VILLAGE OF MOUNT HOREB
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VILLAGE BOARD AGENDA
Wednesday, February 4, 2026 at 7:00 PM

Municipal Building Board Room
138 E. Main Street
Mount Horeb, WI

1) Call to order
2) Pledge of Allegiance
3) Roll call
4) Public Comments on Non-Agenda Items*
5) Consent Agenda
   a. Consideration of January 7, 2026 Meeting Minutes
   b. Approval of Final Energy Plan
   c. Consideration of Resolution 2026-02 Green Tier Legacy Community Program
6) Agenda Items
   a. Jt Klein Senior Affordable and Market Rate Multi-Family Housing, 101 Perimeter Rd
      1. Consideration of Specific Implementation Plan
   b. Cottages at Brookstone Hills Pocket Neighborhood
      1. Consideration of General Development Plan (GDP) rezoning from A-1 Agricultural to R-3 Multifamily to PD - Planned Development for the Cottages at Brookstone Hills
      2. Consideration of Certified Survey Map (CSM) to convert Outlot into Standard Lot
   c. Discussion/Consideration of Nomination for Register of Historic Places for Structures, Sites or Entities: 108 & 110 E Main Street, Vestibule Investments, LLC.
7) Committee Reports:
   a. Community Development Authority
   b. Dane County Cities & Villages Association Report
   c. Finance/Personnel

d. Historic Preservation Committee Report
e. Library Board
f. Mount Horeb Area Chamber of Commerce
g. Mount Horeb Area Joint Fire Department
h. Parks, Recreation, and Forestry Commission
i. Plan Commission
j. Public Safety Committee
k. Public Works Committee
l. School Liaison
m. Sustainability and Natural Resources Committee
n. Tourism Commission
o. Utility Commission

8) Village President's report
9) Village Administrator's report
10) Village Clerk’s report
11) Meeting adjournment.

***Public Comment Policy**
Members of the public are invited to speak at meetings of all Mount Horeb Public Bodies. To comment, please complete a Public Comment Form at the Meeting Room entrance and submit it to staff before the meeting begins. Comments are limited to **three minutes**, must be made from the podium, and the speaker must return to the audience after speaking.

- **Non-agenda item comments** are heard at the start of the meeting. Public Body members and staff will not engage in discussion during public comment but may consider topics for future agendas.
- **Agenda item comments** are heard during the relevant item, after the proposers or staff present the item and before Public Body discussion. All public comments on the item will be heard before any discussion by the Public Body.

Members of the public will only be allowed to speak outside these public comment times if they are invited by the meeting chair to share additional information requested by the Public Body. If so invited to speak, the member of the public must do so from the podium.
Written comments are also welcome. Written comments shall include the name and address of the submitter and should be submitted to the Deputy Treasurer/Governance Coordinator by email at niki.erickson@mounthorebwi.info (subject line: *Public Comment Request-Name of Public Body*) or delivered by to the Village at: 138 E Main Street, Mount Horeb WI, 53572, ATTN *Public Comment Request-Name of Public Body*.

UPON REASONABLE NOTICE, EFFORTS WILL BE MADE TO ACCOMMODATE THE NEEDS OF DISABLED INDIVIDUALS THROUGH APPROPRIATE AIDS AND SERVICES. FOR INFORMATION OR TO REQUEST THIS SERVICE, CONTACT ALYSSA GAFFNEY, CLERK, AT 138 E MAIN STREET, MOUNT HOREB, WI (608) 437-9404.

VILLAGE OF MOUNT HOREB
VILLAGE BOARD MEETING MINUTES
JANUARY 7, 2026

The Village Board met in regular session in-person on the above date at the Mount Horeb Senior Center, 107 N Grove Street.

Call to Order/Roll Call: Village President Ryan Czyzewski called the meeting to order at 7:00pm. The Pledge of Allegiance was recited. Present were Trustees Jones, White, Fendrick, Schellpfeffer, Gauger, and Best. Also present were Administrator Nic Owen, Village Clerk Alyssa Gaffney, and Youth-In-Government students Aaron Fendrick and Jenna Jones.

Public Comments: Village resident voiced his concerns about property taxes. Village resident Tim Scott voiced his concerns about community engagement.

Consent Agenda: Gauger moved, White seconded to approve the following consent agenda items: December 3, 2025 meeting minutes; Resolution 2026-01 Recognition of World Migratory Bird Day; Approval of Appointed Election Officials for the 2026-2027 election cycle; Alcohol Beverage license application for Rokit, LLC, DBA Sunn Café, 201 E Main Street; and Alcohol Beverage Appointment of Agent for Taddeus Rokitowski, Rokit LLC, DBA Sunn Café, 201 E Main Street. Motion carried by unanimous voice vote.

Swearing in of new Police Officer, Samuel Erickson: Chief Vierck introduced officer Erickson, and Clerk Gaffney swore him in. He was then given the Oath of Honor by Chief Vierck.

Langhus on Main Mixed-Use Building, 208-220 E Main Street: Czyzewski explained the process of this agenda item. Owen explained the background of the proposed project. Jeff Grundahl of JG Development spoke about the proposal and changes that have been made to the project. Mount Horeb Economic Development Consultant Kristen Fish-Peterson spoke about the project. The following individuals spoke in opposition of the project: Salem Joseph, Karen Erickson, Brian Ladow, Dianne Hirsch, Tammy Clary, Tim Scott, Stephen Sopcak, Sharman Moen, Steve Penne, Davina Penne, Michelle Kelley, Philip Leavenworth, Beth Bacher-Gresock, and Kristen Clary. The following individuals spoke in support of the project: Vicki Funseth, Gus Schultz, Joe Gallina, Brad Murphy, Amy Mertz, and Joe Karls. The following individuals registered in opposition of the project: Tracie Ace, Dolores Ace, Michael Larson, John Erb, Julie Malliet-Nowak, Joy Martinson, Christy Nesja, Paul Nesja, Jerry Shumate, Tina Shumate, Erin Larson, Brad Brookins, Lorna Brookins, Kayla Meister, Pat, FitzGerald, Jennifer Gottwald, Patty Baumeister, Cindy Jenson, Maura Overland, Timothy Santoirre, Lisa Santoirre, Charlotte-Ann Chenery, Jim DeSonia, and Amanda DeSonia. The following individuals registered in support of the project: Jaclyn Gullick, Brody Richter, Dawn Hendrickson, and Karen Johnson. Architect Steve Schulfer of JG Development and Village Planner Ben Rohr

spoke and addressed concerns. JG Development, Rohr, Owen, and Fish-Peterson fielded questions from the board. The board discussed and each member gave their input.

Consideration of General Development Plan, Planned Development Rezone Application, Jeff Grundahl, Langhus on Main, 208-220 E Main Street: Jones moved, Gauger seconded to deny the proposal for failure to meet the criteria for approval in regards to the Municipal Zoning Code, Section 17.49 PD-1 Planned Development (6)(a)1, 2, and 4 and (6)(b) and (6)(d). Motion carried by a 4-3 roll call vote. Best, Gauger, Jones, and White voted aye. Czyzewski, Fendrick, and Schellpfeffer voted nay.

Consideration of Certified Survey Map to combine Lots 208, 214, and 220 E Main Street: Czyzewski moved, Jones seconded to approve the Certified Survey Map. Motion carried by unanimous roll call vote.

Consideration of Specific Implementation Plan, Jeff Grundahl, Langhus on Main, 208-220 E Main Street: Schellpfeffer moved, Gauger seconded to deny the Specific Implementation Plan due to the General Development Plan being denied. Motion carried by a 6-1 roll call vote. Gauger, Jones, Schellpfeffer, White, Best, and Czyzewski voted aye. Fendrick voted nay.

Committee reports: All committee reports were given, with no action taken.

Village President's report: Czyzewski wished everyone a happy new year. He also thanked the board for their time and hard work.

Village Administrator's report: Owen spoke about the Lukken property and Business Park.

Village Clerk's report: Gaffney spoke about the Spring Primary election and details on absentee voting times.

The closed session item was not needed.

Adjournment: With no further business before the board, Fendrick moved, White seconded to adjourn @ 11:15pm. Motion carried by unanimous voice vote.

Minutes by Alyssa Gaffney, Village Clerk

VILLAGE OF
MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator

AGENDA ITEM # 5.b

Approval of Final Energy Plan

BACKGROUND

The final draft of the Energy Report from Slipstream is attached for review and approval. The Energy Plan details the baseline of energy use at specific village buildings and the vehicle fleet, compares it to benchmarks for comparable municipalities and sets recommendations for improvements. Following Board approval, it will be sent to all departments for consideration in their budgeting process moving forward. A big thank you to Dan Streit, David Vigliotta and the team at Slipstream for their expertise in guiding us through development of the plan. The Sustainability and Natural Resources Committee recommends approval.

RECOMMENDATION

ATTACHMENTS

1. Mt. Horeb Energy Plan.Final

Village of Mount Horeb Municipal Energy Plan

January 16, 2026

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Executive Summary

With funding from the Wisconsin Public Service Commission's Office of Energy Innovation, the Village of Mount Horeb partnered with Slipstream and WPPI Energy to develop the Mount Horeb Energy Plan ("Energy Plan"). The Energy Plan is the Village's first comprehensive municipal energy plan, and it will guide Mount Horeb's strategic energy investments over the next 5–10 years. The Energy Plan evaluates the Village's municipal operations, vehicle fleet, and community-wide energy use and identifies actionable strategies to reduce energy costs, advance sustainability, and lower greenhouse gas (GHG) emissions both in municipal operations and throughout the community.

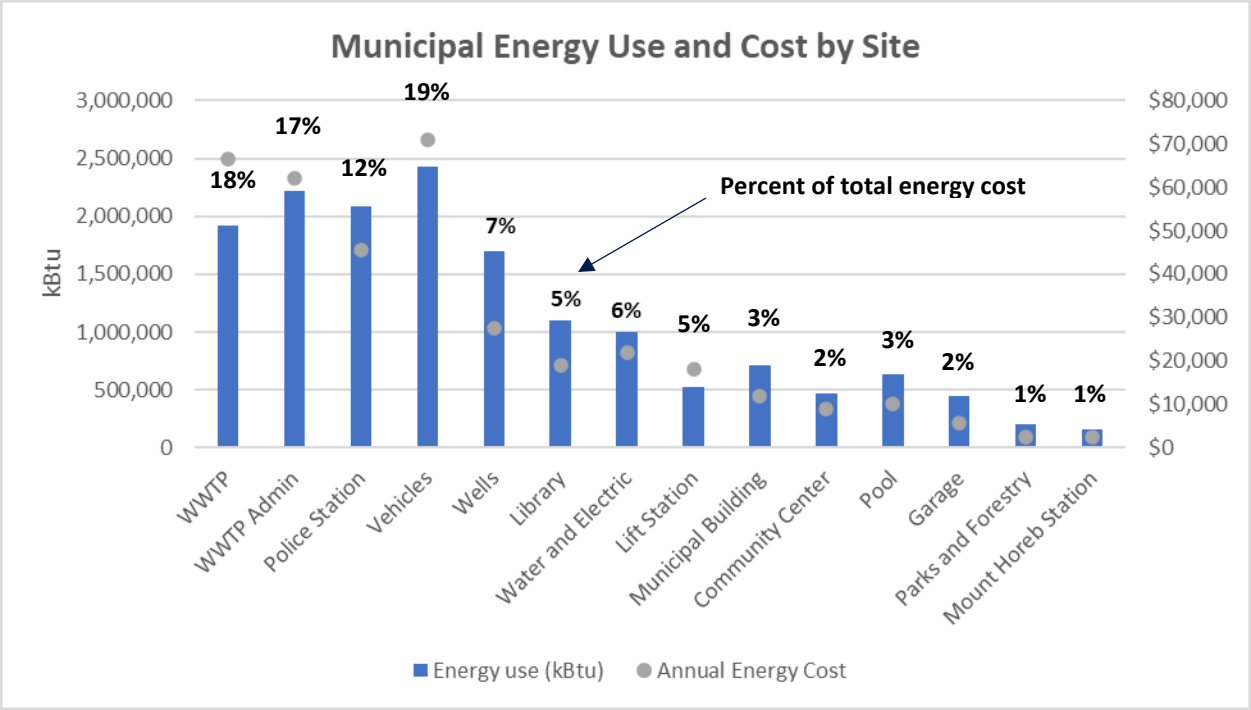
Mount Horeb's goals are driven by its long-standing commitment to environmental stewardship and fiscal responsibility. The Village has already demonstrated leadership through energy-efficient municipal projects, public education initiatives, and the establishment of its Sustainability and Natural Resources (SNR) Committee. This Energy Plan builds on that foundation by prioritizing cost-effective, high-impact actions. The project team used a multi-stage process to understand the energy baseline, identify energy saving opportunities, and recommend improvement strategies. The process included detailed data collection, benchmarking of all municipal facilities, building energy assessments, analysis of vehicle fleet operations, evaluation of community energy use, and extensive engagement with residents, businesses, and the SNR Committee.

ENERGY BASELINE

In the baseline year (2023), the Village of Mount Horeb's municipal operations generated 1,769 metric tons of CO_2e and incurred $373,511 in energy costs. As shown in Figure 1, the largest components of energy costs and emissions were the wastewater treatment plant (WWTP) and the WWTP Administrative building. The police station, wells and lift stations, and the vehicle fleet were also key contributors to baseline energy use and emissions. Benchmarking energy use intensity of each building against national medians showed that several buildings are already more efficient than national medians, but that there continues to be opportunities to improve efficiency at all facilities.

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Figure 1. Municipal energy use and cost by source.



IDENTIFYING ENERGY SAVING OPPORTUNITIES

Four buildings—Village Hall, the Library, the Community Center, and the Police Station portion of the Public Safety Building—received onsite energy assessments. The team created digital energy models of each facility, which were used to identify cost-effective near term, medium-term, and end-of-service life energy upgrades. Completing all recommended energy upgrades would reduce utility costs for the buildings by 20-30%.

Near term recommendations focused on improvements that will yield the greatest energy cost savings per dollar of investment. These measures included retro-commissioning, LED upgrades, lighting controls, smart thermostats, and plug-load management. Longer-term decarbonization opportunities include heat pumps, heat-pump water heaters, window replacements, and roof insulation.

RENEWABLE ENERGY OPPORTUNITIES

Freely available renewable energy from the sun and the wind offers valuable cost saving and emissions reduction opportunities for Mount Horeb. Survey responses, guidance from the SNR, and feedback at the Community Forum all showed high levels of public support for increasing the use of renewable energy for municipal buildings and among residents and businesses. Consequently, the Energy Plan assessed opportunities for the Village to use both on-site and off-site renewable energy to power its municipal buildings and also recommended ways that the Village can help community members increase the share of the energy that they use that is generated from renewable resources. Key renewable energy recommendations included:

- **Install Solar PV on Municipal Buildings**. The analysis identified opportunities to install 583 kW-DC at municipal facilities, which would reduce the Village's energy costs by approximately $100,000 per year.

- **Supplement Solar with Off-Site Renewable Energy**. Space constraints at municipal facilities would prevent the Village from installing sufficient on-site solar capacity to offset 100 percent of its energy use. To reflect this limitation and to optimize cost-effectiveness, the Energy Plan provides guidance for the Village in supplementing on-site PV with procurement of off-site renewable energy.
- Facilitate a Solar Group Buy Program. This low-cost program would reduce informational, financial, and technical barriers to broader adoption of rooftop solar at homes and businesses in the community.

VEHICLE FLEET ANALYSIS

The Village's fleet of 30-municipal vehicles consumed over 19,000 gallons of fuel in the baseline year and operated at an overall fuel economy of 12.5 MPG. In 2023, combined fuel costs for all vehicles exceeded the energy costs of all municipal facilities except the WWTP and the WWTP Administrative building.

- SUVs, primarily operated by the Police Department, consumed the most fuel and generated the most CO2e. (8,844 gallons consumed | 75 MT CO2e).
- Large trucks, many of which are used by the Public Works department, consumed the second highest amount of fuel (5,065 gallons consumed | 52 MT CO2e).
- The Energy Plan recommends strategies to reduce fuel costs and vehicle emissions by incorporating electric vehicles (EVs) into its operations. The evolving EV market presents cost-competitive replacements for several categories of vehicles that the Village operates. Key vehicle recommendations include:
- Implement a phased transition by beginning with two initial EV purchases. Train staff to operate and maintain a limited number of EVs before adding more EVs to the fleet.
- Future-proof EV charging needs by installing the level of electrical infrastructure that will be needed to meet future vehicle charging requirement when planning for the initial EV charging stations.

COMMUNITY ENGAGEMENT AND ENERGY USE

The people who live and work in Mount Horeb are key stakeholders for the Village's Energy Plan. Additionally, community-wide residential and commercial emissions far exceed municipal emissions and therefore working with the community will be essential to reduce energy use and emissions. The planning process engaged the community in three primary ways.

- Periodic presentations to, and guidance from, the SNR Committee.
- Survey feedback from 473 residents and 34 businesses.
- Presentation of preliminary energy plan recommendations at a community forum at which attendees offered feedback on each recommended strategy.
- Several top themes emerged from the community engagement.
    - Residents strongly value renewable energy and energy efficiency but cite cost, information gaps, and contractor uncertainty as barriers.
    - Businesses report modest improvements but express interest in support, recognition, and financing programs.

- Community support is strong for solar group buys, improving efficiency of municipal buildings, especially by adding smart building controls.
- Some skepticism exists about EV fleet expansion due to concerns about grid capacity and the future policy environment.

SUPPORTIVE POLICIES AND PROGRAMS

Mount Horeb can sustain and amplify the impact of its energy efficiency initiatives by instituting aligned internal operational policies, as well as public-facing policies.

The Energy Plan recommends four types of policies to achieve the Village's objectives:

- Enact a Lifecycle Cost Analysis purchasing policy for equipment and vehicles.
- Introduce program and services to connect residents and businesses to incentives and financing, especially Focus on Energy rebates.
- Join state and regional sustainability collaboratives (e.g., WLGCC) to sustain the Village's engagement with sustainability and to access additional learning and grant opportunities.
- Create a Green Business Recognition Program to encourage leadership and visibility.

FUNDING OPPORTUNITIES

Significant financial investments will be required to implement the recommended energy upgrades to municipal facilities and to homes and businesses. Federal policy changes have reduced opportunities to use tax credits to fund purchases of EVs and installation of solar arrays. However, valuable funding opportunities remain for all municipal stakeholders:

- **Focus on Energy**. The Energy Plan recommends that the Village coordinate with its Focus on Energy Advisor on all energy improvements to municipal buildings. The Energy Advisor can provide helpful technical guidance and can also assist the municipality in accessing financial incentives for these upgrades. We also recommend that the Village support outreach activities to help residents and businesses access Focus incentives.
- **WPPI Energy**. Mount Horeb Utilities is a member of WPPI Energy, which has been a key partner in the development of this Energy Plan. We recommend that the Village continue to engage with WPPI Energy to identify any additional funding opportunities that may be available.
- **WI Public Services Commission (PSC) Office of Energy Innovation (OEI).** This Energy Plan was developed through a Rural Energy Startup grant from OEI. OEI periodically offers additional funding opportunities, which the Village may be able to access to obtain funding for energy upgrades.
- **Clean Energy Revolving Fund.** The Village can quantify the value of the energy cost savings that the energy upgrades generate and deposit these cost savings into a revolving fund. As the Village continues to make energy upgrades, funds in this account can be used to fill funding gaps for future projects.

NEXT STEPS

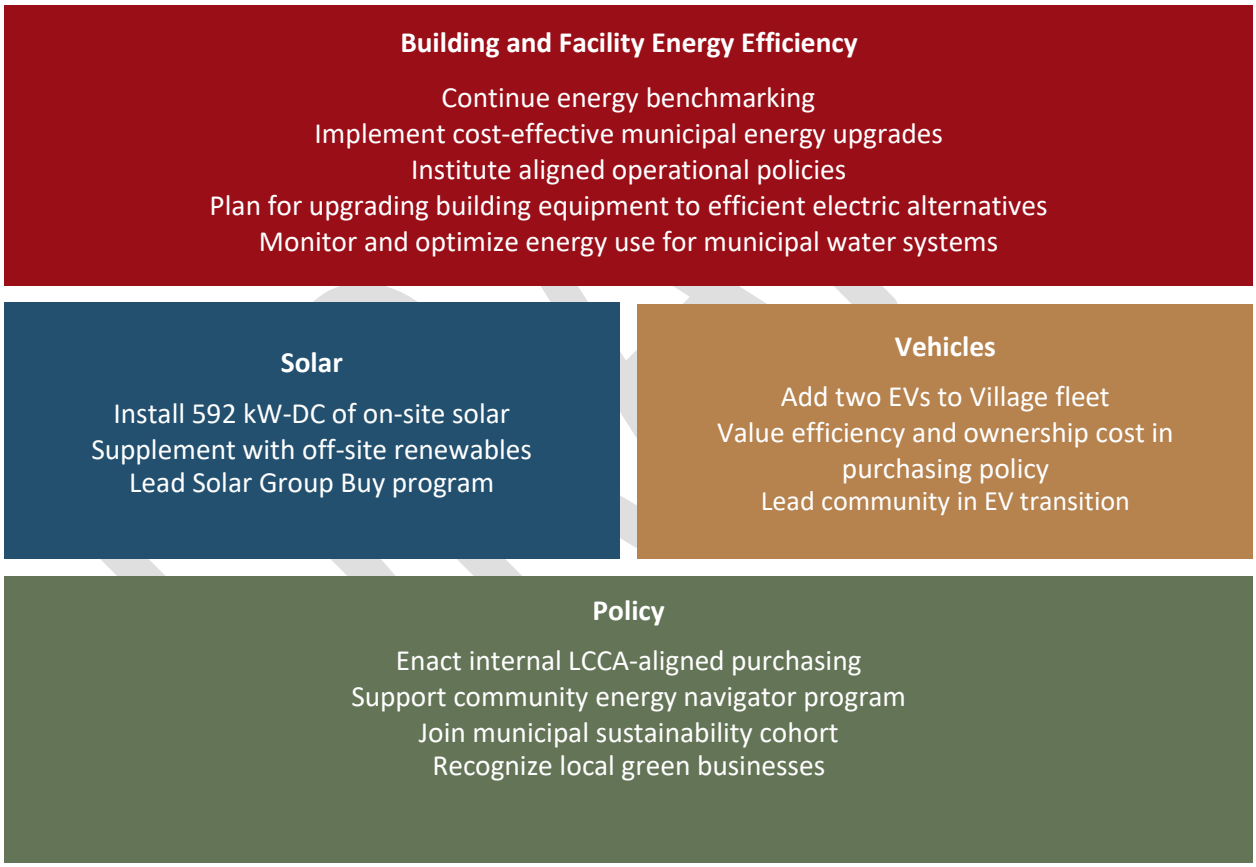
The Mount Horeb Municipal Energy Plan provides a clear, actionable roadmap for reducing energy costs, cutting emissions, and enhancing sustainability across Village operations and the broader community. By

prioritizing high-impact building upgrades, embracing solar energy, modernizing the vehicle fleet, and enabling residents and businesses to participate in energy-saving initiatives, the Village can advance fiscal responsibility, environmental stewardship, and community well-being.

The Plan's success will depend on continued monitoring, strategic investment, and strong collaboration between municipal leadership, Village staff, community members, and regional partners. Mount Horeb is positioned to lead by example and create a model for small communities pursuing a resilient, cost-effective, and sustainable energy future.

Figure 2 provides an overview of the recommendations by category. The recommendations serve as initial items for consideration to save energy and reduce municipal CO_2 emissions. Funding is available through local utility rebates, federal funding, and state funding to implement these recommendations. Funding options for the recommendations are detailed in the full report.

Figure 2. Recommended Mount Horeb energy actions



Glossary

Decarbonization: A process of replacing equipment and systems that generate heat and/or power by combusting fossil fuels with alternatives that are powered solely, or primarily, by electricity or renewable fuels. Fuel switching measures may be complemented by installation of on-site renewable energy systems. These building improvements are designed to achieve near-term and long-term emissions reductions by leveraging trends toward reduced emissions intensity of the electrical grid.

Energy assessment: An on-site inspection paired with energy modeling that analyzes how a building currently uses energy and identifies opportunities to reduce the building's energy consumption.

Electric vehicle (EV): Cars, trucks, buses, and other vehicle types that are propelled using electricity that is stored in a battery.

Energy use intensity (EUI): Total energy used by a building from all fuel types (e.g. electricity, natural gas, and delivered fuels) and converted to British thermal units divided by the total square feet of the building. Normalizes energy use across buildings of different sizes.

Focus on Energy: Wisconsin's statewide program to increase energy efficiency and renewable energy use among residents, businesses, and local governments.

Heat pump: Single heat pump replaces both furnace and an air conditioner; fueled by electricity and highly energy efficient in comparison to furnaces, boilers, and air conditioners.

Internal combustion engine (ICE) vehicle: Conventional vehicle in which gasoline, diesel, or other fuel is consumed to generate the power that propels the vehicle.

Net metering: Billing mechanism that credits solar energy owners for electricity added to grid

PV (Photovoltaic): Conversion of solar energy to electricity

Renewable energy: Energy that is generated from a naturally replenishing resource that does not release carbon dioxide into the atmosphere. Examples include solar energy, wind energy, or geothermal energy.

Weather-normalized site EUI: The energy use a building would have consumed during 30-year average weather conditions. It can be helpful to use this weather normalized value to understand changes in energy when accounting for changes in weather. Energy use is divided by square feet.

Wisconsin Local Government Climate Coalition (WLGCC): Coalition of local governments in Wisconsin committed to accelerating local climate change solutions.

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Introduction

BACKGROUND

To guide its next steps toward investing in energy savings, the Village of Mount Horeb collaborated with Slipstream, a Madison-based non-profit organization, and WPPI to apply for funding to develop a community energy plan. In August 2024, the Village signed a grant agreement through the Wisconsin Public Service Commission's Office of Energy Innovation's (OEI) Rural Energy Start-up Program (RESP). Mount Horeb used the RESP funding to partner with Slipstream to develop this Mount Horeb Energy Plan ("Plan"). The Plan recommends steps that the Village can take within the next 5-10 years to strategically invest in reducing the amount of energy used by its municipal buildings and vehicles, as well as the ways that it can make best use of renewable energy. Beyond municipal operations, the Plan recommends policies and programs that the Village can implement to help residents and businesses in the community save money and reduce negative environmental impacts by saving energy.

The Village of Mount Horeb is committed to using energy efficiently and responsibly and to working to improve the environmental and financial sustainability of its operations. It has a track record of pursuing energy efficiency, including leveraging resources from WPPI Energy and Focus on Energy to reduce energy consumption when constructing the Driftless Historium and when retrofitting the Wastewater Treatment Plant.

In addition to addressing energy efficiency within municipal operations, the Village has worked with residents and businesses to save money, and live and work more sustainably by reducing their energy use. For example, in 2022 it engaged the community to reduce energy consumption through the Save to Give Challenge. In November of the same year, the Village demonstrated its ability to institutionalize energy savings opportunities by passing Resolution 2022-15 to create the Village of Mount Horeb Sustainability & Natural Resources Committee.

The Village's efforts are succeeding in facilitating environmental responsibility in the community. In the fall of 2023, Mount Horeb High School was selected to participate in the Focus on Energy Renew Our Schools program. This five-week initiative encourages students and staff to adopt behavioral changes to enhance energy efficiency within their school buildings. Mount Horeb High School demonstrated exceptional commitment by completing every available activity in the program and was awarded $2,500 to use for future energy efficiency projects.

PLAN DEVELOPMENT PROCESS

Developing the Mount Horeb Energy Plan consisted of four primary activities: data collection to develop the baseline, building energy assessments, analysis of energy saving opportunities, and gathering of stakeholder feedback to finalize results (Figure 3).

Data Collection to Develop the Energy Baseline

To enable the Project Team to understand both the municipality's, and the community's current energy use, the first step was to collect data on energy use in the Village's buildings and vehicles. To establish baseline energy use in the community, the team obtained aggregated residential and business energy

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consumption data. The team used resident and business surveys to understand current energy consumption practices, behaviors and perspectives among community stakeholders.

Using the data collected, the team established baseline energy use for the Village's buildings and fleet vehicles, which informed insights on the current efficiency performance of each building. Because buildings serve different functions, each with distinct uses, occupancy patterns, and energy-intensive processes, the team compared energy use in Mount Horeb's buildings against two relevant benchmarks. First, we used the site energy use intensity (EUI)[1] of each Mount Horeb building, which is calculated as the amount of energy consumed per square foot. The EUIs were compared to national median site EUI values of other buildings of the same type, using a publicly available dataset[2]. This comparison provided insights on which buildings may currently be under performing in their energy use, and which may therefore present the greatest opportunities for energy savings. Second, the site EUI of municipal buildings was compared against the best practice site EUI target for existing buildings as recommended by the ASHRAE 100 – 2024 Energy and Emissions Buildings Performance Standard for Existing Buildings[3]. The ASHRAE 100 metric provides a target level of energy performance for each building that the Village can seek to achieve through completing the recommended energy improvements.

Data Aggregation and Energy Assessments

Village leadership worked with Slipstream to use the benchmarked energy performance, along with known building improvement needs, to identify the four buildings for which it would be most helpful to complete walk through energy assessments. During the assessments, Slipstream's engineers reviewed HVAC equipment, lighting systems, building automation systems (if present), and other building components. The team also spoke with staff who used and operated each building to identify concerns and functional issues. Finally, the team evaluated roof areas to determine their suitability for solar PV panel installation.

Analysis of Energy Saving Opportunities

For each building, Slipstream created virtual energy models using the on-site data collected with historical energy consumption data and blueprints (when available). The energy model was then used to

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[1] Calculation of Site EUI converts the electricity, natural gas, and other energy used at the site into a common unit (kBtu) which is divided by building size (square feet). Source EUI, which accounts for total energy used to produce off-site generated fuels (ex. Electricity), as well as the energy that is lost in transmission, can also be a valuable metric. For purposes of assessing current building performance, we find that site EUI, which is used throughout the Mount Horeb Energy Plan is the more relevant metric to consider.

[2] U.S. Energy Information Administration (EIA) Commercial Building Energy Consumption Survey (CBECS). https://www.eia.gov/consumption/commercial/

[3] https://www.ashrae.org/file%20library/technical%20resources/standards%20and%20guidelines/standards%20addenda/100_2018_e_20230831.pdf

forecast the energy savings potential of multiple energy upgrade scenarios. These became the basis for the development of energy upgrade roadmaps aligned with the most cost-effective upgrade pathways.

In parallel with analyzing energy efficiency and renewable energy improvement pathways for municipal buildings, the team assessed the types of vehicles in the Village's municipal fleet, as well as their fuel consumption and mileage. The team investigated cost-effective strategies for the Village to reduce fuel costs and vehicle emissions by transitioning to hybrid and electric vehicles (EVs) during planned vehicle replacements.

The team also evaluated supportive policy and programs. This included internal policies that can help the Village sustain energy efficiency efforts over time, as well as public-facing policies and programs informed by survey responses and aggregated residential and business energy data. These recommendations outline ways that the Village could help community members reduce their energy use and shift from conventional electricity usage to renewable energy.

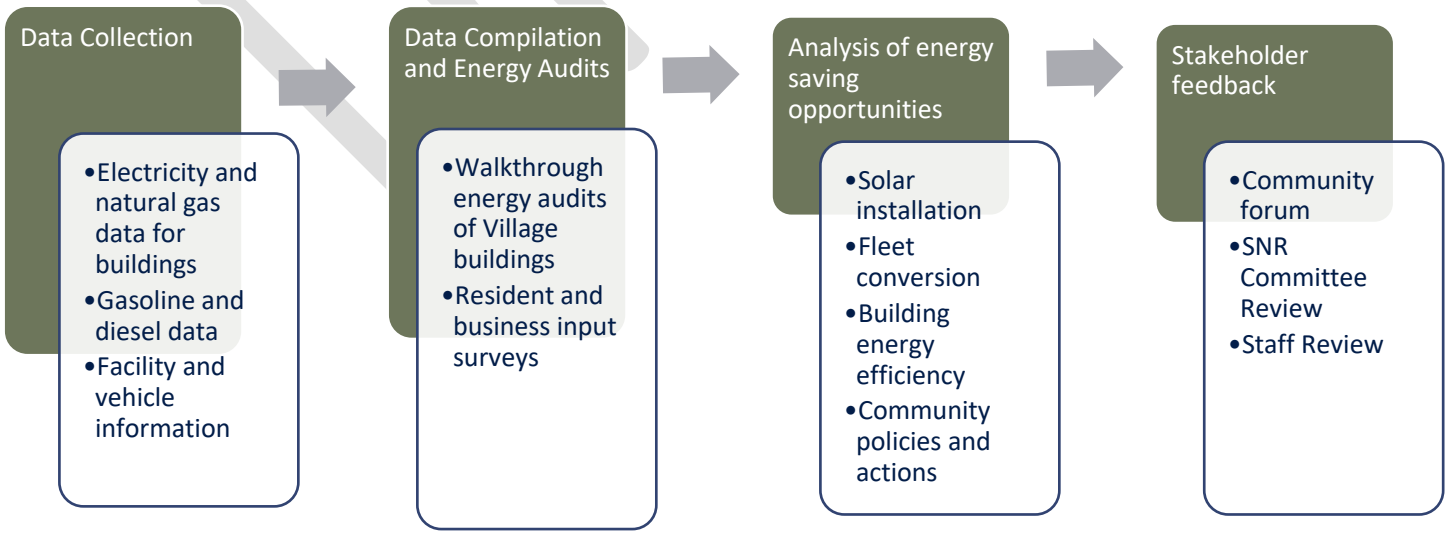
Stakeholder Feedback

The team compiled the strategies identified for energy savings in municipal buildings, municipal vehicles, and community-wide energy used into a preliminary set of recommendations. Because the draft recommendations were informed by community survey responses and by guidance from the Village's SNR committee, it was essential to share them with the SNR and the broader community to confirm that the preliminary roadmap accurately reflected stakeholder priorities.

Community members were invited to a forum where draft recommendations were presented. Participants used dot voting to indicate their level of support or opposition for each recommendation. Attendees also provided insights and feedback by placing sticky notes with comments on posters corresponding to each recommendation. Additional feedback was gathered through comments from Village staff and SNR Committee members.

This final version of the Mount Horeb Energy Plan incorporates feedback from municipal staff, from SNR Committee members, and from residents at the community forum.

Figure 3. Overview of planning process



Baseline Data

PLAN BOUNDARY

The project team aggregated electricity, natural gas, gasoline, vehicle, and facility data to establish the energy baseline for the Mount Horeb Energy Plan. The recommendations that the Plan describes use the information in the baseline to create a roadmap for the Village to achieve significant energy savings in comparison to the baseline.

To align with the objectives and requirements of the grant funding that the Village used to develop the plan, the Energy Plan focuses on municipal facilities and vehicles, as well as community-wide energy reduction strategies. The Mount Horeb Area School District is structured as a separate entity from the Village and is responsible for maintaining and improving all of the school buildings in Mount Horeb. Similarly, the Mount Horeb Area Joint Fire Department and Emergency Medical Service, which operates and maintains the Fire Department portion of the Public Safety building is a separate jurisdiction from the Village. Because the School District and the Fire Department are separate governmental entities from the Village, the facilities and vehicles that they use were not included in the Village's baseline, or in the recommendations that the Energy Plan outlines. As a next step, the Village may seek to engage with these two partners to collaborate on clean energy initiatives.

MUNICIPAL ENERGY USE

Mount Horeb has 11 primary municipal facilities, as well as service garages, storage sites, wells, and lift stations. It also has 30[4] vehicles and numerous pieces of off-road equipment in its Village fleet. The project team analyzed energy data from each source for both 2023 and 2024 (where available)[5]. Table 1 and Table 2 reflect the energy use and costs, as well as the relative level of emissions from each source for 2023, which is the most recent year for which energy data for all sources was received.

The second column in Table 1 shows the total energy use for each source. To allow for accurate conversions of energy values to energy costs and GHG emissions, the values in this column have not been weather normalized to account for the positive or negative effects of colder winter temperatures or hotter summer temperatures on energy consumption in buildings. However, consumption values for buildings were weather normalized when calculating site EUI so that the EUI could be meaningfully compared to median EUI and to the ASHRAE 100 Standard target for high performing site EUI.

[4] Data for 2023 fleet vehicle baseline analysis.

[5] To account for data availability, building energy data reported for "2023" refers to activity from 11/1/2022 – 10/31/2023. Building energy data reported for 2024 refers to the period from 11/1/2023 – 10/31/2024.

Table 1. Annual energy use and costs by source (2023 data)

Source	Energy use (kBtu)	Site EUI[6]	Annual Energy Cost	Percent of Total Cost
WWTP	1,921,580	N/A	$66,508	18%
WWTP Admin	2,221,510	491.3[7]	$62,255	18%
Vehicles	2,430,024	N/A	$70,895	19%
Police Station	2,080,739	79.5	$45,488	12%
Wells	1,701,747	N/A	$27,633	7%
Water and Electric	1,001,029	81.3	$22,059	6%
Library	1,105,416	68.3	$18,901	5%
Lift Station	520,210	N/A	$18,250	5%
Municipal Building	713,607	56	$11,805	3%
Pool	631,518	N/A	$10,273	3%
Community Center	466,727	48.3	$9,094	2%
Garage	450,979	37.6	$5,623	2%
Mount Horeb Station	159,773	79.9	$2,360	1%
Parks and Forestry	203,344	16.9	$2,367	1%
Total	**15,608,203**		**$373,511**	

Table 2. Annual CO_2 emissions and costs by source (2023 data)

Source	CO_2 Emissions (metric tons)	Percent of Total CO_2 Emissions
WWTP	334.73	19%
WWTP Admin	319.2	18%
Police Station	240.76	14%
Vehicles	174.91	10%
Wells	151.16	9%
Library	126.47	7%
Water and Electric	115.95	7%
Lift Station	91.87	5%
Municipal Building	64.56	4%
Community Center	48.5	3%
Pool	42.03	2%
Garage	32.06	2%
Parks and Forestry	13.69	1%
Mount Horeb Station	13.1	1%
Total	1,768.99	

[6] Weather-normalized site EUI

[7] Site EUI for the WWTP Admin building significantly exceeds normal ranges. It is likely that the high EUI indicates that a portion of the energy process load for the primary WWTP facility is being allocated to the WWTP Admin account.

MUNICIPAL FACILITIES

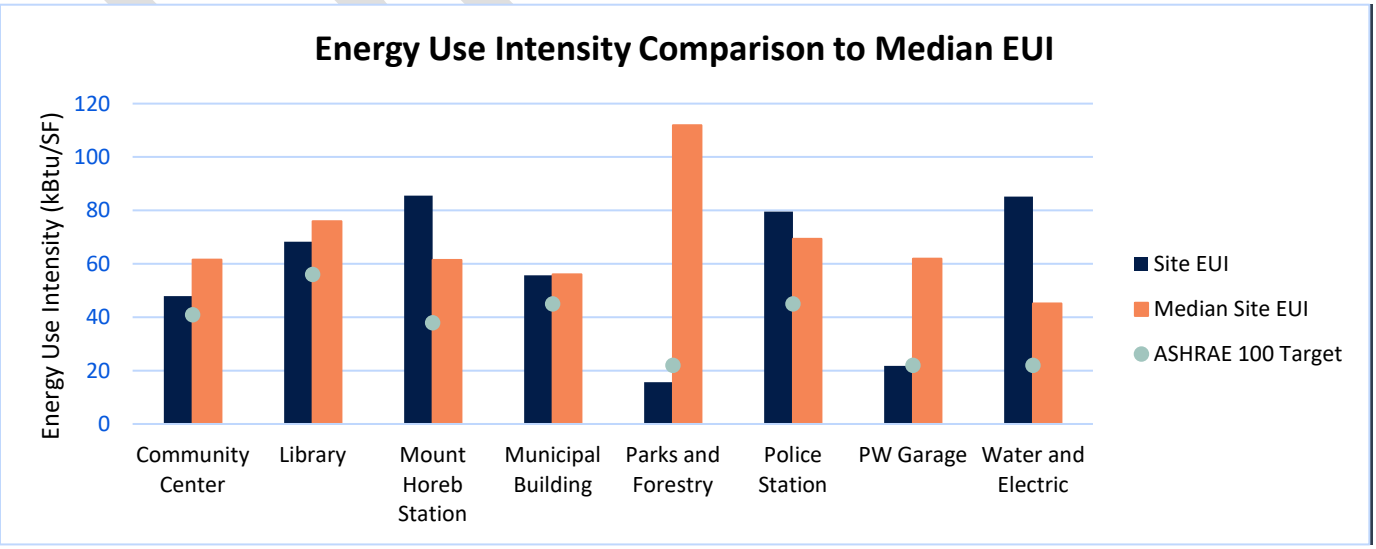
To inform long term energy planning, as shown in Table 3, the project team examined current electricity and natural gas consumption in each facility.

Table 3. Municipal Facility Energy Use

Facility	Annual Electricity (kWh)	Electricity cost	Annual natural gas (therms)	Natural gas cost	Total cost
WWTP	513,689	$65,341	1,389	$1,167	$66,508
WWTP Admin	445,684	$56,691	6,624	$5,564	$62,255
Police Station	285,611	$33,735	13,944	$11,713	$45,488
Wells	141,068	$17,944	11,535	$9,689	$27,633
Library	148,589	$18,901	4,956	$4,163	$23,064
Water and Electric	140,859	$17,917	4,931	$4,142	$22,059
Lift Station	140,859	$17,917	396	$333	$18,250
Municipal Building	60,361	$7,678	4,913	$4,127	$11,805
Pool	50,416	$6,413	4,595	$3,860	$10,273
Community Center	53,921	$6,859	2,662	$2,236	$9,095
Garage	20,949	$2,665	3,522	$2,958	$5,623
Parks and Forestry	7,644	$972	1,660	$1,394	$2,367
Mount Horeb Station	10,910	$1,388	1,158	$973	$2,360
Total	2,020,558	$254,421	62,286	$52,320	$306,780

Figure 4 shows the site EUI for each of the Village of Mount Horeb's municipal facilities as the darker bar, as well as the national median EUI for that building type as the lighter bar. The dot indicates the target EUI set by ASHRAE standard 100-2024.

Figure 4. Municipal Facility Site EUI



MUNICIPAL VEHICLES

Opportunities to replace existing gasoline and diesel vehicles with more efficient hybrids and EVs depend to the category and use of each vehicle. Table 4 segments the energy use and GHG emissions from the Village's vehicles by vehicle category. As shown in the table, SUVs and large trucks consume the most fuel and generate the most emissions.

Table 4. Municipal Vehicle Use

Vehicle category	Annual Gallons	Annual miles	Avg. Fuel Economy[8]	Fuel Cost	Emissions (MT CO2e)
Pickup 1/2 ton or smaller	1,861	60,571	10.8	$6,659	15.82
Large pickup	3,371	47,832	8.9	$12,185	29.60
SUV	8,844	91,293	13.2	$31,639	75.03
Large Truck	5,065	32,713	27.0	$19,410	52.09
Van	280	10,620	10.4	$1,002	2.38
Total	19,421	243,029	12.5	$70,895	**174.91**

COMMUNITY ENERGY USE

Energy use by Mount Horeb residents and businesses, as well as the perspectives of stakeholders on their current energy use, are important components of the community's energy baseline. Figure 5 shows community electricity use and Figure 6 shows community-wide natural gas use among residents and businesses.

The project team surveyed residents and organizations in Mount Horeb to understand the views of community members and stakeholders on energy topics. In May – June 2025, 473 residents as well as representatives from 34 businesses completed surveys through which they identified their views, priorities and challenges related to energy use. The Community Engagement section of the Energy Plan describes key findings that the surveys revealed.

[8] Quality concerns were identified regarding annual miles driven data for some vehicles. To minimize the effects of data input errors by vehicle users. Outliers were removed from the calculation of average MPG. Therefore, the average MPG for each vehicle type may not equal the miles driven divided by the gallons of fuel used.

Figure 5 Mount Horeb community electricity use

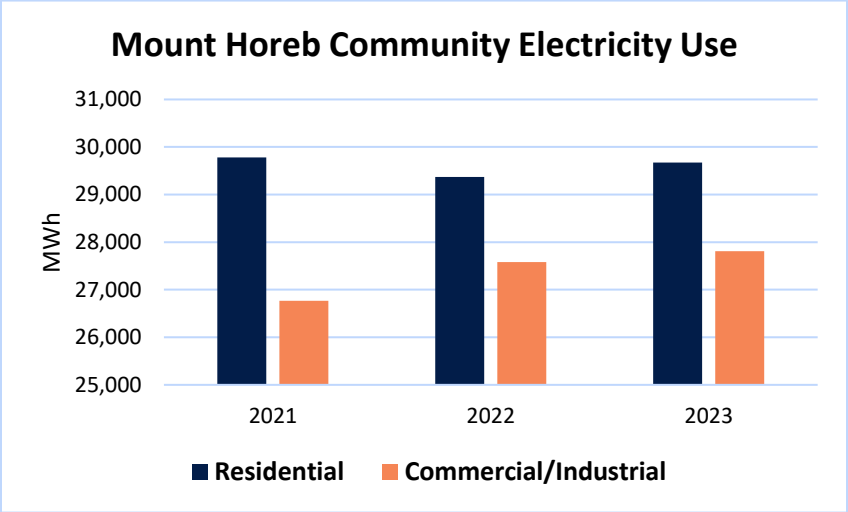
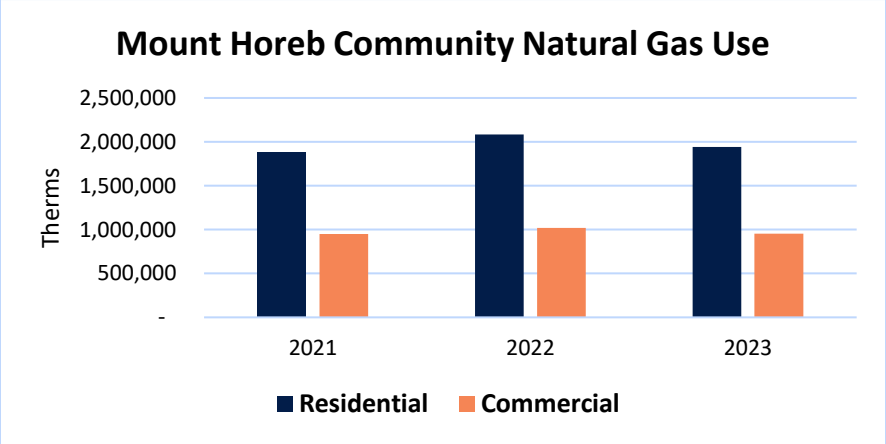
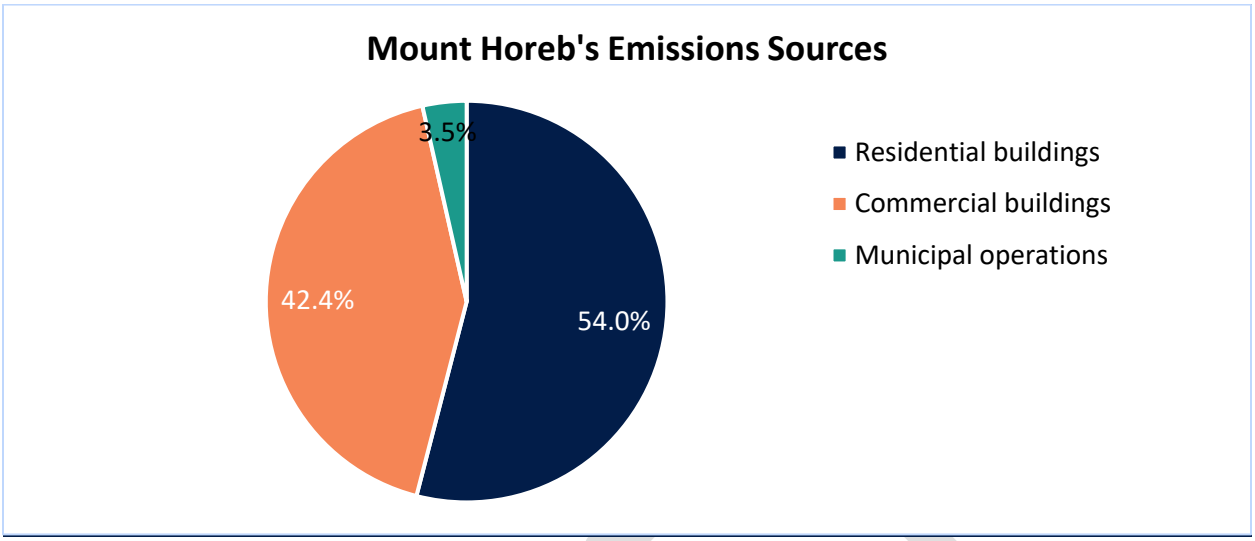


Figure 6. Mount Horeb Community Natural Gas Use



As shown in Figure 7 emissions from residential and commercial buildings greatly exceed emissions generated by municipal operations. Within this context, the Village, residents, and businesses will need to work together to reduce community-wide energy use and emissions.

Figure 7. Mount Horeb Community GHG Emissions by Source



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Community Engagement

The people who live, work, and run businesses and organizations in Mount Horeb are key stakeholders for the Mount Horeb Energy Plan. These stakeholders are in Mount Horeb for many reasons, but all have interests in ensuring that the Village is fiscally responsible, economically vibrant, healthy, and environmentally sustainable. Additionally, as shown in Figure , energy use and emissions from homes and places of business in Mount Horeb is much greater than energy and emissions related to municipal operations and facilities.

To ensure that the recommendations in the Energy Plan align with the priorities of community stakeholders, the project team engaged the community in the planning process in three ways.

1. **Village Sustainability and Natural Resources (SNR) Committee**. Mount Horeb established the SNR Committee in 2022 as a resident advisory body that would guide the Village's environmental sustainability initiatives. Within this charter, the SNR is ideally positioned to provide feedback on the Energy Plan from the perspective of residents.

   In July, 2024, after receiving funding approval for the project from the Wisconsin Public Service Commission (PSC), but prior to the start of work, the project team presented the project plan to the SNR and requested feedback from committee members on the SNR's objectives for the project. In April 2025, the project team presented its findings on the Village's energy baseline to the SNR, as well as its initial plans for the facilities on which energy assessments would be completed. At the April meeting, the team also discussed both the content of the community wide survey that would be deployed and distribution channels for the survey that would be most effective.

   After completing energy assessments and using energy models to identify cost effective improvements, the project team presented its preliminary recommendations for energy upgrades to Village facilities to the SNR. At this meeting, the team also shared results of the community surveys and discussed plans for a community forum event. In November and December 2025, the team shared a draft version of the Energy Plan with the SNR Committee to seek feedback on the recommendations that are described in the document.

2. **Resident and Business Surveys**. One survey for residents and a separate survey for businesses were developed and deployed to collect broad input from community stakeholders on five key topics.
   - Concerns and challenges related to energy and climate
   - Values and actions related to energy or sustainability that the respondent household or business has taken
   - Challenges and barriers to saving energy or using renewable energy
   - Ways in which the Village can help the respondent save energy or use renewable energy
   - Input on ways that the Village can save energy.

   Both surveys were distributed both online and in paper formats. Mount Horeb Utilities distributed surveys through its customer communications platform and the SNR supported distribution of the surveys at events and through community outreach channels. As a result of broad distribution through these channels, 473 residents and 34 businesses responded to the survey. Response levels to both surveys were significantly higher than standard survey response rates.

Key findings from the residential survey are shown in Table 5 and findings from the business survey are shown in Table 6.

Table 5. Resident survey key findings

Topic	Results
Demographics	• 73% own and occupy a single-family home. • 71% are 31 – 65 years old. • 56% have household income over $100,000.
Energy actions completed	• 70% - 80% report having installed LEDs, scheduling HVAC setpoints, and/or turning off lights/appliances to save energy. • 64% completed at least 4 energy saving actions.
Level of agreement with energy statements (percent who strongly or somewhat agree)	• "Saving energy is important to our household" - 95% • "It can be hard to afford our energy bills" - 35% • "Using renewable energy is important to our household" - 73% • "Our household has made changes to our home or lifestyle to reduce our energy use" - 78% • "Minimizing the amount of gasoline and/or diesel fuel that we use is a priority for our household" 61%
Perceptions of barriers	Statements with high levels of **agreement** • "Home improvements that save energy are too expensive." • "Renewable energy systems are too expensive." • "I am interested in energy efficiency and/or renewable energy, but I need to prioritize other goals." Statements with high levels of **disagreement** • "I do not know how to save energy in my home." • "I am not interested in saving energy." • "I am not interested in renewable energy." • "Nothing holds me back! I am saving energy and have transitioned to using renewable energy." (moderate disagreement)
Requests for Village support for residents in saving energy	Top tier • Education on low-cost, cost-effective home improvements • Help identifying opportunities to use Focus on Energy incentives Second tier • Village to purchase offsite renewable energy • Encourage residents to purchase offsite renewable energy • 53% support developing additional bicycle/ped friendly infrastructure • Assistance with vetting solar contractors
Hopes for municipal energy plan	• Investigate geothermal for heating and cooling • Efficiency improvements and heat pumps for municipal buildings

Topic	Results
	• Reducing vehicle sizes and improving efficiency in municipal fleet vehicles
Interest in ongoing engagement	• 182 may be interested in participating in a forum. • 118 willing to participate in a focus group.

Table 6. Business survey key findings

Topic	Results
Characteristics of respondents	• 48% have 10 or fewer staff and an additional 33% have 11 – 25 staff. • 48% occupy buildings smaller than 5,000 sf. Additional 28% occupy buildings 5,000 sf – 10,000 sf. • Respondents represent at least 12 different business sectors
Relevance of energy use to business operations (percent who strongly or somewhat agree)	• Managing energy use is important to the financial success of the organization: 76% • Reducing energy use is a priority for the organization: 76% • The organization has worked hard to reduce its energy consumption: 64% • Using renewable energy is important to the organization: 68%
Energy actions completed	• Few reported upgrading to LED lighting. • Many have installed efficient windows and/or added insulation. • Generally low numbers of energy saving actions reported.
Ways the Village can help businesses save energy	• Provide information about available financing and incentives for efficiency and renewable energy. • Publicly recognize organizations that are making progress toward saving energy.
Interest in ongoing engagement	• 11 may be willing to participate in a focus group.

3. **Community Forum**. On September 30, 2025, the Village, the SNR, and the project team collaborated to offer an evening community forum event at the Mount Horeb Community Center. At the forum, large format posters offered high-level descriptions of the preliminary energy recommendations related to municipal facilities, renewable energy, municipal vehicles, and policies, which had been developed for the Energy Plan. Attendees used green and red stickers to indicate their support for, or opposition to, each recommendation. Community members were also asked to write additional feedback on each element of the draft Energy Plan on Post-it notes and adhere the papers to the applicable poster. After the event, the project team recorded the number of sticker votes supporting and opposing each recommendation and supplemented that data by recording the additional viewpoints that were provided on Post-it notes.

   Notable themes from feedback shared at the Forum are outlined below.

   - Recommendations receiving greatest support were for the Village to facilitate a solar group buy program and for using smart control technology to improve energy efficiency at municipal buildings.

- Recommendations for energy upgrades at all municipal facilities and for adding on-site solar arrays at municipal buildings earned the next greatest level of support.
- Strategies related to incorporating EVs into the municipal vehicle fleet were the only category of recommendations that received opposing votes. Comments on these recommendations identified concerns about pursuing electrification during a time when data centers are increasing demand on the electricity grid. Comments on this topic also wondered whether changes in [Federal] policies may create problems for EVs in the future and also encouraged the Village to consider renewable diesel fuel alternatives.

Feedback received from the Forum has been incorporated throughout the Mount Horeb Energy Plan.

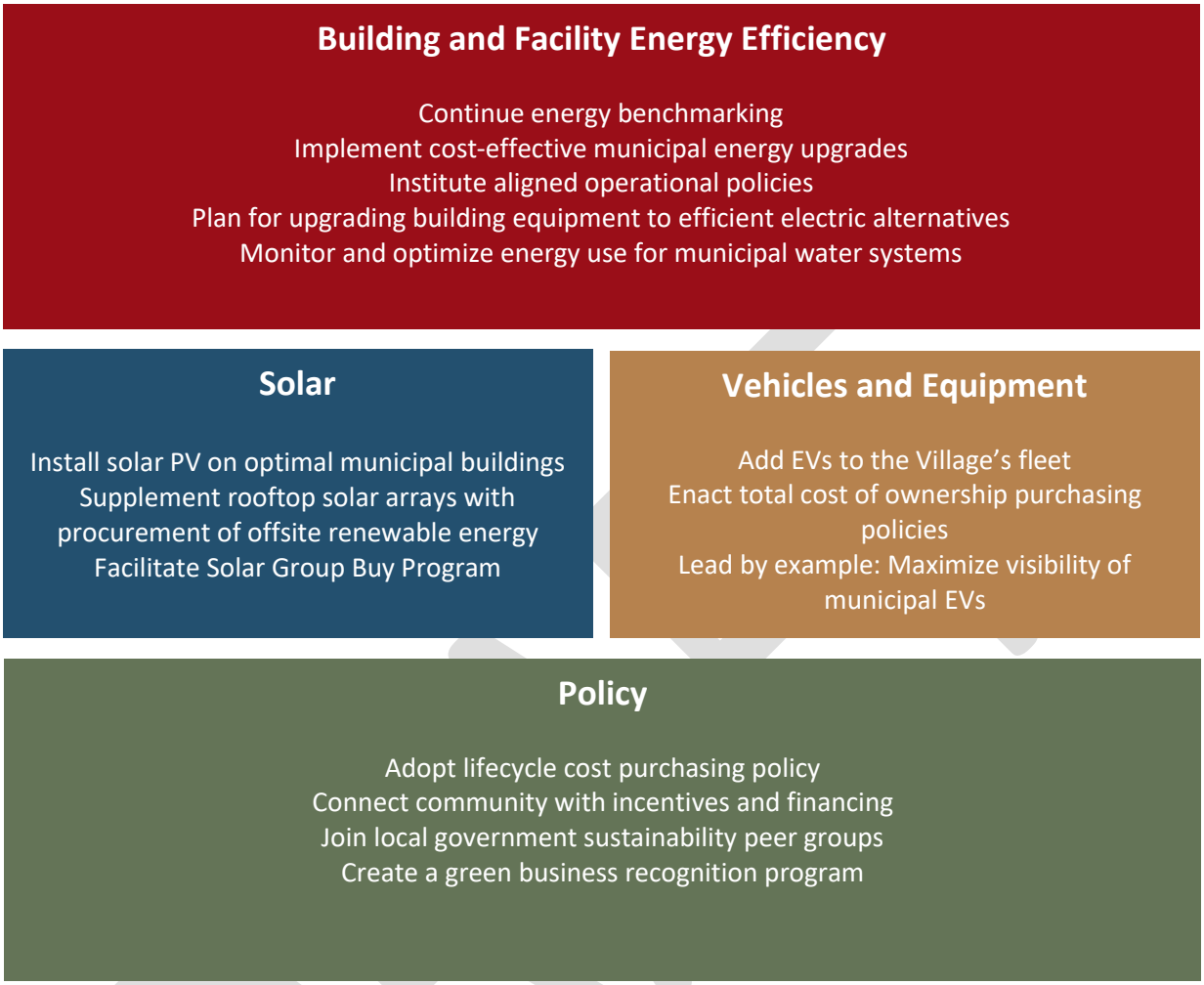
Recommendation Overview

The project team identified priorities for specific building upgrades, solar installations, and low-carbon fleet alternatives for the Village to implement, as well as recommendations for policies that institutionalize progress and encourage community-wide energy and emissions reductions.

Figure 8 provides an overview of recommendations by category and the following sections of the report explore each set of recommendations in more detail. We present funding opportunities for these recommendations within each of these sections and also provide a complete overview of funding options at the end of the report.

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Figure 8. Mount Horeb energy recommendation summary



This energy plan is intended to guide the Village's investments in energy efficiency and renewable energy projects for the next 5-10 years. The descriptions of the municipal building energy efficiency recommendations estimate the relative level of cost and effort that completing each improvement will require. Using this guidance, we recommend that the Village cross-reference these recommendations with its plans for capital improvements during the next decade to establish a timeline for completing the recommended upgrades.

The project team created quantitative energy models of the buildings that the Village selected for energy assessments. The outputs of the models identified the most cost-effective, and the highest impact, energy efficiency improvements that can be made at each building. The team also assessed the financial and energy benefits of installing solar arrays at each municipal facility.

Building and Facility Energy Efficiency Recommendations

Recommendations

1. Benchmark building energy use .
2. Implement recommended measures buildings to reach over 20% utility cost savings in each building.
3. Adopt standard operating procedures across buildings.
4. Plan for decarbonizing buildings through efficient electrification of HVAC and DHW systems
5. Conduct an evaluation of pumps, lifts, and wastewater treatment plant to identify energy savings.

We recommend that the Village of Mount Horeb commit to ongoing and continuous engagement to reduce energy expenses for its municipal facilities. Recommendations 1, 3, and 4 provide operational and policy guidance that will help the Village move toward ongoing improvements in energy efficiency, while recommendation two outlines a strategy for completing the specific energy upgrades that are described in Appendix 1. The fifth recommendation outlines steps that the Village can follow to reduce energy used in its wells, pumps, and lift stations.

RECOMMENDATION 1: CONTINUE ONGOING BENCHMARKING OF BUILDING PERFORMANCE

The energy performance of buildings can be tracked by examining their energy use intensity over time and in comparison, to other buildings through a process called benchmarking. Energy use intensity (EUI) is a metric that shows the building's total energy use divided by the gross square feet of the building, thus normalizing the level of energy use for the size of the building. How a building is used directly affects the amount of energy that it consumes. For example, a hospital that operates 24 hours per day and which requires high levels of mechanical ventilation will consume more energy per square foot in a given year than an office building that does not house specialized equipment, and which has limited hours of operation each week. To enable effective evaluation of a commercial building's level of efficiency, its EUI is benchmarked against other buildings that have similar types of uses, and which are in the same climate zone.

Error! Reference source not found. Figure 9 shows the EUI of all Mount Horeb municipal facilities over time and compared to the national median EUI for that building type. The EUIs for the Library, Community Center, Garage, Parks and Forestry buildings all show EUIs lower than the median. However, the project team has identified strategies through which the Village can further reduce energy costs and emissions. The ASHRAE 100 standard for existing buildings offers target EUI thresholds for high performance buildings. We recommend that the Village work toward reducing energy use to the ASHRAE 100 targets shown in the figure through a continuous improvement process of tracking energy use, identifying opportunities to save energy, and monitoring the savings that the improvements generate. The Mount Horeb Station has a higher EUI than national median. Recommendations in this section highlight specific items to consider for each building.

The Municipal Building (Village Hall) has a similar EUI compared to national median, which suggests that this is a building to prioritize with initial upgrades. The Public Safety building consists of the Police and Fire Department. The Fire Department operates as a separate entity from the Village and was therefore not evaluated for this report. The reported EUI is for the police station only.

The Public Safety building receives natural gas and electricity through common meters that serve both portions of the building. The Village and the Fire Department have agreed that the Village will pay 58% of the cost of the energy use for the building, which is intended to reflect the portion of the building's energy that is

used by the Police Department. The Fire Department pays for the remaining 42% of the cost. To reflect this arrangement, this report assumes that the building's energy use is divided between the Police Department and the Fire Department in the same proportion as the costs for energy have been assigned. While assuming that the Police Department uses 58 percent of the energy that is delivered to the facility applies the best information available regarding distribution of energy use, the actual amount of energy used by the Police Department is unknown. Therefore, the actual EUI for the Police Station may be lower or higher than the EUI that was calculated for this report.

Continuing to track each facility's EUI in comparison to relevant benchmarks is a key strategy for identifying unexpected changes in energy use, as well as maintenance and repairs needed to optimize energy use and to measure progress toward energy saving goals.

ENERGY STAR Portfolio Manager is a free tool that provides an online platform for tracking energy use over time in all municipal facilities. To help the Village measure its progress toward achieving energy saving targets and standards, Portfolio Manager offers the ability to benchmark energy use against a sample of similar buildings in the same use type. Slipstream has created profiles in ENERGY STAR Portfolio Manager of all municipal facilities and has entered each building's energy data for 2023 and 2024 into the platform. The project team recommends that the Village assign a staff person to track energy use for all facilities in Portfolio Manager and utilize the platform's analytical tools to provide regular reports to Village staff and leadership on the Village's energy performance. Slipstream will transfer management of the facilities in Portfolio Manager to the Village's selected point of contact.

RECOMMENDATION 2: IMPLEMENT RECOMMENDED MEASURES FOR AUDITED BUILDINGS

The project team performed energy assessment walkthroughs at four buildings, Village Hall, the Library, the Community Center, and the Police Station section of the Public Safety Building.

The assessments included reviewing current heating and cooling systems, lighting equipment, and appliances and discussing comfort and operations with building staff. The team then developed digital energy models of each building to identify and quantify opportunities for energy savings. Slipstream's engineers applied the equipment that is in use in each building, as well as the condition of the facility, building energy code requirements at the time of construction, and weather data to create the model of each building.

The project team did not create an energy model for the Public Safety Building, as it is a recently built, well-performing building with energy efficient measures already in place. Therefore, rather than focusing on identifying energy efficiency improvement opportunities for the building, this report recommends measures to cost-effectively further reduce emissions from the building by combining on-site renewable energy systems and replacing natural gas fueled space and water heating equipment with electrically powered equipment.

Appendix 1 describes the recommended energy upgrades for the Village's buildings. In these recommendations, measure costs were based on secondary research, industry reference materials, and past project experience. These estimates intend to inform prioritizing improvement measures. Actual energy savings from the recommended improvements will be highly dependent on weather and actual building operation. Further engineering and final pricing of all recommended measures will be required prior to implementation.

Table 7 summarizes the recommended measures for assessed buildings. The measures are organized by high priority, medium priority, and end-of-life.

> **High Priority**. Measures that offer high returns on investment (ROI) and short financial payback periods because they generate significant energy savings in comparison to their installed cost. This category also includes measures that will achieve important comfort upgrades.
>
> **Medium Priority**. Measures that are important to install in order to achieve energy saving goals, but for which the financial payback period is longer, due to higher initial costs and/or lower total energy savings than the High Priority measures.
>
> **End-of-life (EOL)**. Energy efficiency improvements that the Village can implement when the corresponding existing equipment or building system has reached the end of its functional life and must be replaced or repaired.

In addition to measures in the three categories above, the table identifies Decarbonization strategies for each building. Decarbonization measures are italicized and can be most cost-effectively implemented when the corresponding fossil fuel powered space heating or water heating equipment that the measure will replace reaches the end of its service life. Appendix 1 provides additional explanation of the recommendations that are summarized in the table.

Table 7. Overview of recommended measures

	Village Hall	Library	Community Center	Public Safety
High Priority	Retro-commissioning LED Retrofit Lighting Occupancy Controls	Retro-commissioning LED Retrofit Lighting Occupancy Controls Daylighting Controls	Retro-commissioning LED retrofit w/ Occupancy Sensors Smart Thermostat	-
Medium Priority	Plug Load Management Air Sealing Condensing Boiler	Plug Load Management Air Sealing	Air Sealing	-
End of Life and *Decarbonization*	*Heat Pump Water Heater* *Air-To-Water Heat Pump* -	Roof Insulation Heat Pump Water Heater *Air-To-Water Heat Pump*	ENERGY STAR Appliances Window Replacement Roof Insulation *Heat Pump Water Heater*	*Heat Pump Water Heater* *Air-to-Water Heat Pump*

Table 8 estimates upfront cost, annual cost savings, payback period, and annual CO_2 savings for the High Priority, Medium Priority, and End of Life measures. Payback period is calculated as total initial cost divided by annual energy cost savings. The initial cost listed does not account for incentives, and it is recommended that the Village work with its Focus on Energy Representative to understand all incentives that are available for the recommended improvements. The payback for EOL measures is calculated based on the incremental cost of the energy efficient measures compared to a 'business as usual' replacement option. The annual energy cost savings and upfront costs shown in the table are rounded to either the nearest ten or the nearest hundred, depending on the size of the initial value. The Village can reduce its energy costs for each building by approximately 20% - 30% percent if it implements all of the recommended measures.

Appendix 1: Building Descriptions provides a full description of building analysis.

Table 8. Cost and CO_2 savings from recommended measures

	Upfront Cost ($)	Annual Energy Cost Savings ($)	Percent Cost Savings	Annual CO_2 Savings (MT)	Percent CO_2 Savings	Average Payback (yrs)
Village Hall	**$17,100**	**$2,050**	**19.8%**	**17.8**	**27%**	**-**
High Priority	$7,600	$1,600	16.4%	14.1	21.7%	5.9
Medium Priority	$9,500	$450	3.3%	3.7	5.7%	36.1
Library	**$63,700**	**$4,790**	**29.8%**	**28.6**	**27.4%**	**-**
High Priority	$11,600	$3,600	22.6%	18.7	18.0%	3
Medium Priority	$2,100	$190	1.2%	2.0	2.0%	11.2
EOL Measures	$50,000	$1,000	6.0%	7.8	7.5%	>50
Community Center	**$48,500**	**$1,630**	**20.0%**	**9.3**	**19.5%**	**-**
High Priority	$8,300	$1,200	14.9%	6.3	13.6%	7.6
Medium Priority	$1,400	$50	0.7%	0.7	1.5%	28.3
EOL Measures	$38,800	$380	4.3%	2.1	4.4%	>50

RECOMMENDATION 3: INSTITUTE STANDARD OPERATING GUIDELINES AT ALL BUILDINGS

The operation of a building and the behavior of building occupants has a significant impact on building energy use. Operational guidelines can save energy without significant investment and have the potential to positively impact occupant comfort and productivity. We recommend that the Village of Mount Horeb develop a policy that defines clear guidelines for the energy efficient operation of municipal buildings. The policy should provide guidance that applies to all buildings, as well as differentiated guidelines for specific buildings, as needed. The differentiated guidelines should address the unique characteristics functional requirements of individual buildings. All guidelines should seek to balance efficient energy use with assurance of comfort for the staff and visitors that use the building. To ensure that the guidelines are effectively implement and that they align with the functional and occupant wellbeing needs of the building, the Village should establish communications channels so that building occupants can provide ongoing feedback that can be used to adapt the policy, as needed.

Table 9Table provides a full list of items to consider for an operating policy. The operating policy covers ongoing maintenance, HVAC system operation, plug load management, and lighting. The Village of Mount Horeb already implements several of these recommendations, such as establishing setpoints and setbacks. However, it is important to develop a policy to institutionalize current norms and habits.

Table 9. Operating policy examples

Operational Policies	
Maintenance	Include changing air filters as directed by manufacturer specifications in monthly work plans.
	Enter into service contract with HVAC provider that includes regularly monitoring and maintaining refrigerant charge on air conditioning units.
	Establish permissible temperature setpoint ranges and setbacks for occupied and unoccupied times. Guidelines should address both heating season and cooling season operations.
Heating, Ventilation, and Air	Maintain and clearly display a list of operating parameters for all HVAC and water heating equipment. The posted information should include the temperature set points, operating schedules, and maintenance requirements for each piece of equipment.

Operational Policies	
Conditioning (HVAC) Systems	Post guidance on when operable windows can be opened based on room thermostat setpoints. For example, assuming thermostats are set from 70 degrees to 75 degrees, the guidance would state that building users may open windows between 68-77 degrees outdoor temperature.
	Create communication channels for building occupants to provide feedback on comfort or operational issues. A regularly administered survey can be useful to gather additional feedback on occupant comfort.
	Develop a policy that prohibits or limits the use of individual refrigerators, space heaters, printers, and other peripheral equipment at workstations. Consider ways to consolidate the number of refrigerators and printers in each building.
Plug Loads	Implement computer power management on staff workstations that shifts computers and monitors into a sleep mode after no more than 30 minutes of inactivity. Alternatively, install smart plugs or advanced power strips with schedule timer control and/or load-sensing control to automatically power off devices, such as computers and monitors after periods of inactivity to reduce standby energy waste.
	Implement TV sleep requirements to reduce energy consumption when the TV is not in use.
	For spaces where occupancy or daylighting sensors are not installed, post signage that establishes norms for turning off lights in unoccupied rooms. Department heads can lead by example in visibly adhering to the posted policies.

RECOMMENDATION 4: PLAN FOR SPACE AND WATER HEATING ELECTRIFICATION

Electrification is the process of phasing out equipment that uses fossil fuels (i.e., natural gas, propane, gasoline) and replacing it with equipment that uses electricity. Electrification reduces CO_2 emissions in current operations and also enables ongoing emissions reductions.

For more than a decade, market forces have led utilities to choose to add large-scale solar and wind energy systems to their electricity generation portfolios and to retire their coal power plants. Together, these shifts have reduced the amount of carbon dioxide that is released for every unit of electricity that is generated. These trends are expected to continue into the future, which will lead to declining emissions over time from buildings that use electric-powered space and water heating systems, while emissions from buildings that use fossil fuels will remain constant.

In many situations, heat pumps are still more expensive than a high-efficiency natural gas system. However, incentives and changing energy costs are causing heat pumps to become more cost competitive. During future HVAC and water heating decisions, staff should compare both costs and CO_2 emissions of conventional equipment and heat pumps. Table 110 lists the heat pump options for Mount Horeb buildings.

Table 10. Heat pump system options for existing systems in Mount Horeb Buildings

Existing System	Heat Pump System	Description
Furnace and A/C Split System	Dual-Fuel Air-Source Heat Pump	A cost-effective electrification option that still uses gas heat but switches to efficient heat pump heating when outdoor temperatures are above 25°F (user adjustable).
	Air-Source Heat Pump	Full electrification option.

Existing System	Heat Pump System	Description
Hot Water Boiler System	Air-to-Water Heat Pump with Gas Boiler Backup	A cost-effective electrification option that still uses gas but switches to efficient heat pump heating when outdoor temperatures are above 25°F (user adjustable). Can reuse existing distribution system and existing gas boiler for backup.
	Air-to-Water Heat Pump	Full electrification option. Can reuse existing distribution system.
Single Zone Constant Volume Gas-Fired RTU	Dual-Fuel RTU	A cost-effective electrification option that still uses gas heat but switches to efficient heat pump heating when outdoor temperatures are above 25°F (user adjustable).
	Heat Pump RTU	Full electrification option.

RECOMMENDATION 5: IMPLEMENT MONITORING AND OPTIMIZATION STRATEGIES FOR WELLS AND LIFT STATIONS

Wells and lift stations primarily use energy to operate equipment, such as pumps, rather than for space conditioning, water heating, or plug loads. For this reason, energy use intensity, which compares the amount of energy that a building consumes to the size of the building is not a meaningful way of assessing the energy efficiency of these facilities[9].

While EUI does not provide a meaningful metric for benchmarking the energy efficiency performance of wells and lift stations, these facilities, and the equipment that they house, consume a significant share (10% - 30%) of total energy use for many municipalities[10]. In 2024, the Village paid over $48,000 to power these facilities and they account for 13 percent of municipal GHG emissions. Therefore, we recommend that the Village take the steps described below to assess current energy efficiency of this equipment and to improve efficiency move forward while simultaneously operational reliability.

A detailed assessment of the energy efficiency of Mount Horeb's wells and lift stations was outside the scope of this energy planning project. The opportunities described below highlight common strategies to reduce lift station energy use and improve reliability. However, the most effective pathway for Mount Horeb will depend on site-specific factors such as system design, pump sizing, flow patterns, and operational

[9] Because EUI is not a meaningful metric for wells and lift stations, these facilities were excluded from certain tables and charts in the Baseline and Benchmarking sections of this report.

[10] SEDAC. 2022. *Lift Station Optimization in Wastewater Treatment Plants - EnergySense | The EnergySense Resilience Center at The University of Illinois System*. June 29. https://smartenergy.illinois.edu/lift-station-optimization-in-wastewater-treatment-plants/.

requirements. Detailed assessments by technical experts are needed to determine which approaches deliver the greatest benefit for the Village.

Establishing performance baseline

Establishing a performance baseline for lift stations is a critical step in identifying inefficiencies and prioritizing cost-effective improvements. Two primary ways to evaluate current performance are described below. The Village can use both preventative maintenance and reactive upgrades to manage energy use and enhance the operational efficiency of pumping equipment.

1. Energy intensity tracking. Comparing electricity use with water flow [typically expressed as kilowatt-hours per million gallons pumped (kWh/MG)] provides a valuable metric for assessing efficiency. Tracking the metric over time can reveal reduced equipment performance and needed maintenance. Using the metric to compare the energy performance of existing equipment with rated performance of prospective new equipment can inform decisions about the cost-effectiveness of investing in upgrading equipment.
2. Performance monitoring and analysis. This method uses operational data (e.g., runtime, flow, temperature, and vibration) together with manufacturer pump curves to assess efficiency and system health. Deviations from expected ranges signal issues like oversizing, clogging, seal/bearing wear, or cavitation, providing an opportunity to correct problems before they lead to failures (PumpWorks Engineering 2024). Technologies such as supervisory control and data acquisition (SCADA) provide real-time oversight and early warnings of inefficiencies and can be used to enhance monitoring capabilities.

Optimizing energy use

Beyond managing energy consumption through maintenance, lift station electricity consumption can be lowered through operational adjustments and equipment upgrades. Some common strategies include:

1. **Install variable frequency drives (VFDs**) (if not already in use): Where flows vary significantly, installing VFDs allows pumps to adjust speeds to match system demand, thus reducing wasted energy and delivering 5-40% energy savings (SEDAC, 2022).
2. **Impeller trimming**: If pumps deliver more pressure and flow than needed, the impeller can be machined to a smaller diameter, so the pump matches system requirements more closely. This adjustment can reduce excess pressure and lower energy use by 1-8% (Hydraulic Institute, 2022). However, trimming can reduce the pump's hydraulic efficiency[11] thereby negatively affecting energy efficiency (energy use per gallon pumped). To maintain reliability and minimize efficiency losses, trimming should be performed within manufacturer-recommended limits and verified against updated pump performance curves.
3. **High-efficiency motors and pumps**: Premium-efficiency motors and pump designs, as described in the Department of Energy's (DOE) Premium Efficiency Motor Selection and Application Guide (Basso et al. 2014), yield incremental but persistent savings (1–3%), and improve reliability (SEDAC, 2021). When well pumps require replacement at the end of their useful lifespan, the Village can replace existing equipment with pumps that feature high efficiency motors.

Resources for efficient equipment transitions

[11] Hydraulic Institute, 2022. "Trimming Impellers to Reduce Energy Consumption." *Pumps.Org*, September 27. https://www.pumps.org/2022/09/27/trimming-impellers-to-reduce-energy-consumption/.

As lift station components (pumps, motors, controls, etc.) approach the end of their service lives, replacement presents a natural opportunity to improve efficiency. To support this process, Mount Horeb can draw on existing technical resources such as the Focus on Energy Wastewater and Water Utilities Program[12], which offers pump assessments and incentives; DOE's Pumping System Assessment Tool (PSAT)[13], which models pumping performance and identifies efficiency opportunities; and the Wisconsin DNR's Capacity, Management, Operation, and Maintenance (CMOM) Program[14], which provides guidance for evaluating lift station performance and planning system upgrades.

Applying these resources can help Mount Horeb evaluate equipment options and identify the most cost-effective path forward. We recommend that the Village use the resources from Focus on Energy, DOE, and WI DNR, as well as other relevant information to take four key steps to plan investments that will improve the energy efficiency of its wells and lift stations.

1. **Conduct a needs assessment.** Define pumping capacity requirements by evaluating current actual flow and head conditions can avoid inefficiencies associated with oversizing.
2. **Screen potential technologies.** Proactively research potential efficiency strategies, including high-efficiency motors, VFD-compatible pumps, and SCADA ready systems to prepare the Village to be ready to leverage efficiency opportunities if time-sensitive equipment upgrades are needed.
3. **Apply life-cycle cost analysis.** Compare options for equipment upgrades and replacements based on total cost of ownership, which includes initial capital cost, and estimated energy costs, and maintenance costs for each option.
4. **Verify improved performance.** After investing in efficiency improvements, ensure that the equipment is commissioned, then follow an energy measurement and verification protocol to ensure that the upgrades are achieving the predicted improvements in energy efficiency.

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[12] https://focusonenergy.com/business/wastewater

[13] https://www.energy.gov/eere/iedo/articles/pumping-system-assessment-tool

[14] https://dnr.wisconsin.gov/topic/Wastewater/CMOM.html

Solar Recommendations

RECOMMENDATION 1: INSTALL SOLAR PV ON OPTIMAL MUNICIPAL BUILDINGS

Onsite solar can reduce the Village's energy costs and also lower its CO_2 by leveraging existing roof or ground space near existing facilities. The analysis examined Village facilities for solar installations and identified 10 locations that are potential candidates for solar installations.

Recommendations

1. **Install** rooftop solar on municipal buildings
2. **Supplement** with offsite renewable energy
3. **Facilitate** solar group buy

Table 11. Solar PV installation recommendations for Mount Horeb facilities

Building	Size (kW DC)	Renewable Offset	Payback Period (Years)	Annual CO_2 Savings (MT)	Annual Cost Savings
Wastewater Treatment Plant (WWTP)	231.1	59%	15.7	196.65	$39,125
Public Safety (Police Dep't)	146.1	41%	15.5	125.49	$24,967
Electric and Water Shop[15]	65.7	65%*	15.5	56.53	$11,246
WWTP Admin Building	38.2	12%	15.2	33.43	$6,650
Village Hall	33.8	74%	15.5	29.08	$5,786
Community Center	33.5	74%	18.5	24.14	$4,803
Library	19.3	17%	16.3	15.80	$3,144
Public Works	11.8	80%	15.5	10.14	$2,017
Parks and Forestry	4.3	67%	18.5	3.07	$611
Total	**583.8**			**494.33**	**$98,349**

Table12 estimates costs for each of the recommended arrays. The estimated upfront cost is based on size and location on roof or ground. The Focus on Energy incentive shown in the table is a rebate of $50/kW, up to a maximum incentive of $25,000 per installation. The Federal Investment Tax Credit (ITC), which is currently available to non-tax paying entities via the Elective Pay provision will expire in July 2026 and it therefore may not be feasible for the Village to fund, and complete installation of, a solar array within that timeframe. For that reason, the ITC is not considered in the cost estimates in Table2.

[15] The Electric and Water shop currently generates a portion of the electricity that it consumes with a 9 kW on-site solar array. As part of the Mount Horeb Energy Plan, we recommend that the Village install additional PV capacity at this site. All fields except the Renewable Offset column for the Electric and Water Shop in Table and Table reflect information about the added PV capacity. The Renewable Offset field indicates the total renewable offset for the combined systems. Note: Installing additional solar capacity at this facility would require WPPI issuing a waiver for the installation.

Table 12. Cost details of solar PV installations for Mount Horeb facilities

Buildings	Upfront Cost	Focus on Energy Incentives	Net Cost
Wastewater Treatment Plant (WWTP)	$624,000	$11,550	$612,400
Public Safety (Police Dep't)	$394,400	$7,300	$387,200
Electric and Water Shop	$177,300	$3,300	$197,900
WWTP Admin Building	$103,000	$1,900	$101,200
Village Hall	$91,100	$1,700	$89,400
Community Center	$90,500	$1,700	$88,800
Library	$52,100	$950	$51,200
Public Works	$31,800	$600	$31,200
Parks and Forestry	$11,500	$200	$11,300
Total	**$1,575,700**	**$29,200**	**$1,570,600**

RECOMMENDATION 2: SUPPLEMENT ROOFTOP SOLAR WITH PURCHASE OF OFF-SITE RENEWABLE ENERGY

As described in Solar Recommendation 1, this Energy Plan recommends installing rooftop and/or ground mounted solar arrays at most municipal facilities. Table13 includes an indication of the percentage of each building's current electricity consumption that the recommended solar array would offset. For most facilities, due to either limited space available to install solar panels at the site, or for purposes of optimizing cost-effectiveness of the array based on the terms of the applicable electric tariff, the recommended array would offset a maximum of 80 percent of the facility's current electricity use.

Additionally, the estimated combined net cost of the recommended arrays is $1,570,600. Unless the Village is able to leverage outside funding sources to pay for the cost of these installations, we anticipate that the Village will need to install these arrays over a period of 5-10 years.

While it may be necessary for the Village to fund and install the arrays over an extended period of time, the Village can take immediate and near-term action to reduce its municipal emissions by working with Mount Horeb Utilities and WPPI to procure offsite renewable energy. Offsite renewable energy is electricity that a facility purchases, which is generated at a different location from the building that is using the electricity. Due to Wisconsin's regulatory framework, in Wisconsin, offsite renewable energy generating facilities are usually owned by a third party or by the property owner's electric utility, rather than by the owner of the facility.

Table 1313 identifies benefits and drawbacks of both on-site and off-site renewable energy.

Table 13. Comparison of on-site and off-site renewable energy procurement

	Installing on-site solar	Purchasing off-site renewable energy
Initial cost	Significant initial investment required	Initial cost varies depending on procurement method • No initial investment required for adding renewable attributes to conventional electricity purchases (Choose Renewables program. • Low initial investment may be required for community solar participation.

Installation process	Installed by third-party contractor. Requires project management by Village	Not applicable or managed by third party
Energy cost savings	Generated electricity directly reduces utility expenses.	Choose Renewables: Adds surcharge to electricity purchases. Community Solar and RER: Savings vs. added expense determined by rate structure.
Community Leadership	Offers visible and recognizable evidence to the community of Village's investment in clean energy.	May demonstrate leadership if purchase of renewable energy is effectively communicated to the community.
Ease of use	Minimal maintenance occasionally required	No extra effort required following initial registration
Emissions reduction	Renewable energy generated directly reduces Village's Scope 2 emissions from purchased electricity.	Emissions reduction value dependent upon emissions inventory or energy performance standard applied.[16]

The 2024 IECC (International Energy Conservation Code) Section CC103.3.2 of Appendix CC establishes standards for assuring the validity of off-site renewable energy that a building procures to offset its electricity use. We recommend that, if the Village chooses to purchase off-site renewable electricity, it works with the provider of the off-site renewable electricity to ensure that the electricity it purchases meets these standards, as well as the standards provided by Zero Code 2.0.

IECC Section CC 103.3.2[17] Key Requirements for off-site procurement of renewable energy:

- Renewable energy procurement agreement shall be legally binding, have a term of at least 15 years, and be transferrable to a new property owner.
- Renewable energy credits (RECs) associated with the purchased energy must have been created within the past 12 months by a renewable energy system that was constructed within the past five years.
- The renewable electricity must be either directly transmitted to the building or must be provided through the local utility.

Mount Horeb Utilities offers the Choose Renewables rate option. Business and residential customers who opt-in to this program agree to purchase a quantity of 300 kWh blocks of renewable energy each month. For each block of renewable energy, the customer agrees to pay a surcharge in addition to their regular energy charges. For each block that customers purchase, Mount Horeb utilities agrees to procure an additional 300 kWh of electricity produced from renewable sources. The Village could purchase 6,735 blocks of energy[18]

[16] Table 6 of Zero Code 2.0 provides useful framework for comparison of offsite renewable energy procurement options. https://www.zero-code.org/wp-content/uploads/2018/04/Zero-Code-TSD-OffSiteRenewables.pdf

[17] 2024 IECC Appendix CC 103.3.2. https://codes.iccsafe.org/content/IECC2024P1/appendix-cc-zero-energy-commercial-building-provisions

[18] Number of blocks based on weather-normalized 2024 electricity consumption for all municipal facilities

through the Choose Renewables program, at an annual cost of $6,735 to offset all of its current electricity consumption. If the Village installs all of the recommended on-site solar arrays, it could purchase 4,618 blocks of electricity each year at a cost of $4,618 to offset the remaining portion of its electricity use. Utilities in Wisconsin have developed additional frameworks and tariff structures through which they are providing dedicated, locally generated off-site renewable energy to customers who opt in to these programs. Two examples include community solar, and MGE's Renewable energy Rider (RER) tariff.

Community Solar. An off-site PV array that is large enough to generate electricity for multiple residential and/or commercial buildings. Community solar projects in Wisconsin are owned by the local electric utility and ratepayers within designated classes (ex. Residential, business, industrial) may choose to purchase a portion of the electricity that the array generates. While specific terms of participation vary among community solar projects, for most community solar offerings, the customer receives credit on their monthly utility bill for the value of the electricity that the portion of the PV array that they purchased generated that month.

MGE Renewable Energy Rider (RER). MGE's RER tariff offers large energy users the opportunity to opt-in to be an off-taker of the generation capacity of the utility's local large scale renewable energy projects. Specific terms of the agreement are negotiated between the customer and the utility and agreements must be approved by the Wisconsin Public Service Commission. Using the RER, local governments, school districts, and large companies have entered into agreements with MGE to allocate portions of the electricity generated by the large solar arrays that the utility has developed in Dane County. Purchasers that own multiple buildings can allocate the electricity output from the array between their buildings so that the single array and the single agreement provides renewable energy throughout the participant's portfolio of buildings.

Community solar projects and the RER model support the development of local renewable energy systems and offer rate structures through which a participant may be able to achieve cost savings in comparison to purchasing conventional electricity through the default electricity rate. Visibility of local renewable energy projects can demonstrate the Village's use of renewable energy to the community and thus build support for, and adoption of, renewable energy among residents and businesses. Both options also create opportunities for the Village to benefit from electricity cost savings, rather than paying an additional fee to access renewable electricity.

Mount Horeb Utilities is a member of WPPI Energy, which provides the electricity that MHU supplies to its customers. Currently, MHU's contract with WPPI prohibits both community solar programs and the RER tariff framework. We recommend that, while enabling these policies would require considerable changes to contracts and regulations, the Village engage with Mount Horeb Utilities and WPPI to evaluate options through which the Village can achieve electricity cost savings through participation in locally-sited renewable energy developments.

RECOMMENDATION 3: FACILITATE A COMMUNITY-WIDE SOLAR GROUP BUY PROGRAM

Seventy-three percent of respondents to the Mount Horeb residential survey either strongly agreed or somewhat agreed with the statement, "Using renewable energy is important to our household." However, only seven percent of respondents said that they had either installed solar on their home or used renewable energy. The gap between the stated values of residents and the percentage of residents who are currently using renewable energy reveals that many households face barriers in accessing renewable energy.

Respondents identified barriers to using renewable energy, which included installation costs and lack of knowledge in moving forward with installing on-site renewable energy systems. Qualitative responses also suggested that residents have concerns about selecting a qualified and reliable solar installation company.

A solar group buy program could help residents and businesses overcome financial, technical, and information barriers to installing solar arrays at their homes and businesses. Important components of a solar group buy program are outlined below. Mount Horeb can either create a new solar group buy program, or it may consider partnering with nearby municipalities to offer a joint program.

- **Contractor qualification**. The municipality issues an RFP to residential and commercial solar installers that serve the village. The RFP outlines the framework of the solar group buy program and requests proposals from installers for the rate structure(s) that they would offer if selected as the sole provider, as well as examples of the information about recommended solar arrays that they would provide to participants, and references from previous clients who will attest to the quality and reliability of the contractor's work. From the proposals submitted, the Village selects the installer who offers the greatest value to participants within the program framework.
- **Sole sourcing**. In exchange for being the sole installer servicing the program, the contractor reduces its marketing and customer relations expenses, thus lowering the company's cost of doing business and reducing overall project costs for participants.
- **Reliability of pricing and forecasts**. The Village's program implementer coordinates site visits and cost bids by the contractor and provides quality control for the energy production and cost savings forecasts that the contractor provides to participants.
- **Streamlined process**. Both quality control by the Village's program implementer and the installer's pricing agreement with the Village eliminate the need for residents to obtain multiple and conflicting bids from contractors. Oversight by the Village's program implementer ensures that projects progress on a timely basis and that participants have access to a qualified third-party to address any questions or concerns that may arise during the project development and installation processes.

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Fleet Recommendations

The Village of Mount Horeb currently owns and operates 30 vehicles, which it uses to support its police, wastewater treatment, public services, and recreation departments. Large pickup trucks (3/4 ton and above), medium/heavy duty trucks, and SUVs are the most common vehicle types, followed by half-ton pickup trucks and vans. All vehicles use internal combustion engines (ICE) and do not have gasoline-electric hybrid drives. The municipality's total fuel cost for vehicles in 2023 exceeded $70,000.

Table 14 shows Mount Horeb's municipal vehicle energy use, cost, and emissions. The Village can reduce its municipal fuel use and costs, while also reducing its annual GHG emissions by implementing the efficiency recommendations in this section.

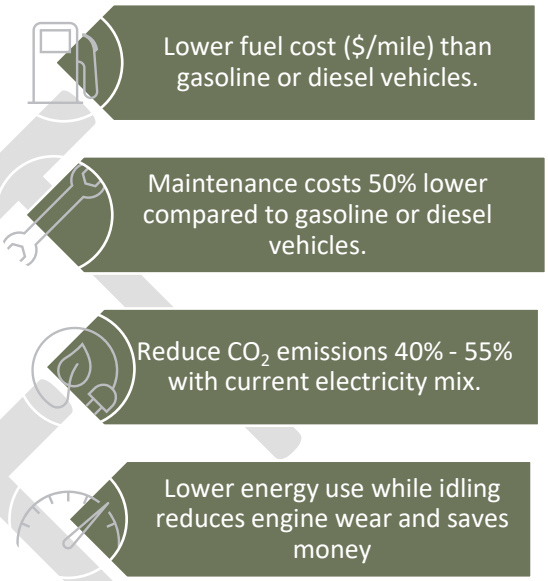


Table 14. Municipal vehicle fleet energy use

Category	Number Vehicles	Gallons of fuel	Fuel cost	Emissions (kg CO_2e)	Miles Driven	Avg MPG[19]
Pickup (1/2 Ton)	5	1,861	$6,659	15,815	60,571	27.0[20]
Pickup (3/4 Ton+)	10	3,371	$12,185	29,596	47,832	13.2
SUV	8	8,844	$31,639	75,027	91,293	10.6
Van	2	280	$1,002	2,379	10,620	10.4
Large Trucks	8	5,065	$19,410	52,092	32,713	8.9
Total	**33**	**19,421**	**$70,895**	**174,909**	**243,029**	**12.5**

Electric vehicles (EVs) provide comparable performance to conventional ICE vehicles, while offering financial and environmental advantages (see sidebar). The electric vehicle (EV) market has accelerated during the past five years and multiple manufacturers now produce an array of light duty electric cars, trucks, vans, and SUVs at price points that are competitive with conventional vehicles.

[19] Quality concerns were identified regarding annual miles driven data for some vehicles. To minimize the effects of data input errors by vehicle users. Outliers were removed from the calculation of average MPG. Therefore, the average MPG for each vehicle type may not equal the miles driven divided by the gallons of fuel used.

[20] Outliers in the vehicle fuel and mileage data suggest that the metric shown for fuel economy of half-ton pickups may not be accurate. Actual fuel economy for this vehicle category is likely closer to 13 mpg.

Currently, there are fewer EV options for larger, medium- and heavy-duty vehicles in the Village's fleet. Many of the Village's current vehicles in these categories use diesel fuel, rather than gasoline. Biodiesel is derived from plant materials and, according to the U.S. Environmental Protection Agency (EPA's) Emissions Factor Hub, generates 7.4% lower emissions than conventional diesel fuel. Additionally, emissions released from burning biodiesel are "biogenic." While emissions produced from fossil fuel combustion release *additional* GHG emissions into the atmosphere, biogenic emissions release CO2e that was already in the earth's carbon cycle, thus not adding to the overall concentration of CO2e in the atmosphere.

While the Village could cost-efficiently reduce GHG emissions by using biodiesel, rather than conventional diesel, according to the U.S. Department of Energy's Alternative Fuels Data Center[21], there are currently no biodiesel refueling stations near Mount Horeb. If the Village would like to assess options for using biodiesel in place of conventional diesel, the Village may engage with local diesel fuel retailers to determine whether they may consider adding biodiesel to the retail fuel options that they sell.

Most EVs can drive 150 – 300 miles between charges, which is significantly greater than the number of miles that the Village's vehicles travel in a single day. Because the driving range of EVs is much greater than typical daily driving distances for Mount Horeb's vehicles, the Village can add EVs to its fleet without interrupting its operations to charge vehicles. Instead, Village staff can plug-in EVs when they are off-duty, and the vehicles will be fully charged and ready for service the next day.

The project team investigated alternative electric models that Mount Horeb could purchase when replacing vehicles in its existing fleet.

RECOMMENDATION 1: ADD TWO EVS TO MUNICIPAL FLEET

Mount Horeb can reduce vehicle fuel and maintenance costs, while also lowering its annual GHG emissions by systematically replacing fleet vehicles nearing the end of their service lives with EV alternatives. While EVs offer financial savings and environmental benefits in comparison to ICE vehicles, the Project Team recommends that the Village gradually transition to EVs and that it starts the transition by replacing two conventional vehicles with EVs. Starting small will enable the Village to install required EV charging supply equipment (EVSE) and train its staff to drive and maintain these vehicles. Lessons learned from adding these vehicles will prepare the Village to systematically replace ICE vehicles with electric, or efficient ICE, options as current vehicles reach the ends of their service lives.

To ensure that the transition to EVs benefits the Village, staff will track the cost and amount of electricity used to charge the EVs, maintenance requirements, and feedback from drivers on their experiences driving the cars. The Village can use this information to guide how it adds more EVs into its municipal fleet in the future.

Part 1: Replace two existing vehicles with EVs

Replace two vehicles nearing end of service life with cost-competitive EVs that match the functionality of their ICE counterparts. The project team analyzed fleet data to identify which vehicles have cost-competitive electric options compared to conventional vehicles and are near-replacement age.

We reviewed available EVs to determine which vehicle categories currently have market-ready EV alternatives and then calculated incremental cost and payback periods to identify which categories are

[21] https://afdc.energy.gov/stations#/find/nearest?fuel=BD

feasible for adoption. While there are not yet cost-effective EVs for all vehicle categories, the EV market continues to advance quickly, so it will be important for the Village to continue to monitor the market moving forward and to watch for cost-effective electric vehicles in additional vehicle categories.

Table15 shows the four vehicle categories in Mount Horeb's fleet for which EVs are available and are currently cost-competitive. The current vehicle column shows an existing vehicle in that category in Mount Horeb's fleet, and the new gasoline vehicle benchmark shows the approximate cost and fuel efficiency rating for a new conventional vehicle in that category. The EV incremental cost is the difference between the cost of a new conventional vehicle and the cost of a corresponding EV. Costs shown do not account for any rebates or credits which may be available. The cost savings per mile is the reduced per mile cost of fueling and maintaining the EV instead of the conventional vehicle. The payback period estimates the number of years required for operational cost savings to surpass the EV's incremental costs.

Table 15. Potential EV Alternatives by Vehicle Category

Category	Ex. current vehicle	New gasoline vehicle benchmark	Ex. EV Alternative	Incremental EV Cost	Annual Cost Savings	Payback period (yrs)
Half-ton Pickup	**WWTP 2016 Ford F150**	**20 mpg $38,810**	**Ford F150 Lightning**	**$13,200**	**$1,048**	**12.6**
SUV	**Police Dept. 2015 Chevrolet Tahoe**	**22 mpg $59,000**	**Chevrolet Blazer EV**	**($12,900)**	**$1,204**	**0**
Work van	Ford Transit Connect	24 mpg $47,400	Ford E-Transit	$5,700	$1,238	4.6
Large truck	International MV607	9 mpg $112,000	International eMV series	$78,000	$3,104	25.1

Commercially available EVs in these four categories could replace 42% of the Village's vehicles. Completing this transition would reduce Mount Horeb's annual fuel and maintenance costs by approximately $16,000 and would reduce the GHG emissions from the Village's fleet vehicles by 13,300 kg CO2e per year (8.1% reduction). The Village could lower its vehicle emissions by 41,700 kg CO2e per year (25.4% reduction) by supplementing its transition to EVs by sourcing the electricity used to power the vehicles from on-site or off-site renewable energy systems.

Instead of an immediate full transition, the Project team recommends initially purchasing two EVs (bolded in Table 4) as replacements for functionally comparable vehicles that are nearing the ends of their service. In addition to achieving the cost savings shown, replacing these vehicles would reduce emissions by over 2,000 kg CO2e/year. After purchasing these vehicles, we recommend collecting data and stakeholder feedback to inform how the Village will transition additional vehicles.

Part 2: Install EV Charging Systems

EVSE Recommendations

1. Prioritize level 2 chargers
2. Install EVSE to future-proof charging needs

To enable initial and expanded future operation of EVs by staff, Mount Horeb will need to install EV charging equipment.

Table 16 summarizes the three categories of EV charging stations[22]. Level 1 chargers offer very low installation costs; however, they do not recharge vehicles quickly enough to fully recharge a vehicle during a typical off-duty period. While Level 3 equipment can quickly refuel vehicles, the equipment and installation costs for chargers in this category may deter the Village from installing DC fast chargers.

The Project Team recommends that the Village install Level 2 charging equipment at central locations where vehicles are typically parked when off-duty. Using Level 2 EVSE will allow staff to plug in a vehicle that is low on charge at the end of their shift and for that vehicle to be fully charged by the start of their next shift. Level 2 chargers require a moderate incremental cost over Level 1 chargers, but this cost is offset by their enhanced functionality.

We recommend adding two EVs to the fleet during the initial transition. If the Village chooses to replace the two vehicles listed in Part 1, the Village will need to install EVSE to support these vehicles, which would require at least one Level 2 charger at the Public Safety building, and at least one Level 2 charger at the wastewater treatment plant (WWTP).

The cost for adding EV charging equipment includes both the cost for the charging ports, as well as the cost of installing the electrical system infrastructure, such as conduit and electrical panel upgrades. Depending on the locations where the charging ports will be installed and the existing electrical infrastructure that serves the building, the cost of laying conduit and upgrading electrical panels may significantly exceed cost of the charging ports. To minimize the total cost of adding the amount of EVSE that will be needed to support a full transition of the Village's current vehicles to EVs in the future, the project team recommends that Mount Horeb install conduit and upgrade electrical service levels proactively to prepare for replacing more ICE vehicles with EVs in the future.

The following steps support cost-efficiently preparing to meet future charging needs.

1. Determine the number of vehicles that park at each location (Public Works building, Public Safety building, and WWTP) for which there is currently a commercially available EV alternative.
    a. Considering likely expansion in the market sectors in which there are cost-competitive EVs, evaluate the number of ICE vehicles that could be replaced with EVs if viable large pickup truck and large truck EVs are introduced.
2. Based on the number of daily miles that each vehicle travels, EV driving ranges, and estimated cold-weather range reductions, determine a 'worst case charging scenario,' that the EVSE will need to support (ex. High number of vehicles requiring charging on a very cold day).
3. To prepare for adding EVs to the municipal fleet, install conduit and complete electrical service upgrades that will be sufficient to support the worst-case charging scenario in a full EV transition of the municipal fleet.

[22] There are variations in capacity and functionality among different types of equipment in a given category

Table 16. EV Charging Station Types

Charger type	Approx. Range Miles per charging hour	Uses	Installed cost per port (est.)
Level 1 (120V AC)	5	Home charging	Less than $500
Level 2 (240V AC)	25	Home, workplace, and public charging (most common)	$500 - $2,500
Level 3 (DC)	200+	Public charging; transportation corridors	$40,000 - $150,000

RECOMMENDATION 2: USE ESTIMATED TOTAL COST OF VEHICLE OWNERSHIP TO GUIDE PURCHASING

To reflect the ever-changing EV market and the benefits of EVs, we recommend that the Village adopt a vehicle purchasing policy to prioritize vehicles that offer the lowest cost of ownership throughout their lifecycle, rather than the lowest initial purchase price. A purchasing policy that prioritizes selecting vehicles that have the lowest total cost of ownership (TCO) will achieve two key objectives. 1) The cost of fueling and maintaining a vehicle during the ownership period may exceed the initial cost of purchasing the vehicle. Selecting vehicles based on comparative TCO will appropriately value these costs and will offer an advantage to more fuel-efficient vehicles, as well as to EVs, which are less expensive to refuel. 2) Focusing on TCO will ensure that the Village uses taxpayer dollars as efficiently as possible to provide the services for which the municipality is responsible. Looking ahead, a TCO-based purchasing policy will ensure that future decisions about fleet transitions reflect the changing costs of EVs vs ICEs and includes the following:

- Purchase cost differential
- Ongoing fuel costs: cost to charge an EV vs. cost to purchase gasoline or diesel fuel to power an ICE vehicle
- Expected maintenance costs
- Forecasted resale values of each vehicle option

Free TCO comparison calculators are offered on the U.S. DOE's Alternative Fuels Data Center site[23], and from Fleetio[24], as well as from other sites.

Table 17 summarizes EV vs conventional vehicle considerations across cost categories.

Table 17. EV vs conventional vehicle cost comparisons - upfront and operating

Vehicle Expense Category	Electric vehicle or conventional vehicle comparison
Purchase Cost	Purchase costs vary by vehicle category
Fuel Cost	Fuel cost per mile is lower for EVs

[23] https://afdc.energy.gov/calc/

[24] https://www.fleetio.com/blog/calculating-total-cost-of-ownership-for-fleet

Maintenance Cost	Studies[25] show approximately 50% lower maintenance costs for EVs.
Resale Value	Some analyses have shown higher resale value for EVs, but irregularities in markets for all used and new vehicles from 2020 – 2023 create uncertainty.

Another way for a municipal fleet to save money is to optimize the total number of vehicles in the fleet. Low annual mileage for some municipal vehicles suggests that parts of the Village's fleet may be under-utilized. To best align the Village's fleet with functional requirements, as vehicles reach the end of their service lives, the Village can add a "Do not replace" option to the choices that it evaluates in the LCCA. When evaluating the "Do not replace" option, in an LCCA, staff may assess opportunities to combine vehicle functions in order to avoid incurring replacement costs.

RECOMMENDATION 3: LEAD COMMUNITY IN EV TRANSITION

As the Village adds EVs to its vehicle fleet, it has an opportunity to demonstrate to the community that EVs are a good transportation solution for residents and businesses.

Mount Horeb can increase the visibility of EVs in the community by adding signage to the sides or backs of EVs in its fleet, which recognizes that a municipal vehicle is an EV. In addition to increasing visibility of EVs in the community, the signage could include information that quantifies the fuel cost savings and the GHG emissions reductions that the Village is realizing by operating EVs in place of gasoline-powered conventional vehicles.

Using a fun and attractive logo or identifier for municipal EVs that connects the Village's logo, community pride, or other positive associations (trolls?) with the environmental and cost benefits can prompt the vehicles to become local conversation pieces and could consequently increase interest in EVs among residents.

A second strategy through which the Village can lead the EV transition by example would be for municipal leaders, such as the Village Administrator, the police chief, and other recognizable figures to drive one of the Village's EVs to public events. At the events, these leaders may reference their enjoyment of the EV that they drove.

There is currently only one public EV charging station in Mount Horeb, with the next closest charging stations located in Verona[26]. While most EV owners primarily charge their vehicles at home, rather than at public charging stations, concern about a lack of available charging stations is a common concern that deters people from considering purchasing an EV.

The Village may be able to reduce concerns among residents about charger availability and thereby increase EV adoption among residents by facilitating the development of additional charging stations in the community. Survey results found that community members do not support the Village installing and owning public-facing charging stations. However, survey responses also indicated that there is support for the Village

[25] Harto, C. *Electric Vehicle Ownership Costs: Chapter 2 – Maintenance.* Consumer Reports. September, 2020. (https://advocacy.consumerreports.org/wp-content/uploads/2020/09/Maintenance-Cost-White-Paper-9.24.20-1.pdf)

[26] https://afdc.energy.gov/fuels/electricity-locations#/find/nearest?fuel=ELEC&location=mount+horeb,+wi

encouraging local businesses to add EV charging stations to their facilities. Mount Horeb can foster the addition of EV charging stations in the municipality by working with businesses, such as grocery stores, restaurants, and museums, and hotels, where shoppers/visitors are likely to stay for at least 30 minutes to install charging at their places of business. To support businesses that agree to add EVSE, the Village can offer to connect them with technical assistance, to streamline permitting processes, and to publicly recognize these businesses and feature their charging stations in local business guides and in tourism materials.

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Policy Recommendations

The recommendations in this section focus on two objectives: 1) institutionalizing and sustaining practices and policies that advance energy efficiency within municipal government operations; and 2) identifying ways to encourage efficient energy use and reductions in CO_2 emissions throughout the community. The recommendations can serve as a springboard for future community efforts.

Policy Recommendations

1. LCCA Purchasing Policy
2. Energy Navigator Program
3. Clean energy peer support
4. Recognize clean energy leaders

RECOMMENDATION 1: IMPLEMENT SUSTAINABLE LCCA PURCHASING POLICY

There are opportunities to increase building efficiency whenever the Village purchases a piece of equipment that uses energy. For high priority measures that generate significant energy cost savings in relation to their cost, the Village may choose to upgrade equipment before it reaches the end of its useful life. However, decisions on upgrading building systems frequently occur when a system is reaching the end of its useful life and must either be replaced or undergo significant repairs. The Village's decisions in addressing these needs will impact the Village's energy use for decades. For many building improvement decisions, the approach that offers the lowest initial cost may utilize less efficient equipment or building systems, which will force the Village to incur increased energy costs throughout the time that the equipment is operational. To manage long term operational costs and to ensure overall cost-effectiveness of capital improvements, we recommend that the Village establish a purchasing policy for all building repairs, upgrades, and new construction that estimates lifecycle operational costs for each option that is being considered and recommends the option that offers the lowest overall cost (initial cost net of financial incentives + operational costs) while achieving the Village's functional requirements. The Village may further advance its environmental goals by also assessing the estimated GHG emissions for each option and applying a cost-factor to each option based on each option's projected lifetime emissions.

Table 18 summarizes types of equipment and operational standards that the Village may use to identify upgrade options that offer the lowest lifecycle costs. While the table shows current high-performance options and standards, we anticipate that efficiency and operational standards will continue to improve in future years, so the Village will need to periodically refresh this guidance.

The Village has already implemented several of these items in certain buildings, such as purchasing LEDs and installing energy efficient equipment.

Table 18 Purchasing Policy Examples

Purchasing Policy Examples	Heating, Ventilation, and Air Conditioning (HVAC) Systems	When purchasing furnaces, consider condensing furnaces with efficiency higher than 95% AFUE.
		When an HVAC system needs to be replaced, consider installation of air source or dual-fuel heat pumps.
		When purchasing air conditioners, consider ENERGY STAR certified AC with SEER2 ≥15.2.
		Install smart thermostats with occupancy sensors to automatically setback temperatures when spaces are unoccupied.
		Consider installing or upgrading the building automation system when replacing equipment.
	Appliances and Other Equipment	New windows should meet or exceed ENERGY STAR requirements. Large commercial windows or store front windows should target U-value no greater than 0.3 and SHGC no greater than 0.25.
		Consider replacing gas domestic water heaters with hybrid electric water heaters or heat pump water heaters.
		Purchase ENERGY STAR equipment to replace office appliances and domestic water heaters.
	Lighting	Continue purchasing LED bulbs or full fixture replacements for lighting retrofit.
		Consider addition of daylighting and occupancy controls for LED lighting.

RECOMMENDATION 2: CONNECT COMMUNITY WITH INCENTIVES AND FINANCING

Respondents to both the residential survey and the business survey stated that the Village could support them in saving energy and shifting to using more renewable energy by helping them identify low-cost energy saving opportunities for their homes and businesses and by providing assistance in understanding the financial incentives and financing options that are available for making energy efficiency improvements to their homes and buildings.

Focus on Energy and WPPI Energy provide portfolios of energy efficiency informational resources, financial incentives, and technical assistance programs to residential and business customers. While changes in Federal policies will eliminate some currently available clean energy funding resources, Mount Horeb residents and businesses can apply for the Federal HOMES and HEAR rebate programs until December 31, 2026.

Focus on Energy is administering the HOMES and HEAR rebate programs in Wisconsin. The programs offer significant rebates for residential building energy efficiency and electrification improvements for single family homes and for multifamily buildings. Rebates are available for all projects that install qualifying equipment (HEAR) and/or that meet energy savings requirements (HOMES), with higher rebates offered to households with lower incomes.

The HOMES and HEAR programs offer rebates that can offset significant portions of the total costs of qualifying projects. However, to receive this funding, customers must ensure that work is done in compliance with the Federal requirements. Focus on Energy representatives and trained contractors are well-equipped to guide Mount Horeb residents throughout their project. To maximize the potential benefits of this funding

resource for the Mount Horeb community, we recommend that, through 2026, the Village highlight opportunities through HOMES, HEAR, Focus on Energy, and WPPI in its outreach to residents.

Additionally, numerous informational resources about energy efficiency and renewable energy upgrades that have been created by non-profit organizations, businesses, utilities, and units of government may provide the clean energy information that Mount Horeb stakeholders are seeking.

While valuable financial, technical, and informational resources are available to help Mount Horeb residents and businesses identify, and pay for, energy efficiency and renewable energy improvements, survey results show that many community members would benefit from assistance accessing these resources. Therefore, without providing additional financial incentives or grants, the Village can facilitate energy improvements in the community by helping community members connect with existing resources. Following are three ways that the Village could support community-wide energy savings:

1. **Village of Mount Horeb Clean Energy web page**. Adding a dedicated page for energy efficiency and renewable energy information to the Village's website would help residents, businesses, and organizations in the community remove the informational and financial barriers to saving energy that they have identified. In addition to offering a community-specific location for this information, adding this information to the Village's website would increase the credibility of this information to local stakeholders. Survey responses indicated that, while residents and businesses want help finding the resources that the page would include, they also expressed concerns about determining what information on this topic is credible and trustworthy. The Village could collaborate with WPPI Energy and Focus on Energy, which both have expertise on these topics, to provide quality assurance for the information on the page and to help the Village ensure that the page continues to display currently available resources and accurate policy guidance.
2. **Staff support**. The Village could dedicate a portion of a staff person's time to serve as the Clean Energy Navigator for community members. This person would be a first point of contact for residents and businesses

   As shown by responses to the surveys, there is significant demand and need for clean energy outreach, education, and individualized support for residents and businesses. The Village may consider either re-allocating a percentage of an existing staff person's job responsibilities to coordinate the Village's sustainability outreach, education, and assistance, or seeking funding to add a new staff person to fill this role. This staff person can both coordinate the Village's community-focused work on this topic and serve as a first point of contact for incoming inquiries. Job responsibilities may include:

   - Developing partnerships with other organizations to collaborate on education and outreach. Partnerships may include the Mount Horeb School District, the Mount Horeb Area Chamber of Commerce, WPPI Energy, Focus on Energy, Neighbors Helping Neighbors, the Mount Horeb Community Foundation, neighborhood associations, and other community organizations. Periodic updates about the Village's progress implementing its Energy Plan and on opportunities for residents and businesses to access energy saving resources can also be shared through articles in the Mount Horeb Mail.
   - Coordinating the Community-Led Energy Navigator Program (see below)
   - Staffing the municipal Sustainability and Natural Resources Committee

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3. **Community-Led Energy Navigators**. Mount Horeb's municipal SNR Committee, as well as its Green Team, show that there are community members who are committed to environmental sustainability. The SNR's engagement with this planning process also demonstrates that there are residents who are committed to helping reduce community-wide emissions and to operate more energy efficiently. Recognizing these community resources, the Village can seek to build on the momentum generated during this planning process, as well as the need to help connect community members and local businesses in both completing initial low-cost, low-effort efficiency upgrades, and then in identifying and funding longer term high-impact energy projects.

   By providing coordination support for a volunteer-led clean energy navigator program, the Village can amplify its efforts by engaging residents in meaningful outreach and community-building work that responds to an identified need. To support these volunteers, the Village would need to coordinate with WPPI Energy, Focus on Energy, and other relevant resource providers to compile a set of applicable informational resources and to train the volunteers in sharing this information within their neighborhoods, and beyond. The Village could further advance the work of the Clean Energy Navigators by highlighting it on the Village's website, as well as in newsletters and other communications.

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RECOMMENDATION 3: JOIN LOCAL GOVERNMENT SUSTAINABILITY PEER GROUPS

Leaders of local governments face unique challenges and opportunities when developing and implementing sustainability initiatives within their municipal operations and throughout the broader community. Considerations related to procurement, funding mechanisms, staffing capacity, and assurance of reliable service delivery, are some of the many factors that leaders must navigate for these projects.

Additionally, limited staffing and availability constraints for current staff members can both contribute to municipalities failing to move forward with projects that advance the community's clean energy objectives.

Collaborations among local governments can provide peer accountability when working toward energy goals, as well as a cadence of regular checkpoints that support forward progress. Working with other municipalities that have made energy, climate, and/or sustainability commitments can also provide valuable peer learning opportunities as leaders share both their achievements and their lessons learned as they each work on energy efficiency, renewable energy, sustainable transportation, and other similar projects in their own communities.

We recommend that Mount Horeb join one or more local government peer organizations as a strategy to support its ongoing efforts to implement the Mount Horeb Energy Plan and to advance other sustainability initiatives. There are at least two networks of this type in Wisconsin, and we recommend that the Village consider joining one, or both, of the organizations.

1. Wisconsin Green Tier Legacy Communities (GTLC) network. The Wisconsin Department of Natural Resources coordinates this group of municipalities and counties. There is no cost to join the GTLC network; however, members are required to adopt a resolution that formalizes their commitment to work with the program and to provide annual reports on the municipality's sustainability activities. The GTLC network meets online quarterly. Each meeting includes presentations on topic areas that the members identify, as well as opportunities for peer learning and exchange. In addition to quarterly meetings, members are able to participate in relevant learning opportunities and receive preferential treatment when applying for state funding related to sustainability programs. There are currently 43 GTLC members from throughout the state. Member municipalities range in size from the Village of Egg Harbor (pop. 327) to the City of Green Bay (pop. 107,395).
2. Wisconsin Local Government Climate Coalition (WLGCC). WLGCC is a non-profit organization that both advocates for improved energy and climate policies and supports local governments in moving forward clean energy and climate efforts at the local level. Programs address energy use in buildings; transportation, land use; resilience, and reducing emissions from the electricity grid. The organization provides a framework for collaboration on relevant projects, as well as access to additional resources. WLGCC currently has 25 member municipalities, as well as six county governments that are members. Members range in size from Shorewood Hills to the City of Milwaukee. Nine of the members are in Dane County (including the Dane County government).

RECOMMENDATION 4: PUBLIC RECOGNITION PROGRAM FOR ENERGY EFFICIENT BUSINESSES

Both the high number of respondents to the surveys and the feedback that respondents shared show that community members and stakeholders value and support energy efficiency and renewable energy. Of the businesses who responded, 50 percent of businesses indicated that it would be helpful for the Village to publicly recognize local businesses and organizations that are making progress in operating more energy efficiently and/or are using renewable energy.

We recommend that the Village develop a mechanism to publicly identify businesses and organizations that are taking meaningful steps on a clean energy journey. Highlighting the clean energy achievements of local businesses would create two important benefits.

1. An opportunity to earn recognition for saving energy and/or using renewable energy can add motivation for businesses to implement efficiency or operational improvements that will reduce energy use, but which may otherwise be invisible to customers and stakeholders.
2. Highlighting local businesses that are actively working to enact clean energy practices would enable community members who value environmental sustainability to choose to patronize businesses and organization that align with their values. Connecting aligned businesses and customers can increase revenue for the businesses and can support development of Mount Horeb's identity as a clean energy leader among its residents.

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Funding Opportunities for Recommendations

The cost of the upgrades identified in this energy plan is substantial and may be a barrier to implementing some of the recommended measures. This section is intended to provide an overview of funding opportunities for the various upgrades identified in the report.

FOCUS ON ENERGY

Mount Horeb Utilities partners with Focus on Energy to provide incentives for renewable energy installations and energy efficiency upgrades. We recommend that Mount Horeb provides a copy of this report to its Energy Advisor and asks for assistance in identifying the best way to access rebates and support programs to fund the recommended improvements. The Focus on Energy incentive amount available depends on the measure and often specific characteristics of the equipment, such as efficiency of new building equipment or quantity of light fixtures. [27]

WPPI ENERGY

Mount Horeb is a member of WPPI Energy. While Mount Horeb Utilities (MHU), like all WPPI member utilities, participates in the Focus on Energy program, WPPI may periodically have opportunities to work with the Village to access additional funding resources to demonstrate innovative energy projects. We recommend that the Village coordinate with staff at Mount Horeb Utilities to communicate the Village's progress toward completing recommendations in this energy plan, as well as to discuss the Village's funding needs related to these efforts so that WPPI can share relevant funding opportunities that emerge with the Village.

WISCONSIN PUBLIC SERVICE COMMISSION'S OFFICE OF ENERGY INNOVATION

Mount Horeb accessed a Rural Energy Start Up Program (RESP) grant from the Wisconsin Office of Energy Innovation (OEI) to pay for this Mount Horeb Energy Plan. In addition to RESP, OEI has periodically issued funding opportunities for local governments through the Energy Innovation Grant Program (EIGP). Both RESP and EIGP have typically funded several categories of projects, including comprehensive energy planning for local governments, energy efficiency upgrades to municipal buildings, renewable energy potential studies, and microgrid feasibility assessments.

The Mount Horeb energy plan is an example of a Comprehensive Energy Planning project. Generally, to ensure that building upgrade funds that it approves achieve maximum impact, OEI has required that a jurisdiction have completed a comprehensive energy plan as a prerequisite for receiving funding to support energy efficiency or renewable energy building improvements. Because Mount Horeb has completed a comprehensive energy plan, it may now be prepared to prepare a competitive proposal for EIGP funds to support an energy efficiency or renewable energy project that is described in this plan.

CLEAN ENERGY REVOLVING FUND

Mount Horeb's Energy Plan identifies opportunities for the Village to save money on its electricity, natural gas, and transportation fuel costs. To support future energy projects, the Village can deposit the energy cost

[27] Focus on Energy's 2025 Incentive Summary: https://assets.focusonenergy.com/production/02-pdf/2025/BIZ_Business-Summary-of-Services-Incentives_2025.pdf

savings from completed energy projects into a separate Clean Energy Revolving Fund sub-account. The Village can deposit money into this fund on a monthly or annual basis, which will cause the fund balance to increase quickly.

The purpose of the Clean Energy Revolving Fund is to supplement other municipal funding sources. It is not intended to replace the need for the Village to use capital funds, operating budgets, and third-party grant funds to pay for the improvements recommended in this plan.

As Mount Horeb continues to move ahead with the recommendations in the Energy Plan, it may periodically encounter recommended projects that it is not able to include in its regular capital budget. In these cases, the Village can draw from its Clean Energy Revolving Fund to supplement other municipal funding sources and obtain approval for these projects.

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Appendix 1: Building Descriptions and Recommendations

BUILDING 1: VILLAGE OF MOUNT HOREB MUNICIPAL BUILDING

Size: 12,739 square feet

Age: Built in 1924

Existing heating and cooling system: Three gas-fired constant volume rooftop units (RTU) for cooling and heating that serve the whole building. Two natural-gas-fired boilers; one is for fin tube perimeter heating in stairwells and hallways, and one is serving forced air units in the offices. Boilers are reported to be turned off in the summer.

Baseline Electricity Use: 60,361 kWh/yr

Baseline Natural Gas Use: 4,913 therms/yr

Weather-normalized site EUI: 56 kBTU/sf. At regional median for comparable buildings.

Over the past several years, some of the office spaces in Village Hall have undergone an LED retrofit and have added occupancy sensors, but there is still some fluorescent lighting in the building. The hearing room has a mixture of LEDs and fluorescent lights, but no occupancy sensors. There are multiple computers, for employee use, that provide opportunity for plug load management. The roof insulation was replaced within the last ten years, and the three constant-volume rooftop units (RTUs) were installed in 2014 to provide cooling to the building. The boilers and RTUs serve overlapping zones but are controlled by separate, non-communicating thermostats, leading to simultaneous, uncontrolled heating during the winter and shoulder seasons. However, during the site visit, staff indicated needing to use space heaters for individual offices during spring and fall, suggesting underheating in the winter and overheating in the shoulder season. There are not individual thermostats for each office area and thus, no individualized temperature control. Due to this configuration, gas and electric usage in the shoulder seasons is higher than expected. Domestic hot water (DHW) is provided by a 40-gallon gas water heater.

Table9 summarizes the recommended measures by priority level and provides potential cost, energy, and carbon savings for Village Hall. The total savings row includes the savings from high priority, medium priority, and EOL measures. Payback period for the condensing boiler is based on an incremental cost instead of a first cost and it is marked with an *. Percentage reduction is relative to the existing (baseline) case. Measure cost and annual energy values displayed in the table are rounded up to the nearest ten or hundred, depending on the initial value.

Table 19. Village Hall recommended energy actions.

Measure	Priority	Installed Cost	Annual Utility Cost Savings	Financial Payback		Annual Energy Reduction		Emissions Reduction (MT CO2e)
						kWh	Therms	
Retro-commissioning	High	$4,800	$1,100	11.7%	4.7 Yrs	5,300 8.2%	1,600 37.1%	12.1 18.7%
Retrofit LED bulbs in existing fixtures	High	$1,800	$300	2.8%	7.3 Yrs	2,100 3.2%	-40 -0.9%	1.2 1.8%
Occupancy lighting controls	High	$1,000	$200	1.9%	5.7 Yrs	1,500 2.3%	-30 -0.7%	0.8 1.2%
Plug load management	Medium	$300	$200	1.3%	2.1 Yrs	1,000 1.5%	0 -	0.6 0.9%

Measure	Priority	Installed Cost	Annual Utility Cost Savings	Financial Payback		Annual Energy Reduction		Emissions Reduction (MT CO2e)
						kWh	Therms	
Improve building air sealing	Medium	$2,700	$50	0.5%	> 50 Yrs	200 0.3%	100 1.9%	0.6 0.9%
Condensing boiler*	Medium	$6,500	$200	1.5%	48.9 Yrs	200 0.3%	400 10.1%	2.5 3.9%
Overall		**$17,100**	**$2,050**	**19.8%**		**10,300 16%**	**2,030 48%**	**18 27%**

Table 20 identifies the impacts of replacing existing fossil fuel powered space and water heating equipment at Village Hall with electricity-powered systems ("Decarbonization measures"). The primary function of a decarbonization measure is to eliminate fossil fuel usage and reduce carbon emissions. Actual carbon emissions reduction over the lifetime of the equipment is difficult to quantify because of fluctuations in the generation sources that supply Mount Horeb's regional electricity grid. Mount Horeb should consider these options if they are interested in a decarbonization or electrification pathway.

The table shows the estimated energy and cost impact of each improvement. The cost listed for the equipment is shown as incremental cost compared with a like-for-like system replacement. The percentage reduction for each measure is relative to the existing (baseline) case.

Table 20. Village Hall recommended decarbonization measures.

Measure	Incremental Cost	Annual Utility Cost Savings		Annual Energy Reduction	
				kWh	Therms
Heat Pump Water Heater	$1,300	-$400	-5%	-4,500 -6.9%	300 6.8%
Air to Water Heat Pump (Alternative to Condensing Boiler)	$271,000	-$1,600	-19%	-18,800 -29%	2,400 55%

High Priority: Retro-Commissioning

Next Step: Focus on Energy provides incentives and a list of qualified contractors for retro-commissioning or building tune-ups. Contact an Energy Representative to understand potential programs and to enroll. [28]

We recommend that Village Hall explore retro-commissioning to address multiple HVAC issues that affect comfort and energy use. Retro-commissioning is a process of servicing and repairing existing heating and air conditioning equipment to restore it to nearly its original level of performance. Retro-commissioning for Village Hall would include reviewing thermostats, valves, and boiler and RTU tune-ups to reduce simultaneous heating and fan usage. Advanced controls such as demand control ventilation (DCV) and boiler supply water temperature reset based on outside air temperature are recommended to be implemented as part of the tune-up process. These tune-ups will also eliminate the need for space heaters in office areas and should mitigate occupant comfort concerns.

[28] Information on Focus' retro-commissioning incentives is here: https://focusonenergy.com/business/building-optimization

The retro-commissioning process would also generate a report that recommends additional system improvements, such as implementing a building automation system (BAS) to tie RTU and boiler operation together and for better implementation of advanced control sequences.

High Priority: LED Upgrades

Next Step: Finish existing fluorescent tube conversion to LED or replace existing fluorescent light fixtures with integrated LED fixtures. Discuss upgrades with Focus on Energy representatives to ensure that lighting fixture upgrades and retrofits optimize potential financial incentives.

Some areas of Village Hall, such as office spaces, have already been retrofitted with LED fixtures. The stairways and hearing room have a mixture of LED and fluorescent lighting. Energy cost savings realized by replacing fluorescent lighting with LED fixtures will quickly recoup the initial installed costs of these improvements. Therefore, we recommend all fluorescent lighting be retrofitted to LEDs. An LED tube retrofit (LED bulbs are placed into existing fixtures) is less expensive, and depending on the ballast and fixture wiring, certain types of tube retrofits can allow for external occupancy sensors (wall-mounted or ceiling-mounted). A full LED fixture replacement is more costly but allows for integrated advanced lighting controls including occupancy, daylighting and task tuning. 20 displays values for an LED tube retrofit.

High Priority: Lighting Occupancy Controls

Next Step: Incorporate occupancy sensors into LED fixtures in smaller enclosed areas, either as externally mounted components or integrated directly into the fixture. Discuss with Focus on Energy representative as occupancy sensors may be eligible for financial incentives.

Some of the office areas already have occupancy sensors installed, but the hearing room does not have occupancy sensors. We recommend installing occupancy sensors in smaller enclosed areas, such as offices, backrooms, the hearing room, corridors, and lavatories that do not already have automatic controls. Daylighting was not considered because windows are mainly located near stairways and hallways.

Medium Priority: Plug Load Management

Next Step: Implement smart plugs or advanced power strips to reduce energy used by computers and by other miscellaneous loads

We recommend installing smart plugs or advanced power strips with schedule timer control and/or load-sensing control to automatically power off devices, such as computers, after periods of inactivity to reduce standby energy waste.

Medium Priority: Improve Building Air Sealing

Next Step: Hire a qualified insulation or air sealing contractor to inspect building and air seal any leaks, gaps, or cracks in the building envelope (ex. Walls, roof, windows, doors, etc.).

Air sealing helps prevent air leaks, thus reducing the workload on heating and cooling systems and improving comfort. Air sealing is typically done on walls, floors, basements, and around doors and windows. We recommend having a professional walk through the building and air seal any leaks that they notice.

Medium Priority: Condensing Boiler Upgrade

Next Step: Consult an HVAC contractor to replace existing gas-fired boiler with a condensing boiler. Discuss this measure with Focus on Energy representative, as boiler upgrades may be eligible for incentives.

Village Hall has two existing 210 MBH boilers that are rated at 80% thermal efficiency. They are turned off during the summer months and used for forced air heating in offices and fin tube perimeter heating in stairwells and hallways. If the village is not pursuing an electrification pathway, we recommend replacing the boilers with high efficiency fully condensing boilers. After retro-commissioning to see how/if the boilers and RTUs can be integrated, the Village should have detailed heating load calculations performed to determine if the boilers can be downsized. Downsizing the boilers would both reduce the cost of the condensing boiler and reduce the cost of supplying the boiler with energy during operations. In addition to condensing boilers, implement outdoor air temperature reset controls on a trim-and-respond sequence to adjust the hot water temperature based on outdoor temperature.

Decarbonization Measure: Alternative to Condensing Boiler Upgrade – Air-to-Water Heat Pump Upgrade

Next Step: Consult a qualified HVAC contractor to supplement the existing gas-fired boiler with an air-to-water heat pump (AWHP) to reduce the use of natural gas heating.

We recommend this measure if Mount Horeb is interested in pursuing an electrification or decarbonization strategy. The hybrid AWHP + gas boiler configuration enables the use of electric heat pump technology as the primary hydronic heating source. The AWHP is used until outdoor temperatures drop below a predefined switchover point, at which the system switches over to the gas-fired boiler for heating. This configuration maximizes efficiency by leveraging the heat pump's high performance during milder conditions and maintains reliable heating during colder weather, when heat pump performance drops.

Decarbonization Measure EOL: Heat Pump Water Heater Upgrade

Next Step: Consult a qualified plumbing contractor to replace the existing gas-fired domestic water heater with a heat pump water heater (HPWH) for improved efficiency and carbon reductions.

We recommend this measure if Mount Horeb chooses to pursue an electrification or decarbonization strategy. A HPWH replaces fossil-fuel-based water heating while being 2-4 times more efficient than a standard electric water heater. It uses electricity to move heat from the surrounding area into the water, instead of generating heat directly through electric resistance. We recommend replacing the gas-fired domestic water heater at its end of life with a HPWH.

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BUILDING 2 MOUNT HOREB PUBLIC LIBRARY

Size: 15,936 square feet

Age: Built in 2001

Existing heating and cooling system: One variable-air-volume rooftop air-handling unit with VAV (variable air volume) terminal boxes equipped with hot water reheat serve the west side of the building. One staged air volume rooftop air-handling unit with booster coils equipped with hot water reheat serve the east side of the building. Both rooftop units use DX cooling and gas-fired heating and have an air-side economizer. A condensing boiler provides hot water to the VAV terminal boxes, booster coils, perimeter convectors, and the radiant floor heating system. On the site visit, staff noted that radiant floor heating, which is in the children's area, is turned off and staff are uncertain about how well the radiant floor heating is functioning.

Baseline Electricity Use: 148,589 kWh

Baseline Natural Gas Use: 4,956 therms

Weather-normalized Site EUI: 68 kBTU/sf. Lower than regional median for similar buildings (74 kBTU/st).

Over the past several years, some spaces of the library have undergone LED retrofits. While there are existing occupancy sensors in the bathroom and storage areas, there are additional opportunities for both occupancy and daylighting controls throughout the building. The building is equipped with a Building Automation System (BAS) with advanced control sequences such as demand controlled ventilation (DCV) and boiler supply water temperature reset control. There is an electric humidifier for the building, but staff noted that it is turned off because condensation from high humidity was causing paint damage in the reading room. The radiant floor heating in the children's area was also turned off. There are multiple desktop computers in the area that provide opportunities for plug load management. Domestic hot water is provided by a 40-gallon electric resistance water heater that was installed in 2019.

Table 21 displays the recommended measures for the library and provides estimated installation cost, energy, and carbon savings. The total savings row includes the savings from high priority, medium priority, and EOL measures. Payback periods for most measures are based on totals cost of the measures; however, the estimated cost indicated for the roof upgrade, which is an end-of-life measure, indicates the incremental cost of increasing insulation levels in the roof in comparison to a business-as-usual like-for-like replacement. This distinction is marked with an *. The percent savings/reduction columns compare reduced energy, cost, and emissions available from completing the measure to the existing (baseline) case.

Table 21. Library measure prioritization and estimated savings.

Measure	Priority	Installed Cost	Annual Utility Cost Savings		Financial Payback	Annual Energy Reduction		Emissions Reduction (MT CO2e)
						kWh	Therms	
Retro-commissioning	High	$8,000	$1,100	7.0%	7.5 yrs	8,200 7.0%	400 7.0%	7.3 7.0%
Retrofit LED bulbs in existing fixtures	High	$2,000	$800	5.2%	2.5 yrs	6,900 5.9%	-100 -2.3%	3.7 3.6%
Occupancy lighting controls	High	$1,100	$700	4.0%	1.8 yrs	5,300 4.5%	-100 -2.3%	2.9 2.8%

Measure	Priority	Installed Cost	Annual Utility Cost Savings		Financial Payback	Annual Energy Reduction		Emissions Reduction (MT CO2e)
Daylighting controls	High	$500	$500	6.4%	0.4 yrs	8,500 7.2%	-100 -2.3%	4.8 4.6%
Plug load management	Medium	$300	$100	0.6%	2.4 yrs	800 0.7%	0 0%	0.5 0.5%
Improve building air sealing	Medium	$1,800	$90	0.6%	19.9 yrs	200 0.2%	300 4.7%	1.5 1.5%
Upgrade roof insulation*	EOL	$48,700	$400	2.5%	>50 yrs	1,800 1.5%	700 13.1%	5.0 4.8%
Heat pump water heater*	EOL	$1,300	$600	3.5%	2.5 yrs	4,500 3.8%	0 0%	2.9 2.8%
Total		**$63,700**	**$4,290**	**29.8%**		**36,200 30.9%**	**1,100 19%**	**28.6 27%**

Table 22 identifies the impacts of replacing existing fossil fuel powered space heating equipment at the library with an electricity-powered system ("Decarbonization measure"). The primary function of a decarbonization measure is to eliminate fossil fuel usage and reduce carbon emissions. Actual carbon emissions reduction over the lifetime of the equipment is difficult to quantify because of fluctuations in the generation sources that supply Mount Horeb's regional electricity grid. Mount Horeb should consider these options if they are interested in a decarbonization or electrification pathway.

Table 22. Library recommended decarbonization measures.

Measure	Incremental Cost	Annual Utility Cost Savings		Annual Energy Reduction		
				kWh	Therms	
Air-to-Water Heat Pump	$96,900	-$4,200	-28%	-45,300 -38%	4,500 82%	82%

High Priority: Retro-commissioning

Next Step: Focus on Energy provides incentives and a list of qualified contractors for retro-commissioning or building tune-ups. Contact an Energy Representative to understand potential programs and to enroll. [29]

We recommend that the Mount Horeb Library explore retro-commissioning to address HVAC issues that are affecting energy use. Retro-commissioning is a process of servicing and repairing existing heating and air conditioning equipment to restore it to nearly its original level of performance. Retro-commissioning of the library includes a BAS tune-up to identify potential improvements, such as reviewing the VAV system to reduce fan energy by lowering minimum airflow setpoints at the terminal boxes, minimizing zone reheat when the AHU is in cooling mode, optimizing humidifier operation to prevent paint damage, and improving the radiant floor heating system operation.

High Priority: LED Upgrades

[29] Information on Focus on Energy's retro-commissioning incentives is here: https://focusonenergy.com/business/building-optimization

Next Step: Finish tube replacement from fluorescent T8 to LED or replace light fixtures with integrated LED fixtures. Discuss with Focus on Energy representatives as lighting fixture upgrades and retrofits are eligible for incentives.

Some lighting in the library has already been retrofitted to LED lighting, and we recommend retrofitting the rest of the fluorescent lighting to LED lighting. An LED tube retrofit (LED bulbs are placed into existing fixtures) is less expensive than a fixture replacement, and depending on the ballast and fixture wiring, some tube retrofits can allow for external occupancy sensors (wall-mounted or ceiling-mounted). A full LED fixture replacement is more costly but allows for integrated advanced lighting controls including occupancy, daylighting, and task tuning. Table 21 displays estimated costs, as well as energy, cost, and emissions reductions for an LED tube retrofit.

High Priority: Occupancy Sensor Controls

Next Step: Incorporate occupancy sensors into LED fixtures in smaller enclosed areas, either as externally mounted components or integrated directly into the fixture. Discuss with Focus on Energy representative as occupancy sensors may be eligible for financial incentives.

Occupancy sensors are already located in lavatories and storage areas. We recommend installing occupancy sensors in the office, break rooms, and larger reading room areas where controls are not already present.

High Priority: Daylighting Controls

Next Step: Implement daylighting controls around perimeter of building in main reading, information services, and general collection areas; discuss with Focus on Energy representative as daylighting controls are eligible for incentives.

We recommend implementing automatic daylight continuous dimming controls near windows to reduce energy use while maintaining sufficient light levels for reading and other visual tasks. An initial illuminance target of 50 footcandles can be set and then fine-tuned by the controls contractor based on occupant feedback.

Medium Priority: Improve Building Air Sealing

Next Step: Hire a qualified insulation or air sealing contractor to inspect building and air seal any leaks, gaps, or cracks in the building envelope (ex. Walls, roof, windows, doors, etc.).

Air sealing helps prevent air leaks, thus reducing the workload on heating and cooling systems and improve comfort. Air sealing is typically done on walls, floors, basements, and around doors and windows. We recommend having a professional walk the building and air seal any leaks that they find.

Medium Priority: Plug Load Management

Next Step: Implement smart plugs or advanced power strips for computers and other miscellaneous loads.

We recommend installing smart plugs or advanced power strips with schedule timer control and/or load-sensing control to reduce standby energy waste by automatically powering off the library's computers after periods of inactivity.

EOL: Upgrade Roof Insulation

Next Step: Have an engineer or contractor review insulation and determine an improvement plan; discuss with Focus on Energy representative for potential incentives with roof insulation upgrades.

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While adding attic insulation is expensive, it can significantly reduce heating loads. We recommend insulation be R-30 or better to comply with current energy code.

EOL/Decarbonization: Heat Pump Water Heater Upgrade

Next Step: Consult a qualified plumbing contractor to replace the existing electric resistance domestic water heater with a heat pump water heater (HPWH) for improved efficiency and carbon reductions.

A HPWH is 2-4 times more efficient than a standard electric water heater, such as the current water heater at the library, leading to substantial energy savings. An HPWH uses electricity to move heat from the surroundings into the water, instead of generating heat directly through electric resistance. When the current water heater reaches the end of its service life, we recommend replacing it with an HPWH.

Decarbonization Measure: Air-to-Water Heat Pump Upgrade

Next Step: Consult a qualified HVAC contractor to supplement the existing gas-fired boiler with air-to-water heat pump (AWHP) to reduce the use of natural gas heating.

We recommend this measure if Mount Horeb is interested in pursuing an electrification or decarbonization strategy. The hybrid AWHP + gas boiler setup enables the use of electric heat pump technology as the primary hydronic heating source until outdoor temperatures drop below a predefined switchover point, at which the system switches over to the gas-fired boiler for heating. This configuration maximizes efficiency by leveraging the heat pump's high performance during milder conditions and maintains reliable heating during colder weather, when heat pump performance drops.

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BUILDING 3 COMMUNITY CENTER

Size: 9,660 square feet

Age: Built in 1978. The top floor houses the Senior Center, and the Parks and Recreation department occupies the bottom floor. The top floor used to be a library until the early 2000s, and the ground floor used to be a youth activity center.

Existing heating and cooling system: Five split system air conditioners with gas-fired furnaces provide heating and cooling to the building. Two systems serve the top floor and three serve the bottom floor, with two of the bottom floor systems in a twinned configuration. The units were replaced in 2020, 2022, 2023, and 2024. A packaged terminal air conditioner (PTAC) serves the converted screen porch area on the ground floor. On the site visit, staff noted that the office area in the senior center is always too cool in the summer and too hot in the winter, such that they use space heaters in the summer for the offices.

Baseline Electricity Use: 53,921 kWh

Baseline Natural Gas Use: 2,662 therms

Weather-normalized Site EUI: 48 kBTU/sf. Lower than median for similar buildings (61 kBTU/sf).

The Community Center is a two-story building with the parks and recreation center on the first floor and the senior center on the second floor. All the HVAC systems have been replaced in the last five years. Staff in the Senior Center noted that their offices are often too cold in the summer and too hot in the winter and they use space heaters in the summer. Because the second floor used to be a library, only one of the offices contains a thermostat, so there isn't proper temperature control in the office wing. The senior citizens who use the facility, however, are generally comfortable. For the Parks and Recreation Center, staff indicated that there is a piece of paper covering the thermostat to prevent people from changing it and the temperature is set to be constant. The converted screen porch area on the first floor is conditioned with a PTAC that is turned off when the room is not being used. Domestic hot water is provided by a 40-gallon natural gas water heater that was replaced in 2019. Lighting in the parks and recreation center has been replaced with LEDs that are connected to occupancy sensors, while the Senior Center has T8 fluorescent lighting with new fixtures. The Senior Center does not have any lighting controls. Except for the former screen porch area and the director's office in the senior center, the windows are original.

Table 23 displays the recommended measures for the Community Center and provides estimated installation cost, energy, and carbon savings. The total savings row includes the savings from high priority, medium priority, and EOL measures. Payback periods for most measures are based on totals cost of the measures; however, the estimated cost indicated for the roof upgrade, which is an end-of-life measure, indicates the incremental cost of increasing insulation levels in the roof in comparison to a business-as-usual like-for-like replacement. This distinction is marked with an *. The percent savings/reduction columns compare reduced energy, cost, and emissions available from completing the measure to the existing (baseline) case.

Table 23. Community Center measure prioritization and estimated savings

Measure	Priority	Installed Cost	Annual Utility Cost Savings		Financial Payback	Annual Energy Reduction		Emissions Reduction (MT CO2e)
						kWh	therms	
Retrofit LED bulbs in existing fixtures	High	$2,800	$400	5.2%	8.3 yrs	3,000 6.1%	-100 -3.1%	1.6 3.3%
Smart Thermostats	High	$600	$300	3.3%	2.8 yrs	1,500 3.1%	200 6.3%	1.8 3.7%

Measure	Priority	Installed Cost	Annual Utility Cost Savings		Financial Payback	Annual Energy Reduction		Emissions Reduction (MT CO2e)
						kWh	therms	
Retro-commissioning	High	$4,900	$500	6.4%	11.8 yrs	3,100 6.4%	200 6.8%	3.1 6.5%
Improve building air sealing	Medium	$1,400	$50	0.7%	28.3 yrs	200 0.3%	100 3.7%	0.7 1.5%
ENERGY STAR commercial appliances*	EOL	$1,500	$90	1.4%	16.2* yrs	800 1.6%	0 0%	0.5 1.0%
Window replacement*	EOL	$22,500	$200	1.6%	>50 yrs*	1,000 2.1%	-100 -1.8%	0.3 0.7%
Upgrade roof insulation*	EOL	$14,800	$90	1.3%	>50 yrs*	300 0.7%	200 6.3%	1.3 2.7%
Overall		**$48,500**	**$1,630**	**20%**		**9,900 20%**	**500 18%**	**9.3 19%**

Table 24 identifies the impacts of replacing existing fossil fuel powered water heating equipment at the Community Center with an electricity-powered system ("Decarbonization measure"). The primary function of a decarbonization measure is to eliminate fossil fuel usage and reduce carbon emissions. Actual carbon emissions reduction over the lifetime of the equipment is difficult to quantify because of fluctuations in the generation sources that supply Mount Horeb's regional electricity grid. Mount Horeb should consider this option if they are interested in a decarbonization or electrification pathway.

Table 24. Community Center recommended decarbonization measures.

Measure	Incremental Cost	Annual Utility Cost Savings		Annual Energy Reduction	
				kWh	Gas
Heat Pump Water Heater	$1,300	-$200	-3.4%	-2,100 -4.4%	100 3.1%

High Priority: Retro-commissioning

Next Step: Focus on Energy provides incentives and a list of qualified contractors for retro-commissioning or building tune-ups. Contact a Focus on Energy, Energy Representative to understand potential programs and to enroll. [30]

We recommend that the Community Center explore retro-commissioning to address the HVAC issues that are affecting comfort, especially in the senior center. Retro-commissioning is a process of servicing and repairing existing heating and air conditioning equipment to restore it to nearly its original level of performance. For the Community Center, this process includes reviewing thermostats and performing a test and balance procedure for the building to eliminate the need for space heaters in the summer. As part of the retro-commissioning process, we also recommend relocating the thermostats to the areas that they serve. This is particularly important on the bottom floor, which was originally an open space but was later converted

[30] Information on Focus on Energy's retro-commissioning incentives are here: https://focusonenergy.com/business/building-optimization

into a wing of offices. Currently, only one office contains a thermostat, leaving the rest of the wing without proper control.

High Priority: Smart Thermostats Upgrade

Next Step: Replace thermostats with smart thermostats. We recommend replacing existing thermostats with smart thermostats to automatically adjust temperature setpoints based on occupancy sensing, ultimately saving energy by reducing energy used to heat and cool unoccupied spaces. As part of this effort, we also recommend implementing temperature setback protocols for unoccupied periods in the parks and recreation portion of the building. When replacing thermostats, we also recommend that the Community Center considers relocating the thermostats on the ground floor to the areas they are serving for better temperature control and comfort. Currently, the office wing has only one thermostat located in one of the offices and therefore it is directing heating and cooling based only on the current temperature in a limited and confined space.

High Priority: LED Upgrades with Occupancy Sensors

Next Step: Retrofit tube replacement from T8 fluorescent to LED in the senior center. Discuss with Focus on Energy representatives to ensure that lighting equipment used for retrofits is eligible for incentives.

The parks and recreation floor already has LED lighting with occupancy controls, but the senior center has T8 fluorescent in both uplight and downlight fixtures. The senior center has newer fixtures, so we recommend an LED tube retrofit (LED bulbs are placed into existing fixtures) and implementing occupancy control. Depending on ballast and fixture wiring, some tube retrofits can allow for external occupancy sensors (wall-mounted or ceiling-mounted).

Medium Priority: Improve Building Air Sealing

Next Step: Hire a qualified insulation or air sealing contractor to inspect building and air seal any leaks, gaps, or cracks in the building envelope (ex. Walls, roof, windows, doors, etc.).

Air sealing helps prevent air leaks, thus reducing the workload on heating and cooling systems and improving comfort. Air sealing is typically done on walls, floors, basements, and around doors and windows. We recommend having a professional walk the building and air seal any leaks that they find.

EOL: ENERGY STAR Appliances

Next Step: Replace equipment with ENERGY STAR appliances at their end of life.

ENERGY STAR appliances are energy efficient appliances that use less energy than alternative non-certified models. Upon end of life, we recommend replacing appliances, such as the refrigerators and dishwasher with ENERGY STAR certified units.

EOL: Windows Replacement

Next Step: At end of life, replace windows with low-E, double pane windows.

Some windows, such as those on the porch and in the director's office on the top floor, have been replaced, while the rest remain original to the building. When the existing windows reach the end of their service life, we recommend replacing the original windows with low-E, double pane glazing for improved energy efficiency and occupant comfort. Upgraded windows can significantly reduce heating and cooling loads.

EOL: Upgrade Roof Insulation

Next Step: Request that an engineer or contractor evaluate existing insulation and determine an improvement plan; discuss with Focus on Energy representative for potential incentives with roof insulation upgrades.

The current roof is pitched with insulation between the studs and the roof. The building does not have an attic, and facility staff were not aware of any additional insulation that has been added. When the roof reaches its end of life, we recommend bringing the roof insulation level to R-30 or greater to comply with the current energy code. While roof upgrades are expensive, they can help reduce heating and cooling loads.

Decarbonization Measure at EOL: Heat Pump Water Heater Upgrade

Next Step: Consult a qualified plumbing contractor to replace the existing gas-fired domestic water heater with a heat pump water heater (HPWH) for improved efficiency and carbon reductions.

We recommend this measure if Mount Horeb is interested in pursuing an electrification or decarbonization strategy. A HPWH replaces fossil-fuel-based water heating while being 2-4 times more efficient than a standard electric water heater. It uses electricity to move heat from the surroundings into the water, instead of generating heat directly through electric resistance. When the existing domestic hot water system reaches the end of its service life, we recommend replacing it with a HPWH.

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BUILDING 4 PUBLIC SAFETY: POLICE STATION

Size: 29,000 square feet

Age: Built in 2019. The building consists of a fire station and a police station. Our site visit focused primarily on the police station.

Existing heating and cooling system: The building is served by two variable-air-volume (VAV) air-handling units (AHU) with DX cooling and hot water terminal reheat, one dedicated to the fire station and the other to the police station. Hot water is provided to the building by two natural gas boilers, with one in lead and the other for backup operation. The police station's garage is served by unit heaters and gas-fired makeup air units (MAU) with energy recovery ventilation (ERV).

Baseline Electricity Use: 285,611 kWh

Baseline Natural Gas Use: 13,944 therms

Weather-normalized Site EUI: 79.5 kBTU/sf. Higher than median for similar buildings (71.8 kBTU/sf).

The building was designed with energy efficiency in mind; however, site EUI does exceed the national median for this building type. The building receives natural gas and electricity service through joint accounts that serve both the fire department and the police department. Energy costs are distributed between the Village (for the police station) and the Mount Horeb Area Joint Fire Department and Emergency Medical Service based on an agreement between the parties that the Village will pay 58 percent of the energy costs and the fire department will pay the other 42 percent of the costs. The energy assessment confirmed that the building appears to be operating efficiently. While more detailed analysis of would be needed to confirm, it is likely that the police station's higher EUI reflects a misalignment between the terms of the agreement between the parties and how energy is actually used in the building.

A building automation system (BAS) manages the HVAC system, allowing for advanced control strategies such as economizer operation, demand control ventilation via CO2 sensors, supply air temperature control, static pressure control, and hot water supply temperature reset controls. The gas and electric bills are divided between the fire and police stations, with 58% allocated to the police station and 42% to the fire department. Each station receives its own water bill. Domestic hot water is provided by an ENERGY STAR certified condensing gas water heater. The police station also features LED lighting throughout with occupancy sensors, along with automated blinds for additional efficiency.

As the building is relatively new and already incorporates many energy efficient measures, our recommendations primarily focus on electrification and decarbonization opportunities that can be implemented when the existing equipment approaches the end of its service life.

Decarbonization Measure at EOL: Air-to-Water Heat Pump Upgrade

Next Step: Consult a qualified HVAC contractor to supplement the existing gas-fired boiler with air-to-water heat pump (AWHP) to reduce the use of natural gas heating.

We recommend this measure if Mount Horeb is interested in pursuing an electrification or decarbonization strategy. The hybrid AWHP + gas boiler setup enables the use of electric heat pump technology as the primary hydronic heating source until outdoor temperatures drop below a predefined switchover point, at which the system switches over to the gas-fired boiler for heating. This configuration maximizes efficiency by leveraging the heat pump's high performance during milder conditions and maintains reliable heating during colder weather, when heat pump performance drops.

Decarbonization Measure at EOL: Heat Pump Water Heater Upgrade

Next Step: Consult a qualified plumbing contractor to replace the existing gas-fired domestic water heater with a heat pump water heater (HPWH) for improved efficiency and carbon reductions.

We recommend this measure if Mount Horeb is interested in pursuing an electrification or decarbonization strategy. A HPWH replaces fossil-fuel-based water heating while being 2-4 times more efficient than a standard electric water heater. It uses electricity to move heat from the surrounding into the water, instead of generating heat directly through electric resistance. We recommend replacing the DHW at its end of life with a HPWH.

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Appendix 2: Solar Methodology

The steps described in this section were followed to recommend sizes of solar arrays that could be installed at each municipal facility. The scope of the Energy Plan project did not allow for solicitation of bids from solar installers to determine exact array configurations, capacities, and costs. The scope also did not include evaluations of roof load capacity for each facility to confirm that the roof structures at all facilities are sufficient to support the recommended solar arrays.

1. **Assessed available space**. Used on-site assessments of Village Hall, the Library, the Public Safety Building, and the Community Center to determine the amount of rooftop space that is available to install a solar array.
    a. Supplemented site visits with aerial and street level imagery from Google Maps and other online sources to assess available roof space, ground space, and potential shading for the remaining municipal facilities.
2. **Determined maximum generating capacity**. Used the National Renewable Energy Lab's (NREL's) PVWatts tool to determine the maximum photovoltaic (PV) array capacity that could be installed in the available space and the annual amount of electricity that the maximum array capacity would generate in an average year.
3. **Optimized cost-effectiveness**. The terms of the MHU electric tariff that applies to facilities that house PV arrays that have generating capacity greater than 20 kW-DC offer a low value to the customer for electricity that the PV array generates which exceeds the building's electricity demand at that time ("over production"). To reduce occurrences of over-production, if the PVWatts output estimated electricity production greater than 80 percent of the building's annual electricity consumption, the size of the recommended array was reduced to a capacity that would produce 80 percent of the facility's annual electricity consumption.
4. **Estimated net installed cost**. The initial cost of the installed array was estimated to be $2.70/watt based on NREL's most recent market assessment[31]. Focus on Energy offers a financial incentive of $50/kW-DC for commercial solar installations, up to a maximum $25,000 incentive amount. The value of this incentive was deducted from the total cost to calculate the net cost. Due to termination of the Federal Investment Tax Credit for any renewable energy systems completed after July 2026, potential value of the ITC was not deducted from the total cost.
5. **Forecast financial payback**. Used U.S. Energy Information Administration (EIA) data for Wisconsin[32] to determine an average value of $0.127/kWh for electricity that the arrays produce which reduces the amount of electricity that the facility purchases. The value per kilowatt-hour produced was applied to the amount of electricity that the array would produce each year to determine an annual value of the electricity that would be generated. The net cost of the array was divided by the annual value of electricity produced to estimate the number of years that would be required for the value of the electricity that is generated to surpass the initial net cost of the array. The financial payback

[31] https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost

[32] https://www.eia.gov/electricity/state/wisconsin/

period does not apply a discount rate to future production and does not consider the potential effects of changes in electricity prices.

We recommend that the Village follow standard procurement procedures of soliciting bids from qualified installation contractors to determine specifications for PV systems on the buildings on which it decides to install solar arrays.

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Appendix 3: Fleet Methodology

The analysis measured the current annual energy, cost, and emissions impacts of the Village of Mount Horeb's municipal fleet. It also applied data on current vehicles to performance metrics of new gasoline, diesel, and electricity-fueled vehicles to recommend a strategy through which the Village can cost-effectively reduce the energy used, and emissions generated by, its vehicles. The methodology used to calculate data on current vehicles and prepare recommendations for fleet vehicle replacements is described below.

1. Calculate key performance indicators (KPIs) for municipal fleet vehicles.
    - Collected data showing the number of gallons of fuel purchased for each vehicle, as well as the fuel type (gasoline, diesel, or other) during a 24-month period
    - Collected data showing the number of miles driven by each vehicle during the same 24-month period.
    - Applied data for fuel use, fuel type, and miles driven to calculate the pounds of CO_2 emitted by each vehicle
    - All Village-owned vehicles were assigned to one of five categories: Half-ton pickup truck, Large pickup truck, Heavy-duty truck, SUV, and Van.
    - Estimated fuel costs per gallon based on 24-month average fuel costs for the Midwest[33].
    - Calculated the annual fuel use, fuel cost, miles driven, and CO_2 emissions for all of the Village's vehicles, then segmented each metric for each vehicle category.
2. Surveyed the market to identify all electric vehicles available in the existing vehicle categories in the Village's fleet.
    - Limited findings to eliminate vehicles that are not yet in production or had limited market share, making them difficult for the Village to obtain.
    - Within each vehicle category, identified a cost-effective EV option that met minimum driving range requirements and had a strong fuel economy (kWh/100 miles) rating to use for opportunity analysis.
3. Surveyed the market to identify a leading gasoline or diesel-powered vehicle in the existing vehicle categories in the Village fleet that the Village would be likely to consider for purchase during its normal vehicle retirement and replacement process.
    - Identified cost and fuel economy metrics for each selected vehicle.
4. Used previous gasoline, diesel, and electricity costs to calculate the cost of fuel used to drive one mile by the selected EV and by the selected gasoline or diesel vehicle in each vehicle category.
5. Applied research by Consumer Reports[34] to estimate the average per mile maintenance costs for EVs and gasoline or diesel-powered vehicles.
   Calculated the potential cost savings per mile that the Village could obtain by purchasing an EV in place of a gasoline or diesel vehicle. If the net purchase cost of the EV exceeded the cost of the gasoline or diesel vehicle, calculated the number of miles after which the per mile cost savings from driving the EV would surpass the incrementally higher purchase of the EV.

[33] U.S. Energy Information Administration Weekly Retail Gasoline and Diesel Prices. https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r20_a.htm

[34] Harto, C. *Electric Vehicle Ownership Costs: Chapter 2 – Maintenance.* Consumer Reports. September, 2020. (https://advocacy.consumerreports.org/wp-content/uploads/2020/09/Maintenance-Cost-White-Paper-9.24.20-1.pdf)

Appendix 4: Additional References and Resources

Advanced Manufacturing Office: Case Study - The Challenge: Saving Energy at a Sewage Lift Station Through Pump System Modificat. n.d.

ANSI/ASHRAE/IES Standard 100-2018 Addendum C. *Energy Efficiency in Existing Buildings.* December 2022. https://www.ashrae.org/file%20library/technical%20resources/standards%20and%20guidelines/standards%20addenda/100_2018_c_20221230.pdf

PumpWorks Engineering. 2024. "What Can Predictive Monitoring Tell You About Your Pumps?" *Pumpworks*, December 19. https://www.pumpworks.com/what-can-predictive-monitoring-tell-you-about-your-pumps/.

U.S DOE. 2012. "Case Study - The Challenge: Saving Energy at a Sewage Lift Station Through Pump System Modifications." *Energy Efficiency and Renewable Energy Advanced Manufacturing Office*, February 2.

Basso, Dale, Bruce Benkhart, Thomas Bishop, et al. 2014. *Premium Efficiency Motor Selection And Application Guide: A Guidebook for Industry*. U.S. Department of Energy (DOE) Office of Energy Efficiency and Renewable Energy (EERE). https://www.energy.gov/sites/prod/files/2014/04/f15/amo_motors_handbook_web.pdf.

National Renewable Energy Laboratory (NREL) Solar Installed System Cost Analysis. https://www.nrel.gov/solar/market-research-analysis/solar-installed-system-cost

U.S. Environmental Protection Agency (EPA). *U.S. Energy Use Intensity by Property Type*. ENERGY STAR Portfolio Manager Technical Reference. August 2024. https://portfoliomanager.energystar.gov/pdf/reference/US%20National%20Median%20Table.pdf

U.S. Energy Information Administration Weekly Retail Gasoline and Diesel Prices. https://www.eia.gov/dnav/pet/pet_pri_gnd_dcus_r20_a.htm

U.S. Energy Information Administration Wisconsin Electricity Profile 2024. https://www.eia.gov/electricity/state/wisconsin/

U.S. Energy Information Administration 2018 Commercial Building Energy Consumption Survey (CBECS). https://www.eia.gov/consumption/commercial/

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VILLAGE OF MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator, Sara Alderson, Utility Office Coordinator

AGENDA ITEM # 5.c

Consideration of Resolution 2026-02 Green Tier Legacy Community Program

BACKGROUND

The Sustainability and Natural Resources (SNR) Committee is recommending joining the Wisconsin Department of Natural Resources Green Tier Legacy Community Program. The program allows the Village acces to DNR Green Tier Staff, networking opportunities with other Green Tier Communities, and preference on certain grant applications. There is no cost to join and no real obligations or requirements. However, if the Village wants to be eligible for the preferred access to certain grants, we would be required to submit an annual benchmark report on sustainability achievements. From my discussion with Green Tier Staff, this would not be significantly different that year-end summaries that the SNR committee currently does.

RECOMMENDATION

ATTACHMENTS

1. GTLC Overview_Jan 2026
2. reso 2026-02 Green Tier Legacy Community

An Introduction to Green Tier Legacy Communities

GREEN TIER

DNR's Sustainability & Business Support Section



Support for your business wherever you are on your path to sustainability

Green Tier Legacy Communities

- Non-Regulatory
- Voluntary Participation
- Network
- Continual Improvement



GREEN TIER

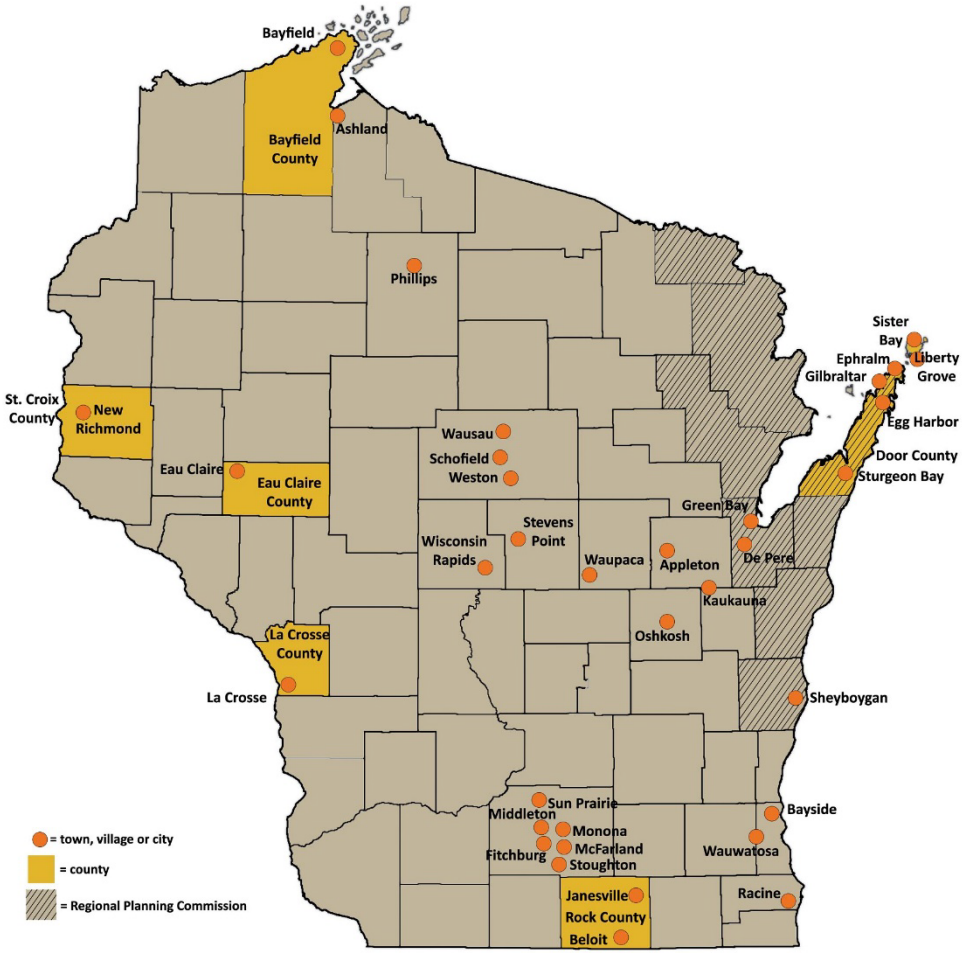
What Does Participation Look Like?

- Networking, sharing ideas & experiences
- Collaborating
- Tracking/measuring
- Doing a little better each year

GREEN TIER

Who is in GTLC?

Green Tier Legacy Communities		
Cities		
Appleton	Kaukauna	Sheboygan
Ashland	La Crosse	Stevens Point
Bayfield	Middleton	Stoughton
Beloit	Monona	Sturgeon Bay
De Pere	New Richmond	Sun Prairie
Eau Claire	Oshkosh	Waupaca
Fitchburg	Phillips	Wausau
Green Bay	Racine	Wauwatosa
Janesville	Schofield	Wisconsin Rapids
Towns	**Villages**	**Counties**
Gibraltar	Bayside	Bayfield
Liberty Grove	Egg Harbor	Door County
	Ephraim	Eau Claire
	McFarland	La Crosse
	Sister Bay	Rock
	Weston	St. Croix
Regional Planning Commission		
Bay Lake RPC		



Building Strength, Gaining Momentum



As of 2025 membership, we are engaging ~1,075,000 Wisconsinites

GREEN TIER

Benefits of Joining GTLC

- ✓ Single point of contact at DNR
- ✓ Potential additional consideration for select DNR grants & loans*
- ✓ Ability to track progress with the Sustainable Strategies Scoresheet
- ✓ Peer-to-peer learning
- ✓ Grant notifications
- ✓ Regional collaboration opportunities
- ✓ Sustainable Strategies Webinars
- ✓ Free technical support from subject matter experts
- ✓ Use of Green Tier logo
- ✓ Statewide recognition of your community's commitment to long-term resilience, community well-being, and fiscal responsibility.



GTLC members touring the Stevens Point Wastewater Treatment Plant at a recent member meeting.

**All Legacy Communities receive networking, learning, and recognition benefits, while communities that complete the Sustainability Strategies Scoresheet each year may also receive additional consideration for select grants and loans.*

GREEN TIER

Grants & Loans

Additional Consideration with Scoresheet Submittal

- **Surface Water**

  Land Acquisition, Management Plan Implementation, and County Ordinance Grants

- **Outdoor Recreation Grants**

  Stewardship, Land & Water Conservation Fund, and Recreational Trails Program

- **Targeted Run-off Management Grants**
- **Urban Nonpoint Source & Stormwater Grants**
- **Urban Forestry Grants**
- **Clean Water Fund / Safe Drinking Water Loans**

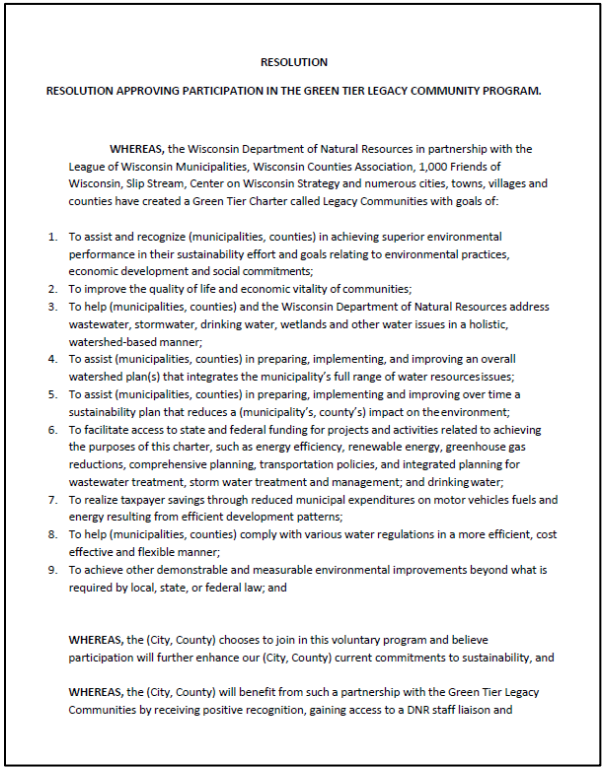


GREEN TIER

Joining GTLC

1. Adopt a resolution
2. Complete Baseline of Sustainability Strategies Scoresheet
3. Agree to member commitments (next slide)

Sample Resolution



RESOLUTION

RESOLUTION APPROVING PARTICIPATION IN THE GREEN TIER LEGACY COMMUNITY PROGRAM.

WHEREAS, the Wisconsin Department of Natural Resources in partnership with the League of Wisconsin Municipalities, Wisconsin Counties Association, 1,000 Friends of Wisconsin, Slip Stream, Center on Wisconsin Strategy and numerous cities, towns, villages and counties have created a Green Tier Charter called Legacy Communities with goals of:

1. To assist and recognize (municipalities, counties) in achieving superior environmental performance in their sustainability effort and goals relating to environmental practices, economic development and social commitments;
2. To improve the quality of life and economic vitality of communities;
3. To help (municipalities, counties) and the Wisconsin Department of Natural Resources address wastewater, stormwater, drinking water, wetlands and other water issues in a holistic, watershed-based manner;
4. To assist (municipalities, counties) in preparing, implementing, and improving an overall watershed plan(s) that integrates the municipality's full range of water resourcesissues;
5. To assist (municipalities, counties) in preparing, implementing and improving over time a sustainability plan that reduces a (municipality's, county's) impact on theenvironment;
6. To facilitate access to state and federal funding for projects and activities related to achieving the purposes of this charter, such as energy efficiency, renewable energy, greenhouse gas reductions, comprehensive planning, transportation policies, and integrated planning for wastewater treatment, storm water treatment and management; and drinking water;
7. To realize taxpayer savings through reduced municipal expenditures on motor vehicles fuels and energy resulting from efficient development patterns;
8. To help (municipalities, counties) comply with various water regulations in a more efficient, cost effective and flexible manner;
9. To achieve other demonstrable and measurable environmental improvements beyond what is required by local, state, or federal law; and

WHEREAS, the (City, County) chooses to join in this voluntary program and believe participation will further enhance our (City, County) current commitments to sustainability, and

WHEREAS, the (City, County) will benefit from such a partnership with the Green Tier Legacy Communities by receiving positive recognition, gaining access to a DNR staff liaison and

GREEN TIER

1. Attend Virtual Quarterly Meetings

- Join us virtually each quarter at our GTLC Member Meetings
  - Expert speakers from around the state
  - Discussion among community members about recent sustainability projects
  - Program updates



DNR Secretary Payne speaking to GTLC members at an in person meeting in 2023 in Stevens Point.

GREEN TIER



GTLC members viewing an EV Charging Station in Bayfield County at an in person member meeting in 2023.

2. Engage with the Network

- Share your successes and challenges with your fellow GTLC members
- Share progress and lessons learned through scoresheets, quarterly meetings, and peer exchange

To Maximize your Benefits

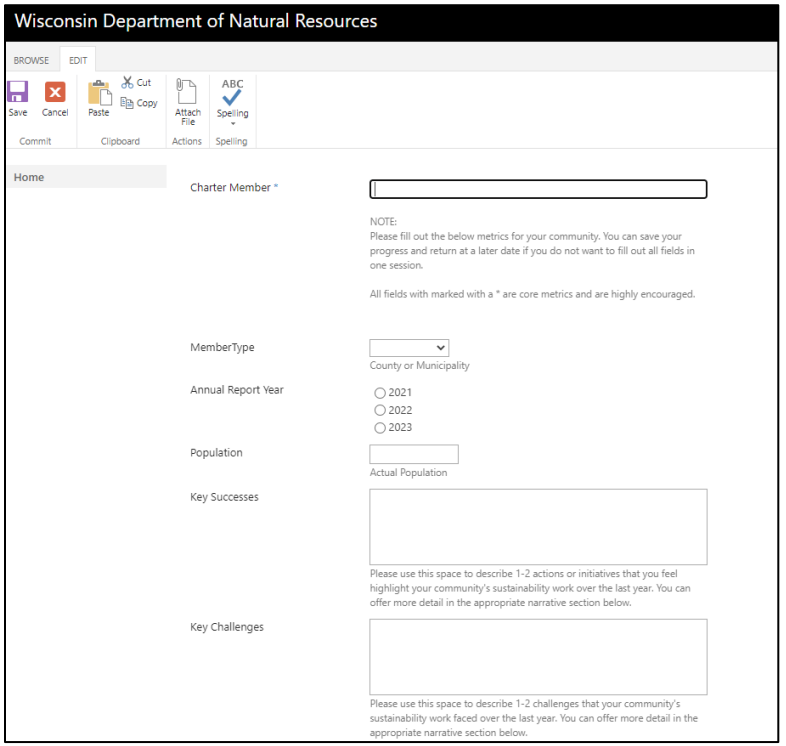
3. Submit an Annual Report

- Each year, communities share updates on their sustainability work through the Sustainability Strategies Scoresheet.
- The scoresheet is comprised of six categories:

1. Energy and Emissions
2. Transportation Systems
3. Land Use
4. Water Quality and Conservation
5. Solid Waste
6. Health and Equity

- Each category has two sections:
  1. Metrics (quantitative)
  2. Supporting Actions (qualitative/narrative)

GTLC Scoresheet



CONNECT WITH US

Jennifer Feyerherm
jennifer.feyerherm@wisconsin.gov

Mandaline Bergstrom
mandaline.bergstrom@wisconsin.gov

dnr.wisconsin.gov
Search: Legacy Communities

/WIDNR

@WIDNR

@WI_DNR

/WIDNRTV

"WILD WISCONSIN:
OFF THE RECORD"

RESOLUTION 2026-02

RESOLUTION APPROVING PARTICIPATION IN THE GREEN TIER LEGACY COMMUNITIES CHARTER.

WHEREAS, the Wisconsin Department of Natural Resources has created a Green Tier Charter called Legacy Communities with the following goals:

1. To assist and recognize all forms of local governments in achieving superior environmental performance and goals relating to environmental practices, economic development and social commitments;
2. To improve the quality of life and economic vitality of communities;
3. To help local governments and the Wisconsin Department of Natural Resources address wastewater, stormwater, drinking water, wetlands and other water issues in a holistic, watershed-based manner;
4. To assist local governments in preparing and implementing a sustainability plan to reduce their impact on the environment while still being fiscally responsible and serving their residents;
5. To facilitate access to state and federal funding for projects and activities related to achieving the purposes of this charter, such as energy efficiency, renewable energy, greenhouse gas reductions, comprehensive planning, transportation policies, and integrated planning for wastewater treatment, storm water treatment and management, and drinking water;
6. To realize taxpayer savings through reduced municipal expenditures resulting from efficient development patterns;
7. To help local governments comply with environmental regulations in a more efficient, cost effective and flexible manner;
8. To achieve other demonstrable and measurable environmental improvements beyond what is required by local, state, or federal law; and

WHEREAS, The Village of Mount Horeb chooses to join in this voluntary program and believes that participation will further enhance our current commitments to sustainability, and

WHEREAS, The Village of Mount Horeb will benefit from such a partnership with Green Tier Legacy Communities by receiving positive recognition, gaining access to a DNR staff liaison and their resource team, gaining access to all Legacy Communities' annual scoresheet data, and

WHERAS, by adopting this resolution, the Village of Mount Horeb agrees to sign and hold to the Green Tier Charter for Legacy Communities, participate in the quarterly meetings, network and share information with our public and the communities in the program, and develop a baseline assessment of practices and provide an annual report noting the progress on our goals, and sustainability plans;

NOW, THEREFORE, BE IT RESOLVED by the Village of Mount Horeb declares itself a signatory to the Green Tier Charter for Legacy Communities and authorizes the [appropriate positions] to execute the necessary documents on behalf of the Board of Trustees, and

BE IT FURTHER RESOLVED, that Village of Mount Horeb staff are directed to assist with meeting the Charter goals and to submit an annual report to the Organizational Signatories, and

BE IT FURTHER RESOLVED, that upon adoption, the Village Administrator is hereby directed to send a copy of this resolution to the Wisconsin DNR Green Tier Legacy Communities Program Coordinator.

The above and foregoing Resolution was duly adopted at a meeting of the Board of Village of Mount Horeb on February 4, 2026.

_____
Ryan Czyzewski, Village President

ATTEST:

_____
Alyssa Gaffney, Village Clerk

VILLAGE OF
MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator

AGENDA ITEM # 6.a

Jt Klein Senior Affordable and Market Rate Multi-Family Housing, 101 Perimeter Rd

BACKGROUND

JT Klein is submitting a Specific Implementation Plan (SIP) for two multifamily buildings, one 40-unti affordable senior and one 49-unit market rate to replace the blighted former Karakahl Motel. The SIP is the second step in the rezoning process, the first step being the General Development Plan (GDP). The GDP is the zoning step that provides the applicant the right to the use of the site and sets the building envelope, size and number of units. The SIP is the design phase that sets the site plan, design of the building including material and colors, and lighting and landscaping plan.

Overall, the SIP is consistent with the previously approved General Development Plan for the project. Planner Rohr's memo includes additional details on the project and needed flexibilities requested for approval under the SIP. The SIP for the project was recommended to the Board for approval by the plan commission, including the items identified in Planner Rohr's memo, staff approval of lightening the main siding color for building 2, the extension of the eave over hang on the gabled roof from 18 inches to 24 inches and additional bike parking in the underground parking,

RECOMMENDATION

ATTACHMENTS

1. 11.17.25 FINAL MH Rezoning App PD-SIP
2. SIP Review Memo

VILLAGE OF MOUNT HOREB

VILLAGE OF MOUNT HOREB
Zoning Administrator 608-437-9409
138 East Main Street
Mount Horeb, WI 53572

PLAN COMMISSION APPLICATION

PROJECT NAME: Karakahl Redevelopment

Project Address 101 Perimeter Rd. **Parcel Number:** 060612400651
Access Dane Link

Zoning Map

Current Zoning PD-GDP *(select **zoning layer** in map)* **Future Land Use Zoning:** PD-SIP *(select **future land use layer** in map)*

APPLICANT: JT Klein Company, Inc.	
ADDRESS: 818 S. Park St.	
PHONE: 612-202-1577	EMAIL: jacob@jtklein.com

OWNER: Mount Horeb Acquisitions LLC	
ADDRESS: 818 S. Park St.	
PHONE: 612-202-1577	EMAIL: jacob@jtklein.com

PROJECT DESCRIPTION: New construction multi-family housing. The development will consist of 89 total rental units

OWNER/APPLICANT SIGNATURE: _____ **DATE:** 11-17-25

FEES & DEPOSITS: (CHECK ALL THAT APPLY)

		Application	Fee	Public Hearing-
		Certificate of Appropriateness (for Central Business Zoning)	No Fee	
		Certified Survey Map (CSM) *scroll to Section 18.61 in schedule*	Schedule	
		Certified Survey Map Extraterritorial *scroll to Section 18.61 in schedule*	Schedule	
		Comprehensive Plan Amendment	$150.00	Class One
		Conditional Use Permit (changes in USE of property)	$150.00	Class Two
		Conditional Use Permit (planned development district)	$200.00	Class Two
	✓	Design Review	$100.00	
		General Development Plan (GDP)	$200.00	
	✓	Specific Improvement Plan (SIP)	$300.00	
		Zoning Amendment (changes in zoning)	$150.00	Class Two
		Zoning Amendment (planned development district)	$200.00	Class Two

Developer Deposit:

An escrow deposit is required in accordance with the Development Application Agreement.

Total Fee Paid:

_____

Date: _____

Fee Waived By:

_____

The Village of Mount Horeb Plan Commission meets the fourth Wednesday of the month, unless noted on calendar. A schedule of deadlines can be found on the Zoning page of the Village website: Plan Commission Calendar. **Consultation with the Village Administrator is highly encouraged to discuss procedure and necessary forms prior to any submittal.**

Note: applications requiring a public hearing will be scheduled for a hearing according to the publication deadline, with action considered at the scheduled Plan Commission meeting following the public hearing. Applicants are encouraged to contact the Village Administrator for a pre-application meeting to review the project and submittal requirements prior to submitting an official application.

Class One = Published in newspaper for one week / Class Two = Published in newspaper for two weeks

Application submittals should include:

1) Fully executed **Plan Commission Application**
2) Fully executed **Development Application Agreement** (attached)
    - A development agreement is a voluntary contract between a local jurisdiction and a person who owns or controls property withing the jurisdiction, detailing the obligations of both parties and specifying the standards and conditions that will govern development.
3) Full payment for all associated fees
4) Written narrative of the proposed project
5) One electronic copy of **full submittal**
    - emailed to (2 parties) Nic.Owen@mounthorebwi.info and mhbuildinginspector@mounthorebwi.info,
    - or provided to our offices on a USB device or submitted via downloaded file

All **submittals** must contain the following to be considered complete:

1) Written narrative must include:
    a. Owner and/or developer names and addresses
    b. Where applicable; architect and/or engineer names and addresses
    c. Description of proposed uses
    d. Calculation indicating total site size, building floor area, number of parking stalls, amount of impervious surface, and amount of non-impervious green space
2) A scaled site plan which must include:
    a. Name of project and date of plan preparation
    b. Scale of drawing and north arrow
    c. Property boundaries
    d. Where applicable; both the one hundred (100) year recurrence interval floodplain and the floodway delineations
    e. Where applicable; wetlands as delineated in the WDNR Wetland Inventory and 75' setback line from such wetlands
    f. Existing and proposed easements on the subject property
    g. Adjoining public street rights-of-way, street pavements, and sidewalk locations; existing and proposed driveways and curb cuts; and parking and loading areas
    h. Location of existing and proposed building footprints with building and yard setback lines indicated
    i. Location and size of any existing or proposed signs and fencing
    j. Location and type of all outdoor lighting proposed to illuminate the site; including a photometrics plan of the site (See Village Code Chapter 17.14 (4))

3) Building Plans which must include:
    a. Elevation drawing of each new or remodeled building façade, indicating height, materials and building dimensions
    b. Colored renderings of all façades of the principal building showing the proposed colors
    c. Building materials samples (upon request)

4) Grading and Stormwater Management Plan, including:
    a. Existing and proposed topography shown at a contour interval of not less than two (2) feet at National Geodetic Vertical Datum
    b. Location and dimension of Stormwater retention or detention basins and/or stormwater conveyances
5) Landscape Plan that meets all landscaping standards (See Village Code Chapter 17.14(25-27))
6) Parking Calculations
7) Escrow fees as outlined in the Development Application Agreement
8) Erosion Control and Stormwater Management Application and fees. *No person may begin a land disturbing construction activity or land developing activity subject to this division until the person has paid the Erosion Control Review and Inspection fee.
9) Erosion Control Plan
10) Signage Plan (Village Code Chapter 17.171)
11) Design Review guideline (See Village Code Chapter 17.14)
12) Refer to Mount Horeb Village Code Chapter 17-Zoning Code for all supporting details of required documentation.

DEVELOPMENT APPLICATION AGREEMENT

This Development Application Agreement (the "Agreement") is made and entered into this 17th day of November, 2025, by and between the Village of Mount Horeb, a Wisconsin municipal corporation (the "Village"), and JT Klein Company, Inc. (the "Applicant").

RECITALS

A. The Applicant plans to file, or has filed, an application for approval by the Village of one or more of the following activities within the Village's jurisdiction: site plan / conditional use permit / rezone / variance / other development (hereinafter referred to as the "Development").

B. The Village desires to review and take action on the Development in a timely manner in accordance with all applicable federal, state and local laws and regulations, and without unreasonable expense to Village taxpayers.

C. The Applicant agrees and acknowledges that decisions and approvals regarding the Development are legislative determinations to be made in the Village's discretion and that the Applicant's compliance with this Agreement does not, in any way, entitle the Applicant to approval of the Development.

D. The process of reviewing the plans and documents associated with the Development will cause the Village to incur direct and indirect expenses including, but not limited to, staff time and fees and expenses incurred by the Village for outside consultant services related to review of the Development (*e.g.*, engineers, attorneys, accountants, planners, and other professionals).

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein, and for good and valuable consideration, the Village and the Applicant agree as follows:

1. *Recitals*. The representations and recitations set forth in the foregoing paragraphs are material to this Agreement and are hereby incorporated into and made a part of this Agreement as though they were fully set forth in this paragraph.

2. *Applicant to Reimburse Village Review Costs*. The Applicant shall reimburse the Village for all direct and indirect costs and expenses related to the Village's review of the Development. The direct and indirect costs and expenses include, but are not limited to, staff time and fees and expenses incurred by the Village for outside consultant services (*e.g.*, engineers, attorneys, accountants, planners, and other professionals). For purposes of this Agreement, the direct and indirect costs and expenses shall be referred to as "Review Costs." Village staff time shall be charged at current rates.

3. *Deposit Required to Fund Reimbursement Account.*

a. To ensure that funds are readily available to the Village for reimbursement of the Review Costs as provided in paragraph 2 above, the Applicant shall deposit with the Village an amount determined by the Village Zoning Administrator to be used to pay the Review Costs (the "Deposit"). The Village Zoning Administrator shall use the following table as a guide to determine the amount of the Deposit:

(1) Small additions (<2,500 sf) shall require a $1,500 Deposit.
(2) Small-sizedprojects (<5,000 sf) shall require a $3,500 Deposit.
(3) Medium-sized projects (<10,000 sf) shall require a $5,500 Deposit.
(4) Large-sized projects (>10,000 sf) shall require a $10,000 Deposit.
(5) In addition to the amounts identified in (1) through (4), any Development that requires a development agreement or tax incremental financing assistance from the Village shall require an additional $5,000 to $10,000 Deposit.

All Deposit amounts shall be determined by the Village Zoning Administrator in his/her sole discretion and are not subject to challenge by the Applicant. Generally small additions will be less than 2,500 square feet, small projects less than 5,000 square feet, medium projects less than 10,000 square feet and large projects are over 10,000 square feet.

b. The Applicant is responsible for payment of all Review Costs regardless of whether the amount exceeds the amount initially deposited with the Village. The Village reserves the right to require the Applicant to deposit additional amounts if the Village Zoning Administrator determines that additional amounts are necessary because of the size of the Development or because the Reimbursement Account (defined below) has been depleted.

c. The Deposit may be provided in the form of cash, a certified check, cashier's check, personal check, or some other form as approved by the Village.

d. The required Deposit must be made by the Applicant upon execution of this Agreement.

e. The Applicant agrees and acknowledges that the Village will not process the application(s) associated with the Development and that the Village may suspend or otherwise stop activities associated with the Development if the Applicant fails to comply with this Agreement.

f. The Village shall place and maintain the Deposit in a segregated, non-interest-bearing account to be used solely for the purpose of reimbursing the Review Costs in accordance with paragraph 4 below (the "Reimbursement Account").

4. *Village Withdrawals from the Reimbursement Account.*

a. After complying with the notification requirements of paragraph 4.b. below, the Village is entitled to make withdrawals from the Reimbursement Account to pay Review Costs in accordance with paragraph 2 above.

b. Not less than 5 days prior to making any withdrawal from the Reimbursement Account, the Village shall provide the Applicant with an itemized invoice for Review Costs incurred, together with a written notice of the Village's intent to withdraw such funds from the Reimbursement Account.

c. Withdrawals from the Reimbursement Account may be made as often as necessary to reimburse the Review Costs. In the event that the balance of Applicant's Reimbursement Account reaches $1,000 or less, the Village shall have the discretion to continue withdrawing funds from the Reimbursement Account; to invoice the Applicant directly for payment; or to require the Applicant to pay additional monies to the Village, which monies shall be deposited in the Reimbursement Account. Payments for directly invoiced bills shall be due 30 days from the date the invoice is mailed to the Applicant.

d. Any amounts remaining in the Reimbursement Account after the Village as taken final action on the Development and all Review Costs have been paid shall be promptly refunded to the Applicant.

5. *Authority/Binding Effect.* The parties agree that the undersigned signatories to this Agreement have full power and authority to act on behalf of the Village and the Applicant, and that all necessary and enabling resolutions have been enacted. This Agreement shall bind the heirs, successors and assigns of the Applicant and the Village.

6. *Notification of Parties.*

Any notices to be provided under this Agreement may be made by delivery in person, by First Class mail, or by electronic mail (request a read receipt required) as provided below:

To Village:
Village of Mount Horeb
Village Administrator
138 East Main Street
Mount Horeb, WI 53572
Email: Nic.Owen@mounthorebwi.info

To Applicant: JT Klein Company, Inc.
818 S. Park St.
Madison, WI 53715

Email: jacob@jtklein.com

7. *Severability*. If any provision of this Agreement is deemed invalid, then the invalidity of said provision shall not affect the validity of any other provision hereof.

8. *Amendment, Withdrawal, or Release*. This Agreement may be withdrawn, amended or released only by a written document duly executed by both parties.

9. *Effective Date*. This Agreement shall be effective commencing on the date indicated in the first paragraph above.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by the duly authorized individuals and officers below.

VILLAGE OF MOUNT HOREB

By: _____
Nicholas W Owen
Administrator

APPLICANT

By: _____
Print name: Jacob T. Klein
Title: President

1.

A. Project Developer - JT Klein Company, Inc.

JT Klein Company, Inc. (JTK) was founded in 2014 with the ambition of increasing access to senior and multifamily affordable housing in Wisconsin and Dane County. Based in Madison, Wisconsin, JTK is a leading workforce housing developer and has successfully developed 871 housing units in Dane County. Most recently, JTK started construction on Phase II of it's redevelopment of the former Westgate Mall in Madison. Upon completion, this project will contain over 620 apartments, including market rate, affordable senior and workforce housing.

Using years of experience and a high level of attention to detail, JT Klein is able to navigate each project's unique challenges to ensure each building is built in a timely fashion without sacrificing quality. JT Klein understands the challenges of developing multifamily housing and continues to complete successful projects on time and on budget.

818 S. Park Madison, WI 53715

B. Project Contacts

Architect: Knothe Bruce & Associates

KBA was founded on the principle that thoughtful design can improve the way we live and work. With over half a century of architectural expertise, we have grown into a firm recognized for our dedication to creating meaningful spaces that balance innovation and practicality. Over the years, we've remained true to our belief that great design is about more than aesthetics, it's about creating spaces that truly serve the people who use them. Our approach is rooted in collaboration, ensuring that each design is a thoughtful response to our clients' needs while enhancing the surrounding environment.

8401 Greenway Blvd Suit 900 Middleton, WI 53562

Civil Engineering: Wyser Engineering

Our team of professional engineers and land surveyors provides site planning, water resources engineering, utility and infrastructure design, traffic engineering and surveying solutions to public and private sector clients for complete project delivery. Wyser Engineering aims to establish long lasting relationships with all Clients as a vested consultant to serve your needs. Concept through Construction.

300 E Front St Mount Horeb WI 53572

Property Management Team- Oakbrook Corporation

This project will be professionally managed by an entity controlled by Oakbrook Corporation, Inc. Based in Madison, WI, Oakbrook's multifamily property management group has extensive experience managing apartment communities of all types and sizes. Their portfolio consists of senior and family communities which operate as market rate properties or were financed with Section 42 Low Income Housing Tax Credits or under various other state and federal programs. Oakbrook Corporation currently employs over 280 individuals and manages over 8,300 apartments in 118 different properties in Wisconsin, Iowa and Illinois, and 46 commercial properties in the Madison area totaling over 1,900,000 square feet.

2 Science Court Madison, WI 53704

C. Description of Proposed Uses:

JT Klein Company, Inc. is pleased to present this proposal for the redevelopment of the former Karakahl Country Inn, located at 101 Perimeter Road in Mount Horeb, Wisconsin. The current site has sat vacant and deteriorating for years and is considered by all definitions blighted. This redevelopment presents a unique opportunity to eliminate a longstanding eyesore at one of Mount Horeb's most visible entry points and replace it with a thoughtfully designed, high-quality residential community.

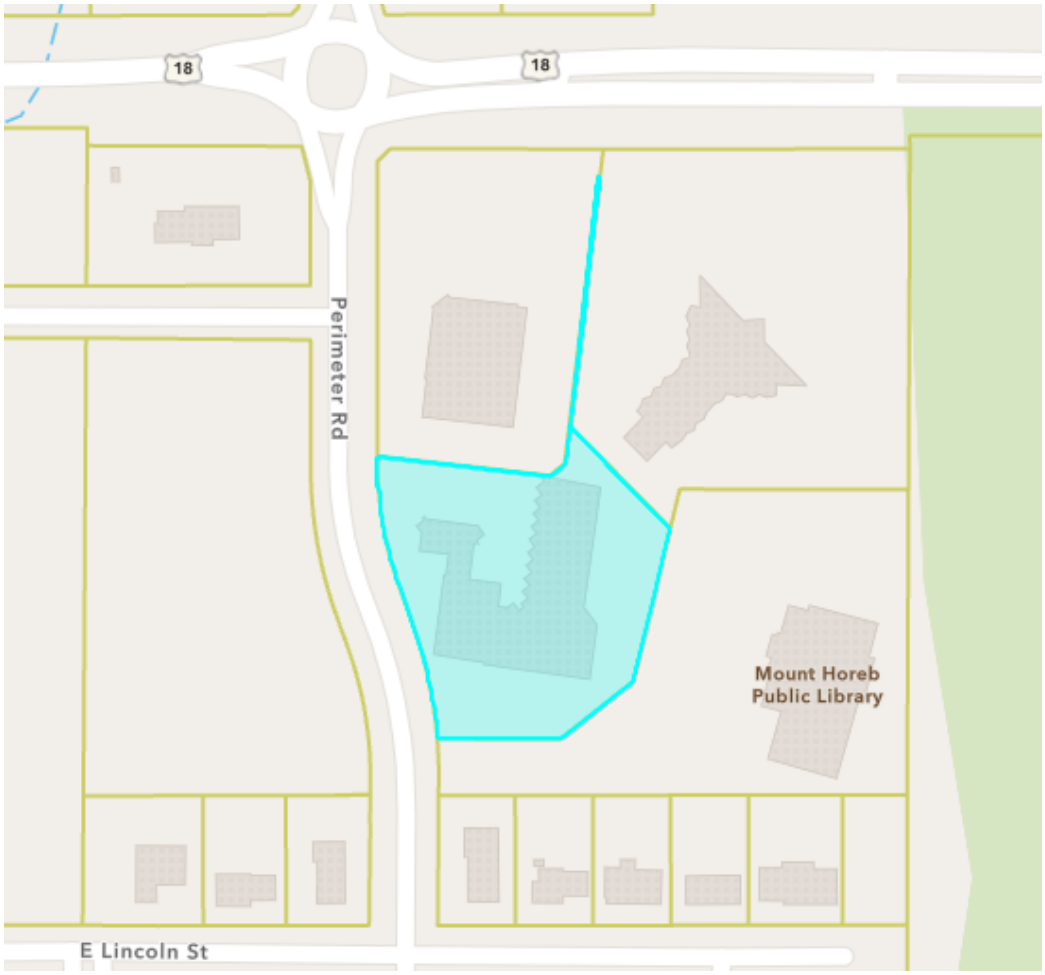
The project consists of two separate three-story apartment buildings, constructed above underground parking. This new community will offer a mix of studio, one, and two-bedroom apartment homes designed to attract a diverse range of residents. One building will feature 49 market-rate units, while the other will provide 40 affordable housing units for seniors. Units will feature open layouts, contemporary finishes, in-unit laundry, and private outdoor space. Common amenities will include a community room, fitness center, underground heated parking, elevator access, and secure entry.

During the concept review and neighborhood meeting for the project, the development team heard clear and consistent feedback from the community expressing a strong desire for senior and market rate housing. Each building will be funded independently, and the lots will be separated with a CSM. This structure will allow the development to serve a wide range of tenants from different socioeconomic backgrounds

Location Map:

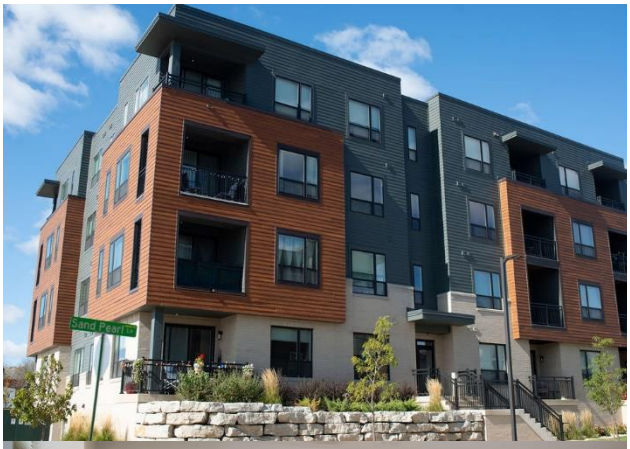
The redevelopment site is located at 101 Perimeter Rd, formerly the Karakahl Country Inn, a long-vacant hotel property directly visible from US-151. The site has deteriorated significantly and is now considered blighted, with overgrown landscape, unsafe structures, and deteriorating pavement. This redevelopment offers an opportunity to transform an underutilized and highly visible site into a modern, vibrant asset for the community.

101 Perimeter Rd. Map



Project Themes and Images:

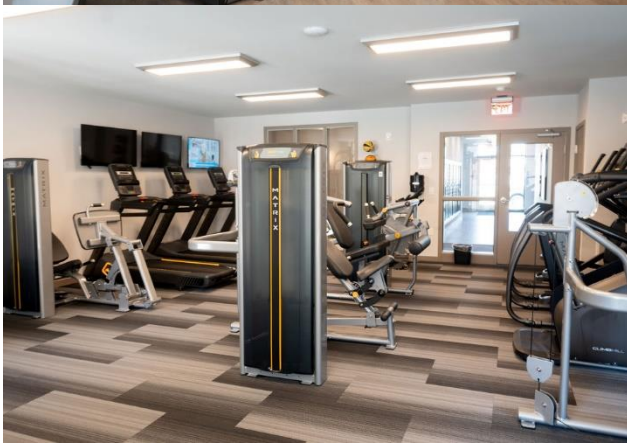
Below are example imagines from JTK's recently completed development Oak Ridge University Park. JTK will use materials and high-level finishes similar in quality to these imagines.

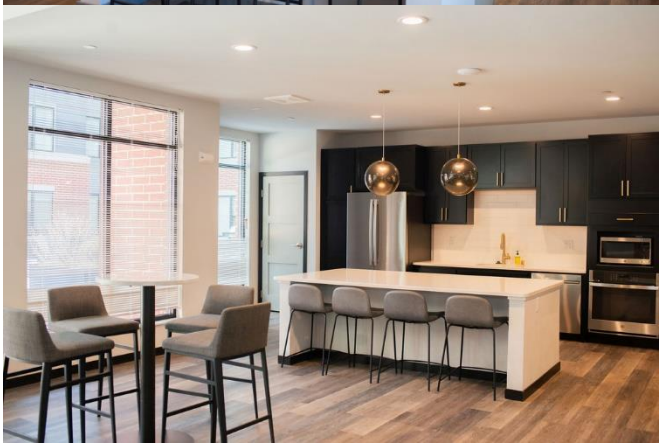












General Relationship of the Project to the Master Plan:

The proposed 89-unit multi-family development aligns closely with the Village of Mount Horeb's Comprehensive Plan, which emphasizes expanding housing options for a range of income levels and household types. It encourages zoning amendments to support higher density, promotes redevelopment of underutilized or blighted properties, and prioritizes infill housing projects. This proposal addresses these objectives directly by revitalizing the former Karakahl Country Inn site—a long-vacant and blighted property—into high-quality, well-designed housing that increases supply without expanding the village's footprint. By redeveloping this underutilized site into a vibrant residential community, the project supports the Village's commitment to sustainable growth, economic revitalization, and housing affordability.

VILLAGE OF MOUNT HOREB VISION STATEMENT The Village of Mount Horeb will continue to be a thriving and active community that builds on its unique culture, character, assets, location, and history to foster community, economic, and tourism development. The Village will continue to grow and evolve by developing and retaining local businesses, attracting new businesses and employers, and offering housing availability and affordability, while maintaining its character, aesthetic look, and feel. A vibrant downtown featuring the community's historic past and bright future acts as the community's center piece for cultural, recreational, business, shopping, and tourism activities. Building on its high quality of life, the Village will be a welcoming, safe, clean, healthy, and inclusive place to live, work, and play.

D. Approximate Residential Densities and Non-Residential Intensities:

For dwelling units per acre, floor area ratio, and impervious surface area ratio, please see the chart below put together by the design architect, Knothe Bruce Architects (KBA)

SITE DEVELOPMENT DATA:		
ZONING	PD - PLANNED DEVELOPMENT	
DENSITIES:	LOT 1	LOT 2
LOT AREA	46,579 S.F. / 1.06 ACRES	37,916 S.F. / 0.87 ACRES
DWELLING UNITS	49 UNITS	40 UNITS
LOT AREA / D.U.	951 S.F. / D.U.	948 S.F. / D.U.
DENSITY	46 UNITS / ACRE	46 UNITS / ACRE
PERVIOUS / GREEN SPACE	14,274 S.F. (31%)	16,122 (43%)
BUILDING HEIGHT (SEE ELEVATION SHEETS)	3 STORIES	3 STORIES
FLOOR AREA CALCULATIONS:		
FIRST FLOOR	16,878 S.F.	13,738 S.F.
SECOND FLOOR	16,878 S.F.	13,738 S.F.
THIRD FLOOR	16,878 S.F.	13,649 S.F.
TOTAL	50,634 S.F.	41,125 S.F.
BASEMENT	18,968 S.F.	14,146 S.F.
DWELLING UNIT MIX:		
STUDIO	6	0
ONE BEDROOM	30	21
TWO BEDROOM	13	19
TOTAL	49 D.U.	40 D.U.
VEHICLE PARKING STALLS:		
UNDERGROUND GARAGE	47 (INCL. 1 ADA)	35 (INCL. 1 ADA)
SURFACE	26 (INCL. 1 ADA)	14
TOTAL	73 PARKING STALLS	49 PARKING STALLS
PARKING RATIO	1.49 STALLS / D.U.	1.23 STALLS / D.U.

2. **Scaled Site Plan**
3. **Building Plan**

The following architectural exhibits meet all applicable requirements for items 2 &3.



Klein Perimeter Rd.

101 Perimeter Rd. Mt.Horeb, WI

2 BUILDINGS, 3 STORY, 89 UNITS; 122 UNDERGROUND PARKING



SHEET INDEX

SITE SHEETS

G 000	COVER SHEET
C100	SITE PLAN
C101	DEMOLITION PLAN
C200	GRADING PLAN
C201	DETAILED GRADING PLAN
C202	DETAILED GRADING PLAN
C300	UTILITY PLAN
C400	DETAILS
C401	DETAILS
CA101	ARCHITECTURAL SITE PLAN
CA102	SITE LIGHTING PLAN
CA103	PERVIOUS/ GREEN SPACE
L100	LANDSCAPE PLAN
L101	LANDSCAPE DETAILS

ARCHITECTURAL SHEETS

AC101.1	FIRST FLOOR PLAN
AC102.1	SECOND FLOOR PLAN
AC103.1	THIRD FLOOR PLAN
AC104.1	ROOF PLAN
AC201.1	EXTERIOR ELEVATIONS
AC202.1	EXTERIOR ELEVATIONS
AC203.1	EXTERIOR COLORED ELEVATIONS
AC204.1	EXTERIOR COLORED ELEVATIONS
AC100.2	BASEMENT FLOOR PLAN
AC101.2	FIRST FLOOR PLAN
AC102.2	SECOND FLOOR PLAN
AC103.2	THIRD FLOOR PLAN
AC104.2	ROOF PLAN
AC201.2	EXTERIOR ELEVATIONS
AC202.2	EXTERIOR ELEVATIONS
AC203.2	EXTERIOR COLORED ELEVATIONS
AC204.2	EXTERIOR COLORED ELEVATIONS

ISSUED FOR:

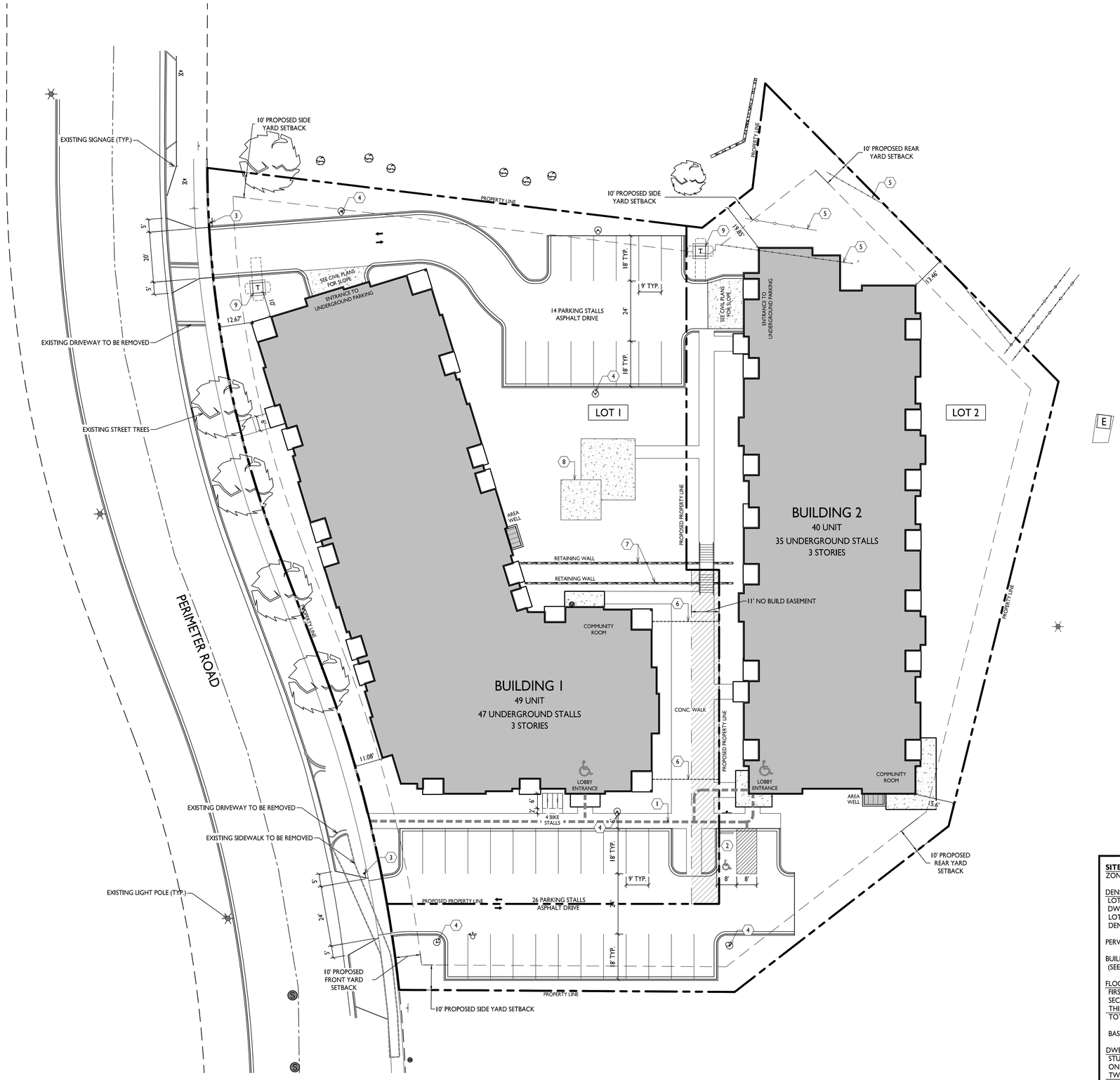
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT NUMBER 2514

G 000
SHEET NUMBER

knothe • bruce ARCHITECTS

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1 CA101 ARCHITECTURAL SITE PLAN

1" = 20'-0"

GRAPHIC SCALE

0 20 40 60

1 INCH = 20 FT (24X36 SHEET)

KEYED PLAN NOTES	
1	ACCESSIBLE ROUTE - 5% RUNNING SLOPE / 2% CROSS SLOPE MAXIMUM.
2	ACCESSIBLE PARKING STALL - MAXIMUM 2% SLOPE IN ALL DIRECTIONS. MOUNT ACCESSIBLE PARKING SIGN @ 60" HIGH TO BOTTOM OF SIGN.
3	STOP SIGN - MOUNT @ 7' HIGH TO BOTTOM OF SIGN
4	LIGHT POLE (TYP.) - SEE CA102 FOR FIXTURE SCHEDULE
5	EXISTING FENCING TO BE REMOVED
6	BASEMENT WALL BELOW
7	RETAINING WALL - SEE CIVIL PLANS FOR HEIGHTS
8	OUTDOOR AMENITY SPACE - SEE SHEET L101
9	TRANSFORMER ON CONCRETE PAD

SITE DEVELOPMENT DATA:

ZONING	PD - PLANNED DEVELOPMENT	
DENSITIES:	LOT 1	LOT 2
LOT AREA	46,579 S.F. / 1.06 ACRES	37,916 S.F. / 0.87 ACRES
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TOTAL	73 PARKING STALLS	49 PARKING STALLS
PARKING RATIO	1.49 STALLS / D.U.	1.23 STALLS / D.U.

kba
knothe bruce
ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd., Suite 900
Middleton, WI 53562

ISSUED
2025.04.17 - NEIGHBORHOOD MEETING
2025.05.23 - PLAN COMMISSION SUBMITTAL
2025.11.17 - SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

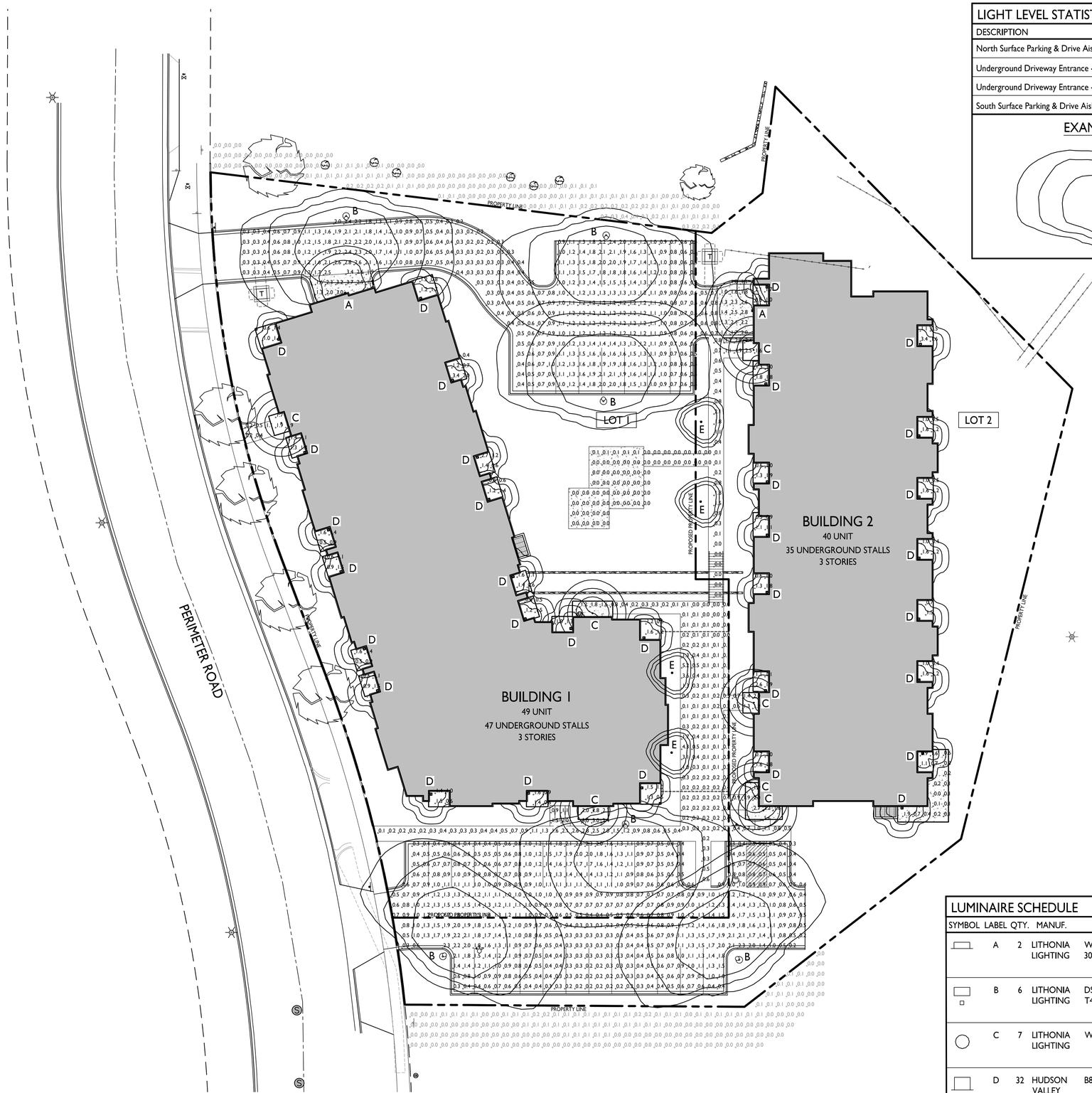
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
ARCHITECTURAL SITE PLAN

SHEET NUMBER
CA101

PROJECT NO. 2514

© Knothe & Bruce Architects, LLC



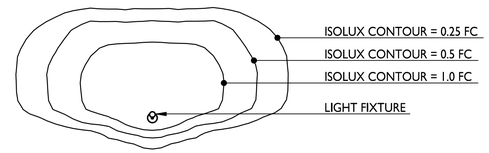
1 CA102 SITE LIGHTING PLAN
1" = 20'-0"

GRAPHIC SCALE
0 20 40 60
1 INCH = 20 FT (24X36 SHEET)

LIGHT LEVEL STATISTICS

DESCRIPTION	SYMBOL	AVG.	MAX.	MIN.	MAX. / MIN.	AVG. / MIN.
North Surface Parking & Drive Aisle	+	1.0 fc	2.8 fc	0.2 fc	14.0:1	5.0:1
Underground Driveway Entrance - Building 1	+	2.5 fc	3.7 fc	1.3 fc	2.8:1	1.9:1
Underground Driveway Entrance - Building 2	+	1.8 fc	2.8 fc	1.0 fc	2.8:1	1.8:1
South Surface Parking & Drive Aisle	+	0.9 fc	2.3 fc	0.2 fc	11.5:1	4.5:1

EXAMPLE LIGHT FIXTURE DISTRIBUTION



LUMINAIRE SCHEDULE

SYMBOL	LABEL	QTY.	MANUF.	CATALOG	DESCRIPTION	FILE	MOUNTING
	A	2	LITHONIA LIGHTING	WDGE1 LED P1 30K MVOLT	LED WALLPACK, 3000K, 80CRI, DARK BRONZE FINISH	WDGE1 LED P0 30K 80CRI VF.ies	10'-0" ABOVE GRADE ON BUILDING
	B	6	LITHONIA LIGHTING	DSX0 LED P1 30K T4M MVOLT HS	LED POLE MOUNT LIGHT, 3000K, 80CRI, DARK BRONZE FINISH	DSX0_LED_P1_30K _T4M_MVOLT_HS.ies	14'-0" POLE ON 2'-0" CONC. BASE
	C	7	LITHONIA LIGHTING	WF3 LED 30K	LED 3" WAFER DOWNLIGHT, 3000K, MATTE WHITE FINISH	WF3_LED_30K.ies	10'-0" ABOVE GRADE ON BUILDING
	D	32	HUDSON VALLEY	B8907-TBK	LED WALL SCONCE, 3000K, 80CRI, BLACK FINISH	B8907-TBK.ies	7'-0" ABOVE GRADE ON BUILDING
	E	4	KUZCO LIGHTING	EB82229-BK-UNV	28" LED BOLLARD, 2700K, 80CRI, BLACK FINISH	EB82229-BK-UNV.ies	28" BOLLARD ON FLUSH CONC. BASE

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd., Suite 900
Middleton, WI 53562

ISSUED
2025.04.17 - NEIGHBORHOOD MEETING
2025.05.23 - PLAN COMMISSION SUBMITTAL
2025.11.17 - SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
SITE LIGHTING PLAN

SHEET NUMBER
CA102

PROJECT NO. 2514

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WDGE1 LED
Architectural Wall Sconce

Catalog Number

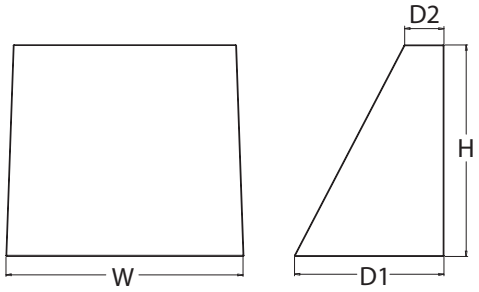
Notes Klein Mt. Horeb

Type Lighting Fixture Type A

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

Depth (D1): 5.5"
Depth (D2): 1.5"
Height: 8"
Width: 9"
Weight: (without options) 9 lbs



Introduction

The WDGE LED family is designed to meet specifier's every wall-mounted lighting need in a widely accepted shape that blends with any architecture. The clean rectilinear design comes in four sizes with lumen packages ranging from 1,200 to 25,000 lumens, providing true site-wide solution.

WDGE1 delivers up to 2,000 lumens with a soft, non-pixelated light source, creating a visually comfortable environment. The compact size of WDGE1, with its integrated emergency battery backup option, makes it an ideal over-the-door wall-mounted lighting solution.

design select Items marked by a shaded background qualify for the Design Select program and ship in 15 days or less. To learn more about Design Select, visit www.acuitybrands.com/designselect.
*See ordering tree for details

WDGE LED Family Overview

Luminaire	Optics	Standard EM, 0°C	Cold EM, -20°C	Sensor	Approximate Lumens (4000K, 80CRI)						
					P0	P1	P2	P3	P4	P5	P6
WDGE1 LED	Visual Comfort	4W		--	750	1,200	2,000	--	--	--	--
WDGE2 LED	Visual Comfort	10W	18W	Standalone / nLight	--	1,200	2,000	3,000	4,500	6,000	--
WDGE2 LED	Precision Refractive	10W	18W	Standalone / nLight	700	1,200	2,000	3,200	4,200	--	--
WDGE3 LED	Precision Refractive	15W	18W	Standalone / nLight	6,000	7,500	8,500	10,000	12,000	--	--
WDGE4 LED	Precision Refractive			Standalone / nLight	--	12,000	16,000	18,000	20,000	22,000	25,000

Ordering Information

EXAMPLE: WDGE1 LED P2 40K 80CRI VF MVOLT SRM PE DDBXD

Series	Package	Color Temperature	CRI	Distribution	Voltage	Mounting
WDGE1 LED	P0	27K 2700K	80CRI	VF Visual comfort forward throw	MVOLT	**Shipped included**
	P1	30K 3000K	90CRI	VW Visual comfort wide	347[2]	SRM Surface mounting bracket
	P2	35K 3500K				ICW Indirect Canopy/Ceiling Washer bracket (dry/damp locations only)[3]
		40K 4000K				**Shipped separately**
		50K[1] 5000K				AWS 3/8inch Architectural wall spacer[4]
						PBBW Surface-mounted back box (top, left, right conduit entry) Use when there is no junction box available.[4]

Options

E4WH	Emergency battery backup, Certified in CA Title 20 MAEDBS (4W, 0°C min)[5]
PE	Photocell, Button Type[6]
DS	Dual switching (comes with 2 drivers and 2 light engines; see page 3 for details)[7]
DMG	0-10V dimming wires pulled outside fixture (for use with an external control, ordered separately)
BCE	Bottom conduit entry for back box (PBBW). Total of 4 entry points.
DSLE	Dual Switching (1 Driver, 2 Light Engines)
CCE	Coastal Construction[4]

Finish

DDBXD	Dark bronze	DDBTXD	Textured dark bronze
DBLXD	Black	DBLBXD	Textured black
DNAXD	Natural aluminum	DNATXD	Textured natural aluminum
DWHXD	White	DWHGXD	Textured white
DSSXD	Sandstone	DSSTXD	Textured sandstone

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Accessories

Ordered and shipped separately.

WDGEAWS DDBXD	WDGE 3/8inch Architectural Wall Spacer (specify finish)
WDGE1PBBW DDBXD U	WDGE1 surface-mounted back box (specify finish)

NOTES

1 50K not available in 90CRI.
2 347V not available with E4WH, DS, DSLE or PE.
3 Not qualified for DLC. Not available with E4WH.
4 For PBBW and AWS with CCE option, require an RFA.
5 E4WH not available with PE or DS.
6 PE not available with DS.
7 DS is not available with P0.

Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Performance Package	System Watts	Dist. Type	27K (2700K, 80 CRI)					30K (3000K, 80 CRI)					35K (3500K, 80 CRI)					40K (4000K, 80 CRI)					50K (5000K, 80 CRI)				
			Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G	Lumens	LPW	B	U	G
P0	7W	VF	693	99	0	0	0	718	103	0	0	0	739	106	0	0	0	759	108	0	0	0	764	109	0	0	0
		VW	694	99	0	0	0	720	103	0	0	0	740	106	0	0	0	760	109	0	0	0	766	109	0	0	0
P1	10W	VF	1,120	112	0	0	0	1,161	116	0	0	0	1,194	119	0	0	0	1,227	123	0	0	0	1,235	123	0	0	0
		VW	1,122	112	0	0	0	1,163	116	0	0	0	1,196	120	0	0	0	1,229	123	0	0	0	1,237	124	0	0	0
P2	15W	VF	1,806	120	1	0	0	1,872	125	1	0	0	1,925	128	1	0	0	1,978	132	1	0	0	1,992	133	1	0	0
		VW	1,809	120	1	0	0	1,876	125	1	0	0	1,929	128	1	0	0	1,982	132	1	0	0	1,996	133	1	0	0

Electrical Load

Performance Package	System Watts	Current (A)				
		120V	208V	240V	277V	347V
P0	7W	0.060	0.035	0.030	0.026	--
	9W	--	--	--	--	0.026
P1	10W	0.082	0.049	0.043	0.038	--
	13W	--	--	--	--	0.046
P2	15W	0.132	0.081	0.072	0.064	--
	18W	--	--	--	--	0.056

Lumen Multiplier for 90CRI

CCT	Multiplier
27K	0.845
30K	0.867
35K	0.845
40K	0.885
50K	0.898

Lumen Output in Emergency Mode (4000K, 80 CRI)

Option	Dist. Type	Lumens
E4WH	VF	646
	VW	647

Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.03
10°C	50°F	1.02
20°C	68°F	1.01
25°C	77°F	1.00
30°C	86°F	0.99
40°C	104°F	0.98

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a 25°C ambient, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	0	25,000	50,000	100,000
Lumen Maintenance Factor	1.0	>0.96	>0.95	>0.91

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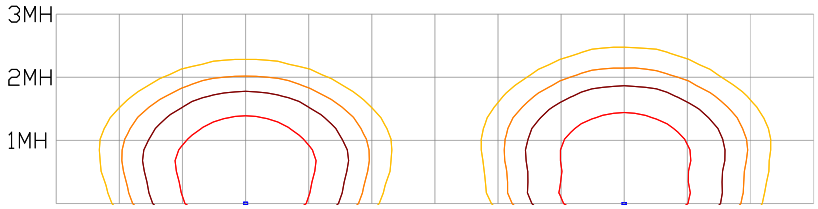
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit the Lithonia Lighting WDGE LED homepage. Tested in accordance with IESNA LM-79 and LM-80 standards.

LEGEND

- 0.25 fc
- 0.5 fc
- 1.0 fc
- 3.0 fc

MH = 8ft
Grid = 8ft x 8ft



WDGE1 LED P2 40K 80CRI VW

WDGE1 LED P2 40K 80CRI VF

Emergency Egress Options

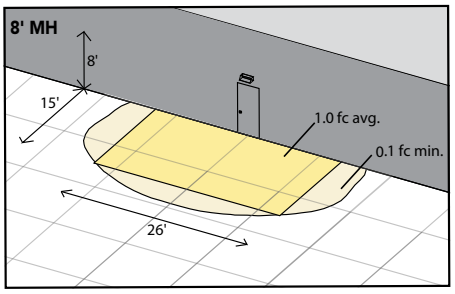
Emergency Battery Backup

The emergency battery backup is integral to the luminaire — no external housing required! This design provides reliable emergency operation while maintaining the aesthetics of the product. All emergency battery backup configurations include an independent secondary driver with an integral relay to immediately detect loss of normal power and automatically energize the luminaire. The emergency battery will power the luminaire for a minimum duration of 90 minutes (maximum duration of three hours) from the time normal power is lost and maintain a minimum of 60% of the light output at the end of 90minutes.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9

The example below shows illuminance of 1 fc average and 0.1 fc minimum in emergency mode with E4WH and VF distribution.

Grid = 10ft x 10ft

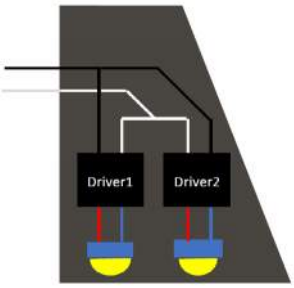


WDGE1 LED xx 40K 80CRI VF MVOLT E4WH

Dual Switching (DS) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with two drivers and two light engines. These work completely independent to each other so that a failure of any individual component does not cause the whole luminaire to go dark.

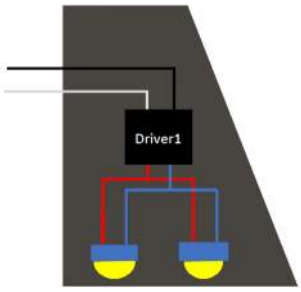
Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



Dual Switching Light Engine (DSLE) Option

The dual switching option offers operational redundancy that certain codes require. With this option the luminaire comes integrated with one driver and two light engines. These work completely independent to each other so that a failure of either light engine does not cause the whole luminaire to go dark.

Applicable codes: NFPA 70/NEC – section 700.16, NFPA 101 Life Safety Code Section 7.9



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E4WH – 4W Emergency Battery Backup

D = 5.5"

H = 8"

W = 9"



PBBW – Surface-Mounted Back Box
Use when there is no junction box available.

D = 1.75"

H = 8"

W = 9"



AWS – 3/8inch Architectural Wall Spacer

D = 0.38"

H = 4.4"

W = 7.5"

FEATURES & SPECIFICATIONS

INTENDED USE
Common architectural look, with clean rectilinear shape, of the WDGE LED was designed to blend with any type of construction, whether it be tilt-up, frame or brick. Applications include commercial offices, warehouses, hospitals, schools, malls, restaurants, and other commercial buildings.

CONSTRUCTION
The single-piece die-cast aluminum housing integrates secondary heat sinks to optimize thermal transfer from the internal light engine heat sinks and promote long life. The driver is mounted in direct contact with the casting for a low operating temperature and long life. The die-cast door frame is fully gasketed with a one-piece solid silicone gasket to keep out moisture and dust, providing an IP66 rating for the luminaire.

FINISH
Exterior painted parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Standard Super Durable colors include dark bronze, black, natural aluminum, sandstone and white. Available in textured and non-textured finishes.

OPTICS
Well crafted reflector optics allow the light engine to be recessed within the luminaire, providing visual comfort, superior distribution, uniformity, and spacing in wall-mount applications. The WDGE LED has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL
Light engine consists of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L91/100,000 hours at 25°C). The electronic driver has a power factor of >90%, THD <20%. Luminaire comes with built in 6kV surge protection, which meets a minimum Category C low exposure (per ANSI/IEEE C62.41.2). Fixture ships standard with 0-10v dimmable driver.

INSTALLATION
A universal mounting plate with integral mounting support arms allows the fixture to hinge down for easy access while making wiring connections. The 3/8" Architectural Wall Spacer (AWS) can be used to create a floating appearance or to accommodate small imperfections in the wall surface. The ICW option can be used to mount the luminaire inverted for indirect lighting in dry and damp locations. Design can withstand up to a 1.5 G vibration load rating per ANSI C136.31.

LISTINGS
CSA certified to U.S. and Canadian standards. Luminaire is IP66 rated. PIR options are rated for wet location. Rated for -40°C minimum ambient. DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified. International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 2700K and 3000K color temperature only and SRM mounting only.

GOVERNMENT PROCUREMENT
BABA – Build America Buy America: Product qualifies as produced in the United States under the definitions of the Build America, Buy America Act.
Please refer to www.acuitybrands.com/buy-american for additional information.

WARRANTY
5-year limited warranty. This is the only warranty provided and no other statements in this specification sheet create any warranty of any kind. All other express and implied warranties are disclaimed. Complete warranty terms located at:
www.acuitybrands.com/support/warranty/terms-and-conditions
Note: Actual performance may differ as a result of end-user environment and application. All values are design or typical values, measured under laboratory conditions at 25 °C. Specifications subject to change without notice.

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D-Series Size 0
LED Area Luminaire

Catalog Number

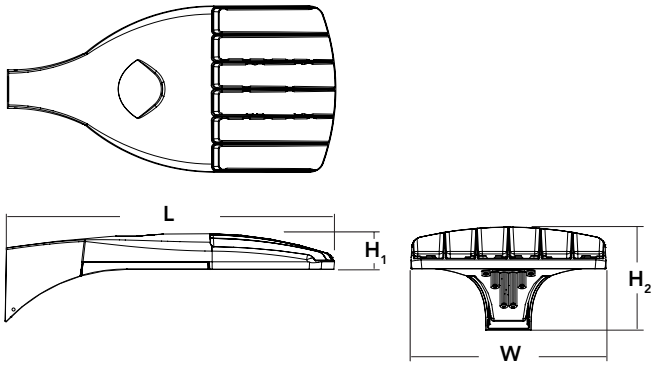
Notes Klein Mt. Horeb

Type Lighting Fixture Type B

Hit the Tab key or mouse over the page to see all interactive elements.

Specifications

EPA:	0.95 ft² (.09 m²)
Length:	26" (66.0 cm)
Width:	13" (33.0 cm)
Height$_1$:	3" (7.62 cm)
Height$_2$:	7" (17.8 cm)
Weight (max):	16 lbs (7.25 kg)



Introduction

The modern styling of the D-Series is striking yet unobtrusive - making a bold, progressive statement even as it blends seamlessly with its environment. The D-Series distills the benefits of the latest in LED technology into a high performance, high efficacy, long-life luminaire. The outstanding photometric performance results in sites with excellent uniformity, greater pole spacing and lower power density. It is ideal for replacing up to 400W metal halide with typical energy savings of 70% and expected service life of over 100,000 hours.

A+ Capable options indicated by this color background.

Ordering Information

EXAMPLE: DSX0 LED P6 40K T3M MVOLT SPA NLTAIR2 PIRHN DDBXD

DSX0 LED

Series	LEDs	Color temperature	Distribution	Voltage	Mounting
DSX0 LED	**Forward optics** P1 P4 P7 P2 P5 P3 P6 **Rotated optics** P10[1] P12[1] P11[1] P13[1]	30K 3000 K 40K 4000 K 50K 5000 K	T1S Type I short T2S Type II short T2M Type II medium T3S Type III short T3M Type III medium T4M Type IV medium TFTM Forward throw medium T5VS Type V very short T5S Type V short T5M Type V medium T5W Type V wide BLC Backlight control[2] LCCO Left corner cutoff[2] RCCO Right corner cutoff[2]	MVOLT[3,4] 120[4] 208[4] 240[4] 277[4] 347[4,5] 480[4,5]	**Shipped included** SPA Square pole mounting RPA Round pole mounting WBA Wall bracket SPUMBA Square pole universal mounting adaptor[6] RPUMBA Round pole universal mounting adaptor[6] **Shipped separately** KMA8 DDBXD U Mast arm mounting bracket adaptor (specify finish)[7]

Control options

Shipped installed

NLTAIR2	nLight AIR generation 2 enabled[8,9]
PIRHN	Network, high/low motion/ambient sensor[10]
PER	NEMA twist-lock receptacle only (control ordered separate)[11]
PER5	Five-pin receptacle only (control ordered separate)[11,12]
PER7	Seven-pin receptacle only (leads exit fixture) (control ordered separate)[11,12]
DMG	0-10V dimming extend out back of housing for external control (control ordered separate)[13]
PIR	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 5fc[14,15]
PIRH	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 5fc[14,15]
PIR1FC3V	High/low, motion/ambient sensor, 8-15' mounting height, ambient sensor enabled at 1fc[14,15]
PIRH1FC3V	High/low, motion/ambient sensor, 15-30' mounting height, ambient sensor enabled at 1fc[14,15]
FAO	Field adjustable output[16]

Other options

Shipped installed

HS	House-side shield[17]
SF	Single fuse (120, 277, 347V)[4]
DF	Double fuse (208, 240, 480V)[4]
L90	Left rotated optics[1]
R90	Right rotated optics[1]
DDL	Diffused drop lens[17]

Shipped separately

BS	Bird spikes[18]
EGS	External glare shield[18]

Finish *(required)*

DDBXD	Dark bronze
DBLXD	Black
DNAXD	Natural aluminum
DWHXD	White
DDBTXD	Textured dark bronze
DBLBXD	Textured black
DNATXD	Textured natural aluminum
DWHGXD	Textured white

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Ordering Information

Accessories

Ordered and shipped separately.

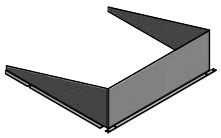
DLL127F 1.5 JU	Photocell - SSL twist-lock (120-277V) [19]
DLL347F 1.5 CUL JU	Photocell - SSL twist-lock (347V) [19]
DLL480F 1.5 CUL JU	Photocell - SSL twist-lock (480V) [19]
DSHORT SBK U	Shorting cap [19]
DSX0HS 20C U	House-side shield for P1,P2,P3 and P4 [17]
DSX0HS 30C U	House-side shield for P10,P11,P12 and P13 [17]
DSX0HS 40C U	House-side shield for P5,P6 and P7 [17]
DSX0DDL U	Diffused drop lens (polycarbonate) [17]
PUMBA DDBXD U*	Square and round pole universal mounting bracket adaptor (specify finish) [20]
KMA8 DDBXD U	Mast arm mounting bracket adaptor (specify finish) [6]

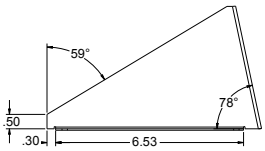
For more control options, visit DTL and ROAM online. Link to nLight Air 2

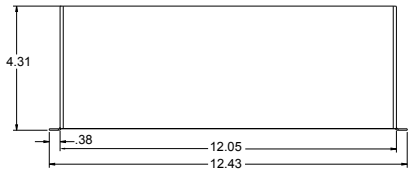
NOTES

1 P10, P11, P12 and P13 and rotated options (L90 or R90) only available together.
2 Not available with HS or DDL.
3 MVOLT driver operates on any line voltage from 120-277V (50/60 Hz).
4 Single fuse (SF) requires 120V, 277V or 347V. Double fuse (DF) requires 208V, 240V or 480V.
5 Not available with BL30, BL50 or PNMT options.
6 Universal mounting brackets intended for retrofit on existing pre-drilled poles only. 1.5 G vibration load rating per ANCI C136.31.
7 Must order fixture with SPA mounting. Must be ordered as a separate accessory; see Accessories information. For use with 2-3/8" mast arm (not included).
8 Must be ordered with PIRHN.
9 Sensor cover available only in dark bronze, black, white and natural aluminum colors.
10 Must be ordered with NLTAIR2. For more information on nLight Air 2 visit this link
11 Photocell ordered and shipped as a separate line item from Acuity Brands Controls. See accessories. Shorting Cap included.
12 If ROAM® node required, it must be ordered and shipped as a separate line item from Acuity Brands Controls. Shorting Cap included.
13 DMG not available with PIRHN, PER5, PER7, PIR, PIRH, PIR1FC3V or PIRH1FC3V.
14 Reference Motion Sensor table on page 3.
15 Reference PER Table on page 3 to see functionality.
16 Not available with other dimming controls options.
17 Not available with BLC, LCCO and RCCO distribution.
18 Must be ordered with fixture for factory pre-drilling.
19 Requires luminaire to be specified with PER, PER5 or PER7 option. See PER Table on page 3.
20 For retrofit use only.

EGS – External Glare Shield

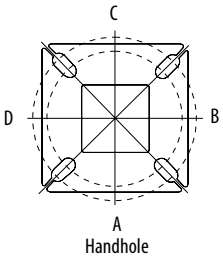


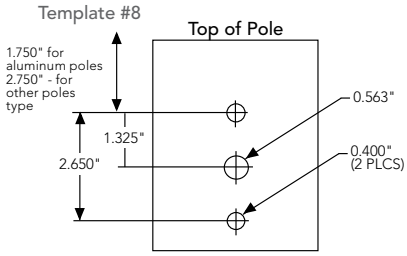




Drilling

HANDHOLE ORIENTATION
(from top of pole)





Tenon Mounting Slipfitter

Tenon O.D.	Single Unit	2 at 180°	2 at 90°	3 at 120°	3 at 90°	4 at 90°
2-3/8"	AST20-190	AST20-280	AST20-290	AST20-320	AST20-390	AST20-490
2-7/8"	AST25-190	AST25-280	AST25-290	AST25-320	AST25-390	AST25-490
4"	AST35-190	AST35-280	AST35-290	AST35-320	AST35-390	AST35-490

Mounting Option	Drilling Template	Single	2 @ 180	2 @ 90	3 @ 90	3 @ 120	4 @ 90
Head Location		Side B	Side B & D	Side B & C	Side B, C & D	Round Pole Only	Side A, B, C & D
Drill Nomenclature	#8	DM19AS	DM28AS	DM29AS	DM39AS	DM32AS	DM49AS
		Minimum Acceptable Outside Pole Dimension					
SPA	#8	2-7/8"	2-7/8"	3.5"	3.5"		3.5"
RPA	#8	2-7/8"	2-7/8"	3.5"	3.5"	3"	3.5"
SPUMBA	#5	2-7/8"	3"	4"	4"		4"
RPUMBA	#5	2-7/8"	3.5"	5"	5"	3.5"	5"

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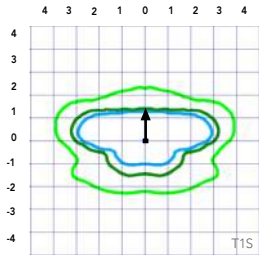
Photometric Diagrams

To see complete photometric reports or download .ies files for this product, visit Lithonia Lighting's D-Series Area Size 0 homepage.

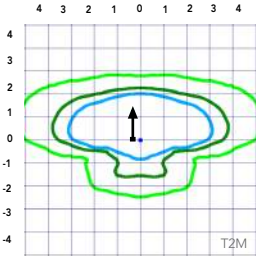
Isofootcandle plots for the DSX0 LED 40C 1000 40K. Distances are in units of mounting height (20').

LEGEND

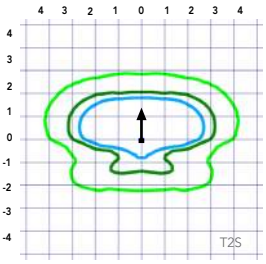
- 0.1 fc
- 0.5 fc
- 1.0 fc



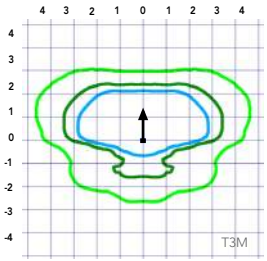
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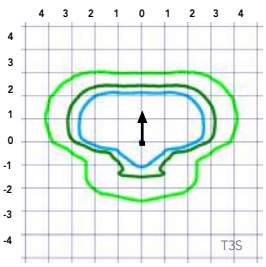
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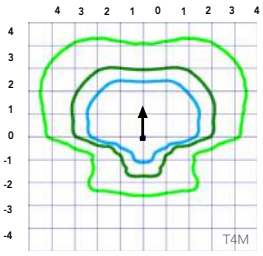
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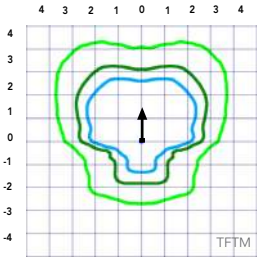
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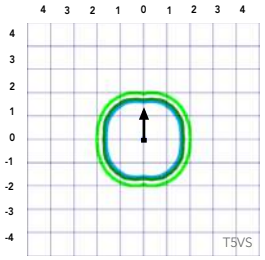
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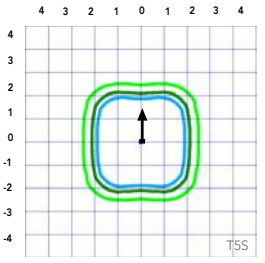
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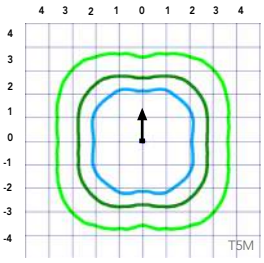
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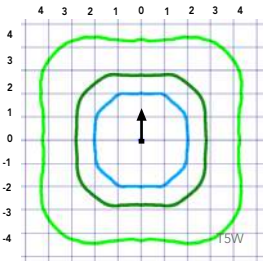
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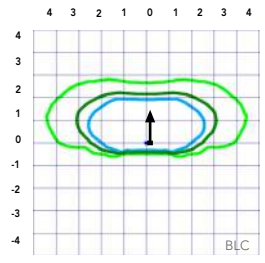
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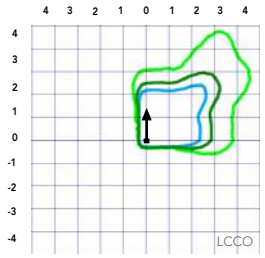
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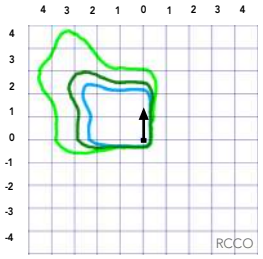
Test No. LTL23451P25 tested in accordance with IESNA LM-79-08.



Test No.



Test No.



Test No.

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Lumen Ambient Temperature (LAT) Multipliers

Use these factors to determine relative lumen output for average ambient temperatures from 0-40°C (32-104°F).

Ambient		Lumen Multiplier
0°C	32°F	1.04
5°C	41°F	1.04
10°C	50°F	1.03
15°C	50°F	1.02
20°C	68°F	1.01
25°C	**77°C**	**1.00**
30°C	86°F	0.99
35°C	95°F	0.98
40°C	104°F	0.97

Projected LED Lumen Maintenance

Data references the extrapolated performance projections for the platforms noted in a **25°C ambient**, based on 10,000 hours of LED testing (tested per IESNA LM-80-08 and projected per IESNA TM-21-11).

To calculate LLF, use the lumen maintenance factor that corresponds to the desired number of operating hours below. For other lumen maintenance values, contact factory.

Operating Hours	Lumen Maintenance Factor
25,000	0.96
50,000	0.92
100,000	0.85

Motion Sensor Default Settings						
Option	Dimmed State	High Level (when triggered)	Photocell Operation	Dwell Time	Ramp-up Time	Ramp-down Time
PIR or PIRH	3V (37%) Output	10V (100%) Output	Enabled @ 5FC	5 min	3 sec	5 min
*PIR1FC3V or PIRH1FC3V	3V (37%) Output	10V (100%) Output	Enabled @ 1FC	5 min	3 sec	5 min
*for use with separate Dusk to Dawn or timer.						

Electrical Load

					Current (A)					
	Performance Package	LED Count	Drive Current	Wattage	120	208	240	277	347	480
Forward Optics (Non-Rotated)	P1	20	530	38	0.32	0.18	0.15	0.15	0.10	0.08
	P2	20	700	49	0.41	0.23	0.20	0.19	0.14	0.11
	P3	20	1050	71	0.60	0.37	0.32	0.27	0.21	0.15
	P4	20	1400	92	0.77	0.45	0.39	0.35	0.28	0.20
	P5	40	700	89	0.74	0.43	0.38	0.34	0.26	0.20
	P6	40	1050	134	1.13	0.65	0.55	0.48	0.39	0.29
	P7	40	1300	166	1.38	0.80	0.69	0.60	0.50	0.37
Rotated Optics (Requires L90 or R90)	P10	30	530	53	0.45	0.26	0.23	0.21	0.16	0.12
	P11	30	700	72	0.60	0.35	0.30	0.27	0.20	0.16
	P12	30	1050	104	0.88	0.50	0.44	0.39	0.31	0.23
	P13	30	1300	128	1.08	0.62	0.54	0.48	0.37	0.27

Controls Options

Nomenclature	Descripton	Functionality	Primary control device	Notes
FAO	Field adjustable output device installed inside the lumiaire; wired to the driver dimming leads.	Allows the lumiaire to be manually dimmed, effectively trimming the light output.	FAO device	Cannot be used with other controls options that need the 0-10V leads
DS	Drivers wired independantly for 50/50 luminaire operation	The luminaire is wired to two separate circuits, allowing for 50/50 operation.	Independently wired drivers	Requires two seperately switched circuits. Consider nLight AIR as a more cost effective alternative.
PER5 or PER7	Twist-lock photocell receptacle	Compatible with standard twist-lock photocells for dusk to dawn operation, or advanced control nodes that provide 0-10V dimming signals.	Twist-lock photocells such as DLL Elite or advanced control nodes such as ROAM.	Pins 4 & 5 to dimming leads on driver, Pins 6 & 7 are capped inside luminaire
PIR or PIRH	Motion sensors with integral photocell. PIR for 8-15' mounting; PIRH for 15-30' mounting	Luminaires dim when no occupancy is detected.	Acuity Controls SBOR	Also available with PIRH1FC3V when the sensor photocell is used for dusk-to-dawn operation.
NLTAIR2 PIRHN	nLight AIR enabled luminaire for motion sensing, photocell and wireless communication.	Motion and ambient light sensing with group response. Scheduled dimming with motion sensor over-ride when wirelessly connected to the nLight Eclypse.	nLight Air rSDGR	nLight AIR sensors can be programmed and commissioned from the ground using the CIAIRity Pro app.

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P1	20	530	38W	T1S	4,369	1	0	1	115	4,706	1	0	1	124	4,766	1	0	1	125
				T2S	4,364	1	0	1	115	4,701	1	0	1	124	4,761	1	0	1	125
				T2M	4,387	1	0	1	115	4,726	1	0	1	124	4,785	1	0	1	126
				T3S	4,248	1	0	1	112	4,577	1	0	1	120	4,634	1	0	1	122
				T3M	4,376	1	0	1	115	4,714	1	0	1	124	4,774	1	0	1	126
				T4M	4,281	1	0	1	113	4,612	1	0	2	121	4,670	1	0	2	123
				TFTM	4,373	1	0	1	115	4,711	1	0	2	124	4,771	1	0	2	126
				T5VS	4,548	2	0	0	120	4,900	2	0	0	129	4,962	2	0	0	131
				T5S	4,552	2	0	0	120	4,904	2	0	0	129	4,966	2	0	0	131
				T5M	4,541	3	0	1	120	4,891	3	0	1	129	4,953	3	0	1	130
				T5W	4,576	3	0	2	120	4,929	3	0	2	130	4,992	3	0	2	131
				BLC	3,586	1	0	1	94	3,863	1	0	1	102	3,912	1	0	1	103
				LCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77
				RCCO	2,668	1	0	1	70	2,874	1	0	2	76	2,911	1	0	2	77
P2	20	700	49W	T1S	5,570	1	0	1	114	6,001	1	0	1	122	6,077	2	0	2	124
				T2S	5,564	1	0	2	114	5,994	1	0	2	122	6,070	2	0	2	124
				T2M	5,593	1	0	1	114	6,025	1	0	1	123	6,102	1	0	1	125
				T3S	5,417	1	0	2	111	5,835	1	0	2	119	5,909	2	0	2	121
				T3M	5,580	1	0	2	114	6,011	1	0	2	123	6,087	1	0	2	124
				T4M	5,458	1	0	2	111	5,880	1	0	2	120	5,955	1	0	2	122
				TFTM	5,576	1	0	2	114	6,007	1	0	2	123	6,083	1	0	2	124
				T5VS	5,799	2	0	0	118	6,247	2	0	0	127	6,327	2	0	0	129
				T5S	5,804	2	0	0	118	6,252	2	0	0	128	6,332	2	0	1	129
				T5M	5,789	3	0	1	118	6,237	3	0	1	127	6,316	3	0	1	129
				T5W	5,834	3	0	2	119	6,285	3	0	2	128	6,364	3	0	2	130
				BLC	4,572	1	0	1	93	4,925	1	0	1	101	4,987	1	0	1	102
				LCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76
				RCCO	3,402	1	0	2	69	3,665	1	0	2	75	3,711	1	0	2	76
P3	20	1050	71W	T1S	7,833	2	0	2	110	8,438	2	0	2	119	8,545	2	0	2	120
				T2S	7,825	2	0	2	110	8,429	2	0	2	119	8,536	2	0	2	120
				T2M	7,865	2	0	2	111	8,473	2	0	2	119	8,580	2	0	2	121
				T3S	7,617	2	0	2	107	8,205	2	0	2	116	8,309	2	0	2	117
				T3M	7,846	2	0	2	111	8,452	2	0	2	119	8,559	2	0	2	121
				T4M	7,675	2	0	2	108	8,269	2	0	2	116	8,373	2	0	2	118
				TFTM	7,841	2	0	2	110	8,447	2	0	2	119	8,554	2	0	2	120
				T5VS	8,155	3	0	0	115	8,785	3	0	0	124	8,896	3	0	0	125
				T5S	8,162	3	0	1	115	8,792	3	0	1	124	8,904	3	0	1	125
				T5M	8,141	3	0	2	115	8,770	3	0	2	124	8,881	3	0	2	125
				T5W	8,204	3	0	2	116	8,838	4	0	2	124	8,950	4	0	2	126
				BLC	6,429	1	0	2	91	6,926	1	0	2	98	7,013	1	0	2	99
				LCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73
				RCCO	4,784	1	0	2	67	5,153	1	0	2	73	5,218	1	0	2	73
P4	20	1400	92W	T1S	9,791	2	0	2	106	10,547	2	0	2	115	10,681	2	0	2	116
				T2S	9,780	2	0	2	106	10,536	2	0	2	115	10,669	2	0	2	116
				T2M	9,831	2	0	2	107	10,590	2	0	2	115	10,724	2	0	2	117
				T3S	9,521	2	0	2	103	10,256	2	0	2	111	10,386	2	0	2	113
				T3M	9,807	2	0	2	107	10,565	2	0	2	115	10,698	2	0	2	116
				T4M	9,594	2	0	2	104	10,335	2	0	3	112	10,466	2	0	3	114
				TFTM	9,801	2	0	2	107	10,558	2	0	2	115	10,692	2	0	2	116
				T5VS	10,193	3	0	1	111	10,981	3	0	1	119	11,120	3	0	1	121
				T5S	10,201	3	0	1	111	10,990	3	0	1	119	11,129	3	0	1	121
				T5M	10,176	4	0	2	111	10,962	4	0	2	119	11,101	4	0	2	121
				T5W	10,254	4	0	3	111	11,047	4	0	3	120	11,186	4	0	3	122
				BLC	8,036	1	0	2	87	8,656	1	0	2	94	8,766	1	0	2	95
				LCCO	5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71
					5,979	1	0	2	65	6,441	1	0	2	70	6,523	1	0	3	71

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Forward Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P5	40	700	89W	T1S	10,831	2	0	2	122	11,668	2	0	2	131	11,816	2	0	2	133
				T2S	10,820	2	0	2	122	11,656	2	0	2	131	11,803	2	0	2	133
				T2M	10,876	2	0	2	122	11,716	2	0	2	132	11,864	2	0	2	133
				T3S	10,532	2	0	2	118	11,346	2	0	2	127	11,490	2	0	2	129
				T3M	10,849	2	0	2	122	11,687	2	0	2	131	11,835	2	0	2	133
				T4M	10,613	2	0	3	119	11,434	2	0	3	128	11,578	2	0	3	130
				TFTM	10,842	2	0	2	122	11,680	2	0	2	131	11,828	2	0	2	133
				T5VS	11,276	3	0	1	127	12,148	3	0	1	136	12,302	3	0	1	138
				T5S	11,286	3	0	1	127	12,158	3	0	1	137	12,312	3	0	1	138
				T5M	11,257	4	0	2	126	12,127	4	0	2	136	12,280	4	0	2	138
				T5W	11,344	4	0	3	127	12,221	4	0	3	137	12,375	4	0	3	139
				BLC	8,890	1	0	2	100	9,576	1	0	2	108	9,698	1	0	2	109
				LCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
				RCCO	6,615	1	0	3	74	7,126	1	0	3	80	7,216	1	0	3	81
P6	40	1050	134W	T1S	14,805	3	0	3	110	15,949	3	0	3	119	16,151	3	0	3	121
				T2S	14,789	3	0	3	110	15,932	3	0	3	119	16,134	3	0	3	120
				T2M	14,865	3	0	3	111	16,014	3	0	3	120	16,217	3	0	3	121
				T3S	14,396	3	0	3	107	15,509	3	0	3	116	15,705	3	0	3	117
				T3M	14,829	2	0	3	111	15,975	3	0	3	119	16,177	3	0	3	121
				T4M	14,507	2	0	3	108	15,628	3	0	3	117	15,826	3	0	3	118
				TFTM	14,820	2	0	3	111	15,965	3	0	3	119	16,167	3	0	3	121
				T5VS	15,413	4	0	1	115	16,604	4	0	1	124	16,815	4	0	1	125
				T5S	15,426	3	0	1	115	16,618	4	0	1	124	16,828	4	0	1	126
				T5M	15,387	4	0	2	115	16,576	4	0	2	124	16,786	4	0	2	125
				T5W	15,506	4	0	3	116	16,704	4	0	3	125	16,915	4	0	3	126
				BLC	12,151	1	0	2	91	13,090	1	0	2	98	13,255	1	0	2	99
				LCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
				RCCO	9,041	1	0	3	67	9,740	1	0	3	73	9,863	1	0	3	74
P7	40	1300	166W	T1S	17,023	3	0	3	103	18,338	3	0	3	110	18,570	3	0	3	112
				T2S	17,005	3	0	3	102	18,319	3	0	3	110	18,551	3	0	3	112
				T2M	17,092	3	0	3	103	18,413	3	0	3	111	18,646	3	0	3	112
				T3S	16,553	3	0	3	100	17,832	3	0	3	107	18,058	3	0	3	109
				T3M	17,051	3	0	3	103	18,369	3	0	3	111	18,601	3	0	3	112
				T4M	16,681	3	0	3	100	17,969	3	0	3	108	18,197	3	0	3	110
				TFTM	17,040	3	0	3	103	18,357	3	0	4	111	18,590	3	0	4	112
				T5VS	17,723	4	0	1	107	19,092	4	0	1	115	19,334	4	0	1	116
				T5S	17,737	4	0	2	107	19,108	4	0	2	115	19,349	4	0	2	117
				T5M	17,692	4	0	2	107	19,059	4	0	2	115	19,301	4	0	2	116
				T5W	17,829	5	0	3	107	19,207	5	0	3	116	19,450	5	0	3	117
				BLC	13,971	2	0	2	84	15,051	2	0	2	91	15,241	2	0	2	92
				LCCO	10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68
					10,396	1	0	3	63	11,199	1	0	3	67	11,341	1	0	3	68

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Performance Data

Lumen Output

Lumen values are from photometric tests performed in accordance with IESNA LM-79-08. Data is considered to be representative of the configurations shown, within the tolerances allowed by Lighting Facts. Contact factory for performance data on any configurations not shown here.

Rotated Optics

Power Package	LED Count	Drive Current	System Watts	Dist. Type	30K (3000 K, 70 CRI)					40K (4000 K, 70 CRI)					50K (5000 K, 70 CRI)				
					Lumens	B	U	G	LPW	Lumens	B	U	G	LPW	Lumens	B	U	G	LPW
P10	30	530	53W	T1S	6,727	2	0	2	127	7,247	3	0	3	137	7,339	3	0	3	138
				T2S	6,689	3	0	3	126	7,205	3	0	3	136	7,297	3	0	3	138
				T2M	6,809	3	0	3	128	7,336	3	0	3	138	7,428	3	0	3	140
				T3S	6,585	3	0	3	124	7,094	3	0	3	134	7,183	3	0	3	136
				T3M	6,805	3	0	3	128	7,331	3	0	3	138	7,424	3	0	3	140
				T4M	6,677	3	0	3	126	7,193	3	0	3	136	7,284	3	0	3	137
				TFTM	6,850	3	0	3	129	7,379	3	0	3	139	7,472	3	0	3	141
				T5VS	6,898	3	0	0	130	7,431	3	0	0	140	7,525	3	0	0	142
				T5S	6,840	2	0	1	129	7,368	2	0	1	139	7,461	2	0	1	141
				T5M	6,838	3	0	1	129	7,366	3	0	2	139	7,460	3	0	2	141
				T5W	6,777	3	0	2	128	7,300	3	0	2	138	7,393	3	0	2	139
				BLC	5,626	2	0	2	106	6,060	2	0	2	114	6,137	2	0	2	116
				LCCO	4,018	1	0	2	76	4,328	1	0	2	82	4,383	1	0	2	83
				RCCO	4,013	3	0	3	76	4,323	3	0	3	82	4,377	3	0	3	83
P11	30	700	72W	T1S	8,594	3	0	3	119	9,258	3	0	3	129	9,376	3	0	3	130
				T2S	8,545	3	0	3	119	9,205	3	0	3	128	9,322	3	0	3	129
				T2M	8,699	3	0	3	121	9,371	3	0	3	130	9,490	3	0	3	132
				T3S	8,412	3	0	3	117	9,062	3	0	3	126	9,177	3	0	3	127
				T3M	8,694	3	0	3	121	9,366	3	0	3	130	9,484	3	0	3	132
				T4M	8,530	3	0	3	118	9,189	3	0	3	128	9,305	3	0	3	129
				TFTM	8,750	3	0	3	122	9,427	3	0	3	131	9,546	3	0	3	133
				T5VS	8,812	3	0	0	122	9,493	3	0	0	132	9,613	3	0	0	134
				T5S	8,738	3	0	1	121	9,413	3	0	1	131	9,532	3	0	1	132
				T5M	8,736	3	0	2	121	9,411	3	0	2	131	9,530	3	0	2	132
				T5W	8,657	4	0	2	120	9,326	4	0	2	130	9,444	4	0	2	131
				BLC	7,187	3	0	3	100	7,742	3	0	3	108	7,840	3	0	3	109
				LCCO	5,133	1	0	2	71	5,529	1	0	2	77	5,599	1	0	2	78
				RCCO	5,126	3	0	3	71	5,522	3	0	3	77	5,592	3	0	3	78
P12	30	1050	104W	T1S	12,149	3	0	3	117	13,088	3	0	3	126	13,253	3	0	3	127
				T2S	12,079	4	0	4	116	13,012	4	0	4	125	13,177	4	0	4	127
				T2M	12,297	3	0	3	118	13,247	3	0	3	127	13,415	3	0	3	129
				T3S	11,891	4	0	4	114	12,810	4	0	4	123	12,972	4	0	4	125
				T3M	12,290	3	0	3	118	13,239	4	0	4	127	13,407	4	0	4	129
				T4M	12,058	4	0	4	116	12,990	4	0	4	125	13,154	4	0	4	126
				TFTM	12,369	4	0	4	119	13,325	4	0	4	128	13,494	4	0	4	130
				T5VS	12,456	3	0	1	120	13,419	3	0	1	129	13,589	4	0	1	131
				T5S	12,351	3	0	1	119	13,306	3	0	1	128	13,474	3	0	1	130
				T5M	12,349	4	0	2	119	13,303	4	0	2	128	13,471	4	0	2	130
				T5W	12,238	4	0	3	118	13,183	4	0	3	127	13,350	4	0	3	128
				BLC	10,159	3	0	3	98	10,944	3	0	3	105	11,083	3	0	3	107
				LCCO	7,256	1	0	3	70	7,816	1	0	3	75	7,915	1	0	3	76
				RCCO	7,246	3	0	3	70	7,806	4	0	4	75	7,905	4	0	4	76
P13	30	1300	128W	T1S	14,438	3	0	3	113	15,554	3	0	3	122	15,751	3	0	3	123
				T2S	14,355	4	0	4	112	15,465	4	0	4	121	15,660	4	0	4	122
				T2M	14,614	3	0	3	114	15,744	4	0	4	123	15,943	4	0	4	125
				T3S	14,132	4	0	4	110	15,224	4	0	4	119	15,417	4	0	4	120
				T3M	14,606	4	0	4	114	15,735	4	0	4	123	15,934	4	0	4	124
				T4M	14,330	4	0	4	112	15,438	4	0	4	121	15,633	4	0	4	122
				TFTM	14,701	4	0	4	115	15,836	4	0	4	124	16,037	4	0	4	125
				T5VS	14,804	4	0	1	116	15,948	4	0	1	125	16,150	4	0	1	126
				T5S	14,679	3	0	1	115	15,814	3	0	1	124	16,014	3	0	1	125
				T5M	14,676	4	0	2	115	15,810	4	0	2	124	16,010	4	0	2	125
				T5W	14,544	4	0	3	114	15,668	4	0	3	122	15,866	4	0	3	124
				BLC	7919	3	0	3	62	8531	3	0	3	67	8639	3	0	3	67
				LCCO	5145	1	0	2	40	5543	1	0	2	43	5613	1	0	2	44
					5139	3	0	3	40	5536	3	0	3	43	5606	3	0	3	44

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A+ Capable Luminaire

This item is an A+ capable luminaire, which has been designed and tested to provide consistent color appearance and system-level interoperability.

- All configurations of this luminaire meet the Acuity Brands' specification for chromatic consistency
- This luminaire is A+ Certified when ordered with DTL® controls marked by a shaded background. DTL DLL equipped luminaires meet the A+ specification for luminaire to photocontrol interoperability1
- This luminaire is part of an A+ Certified solution for ROAM® or XPoint™ Wireless control networks, providing out-of-the-box control compatibility with simple commissioning, when ordered with drivers and control options marked by a shaded background[1]

To learn more about A+, visit www.acuitybrands.com/aplus.

1. See ordering tree for details.
2. A+ Certified Solutions for ROAM require the order of one ROAM node per luminaire. Sold Separately: Link to Roam; Link to DTL DLL

FEATURES & SPECIFICATIONS

INTENDED USE

The sleek design of the D-Series Size 0 reflects the embedded high performance LED technology. It is ideal for many commercial and municipal applications, such as parking lots, plazas, campuses, and pedestrian areas.

CONSTRUCTION

Single-piece die-cast aluminum housing has integral heat sink fins to optimize thermal management through conductive and convective cooling. Modular design allows for ease of maintenance and future light engine upgrades. The LED driver is mounted in direct contact with the casting to promote low operating temperature and long life. Housing is completely sealed against moisture and environmental contaminants (IP65). Low EPA (0.95 ft^2) for optimized pole wind loading.

FINISH

Exterior parts are protected by a zinc-infused Super Durable TGIC thermoset powder coat finish that provides superior resistance to corrosion and weathering. A tightly controlled multi-stage process ensures a minimum 3 mils thickness for a finish that can withstand extreme climate changes without cracking or peeling. Available in both textured and non-textured finishes.

OPTICS

Precision-molded proprietary acrylic lenses are engineered for superior area lighting distribution, uniformity, and pole spacing. Light engines are available in 3000 K, 4000 K or 5000 K (70 CRI) configurations. The D-Series Size 0 has zero uplight and qualifies as a Nighttime Friendly™ product, meaning it is consistent with the LEED® and Green Globes™ criteria for eliminating wasteful uplight.

ELECTRICAL

Light engine(s) configurations consist of high-efficacy LEDs mounted to metal-core circuit boards to maximize heat dissipation and promote long life (up to L85/100,000 hours at 25°C). Class 1 electronic drivers are designed to have a power factor >90%, THD <20%, and an expected life of 100,000 hours with <1% failure rate. Easily serviceable 10kV surge protection device meets a minimum Category C Low operation (per ANSI/IEEE C62.41.2).

STANDARD CONTROLS

The DSX0 LED area luminaire has a number of control options. Dusk to dawn controls can be utilized via optional NEMA twist-lock photocell receptacles. Integrated motion sensors with on-board photocells feature field-adjustable programing and are suitable for mounting heights up to 30 feet.

nLIGHT AIR CONTROLS

The DSX0 LED area luminaire is also available with nLight® AIR for the ultimate in wireless control. This powerful controls platform provides out-of-the-box basic motion sensing and photocontrol functionality and is suitable for mounting heights up to 40 feet. Once commissioned using a smartphone and the easy-to-use CLAIRITY app, nLight AIR equipped luminaries can be grouped, resulting in motion sensor and photocell group response without the need for additional equipment. Scheduled dimming with motion sensor over-ride can be achieved when used with the nLight Eclypse. Additional information about nLight Air can be found here.

INSTALLATION

Included mounting block and integral arm facilitate quick and easy installation. Stainless steel bolts fasten the mounting block securely to poles and walls, enabling the D-Series Size 0 to withstand up to a 3.0 G vibration load rating per ANSI C136.31. The D-Series Size 0 utilizes the AERIS™ series pole drilling pattern (template #8). Optional terminal block and NEMA photocontrol receptacle are also available.

LISTINGS

UL Listed for wet locations. Light engines are IP66 rated; luminaire is IP65 rated. Rated for -40°C minimum ambient. U.S. Patent No. D672,492 S. International patent pending.

DesignLights Consortium® (DLC) Premium qualified product and DLC qualified product. Not all versions of this product may be DLC Premium qualified or DLC qualified. Please check the DLC Qualified Products List at www.designlights.org/QPL to confirm which versions are qualified.

International Dark-Sky Association (IDA) Fixture Seal of Approval (FSA) is available for all products on this page utilizing 3000K color temperature only.

WARRANTY

5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/resources/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

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LITHONIA LIGHTING®

Catalog Number	
Notes	Klein Mt. Horeb
Type	Lighting Fixture Type C

FEATURES & SPECIFICATIONS

INTENDED USE — The 3" Wafer-Thin LED recessed downlight with remote driver box combines high quality light output and efficiency while eliminating the pot light housing for competitive affordability. This innovate wafer-slim Type IC design allows easy installation for new construction or remodel from below the ceiling without the requirement of a pot light housing for insulation. The LED module maintains at least 70% light output for 36,000 hours. These LED Wafer downlights are intended for closets, attics, hallways, bathrooms, kitchens, basements, soffits, entry ways, porches, garages, stairwells, corridors, nursing/retirement homes, condos, elevators, apartments, and any other small areas.

CONSTRUCTION — IC rated driver and fixture - approved for direct contact with insulation. Aluminum die cast outer frame. Durable, powder coat paint to prevent rust. Round fixture with integral edge-lit LED's. Plenum rated cable connector to connect from module to remote driver box. Isolated driver integrated inside steel remote box with four 7/8" knockouts with slots for pryout. Suitable for pulling wires with the 12 cubic-inch wiring compartment to accommodate up to (8) 14 gauge insulated conductors, or (6) 12 gauge insulated conductors; making the Wafer LED Downlights much easier to wire in 2in/2out (plus ground) daisy-chain applications and contractor friendly.

INSTALLATION — Ideal for shallow ceiling plenum; no housing required. Steel spring clip for easy installation. 3" cut out template is provided to ensure a correct sized hole is cut into ceiling for proper installation of the trim. Size of hole should not exceed 3 1/8 inches for this product. Suitable for installation in t-grid and drop ceiling applications. 6" plenum space required for installation of remote driver box.

OPTICS — Wafer-Thin downlight edge-lit LED technology uses light guided plate to distribute light. Polycarbonate lens provides even illumination throughout the space. Utilizes 2700K, 3000K, and 4000K color temperature LEDs.

ELECTRICAL — Connect directly to 120V power supply via provided UL recognized driver. Driver and Fixture Wet location approved and IC rated. High efficient driver with power factor > 0.9. Ambient operating temperature: -40°F (-40°C) to +104°F (+40°C). Dimming down to 10% (See page 2 for recommended dimmers). Standard input wattage is 8W ,68 lumens per watt. Actual wattage may differ by +/- 5% when operating at 120V +/- 10%. Replaces 50W incandescent.

LISTINGS — CSA certified to US and Canadian safety standards. ENERGY STAR® qualified. Wet location. Air Tight certified in accordance with ASTM E283-2004. NOM certified.

WARRANTY — 5-year limited warranty. Complete warranty terms located at: www.acuitybrands.com/support/warranty/terms-and-conditions

Note: Actual performance may differ as a result of end-user environment and application.
All values are design or typical values, measured under laboratory conditions at 25 °C.
Specifications subject to change without notice.

Wafer LED Recessed Downlight

WF3
3" LED Module

IC/Non-IC
New Construction/Remodel



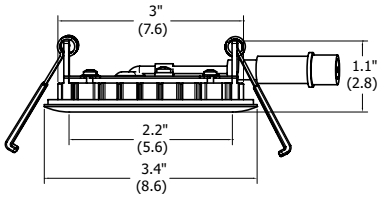

Matte black

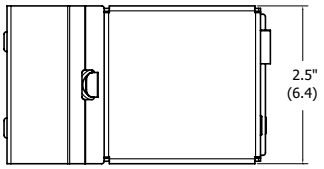

Brushed nickel

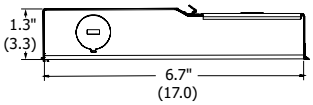

Oil-rubbed bronze

Specifications

Aperture:	2.2 (5.6)
Ceiling opening:	3 (7.6)
Overlap trim:	3.4 (8.6)
Height:	1.1 (2.8)







All dimensions are inches (centimeters) unless otherwise indicated.

ORDERING INFORMATION For shortest lead times, configure product using **standard options (shown in bold).** **Example:** WF3 LED 30K MW

WF3	LED		
Series	**Lamp**	**CCT/CRI/W/Lumens[1]**	**Finish**
WF3 3" wafer-thin LED downlight	**LED** LED	**27K[2]** 2700K/80CRI/8W/540L	**MW** Matte white
		30K 3000K/80CRI/8W/550L	**MB** Matte black
		40K 4000K/80CRI/7.9W/590L	**BN** Brushed nickel
			ORB Oil-rubbed bronze

Accessories: *Order as separate catalog number.*

WF3 PAN R12	3" new construction pan, retail pack of 12
WFEXC6 U	6' FT4 cable
WFEXC10 U	10' FT4 cable
WFEXC20 U	20' FT4 cable


WF3_Pan

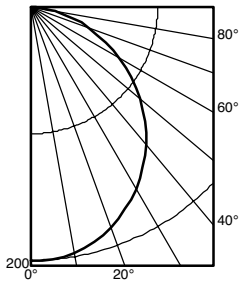

Extension Cable

Notes
1 Total system delivered lumens.
2 Available in Matte White only.

PHOTOMETRICS

Distribution Curve | **Distribution Data** | **Output Data** | **Coefficient of Utilization** | **Illuminance Data at 30" Above Floor for a Single Luminaire**

WF3 LED 27K, 2700 K LEDs, 8 watts, 545 lumens, 68.1 lm/w, test no. ISF 30891P2



	Ave	Lumens
0	201	
5	200	19
15	192	54
25	176	81
35	154	96
45	127	98
55	97	86
65	65	65
75	34	36
85	8	9
90	0	

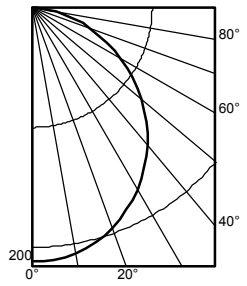
Zone	Lumens	% Lamp
0° - 30°	154.4	28.3
0° - 40°	250.9	46.0
0° - 60°	435.3	79.8
0° - 90°	545.2	100.0
90° - 180°	0.0	0.0
0° - 180°	545.2	*100.0

*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	70% 50%	70% 30%	70% 10%	20% 50%	20% 30%	20% 10%
0	119	119	119	116	116	116	111	111	111
1	104	100	96	102	98	95	98	94	92
2	91	84	79	89	83	78	86	80	76
3	80	72	65	78	71	65	75	69	64
4	71	62	56	70	61	55	67	60	54
5	63	54	48	62	54	48	60	53	47
6	57	48	42	56	48	42	54	47	41
7	52	43	37	51	43	37	50	42	37
8	47	39	33	47	39	33	45	38	33
9	43	35	30	43	35	30	42	35	30
10	40	32	27	40	32	27	39	32	27

Mounting Height	Inital FC Center Beam	50% beam - 63.3° Diameter	50% beam - 63.3° FC	10% beam - 108.2° Diameter	10% beam - 108.2° FC
8.0	6.6	6.8	3.3	15.2	0.7
10.0	3.6	9.2	1.8	20.7	0.4
12.0	2.2	11.7	1.1	26.2	0.2
14.0	1.5	14.2	0.8	31.8	0.2
16.0	1.1	16.6	0.6	37.3	0.1

WF3 LED 30K, 3000 K LEDs, 8 watts, 550 lumens, 68.8 lm/w, test no. ISF 30891



	Ave	Lumens
0	212	
5	212	20
15	203	57
25	186	86
35	163	102
45	134	104
55	102	91
65	69	68
75	36	38
85	8	10
90	0	

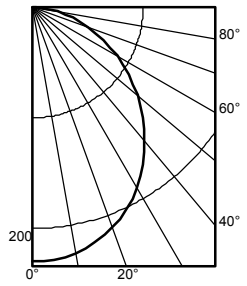
Zone	Lumens	% Lamp
0° - 30°	163.2	28.3
0° - 40°	265.1	46.0
0° - 60°	460.0	79.8
0° - 90°	576.1	100.0
90° - 180°	0.0	0.0
0° - 180°	576.1	*100.0

*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	70% 50%	70% 30%	70% 10%	20% 50%	20% 30%	20% 10%
0	119	119	119	116	116	116	111	111	111
1	104	100	96	102	98	95	98	94	92
2	91	84	79	89	83	78	86	80	76
3	80	72	65	78	71	65	75	69	64
4	71	62	56	70	61	55	67	60	54
5	63	54	48	62	54	48	60	53	47
6	57	48	42	56	48	42	54	47	41
7	52	43	37	51	43	37	50	42	37
8	47	39	33	47	39	33	45	38	33
9	43	35	30	43	35	30	42	35	30
10	40	32	27	40	32	27	39	32	27

Mounting Height	Inital FC Center Beam	50% beam - 63.3° Diameter	50% beam - 63.3° FC	10% beam - 108.2° Diameter	10% beam - 108.2° FC
8.0	7.0	6.8	3.5	15.2	0.7
10.0	3.8	9.2	1.9	20.7	0.4
12.0	2.3	11.7	1.2	26.2	0.2
14.0	1.6	14.2	0.8	31.8	0.2
16.0	1.2	16.6	0.6	37.3	0.1

WF3 LED 40K, 4000 K LEDs, 7.9 watts, 590 lumens, 74.7 lm/w, test no. ISF 31230



	Ave	Lumens
0	230	
5	229	22
15	219	62
25	202	93
35	174	109
45	141	109
55	106	95
65	70	70
75	38	40
85	9	11
90	1	

Zone	Lumens	% Lamp
0° - 30°	176.6	29.0
0° - 40°	285.2	46.8
0° - 60°	488.6	80.2
0° - 90°	609.5	100.0
90° - 120°	0.1	0.0
90° - 130°	0.1	0.0
90° - 150°	0.1	0.0
90° - 180°	0.1	0.0
0° - 180°	609.6	*100.0

*Efficiency

pf / pc / pw	80% 50%	80% 30%	80% 10%	70% 50%	70% 30%	70% 10%	20% 50%	20% 30%	20% 10%
0	119	119	119	116	116	116	111	111	111
1	104	100	96	102	98	95	98	95	92
2	91	84	79	89	83	78	86	80	76
3	80	72	66	79	71	65	76	69	64
4	71	63	56	70	62	55	67	60	55
5	64	55	48	63	54	48	60	53	47
6	57	49	42	57	48	42	55	47	42
7	52	44	37	51	43	37	50	42	37
8	48	39	33	47	39	33	46	38	33
9	44	36	30	43	35	30	42	35	30
10	40	33	27	40	32	27	39	32	27

Mounting Height	Inital FC Center Beam	50% beam - 62.8° Diameter	50% beam - 62.8° FC	10% beam - 107.4° Diameter	10% beam - 107.4° FC
8.0	7.6	6.7	3.8	15.0	0.8
10.0	4.1	9.2	2.0	20.4	0.4
12.0	2.5	11.6	1.3	25.9	0.3
14.0	1.7	14.0	0.9	31.3	0.2
16.0	1.3	16.5	0.6	36.8	0.1

DIMMER COMPATIBILITY

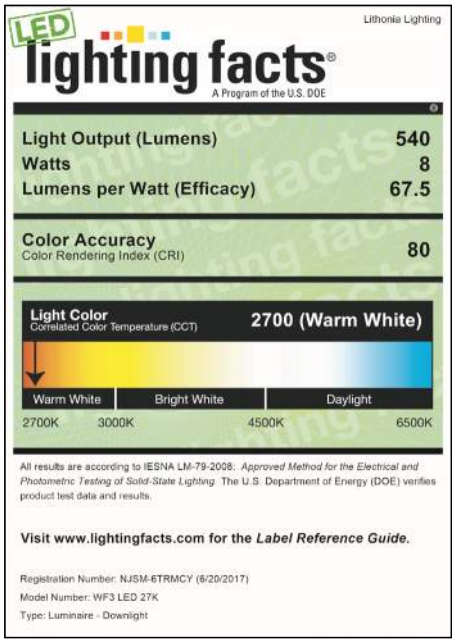
COMPATIBLE DIMMERS					
Leviton	**Lutron**			**Sensorswitch**	**Synergy/Leviton**
6633-PA	Maestro MACL-153M (TX)	Diva/Skylark DVRP-253PCTRP-253P	Panel Module HW/LP-RPM-4A-120	nSP5 PCD 2W	ISD 600 I 120/IPI06
IPL06-LED/INC mode	Maestro Wireless MRF2-6ELV	Skylark CTCL-150	Panel Module HW/LP-RPM-4U-120	nSP5 PCD ELV 120	ISD 400 ELV 120/IPE04
6615-P	Gen 3.0 DVCL-153P (T9)	Caseta Wireless PD-5NE	Grafik QS/Wallbox LQRJ-WPM-6P		
	Maestro MSCL-OP153M	Maestro MACL-LFQ	Grafik Eye 3000 Family HWI-WPM-6D-120		
	Caseta Wireless PD-6WCL	RadioRA2 RRD-6NA	HomeWorksQS / my Room LQSE-4A1-D/ MQSE-4A1-D/MQSE-3A1/MQSE-2A1-D,120V		
	Grafik T GT-5NEM / GTJ-5NEM	HomeWorks HQRD-6NA	Homeworks QS LQSE-4A-120-D		

*Requires Lutron Smart Bridge L-BDG2-WH for wireless applications (sold separately)

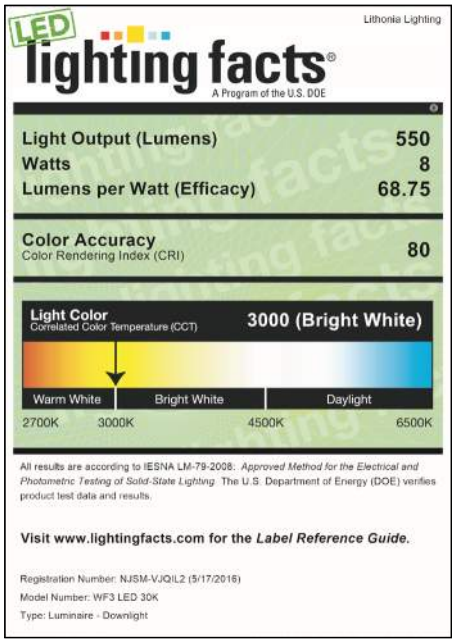
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ENERGY DATA

3" ENERGY DATA - 2700K	
Lumens	540
Color temperature	2700K
CRI	80
Lumens/Watt	67.5
Min. starting temperature	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A standards
Input voltage	120V
Total Harmonic Distortion	13.5%
Min. power factor	0.97
Input frequency	50/60 Hz
Rated wattage	8W
Input power	8W
Input current	0.07A



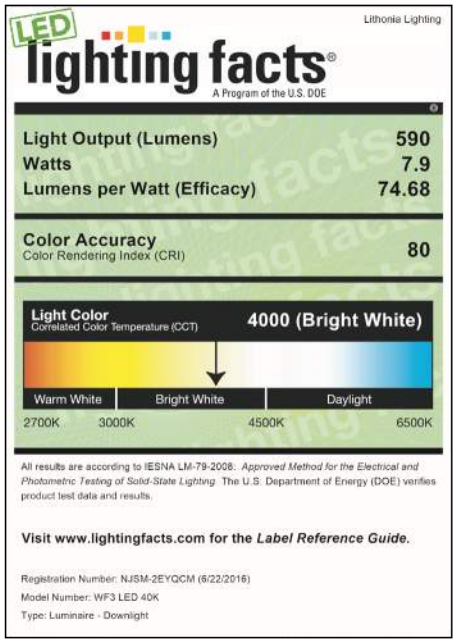
3" ENERGY DATA - 3000K	
Lumens	550
Color temperature	3000K
CRI	80
Lumens/Watt	68.75
Min. starting temperature	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A standards
Input voltage	120V
Total Harmonic Distortion	13.5%
Min. power factor	0.97
Input frequency	50/60 Hz
Rated wattage	8
Input power	8W
Input current	0.07A



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ENERGY DATA

3" ENERGY DATA - 4000K	
Lumens	590
Color temperature	4000K
CRI	80
Lumens/Watt	74.68
Min. starting temperature	-40°C (-40°F)
EMI/RFI	FCC Title 47 CFR, Part 15, Class B
Sound rating	Class A standards
Input voltage	120V
Total Harmonic Distortion	13.5%
Min. power factor	0.97
Input frequency	50/60 Hz
Rated wattage	7.9
Input power	7.9W
Input current	0.07A



DOWNLIGHTING: One Lithonia Way, Conyers, GA 30012 Phone: 800-315-4935 Fax: 770-860-3129 www.lithonia.com
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SOREN

B8907-TBK

Klein Mt. Horeb
Lighting Fixture Type D

This timeless silhouette, which is made from an exclusive EPM material and is part of the Troy Elements collection, can withstand a multitude of outdoor elements, including UV and salt exposure for years to come in style. The Soren family offers a sleek yet familiar silhouette in wall sconce, lantern, and post configurations.

*SKUs B8905-TBK, B8906-TBK, B8907-TBK, and B8908-TBK are Dark Sky Compliant and feature integrated LED

FINISHES

TEXTURE BLACK
Coastal Suitable Finish (EPM): Yes



DIMENSIONS

Height: 23"
Width/Diameter: 11"
Product Weight: 7.98lb
Extension: 12.25"
Top to Center: 4.25"
Canopy/Backplate Shape: Rectangle
Sloped Ceiling Compatible: No
Living Finish: No
Uplight Only: Yes

Shade

ELECTRICAL

Bulb 1
Bulb Included: N/A
Socket: Integrated LED
Max Wattage: 9
Bulb Quantity: 1
Bulb Included: No
Wire Length: 7"
Dimmer Type: TRIAC
Gem Box Required (2"x3"): No
Dark Sky: Yes
CRI: 90
Color Temp.: 2700k
Lumens: 275
Title 24: No
Field Serviceable: Yes

SHIPPING

Carton 1: 28" x 15" x 17"
Carton 1 Weight: 12lb
Shipping Method: Ground
Country of Origin: TH

GLEN
EB82229-UNV

BOLLARDS

PROJECT

Klein Mt. Horeb
Lighting Fixture Type E

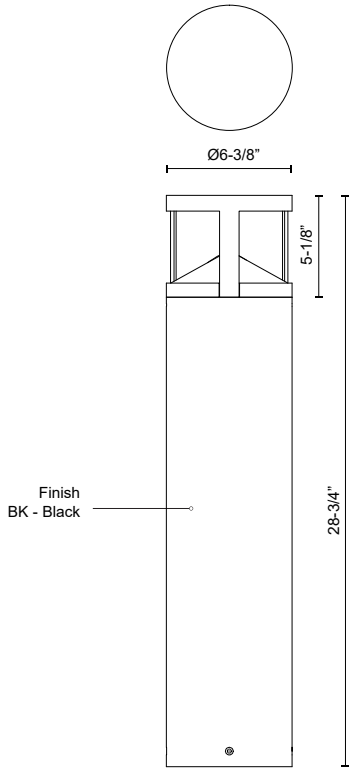




EB82229-BK-UNV
Black

DESCRIPTION

Architecturally designed high-power LED exterior bollard fixture. This die-cast aluminum cylinder offers a uniquely shaped split pyramid top with a diffused omni directional light. Available in three base sizes and interchangeable head options



SPECIFICATION DETAILS

Fixture Dimensions	D6-3/8" x H28-3/4"
Light Source	LED with DC Driver
Wattage	24W
Total Lumens	2500lm
Delivered Lumens	1009lm
Voltage	120-277V
Color Temperature	3000K
CRI (Ra)	80CRI
Optional Color Temps	2700K - 5000K Available, Minimum Order Quantities Apply
LED Rated Life	50,000 hours
Dimming	100% - 10%, TRIAC or ELV Dimmer (Not Included)
Location	Wet
Illumination Direction	Down
Paint Finish	BK02

* For custom options, consult factory for details.
* For warranty information, please visit www.kuzcolighting.com/warranty

KUZCO

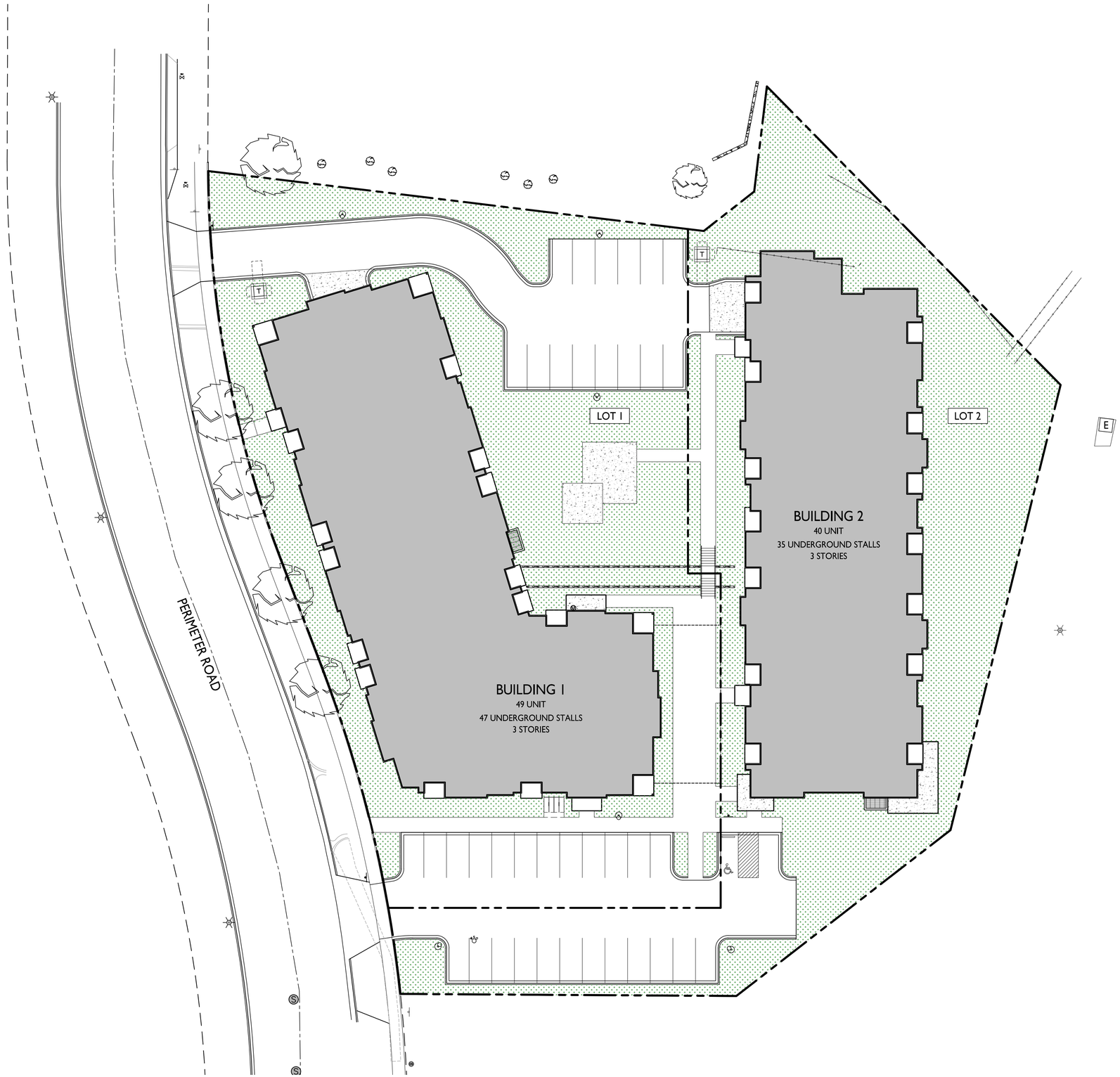
CANADA: 19054 28TH AVENUE - SURREY, BC V3Z 6M3
USA: 3035 E. LONE MOUNTAIN ROAD - LAS VEGAS, NV 89081

WWW.KUZCOLIGHTING.COM

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COMMENT

Intertek



1 CA103 PERVIOUS/GREEN SPACE
1" = 20'-0"

GRAPHIC SCALE
0 20 40 60
1 INCH = 20 FT (24X36 SHEET)

PERVIOUS AREA / GREEN SPACE

	LOT 1	LOT 2
LOT AREA	46,579 S.F.	37,916 S.F.
PROPOSED GREEN SPACE	14,274 S.F. / 31%	16,122 S.F. / 43%

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd., Suite 900
Middleton, WI 53562

ISSUED
2025.04.17 - NEIGHBORHOOD MEETING
2025.05.23 - PLAN COMMISSION SUBMITTAL
2025.11.17 - SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

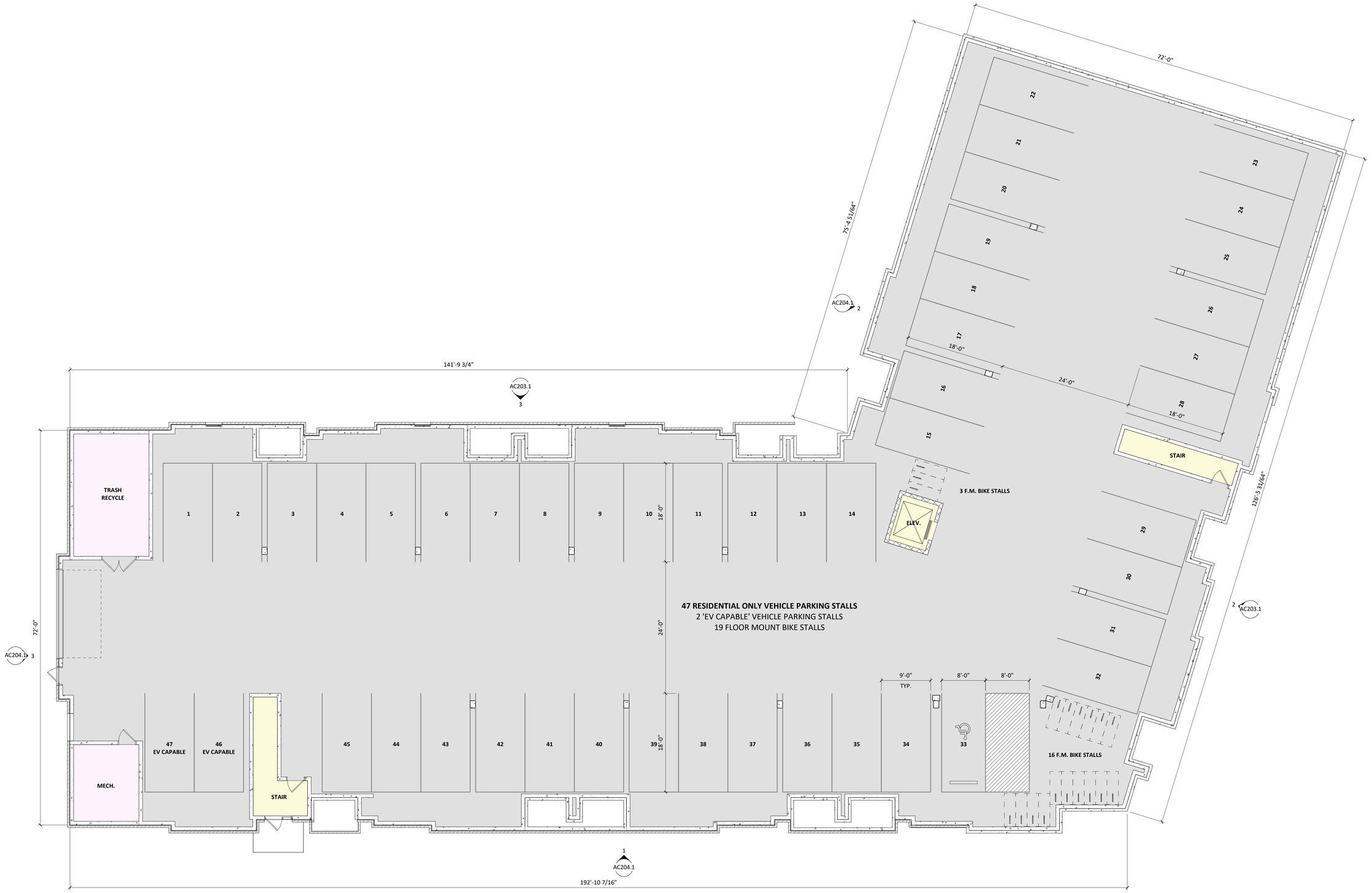
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
PERVIOUS/ GREEN SPACE

SHEET NUMBER
CA103

PROJECT NO. 2514

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1 AC100.1 BASEMENT FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd, Suite 900
Middleton, WI 53562

ISSUED
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1
BASEMENT FLOOR PLAN

SHEET NUMBER
AC100.1

PROJECT NUMBER
2514

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1 AC101.1 FIRST FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd, Suite 900
Middleton, WI 53562

ISSUED
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

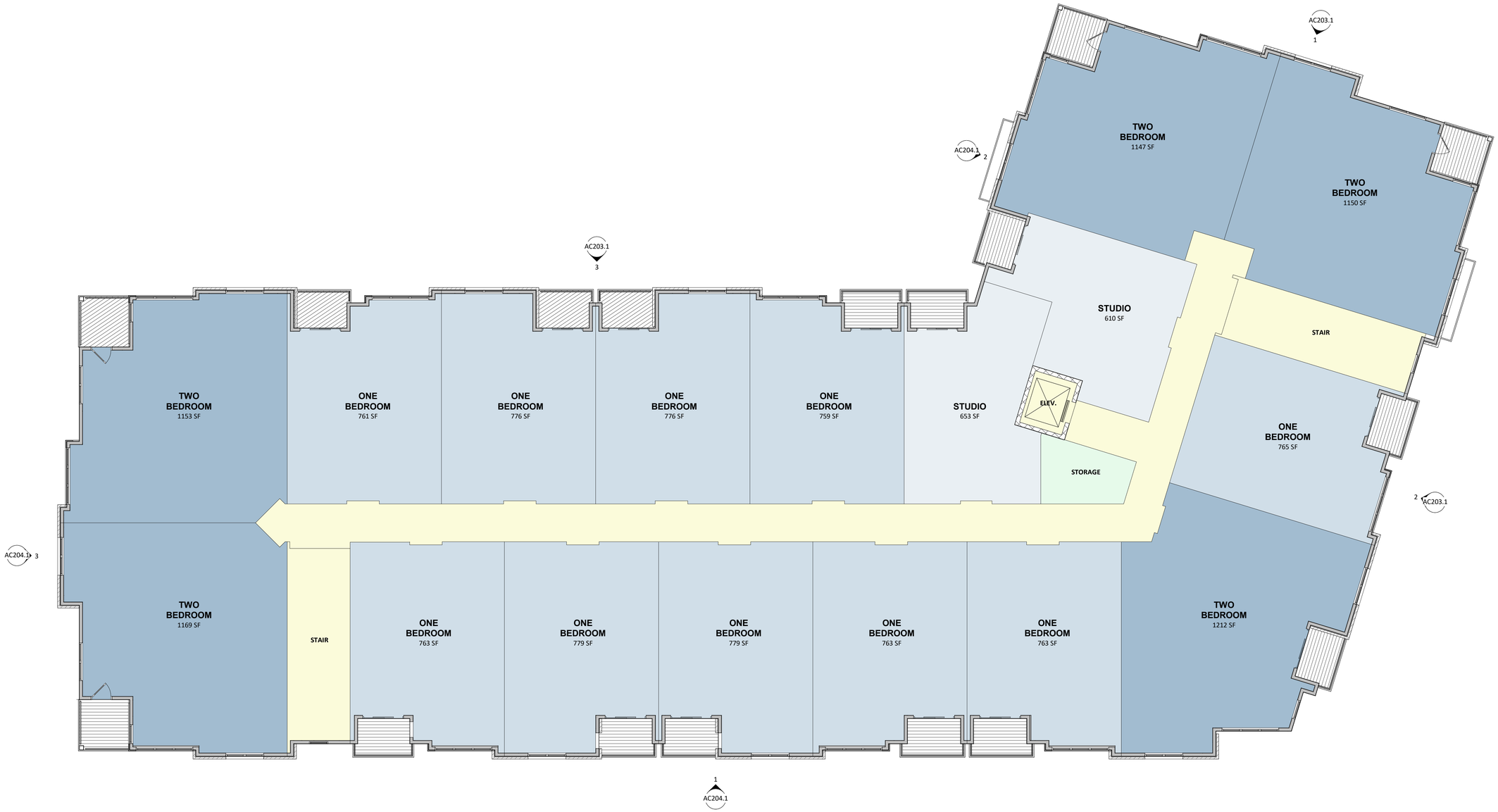
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1
FIRST FLOOR PLAN

SHEET NUMBER
AC101.1

PROJECT NUMBER
2514

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1 AC102.1 SECOND FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd, Suite 900
Middleton, WI 53562

ISSUED
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

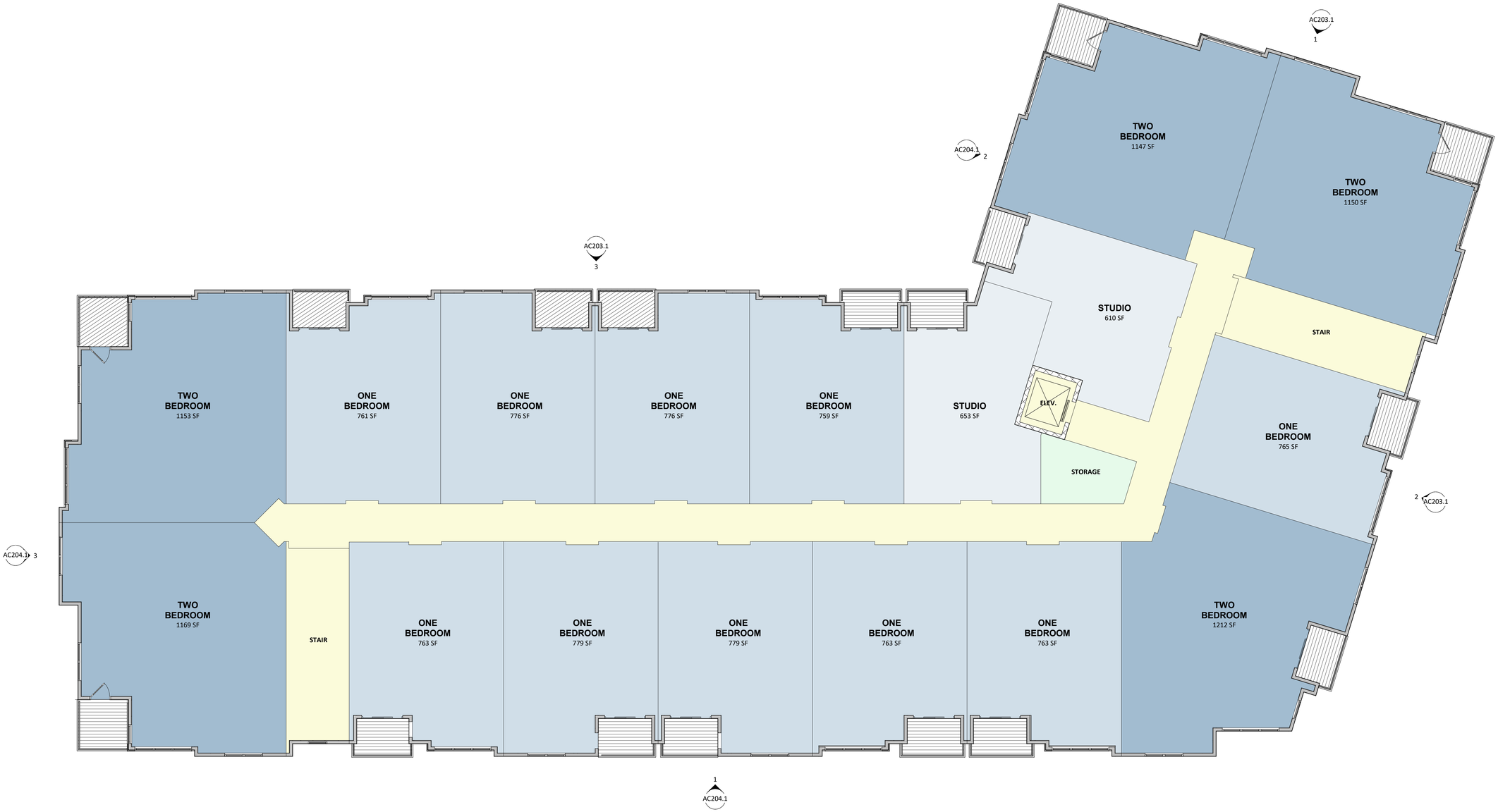
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1
SECOND FLOOR PLAN

SHEET NUMBER
AC102.1

PROJECT NUMBER
2514

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1 / AC103.1 THIRD FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

knothe bruce ARCHITECTS
Phone: 608.836.3690
8401 Greenway Blvd, Suite 900
Middleton, WI 53562

ISSUED
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

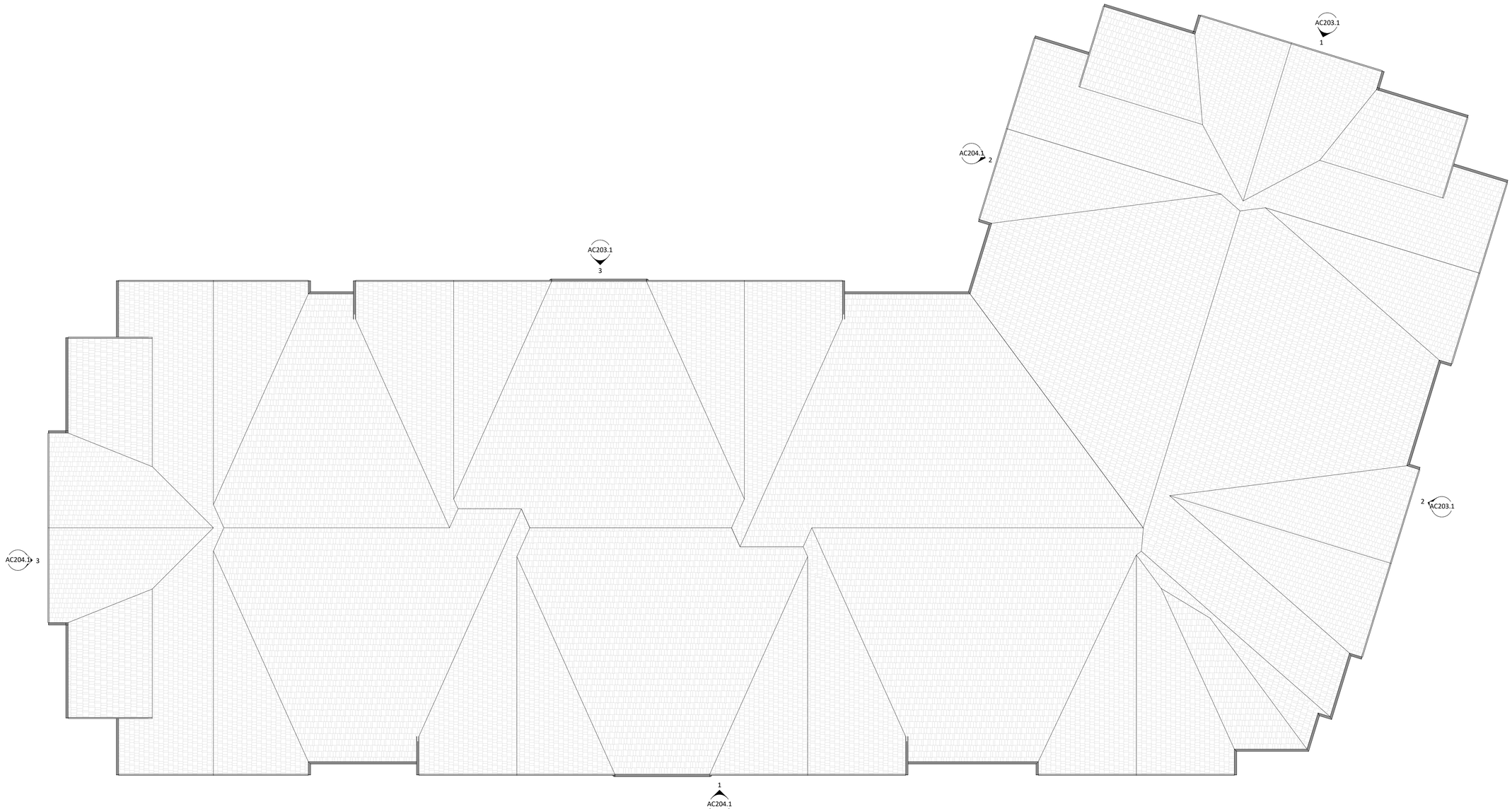
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1 THIRD FLOOR PLAN

SHEET NUMBER
AC103.1

PROJECT NUMBER
2514

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1 AC104.1 ROOF PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

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ARCHITECTS
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8401 Greenway Blvd, Suite 900
Middleton, WI 53562

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2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1
ROOF PLAN

SHEET NUMBER
AC104.1

PROJECT NUMBER
2514

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1 AC201.1 EAST ELEVATION
1/8" = 1'-0"



2 AC201.1 SOUTH ELEVATION
1/8" = 1'-0"



3 AC201.1 NORTHEAST ELEVATION
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

EXTERIOR MATERIAL SCHEDULE

MARK	BUILDING ELEMENT	MANUFACTURER	COLOR
01	COMPOSITE VERTICAL SIDING 6"	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
02	COMPOSITE LAP SIDING 6"	JAMES HARDIE	AGED PEWTER
03	COMPOSITE PANEL	JAMES HARDIE	MIDNIGHT BLACK
04	WRAPPED COLUMN	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
05	COMPOSITE TRIM	JAMES HARDIE	MATCH ADJACENT SIDING
06	STONE VENEER	HALQUIST	KENSINGTON FULL COLOR BLEND
07	CAST STONE BANDS & SILLS	BIG RIVER	SMOOTH 14-31
08	RAILINGS & HANDRAILS	SUPERIOR	BLACK
09	ALUMINIUM STOREFRONT	KAWNEER	BLACK
10	COMPOSITE WINDOWS	ANDERSEN	BLACK
11	ASPHALT SHINGLES	CERTAINTEED	CINDER BLACK

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SHEET TITLE
BUILDING #1 EXTERIOR ELEVATIONS

SHEET NUMBER
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PROJECT NUMBER
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1 AC202.1 SOUTHWEST ELEVATION ALONG PERIMETER RD.
1/8" = 1'-0"



2 AC202.1 NORTH ELEVATION
1/8" = 1'-0"



3 AC202.1 NORTHWEST ELEVATION
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

EXTERIOR MATERIAL SCHEDULE

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01	COMPOSITE VERTICAL SIDING 6"	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
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2 AC203.1 SOUTH ELEVATION
1/8" = 1'-0"



3 AC203.1 NORTHEAST ELEVATION
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0' 4' 8' 16'
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EXTERIOR MATERIAL SCHEDULE

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11	ASPHALT SHINGLES	CERTAINTEED	CINDER BLACK

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MT. HOREB, WI

SHEET TITLE
BUILDING #1 EXTERIOR ELEVATIONS COLORED

SHEET NUMBER
AC203.1

PROJECT NUMBER
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1 AC204.1 ELEVATION - SOUTHWEST
1/8" = 1'-0"



2 AC204.1 ELEVATION - NORTH
1/8" = 1'-0"



3 AC204.1 ELEVATION - NORTHWEST
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

EXTERIOR MATERIAL SCHEDULE

MARK	BUILDING ELEMENT	MANUFACTURER	COLOR
01	COMPOSITE VERTICAL SIDING 6"	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
02	COMPOSITE LAP SIDING 6"	JAMES HARDIE	AGED PEWTER
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PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #1 EXTERIOR ELEVATIONS COLORED

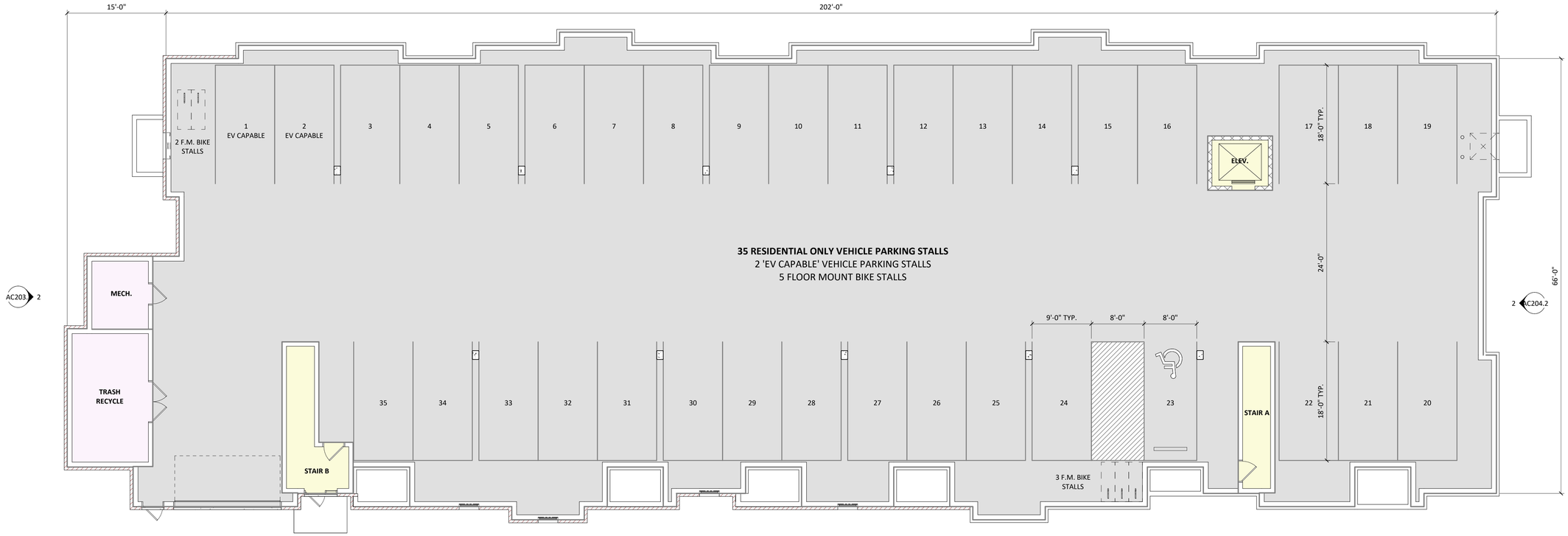
SHEET NUMBER
AC204.1

PROJECT NUMBER
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AC204.2
1



1
AC203.2

1 BASEMENT FLOOR PLAN
AC100.2 1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

ISSUED
2025.05.23 PLAN COMMISSION SUBMITTAL
2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

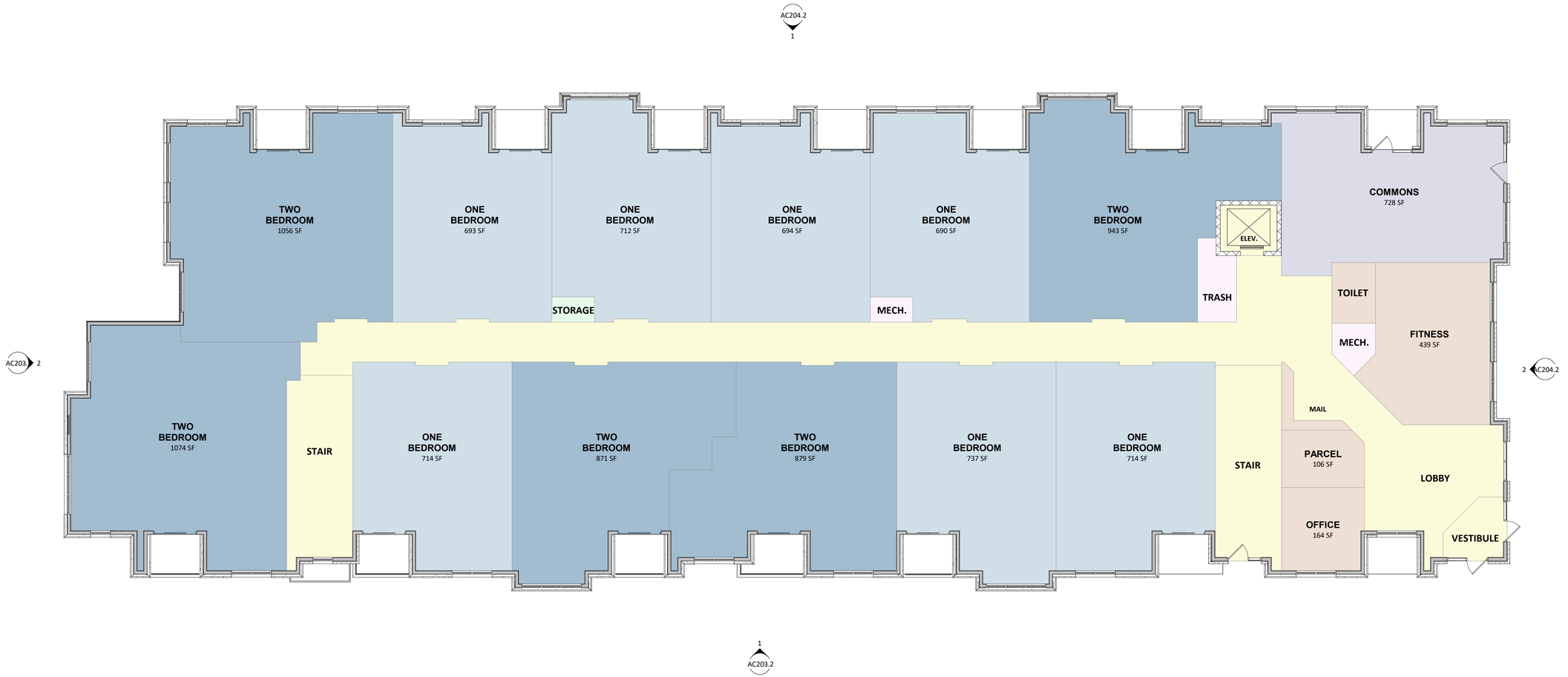
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SHEET TITLE
BUILDING #2
BASEMENT FLOOR PLAN

SHEET NUMBER
AC100.2

PROJECT NUMBER
2514

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1 AC101.2 FIRST FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

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KEY PLAN

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2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #2
FIRST FLOOR PLAN

SHEET NUMBER
AC101.2

PROJECT NUMBER
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1 / AC102.2 SECOND FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

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KEY PLAN

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PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #2
SECOND FLOOR PLAN

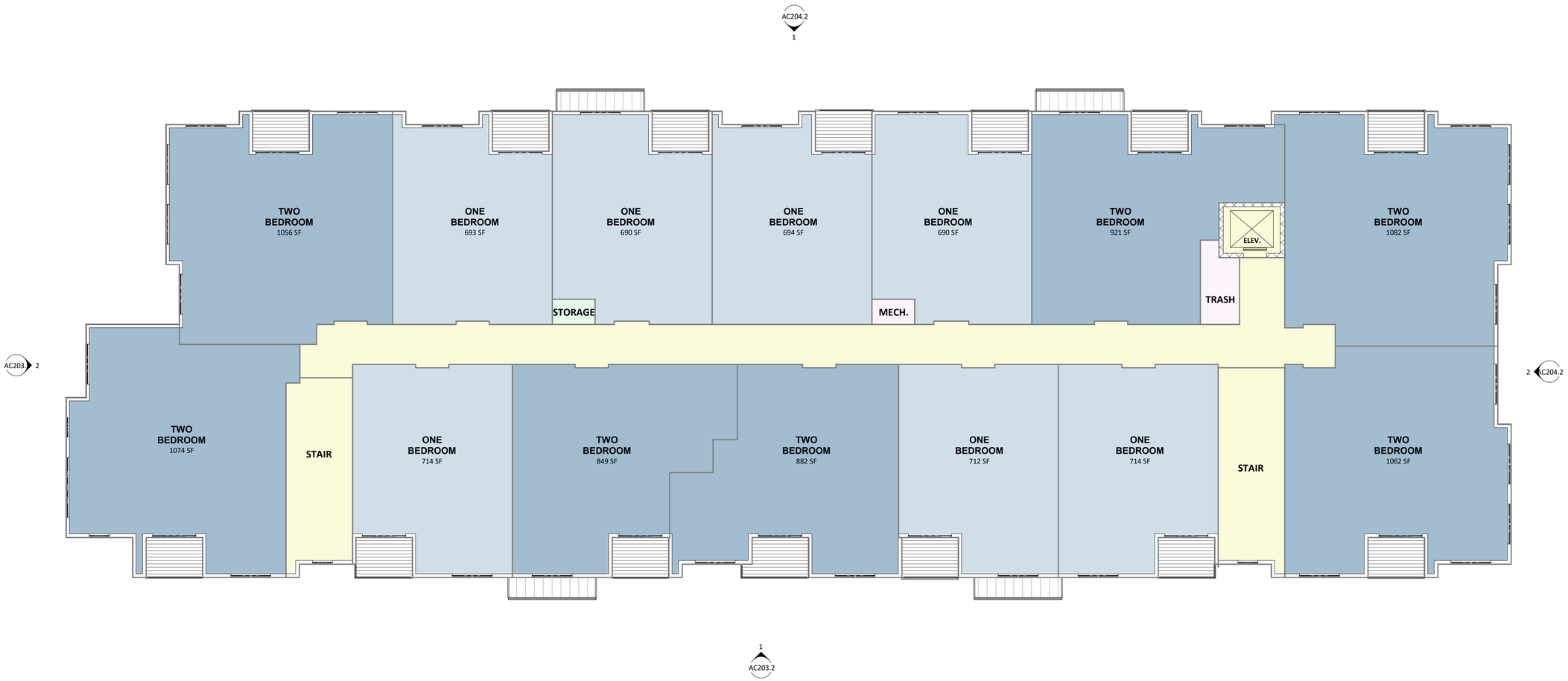
SHEET NUMBER
AC102.2

PROJECT NUMBER
2514

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KEY PLAN



1 AC103.2 THIRD FLOOR PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

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2025.11.17 SIP SUBMITTAL

PROJECT TITLE
PERIMETER ROAD DEVELOPMENT

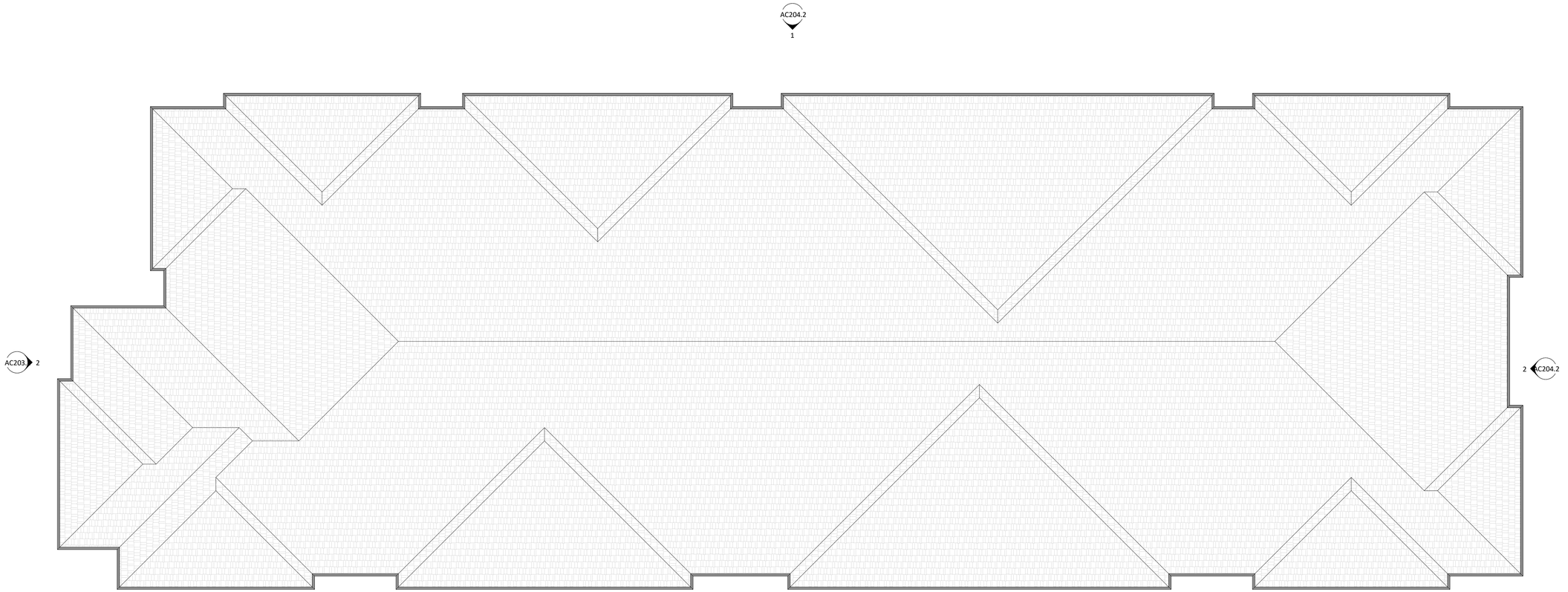
101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #2
THIRD FLOOR
PLAN

SHEET NUMBER
AC103.2

PROJECT NUMBER
2514

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1 AC104.2 ROOF PLAN
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

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PROJECT TITLE
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SHEET TITLE
BUILDING #2
ROOF PLAN

SHEET NUMBER
AC104.2

PROJECT NUMBER
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1 AC201.2 WEST ELEVATION
1/8" = 1'-0"



2 AC201.2 NORTH ELEVATION
1/8" = 1'-0"

0' 4' 8' 16'
1/8" = 1 '- 0"

EXTERIOR MATERIAL SCHEDULE

MARK	BUILDING ELEMENT	MANUFACTURER	COLOR
01	STANDING SEAM METAL ROOF	TBD	GRAY
02	COMPOSITE LAP SIDING 6"	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
03	COMPOSITE LAP SIDING 6"	JAMES HARDIE	IRON GRAY
04	COMPOSITE PANELS	JAMES HARDIE	MIDNIGHT BLACK
05	COMPOSITE LAP SIDING 6"	JAMES HARDIE	AGED PEWTER
06	STONE VENEER	KENSINGTON FULL COLOR BLEND	HALQUIST
07	CAST STONE BANDS & SILLS	BIG RIVER	SMOOTH 14-31
08	RAILINGS & HANDRAILS	SUPERIOR	BLACK
09	ALUMINIUM STOREFRONT	KAWNEER	BLACK
10	COMPOSITE WINDOWS	ANDERSEN	BLACK
11	ASHPALT SHINGLES	CERTAINTEED	CINDER BLACK

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PROJECT TITLE
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101 PERIMETER RD.
MT. HOREB, WI

SHEET TITLE
BUILDING #2 EXTERIOR ELEVATIONS

SHEET NUMBER
AC201.2

PROJECT NUMBER
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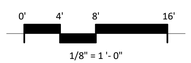
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1 AC202.2 ELEVATION - EAST
1/8" = 1'-0"



2 AC202.2 ELEVATION - SOUTH
1/8" = 1'-0"



EXTERIOR MATERIAL SCHEDULE

MARK	BUILDING ELEMENT	MANUFACTURER	COLOR
01	STANDING SEAM METAL ROOF	TBD	GRAY
02	COMPOSITE LAP SIDING 6"	JAMES HARDIE	ROSEWOOD - RUSTIC SERIES
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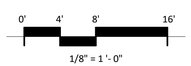
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1 AC203.2 WEST ELEVATION
1/8" = 1'-0"



2 AC203.2 NORTH ELEVATION
1/8" = 1'-0"



EXTERIOR MATERIAL SCHEDULE

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MT. HOREB, WI

SHEET TITLE
BUILDING #2 EXTERIOR ELEVATIONS COLORED

SHEET NUMBER
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PROJECT NUMBER
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1/8" = 1'-0"



2 AC204.2 SOUTH ELEVATION
1/8" = 1'-0"

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SHEET TITLE
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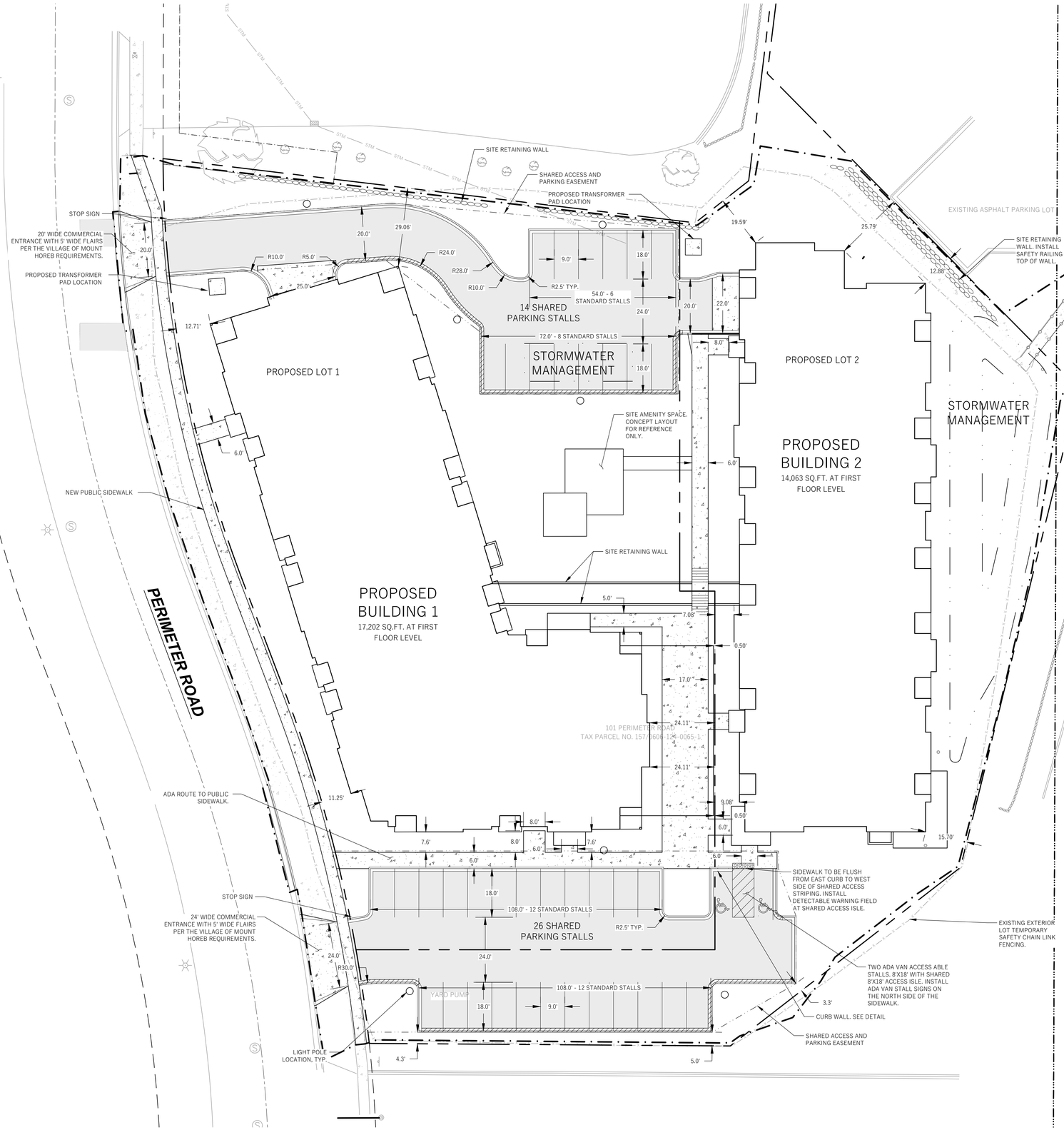
SHEET NUMBER
AC204.2

PROJECT NUMBER
2514

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4. **Grading and Stormwater Management Plan**

The following engineering exhibits address all grading and stormwater requirements.



LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- 18" REJECT CURB AND GUTTER
- 18" CURB AND GUTTER FLUSH WITH PAVEMENT
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- STORMWATER TREATMENT FACILITY

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON THE WEEK OF FEBRUARY 26, 2025. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE VILLAGE'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS.

SITE INFORMATION BLOCK:

SITE ADDRESS: PERIMETER ROAD
USE OF PROPERTY: MULTI FAMILY RESIDENTIAL
ZONING: PD (PLANNED DEVELOPMENT)

	LOT 1	LOT 2
SITE ACREAGE:	46,660 SQ.FT. (1.07 AC)	38,651 SQ.FT. (0.89 AC)
SETBACKS:		
FRONT YARD:	10-FEET	7-FEET
REAR YARD:	10-FEET	10-FEET
BELOW GRADE:	0.5-FOOT	-
SIDE YARD:	10-FEET	10-FEET
NUMBER OF UNITS:	49	40

TOTAL NUMBER OF PARKING STALLS: 122
UNDERGROUND: 47 | 35
SURFACE: 40
NUMBER OF SURFACE STALLS DESIGNATED ACCESSIBLE: 2

TOTAL NUMBER OF EXTERIOR BIKE STALLS: 4

EXISTING IMPERVIOUS SURFACE AREA: 57,918 SQ.FT.
ROOFTOP: 19,918 SQ.FT.
PAVED: 38,000 SQ.FT.

NEW IMPERVIOUS SURFACE AREA: 54,619 SQ.FT.
LOT 1: 33,220 SQ.FT. (32,699 SQ.FT. NOT INCLUDING GREEN ROOF)
ROOFTOP: 19,885 SQ.FT. (19,364 SQ.FT. NOT INCLUDING GREEN ROOF)
AT FIRST FLOOR: 17,202 SQ.FT.
DECKS: 866 SQ.FT.
BELOW GRADE PARKING: 1,296 SQ.FT.
GREEN ROOF: 521 SQ.FT.
PAVED DRIVEWAY / PARKING: 10,711 SQ.FT.
SIDEWALK / STOOPS / PADS: 2,624 SQ.FT.

LOT 2: 21,399 SQ.FT.
ROOFTOP: 14,711 SQ.FT.
AT FIRST FLOOR: 14,063 SQ.FT.
DECKS: 648 SQ.FT.
PAVED DRIVEWAY / PARKING: 5,252 SQ.FT.
SIDEWALK / STOOPS / PADS: 1,436 SQ.FT.

PERCENT IMPERVIOUS ON THE LOTS: 64.0%
LOT 1: 71.2%
LOT 2: 55.4%
DISTURBANCE LIMITS: 82,000 SQ. FT.

DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

WYSER ENGINEERING

KLEIN PERIMETER ROAD
VILLAGE OF MT. HOREB, DANE COUNTY, WI
101 PERIMETER ROAD
MOUNT HOREB, WI 53572

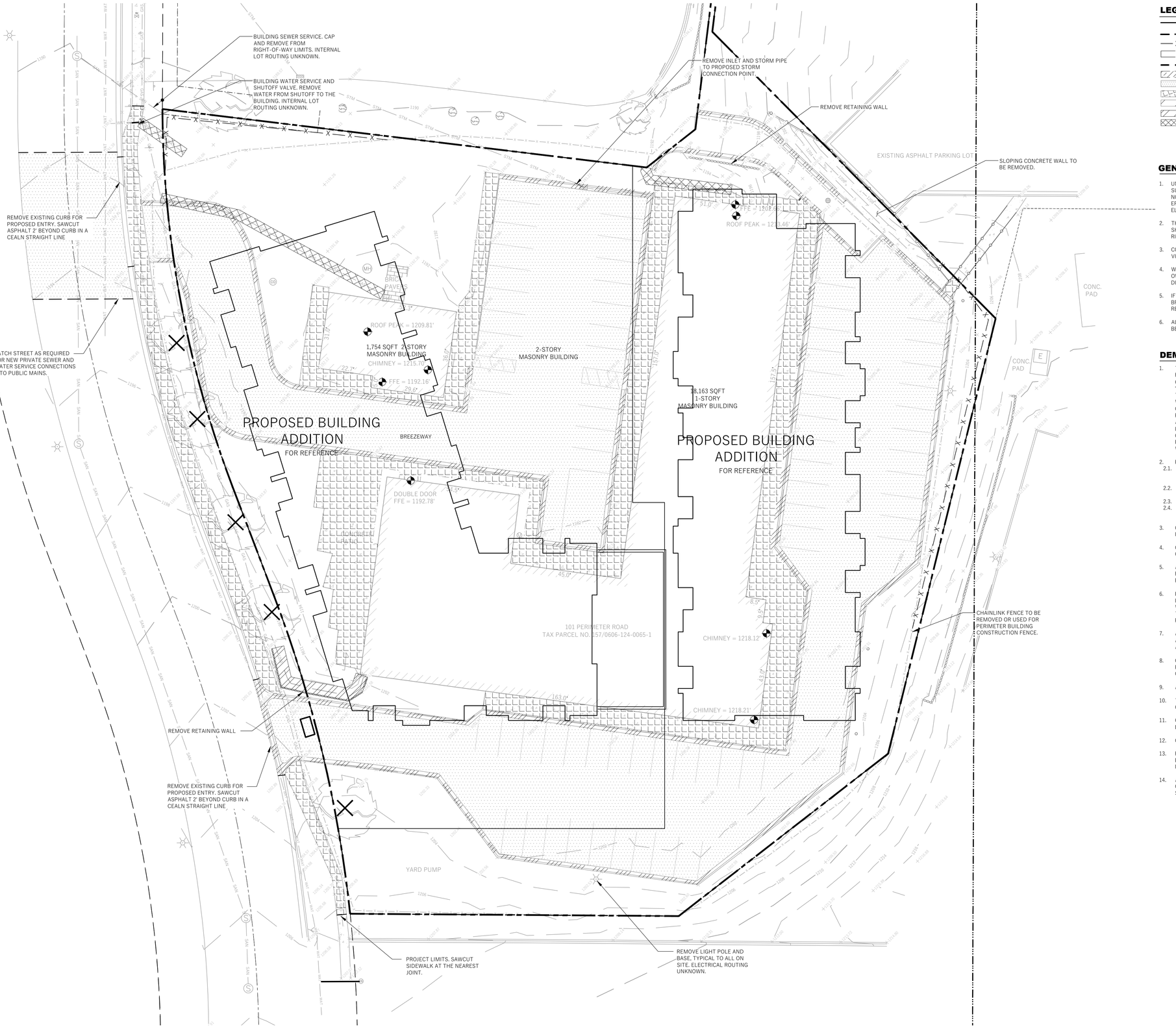
Sheet Title: SITE PLAN

Revisions:

No.	Date:	Description:

Graphic Scale: 0' 5' 10' 20' 30'
Wyser Number: 25-1386
Set Type: REVIEW
Date Issued: 11/13/2025
Sheet Number: C100

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LEGEND (PROPOSED)

- SUBJECT PARCEL PROPERTY LINE
- CONSTRUCTION LIMIT LINE
- CONSTRUCTION FENCE
- NEW BUILDING (FOR REFERENCE)
- SAWCUT LIMITS
- ASPHALT ONLY REMOVAL AREA
- FULL SECTION ASPHALT REMOVAL AREA
- CONCRETE REMOVAL AREA
- CURB AND GUTTER REMOVAL
- RETAINING WALL REMOVAL AREA
- UTILITY REMOVAL
- TREE REMOVAL

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON THE WEEK OF FEBRUARY 26, 2025. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE VILLAGE'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS.

DEMOLITION NOTES

1. THIS PLAN INDICATES ITEMS ON THE SITE, NOT INCLUDING INTERNAL BUILDING DEMOLITION, INTENDED FOR DEMOLITION BASED ON THE CURRENT SITE DESIGN THAT HAVE BEEN IDENTIFIED BY A REASONABLE OBSERVATION OF THE EXISTING CONDITIONS THROUGH FIELD SURVEY RECONNAISSANCE (BY OTHERS), "DIGGER'S HOTLINE" LOCATION, AND GENERAL "STANDARD OF CARE". THERE MAY BE ADDITIONAL ITEMS THAT CAN NOT BE IDENTIFIED BY A REASONABLE ABOVE GROUND OBSERVATION, WHERE NOT INCLUDED WITHIN THE FIELD SURVEY, OF WHICH THE ENGINEER WOULD HAVE NO KNOWLEDGE OR MAY BE A PART OF ANOTHER DESIGN DISCIPLINE. IT IS THE CONTRACTOR'S / BIDDER'S RESPONSIBILITY TO REVIEW THE PLANS, INSPECT THE SITE AND PROVIDE HIS OWN DUE DILIGENCE TO INCLUDE IN HIS BID WHAT ADDITIONAL ITEMS, IN HIS OPINION, MAY BE NECESSARY FOR DEMOLITION. ANY ADDITIONAL ITEMS IDENTIFIED BY THE CONTRACTOR / BIDDER SHALL BE IDENTIFIED IN THE BID AND REPORTED TO THE OWNER AND ENGINEER OF RECORD. WYSER ENGINEERING TAKES NO RESPONSIBILITY FOR ITEMS ON THE PROPERTY THAT COULD NOT BE LOCATED BY A REASONABLE OBSERVATION OF THE PROPERTY OR OF WHICH THEY WOULD HAVE NO KNOWLEDGE.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - 2.1. EXAMINING ALL SITE CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE OWNER AND ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - 2.2. VERIFYING UTILITY ELEVATIONS AND NOTIFYING OWNER AND ENGINEER OR ANY DISCREPANCIES. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCIES ARE RESOLVED.
   - 2.3. NOTIFYING ALL UTILITIES PRIOR TO THE REMOVAL OF ANY UNDERGROUND UTILITIES.
   - 2.4. NOTIFYING THE OWNER, DESIGN ENGINEER AND LOCAL CONTROLLING MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION INSPECTION.
3. CONTRACTOR IS SOLELY RESPONSIBLE FOR SITE SAFETY DURING THE CONSTRUCTION OF THESE IMPROVEMENTS.
4. CONTRACTOR SHALL KEEP ALL STREETS AND ADJOINING SHARED ACCESS ROADWAYS FREE AND CLEAR OF ALL CONSTRUCTION RELATED DIRT, DUST AND DEBRIS.
5. ALL TREES WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED UNLESS SPECIFICALLY CALLED OUT FOR PROTECTION. ALL TREES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY. STUMPS SHALL BE GROUND TO PROPOSED SUBGRADE.
6. PERFORM TREE PRUNING IN ALL LOCATIONS WHERE PROPOSED PAVEMENT AND / OR UTILITY INSTALLATION ENCROACH WITHIN THE EXISTING DRIP LINE OF THE TREES TO REMAIN. ALL TRENCHING WITHIN THE EXISTING DRIP LINE OF THE TREES TO REMAIN SHALL BE DONE RADIALLY AWAY FROM THE TRUNK IF ROOTS IN EXCESS OF 1" DIAMETER ARE EXPOSED. ROOTS MUST BE CUT BY REPUTABLE TREE PRUNING SERVICE PRIOR TO ANY TRANSVERSE TRENCHING.
7. ALL LIGHT POLES TO BE REMOVED SHALL BE REMOVED IN THEIR ENTIRETY, INCLUDING BASE AND ALL APPURTENANCES. SALVAGE FOR RELOCATION. COORDINATE RELOCATION AND / OR ABANDONMENT OF ALL ELECTRIC LINES WITH ELECTRICAL ENGINEER AND OWNER PRIOR TO DEMOLITION.
8. CONTRACTOR SHALL COORDINATE PRIVATE UTILITY REMOVAL / ABANDONMENT AND NECESSARY RELOCATIONS WITH RESPECTIVE UTILITY COMPANY. COORDINATION REQUIRED PRIOR TO CONSTRUCTION.
9. ABANDONED / REMOVED ITEMS SHALL BE DISPOSED OF OFF SITE UNLESS OTHERWISE NOTED.
10. THE CONTRACTOR SHALL INSTALL A PEDESTRIAN FENCE AROUND ALL EXCAVATIONS TO BE LEFT OPEN OVERNIGHT AS REQUIRED.
11. CONTRACTOR TO REMOVE EXISTING UTILITY PIPE AND BACKFILL WITH SELECT FILL OR PROVIDE PIPE BACK-FILLING WITHIN BUILDING FOOTPRINT USING "LOW DENSITY CONCRETE / FLOWABLE FILL".
12. GRANULAR BACKFILL MATERIALS ARE REQUIRED FOR FILL UNDER PROPOSED PAVED AREAS.
13. RESTORATION OF THE EXISTING RIGHT-OF-WAYS AS NEEDED ARE CONSIDERED INCIDENTAL AND SHOULD BE PART OF THE COST OF THE UNDERGROUND IMPROVEMENTS, DEMOLITION AND REMOVAL. THIS INCLUDES, BUT IS NOT LIMITED TO, CURB & GUTTER, SIDEWALK, TOPSOIL, SEEDING AND MULCHING.
14. ANY SANITARY SEWER, SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE.

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WYSER ENGINEERING
101 PERIMETER ROAD
MOUNT HOREB, WI 53572

KLEIN PERIMETER ROAD
VILLAGE OF MT. HOREB, DANE COUNTY, WI

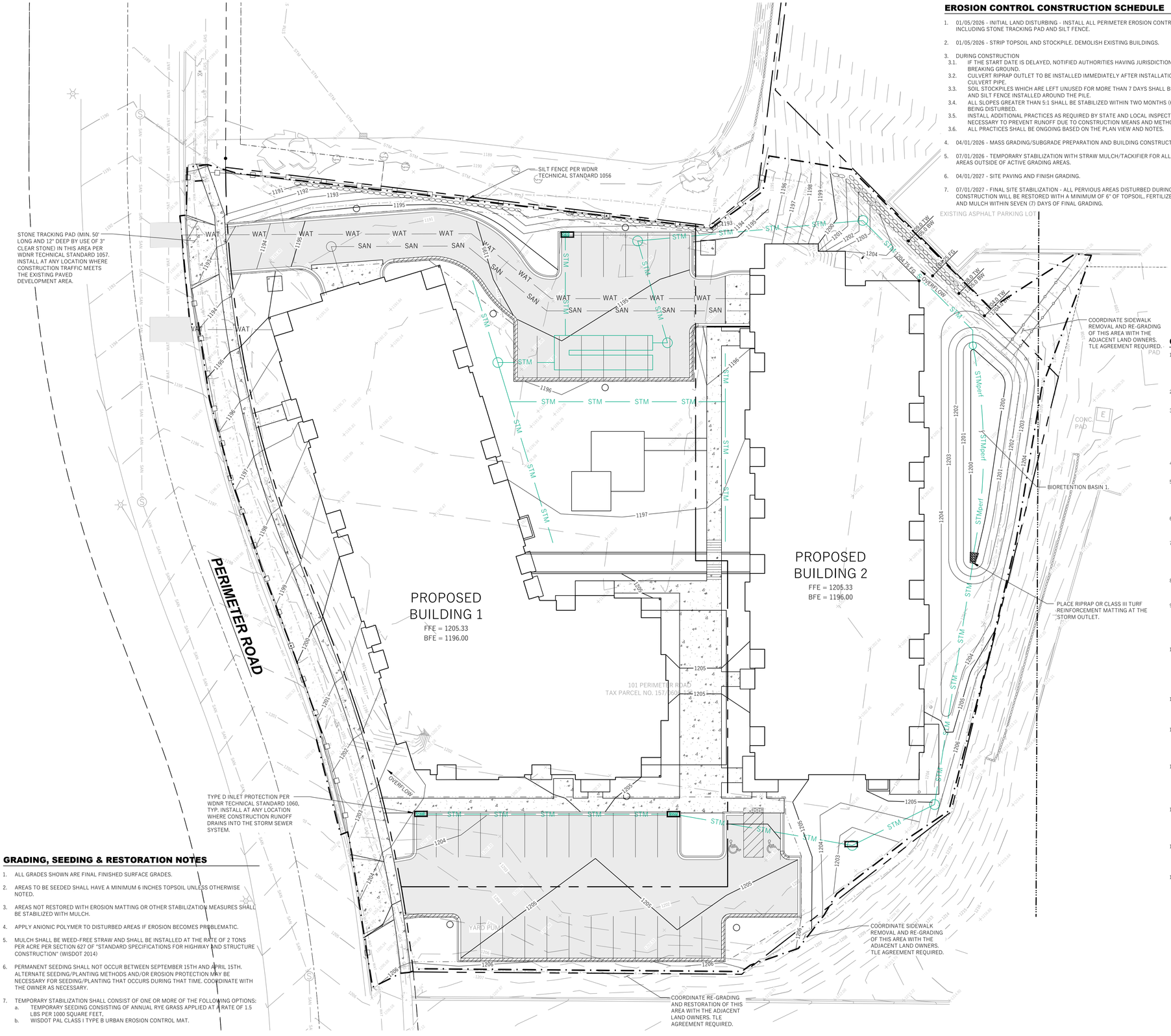
Sheet Title: DEMOLITION PLAN

Revisions:

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EROSION CONTROL CONSTRUCTION SCHEDULE

1. 01/05/2026 - INITIAL LAND DISTURBING - INSTALL ALL PERIMETER EROSION CONTROL DEVICES INCLUDING STONE TRACKING PAD AND SILT FENCE.
2. 01/05/2026 - STRIP TOPSOIL AND STOCKPILE. DEMOLISH EXISTING BUILDINGS.
3. DURING CONSTRUCTION
   - 3.1. IF THE START DATE IS DELAYED, NOTIFIED AUTHORITIES HAVING JURISDICTION WHEN BREAKING GROUND.
   - 3.2. CULVERT RIPRAP OUTLET TO BE INSTALLED IMMEDIATELY AFTER INSTALLATION OF CULVERT PIPE.
   - 3.3. SOIL STOCKPILES WHICH ARE LEFT UNUSED FOR MORE THAN 7 DAYS SHALL BE STABILIZED AND SILT FENCE INSTALLED AROUND THE PILE.
   - 3.4. ALL SLOPES GREATER THAN 5:1 SHALL BE STABILIZED WITHIN TWO MONTHS (60 DAYS) OF BEING DISTURBED.
   - 3.5. INSTALL ADDITIONAL PRACTICES AS REQUIRED BY STATE AND LOCAL INSPECTORS AND AS NECESSARY TO PREVENT RUNOFF DUE TO CONSTRUCTION MEANS AND METHODS.
   - 3.6. ALL PRACTICES SHALL BE ONGOING BASED ON THE PLAN VIEW AND NOTES.
4. 04/01/2026 - MASS GRADING/SUBGRADE PREPARATION AND BUILDING CONSTRUCTION.
5. 07/01/2026 - TEMPORARY STABILIZATION WITH STRAW MULCH/TACKIFIER FOR ALL DISTURBED AREAS OUTSIDE OF ACTIVE GRADING AREAS.
6. 04/01/2027 - SITE PAVING AND FINISH GRADING.
7. 07/01/2027 - FINAL SITE STABILIZATION - ALL PERVIOUS AREAS DISTURBED DURING CONSTRUCTION WILL BE RESTORED WITH A MINIMUM OF 6" OF TOPSOIL, FERTILIZER, SEED, AND MULCH WITHIN SEVEN (7) DAYS OF FINAL GRADING.

GRADING, SEEDING & RESTORATION NOTES

1. ALL GRADES SHOWN ARE FINAL FINISHED SURFACE GRADES.
2. AREAS TO BE SEEDED SHALL HAVE A MINIMUM 6 INCHES TOPSOIL UNLESS OTHERWISE NOTED.
3. AREAS NOT RESTORED WITH EROSION MATTING OR OTHER STABILIZATION MEASURES SHALL BE STABILIZED WITH MULCH.
4. APPLY ANIONIC POLYMER TO DISTURBED AREAS IF EROSION BECOMES PROBLEMATIC.
5. MULCH SHALL BE WEED-FREE STRAW AND SHALL BE INSTALLED AT THE RATE OF 2 TONS PER ACRE PER SECTION 627 OF "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION" (WISDOT 2014)
6. PERMANENT SEEDING SHALL NOT OCCUR BETWEEN SEPTEMBER 15TH AND APRIL 15TH. ALTERNATE SEEDING/PLANTING METHODS AND/OR EROSION PROTECTION MAY BE NECESSARY FOR SEEDING/PLANTING THAT OCCURS DURING THAT TIME. COORDINATE WITH THE OWNER AS NECESSARY.
7. TEMPORARY STABILIZATION SHALL CONSIST OF ONE OR MORE OF THE FOLLOWING OPTIONS:
   - a. TEMPORARY SEEDING CONSISTING OF ANNUAL RYE GRASS APPLIED AT A RATE OF 1.5 LBS PER 1000 SQUARE FEET.
   - b. WISDOT PAL CLASS I TYPE B URBAN EROSION CONTROL MAT.

LEGEND (PROPOSED)

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1180 — PROPOSED MAJOR CONTOUR
- 1181 — PROPOSED MINOR CONTOUR
- STM — PROPOSED STORM SEWER
- SILT FENCE
- INLET PROTECTION
- DITCH CHECK

NORTH

GENERAL NOTES

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2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE VILLAGE'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS.

CONSTRUCTION SITE EROSION CONTROL REQUIREMENTS

1. POST WDNR CERTIFICATE OF PERMIT COVERAGE AND MUNICIPAL EROSION CONTROL PERMITS ON SITE AND MAINTAIN UNTIL CONSTRUCTION ACTIVITIES HAVE CEASED, THE SITE IS STABILIZED, AND A NOTICE OF TERMINATION IS FILED WITH WDNR.
2. KEEP A COPY OF THE CURRENT EROSION CONTROL PLAN ON SITE THROUGHOUT THE DURATION OF THE PROJECT.
3. ENGINEER / VILLAGE OF MOUNT HOREB / WDNR HAS THE RIGHT TO REQUIRE CONTRACTOR TO IMPLEMENT ADDITIONAL EROSION CONTROL MEASURES AS NECESSARY.CONTRACTOR MUST NOTIFY THE VILLAGE OF MOUNT HOREB BUILDING INSPECTOR TWO (2) WORKING DAYS IN ADVANCE OF ANY SOIL DISTURBANCE ACTIVITIES.
4. SUBMIT PLAN REVISIONS OR AMENDMENTS TO THE WDNR AT LEAST 5 DAYS PRIOR TO FIELD IMPLEMENTATION.
5. THE SITE CONTRACTOR IS RESPONSIBLE FOR ROUTINE SITE INSPECTIONS AT LEAST ONCE EVERY 7 DAYS AND WITHIN 24 HOURS AFTER A RAINFALL EVENT OF 0.5 INCHES OR GREATER. KEEP INSPECTION REPORTS ON-SITE AND MAKE THEM AVAILABLE UPON REQUEST.
6. INSPECT AND MAINTAIN ALL INSTALLED EROSION CONTROL PRACTICES UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN STABILIZED.
7. WHEN POSSIBLE: PRESERVE EXISTING VEGETATION (ESPECIALLY ADJACENT TO SURFACE WATERS), MINIMIZE LAND-DISTURBING CONSTRUCTION ACTIVITY ON SLOPES OF 20% OR MORE, MINIMIZE SOIL COMPACTION, AND PRESERVE TOPSOIL.
8. REFER TO THE WDNR STORMWATER CONSTRUCTION TECHNICAL STANDARDS AT http://dnr.wi.gov/topic/stormwater/standards/const_standards.html.
9. INSTALL PERIMETER EROSION CONTROLS AND ROCK TRACKING PAD CONSTRUCTION ENTRANCE(S) PRIOR TO ANY LAND-DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRUBBING. USE WDNR TECHNICAL STANDARD STONE TRACKING PAD AND TIRE WASHING #1057 FOR ROCK CONSTRUCTION ENTRANCE(S).
10. INSTALL INLET PROTECTION PRIOR TO LAND-DISTURBING ACTIVITIES IN THE CONTRIBUTING DRAINAGE AREA AND/OR IMMEDIATELY UPON INLET INSTALLATION. COMPLY WITH WDNR TECHNICAL STANDARD STORM DRAIN INLET PROTECTION FOR CONSTRUCTION SITES #1060 AND DANE COUNTY REQUIREMENTS FOR FRAMED INLET PROTECTION.
11. CONTRACTOR TO PROVIDE SOLID LID OR METAL PLATE ON ALL OPEN MANHOLES DURING CONSTRUCTION TO MINIMIZE SEDIMENT FROM ENTERING THE STORM SEWER SYSTEM.
12. STAGE CONSTRUCTION GRADING ACTIVITIES TO MINIMIZE THE CUMULATIVE EXPOSED AREA. CONDUCT TEMPORARY GRADING FOR EROSION CONTROL PER WDNR TECHNICAL STANDARD TEMPORARY GRADING PRACTICES FOR EROSION CONTROL #1067.
13. PERMITTING OF GROUNDWATER DEWATERING IS THE RESPONSIBILITY OF THE CONTRACTOR. GROUNDWATER DEWATERING IS SUBJECT TO A DNR WASTEWATER DISCHARGE PERMIT AND A DNR HIGH CAPACITY WELL APPROVAL IF CUMULATIVE PUMP CAPACITY IS 70 GPM OR MORE.
14. PROVIDE ANTI-SCOUR PROTECTION AND MAINTAIN NON-EROSIVE FLOW DURING DEWATERING. PERFORM DEWATERING OF ACCUMULATED SURFACE RUNOFF IN ACCORDANCE WITH WDNR TECHNICAL STANDARD DE-WATERING #1061.
15. CONSTRUCT AND PROTECT THE BIOINFILTRATION BASIN AND VEGETATION FROM RUNOFF AND SEDIMENT DURING CONSTRUCTION. REFERENCE THE WDNR TECHNICAL STANDARD BIORETENTION FOR INFILTRATION # 1004.
16. INSTALL AND MAINTAIN SILT FENCING PER WDNR TECHNICAL STANDARD SILT FENCE #1056. REMOVE SEDIMENT FROM BEHIND SILT FENCES AND SEDIMENT BARRIERS BEFORE SEDIMENT REACHES A DEPTH THAT IS EQUAL TO ONE-HALF OF THE FENCE AND/OR BARRIER HEIGHT.
17. REPAIR BREAKS AND GAPS IN SILT FENCES AND BARRIERS IMMEDIATELY. REPLACE DECOMPOSING STRAW BALES (TYPICAL BALE LIFE IS 3 MONTHS). LOCATE, INSTALL, AND MAINTAIN STRAW BALES PER WDNR TECHNICAL STANDARD DITCH CHECKS #1062.
18. INSTALL AND MAINTAIN FILTER SOCKS IN ACCORDANCE WITH WDNR TECHNICAL STANDARD INTERIM MANUFACTURED PERIMETER CONTROL AND SLOPE INTERRUPTION PRODUCTS # 1071.
19. IMMEDIATELY STABILIZE STOCKPILES AND SURROUND STOCKPILES AS NEEDED WITH SILT FENCE OR OTHER PERIMETER CONTROL IF STOCKPILES WILL REMAIN INACTIVE FOR 7 DAYS OR LONGER.
20. IMMEDIATELY STABILIZE ALL DISTURBED AREAS THAT WILL REMAIN INACTIVE FOR 14 DAYS OR LONGER. BETWEEN SEPTEMBER 15 AND OCTOBER 15: STABILIZE WITH MULCH, TACKIFIER, AND A PERENNIAL SEED MIXED WITH WINTER WHEAT, ANNUAL OATS, OR ANNUAL RYE, AS APPROPRIATE FOR REGION AND SOIL TYPE OCTOBER 15 THROUGH COLD WEATHER: STABILIZE WITH A POLYMER AND DORMANT SEED MIX, AS APPROPRIATE FOR REGION AND SOIL TYPE.
21. STABILIZE AREAS OF FINAL GRADING WITHIN 7 DAYS OF REACHING FINAL GRADE.
22. SWEEP/CLEAN UP ALL SEDIMENT/TRASH THAT MOVES OFF-SITE DUE TO CONSTRUCTION ACTIVITY OR STORM EVENTS BEFORE THE END OF THE SAME WORKDAY OR AS DIRECTED BY THE AUTHORITIES WITH JURISDICTION. SEPARATE SWEPT MATERIALS (SOILS AND TRASH) AND DISPOSE OF APPROPRIATELY.
23. THE CONTRACTOR IS RESPONSIBLE FOR CONTROLLING DUST PER WDNR TECHNICAL STANDARD DUST CONTROL ON CONSTRUCTION SITES # 1068.
24. PROPERLY DISPOSE OF ALL WASTE AND UNUSED BUILDING MATERIALS (INCLUDING GARBAGE, DEBRIS, CLEANING WASTES, OR OTHER CONSTRUCTION MATERIALS) AND DO NOT ALLOW THESE MATERIALS TO BE CARRIED BY RUNOFF INTO THE RECEIVING CHANNEL.
25. COORDINATE WITH THE AUTHORITIES WITH JURISDICTION TO UPDATE THE LAND DISTURBANCE PERMIT TO INDICATE THE ANTICIPATED OR LIKELY DISPOSAL LOCATIONS FOR ANY EXCAVATED SOILS OR CONSTRUCTION DEBRIS THAT WILL BE HAULED OFF-SITE FOR DISPOSAL. THE DEPOSITED OR STOCKPILED MATERIAL NEEDS TO INCLUDE PERIMETER SEDIMENT CONTROL MEASURES (SUCH AS SILT FENCE, HAY BALES, FILTER SOCKS, OR COMPACTED EARTHEN BERMS).
26. FOR NON-CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED SLOPES, PROVIDE CLASS I TYPE B EROSION CONTROL MATTING. INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD NON-CHANNEL EROSION MAT #1052.
27. FOR CHANNELIZED FLOW ON DISTURBED OR CONSTRUCTED AREAS, PROVIDE CLASS II TYPE B EROSION CONTROL MATTING UNLESS OTHERWISE SPECIFIED ON THE PLAN. INSTALL AND MAINTAIN PER WDNR TECHNICAL STANDARD CHANNEL EROSION MAT #1053.
28. MAKE PROVISIONS FOR WATERING DURING THE FIRST 8 WEEKS FOLLOWING SEEDING OR PLANTING OF DISTURBED AREAS WHENEVER MORE THAN 7 CONSECUTIVE DAYS OF DRY WEATHER OCCUR.
29. THE CONTRACTOR IS RESPONSIBLE FOR COMPLYING WITH ALL APPLICABLE WDNR REMEDIATION AND WASTE MANAGEMENT REQUIREMENTS FOR HANDLING AND DISPOSING OF CONTAMINATED MATERIALS. SITE-SPECIFIC INFORMATION FOR AREAS WITH KNOWN OR SUSPECTED SOIL AND/OR GROUNDWATER CONTAMINATION CAN BE FOUND ON WDNR'S BUREAU OF REMEDIATION AND REDEVELOPMENT RACKING SYSTEM (BRRTS) PUBLIC DATABASE AT: http://dnr.wi.gov/botw/
30. INSTALL AND MAINTAIN A CONCRETE WASHOUT BASIN PER EPA 833-F-11-006: https://www3.epa.gov/npdes/pubs/concretewashout.pdf. REQUIRE USE BY ALL CONCRETE CONTRACTORS. LIQUID MAY BE REUSED IN CONCRETE MIXING, EVAPORATED, OR DISPOSED OF AS WASTEWATER.

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WYSER ENGINEERING

101 PERIMETER ROAD
MOUNT HOREB, WI 53572

KLEIN PERIMETER ROAD
VILLAGE OF MT. HOREB, DANE COUNTY, WI

Sheet Title: GRADING & EROSION CONTROL PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 5' 10' 20' 30'
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NOTE:
SPOT GRADES ARE AS FOLLOWS:
FFE - FINISHED FLOOR GRADE
EP - EDGE OF ASPHALT PAVEMENT
EC - EDGE OF CONCRETE PAVEMENT
BC - BACK OF CURB
SW - EDGE OF SIDEWALK
FG - FINISH GRADE
TW - FINISH GRADE ADJACENT TOP OF WALL
BW - FINISH GRADE ADJACENT BOTTOM OF WALL (NOT FOOTING)

PROPOSED BUILDING 1
FFE = 1205.33
BFE = 1196.00

PROPOSED BUILDING 2
FFE = 1205.33
BFE = 1196.00

PERIMETER ROAD

NORTH

LEGEND (PROPOSED)

- PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- 1180 PROPOSED MAJOR CONTOUR
- 1181 PROPOSED MINOR CONTOUR
- STM PROPOSED STORM SEWER
- SILT FENCE
- INLET PROTECTION
- DITCH CHECK
- 1181.25 EP SPOT GRADE
- DRAINAGE GRADE BREAK
- 1.0% DRAINAGE ARROW

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WYSER ENGINEERING
101 PERIMETER ROAD
MOUNT HOREB, WI 53572

KLEIN PERIMETER ROAD
VILLAGE OF MT. HOREB, DANE COUNTY, WI
Sheet Title: DETAILED GRADING PLAN

Revisions:

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PROPOSED
BUILDING 1
FFE = 1205.33
BFE = 1196.00

PROPOSED
BUILDING 2
FFE = 1205.33
BFE = 1196.00

101 PERIMETER ROAD
TAX PARCEL NO. 157/0606-124-0065-1

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BW - FINISH GRADE ADJACENT BOTTOM OF WALL (NOT FOOTING)

PERIMETER ROAD

YARD PUMP

NORTH

LEGEND (PROPOSED)

- PROPERTY BOUNDARY
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- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
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GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON THE WEEK OF FEBRUARY 26, 2025. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
2. THE BENCHMARK LOCATIONS ARE SHOWN FOR REFERENCE ONLY ON THIS PLAN. THE BENCHMARKS SHALL BE VALIDATED BY LICENSED LAND SURVEYOR PRIOR TO CONSTRUCTION. CONTRACTOR ASSUMES RISK ASSOCIATED WITH BENCHMARK ELEVATIONS UNTIL CONFIRMED.
3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE VILLAGE'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS.

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WYSER ENGINEERING

KLEIN PERIMETER ROAD
VILLAGE OF MT. HOREB, DANE COUNTY, WI
101 PERIMETER ROAD
MOUNT HOREB, WI 53572

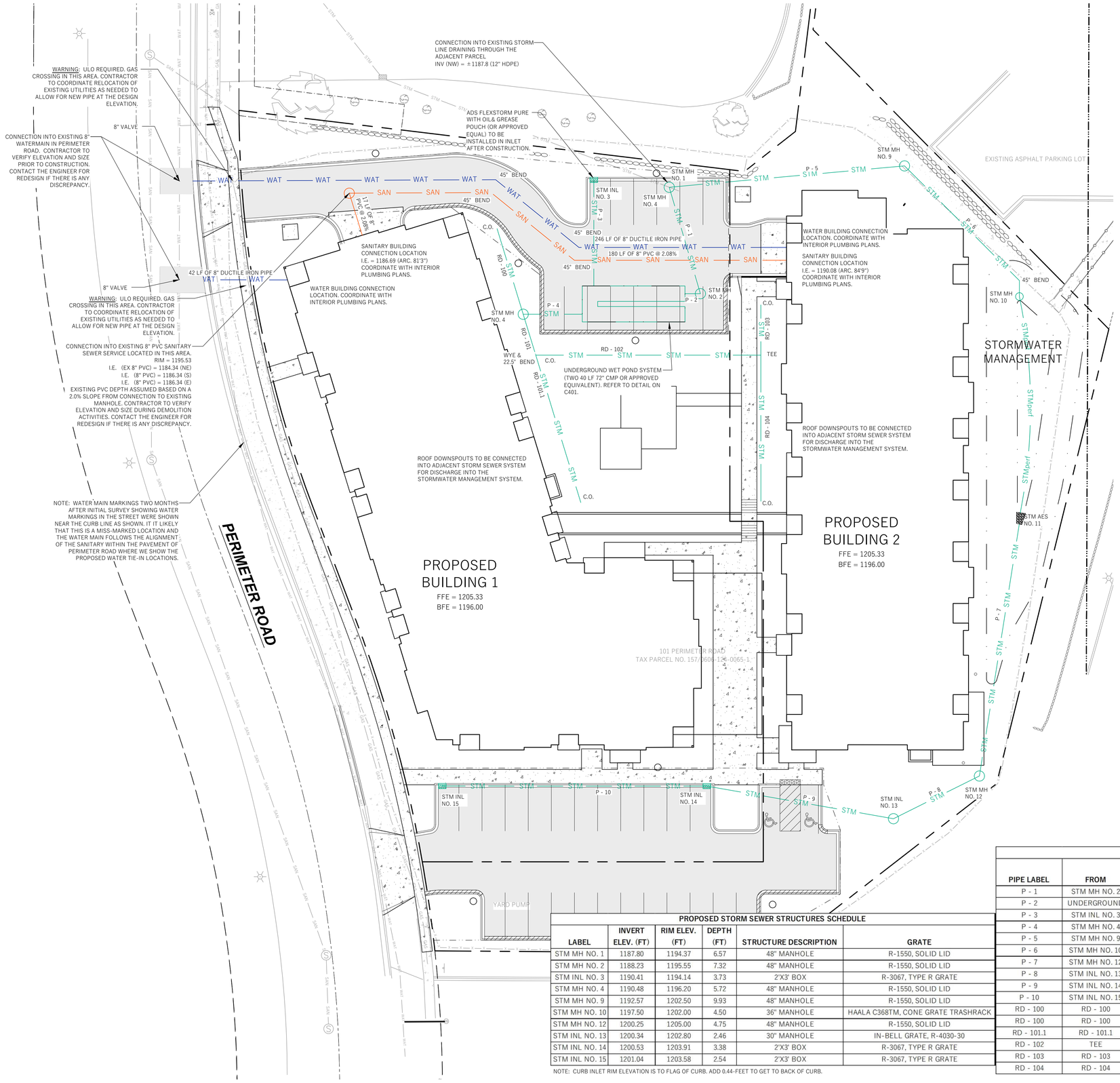
Sheet Title: DETAILED GRADING PLAN

Revisions:

No.	Date:	Description:

Graphic Scale 0' 5' 10' 20' 30'
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LEGEND (PROPOSED)

- PROPOSED PROPERTY BOUNDARY
- EASEMENT
- BUILDING FOOTPRINT
- 18" CURB AND GUTTER
- ASPHALT PAVEMENT
- CONCRETE PAVEMENT
- WAT — PROPOSED WATER MAIN
- SAN — PROPOSED SANITARY SEWER
- STM — PROPOSED STORM SEWER
- GAS — PROPOSED GAS SERVICE (DESIGN BY OTHERS)
- E — PROPOSED ELECTRIC SERVICE (DESIGN BY OTHERS)
- STORMWATER TREATMENT FACILITY

NORTH

GENERAL NOTES

1. UNDERLYING SITE CONTOURS AND INFORMATION BASED ON TOPOGRAPHIC & UTILITY DATA AS SURVEYED BY WYSER ENGINEERING ON THE WEEK OF FEBRUARY 26, 2025. WYSER ENGINEERING SHALL NOT BE HELD RESPONSIBLE FOR ANY ERRORS OR OMISSIONS THAT MAY ARISE AS A RESULT OF ERRONEOUS OR INCOMPLETE INFORMATION PROVIDED BY OTHERS. CONTRACTOR TO CONFIRM ALL ELEVATIONS, GENERAL DRAINAGE AND EARTHWORK REQUIREMENTS PRIOR TO CONSTRUCTION.
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3. CONTRACTOR TO OBTAIN APPROPRIATE PERMITS FOR STREET OPENINGS & TO WORK WITHIN THE VILLAGE'S LAND IF REQUIRED.
4. WYSER ENGINEERING SHALL BE HELD HARMLESS AND DOES NOT WARRANT ANY DEVIATIONS BY THE OWNER OR CONTRACTOR FROM THE APPROVED CONSTRUCTION PLANS THAT MAY RESULT IN DISCIPLINARY ACTIONS BY REGULATORY AGENCIES.
5. IF ANY ERRORS, DISCREPANCIES, OR OMISSIONS WITHIN THE PLAN BECOME APPARENT, IT SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER PRIOR TO CONSTRUCTION SO THAT CLARIFICATION OR REDESIGN MAY OCCUR.
6. ALL MUNICIPAL UTILITY CONNECTIONS, WORK IN ROW, PUBLIC OUTLOTS AND PUBLIC EASEMENTS SHALL BE IN ACCORDANCE WITH VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS.

UTILITY NOTES

1. DIMENSIONS TAKE PRECEDENCE OVER SCALE. CONTRACTOR TO VERIFY ALL DIMENSIONS IN FIELD.
2. LENGTHS OF ALL UTILITIES ARE TO CENTER OF STRUCTURES OR FITTINGS AND MAY VARY SLIGHTLY FROM PLAN. LENGTHS SHALL BE VERIFIED IN THE FIELD DURING CONSTRUCTION.
3. CONTRACTOR SHALL VERIFY ALL ELEVATIONS, LOCATIONS, AND SIZES OF SANITARY, WATER AND STORM LATERALS AND CHECK ALL UTILITY CROSSINGS FOR CONFLICTS.
4. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH ENGINEERING PLANS DESIGNED TO MEET ORDINANCES AND REQUIREMENTS OF THE MUNICIPALITY AND WISDOT, WISDSPS, AND WDNR.
5. PRIOR TO CONSTRUCTION, THE CONTRACTOR IS RESPONSIBLE FOR:
   - EXAMINING ALL SITES CONDITIONS RELATIVE TO THE CONDITIONS INDICATED ON THE ENGINEERING DRAWINGS. ANY DISCREPANCIES ARE TO BE REPORTED TO THE ENGINEER AND RESOLVED PRIOR TO THE START OF CONSTRUCTION.
   - OBTAINING ALL PERMITS INCLUDING PERMIT COSTS, TAP FEES, METER DEPOSITS, BONDS, AND ALL OTHER FEES REQUIRED FOR PROPOSED WORK TO OBTAIN OCCUPANCY.
   - VERIFYING UTILITY ELEVATIONS AND NOTIFYING ENGINEER OF ANY DISCREPANCY. NO WORK SHALL BE PERFORMED UNTIL THE DISCREPANCY IS RESOLVED.
   - NOTIFYING ALL UTILITIES PRIOR TO THE INSTALLATION OF ANY UNDERGROUND IMPROVEMENTS.
   - NOTIFYING THE DESIGN ENGINEER AND MUNICIPALITY 48 HOURS PRIOR TO THE START OF CONSTRUCTION TO ARRANGE FOR APPROPRIATE CONSTRUCTION OBSERVATION.
9. THE CONTRACTOR IS RESPONSIBLE FOR PROVIDING THE ENGINEER WITH AS-BUILT CONDITIONS OF THE DESIGNATED IMPROVEMENTS IN ORDER THAT THE APPROPRIATE DRAWINGS CAN BE PREPARED, IF REQUIRED. ANY CHANGES TO THE DRAWINGS OR ADDITIONAL ITEMS MUST BE REPORTED TO THE ENGINEER AS WORK PROGRESSES.
10. ANY SANITARY SEWER , SANITARY SEWER SERVICES, WATER MAIN, WATER SERVICES, STORM SEWER, OR OTHER UTILITIES, WHICH ARE DAMAGED BY THE CONTRACTORS, SHALL BE REPAIRED TO THE OWNER'S SATISFACTION AT THE CONTRACTOR'S EXPENSE. NO BLASTING IS ALLOWED WITHIN 30 FEET OF EXISTING UTILITIES.
11. ALL PRIVATE INTERCEPTOR WATER MAIN AND WATER SERVICES SHALL BE INSTALLED WITH A 6' MINIMUM BURY. PROVIDE INSULATION ABOVE PIPES WITH LESS THAN 5' OF GROUND COVER.
12. GRANULAR BACKFILL MATERIALS ARE REQUIRED IN ALL UTILITY TRENCHES UNDER SIDEWALKS AND PROPOSED PAVED AREAS (UNLESS OTHERWISE SPECIFIED BY A GEOTECHNICAL ENGINEER). ALL UTILITY TRENCH BACKFILL SHALL BE COMPACTED PER SPECIFICATIONS. ALL PAVEMENT PATCHING SHALL COMPLY WITH THE VILLAGE OF MOUNT HOREB STANDARD SPECIFICATIONS. ADDITIONAL PAVEMENT MILLING AND OVERLAY MAY BE REQUIRED BY PERMIT.
13. CONTRACTOR SHALL NOTIFY THE MUNICIPAL PUBLIC WORKS DEPARTMENT A MINIMUM OF 48 HOURS BEFORE CONNECTING TO PUBLIC UTILITIES.
14. ALL NON-METALLIC BUILDING SEWER AND WATER SERVICES MUST BE ACCOMPANIED BY MEANS OF LOCATING UNDERGROUND PIPE. TRACER WIRE VALVE BOXES SHALL BE INSTALLED ON ALL LATERALS AND AS INDICATED ON THESE PLANS.
15. EXTERIOR CLEANOUTS SHALL BE PROVIDED AS REQUIRED BY SPS 382.35. ALL EXTERIOR CLEANOUTS SHALL BE PROVIDED WITH A FROST SLEEVE IN ACCORDANCE WITH SPS 382.34(5)(a)b AND SPS 384.30(2)(c).
16. ALL PRIVATE PLUMBING MATERIALS SHALL CONFORM TO SPS 384.30.
17. ALL PRIVATE PIPE JOINTS SHALL BE INSTALLED PER SPS 384.40.
18. ALL PRIVATE WATER PIPE, INCLUDING DEPTH AND SEPARATION REQUIREMENTS, SHALL BE IN ACCORDANCE WITH SPS 382.40(8).
19. THE CONTRACTOR SHALL ALLOW 10 WORKING DAYS FOR THE CONSTRUCTION OF GAS MAINS WHEN SCHEDULING THE WORK AND SHALL NOT RESTRICT ACCESS TO THE GAS MAIN CONTRACTOR OR OTHER UTILITY COMPANIES.
20. INLET CASTINGS SHALL BE SET TO GRADE PRIOR TO AND SEPARATE FROM THE POURING OF THE CONCRETE CURB AND GUTTER. IS IS REQUIRED THAT THREE FEET OF CONCRETE CURB AND GUTTER ON EACH SIDE OF THE INLET SHALL BE POURED BY HAND, NOT THROUGH THE USE OF A CURB MACHINE. THE INLET CASTING SHALL BE SET TO GRADE ON A BED OF MORTAR WHICH SHALL BE A MINIMUM OF TWO INCHES THICK. THE INLET SHALL BE PLACED ON THE MORTAR BED AND SHALL BE ADJUSTED TO GRADE BY APPLYING DIRECT PRESSURE TO THE CASTING. ONCE THE CASTING ADJUSTMENT IS COMPLETE, THREE FEET OF CURB AND GUTTER ON EACH SIDE OF THE CASTING SHALL BE POURED BY HAND.
21. CONTRACTOR SHALL VERIFY AND COORDINATE ALL UTILITY CONNECTIONS WITH THE BUILDING PRIOR TO CONSTRUCTION.
22. THE CONTRACTOR SHALL CONDUCT HIS OPERATIONS SO AS TO BE IN CONFORMANCE WITH THE VILLAGE EROSION CONTROL AND STORMWATER ORDINANCE, AND DNR ADMINISTRATIVE RULE NR 216 AT ALL TIMES.

PROPOSED STORM SEWER STRUCTURES SCHEDULE

LABEL	INVERT ELEV. (FT)	RIM ELEV. (FT)	DEPTH (FT)	STRUCTURE DESCRIPTION	GRATE
STM MH NO. 1	1187.80	1194.37	6.57	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 2	1188.23	1195.55	7.32	48" MANHOLE	R-1550, SOLID LID
STM INL NO. 3	1190.41	1194.14	3.73	2'X3' BOX	R-3067, TYPE R GRATE
STM MH NO. 4	1190.48	1196.20	5.72	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 9	1192.57	1202.50	9.93	48" MANHOLE	R-1550, SOLID LID
STM MH NO. 10	1197.50	1202.00	4.50	36" MANHOLE	HAALA C368TM, CONE GRATE TRASHRACK
STM MH NO. 12	1200.25	1205.00	4.75	48" MANHOLE	R-1550, SOLID LID
STM INL NO. 13	1200.34	1202.80	2.46	30" MANHOLE	IN-BELL GRATE, R-4030-30
STM INL NO. 14	1200.53	1203.91	3.38	2'X3' BOX	R-3067, TYPE R GRATE
STM INL NO. 15	1201.04	1203.58	2.54	2'X3' BOX	R-3067, TYPE R GRATE

NOTE: CURB INLET RIM ELEVATION IS TO FLAG OF CURB. ADD 0.44-FEET TO GET TO BACK OF CURB.

PROPOSED STORM SEWER / CULVERT PIPE SCHEDULE

PIPE LABEL	FROM	TO	LENGTH (FT)	INVERT ELEV. (FT)	DISCHARGE ELEV. (FT)	SLOPE (%)	PIPE SIZE & TYPE	MANNING'S NUMBER	DESIGN RUNOFF (GPM)	PIPE CAPACITY (GPM)
P - 1	STM MH NO. 2	STM MH NO. 1	43	1188.23	1187.80	1.00%	12" HDPE	0.012	1535.00	1732.36
P - 2	UNDERGROUND	STM MH NO. 2	6	1189.00	1188.94	1.00%	24" HDPE	0.012	1535.00	10999.78
P - 3	STM INL NO. 3	UNDERGROUND	41	1190.24	1189.00	3.00%	10" HDPE	0.012	781.31	1845.22
P - 4	STM MH NO. 4	UNDERGROUND	23	1190.15	1189.00	5.00%	8" HDPE	0.012	1013.95	1313.85
P - 5	STM MH NO. 9	STM MH NO. 1	92	1192.57	1187.97	5.00%	10" HDPE	0.012	1059.24	2382.17
P - 6	STM MH NO. 10	STM MH NO. 9	69	1197.50	1192.57	7.11%	10" HDPE	0.012	1059.24	2840.26
P - 7	STM MH NO. 12	STM AES NO. 11	100	1200.25	1200.00	0.25%	15" HDPE	0.012	1422.99	1570.49
P - 8	STM INL NO. 13	STM MH NO. 12	37	1200.34	1200.25	0.25%	15" HDPE	0.012	1422.99	1570.49
P - 9	STM INL NO. 14	STM INL NO. 13	74	1200.53	1200.34	0.25%	15" HDPE	0.012	1152.10	1570.49
P - 10	STM INL NO. 15	STM INL NO. 14	103	1201.04	1200.78	0.25%	12" HDPE	0.012	527.35	866.18
RD - 100	RD - 100	STM MH NO. 4	34	1192.04	1190.32	5.00%	6" HDPE	0.012	117.10	610.06
RD - 100	RD - 100	STM MH NO. 4	34	1192.04	1190.32	5.00%	6" HDPE	0.012	117.10	610.06
RD - 101.1	RD - 101.1	WYE	60	1193.98	1190.98	5.00%	8" HDPE	0.012	460.56	1313.85
RD - 102	TEE	WYE	88	1192.74	1190.98	2.00%	8" HDPE	0.012	436.28	830.95
RD - 103	RD - 103	TEE	20	1193.10	1192.90	1.00%	6" HDPE	0.012	154.95	272.83
RD - 104	RD - 104	TEE	57	1194.04	1192.90	2.00%	6" HDPE	0.012	281.34	385.84

WYSER ENGINEERING

KLEIN PERIMETER ROAD

101 PERIMETER ROAD
MOUNT HOREB, WI 53572

VILLAGE OF MT. HOREB, DANE COUNTY, WI

Sheet Title: UTILITY PLAN

Revisions:

No.	Date:	Description:

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Wyser Number 25-1386

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Date Issued 11/13/2025

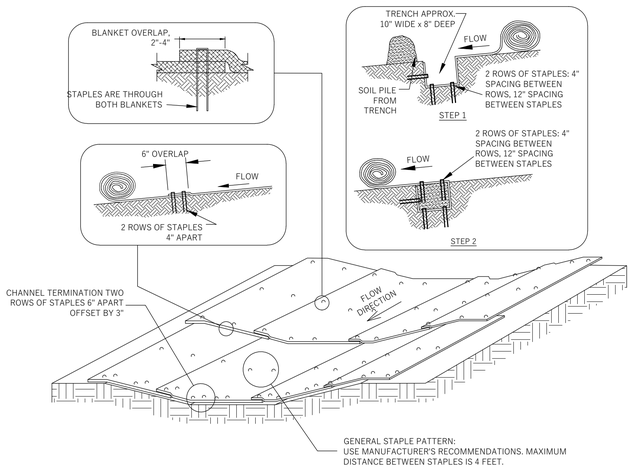
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ANCHOR TRENCH DETAIL

SEE PLANS FOR ANCHOR TRENCH LOCATIONS



MATERIAL NOTES

1. ONLY PRODUCTS LISTED IN THE WISCONSIN DEPARTMENT OF TRANSPORTATION EROSION CONTROL PRODUCT ACCEPTABILITY LIST (PAL) ARE ACCEPTABLE FOR USE.
2. STAPLES USED FOR CLASS I TYPES A & B MATS SHALL BE 1-2 INCH WIDE, U-SHAPED, MADE OF NO.11 (3.05mm) OR LARGER DIAMETER STEEL WIRE, AND NOT LESS THAN 6 INCHES LONG FOR FIRM SOILS AND 12 INCHES LONG FOR LOOSE SOILS.

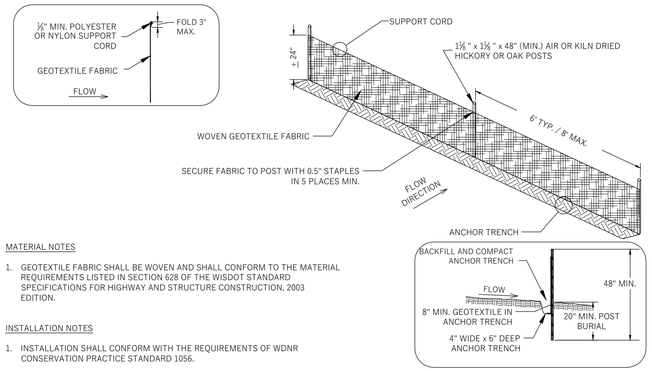
INSTALLATION NOTES

1. EROSION CONTROL REVEGETATIVE MATS (ECRM) SHALL BE INSTALLED AFTER TOPSOIL AND SEED HAVE BEEN PLACED.
2. INSTALLATION OF ECRM SHOULD BE COORDINATED WITH PERMANENT RESTORATION PRACTICES.
3. INSTALLATION SHALL CONFORM WITH WDNR CONSERVATION PRACTICE STANDARD 1053.
4. ALL PRODUCTS SHALL BE INSTALLED PER THE MANUFACTURER'S RECOMMENDATIONS. THIS STANDARD DETAIL IS AN EXAMPLE OF TYPICAL INSTALLATION GUIDANCE.
5. MATS SHALL BE IN FIRM AND CONTINUOUS CONTACT WITH THE SOIL.
6. IF SECTIONS OF ECRM NEED TO BE OVERLAPPED, ENSURE THAT THE OVERLAP IS FACING DOWNSTREAM TO PREVENT WATER FROM FLOWING BENEATH THE ECRM.

INSPECTION & MAINTENANCE NOTES

1. INSTALL ADDITIONAL ANCHORING IN AREAS OF OBSERVED RILLING AND CONCENTRATED FLOW BENEATH THE EROSION MAT. IF RILLING IS SEVERE ENOUGH TO PREVENT VEGETATION ESTABLISHMENT, REMOVE EROSION MAT, REGRADE, COMPACT, RE-SEED, AND REPLACE THE SECTION OF MAT.
2. IF PRODUCTS WITH PLASTIC NETTING ARE USED, REMOVE NETTING OR REPLACE MAT IF SEPARATION OF THE NETTING FROM THE MAT IS OBSERVED.
3. ALL MAINTENANCE ACTIVITIES SHOULD OCCUR AS SOON AS POSSIBLE WITH CONSIDERATION OF SITE CONDITIONS.

EROSION CONTROL MAT (CHANNELS)



MATERIAL NOTES

1. GEOTEXTILE FABRIC SHALL BE WOVEN AND SHALL CONFORM TO THE MATERIAL REQUIREMENTS LISTED IN SECTION 628 OF THE WISDOT STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, 2003 EDITION.

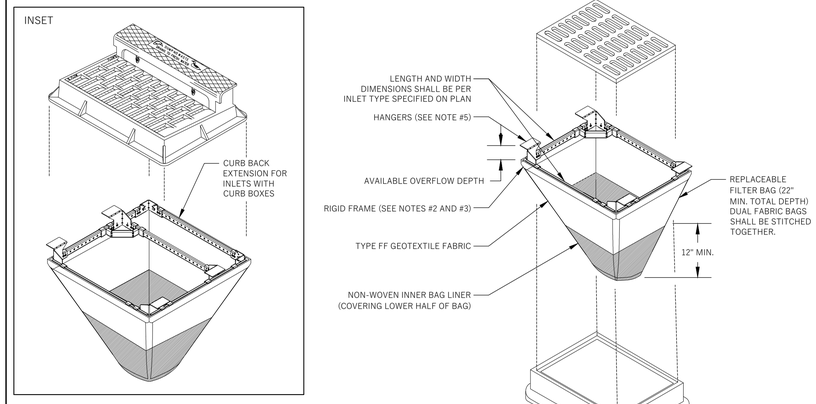
INSTALLATION NOTES

1. INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF WDNR CONSERVATION PRACTICE STANDARD 1056.
2. CONSTRUCT THE SILT FENCE IN AN ARC WITH THE ENDS POINTING UPSLOPE TO AVOID EROSION AROUND THE ENDS OF THE FENCE.
3. FAILURE TO PROPERLY ANCHOR SILT FENCE COULD RESULT IN WATER AND SEDIMENT RELEASE BENEATH THE SILT FENCE. PROPERLY SECURE THE SILT FENCE INTO THE ANCHOR TRENCH.
4. CONSTRUCT THE FENCE FROM A CONTINUOUS ROLL OF GEOTEXTILE TO AVOID JOINTS. WHERE JOINTS ARE NECESSARY, OVERLAP TO THE NEXT POST OR WRAP ADJOINING FABRICS TOGETHER AROUND THE JOINT POST AND TIGHTLY FASTEN.
5. SILT FENCE SHALL NOT BE USED IN AREAS OF CONCENTRATED FLOW.

INSPECTION & MAINTENANCE NOTES

1. AT A MINIMUM, PERFORM INSPECTIONS WEEKLY AND WITHIN 24 HOURS OF PRECIPITATION EVENTS PRODUCING 0.5 INCHES OR MORE OF RAINFALL.
2. INSPECT FENCES FOR DAMAGE TO STAKES AND FABRIC, UNDERCUTTING, EXCESSIVE SEDIMENT ACCUMULATION (GREATER THAN ½ OF THE FENCE HEIGHT), AND INDICATIONS OF SCOUR AROUND THE EDGES.
3. REPAIR OR REPLACE SILT FENCE WITHIN 24 HOURS OF IDENTIFYING AND DEFICIENCIES.

SILT FENCE



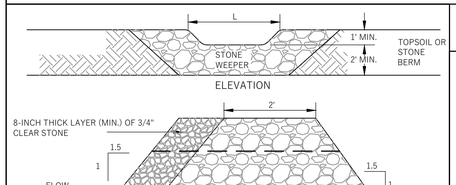
NOTES:

1. DETAIL BASED ON WDNR TECHNICAL STANDARD 1060. ANY VARIATIONS FROM THAT STANDARD IS UNINTENDED AND SHOULD NOT BE USED.
2. TAPER BOTTOM OF BAG TO MAINTAIN 8" OF CLEARANCE BETWEEN THE BAG AND THE STRUCTURE, MEASURED FROM THE BOTTOM OF THE OVERFLOW OPENINGS TO THE STRUCTURE WALL.
3. THE RIGID FRAME SHALL BE CONSTRUCTED OF GALVANIZED STEEL AND HAVE ADEQUATE STRENGTH TO SUPPORT THE WEIGHT OF THE SEDIMENT BAG WHEN COMPLETELY FULL.
4. THE RIGID FRAME SHALL NOT INTERFERE WITH OR ELEVATE THE GRATE MORE THAN 1/8".
5. DROP THE INLET FILTER THOUGH THE CLEAR OPENING SUCH THAT THE HANGERS REST FIRMLY ON THE LIP OF THE STRUCTURE.

MAINTENANCE NOTES:

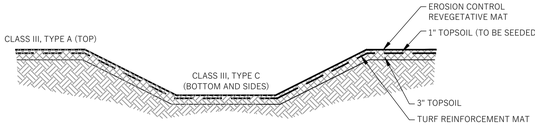
1. WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARS SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED IN THE FABRIC DOES NOT FALL INTO THE STRUCTURE. MATERIAL THAT HAS FALLEN INTO THE STRUCTURE SHALL BE IMMEDIATELY REMOVED.

TYPE D-RF INLET PROTECTION



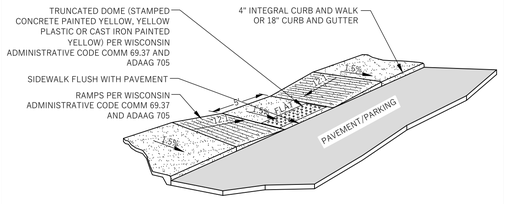
1. BERM TO BE CONSTRUCTED WITH 3" CLEAR STONE, 1.5' HIGH ABOVE THE SWALE BOTTOM AND LEVEL WITH THE CREST.
2. EXTEND BERM ACROSS SWALE TO MEET SWALE SIDE SLOPES GRADES. WHERE SWALE IS LESS THAN 1.5' DEEP, REDUCE BERM HEIGHT TO 1.0', WITH A 4' LENGTH.
3. INSTALL GEOTEXTILE FABRIC SAS UNDER CLEAR STONE.

STONE BERM



NOTE: VARIATION ON INSTALLATION PROCEDURES MAY OCCUR. REFER TO MANUFACTURER'S RECOMMENDED INSTALLATION GUIDELINES.

TURF REINFORCEMENT INSTALLATION DETAIL



ADA RAMP

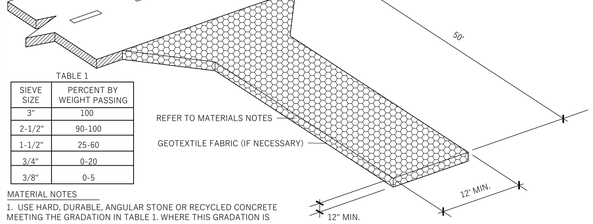


TABLE 1

SIEVE SIZE	PERCENT BY WEIGHT PASSING
3"	100
2-1/2"	90-100
1-1/2"	25-60
3/4"	0-20
3/8"	0-5

MATERIAL NOTES

1. USE HARD, DURABLE, ANGULAR STONE OR RECYCLED CONCRETE MEETING THE GRADATION IN TABLE 1. WHERE THIS GRADATION IS NOT AVAILABLE, MEET THE GRADATION IN WISCONSIN DEPARTMENT OF TRANSPORTATION (DOT) STANDARD SPECIFICATION, SECTION 312 SELECT CRUSHED MATERIAL. USE MATERIAL SUBSTANTIALLY FREE FROM DIRT, DEBRIS, STEEL, VEGETABLE MATTER, AND OTHER DELETERIOUS MATERIAL. PLACE THE AGGREGATE IN A LAYER AT LEAST 12 INCHES THICK.
2. THE TRACKING PAD SHALL BE UNDERLAIN WITH A WDOT TYPE R GEOTEXTILE FABRIC WHERE WARRANTED BASED ON SOIL TYPE OR HIGH GROUNDWATER.

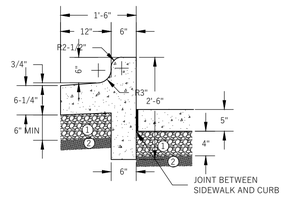
INSTALLATION NOTES

1. INSTALLATION SHALL CONFORM WITH THE REQUIREMENTS OF WDNR CONSERVATION PRACTICE STANDARD 1057.
2. INSTALL THE TRACKING PAD ACROSS THE FULL WIDTH OF THE ACCESS POINT, OR RESTRICT EXITING TRAFFIC TO A DEDICATED EGRESS LANE WITH A DRIVING SURFACE AT LEAST 12 FEET WIDE.
3. DIMENSIONS OF THE TRACKING PAD SHALL BE MINIMUM AS NOTED ON THE FIGURE ABOVE.
4. DIVERT SURFACE FLOWS AWAY FROM TRACKING PADS OR CONVEY FLOW UNDER AND/OR AROUND USING CULVERTS AND SWALES. DIRECT RUNOFF FROM TRACKING PADS TO SEDIMENT CONTROL PRACTICES.
5. DO NOT COMPACT AGGREGATE PRIOR TO USE. COMPACTION, GROUTING, OR OTHER MEANS OF CREATING A SMOOTH SURFACE COMPROMISE THE EFFECTIVENESS OF THE TRACKING PAD.
6. TRACKING PAD SHALL BE REMOVED OR INCORPORATED INTO GRAVEL DRIVEWAY ONLY AFTER CONSTRUCTION IS COMPLETE AND THE SITE HAS BEEN STABILIZED.

INSPECTION & MAINTENANCE NOTES

1. STONE TRACKING PADS SHALL BE INSPECTED WEEKLY AND WITHIN 24 HOURS AFTER EVERY PRECIPITATION EVENT THAT PRODUCES 0.5 INCHES OF RAIN OR MORE DURING A 24 HOUR PERIOD.
2. MONITOR AND MAINTAIN DEVICES TO MINIMIZE SHIFTING, RUTTING OF ADJACENT SURFACES, AND STRUCTURAL FAILURE. MAINTAIN A LOOSENED, ROUGH SURFACE BY SCRAPING, LOOSENING, OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
2. ADDITIONAL AGGREGATE SHALL BE PLACED IF THE TRACKING PAD BECOMES BURIED OR IF SEDIMENT IS NOT BEING REMOVED EFFECTIVELY FROM THE VEHICLE TIRES.
3. A MINIMUM 30-FEET WIDE BY 50-FEET LONG BY 12-INCH THICK PAD SHALL BE MAINTAINED AT ALL TIMES. ADD STONE AS NEEDED TO MAINTAIN THE MINIMUM PAD THICKNESS.
4. THE TRACKING PAD PERFORMANCE SHALL BE MAINTAINED BY SCRAPING OR TOP-DRESSING WITH ADDITIONAL AGGREGATE.
5. ANY SEDIMENT TRACKED ONTO A PUBLIC OR PRIVATE ROAD SHOULD BE REMOVED BY STREET CLEANING AT THE END OF EACH WORKING DAY.
6. REMOVE STONES LODGED BETWEEN THE TIRES OF DUAL WHEEL VEHICLES PRIOR TO LEAVING THE CONSTRUCTION SITE.
7. MAINTENANCE SHALL BE COMPLETED AS SOON AS POSSIBLE WITH CONSIDERATION FOR SITE CONDITIONS.
8. REPLACE DAMAGED OR CRUSHED CULVERTS UNDER TRACKING PAD.

CONSTRUCTION ENTRANCE (STONE TRACKING PAD)



① DENSE GRADED BASE 1-1/4" (TYP.),

② COMPACTED SUB BASE

CURB WALL

MATERIAL	THICKNESS	SPECIFICATION
BITUMINOUS UPPER LAYER	1.75"	SECTION 460, TABLE 460-1
BITUMINOUS LOWER LAYER	2.25"	SECTION 460, TABLE 460-1
DENSE GRADED BASE	12.0"	SECTION 301 AND 305, 3" AND 1.25"
TOTAL THICKNESS	16.0"	

1. SPECIFICATIONS BASED ON GEOTECHNICAL REPORT AS PREPARED BY CGC, INC., DATED JULY 23, 2025. IF ANY DISCREPANCY BETWEEN THIS DETAIL AND THE GEOTECHNICAL REPORT IS FOUND, THE GEOTECHNICAL REPORT HOLDS.
2. LIGHT DUTY AREAS (REFERS TO THE STRIPED PARKING AREAS ONLY). MAY HAVE REDUCED BITUMINOUS LOWER LAYER TO 1.75" AND DGB TO 10.0".
3. UNDERCUTTING IS LIKELY BASED ON UNDERLYING SOILS. ASSUME 30% OF SITE WILL REQUIRE UNDERCUTTING. UNDERCUT SECTION ASSUMED TO BE 12" OF 3" DGB OVER BIAXIAL GEOGRID (TENSAR BX TYPE 1 OR EQUAL). FINAL DETERMINATION BASED ON FIELD PROOF-ROLL.
4. COMPACTION REQUIREMENTS
   4.1. BITUMINOUS CONCRETE: REFER TO SECTION 460-3.
   4.2. BASE COURSE: REFER TO SECTION 301.3.4.2, STANDARD COMPACTION
5. MIXTURE TYPE LT BITUMINOUS PAVEMENT IS RECOMMENDED, REFER TO SECTION 460, TABLE 460-2 OF THE STANDARD SPECIFICATIONS.
6. THE UPPER 4" OF DGB SHALL BE 1.25"; THE BOTTOM PART OF THE LAYER CAN BE 3" DGB.

MATERIAL	THICKNESS	SPECIFICATION
CONCRETE SLAB LAYER	6.0"*	SECTION 501, GRADE A, CLASS I
DENSE GRADED BASE	8.0"**	SECTION 301 AND 305, 31.5 MM
TOTAL THICKNESS	14.0"	

NOTE: CONCRETE SIDEWALK TO BE 5" CONCRETE OVER 4" DENSE GRADED BASE.
* REINFORCEMENT TO INCLUDE #4 REBAR 12" O.C. BOTH WAYS OR EQUIVALENT
** SITE PROOF ROLLS TO BE COMPLETED WITH ADDITIONAL THICKNESS ADDED PER GEOTECHNICAL RECOMMENDATION. BASED ON CURRENT GEOTECHNICAL RECOMMENDATIONS; 12" DGB TO BE ADDED BELOW 6" LAYER WITH ADDITIONAL BIAXIAL GEOGRID (TENSAR BX TYPE I OR EQUIVALENT)

PAVEMENT SECTIONS

WYSER ENGINEERING

101 PERIMETER ROAD
MOUNT HOREB, WI 53572

KLEIN PERIMETER ROAD

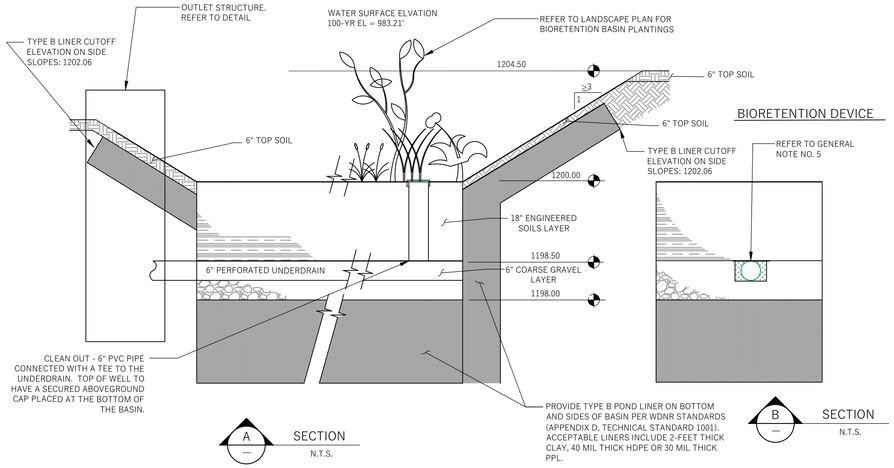
VILLAGE OF MT. HOREB, DANE COUNTY, WI

Sheet Title: DETAILS

Revisions:

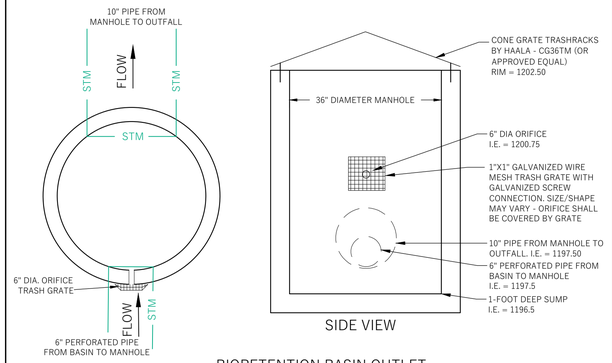
No.	Date:	Description:

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Wyser Number	25-1386
Set Type	REVIEW
Date Issued	11/13/2025
Sheet Number	C400

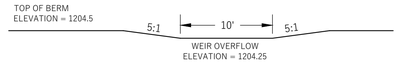


GENERAL NOTES:

1. ALL CONSTRUCTION PRACTICES SHALL MEET THE SPECIFICATIONS OF THE WDNR TECHNICAL STANDARD 1004 - BIORETENTION FOR INFILTRATION. IT IS THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN A COPY OF THIS STANDARD AND CONSTRUCT THE BIORETENTION DEVICE IN ACCORDANCE WITH THE REQUIREMENTS OUTLINED THEREIN.
2. CONTRACTOR SHALL INSTALL NATIVE PLANT PLUGS IN THE BASIN AND INSTALL A CLASS II EROSION CONTROL MAT (OVERLAPPED AND ANCHORED WITH MIN. 6" LONG HARDWOOD STAKES). CUT AN "X" IN THE MATTING AND AUGER DOWN TO PLACE APPROPRIATE PLANTING PLUGS EVERY 12 INCHES ON CENTER.
3. CONTRACTOR SHALL INSTALL 18" OF ENGINEERED SOIL CONSISTING OF: 70% ASTM C33 SAND AND 30% CERTIFIED COMPOST (SEE GENERAL NOTE 4).
4. CERTIFIED COMPOST SHALL CONSIST OF: >40% ORGANIC MATTER, <60% ASH CONTENT, PH OF 6-8, AND MOISTURE CONTENT OF 35-50% BY WEIGHT.
5. FILTER FABRIC SHALL BE PLACED ABOVE THE PERFORATED PIPE, BETWEEN THE PEA GRAVEL AND THE ENGINEERED SOIL, A WIDTH OF 4 FEET CENTERED OVER THE FLOW LINE OF THE PIPE.
6. ANNUAL RYE GRASS SHALL BE SEEDED AT 40 LB/ACRE WITH THE SEED MIX IN THE AREAS SURROUNDING THE BASIN, ON SIDE SLOPES, AND OVER ANY LAND THAT DISCHARGES INTO THE BASIN FOR EROSION CONTROL WHEN BASIN IS BROUGHT ON-LINE. ROOTSTOCK AND PLUGS ARE REQUIRED TO ESTABLISH VEGETATION AT THE INVERT OF THE BASIN.
7. ALL WORK TO BE CONDUCTED IN CONFORMANCE WITH APPLICABLE LOCAL, REGIONAL, AND STATE STORMWATER STANDARDS FOR THE PROJECT SITE AS APPROVED BY THE REGULATORY ENGINEER.
8. REFER TO LANDSCAPE PLAN FOR PLANTING REQUIREMENTS.

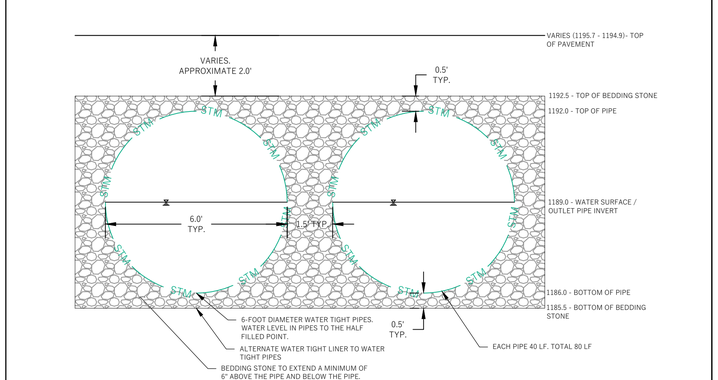


BIORETENTION BASIN OUTLET
NTS

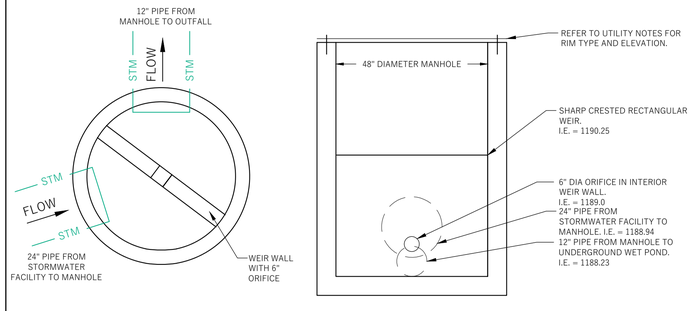


NOTE: OVERFLOW SHALL BE REINFORCED WITH TURF REINFORCED MAT (TRM) - CLASS III, TYPE C BY PYRAMAT OR APPROVED EQUAL. TRM SHALL BE INTALLED PER MANUFACTURER'S RECOMMENTDATIONS.

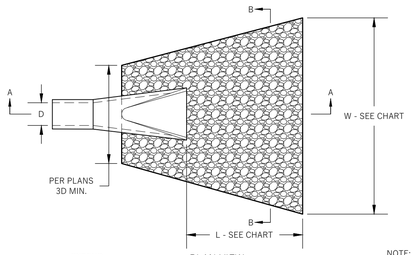
BIORETENTION BASIN OVERFLOW WEIR
NTS

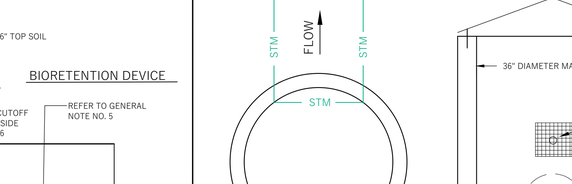


UNDERGROUND WET POND TYPICAL SECTION



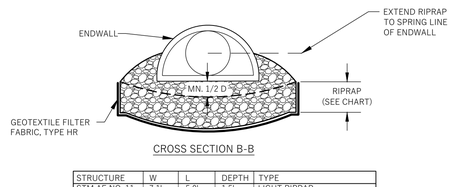
UNDERGROUND WET POND OUTLET
STM MH NO. 2
NTS





CROSS SECTION A-A

1) JOINT TIES SHALL BE INSTALLED AT THE LAST (DOWNSTREAM) TWO JOINTS ON ANY PIPE RUN ENDING IN AN APRON ENDWALL



STRUCTURE	W	L	DEPTH	TYPE
STM AE NO. 11	7.1'	5.0'	1.5'	LIGHT RIPRAP

RIP RAP AND ENDWALL

WYSER ENGINEERING
101 PERIMETER ROAD
MOUNT HOREB, WI 53572

KLEIN PERIMETER ROAD

VILLAGE OF MT. HOREB, DANE COUNTY, WI

Sheet Title: DETAILS

Revisions:

No.	Date:	Description:

Graphic Scale: 0' 5' 10' 20' 30'

Wyser Number: 25-1386

Set Type: REVIEW

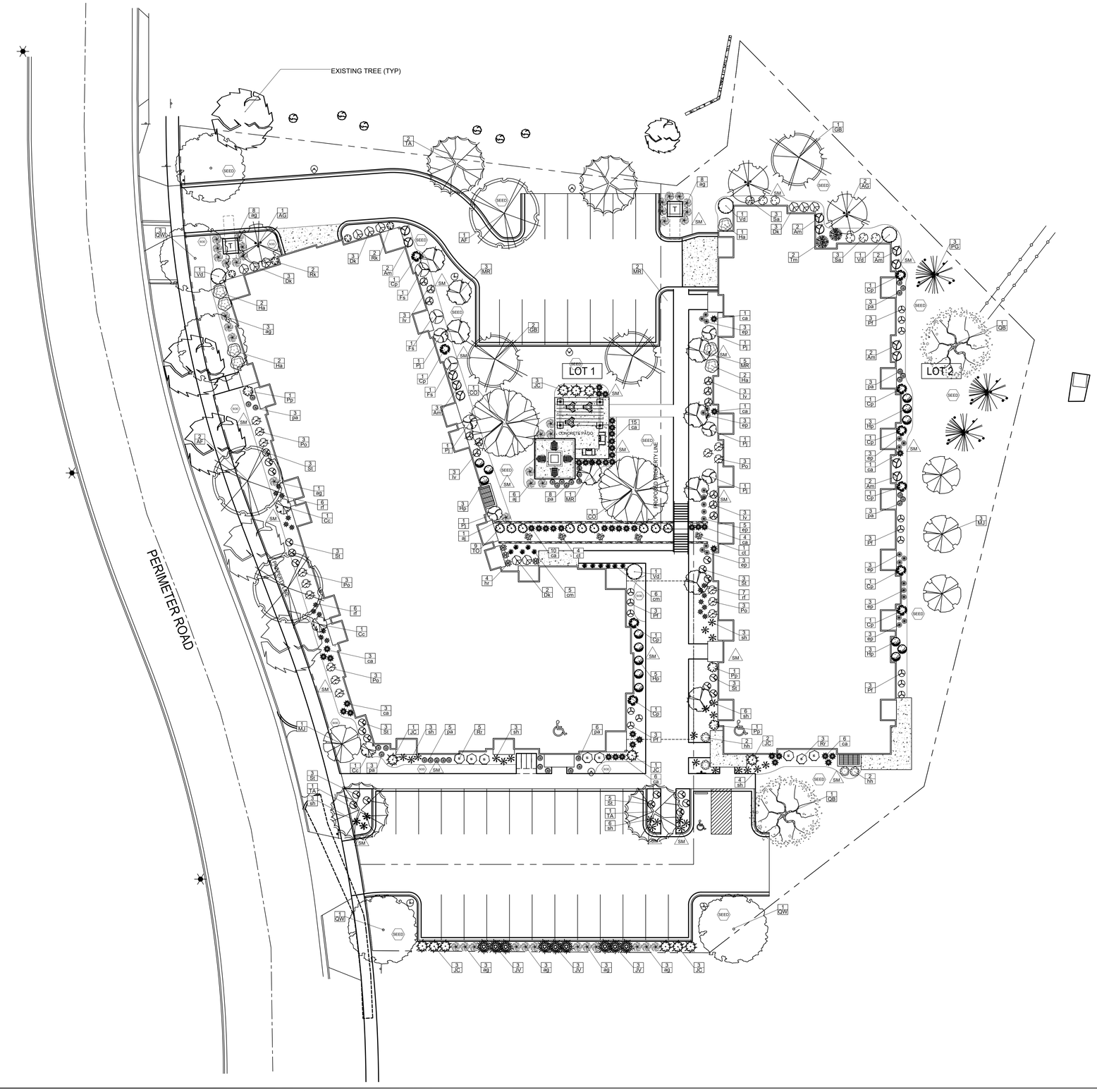
Date Issued: 11/13/2025

Sheet Number: C401

File: W:\2025\251386_JT Klein - 101 Perimeter Rd, Mount Horeb\dwg\25-1386_Civil Design.dwg Layout: Details (2) User: dschneider Plotted: Nov 13, 2025 - 10:12am

5. Landscaping Plan

The following exhibit is a detailed landscaping plan for the site designed by Olson Toon. The landscape design for this project will meet all Village of Mount Horeb landscape design standards. This plan contains an itemized plant detailing the types of plants and quantities that will be incorporated.



PLANT LIST

KEY	SCIENTIFIC NAME	COMMON NAME	QTY	SIZE	ROOT	STEM
	DECIDUOUS TREES					
AF	*Acer x freemanii 'Jefersred'*	Autumn Blaze Maple	3	2"	B&B	
CO	*Celtis occidentalis*	Common Hackberry	2	2"	B&B	
GB	*Gingko biloba 'Princeton Sentry'*	Princeton Sentry Ginkgo	3	2"	B&B	
QB	*Quercus bicolor*	Swamp White Oak	2	2"	B&B	
QW	*Quercus x warei 'Long'*	Regal Prince Oak	5	2"	B&B	
TA	*Tilia americana 'McKSentry'*	American Sentry Linden	4	2"	B&B	
	ORNAMENTAL TREES					
AG	*Amelanchier x grandiflora 'Autumn Brilliance'*	Autumn Brilliance Serviceberry	3	2"	B&B	tree form
MJ	*Malus 'Red Jewel'*	Red Jewell Crabapple	4	2"	B&B	
MR	*Malus 'Royal Raindrops'*	Royal Raindrops Crabapple	9	2"	B&B	
	EVERGREEN TREES					
JC	*Juniperus chinensis 'Trautman'*	Trautman Juniper	12	6'	B&B	
JV	*Juniperus virginiana 'Taylor'*	Taylor Juniper	9	6'	B&B	
PG	*Picea glauca var. densata*	Black Hills Spruce	3	6'	B&B	
TO	*Thuja occidentalis 'Emerald Green'*	Emerald Green Arborvitae	9	6'	B&B	
	EVERGREEN SHRUBS					
Cp	*Chamaecyparis pisifera 'Golden Mop'*	Golden Mop Japanese False Cypress	10	#5	Cont.	
Pp	*Picea pungens 'Globosa'*	Dwarf Globe Blue Spruce	3	#5	Cont.	
Rk	*Rhododendron 'Karen'*	Karen Rhododendron	4	#5	Cont.	
Tm	*Taxus x media 'Tautonii'*	Taunton Yew	2	#5	Cont.	
	DECIDUOUS SHRUBS					
Am	*Aronia melanocarpa 'UCONNAM166'*	Low Scape Hedger Aronia	13	#3	Cont.	
Cc	*Cotinus coggygria 'NCCO1'*	Winecraft Black Smokebush	3	#5	Cont.	
Dk	*Diervilla 'G2X885411'*	Kodiak Red Bush Honeysuckle	11	#3	Cont.	
Fs	*Forsythia x 'Mindor'*	Show Off Forsythia	3	#3	Cont.	
Ha	*Hydrangea arborescens 'Abetwo'*	Incrediball Hydrangea	12	#3	Cont.	
Hp	*Hydrangea paniculata'NCHP1'*	Puffer Fish Hydrangea	14	#3	Cont.	
Iv	*Itea virginica 'Sprich'*	Little Henry Dwarf Virginia Sweetspire	12	#3	Cont.	
Pf	*Potentilla fruticosa 'Bailbrule'*	Creme Brulee Potentilla	15	#3	Cont.	
Pj	*Physocarpus opulifolius 'Jefam'*	Amber Jubilee Ninebark	6	#3	Cont.	
Po	*Physocarpus opulifolius 'SMPOTW'*	Tiny Wine Ninebark	15	#3	Cont.	
Rr	*Rosa 'Meiggili'*	Coral Drift Rose	8	#3	Cont.	
Sa	*Symphoricarpos albus*	Common Snowberry	6	#3	Cont.	
St	*Spiraea betulifolia 'Tor'*	Tor Birchleaf Spirea	26	#3	Cont.	
Vd	*Viburnum dentatum 'Christom'*	Blue Muffin Arrowwood Viburnum	4	#5	Cont.	
	ORNAMENTAL GRASSES & PERENNIALS					
ag	*Andropogon gerardii 'Blackhawks'*	Blackhawks Big Bluestem Grass	37	#1	Cont.	
ca	*Calamagrostis x acutiflora 'Karl Foerster'*	Karl Foerster Feather Reed Grass	49	#1	Cont.	
cm	*Carex morrowii 'Ice Dance'*	Ice Dance Sedge Grass	11	#1	Cont.	
ct	*Clematis terniflora*	Sweet Autumn Clematis	5	#1	Cont.	
ep	*Echinacea 'Prairie Splendor'*	Prairie Splendor Coneflower	25	#1	Cont.	
hh	*Hibiscus 'Holy Grail'*	Holy Grail Hibiscus	4	#1	Cont.	
hr	*Hosta 'Rainbow's End'*	Rainbow's End Hosta	4	#1	Cont.	
pa	*Perovskia atriplicifolia 'Little Lace'*	Little Lace Russian Sage	37	#1	Cont.	
rf	*Rudbeckia fulgida 'fulgida'*	Black Eyed Susan	19	#1	Cont.	
sh	*Sporobolus heterolepis*	Prairie Dropseed	26	#1	Cont.	

SM — All planting beds to be Capitol Washed Stone with Dimex EdgePro polyvinyl (black plastic) edging

SOD — Premium Kentucky Bluegrass sod

SEED — Premium sunny grass seed blend with straw mat. (Class 1 Type B single net)

LANDSCAPE NOTES:

- Please refer to Grading & Erosion Control Plan for final contour information.
- Individual tree and shrub groupings in lawn areas to receive brown dyed wood mulch rings with trench edge.

L100

LANDSCAPE PLAN

3570 Pioneer Road
Verona, WI 53593
(608) 827-9401
www.olsontoon.com

KLEIN PERIMETER ROAD
Perimeter Road
Mount Horeb, Wisconsin

Date: May 23, 2025
Scale: 1" = 20'-0"
Designer: kms
Job #

Seal:
To protect against legal liability, the plans presented herein are "schematic," and should not be outsourced as "biddable" or "construction documents" unless approved by the Landscape Designer. This is not an original document unless stamped in red, as ORIGINAL.

Revisions:
2025.11.10
2025.11.12

Reference Name:
JTKlein

6. **Parking Calculations**

Building 1

Underground Parking Stalls: 47

Surface Parking Stalls: 26

Total 73 (1.49 Per Unit)

Building 2

Underground Parking Stalls: 35

Surface Parking Stalls: 14

Total 49 (1.23 Per Unit)

7. **Escrow Fees**

All applicable fees and deposits will be paid in full in a timely manner.

8. **Erosion Control and Stormwater Management Application & Fees**
9. **Erosion Control Plan**

The application and plans have been sent in a separate link due to the size of the Stormwater Management and Erosion Control plan files.

10. **Signage Plan**

The development team will return with a detailed signage application once available. Below is an outline of the existing signage and an example of what the proposed onsite signage will look like.

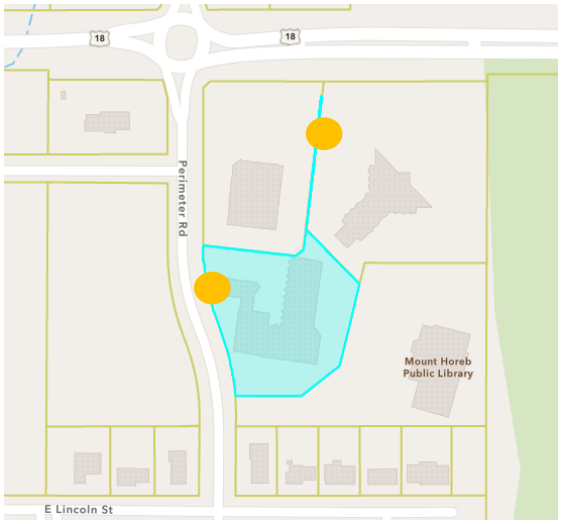
Existing Signage

- **Springdale Signage:** Currently, there is an illuminated monument sign between Springdale St and the Walgreens parking lot. (Indicated in Map)
- **Perimeter Signage:** The main Perimeter entrance also has a stand-alone illuminated sign.

Current Signage







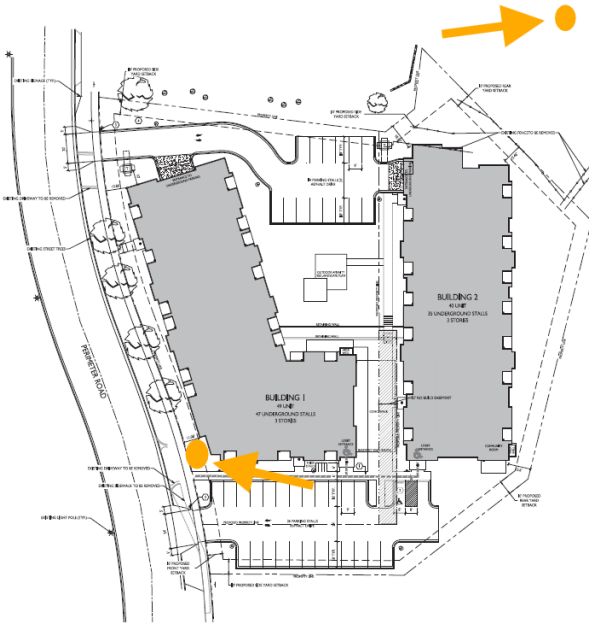
Proposed Signage

After the 89 units are completed, the following signage elements will be installed or updated. The picture below represents what a future monument sign could look like. The sign below is 4’x6’.



Main Development Sign

- Positioned for visibility from main thoroughfare
- Branding and name of the development prominently displayed
- Landscaping integrated around base



Leasing/Temporary Marketing Signage (Pre-Occupancy)

- To be placed in existing monument frame or a removable ground sign
- Duration: Until lease-up is complete
- Must comply with local ordinances for temporary signs

Design & Materials

- Materials: Sign bases and panels will utilize the same exterior cladding materials as the residential buildings (e.g., stone veneer, cement board, metal accents, and fiber cement trim).
- Color Palette: Natural, earthy tones that reflect the building's color scheme
- Typography & Branding: Consistent font, iconography, and logo use across all signs
- Illumination: Low energy, shielded LED lighting for readability and neighborhood compatibility

VANDEWALLE & ASSOCIATES INC.

To: Village of Mount Horeb Plan Commission

From: Village Planner: Ben Rohr, AICP

Date: January 28, 2026

Re: Specific Implementation Plan (SIP) and Design Review for a Two Proposed 3-Story Multi-Family Buildings at 101 Perimeter Road for JT Klein, Inc.

Introduction

JT Klein, Inc. has submitted the Specific Implementation Plan (SIP) for 101 Perimeter Road for Plan Commission review. The project is proposed on the former Karakahl County Inn site south of Walgreens and the Chiropractic Clinic, west of the Mount Horeb Public Library, east of the vacant lot between Cox Drive and E. Lincoln Street, and north of single-family homes that front along E. Lincoln Street. This project received General Development Plan (GDP) zoning approval at the July 2025 meeting, and the applicant has formally submitted the proposed SIP for Plan Commission consideration at the January meeting. The SIP is consistent with the approved GDP.

Plan Commission feedback summary from previous meetings:

- Some concerns about dwelling unit density
    - The density remains the same as the approved GDP (40 affordable senior housing units and 49 market-rate housing units).
- Some traffic and parking concerns associated with the ratio of senior unit parking spaces provided, peak traffic volumes on Perimeter Road during school hours impacted by this project, and preventing the Library parking lot from being used for residential parking on this site
    - The parking remains nearly identical to the approved GDP (73 spaces provided for the market-rate building and 49 for the affordable building).
        - Was 73 and 48 in the GDP submittal
    - No additional traffic analysis has been provided and was not required as part of the GDP approval.
    - Nothing in the materials notes a method for preventing residential parking at the Library site and this was not required as part of the GDP approval. See item below.
- Provide connectivity for pedestrians to access the Library site
    - No new pedestrian connection has been provided between the site and the Library. The applicant, Village Engineer, and Library Director worked together to come up with a connection approach, but could not determine one that made sense with the distinct grade changes between lots. Pedestrians will have to use the sidewalk along Perimeter Road and the Library driveway.

The Planned Development is proposed to accommodate two three-story multi-family buildings on two separate parcels. Lot 1/Building 1 is proposed directly adjacent to Perimeter Road and includes 49 market-rate multi-family units. Lot 2/Building 2 is proposed to the east of Lot 1/Building 1 at the rear of the property and includes 40 affordable senior multi-family units. Each building is proposed to include underground parking and shared surface parking. A brief summary is provided below:

- Building 1 is proposed to include 49 total market-rate multi-family units (6 studios, 30 one-bedroom, and 13 two-bedroom units). It will also include 47 underground parking spaces.
- Building 2 is proposed to include 40 total affordable senior multi-family units (0 studios, 21 one-bedroom, and 19 two-bedroom units). It will also include 35 underground parking spaces.
- Combined, the site will feature 40 surface parking spaces for shared use between the two buildings.
- Total: 89 units, 122 parking spaces, 1.37 spaces/unit

Notable changes from the GDP submittal include:

- An increase to 122 overall parking spaces on the site compared to 121 in the GDP materials.
- A reduction in the number of 1-bedroom units within the senior multi-family building (was 24, now 21) and an increase in the number of 2-bedroom units (was 16, now 19).
- The addition of two electric-vehicle-ready parking spaces and 19 bicycle parking stalls in the underground parking area of Building 1.
- The addition of two electric-vehicle-ready parking spaces and 5 bicycle parking stalls in the underground parking area of Building 2.
- An in-building fitness area for tenants and common gathering space on the first floor of each building.
- Solar panels are proposed on the roof of Building 2.
- Provided proposed detailed elevation plans for each façade of each building, in addition to Landscaping, Lighting, Stormwater Management, Erosion Control, and Grading Plans.

To receive final Village approval of the Planned Development, this project requires approval of the SIP and Design Review by the Plan Commission and the Village Board. This report addresses the SIP first, followed by the Design Review.

Specific Implementation Plan Review

At the July 2025 Plan Commission and Village Board meeting, the project received General Development Plan approval. The SIP must meet the zoning requirements, inclusive of the zoning flexibilities approved in the GDP.

Lot 1/Building 1: Specific SIP Flexibilities Consistent with the Approved GDP include:

1. Allowable Land Uses: The GDP approved Apartments (Multi-Family) as a by-right principal land use for the property. The SIP is consistent with the approved GDP.

2. Number of Dwelling Units: The GDP approved a building with up to 49 dwelling units. The SIP is consistent with the approved GDP.

3. Apartment Land Use Setbacks: The GDP approved minimum setbacks of 10 feet from all property lines. The SIP is consistent with the approved GDP.

4. Floor Area Ratio: The GDP approved greater minimum floor area ratios for the property of up to 1.07. The SIP is consistent with the approved GDP.

5. Building Height: The GDP approved a building up to 54 feet in height. The SIP is consistent with the approved GDP.

6. Front Yard Building Setbacks: The GDP approved a minimum front yard setback of 10 feet. The SIP is consistent with the approved GDP.

7. Pavement Setbacks: The GDP approved minimum pavement setbacks of 0-foot from all property lines. The SIP is consistent with the approved GDP.

8. Parking: The GDP approved a minimum of 73 off-street parking spaces be provided. The SIP is consistent with the approved GDP.

Lot 2/Building 2: Specific SIP Flexibilities Consistent with the Approved GDP include:

1. Allowable Land Uses: The GDP approved Apartments (Multi-Family) as a by-right principal land use for the property. The SIP is consistent with the approved GDP.

2. Number of Dwelling Units: The GDP approved a building with up to 40 dwelling units. The SIP is consistent with the approved GDP.

3. Apartment Land Use Setbacks: The GDP approved minimum setbacks of 3 feet from all property lines. The SIP is consistent with the approved GDP.

4. Floor Area Ratio: The GDP approved greater minimum floor area ratios for the property of up to 1.14. The SIP is consistent with the approved GDP.

5. Building Height: The GDP approved a building up to 54 feet in height. The SIP is consistent with the approved GDP.

6. Front and Rear Yard Building Setbacks: The GDP approved a minimum front yard setback of 3 feet and a minimum rear yard setback of 13 feet. The SIP is consistent with the approved GDP.

7. Pavement Setbacks: The GDP approved minimum pavement setbacks of 0-foot from all property lines. The SIP is consistent with the approved GDP.

8. Parking: The GDP approved a minimum of 48 off-street parking spaces be provided. The SIP is consistent with the approved GDP.

9. Street Frontage: The GDP approved a minimum 34 feet of street frontage be provided for the parcel. The SIP is consistent with the approved GDP.

Planner's Recommendation for the Specific Implementation Plan:

I recommend the Plan Commission recommend the SIP for 101 Perimeter Road for approval by the Village Board, subject to the waivers and requirements addressed at the end of this report, as discussed and approved by the Plan Commission.

Design Review Requirements per Section 17-14:

Design Review by the Plan Commission is required under Section 17.14 of the Zoning Ordinance. Design Review is required for all development projects in the Village, except residential development with three or fewer dwelling units. The Design Review requirements in Section 17.14(4)(b) identify 27 Design Directives. The Plan Commission has the ability to waive any Design Directive or add additional design requirements upon a finding that the additional design requirement would improve the project.

This review is based on the plan set provided by the applicant. This project complies with most Design Review requirements. Any items that do not comply with the Design Directives or requires Plan Commission discussion have been identified with underlined text.

1. **Site Grading:**

a. The grading plan shall preserve existing grades to the greatest extent possible, particularly at the perimeter of the site.

- This requirement is met, pending any comments from the Village Engineer on the Grading, Erosion Control, and Stormwater Plan. A new retaining wall is planned on the north side of the site and a reconstructed retaining wall is planned for the northeast corner of the site. The property includes a variety of grade changes within the site and to adjacent properties and the Grading Plan works within the existing grade changes on-site today and maintains the site's topography to the extent possible.

b. In no instance shall proposed grading create transitions to adjoining properties or rights-of-way that are unsafe, unstable or create drainage problems.

- This requirement is met, pending any comments from the Village Engineer on the Grading, Erosion Control, and Stormwater Plan. Existing grade transitions to adjacent properties are maintained to the extent possible.

c. Site grading shall also preserve or create an attractive site appearance in conjunction with the proposed development.

- This requirement is met, pending any comments from the Village Engineer on the Grading, Erosion Control, and Stormwater Plan. Existing grade transitions to adjacent properties are maintained to the extent possible.

2. **Existing Site Vegetation and Other Natural Features:**

a. The grading and development plans shall preserve, protect, and maintain important existing site vegetation as identified by the Plan Commission. Examples include hedgerows, groves and individual specimen trees.

- This requirement is not met. While most of the property today has no existing vegetation, five existing mature trees are proposed to be removed along the Perimeter Road frontage to accommodate the new Building 1. I recommend that this requirement be waived by the Plan Commission to allow Building 1 to be located adjacent to the street frontage as proposed. Proposed new trees are planned to replace these trees as shown in the landscaping plan.

b. Topsoil used at the development site should be from on site, to the extent possible, particularly in areas under the drip line of preserved vegetation.

- This requirement is met. The proposed development works within the site's existing topography to limit grading impacts to the extent possible.

3. Site Layout Relation to Abutting Streets:

a. In general, the layout of buildings, structures, pavement, parking and landscaping shall be compatible with the general pattern for similar land uses in the vicinity, as determined by the Plan Commission.

- This requirement is met. The project acts as a transition between the existing homes to the south and commercial development to the west and north. The pitched roof and building materials are generally reflective of the housing designs and the proposed development utilizes an interconnected surface parking area and traffic circulation approach. Two new vehicle access points are proposed, but are in a very similar location to today's access points. Each will provide direct access to the building's underground and shared surface parking areas. The existing topography in this area of the Village creates a situation where the building will appear taller from Springdale Street, but as the grade changes further south on Perimeter Road, the building height then appears consistent with the homes behind (south) the proposed development.

b. The general site layout shall result in an attractive appearance to all abutting streets, as determined by the Plan Commission.

- This requirement is met. Same as 3.a., above.

4. Building Setbacks:

a. Building setbacks shall comply with the requirements of the zoning district, and with the additional requirements listed below in subparagraphs 4.b. and 4.c.

- This requirement is met. The SIP is consistent with the approved setbacks in the GDP. All other building setbacks are met.

b. Within the downtown area, and particularly along Main Street and the commercially developed portions of intersecting streets, the entire street side of buildings shall be located at or within 3 feet of all abutting street rights-of-way, unless an exception is granted through the conditional use process.

- This requirement is not applicable, as the subject property is not located in the specified area.

c. Within the CTH ID corridor between STH 78 and USH 151, the entire street side of buildings shall be located at or within 30 feet of all abutting street rights-of-way, unless an exception is granted through the conditional use process. Parking shall not be permitted in this area. Drives for one-way circulation and/or emergency vehicle access may be permitted through the conditional use process.

- This requirement is not applicable, as the subject property is not located in the specified area. However, the building is designed to mirror these requirements along the front façade that faces Perimeter Road, with parking on the side (north and south sides of the site).

5. Building Height:

a. Building heights shall comply with the requirements of the zoning district, and with the additional requirements listed below in subparagraphs 5.b. and 5.c.

- This requirement is met. The SIP is consistent with the approved building height in the GDP.

b. Within the downtown area, and particularly along Main Street and the commercially developed portions of intersecting streets, building heights shall be a minimum of 20 feet

and shall be a minimum of 2 stories, unless an exception is granted through the conditional use process.

- This requirement is not applicable, as the subject property is not located in the specified area.

c. Within the CTH ID corridor between STH 78 and USH 151, building heights shall provide a functional or decorative building tower or related architectural feature that exceeds the height of the majority of the building facade by at least 7 feet, unless an exception is granted through the conditional use process. Roofs, and roof appurtenances such as cupolas, shall not count toward this requirement.

- This requirement is not applicable, as the subject property is not located in the specified area. However, the design of the proposed structures does provide varying roof pitches that create architectural interest and are generally consistent with this requirement.

6. Building Mass:

a. Buildings over 5,000 square feet of gross floor area shall be subject to the requirements for large developments.

- The building exceeds 5,000 square feet of gross floor area, and complies with all requirements for large developments.

7. Building Facades:

a. Long building facades shall be visually broken up and variegated with staggers and offsets as determined appropriate by the Plan Commission.

- This requirement is met by regularly spaced building staggers and roof pitches, changes in building façade materials, patios, and differentiated widow sizes along all facades.

b. All building facades facing streets, drives or parking areas shall provide regularly spaced openings for windows and doors, and regularly spaced decorative elements such as piers and columns. The size and spacing of these features shall be compatible with nearby structures that meet this requirement, as determined by the Plan Commission.

- This requirement is met. Same as 7.a., above.

c. All building facades facing streets, drives or parking areas shall provide a pattern of upper story openings that is compatible with the pattern established by the ground floor, as determined by the Plan Commission.

- This requirement is met with regularly spaced windows on the upper stories of all facades. To note, there are instances where the underground parking level is exposed at the north end of the site on each building. This portion of the ground floor façade includes minimal window openings due to the in-building parking location. However, the applicant has integrated some window and door openings, where possible.

d. Within the downtown zoning district, and particularly along Main Street and the commercially developed portions of intersecting streets, building facades shall employ traditional storefront design by providing pilasters, transom windows, cornices, lintels and related decorative details to highlight transitions between the ground floor and upper stories and between upper stories and the parapet.

- This requirement is not applicable, as the subject property is not located in the specified area.

8. Exterior Building Materials:

a. Exterior materials for multi-family, office, or commercial buildings may not include metal wall panels, concrete panels, plain concrete block, asphalt, or spandrel window panels, unless an exception is granted through the conditional use process.

- This requirement is met. Proposed building materials include lap siding, cement board composite siding panels, windows, and a stone veneer base on all four facades.

b. Hard and durable materials including decorative block, brick or stone, shall be required on all exterior portions of the structure within 40 inches of the adjacent grade.

- This requirement is met. Stone veneer is proposed along the base of all four facades the full length of the first floor. The elevation of this base material varies along each façade to add additional architectural interest and covers a greater proportion of the ground floor façade where the underground parking level becomes exposed due to topography changes (north side).

9. Exterior Building Colors:

a. Exterior colors of all buildings, structures, appurtenances and paving shall be compatible and harmonious with those of existing buildings in the immediate area which conform to these design requirements, as determined by the Plan Commission.

i. Within the downtown area, the Victorian color palette shall be used, or other colors must be approved by the Plan Commission.

- This requirement is not applicable, as the subject property is not located in the specified area.

ii. Throughout the rest of the Village, primary colors including red, blue, green, yellow, black, and fluorescent colors shall not be permitted. Where an integral part of site design, muted versions of these colors may be used, as approved by the Plan Commission.

- <u>This requirement is not met. The proposed exterior building material colors include varying types of grey, stone, and rosewood, but also includes the use of black accents on each façade. To note, black is utilized more prominently on Building 2 as one of the primary façade material applications. I recommend the Plan Commission discuss this item further.</u>

iii. High gloss paints and other exterior finishes are not permitted.

- This requirement is met on all portions of the building.

iv. Color patterns shall be used consistently throughout the property, as determined by the Plan Commission.

- This requirement is met on all portions of the building with a consistent use of neutral colors and accent materials proposed.

10. Exterior Doors:

a. All exterior doors visible from streets, drives or parking areas shall provide decorative design elements.

- This requirement is mostly met. All man doors are proposed to be glass with metal framing. The only exception is along the north side of Building 1 and west side of Building 2 where the non-decorative garage door and service door to access the in-building parking are provided. I recommend waiving this requirement for these doors.

11. Windows:

a. Spandrel panels, mirrored glass or heavily-tinted windows are not permitted. Where screening is desired, vertical or horizontal strip blinds may be used.

- This requirement is met. No such windows are proposed.

b. Windows may not be obscured by paper or other attached materials on more than 5% of any individual window panel.

- This requirement is met. No such windows are proposed.

12. Roofs:

a. Roof forms and materials shall be compatible and harmonious with those of existing buildings in the immediate area which conform to these design requirements, as determined by the Plan Commission.

- This requirement is met. The proposed pitched roof on both structures is consistent with the design of the existing homes to the south, the Library to the east, and the Chiropractic Clinic to the northeast. The proposed pitched roof is not consistent with the commercial development patterns along Springdale Street, but acts as a complimentary transition between different development patterns in this area.

b. Metal roofs shall not be used for multifamily, office or commercial buildings, unless an exception is granted through the conditional use process.

- This requirement is met. A shingled roof is proposed.

c. Roof forms shall be designed to accommodate the requirements in subparagraphs 5.c. and 7.d., above.

- This requirement is met.

d. Rooftop mechanical equipment shall not exceed the elevation of the lowest point of the surrounding building parapet or roof.

- This requirement is met. No rooftop mechanicals are proposed, outside of solar panels proposed on the south and west sides of the roof on Building 2.

13. Exterior Building Appurtenances:

a. Building facades shall be uncluttered by the minimal use and careful placement of brackets, wiring, meter boxes, antennae, gutters, downspouts and other appurtenances. Where necessary, such features shall be colored to blend in, rather than contrast, with the immediately adjacent building exterior.

- It is unknown if this requirement is met. The applicant has indicated that meter boxes will be required to serve the units, but placement of the meter boxes has not yet been determined. I recommend that staff be responsible for reviewing the proposed meter boxes on a set of updated elevation plans when the location is determined and that appropriate landscaping or other screening is employed.

14. Awnings:

a. Awnings, where approved by the Plan Commission, shall complement the character of the building.

- This requirement is met. Flat canopies are proposed over each building entrance. Each are consistent on all sides of the structure, match the color scheme, and are reflective of the materials of the building (composite trim and panels).

b. Soft, weather-treated canvas or vinyl materials which allow for flexible or fixed installation may be used. Metal canopies are prohibited.

- This requirement is not met. Each canopy is proposed to be metal and composite panels. Each matches the color scheme and materials of the building. I recommend that this requirement be waived.

c. Backlighting is prohibited.

- This requirement is met.

15. Trash Containment Structures:

a. Trash containment structures shall be designed to fully conceal trash storage.

- This requirement is met. The trash containment area is proposed to be located within both building's in-building structured parking area.

b. Trash containment structures shall be constructed in the same materials and colors as the ground floor of the principal building.

- This requirement is not applicable, as the structure will be located within the building.

c. Wood or synthetic wood gates shall be used and shall be arranged in a pattern to provide complete opacity. Metal panel gates and metal fence gates with strips are prohibited.

- This requirement is not applicable, as the structure will be located within the building.

16. Freestanding Canopy Structures:

a. Freestanding canopy structures, such as those providing shelter at a gas station or drive-up banking station, shall be designed to complement the design of the principal building, as determined by the Plan Commission.

- This requirement is not applicable. There are no freestanding canopy structures proposed.

b. Canopy roofs shall employ the same pitch, materials and colors as the roof of the principal building, unless an exception is granted through the conditional use process.

- This requirement is not applicable. There are no freestanding canopy structures proposed.

c. Canopy supports shall be decorative in nature and shall employ the same materials and colors as the principal building. Exposed nondecorative supporting poles are not permitted.

- This requirement is not applicable. There are no freestanding canopy structures proposed.

17. Other Structures:

a. Outbuildings shall employ the same high-quality exterior building materials as used on the principal building.

- This requirement is met. There are no outbuildings proposed. The central outdoor gathering space provided between the two buildings is proposed to include a concrete patio and fire pit at ground level.

b. Walls and fences shall employ high-quality materials such as metal pickets, stone, decorative block or brick which complement the principal building, as determined by the Plan Commission.

- This requirement is met. Limestone block walls are proposed for the sections of reconstructed or new retaining walls on the north side of the property. No other fencing or walls are proposed.

18. Exterior Lighting:

a. All exterior lighting shall use decorative fixtures, as approved by the Plan Commission. Such fixtures shall be consistent in design theme throughout the site.

- This requirement is met. All fixtures are decorative and consistent with the proposed design of the structure.

b. All exterior light bulbs shall not be visible from beyond any property line. Directional or cutoff fixtures shall be used to meet this requirement.

- This requirement is met. All fixtures are downward facing and directional in nature.

c. Lighting at the property lines shall not exceed 0.5 footcandles over ambient conditions.

- This requirement is met.

d. Maximum lighting shall not exceed 10.0 footcandles on the site, except in areas serving in-vehicle uses such as drive-up windows and fueling areas. In such locations, maximum lighting shall not exceed 25.0 footcandles.

- This requirement is met.

e. Freestanding light fixtures shall not exceed a total height of 20 feet.

- This requirement is met. The freestanding lighting fixtures proposed are 16' in height.

19. Exterior Signage:

a. Exterior signage shall complement the design of the overall site, as determined by the Plan Commission.

- <u>It is unknown if this requirement is met. Signage is indicated both on-building and ground-mounted, but no signage details have been provided by the applicant at this time.</u>

b. Freestanding sign supports shall be decorative in nature and shall employ the same materials and colors as the principal building. Exposed nondecorative supporting poles are not permitted.

- <u>It is unknown if this requirement is met. Signage is indicated both on-building and ground-mounted, but no signage details have been provided by the applicant at this time.</u>

20. Outdoor Display or Storage:

a. All outdoor display and/or storage areas must be clearly depicted and labeled on an approved site plan. Said label shall specify the general types of materials to be displayed or stored, including: retail or rental display; retail or rental vehicle display; long-term business vehicle storage; equipment storage; refuse storage; scrap equipment or vehicle storage.

- This requirement is not applicable, as there is no outdoor display or storage areas proposed.

b. Outdoor storage areas shall be adequately screened from view from adjacent properties and streets, drives and parking areas, as determined by the Plan Commission.

- This requirement is not applicable, as there is no outdoor display or storage areas proposed.

21. Pavement Materials:

a. All traffic circulation, parking and pedestrian areas shall be provided with a hard, durable surface such as concrete, asphalt, pavement blocks or bricks. Gravel is not acceptable.

- This requirement is met throughout the site.

b. Durable, porous pavement techniques are encouraged, and the overall coverage of pavement on all sites should be minimized so as to reduce stormwater runoff.

- This requirement is met. The stormwater management plan will be reviewed by the Village Engineer and be subject to meeting all applicable requirements.

22. Pedestrian Facilities:

a. Public sidewalks or multipurpose paths shall be required along all street frontages, per Village standards.

- This requirement is met. An existing sidewalk will be retained along the full length of Perimeter Road with two proposed connection points into the site (directly to Building 1 on the north side of the site and connecting to the internal sidewalk network on the south side of the site). Additionally, an interior sidewalk connection is provided the full length of Building 2 on the western side of the structure to provide interconnected pedestrian access within the site. To note, no sidewalk connection is provided between Perimeter Road and the north side of Building 2 because the driveway will be primarily utilized for vehicle ingress/egress and the main building entry for pedestrians will be on the southside of Building 2 where pedestrian connections are proposed to be provided.

b. Paved pedestrian connections are required between all street frontage pedestrian facilities and public doorways. Said connections shall be a minimum of 5 feet wide.

- This requirement is met. Two sidewalk connections are proposed into the site per item 22.a. above.

c. Where pedestrian connections cross vehicle circulation areas, a crosswalk clearly delineated by color and/or texture is required.

- This requirement is met. There are no situations where sidewalks cross over vehicle circulation areas.

23. Traffic Circulation:

a. Traffic circulation patterns shall be safe and understandable by vehicle operators, as determined by the Plan Commission.

- This requirement is met. Two access points will be provided into the site on the north and south end of the Perimeter Road frontage in similar locations as today's access points. In-building parking access will be provided to residential tenants via the northern driveway, while the larger surface parking lot will be accessible from the southern driveway. This will separate the volume of vehicle traffic to be distributed between two different driveways.

b. Traffic patterns which are determined as too complicated by the Plan Commission shall be prohibited. Complications may be identified due to steep grades, inadequate throat depths, offset intersections, too many intersections within a particular area, dangerous and conflicting traffic movements, movements compromised by limited visibility, or restricted turning radii for the types of vehicles likely present on the site.

- This requirement is met. While it would be ideal for vehicle access to be interconnected within the site, the existing topography and proposed building configurations do not provide the ability for that to take place. However, as noted above in 23.a., the proposed traffic circulation patterns work well within these constraints to provide safe and understandable vehicle traffic circulation.

c. No traffic circulation shall be permitted within 10 feet of a street or drive right-of-way or easement, nor within 5 feet of any other property line, except within the downtown area, or as approved as through the conditional use process.

- This requirement met. The SIP is consistent with the approved pavement setbacks in the GDP.

d. Within the CTH ID corridor between STH 78 and USH 151, refer to subparagraph 4.c. above regarding limitations on drives located adjacent to street rights-of-way.

- This requirement is not applicable, as the subject property is not located in the specified area.

24. Parking:

a. All parking areas located within required principal building setback areas shall be visually screened from streets by a continuous landscaped hedge, fence, wall or berm with a minimum height of 40 inches over the elevation of the adjacent portion of the parking lot at time of installation. Gaps in this hedge are permitted for pavement approved as part of the site design.

- This requirement is met. Surface parking is visually screened from the street by the building. Additionally, where surface parking is visible from the street on the south end of the site, plantings are proposed along the street frontage.

b. Within the downtown area, and particularly along Main Street and the commercially developed portions of intersecting streets, parking shall not be located along a street frontage unless an exception is granted through the conditional use process.

- This requirement is not applicable, as the subject property is not located in the specified area.

c. Within the CTH ID corridor between STH 78 and USH 151, refer to subparagraph 4.c. above regarding the prohibition of parking adjacent to street rights-of-way.

- This requirement is not applicable, as the subject property is not located in the specified area.

d. Bicycle parking shall be provided at a rate of one bicycle space for every 10 vehicle parking spaces up to a total of 20 bicycle spaces.

- This requirement is met. A total of 24 bicycle parking spaces are provided for residential tenants within the in-building parking area (19 in Building 1 and 5 in Building 2).

25. Building Foundation Landscaping:

a. A minimum 10-foot wide landscaping bed or planter shall be provided along at least 50% of each wall facing a street, drive or parking area, except within the downtown area.
    - This requirement is met.

b. This bed or planter shall be located adjacent to or within 10 feet of the building foundation.
    - This requirement is met.

c. This bed or planter shall be landscaped appropriately as determined by the Plan Commission.
    - This requirement is met.

26. Street Frontage Landscaping:

a. A minimum 10-foot wide landscaped area shall be provided adjacent to the frontage of all streets and drives, except within the downtown area.
    - This requirement is met.

b. This area shall be landscaped appropriately as determined by the Plan Commission. At minimum, one canopy-type street tree (maple, oak, hickory, ginkgo, honey locust or similar species) shall be required for every 50 feet of street or drive frontage, except within the downtown area. Said trees shall be a minimum 2-inch to 2.5-inch caliper.
    - This requirement is met.

27. Parking Lot Landscaping:

a. Parking lot landscaping shall comply with the requirements of §17.136
    - This requirement met.

b. Subsection 24.a., above, shall also apply along street and drive frontages.
    - This requirement is met.

c. Subsection 24.c., above, shall also apply along CTH ID.
    - This requirement is not applicable, as the subject property is not located in the specified area.

Village Planner's Recommendations:

I recommend the Plan Commission consider and approve the following requirements for the approval of the Specific Implementation Plan for 101 Perimeter Road:

1. A recommendation to the Village Board that the Specific Implementation Plan for 101 Perimeter Road be approved, subject to any and all requirements identified by the Plan Commission under Design Review.

2. A recommendation to the Village Board that the Site Plan packet be approved, subject to any and all requirements identified by the Plan Commission under Design Review.

3. Design Review as submitted to the Village, including waivers from the Design Review requirements approved by the Plan Commission, including:
    a. 2.a. for the removal of five existing mature trees along the Perimeter Road frontage to be replaced with new trees in a similar location, as depicted.
    b. 10.a. for the non-decorative service and garage doors on the façade of both buildings for the in-building parking entry, as depicted.
    c. 14.b. for the metal awnings to be permitted on each façade, as depicted.
4. Village staff review and approval of the following that meets all Design Review requirements. If any waivers are requested by the applicant from the Design Review requirements, the proposed plans must be reviewed and approved by the Plan Commission.
    a. 13.a. Require updated elevation plans with the proposed location of the meter boxes and proposed screening approach.
    b. 19.a. and b. Require detailed signage plans for all proposed signs.
5. Plan Commission Discussion and Action on either (related to requirement 9.a.ii.):
    a. Finding that the proposed use of black colored exterior materials is appropriate as an accent on Building 1 and the majority of the façade exterior on Building 2.
    b. Requiring resubmittal with an alternative color instead of black that is determined to be more consistent with the Design Review requirements.
6. Village Engineer review and approval of the proposed Stormwater Management and Grading Plans.
7. Any additional requirements identified by Village Staff, the Village Engineer, the Plan Commission, or the Village Board.

VILLAGE OF
MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator

AGENDA ITEM # 6.b

Cottages at Brookstone Hills Pocket Neighborhood

BACKGROUND

Brookstone South LLC is applying for a zoning map amendment to change the zoning for their parcel at the end of Brookview Trail from AG-1 Agriculture to R-3 Multi-family Residential to PD-Planned Development - General Development Plan (GDP) for the development of 21 single-family homes as a pocket neighborhood, the Cottages at Brookstone Hills. The Planned Development zoning is needed for this development because we do not yet have a zoning district for pocket neighborhood developments and this proposed development doesn't meet the standards of a standard multifamily development in our current code.

The application and submittal materials are included in your packet, along with an email from the applicant detailing some changes proposed from feedback at the concept review, including making the private street loop serving the development one-way to allow for on-street parking. The applicant also noted that they looked at options to connect the pocket neighborhood to a potential future development to the west but were unsuccessful in finding a feasible route due to the topography.

The pocket neighborhood is a newer concept in Mount Horeb, with the only other example being the Windflower Ridge on Lillehammer Lane, also developed by Encore Homes. Pocket neighborhoods have gained popularity throughout Dane County to help fill a gap in the missing middle of the housing market. With the smaller spacing between homes and using condo-style ownership where maintenance costs are shared by all the owners, it helps to spread out the costs of the land and maintenance costs over more owners, making it more affordable.

Planner Rohr's memo is also included in the packet with his review of the project and list of flexibilities needed for approval. As Rohr notes in his memo, if this project was proposed under the draft rewritten code with the pocket neighborhood zoning district, it would meet nearly all the requirements. Following the public hearing where two nearby residents asked a couple of questions regarding site ingress and egress, the Plan Commission is recommending approval of the GDP for the Cottages at

Brookstone Hills on a 6-1 vote, including the recommended flexibilities from Planner Rohr's memo.

RECOMMENDATION

ATTACHMENTS

1. Pocket Neighborhood Letter 300'
2. Brookstone Cottages GDP Changes
3. Brookstone Hills Pocket Neighborhood GDP 1.28.26
4. Encore PD App and Site Plan

VILLAGE OF MOUNT HOREB
PUBLIC HEARING
JANUARY 28, 2026

The Plan Commission of the Village of Mount Horeb will hold a public hearing on the above date at 7:00pm in the Board Room of the Municipal Building, 138 E Main Street, Mount Horeb, WI.

The purpose of the hearing is to consider an application from Brookstone South LLC, for the creation of Cottages at Brookstone Hills, a Pocket Neighborhood as phase 2 of the Brookstone Hills subdivision. The application includes a zoning change from A-1 Agriculture to R-3 Multi-Family Residential then to PD-1 Planning Development District to enable the proposed 21 single-family residential for sale buildings as a condo-style development on a common lot described as parcel 0606-141-4177-1

The Village Board, by its Plan Commission will hear all persons concerning all matters and/or objections written or oral at that time.

PUBLISH: Mount Horeb Mail January 8, 2026
Mount Horeb Mail January 15, 2026



PROPERTY OWNERS: You are receiving this notice as you own property that is within 300 feet of the proposed request. Please contact Village Administrator Nic Owen at 608 437-6884 ext 2109 or email nic.owen@mounthorebwi.info with any questions.

From: Chad Wuebben
To: Nic Owen
Subject: Plan Commission submission
Date: Wednesday, January 21, 2026 8:34:43 AM
Attachments: 31026T-Elevations.pdf
6705BL-Elevations.pdf
31026T-Elevations[38].pdf

Hello Nic,

During the last plan commission meeting the commissioners requested I provide plans for their review. I have attached 3 of the elevations I plan to use. I am in the process of developing some additional variations of these elevations that I will include in the SIP applications along with colors and finishes.

We have also reviewed the question of parking and have decided that it would be very appropriate to make this circle a one-way drive with parking allowed on one side. We believe this solution will adequately address the issue of guest parking.

We also looked at the idea of adding a connection of some kind to a potential future development to the west and have determined that there is no real opportunity to do so. It is our opinion that development of the land immediately to the west is impractical because of slopes and proximity to the highway.

Please pass this along to the plan commission.

Regards,

Chad Wuebben
Get Outlook for Mac

VANDEWALLE & ASSOCIATES INC.

To: Village of Mount Horeb Plan Commission

From: Village Planner: Ben Rohr, AICP

Date: January 28, 2026

Re: Proposed Zoning Map Amendment from A-1 Agricultural Zoning to R-3 Multi-Family Residential Zoning to a Planned Development - General Development Plan (GDP) for 21 Single-Family Homes at the Southern End of Brookview Trail for Brookstone South, LLC.

Introduction

Project Overview

Brookstone South, LLC (Chad Wuebben of Encore Homes) is proposing R-3 Multi-Family Residential and PD Planned Development zoning to accommodate 21 single-family units on the same parcel under a condominium form of ownership. The 204,810 square foot (4.7-acre) parcel was created at the southern end of Brookview Trail when the subdivision plat was approved in February 2025 (Brookstone Hills). At that time, the new parcel was zoned A-1 Agricultural because it wasn't yet known what the future development of the property was intended to be. However, as part of the subdivision plat, it was noted that there would be a future proposed development on the subject property.

The proposed project will require a Zoning Map Amendment from A-1 to R-3, in addition to an amendment from R-3 to PD. This will establish base zoning standards (R-3) that best fit the proposed project and enable the requested flexibilities (PD) as noted within this report.

The property is located at the southern end of Brookview Trail and is bounded by platted single-family homes to the north, farmland to the west in the Town of Blue Mounds, an intermittent stream corridor and vacant land to the east in the Village of Mount Horeb, and subdivision's stormwater pond and USH 151 to the south. Village utilities are currently being extended to serve this property as the subdivision develops and the regional stormwater management basin is also under construction to the south of the subject property. As part of the subdivision plat, a public access easement was established through the subject property from the southern end of Brookview Trail to the stormwater management basin. This enables Village access to the stormwater facility long-term and mirrors the alignment of Brookview Trail and the proposed new private drive to serve the planned development. The easement and long-term access will be retained as part of the proposed project.

The proposed project includes 21 separate single-family buildings with individual entries, garages, and access. Each unit (+/- 2,190 square feet) includes a two-car garage and front entry that faces the private drive that's planned to loop around in an oval shape within the property and provide access to the public right-of-way (Brookview Trail). Additionally, the developer is planning to create and establish a condominium plat for the property which will enable each unit to be sold separately and a new condominium association will be formed to fund and perform maintenance within the common areas.

This will ensure architectural and aesthetic consistency across the development long-term, in addition to maintenance of the shared open space and private streets/sidewalks.

This type of development is unique to Mount Horeb and is often referred to as a Pocket Neighborhood. The only other development that reflects this format is Windflower Ridge located on the far southeast side of Mount Horeb, also developed by Encore Homes. A Pocket Neighborhood typically includes individually owned buildings grouped together on the same parcel around a shared open space. Because each unit will be only 11 feet apart and there will be no privately owned spaces around each unit, the shared open space acts as each unit's front, side, or rear yard that's typically associated with a traditional single-family project. The configuration offers benefits such as greater densities, reduced infrastructure costs, and lower price points.

The site features slopping topography and an adjacent intermittent stream. This presents challenges related to building configuration and densities. The result is the need to group the majority of the proposed units around the private drive, rather than directly fronting onto the shared open space. It will also result in the need for retaining walls, exposed basements, and units on the north side of the property being higher in elevation than those toward the southern end of the property. Finally, the natural features in this area also limit opportunities for future development connections to the east (steep slopes) and west (stream corridor).

The project has conceptually been brought before the Plan Commission in December for review and comment. The requested General Development Plan (GDP), if approved by the Village, would establish a new zoning district on the subject property. It is anticipated that the project will pursue approval of the Specific Implementation Plan (SIP) for design and operational details in February.

Zoning

The site is currently zoned A-1 Agricultural and is proposed to be rezoned to R-3 Multi-Family Residential. Through the proposed GDP rezoning, the property will be establishing a customized GDP and use the R-3 zoning district as the comparable district under the Planned Development.

The property's current zoning district (A-1) allows for general farming, cultivation, and the raising of livestock type uses. It also has bulk dimensional standards oriented toward large parcels used for agricultural purposes. The site is shown as Planned Neighborhood on the Village's 2022 Comprehensive Plan Future Land Use Map because it was envisioned that the area would develop into an extension of the neighborhood to the north.

The proposed project's land uses, setbacks, and lot area (described further below) do not meet the standards of the A-1 zoning district. The R-3 zoning district is much better suited to accomplish the Village's goals in this area and the proposed project. The Village Zoning Ordinance requires any new parcel zoned R-3 to meet the minimum dimensional standards as noted in the table below. The parcel meets the minimum required dimensions.

Section 17.39 lists the permitted and conditional principal and accessory uses of the R-3 Multi-Family Residential zoning district. Currently, the district permits any use in the R-2 zoning district, except for two-family dwellings. Within the R-2 zoning district, any use permitted with the R-1 zoning district is also permitted. Thus, single-family dwellings (permitted by-right in the R-1 zoning district) are also permitted by-right in the R-3 zoning district. All other existing permitted and conditional principal, accessory, and temporary land uses in the R-3 district would remain the same.

Currently, the following standards apply to single-family detached dwellings (Section 17.20(1)(a)1.):

- May not be occupied by more than one family = met
- May not have a shared roof, wall, or floor in common with any other dwelling unit = met
- May be located on an individual lot or within a group development = met
- Must conform to the Building Code = met
- The dwelling unit may not be split into two or more residences = met
- Minimum parking requirements per Section 17.132 = met

Additionally, Passive Outdoor Public Recreation (shared open space) uses are permitted by-right within the R-3 zoning district. However, as defined within Section 17.20(3)(a), this only includes passive uses (open grassed areas, picnic areas/shelters, gardens, etc.) on public property. The GDP will have to enable this proposed land use to be on private property in conjunction with the single-family dwellings to accommodate the proposed development.

Currently, the following standards apply to Passive Outdoor Public Recreation land uses (Section 17.20(3)(a)):

- Minimum parking requirements of one space per four expected patrons at maximum capacity for any use requiring over five spaces = met (users will be private residents of the development that are all served by the on-site parking provided for the single-family dwelling units).

Section 17.39 provides the bulk dimensions for the R-3 district:

Lot and Density Requirements		
	Village Standards	**Proposed**
Min. Lot Area*	10,000 sf or 67,200*	204,810 sf
Min. Lot Width	75 feet	671 feet
Min. Street Frontage	50 feet	66 feet
Max. Building Height	35 feet	Unknown
Max. Impervious Surface Ratio	40%	40%
Minimum Building Setbacks		
	Village Standards	**Proposed**
Minimum Front Setback	30 feet	15 feet
Minimum Side Setback	15 feet	34 feet
Minimum Rear Setback	25 feet	2 feet
Minimum Pavement Setback	Side/Rear: 5 feet Street: 10 feet	Side/Rear: 0 feet Street: 0 feet
Maximum Accessory Structure Height	15 feet	TBD
Minimum Accessory Structure Side Setback	5 feet	TBD
Minimum Accessory Structure Rear Setback	5 feet	TBD

*Chart 1 Footnote 5 indicates that the minimum area for single-family and two-family dwellings is 10,000 sf. Chart 1 Footnote 5 indicates that the minimum area for 3-bedroom multi-family units is 3,200 square feet of lot area per unit. 21 total 3-bedroom units equates to a minimum lot area of 67,200 sf required.

Section 17.132 provides the minimum required off-street parking spaces:

Parking Requirements*			
	Village Standards	**Village Standards Based on Proposed Units**	**Proposed On-Site Parking Provided***
Three-Bedroom+ Units	2.0 stalls/unit	21 units at 2.0 stalls/unit = 42 spaces	84 spaces
Total		42 spaces	84 spaces

*Each unit will have a two-car, attached garage in addition to space for two vehicles to be parked on-site within the driveway. Both garage and driveway parking spaces count towards meeting the on-site parking requirements. Additionally, the applicant has noted that the proposed private road (23 feet wide) will be designed to be one-way traffic. This will enable a one-way travel lane (12 feet wide) and room for on-street parking on one side of the road (11 feet wide).

Finally, the Village's Zoning Ordinance requires a maximum of one principal structure per lot. The proposed project includes 21 principal structures on a single lot. The Group Development standards (Section 17.63) establish a process for enabling more than one principal structure per lot. This process requires a Conditional Use Permit and Design Review to ensure the development is:

- Consistent with the recommendations, and forwards the objectives, of adopted planning documents.
- Complementary to the design and layout of nearby buildings and developments.
- Enhances, rather than detracts from, the desired Village character of Mount Horeb.
- Can be further subdivided in the future into individual lots for each structure in compliance with the minimum standards of the zoning district.
- Inclusive of high-quality building materials and includes appropriate colors, screening, roadway connections, parking, bicycle and pedestrian facilities, outdoor activities, landscaping, lighting, signage, and neighborhood impacts.

If the proposed project were not seeking a Planned Development for other identified flexibilities, the Group Development process would be applicable in this instance. However, that is not the case. Instead, a flexibility will be required from Section 17.75 to allow more than one principal residential building to be located on a lot. Many of the applicable Group Development standards will still be required for the proposed project and are addressed within this report and within the future SIP report.

If flexibility is granted in the General Development Plan (zoning) step, a Planned Development can exceed the minimums/maximums as indicated above and incorporate additional permitted land uses.

Comprehensive Plan

The Village's Comprehensive Plan designates the site in the Planned Neighborhood category, which is defined as, "a carefully planned mix of single-family residential development combined with two-family residential, multi-family residential, small-scale government and institutional (e.g. churches, schools), parks, conservancy, and neighborhood business land uses that are consistent with the residential character of the area. This category is also intended to accommodate Traditional Neighborhood Design (TND) forms of development."

Relevant goals, objectives, and policies from the plan that align with the proposed development include the following:

- Encourage compact growth, provide efficient services, and minimize farmland conversion by preventing Planned Neighborhoods outside the Village limits and establishing Planned Neighborhood areas following annexation.
- Encourage traditional neighborhood design principles for new neighborhood development.
    - Community gathering places, housing variety, blending of different land uses together, enable walkability, promote street connectivity, calm traffic, create attractive and active streetscapes, and incorporate natural features.
- Plan for interconnected road, trail, and open space networks in new residential areas and between individual subdivisions.
- Provide a variety of housing types, densities, arrangements, and costs to accommodate the needs, desires, and life cycles of existing and future residents.
- Carefully control neighborhood development to provide a range of housing types, densities, and costs, but which also maintain the character of the community.
- Design neighborhoods that are oriented towards pedestrians and well-served by sidewalks, bicycle routes, and other non-motorized transportation facilities.

The Housing and Neighborhood Chapter goes on to contain design standards for multi-family projects, which includes:

- Incorporate architectural design that fits the context of the surrounding neighborhood.
- Provide generous landscaping.
- Whenever possible, develop contiguous yards to encourage use by residents and guests.
- Incorporate balconies, porches, varied building and façade setbacks, varied roof design, and bay windows to avoid monotonous facades.

Project Ownership

The land is currently owned by the applicant and proposed developer, Brookstone South, LLC (Chad Wuebben of Encore Homes).

Background Information about Planned Developments

A Planned Development is a unique zoning district which is specific to a particular project or area. In addition to enabling flexibilities from zoning requirements, Planned Developments also enable the imposition of higher standards for design and operation, and/or requirements related to timing. With the resulting combination of customized flexibility and control, every Planned Development is reviewed on its relation to the subject property, nearby properties, and the community as a whole.

Every Planned Development has three steps:

- Conceptual discussion to identify project concepts and concerns.
- General Development Plan (GDP) to establish the unique zoning district.
- Specific Implementation Plan (SIP) to approve design and operation details.

Planned Developments also allow for the developer and municipality to establish the zoning for multi-phased projects through the GDP step, while allowing expensive engineering and architecture plans to be submitted later as a sequence of SIPs, as the need for each building or phase evolves.

To further protect the public interest, Mount Horeb's zoning requirements for Planned Developments require the applicant to explicitly list items of requested zoning flexibility from the existing district regulations, in addition to clearly depicting them on submittal drawings.

If the GDP is approved, the approval of a Specific Implementation Plan (SIP) will be required at a subsequent date. The SIP submittal requires all of the details of development, including specific exterior materials and colors, floor plans, detailed exterior lighting plans, and detailed landscaping plans.

Formal General Development Plan (GDP) Review

Requested Flexibility from Zoning Ordinance Requirements:
The proposed GDP identifies the following items of flexibility from the standards of the R-3 Multi-Family Residential zoning district:

1. The **Minimum Front and Street Setback** established for the R-3 district in Section 17.39 of the Zoning Ordinance will not be met by this proposal. Specifically, the minimum front and street setback is 30 feet. The proposed project has a 15-foot setback on the northern property line.

2. The **Minimum Rear Setback** established for the R-3 district in Section 17.39 of the Zoning Ordinance will not be met by this proposal. Specifically, the minimum rear setback is 25 feet. The proposed project has a 2-foot setback from the southern property line.

3. The **Maximum Impervious Surface Area Ratio** established for the R-3 district in Section 17.39 of the Zoning Ordinance will not be met by this proposal. Specifically, the maximum impervious surface area ratio is 40%. The proposed project has an impervious surface area ratio of 40%, but will have increased impervious surface coverage when the shared open space is developed (ex. fire pit, small play area/court, gazebo, etc.). To enable this additional impervious surface coverage, the project will need an impervious surface area ratio up to 45% (an additional 10,000 sf of impervious surface from what's shown).

4. The **Minimum Pavement Setbacks** established for the R-3 district in Section 17.39 of the Zoning Ordinance will not be met by this proposal. Specifically, the minimum pavement setbacks required are 5 feet from the rear and side property lines and 10 from the street. The proposed project has a 0-foot pavement setback along the northern property line associated with the proposed sidewalk along the northern property line.

5. The **Maximum Number of Residential Buildings Per Lot** established in Section 17.75 of the Zoning Ordinance will not be met by this proposal. Specifically, there are 21 total principal residential buildings proposed on a single lot.

6. The **Passive Outdoor Recreation Space Land Use** established in Section 17.20(3)(a) of the Zoning Ordinance will not be met by this proposal. Specifically, the land use is defined as passive recreational uses on public property. The proposed project includes passive recreational uses on private property.

Analysis of Requested Flexibilities
The project's proposed flexibilities are needed because of the existing Zoning Ordinance's stringent bulk dimensional requirements, limit on the number of principal buildings per lot, and restrictive passive recreational land use definition.

As part of the ongoing Zoning Ordinance rewrite process, many of these issues will be resolved. Additionally, this unique form of residential development is specifically enabled via a draft new Pocket Neighborhood zoning district and land use. As discussed during the December concept meeting, the proposed project would not fully conform with the new requirements in the Draft Zoning Ordinance. Most notably, the rear setback proposed would not conform to the draft new standards.

In my opinion, this project is attempting to work within existing constraints (sloping topography and adjacent regional stormwater management facility and intermittent stream corridor) to deliver a type of project that fits within its surroundings and furthers the Village's goals of providing new owner-occupied housing units.

Documented Housing Shortage

In 2025, the Village completed a Housing Assessment to better understand the current market considering changes that have occurred since 2021. Some of the key takeaways from the assessment include:

- One-unit attached and one-unit detached housing makes up 85% of the Village's housing stock
- The current overall vacancy rate in Mount Horeb is 3.1%
- There is significant demand for new housing units in Mount Horeb (between 435-935 new units)
- Two of the largest age cohorts in the Village are residents age 15-24 and 55-64
- Both employment and labor have grown by approximately 35,000 over the last ten years in Dane County

In 2024, Dane County completed the Regional Housing Strategy. This included an analysis of the existing and projected housing situation, but also identified strategies, policies, and actions that could be taken to combat the existing housing situation. Below are several key data takeaways from that report.

- Dane County added 42,000 new households between 2010-2020, making it the fastest growing county in the state. However, only 34,000 new housing units were constructed during this time period.
- The number of jobs in Dane County grew by 14% between 2010-2021, adding over 38,000 new employment opportunities, which is more than double the rate experienced across the state during that time.
- The fastest growing age groups within the Dane County between 2010-2020 included young adults (age 15-24) at 15% and retirees (age 55-74) at 31%.
- Homeownership rates across Dane County have decreased from 65% in 2010 to 59% in 2021.
- Between 2020-2040, Dane County is projected to add over 89,000 net new households or a 38% increase. That's almost 4,500 new households per year.
- Between 2020-2040, Mount Horeb is projected to add 1,831 new households and need 103 new housing units per year to keep up with projected demand.
- The 2024 Dane County Housing Strategy sets a goal of constructing 7,000 new housing units each year over the next 20 years to address forecasted household growth.

While the Village has approved several new housing projects within the last year, housing construction is not keeping pace with demand. This is a trend experienced across Dane County. The Regional Data Group recently released population projections for Dane County. The Capital Area Regional Planning Commission worked in partnership with the Madison Metropolitan Planning Organization, Dane County, City of Madison, and University of Wisconsin to produce the new projections (Regional Data Group). The analysis found that Dane County's current population (611,419) is projected to increase to 887,000

over the next 25 years (2050) or an average of 11,000 new residents per year. Specifically related to Mount Horeb, the projections indicate a potential of 1,034 new residents by 2030, 2,424 new residents by 2040, and 3,994 new residents by 2050. The Village of Mount Horeb's 2025 population is 8,006 according to the Wisconsin Department of Administration.

For further context, the Village's 2022 Comprehensive Plan projected an increase of 1,765 new residents between 2020-2040, which is about 660 fewer than what these new projections predict.

The documented need for more housing and greater housing diversity in the Village creates the need for land use and dimensional flexibilities as proposed.

Additional Review

The following are observations of the proposed project, many of which will be further reviewed through the SIP stage.

1. **Building Quality:** The proposed GDP provides several examples of high-quality buildings of sound design and materials that enhance the aesthetic look of the area and site. They are consistent with the ongoing development of the surrounding neighborhood.

2. **Project Layout:** The project layout works well within the confines of the existing features surrounding it. Access to all units will come from a one-way private road that will loop through the property. This will also provide direct access to the centralized shared open space area for residents and visitors to enjoy. The private road is planned to connect to existing public right-of-way and aligns with the existing public access easement to the stormwater facility to the south. Sidewalk connections are provided to the existing public sidewalks and loop around the shared open space to enable pedestrian connectivity within the site. The project does not provide additional connectivity to the east, west, or south because of existing constraints including topography, a stream corridor, and USH 151 and a stormwater management facility.

3. **Project Scale/Number of Units:** The proposed GDP represents a density of 21 dwelling units on 4.7 acres – or about 4.5 dwelling units per acre. This is denser than the platted single-family lots to the north, but is in keeping with the Traditional Neighborhood Design principles of the Comprehensive Plan.

4. **Architecture:** The proposed GDP as depicted on the elevations has a pitched roof which fits well in the context of the developing homes in the area. Overall, variation in materials, heights, projections from the façade, glazing, and roof pitch provide articulation along each façade.

5. **Site Design:** The proposed GDP as depicted on the site plan provides access to each unit from the private road and includes parking within the garages, driveways, and along the private road. Sidewalk and road connectivity are provided within the development to each unit and to the adjacent public right-of-way to the north. The applicant has worked within the confines of the existing site topography to integrate basement walk-outs for many of the units and access to the shared common open spaces.

6. **Landscaping:** The proposed GDP includes a preliminary landscaping plan that looks to meet the requirements of the Zoning Ordinance, but the specific plan will be submitted and reviewed as part of the SIP process.

7. **Lighting:** The proposed GDP does not currently include a lighting plan, but the specific plan for the site will be submitted and reviewed as part of the SIP process.

8. **Signage:** The proposed GDP does not include any exterior signage. The specific signage plan for the site will be submitted and reviewed as part of the SIP process, if any is desired.

9. **Requested Zoning Flexibility: I support granting flexibility for bulk dimensional standard requirements, number of principal buildings per lot, and land uses because of the following. First, the Zoning Ordinance standards are clearly outdated and do not reflect the Village's goals, objectives, and priorities as outlined within the 2022 Comprehensive Plan. Second, the project helps meet the housing shortage experienced across Mount Horeb and increases the diversity of the Village's housing stock. Finally, the existing site configuration and surrounding environment are leveraged to improve the development through walk-out lower levels, vehicle and pedestrian connections, and access to the shared centralized open space. Overall, the proposed development provides a unique and high-quality owner-occupied residential development within Mount Horeb.**

Village Planner's Recommendations Regarding the GDP

If acceptable to the Plan Commission, the Village Planner recommends the Plan Commission make, consider, and adopt a motion which makes a finding that the criteria for GDP submittals and approval have been met, and that also recommends approval of the proposed GDP Zoning Map Amendment by the Village Board, inclusive of full and continuous compliance with the submittal documents, the list of flexibilities and conditions provided in the submittal, and with any conditions identified by Village Staff and the Plan Commission, including those below:

1. Recommend approval of the requested Zoning Map Amendment to the Village Board for parcel number 0606-141-4177-1 from A-1 Agricultural to R-3 Multi-Family.

2. Recommend approval of the requested Zoning Map Amendment to the Village Board for parcel number 0606-141-4177-1 from R-3 Multi-Family to PD Planned Development with the following flexibilities as listed below:

    a. The proposed flexibility to allow a minimum front and street setback less than 30 feet should be granted to 15 feet on the northern property line as proposed in the GDP submittal.

    b. The proposed flexibility to allow a minimum rear setback less than 25 feet should be granted to 2 feet on the southern property line as proposed in the GDP submittal.

    c. The proposed flexibility to allow the maximum impervious surface ratio to be greater than 40% should be granted to 45% as proposed in the GDP submittal.

    d. The proposed flexibility to allow minimum pavement setbacks less than 5 feet from the side and rear property lines and 10 feet from the street adjacent property lines should be granted to 0 feet along the northern property line as proposed in the GDP submittal.

    e. The proposed flexibility to allow the maximum number of residential buildings per lot to be greater than one should be granted up to 21 principal residential buildings on the lot as proposed in the GDP submittal.

    f. The proposed flexibility to allow privately owned land to be considered as part of the Passive Outdoor Recreation Space land use should be granted on the lot as proposed in the GDP submittal.

3. The Village's design review standards be applied through the SIP phase of project review.

4. The applicant shall establish a condominium plat for the property and establish a condominium association for the property to be reviewed and approved by staff.

5. Any additional requirements identified by Village Staff, the Village Engineer, the Plan Commission, or the Village Board.

VILLAGE OF MOUNT HOREB
Zoning Administrator 608-437-9409
138 East Main Street
Mount Horeb, WI 53572

PLAN COMMISSION APPLICATION

PROJECT NAME: Cottages at Brookstone Hills

Project Address Brookview Trail **Parcel Number:** 0606-141-4177-1
Access Dane Link

Zoning Map

Current Zoning A-1 Agriculture *(select **zoning layer** in map)* **Future Land Use Zoning:** Planned Development Dist *(select **future land use layer** in map)*

APPLICANT: Brookstone South LLC	
ADDRESS: 6840 Schneider Road Middleton WI 53562	
PHONE: 608-444-7752	EMAIL: cwuebben@encorehomesinc.com

OWNER: SAME AS APPLICANT	
ADDRESS:	
PHONE:	EMAIL:

PROJECT DESCRIPTION: A cottage style neighborhood within a neighborhood, focusing on attainability. Shared green space and shared maintenance for lawn mowing and snow removal in condominium deeded ownership.

OWNER/APPLICANT SIGNATURE:  **DATE:** 11/10/25

FEES & DEPOSITS: (CHECK ALL THAT APPLY)

	Application		Fee	Public Hearing-
☐	Certificate of Appropriateness (for Central Business Zoning)		No Fee	
☐	Certified Survey Map (CSM)	*scroll to Section 18.61 in schedule*	Schedule	
☐	Certified Survey Map Extraterritorial	*scroll to Section 18.61 in schedule*	Schedule	
☐	Comprehensive Plan Amendment		$150.00	Class One
☐	Conditional Use Permit (changes in USE of property)		$150.00	Class Two
☐	Conditional Use Permit (planned development district)		$200.00	Class Two
☐	Design Review		$100.00	
☒	General Development Plan (GDP)		$200.00	
☐	Specific Improvement Plan (SIP)		$300.00	
☐	Zoning Amendment (changes in zoning)		$150.00	Class Two
☒	Zoning Amendment (planned development district)		$200.00	Class Two

Developer Deposit:

An escrow deposit is required in accordance with the Development Application Agreement.

Total Fee Paid:

_____

Date: _____

Fee Waived By:

_____

The Village of Mount Horeb Plan Commission meets the fourth Wednesday of the month, unless

noted on calendar. A schedule of deadlines can be found on the Zoning page of the Village website: Plan Commission Calendar. **Consultation with the Village Administrator is highly encouraged to discuss procedure and necessary forms prior to any submittal.**

Note: applications requiring a public hearing will be scheduled for a hearing according to the publication deadline, with action considered at the scheduled Plan Commission meeting following the public hearing. Applicants are encouraged to contact the Village Administrator for a pre-application meeting to review the project and submittal requirements prior to submitting an official application.

Class One = Published in newspaper for one week / Class Two = Published in newspaper for two weeks

Application submittals should include:

1) Fully executed **Plan Commission Application**
2) Fully executed **Development Application Agreement** (attached)
    - A development agreement is a voluntary contract between a local jurisdiction and a person who owns or controls property withing the jurisdiction, detailing the obligations of both parties and specifying the standards and conditions that will govern development.
3) Full payment for all associated fees
4) Written narrative of the proposed project
5) One electronic copy of **full submittal**
    - emailed to (2 parties) Nic.Owen@mounthorebwi.info and mhbuildinginspector@mounthorebwi.info,
    - or provided to our offices on a USB device or submitted via downloaded file

All **submittals** must contain the following to be considered complete:

1) Written narrative must include:
    a. Owner and/or developer names and addresses
    b. Where applicable; architect and/or engineer names and addresses
    c. Description of proposed uses
    d. Calculation indicating total site size, building floor area, number of parking stalls, amount of impervious surface, and amount of non-impervious green space
2) A scaled site plan which must include:
    a. Name of project and date of plan preparation
    b. Scale of drawing and north arrow
    c. Property boundaries
    d. Where applicable; both the one hundred (100) year recurrence interval floodplain and the floodway delineations
    e. Where applicable; wetlands as delineated in the WDNR Wetland Inventory and 75' setback line from such wetlands
    f. Existing and proposed easements on the subject property
    g. Adjoining public street rights-of-way, street pavements, and sidewalk locations; existing and proposed driveways and curb cuts; and parking and loading areas
    h. Location of existing and proposed building footprints with building and yard setback lines indicated
    i. Location and size of any existing or proposed signs and fencing
    j. Location and type of all outdoor lighting proposed to illuminate the site; including a photometrics plan of the site (See Village Code Chapter 17.14 (4))
3) Building Plans which must include:
    a. Elevation drawing of each new or remodeled building façade, indicating height,

materials and building dimensions
   b. Colored renderings of all façades of the principal building showing the proposed colors
   c. Building materials samples (upon request)

4) Grading and Stormwater Management Plan, including:
   a. Existing and proposed topography shown at a contour interval of not less than two (2) feet at National Geodetic Vertical Datum
   b. Location and dimension of Stormwater retention or detention basins and/or stormwater conveyances
5) Landscape Plan that meets all landscaping standards (See Village Code Chapter 17.14(25-27))
6) Parking Calculations
7) Escrow fees as outlined in the Development Application Agreement
8) Erosion Control and Stormwater Management Application and fees. *No person may begin a land disturbing construction activity or land developing activity subject to this division until the person has paid the Erosion Control Review and Inspection fee.
9) Erosion Control Plan
10) Signage Plan (Village Code Chapter 17.171)
11) Design Review guideline (See Village Code Chapter 17.14)
12) Refer to Mount Horeb Village Code Chapter 17-Zoning Code for all supporting details of required documentation.

DEVELOPMENT APPLICATION AGREEMENT

This Development Application Agreement (the "Agreement") is made and entered into this ___ day of _____, _____, by and between the Village of Mount Horeb, a Wisconsin municipal corporation (the "Village"), and _____ (the "Applicant").

RECITALS

A. The Applicant plans to file, or has filed, an application for approval by the Village of one or more of the following activities within the Village's jurisdiction: site plan / conditional use permit / rezone / variance / other development (hereinafter referred to as the "Development").

B. The Village desires to review and take action on the Development in a timely manner in accordance with all applicable federal, state and local laws and regulations, and without unreasonable expense to Village taxpayers.

C. The Applicant agrees and acknowledges that decisions and approvals regarding the Development are legislative determinations to be made in the Village's discretion and that the Applicant's compliance with this Agreement does not, in any way, entitle the Applicant to approval of the Development.

D. The process of reviewing the plans and documents associated with the Development will cause the Village to incur direct and indirect expenses including, but not limited to, staff time and fees and expenses incurred by the Village for outside consultant services related to review of the Development (*e.g.*, engineers, attorneys, accountants, planners, and other professionals).

NOW, THEREFORE, for and in consideration of the mutual covenants contained herein, and for good and valuable consideration, the Village and the Applicant agree as follows:

1. *Recitals*. The representations and recitations set forth in the foregoing paragraphs are material to this Agreement and are hereby incorporated into and made a part of this Agreement as though they were fully set forth in this paragraph.

2. *Applicant to Reimburse Village Review Costs*. The Applicant shall reimburse the Village for all direct and indirect costs and expenses related to the Village's review of the Development. The direct and indirect costs and expenses include, but are not limited to, staff time and fees and expenses incurred by the Village for outside consultant services (*e.g.*, engineers, attorneys, accountants, planners, and other professionals). For purposes of this Agreement, the direct and indirect costs and expenses shall be referred to as "Review Costs." Village staff time shall be charged at current rates.

3. *Deposit Required to Fund Reimbursement Account*.

a. To ensure that funds are readily available to the Village for reimbursement of the Review Costs as provided in paragraph 2 above, the Applicant shall deposit with the Village an amount determined by the Village Zoning Administrator to be used to pay the Review Costs (the "Deposit"). The Village Zoning Administrator shall use the following table as a guide to determine the amount of the Deposit:

(1) Small additions (<2,500 sf) shall require a $1,500 Deposit.
(2) Small-sized projects (<5,000 sf) shall require a $3,500 Deposit.
(3) Medium-sized projects (<10,000 sf) shall require a $5,500 Deposit.
(4) Large-sized projects (>10,000 sf) shall require a $10,000 Deposit.
(5) In addition to the amounts identified in (1) through (4), any Development that requires a development agreement or tax incremental financing assistance from the Village shall require an additional $5,000 to $10,000 Deposit.

All Deposit amounts shall be determined by the Village Zoning Administrator in his/her sole discretion and are not subject to challenge by the Applicant. Generally small additions will be less than 2,500 square feet, small projects less than 5,000 square feet, medium projects less than 10,000 square feet and large projects are over 10,000 square feet.

b. The Applicant is responsible for payment of all Review Costs regardless of whether the amount exceeds the amount initially deposited with the Village. The Village reserves the right to require the Applicant to deposit additional amounts if the Village Zoning Administrator determines that additional amounts are necessary because of the size of the Development or because the Reimbursement Account (defined below) has been depleted.

c. The Deposit may be provided in the form of cash, a certified check, cashier's check, personal check, or some other form as approved by the Village.

d. The required Deposit must be made by the Applicant upon execution of this Agreement.

e. The Applicant agrees and acknowledges that the Village will not process the application(s) associated with the Development and that the Village may suspend or otherwise stop activities associated with the Development if the Applicant fails to comply with this Agreement.

f. The Village shall place and maintain the Deposit in a segregated, non-interest-bearing account to be used solely for the purpose of reimbursing the Review Costs in accordance with paragraph 4 below (the "Reimbursement Account").

4. *Village Withdrawals from the Reimbursement Account.*

a. After complying with the notification requirements of paragraph 4.b. below, the Village is entitled to make withdrawals from the Reimbursement Account to pay Review Costs in accordance with paragraph 2 above.

b. Not less than 5 days prior to making any withdrawal from the Reimbursement Account, the Village shall provide the Applicant with an itemized invoice for Review Costs incurred, together with a written notice of the Village's intent to withdraw such funds from the Reimbursement Account.

c. Withdrawals from the Reimbursement Account may be made as often as necessary to reimburse the Review Costs. In the event that the balance of Applicant's Reimbursement Account reaches $1,000 or less, the Village shall have the discretion to continue withdrawing funds from the Reimbursement Account; to invoice the Applicant directly for payment; or to require the Applicant to pay additional monies to the Village, which monies shall be deposited in the Reimbursement Account. Payments for directly invoiced bills shall be due 30 days from the date the invoice is mailed to the Applicant.

d. Any amounts remaining in the Reimbursement Account after the Village as taken final action on the Development and all Review Costs have been paid shall be promptly refunded to the Applicant.

5. *Authority/Binding Effect*. The parties agree that the undersigned signatories to this Agreement have full power and authority to act on behalf of the Village and the Applicant, and that all necessary and enabling resolutions have been enacted. This Agreement shall bind the heirs, successors and assigns of the Applicant and the Village.

6. *Notification of Parties*.

Any notices to be provided under this Agreement may be made by delivery in person, by First Class mail, or by electronic mail (request a read receipt required) as provided below:

To Village: Village of Mount Horeb
Village Administrator
138 East Main Street
Mount Horeb, WI 53572
Email: Nic.Owen@mounthorebwi.info

To Applicant: _____

_____

_____

_____

Email: _____

7. *Severability*. If any provision of this Agreement is deemed invalid, then the invalidity of said provision shall not affect the validity of any other provision hereof.

8. *Amendment, Withdrawal, or Release*. This Agreement may be withdrawn, amended or released only by a written document duly executed by both parties.

9. *Effective Date*. This Agreement shall be effective commencing on the date indicated in the first paragraph above.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by the duly authorized individuals and officers below.

VILLAGE OF MOUNT HOREB

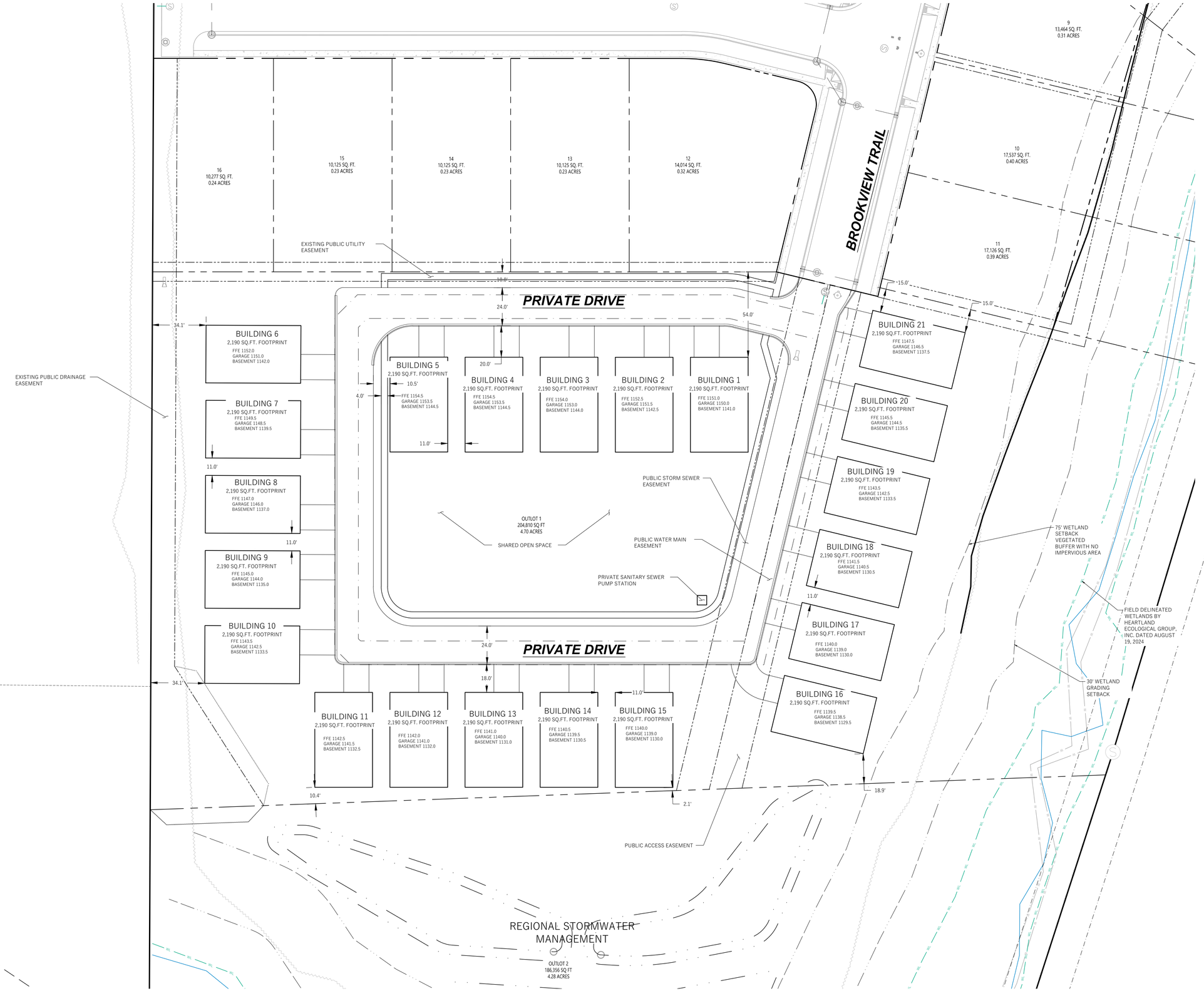
By: _____
Nicholas W Owen
Administrator

APPLICANT

By: _____

Print name: _____

Title: _____



DIGGERS HOTLINE
Toll Free (800) 242-8511 -or- 811
Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

WYSER ENGINEERING

BROOKSTONE HILLS SUBDIVISION
VILLAGE OF MOUNT HOREB, DANE COUNTY, WI

XXX

BROOKVIEW TRAIL
MOUNT HOREB, WI 53572

Sheet Title: SITE PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 15' 30' 45'
Wyser Number	24-1229
Set Type	REVIEW
Date Issued	10/31/2025
Sheet Number	C100

File: W:\2024\24-1229_Grundahl - Fink Parcel, Mt Horeb\dwg\24-1229_Overall Plans_Encore Blasting Mass Grading_PDD Lot Extension.dwg Layout: Site Plan User: dschneider Plotted: Oct 31, 2025 - 1:47pm



NORTH

WYSER ENGINEERING

BROOKSTONE HILLS SUBDIVISION

VILLAGE OF MOUNT HOREB, DANE COUNTY, WI

BROOKVIEW TRAIL
MOUNT HOREB, WI 53572

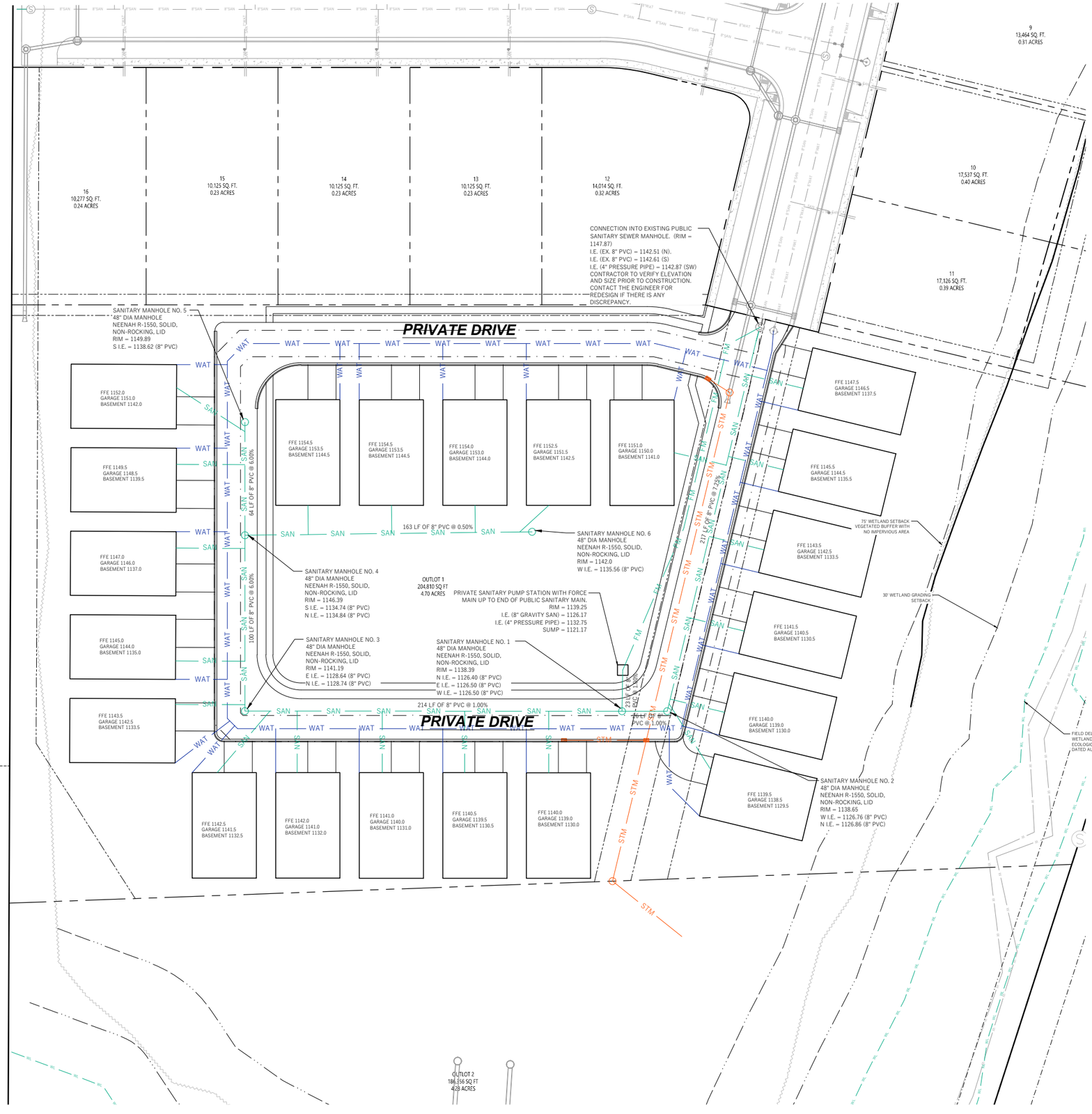
Sheet Title:
GRADING PLAN

Revisions:		
No.	Date:	Description:

Graphic Scale	0' 15' 30' 45'
Wyser Number	24-1229
Set Type	REVIEW
Date Issued	10/31/2025
Sheet Number	C200

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File: W:\2024\241229_Grundahl - Flirk Parcel, Mt Horeb\dwg\24-1229_Overall Plans_Encore Blasting Mass Grading_POD Lot Extension.dwg Layout: Grading Plan User: dschneider Plotted: Oct 31, 2025 - 1:47pm



NORTH

WYSER ENGINEERING

BROOKSTONE HILLS SUBDIVISION

VILLAGE OF MOUNT HOREB, DANE COUNTY, WI

BROOKVIEW TRAIL
MOUNT HOREB, WI 53572

Sheet Title: UTILITY PLAN

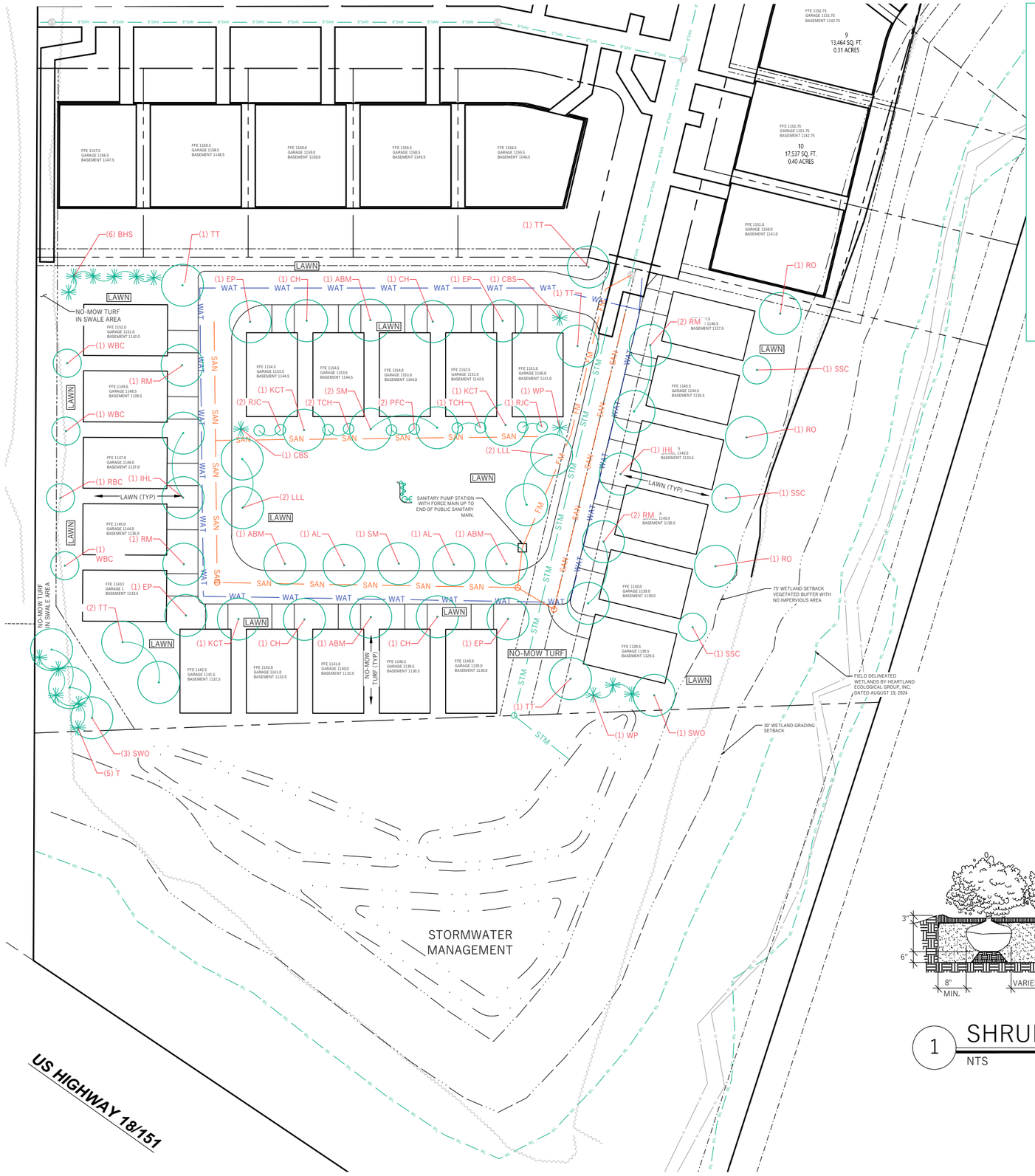
Revisions:

No.	Date:	Description:

Graphic Scale	0' 15' 30' 45'
Wyser Number	24–1229
Set Type	REVIEW
Date Issued	10/31/2025
Sheet Number	C300

DIGGERS HOTLINE
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Hearing Impaired TDD (800) 542-2289
www.DiggersHotline.com

File: W:\2024\241229_Grundahl – Fink Parcel, Mt Horeb\dwg\24–1229_Overall Plans_Encore Blasting Mass Grading_PDD Lot Extension.dwg Layout: Utility Plan User: dschneider Plotted: Oct 31, 2025 – 1:48pm



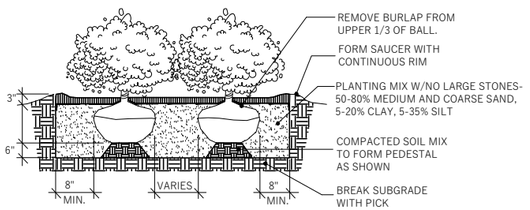
PLANT LIST
(Master)

KEY	QUAN	SIZE	COMMON NAME	Botanical Name	ROOT
	(51)		Canopy Trees		
ABM	4	2"	Autumn Blaze Maple	Acer Freemanii	BB
AL	2	2"	Basswood	Tilia Americana	BB
CH	4	2"	Common Hackberry	Celtis Occidentalis	BB
EP	4	2"	Exclamation Planetree	Platanus Occidentalis	BB
IHL	3	2"	Imperial Honeylocust	Gleditsia Tricanthos 'Imperial'	BB
KCT	3	2"	Gymnocladus Dioicus	Kentucky Coffee Tree	BB
LLL	4	2"	Little Leaf Linden	Tilia Cordata	BB
RM	6	2"	Red Maple	Acer Rubrum	BB
RO	3	2"	Red Oak	Quercus Rubrum	BB
SM	3	2"	Sugar Maple	Acer Saccharum	BB
SWO	4	2"	Swamp White Oak	Quercus Bicolor	BB
T	5	5'	Tamarack	Larix Larcina	BB
TT	6	2"	Tulip Tree	Liriodendron Tulipifera	BB
	(4)		Medium Trees		
RBC	2	10'	River Birch Clump	Betula Nigra	BB
WBC	2	10'	Whitespire Birch Clump	Betula Populafolia 'Whitespire'	BB
	(13)		Ornamental Trees		
PFC	2	1 ½"	Prairie Fire Crab	Malus 'Prairie Fire'	BB
RJC	4	1 ½"	Red Jade Crab	Malus 'Red Jade'	BB
SSC	3	1 ½"	Spring Snow Crab	Malus 'Spring Snow'	BB
TCH	4	1 ½"	Thornless Cockspur Hawthorn	Crataegus Crusgallii Inermis	BB

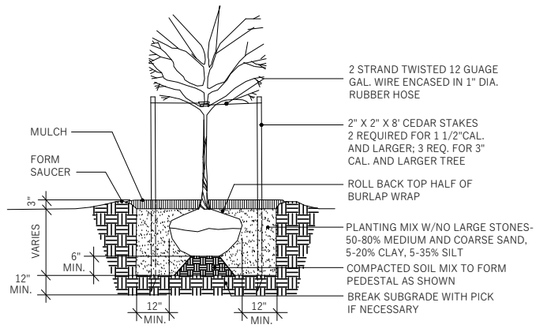
NORTH

LANDSCAPE NOTES

1. DESIGNATED LAWN AREAS TO RECEIVE A MINIMUM OF 6" OF TOPSOIL, PREMIUM BLUEGRASS SEED MIX, STARTER FERTILIZER, AND STRAW MULCH.
2. DESIGNATED NO-MOW TURF AREAS TO RECEIVE A MINIMUM OF 6" OF TOPSOIL, PREMIUM NO-MOW SEED MIX, STARTER FERTILIZER, AND STRAW MULCH.
3. LAWN AND NO-MOW TURF AREAS IN SWALES AND ON SLOPES IN EXCESS OF 3:1 SHALL BE MULCHES WITH STRAW MAT PER CIVIL PLANS
4. PLANTING BEDS TO BE MULCHED WITH SHREDDED HARDWOOD BARK MULCH SPREAD TO A DEPTH OF 3".
5. INDIVIDUAL TREES AND SHRUB GROUPINGS IN LAWN AREAS TO RECEIVE SHREDDED HARDWOOD BARK MULCH PLANT RINGS (4' DIAMETER) SPREAD TO A DEPTH OF 3".
6. DESIGNATED PLANTING BEDS TO BE SEPARATED FROM LAWN AREAS WITH 5" CRISP SHOVEL-CUT EDGE



1 SHRUB PLANTING
NTS



2 TREE PLANTING
NTS

DIGGERS HOTLINE
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WYSER ENGINEERING

BROOKSTONE HILLS SUBDIVISION
VILLAGE OF MOUNT HOREB, DANE COUNTY, WI
BROOKVIEW TRAIL
MOUNT HOREB, WI 53572
Sheet Title: LANDSCAPE PLAN

Revisions:

No.	Date:	Description:

Graphic Scale	0' 20' 40' 60'
Wyser Number	24-1229
Set Type	REVIEW
Date Issued	08/08/2025
Sheet Number	O-6

File: W:\2024\241229_Grundahl - Fink Parcel, Mt Horeb\dwg\24-1229_Overall Plans_Encore Blasting Mass Grading_PDD Lot_Landscaping.dwg Layout: Landscape Plan User: alawyer Plotted: Oct 30, 2025 - 1:56pm

VILLAGE OF
MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator

AGENDA ITEM # 6.b.2

Consideration of Certified Survey Map (CSM) to convert Outlot into Standard Lot

BACKGROUND

The CSM included in the packet converts the existing outlot created with the original plat for the first phase of the Brookstone Hills development into a so the development can occur. The Plan Commission recommends approval.

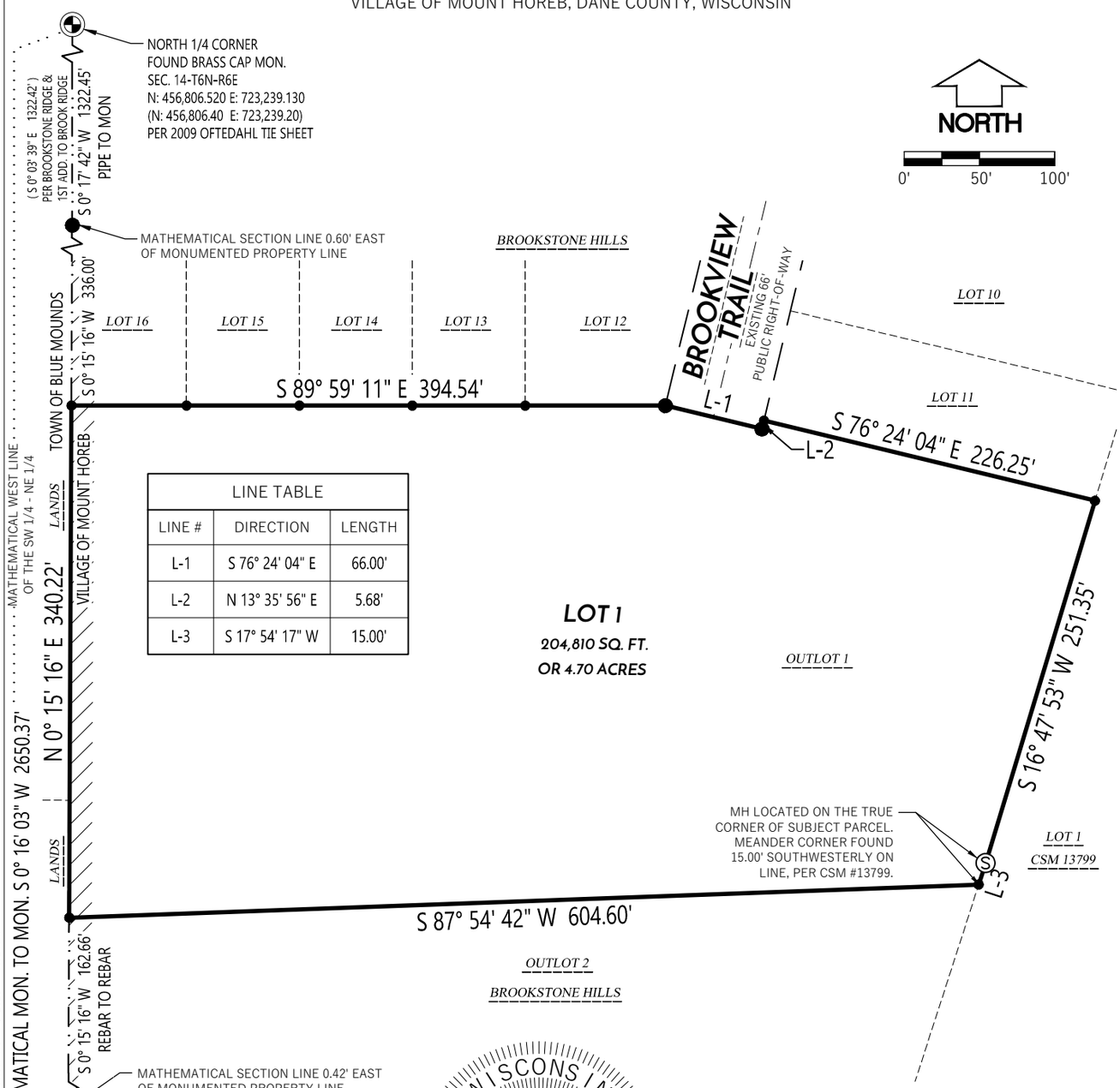
RECOMMENDATION

ATTACHMENTS

1. 24-1229_CSM (11-14-25)

CERTIFIED SURVEY MAP NO._____

OUTLOT 1, BROOKSTONE HILLS, RECORDED IN VOLUME 62-041B OF PLATS, PAGES 226-227, AS DOCUMENT 6057033, BEING LOCATED IN PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 6 NORTH, RANGE 6 EAST, VILLAGE OF MOUNT HOREB, DANE COUNTY, WISCONSIN



LINE TABLE		
LINE #	DIRECTION	LENGTH
L-1	S 76° 24' 04" E	66.00'
L-2	N 13° 35' 56" E	5.68'
L-3	S 17° 54' 17" W	15.00'

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

LEGEND

- SECTION CORNER FOUND / RECOVERED
- 3/4" REBAR FOUND
- 1" IRON PIPE FOUND
- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION LINE
- PLATTED LINE
- VILLAGE/TOWNSHIP LINE
- ( ) RECORDED INFORMATION

NOTES:

1. FIELD WORK PERFORMED BY WYSER ENGINEERING, LLC. ON JUNE 11TH, 14TH, 20TH, AND JULY 1ST, 16TH, 29TH, 2024, AND SEPTEMBER 3RD, 16TH, 17TH, 19TH, 24TH, 30TH, AND OCTOBER 6TH, 8TH, 14TH, 29TH, AND NOVEMBER 3RD, 2025
2. NORTH REFERENCE FOR THIS CERTIFIED SURVEY AND MAP ARE BASED ON THE WISCONSIN COORDINATE REFERENCE SYSTEM, DANE ZONE, (WISCRS DANE) NORTH AMERICAN DATUM 1983, 2011 ADJUSTMENT, NAD 83 (2011), GRID NORTH . THE MATHEMATICAL WEST LINE OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14-T6N-R6E WAS MEASURED TO BEAR S 0° 16' 03" W
3. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
4. SEE SHEET 2 OF 4 FOR EASEMENTS.

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
BROOKSTONE SOUTH, LLC
6840 SCHNEIDER ROAD
MIDDLETON, WI 53562

SURVEYED BY: MAL
DRAWN BY: SCH
CHECKED BY: ZMR
APPROVED BY: ZMR

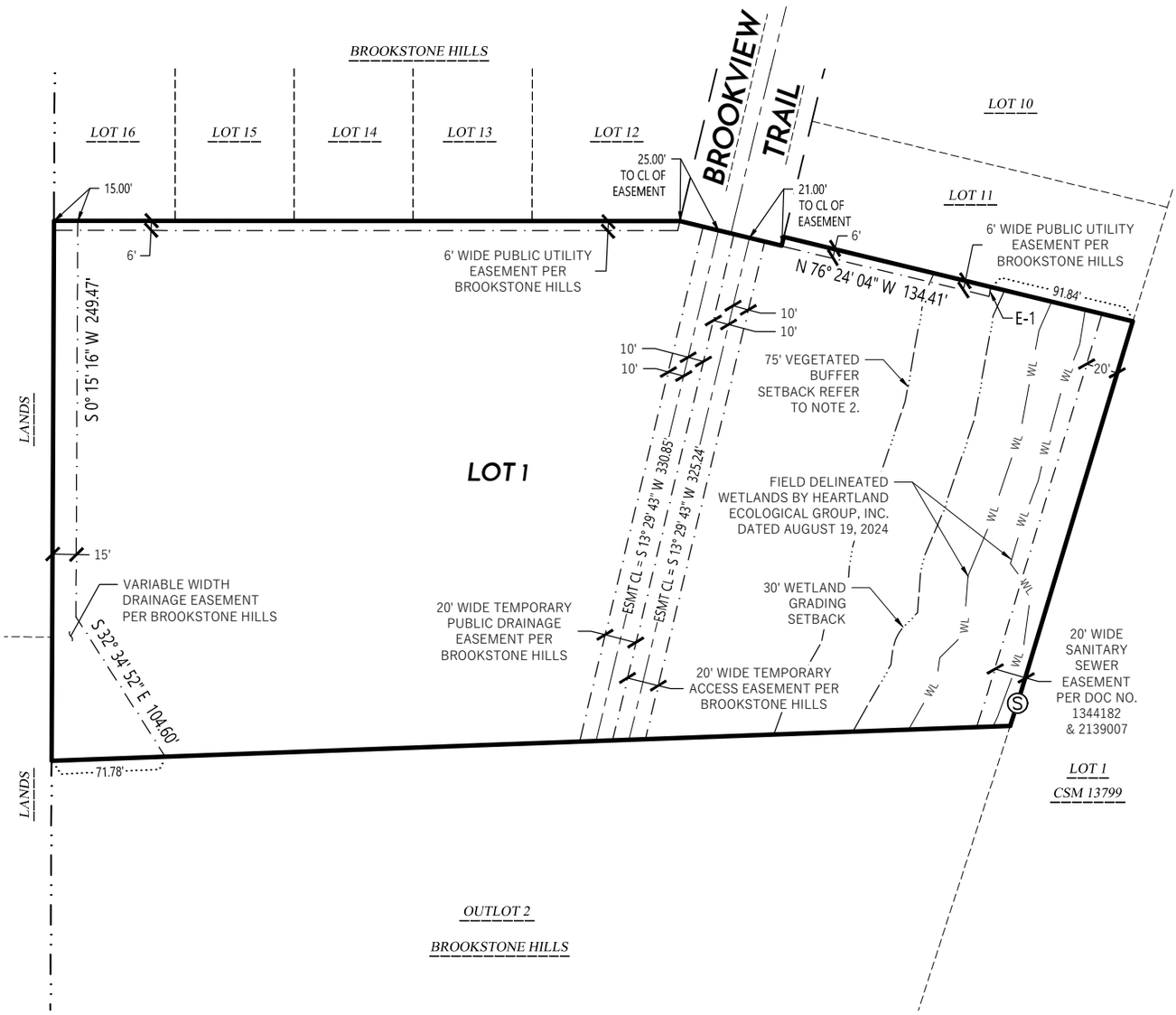
PROJECT NO: 241229
SHEET NO: 1 of 4

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

File: W:\2024\241229_Grundahl – Fink Parcel, Mt Horeb\dwg\24-1229_CSM.dwg Layout: CSM 1 OF 4 User: shearn Plotted: Nov 14, 2025 – 10:24am

CERTIFIED SURVEY MAP NO._____

OUTLOT 1, BROOKSTONE HILLS, RECORDED IN VOLUME 62-041B OF PLATS, PAGES 226-227, AS DOCUMENT 6057033, BEING LOCATED IN PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 6 NORTH, RANGE 6 EAST, VILLAGE OF MOUNT HOREB, DANE COUNTY, WISCONSIN



EASEMENT LINE TABLE		
LINE #	BEARING	DISTANCE
E-1	S 13° 49' 30" W	6.00'

NORTH

0' 50' 100'

LEGEND

- CSM BOUNDARY
- CSM BOUNDARY
- RIGHT-OF-WAY LINE
- CENTERLINE
- SECTION LINE
- PLATTED LINE
- EXISTING EASEMENT
- SETBACKS (TYP.)
- WL DELINEATED WETLANDS

NOTES:

1. THIS PARCEL IS SUBJECT TO ALL EASEMENTS AND AGREEMENTS, BOTH RECORDED AND UNRECORDED.
2. NO IMPERVIOUS AREA IS ALLOWED WITHIN THE 75' WETLAND SETBACK. THE AREA IN THE SETBACK IS TO BE A VEGETATED BUFFER.

WISCONSIN
ZACHARY M. REYNOLDS
S-3223
MOUNT HOREB
WISCONSIN
PROFESSIONAL LAND SURVEYOR

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
BROOKSTONE SOUTH, LLC
6840 SCHNEIDER ROAD
MIDDLETON, WI 53562

SURVEYED BY: MAL
DRAWN BY: SCH
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 241229
SHEET NO: 2 of 4

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

File: W:\2024\241229_Grundahl – Fink Parcel, Mt Horeb\dwg\24-1229_CSM.dwg Layout: CSM 2 OF 4 User: shearn Plotted: Nov 14, 2025 – 10:25am

*CERTIFIED SURVEY MAP NO.*_____

OUTLOT 1, BROOKSTONE HILLS, RECORDED IN VOLUME 62-041B OF PLATS, PAGES 226-227, AS DOCUMENT 6057033, BEING LOCATED IN PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 6 NORTH, RANGE 6 EAST, VILLAGE OF MOUNT HOREB, DANE COUNTY, WISCONSIN

LEGAL DESCRIPTION

ALL OF OUTLOT 1, BROOKSTONE HILLS, RECORDED IN VOLUME 62-041B OF PLATS, PAGES 226-227, AS DOCUMENT 6057033, BEING LOCATED IN PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 6 NORTH, RANGE 6 EAST, VILLAGE OF MOUNT HOREB, DANE COUNTY, WISCONSIN

SAID PARCEL CONTAINS 204,810 SQUARE FEET OR 4.70 ACRES.

SURVEYOR'S CERTIFICATE

I, ZACHARY M. REYNOLDS, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3223, DO HEREBY CERTIFY THAT BY DIRECTION OF BROOKSTONE SOUTH, LLC, I HAVE SURVEYED, DIVIDED, AND MAPPED THE LANDS DESCRIBED HEREON AND THAT THE MAP IS A CORRECT REPRESENTATION IN ACCORDANCE WITH THE INFORMATION PROVIDED. I FURTHER CERTIFY THAT THIS CERTIFIED SURVEY MAP IS IN FULL COMPLIANCE WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND THE SUBDIVISION REGULATIONS OF THE VILLAGE OF MOUNT HOREB AND DANE COUNTY, WISCONSIN.

_____ _____

ZACHARY M. REYNOLDS, S-3223 DATE
WISCONSIN PROFESSIONAL LAND SURVEYOR



OWNER'S CERTIFICATE

BROOKSTONE SOUTH, LLC, AS OWNER I HEREBY CERTIFY THAT I CAUSED THE LAND DESCRIBED ON THIS CERTIFIED SURVEY MAP TO BE SURVEYED, DIVIDED, MAPPED AND DEDICATED AS REPRESENTED ON THIS CERTIFIED SURVEY MAP. I ALSO CERTIFY THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY SEC. 75.17(1)(A), DANE COUNTY CODE OF ORDINANCES, TO BE SUBMITTED TO THE DANE COUNTY ZONING AND VILLAGE BOARD, VILLAGE OF MOUNT HOREB.

BY: _____
JEFFREY A. JASCHINKSKI, AUTHORIZED MEMBER
BROOKSTONE SOUTH, LLC

STATE OF WISCONSIN) SS
DANE COUNTY) SS

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 2025,

THE ABOVE NAMED AUTHORIZED MEMBER FOR BROOKSTONE SOUTH, LLC, TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____

NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

File: W:\2024\241229_Grundahl – Fink Parcel, Mt Horeb\dwg\24-1229_CSM.dwg Layout: CSM 3 of 4 User: shearn Plotted: Nov 14, 2025 – 10:25am

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

PREPARED FOR:
BROOKSTONE SOUTH, LLC
6840 SCHNEIDER ROAD
MIDDLETON, WI 53562

SURVEYED BY: MAL
DRAWN BY: SCH
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 241229
SHEET NO: 3 of 4

VOL. _____ PAGE _____
DOC. NO. _____
C.S.M. NO. _____

*CERTIFIED SURVEY MAP NO.*_____

OUTLOT 1, BROOKSTONE HILLS, RECORDED IN VOLUME 62-041B OF PLATS, PAGES 226-227, AS DOCUMENT 6057033, BEING LOCATED IN PART OF THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER OF SECTION 14, TOWNSHIP 6 NORTH, RANGE 6 EAST, VILLAGE OF MOUNT HOREB, DANE COUNTY, WISCONSIN

CONSENT OF MORTGAGEE

OAK BANK, A BANKING ASSOCIATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN , MORTGAGEE OF THE ABOVE DESCRIBED LAND, DOES HEREBY CONSENT TO THE SURVEY, DIVIDING, MAPPING AND DEDICATION OF THE LAND DESCRIBED ON THIS PLAT AND DOES HEREBY CONSENT TO THE OWNER'S CERTIFICATE.

IN WITNESS WHEREOF, LINDA ZIMDARS HAS CAUSED THESE PRESENTS TO BE SIGNED BY CORPORATE OFFICER, AND ITS CORPORATE SEAL TO BE HEREUNTO AFFIXED

ON THIS_____ DAY OF_____, 20___.

BY: _____
LINDA ZIMDARS, - SENIOR VICE PRESIDENT - BUSINESS BANKING
AUTHORIZED OFFICER

STATE OF WISCONSIN)
DANE COUNTY) ss.

PERSONALLY CAME BEFORE ME THIS_____DAY OF_____, 20____,

THE ABOVE NAMED BANKING ASSOCIATION, OAK BANK AUTHORIZED OFFICER, LINDA ZIMDARS, TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE FOREGOING INSTRUMENT, AND ACKNOWLEDGED THE SAME.

_____ _____
NOTARY PUBLIC, STATE OF WISCONSIN MY COMMISSION EXPIRES

VILLAGE OF MOUNT HOREB APPROVAL

THE VILLAGE OF MOUNT HOREB HAS APPROVED THIS CERTIFIED SURVEY MAP.

_____ _____
ALYSSA GAFFNEY DATE
VILLAGE CLERK, VILLAGE OF MOUNT HOREB



OFFICE OF THE REGISTER OF DEEDS

_____COUNTY, WISCONSIN

RECEIVED FOR RECORD_____,

20____ AT_____O'CLOCK_____M AS

DOCUMENT # _____

IN VOL. _____ OF CERTIFIED SURVEY

MAPS ON PAGE(S) _____ .

_____
KRISTI CHLEBOWSKI, REGISTER OF DEEDS

WYSER ENGINEERING

PREPARED BY:
WYSER ENGINEERING
300 EAST FRONT STREET
MOUNT HOREB, WI 53572
www.wyseengineering.com

PREPARED FOR:
BROOKSTONE SOUTH, LLC
6840 SCHNEIDER ROAD
MIDDLETON, WI 53562

SURVEYED BY: MAL
DRAWN BY: SCH
CHECKED BY: ZMR
APPROVED BY: ZMR

PROJECT NO: 241229
SHEET NO: 4 of 4

File: W:\2024\241229_Grundahl – Fink Parcel, Mt Horeb\dwg\24-1229_CSM.dwg Layout: CSM 4 of 4 User: shearn Plotted: Nov 14, 2025 – 10:30am

VILLAGE OF
MOUNT HOREB

AGENDA ITEM REPORT

MEETING DATE	PREPARED BY
February 4, 2026	Nicholas Owen, Administrator

AGENDA ITEM # 6.c

Discussion/Consideration of Nomination for Register of Historic Places for Structures, Sites or Entities: 108 & 110 E Main Street, Vestibule Investments, LLC.

BACKGROUND

Mark and Barb Johnson have submitted an application for the nomination of their property at 108-110 E Main Street for the Local Register of Historic Places for Structures, Sites or Entities. The Johnson's application includes a complete form with a thorough history, an explanation of why the property should be listed, and a known history of the site. The application also includes historic and current photos of the property, and some advertising materials from a business that was housed in the building. The Historic Preservation Commission (HPC) recommends approval. This is the first property to be nominated since the HPC has re-split from the Plan Commission to provide a great focus on the importance of preserving the history of Mount Horeb and the Village thanks the Johnson's for being our test case.

RECOMMENDATION

ATTACHMENTS

1. Historic Nomination 108 and 110 E Main Street
2. 108 and 110 Photos

HERITAGE
COMMUNITY
OPPORTUNITY

VILLAGE OF MOUNT HOREB
138 E. Main Street
Mount Horeb, WI 53572
Phone: (608) 437-6884 Fax: (608) 437-3190
Email: mhinfo@mounthorebwi.info Web: mounthorebwi.info

Village of Mount Horeb Municipal Register of Historic Places
Nomination Form for Structures, Sites or Entities

NOTE: Please complete this form to the best of your ability. Attach additional sheets as needed, clearly referencing the associated number(s) on the Nomination Form. Village staff or Commission members may request additional information to enable a thorough evaluation. To ensure necessary review time, completed forms are due ***at least 30 days prior*** *to a regularly scheduled Village of Mount Horeb Historic Preservation Commission meeting.*

1. **Form prepared by:** **Date** January 8, 2026
   Name Mark & Barb Johnson
   Address 801 View Ct.
   City, State, Zip Code Mt. Horeb, WI 53572-2200
   Telephone 608-444-5849
   Email Vito427@icloud.com

2. **Owner** (if different than above)
   Name Vestibule Investments, LLC
   Address 801 View Ct.
   City, State, Zip Code Mt. Horeb, WI 53572-2200
   Telephone 608-444-5849
   Email Vito427@icloud.com

3. **What is the historic name of this property?** Evans Drug Store, Creamery Retail/Creamery manufacturing

4. **What is the current name of this property?**

5. **Where is the property located?**
   Address (street and number) 108+110 E Main St. Mt. Horeb
   Legal Description Lot 1 and the westerly 1/2 of lot 2, Block 5 of Carl Boeckl's Survey and plat of Mount Horeb Station, in the Village of Mt. Horeb,
   Tax Parcel Number Dane County, Wisconsin #157/0606-123-2221-7

6. **Provide physical description** of exterior and the state of its current condition.

Built in a vernacular commercial style, the wood frame two-story building at 108-110 East Main Street maintains its original bracketed cornice and pedimented boomtown false front. These elements are representative of the style of commercial architecture built during this period in Mount Horeb. It has tan colored modern composite siding with dark brown trim and a new tin roof replicating the building's original metal roof. The original upper level 4/4 wooden windows and decorative hood details have been replaced with new 2/2 double-hung sash windows on the front façade. Both storefronts have their own recessed entrances and large storefront windows. Built of rock-faced concrete block, the utilitarian style one-story creamery building at the rear of the parcel retains its original multi-pane windows (as of 2025). All the buildings are well cared for and in very good condition.

VILLAGE OF MOUNT HOREB
138 E. Main Street
Mount Horeb, WI 53572
Phone: (608) 437-6884 Fax: (608) 437-3190
Email: mhinfo@mounthorebwi.info Web: mounthorebwi.info

7. Do you know any of the following information?

The architect's name was Unknown

The builder's name was Unknown

The date of construction was 1827, 1920, 1927

8. If a structure or entity, are you aware of any changes to the original fabric? Please check one or more boxes, as applicable.

- ☐ additions
- ☒ replacement siding or re-siding
- ☐ removal of porches
- ☐ removal of decorative details
- ☒ replacement doors and/or windows
- ☒ interior remodeling or updating
- ☐ moved from its original location *(if moved, list why, from where and when in description below)*

Briefly describe any changes checked above:

1890 – 2-story addition to the back of the original building at 108 East Main Street
1895-1899 – addition of the small upper window with insulator bracket possibly for phone exchange
1906- Dr. Evans moved a building referred to as the former "Britton's Sample Room" to the rear of his drugstore to house his automobile. No longer located on the property today.
1920 – Construction of the creamery building at the rear of the parcel off the alley
1927 – Addition of the second storefront most likely resulting in the removal of the side staircase and porches.
Unknown dates – Original 4/4 upper wooden windows replaced, removal of decorative window hoods, original double shop doors and storefront windows were remolded/replaced and addition of vinyl siding.
2009 - current owners Mark and Barb Johnson completed an interior remodel of the 108 East Main Street space that included restoring the tin ceiling, refinishing the original maple floors, improving the electrical and HVAC systems, and adding an ADA compliant restroom.
2022 -An exterior remodel of the 108-110 East Main Street building included the addition of new siding, insulation, windows, and tin roof helping to preserve the building for the future.

9. Significance of the property

	Period(s)		Area(s) of Significance (*check all that apply, and justify below*)							
	Prehistoric		Archeology-prehistoric		Community planning		Landscape Architecture		Religion
	1400-1499		Archeology-historic		Conservation		Law		Science
	1500-1599		Agriculture		Economics		Literature		Sculpture
	1600-1699		Architecture		Education		Medicine		Social
	1700-1799		Art		Engineering		Military		Humanitarian
✓	1800-1899	✓	Commerce		Exploration/settlement		Music		Theatre
✓	1900-1950		Communications	✓	Historic personages		Native American life		Trails
	1951-1962	*		✓	Industry - Dairy		Philosophy		Transportation
	20--				Invention		Politics/government	✓	Other (specify)* Library

Why do you think that this property should be listed in the Municipal Register? In one or two paragraphs, summarize its importance in the context of the Mount Hore area story.

The historic buildings located at 108-110 East Main Street including the original 1885 Evans building, the 1927 addition and the 1920 creamery building at the rear of the parcel document important stories in the history and development of

VILLAGE OF MOUNT HOREB
138 E. Main Street
Mount Horeb, WI 53572
Phone: (608) 437-6884 Fax: (608) 437-3190
Email: mhinfo@mounthorebwi.info Web: mounthorebwi.info

(cont.)

the Village of Mount Horeb. They provide a physical record of the life and work of prominent Villager Dr. Nels Christian Evans (1857-1918) and his family; the establishment of a 19th century downtown commercial district at East Main and South First Streets resulting from the construction of the Chicago and North Western Railway depot in 1881; and the Village's long association with area dairy farmers and the manufacture of dairy products including milk, cheese, and butter.

The buildings at 108-110 East Main Street should be added to the Village of Mount Horeb's Local Register of Historic Places because of their significance to Mount Horeb's history and culture. They represent important stories about Mount Horeb's growth, residents, businesses, and connection to dairy production. Notably, the site was home to the Village's first pharmacy, operating as a drugstore from 1885 until 1962, and it is also believed to be the location of the first local telephone exchange in the Village. The Evans family owned the property for nearly a century (1884 to 1984), and many Village residents remember the building when the Mount Horeb Public Library occupied the space from 1955-1970. The buildings stand as physical reminders of the Village's history providing a connection to our communities shared past and unique sense of place.

10. What is known about the history of the property?

Commerce 1800-1899, 1900-1950 and 1950-1962

The original wood frame structure at 108 East Main Street was built in 1885 for Dr. Nels Christian Evans and housed Evan's pharmacy. The building had a private office on the first floor and an apartment on the second floor where the family resided. A two-story addition was added to the back of the original building in 1890, expanding both the pharmacy and office space on the first floor and the apartment on the second floor. The building's location at 108 East Main Street marks an important transition in the development of the Village of Mount Horeb when the center of business moved from Old Town (Springdale and Eighth Street) to Main Street between First and Third Streets. This shift began in 1881 prompted by the construction of the Chicago and North Western railroad depot located on Front Street between South First and South Second Streets.

Home to Mount Horeb's first pharmacy, the building operated as a drugstore from 1885 until 1962. Originally run by Dr. Evans, then by his son Milo in 1908, the business was sold to Albert Hrubesky Sr., in 1926. At this time, it was renamed Bert's Drug Store. After Albert's death in 1954, his son Bert Jr., ran the business at 108 East Main Street until 1962, when he moved the pharmacy down the street.

Historic Personages

Born in Perry Township, Dr. Evans relocated to Mount Horeb shortly after receiving his medical degree in 1884 from the College of Physicians and Surgeons in Chicago. He became a well-respected member of the community and belonged to several organizations including the Masonic Lodge and the Modern Woodman of America. He was President of the State Bank of Mount Horeb and served as Village President in Mount Horeb. He was a Dane County Supervisor from 1898-1899 and again from 1904-1906 and served in the Wisconsin State Assembly from 1893-1894.

Dr. Evans was one of several businessmen who held an interest in the first local phone exchange and according to his daughter, Nora Evans, who became a well-known local historian whose papers are at the MHAHS, the pharmacy once housed the "the first telephone central, with druggist, J.E. (Elmer) Rogers as operator." The phone exchange's location in the building may be reflected in the addition of the small upper story window with bracket— and possibly insulators that can be seen in one of the attached photographs. The window was added to the façade of the building sometime between 1895 and1899, based on historic photographs of the building in the MHAHS collection.

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Industry (Dairy) 1920-1953

After Dr. Evans death in 1918, ownership of the building passed to his son Walter Evans. A small utilitarian creamery building was constructed in 1920 at the rear of the lot (110R) for the Capital Dairy Company, a business owned and operated by the Walter Evans family. Walter Evans began producing butter here in 1927. He also added a second storefront in 1927 at 110 East Main Street to sell dairy products produced in the creamery building. In 1932, Walter Evans installed modern large capacity butter churns in the creamery building that were able to produce large quantities of butter in a single churn. In addition to selling their products locally, they also distributed butter to Madison. The family changed the name to the Evans Creamery in 1936 and operated the business until 1953.

After Walter Evan's passing in 1946 the property passed to his son Neil who continued to live on the upper floor of the building with his mother Josephine. Neil passed in 1984—ending 99 years of continuous Evans family ownership.

Other (Library)

The building was home to the Mount Horeb Public Library from 1955 until 1970 and many residents remember visiting the library when it was at this location.

Commerce 1984 to date

Alfred and Velma Schurch purchased the property in 1984. Alfred ran a successful insurance and real estate business in the building for many years. Velma Schurch sold the property to Mark and Barb Johnson in 2007 who remain the owners today. The 108-110 East Main Street building is occupied by two separate businesses; Telsaan Tea and Sift and Winnow. The creamery building at the rear of the parcel is still extant and used for storage at this time.

11. Reference list. For statements of fact, list sources of information. Attach photocopies when feasible.

Source "Property History for 108-110 East Main Street," MHAHS (see attached) Page _____

Source *Mount Horeb Presettlement to 1986, MHAHS, 1986* Page _____

Source Mount Horeb, Wisconsin: An Intensive Survey of the Historic Resources of the Commercially Zoned Downtown, Elizabeth Miller, 1997 Page _____

Source Nora Evans Papers, MHAHS Page _____

Source Dr. Evans Obituary, *Mount Horeb Times*, Aug 30, 1918 Page _____

Source *Mount Horeb Times*, Dec 20, 1906 Page _____

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12. Attachments

- **Photographs***

  Please submit clear, recent photographs that show all sides of the exterior of the structure. Interior views of structures that highlight the construction, fabric and integrity are helpful but not required. For properties with more than one building (i.e. farmsteads, industrial complexes or religious complexes), include photographs of all buildings and structures that make up the complex. **Submitted photographs will become a permanent part of the site record, and will NOT be returned.**

  **For additional direction regarding preferred photograph composition and submission format, see page 5, "Photograph Information Sheet."*

- **Map**

  Submit a copy of the parcel map from Dane County's online land records system, found at *https://accessdane.danecounty.gov/Parcel*.

  For properties with more than one building, photographs of the outbuildings should be keyed to this parcel map in order to indicate the relative relationship of the components. Please also indicate the location of any known former buildings if they once were part of the complex. When possible, dates should be provided for all buildings.

- **Photocopies of historic photographs**

  While not required, historic photographs can be useful in evaluating changes to the property. When available, please provide photocopies of historic images, listing the source and date of the photograph. **DO NOT SEND ORIGINALS.**

Complete and return this form, along with recent photos and any additional attachments, to:

Historic Preservation Commission
Village of Mount Horeb
138 E Main Street
Mount Horeb WI 53572

COMMISSION ACTIONS (Applicant leave blank; for Commission use only.)

Committee hearing date _____

Committee recommendation (including brief justification) _____

_____

_____

_____

Signature of Commission Chair _____ Date _____

VILLAGE OF MOUNT HOREB
138 E. Main Street
Mount Horeb, WI 53572
Phone: (608) 437-6884 Fax: (608) 437-3190
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Photograph Information Sheet

Photo composition

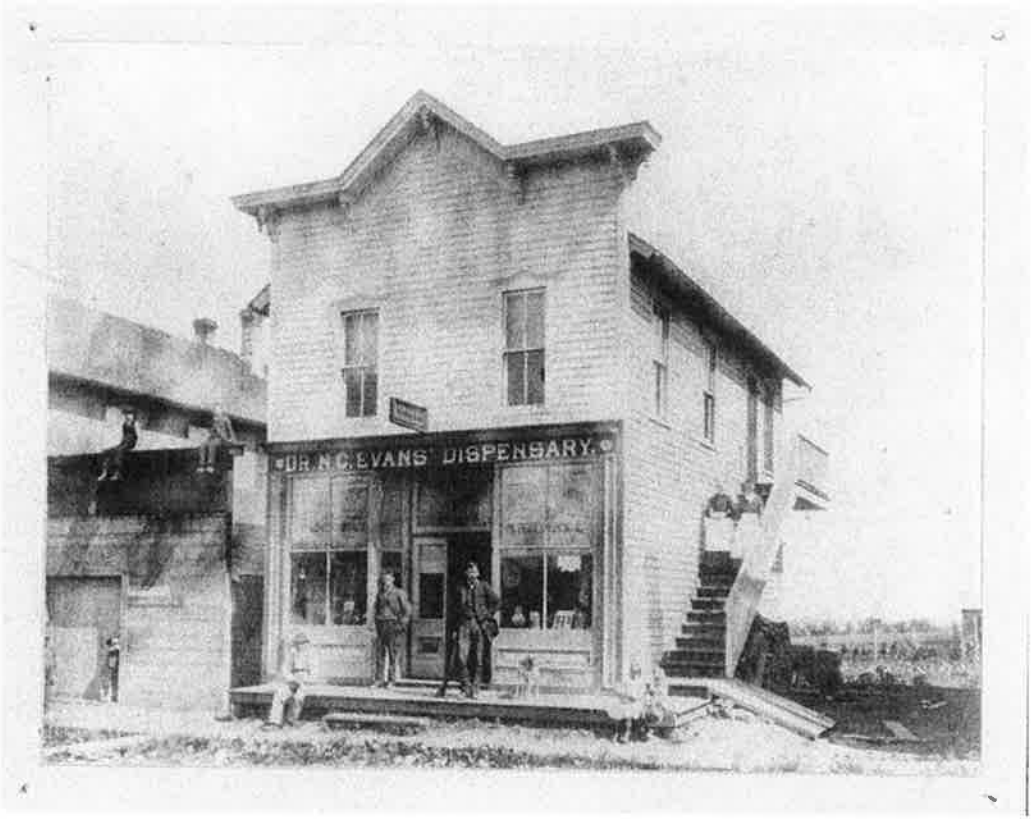
- Photos should be recent and clear.
- If you are using a digital or phone camera, set to the highest quality possible.
- Stand back far enough that you can see the whole building from top to bottom in one photo.
- Photograph each side of the structure.
- Interior photos, while not required, are also very helpful. Documentation of defining features (i.e. fireplaces, staircases, built-in furniture, decorative trim) can be illustrative of building techniques, architecture styles and historical integrity. It is not necessary to photograph every room.
- If there are multiple buildings on the property (as with farmsteads or a church campus), please photograph each building separately. Include a parcel map from Dane County's online land records system, found at *https://accessdane.danecounty.gov/Parcel*, and key the photographs to this map.

Photo submission

- Submit a set of standard size prints, commercially-produced or printed at a store.

OR

- Save your photos to a flash drive, and submit the flash drive and print-outs of each photo.
  - Save the images to the flash drive as a high quality jpeg. Use the file name to describe the photo (i.e. "front of house", "back of barn", "second floor staircase main house").
  - DO NOT crop or resize the images prior to saving them to the flash drive.
  - Remember to include a hard copy of the photos. These print-outs can be made on a home printer using regular printer paper.



Evans pharmacy, 1885-1890 (MHAHS Image #8x10.00621)



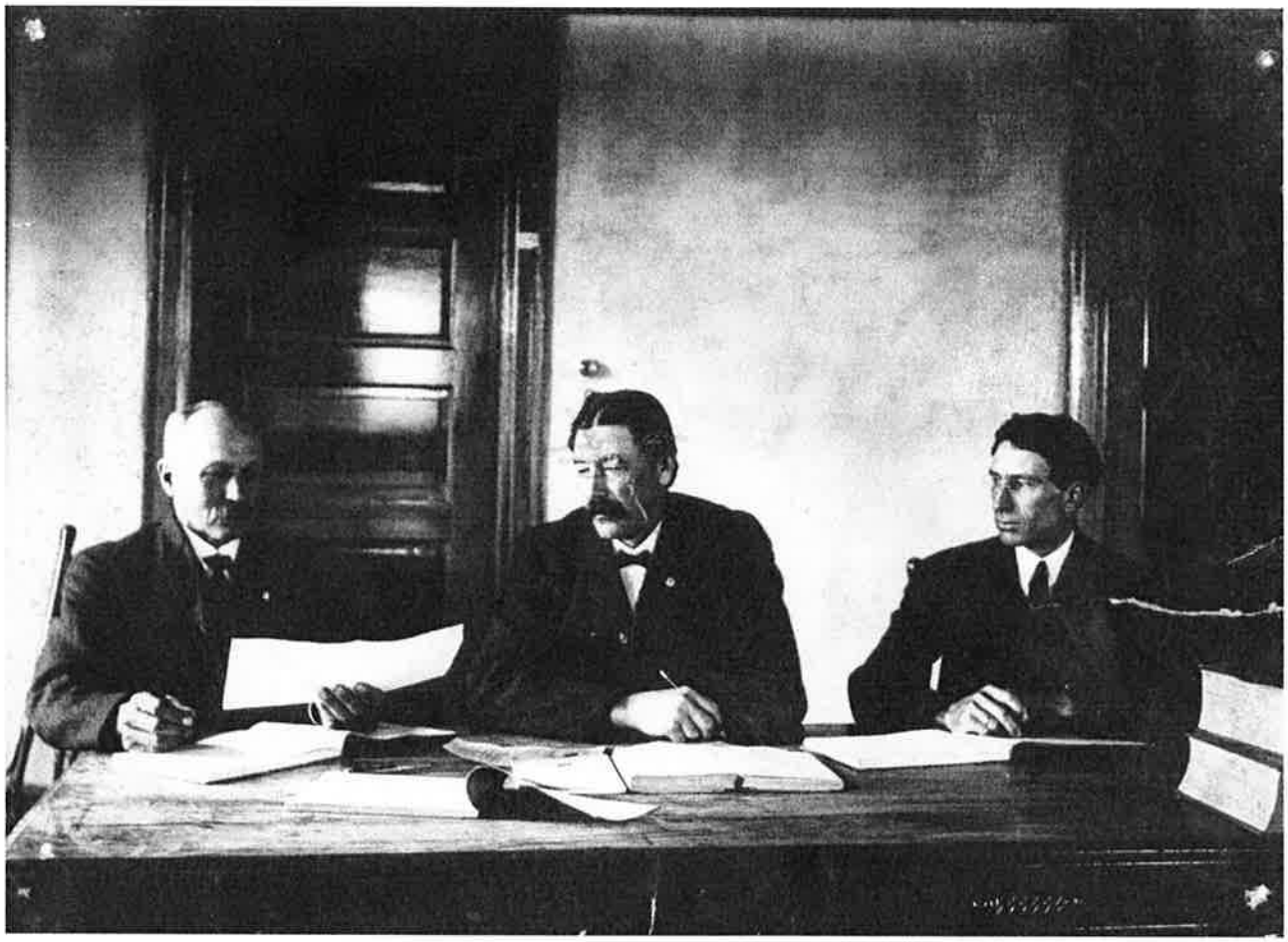
Evans pharmacy after the 1890 back addition, c. 1895 (MHAHS Image #5x7.01008)



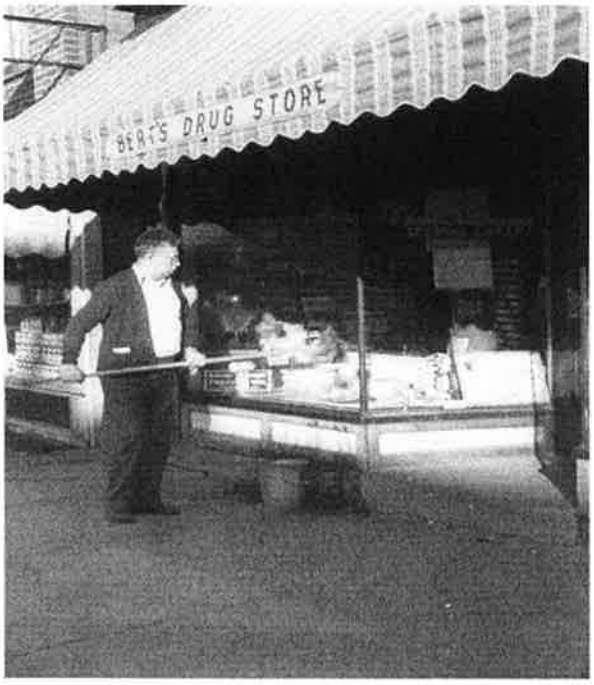
Evans pharmacy showing addition of upper window, c. 1900 (MHAHS Image# 5x7.01047)



Interior of Evans pharmacy with Milo Evans in picture (far left), c.1 910 (MHAHS Image #5x7.00684)



Pictured L to R: A.F. Gramm, Dr. Evans and H. C. Gier, at a meeting at the Old Village Hall c. 1905 (MHAHS Image #5x7.01189)



Bert Hrubesky, Jr, washing Bert's Drug Store window, c. 1960 (MHAHS Image #5x7.02560)



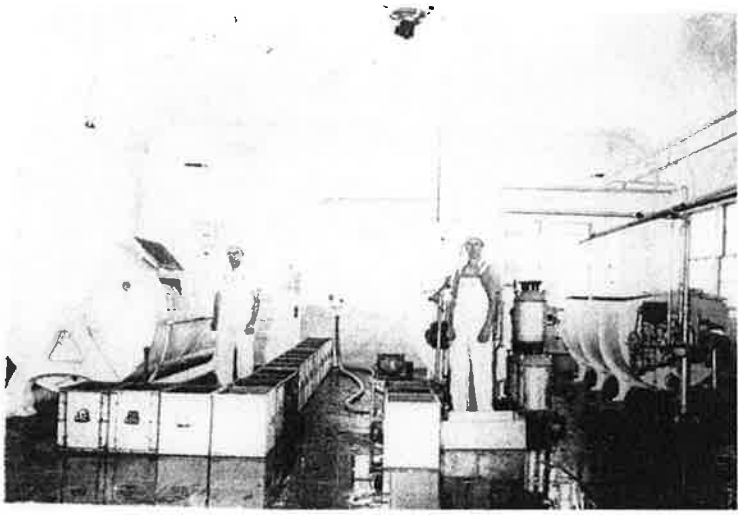
Businesses on East Main Street including Bert's Drug Store and Evans Creamery storefront, c.1935 (MHAHS Image #PC.01987)



Evans Creamery Building (110R E. Main Street) , 1988 (MHAHS Image #4x6.02653)



Evans Creamery Truck, c. 1930 (MHAHS 4x6.04050)



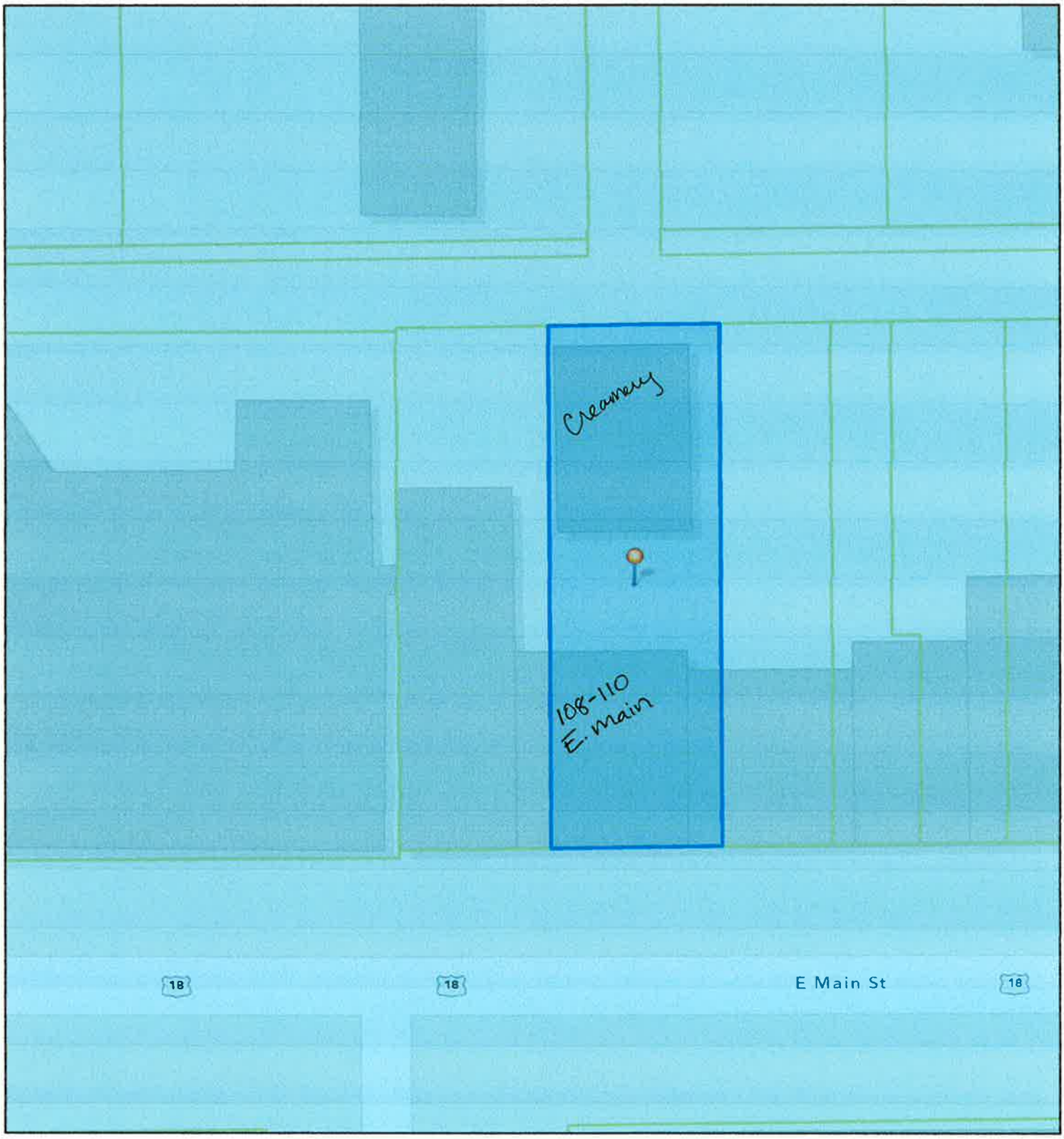
Evans Creamery, c. 1930 Pictured L to R: Walter Schwarz and Levoe Moen? (MHAHS Image #4x6.04046)



Mount Horeb Public Library in the Evans Building, c. 1955-1961. Pictured L to R: Librarian Elsie Holum and Nora Evans (MHAHS Image #5x7.01225)



108-110 E Main Street, c. 1984 (MHAHS 4x6.02649)



January 7, 2026

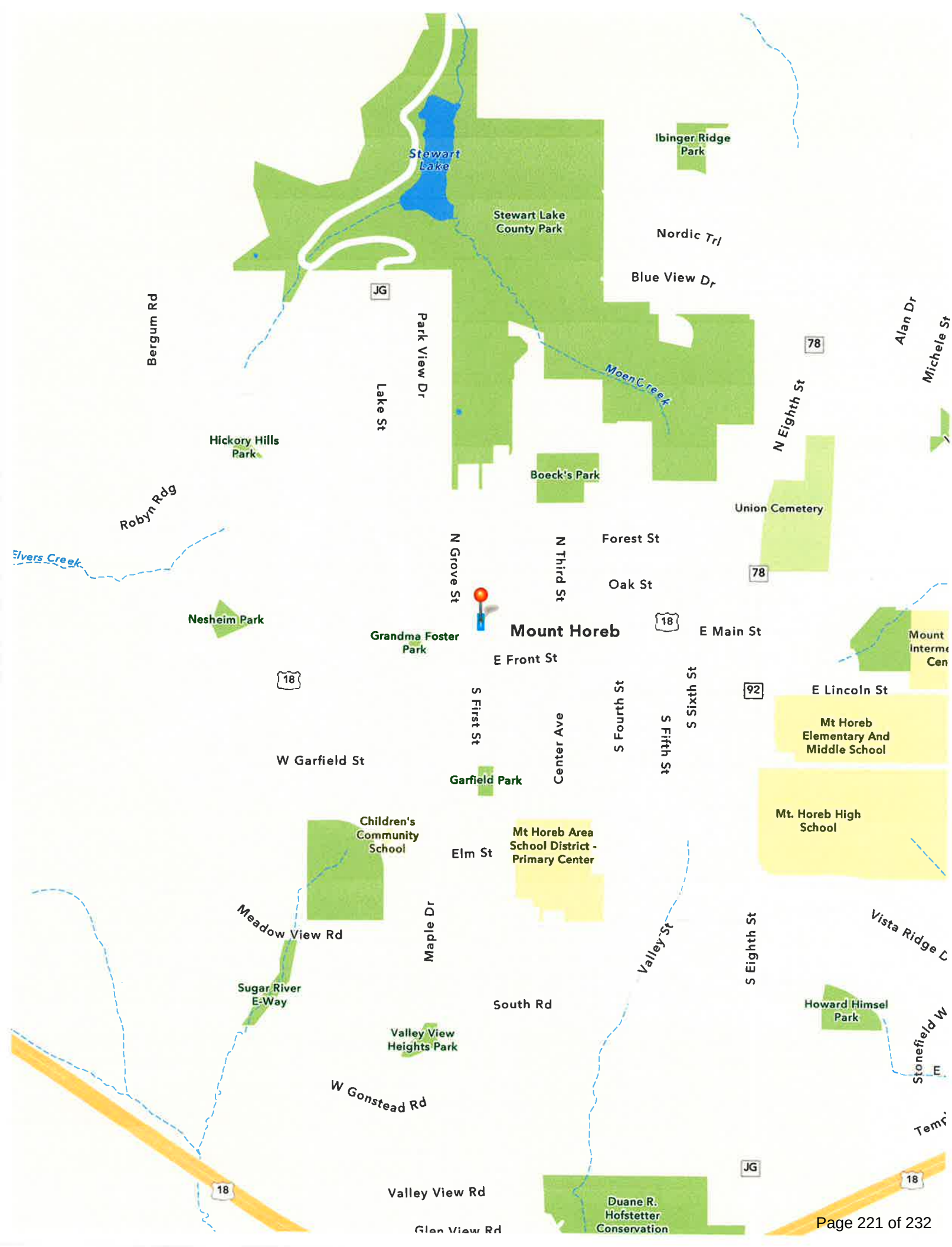
Parcels

1:505

0 0 0.01 0.01 mi

0 0.01 0.01 0.02 km

Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community


Stewart Lake
Stewart Lake County Park
Ibinger Ridge Park
Nordic Trl
Blue View Dr
JG
Bergum Rd
Park View Dr
Lake St
Moen Creek
78
Alan Dr
Michele St
N Eighth St
Hickory Hills Park
Boeck's Park
Union Cemetery
Robyn Rdg
Elvers Creek
N Grove St
N Third St
Forest St
Oak St
78
Nesheim Park
Grandma Foster Park
Mount Horeb
18
E Main St
Mount Interme Cem
E Front St
18
S First St
Center Ave
S Fourth St
S Fifth St
S Sixth St
92
E Lincoln St
Mt Horeb Elementary And Middle School
W Garfield St
Garfield Park
Mt. Horeb High School
Children's Community School
Elm St
Mt Horeb Area School District - Primary Center
Meadow View Rd
Maple Dr
Valley St
S Eighth St
Vista Ridge D
Sugar River E-Way
South Rd
Howard Himsel Park
Stonefield W
Valley View Heights Park
W Gonstead Rd
Temp
JG
18
Valley View Rd
Duane R. Hofstetter Conservation
18
Glen View Rd

Parcel Number - 157/0606-123-2221-7

Current

Parcel Parents

Summary Report

Parcel Summary More +

Municipality Name	VILLAGE OF MOUNT HOREB
Parcel Description	BOECK'S, CARL SURVEY & PLAT MT HOREB STA...
Owner Name	VESTIBULE INVESTMENTS MH LLC
Primary Address	108 E MAIN ST
Billing Address	801 VIEW CT MOUNT HOREB WI 53572

Show Municipal Contact Information

Assessment Summary More +

Assessment Year	2025
Valuation Classification	G2
Assessment Acres	0.110
Land Value	$52,700.00
Improved Value	$252,000.00
Total Value	$304,700.00

Show Valuation Breakout

Zoning Information

For the most current and complete zoning information contact:
Village of Mount Horeb | 608-437-6884

Parcel Maps



DCiMap Google Map Bing Map

Tax Information

E-Statement E-Bill E-Receipt

Pay Taxes Online

« ‹ Newer Older › »

Tax Year 2025		
Assessed Land Value	**Assessed Improvement Value**	**Total Assessed Value**
$52,700.00	$252,000.00	$304,700.00
Taxes:		$5,437.32
Lottery Credit(-):		$0.00
First Dollar Credit(-):		$76.17
Specials(+):		$0.00
Amount:		$5,361.15
2025 Tax Info Details		Tax Payment History

Property History for
108-110 E Main Street, Mount Horeb, WI
(Boeck's Addition, Block 5, Lot 1 & west part of Lot 2)

The following information was compiled from tax records and maps in the archives of the Mount Horeb Area Historical Society and supplemented with online research done on ancestry.com, glorecords.blm.gov, the UW Wisconsin-Madison Libraries and other resources. Many of the ownership dates provided in this report are based on annual tax assessments; because the tax records document ownership at the time of assessments and not specific dates of ownership transfer, they should be seen as approximate dates (within six months). In addition, we rely heavily on census records to piece together a home's history; the most recent census records that have been made public are those from the 1950 census, therefore the amount of personal information available for individuals after 1950 is limited.

History and association information for 108-110 E Main St, Mount Horeb

- Dr. Nels Christian Evans was born in Perry Township on July 10, 1857. He studied medicine under Dr. A. J. Ward in Madison before entering the College of Physicians and Surgeons in Chicago. He graduated from there in 1884 and established his own practice in Mount Horeb shortly after (find-a-grave; N. C. Evans obituary; Blue Mounds Weekly news article [Sept. 7, 1884]).

- Dr. Evans purchased Block 5, Lot 1 and the west half of Lot 2 in 1885 and construction of the building began that fall (1885 Mt Horeb tax roll; Blue Mounds Weekly news article [June 10, 1885]; Blue Mounds Weekly news article [Aug. 19, 1885]).

- Dr. Evans had his pharmacy, Evan's Drug Store, and private office in the lower level of the building and he and his family resided on the upper floor. Evan's Drug Store was the first pharmacy in Mount Horeb; in addition, a history written by Dr. Evan's daughter, Nora Evans, states that the Evans Drug Store was the *only* pharmacy in town for 18 years (Nora Evens local history notes).

- The Dr. N. C. Evans family lived in the upper level until 1898, when they moved into a large home on S First Street. Dr. Evan's continued to have a medical office at 108 E Main Street (Nora Evens local history notes; Mt Horeb tax rolls; Mount Horeb telephone directories).

- Dr. Evans was a well-respected member of the community who was involved with a number of groups in the village. He was a member of the Wisconsin State Legislature, a Justice of the Peace in Mount Horeb, and president of the village for a several years. He was also a member of the Mount Horeb Masonic Lodge, the Modern Woodmen of America, and president of the State Bank of Mount Horeb (*Mount Horeb Presettlement to 1986*).

- Dr. Evan's oldest son, Milo (1880-1942), became a pharmacist in 1907. According to the personal tax information in the Mount Horeb tax rolls, Milo became the owner of the pharmacy merchandise by 1908; it seems likely that after Milo got his pharmacy license, his father sold him the Evans Drug Store business, though he did not sell the building itself.

- Dr. Evans passed away in 1918; ownership of the building passed to his youngest son, Walter Evans (1890-1946; Find-A-Grave; Mt Horeb tax rolls). Although Milo had moved to Madison by at least 1920 and started another pharmacy, he appears to have continued involvement with Evan's Drug Store in Mount Horeb until selling the business in 1926 (Mt Horeb tax rolls; 1920 census records).

- For a short time after his father's death, Walter ran a confectionary store out of the building (1920 and 1921, Mount Horeb High School yearbook advertisements).

- By 1921, the property was listed as being owned by the Capital Dairy Company which was a business owned and operated by the Walter Evans family. The creamery was located at 110 E Main Street, a concrete block building just off the alley behind 108 E Main Street constructed in 1920. Walter and his family lived in the upper level of 108 E Main Street (Mt Horeb tax rolls; federal census records).

- Albert Hrubesky, Sr (1893-1954), a pharmacist, bought the contents of Evans Drug Store from Milo Evans about 1926 and rented the larger, western storefront (108 E Main Street), calling the business Bert's Drug Store. Albert Sr passed away in 1954, after which his son, Albert Hrubesky, Jr (1922-1982), also a pharmacist, took over the business. Bert's Drug Store remained in this section of the building until 1962; by the following year, Albert Jr had set up Bert's Drug Store at 203 W Main Street in Mount Horeb.

- The building at 108 E Main Street, specifically the west storefront, served as a pharmacy/drug store from 1885 to 1962—over 77 years (Find-A-Grave, Mt Horeb tax rolls; *Mount Horeb Presettlement to 1986*)!

- In 1927, a second two-story storefront was added to the building by Walter Evans; it was used as a storefront for their dairy products. They changed the name of their business to Evans Creamery in 1936. Walter passed away in 1946; his wife Josephine (1891-1979) and son Neil (1918-1984) continued to run the business until 1953 (Mt Horeb tax rolls, *Mount Horeb Presettlement to 1986*).

- The Mount Horeb Public Library was located in the building from 1955 to 1970 (Mt Horeb telephone directories; *Mount Horeb Presettlement to 1986*).

- Walter Evans retained ownership of the property until his death in 1946. The property was then passed to his son, Neil. Neil Evans and his mother, Josephine, continued to live in the upper levels of the building. Josie lived there until her death in 1979 and Neil lived there until his death in 1984 (federal census records; Mt Horeb telephone directories).

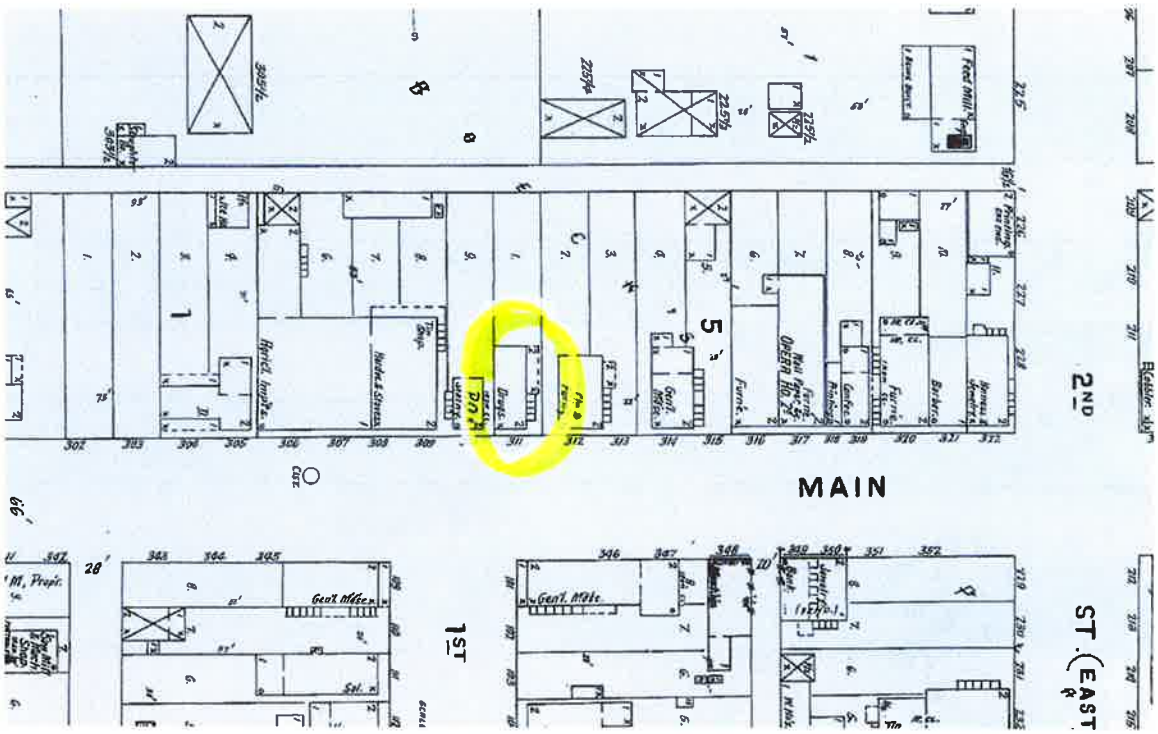
- The building at 108 E Main Street was owned by the Evans family from 1885 to 1984!

- After Neil's death, the building was purchased by Alfred (1909-1999) and Velma (1911-2009) Schurch; Alfred ran a real estate and insurance business in the building for many years.

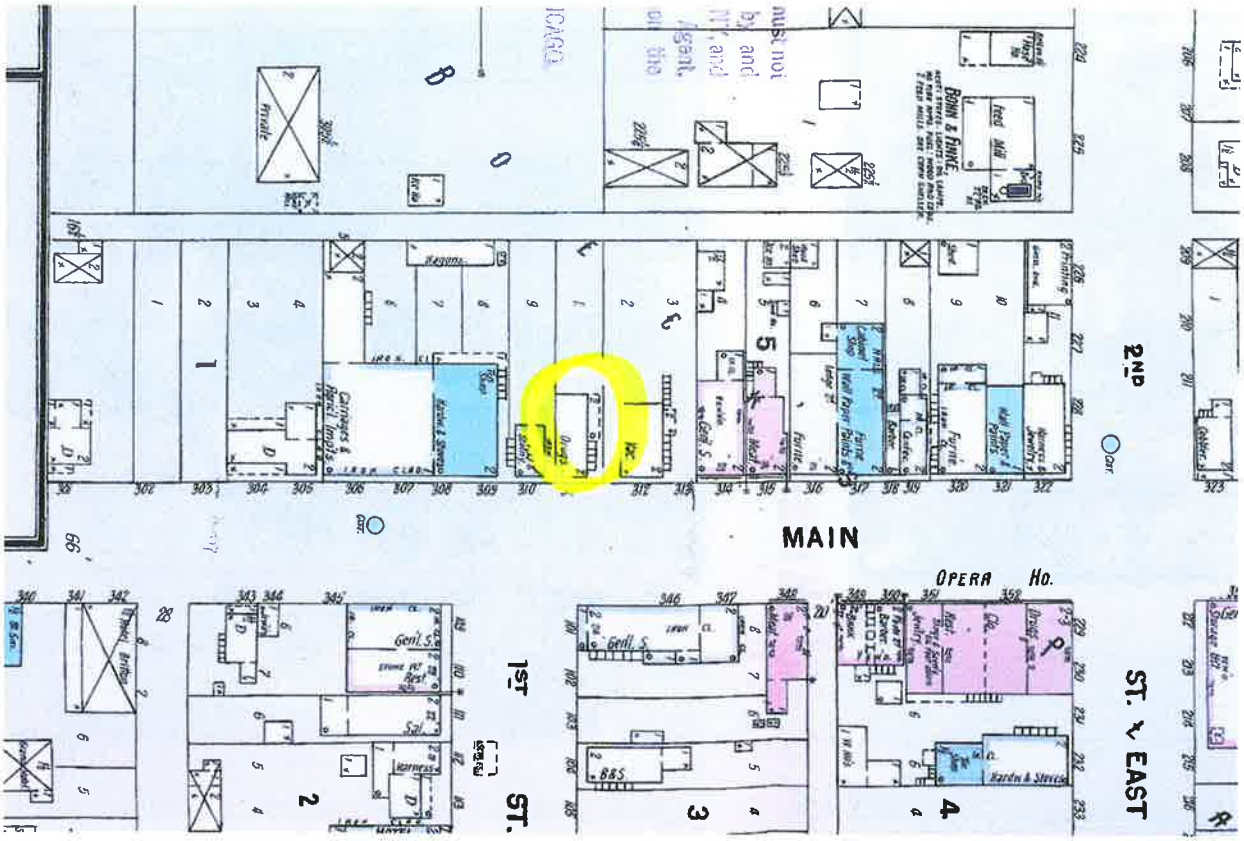
- Velma Schurch sold the building to Mark and Barb Johnson in 2007.

References (all available in the archives of the Mount Horeb Area Historical Society):

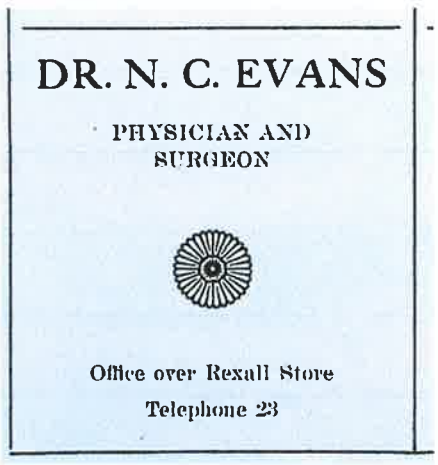
Mount Horeb Presettlement to 1986: A History Celebrating Mount Horeb's Quasquicentennial, 1986
Village of Mount Horeb Tax Rolls, 1899-1990
Town of Blue Mounds Tax Rolls, 1882-1898
Mount Horeb Telephone Directories, 1936-1962
Mount Horeb High School Yearbooks, 1914-1925
Mount Horeb Sanborn Insurance Maps



1894 Mount Horeb Sanborn Insurance Map; drug store at 108 E Main is circled.

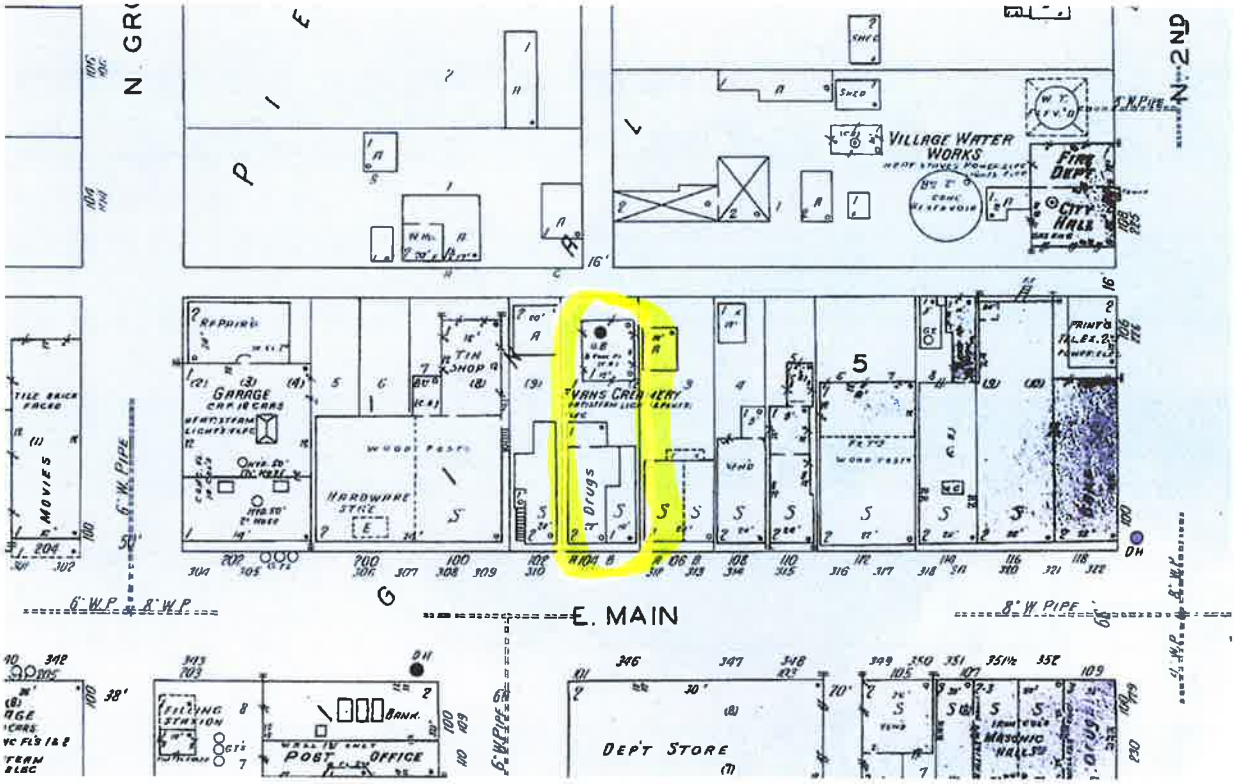


1899 Mount Horeb Sanborn Insurance Map; drug store at 108 E Main is circled.





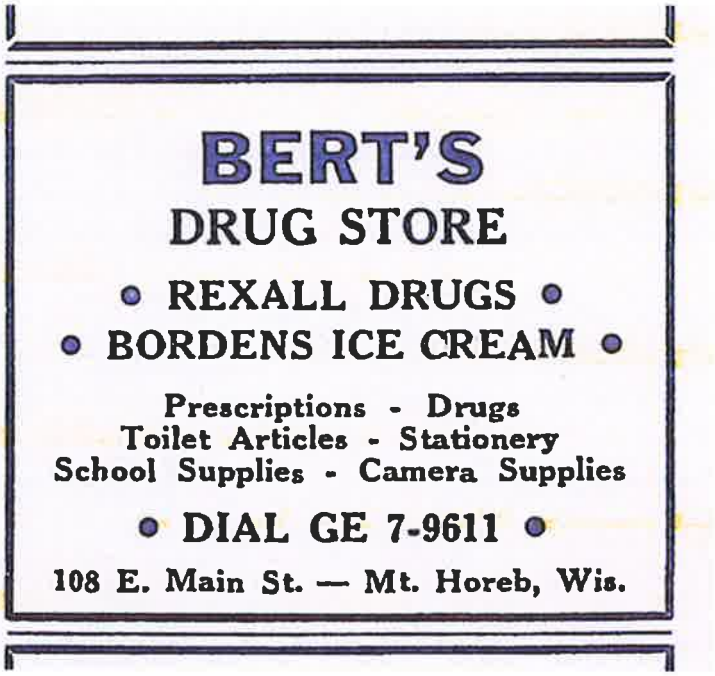
Advertisements in the 1916 Mount Horeb High School yearbook for Dr. Evans' medical services and Milo Evan's pharmacy



1928 Mount Horeb Sanborn Insurance Map; drug store and creamery at 108 E Main is circled.



1936 Mount Horeb telephone directory ad for Bert's Drug Store (106 E Main was later renumbered 108 E Main Street).

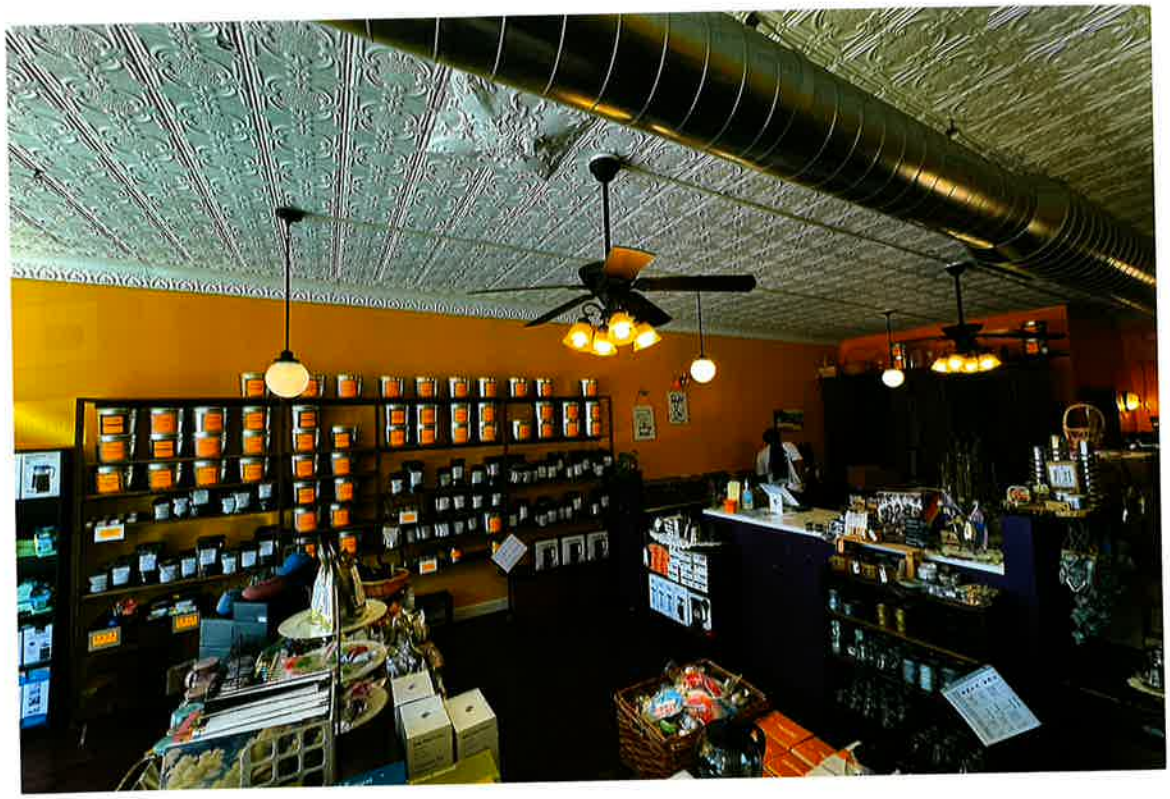


1962 Mount Horeb telephone directory ad for Bert's Drug Store at 108 E Main Street.


telsaan
tea
TEA


telsaan
tea
& WINNOW
TEA
















HOREB