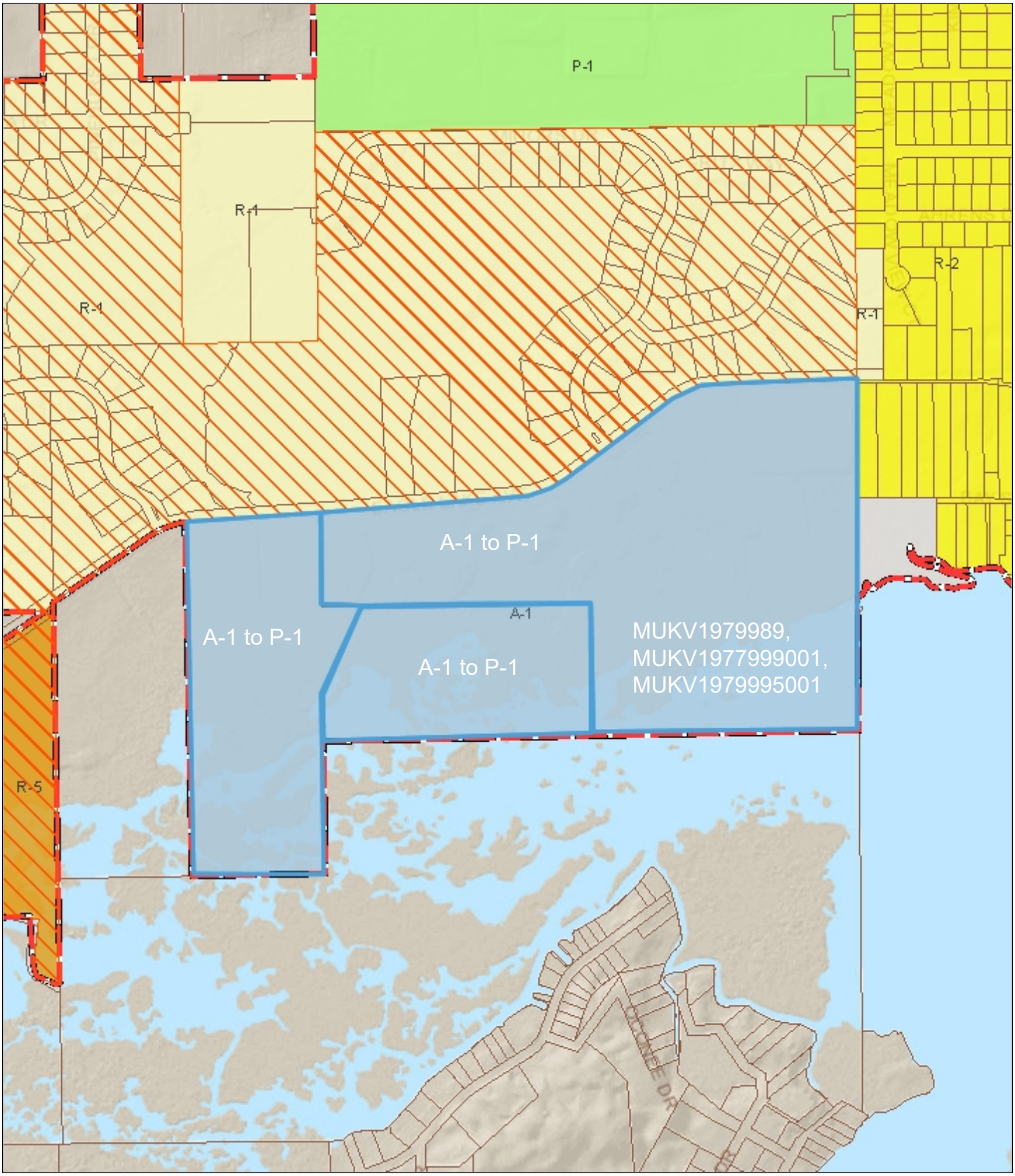

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MUKV1979989, MUKV1977999001, MUKV1979995001 - Current Zoning Map

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Village of Mukwonago GIS

E Troy Railroad Parcels - Aerial Map

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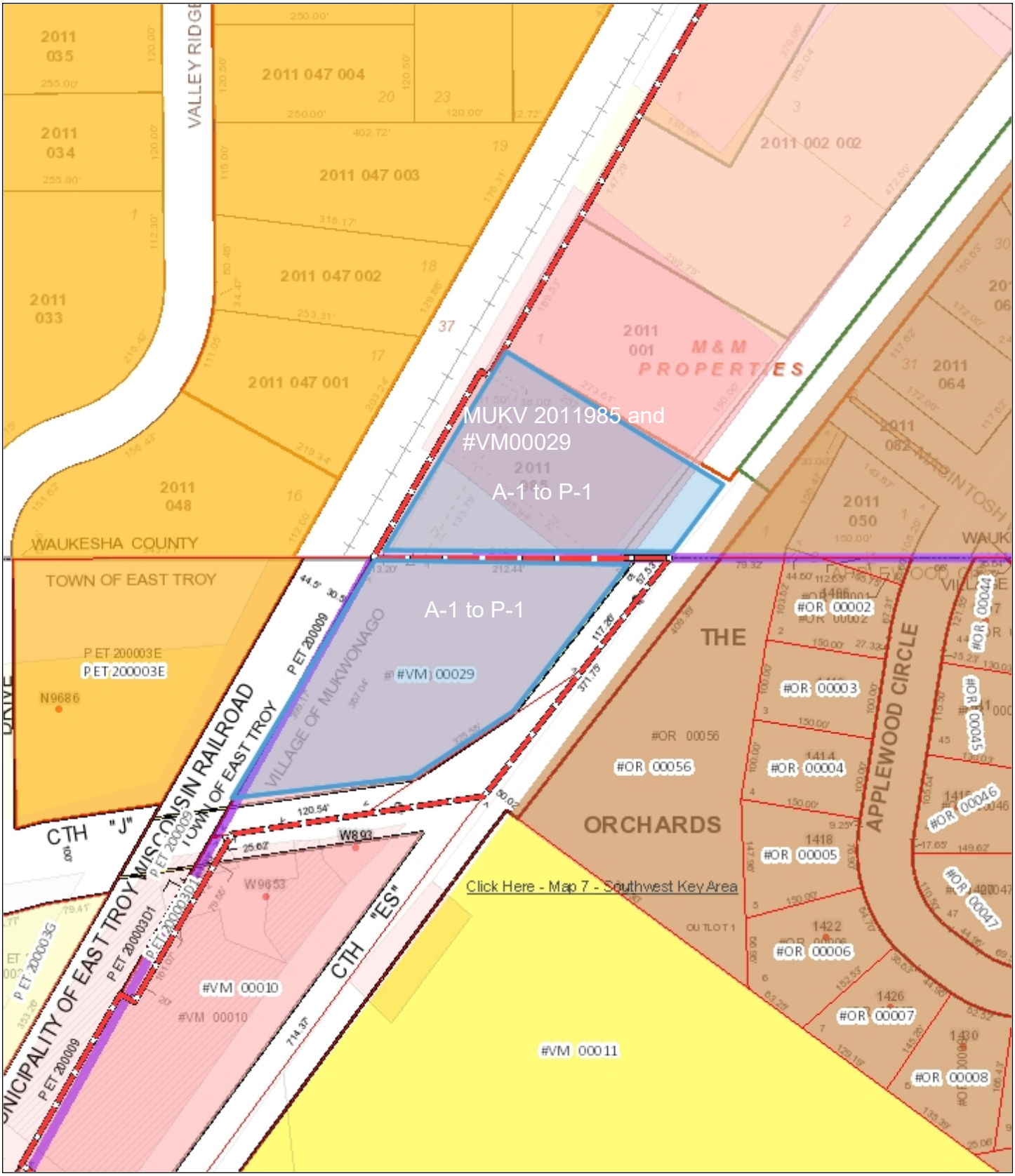

Village of Mukwonago GIS

E Troy Railroad Parcels - Land Use Map

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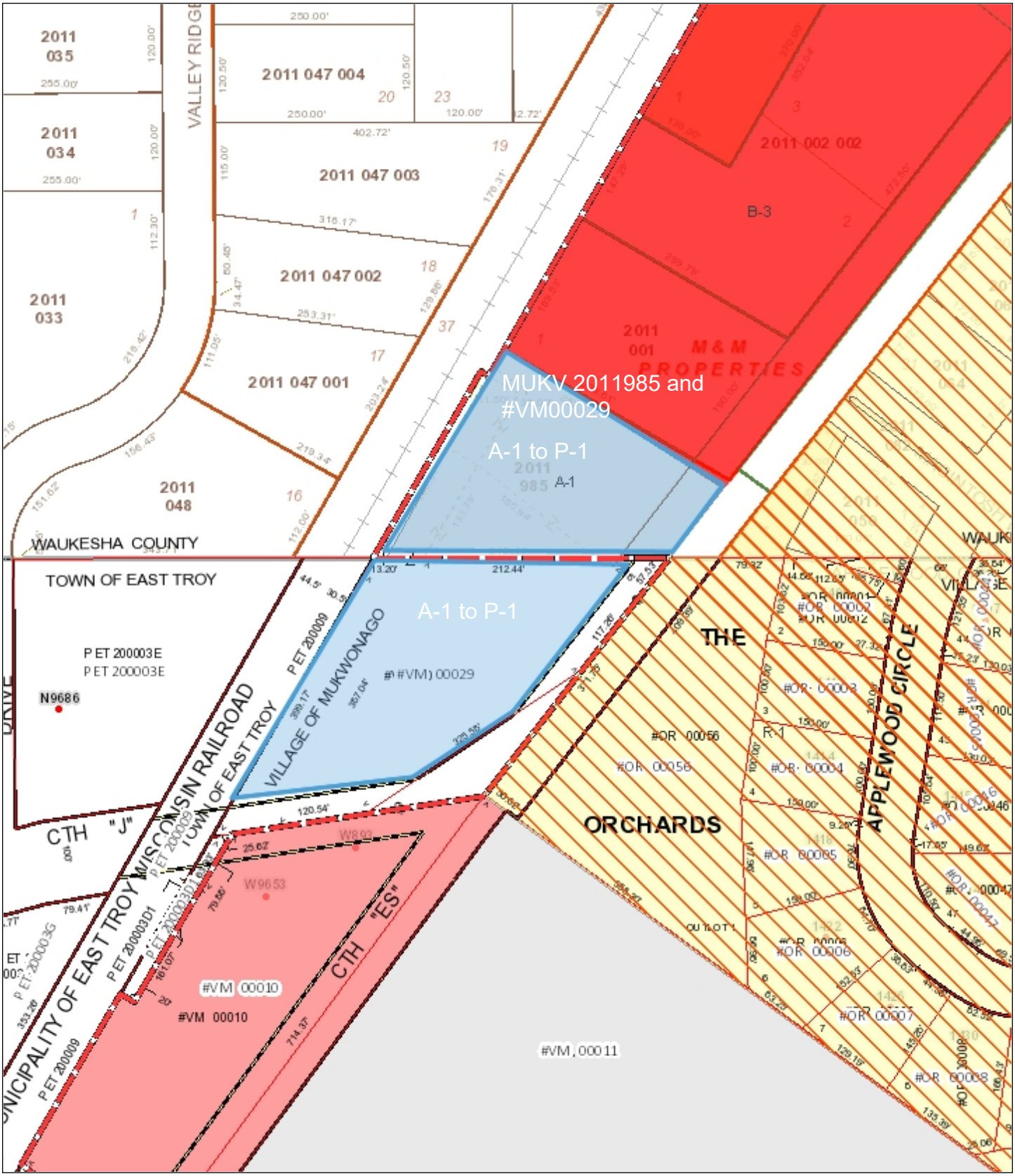

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Village of Mukwonago GIS

#A364100001 Aerial Photo

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SCALE: 1" = 200 '

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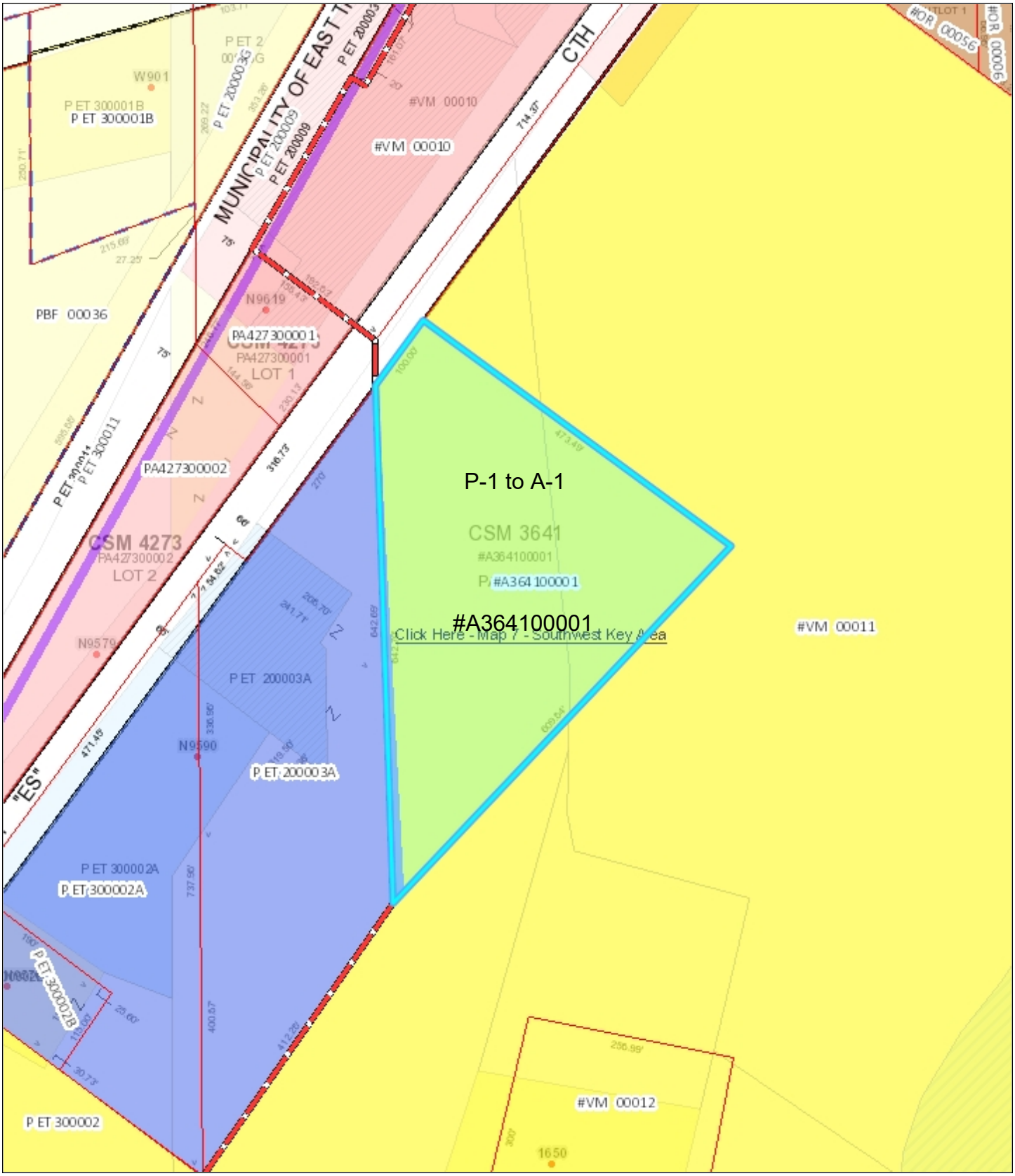

Village of Mukwonago GIS

#A364100001 Land Use

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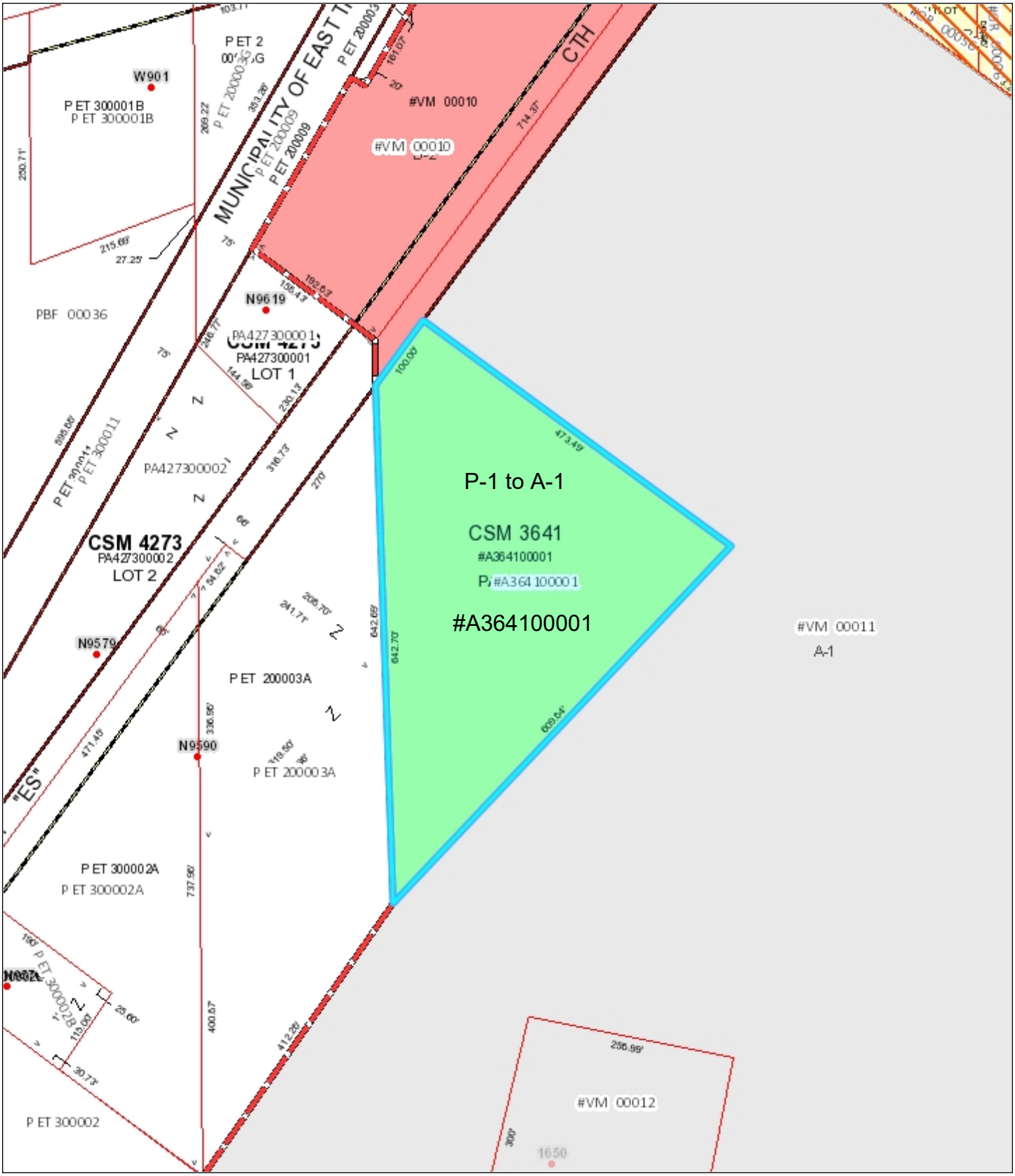

Village of Mukwonago GIS

#A364100001 Zoning

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Village of Mukwonago GIS

MUKV2012994 -Aerial

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SCALE: 1" = 500 '

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Village of Mukwonago GIS

MUKV2012994 - Land Use

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SCALE: 1" = 500 '

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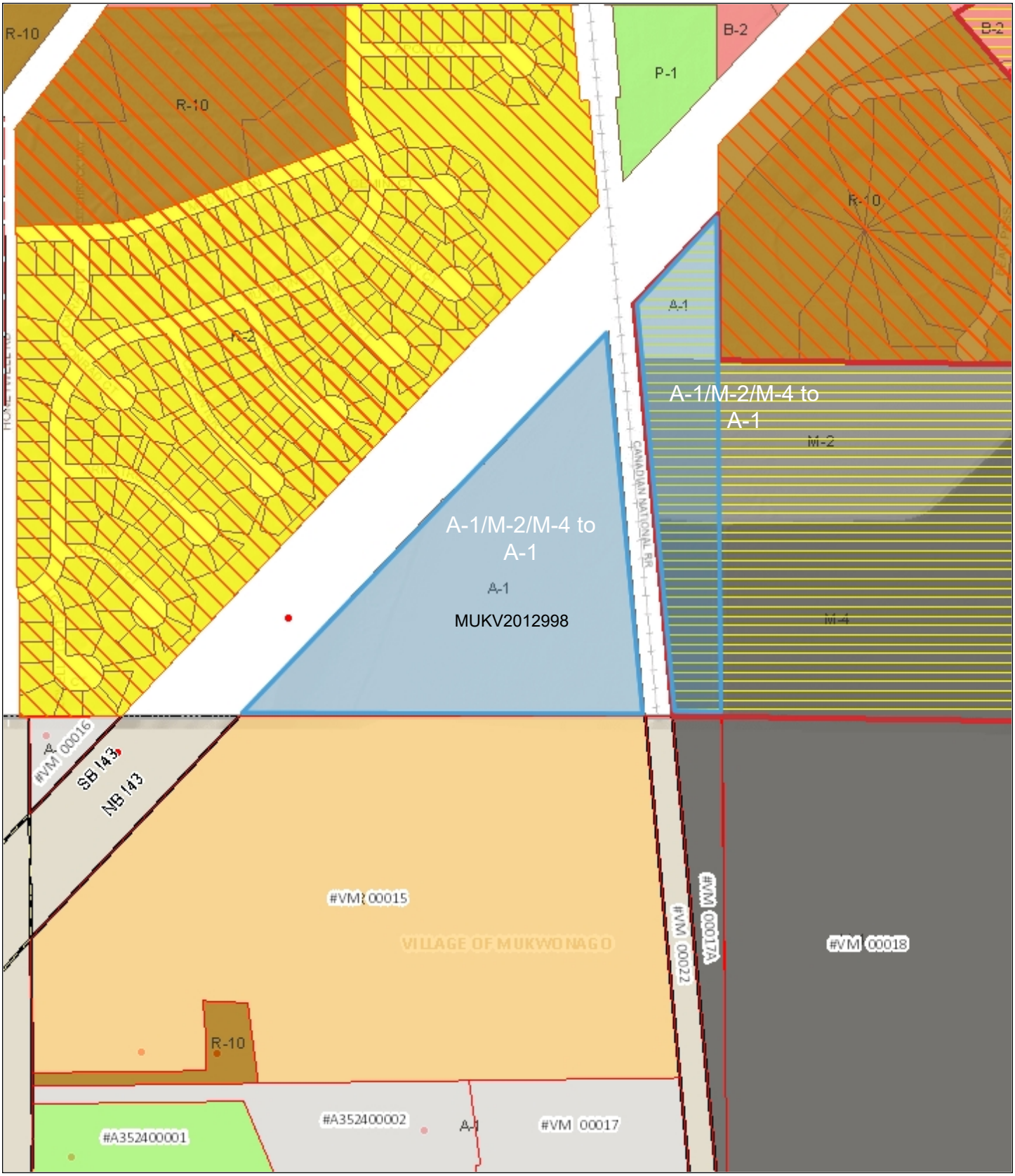

Village of Mukwonago GIS

MUKV2012994 - Zoning

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Village of Mukwonago GIS

MUKV1969062 and 077 - Aerial

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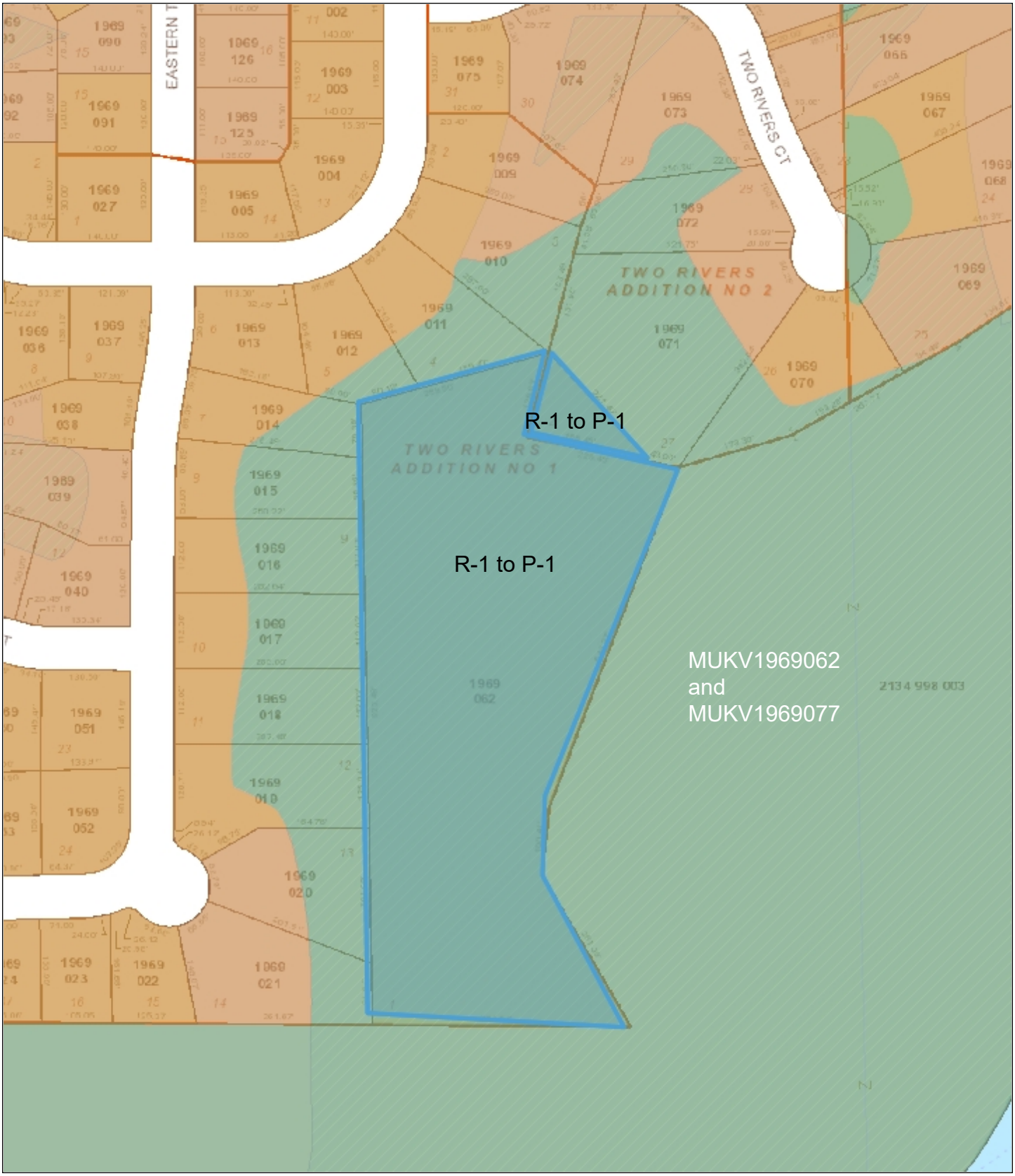

Village of Mukwonago GIS

MUKV1969062 and 077 - Land Use

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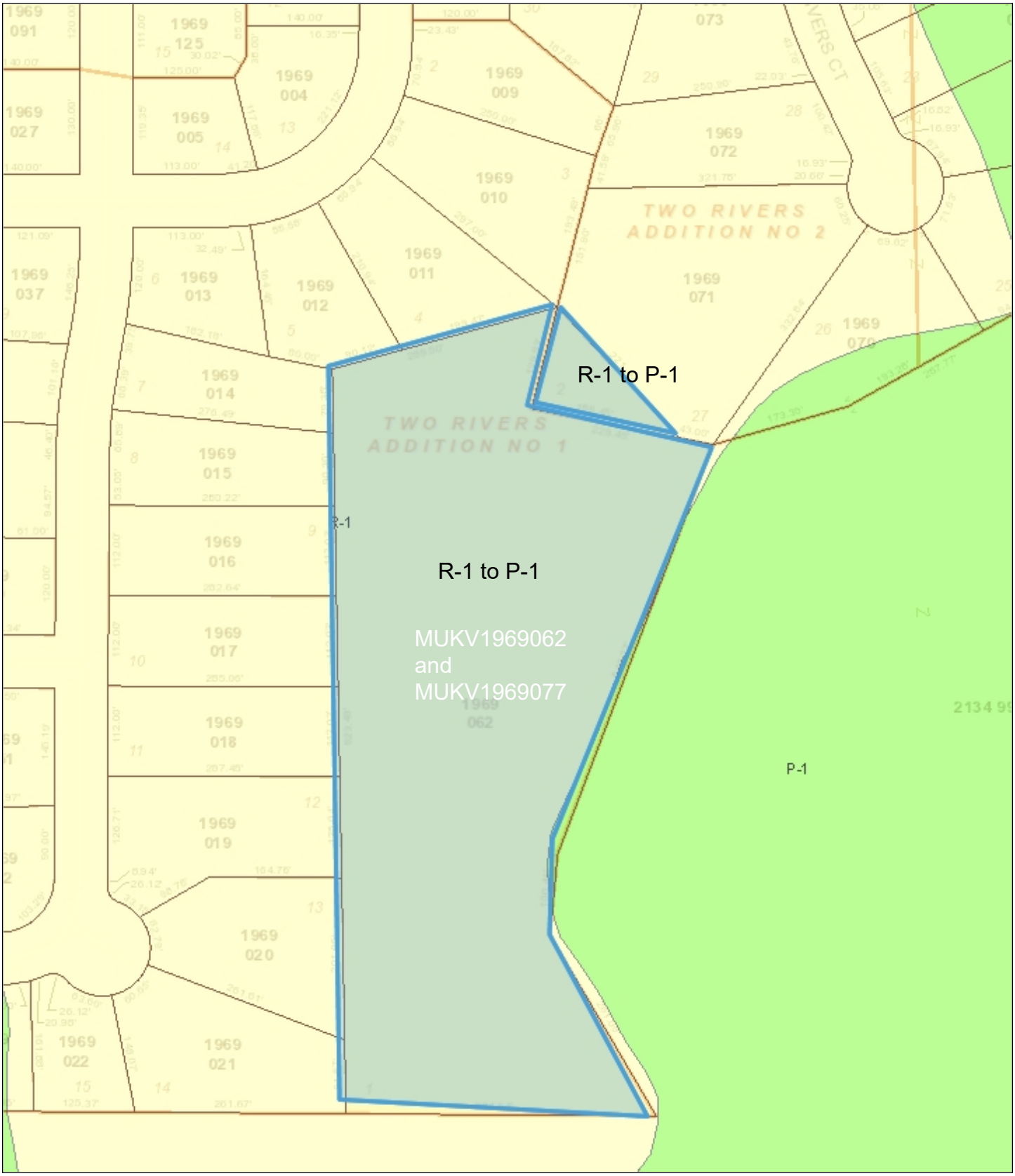

Village of Mukwonago GIS

MUKV1969062 and 077 - Zoning

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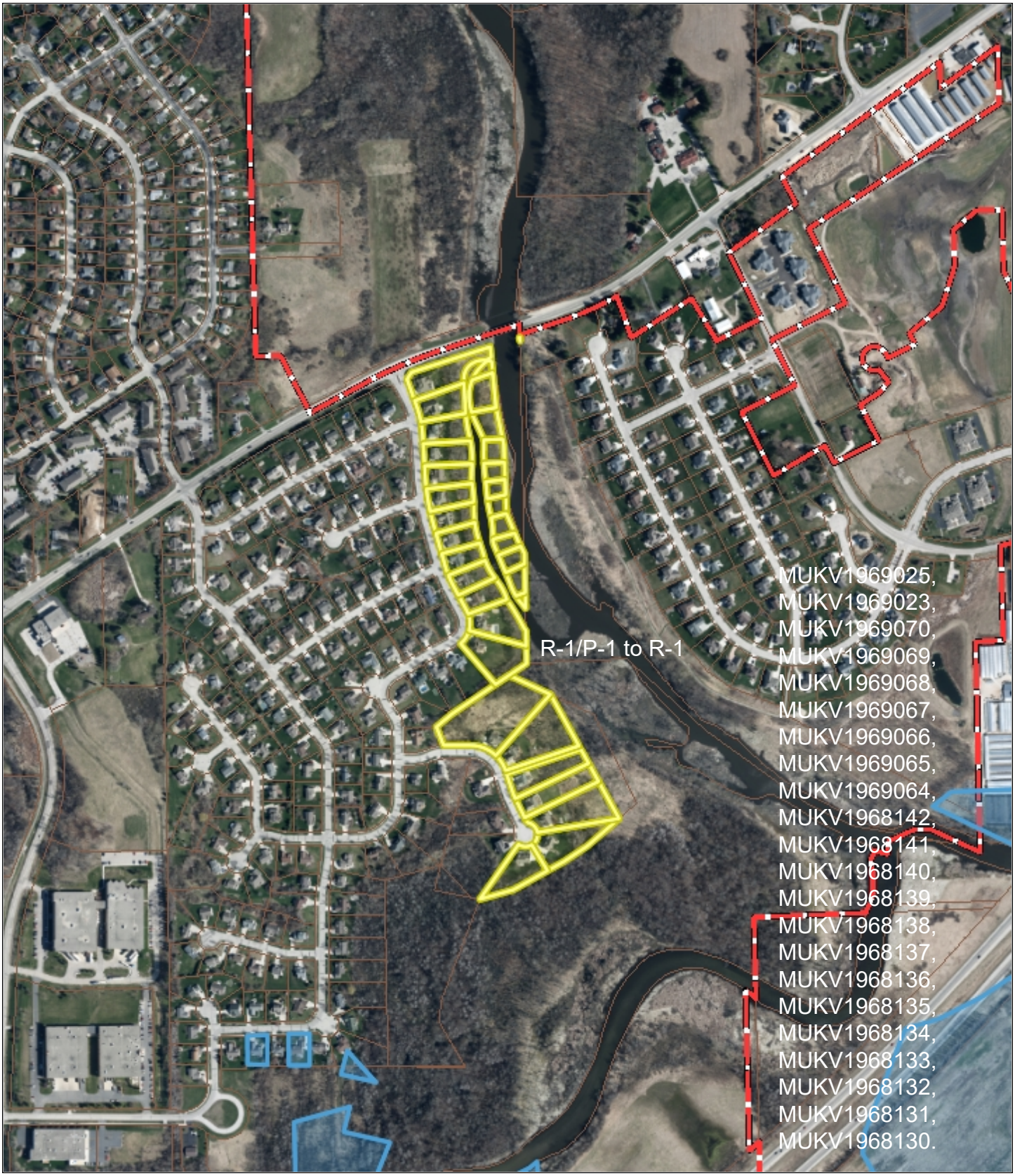

Village of Mukwonago GIS

Parcels with Two Rivers - Aerial

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SCALE: 1" = 667 '

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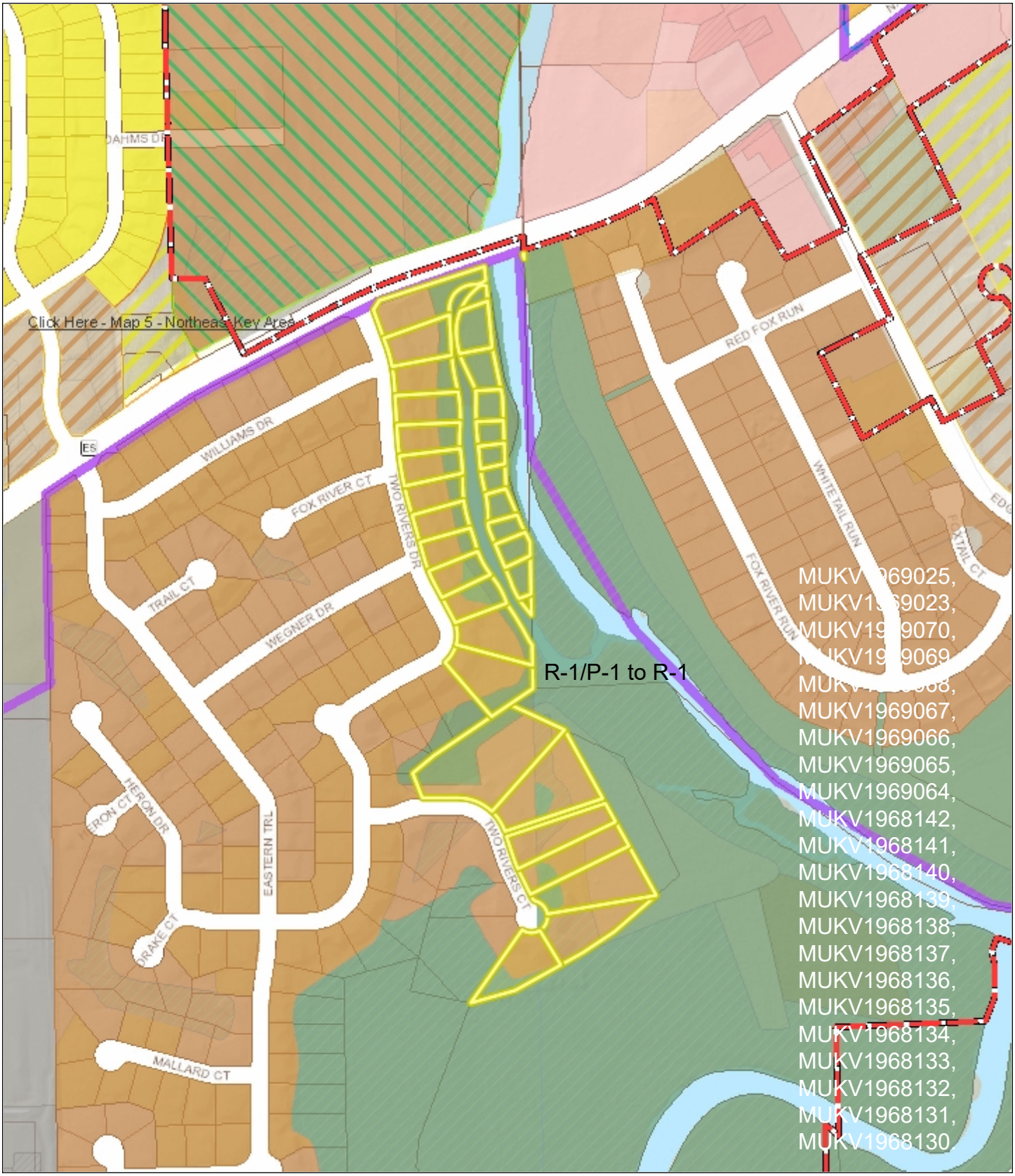

Village of Mukwonago GIS

Parcels with Two Rivers - Land Use

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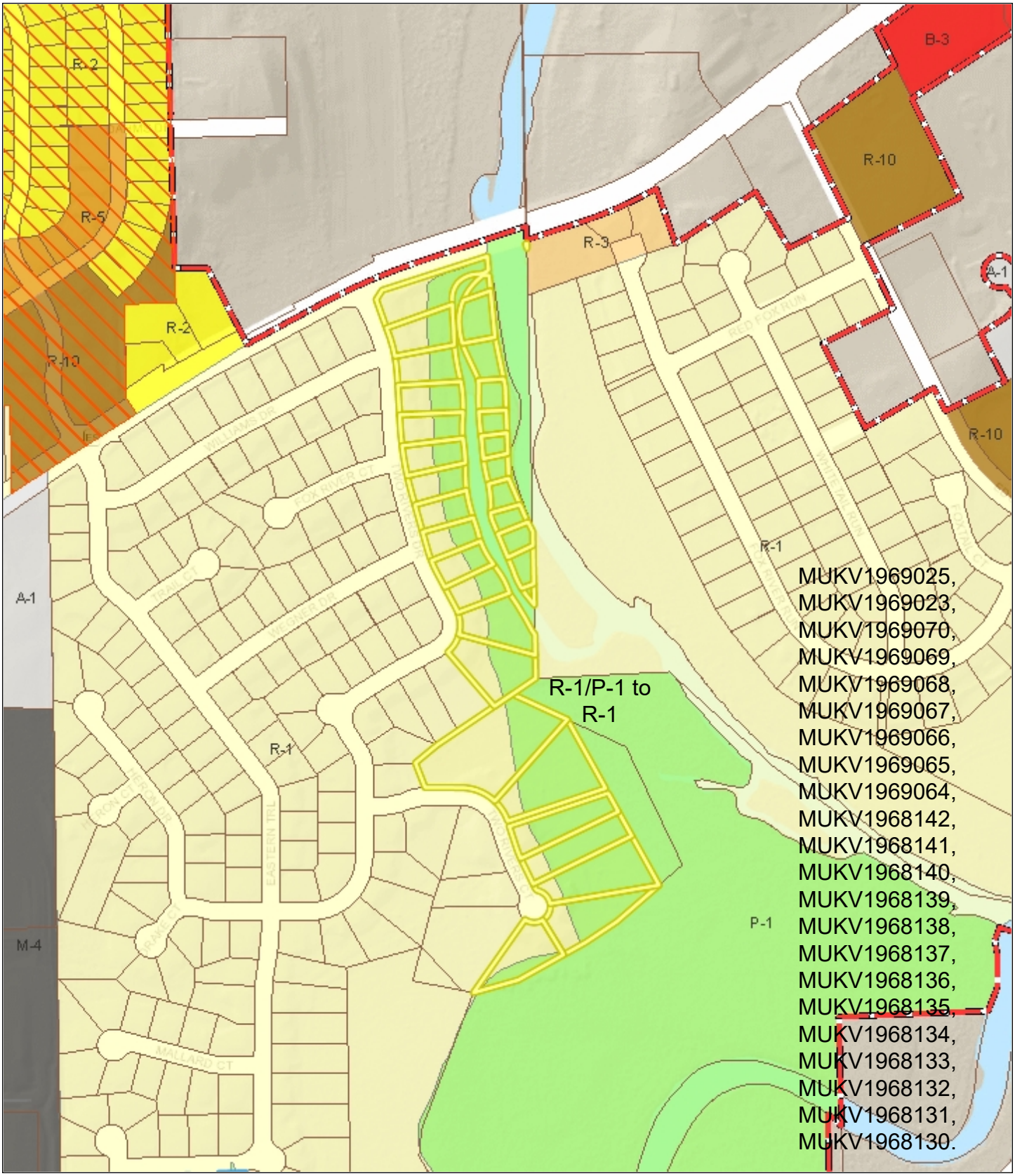

Village of Mukwonago GIS

Parcels with Two Rivers - Zoning

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Village of Mukwonago GIS

N and S of LO R-2 to R-1 -Aerial Map

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SCALE: 1" = 200 '

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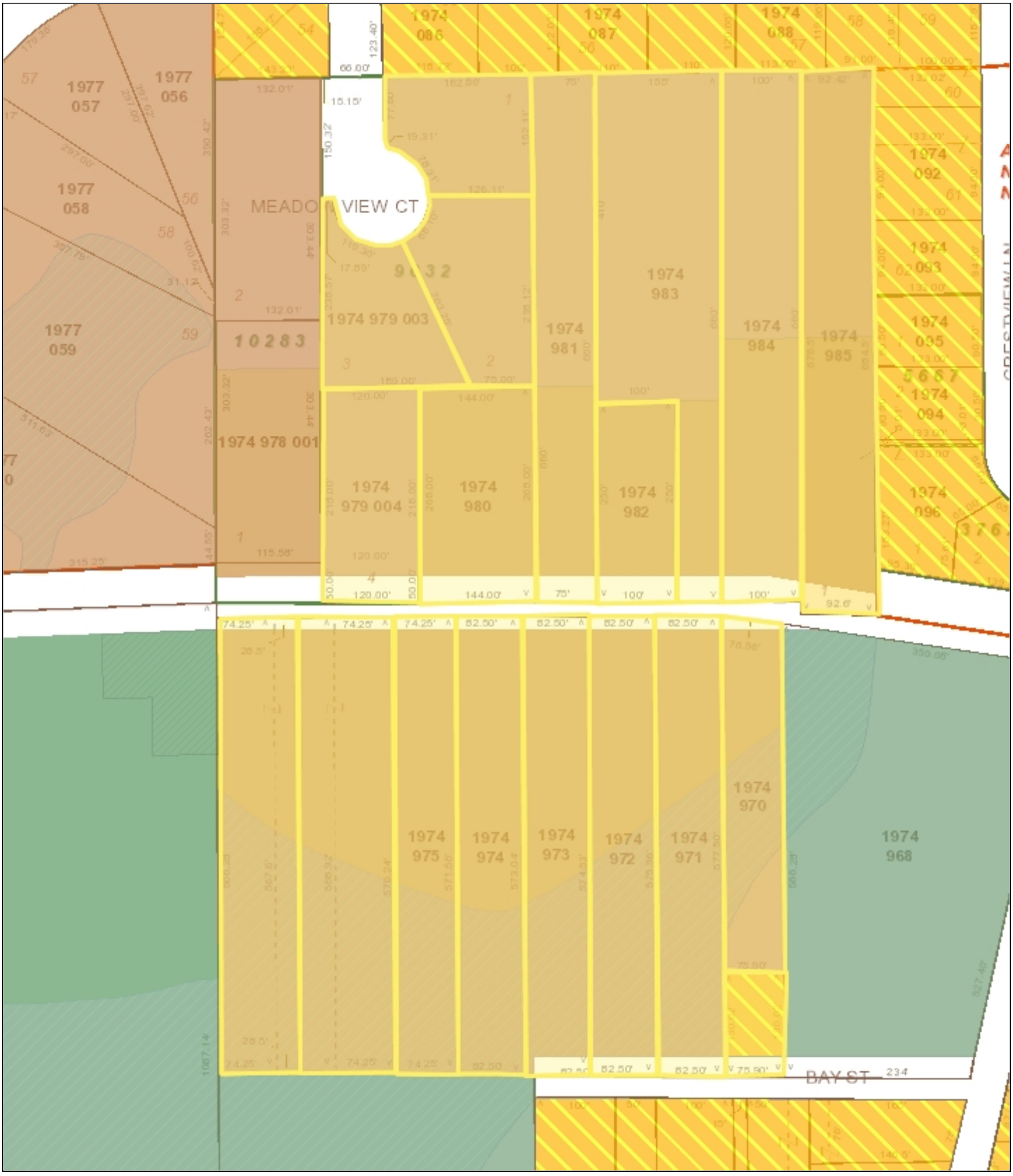

Village of Mukwonago GIS

N and S of LO R-2 to R-1 -Land Use Map

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MUKV1974979004,
MUKV1974979003,
MUKV1974979002,
MUKV1974979001.

Village of Mukwonago GIS

N and S of LO R-2 to R-1 - Zoning Map

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Village of Mukwonago GIS

MUKV1969023 and 025 - Aerial

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SCALE: 1" = 100 '

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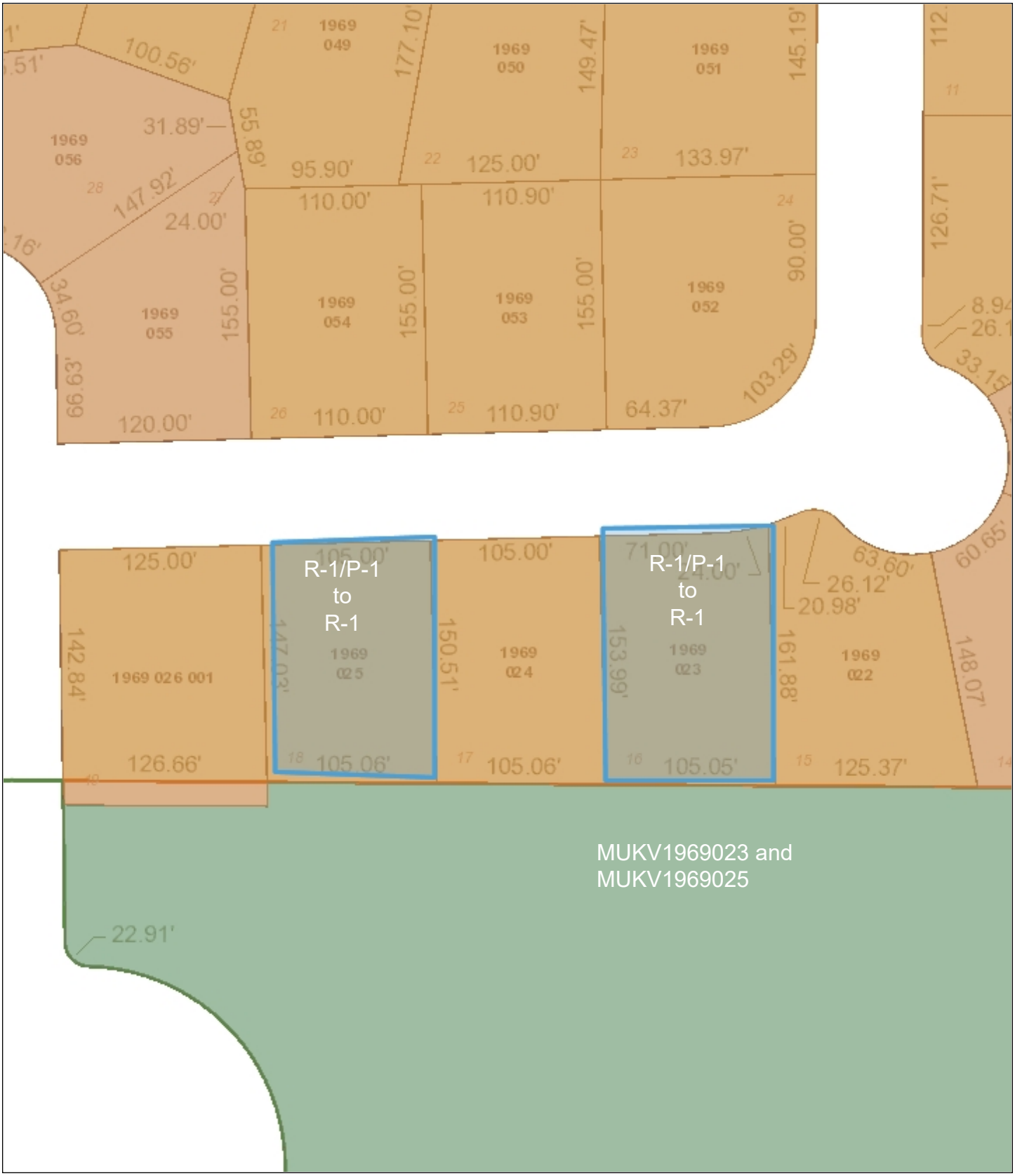

Village of Mukwonago GIS

MUKV1969023 and 025 - Land Use

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SCALE: 1" = 83 '

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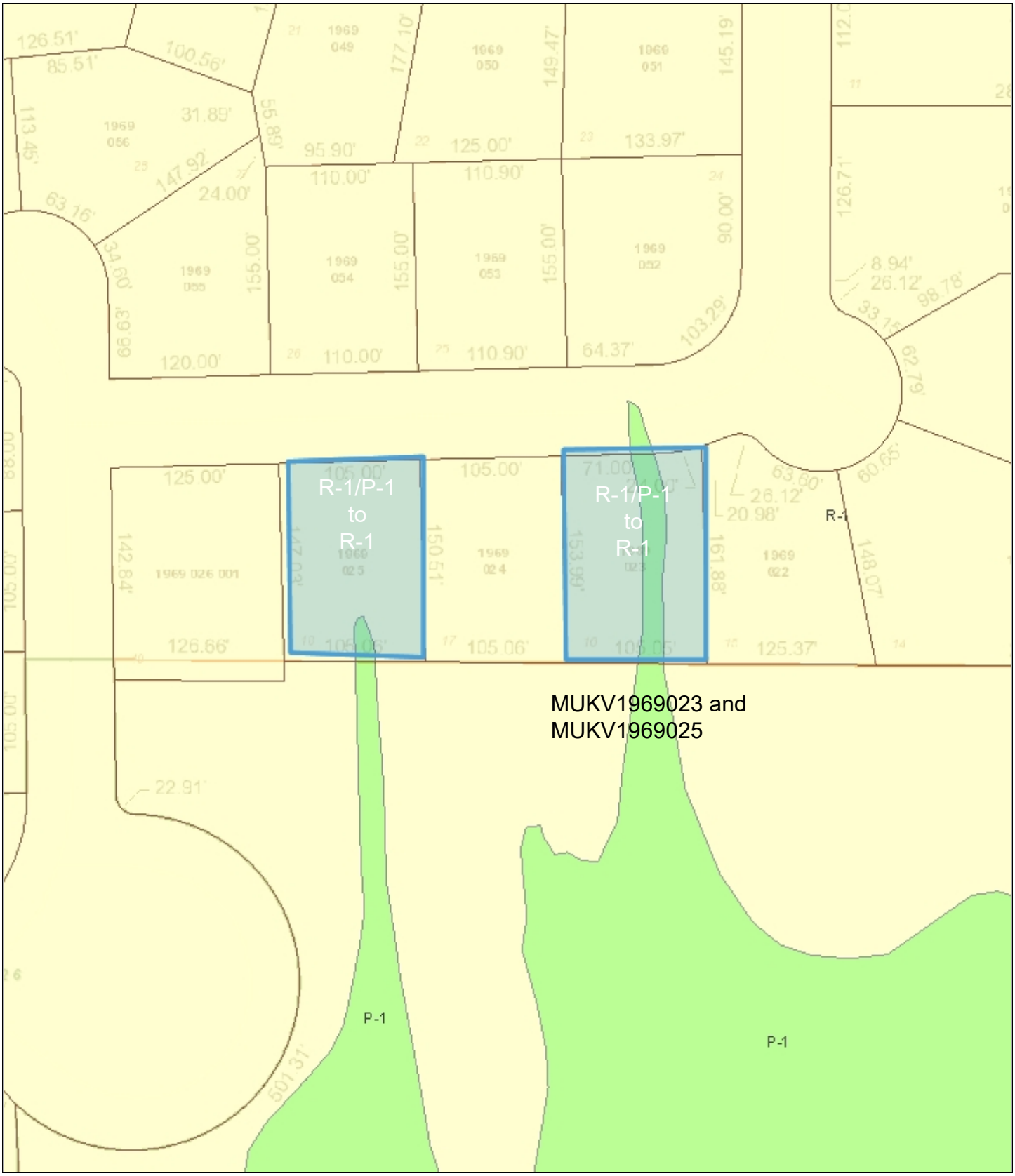

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Village of Mukwonago GIS

MUKV2134988003 - Aerial

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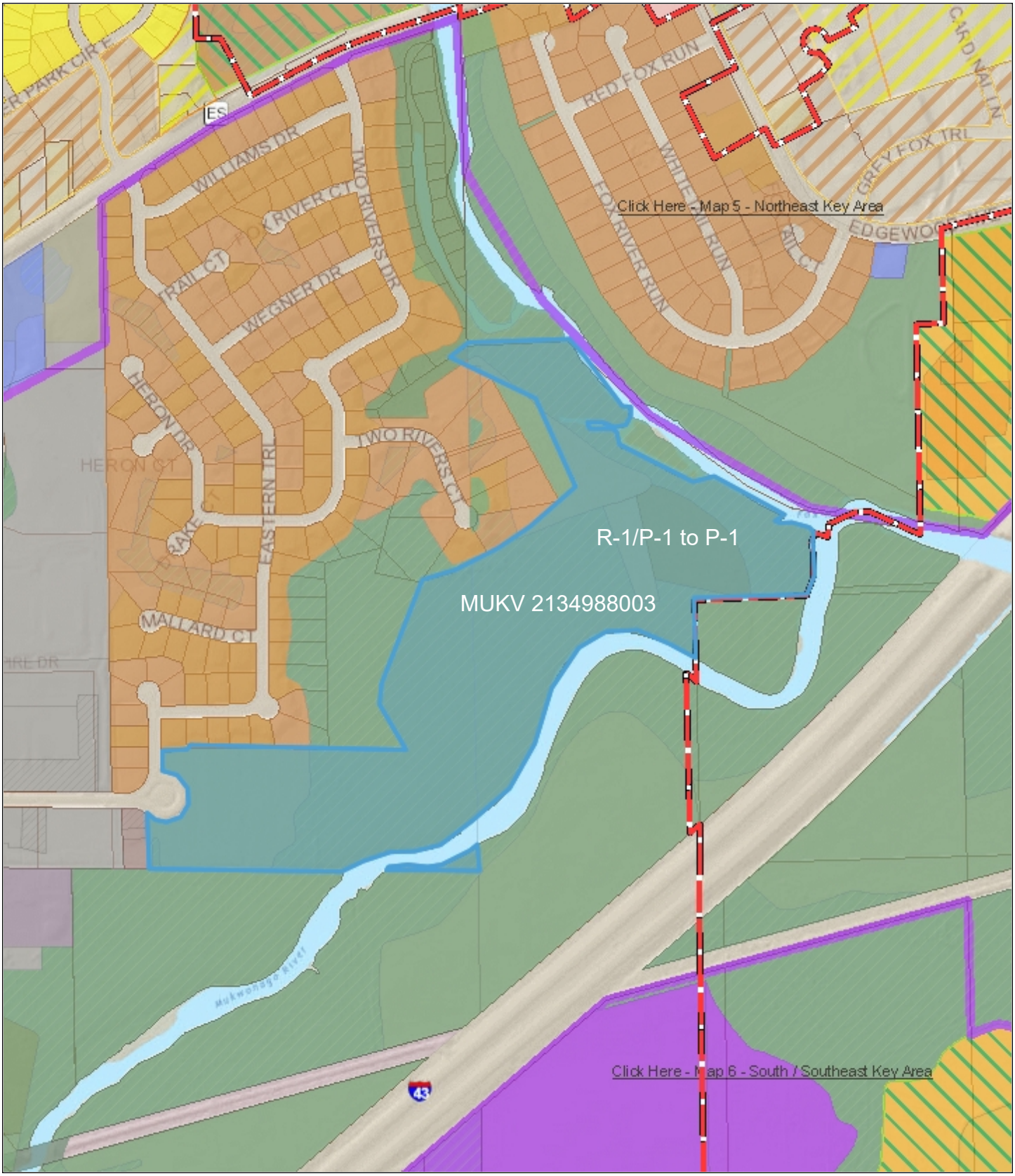
262-363-6420

Print Date: 1/10/2022



Village of Mukwonago GIS

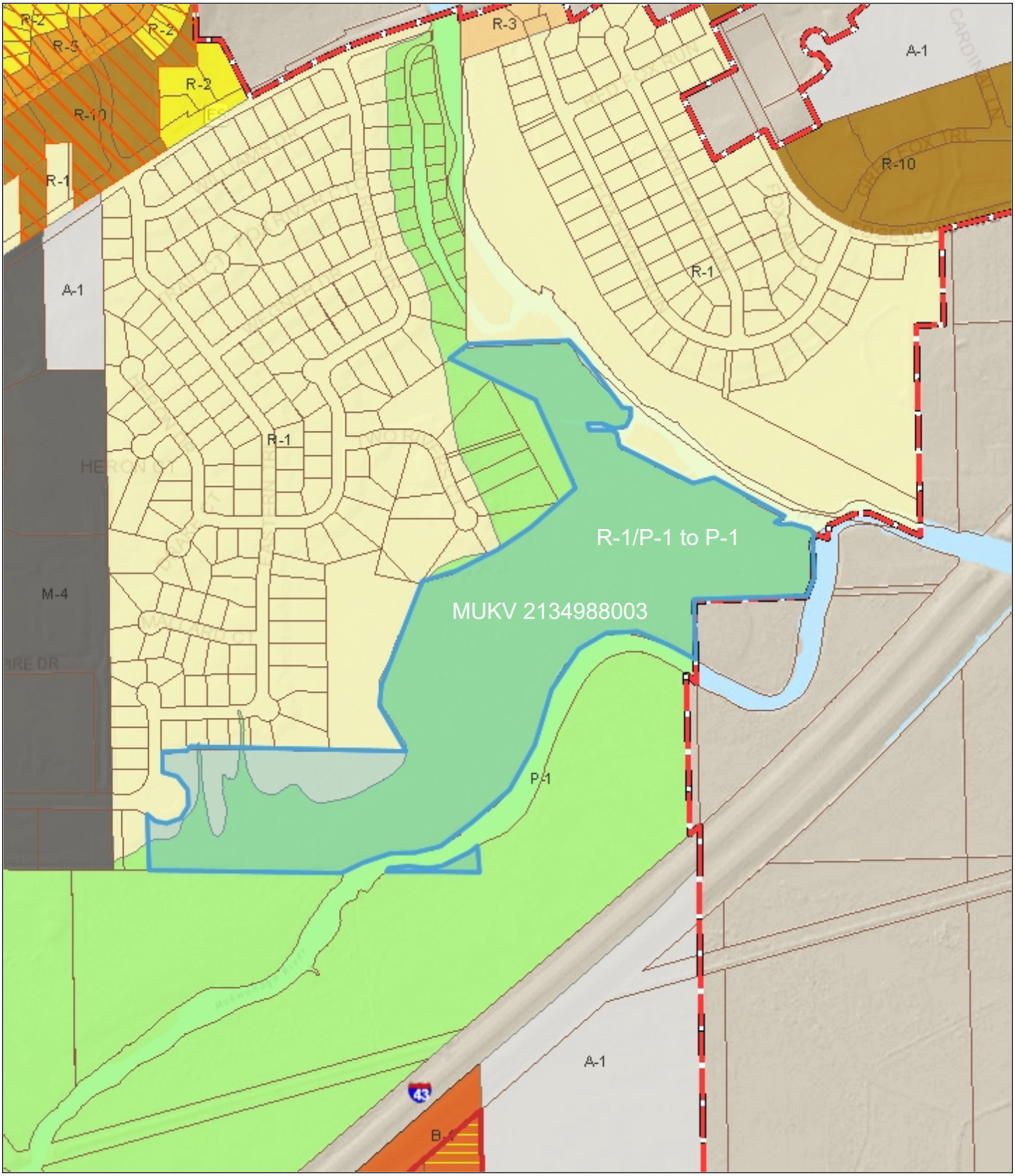
MUKV2134988003 - land use

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 667 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/10/2022



Village of Mukwonago GIS

MUKV2134988003 - zoning

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SCALE: 1" = 667 '

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Mukwonago, WI 53149
262-363-6420

Print Date: 1/10/2022

Village of Mukwonago GIS

Waukesha Co. / V of Mukwonago land along Fox River - Aerial

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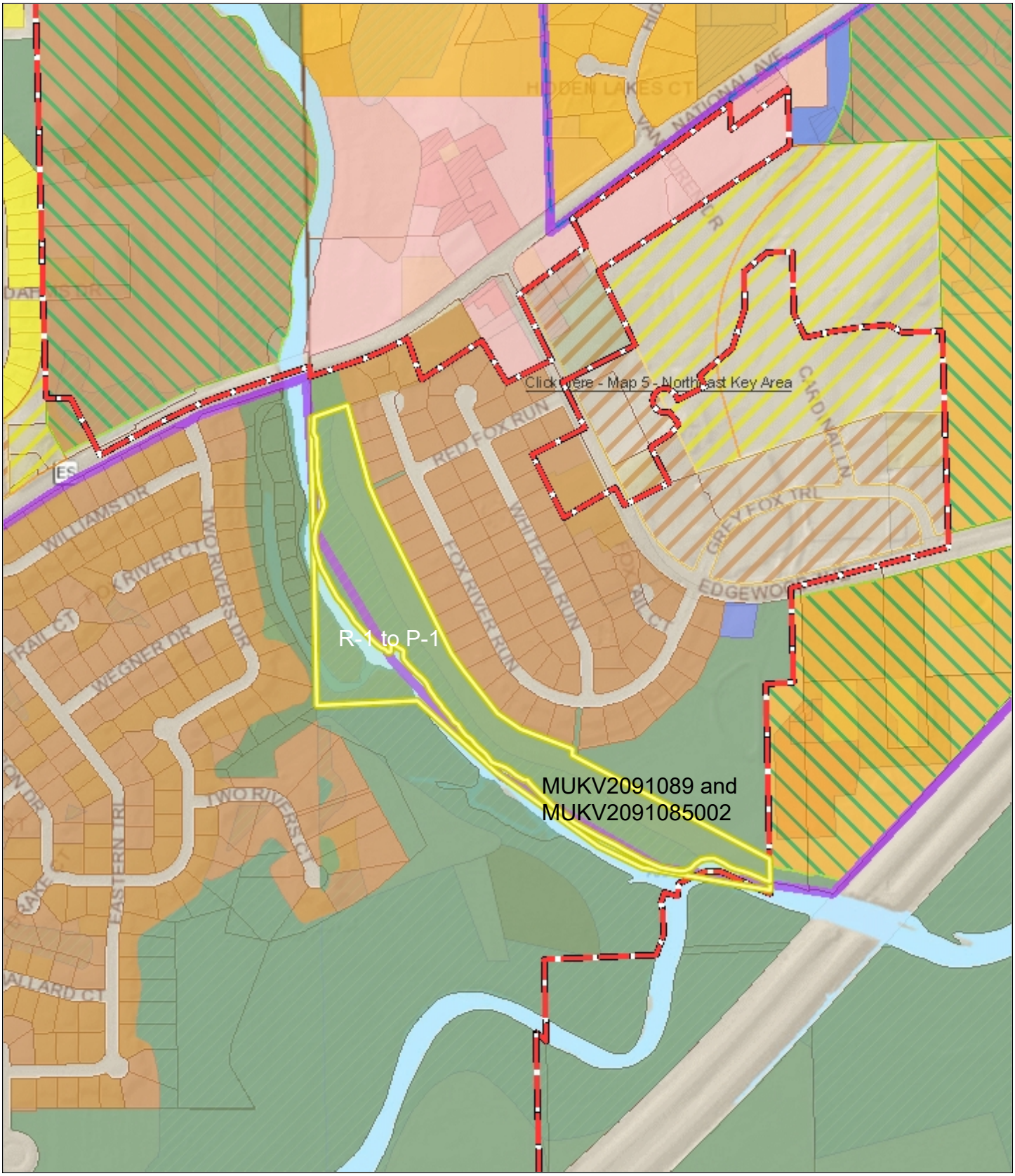
SCALE: 1" = 500 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/13/2022



Village of Mukwonago GIS

Waukesha Co. / V of Mukwonago land along Fox River - Land Use

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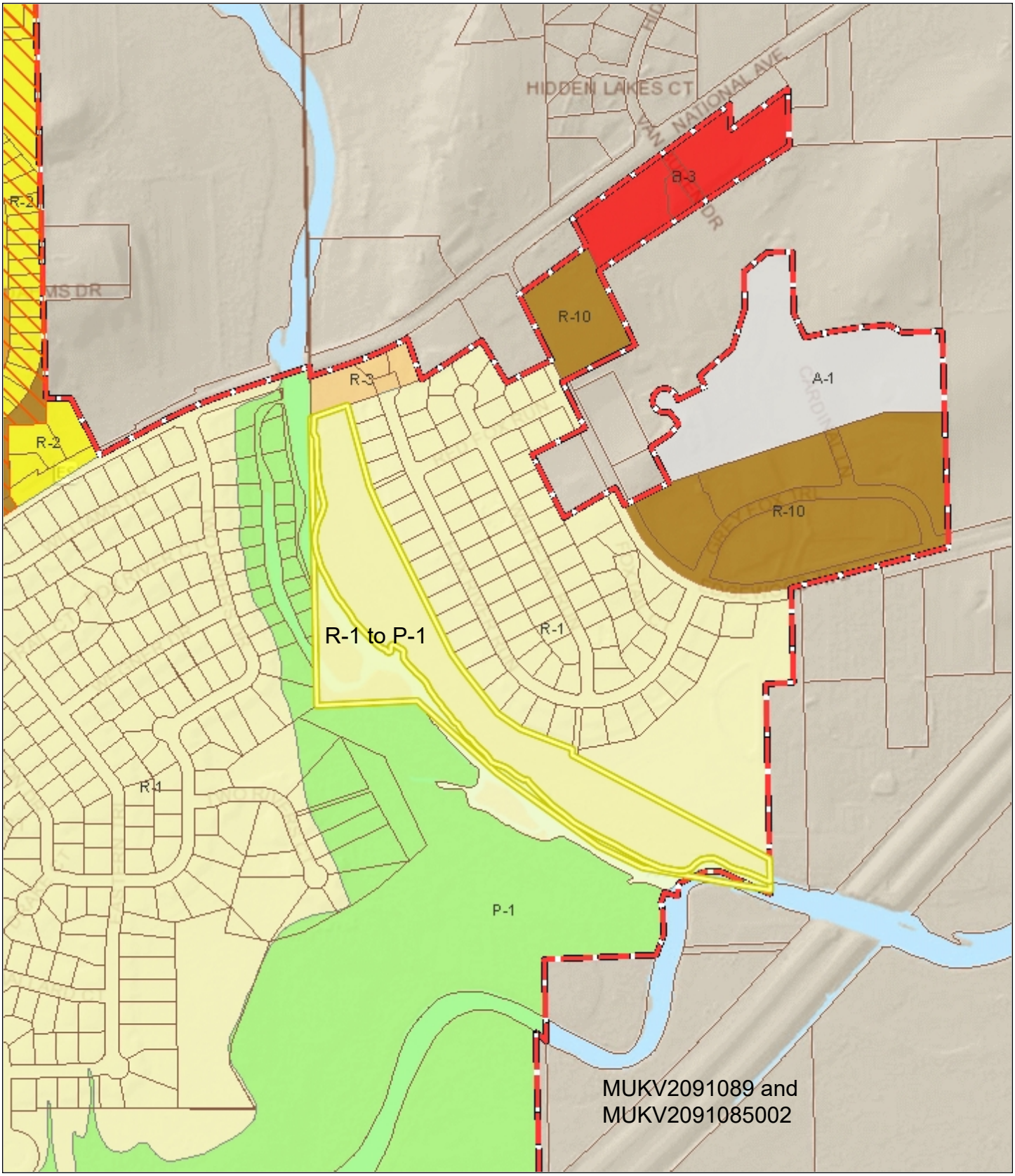
262-363-6420

Print Date: 1/13/2022



Village of Mukwonago GIS

Waukesha Co. / V of Mukwonago land along Fox River - Zoning

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SCALE: 1" = 667 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/13/2022

Village of Mukwonago GIS

Black Bear Condo - Aerial

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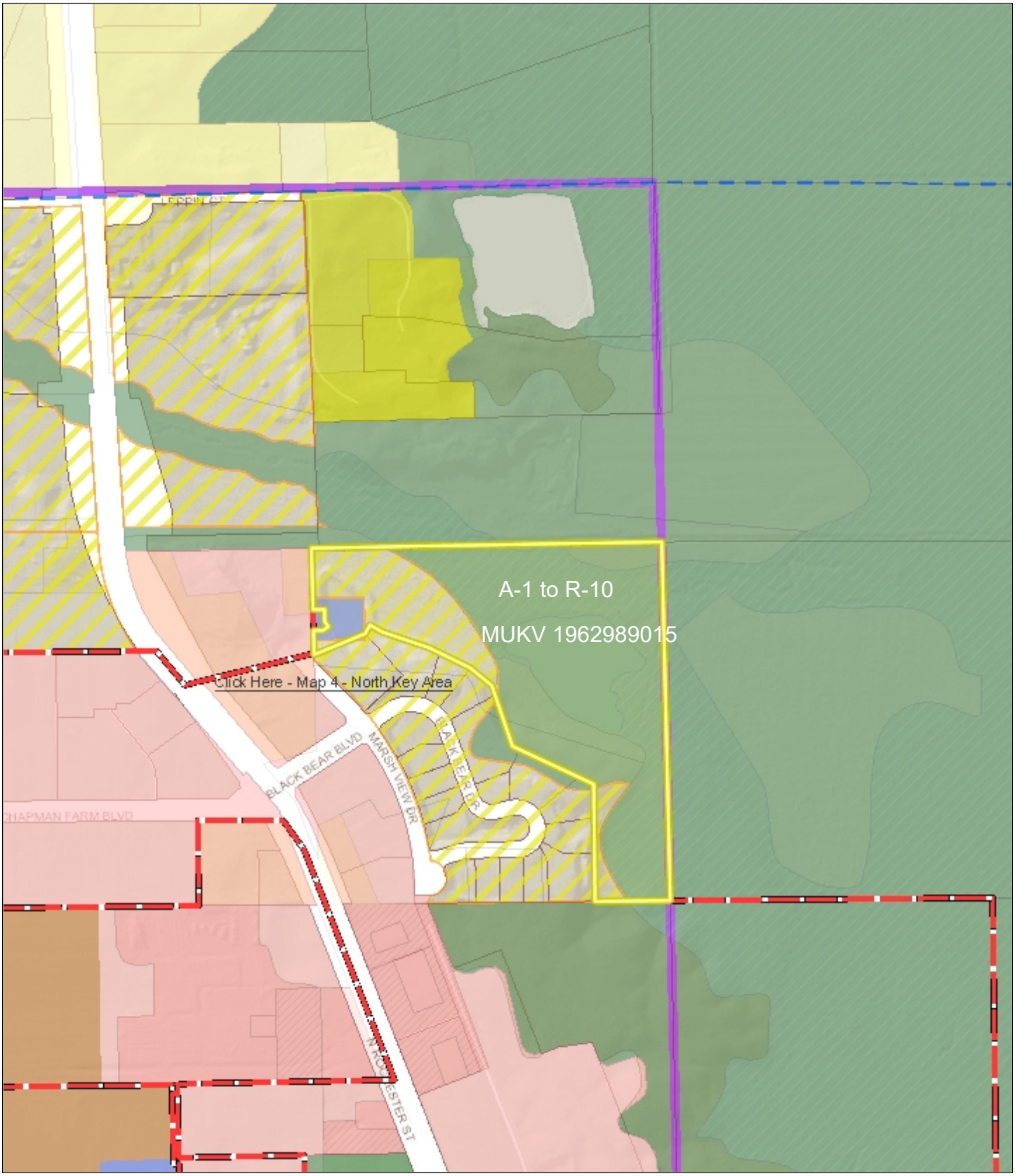
SCALE: 1" = 500 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/13/2022



Village of Mukwonago GIS

Black Bear Condo - Land Use

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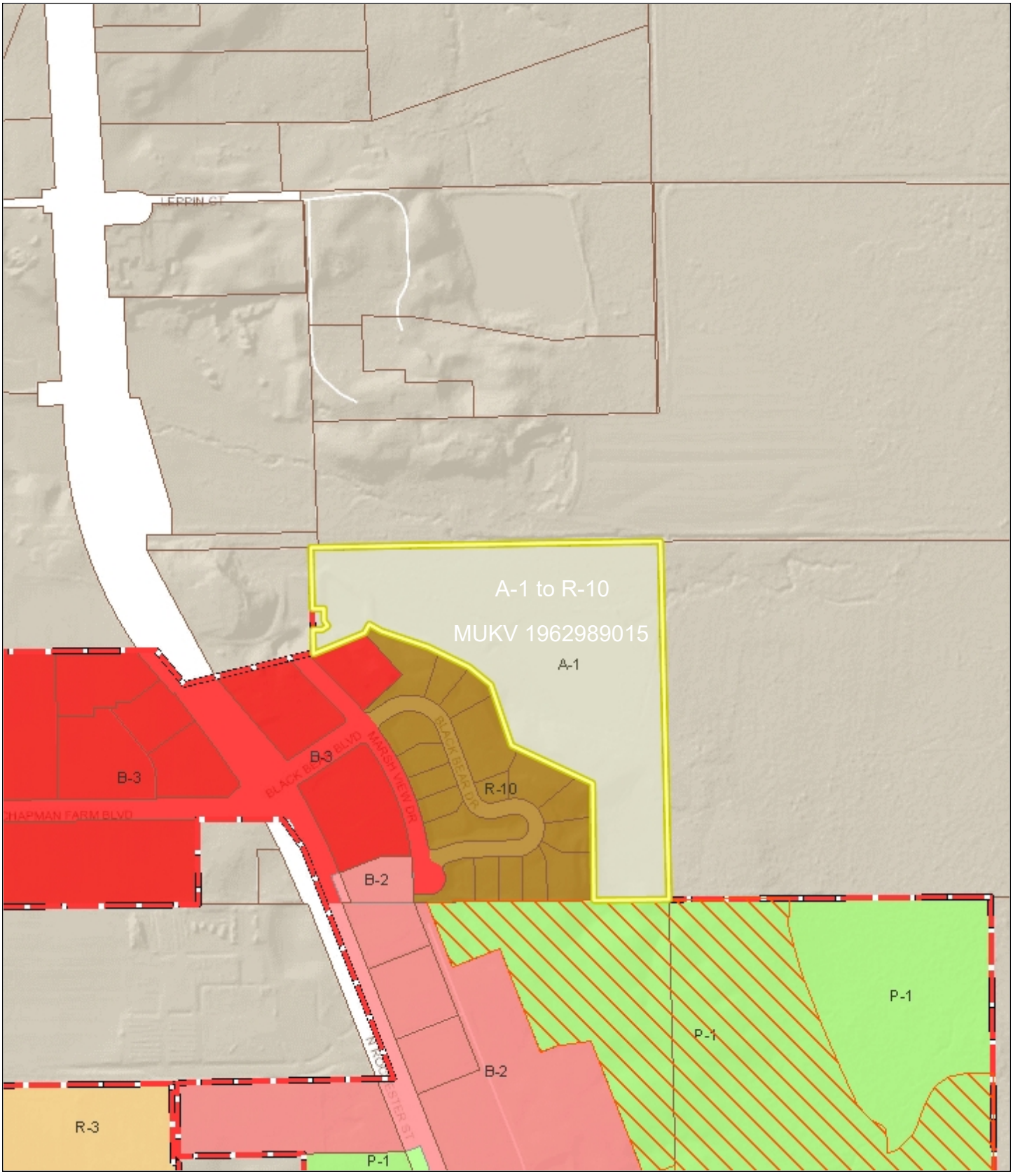
SCALE: 1" = 500 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/13/2022



Village of Mukwonago GIS

Black Bear Condo - Zoning

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 500 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/13/2022

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

ORDINANCE NO. 999

AN ORDINANCE TO AMEND THE ZONING MAP OF THE VILLAGE OF MUKWONAGO ON BEHALF OF THE VILLAGE OF MUKWONAGO FOR MULTIPLE PROPERTIES AND ADDRESSES

THE VILLAGE BOARD of the Village of Mukwonago, Waukesha and Walworth Counties, Wisconsin, do ordain as follows:

SECTION I. Pursuant to the provision of Article XIII and Section 100.856 of the Municipal Code of the Village of Mukwonago, having received the recommendation of the Village Plan Commission, and after a public hearing duly called and held on the 16th day of March, 2022, the following legally described properties are amended on the Village of Mukwonago Zoning District Map as follows:

From A-1 Agricultural District to P-1 Public and Semipublic District

MUKV1959988010 - S93W30740 HIGHWAY NN
Owner: Owner: Village of Mukwonago
LOT 1 CSM #9046 VOL 81/198 REC AS DOC #2589806 PT SW1/4 SEC 22 T5N R18E

MUKV1977999001 - COUNTY ROAD LO
Owner: Village of Mukwonago
PT NE1/4 & SE1/4 SEC 27 T5N R18E; COM E1/4 COR; S89°26'W 1329.98 FT; S 280 FT THE BGN; N 130 FT; N 149.87 FT; S89°26'W 1329.98 FT; N 468.36 FT; N85°38' E 988.68 FT ALG CURVE 272.61 FT; N53°28'E 613.85 FT ALG CURVE N70°48'E 267.27 FT; N88°09'E 681.58 FT; S 1087.14 FT TO BGN :: DOC #1081540 & DOC #1081541

MUKV1979995001 – No Address Assigned
Owner: Village of Mukwonago
N1/2 NW1/4 SE1/4 & N1/2 NE1/4 SE1/4 SEC 27 T5N R18E :: DOC #1714562

MUKV1979989 - COUNTY ROAD LO
Owner: Village of Mukwonago
PT SE1/4 NW1/4 & NE1/4 SW1/4 SEC 27 T5N R18E PCL 6 COM SW COR SW1/4 N89°42'E 1331.14 FT; N 1313.36 FT; N89°51'E 662.72 FT THE BGN; N89°51'E 668.69 FT; N0°01'E 880.46 FT; N42°12'E 470.33 FT; N89°59'W 192.72 FT; N0°01'E 468.44 FT; S87°08'W 623.12 FT; S84°26'W 42.78 FT; S0°08'W 1744.60 FT TO BGN :: DOC #1334435

#VM 00029 – No Address Assigned
Owner: FRIENDS OF EAST TROY RAILROAD MUSEUM INC

PT NW 1/4 SEC 2 T4N R18E DESC AS: COM NW COR NW 1/4 SEC 2, N89D57'56"E 511.92' TO POB, N89D57'56"E 368.09' TO C/L HWY ES, S37D57'05"W 174.79', S56D26'36"W 325.58' TO C/L HWY J, S81D27'48"W 191.41', N30D01'55"E 399.65' TO POB. EXC SLY 33' & ELY 33' FOR HWY. 83357 SQ FT (NET) VILLAGE OF MUKWONAGO ANNEXED UNDER #822030 OMITS P ET 2-3C, P ET 2-3C1 & P ET 2-3D

MUKV2011985 - 1450 MAIN ST
Owner: FRIENDS OF EAST TROY RAILROAD MUSEUM INC

PT SW1/4 SEC 35 T5N R18E; COM AT PT S88°50'E 511.92 FT FROM NW COR SEC 2 T4N R18E; S88°50'E 368.23 FT; N39°09'E 105.89 FT; N55°28'W 290.25 FT; N58°46'W 32.00 FT; S31°14'W 38.00 FT; N58°46'W 11.50 FT; S31°14'W 268.01 FT TO BGN :: DOC# 2018861 & DOC# 2166958

From P-1 Public and Semipublic District to A-1 Agricultural District

A364100001 - 1545 MAIN ST
STRAWBERRY ORCHARDS LLC

LOT 1 CERTIFIED SURVEY NO. 3641 AS RECORDED IN VOL 21 OF C.S. ON PAGE 296 WCR. LOCATED IN NW 1/4 & SW 1/4 NW 1/4 SEC 2 T4N R18E. 163146 SQ FT OUT OF #VM-11

From A-1 Agricultural District /M-2 Light Industrial District /M-4 Medium /Heavy Industrial to A-1 Agricultural District

MUKV 2012994 – Address Not Assigned
HMS PARTNERS LLC

PT SE1/4 SEC 35 T5N R18E; COM SE COR; N0°45'54"E 1872.26 FT; S44°19'29"W 1277.35 FT; S50°02'07"W 201 FT; S44°19'29"W 1107.10 FT; S88°48'46"E 1795.50 FT TO BGN :: EX RR :: DOC #4380104

From R-1 Single Family Community Residential District and P-1 Public and Semipublic District to P-1 Public and Semipublic District

MUKV2134998003 – Address Not Assigned
Owner: Village of Mukwonago

PT NW1/4 SEC 30 T5N R19E :: ALSO PT NE1/4 SEC 25 T5N R18E; COM NW COR SEC 30 N87°15'E 490 FT TO HIGH WATER LI FOX RIVER; SELY ALG RIVER TO W HIGH WATER LI MUKWONAGO RIVER; SLY ALG RIVER TO N LI SE1/4 NW1/4 SEC 30 T5N R19E; S87°46'W 550 FT; S01°21'E 295 FT TO N HIGH WATER LI MUKWONAGO RIVER; SWLY ALG RIVER TO E LI NE1/4 SEC 25 T5N R18E; S01°13'E 270 FT; N89°35'W 1812.71

FT; N 600.15 FT; S89°35'E 1463.58 FT; N30°22'W 260.19 FT; N05°20'E 100.41 FT; N20°46'E 543.27 FT; N74°12'E 173.36 FT; N60°46'E 287.77 FT; N56°23'E 139.91 FT; N49°04'E 322.08 FT; N25°32'W 486.51 FT; N65°02'W 247.26 FT; N65°21'W 219.23 FT; N55°55'E 105.35 FT TO BGN :: EX COM SE COR CSM #7041; N 496.47 FT THE BGN; N 103.67 FT N89°35'E 184.05 FT; S 99.63 FT; S89°08'W 184.01 FT TO BGN :: ALSO EX COM SE COR CSM #7041; N 600.15 FT; S89°35'E 252.42 FT THE BGN; S89°35'E 20.01 FT; S01°47'E 19.23 FT; S88°12'W 20 FT; N01°47'W 20 FT TO BGN :: EX CSM #8526 :: ALSO PT SW1/4 NE1/4 SEC 25 T5NR18E; COM SE COR CSM #7041; N00°51'W 600.15 FT; S89°35'E 252.42 FT THE BGN; S89°35'E 20.01 FT; S01°47'E 19.23 FT; S88°12'W 20.00 FT; N01°47'W 20.00 FT TO BGN :: EX DOC #2600132 :: DOC #2180797 & DOC #2600131

MUKV1969076 - TWO RIVERS CT
Owner: Village of Mukwonago

OUTLOT 1 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC #2356791

From R-1 Single Family Community Residential District to P-1 Public and Semipublic District

MUKV1969062 – Address Not Assigned
Owner: Village of Mukwonago

OUTLOT 1 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E :: DOC #2335481

MUKV1969077 No Address Assigned
Owner: Village of Mukwonago

OUTLOT 2 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC #2356791

MUKV2091085002 – Address Not Assigned
WAUKESHA COUNTY

OUTLOT 2 FOX RIVER VIEW PT SW1/4 & SE1/4 SEC 19 & NW1/4 SEC 30 T5N R19E (DEDICATED TO WAUKESHA COUNTY PER PLAT) :: INCLUDING BURIAL LANDS AS DESCRIBED IN NOTICE OF LOCATION OF CATALOGUED BURIAL SITE EXECUTED BY THE STATE HISTORICAL SOCIETY OF WISCONSIN AND RECORDED AS DOC #3212088

MUKV2091089 – Address Not Assigned
Owner: Village of Mukwonago

OUTLOT 6 FOX RIVER VIEW PT SW1/4 & SE1/4 SEC 19 & NW1/4 SEC 30 T5N R19E :: DOC #3200496

From R-1 Single Family Community Residential District and P-1 Public and Semipublic District to R-1 Single Family Community Residential District

MUKV1969025 -416 EASTERN TRL
Owner: CONNIE R COYLE
LOT 18 BLK 6 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E

MUKV1969023 - 426 EASTERN TRL
Owner: JIM DARBY
LOT 16 BLK 6 TWO RIVERS ADDITION NO 1 PT NE1/4 SEC 25 T5N R18E :: DOC #4355641

MUKV1969070 - 1341 TWO RIVERS CT
Owner: ANDREW CIGANEK
LOT 26 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E 0.910 AC DOC# 3715550

MUKV1969069 - 1338 TWO RIVERS CT
Owner: ANDREW R YERGENS & SHELLY A YERGENS JT REV TRUST
LOT 25 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC# 4182004

MUKV1969068 - 1332 TWO RIVERS CT
Owner: HARTWIG TRUST
LOT 24 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E 1.366 AC DOC# 3322411

MUKV1969067 - 1326 TWO RIVERS CT
Owner: BRIAN SWIRTH
LOT 23 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E R2885/3305

MUKV1969066 - 1320 TWO RIVERS CT
Owner: LOUIS BURG
LOT 22 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E DOC# 2790910

MUKV1969065 - 1314 TWO RIVERS CT
Owner: MARK A ZABOROWSKI
LOT 21 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E :: DOC# 4143905

MUKV1969064 -1308 TWO RIVERS CT
Owner: KENNETH A WERNER JR
LOT 20 BLK 5 TWO RIVERS ADDITION NO 2 PT NE1/4 SEC 25 T5N R18E & PT NW1/4 SEC 30 T5N R19E DOC# 2815397

MUKV1968142 626 TWO RIVERS DR
Owner: GREGORY J WILLETT
LOT 13 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E 1.1297 AC DOC# 3482848

MUKV1968141 630 TWO RIVERS DR
Owner: LUCAS G LEMASTER
LOT 12 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E

MUKV1968140 - 634 TWO RIVERS DR
Owner: SHAWN MCNULTY
LOT 11 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2912593

MUKV1968139 - 638 TWO RIVERS DR
Owner: JASON R PARSELL

LOT 10 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E :: DOC# 4113379

MUKV1968138 - 642 TWO RIVERS DR
Owner: JOHN E LEPINSKI
LOT 9 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E 0.8002 AC DOC# 3632084

MUKV1968137 - 646 TWO RIVERS DR
Owner: BRAD SMITH
LOT 8 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2814156

MUKV1968136 - 650 TWO RIVERS DR
Owner: TIMOTHY MAHER
LOT 7 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2601340

MUKV1968135 - 704 TWO RIVERS DR
Owner: JOAN DUBEY
LOT 6 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E

MUKV1968134 - 712 TWO RIVERS DR
Owner: ROBERT C JOY
LOT 5 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 4042130 & DOC# 4082094

MUKV1968133 - 720 TWO RIVERS DR
Owner: JOSEPH KOWALCZYK
LOT 4 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2536266

MUKV1968132 - 728 TWO RIVERS DR
Owner: JOHN BUSSE JR
LOT 3 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 2676113

MUKV1968131 - 736 TWO RIVERS DR
Owner: CYNTHIA M SCHIFERL
LOT 2 BLK 5 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E :: DOC# 4228964

MUKV1968130 - 744 TWO RIVERS DR
Owner: JONATHAN G HURLEY
LOT 1 BLK 5 & OUTLOT 1 BLK 9 TWO RIVERS PT SE1/4 SEC 24 & NE1/4 SEC 25 T5N R18E DOC# 3899387

From R-2 Single-Family Village Residential to R-1 Single Family Community Residential District

MUKV1974977 – 577 Eagle Lake Ave
Owner: JOSEPH C MENDEZ
PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT N 566.28 FT N89°E 74.25 FT S 567.60 FT W 74.25 FT TO BGN 0.966 AC ALSO 28 FT STRIP DOC# 3116776

MUKV1974976 – 503 Eagle Lake Ave
Owner: KRISTIN J PETERSON
E 120 FT OF PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N OF & 74.25 FT E OF W1/4 POST N 567.6 FT N89°E 74.25 FT S 568.92 FT W 74.25 FT TO BGN ALSO COM 505.62 FT N OF & 148.50 FT E OF W1/4 POST N 568.92 FT N89°E 74.25 FT S 570.24 FT W 74.25 FT TO BGN DOC# 3603451

MUKV1974975 – 493 Eagle Lake Ave
Owner: JASON DREGER
PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 222.55 FT N 570.24 FT N89°E 74.25 FT S 571.56 FT W 74.25 FT TO BGN DOC# 3057094

MUKV1974974 – 487 Eagle Lake Ave
Owner: TERRY HASS
PT NW1/4 SEC 26 T5N R18E; COM 7 CH 66 LINKS (505.56 FT) N & 4 CH 50 LINKS (297 FT) E OF W1/4 POST; N 8 CH 66 LINKS (571.56 FT) TO CNTR OF HWY; N89°E 1 CH 25 LINKS (82.5 FT); S 8 CH 68 1/4 LINKS (573.04 FT); W 1 CH 25 LINKS (82.5 FT) TO BGN :: DOC# 4222578

MUKV1974973 – 477 Eagle Lake Ave
Owner: RICHARD R HIERL

PT NW1/4 SEC 26 T5N R18E; COM AT POINT 505.56 FT N & 379.50 FT E OF 1/4 POST ON W SI OF SAID SEC 26; N PARALLEL TO W LI OF SEC 573.04 FT TO CTR OF HWY; N89°E IN CTR OF HWY 82.50 FT; S PARALLEL TO W LI OF SEC 574.53 FT; W 82.50 FT TO BGN :: DOC #4379879

MUKV1974972 – 467 Eagle Lake Ave
Owner: CRAIG WILSON
PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N & 462.00 FT E OF W1/4 POST N 574.53 FT N89°E 82.50 FT S 577.99 FT W 82.50 FT TO BGN DOC# 3170440

MUKV1974971 – 459 Eagle Lake Ave
Owner: DANIEL LEISTER
PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 544.50 FT N 576.01 FT N89°E 82.50 FT S 577.50 FT W 82.50 FT TO BGN DOC# 3951221

MUKV1974970- No Address
Owner: WAUKESHA COUNTY
PT NW1/4 SEC 26 T5N R18E COM W1/4 POST N 505.56 FT E 627 FT N 577.50 FT S81 E 76.56 FT S 566.28 FT W 75.90 FT TO BGN 0.715 AC EX R24/71 R999/268

MUKV1974969 – 512 Bay St
Owner: NICHOLAS K NEWBY
PT NW1/4 SEC 26 T5N R18E COM 505.56 FT N & 627 FT E OF W1/4 POST N 130.02 FT E 75.90 FT S 130.02 FT W 75.90 FT TO BGN DOC# 4039326 & DOC# 4043584

MUKV1974985 – 430 Eagle Lake Ave
Owner: DEBBIE D JAMES
PT NW1/4 SEC 26 T5N R18E; COM NW COR; S 1/2°W 883.08 FT; N89°30'E 726 FT THE BGN; S 1/2°W 676.5 FT; S86°E 92.6 FT; N 1/2°E 684.5 FT; S89°30'W 92.42 FT TO BGN :: DOC# 4131729 & DOC# 4170782

MUKV1974984 – 440 Eagle Lake Ave
Owner: ROSS PILAK
T NW1/4 SEC 26 T5N R18E; COM AT PT CTR OF HWY 16.24 CH (1071.84') N OF 1/4 POST W SI SEC 26 & 11 CH (726') N89°E OF W LI SEC 26; N 10 CH (660'); S89°W 100 FT; S 10 CH (660') TO CNTR OF HWY; N89°E 100 FT TO BGN :: DOC #4343503

MUKV1974983 – 450 Eagle Lake Ave
Owner: RAYMOND SCHMIDT
PT NW1/4 SEC 26 T5N R18E; COM IN CTR OF HWY 16 CHAINS & 24 LINKS (1071.84 FT) N OF W1/4 POST & 6 CHAINS (396 FT) N89°E FROM W LI SEC 26; N89°E 175 FT THE BGN; N 250 FT;

S89°W 100 FT; N 410 FT; N89°E 155 FT; S 660 FT; S89°W 55 FT TO BGN :: DOC# 4230284

MUKV1974982 – 460 Eagle Lake Ave
Owner: JOHN W STRIZIC

PT NW1/4 SEC 26 T5N R18E COM 1071.84 FT N OF W1/4 POST & 396.00 FT N89° E FROM W SEC LI; N89° E 75 FT THE BGN; N 250 FT; N89° E 100 FT; S 250 FT; S89° W 100 FT TO BGN DOC# 4067838

MUKV1974981 - 470 EAGLE LAKE AVE
Owner: JOHN W STRIZIC

PT NW1/4 SEC 26 T5N R18E COM 1071.84 FT N OF W1/4 POST & 396.00 FT N89° E FROM W SEC LI; N 660.00 FT; N89° E 75 FT; S 660 FT; S89° W 75 FT TO BGN DOC# 4067838

MUKV1974980 490 EAGLE LAKE AVE
Owner: NYSSE REVOCABLE TRUST

PT NW1/4 SEC 26 T5N R18E; COM AT A POINT ON W LI OF SAID 1/4 SEC N 1071.84 FT FROM THE W1/4 POST OF SAID SEC; N89°35'36"E ALG CNTR LI OF HWY 252.0 FT THE BGN; N89°35'36"E ALG SAID CNTR LI 144.0 FT; N & PARALLEL TO W LI OF SAID 1/4 SEC 268.0 FT; S89°35'36"W 144.0 FT; S 268.0 FT TO BGN

MUKV1974979004 500 EAGLE LAKE AVE
Owner: MARY JO LA TONA

LOT 4 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E

MUKV1974979003 618 MEADOW VIEW CT
Owner: ALAN FORD

LOT 3 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E

MUKV1974979002 612 MEADOW VIEW CT
Owner: ANDREW GRIPPEN

LOT 2 CSM #9632 VOL 88/277 REC AS DOC #3066849 PT NW1/4 SEC 26 T5N R18E :: DOC #4345683

MUKV1974979001 606 MEADOWVIEW CT
Owner: JEFFREY SCOTT RUDOLPH

LOT 1 CSM #9632 VOL 88/277 REC AS DOC #3066894 PT NW1/4 SEC 26 T5N R18E :: DOC #4348624

From A-1 Agricultural District to R-10 Multi Family District

MUKV1962989015

Owner: LOT OWNERS OF THE GLEN OF MUKWONAGO CONDOMINIUM

1ST ADDENDUM TO CONDOMINIUM PLAT OF THE GLEN OF MUKWONAGO (PHASE 1) EX UNITS 37 & 38 PT NW1/4 SEC 23 T5N R18E

SECTION II: The above referenced legal descriptions are graphically provided within attached Exhibit A.

SECTION Ill. All Ordinances or parts of Ordinances contravening the terms and conditions of this Ordinance are hereby to that extent repealed.

SECTION IV. Severability. If any portion of this Ordinance is invalid or unconstitutional, or the application of this Ordinance to any person or circumstances is invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provisions or applications.

SECTION V. Effective Date. This Ordinance shall take effect upon passage and publication as provided by law.

The remainder of this page left intentionally blank.

PASSED AND ADOPTED by the Village Board this _____ day of _____, 2022.

APPROVED:

_____
Fred Winchowky, Village President

Countersigned:

_____
Diana Dykstra, Village Clerk/Treasurer

PLANNING COMMISSION

February 8, 2021 at 6:30pm
Mukwonago, WI

Ordinance – Solar Panels

Modifications of Chapter 100 Regarding Solar Panel Standards and Approval Processes

Project Summary

The Village of Mukwonago zoning code has not been updated or revised in a significant period of time. Currently the zoning code is being updated. This process began in 2021 and it is anticipated to be complete in 2023.

Currently there are number of property owners seeking approval for solar panels within the Village. Applicants apply for a building permit and if they are not visible from the street then permits are issued by inspections. However, there are a number of properties who are requesting solar panel approval that are visible from the street.

Multiple sections of the zoning code state that *"both roof mounted and as a accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and received prior plan commission approval and a permit from the building inspector."*

The complexity of these ordinance sections is the "screened from view" and well as the additional burden of having to get approval from the planning commission.

To address these two sections staff has drafted a proposed ordinance for the short term until the full zoning code update is able to be competed and adopted. This draft ordinance simply makes solar collectors and accessory use to the primary use in each district and removes the screening, as well as planning commission approval.

Draft Ordinance

Note: ~~Crossed out~~ = text removed Underlined = text added

100-71 (2) d. Roof-mounted solar collectors. ~~which do not detract from the appearance of the structure, provided that the location of the collector is approved by the board of zoning and building appeals.~~

100-101 (2) c. Solar collectors.~~, both roof mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-102 (2) c. Solar collectors.~~, both roof mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are~~

~~located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-103 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-107 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-108 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-109 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-105 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-110 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-115 (2) c. Solar collectors.~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-155 (2) d. Solar collectors.~~, only as a conditional use.~~

100-156 (2) e. Solar collectors.~~, only as a conditional use.~~

Recommendation

Staff recommend the planning commission recommend to the Village board the adoption of an ordinance as drafted.

Attachments

1. Ordinance

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

ORDINANCE NO. 1000

AN ORDINANCE TO AMEND THE ZONING CODE RELATEDTO SOLAR PANELS IN MULTIPLE ZONING DISTRICTS WITHIN THE VILLAGE OF MUKWONAGO, WISCONSIN

THE VILLAGE BOARD of the Village of Mukwonago, Waukesha and Walworth Counties, Wisconsin, do ordain as follows:

SECTION I. Pursuant to the provision of Article XIII and Section 100.856 of the Municipal Code of the Village of Mukwonago, having received the recommendation of the Village Plan Commission, and after a public hearing duly called and held on the 16th day of February 2022, that Chapter 100 Zoning Code, Article II District Regulations, Sections 100-71 (2) d., 100-101 (2) c., 100-102 (2) c., 100-103 (2) c., 100-107 (2) c., 100-108 (2) c., 100-109 (2) c., 100-105 (2) c., 100-110 (2) c., 100-115 (2) c., 100-155 (2) d., 100-156 (2) e., of the Municipal Code of the Village of Mukwonago, Wisconsin, is hereby amended as follows: . . .

100-71 (2) d. Roof-mounted solar collectors. ~~which do not detract from the appearance of the structure, provided that the location of the collector is approved by the board of zoning and building appeals.~~

100-101 (2) c. Solar collectors. ~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-102 (2) c. Solar collectors. ~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-103 (2) c. Solar collectors. ~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-107 (2) c. Solar collectors. ~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-108 (2) c. Solar collectors. ~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan~~

~~commission approval and a permit from the Building Inspector.~~

100-109 (2) c. Solar collectors~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-105 (2) c. Solar collectors~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-110 (2) c. Solar collectors~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-115 (2) c. Solar collectors~~, both roof-mounted and as an accessory structure are permitted provided they comply with all yard and height requirements for the district in which they are located, are screened from street view, and receive prior plan commission approval and a permit from the Building Inspector.~~

100-155 (2) d. Solar collectors~~, only as a conditional use.~~

100-156 (2) e. Solar collectors~~, only as a conditional use.~~

SECTION II. Upon Adoption of this Ordinance Article II District Regulations, Sections 100-71 (2) d., 100-101 (2) c., 100-102 (2) c., 100-103 (2) c., 100-107 (2) c., 100-108 (2) c., 100-109 (2) c., 100-105 (2) c., 100-110 (2) c., 100-115 (2) c., 100-155 (2) d., 100-156 (2) e., of the Municipal Code of the Village of Mukwonago, Wisconsin, shall read as follows:

100-71 (2) d. Roof-mounted solar collectors.

100-101 (2) c. Solar collectors.

100-102 (2) c. Solar collectors.

100-103 (2) c. Solar collectors.

100-107 (2) c. Solar collectors.

100-108 (2) c. Solar collectors.

100-109 (2) c. Solar collectors.

100-105 (2) c. Solar collectors.

100-110 (2) c. Solar collectors.

100-115 (2) c. Solar collectors.

100-155 (2) d. Solar collectors.

100-156 (2) e. Solar collectors.

SECTION III. All Ordinances or parts of Ordinances contravening the terms and conditions of this Ordinance are hereby to that extent repealed.

SECTION IV. Severability. If any portion of this Ordinance is invalid or unconstitutional, or the application of this Ordinance to any person or circumstances is invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provisions or applications.

SECTION V. Effective Date. This Ordinance shall take effect upon passage and publication as provided by law.

The remainder of this page left intentionally blank.

PASSED AND ADOPTED by the Village Board this _____ day of _____, 2022.

APPROVED:

_____
Fred Winchowky, Village President

Countersigned:

_____
Diana Dykstra, Village Clerk/Treasurer

PLANNING COMMISSION

February 8, 2021 at 6:30pm
Mukwonago, WI

PC - Resolution
VB - Ordinance

Minor Amendment to the Comprehensive Plan
related to Parcel Numbers #VM00029 and MUKV2011985

Project Summary

The Village of Mukwonago zoning code has not been updated or revised in a significant period of time. Currently the zoning code is being updated. This process began in 2021 and it is anticipated to be complete in 2023.

The consultants and staff have reviewed both the Comprehensive Plan (Land Use Plan) and the Zoning Map. Upon our review we found two minor items for consideration with regard to the Comprehensive Plan. These two items relate to the #VM00029 and MUKV2011985 which are both owned by the East Troy Railroad where they organization has their maintenance facility.

Currently, the Comprehensive Plan (Land Use Plan) list these two parcels as Low Intensity Commercial/ Business. These parcels based upon their current use and their anticipated long-term use as part of the historic rail system, should in staff's opinion be listed as Government and Institutional.

This land use classification will allow for a more logical mapping of the zoning map to institutional thus allowing for such an operation to continue as a conforming use.

Recommendation

Staff recommend the planning commission recommend to the Village board the adoption of an ordinance as drafted.

Attachments

1. Ordinance

Village of Mukwonago GIS

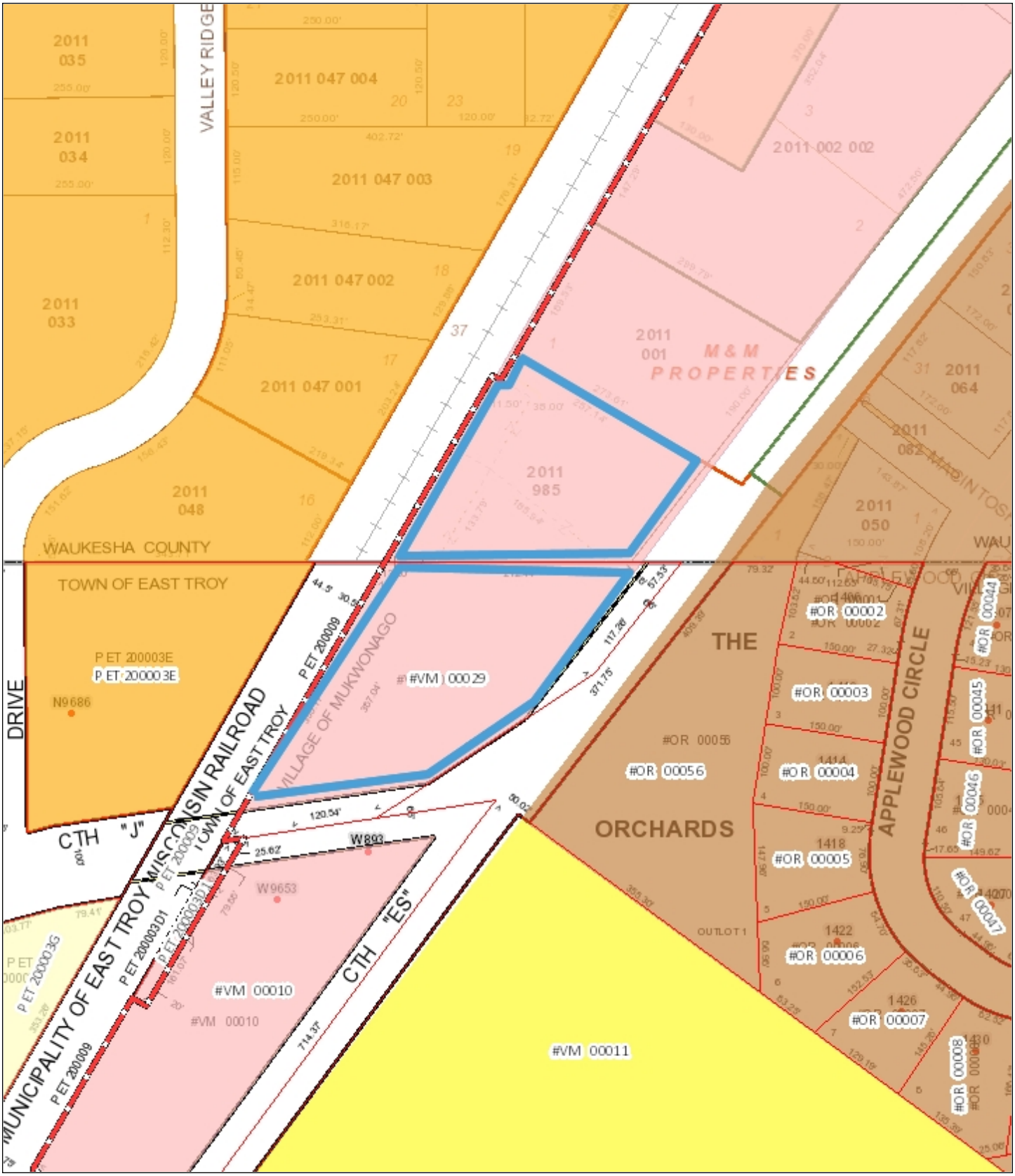
Land Use Plan Amendment - Aerial

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 167 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/31/2022



Village of Mukwonago GIS

Land Use Plan Amendment - Land Use

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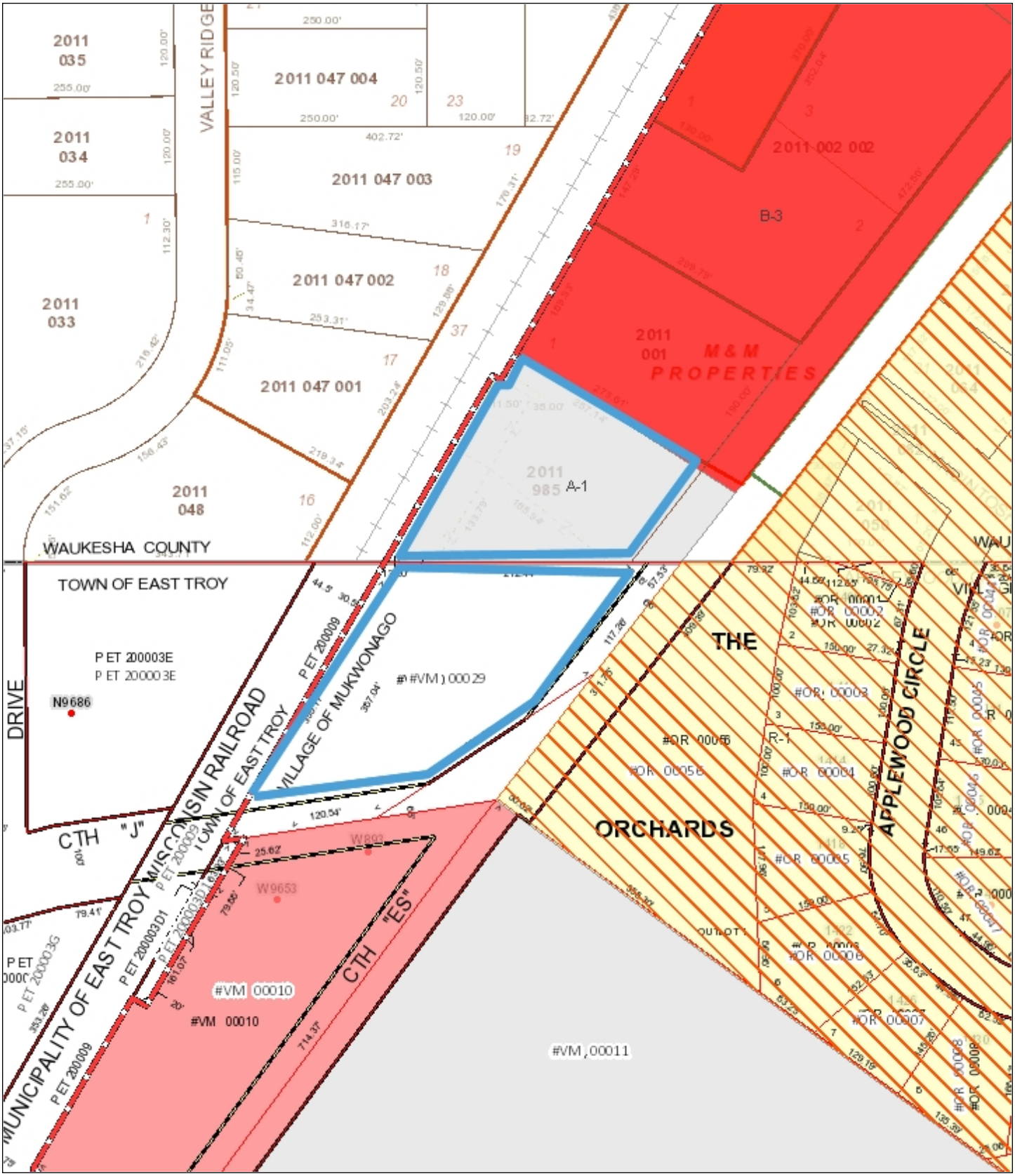
SCALE: 1" = 167 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/31/2022



Village of Mukwonago GIS

Land Use Plan Amendment - Zoning

DISCLAIMER: The Village of Mukwonago does not guarantee the accuracy of the material contained here in and is not responsible for any misuse or misrepresentation of this information or its derivatives.

SCALE: 1" = 167 '

VILLAGE OF MUKWONAGO
440 River Crest Court
PO Box 206
Mukwonago, WI 53149
262-363-6420

Print Date: 1/31/2022

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

PLAN COMMISSION RESOLUTION NO. PC- 2022-01

A RESOLUTION OF THE VILLAGE OF MUKWONAGO PLAN COMMISSION RECOMMENDING TO THE VILLAGE BOARD VARIOUS REVISIONS TO THE COMPREHENSIVE PLAN (LAND USE MAP) RELATING TO PARCEL NUMBERS #VM 00029 and MUKV2011985

WHEREAS, the Village Board is authorized by state law to adopt a comprehensive plan as defined in Sections 66.1001(1)(a) and 66.1001(2), Wis. Stats.; and

WHEREAS, the Village Board, upon recommendation of the Village Plan Commission, adopted a comprehensive plan on October 6, 2009; and

WHEREAS, the Village Board upon recommendation of the Village Plan Commission, Adopted an Update to the Comprehensive Plan 2035 on November, 29, 2016; and

WHEREAS, the Village Board is authorized to amend the adopted comprehensive plan from time to time, upon recommendation of the Village Plan Commission; and

WHEREAS, the Village Board adopted a public participation plan that describes the way in which Village residents and other interested parties can participate in the revision of the adopted comprehensive plan; and

WHEREAS, The Village has embarked upon a zoning code rewrite and prior to completion of the text and map has determined a number of inconsistencies between the actual land use, the land use plan, and zoning; on parcels identified by parcel numbers #VM 00029 and MUKV2011985 to amend the future land use map (Map 9) and the Southwest Key Area Map (Map 7) of the adopted comprehensive plan by change the classification from Low Intensity Commercial/ Business to Government and Institutional.

WHEREAS, the proposed revisions constitute a minor amendment as set forth in the adopted public participation plan; and

WHEREAS, the Village Plan Commission at their meeting on February 8, 2022 has determined that additional opportunities for public participation (aside from the public hearing to be conducted by the Village Board) are not needed for this minor amendment owing to the limited nature of the request; and

WHEREAS, the Village Plan Commission considered this resolution at their meeting on February 8, 2022, and found it to be a desirable change; and

NOW, THEREFORE, the Plan Commission of the Village of Mukwonago, Waukesha and Walworth Counties**,** does hereby ordain as follows:

SECTION I: The Comprehensive Plan for the Village of Mukwonago entitled "Comprehensive Plan 2035 for the Village of Mukwonago" should be amended as follows:

A. Map 9, "Land Use 2035", should be amended by adding a "Government and Institutional" to Parcel Number VM 00029 and MUKV2011985

B. Map 7 , " Southwest Key Area Map ", should be amended by adding "Government and Institutional" to Parcel Number VM 00029 and MUKV2011985

C. This amendment shall take precedence to any conflict that may arise between other Comprehensive Plan policies and presentation of projected number of dwelling units and population within the Comprehensive Plan calculated based on the prior land use designation of the area subject to this amendment.

SECTION II. All Resolutions or parts of Resolutions contravening the terms and conditions of this Resolution are hereby to that extent repealed.

SECTION Ill: SEVERABILITY. The several sections of this resolution are declared to be severable. If any section or portion thereof shall be declared by a court of competent jurisdiction to be invalid, unlawful or unenforceable, such decisions shall apply only to the specific section or portion thereof directly specified in the decision and shall not affect the validity of any other provisions, section or portions thereof of the ordinance. The remainder of the resolution shall remain in full force and effect. Any other resolutions whose terms are in conflict with the provisions of this resolution are hereby repealed as to those terms that conflict.

Passed and adopted this 8th day of February 2022. VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky,
Plan Commission Chairman

Attest: _____
Linda Gourdoux, WCMC
Deputy Village Clerk

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

ORDINANCE NO. 1001

AN ORDINANCE TO AMEND THE COMPREHENSIVE PLAN

The Village Board of the Village of Mukwonago, Waukesha and Walworth Counties, Wisconsin, do ordain as follows:

Whereas, the Village of Mukwonago has by ordinance established Plan Commission for the Village of Mukwonago empowered to make and adopt a master plan for the physical development of the Village Pursuant to the Wisconsin Statutes Section 62.23 (2) and (3); and

Whereas, the Village of Mukwonago adopted a Comprehensive / Master Plan for the Village of Mukwonago via Ordinance No. 824 on October 6, 2009 and subsequently amended on several occasions to meet the particular needs of the Village; and

Whereas, per the adopted public participation plan (Resolution 2016-004) minor amendments may be recommended by the Planning Commission after adoption of a resolution and adopted by the Village Board by ordinance after holding a public hearing; and

WHEREAS, the Village Plan Commission at their meeting on February 8, 2022 has determined that additional opportunities for public participation (aside from the public hearing to be conducted by the Village Board) are not needed for this minor amendment owing to the limited nature of the request; and

WHEREAS, The Village has embarked upon a zoning code rewrite and prior to completion of the text and map has determined a number of inconsistencies between the actual land use, the land use plan, and zoning; on parcels identified by parcel numbers #VM 00029 and MUKV2011985 to amend the future land use map (Map 9) and the Southwest Key Area Map (Map 7) of the adopted comprehensive plan by change the classification from Low Intensity Commercial/ Business to Government and Institutional.

Whereas, the Village Board hosted a public hearing on March 16, 2022 for additional citizen comment in accordance with Wisconsin Statutes Section 66.1001; and

Whereas, The Village Board by adoption of this ordinance is ratifying all previous amendments to the comprehensive plan approved by the planning commission and approved by resolution; and

WHEREAS, the Village Plan Commission considered this resolution at their meeting on February 8, 2022, and found it to be a desirable change; and

NOW, THEREFORE, the Village Board of Trustees of the Village of Mukwonago, Waukesha and Walworth Counties**,** does hereby ordain as follows:

SECTION I: The Comprehensive Plan for the Village of Mukwonago entitled "Comprehensive Plan 2035 for the Village of Mukwonago" shall be amended as follows:

A. Map 9, "Land Use 2035", should be amended by adding a "Government and Institutional" to Parcel Number VM 00029 and MUKV2011985
B. Map 7, " Southwest Key Area Map ", should be amended by adding "Government and Institutional" to Parcel Number VM 00029 and MUKV2011985

C. This amendment shall take precedence to any conflict that may arise between other Comprehensive Plan policies and presentation of projected number of dwelling units and population within the Comprehensive Plan calculated based on the prior land use designation of the area subject to this amendment.

SECTION II. All Ordinances or parts of Ordinances contravening the terms and conditions of this Ordinances are hereby to that extent repealed.

SECTION Ill: SEVERABILITY. The several sections of this ordinances are declared to be severable. If any section or portion thereof shall be declared by a court of competent jurisdiction to be invalid, unlawful or unenforceable, such decisions shall apply only to the specific section or portion thereof directly specified in the decision, and shall not affect the validity of any other provisions, section or portions thereof of the ordinance. The remainder of the ordinances shall remain in full force and effect. Any other ordinances whose terms are in conflict with the provisions of this ordinances are hereby repealed as to those terms that conflict.

Passed and adopted this ___ day of ___ 2022. VILLAGE OF MUKWONAGO

By: _____
Fred Winchowky, Village President

Attest: _____
Diana Dykstra., Village Clerk

PLANNING COMMISSION

February 8, 2021 at 6:30pm
Mukwonago, WI

Zoning Text Amendment

AN ORDINANCE TO REPEAL AND RECREATE DIVISION 7 FLOODPLAIN DISTRICT AND STANDARDS (SECTIONS 100-271 THROUGH 100-281) OF MUNICIPAL CODE VILLAGE OF MUKWONAGO

Project Summary

The Village received a Letter of Final Determination (LFD) from the Federal Emergency Management Agency (FEMA) regarding the updated Flood Insurance Rate Maps (FIRM) for Walworth County in November of 2021.

As part of the map changes, the Village will need to update the local floodplain zoning ordinance by *April 6, 2022*. The Department of Natural Resources (DNR) has been assisting with this process. The DNR has provided a draft ordinance to be adopted. This ordinance has a few options and blanks to be filled in by each municipality. This draft has been reviewed and discussed with the Village Legal council and the draft that is attached has been reviewed by both the DNR and Attorney.

This ordinance has the same sections as our existing ordinance, however there are portions of the text that have become more clear or additional language has been added.

As note above the Village is required to approve this ordinance by April 6, 2022.

If the Village does not pass the attached ordinance the Village will no longer be participating in the Flood Insurance program. The results of not participating are that residence of the Village would not be able to apply for flood insurance. This is an important ordinance for a community like Mukwonago as we have two rivers, one lake, a marsh, and multiple other areas like wetlands that can flood. Thus, this program is important for many of the property owners and residents of the community as well as assisting with regulatory standards for development.

Recommendation

Staff recommend the planning commission recommend to the Village board the adoption of the ordinance as drafted.

Attachments

1. Ordinance

VILLAGE OF MUKWONAGO
WAUKESHA AND WALWORTH COUNTIES

ORDINANCE NO. 1002

AN ORDINANCE TO REPEAL AND RECREATE DIVISION 7 FLOODPLAIN DISTRICT AND STANDARDS (SECTIONS 100-271 THROUGH 100-281) OF MUNICIPAL CODE VILLAGE OF MUKWONAGO

THE VILLAGE BOARD of the Village of Mukwonago, Waukesha and Walworth Counties, Wisconsin, do ordain as follows:

SECTION I. Pursuant to the provision of Article XIII and Section 100.856 of the Municipal Code of the Village of Mukwonago, having received the recommendation of the Village Plan Commission, and after a public hearing duly called and held on the 16th day of February 2022, that Division 7, Sections 100-271 through 281 of the Municipal Code of the Village of Mukwonago, Wisconsin, is hereby repealed and recreated as follows: . . .

100-271 STATUTORY AUTHORIZATION, FINDING OF FACT, STATEMENT OF PURPOSE, TITLE AND GENERAL PROVISIONS

1.1 STATUTORY AUTHORIZATION

This ordinance is adopted pursuant to the authorization in s. 61.35 and 62.23, for villages and cities and the requirements in s. 87.30, Stats.

1.2 FINDING OF FACT

Uncontrolled development and use of the floodplains and rivers of this municipality would impair the public health, safety, convenience, general welfare and tax base.

1.3 STATEMENT OF PURPOSE

This ordinance is intended to regulate floodplain development to:

(1) Protect life, health and property;

(2) Minimize expenditures of public funds for flood control projects;

(3) Minimize rescue and relief efforts undertaken at the expense of the taxpayers;

(4) Minimize business interruptions and other economic disruptions;

(5) Minimize damage to public facilities in the floodplain;

(6) Minimize the occurrence of future flood blight areas in the floodplain;

(7) Discourage the victimization of unwary land and homebuyers;

(8) Prevent increases in flood heights that could increase flood damage and result in conflicts between property owners; and

(9) Discourage development in a floodplain if there is any practicable alternative to locate the activity, use or structure outside of the floodplain.

1.4 TITLE

This ordinance shall be known as the Floodplain Zoning Ordinance for Village of Mukwonago, Wisconsin.

1.5 GENERAL PROVISIONS

(1) AREAS TO BE REGULATED

This ordinance regulates all areas of special flood hazard identified as zones A, AO, AH, A1-30, or AE on the Flood Insurance Rate Map. Additional areas identified on maps approved by the Department of Natural Resources (DNR) and local community may also be regulated under the provisions of this ordinance, where applicable.

(2) OFFICIAL MAPS & REVISIONS

Special Flood Hazard Areas (SFHA) are designated as zones A, A1-30, AE, AH, or AO on the Flood Insurance Rate Maps (FIRMs) based on flood hazard analyses summarized in the Flood Insurance Study (FIS) listed in subd. (a) below. Additional flood hazard areas subject to regulation under this ordinance are identified on maps based on studies approved by the DNR and listed in subd. (b) below. These maps and revisions are on file in the office of the ***Village Clerk (Village of Mukwonago).***

(a) OFFICIAL MAPS: Based on the Flood Insurance Study (FIS):

1. Flood Insurance Rate Map (FIRM) for Walworth County, panel numbers 55127C0104E and 55127C0110E, dated 04/06/2022;

2. Flood Insurance Rate Map (FIRM) for Waukesha County, panel numbers 55133C0314G, 55133C0318G, 55133C0426G, 55133C0427G, and 55133C0431G, dated 11/05/2014;

3. Flood Insurance Study (FIS) for Walworth County, 55127CV001C and 55127CV002C, dated 04/06/2022.

4. Flood Insurance Study (FIS) for Waukesha County, 55133CV001C dated 11/5/2014.

Approved by: The DNR and FEMA

(b) OFFICIAL MAPS**:** Based on other studies. Any maps referenced in this section must be approved by the DNR and be more restrictive than those based on the FIS at the site of the proposed development.

1. Lake Beulah Dam Failure analysis approved by the Department of Natural Resources on December 1, 2004, including:
   - Map dated June 6, 2004 and titled “Lake Beulah Dam”.

- Floodway data table dated June 6, 2004 and titled “Lake Beulah NWS Parameter Estimates”.
- Flood profiles dated June 6, 2004 and titled “Lake Beulah NWS Parameter Estimates”.

2. Lower Phantom Dam Failure Analysis approved by the Department of Natural Resources on July 11, 2012 including:
   - Map dated June 28, 2012 and titled “Inundation Map Hydraulic Shadow – Dam Failure”.
   - Floodway data table dated June 27, 2012 and titled “Mukwonago River, Waukesha Co., Wisconsin. Mukwonago Dam Hydraulic Shadow Floodway Data Table.”
   - Flood profiles dated June 27, 2012 and titled “Dam Failure, 100-year Flood Profile”.

3. Waukesha County, Village of Mukwonago Flood Storage District, Panel 11 of 12, Effective November 5, 2014.

(3) ESTABLISHMENT OF FLOODPLAIN ZONING DISTRICTS

The flood hazard areas regulated by this ordinance are divided into districts as follows:

(a) The Floodway District (FW), is the channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional floodwaters, within AE Zones as shown on the FIRM, or within A Zones shown on the FIRM when determined according to s. 5.1(5).

(b) The Floodfringe District (FF) is that portion of a riverine special flood hazard area outside the floodway within AE Zones on the FIRM, or, when floodway limits have been determined according to s. 5.1(5), within A Zones shown on the FIRM.

(c) The General Floodplain District (GFP) is those riverine areas that may be covered by floodwater during the regional flood in which a floodway boundary has not been delineated on the FIRM and also includes shallow flooding areas identified as AH and AO zones on the FIRM.

(e) The Flood Storage District (FSD) is that area of the floodplain where storage of floodwaters is calculated to reduce the regional flood discharge.

(4) LOCATING FLOODPLAIN BOUNDARIES

Discrepancies between the exterior boundaries of zones A1-30, AE, AH, or A on the official floodplain zoning map and actual field conditions may be resolved using the criteria in subd (a) or (b) below. If a significant difference exists, the map shall be amended according to s. 8.0 *Amendments*. The zoning administrator can rely on a boundary derived from a profile elevation to grant or deny a land use permit, whether or not a map amendment is required. The zoning administrator shall be responsible for documenting actual pre-development field conditions and the basis upon which the district boundary was

determined. Disputes between the zoning administrator and an applicant over the district boundary line shall be settled according to s. 7.3(3) and the criteria in (a) and (b) below**.** Where the flood profiles are based on established base flood elevations from a FIRM, FEMA must approve any map amendment or revision pursuant to s. 8.0 *Amendments*.

(a) If flood profiles exist, the map scale and the profile elevations shall determine the district boundary. The regional or base flood elevations shall govern if there are any discrepancies.

(b) Where flood profiles do not exist for projects, including any boundary of zone A, or AO the location of the boundary shall be determined by the map scale.

(5) REMOVAL OF LANDS FROM FLOODPLAIN

(a) Compliance with the provisions of this ordinance shall not be grounds for removing land from the floodplain unless it is filled at least two feet above the regional or base flood elevation, the fill is contiguous to land outside the floodplain, and the map is amended pursuant to s. 8.0 *Amendments.*

(b) The delineation of any of the Floodplain Districts may be revised by the community where natural or man-made changes have occurred and/or where more detailed studies have been conducted. However, prior to any such change, approval must be obtained from the Wisconsin Department of Natural Resources and Federal Emergency Management Agency. A completed Letter of Map Revision is a record of this approval. The floodplain administrator shall not sign a community acknowledgement form unless all criteria set forth in the following paragraphs are met:

1. The land and/or land around the structure must be filled at least two feet above the regional or base flood elevation;

2. The fill must be contiguous to land outside the floodplain; Applicant shall obtain floodplain development permit before applying for a LOMR or LOMR-F;

(c) Removal of lands from the floodplain may also occur by operation of §87.30(1)(e), Wis. Stat. if a property owner has obtained a letter of map amendment from the federal emergency management agency under 44 C.F.R. 70.

(6) COMPLIANCE

(a) No structure or use within areas regulated by this ordinance shall hereafter be located, erected, constructed, reconstructed, repaired, extended, converted, enlarged, or altered without full compliance with the terms of these regulations and all other applicable regulations that apply to uses within the jurisdiction of these regulations.

(b) Failure to obtain a floodplain development permit shall be a violation of these regulations and shall be punishable in accordance with s. 9.0.

(c) Floodplain development permits issued on the basis of plans and applications approved by the Floodplain Administrator authorize only the use, and arrangement, set forth in such approved plans and applications, or amendments thereto if approved by the Floodplain Administrator. Use, arrangement, or construction contrary to that authorized shall be deemed a violation of these regulations and punishable in accordance with s. 9.0.

(7) MUNICIPALITIES AND STATE AGENCIES REGULATED

Unless specifically exempted by law, all cities, villages, towns, and counties are required to comply with this ordinance and obtain all necessary permits. State agencies are required to comply if s. 13.48(13), Stats., applies. The construction, reconstruction, maintenance and repair of state highways and bridges by the Wisconsin Department of Transportation is exempt when s. 30.2022, Stats., applies. Although exempt from a local zoning permit and permit fees, DOT must provide sufficient project documentation and analysis to ensure that the community is in compliance with Federal, State, and local floodplain standards.

(8) ABROGATION AND GREATER RESTRICTIONS

(a) This ordinance supersedes all the provisions of any municipal zoning ordinance enacted under s. 61.35 for villages or s. 87.30, Stats., which relate to floodplains. A more restrictive ordinance shall continue in full force and effect to the extent of the greater restrictions, but not otherwise.

(b) This ordinance is not intended to repeal, abrogate or impair any existing deed restrictions, covenants or easements. If this ordinance imposes greater restrictions, the provisions of this ordinance shall prevail.

(9) INTERPRETATION

In their interpretation and application, the provisions of this ordinance are the minimum requirements liberally construed in favor of the governing body and are not a limitation on or repeal of any other powers granted by the Wisconsin Statutes. If a provision of this ordinance, required by ch. NR 116, Wis. Adm. Code, is unclear, the provision shall be interpreted in light of the standards in effect on the date of the adoption of this ordinance or in effect on the date of the most recent text amendment to this ordinance.

(10) WARNING AND DISCLAIMER OF LIABILITY

The flood protection standards in this ordinance are based on engineering experience and research. Larger floods may occur, or the flood height may be increased by man-made or natural causes. This ordinance does not imply or guarantee that non-floodplain areas or permitted floodplain uses will be free from flooding and flood damages. This ordinance does not create liability on the part of, or a cause of action against, the municipality or any officer or employee thereof for any flood damage that may result from reliance on this ordinance.

(11) SEVERABILITY

Should any portion of this ordinance be declared unconstitutional or invalid by a court of competent jurisdiction, the remainder of this ordinance shall not be

affected.

(12) ANNEXED AREAS FOR CITIES AND VILLAGES
The Walworth County and Waukesha County floodplain zoning provisions in effect on the date of annexation shall remain in effect and shall be enforced by the municipality for all annexed areas until the municipality adopts and enforces an ordinance which meets the requirements of ch. NR 116, Wis. Adm. Code and 44 CFR 59-72, *National Flood Insurance Program* (NFIP). These annexed lands are described on the municipality's official zoning map. County floodplain zoning provisions are incorporated by reference for the purpose of administering this section and are on file in the office of the municipal zoning administrator. All plats or maps of annexation shall show the regional flood elevation and the floodway location.

100-272 GENERAL STANDARDS APPLICABLE TO ALL FLOODPLAIN DISTRICTS

2.1 General Standards

The community shall review all permit applications to determine whether proposed building sites will be reasonably safe from flooding and assure that all necessary permits have been received from those governmental agencies whose approval is required by federal or state law.

(1) If a proposed building site is in a flood-prone area, all new construction and substantial improvements shall:

(a) be designed and anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy;

(b) be constructed with flood-resistant materials;

(c) be constructed by methods and practices that minimize flood damages; and

(d) be constructed with electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities that are designed and/or located so as to prevent water from entering or accumulating within the components during conditions of flooding.

(2) If a subdivision or other proposed new development is in a flood-prone area, the community shall assure that:

(a) such proposed subdivision or other proposed new development is consistent with the need to minimize flood damage within the flood-prone area;

(b) public utilities and facilities such as sewer, gas, electrical, and water systems are located and constructed to minimize or eliminate flood damage; and

(c) adequate drainage is provided to reduce exposure to flood hazards. All subdivision proposals (including manufactured home parks) shall include regional flood elevation and floodway data for any development that meets the subdivision

definition of this ordinance and all other requirements in s. 7.1(2).

2.2 HYDRAULIC AND HYDROLOGIC ANALYSES

(1) No floodplain development shall:

(a) Obstruct flow, defined as development which blocks the conveyance of floodwaters by itself or with other development, causing any increase in the regional flood height; or

(b) Cause any increase in the regional flood height due to floodplain storage area lost.

(2) The zoning administrator shall deny permits if it is determined the proposed development will obstruct flow or cause any increase in the regional flood height, based on the officially adopted FIRM or other adopted map, unless the provisions of s. 8.0 *Amendments* are met.

2.3 WATERCOURSE ALTERATIONS

No land use permit to alter or relocate a watercourse in a mapped floodplain shall be issued until the local official has notified in writing all adjacent municipalities, the Department and FEMA regional offices, and required the applicant to secure all necessary state and federal permits. The standards of s. 2.1 must be met and the flood carrying capacity of any altered or relocated watercourse shall be maintained.

As soon as is practicable, but not later than six months after the date of the watercourse alteration or relocation and pursuant to s. 8.0 *Amendments,* the community shall apply for a Letter of Map Revision (LOMR) from FEMA. Any such alterations must be reviewed and approved by FEMA and the DNR through the LOMC process.

2.4 CHAPTER 30, 31, WIS. STATS., DEVELOPMENT

Development which requires a permit from the Department, under chs. 30 and 31, Stats., such as docks, piers, wharves, bridges, culverts, dams and navigational aids, may be allowed if the necessary permits are obtained and amendments to the floodplain zoning ordinance are made according to s. 8.0 *Amendments*.

2.5 PUBLIC OR PRIVATE CAMPGROUNDS

Public or private campgrounds shall have a low flood damage potential and shall meet the following provisions:

(1) The campground is approved by the Department of Agriculture, Trade and Consumer Protection;

(2) A land use permit for the campground is issued by the zoning administrator;

(3) The character of the river system and the campground elevation are such that a 72-hour warning of an impending flood can be given to all campground occupants;

(4) There is an adequate flood warning procedure for the campground that offers the minimum notice required under this section to all persons in the campground. This procedure shall include a written agreement between the campground owner, the municipal emergency government coordinator and the chief law enforcement official

which specifies the flood elevation at which evacuation shall occur, personnel responsible for monitoring flood elevations, types of warning systems to be used and the procedures for notifying at-risk parties, and the methods and personnel responsible for conducting the evacuation;

(5) This agreement shall be for no more than one calendar year, at which time the agreement shall be reviewed and updated - by the officials identified in sub. (4) - to remain in compliance with all applicable regulations, including those of the state Department of Agriculture, Trade and Consumer Protection and all other applicable regulations;

(6) All mobile recreational vehicles placed on the site must meet one of the following:

(a) Only camping units that are fully licensed, if required, and ready for highway use
are allowed; or

(b) The camping units shall not occupy any site in the campground for more than 180 consecutive days, at which time the camping unit must be removed from the floodplain for a minimum of 24 hours; A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

(7) All camping units that remain on site for more than 30 days shall be issued a limited authorization by the campground operator, a written copy of which is kept on file at the campground. Such authorization shall allow placement of a camping unit consistent with 2.4(6) and shall ensure compliance with all the provisions of this section;

(8) The municipality shall monitor the limited authorizations issued by the campground operator to assure compliance with the terms of this section;

(9) All camping units that remain in place for more than 180 consecutive days must meet the applicable requirements in either s. 3.0, 4.0, 5.1, or 5.3 for the floodplain district in which the structure is located;

(10) The campground shall have signs clearly posted at all entrances warning of the flood hazard and the procedures for evacuation when a flood warning is issued; and

(11) All service facilities, including but not limited to refuse collection, electrical service, gas lines, propane tanks, sewage systems and wells shall be properly anchored and placed at or floodproofed to the flood protection elevation.

100-273 FLOODWAY DISTRICT (FW)

3.1 APPLICABILITY

This section applies to all floodway areas on the floodplain zoning maps and those identified pursuant to s. 5.1(5).

3.2 PERMITTED USES

The following open space uses are allowed in the Floodway District and the floodway areas of the General Floodplain District, if:

- they are not prohibited by any other ordinance;
- they meet the standards in s. 3.3 and 3.4; and
- all permits or certificates have been issued according to s. 7.1.

(1) Agricultural uses, such as: farming, outdoor plant nurseries, horticulture, viticulture and wild crop harvesting.

(2) Nonstructural industrial and commercial uses, such as loading areas, parking areas and airport landing strips.

(3) Nonstructural recreational uses, such as golf courses, tennis courts, archery ranges, picnic grounds, boat ramps, swimming areas, parks, wildlife and nature preserves, game farms, fish hatcheries, shooting, trap and skeet activities, hunting and fishing areas and hiking and horseback riding trails, subject to the fill limitations of s. 3.3(4).

(4) Uses or structures accessory to open space uses or classified as historic structures that comply with s. 3.3 and 3.4.

(5) Extraction of sand, gravel or other materials that comply with s. 3.3(4).

(6) Functionally water-dependent uses, such as docks, piers or wharves, dams, flowage areas, culverts, navigational aids and river crossings of transmission lines, and pipelines that comply with chs. 30 and 31, Stats.

(7) Public utilities, streets and bridges that comply with s. 3.3(3).

(8) Portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code.

(9) Public or private wells used to obtain potable water for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code.

(10) Wastewater treatment ponds or facilities permitted under s. NR 110.15(3)(b), Wis. Adm. Code.

(11) Sanitary sewer or water supply lines to service existing or proposed development located outside the floodway that complies with the regulations for the floodplain area occupied.

3.3 STANDARDS FOR DEVELOPMENTS IN THE FLOODWAY

(1) GENERAL

(a) Any development in the floodway shall comply with s. 2.0 and have a low flood damage potential.

(b) Applicants shall provide an analysis calculating the effects of this proposal on the regional flood height to determine the effects of the proposal according to s. 2.1 and 7.1(2)(c). The analysis must be completed by a registered professional engineer in the state of Wisconsin.

(c) Any encroachment in the regulatory floodway is prohibited unless the data submitted for subd. 3.3(1)(b) above demonstrates that the encroachment will cause no increase in flood elevations in flood events up to the base flood at any location or removes the encroached area from the regulatory floodway as provided in s. 1.5(5).

(2) STRUCTURES

Structures accessory to permanent open space uses, including utility and sanitary facilities, or functionally dependent on a waterfront location may be allowed by permit if the structures comply with the following criteria:

(a) Not designed for human habitation, does not have a high flood damage potential and is constructed to minimize flood damage;

(b) Shall either have the lowest floor elevated to or above the flood protection elevation or shall meet all the following standards:

1. Have the lowest floor elevated to or above the regional flood elevation and be dry floodproofed so that the structure is watertight with walls substantially impermeable to the passage of water and completely dry to the flood protection elevation without human intervention during flooding;

2. Have structural components capable of meeting all provisions of Section 3.3(2)(g) and;

3. Be certified by a registered professional engineer or architect, through the use of a Federal Emergency Management Agency Floodproofing Certificate, that the design and methods of construction are in accordance with Section 3.3(2)(g).

(c) Must be anchored to resist flotation, collapse, and lateral movement;

(d) Mechanical and utility equipment must be elevated to or above the flood protection elevation; and

(e) Must not obstruct flow of flood waters or cause any increase in flood levels during the occurrence of the regional flood.

(f) For a structure designed to allow the automatic entry of floodwaters below the Regional Flood Elevation, the applicant shall submit a plan that meets s. 3.3(2)(a) through 3.3(2)(e) and meets or exceeds the following standards:

1. The lowest floor must be elevated to or above the regional flood elevation;

2. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

3. the bottom of all openings shall be no higher than one foot above the lowest adjacent grade; openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters, otherwise must remain open.

4. The use must be limited to parking, building access or limited storage.

(g) Certification: Whenever floodproofing measures are required, a registered professional engineer or architect shall certify that the following floodproofing measures will be utilized, where appropriate, and are adequate to withstand the flood depths, pressures, velocities, impact and uplift forces and other factors associated with the regional flood:

1. Reinforcement of floors and walls to resist rupture, collapse, or lateral movement caused by water pressures or debris buildup;

2. Construction of wells, water supply systems and waste treatment systems so as to prevent the entrance of flood waters in such systems and must be in accordance with provisions in Sections 3.4(4) and 3.4(5);

3. Subsurface drainage systems to relieve external pressures on foundation walls and basement floors;

4. Cutoff valves on sewer lines or the elimination of gravity flow basement drains; and

5. Placement of utilities to or above the flood protection elevation.

(3) PUBLIC UTILITIES, STREETS AND BRIDGES

Public utilities, streets and bridges may be allowed by permit, if:

(a) Adequate floodproofing measures are provided to the flood protection elevation; and

(b) Construction meets the development standards of s. 2.1.

(4) FILLS OR DEPOSITION OF MATERIALS
Fills or deposition of materials may be allowed by permit, if:

(a) The requirements of s. 2.1 are met;

(b) No material is deposited in navigable waters unless a permit is issued by the Department pursuant to ch. 30, Stats., and a permit pursuant to s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344 has been issued, if applicable, and all other requirements have been met;

(c) The fill or other materials will be protected against erosion by riprap, vegetative cover, sheet piling or bulkheading; and

(a) The fill is not classified as a solid or hazardous material.

3.4 PROHIBITED USES

All uses not listed as permitted uses in s. 3.2 are prohibited, including the following uses:

(1) Habitable structures, structures with high flood damage potential, or those not associated with permanent open-space uses;

(2) Storing materials that are buoyant, flammable, explosive, injurious to property, water quality, or human, animal, plant, fish or other aquatic life;

(3) Uses not in harmony with or detrimental to uses permitted in the adjoining districts;

(4) Any private or public sewage systems, except portable latrines that are removed prior to flooding and systems associated with recreational areas and Department-approved campgrounds that meet the applicable provisions of local ordinances and ch. SPS 383, Wis. Adm. Code;

(5) Any public or private wells which are used to obtain potable water, except those for recreational areas that meet the requirements of local ordinances and chs. NR 811 and NR 812, Wis. Adm. Code;

(6) Any solid or hazardous waste disposal sites;

(7) Any wastewater treatment ponds or facilities, except those permitted under s. NR 110.15(3)(b), Wis. Adm. Code; and

(8) Any sanitary sewer or water supply lines, except those to service existing or proposed development located outside the floodway which complies with the regulations for the floodplain area occupied.

100-274 FLOODFRINGE DISTRICT (FF)

4.1 APPLICABILITY

This section applies to all floodfringe areas shown on the floodplain zoning maps and those identified pursuant to s. 5.1(5).

4.2 PERMITTED USES

Any structure, land use, or development is allowed in the Floodfringe District if the standards in s. 4.3 are met, the use is not prohibited by this or any other ordinance or regulation and all permits or certificates specified in s. 7.1 have been issued.

4.3 STANDARDS FOR DEVELOPMENT IN THE FLOODFRINGE

Section 2.0 shall apply in addition to the following requirements according to the use requested. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

(1) RESIDENTIAL USES

Any structure, including a manufactured home, which is to be newly constructed or moved into the floodfringe, shall meet or exceed the following standards. Any existing structure in the floodfringe must meet the requirements of s. 6.0 *Nonconforming Uses*;

(a) All new construction, including placement of manufactured homes, and substantial improvement of residential structures, shall have the lowest floor elevated to or above the flood protection elevation on fill. The fill around the structure shall be one foot or more above the regional flood elevation extending at least 15 feet beyond the limits of the structure. No area may be removed from the floodfringe district unless it can be shown to meet s. 1.5(5).

(b) Notwithstanding s. 4.3 (1)(a), a basement or crawlspace floor may be placed at the regional flood elevation if the basement or crawlspace is designed to make all portions of the structure below the flood protection elevation watertight with walls substantially impermeable to the passage of water and with structural components having the capability of resisting hydrostatic and hydrodynamic loads and effects of buoyancy. No floor of any kind is allowed below the regional flood elevation;

(c) Contiguous dryland access shall be provided from a structure to land outside of the floodplain, except as provided in subd. (d).

(d) In developments where existing street or sewer line elevations make compliance with subd. (c) impractical, the municipality may permit new development and substantial improvements where roads are below the regional flood elevation, if:

1. The municipality has written assurance from police, fire and emergency services that rescue and relief will be provided to the structure(s) by wheeled vehicles during a regional flood event; or

2. The municipality has a DNR-approved emergency evacuation plan that follows acceptable hazard mitigation planning guidelines.

(2) ACCESSORY STRUCTURES OR USES

In addition to s. 2.0, new construction and substantial improvements of Accessory structures shall be constructed on fill with the lowest floor at or above the regional flood elevation.

(3) COMMERCIAL USES

In addition to s. 2.0, any commercial structure which is erected, altered or moved into the floodfringe shall meet the requirements of s. 4.3(1). Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(4) MANUFACTURING AND INDUSTRIAL USES

In addition to s. 2.0, any manufacturing or industrial structure which is erected, altered or moved into the floodfringe shall have the lowest floor elevated to or above the flood protection elevation or meet the floodproofing standards in s 7.5. Subject to the requirements of s. 4.3(5), storage yards, surface parking lots and other such uses may be placed at lower elevations if an adequate warning system exists to protect life and property.

(5) STORAGE OF MATERIALS

Materials that are buoyant, flammable, explosive, or injurious to property, water quality or human, animal, plant, fish or aquatic life shall be stored at or above the flood protection elevation or floodproofed in compliance with s. 7.5. Adequate measures shall be taken to ensure that such materials will not enter the water body during flooding.

(6) PUBLIC UTILITIES, STREETS AND BRIDGES

All utilities, streets and bridges shall be designed to be compatible with comprehensive floodplain development plans; and

(a) When failure of public utilities, streets and bridges would endanger public health or safety, or where such facilities are deemed essential, construction or repair of such facilities shall only be permitted if they are designed to comply with s. 7.5.

(b) Minor roads or non-essential utilities may be constructed at lower elevations if they are designed to withstand flood forces to the regional flood elevation.

(7) SEWAGE SYSTEMS

All sewage disposal systems shall be designed to minimize or eliminate infiltration of flood water into the system, pursuant to s. 7.5(3), to the flood protection elevation and meet the provisions of all local ordinances and ch. SPS 383, Wis. Adm. Code.

(8) WELLS

All wells shall be designed to minimize or eliminate infiltration of flood waters into the system, pursuant to s. 7.5(3), to the flood protection elevation and shall meet the provisions of chs. NR 811 and NR 812, Wis. Adm. Code.

(9) SOLID WASTE DISPOSAL SITES

Disposal of solid or hazardous waste is prohibited in floodfringe areas.

(10) DEPOSITION OF MATERIALS

Any deposited material must meet all the provisions of this ordinance.

(11) MANUFACTURED HOMES

(a) Owners or operators of all manufactured home parks and subdivisions shall provide adequate surface drainage to minimize flood damage, and prepare, secure approval and file an evacuation plan, indicating vehicular access and escape routes, with local emergency management authorities.

(b) In existing manufactured home parks, all new homes, replacement homes on existing pads, and substantially improved homes shall:

1. have the lowest floor elevated to the flood protection elevation; and

2. be anchored so they do not float, collapse or move laterally during a flood

(c) Outside of existing manufactured home parks, including new manufactured home parks and all single units outside of existing parks, all new, replacement and substantially improved manufactured homes shall meet the residential development standards for the floodfringe in s. 4.3(1).

(12) MOBILE RECREATIONAL VEHICLES

All mobile recreational vehicles must be on site for less than 180 consecutive days and be either:

(a) fully licensed and ready for highway use; or

(b) shall meet the elevation and anchoring requirements in s. 4.3 (11)(b) and (c). A mobile recreational vehicle is ready for highway use if it is on its wheels or jacking system, is attached to the site only by quick-disconnect utilities and security devices and has no permanently attached additions.

100-275 OTHER FLOODPLAIN DISTRICTS

5.1 GENERAL FLOODPLAIN DISTRICT (GFP)

(1) APPLICABILITY

The provisions for the General Floodplain District shall apply to development in all floodplains mapped as A, AO, AH, and in AE zones within which a floodway is not delineated on the Flood Insurance Rate Maps identified in s. 1.5(2)(a).

(2) FLOODWAY BOUNDARIES

For proposed development in zone A, or in zone AE within which a floodway is not delineated on the Flood Insurance Rate Map identified in s. 1.5(2)(a), the boundaries of the regulatory floodway shall be determined pursuant to s. 5.1(5). If the development is proposed to encroach upon the regulatory floodway, the development is subject to the standards of s 3.0. If the development is located entirely within the floodfringe, the development is subject to the standards of s. 4.0.

(3) PERMITTED USES

Pursuant to s. 5.1(5) it shall be determined whether the proposed use is located within the floodway or floodfringe. Those uses permitted in the Floodway (s. 3.2) and

Floodfringe (s. 4.2) Districts are allowed within the General Floodplain District, according to the standards of s. 5.1(4) provided that all permits or certificates required under s. 7.1 have been issued.

(4) STANDARDS FOR DEVELOPMENT IN THE GENERAL FLOODPLAIN DISTRICT

Section 3.0 applies to floodway areas, determined to pursuant to 5.1(5); Section 4.0 applies to floodfringe areas, determined to pursuant to 5.1(5).

(a) New construction and substantial improvement of structures in zone AO shall have the lowest floor, including basement, elevated:

1. To or above the depth, in feet, as shown on the FIRM above the highest adjacent natural grade; or

2. If the depth is not specified on the FIRM, to or above two (2) feet above the highest adjacent natural grade.

(b) New Construction and substantial improvement of structures in zone AH shall have the lowest floor, including basement, elevated to or above the flood protection elevation.

(c) In AO/AH zones, provide adequate drainage paths to guide floodwaters around structures.

(d) All development in zones AO and zone AH shall meet the requirements of s. 4.0 applicable to flood fringe areas.

(5) DETERMINING FLOODWAY AND FLOODFRINGE LIMITS

Upon receiving an application for development within zone A, or within zone AE where a floodway has not been delineated on the Flood Insurance Rate Maps, the zoning administrator shall:

(a) Require the applicant to submit two copies of an aerial photograph or a plan which shows the proposed development with respect to the general floodplain district limits, stream channel, and existing floodplain developments, along with a legal description of the property, fill limits and elevations, building floor elevations and flood proofing measures; and the flood zone as shown on the FIRM.

(b) Require the applicant to furnish any of the following information deemed necessary by the Department to evaluate the effects of the proposal upon flood height and flood flows, regional flood elevation and to determine floodway boundaries.

1. A Hydrologic and Hydraulic Study as specified in s. 7.1(2)(c).

2. Plan (surface view) showing elevations or contours of the ground; pertinent structure, fill or storage elevations; size, location and layout of all proposed and existing structures on the site; location and elevations of streets, water supply, and sanitary facilities; soil types and other pertinent information;
3. Specifications for building construction and materials, floodproofing, filling, dredging,

channel improvement, storage, water supply and sanitary facilities.

5.2 FLOOD STORAGE DISTRICT

The flood storage district delineates that portion of the floodplain where storage of floodwaters has been taken into account and is relied upon to reduce the regional flood discharge. The district protects the flood storage areas and assures that any development in the storage areas will not decrease the effective flood storage capacity which would cause higher flood elevations.

(1) APPLICABILITY

The provisions of this section apply to all areas within the Flood Storage District (FSD), as shown on the official floodplain zoning maps.

(2) PERMITTED USES

Any use or development which occurs in a flood storage district must meet the applicable requirements in s. 4.3.

(3) STANDARDS FOR DEVELOPMENT IN FLOOD STORAGE DISTRICTS

(a) Development in a flood storage district shall not cause an increase equal or greater than 0.00 of a foot in the height of the regional flood.

(b) No development shall be allowed which removes flood storage volume unless an equal volume of storage as defined by the pre-development ground surface and the regional flood elevation shall be provided in the immediate area of the proposed development to compensate for the volume of storage which is lost, (compensatory storage). Excavation below the groundwater table is not considered to provide an equal volume of storage.

(c) If compensatory storage cannot be provided, the area may not be developed unless the entire area zoned as flood storage district – on this waterway – is rezoned to the floodfringe district. This must include a revision to the floodplain study and map done for the waterway to revert to the higher regional flood discharge calculated without floodplain storage, as per s. 8.0 *Amendments* of this ordinance.

(d) No area may be removed from the flood storage district unless it can be shown that the area has been filled to the flood protection elevation and is contiguous to other lands lying outside of the floodplain.

100-276 NONCONFORMING USES

6.1 GENERAL

(1) APPLICABILITY

(a) The standards in this section shall apply to all uses and buildings that do not conform to the provisions contained within a floodplain zoning ordinance or with s. 87.30, Stats. and §§ NR 116.12-14, Wis. Adm. Code and 44 CFR 59-72., these standards shall apply to all modifications or additions to any nonconforming use or structure and to the use of any structure or premises which was lawful before the passage of this ordinance or any amendment thereto. A party asserting existence of a lawfully established nonconforming use or structure has the burden of proving

that the use or structure was compliant with the floodplain zoning ordinance in effect at the time the use or structure was created.

(b) As permit applications are received for additions, modifications, or substantial improvements to nonconforming buildings in the floodplain, municipalities shall develop a list of those nonconforming buildings, their present equalized assessed value and a list of the costs of those activities associated with changes to those buildings.

(2) The existing lawful use of a structure or its accessory use which is not in conformity with the provisions of this ordinance may continue subject to the following conditions:

(a) No modifications or additions to a nonconforming use or structure shall be permitted unless they comply with this ordinance. The words "modification" and "addition" include, but are not limited to, any alteration, addition, modification, structural repair, rebuilding or replacement of any such existing use, structure or accessory structure or use. Maintenance is not considered a modification; this includes painting, decorating, paneling and other nonstructural components and the maintenance, repair or replacement of existing private sewage or water supply systems or connections to public utilities. Any costs associated with the repair of a damaged structure are not considered maintenance.

The construction of a deck that does not exceed 200 square feet and that is adjacent to the exterior wall of a principal structure is not an extension, modification or addition. The roof of the structure may extend over a portion of the deck in order to provide safe ingress and egress to the principal structure.

(b) If a nonconforming use or the use of a nonconforming structure is discontinued for 12 consecutive months, it is no longer permitted and any future use of the property, and any structure or building thereon, shall conform to the applicable requirements of this ordinance;

(c) The municipality shall keep a record which lists all nonconforming uses and nonconforming structures, their present equalized assessed value, the cost of all modifications or additions which have been permitted, and the percentage of the structure's total current value those modifications represent;

(d) No modification or addition to any nonconforming structure or any structure with a nonconforming use, which over the life of the structure would equal or exceed 50% of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). The costs of elevating the lowest floor of a nonconforming building or a building with a nonconforming use to the flood protection elevation are excluded from the 50% provisions of this paragraph;

(e) No maintenance on a per event basis to any nonconforming structure or any structure with a nonconforming use, the cost of which would equal or exceed 50%

of its present equalized assessed value, shall be allowed unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1). Maintenance to any nonconforming structure, which does not exceed 50% of its present equalized assessed value on a per event basis, does not count against the cumulative calculations over the life of the structure for substantial improvement calculations.

(f) If on a per event basis the total value of the work being done under (d) and (e) equals or exceeds 50% of the present equalized assessed value the work shall not be permitted unless the entire structure is permanently changed to a conforming structure with a conforming use in compliance with the applicable requirements of this ordinance. Contiguous dry land access must be provided for residential and commercial uses in compliance with s. 4.3(1).

(g) Except as provided in subd. (h), if any nonconforming structure or any structure with a nonconforming use is destroyed or is substantially damaged, it cannot be replaced, reconstructed or rebuilt unless the use and the structure meet the current ordinance requirements. A structure is considered substantially damaged if the total cost to restore the structure to its pre-damaged condition equals or exceeds 50% of the structure's present equalized assessed value.

(h) For nonconforming buildings that are substantially damaged or destroyed by a nonflood disaster, the repair or reconstruction of any such nonconforming building shall be permitted in order to restore it to the size and use in effect prior to the damage event, provided that the following minimum requirements are met and all required permits have been granted prior to the start of construction:

1. Residential Structures

a. Shall have the lowest floor, including basement, elevated to or above the flood protection elevation using fill, pilings, columns, posts or perimeter walls. Perimeter walls must meet the requirements of s. 7.5(2).

b. Shall be anchored to prevent flotation, collapse, or lateral movement of the structure resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy and shall be constructed with methods and materials resistant to flood damage.

c. Shall be constructed with electrical, heating, ventilation, plumbing and air conditioning equipment and other service facilities that are designed and/or elevated so as to prevent water from entering or accumulating within the components during conditions of flooding.

d. In A Zones, obtain, review and utilize any flood data available from a federal, state or other source.

e. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).

f. in AO Zones, shall have adequate drainage paths around structures on slopes to guide floodwaters around and away from the structure.

2. Nonresidential Structures

a. Shall meet the requirements of s. 6.1(2)(h)1a-f.

b. Shall either have the lowest floor, including basement, elevated to or above the regional flood elevation; or, together with attendant utility and sanitary facilities, shall meet the standards in s. 7.5 (1) or (2).

c. In AO Zones with no elevations specified, shall have the lowest floor, including basement, meet the standards in s. 5.1(4).

(3) A nonconforming historic structure may be altered if the alteration will not preclude the structure's continued designation as a historic structure, the alteration will comply with s. 3.3 (1), flood resistant materials are used, and construction practices and floodproofing methods that comply with s. 7.5 are used. Repair or rehabilitation of historic structures shall be exempt from the development standards of s. 6.1 (2)(h)1 if it is determined that the proposed repair or rehabilitation will not preclude the structure's continued designation as a historic structure and is the minimum necessary to preserve the historic character and design of the structure.

6.2 FLOODWAY DISTRICT

(1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use in the Floodway District, unless such modification or addition:

(a) Has been granted a permit or variance which meets all ordinance requirements;

(b) Meets the requirements of s. 6.1;

(c) Shall not increase the obstruction to flood flows or regional flood height;

(d) Any addition to the existing structure shall be floodproofed, pursuant to s. 7.5, by means other than the use of fill, to the flood protection elevation; and

(e) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:

1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;

3. Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and

4. The use must be limited to parking, building access or limited storage.

(2) No new on-site sewage disposal system, or addition to an existing on-site sewage disposal system, except where an addition has been ordered by a government agency to correct a hazard to public health, shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing on-site sewage disposal system in a floodway area shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and ch. SPS 383, Wis. Adm. Code.

(3) No new well or modification to an existing well used to obtain potable water shall be allowed in the Floodway District. Any replacement, repair or maintenance of an existing well in the Floodway District shall meet the applicable requirements of all municipal ordinances, s. 7.5(3) and chs. NR 811 and NR 812, Wis. Adm. Code.

6.3 FLOODFRINGE DISTRICT

(1) No modification or addition shall be allowed to any nonconforming structure or any structure with a nonconforming use unless such modification or addition has been granted a permit or variance by the municipality and meets the requirements of s. 4.3 except where s. 6.3(2) is applicable.

(2) Where compliance with the provisions of subd. (1) would result in unnecessary hardship and only where the structure will not be used for human habitation or be associated with a high flood damage potential, the Board of Adjustment/Appeals, using the procedures established in s. 7.3, may grant a variance from those provisions of subd. (1) for modifications or additions using the criteria listed below. Modifications or additions which are protected to elevations lower than the flood protection elevation may be permitted if:

(a) No floor is allowed below the regional flood elevation for residential or commercial structures;

(b) Human lives are not endangered;

(c) Public facilities, such as water or sewer, shall not be installed;

(d) Flood depths shall not exceed two feet;

(e) Flood velocities shall not exceed two feet per second; and

(f) The structure shall not be used for storage of materials as described in s. 4.3(5).

(3) All new private sewage disposal systems, or addition to, replacement, repair or maintenance of a private sewage disposal system shall meet all the applicable provisions of all local ordinances, s. 7.5 (3) and ch. SPS 383, Wis. Adm. Code.

(4) All new wells, or addition to, replacement, repair or maintenance of a well shall meet

the applicable provisions of this ordinance, s. 7.5 (3) and ch. NR 811 and NR 812, Wis. Adm. Code.

6.4 FLOOD STORAGE DISTRICT

No modifications or additions shall be allowed to any nonconforming structure in a flood storage area unless the standards outlined in 5.2(3) are met.

100-277 ADMINISTRATION

Where a zoning administrator, planning agency or a board of appeals has already been appointed to administer a zoning ordinance adopted under ss. 59.69, 59.692 or 62.23(7), Stats., these officials shall also administer this ordinance.

7.1 ZONING ADMINISTRATOR

(1) DUTIES AND POWERS

The zoning administrator is authorized to administer this ordinance and shall have the following duties and powers:

(a) Advise applicants of the ordinance provisions, assist in preparing permit applications and appeals, and assure that the regional flood elevation for the proposed development is shown on all permit applications.

(b) Issue permits and inspect properties for compliance with provisions of this ordinance and issue certificates of compliance where appropriate.

(c) Inspect and assess all damaged floodplain structures to determine if substantial damage to the structures has occurred.

(d) Keep records of all official actions such as:

1. All permits issued, inspections made, and work approved;
2. Documentation of certified lowest floor and regional flood elevations;
3. Floodproofing certificates.
4. Water surface profiles, floodplain zoning maps and ordinances, nonconforming uses and structures including changes, appeals, variances and amendments.
5. All substantial damage assessment reports for floodplain structures.
6. List of nonconforming structures and uses.

(e) Submit copies of the following items to the Department Regional office:

1. Within 10 days of the decision, a copy of any decisions on variances, appeals for map or text interpretations, and map or text amendments;

2. Copies of case-by-case analyses and other required information.

3. Copies of substantial damage assessments performed and all related correspondence concerning the assessments.

(f) Investigate, prepare reports, and report violations of this ordinance to the municipal zoning agency and attorney for prosecution. Copies of the reports shall also be sent to the Department Regional office.

(g) Submit copies of amendments to the FEMA Regional office.

(2) LAND USE PERMIT

A land use permit shall be obtained before any development; repair, modification or addition to an existing structure; or change in the use of a building or structure, including sewer and water facilities, may be initiated. Application to the zoning administrator shall include:

(a) GENERAL INFORMATION

1. Name and address of the applicant, property owner and contractor;

2. Legal description, proposed use, and whether it is new construction or a modification;

(b) SITE DEVELOPMENT PLAN

A site plan drawn to scale shall be submitted with the permit application form and shall contain:

1. Location, dimensions, area and elevation of the lot;

2. Location of the ordinary highwater mark of any abutting navigable waterways;

3. Location of any structures with distances measured from the lot lines and street center lines;

4. Location of any existing or proposed on-site sewage systems or private water supply systems;

5. Location and elevation of existing or future access roads;

6. Location of floodplain and floodway limits as determined from the official floodplain zoning maps;

7. The elevation of the lowest floor of proposed buildings and any fill using the vertical datum from the adopted study – either National Geodetic Vertical Datum (NGVD) or North American Vertical Datum (NAVD);

8. Data sufficient to determine the regional flood elevation in NGVD or NAVD at the location of the development and to determine whether or not the requirements of s. 3.0 or 4.0 are met; and

9. Data to determine if the proposed development will cause an obstruction to flow or an increase in regional flood height or discharge according to s. 2.1. This may include any of the information noted in s. 3.3(1).

(c) HYDRAULIC AND HYDROLOGIC STUDIES TO ANALYZE DEVELOPMENT
All hydraulic and hydrologic studies shall be completed under the direct supervision of a professional engineer registered in the State. The study contractor shall be responsible for the technical adequacy of the study. All studies shall be reviewed and approved by the Department.

1. Zone A floodplains and in AE zones within which a floodway is not delineated:
   a. Hydrology
      i. The appropriate method shall be based on the standards in ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge.*

   b. Hydraulic modeling
      The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

      i. determination of the required limits of the hydraulic model shall be based on detailed study information for downstream structures (dam, bridge, culvert) to determine adequate starting WSEL for the study.

      ii. channel sections must be surveyed.

      iii. minimum four-foot contour data in the overbanks shall be used for the development of cross section overbank and floodplain mapping.

      iv. a maximum distance of 500 feet between cross sections is allowed in developed areas with additional intermediate cross sections required at transitions in channel bottom slope including a survey of the channel at each location.

      v. the most current version of HEC-RAS shall be used.

      vi. a survey of bridge and culvert openings and the top of road is required at each structure.

      vii. additional cross sections are required at the downstream and upstream limits of the proposed development and any necessary intermediate locations based on the length of the reach if greater than 500 feet.

      viii. standard accepted engineering practices shall be used when assigning parameters for the base model such as flow, Manning's N values, expansion and contraction coefficients or effective flow limits. The base model shall be calibrated to past flooding data such as high water marks to determine the reasonableness of the model results. If no historical data is available, adequate justification shall be provided for any parameters outside standard accepted engineering practices.

      ix. the model must extend past the upstream limit of the difference in the existing and proposed flood profiles in order to provide a tie-in to existing

studies. The height difference between the proposed flood profile and the existing study profiles shall be no more than 0.00 feet.

c. Mapping

A work map of the reach studied shall be provided, showing all cross-section locations, floodway/floodplain limits based on best available topographic data, geographic limits of the proposed development and whether the proposed development is located in the floodway.

i. If the proposed development is located outside of the floodway, then it is determined to have no impact on the regional flood elevation.

ii. If any part of the proposed development is in the floodway, it must be added to the base model to show the difference between existing and proposed conditions. The study must ensure that all coefficients remain the same as in the existing model, unless adequate justification based on standard accepted engineering practices is provided.

2. Zone AE Floodplains

a. Hydrology

If the proposed hydrology will change the existing study, the appropriate method to be used shall be based on ch. NR 116.07(3), Wis. Admin. Code, *Hydrologic Analysis: Determination of Regional Flood Discharge.*

b. Hydraulic model

The regional flood elevation shall be based on the standards in ch. NR 116.07(4), Wis. Admin. Code, *Hydraulic Analysis: Determination of Regional Flood Elevation* and the following:

i. Duplicate Effective Model

The effective model shall be reproduced to ensure correct transference of the model data and to allow integration of the revised data to provide a continuous FIS model upstream and downstream of the revised reach. If data from the effective model is available, models shall be generated that duplicate the FIS profiles and the elevations shown in the Floodway Data Table in the FIS report to within 0.1 foot.

ii. Corrected Effective Model.

The Corrected Effective Model shall not include any man-made physical changes since the effective model date but shall import the model into the most current version of HEC-RAS for Department review.

iii. Existing (Pre-Project Conditions) Model.

The Existing Model shall be required to support conclusions about the actual impacts of the project associated with the Revised (Post-Project) Model or to establish more up-to-date models on which to base the Revised (Post-Project) Model.

iv. Revised (Post-Project Conditions) Model.

The Revised (Post-Project Conditions) Model shall incorporate the Existing

Model and any proposed changes to the topography caused by the proposed development. This model shall reflect proposed conditions.

v. All changes to the Duplicate Effective Model and subsequent models must be supported by certified topographic information, bridge plans, construction plans and survey notes.

vi. Changes to the hydraulic models shall be limited to the stream reach for which the revision is being requested. Cross sections upstream and downstream of the revised reach shall be identical to those in the effective model and result in water surface elevations and topwidths computed by the revised models matching those in the effective models upstream and downstream of the revised reach as required. The Effective Model shall not be truncated.

c. Mapping

Maps and associated engineering data shall be submitted to the Department for review which meet the following conditions:

i. Consistency between the revised hydraulic models, the revised floodplain and floodway delineations, the revised flood profiles, topographic work map, annotated FIRMs and/or Flood Boundary Floodway Maps (FBFMs), construction plans, bridge plans.

ii. Certified topographic map of suitable scale, contour interval, and a planimetric map showing the applicable items. If a digital version of the map is available, it may be submitted in order that the FIRM may be more easily revised.

iii. Annotated FIRM panel showing the revised 1% and 0.2% annual chance floodplains and floodway boundaries.

iv. If an annotated FIRM and/or FBFM and digital mapping data (GIS or CADD) are used then all supporting documentation or metadata must be included with the data submission along with the Universal Transverse Mercator (UTM) projection and State Plane Coordinate System in accordance with FEMA mapping specifications.

v. The revised floodplain boundaries shall tie into the effective floodplain boundaries.

vi. All cross sections from the effective model shall be labeled in accordance with the effective map and a cross section lookup table shall be included to relate to the model input numbering scheme.

vii. Both the current and proposed floodways shall be shown on the map.

viii. The stream centerline, or profile baseline used to measure stream distances in the model shall be visible on the map.

(d) EXPIRATION

All permits issued under the authority of this ordinance shall expire no more than 180 days after issuance. The permit may be extended for a maximum of 180 days for good and sufficient cause. If the permitted work has not started within 180 days of the permit date, the development must comply with any regulation, including any revision to the FIRM or FIS, that took effect after the permit date.

(3) CERTIFICATE OF COMPLIANCE

No land shall be occupied or used, and no building which is hereafter constructed, altered, added to, modified, repaired, rebuilt or replaced shall be occupied until a certificate of compliance is issued by the zoning administrator, except where no permit is required, subject to the following provisions:

(a) The certificate of compliance shall show that the building or premises or part thereof, and the proposed use, conform to the provisions of this ordinance;

(b) Application for such certificate shall be concurrent with the application for a permit;

(c) If all ordinance provisions are met, the certificate of compliance shall be issued within 10 days after written notification that the permitted work is completed;

(d) The applicant shall submit a certification signed by a registered professional engineer, architect or land surveyor that the fill, lowest floor and floodproofing elevations are in compliance with the permit issued. Floodproofing measures also require certification by a registered professional engineer or architect that the requirements of s. 7.5 are met.

(e) Where applicable pursuant to s. 5.1(4), the applicant must submit a certification by a registered professional engineer or surveyor of the elevation of the bottom of the lowest horizontal structural member supporting the lowest floor (excluding pilings or columns), and an indication of whether the structure contains a basement.

(f) Where applicable pursuant to s. 5.1(4), the applicant must submit certifications by a registered professional engineer or architect that the structural design and methods of construction meet accepted standards of practice as required by s. 5.1(4).

(4) OTHER PERMITS

Prior to obtaining a floodplain development permit the applicant must secure all necessary permits from federal, state, and local agencies, including but not limited to those required by the U.S. Army Corps of Engineers under s. 404 of the Federal Water Pollution Control Act, Amendments of 1972, 33 U.S.C. 1344.

7.2 ZONING AGENCY

(1) The Planning Commission shall:

(a) oversee the functions of the office of the zoning administrator; and

(b) review and advise the governing body on all proposed amendments to this ordinance, maps and text.

(c) publish adequate notice pursuant to Ch. 985, Stats., specifying the date, time, place and subject of the public hearing.

(2) The Planning Commission shall not:

(a) grant variances to the terms of the ordinance in place of action by the Board of Adjustment/Appeals; or

(b) amend the text or zoning maps in place of official action by the governing body.

7.3 BOARD OF APPEALS

The Board of Appeals, created under s. 62.23(7)(e), Stats., for cities or villages, is hereby authorized or shall be appointed to act for the purposes of this ordinance. The Board shall exercise the powers conferred by Wisconsin Statutes and adopt rules for the conduct of business. The zoning administrator shall not be the secretary of the Board.

(1) POWERS AND DUTIES

The Board of Appeals shall:

(a) Appeals - Hear and decide appeals where it is alleged there is an error in any order, requirement, decision or determination made by an administrative official in the enforcement or administration of this ordinance;

(b) Boundary Disputes - Hear and decide disputes concerning the district boundaries shown on the official floodplain zoning map; and

(c) Variances - Hear and decide, upon appeal, variances from the ordinance standards.

(2) APPEALS TO THE BOARD

(a) Appeals to the board may be taken by any person aggrieved, or by any officer or department of the municipality affected by any decision of the zoning administrator or other administrative officer. Such appeal shall be taken within 30 days unless otherwise provided by the rules of the board, by filing with the official whose decision is in question, and with the board, a notice of appeal specifying the reasons for the appeal. The official whose decision is in question shall transmit to the board all records regarding the matter appealed.

(b) NOTICE AND HEARING FOR APPEALS INCLUDING VARIANCES

1. Notice - The board shall:

a. Fix a reasonable time for the hearing;
b. Publish adequate notice pursuant to Wisconsin Statutes, specifying the date, time, place and subject of the hearing; and
c. Assure that notice shall be mailed to the parties in interest and the Department Regional office at least 10 days in advance of the hearing.

2. Hearing - Any party may appear in person or by agent. The board shall:

    a. Resolve boundary disputes according to s. 7.3(3);
    b. Decide variance applications according to s. 7.3(4); and
    c. Decide appeals of permit denials according to s. 7.4.

(c) DECISION: The final decision regarding the appeal or variance application shall:

1. Be made within a reasonable time;

2. Be sent to the Department Regional office within 10 days of the decision;

3. Be a written determination signed by the chairman or secretary of the Board;

4. State the specific facts which are the basis for the Board's decision;

5. Either affirm, reverse, vary or modify the order, requirement, decision or determination appealed, in whole or in part, dismiss the appeal for lack of jurisdiction or grant or deny the variance application; and

6. Include the reasons for granting an appeal, describing the hardship demonstrated by the applicant in the case of a variance, clearly stated in the recorded minutes of the Board proceedings.

(3) BOUNDARY DISPUTES

The following procedure shall be used by the Board in hearing disputes concerning floodplain district boundaries:

(a) If a floodplain district boundary is established by approximate or detailed floodplain studies, the flood elevations or profiles shall prevail in locating the boundary.

(b) The person contesting the boundary location shall be given a reasonable opportunity to present arguments and technical evidence to the Board; and

(c) If the boundary is incorrectly mapped, the Board should inform the zoning committee or the person contesting the boundary location to petition the governing body for a map amendment according to s. 8.0 *Amendments*.

(4) VARIANCE

(a) The Board may, upon appeal, grant a variance from the standards of this ordinance if an applicant convincingly demonstrates that:

1. Literal enforcement of the ordinance will cause unnecessary hardship;

2. The hardship is due to adoption of the floodplain ordinance and unique property conditions, not common to adjacent lots or premises. In such case the ordinance or map must be amended;

3. The variance is not contrary to the public interest; and

4. The variance is consistent with the purpose of this ordinance in s. 1.3.

(b) In addition to the criteria in subd. (a), to qualify for a variance under FEMA regulations, the Board must find that the following criteria have been met:

1. The variance shall not cause any increase in the regional flood elevation;

2. The applicant has shown good and sufficient cause for issuance of the variance;

3. Failure to grant the variance would result in exceptional hardship;

4. Granting the variance will not result in additional threats to public safety, extraordinary expense, create a nuisance, cause fraud on or victimization of the public, or conflict with existing local laws or ordinances;

5. The variance granted is the minimum necessary, considering the flood hazard, to afford relief.

(c) A variance shall not:

1. Grant, extend or increase any use prohibited in the zoning district;

2. Be granted for a hardship based solely on an economic gain or loss;

3. Be granted for a hardship which is self-created.

4. Damage the rights or property values of other persons in the area;

5. Allow actions without the amendments to this ordinance or map(s) required in s. 8.0 *Amendments*; and

6. Allow any alteration of an historic structure, including its use, which would preclude its continued designation as an historic structure.

(d) When a floodplain variance is granted the Board shall notify the applicant in writing that it may increase risks to life and property and flood insurance premiums could increase up to $25.00 per $100.00 of coverage. A copy shall be maintained with the variance record.

7.4 TO REVIEW APPEALS OF PERMIT DENIALS

(1) The Zoning Agency (s. 7.2) or Board shall review all data related to the appeal. This may include:

(a) Permit application data listed in s. 7.1(2);

(b) Floodway/floodfringe determination data in s. 5.1(5);

(c) Data listed in s. 3.3(1)(b) where the applicant has not submitted this information to the zoning administrator; and

(d) Other data submitted with the application or submitted to the Board with the appeal.

(2) For appeals of all denied permits the Board shall:

(a) Follow the procedures of s. 7.3;

(b) Consider zoning agency recommendations; and

(c) Either uphold the denial or grant the appeal.

(3) For appeals concerning increases in regional flood elevation the Board shall:

(a) Uphold the denial where the Board agrees with the data showing an increase in flood elevation. Increases may only be allowed after amending the flood profile and map and all appropriate legal arrangements are made with all adversely affected property owners as per the requirements of s. 8.0 *Amendments*; and

(b) Grant the appeal where the Board agrees that the data properly demonstrates that the project does not cause an increase provided no other reasons for denial exist.

7.5 FLOODPROOFING STANDARDS

(1) No permit or variance shall be issued for a non-residential structure designed to be watertight below the regional flood elevation until the applicant submits a plan certified by a registered professional engineer or architect that the floodproofing measures will protect the structure or development to or above the flood protection elevation and submits a FEMA Floodproofing Certificate. Floodproofing is not an alternative to the development standards in ss. 2.0, 3.0, 4.0, 5.1, or 5.3.

(2) For a structure designed to allow the entry of floodwaters, no permit or variance shall be issued until the applicant submits a plan either:

(a) certified by a registered professional engineer or architect; or

(b) meeting or exceeding the following standards:

1. a minimum of two openings having a total net area of not less than one square inch for every square foot of enclosed area subject to flooding;

2. the bottom of all openings shall be no higher than one-foot above grade; and

3. openings may be equipped with screens, louvers, valves, or other coverings or devices provided that they permit the automatic entry and exit of floodwaters.

(3) Floodproofing measures shall be designed, as appropriate, to:

(a) Withstand flood pressures, depths, velocities, uplift and impact forces and other regional flood factors;

(b) Protect structures to the flood protection elevation;

(c) Anchor structures to foundations to resist flotation and lateral movement;

(d) Minimize or eliminate infiltration of flood waters;

(e) Minimize or eliminate discharges into flood waters;
(f) Placement of essential utilities to or above the flood protection elevation; and

(g) If any part of the foundation below the flood protection elevation is enclosed, the following standards shall apply:

1. The enclosed area shall be designed by a registered architect or engineer to allow for the efficient entry and exit of flood waters without human intervention. A minimum of two openings must be provided with a minimum net area of at least one square inch for every one square foot of the enclosed area. The lowest part of the opening can be no more than 12 inches above the adjacent grade;

2. The parts of the foundation located below the flood protection elevation must be constructed of flood-resistant materials;

3.Mechanical and utility equipment must be elevated or floodproofed to or above the flood protection elevation; and

4. The use must be limited to parking, building access or limited storage.

7.6 PUBLIC INFORMATION

(1) Place marks on structures to show the depth of inundation during the regional flood.

(2) All maps, engineering data and regulations shall be available and widely distributed.

(3) Real estate transfers should show what floodplain district any real property is in.

100-278 AMENDMENTS

Obstructions or increases may only be permitted if amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1.

(1) In AE Zones with a mapped floodway, no obstructions or increases shall be permitted unless the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain zoning maps, floodway lines and water surface profiles, in accordance with s. 8.1. Any such alterations must be reviewed and approved by FEMA and the DNR.

(2) In A Zones increases equal to or greater than 1.0 foot may only be permitted if the applicant receives a Conditional Letter of Map Revision from FEMA and amendments are made to this ordinance, the official floodplain maps, floodway lines, and water surface profiles, in accordance with s. 8.1.

8.1 GENERAL

The governing body shall change or supplement the floodplain zoning district boundaries and this ordinance in the manner outlined in s. 8.2 below. Actions which require an

amendment to the ordinance and/ or submittal of a Letter of Map Change (LOMC) include, but are not limited to, the following:

(1) Any fill or floodway encroachment that obstructs flow causing any increase in the regional flood height;

(2) Any change to the floodplain boundaries and/or watercourse alterations on the FIRM;

(3) Any changes to any other officially adopted floodplain maps listed in s. 1.5 (2)(b);

(4) Any floodplain fill which raises the elevation of the filled area to a height at or above the flood protection elevation and is contiguous to land lying outside the floodplain;

(5) Correction of discrepancies between the water surface profiles and floodplain maps;

(6) Any upgrade to a floodplain zoning ordinance text required by s. NR 116.05, Wis. Adm. Code, or otherwise required by law, or for changes by the municipality; and

(7) All channel relocations and changes to the maps to alter floodway lines or to remove an area from the floodway or the floodfringe that is based on a base flood elevation from a FIRM requires prior approval by FEMA.

8.2 PROCEDURES

Ordinance amendments may be made upon petition of any party according to the provisions of s. 62.23, Stats., for cities and villages. The petitions shall include all data required by s. 5.1(5) and 7.1(2). The Land Use Permit shall not be issued until a Letter of Map Revision is issued by FEMA for the proposed changes.

(1) The proposed amendment shall be referred to the zoning agency for a public hearing and recommendation to the governing body. The amendment and notice of public hearing shall be submitted to the Department Regional office for review prior to the hearing. The amendment procedure shall comply with the provisions of s. 62.23, Stats., for cities and villages.

(2) No amendments shall become effective until reviewed and approved by the Department.

(3) All persons petitioning for a map amendment that obstructs flow causing any increase in the regional flood height, shall obtain flooding easements or other appropriate legal arrangements from all adversely affected property owners and notify local units of government before the amendment can be approved by the governing body.

100-279 ENFORCEMENT AND PENALTIES

Any violation of the provisions of this ordinance by any person shall be unlawful and shall be referred to the municipal attorney who shall expeditiously prosecute all such violators. A violator shall, upon conviction, forfeit to the municipality a penalty of not more than $50.00 (fifty dollars), together with a taxable cost of such action. Each day of continued violation shall constitute a separate offense. Every violation of this ordinance is a public nuisance and the creation may be enjoined and the maintenance may be abated by action at suit of the municipality, the state, or any citizen thereof pursuant to s. 87.30, Stats.

100-280 DEFINITIONS

Unless specifically defined, words and phrases in this ordinance shall have their common law meaning and shall be applied in accordance with their common usage. Words used in the present tense include the future, the singular number includes the plural and the plural number includes the singular. The word "may" is permissive, "shall" is mandatory and is not discretionary.

1. A ZONES – Those areas shown on the Official Floodplain Zoning Map which would be inundated by the regional flood. These areas may be numbered or unnumbered A Zones. The A Zones may or may not be reflective of flood profiles, depending on the availability of data for a given area.

2. AH ZONE – See “AREA OF SHALLOW FLOODING”.

3. AO ZONE – See “AREA OF SHALLOW FLOODING”.

4. ACCESSORY STRUCTURE OR USE – A facility, structure, building or use which is accessory or incidental to the principal use of a property, structure or building. An accessory structure shall not be used for human habitation.

5. ALTERATION – An enhancement, upgrade or substantial change or modification other than an addition or repair to a dwelling or to electrical, plumbing, heating, ventilating, air conditioning and other systems within a structure.

6. AREA OF SHALLOW FLOODING – A designated AO, AH, AR/AO, AR/AH, or VO zone on a community’s Flood Insurance Rate Map (FIRM) with a 1 percent or greater annual chance of flooding to an average depth of 1 to 3 feet where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flood may be evident. Such flooding is characterized by ponding or sheet flow.

7. BASE FLOOD – Means the flood having a one percent chance of being equaled or exceeded in any given year, as published by FEMA as part of a FIS and depicted on a FIRM.

8. BASEMENT – Any enclosed area of a building having its floor sub-grade on all sides.

9. BREAKAWAY WALL – A wall that is not part of the structural support of the building and is intended through its design and construction to collapse under specific lateral loading forces, without causing damage to the elevated portion of the building or supporting foundation system.

10. BUILDING – See STRUCTURE.

11. BULKHEAD LINE – A geographic line along a reach of navigable water that has been adopted by a municipal ordinance and approved by the Department pursuant to s. 30.11, Stats., and which allows limited filling between this bulkhead line and the original ordinary highwater mark, except where such filling

is prohibited by the floodway provisions of this ordinance.

12. CAMPGROUND – Any parcel of land which is designed, maintained, intended or used for the purpose of providing sites for nonpermanent overnight use by 4 or more camping units, or which is advertised or represented as a camping area.

13. CAMPING UNIT – Any portable device, no more than 400 square feet in area, used as a temporary shelter, including but not limited to a camping trailer, motor home, bus, van, pick-up truck, or tent that is fully licensed, if required, and ready for highway use.

14. CERTIFICATE OF COMPLIANCE – A certification that the construction and the use of land or a building, the elevation of fill or the lowest floor of a structure is in compliance with all of the provisions of this ordinance.

15. CHANNEL – A natural or artificial watercourse with definite bed and banks to confine and conduct normal flow of water.

16. COASTAL FLOODPLAIN – An area along the coast of Lake Michigan or Lake Superior which is inundated by the regional flood and which is also subject to additional hazard due to wave runup.

17. COASTAL HIGH HAZARD AREA – An area of special flood hazard extending from offshore to the inland limit of a primary frontal dune along an open coast, and any other area subject to high velocity wave action from storms.

18. CRAWLWAYS or CRAWL SPACE – An enclosed area below the first usable floor of a building, generally less than five feet in height, used for access to plumbing and electrical utilities.

19. DECK – An unenclosed exterior structure that has no roof or sides and has a permeable floor which allows the infiltration of precipitation.

20. DEPARTMENT – The Wisconsin Department of Natural Resources.

21. DEVELOPMENT – Any artificial change to improved or unimproved real estate, including, but not limited to, the construction of buildings, structures or accessory structures; the construction of additions or alterations to buildings, structures or accessory structures; the repair of any damaged structure or the improvement or renovation of any structure, regardless of percentage of damage or improvement; the placement of buildings or structures; subdivision layout and site preparation; mining, dredging, filling, grading, paving, excavation or drilling operations; the storage, deposition or extraction of materials or equipment; and the installation, repair or removal of public or private sewage disposal systems or water supply facilities.

22. DRYLAND ACCESS – A vehicular access route which is above the regional flood elevation and which connects land located in the floodplain to land outside the floodplain, such as a road with its surface above regional flood elevation and wide enough for wheeled rescue and relief vehicles.

23. ENCROACHMENT – Any fill, structure, equipment, use or development in the floodway.

24. FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) – The federal agency that administers the National Flood Insurance Program.

25. FLOOD INSURANCE RATE MAP (FIRM) – A map of a community on which the Federal Insurance Administration has delineated both the floodplain and the risk premium zones applicable to the community. This map can only be amended by the Federal Emergency Management Agency.

26. FLOOD or FLOODING – A general and temporary condition of partial or complete inundation of normally dry land areas caused by one of the following conditions:

- The overflow or rise of inland waters;
- The rapid accumulation or runoff of surface waters from any source;
- The inundation caused by waves or currents of water exceeding anticipated cyclical levels along the shore of Lake Michigan or Lake Superior; or
- The sudden increase caused by an unusually high water level in a natural body of water, accompanied by a severe storm, or by an unanticipated force of nature, such as a seiche, or by some similarly unusual event.

27. FLOOD FREQUENCY – The probability of a flood occurrence which is determined from statistical analyses. The frequency of a particular flood event is usually expressed as occurring, on the average once in a specified number of years or as a percent (%) chance of occurring in any given year.

28. FLOODFRINGE – That portion of the floodplain outside of the floodway which is covered by flood waters during the regional flood and associated with standing water rather than flowing water.

29. FLOOD HAZARD BOUNDARY MAP – A map designating approximate flood hazard areas. Flood hazard areas are designated as unnumbered A-Zones and do not contain floodway lines or regional flood elevations. This map forms the basis for both the regulatory and insurance aspects of the National Flood Insurance Program (NFIP) until superseded by a Flood Insurance Study and a Flood Insurance Rate Map.

30. FLOOD INSURANCE STUDY – A technical engineering examination, evaluation, and determination of the local flood hazard areas. It provides maps designating those areas affected by the regional flood and provides both flood insurance rate zones and base flood elevations and may provide floodway lines. The flood hazard areas are designated as numbered and unnumbered A-Zones. Flood Insurance Rate Maps, that accompany the Flood Insurance Study, form the basis for both the regulatory and the insurance aspects of the National Flood Insurance Program.

31. FLOODPLAIN – Land which has been or may be covered by flood water during the regional flood. It includes the floodway and the floodfringe and may include other designated floodplain areas for regulatory purposes.

32. FLOODPLAIN ISLAND – A natural geologic land formation within the floodplain that is surrounded, but not covered, by floodwater during the regional flood.

33. FLOODPLAIN MANAGEMENT – Policy and procedures to ensure wise use of floodplains, including mapping and engineering, mitigation, education, and administration and enforcement of floodplain regulations.

34. FLOOD PROFILE – A graph or a longitudinal profile line showing the relationship of the water surface elevation of a flood event to locations of land surface elevations along a stream or river.

35. FLOODPROOFING – Any combination of structural provisions, changes or adjustments to properties and structures, water and sanitary facilities and contents of buildings subject to flooding, for the purpose of reducing or eliminating flood damage.

36. FLOOD PROTECTION ELEVATION – An elevation of two feet of freeboard above the Regional Flood Elevation. (Also see: FREEBOARD.)

37. FLOOD STORAGE – Those floodplain areas where storage of floodwaters has been taken into account during analysis in reducing the regional flood discharge.

38. FLOODWAY – The channel of a river or stream and those portions of the floodplain adjoining the channel required to carry the regional flood discharge.

39. FREEBOARD – A safety factor expressed in terms of a specified number of feet above a calculated flood level. Freeboard compensates for any factors that cause flood heights greater than those calculated, including ice jams, debris accumulation, wave action, obstruction of bridge openings and floodways, the effects of watershed urbanization, loss of flood storage areas due to development and aggregation of the river or stream bed.

40. HABITABLE STRUCTURE – Any structure or portion thereof used or designed for human habitation.

41. HEARING NOTICE – Publication or posting meeting the requirements of Ch. 985, Stats. For appeals, a Class 1 notice, published once at least one week (7 days) before the hearing, is required. For all zoning ordinances and amendments, a Class 2 notice, published twice, once each week consecutively, the last at least a week (7 days) before the hearing. Local ordinances or bylaws may require additional notice, exceeding these minimums.

42. HIGH FLOOD DAMAGE POTENTIAL – Damage that could result from flooding that includes any danger to life or health or any significant economic loss to a structure or building and its contents.

43. HIGHEST ADJACENT GRADE – The highest natural elevation of the ground surface prior to construction next to the proposed walls of a structure.

44. HISTORIC STRUCTURE – Any structure that is either:

- Listed individually in the National Register of Historic Places or preliminarily determined by the Secretary of the Interior as meeting the requirements for individual listing on the National Register;
- Certified or preliminarily determined by the Secretary of the Interior as contributing to the historical significance of a registered historic district or a district preliminarily determined by the Secretary to qualify as a registered historic district;
- Individually listed on a state inventory of historic places in states with historic preservation programs which have been approved by the Secretary of the Interior; or
- Individually listed on a local inventory of historic places in communities with historic preservation programs that have been certified either by an approved state program, as determined by the Secretary of the Interior; or by the Secretary of the Interior in states without approved programs.

45. INCREASE IN REGIONAL FLOOD HEIGHT – A calculated upward rise in the regional flood elevation greater than 0.00 foot, based on a comparison of existing conditions and proposed conditions which is directly attributable to development in the floodplain but not attributable to manipulation of mathematical variables such as roughness factors, expansion and contraction coefficients and discharge.

46. LAND USE – Any nonstructural use made of unimproved or improved real estate. (Also see DEVELOPMENT.)

47. LOWEST ADJACENT GRADE – Elevation of the lowest ground surface that touches any of the exterior walls of a building.

48. LOWEST FLOOR – The lowest floor of the lowest enclosed area (including basement).

49. MAINTENANCE – The act or process of ordinary upkeep and repairs, including redecorating, refinishing, nonstructural repairs, or the replacement of existing fixtures, systems or equipment with equivalent fixtures, systems or structures.

50. MANUFACTURED HOME – A structure transportable in one or more sections, which is built on a permanent chassis and is designed to be used with or without a permanent foundation when connected to required utilities. The term "manufactured home" includes a mobile home but does not include a "mobile recreational vehicle."

51. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION – A parcel (or contiguous parcels) of land, divided into two or more manufactured home lots for rent or sale.

52. MOBILE/MANUFACTURED HOME PARK OR SUBDIVISION, EXISTING – A parcel of land, divided into two or more manufactured home lots for rent or sale, on which the construction of facilities for servicing the lots is completed before the effective date of this ordinance. At a minimum, this would include the

installation of utilities, the construction of streets and either final site grading or the pouring of concrete pads.

53. MOBILE/MANUFACTURED HOME PARK, EXPANSION TO EXISTING – The preparation of additional sites by the construction of facilities for servicing the lots on which the manufactured homes are to be affixed. This includes installation of utilities, construction of streets and either final site grading, or the pouring if concrete pads.

54. MOBILE RECREATIONAL VEHICLE – A vehicle which is built on a single chassis, 400 square feet or less when measured at the largest horizontal projection, designed to be self-propelled, carried or permanently towable by a licensed, light-duty vehicle, is licensed for highway use if registration is required and is designed primarily not for use as a permanent dwelling, but as temporary living quarters for recreational, camping, travel or seasonal use. Manufactured homes that are towed or carried onto a parcel of land, but do not remain capable of being towed or carried, including park model homes, do not fall within the definition of "mobile recreational vehicles."

55. MODEL, CORRECTED EFFECTIVE – A hydraulic engineering model that corrects any errors that occur in the Duplicate Effective Model, adds any additional cross sections to the Duplicate Effective Model, or incorporates more detailed topographic information than that used in the current effective model.

56. MODEL, DUPLICATE EFFECTIVE – A copy of the hydraulic analysis used in the effective FIS and referred to as the effective model.

57. MODEL, EFFECTIVE – The hydraulic engineering model that was used to produce the current effective Flood Insurance Study.

58. MODEL, EXISTING (PRE-PROJECT) – A modification of the Duplicate Effective Model or Corrected Effective Model to reflect any man made modifications that have occurred within the floodplain since the date of the effective model but prior to the construction of the project for which the revision is being requested. If no modification has occurred since the date of the effective model, then this model would be identical to the Corrected Effective Model or Duplicate Effective Model.

59. MODEL, REVISED (POST-PROJECT) – A modification of the Existing or Pre-Project Conditions Model, Duplicate Effective Model or Corrected Effective Model to reflect revised or post-project conditions.

60. MODERATE WAVE ACTION AREA (MoWA) – A special flood hazard area subject to the potential for breaking wave heights of greater than or equal to 1.5 feet, but less than 3 feet, where the primary source of flooding is astronomical tides, storm surges, seiches, and/or tsunamis. A MoWA is an area within zone AE on a FIRM that is between the inland limit of zone VE and a Limit of Moderate Wave Action, where identified. (Also known as “coastal A zone”)

61. MUNICIPALITY or MUNICIPAL – The county, city or village governmental units enacting, administering and enforcing this zoning ordinance.

62. NAVD or NORTH AMERICAN VERTICAL DATUM – Elevations referenced to mean sea level datum, 1988 adjustment.

63. NGVD or NATIONAL GEODETIC VERTICAL DATUM – Elevations referenced to mean sea level datum, 1929 adjustment.

64. NEW CONSTRUCTION – Structures for which the start of construction commenced on or after the effective date of a floodplain zoning regulation adopted by this community and includes any subsequent improvements to such structures.

65. NON-FLOOD DISASTER – A fire or an ice storm, tornado, windstorm, mudslide or other destructive act of nature, but excludes a flood.

66. NONCONFORMING STRUCTURE – An existing lawful structure or building which is not in conformity with the dimensional or structural requirements of this ordinance for the area of the floodplain which it occupies. (For example, an existing residential structure in the floodfringe district is a conforming use. However, if the lowest floor is lower than the flood protection elevation, the structure is nonconforming.)

67. NONCONFORMING USE – An existing lawful use or accessory use of a structure or building which is not in conformity with the provisions of this ordinance for the area of the floodplain which it occupies. (Such as a residence in the floodway.)

68. OBSTRUCTION TO FLOW – Any development which blocks the conveyance of floodwaters such that this development alone or together with any future development will cause an increase in regional flood height.

69. OFFICIAL FLOODPLAIN ZONING MAP – That map, adopted and made part of this ordinance, as described in s. 1.5(2), which has been approved by the Department and FEMA.

70. OPEN SPACE USE – Those uses having a relatively low flood damage potential and not involving structures.

71. ORDINARY HIGHWATER MARK – The point on the bank or shore up to which the presence and action of surface water is so continuous as to leave a distinctive mark such as by erosion, destruction or prevention of terrestrial vegetation, predominance of aquatic vegetation, or other easily recognized characteristic.

72. PERSON – An individual, or group of individuals, corporation, partnership, association, municipality or state agency.

73. PRIMARY FRONTAL DUNE – A continuous or nearly continuous mound or ridge of sand with relatively steep seaward and landward slopes immediately landward and adjacent to the beach and subject to erosion and overtopping from

high tides and waves during major coastal storms. The inland limit of the primary frontal dune occurs at the point where there is a distinct change from a relatively steep slope to a relatively mild slope.

74. PRIVATE SEWAGE SYSTEM – A sewage treatment and disposal system serving one structure with a septic tank and soil absorption field located on the same parcel as the structure. It also means an alternative sewage system approved by the Department of Safety and Professional Services, including a substitute for the septic tank or soil absorption field, a holding tank, a system serving more than one structure or a system located on a different parcel than the structure.

75. PUBLIC UTILITIES – Those utilities using underground or overhead transmission lines such as electric, telephone and telegraph, and distribution and collection systems such as water, sanitary sewer and storm sewer.

76. REASONABLY SAFE FROM FLOODING – Means base flood waters will not inundate the land or damage structures to be removed from the floodplain and that any subsurface waters related to the base flood will not damage existing or proposed buildings.

77. REGIONAL FLOOD – A flood determined to be representative of large floods known to have occurred in Wisconsin. A regional flood is a flood with a one percent chance of being equaled or exceeded in any given year, and if depicted on the FIRM, the RFE is equivalent to the BFE.

78. SAND DUNES – Naturally occurring accumulations of sand in ridges or mounds landward of the beach.

79. START OF CONSTRUCTION – The date the building permit was issued, provided the actual start of construction, repair, reconstruction, rehabilitation, addition, placement, or other improvement was within 180 days of the permit date. The actual start means either the first placement of permanent construction on a site, such as the pouring of slab or footings, the installation of piles, the construction of columns, or any work beyond initial excavation, or the placement of a manufactured home on a foundation. Permanent construction does not include land preparation, such as clearing, grading and filling, nor does it include the installation of streets and/or walkways, nor does it include excavation for a basement, footings, piers or foundations or the erection of temporary forms, nor does it include the installation on the property of accessory buildings, such as garages or sheds not occupied as dwelling units or not part of the main structure. For an alteration, the actual start of construction means the first alteration of any wall, ceiling, floor or other structural part of a building, whether or not that alteration affects the external dimensions of the building.

80. STRUCTURE – Any manmade object with form, shape and utility, either permanently or temporarily attached to, placed upon or set into the ground, stream bed or lake bed, including, but not limited to, roofed and walled buildings, gas or liquid storage tanks, bridges, dams and culverts.

81. SUBDIVISION – Has the meaning given in s. 236.02(12), Wis. Stats.

82. SUBSTANTIAL DAMAGE – Damage of any origin sustained by a structure, whereby the cost of restoring the structure to its pre-damaged condition would equal or exceed 50 percent of the equalized assessed value of the structure before the damage occurred.

83. SUBSTANTIAL IMPROVEMENT – Any repair, reconstruction, rehabilitation, addition or improvement of a building or structure, the cost of which equals or exceeds 50 percent of the equalized assessed value of the structure before the improvement or repair is started. If the structure has sustained substantial damage, any repairs are considered substantial improvement regardless of the work performed. The term does not include either any project for the improvement of a building required to correct existing health, sanitary or safety code violations identified by the building official and that are the minimum necessary to assure safe living conditions; or any alteration of a historic structure provided that the alteration will not preclude the structure's continued designation as a historic structure.

84. UNNECESSARY HARDSHIP – Where special conditions affecting a particular property, which were not self-created, have made strict conformity with restrictions governing areas, setbacks, frontage, height or density unnecessarily burdensome or unreasonable in light of the purposes of the ordinance.

85. VARIANCE – An authorization by the board of adjustment or appeals for the construction or maintenance of a building or structure in a manner which is inconsistent with dimensional standards (not uses) contained in the floodplain zoning ordinance.

86. VIOLATION – The failure of a structure or other development to be fully compliant with the floodplain zoning ordinance. A structure or other development without required permits, lowest floor elevation documentation, floodproofing certificates or required floodway encroachment calculations is presumed to be in violation until such time as that documentation is provided.

87. WATERSHED – The entire region contributing runoff or surface water to a watercourse or body of water.

88. WATER SURFACE PROFILE – A graphical representation showing the elevation of the water surface of a watercourse for each position along a reach of river or stream at a certain flood flow. A water surface profile of the regional flood is used in regulating floodplain areas.

89. WELL – means an excavation opening in the ground made by digging, boring, drilling, driving or other methods, to obtain groundwater regardless of its intended use.

100-281 (Reserved)

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SECTION II. All Ordinances or parts of Ordinances contravening the terms and conditions of this Ordinance are hereby to that extent repealed.

SECTION III. Severability. If any portion of this Ordinance is invalid or unconstitutional, or the application of this Ordinance to any person or circumstances is invalid or unconstitutional, such invalidity or unconstitutionality shall not affect the other provisions or applications of this Ordinance which can be given effect without the invalid or unconstitutional provisions or applications.

SECTION I V. Effective Date. This Ordinance shall take effect upon passage and publication as provided by law.

PASSED AND ADOPTED by the Village Board this _____ day of _____, 2022.

APPROVED:

_____
Fred Winchowky, Village President

Countersigned:

_____
Diana Dykstra, Village Clerk/Treasurer