**Agenda**
**Planning Commission**
**Monday, November 17, 2025, 6:00 PM**
**2780 Kelley Parkway, Orono, MN 55356**
952-249-4600 /oronomn.gov

*Audience Members: Information regarding each of the agenda items is available on the city website under meetings and in the public packet located in the lobby near the entrance. Applicants will be asked to move to the lectern to answer questions after staff presents the application. The Planning Commission is an advisory body to the City Council. If action is taken on any items on this agenda, they will be scheduled for an upcoming City Council meeting. A quorum of the City Council may be in attendance of a Planning Commission meeting to hear comments made, though no action or deliberation of the Council will occur.*

1. **Call to Order**

2. **Pledge of Allegiance**

3. **Approval of Agenda**

4. **Approval of Minutes**
   - 4.1. Planning Commission Minutes of October 20, 2025

5. **Public Hearings**
   - 5.1. LA25-000033, Hennepin County, 3700 North Shore Drive (â€œNorth Arm Public Boat Launchâ€), Vacation, Variance, Conditional Use Permit and Interim Use Permit (Laura Oakden)
   - 5.2. LA25-000047, Brian Peters, 1978 Shadywood Road, Lake Setback and Average Lakeshore Setback Variances (Staff: Melanie Curtis)
   - 5.3. LA25-000048, Hoxie Homes, 755 Tonkawa Rd, Variance (Matthew Karney)
   - 5.4. LA25-000049, O2 Design o/b/o Stephen & Stacey Stenehjem, 1450 Bracketts Point Road, CUP: Retaining Wall (Staff: Melanie Curtis)
   - 5.5. LA25-000051, Ungerman Inc., 4680 North Shore Dr, Variance (Matthew Karney)

6. **New Business**
   - 6.1. Chair Appointment Discussion
   - 6.2. LA25-000044, Scott England o/b/o Barbara Lupient, 3220 Wayzata Blvd W,Â  Sketch Plan (Laura Oakden)

7. **Adjournment**

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 4.1

**Title:** Planning Commission Minutes of October 20, 2025

**Presenter:** Laura Oakden, Community Development Director

**Section:** Approval of Minutes

1. **Purpose:**
   Approve the Planning Commission Minutes

2. **Planning Commission Action Requested:**
   Approve the Planning Commission Regular Minutes of October 20, 2025

**Exhibits**

10.20.2025 Planning Commission Minutes

Minutes
Planning Commission Regular Meeting
Monday, October 20, 2025, 6:00 PM
City Council Chambers 2780 Kelley Parkway, Orono, MN 55356

Chair Bollis called the meeting to order at 6:00 p.m., followed by the Pledge of Allegiance.

## 1. ROLL CALL

Orono Planning Commission members present: Chair Chris Bollis, Commissioners Jon Ressler, Thomas Brandabur, Andrew Jarnot, Kelly Prchal, Sam Tift, and Shane Weltzin. Absent: None.

Staff present: Community Development Director Laura Oakden, City Planner Melanie Curtis, and City Planner Matthew Karney.

## 2. PLEDGE OF ALLEGIANCE

## 3. APPROVAL OF AGENDA

**Bollis moved, Brandabur seconded, to approve the Agenda with Item 6 Other Items moved to before Item 5 Public Hearings. VOTE: Ayes 7, Nays 0.**

## 4. APPROVAL OF PLANNING COMMISSION MEETING MINUTES OF SEPTEMBER 15, 2025

**Prchal moved, Jarnot seconded, to approve the minutes of the Orono Planning Commission meeting of September 15, 2025. VOTE: Ayes 7, Nays 0.**

## 6. OTHER ITEMS

Community Development Director Oakden updated the Planning Commission on actions of the City Council on their recommendations, including one not yet concluded. The Planning Commission asked to have Other Items also be used for members of the public to address the Commission on items not on the agenda.

Gabriel Jabbor, 985 Tonakawa Rd., provided comments.

## 5. PUBLIC HEARINGS

### 5.1. LA25-000041, STONEWOOD LLC O/B/O WYATT & NICOLE PANNHOFF, 850 WINDJAMMER LANE, ALS VARIANCE

The Planning Commission is requested to review the Staff report, receive a presentation, and discuss and approve an Average Lakeshore Setback variance to construct a new home in place of an existing home. The proposed home improves the lakeshore setbacks while avoiding a steep slope and tree removal.

The Planning Commission discussed the item and asked questions of staff and a representative of the applicant, Sven Gustafson, Stonewood LLC.

Chair Bollis opened the public hearing at 6:09 p.m.

There were no public comments.

Chair Bollis closed the public hearing at 6:09 p.m.

Commissioners noted the improvement in the placement of the home and the attempt to save trees. Bollis said there was enough space beyond the Average Lakeshore Setback, and the slope is not protected, so he is opposed, although he agreed the proposal is an improvement over the existing home location.

**Brandabur moved, Tift seconded, to approve LA25-000041, 850 Windjammer Lane, Variance. VOTE: Ayes 6, Nays 1 (Bollis).**

5.2 LA25-000042, SCOTT + INGRID ERICKSON, 1840 SHADYWOOD ROAD, HARDCOVER, LOT AREA, AND LOT WIDTH VARIANCES

The Planning Commission is requested to review the Staff report, receive a presentation, and discuss and deny the requested variances to build a new home in place of an existing home. Staff indicated the lot is very long and narrow, which is a practical difficulty, but the City would like to see further reduction of hardcover and suggested reductions in the driveway turnaround and veranda. Staff supported the other requested variances.

The Planning Commission discussed the item and asked questions of staff and the applicant, Scott Erickson, 1840 Shadywood Road, as well as the contractor for the project.

Chair Bollis opened the public hearing at 6:38 p.m.

There were no public comments.

Chair Bollis closed the public hearing at 6:38 p.m.

Several commissioners pointed out that there would be a lot of work and expense to make a small reduction in hardcover on a substandard lot when neighbors appeared to have as much hardcover. Others did not favor a hardcover variance, noting the property owner was planning to keep a free-standing garage and build a house with an attached garage, and there seemed to be ways to reduce the hardcover. It was noted that reducing hardcover also reduces runoff into the lake. Commissioners debated tabling the item or denying it so it can go to the City Council.

**Bollis moved, Ressler seconded, to approve LA25-000042, 1840 Shadywood Road, lot area and lot width variances, but to deny the hardcover variance as applied. VOTE: Ayes 7, Nays 0.**

5.3. LA25-000043, TAKKA DAY DESIGN O/B/O JOHN ERICKSON, 865 PARTENWOOD RD, VARIANCES & CONDITIONAL USE PERMIT

The Planning Commission is requested to review the Staff report, receive a presentation, and discuss and approve the request for variances and a conditional use permit to remodel an existing home and a retaining wall. The plan includes a reduction of more than 1,000 square feet of hardcover in the lakeshore setback.

The Planning Commission discussed the item and asked questions of staff and the applicant, Mark Vincent. Takka Day Design.

Chair Bollis opened the public hearing at 7:20 p.m.

Ann Theisen, 815 Partenwood Road, asked about an easement they have over the driveway and any impact on their hardcover.

Scott Mayer, contractor, spoke about the easement.

Chair Bollis closed the public hearing at 7:27 p.m.

Commissioners appreciated the reduction in hardcover and the thoughtfulness of the plan.

**Ressler moved, Tift seconded, to approve LA25-000043, 865 Partenwood Road, Variances and Conditional Use Permit as applied. VOTE: Ayes 7, Nays 0.**

5.4. LA25-000045, KEEP THE FAITH CONTRACTING O/B/O WAYZATA COUNTRY CLUB, 200WAYZATA BOULEVARD WEST, CONDITIONAL USE PERMIT

The Planning Commission is requested to review the Staff report, receive a presentation, and discuss and approve the request for a conditional use permit to build a new pavilion for events and service access from the putting green. The structure would be significantly farther from the nearest residence than required.

The Planning Commission discussed the item and asked questions of staff and the applicant, Sam Lemke of Keep the Faith Contracting, and Chris Gerardi, the CEO of the Country Club.

Chair Bollis opened the public hearing at 7:38 p.m.

There were no public comments.

Chair Bollis closed the public hearing at 7:38 p.m.

Commissioners noted the proposed structure would be well inside the property site and far from any neighbors.

**Ressler moved, Jarnot seconded, to approve LA25-000045, Wayzata County Club, 200 Wayzata Blvd, Conditional Use Permit. VOTE: Ayes 7, Nays 0.**

5.5. LA25-000039, Â TEXT AMENDMENTS REGARDING RETAINING WALLS

The Planning Commission is requested to review the Staff report, receive a presentation, and discuss and approve the text amendments clarifying requirements for retaining walls.

The Planning Commission discussed the item and asked questions of staff.

Commissioners asked about the requirements for landscaping plans in the amendments and expressed reservations about making the requirements too complicated. They asked for clarification on restoration of areas that are disturbed during the construction of a wall and the types of vegetation allowed, and suggested revisions to sections dealing with restoration plantings and wall screening plantings.

**Weltzin moved, Prchal seconded, to approve LA25-000039, Text Amendments Regarding Retaining Walls with recommended language revisions regarding landscaping. VOTE: Ayes 6, Nays 1 (Bollis).**

## 6. OTHER ITEMS

*This item was moved ahead on the agenda.*

## 7. ADJOURNMENT

**Tift moved, Weltzin seconded, to adjourn the Planning Commission Meeting at 8:58 p.m. to November 17, 2025. VOTE: Ayes 7, Nays 0.**

**ATTEST:**

_____
Christopher Bollis, Chair

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 5.1

**Title:** LA25-000033, Hennepin County, 3700 North Shore Drive ("North Arm Public Boat Launch"), Vacation, Variance, Conditional Use Permit and Interim Use Permit (Laura Oakden)

**Presenter:** Laura Oakden, Community Development Director

**Section:** Public Hearings

1. **Purpose:**
The applicant is requesting City approval to redesign the County-owned North Arm Public Boat Launch. The redesign includes requests for the following:
1. Vacation of public right-of-way for the eastern 20 feet of Part of Cherry Ave and Alley;
2. Variances for total hardcover, hardcover within 75-feet of the OHWL, and building and structure setback within 75-feet of the OHWL;
3. Conditional Use Permit to reconstruct a seawall; and
4. Interim Use Permit to allow grading over 10 cubic yards within75-feet of the OHWL.

2. **MN§15.99 Application Deadline:**
The application was made complete on September 22, 2025. An administrative extension was issues that results in a 120 day review period deadline on January 20, 2026.

3. **Background:**
The North Arm Boat Landing is located near the intersection of Shadywood Road (CSAH 19) and North Shore Drive (CSAH 51) at 3700 North Shore Drive. The property was created through the placement of fill in the 1960s with approximately 500 linear feet of shoreline on Lake Minnetonka and has been used as a Hennepin County-managed public boat access since that time. The ±1.58-acre property is located in the LR-1C, One Family Lakeshore Residential zoning district; its use as a public boat access is legally nonconforming as it existed prior to the adoption of the City's zoning regulations in 1975. Undeveloped, platted rights-of-way bisect the parcel.

The County's plan is a reinvestment in the site to promote safety, accessibility and environmental stewardship. The project scope includes the following:
- Reconstruction of the parking lot area and boat launch,
- Creation of new fishing areas and walking paths,
- Improvement of the decontamination areas and installation of a shade structure to support the AIS inspection program,
- Installation of a new accessibility lift for ADA lake access,
- Reorientation of the refuse containers to better support fishing activities,
- Improve the overall stormwater management for the site, and
- Removal of invasive vegetation and establish native planting areas including new screening between the site and the abutting residential areas.

4. **Public Comment:**
Comments from the public have been received, and are included as exhibits in the packet. The comments or questions received are generally regarding the site design, users of the site, enforcement of the activities on the site, lighting, noise and the plan for overall future maintenance

of the site.

5. **Staff Recommendation:**
Staff recommends approval of the application as applied, conditioned on the following:
1. Hennepin County must obtain permits and approvals from other government agencies (MCWD, DNR, LMCD, and Met Council); and
2. A Notice of Decision from Minnehaha Creek Watershed District to address the wetland regulations must be provided to the City before this application proceeds to the City Council for review.
3. Efforts should be made to incorporate a natural shoreline around the property where possible as to not limit use of the site for the public.

6. **Planning Commission Action Requested:**
The Planning Commission should review the application and make a recommendation to the City Council.

**Exhibits**

Ex A. Staff Report LA25-000033, (3700 North Shore Dr) North Arm Boat Access
Ex B. Land Use Application
Ex C. Narrative
Ex D. Governing Regulations and Practical Difficulties
Ex E. Existing Conditions Survey
Ex F. Site Plan (10-27-2025)
Ex G. Grading Plan (10-27-2025)
Ex H. Landscape Plan (10-27-2025)
Ex I. Photometric Plan (DRAFT)
Ex J. Site Trees (10-27-2025)
Ex K Vacation Exhibit, Lake Access Map and Easements
Ex L. Site Photos (Historic and Current)
Ex M. ADA Lift Detail
Ex N. Stormwater Plan
Ex O. Maneuverability and Parking Plan
Ex P. Orono PD Comments and Response
Ex Q. MCWD Incomplet Letter, Stormwater, Wetland and Geotech Reports
Ex R. DNR Vacation and Site Comments
Ex S. LMCD Permitting Comments
Ex T. Lake Minnetonka Association Comments
Ex U. Henn Co Sheriff 4.16.25
Ex V Herman Public Comments
Ex W Jabbour Public Comments
Ex X. Niccum Letter
Ex Y. Vacation Notice and Comments
Ex Z. Mailing Map, List and Extention

Date Application Received: 07/23/2025
Date Application Considered as Complete: 09/22/2025
120-Day Review Period Expires: 01/20/2026

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Laura Oakden, Community Development Director

**Date:** 17 November 2025

**Subject:** LA25-000033, Hennepin County, 3700 North Shore Drive ("North Arm Public Boat Launch")
Public Hearing: Vacation, Variance, Conditional Use Permit and Interim Use Permit

***Application Summary:*** The applicant is requesting City approval to redesign the County-owned North Arm Public Boat Launch. The redesign includes requests for the following:

1. **Vacation** of public right-of-way for the eastern 20 feet of Part of Cherry Ave and Alley;
2. **Variances** for total hardcover, hardcover within 75-feet of the OHWL, and building and structure setback within 75-feet of the OHWL;
3. **Conditional Use Permit** to reconstruct a seawall; and
4. **Interim Use Permit** to allow grading over 10 cubic yards within75-feet of the OHWL.

***Staff Recommendation:*** Planning Department Staff recommends approval.

**Background**

The North Arm Boat Landing is located near the intersection of Shadywood Road (CSAH 19) and North Shore Drive (CSAH 51) at 3700 North Shore Drive. The man-made property was created through the placement of fill in the 1960s with approximately 500 linear feet of shoreline on Lake Minnetonka and has been used as a Hennepin County-managed public boat access since that time. The ±1.58-acre property is located in the *LR-1C, One Family Lakeshore Residential* zoning district; its use as a public boat access is legally nonconforming as it existed prior to the adoption of the City's zoning regulations in 1975. Undeveloped, platted rights-of-way bisect the parcel.

The site serves as an public access to Lake Minnetonka with a boat landing and parking along with site amenities which include signage, portable restrooms, foot paths, dumpsters, fencing, fishing areas, benches, and utilities which support Met Council's sanitary sewer and Hennepin County's Aquatic Invasive Species (AIS) programs.

The property's use as a public boat landing requires that the associated improvements are in close proximity to the lake. The majority of the property is located within 75 feet of the ordinary high-water level (OHWL) which is environmentally sensitive and heavily regulated. Orono's Shoreland Regulations are in place to protect natural resources from the negative impacts resulting from intense development.

The LR-1C residential zoning district provides for uses such as medium-density residential development, limited agricultural activity, and other compatible uses. According to Orono's Comprehensive Plan, the property's existing land use is classified as: *Park, Recreational and Open Space.* The property's current use as a public boat landing appears to be consistent with the existing and future land use guidance within Orono's Comprehensive Plan.

The County's plan is a reinvestment in the site to promote safety, accessibility and environmental stewardship. The project scope includes the following:

- Reconstruction of the parking lot area and boat launch,

- Creation of new fishing areas and walking paths,
- Improvement of the decontamination areas and installation of a shade structure to support the AIS inspection program,
- Installation of a new accessibility lift for ADA lake access,
- Reorientation of the refuse containers to better support fishing activities,
- Improve the overall stormwater management for the site, and
- Removal of invasive vegetation and establish native planting areas including new screening between the site and the abutting residential areas.

**Wetlands**

According to Hennepin County's Natural Resources Map, there is a potential wetland shown along the western lakeshore side of the property. As the property is the result of placement of a large amount of fill brought in during the 1960s, the applicant indicated that it's likely this wetland is not a protected wetland subject to regulation under the Wetland Conservation Act (WCA). The Minnehaha Creek Watershed District (MCWD) requested the applicant provide documentation to support their assertion that the wetland is incidental, not subject to WCA and therefore does not have any limitations on setbacks, filling, etc. However, if the MCWD determines that this wetland qualifies as a protected wetland, then additional information and approvals may be required.

*A Notice of Decision (NOD) from MCWD must be submitted to the City before this application proceeds to the City Council for review.*

**LOT ANALYSIS**

**Section 6.12.1550 – Lot Area/Width:**

| LR-1C | Lot Area | Lot Width |
|---|---|---|
| Required | 21,780 s.f. (0.5 acres) | 100' |
| Actual | 81,599 s.f. (1.87 acre) | ±500' |

**Section 6.12.6240– Structural Building Coverage:**

| Total Lot Area | Total Structural Coverage |
|---|---|
| 81,599 s.f. (1.87 acre) | Allowed: 16,319 s.f. (20%)<br>Proposed: 105 s.f. (0.1%) * |

*AIS Decontamination Shed 8'x10' and AIS Inspection Shed 5'x5'

**Section 6.12.9210 and 6.12.9110– Hardcover Calculations:**

| Stormwater Overlay District Tier | Total Area in Zone | Allowed Hardcover | Existing Hardcover | Proposed Hardcover | |
|---|---|---|---|---|---|
| Tier 1 | 81,599 s.f | 20,399 s.f. (25 %) | 57,495 s.f. (70.4%) | **Total improved area: 64,896 s.f. (79.5%)**<br>-Permeable: 29,408 s.f. (36%)<br>-Impermeable: 34,194 s.f. (43%) | **Within the 75 foot Lakeyard**<br>- Permeable: 10,572<br>- Impermeable: 14,267 |

**Of the 64,896 square feet of proposed hardcover, 29,408 square feet will be comprised of pervious materials. The applicant is proposing a pervous grid for the parking stall portion of the parking area which will be comprised of rock and sand drainage areas. The proposed bituminous and concrete areas will make up 34,194 square feet (43%) of the site.*

**Site Plan Summary:**

Parking. One of the primary functions of the site is a surface parking lot to support the lake access boat launch. Currently the site contains 48 standard (passenger vehicle) parking stalls, 5 accessible stalls, and 14 boat trailer parking stalls resulting in 67 total parking stalls for the site.

The proposed plan indicates 64 total stalls made up of 18 standards parking stalls, 5 accessible stalls, and 41 boat and trailer parking spaces. The proposed site plan reflects a 3 fewer parking stalls overall but increases the boat trailer spaces by an additional 27 stalls. The applicant has noted that the new design should be more functional. Additionally, the parking stalls will be constructed with a TrueGrid System. This is a grid system that will hold rocks in packet to allow parking and walking on, while operating as a stormwater management system for the site. The water is able to pass through the rocks into sand and drain tile. This facilitates filtering of the stormwater by detaining the water under the surface.

Additionally, as part of the parking plan, a new accessibility lift is proposed on the site to facilitate ADA access to Lake Minnetonka. The lift in located in the northwest corner of the site and utilized a parking stall for loading and unloading patron into boat and trailers. The county has partners with Wheelchairs and Walleyes to facilitate and promote ADA access for Lake Minnetonka.

*Staff finds the new parking configuration with the additional trailer parking spaces will improve the maneuverability, safety, and use of the site. The additional amenities with the design of parking areas that incorporate stormwater management and ADA accessibility improve the functionality of the site. Planning Commission should request additional testimony from the application relating to the fluctuating parking demands on the site and provide plans for their enforcement of the parking on site.*

Circulation. Traffic circulation systems shall be designed to accommodate anticipated traffic demands. Vehicular traffic generated by industrial (commercial/barge) uses shall be channeled and controlled in a manner which will avoid congestion or interference with other vehicular transportation systems and pedestrians and which will avoid creating traffic hazards and excessive traffic. *A traffic circulation and maneuverability plan was originally provided when the applicant was including a vertical access lift in the scope of the project. The vertical access lift has been removed from project which lowers the traffic safety and congestion concerns for the site. Staff finds the layout of the proposed plan to be reasonable and should adequately support functional traffic circulation.*

Lighting. Any lighting used to illuminate an off-street parking area shall be hooded and so arranged as to reflect the light away from adjoining property, abutting residential uses, and public rights-of-way. The applicant submitted a lighting plan that shows pole lights around the parking area and fishing piers. The applicant notes that lighting will be "kept to a minimum". The applicant received input from Starry Skies North on ways to reduce light pollution. A total of five, single fixtured, 20 foot tall light poles will be installed. Additionally, five light bollards will be placed along the northern fishing area. Lights will automatically turn on one hour before sunset, dim to half intensity after 10 PM, and turn off at sunrise. A warmer color temperature lighting will be used throughout the site. These lights will be downcast and screened. *It is important for the safety and maneuverability of the site that lighting on the site be provided.*

*Fencing.* The applicant is proposing minimal fencing around the property. Outside of the 75-foot lake yard setback there will be a temporary/seasonal restroom where new fencing will screen the space from being viewed from the lake. Within the 75-foot setback, the fencing is proposed around a variety of utility areas to screen the utility infrastructure from the lake, including around the Met Council's generator.

Garbage: The site currently has a dumpster that is managed and monitored by the County (applicant). The proposed plan will not include a dumpster due to the gross misuse of the existing dumpster. Under the new redesign of the project, the County will encourage users to use the 'pack it in, pack it out' method of waste disposal. Smaller waste and recycling receptacles will be provided at the fishing area.

Signage: Currently, there are directional and regulation signs placed around the site. The applicant proposes to update the signage around the site. This includes new directional signage, information for a new ADA lift, parking information, AIS information, and ramp and fishing information as well. Additionally, the County is proposing to install educational signage regarding the native vegetation and general information about the lake.

Landscaping: There is existing vegetation along the western side of the property which is comprised up of a mix of trees and plantings creating some screening of residential properties. Additionally, there is a mix of mixed height grasses along the County right-of-way and eastern side of the property. Many of the plants in this area are not native or are invasive. *Efforts should be made to incorporate a natural shoreline around the property where possible.*

The applicant is proposing landscaping designed around sustainability and ease of maintenance. Pollinator-friendly "bee lawns" will surround both sides of the site's entrance. A strip of prairie vegetation will run adjacent to County Road 51 and trees, shrubs, and perennials will line the water's edge. Existing invasive trees and shrubs will be cleared and grubbed. The tree buffer along the western edge of the site will be restored. The County's forestry department will assist with the selection of appropriate trees to plant for the buffer restoration.

Water Access (motorized and nonmotorized): The site is currently used as a public boat launch. The County does not regulate the users of the site. This can include launching a variety of motorized boats including recreational boats, fishing boats, sport boats, jet skis and commercial/industrial boats such as barges.

The redesign proposal identifies a goal of making the lake more accessible to all user types. Part of the project includes widening and reorienting the boat launch to make launching easier for all users of the lake. This will allow new dock configuration and stairs into the lake. Additionally, an accessibility lift is proposed on the site. Another aspect of the site design is to have stairs/steps along the eastern shoreline. These stairs are proposed to support the launching of nonmotorized boat (canoes, kayaks, etc.) away from the standard lake access. New fishing piers are also proposed to provide for safer and easier access for fishing from the site.

**APPLICABLE REGULATIONS:**

**VACATION**

The property is bisected by platted rights of ways. There is 40-foot platted road (Cherry Ave) and a 10-foot Alley. The county is proposing to vacation the 20 western feet of Cherry Ave and the 10-foot Alley. The Planning Commission should review the standards identified in the Governing Regulations Exhibit. n order to vacate following State and City requirements the DNR was notified (notification and response in included as exhibits) and following the Comprehensive Plan, determine if the following are met:

- *Requests for vacation of dedicated lake access right of ways will be evaluated carefully, in particular where equal or better lake accesses are not available nearby. The City will identify and take necessary action to preserve the public's right to use of any such accesses which exist but which may not have been formally dedicated.*
- *The City will endeavor to work with property owners adjacent to lake access corridors to ensure that*

*both the rights of the public and the rights of the private landowner are upheld.*

**VARIANCES**

*Overall site hardcover to exceed 25%* (Sec 6.12.9210)

The site currently has 70% hardcover, made up of bituminous and concrete (57,495 sq.ft). The applicant proposes an approximate 22,000 square foot decrease in bituminous and concrete which results in a total of 35,455 square feet of impervious hardcover on the site. They also propose to add new pervious paver areas for all the parking stalls. The new hardcover proposed on the site (permeable and impermeable) is estimated at 79% (64,896 sq.ft).

*Hardcover within the 75-foot lakeyard* (Sec 6.12.9110)

The majority of the site is within the 75 foot setback from the lake which includes the new parking lot, sidewalk, and structure/building improvement. There is currently existing hardcover within the 75-foot lakeshore setback that is made up all impermeable areas. The proposal results in approximately 24,839 square feet of total hardcover in the 75-foot setback including 10,572 square feet of "permeable" hardcover areas, and 14,267 bituminous/concrete "impermeable" areas.

*Buildings and structures within the 75-foot lake setback* (including a 5'x5' AIS Inspection Canopy, an 8'x10' AIS Decontamination Shed, Signs, fencing, and lighting) (Sec 6.12.6240)

Most of the improvements on the site are within the 75' lake setback including new parking lot, sidewalk, and accessory structures. The applicant plans to replace the existing dumpster with new trash containers oriented towards the fishing area, screening/fencing around the port-a-potty areas, screening/fencing around other utilities on the site, a new canopy area for an AIS inspector, and a new shed to support the AIS decontamination area. Additionally, the lighting and the signs on the property are proposed to be upgraded.

**Conditional Use Permit** *Foodway - Shoreline Management/Seawall* (Sec 6.12.4930)

New steps along the east side of the shoreline are proposed to protect and preserve the shoreline (from erosion) and allow easier access for fishing and nonmotorized boats to access the water. Additionally, the site plan shows new fishing piers protruding into the water beyond the existing shoreline. The vertical nature of the new stairs and fishing piers functions as a seawall along the east side of the site. Additionally, the new orientation of the lake access boat launch will require construction in the floodplain requiring a conditional use permit.

**Interim Use Permit** *Grading over 10 CY within the Shoreland Setback (6.12.9420)*

An Interim Use Permit (IUP) is required when substantial land alterations are proposed that are not associated with a construction/building permit. For lakeshore lots, a project that disturbs over 10 cubic yards of material requires an IUP. The property was created in the 1960s by placing an accumulation of fill. One major component of the proposed project is to improve the stormwater management for the site. The applicant proposes to construct a permeable parking area that will filter the stormwater from the site before reaching Lake Minnetonka. The project is anticipated to alter the soil for the overall site on the site by cutting ±1,060 cubic yards of material and filling approximately 311 cubic yards. The majority of this work will be in the 75-foot lakeshore setback. Within the 75 foot lakeshore it is estimates to cut roughly 547 CY and using roughly 208 CY of full resulting in a new reduction of 339 CY from the area.

**STAFF ANALYSIS:**

**VACATION**

The right-of-way corridors addressed in this application have *not* been identified as lake access points within

the Comprehensive Plan. The applicant is proposing to vacate the eastern 20 feet of the unimproved Cherry Avenue and a 10-foot wide alley that cuts through the property. The remaining western 20 feet of the unimproved Cherry Avenue would remain as right-of-way as it serves the Met Council's utility infrastructure on site.

The Comp Plan identifies a lake access point approximately 200 feet to the west of the property on North Arm (Lake Access Point #18). There is a second lake access approximately 1,200 feet to the west of the property on North Arm (Lake Access Point #19). Additionally, there is a public boat launch ±0.5 mile east on Maxwell Bay managed by the DNR.

The challenge with vacating rights-of-way is that vacation is final. Should the public or the City have access or utility needs in the future, the cost to taxpayers to reacquire the property will be at a premium. For this reason, vacation reduces options for the City in the future. The partial rights-of-way of Cherry Avenue and the alley within the property do not serve as a benefit for the city to maintain right-of-way to the public and within the site create a hindrance for the applicant to redevelop the property. The property has operated as a public access since the 1960s and is proposed to maintain is public access by the County as part of this project. A letter from the DNR is included as an Exhibit. The vacation of the identified portions of right-of-way is supported by staff. Following the recommendation by the DNR, the City will retain the public access easement over the right-of-way.

**VARIANCES**

Regarding practical difficulty, Staff finds that there are several challenging issues infringing on the County's ability to improve the site. The lot's depth, the property's orientation along the curved shoreline, the right-of-way, and the low elevation all support granting variances.

The inclusion of the "pervious" areas of hardcover offsets the total proposed hardcover level by ±22,000 square feet, although by definition the overall hardcover of the site is increasing. The stormwater management capabilities of the site are improving with the inclusion of best practices including a infiltration system placed under the parking stalls, filtration circulator and limiting surface water runoff all supporting the reconstructing of the hardcover. The site is a water-oriented use that serves the public. The new accessory structures and buildings are replacement structures or new structures that support services and/or utilities on site. The lighting, landscaping and maneuverability of the site will improve promoting safety and access for the public.

**CONDITIONAL USE PERMIT**

The applicant's plan reflects new lake-perimeter stone steps along the eastern edge of the property. Additionally, new fishing piers are proposed to support greater access to the lake. The new, in-lake improvements are vertical installments which extend beyond the standard rip rap requirements, and are regulated as "seawalls". The site currently has some areas of rip rap, an aging seawall in the channel, and improvements around the boat access to support the public access use. The new and replacement seawall is required to meet the conditional use permit standards and obtain all MCWD and DNR approvals. **Efforts should be made to incorporate a natural shoreline around the property where possible as to not limit use of the site for the public.**

**INTERIM USE PERMIT**

Staff finds the proposed project purpose and scope of the site grading is reasonable. The City Engineer is reviewing the project and any comments will be presented for Council consideration. The project will be reviewed again by the City Engineer at the time of the administrative grading permit.

**SITE PLAN**

The proposed redesign will maintain the existing nonconforming use within the LR-1C District. The project will preserve the existing features of the site. The land is a result of fill created in the 1960s to provide a public access to Lake Minnetonka. The proposed site plan incorporates efforts to conserve energy with auto dim lightings, native plantings to decrease chemical use near the lakeshore, and improvements to the site's stormwater management performance. It is expected that the water-oriented-use of the site requires the creation and maintenance of improvements near the lakeshore.

As designed, the new parking orientation, boat launch, circulation and lighting of the site will promote safety for vehicular circulation and pedestrians as well as improve ADA accessibility throughout the site. The accessory structures and buildings on the site serve the current use of a public boat launch and support additional services for utilities and the AIS program administered by the County. The new landscape and lighting plans should protect abutting residential properties to not create detrimental disturbances for the area.

The redesign will improve the stormwater management within the site by promoting stormwater infiltration before it enters the lake. The regrading of the site will create areas for water storage within the 100-year floodplain; the landscape plan will remove invasive plantings and replacement them with new, native plantings which will protect water quality in this sensitive area. The new landscape and lighting plans should protect abutting residential properties from activities on the site and is not expected to be detrimental to the surrounding area.

**Orono Police Department Comments**
Orono Police Chief Farniok submitted a comment letter responding to an early draft of the proposed site plan. Chief Farniok posed questions about the parking lot design, accessibility, and enforcement of the parking on the site. The applicant has revised the plan and eliminated the originally-proposed vertical lift/barge access from the plan. The County responded with a comment letter to address the Police department's comments included on the PD Exhibit.

**DNR Comments**
The Minnesota Department of Natural Resources has reviewed the vacation request and provided comments, included in the DNR Exhibit. Their analysis indicates the DNR is supportive of the vacation due to the land being owned by another government agency and operates as a public boat launch. The DNR recommends the City retain public access over the rights-of-way which can be accomplished with the project resolution.

Additionally, the applicant is in contact with the DNR on the proposed seawall, fishing piers, and general redevelopment of the site. Staff recommends that the forthcoming comments from the DNR be incorporated in the City's approval of the project.

**MCWD**
The MCWD provided a letter with preliminary comments regarding the project. The MCWD is currently reviewing the project against their Rules for shoreline stabilization, stormwater management, and wetland impacts. The applicant has been working with the MCWD to meet the District's standards. It is anticipated that the application will go before the MCWD board in the first part of 2026 for review.

**LMCD**
The LMCD is reviewing the reconstruction of the boat access/ launch and the new proposed docks. Comments from the LMCD are forthcoming.

**PUBLIC COMMENTS**

Comments from the public have been received, and are included as exhibits in the packet. The comments or questions received are generally regarding the site design, users of the site, enforcement of the activities on the site, lighting, noise and the plan for overall future maintenance of the site.

**Issues for Consideration**

1. *Planning Commission should request additional testimony from the application relating to the fluctuating parking demands on the site and provide plans for their enforcement of the parking on site.*
2. Does the Commission have any concerns with the proposed improvements to the site?
3. The Commission should review the materials for impacts to abutting residential areas and request additional testimony regarding the landscaping and lighting on the site.
4. Are there any issues or concerns with this application?

**Planning Staff Recommendation**

Staff recommends approval of the application as applied, conditioned on the following:

1. Hennepin County must obtain permits and approvals from other government agencies (MCWD, DNR, LMCD, and Met Council); and
2. A Notice of Decision from Minnehaha Creek Watershed District to address the wetland regulations must be provided to the City before this application proceeds to the City Council for review.
3. Efforts should be made to incorporate a natural shoreline around the property where possible as to not limit use of the site for the public.

# Land Use Application Summary

**Application Date:** 07/23/2025

**Address:** 3700 North Shore Drive
Orono, MN 55391

**Parcel Number:** 0811723340061

**Land Use Number:** LA25-000033

**Application Submitted By:** Agent on behalf of property owner

**Owner:**

**Name:** COUNTY OF HENNEPIN
**Address:** 300 S 6TH STREET MC228 MINNEAPOLIS MN 55487

**Applicant:**

**Name:** Nguyen Hoang
**Company:** Hennepin County Facility Services
**Address:** 300 South Sixth Street, A-22
Minneapolis, MN 55487

**Contact Information:**

**Associated Contact:**
**Associated Contact:**
**Associated Contact:**
**Associated Contact:**

**Project Description:** Hennepin County North Arm Public Access

**Land Use Application Type:**

- Amendmend Application ☐
- Appeal of Admin Decision ☐
- Concept Application ☐
- Conditional Use Permit ☐
- Site Plan Application ☐
- Subdivision Application ☐
- Subdivision Exception ☐
- Vacation Application ☑
- Variance Application ☑

**Applicant Signature:**



# Narrative

**To:** Laura Oakden, Community Development Director, City of Orono
**From:** Nguyen 'Guy' Hoang, Project Architect, Hennepin County Facility Services
**Date:** October 27, 2025
**Re:** Hennepin County Lake Minnetonka North Arm Public Access – Revised Narrative

Dear Ms. Oakden,

Hennepin County seeks to modernize the Lake Minnetonka North Arm public access located at 3700 North Shore Drive, Orono, MN. The existing use of the 1.63-acre site as a boat landing, parking, and shore fishing area will remain the same.

Background

Hennepin County has performed lake improvement work on Lake Minnetonka since the 1880's. The county manages two public access points on the lake – one of which is the North Arm public access created circa 1960. Long overdue repairs to critical infrastructure such as parking lot asphalt, boat ramp, and stormwater management system are required to keep the access point operational.



*Historic Photos of North Arm Public Access – Circa 1972 (above)*

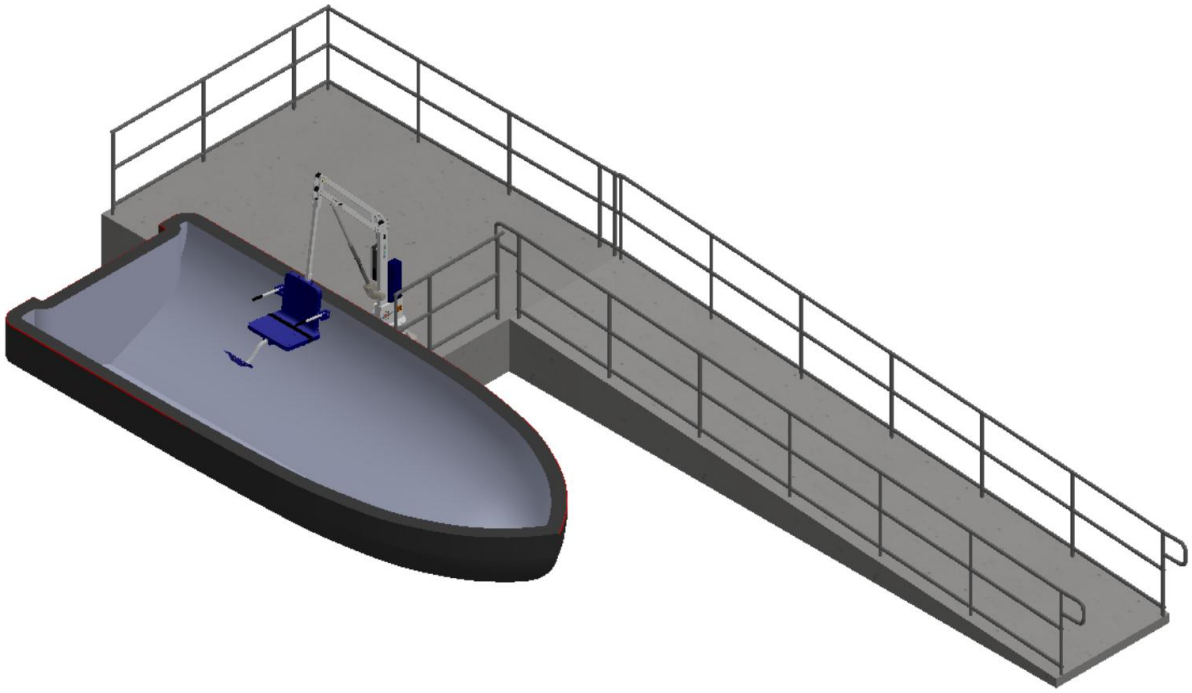
Design Goals

A positive framework for the space was maintained during design to ensure all public interests were served by recognizing the diversity of uses. The design reflects the following county goals:

- Respect and protect all users in an equitable and inclusive manner
- Create a safe space for all user types, e.g. public access, anglers, etc.

- Ability to maintain and keep the space clean by using Hennepin County Sentencing to Service (STS) program level of experience crew and equipment
- Create an open and unrestricted space
- Have a well-designed traffic flow and travel paths
- Follow all Americans with Disabilities Act (ADA) guidelines and requirements
- Create the overall feeling of being safe, comfortable, and relaxing for all users

All site traffic will follow a wide, one-way, bituminous asphalt drive aisle. Vehicle and trailer parking will be on an aggregate-filled, grid-pervious, paver system to allow for storm water management. Trailer parking stalls are wider and longer to accommodate larger vehicles and trailers. Shoreline anglers will be able to enjoy fishing on individual platforms that extend into the water. Non-powered watercraft users will have a dedicated area to launch equipment. Boat ramp users will have two docks and a large concrete ramp that can accommodate two users simultaneously. A partnership between Hennepin County and Wheelchairs & Walleyes will provide an accessible ramp and accessible lift to make fishing and boating accessible to everyone. The Aquatic Invasive Species (AIS) program will expand to include the best modern practices and a dedicated hot-water decontamination system for official Department of Natural Resources (DNR) use only.



*Rendering of Wheelchairs & Walleyes Accessible Ramp and Accessible Lift (above)*

Vertical Access Point

The vertical access point has been omitted from the originally proposed design. Recreational and commercial users continue to share the site to access the lake. The intent of the vertical access point was to provide an option to make it safer and more efficient for all user groups. With or without the vertical

access point, the use of the site remains the same. The county does not regulate or prohibit commercial users. Conservation districts, the DNR, and cities share responsibilities for regulating launch and boat activity on public waters. In lieu of the vertical access point, an accessible picnic and viewing area will be provided.

Landscape

Landscaping was designed around sustainability and ease of maintenance. Bee lawns will surround both sides of the site entrance. A strip of prairie will run adjacent to County Road 51. Trees, shrubs, and perennials will line the water's edge. Existing invasive trees and shrubs will be cleared and grubbed. The tree buffer along the western edge of the site will be restored. The county's forestry department will assist with the selection of appropriate trees to plant for the buffer restoration.

Site Lighting

Lighting will be kept to a minimum. The county received input from Starry Skies North on how to reduce light pollution. A total of five, single fixtured, 20 feet high, light poles will be installed. Additionally, five light bollards will be placed along the northern fishing area. Lights will turn on one hour before sunset, dim to half intensity after 10 PM, and turn off at sunrise. A warmer color temperature will be used throughout the site.

Waste Receptacles

The county will encourage users to use the 'pack it in, pack it out' method of waste disposal. A dumpster will not be provided due to the gross misuse of` the existing dumpster. Waste and recycling receptacles will be provided at the fishing area.

Minnehaha Creek Watershed District (MCWD)

Conversations with the MCWD are ongoing. The accessible fishing platforms will be revised to avoid being considered a retaining wall. The stormwater management design will be adjusted due to the high groundwater. A No-Loss Wetland Conservation Act (WCA) application will be submitted due to the existing incidental wetlands.

Lake Minnetonka Conservation District (LMCD)

Conversations with the LMCD are ongoing. The LMCD Code requires a Municipal Launch License. The licensing process varies, with some being administrative and some requiring a public hearing. The LMCD Legal Counsel will confirm the process required. The county will continue to work with the LMCD to resolve the licensing.

Easement Vacations

As part of the project, the county seeks to vacate the alley that bisects the site and one-half of Cherry Avenue that will accrue and be incorporated into the site. As a public access area, the vacations will not adversely affect the public's use and enjoyment of the site.

Conclusion

Hennepin County's vision for the Lake Minnetonka North Arm Public Access redesign and development prioritizes safety, inclusiveness, and stewardship. Since the size of the site remains the same, the anticipated number of users served remains the same. Thank you for your consideration.

Respectfully submitted,



Nguyen 'Guy' Hoang
Project Architect
Hennepin County Facility Services

# GOVERNING REGULATIONS AND PRACTICAL DIFFICULTY STANDARDS

## VARIANCE ANALYSIS (SECTION 6.12.530)

*In reviewing applications for variance, the Planning Commission shall consider the effect of the proposed variance upon the health, safety and welfare of the community, existing and anticipated traffic conditions, light and air, danger of fire, risk to the public safety, and the effect on values of property in the surrounding area. The Planning Commission shall consider recommending approval for variances from the literal provisions of the Zoning Code in instances where their strict enforcement would cause practical difficulties because of circumstances unique to the individual property under consideration, and shall recommend approval only when it is demonstrated that such actions will be in keeping with the spirit and intent of the Orono Zoning Code.* Economic considerations alone do not constitute practical difficulties. Practical difficulties also include but are not limited to inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. §216C.06, subd. 14, when in harmony with this chapter. The board or the council may not permit as a variance any use that is not permitted under this chapter for property in the zone where the affected person's land is located. The board or council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling.

According to MN §462.357 Subd. 6(2) variances shall only be permitted when:

1. The variance is in harmony with the general intent and purpose of the Ordinance. **The proposed variances are in harmony with the intent of the Ordinance supporting the improvements for the legally nonconforming use. The public boat launch is a legally nonconforming water-oriented use. The improvements proposed to the site for parking, lighting, and accessory structures support the site by improving safety, accessibility and screening on the parcel.**
2. The variance is consistent with the comprehensive plan. **The variances proposed to rebuild the public access boat launch are consistent with the Comprehensive Plan. The Comprehensive Plan identifies the use of this property as Park/Recreation/Open Space which include private and public areas. This site is owned by Hennepin County and operates as a public boat launch to access and support activities for Lake Minnetonka.**
3. The applicant establishes that there are practical difficulties.
    a. The property owner proposes to use the property in a reasonable manner not permitted by the official controls; **The property is a legal nonconforming use. The site has operated as a public boat launch since the 1960s before establishment of the City's current zoning classification of LR-1C. This proposed redesign will maintain this existing use. The improvements proposed are reasonable and support the public boat launch and includes a resign of a public parking lot, ADA improvements, and utilities on the site.**
    b. There are circumstances unique to the property not created by the landowner; **The property's orientation and proximity to the lake is an existing condition, and there is no available land with which to make the property more conforming. The restricted roadway, low topography, lot size and shape, and location are challenges with the parcel. There should be consideration for variances to setback requirements for the property which is nonconforming . The project has been designed with an effort toward promoting stormwater management, improving accessibility and safety without sacrificing functionality;** and

c. The variance will not alter the essential character of the locality. **The variances are requested to permit the reconstruction of a parking lot, new public boat launch, and installation of additional functional features, which is reasonable.**

4. Economic considerations alone do not constitute practical difficulties. **Economic considerations have not been a factor in the variance approval determination.**
5. Practical difficulties also include but are not limited to inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. § 216C.06, subd. 17, when in harmony with Orono City Code Chapter 78. **This condition is not applicable.**
6. The board or the council may not permit as a variance any use that is not permitted under Orono City Code Chapter 78 for property in the zone where the affected person's land is located. **This condition is not applicable, as the property is a legal nonconforming use. The site has operated as a public boat launch since the 1960s before the City Zoning of LR-1C was adopted. This proposed redesign will maintain this existing use.**
7. The board or council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling. **This condition is not applicable.**
8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property. **The property's existing orientation and current use are peculiar to the property. This creates unique difficulties for the site that also apply to other water-oriented uses. The proposed variances are not out of character.**
9. The conditions do not apply generally to other land or structures in the district in which the land is located. **The property's limited land availability, the necessity of the location and orientation of the site with respect to the lake, support the established water-oriented use create difficulties that do not apply other properties in the City.**
10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant. **The site is currently being used for public access to Lake Minnetonka. The redesign supports and maintains the current use. The improvements are necessary to address stormwater, accessibility and safety for the public (users of the property).**
11. The granting of the proposed variance will not in any way impair health, safety, comfort, or morals, or in any other respect be contrary to the intent of this chapter. **Granting the variances in this situation is not contrary to the intent of the zoning chapter.**
12. The granting of such variance will not merely serve as a convenience to the applicants but is necessary to alleviate demonstrable difficulty. **The site is nonconforming as the restrictive 75 lake setback area encumbers majority of the land. The site currently operates as a public access for Lake Minnetonka. The proposed redesign will maintain the current use and improve the stormwater, accessibility and safety. Granting the variances are necessary to maintain the current use of the property.**

The Commission may recommend or the Council may impose conditions in granting variances. Any conditions imposed must be directly related to and must bear a rough proportionality to the impact created by the variance. No variance shall be granted or changed beyond the use permitted in this chapter in the district where such land is located.

**CONDITIONAL USE PERMIT ANALYSIS (SECTION 6.12.4090)**

The Planning Commission may recommend and the Council may grant a Conditional Use Permit (CUP) as the use permit was applied for or in modified form. On the basis of the application and the evidence submitted, the city must find that the proposed use at the proposed location is or will be:

1) Consistent with the community management plan; **the proposed development of the property for public boat landing to support access to Lake Minnetonka is consistent with the community management plan of a Park and Recreational Space.**
2) Compliant with the zoning code, including any conditions imposed on specific uses as required by article V, division 3 of the City Code; **The property will maintain the existing use, which is legally nonconforming, to support a public boat launch.**
3) Adequately served by police, fire, roads, and stormwater management; **The proposed project improves the stormwater management on the site and accessibility with a new parking lot design. This criterion is met.**
4) Provided with an adequate water supply and sewage disposal system; **This criterion is met.**
5) Not expected to generate excessive demand for public services at public cost; **in the opinion of staff this criterion is met. The existing use of a public boat launch is being maintained. Any additional demand for public services from the site will be coordinated with Hennepin County as the property owner.**
6) Compatible with the surrounding area as the area is used both presently and as it is planned to be used in the future; **The property will maintain the existing use which is legally nonconforming to support a public boat launch which is consistent with the existing conditions for the neighborhood and surrounding uses.**
7) Consistent with the character of the surrounding area, unless a change of character is called for in the community management plan; **The property will maintain the existing, legally nonconforming use to support a public boat launch which is consistent with the existing conditions for the neighborhood and surrounding uses. The site is consistent with the community management plan.**
8) Compatible with the character of buildings and site improvements in the surrounding area, unless a change of character is called for in the community management plan; **The proposed seawall along the eastern edge of the parcel is compatible with the community management plan. Efforts should be made to incorporate a natural shoreline around the property where possible as to not limit use of the site for the public.**
9) Not expected to substantially impair the use and enjoyment of the property in the area or have a materially adverse impact on the property values in the area when compared to the impairment or impact of generally permitted uses. **The proposed site improvements require review and approval by other governmental agencies such as MCWD, DNR and LMCD. The proposed seawall will not have adverse impact on the neighborhood.**
10) Provided with screening and buffering adequate to mitigate undesirable views and activities likely to disturb surrounding uses; **The applicant has submitted landscape and lighting plans to mitigate views for the abutting properties and limits activities on the site.**
11) Not create a nuisance which generates smoke, noise, glare, vibration, odors, fumes, dust, electrical interference, general unsightliness, or other means; **The applicants will be required to adhere to the City's erosion control regulations as well as the permitting requirements of the DNR, LMCD, and MCWD. Timely re-vegetation and stabilization will be a requirement of the permitting process. The project should not result in a nuisance condition.**

**12)** Not cause excessive non-residential traffic on residential streets, parking needs that cause a demonstrable inconvenience to adjoining properties, traffic congestion, or unsafe access; **The applicant will be required to keep debris off of the public roadways; a haul route should be provided. The noise resulting from the trucks and equipment moving the material in and around the site should be minimized to the extent possible. The project will be evaluated and monitored by the City to minimize nuisances during the project.**

13) Designed to take into account the natural, scenic, and historic features of the area and to minimize environmental impact; **the overall long-term effect of the project should promote sustainability throughout the site with improved stormwater management, reduction of shoreline impacts and additional native vegetation areas within the site.**

14) All exterior lighting shall be so directed so as not to cast glare toward or onto the public right-of-way or neighboring residential uses or districts; **The proposed lighting plan includes down directed, diffused or shielded/hooded fixtures, timers, ensuring that this criterion will be met.**

**15)** Not detrimental to the public health, public safety, or general welfare. **The project should improve accessibility and safety within site. It will not be detriment to the public health, public safety, or general welfare.**

A CUP may be granted subject to such conditions as the Council may prescribe. Additionally, a CUP shall remain in effect as long as the conditions imposed by the City Council are observed, but nothing in this section shall prevent the city from enacting or amending official controls to change the status of conditional uses.

**INTERIM USE PERMIT ANALYSIS (6.12.9530)**

According to Code, an interim use permit may be granted if the city council determines that the use will comply with the following:

1) The use will meet the general performance standards in section 6.12.4090; **Project has been reviewed against the CUP standards (6.12.4090). The general performance standards are met.**
2) The use is allowed as an interim use in the applicable zoning district; **Grading activities are permitted within the LR-1C Zoning District. This criterion is met.**
3) The use will not delay anticipated development or redevelopment of the site; **The grading activities necessary for future site development. This criterion is met.**
4) The use will not be in conflict with any provisions of the city code on an ongoing basis; **The plan will be reviewed by the City Engineer, MCWD, DNR, and the applicant will be required to follow all governing agency requirements. The applicant will obtain all necessary permits with outside agencies including MPCA, and NPDES permitting. This criterion is met.**
5) The use will not adversely affect the adjacent property, the surrounding neighborhood, or other uses on the property where the use will be located; **The applicant shall ensure the project scope remains within the property limits, the haul route is monitored (and cleaned as often as necessary), and that any adverse impacts are mitigated. This criterion is met.**
6) The use will not impose additional unreasonable costs on the public; **The project will not impose additional costs on the public. This criterion is met.**
7) The date or event that will terminate the use can be identified with certainty; **The applicant has provided a project timeline which will commence in the Spring of 2026 with a goal to be complete in 2027. This criterion is met.**

8) And the applicant agrees in writing to any conditions that the city council deems appropriate for the use, including a requirement for a financial security to ensure removal of all evidence of the use upon termination, and restoration of the site to prior or better conditions. The conditions shall be set forth in a development agreement between the property owner and the city, which agreement shall be recorded with the Hennepin County Recorder or Registrar of Deeds. **Approval of the Interim Use Permit will be memorialized through a resolution that will be recorded against the property. All requirements and conditions will be listed as part of the resolution. This criterion is met.**

**SITE PLAN ANALYSIS (6.12.750)**

Before granting approval of the site plan review, the city council or the planning and zoning coordinator shall determine that the proposal:

1) Is compatible with surrounding land uses; **The current land use (public boat launch) is an existing condition and is a legally nonconforming use . The proposed improvements support the existing use.**
2) Preserves existing unique and natural features of the site and minimizes impacts to wetlands, floodplains, and shoreland areas; **The proposal will preserve and improve the natural features of the parcel by improving the stormwater management, removing invasive plantings, and installing new native landscaping. The existing use as a public access point for Lake Minnetonka will be maintained.**
3) Creates harmonious relationship of buildings and open space with natural site features and with existing and future buildings having a visual relationship of the development; **The site has minimal building and structural improvements. The site supports access and use of Lake Minnetonka for the public. As proposed, the application will provide screening of the site with fencing and new plantings to promote a protect view for portions of the site.**
4) Achieves a safe and efficient vehicular and pedestrian circulation system; **The proposed application will reorient the parking lot and install walking paths for pedestrians. These improvements promote safety for vehicle and pedestrian circulation within the site.**
5) Places no excessive demands on services and infrastructure, including local streets; **The site is accessed off of a County road. It should not create new demands on services from the city. The County is responsible for the maintenance and improvements of the site.**
6) Conforms to the city's plans for parks, streets, and walkways; **No new parks, streets or walkways are proposed outside of the subject parcel. The site supports public access to Lake Minnetonka for a variety of users.**
7) Conforms to the city's community management plan; T**he proposed development improvements of the public boat landing support access to Lake Minnetonka which is consistent with the community management plan for a Park and Recreational Space.**
8) Achieves a maximum of safety and convenience of vehicular and pedestrian movement; **The redesign promotes safety for vehicular and pedestrian access throughout the site.**
9) Incorporates sufficient landscaping to reasonably screen undesirable features and to enhance the image of the development; **The applicant has submitted landscape and lighting plans to mitigate views for the abutting properties and limits activities on the site.**
10) Protects abutting properties and does not create detrimental disturbances to surrounding properties; **The site will be screened from the residential properties to the west with new**

**landscaping. Additionally, fencing is proposed around some of the utility infrastructure to screen from public view. The lighting designed for the site will have a dimming sensor to minimize lighting during night hours.**

11) Conforms to all requirements of this chapter unless a variance has been granted; **A variance analysis has been provided for the proposed project.**
12) Incorporates efforts to conserve energy whenever practical. **The proposed lighting plan and landscaping plan promote energy conservation.**

## VACATION REGULATIONS

→ MN State Statute 412.851 VACATION OF STREETS

The council may by resolution vacate any street, alley, public grounds, public way, or any part thereof, on its own motion or on petition of a majority of the owners of land abutting on the street, alley, public grounds, public way, or part thereof to be vacated. When there has been no petition, the resolution may be adopted only by a vote of four-fifths of all members of the council. No vacation shall be made unless it appears in the interest of the public to do so after a hearing preceded by two weeks' published and posted notice. The council shall cause written notice of the hearing to be mailed to each property owner affected by the proposed vacation at least ten days before the hearing. The notice must contain, at minimum, a copy of the petition or proposed resolution as well as the time, place, and date of the hearing. In addition, if the street, alley, public grounds, public way, or any part thereof terminates at, abuts upon, or is adjacent to any public water, written notice of the petition or proposed resolution must be served by certified mail upon the commissioner of natural resources at least 60 days before the hearing on the matter. The notice to the commissioner of natural resources does not create a right of intervention by the commissioner. At least 15 days prior to convening the hearing required under this section, the council or its designee must consult with the commissioner of natural resources to review the proposed vacation.

The commissioner must evaluate:

1. The proposed vacation and the public benefits to do so;
2. the present and potential use of the land for access to public waters; and
3. how the vacation would impact conservation of natural resources.

The commissioner must advise the city council or its designee accordingly upon the evaluation. After a resolution of vacation is adopted, the clerk shall prepare a notice of completion of the proceedings which shall contain the name of the city, an identification of the vacation, a statement of the time of completion thereof, and a description of the real estate and lands affected thereby. The notice shall be presented to the county auditor who shall enter the same in the transfer records and note upon the instrument, over official signature, the words "entered in the transfer record." The notice shall then be recorded with the county recorder. Any failure to file the notice shall not invalidate any vacation proceedings.

→ MN State Statue 462.358 Subd. 7. Vacation

The governing body of a municipality may vacate any publicly owned utility easement or boulevard reserve or any portion thereof, which are not being used for sewer, drainage, electric, telegraph, telephone, gas and steam purposes or for boulevard reserve purposes, in the same manner as vacation proceedings are conducted for streets, alleys and other public ways under a home rule charter or other provisions of law.

→ Orono City Code. Sec. 78-9. - Vacation of streets, alleys and public grounds.

Vacation of streets, alleys and public grounds shall follow the procedures set forth in this chapter; except that such vacation shall require a petition by a majority of the landowners abutting the

property to be vacated, and a hearing preceded by two weeks' published and posted notice, all as required by Minn. Stat. § 412.851. The council may vacate any publicly owned utility easement or boulevard reserve which is not being used for sewer, drainage, electric, telegraph, and telephone, gas and steam purposes or for boulevard reserve purposes, in the same manner as vacation proceedings are conducted for streets, alleys and other public ways. A boulevard reserve means an easement established adjacent to a dedicated street for the purpose of establishing open space adjacent to the street and which area is designated on the recorded plat as boulevard reserve.

→ Orono's 2020-2040 Comprehensive Plan: Transportation Chapter 4A - Lake access, preservation and management

Orono's lakes provide a significant recreational resource for all Orono residents. This value was long ago realized by City leaders. In order to provide lake access for the general public, as well as to provide for fire department access to the lake as a water source, a number of lake access corridors were created as the shore land developed. These typically are platted, dedicated rights-of-way leading from the local road system to the shoreline, and are commonly from 16' to 66' in width.

These rights-of-way (often referred to as "fire lanes" or "lake access roads") vary considerably in their proximity to traffic, parking availability, proximity to housing, lakeshore conditions, and other factors that effect their recreational value. Some of these corridors have been maintained by the City for local swimming beaches or as winter snowmobile and ice-fishing accesses. Certain accesses have docks for fishing, and some have ramp areas suitable for launching a small boat. However, most do not have designated parking available, and are primarily intended to serve the neighborhood rather than the general public. A number of these access corridors have steep topography, shallow water depths, undesirable lake bottom conditions, and/or dense vegetation and experience little or no usage. Of the City lake accesses shown on Map 4E-2 (Exhibit J), half of those located outside of Big Island are either undeveloped or closed to public use.

→ Orono's 2020-2040 Comprehensive Plan: Chapter 4E Parks, Trails, and Open Spaces

- Orono will maintain Lake Access for all residents. With shore land abutting a dozen separate bays in Lake Minnetonka, Orono has a commitment to maintaining access via the dedicated access corridors. It is the City's intent to permanently retain for public use all existing lake access corridors and fire lanes, regardless of the current level of use or maintenance. (Supports goal 5) To this end, the City will follow these policies:
    - *Requests for vacation of dedicated lake access right of ways will be evaluated carefully, in particular where equal or better lake accesses are not available nearby. The City will identify and take necessary action to preserve the public's right to use of any such accesses which exist but which may not have been formally dedicated.*
    - *The City will endeavor to work with property owners adjacent to lake access corridors to ensure that both the rights of the public and the rights of the private landowner are upheld.*

## LEGAL DESCRIPTION:

Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, Block 2, "Crystal Bay View" Hennepin County, Minnesota (Per. Doc. No. 2147991)

(Abstract Property)

## GENERAL NOTES:

1.) Utility information is from actual field measurements as marked by utility companies or plans furnished by utility and public agencies. Project ticket number: 221572388. Contact Gopher State One Call (Phone: 651-454-0002) for exact field location prior to any excavation. Where additional or more detailed information is required, excavation, and/or a private utility locate request may be necessary.

2.) Number of Regular Parking Spaces: 48
Number of Handicap Parking Spaces: 5
Number of Boat Trailer Parking Spaces: 14
Total Number of Parking Spaces: 67

3.) 100-Year Flood Elevation (Hennepin Countywide FEMA Flood Insurance Study (FIS) dated November 4, 2016) & Ordinary High Water Level (OHWL) were found on the MN DNR Lake Flood Elevations Online map and converted to NAVD88 from NGVD29 using the NGS NCAT coordinate conversion tool.

## LIST OF POSSIBLE ENCHROACHMENTS:

The following list of possible encroachments is only the opinion of this surveyor; should not be interpreted as a legal opinion and should not be interpreted as a complete listing.

Possible encroachments are indicated on Survey with boxed letters as listed below.

- [A] Parking lot and various utilities cross into street on south and westerly property line
- [B] Parking lot crosses into alley
- [C] Concrete boat launch
- [D] Metal Seawall for boat launch and gravel area

## SURFACE AREA CALCULATIONS:

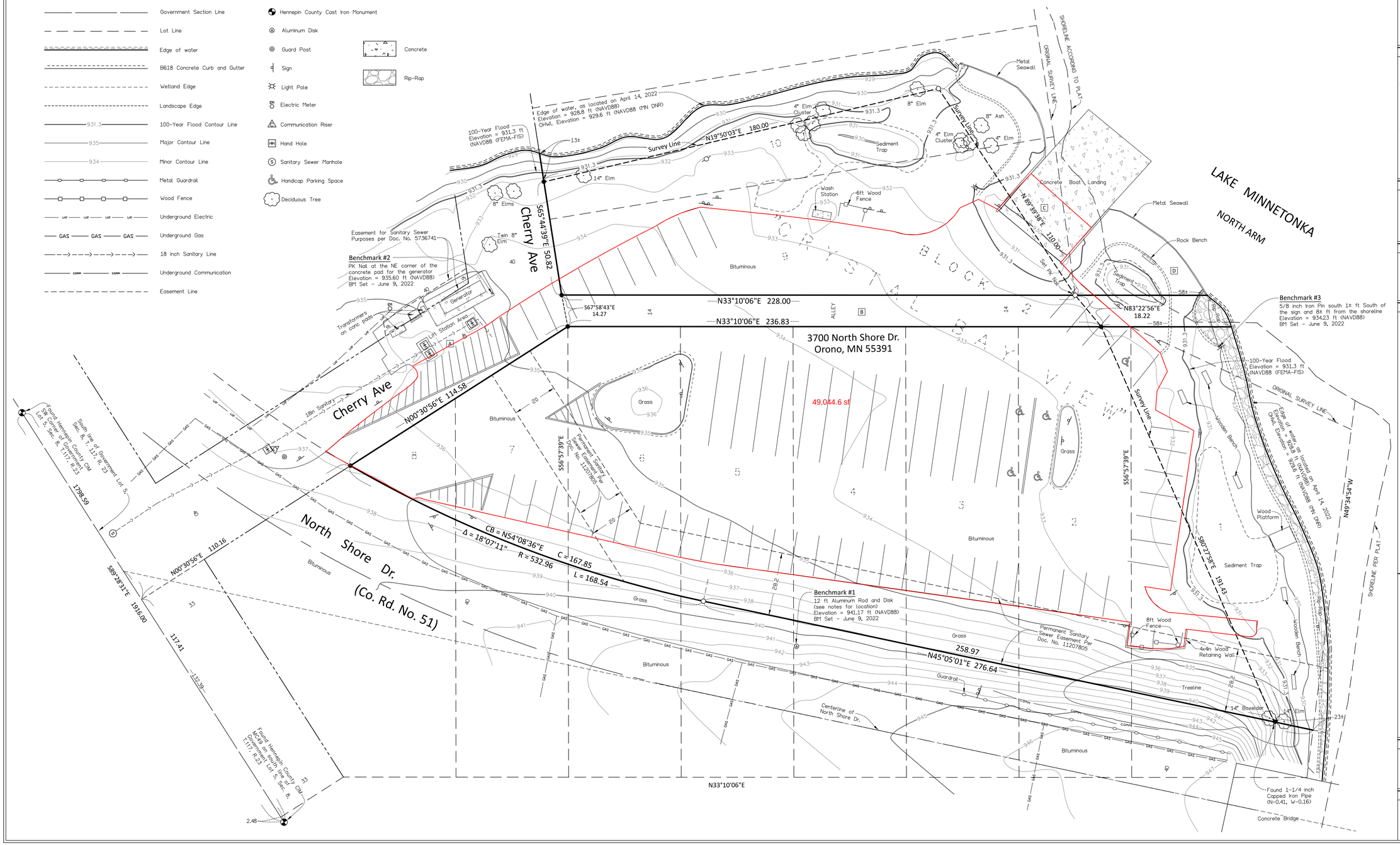
| | | |
|---|---|---|
| East of Alley: | 51,241 sq. ft. | 1.18 acres |
| West of Alley: | 19,719 sq. ft. | 0.45 acres |
| TOTAL AREA: | 70960 sq. ft. | 1.63 acres |

## LEGEND

- Boundary Line
- Survey Line
- Government Section Line
- Lot Line
- Edge of water
- B618 Concrete Curb and Gutter
- Wetland Edge
- Landscape Edge
- 931.3 100-Year Flood Contour Line
- 935 Major Contour Line
- 934 Minor Contour Line
- Metal Guardrail
- Wood Fence
- ue Underground Electric
- GAS Underground Gas
- 18 inch Sanitary Line
- conn Underground Communication
- Easement Line

- Set 1/2 inch capped Iron Pipe with a Plastic Cap Engraved with Minnesota License Number 48177 unless otherwise noted
- Found 1-1/4 inch capped Iron Pipe unless otherwise noted
- Hennepin County Cast Iron Monument
- Aluminum Disk
- Guard Post
- Sign
- Light Pole
- Electric Meter
- Communication Riser
- Hand Hole
- Sanitary Sewer Manhole
- Handicap Parking Space
- Deciduous Tree

- Concrete
- Rip-Rap




BEARINGS SHOWN ON THIS SURVEY ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 117, RANGE 23 AND HAVE AN ASSUMED BEARING OF S89°28'31"E USING HENNEPIN COUNTY GROUND COORDINATE SYSTEM RELATIVE TO NAD83(86).

**Project Name:**

**3700 North Shore Drive Orono, Minnesota**

**Project No.:**

**CSP-1058**

**Professional Services:**


HENNEPIN COUNTY
Resident and Real Estate Services
Survey Division

Suite A-703 300 South 6th Street
Minneapolis, MN 55487


**Professional Signature:**

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2015 Minimum Standard Detail Requirements for Hennepin County Boundary Surveys, and includes items (1,2,3,4,5,7ab,8,9,10b,11b,14,15,19) of Table A thereof. The field work was completed on (April 19, 2022). I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Timothy E. Eklund
License. No. 48177

April 19, 2022
Date

**Quality Control:**

| | |
|---|---|
| JRS, DMP | DD |
| Field Crew | Drawn By |
| T.E | August 1, 2022 |
| Checked By | Review Date |

**Revisions:**

| | |
|---|---|
| May 5, 2024 | Added Sanitary Sewer Easement |

**Disclaimer/Notes:**

Project Benchmarks:

1. 12 ft Aluminum Rod and Disk "SAMS on the grass embankment 11± ft from the edge of North Shore Dr. and 71± ft from the end of the guardrail
   Elevation = 941.17 ft
2. PK Nail at the NE corner of the concrete pad for the generator
   Elevation = 935.60 ft
3. 5/8 inch Iron Pin south 1± ft of the yellow sign and 8± ft from the shoreline
   Elevation = 934.23 ft

(NAVD88 derived using GPS-RTK methods)

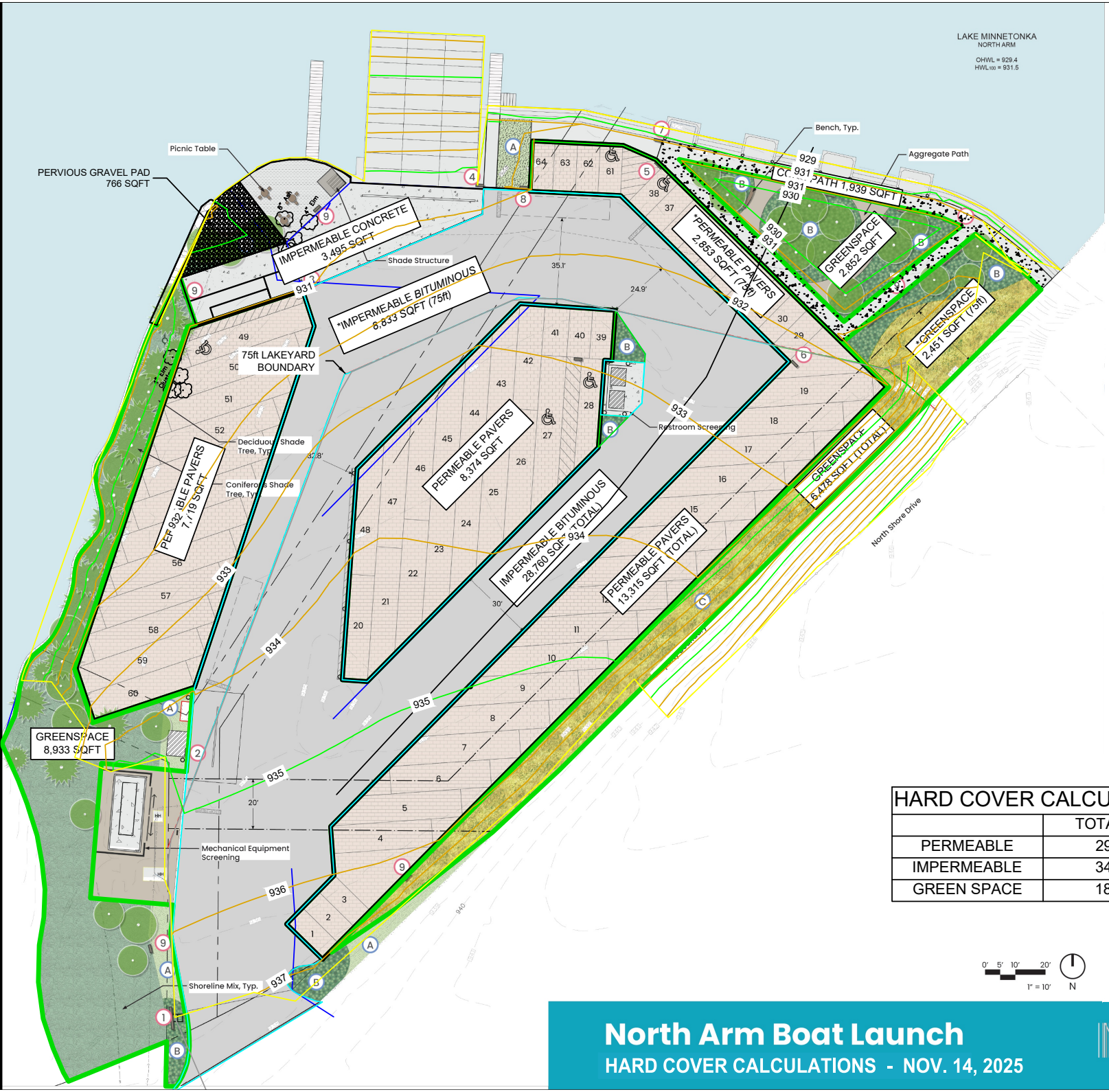
This survey was prepared without the benefit of current title work. Easements, appurtenances and encumbrances may exist in addition to those shown hereon. This Survey is subject to any facts that may be disclosed by a full and accurate title search.

**Sheet Title:**

**BOUNDARY AND TOPOGRAPHIC SURVEY**

**Sheet No.:**

**Sheet 1 of 1**




## Signage

1. Entry Sign
2. Decon Sign
3. ADA Lift Sign (two sided)
4. Ramp Sign (2) (two sided)
5. Parking Sign (double panel)
6. Parking Sign (single panel)
7. Fishing Sign (2)
8. Watersport Sign (two sided)
9. Educational Signage

| HARD COVER CALCULATIONS (SQUARE FEET) | | |
|---|---|---|
| | TOTAL SITE | 75ft LAKEYARD ONLY |
| PERMEABLE | 29,408 | 10,572 |
| IMPERMEABLE | 34,194 | 14,267 |
| GREEN SPACE | 18,263 | 14,236 |

0' 5' 10' 20'
1" = 10'
N

# North Arm Boat Launch

## HARD COVER CALCULATIONS - NOV. 14, 2025

IMO

TUAL-LI collaborative

Hennepin

| SITE HARDCOVER | | |
|---|---|---|
| | EXISTING | PROPOSED |
| GREEN SPACE: | 24064 SF | 16663 SF |
| PERVIOUS PAVERS | 0 SF | 29441 SF |
| IMPERVIOUS GROUND | 57495 SF | BITUMINOUS: 27151 SF |
| | | CONCRETE: 8304 SF |
| SITE TOTAL: | 81559 SF | |

PARKING SPACE SIZES:

| | |
|---|---|
| 1-3: | 9' X 20' |
| 4-19: | 11' X 40' |
| 20-26: | 10' X 42' |
| 27: | 10' X 52' |
| 28: | 10' X 35' |
| 29-38: | 9' X 20' |
| 39-40: | 9' X 20' |
| 41: | 10' X 20' |
| 42-48: | 10' X 42' |
| 49 | 10' X 50' |
| 50-59: | 11' X 50' |
| 60: | 11' X 42' |
| 61-64: | 9' X 20' |

INSPECTION CANOPY
CONCRETE BOAT RAMP 45' X 60'
BOAT DOCK
WATERCRAFT DOCK
CONCRETE PAVING
GRANITE RIP RAP
GRAVEL
STEPS
ACCESSIBILITY LIFT
WATER EDGE
PARKING SIGN
ADA FISHING PIER
PROPOSED OSPREY NEST
LIGHTED FISHING PIERS
GRID PERVIOUS PAVERS
35.1'
PARKING SIGN
24.9'
32.8'
GRANITE EDGING
CONCRETE SIDEWALK
PARKING SIGN
PREPARATION AREA (TYPICAL OF THREE)
PORTABLE RESTROOMS WITH SCREEN
CONCRETE CURB
AIS PREVENTION TOOLS
28.2'
HOT WATER DECONTAMINATION SHED
SANITARY EASEMENT
GRID PERVIOUS PAVERS
CONCRETE SLAB 36' X 20'
30.0'
75' SETBACK LINE FROM SHORE
EXISTING GENERATOR
CONCRETE CURB TO PREVENT ROAD ENCROACHMENT
20.0'
SANITARY FORCEMAIN EASEMENT
ASPHALT
PROPERTY LINE
PROPERTY LINE
ENTRY SIGN

LAKE MINNETONKA
NORTH ARM

OHWL = 929.4
$HWL_{100}$ = 931.5

Northshore Dr

Oct 27, 2025 - 4:40pm
K:\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CAD\DWG\C200 - P03106 NORTH ARM - LAYOUT PLANS.dwg

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

Ⓣ TRASH RECEPTACLE
BENCH: BY OWNER
BOLLARD

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 10/27/2025 | DRAFT NOT FOR CONSTRUCTION |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME: ROBERT C. RUSSEK
LIC. NO.: XXXXX DATE: 10/27/2025

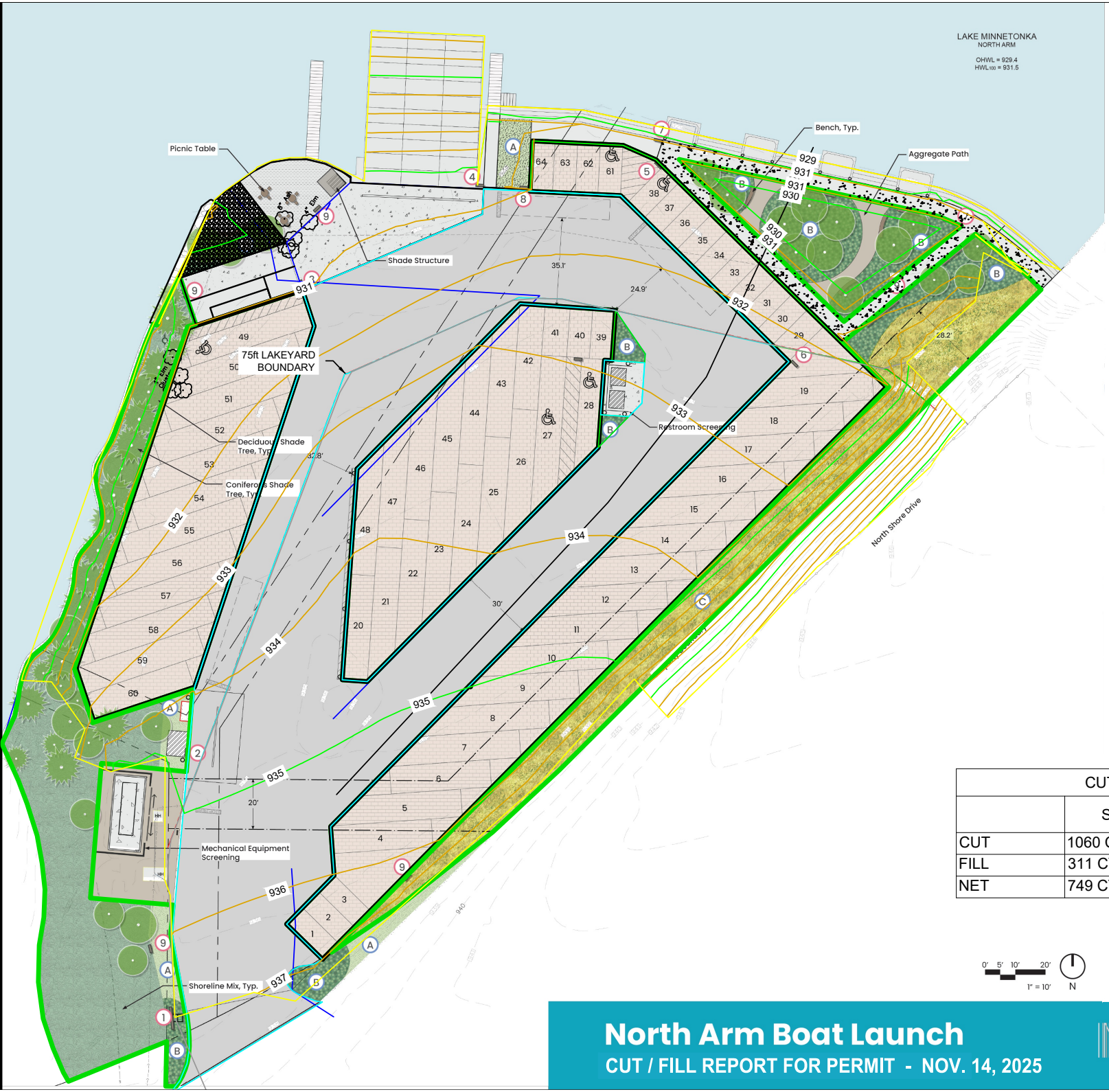
IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| RCR | GRW | SRW |

## SITE PLAN FOR PLANNING COMMISSION REVIEW

P031062406

PROJ.NU...




## Signage

1. Entry Sign
2. Decon Sign
3. ADA Lift Sign (two sided)
4. Ramp Sign (2) (two sided)
5. Parking Sign (double panel)
6. Parking Sign (single panel)
7. Fishing Sign (2)
8. Watersport Sign (two sided)
9. Educational Signage

| CUT/FILL | | | |
|---|---|---|---|
| | SITE | FLOODPLAIN | 75ft LAKE YARD |
| CUT | 1060 CY | 172 CY | 547 CY |
| FILL | 311 CY | 165 CY | 208 CY |
| NET | 749 CY (CUT) | 7 CY (CUT) | 339 CY (CUT) |

0' 5' 10' 20'
1" = 10'
N

# North Arm Boat Launch

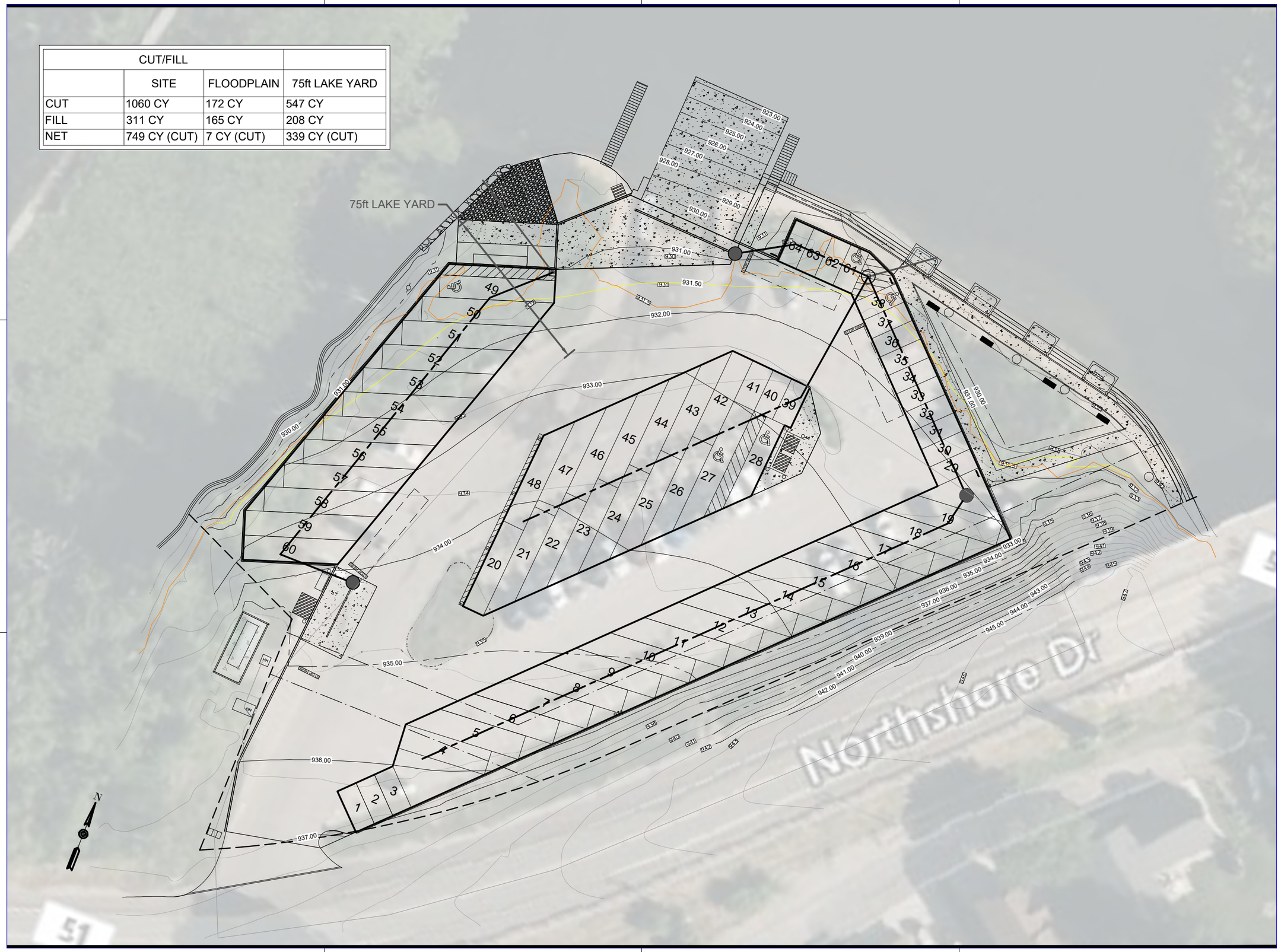
## CUT / FILL REPORT FOR PERMIT - NOV. 14, 2025

IMO

TUAL-LI collaborative

Hennepin 32

| CUT/FILL | | | |
|---|---|---|---|
| | SITE | FLOODPLAIN | 75ft LAKE YARD |
| CUT | 1060 CY | 172 CY | 547 CY |
| FILL | 311 CY | 165 CY | 208 CY |
| NET | 749 CY (CUT) | 7 CY (CUT) | 339 CY (CUT) |





HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 11/14/2025 | DRAFT NOT FOR CONSTRUCTION |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____
PRINTED NAME: _____
LIC. NO.: _____ DATE: _____


IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898


| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| IMO | SRW | SRW |

C300.1
GRADING
CUT/FILL REPORT

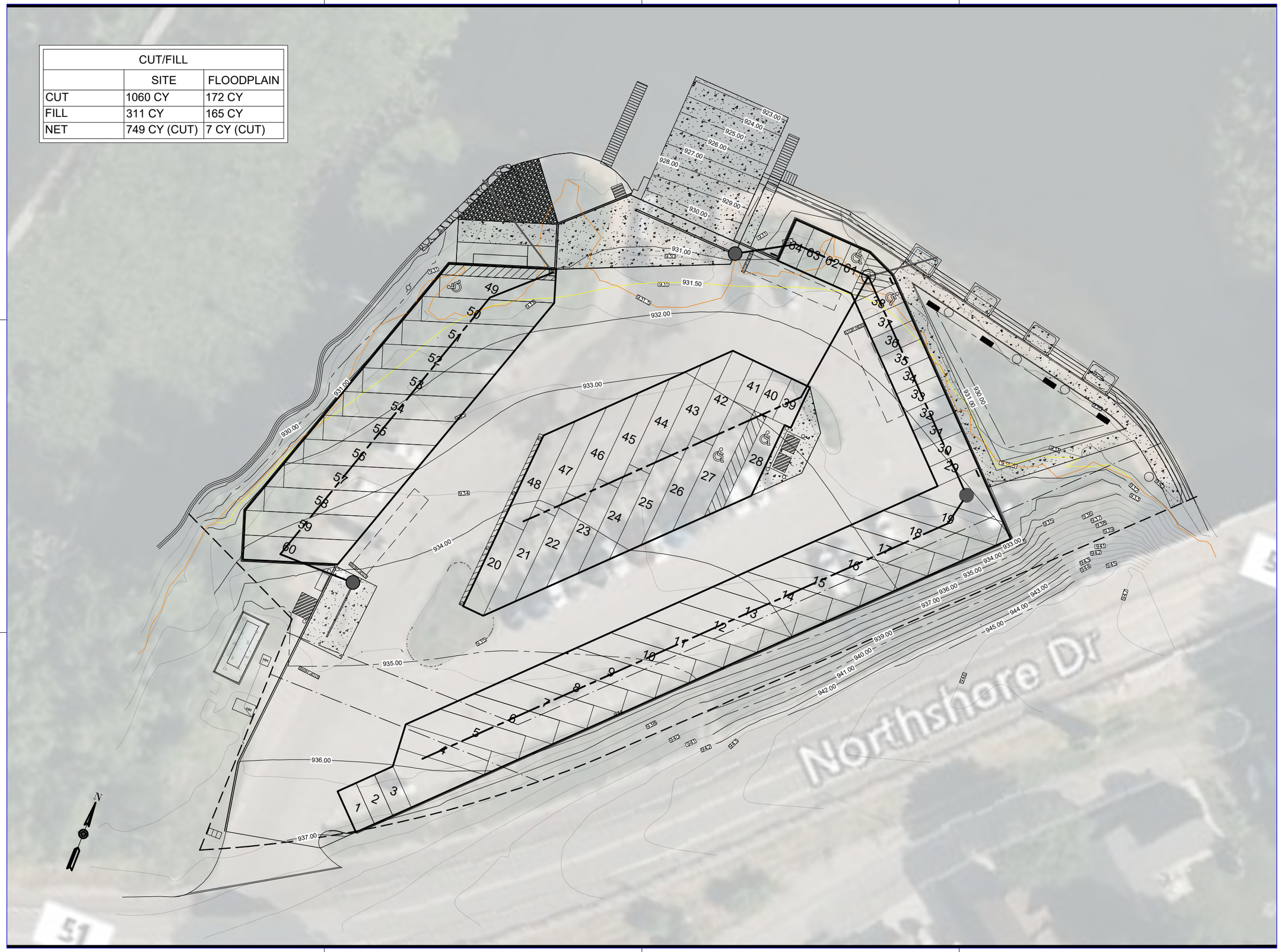
P031062406

PROJ.NU




Nov 14, 2025 - 11:29am
K:\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CAD\DWGs\C300 - P031062406 NORTH ARM - GnP CUTFILL 75FT LAKE YARD.dwg

| CUT/FILL | | |
|---|---|---|
| | SITE | FLOODPLAIN |
| CUT | 1060 CY | 172 CY |
| FILL | 311 CY | 165 CY |
| NET | 749 CY (CUT) | 7 CY (CUT) |





HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

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0 20 40 Feet

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Minnetonka, MN 55343
Off: 952-446-7898


| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| RCR | GRW | SRW |

C300
GRADING

P031062406

PROJ.NU



Oct 27, 2025 - 4:37pm
K:\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CADD\WDs\C300 - P03106 NORTH ARM - GRADING AND PROFILES.dwg

**Lake Minnetonka**
OHWL: 929.4

Shade Structure
Low Seat Wall, Typ.
Artificial Turf
Aggregate
Grove
75' SHORELINE SETBACK
Ornamental Grasses
Planter Edge
Shrubs
Restroom Screening
Perennial Plantings
Shade Tree, Typ.
Prairie, Typ.
Shoreline Mix, Typ.
Shade Tree, Typ.
Property Boundary
Mechanical Equipment Screening
Entry Plantings
Entry Plantings
N. Shore Drive

0' 5' 10' 20'
1" = 10'
N

# Flow

1. Entry Sign
2. Decon Sign
3. ADA Lift Sign (two sided)
4. Ramp Sign (2) (two sided)
5. Parking Sign (double panel)
6. Parking Sign (single panel)
7. Fishing Sign (2)
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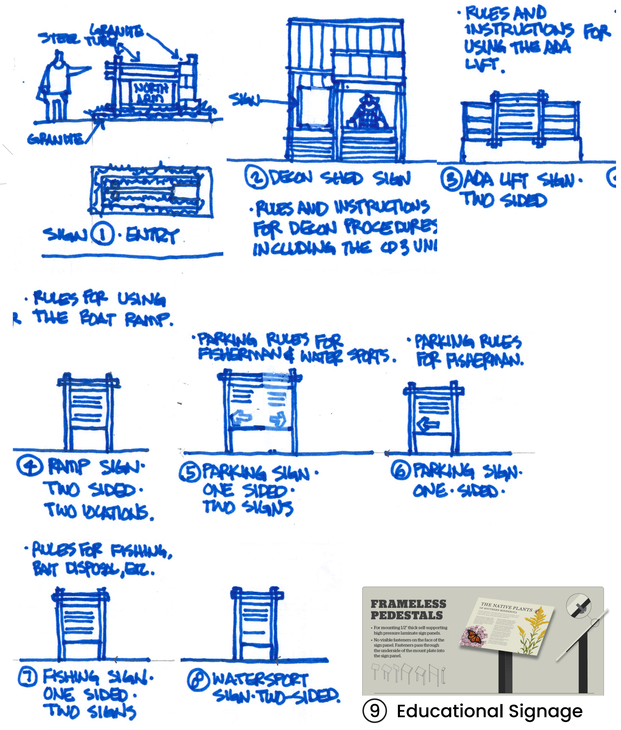
9. Educational Signage



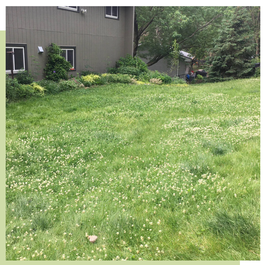




(9) Educational Signage

| | |
|---|---|
| Tree Count: | 24 |
| Caliper Size: | 2.5" |
| Total Replacement: | 60" |


Artificial Turf


Bee Lawn


Shrubs & Perennials


Prairie

# North Arm Boat Launch

Planting Layout

June 11th, 2025

IMO

TLÂL-LI collaborative

Hennepin

# Planting Palette

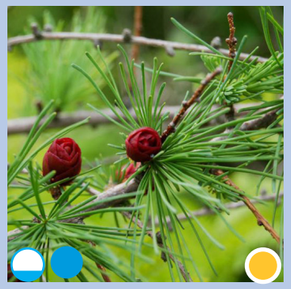
MOISTURE LEVEL:

DRY/WELL DRAINED | MOIST | WET

SUN EXPOSURE:

FULL SUN | PARTIAL SHADE | FULL SHADE

## Shade Trees
throughout the site



*Larix laricina*



*Tilia americana*



*Acer saccharum*



*Quercus bicolor*

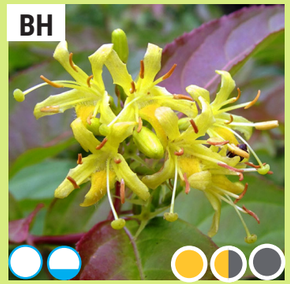


*Ironwood*

## Shrubs
bathroom planters and fishing area



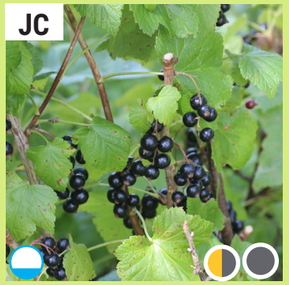

*Aronia melanocarpa*




*Diervilla lonicera*




*Amorpha canescens*




*Ribes americanum*



*Ceanothus americanus var. pitcheri*



*Rhus aromatica 'Gro-Low'*

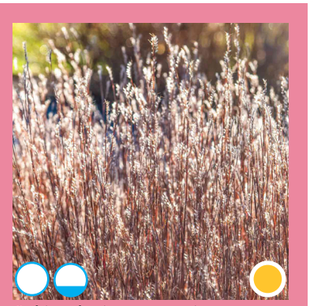
## Ornamental Grasses
bathroom plantings and prairie



*Sporobolus heterolepis*



*Bouteloua curtipendula var. curtipendula*

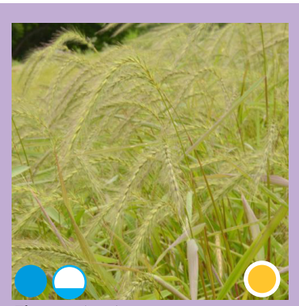


*Schizachyrium scoparium*

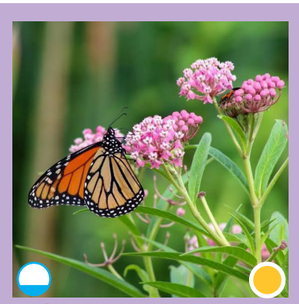
## Shoreline Mix
shoreline



*Carex lacustris*



*Elymus riparius*

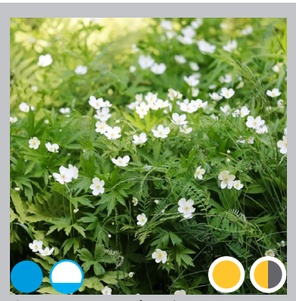


*Asclepias incarnata var. incarnata*

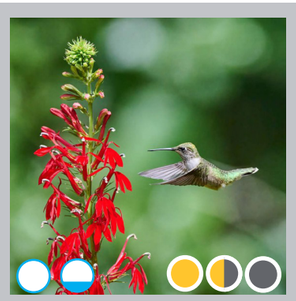


*Iris versicolor*

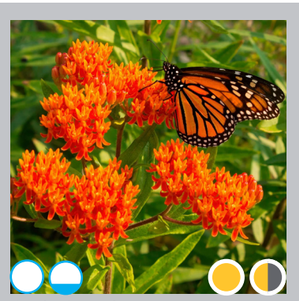
## Perennials
fishing area, shoreline, and prairie



*Anemone canadensis*
Canada Anemone



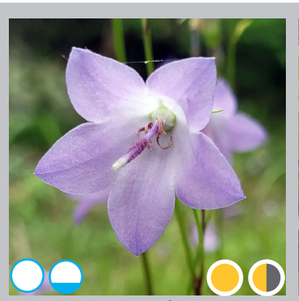
*Lobelia cardinalis var. cardinalis*
Cardinal Flower



*Asclepias tuberosa*
Butterfly Milkweed



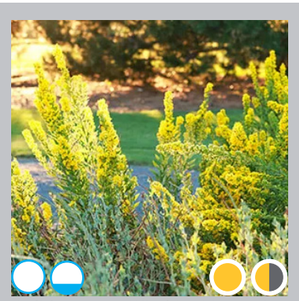
*Liatris spicata*
*Dense Blazing Star*



*Campanula rotundifolia*
Harebell



*Gentiana andrewsii*
Bottle Gentian



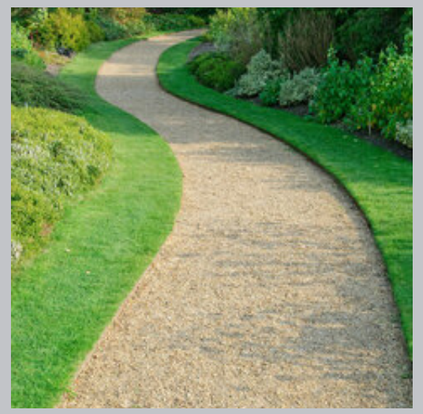
*Solidago spp. Witchita Mountains*
Golden Torch Goldenrod



*Rudbeckia hirta var. pulcherrima*
Black-Eyed Susan

# Material Palette

## AGGREGATE





## SCREENING

Prefabricated Screen



## SEATING / WASTE RECEPTACLE

Waste Receptacle



Low Seat Wall - Linear



Curved Seat Wall - Curved

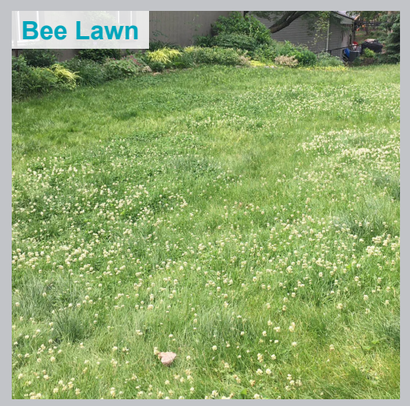


## GROUNDCOVER

Artificial Turf



Bee Lawn



LAKE MINNETONKA
NORTH ARM

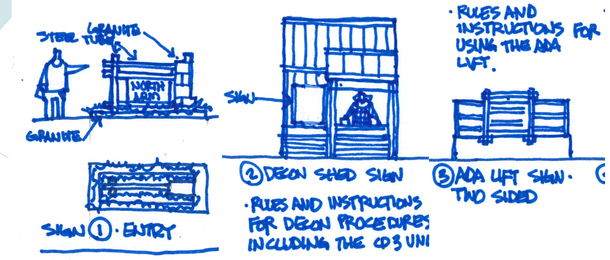
OHWL = 929.4
HWL100 = 931.5

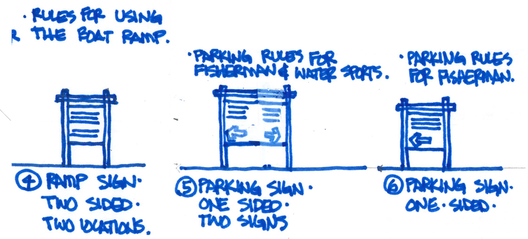
Picnic Table
Shade Structure
Bench, Typ.
Aggregate Path
Restroom Screening
Deciduous Shade Tree, Typ.
Coniferous Shade Tree, Typ.
Mechanical Equipment Screening
Shoreline Mix, Typ.
Property Boundary
North Shore Drive
35.1'
24.9'
28.2'
32.8'
30'
20'

0' 5' 10' 20'
1" = 10'
N

## Signage

1. Entry Sign
2. Decon Sign
3. ADA Lift Sign (two sided)
4. Ramp Sign (2) (two sided)
5. Parking Sign (double panel)
6. Parking Sign (single panel)
7. Fishing Sign (2)
8. Watersport Sign (two sided)
9. Educational Signage







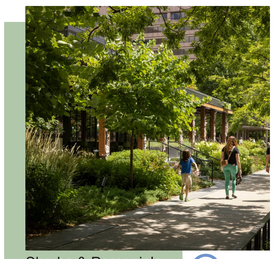
(9) Educational Signage

## Plantings

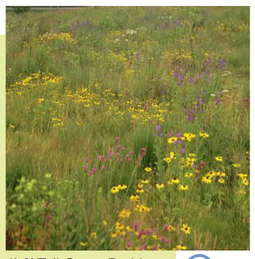


Bee Lawn --OR-- Artificial Turf (A)





Shrubs & Perennials (B)

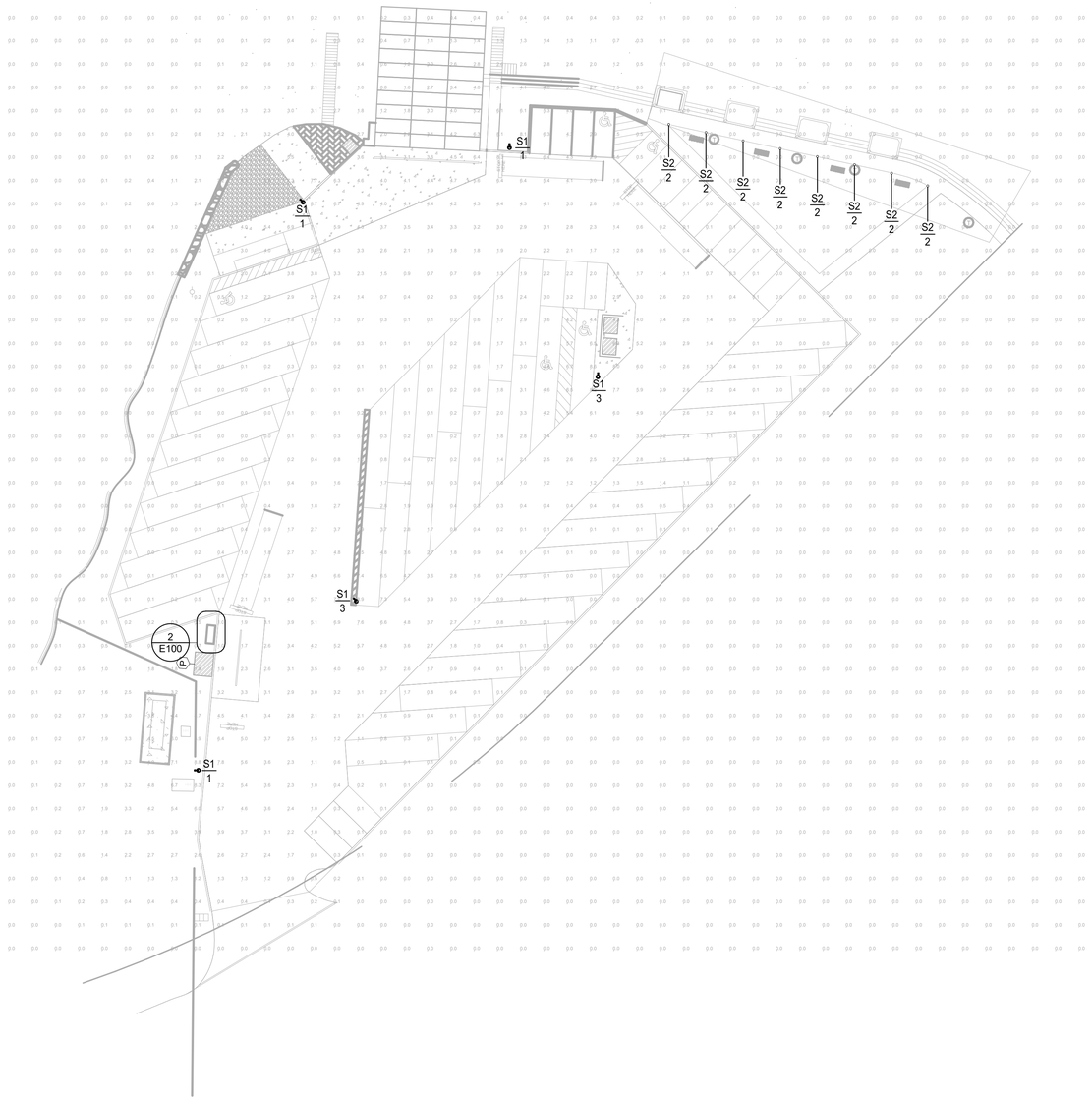


4'-6' Tall Grass Prairie (C)

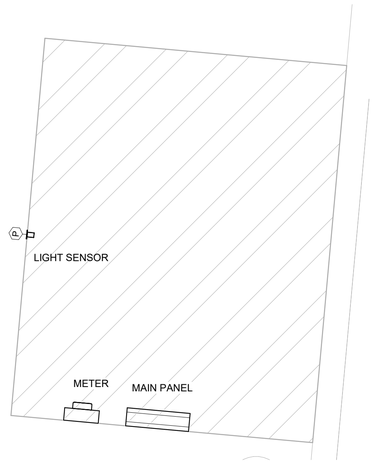
# North Arm Boat Launch

Planting Layout

October, 27th 2025




1 / E100 OVERALL LIGHTING PLAN
1/32" = 1'-0"




2 / E100 DECONTAMINATION/ELEC RM
1/2" = 1'-0"

NELSON-RUDIE & ASSOCIATES, INC.
9100 49TH AVE N MINNEAPOLIS, MN 55428
763 367 7600 | NELSONRUDIE•COM

# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 5/28/2025 | DRAFT NOT FOR CONSTRUCTION |

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

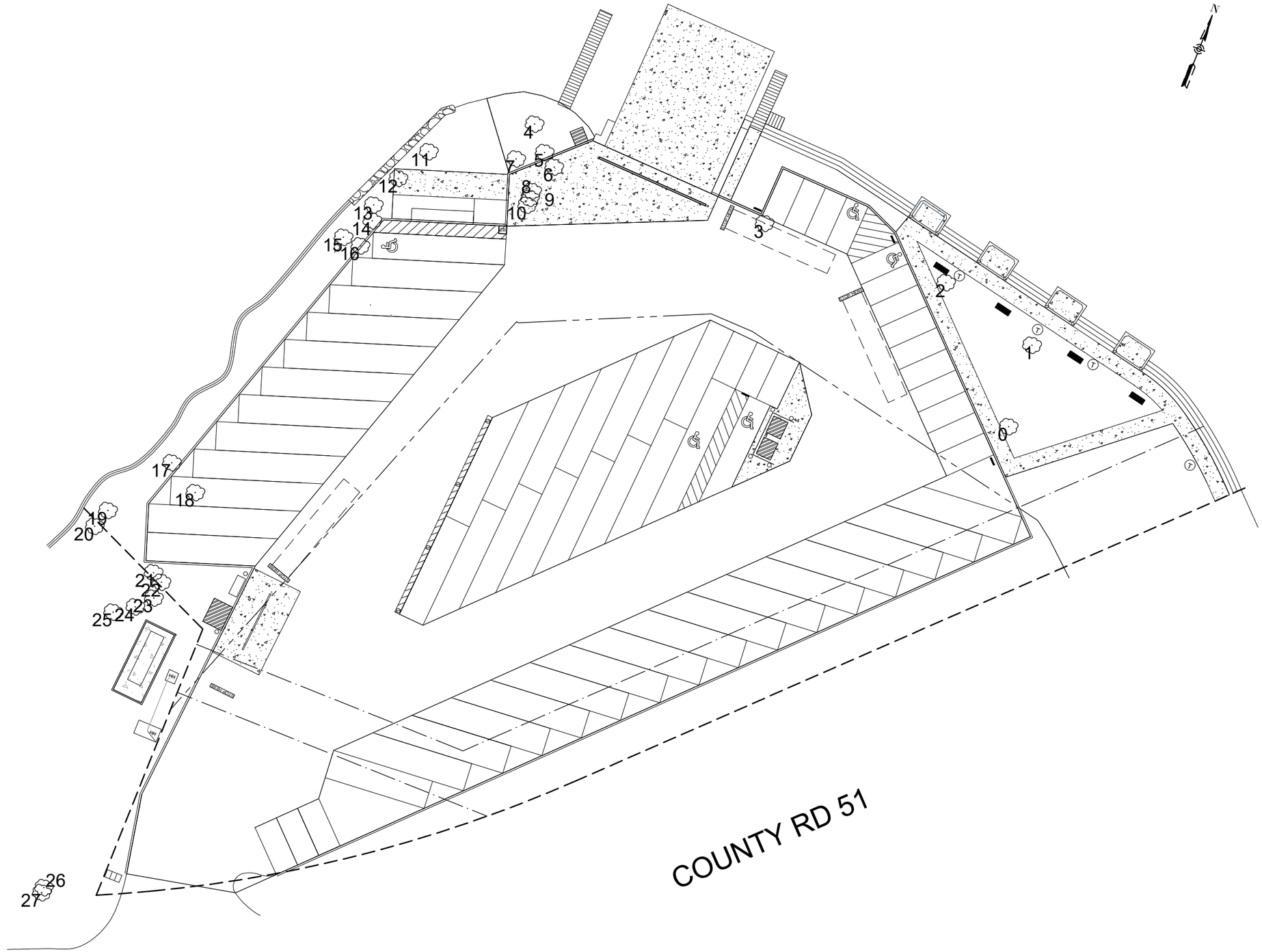
| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| NMM | NMM | JAP |

ELECTRICAL PLANS

5/28/2025

E100

24-057




HENNEPIN COUNTY

300 South 6th Street
Minneapolis, MN 55487

# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

LOCATION KEY

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

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| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 10/27/2025 | DRAFT NOT FOR CONSTRUCTION |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME: ROBERT C. RUSSEK
LIC. NO.: XXXXX DATE: 10/27/2025

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| XXX | GRW | XXX |

SITE TREES
10/27/2025

P000

PROJ.NU..



Oct 27, 2025 - 4:44pm
K:\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CADBase\P03106-NorthArmBoatLaunchDesign.dwg

Staff Annotated

## LEGAL DESCRIPTION:

Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, Block 2, "Crystal Bay View" Hennepin County, Minnesota (Per. Doc. No. 2147991)

(Abstract Property)

## LEGEND

- Boundary Line
- Survey Line
- Government Section Line
- Lot Line
- Edge of water
- B618 Concrete Curb and Gutter
- Wetland Edge
- Landscape Edge
- 931.3 100-Year Flood Contour Line
- 935 Major Contour Line
- 934 Minor Contour Line
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- Wood Fence
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- GAS Underground Gas
- 18 inch Sanitary Line
- conn Underground Communication
- Easement Line
- Set 1/2 inch capped Iron Pipe with a Plastic Cap Engraved with Minnesota License Number 48177 unless otherwise noted
- Found 1-1/4 inch capped Iron Pipe unless otherwise noted
- Hennepin County Cast Iron Monument
- Aluminum Disk
- Guard Post
- Sign
- Light Pole
- Electric Meter
- Communication Riser
- Hand Hole
- Sanitary Sewer Manhole
- Handicap Parking Space
- Deciduous Tree
- Concrete
- Rip-Rap

## GENERAL NOTES:

1.) Utility information is from actual field measurements as marked by utility companies or plans furnished by utility and public agencies. Project ticket number: 221572388. Contact Gopher State One Call (Phone: 651-454-0002) for exact field location prior to any excavation. Where additional or more detailed information is required, excavation, and/or a private utility locate request may be necessary.

2.) Number of Regular Parking Spaces: 48
Number of Handicap Parking Spaces: 5
Number of Boat Trailer Parking Spaces: 14
Total Number of Parking Spaces: 67

3.) 100-Year Flood Elevation (Hennepin Countywide FEMA Flood Insurance Study (FIS) dated November 4, 2016) & Ordinary High Water Level (OHWL) were found on the MN DNR Lake Flood Elevations Online map and converted to NAVD88 from NGVD29 using the NGS NCAT coordinate conversion tool.

## LIST OF POSSIBLE ENCHROACHMENTS:

The following list of possible encroachments is only the opinion of this surveyor; should not be interpreted as a legal opinion and should not be interpreted as a complete listing.

Possible encroachments are indicated on Survey with boxed letters as listed below.

- [A] Parking lot and various utilities cross into street on south and westerly property line
- [B] Parking lot crosses into alley
- [C] Concrete boat launch
- [D] Metal Seawall for boat launch and gravel area

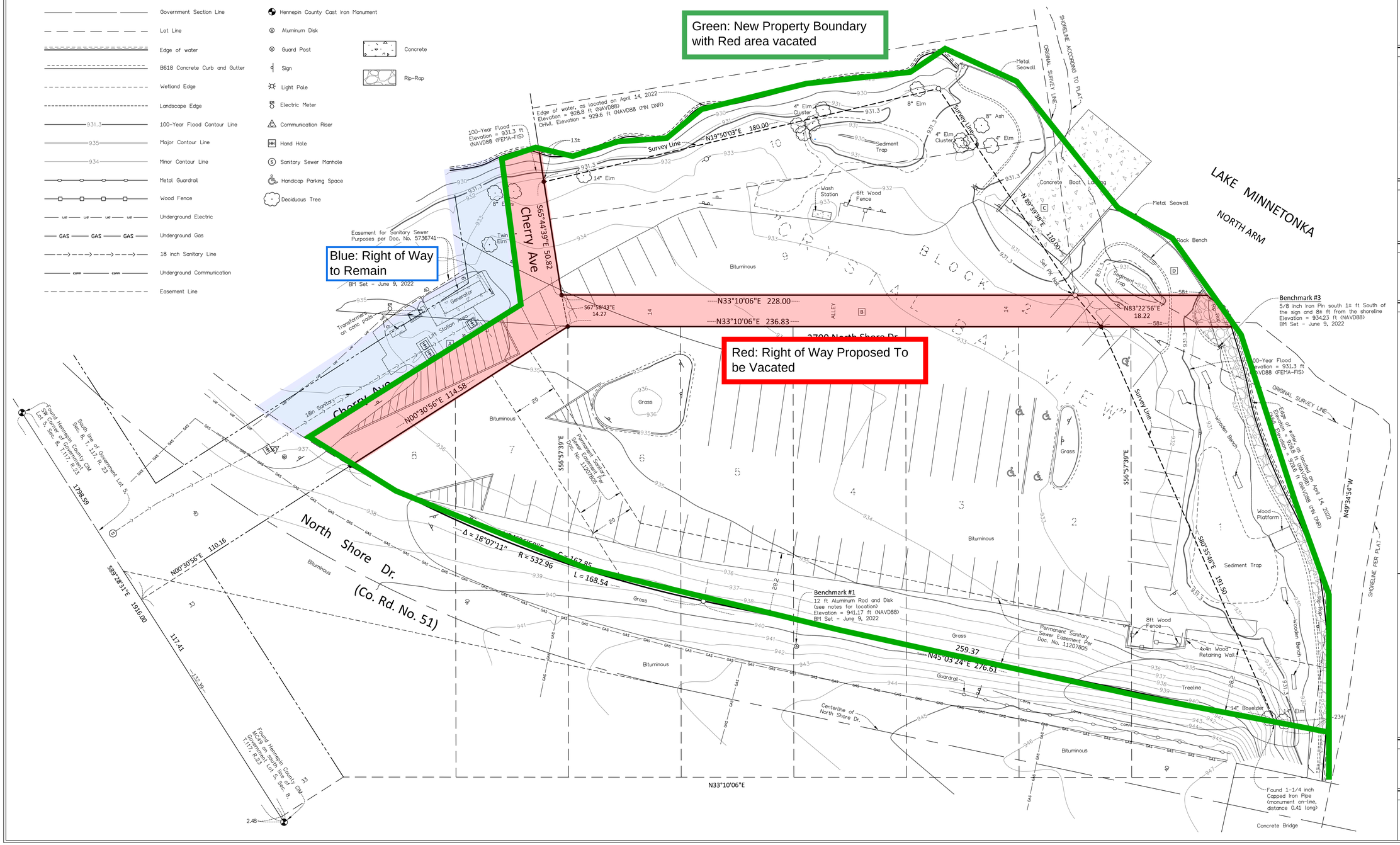
## SURFACE AREA CALCULATIONS:

| | | | |
|---|---|---|---|
| East of Alley: | 51,241 sq. ft. | 1.18 acres |
| West of Alley: | 19,719 sq. ft. | 0.45 acres |
| TOTAL AREA: | 70960 sq. ft. | 1.63 acres |

Green: New Property Boundary with Red area vacated

Blue: Right of Way to Remain

Red: Right of Way Proposed To be Vacated




**Project Name:**

**3700 North Shore Drive Orono, Minnesota**

**Project No.:**

**CSP-1058**

**Professional Services:**

HENNEPIN COUNTY
Resident and Real Estate Services
Survey Division

Suite A-703 300 South 6th Street
Minneapolis, MN 55487

**Professional Signature:**

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2015 Minimum Standard Detail Requirements for Hennepin County Boundary Surveys, and includes items (1,2,3,4,5,7ab,8,9,10b,11b,14,15,19) of Table A thereof. The field work was completed on (April 19, 2022). I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Timothy E. Eklund
License. No. 48177

April 19, 2022
Date

**Quality Control:**

| | |
|---|---|
| JRS, DMP | DD, BK |
| Field Crew | Drawn By |
| TJE | August 1, 2022 |
| Checked By | Review Date |

**Revisions:**

| | |
|---|---|
| May 5, 2024 | Added Sanitary Sewer Easement |
| Sept. 24, 2024 | Revised the NE'ly line of North Shore Dr. (CR 51) to fit monuments along Rd. |

**Disclaimer/Notes:**

Project Benchmarks:

1. 12 ft Aluminum Rod and Disk "SAMS on the grass embankment 11± ft from the edge of North Shore Dr. and 71± ft from the end of the guardrail
   Elevation = 941.17 ft
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   Elevation = 935.60 ft
3. 5/8 inch Iron Pin south 1± ft of the yellow sign and 8± ft from the shoreline
   Elevation = 934.23 ft

(NAVD88 derived using GPS-RTK methods)

This survey was prepared without the benefit of current title work. Easements, appurtenances and encumbrances may exist in addition to those shown hereon. This Survey is subject to any facts that may be disclosed by a full and accurate title search.

0 20 40
Scale in Feet

BEARINGS SHOWN ON THIS SURVEY ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHIP 117, RANGE 23 AND HAVE AN ASSUMED BEARING OF S89°28'31"E USING HENNEPIN COUNTY GROUND COORDINATE SYSTEM RELATIVE TO NAD83(86).

**Sheet Title:**

**BOUNDARY AND TOPOGRAPHIC SURVEY**

**Sheet No.:**

**Sheet 1 of 1**

# LEGAL DESCRIPTION:

Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, Block 2, "Crystal Bay View" Hennepin County, Minnesota (Per. Doc. No. 2147991)

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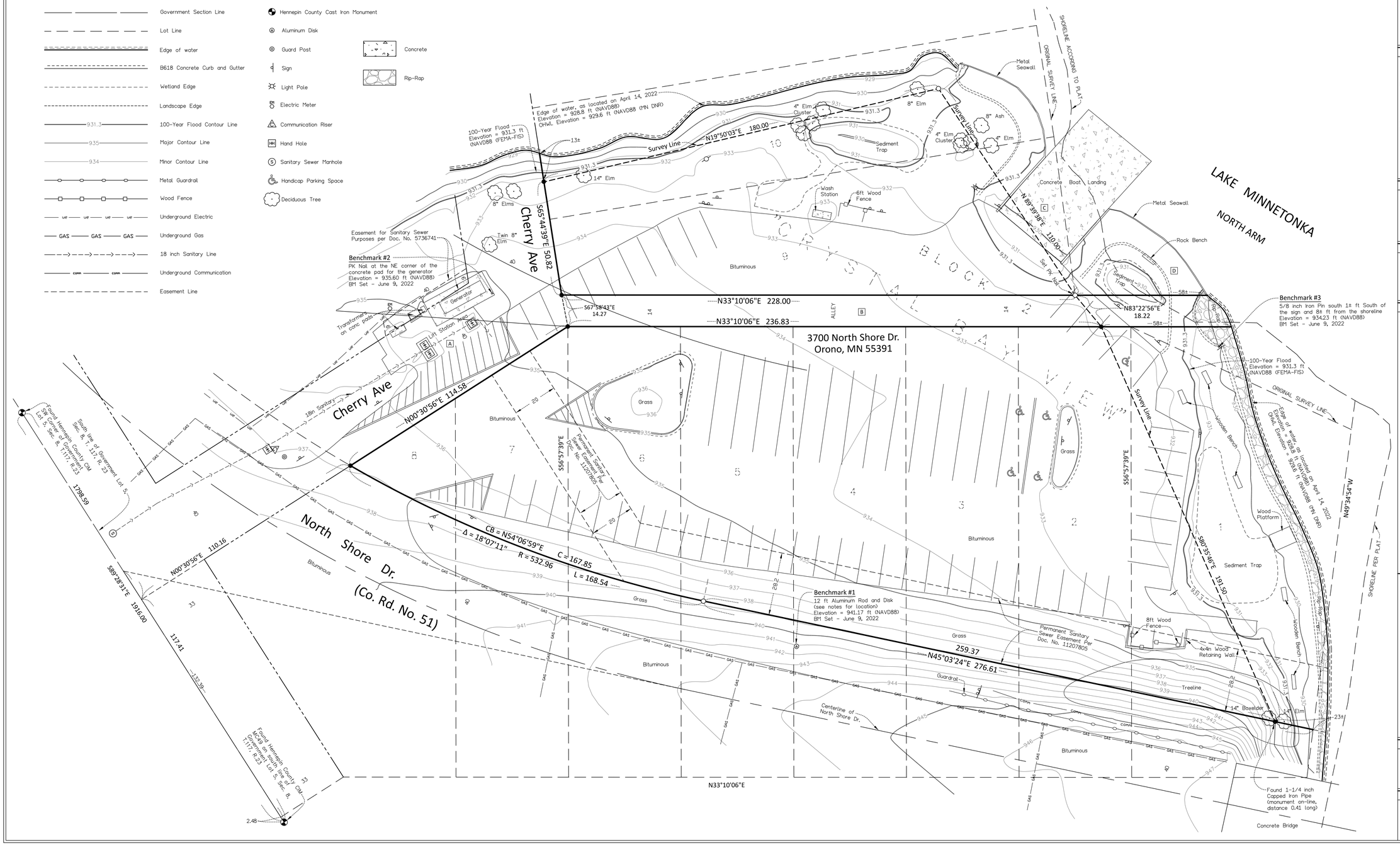


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**Resident and Real Estate Services**
**Survey Division**

**Suite A-703 300 South 6th Street**
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**Sheet Title:**

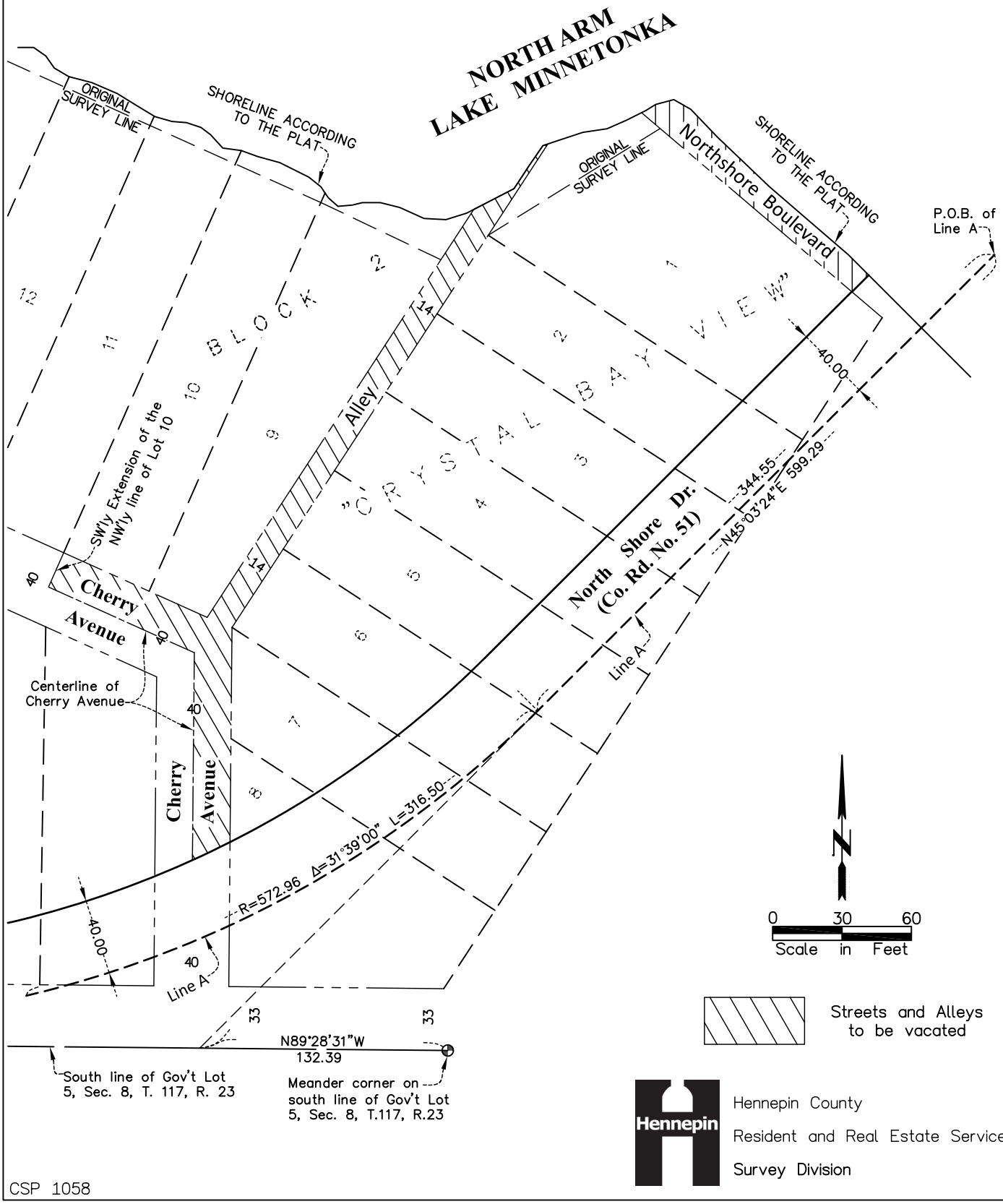
**BOUNDARY AND TOPOGRAPHIC SURVEY**

**Sheet No.:**

**Sheet 1 of 1**

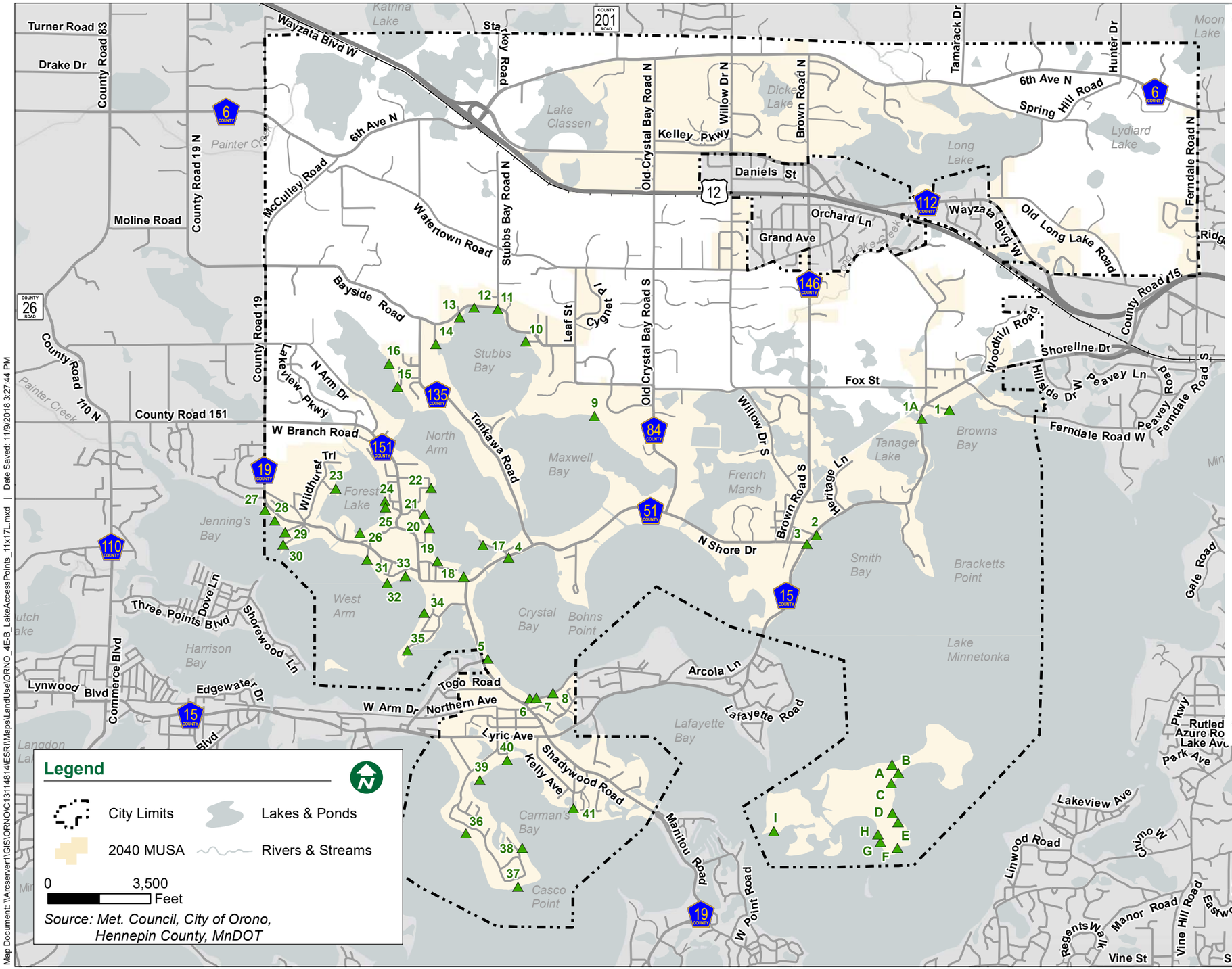
# Exhibit A

**Depiction of Streets and Alleys being vacated**




Hennepin County
Resident and Real Estate Services
Survey Division

CSP 1058




## City of Orono Lake Minnetonka Access Points

Designated Use and Current Status

Updated 4/1/01, 5/21/08, 1/1/18

| Site | Access/Street Name | Plat Section | Between Address #s | Designated Use | Notes |
|---|---|---|---|---|---|
| **Brown's Bay (Lower Lake)** | | | | | |
| 1 | End of Orono Lane | 2-S | 1355/1385 | No public access | Not open for public use plat map indicates questionable abutment of shoreline |
| 14 | Shoreline Drive - "Molly's Corner" (Outlot A, Dragonfly Hill) | 2-S | Across from 1410 Shoreline | Shore Fishing | Hennepin County provides an informal parking area and trailhead at this wide spot along Shoreline Drive; popular fishing spot; winter vehicular access feasible |
| **Smith Bay (Lower Lake)** | | | | | |
| 2 | Shoreline Drive at Spatse | 10-S | Adj to 1955 | Winter Only | Gated in summer; winter vehicular access allowed. As of 2016 privately owned with city easment for lake access and sanitary back up generator. |
| 3 | North Shore Drive at Shoreline Drive | 10-S | | No public access | Tracts 5&U, RLS 192, these tracts are on the steep slope adjacent to Shoreline Drive; due to slope and safety issues this access point is not open for public use |
| **Crystal Bay** | | | | | |
| 4 | North Shore Drive at Bandit Park Road | 8-S | 3498/3510 | Winter Only | 30' wide platted road right-of-way |
| 5 | Shadywood Road at Sunset Dr | 17-N | 1998/2000 | Drainage way | 15.2' wide platted alley - closely abutting homes on either side |
| 6 | Crystal Bay Road (West end) | 17-S | Adj to 2284 Shadywood | Pedestrian Access / Bathing | 66' wide platted road extending to lakeshore; City also owns 4 adjacent tiny lakeshore parcels to the east for an additional 200' of shoreline, over which a number of inland private parcels claim deeded access rights for "boating and bathing". |
| 7 | Crystal Bay Road (Relocated extension of Bayview Place in plat of "Wallace's Addition...") | 17-S | 3405/3415 | Pedestrian Access | 20' relocated alley from Railroad property to shoreline; potential lake access from railway corridor. The only known documentation is Doc. 8567616 deed filed Nov. 10, 1908 from Wallace et al to Preble which states that the 20' strip is "hereinfore taken for street purposes" and notes that the platted alley between Lots 18 and 19 was vacated by the District Court. |
| 8 | Crystal Bay Road (Platted extension of Orchard Alley) | 17-S | 3339/3345 | Utilities | 23' wide platted roadway; contains municipal sewer lines, potential access from neighborhood and Railroad/Trail corridor to lakeshore |
| **Maxwell Bay** | | | | | |
| 9 | Gibbs Landing - Fox St. | 4-S | Adj to 3125 | Pedestrian year-round, vehicles winter only | Tax records show access as Outlot A, owned by owner of 3125, City has easement over Outlot, City maintains access |
| **Stubbs Bay** | | | | | |
| 10 | Eastlake Street | 5-N | 3424/3465 | Winter Only | 30' platted road gated March 1 - Dec. 1 |
| 11 | Bayside Rd. at Stubbs Bay Rd. | 5-N | 3580/3640 | Fishing Dock | 33' platted road. ("Oak Street" in plat of "Bay View Park"). Also used for winter access by snowmobiles off Luce Line. |
| 12 | Bayside Rd | 5-N | Across from 3640, 3700, 3750 Bayside | No public access | Two 60' platted roads and one 65' platted road to the Lake (Park, Spring, and Maple Streets in plat of Bay View Park, and Theresa St. in plat of Ottoville on Lake Minnetonka). These potential access points are not opened for public use. |
| 13 | Bayside Rd. | 5-N | West side of 3775 Bayside | No public access | 50' realigned platted road (Realigned "Lake Street" in the plat of Ottoville on Lake Minnetonka) (See street file 3775 Bayside). Not opened for public use. |
| 14 | Westlake Street | 5-N | 372/389 | Pedestrian Access | 30' platted road right-of-way extending to lakeshore; walking access only. |
| **North Arm Bay** | | | | | |
| 15 | Park Lane | 6-S | 607/669 | Fishing Dock | 60' wide platted road, paved to shoreline - usable for boat launch but there is no parking available |
| 16 | Oak Street | 6-S | Adj to 4119 | Drainage way | 30' wide platted road, not developed, steep slopes and ravine limit use |
| 17 | Bohler Park Road | 8-S | Across from 1384/1392 | Winter Access | NW end of platted developed road as it extends to shoreline |
| 18 | Oak Place (Platted road in plat of "Crystal Bay View") | 8-S | 3768/3818 North Shore Dr | No public access | 60' wide platted undeveloped road extending from North Shore Drive across platted Cherry Ave to shoreline; mostly wetland or under water. Encroached by shared driveway |
| 19 | Sandy Beach (Extension of Maple Place) | 8-S | 3898/3908 Cherry Ave | Swimming Beach | 60' wide platted roadway used for City beach |
| 20 | Grant Street | 8-S | 1310 Spruce/1330 Cherry H | Drainage way | 50' wide platted road, undeveloped |
| 21 | Spruce Place | 8-S | 1250/1260 | No public access | 60' wide (remaining after partial vacation) platted roadway, undeveloped, Encroached |
| 22 | Loma Linda Avenue | 8-N | 1098/1130 | Fishing Dock | 60' wide platted road; also useful for vehicular access |
| **Forest Lake** | | | | | |
| 23 | Forest Lake Landing | 7-N | 4415/4440 | Pedestrian Access | 60' wide platted road right-of-way , access not developed, walking use only. Encroachments present |
| 24 | Elmwood Avenue | 7-N | South of 1199 | Drainage way | 20' wide platted road/alley undeveloped right-of-way leading to shoreline |
| 25 | "Summit Avenue" (Extension of Elmwood Avenue) | 7-S | 1067/1101 | Drainage way utilities | 50' wide platted road undeveloped right-of-way to shoreline, drainage way |
| 26 | "Bluff Street" | 7-S | West side of 1453 Park Dr | Drainage way | 50' wide platted road right-of-way to shoreline, not developed, drainage way |
| **West Arm Bay** | | | | | |
| 27 | North Shore Drive west end (adjacent to Orono/Minnetonka border) | 7-S | "4705" Shoreline | Drainage way | 33' platted right-of-way corridor extension of Co. Rd. 19 plus tax-forfeited Lot 10, Block 6, "Bergquist and Wickland's Park..."; undeveloped corridor primarily for drainage purposes due to very steep slopes |
| 28 | North Shore Drive at "Adams Street" Extension | 7-S | 4731/4745 | Drainage way | 40' platted road right-of-way extension in plat of "Bergquist and Wickland's Park..." undeveloped, very steep, used for drainage |
| 29 | Rest Point Lane | 7-S | 1340/1345 | Pedestrian Access | 33' platted right-of-way corridor, pavement does not extend to lake |
| 30 | Rest Point Road | 7-S | 1405/1410 | Pedestrian Access | 16' platted road right-of-way widens to about 40' at shoreline, paved but no boat launching available |
| 31 | Orchard Beach Place | 7-S | West of 1530 | Pedestrian Access | 50' platted road right-of-way extends to shoreline; tree growth and topography limits vehicular access |
| 32 | Highwood Lane Extension | 7-S | 4156/4167 Highwood Rd | Drainage way | 20' platted alley right-of-way to shoreline; steep slope to shoreline, undeveloped |
| 33 | Highwood Road Alley | 7-S | 4051/4075 | Drainage way | 20' platted alley right-of-way to shoreline, not developed |
| 34 | Corral Road Extension | 17-N | 1785/1825 Concordia | Drainage way pedestrian access | 20' platted alley mainly for drainage but also walking access |
| 35 | Fagernese Point Accretions | 18-N | Across from 1965/1985 Fagernes Pt Rd | No public access | Accretions to the 60' originally platted road in the plat of "Fagernes"; title registrations by most abutting owners have resulted in dedicated right-of-way no longer abutting shoreline; it appears that there is no public access remaining |
| **Spring Park Bay** | | | | | |
| 36 | Casco Point Beach | 20-S | 2871/2879 Casco Pt Rd | Swimming Beach | 60' wide platted road ("Carman St") used as a City swimming beach |
| 37 | Casco Circle | 20-S | 3105/3205 | Drainage way | 60' wide platted road right-of-way to shoreline at the south side of Casco Circle - undeveloped |
| **Carmans Bay** | | | | | |
| 38 | "Ivy Lane" (Ivy Place) | 20-S | 3486/3508 | Drainage way | 60' wide platted road right-of-way extending to shoreline east of Ivy Place - steep, used for drainage |
| 39 | "Spring Street" | 20-S | 2600/2618/Casco Point Rd | Pedestrian Access | 60' wide platted road right-of-way from Casco Point Road to shoreline along south side of plat of "Kaster Cove" - undeveloped, walking access only |
| 40 | Carman Street | 20-S | 2490 Carman/ 3555 Frederick | Fishing dock | 30' wide platted road right-of-way extending to shoreline, fishing dock |
| 41 | Lydiard Beach | 20-S | End of Lydiard Rd | Swimming Beach | 60' wide platted road right-of-way extending to shoreline, used as a City swimming beach |
| **Big Island** | | | | | |
| A | N. End of "Lasso Avenue" | 23-N | 110 | | 33' wide platted roadway adjacent to Lot 46, Morse Island Park |
| B | E. end of "Tootsie Avenue" | 23-N | 110/120 | | 33' wide platted roadway adjacent to Lot 45, Morse Island Park - slope makes use difficult |
| C | Unnamed Street | 23-N | 120/140 | | 90' wide platted roadway between Lots 38 and 39, Morse Island Park - City has established drivable gravel road for emergency & service vehicle access |
| D | "Boy Place" | 23-N | 210/260 | | 50' +/- wide platted roadway between Lots 21 and 54, Morse Island Park |
| E | "Meadow Lane East Extended" | 23-S | 180/190 | | 20' wide platted roadway between Lots 59 and 60, Morse Island Park - steep slope makes use difficult |
| F | "Meta-Comet Avenue South" | 23-S | 340 | | 33' wide platted roadway between Lot F Morse Island Park and Lot 3, Morse Island Park 2nd Addition |
| G | "Massasoit Avenue West End" | 23-S | 440/450 | | 33' wide platted roadway between Lot 1, Morse Island Park and Lot 1, Scrivers subdivision of Lot E, Morse Island Park - steep slope |
| H | "Meadow Lane Alley" | 23-S | 450/460 | | 16' platted alley between Lots 5 and 6, Morse Island Park - drivable for emergency and service vehicles |
| I | "Pleasant View Street" | 22-S | 570/600 | | 30' platted roadway between Lot 9, Pleasant View Lake Minnetonka and Lot 3, Island Pointe |

## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Lake Access Points

▲ Lake Access Points

**Map 4E-2**



Map Document: \\Arcserver1\GIS\ORNO\C13114814\ESRIMaps\LandUse\ORNO_4E-B_LakeAccessPoints_11x17L.mxd | Date Saved: 11/9/2018 3:27:44 PM

No delinquent taxes

Transfer Entered

Jun 14, 2023 8:30 AM

Hennepin County, Minnesota
Daniel Rogan
County Auditor and Treasurer

LAND TYPE Abstract (A)

DOC NUM 11207805

Certified, filed and/or recorded on
Jun 14, 2023 8:30 AM

Office of the County Recorder
Hennepin County, Minnesota
Amber Bougie, County Recorder
Daniel Rogan, County Auditor and Treasurer

Deputy 147 Pkg ID 2572778E

| | |
|---|---|
| Document Recording Fee | $46.00 |
| ***Document Total*** | $46.00 |

**PID(s)**
08-117-23-34-0001, 08-117-23-34-0002, 08-117-23-34-0003, 08-117-23-34-0004, 08-117-23-34-0061

Transfer Entered

Jun 12, 2023 3:14 PM

Hennepin County, Minnesota
Daniel Rogan
County Auditor and Treasurer



LAND TYPE Torrens (T)

DOC NUM 6017951

Certified, filed and/or recorded on
Jun 12, 2023 3:14 PM

Office of the Registrar of Titles
Hennepin County, Minnesota
Amber Bougie, Registrar of Titles
Daniel Rogan, County Auditor and Treasurer

| | |
|---|---|
| Deputy 98 | Pkg ID 2572124E |
| Document Recording Fee | $46.00 |
| Multiple Certificates Affected Fee | $20.00 |
| ***Document Total*** | $66.00 |

**PID(s)**
08-117-23-34-0001, 08-117-23-34-0002, 08-117-23-34-0003, 08-117-23-34-0004

**Existing Certs**
246123, 472369

(Above space reserved for Recording Information)

# PERMANENT SANITARY SEWER EASEMENT

THIS PERMANENT SANITARY SEWER EASEMENT is made this 25th day of May, 2023, by and between County of Hennepin, a political subdivision of the State of Minnesota, ("Grantor") and the Metropolitan Council, a public corporation and political subdivision of the State of Minnesota ("Grantee") (each individually referred to as a "Party" and collectively referred to as the "Parties").

**Whereas**, Grantor is the owner is the fee owner of real property that is legally described on the attached Exhibit A ("Property"); and

**Whereas**, Grantee is constructing and installing a sanitary sewer interceptor pipeline and related sewer infrastructure known as MCES 8567 FM Channel Crossing Replacement for which it needs a permanent sanitary sewer easement over, under, through and across portions of Grantor's Property.

**Whereas**, Grantor and Grantee are parties to that certain permit no. 17160 ("Permit") for the installation and maintenance of sanitary sewer facilities and the Grantor and Grantee desire to replace the Permit with this Easement.

NOW THEREFORE, for valuable consideration, the Parties agree as follows:

1. Grant of Easement. Grantor, in consideration of One Dollar and other good and valuable consideration to it in hand paid, the receipt of which is hereby acknowledged, does hereby grant, bargain, sell and convey to Grantee, its agents, contractors, permittees, successors and assigns, the following described easement:

a. Permanent Sanitary Sewer Easement. A non-exclusive permanent sanitary sewer easement legally described on the attached **Exhibit B** (the "Permanent Sanitary Sewer Easement" or the "Easement") and depicted on the attached **Exhibit C** (the "Permanent Sanitary Sewer Easement Area") over, under, through and across the Property for, without limitation, the location, installation, construction, inspection, repair, replacement, maintenance, use, and operation of a sewer interceptor, lift station, meter, pipes and other wastewater related improvements.

i. Subject to the provisions of Section 4, the Permanent Sanitary Sewer Easement includes the rights of ingress and egress over and across the Property by Grantee and its agents, employees, permittees, assigns and contractors, for the use of the Permanent Sanitary Sewer Easement Area as may be necessary in the exercise of the rights and privileges herein granted.

ii. Unless part of an improvement approved by the Grantee as provided in paragraph 1(a)(iv), Grantee retains the right to cut, trim, or remove from the Permanent Sanitary Sewer Easement Area any pavement, hardscaping, trees, shrubs, undergrowth, landscaping, and other vegetation as in the Grantee's judgment unreasonably interferes with the use of the Permanent Sanitary Sewer Easement Area by Grantee, provided that Grantee shall take all reasonable precautions to prevent any damage to the Grantor's property.

iii. Grantor shall not erect, construct, or create any building, improvement, obstruction or structure of any kind, either above or below the surface, or stockpile soils, construction debris or construction equipment or change the grade of the Permanent Sanitary Sewer Easement Area.

iv. Notwithstanding the foregoing, Grantor shall submit plans for any improvements, whether sought by Grantor or a third party, to be constructed within the Permanent Sanitary Sewer Easement Area to the Grantee ("Improvement Plans"). The Improvement Plans shall include all necessary information for Grantee to determine the impact of the Improvement Plans on the Grantee's facilities located within the Permanent Sanitary Sewer Easement Area. Grantee

shall have 15 business days to review the Improvement Plans to determine if the plans will result in any adverse impacts to the Grantee's facilities located within the Permanent Sanitary Sewer Easement Area ("Review Period").

If Grantee determines the Improvement Plans will not result in any adverse impacts to the Grantee's facilities located within the Permanent Sanitary Sewer Easement Area, Grantee shall provide written approval of the Improvement Plans no later than 15 business days after the Review Period. If the Grantee determines the Improvement Plans will adversely affect the Grantee's facilities located within the Permanent Sanitary Sewer Easement Area, Grantee shall provide written comments stating Grantee's objections to the Improvement Plans and thereafter Grantor and Grantee shall cooperate to attempt to resolve Grantee's objections. Both the Improvement Plans and any Grantee objections shall be based upon reasonable engineering and operational standards applicable to the proposed improvement made by the Improvement Plans.

Grantor and Grantee agree to amend this Easement to reflect any improvement constructed pursuant to this paragraph1(a)(iv) prior to commencing an approved Improvement Plan. For Grantee-approved Improvements that are disturbed during Grantee's use of the Permanent Sanitary Sewer Easement Area, Grantee shall coordinate in advance with Grantor (except in an emergency when Grantee shall notify Grantor as soon as reasonably practical), identify the Improvements to be removed and a plan for their salvage or replacement. In any event, Grantee's cost of replacement shall be limited to the equivalent cost, at the time of replacement, to construct a bituminous parking surface area, including the subgrade, for the area disturbed by Grantee.

Grantor shall also provide plans to Grantee in advance, but Grantee's express written approval is not required, for installation of ordinary bituminous or concrete parking surfaces, streets or roadways, landscaping with minimal subsurface penetration and minimal root system bushes and shrubs, although systems that may adversely impact the

performance of the Grantee's sewer shall require Grantee's express written approval, by way of illustration but not limitation such as permeable pavers and stormwater management systems. Grantee shall restore the surface to a comparable condition as existed prior to the Grantee's work, which includes replacing all grass, sod, and bituminous parking surfaces, and lake channel edging surfaces (granite riprap and gravel) within the disturbed portion of the Permanent Sanitary Sewer Easement Area.

2. Grantee's Maintenance, Access and Soil Compaction.

a. Routine Maintenance. Grantee will perform major, impactful routine maintenance, which by way of illustration and not limitation, includes force main cleaning, during of the period of October 15 to March 30 (the "Off Season"), following the provision of prior written mailed notice provided to Grantor a minimum of seven (7) days prior to commencement of the maintenance as provided in Section 4. During the Off Season, in the performance of routine maintenance activities, Grantee, its employees, contractors and agents may utilize portions of the Property outside of the Permanent Sanitary Sewer Easement Area for parking of vehicles and equipment related maintenance activities.

Grantee will perform minor, non-impactful routine maintenance which by way of illustration and not limitation includes changing carbon filtration on the odor control components or air relief valve maintenance of the improvements as needed and provide notice one (1) business day to Grantor via email and telephone. In the performance of minor routine maintenance of the improvements that occur outside of the Off Season, Grantee may utilize two parking stalls which are located over the Grantee's subsurface improvements.

b. Emergency Work. In the case of Emergency Work, Grantee shall provide notice as provided in Section 4 as soon as practical. "Emergency Work" is work that requires immediate action to correct or avoid (a) threats or harm to the health and safety of the public, contractors, and/or employees or (b) threats or harm to the Grantee's facilities, Grantee's infrastructure or property.

c. Soil Compaction and Restoration. Unless otherwise agreed to in writing by Grantor, Grantee will restore the disturbed portions of the

Permanent Sanitary Sewer Easement Area including soil compaction to 95% of standard proctor density, matching the original surface grade as far as practicable.

3. Representation of Ownership. Grantor represents that it is the lawful owner and is in lawful possession of the Property and has lawful right and authority to convey and grant the Permanent Sanitary Sewer Easement described herein.

4. Notices and Demands. All notices, requests, demands, consents, and other communications required or permitted under this Permanent Sanitary Sewer Easement shall be in writing. Notice shall be deemed to have been duly and properly given three (3) business days after the date of mailing if deposited in a receptacle of the United States mail, first class postage prepaid, addressed to the intended recipient as follows:

Grantor: Director of Environment and Energy Department
Hennepin County – Environment and Energy Department
701 Fourth Avenue South, Suite 700
Minneapolis, MN 55415

County of Hennepin
701 Fourth Avenue South, Suite 400
Minneapolis, MN 55415
Attn: Real Estate Manager

Grantee: Metropolitan Council
390 Robert Street North
St. Paul, MN 55101-1805
Attn: Director of Real Estate

Metropolitan Council
Regional Maintenance Facility
3565 Kennebec Drive
Eagan, MN 55122
Attn: Interceptor Services Business Unit Manager

5. Amendment of Easement. The Permanent Sanitary Sewer Easement may only be amended by written agreement signed and notarized by the Parties or their successors or assigns.

6. Termination of Permit. Permit No. 17160 is hereby terminated.

7. Miscellaneous.

a. Binding Covenant. The provisions and conditions of this Easement shall be binding upon and inure to the benefit of the Parties and their successors and assigns and shall constitute a covenant running with the land.

b. Waiver. No waiver of any provision of this Easement shall be binding unless executed in writing by the Party making the waiver. No waiver of any provision of this Easement shall be deemed to constitute a waiver of any other provision, whether or not similar, nor shall any waiver constitute a continuing waiver unless the written waiver so specifies.

c. Liability. Each Party is responsible for their own acts and omissions and the results thereof to the extent authorized by the law. This shall not be construed to waive any liability limits or immunities including those arising under Minnesota Statutes Chapter 466.

d. Governing Law. This Easement is governed, construed, and enforced under the laws of the State of Minnesota without regard to conflicts of law provisions.

e. Counterparts. This Easement may be executed in any number of counterparts, each of which is to be deemed to be an original and the counterparts together constitute one and the same Easement. A physical copy or electronic copy of this Easement, including its signature pages, will be binding, and deemed to be an original.

f. Severability. The provisions of this Easement are severable, and in the event that any provision is held to be invalid or unenforceable, the Parties intend that the remaining provisions will remain in full force and effect.

g. No Presumption against Drafter. This Easement has been negotiated at arm's length and with the opportunity for the Parties to consult legal counsel regarding its terms. Accordingly, this Easement shall be interpreted to achieve the intent and purpose of the Parties, without any presumption against the drafting party.

h. Authority of Signatory. Each party to this Easement warrants to the other that it has the right and authority to enter into this Easement.

**METROPOLITAN COUNCIL,**
a public corporation and political subdivision of the State of Minnesota,

By: _____
Mary Bogie

Its: Regional Administrator

STATE OF MINNESOTA )
) ss
COUNTY OF RAMSEY )

This instrument was acknowledged before me on the 3rd day of May, 2023, by Mary Bogie, as Regional Administrator of the Metropolitan Council, a public corporation and political subdivision of the State of Minnesota, on its behalf.

_____
Notary Public

[Notary stamp]

BRIDGET ANNA TOSKEY
NOTARY PUBLIC
MINNESOTA
My Commission Expires Jan. 31, 2028

**HENNEPIN COUNTY (GRANTOR)**

**ATTEST:**

By: M. Rose
Deputy/Clerk of the County Board

Date: 5/25/2023

**REVIEWED BY**
**THE COUNTY ATTORNEY'S OFFICE:**

By: Rebecca Hennessy
Assistant County Attorney

Date: May 23, 2023

By: Irene Fernando
Chair of its County Board

Date: 5/25/2023

And:
County Administrator

Date: 5/25/2023

And: Lisa K. Cerney
Assistant County Administrator, Public Works

Date: May 23, 2023

**RECOMMENDED FOR APPROVAL**

By: Cara Steuve
County Highway Engineer

Date: May 23, 2023

STATE OF Minnesota )
)ss.
COUNTY OF Hennepin )

The foregoing instrument was acknowledged before me this 25th day of May 2023, by Irene Fernando, Chair of the Board of Commissioners and by Maria Rose, Clerk of the Board of Commissioners of the County of Hennepin.

Karen L Keller
Notary Public

[Notary stamp]



**Project:** *MCES 8567 FM Channel Crossing Replacement*
**Parcel:** *Lots 1 through 6, Auditor's Subdivision No. 273*

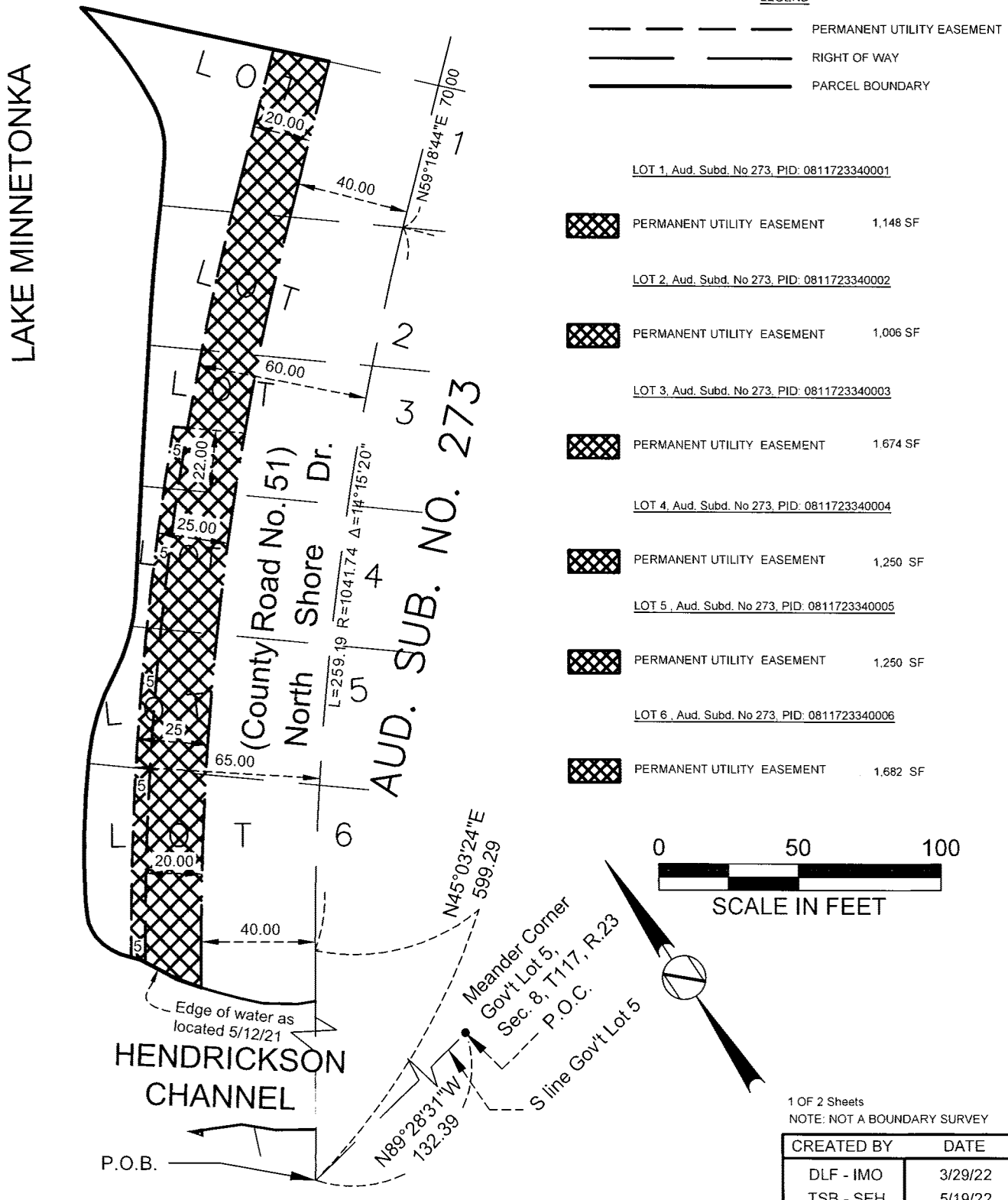
**County:** *Hennepin*

**Owner:** *County of Hennpin*

**Address:** *Unassigned*

**PID:** *See lots below*

METROPOLITAN COUNCIL




1 OF 2 Sheets
NOTE: NOT A BOUNDARY SURVEY

| CREATED BY | DATE |
|---|---|
| DLF - IMO | 3/29/22 |
| TSB - SEH | 5/19/22 |

| | |
|---|---|
| **Project:** *MCES 8567 FM Channel Crossing Replacement*<br>**Parcel:** *Lots 1 through 6, Auditor's Subdivision No. 273*<br>**County:** *Hennepin* | **Owner:** *County of Hennpin*<br>**Address:** *Unassigned*<br>**PID:** *See lots below* |

METROPOLITAN COUNCIL

Description of Property:

Lots 1, 2, 3, 4, 5 & 6, Auditor's Subdivision No. 273, Hennepin County, Minnesota.

Description of Perpetual Easement:

A 20.00 foot wide perpetual easement for sanitary sewer purposes over, under and across the the following described property:

Lots 1 thru 6, inclusive, Auditor's Subdivision No. 273, Hennepin County, Minnesota.

Said 20.00 foot wide perpetual easement lying between a line 40.00 feet northwesterly and a line 60.00 feet northwesterly of the follow described line:
Commencing at the meander corner of the south line of Government Lot 5, Section 8, Township 117, Range 23, Hennepin County, Minnesota; thence on an assumed bearing of North 89 degrees 28 minutes 31 seconds West along the south line of said Government Lot 5 a distance of 132.39 feet to the beginning of the line to be described; thence North 45 degrees 03 minutes 24 seconds East a distance of 599.29 feet; thence northeasterly a distance of 259.19 feet along a tangential curve concave to the southeast, having a radius of 1041.74 feet and a central angle of 14 degrees 15 minutes 20 seconds; thence North 59 degrees 18 minutes 44 seconds East, tangent to the last described curve a distance of 70.00 feet and said line there terminating.

Also a 5.00 foot wide perpetual easement for sanitary sewer purposes over, under and across the following described property:

Lots 4 thru 6, inclusive, and the southwesterly 22.00 feet of Lot 3, Auditor's Subdivision No. 273, Hennepin County, Minnesota.

Said 5.00 foot wide perpetual easement lying between a line 60.00 feet northwesterly and a line 65.00 feet northwesterly of the above described line.

THEODORE S BROWN — 56716 (LIC. NO.) — 5/19/2022 (DATE)

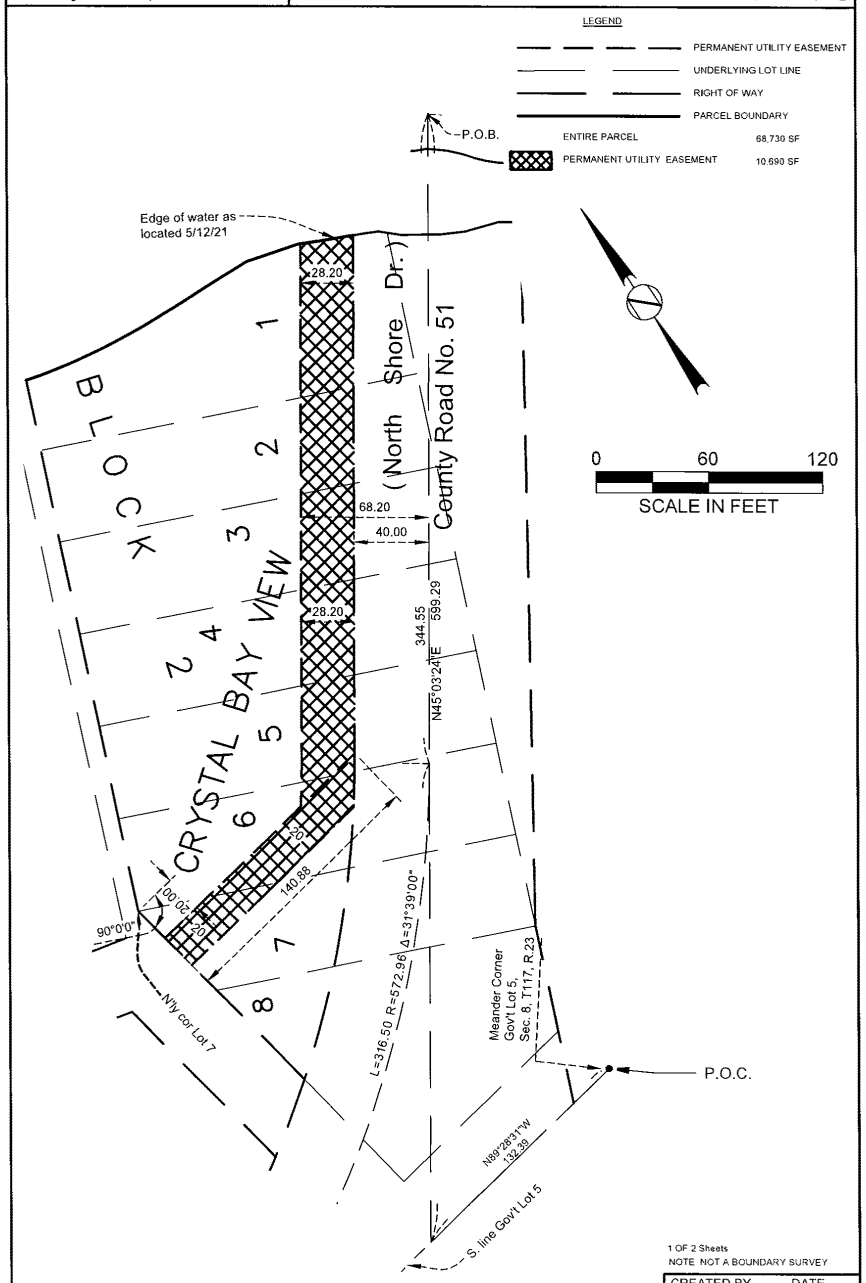
2 OF 2 Sheets
NOTE: NOT A BOUNDARY SURVEY

| CREATED BY | DATE |
|---|---|
| DLF - IMO | 3/29/22 |
| TSB - SEH | 5/19/22 |

**Project:** *MCES 8567 FM Channel Crossing Replacement*
**Parcel:** *Lots 1 through 10, Block 2 Crystal Bay View*
**County:** *Hennepin*

**Owner:** *Hennepin County*
**Address:** *3700 North Shore Dr. Orono, MN 55391*
**PID:** *0811723340061*

METROPOLITAN COUNCIL




1 OF 2 Sheets
NOTE NOT A BOUNDARY SURVEY

| CREATED BY | DATE |
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| DLF - IMO | 3/29/22 |
| TSB - SEH | 5/19/22 |

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|---|---|
| **Project:** *MCES 8567 FM Channel Crossing Replacement*<br>**Parcel:** *Lots 1 through 10, Block 2 Crystal Bay View*<br>**County:** *Hennepin* | **Owner:** *Hennepin County*<br>**Address:** *3700 North Shore Dr. Orono, MN 55391*<br>**PID:** *0811723340061* |

METROPOLITAN COUNCIL

Description of Property:

Lots 1 thru 7, inclusive, Block 2, Crystal Bay View, Hennepin County, Minnesota.

Descriptions of Perpetual Easements:

A 28.20 foot wide perpetual easement for sanitary purposes over, under and across the following described property:

Those parts of Lots 1 thru 6, inclusive, Block 2, Crystal Bay View, Hennepin County, Minnesota.

Said 28.20 foot wide perpetual easement lying between a line 40.00 feet northwesterly and a line 68.20 feet northwesterly of the following described Line A:

Commencing at the meander corner of the south line of Government Lot 5, Section 8, Township 117, Range 23, Hennepin County, Minnesota; thence on an assumed bearing of North 89 degrees 28 minutes 31 seconds West, along the south line of said Government Lot 5, a distance of 132.39 feet; thence North 45 degrees 03 minutes 24 seconds East a distance a of 599.29 feet to the point of beginning of the Line A to be described; thence South 45 degrees 03 minutes 24 seconds West, back along last described line, a distance of 344.55 feet; thence southwesterly along a tangential curve, concave to the northwest, having a radius of 572.96 feet, central angle of 31 degrees 39 minutes 00 seconds, for a distance of 316.50 feet and said Line A there terminating.

Except that part lying southerly of the following described Line B:

Beginning at a point on the west line of Lot 7, Block 2, Crystal Bay View, Hennepin County, Minnesota, a distance of 20.00 feet south from the most northerly corner of said Lot 7; thence easterly at right angles to said west line a distance of 140.88 feet more or less to a line 40.00 feet northwesterly of said Line A and said Line B there terminating.

Also a 20.00 foot wide perpetual easement for sanitary sewer purposes over, under and across the following described property:

Lots 5 thru 7, inclusive, Block 2, Crystal Bay View, Hennepin County, Minnesota.

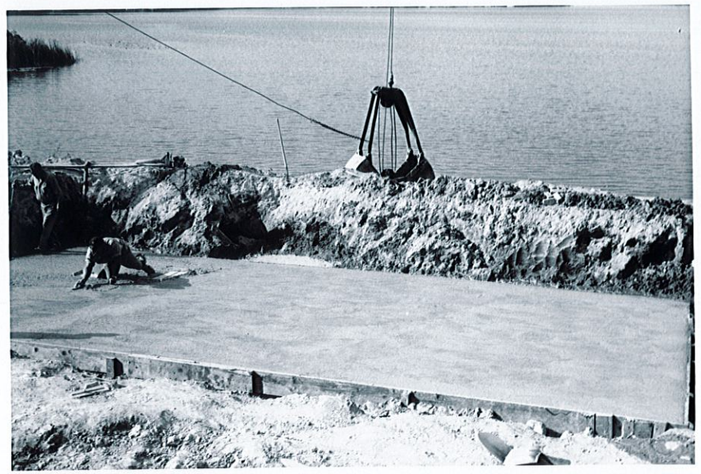
The northerly boundary of said 20.00 foot wide easement being said Line B and the easterly boundary of said 20.00 foot wide easement being a line 40.00 feet northwesterly of said Line A.

THEODORE S BROWN — 56716 LIC. NO. — 5/19/2022 DATE

2 OF 2 Sheets
NOTE: NOT A BOUNDARY SURVEY

| CREATED BY | DATE |
|---|---|
| DLF - IMO | 3/29/22 |
| TSB - SEH | 5/19/22 |

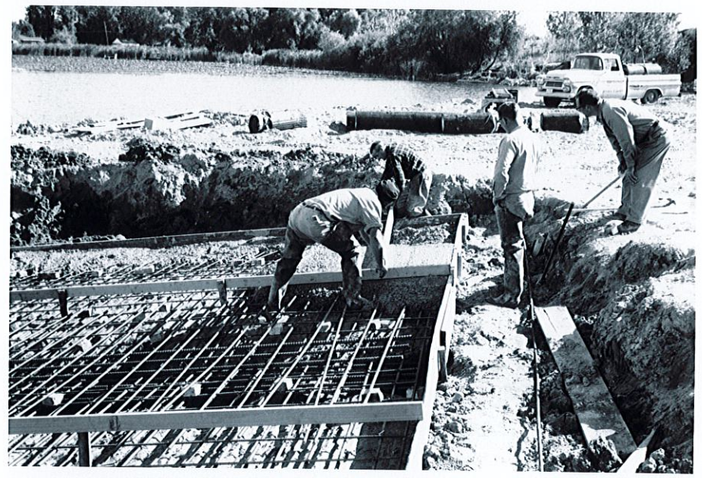




















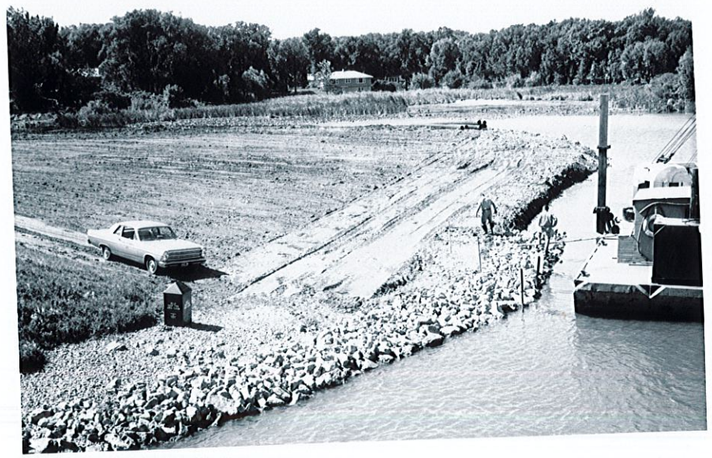






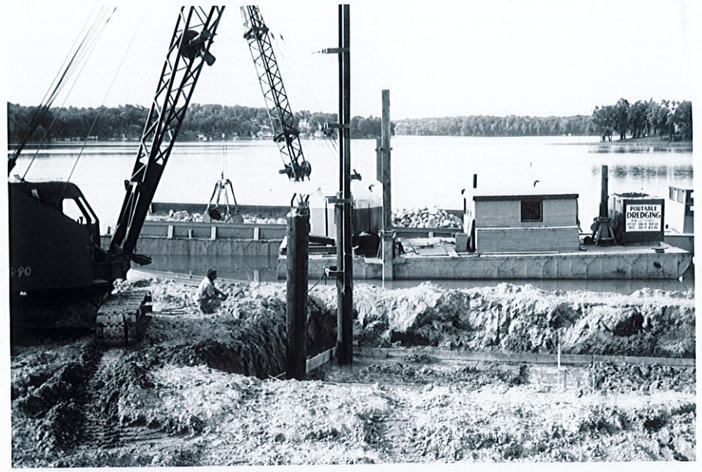






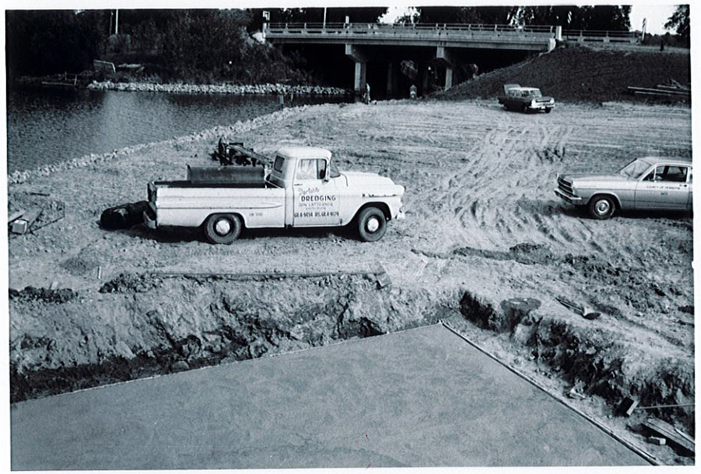

MEN
LADIES





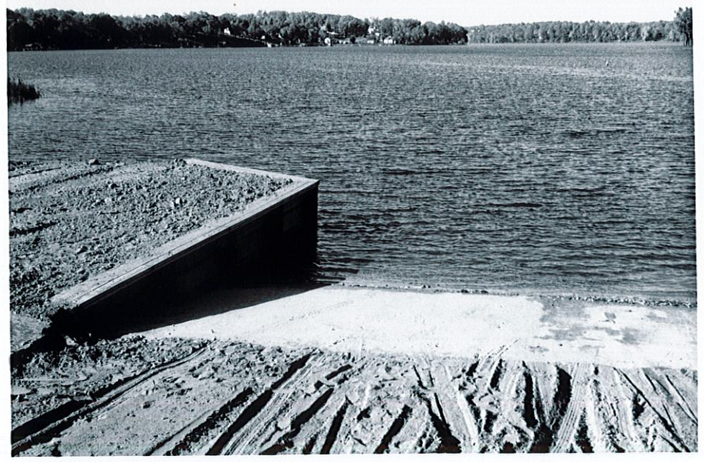




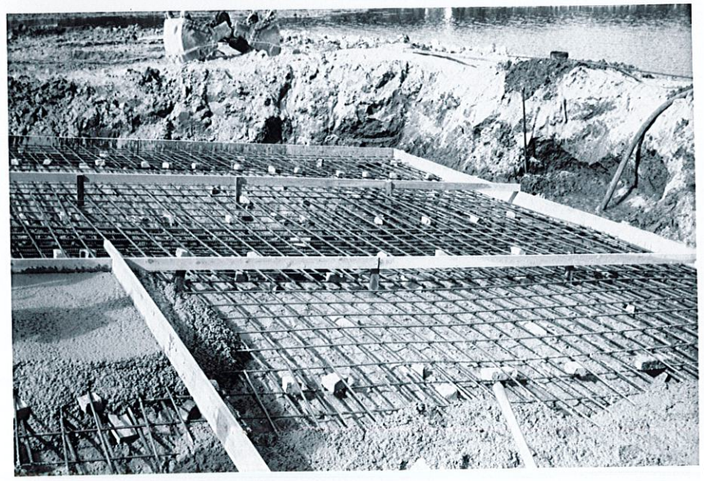













North Arm
Boat Landing
North Shore Dr
51
51


North Arm
Boat Landing
North Shore Dr
North Shore Dr
51
51
19










JCT
19

















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Invasive species can be too small to see
A diseased fish


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Can you make a difference?
STOP AQUATIC HITCHHIKERS!
ASPEN
TRASH

**Wheelchairs & Walleyes**, a 501c (3) organization, was born out of necessity.

Individuals, especially children with adaptive needs, are forced to conform to an able-bodied world. In many cases, such as outdoor lake recreation, they aren't allowed due to nonexistent accommodations.

It is our mission to enable anyone, regardless of their physical limitations, to enjoy the lake without feeling like they are a burden to their friends and loved ones. This idea resulted in the first construction and donation of the most inclusive wheelchair ramp and disabled persons lift in North Dakota.

**We have now formed a MN Chapter to bring this equipment to Minnesota.**

We will fundraise to pay for the equipment and donate it to the community in its entirety, installed and ready to use, which the public will use at no cost so children, veterans, and elderly people with mobility issues can enjoy fishing and boating with ease!

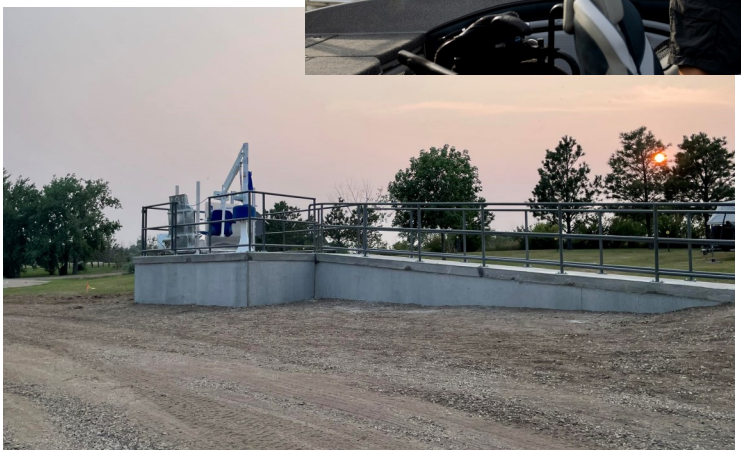
We feel every disabled child, adult, elderly loved one, and paralyzed veteran in the country deserves the right to experience what many of us take for granted every day: INDEPENDENCE.

**We would love for you to partner with us on this project or be the next recipient.**

**CLICK HERE to help as a Volunteer, a Donor, Sponsor, or to serve on a Committee.**

**CLICK HERE to make a pledge to 13-year old Callan Wagner's Fishathon.** He will fish one day before the end of February to raise money for Wheelchairs & Walleyes MN Chapter. Pledge $1 for every fish he catches that day (100 fish max), or make a donation of any size. **Feel free to follow his fishing and hunting adventures on Facebook, including his Fishathon!**





WHEELCHAIRS & WALLEYES MN


**Address:**

Diane Scott

38034 193rd St

Hillman, MN 56338

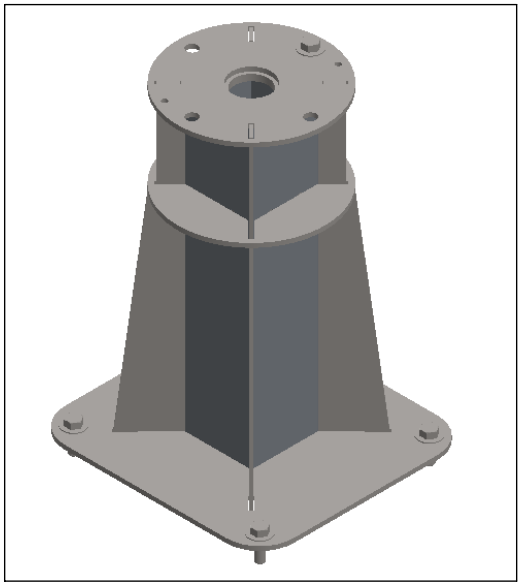
**Phone/Fax/E-mail:**

Cell: 320-260-7064

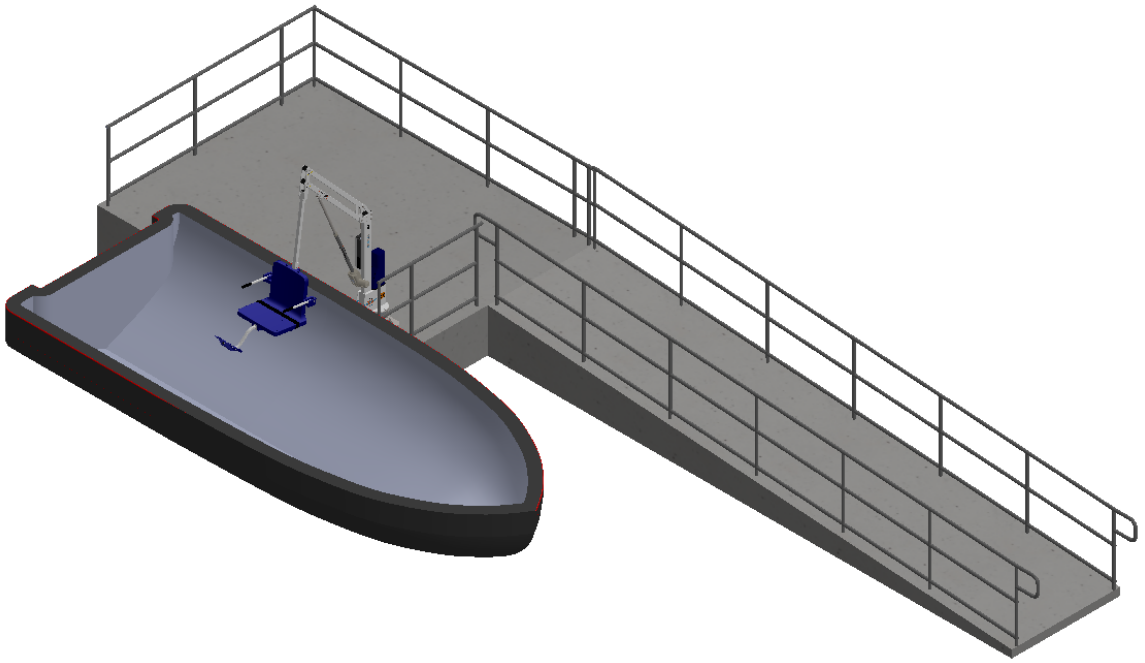
Email: tribitt@brainerd.net



**REVXL-DD**
**PART NO. INV03178**



**F-MTYPD18**
**PART NO. INV02522**



# WHEELCHAIRS & WALLEYES

CATALOG NO.
PART NO. OP 010922

## CUSTOMER APPROVAL

- ☐ APPROVED AS IS
- ☐ APPROVED, AS NOTED
- ☐ REVISE, RESUBMIT

AUTHORIZED SIGNATURE DATE

THIS DRAWING REPRESENTS AQUA CREEK PRODUCTS INTERPRETATION OF THE DESIGN INTENT AND SERVES AS OUR SHOP DRAWINGS FOR MANUFACTURING PURPOSES. THE DETAILS AND SCOPE IN THESE DRAWINGS REPRESENT THE PRODUCT THAT WILL BE PRODUCED BY AQUA CREEK PRODUCTS AND DELIVERED TO SITE. ALL ADDITIONS, CHANGES, OR DEVIATIONS FROM THIS APPROVAL DRAWING PACKAGE WILL BE REGARDED AS A CHANGE ORDER AND PROCESSED ACCORDINGLY. APPROVAL OF THIS DRAWING PACKAGE IS ONE OF THE CONDITIONS PRECEDENT TO COMMENCEMENT OF MANUFACTURING.

ALL CUSTOM PRODUCTS ARE BASED ON CUSTOMER SUPPLIED INFORMATION FOR SPECIFIC APPLICATIONS. AQUA CREEK USES BEST PRACTICES TO DESIGN CUSTOM PRODUCTS THAT WILL FUNCTION APPROPRIATELY AND PROVIDE REASONABLY SAFE OPERATION BASED ON INDUSTRY EXPERIENCE, COMMON KNOWLEDGE AND DESIGN SOFTWARE ANALYSIS. HOWEVER, BECAUSE CUSTOM PRODUCTS HAVE NOT GONE THROUGH OUR REGULAR PHYSICAL TESTING STANDARDS, THE PRODUCT MAY NOT BE CERTIFIED UNDER UL OR OTHER APPLICABLE STANDARDS AND THE CUSTOMER ASSUMES ALL LIABILITY THAT MAY BE ASSOCIATED WITH IT.

**AQUA CREEK PRODUCTS**

MODEL I REVISION

**Wheelchairs & Walleyes - OP 010922**


Aqua Creek Products
Leaders in Recreation, Fitness and Ability
9889 GARRYMORE LANE
MISSOULA, MT 59808
(406) 549-0769
FAX (406) 549-2602
www.AquaCreek.com



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PROPRIETARY AND CONFIDENTIAL INFORMATION

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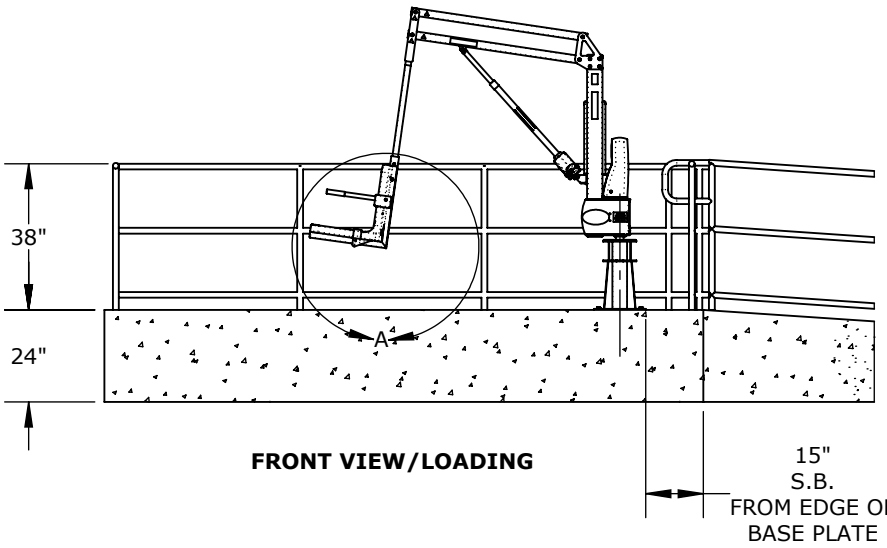
*SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

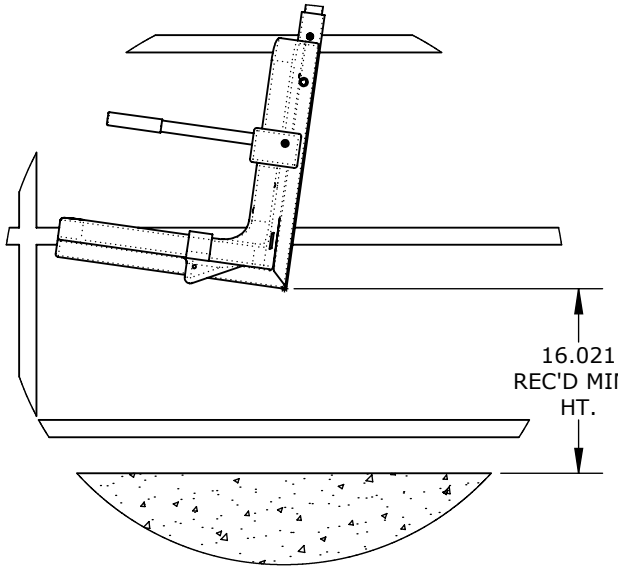

DIMENSIONS ARE IN INCHES
UNLESS OTHERWISE SHOWN
FRACTIONAL: ..... ±1/16
ANGULAR: ..... ±1°
TWO PLACE DECIMAL: .... ±.01
THREE PLACE DECIMAL: .. ±.005

MATERIAL: 304 STAINLESS STEEL
FINISH: -
APPROX. WEIGHT: MASS LBS.

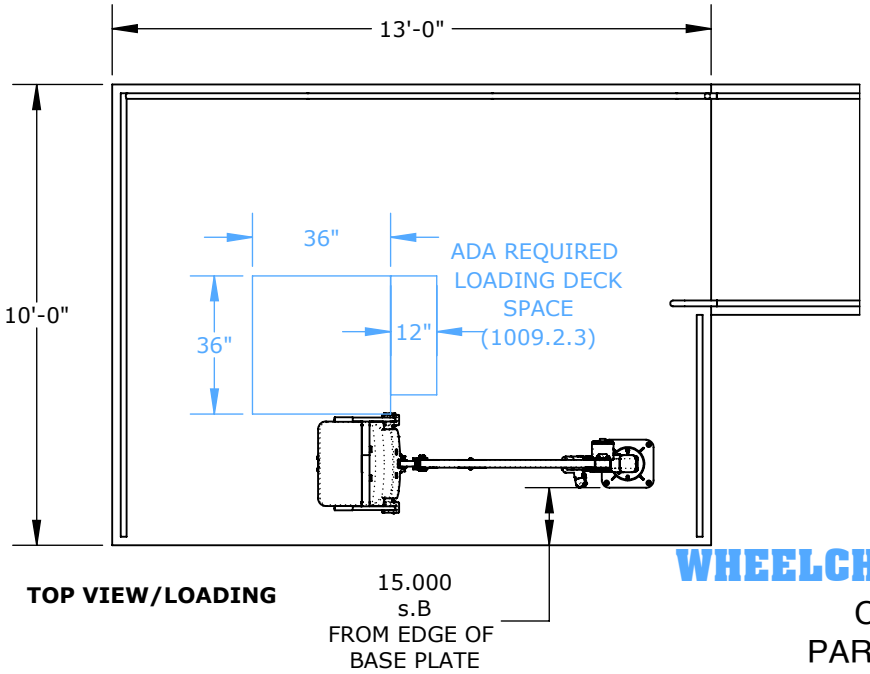
SCALE 1:128
SHT 83




**FRONT VIEW/LOADING**




**DETAIL A**
**SCALE 3 : 50**




**TOP VIEW/LOADING**

## NOTE:
## LIFT SHOWN ATTACHED TO 18" PEEDESTAL AND IN SEAT POLE POSITION 5 AND NO FRONT RAILS

- DIMENSIONS SHOWN IN RED INDICATE THE MIN. RECOMMENDED RANGE OF MOTION FOR PARTICIPANT SAFETY, NOT THE LIFT'S MAXIMUM RANGE.
- ALL DIMENSIONS SHOWN IN BLUE INDICATE CURRENT ADA REGLULATIONS REQUIREMENTS
- ALL DIMENSIONS SHOWN IN GREEN INDICATE THE LIFT ANCHOR PLACEMENT.

# WHEELCHAIRS & WALLEYES

CATALOG NO.
PART NO. OP 010922

Aqua Creek Products
Leaders in Recreation, Fitness and Ability
9889 GARRYMORE LANE
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FAX (406) 549-2602
www.AquaCreek.com
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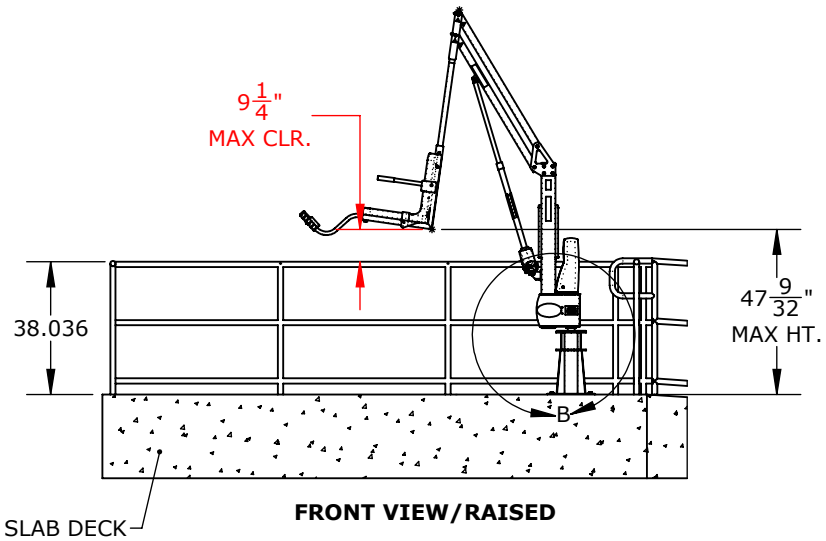
UNLESS OTHERWISE SHOWN
FRACTIONAL: ..... ±1/16
ANGULAR: ..... ±1°
TWO PLACE DECIMAL: .... ±.01
THREE PLACE DECIMAL: .. ±.005

MATERIAL: 304 STAINLESS STEEL
FINISH: -
APPROX. WEIGHT: MASS LBS.

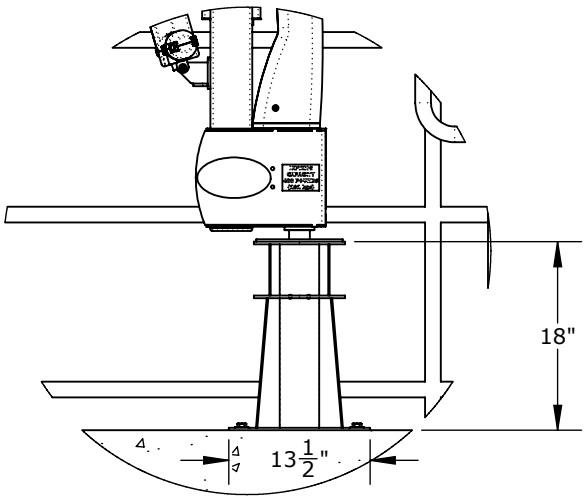
MODEL
I
REVISION

Wheelchairs & Walleyes - OP 010922

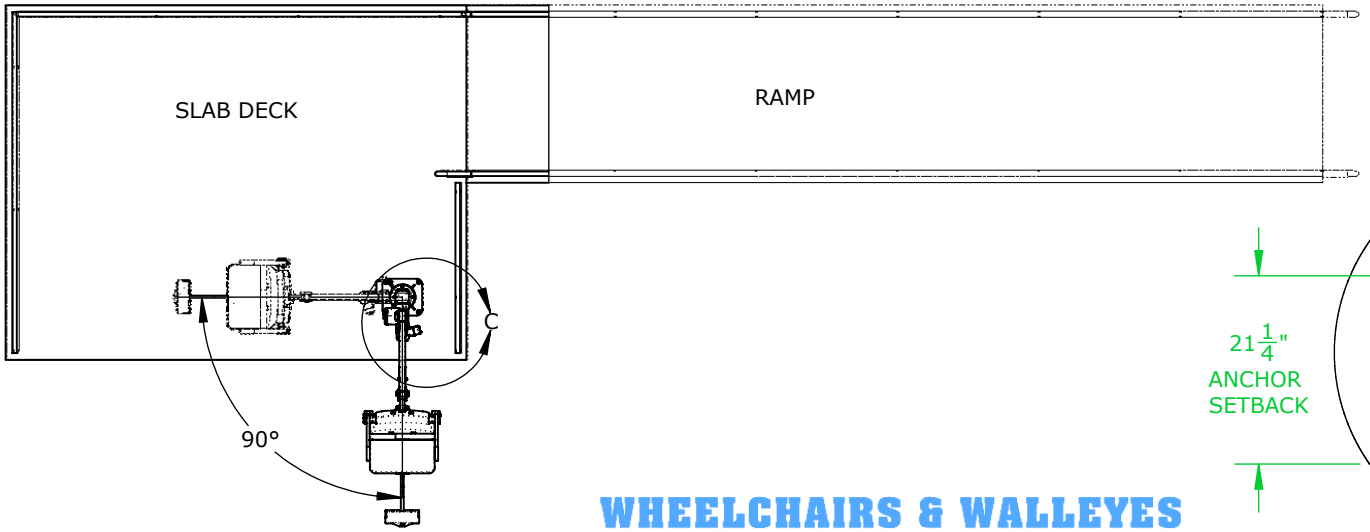
SCALE
1:128
SHT
84



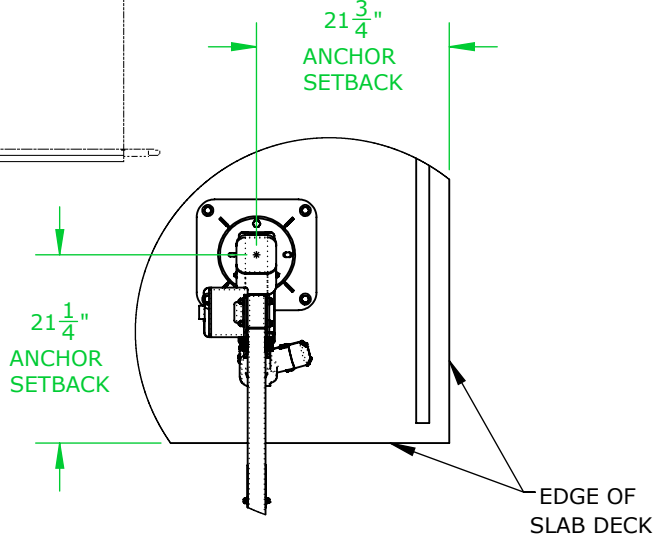

**FRONT VIEW/RAISED**




**DETAIL B**
**SCALE 3 : 55**




**TOP VIEW/RAISED/ROTATED OVER**




**DETAIL C**
**SCALE 3 : 65**

# WHEELCHAIRS & WALLEYES

CATALOG NO.
PART NO. OP 010922

Aqua Creek Products
Leaders in Recreation, Fitness and Ability
9889 GARRYMORE LANE
MISSOULA, MT 59808
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FAX (406) 549-2602
www.AquaCreek.com

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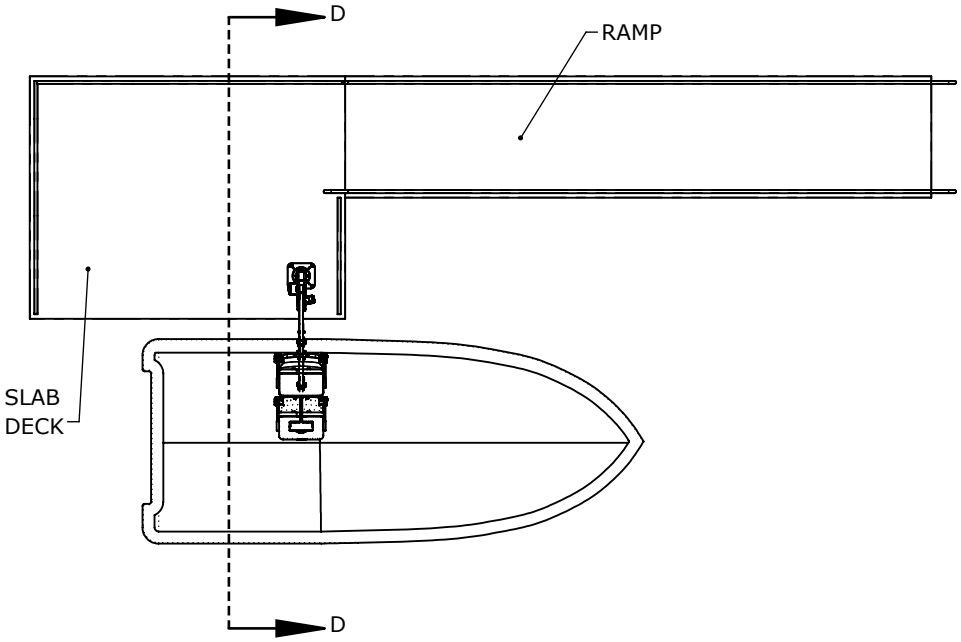
UNLESS OTHERWISE SHOWN
FRACTIONAL: ..... ±1/16
ANGULAR: ..... ±1°
TWO PLACE DECIMAL: .... ±.01
THREE PLACE DECIMAL: .. ±.005

MATERIAL: 304 STAINLESS STEEL
FINISH: -
APPROX. WEIGHT: MASS LBS.

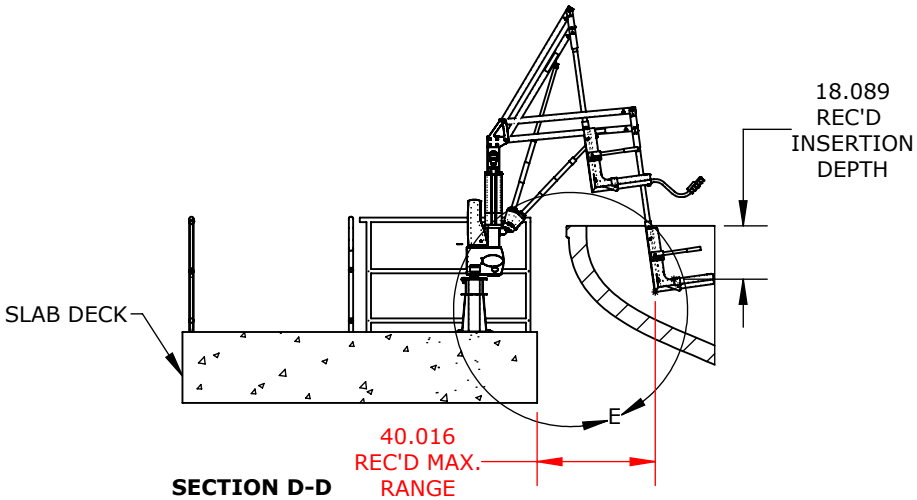
MODEL I
REVISION

Wheelchairs & Walleyes - OP 010922

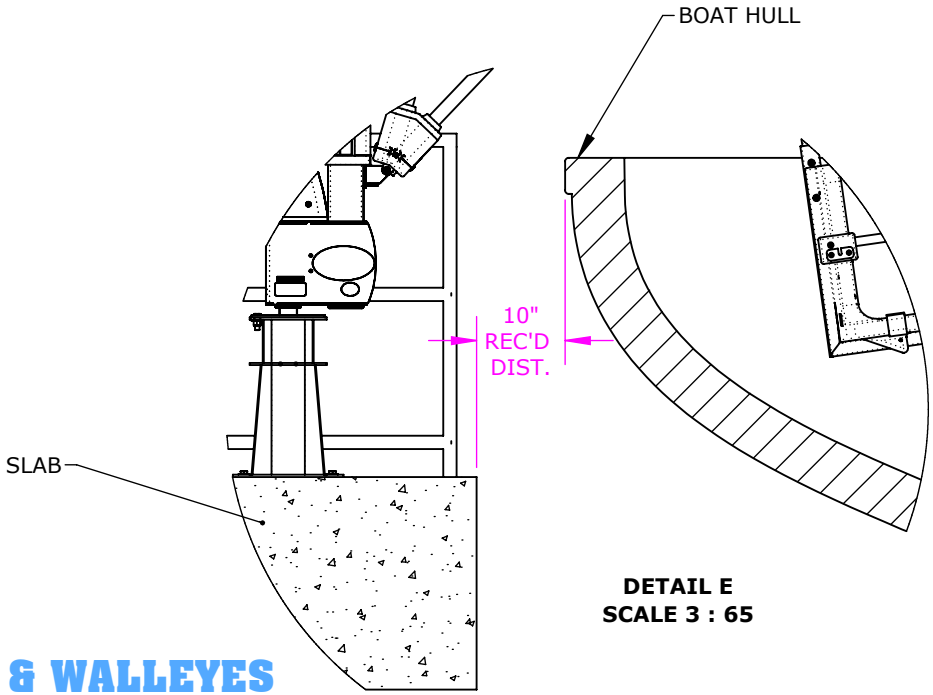
SCALE 1:128
SHEET 85




**TOP VIEW/RAISED/INSERTED**




**SECTION D-D**
**SCALE 1 : 65**




**DETAIL E**
**SCALE 3 : 65**

**NOTE:**
**LIFT SHOWN ATTACHED TO 18" PEDESTAL AND IN SEAT POLE POSITION 5**
**AND NO FRONT RAILS**

- DIMENSIONS SHOWN IN RED INDICATE THE MAX. RECOMMENDED RANGE OF MOTION FOR PARTICIPANT SAFETY, PLEASE NOTE DIMS RELEVANT TO THIS MOUNTING CONFIG.

- ALL DIMENSIONS SHOWN IN PINK ARE MINIMUMS. RECOMMENDED DISTANCE FROM BOAT HULL TO SLAB MAY VARY DEPENDING ON TRAILER OPERATOR.

# WHEELCHAIRS & WALLEYES

CATALOG NO.
PART NO. OP 010922

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ANGULAR: ..... ±1°
TWO PLACE DECIMAL: .... ±.01
THREE PLACE DECIMAL: .. ±.005

MATERIAL: 304 STAINLESS STEEL
FINISH: -
APPROX. WEIGHT: MASS LBS.

MODEL I REVISION

Wheelchairs & Walleyes - OP 010922

SCALE 1:128
SHT 86

# REVISIONS

| REV. | DESCRIPTION | ECR # | DATE | APPROVED |
|---|---|---|---|---|
| 1 | INITIAL OP DWG | | 4/8/2025 | A.PEREZ |

**IMPORTANT NOTE ON DIMENSIONS:**
ALL DIMENSIONS RELATED TO SAFE LIFT CLEARANCES ARE PRELIMINARY REFERENCES ONLY, AND SHOULD NOT BE CONSIDERED FINAL SPECIFICATIONS.

FINAL PLACEMENT AND ADJUSTMENTS MUST BE VERIFIED AND COORDINATED BETWEEN THE CUSTOMER AND THE PROJECT TEAM.

## WHEELCHAIRS & WALLEYES

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THREE PLACE DECIMAL: .. ±.005

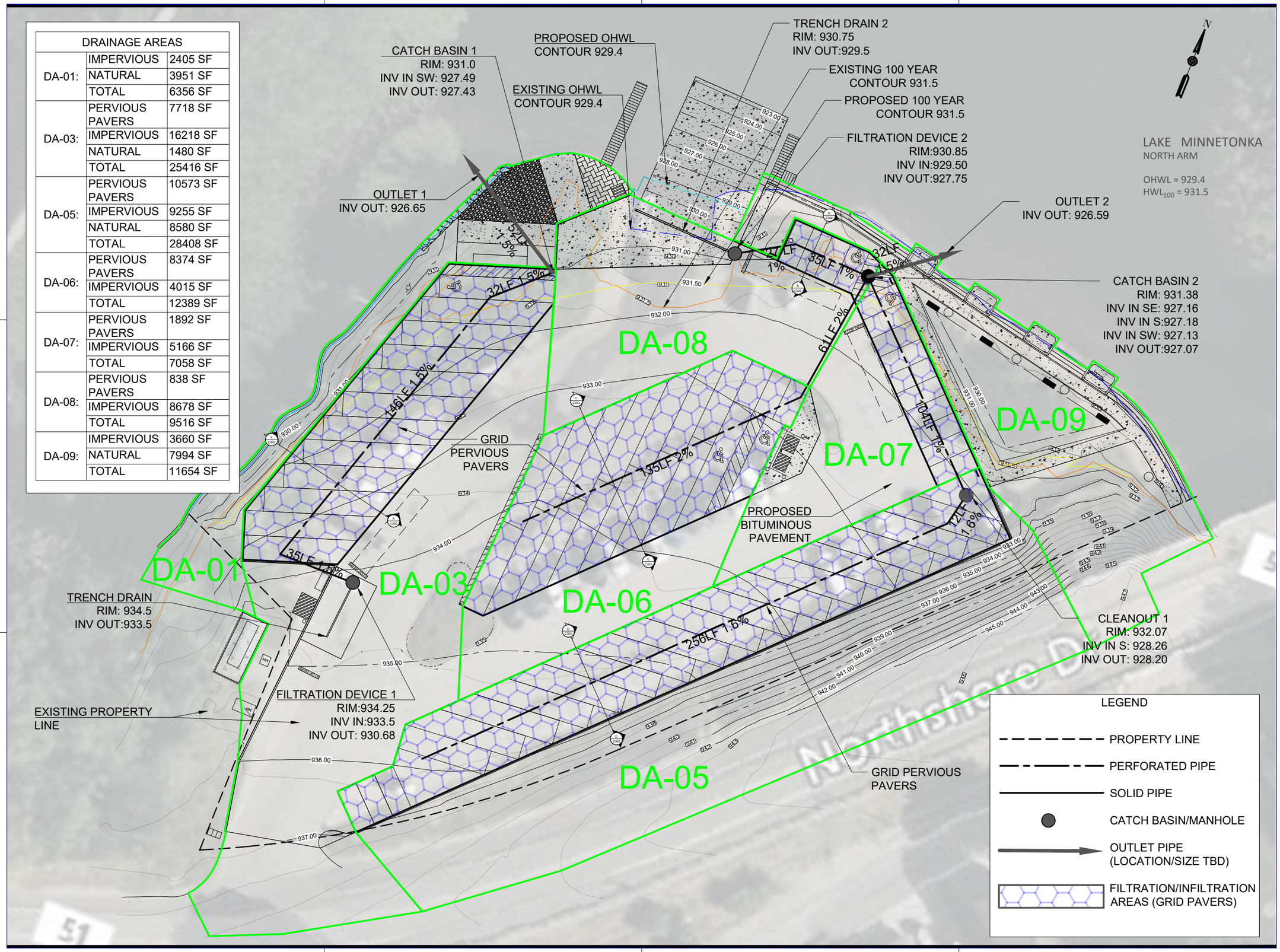
MATERIAL: 304 STAINLESS STEEL
FINISH: -
APPROX. WEIGHT: MASS LBS.

MODEL I REVISION

Wheelchairs & Walleyes - OP 010922

SCALE 1:128
87

| DRAINAGE AREAS | | |
|---|---|---|
| DA-01: | IMPERVIOUS | 2405 SF |
| | NATURAL | 3951 SF |
| | TOTAL | 6356 SF |
| DA-03: | PERVIOUS PAVERS | 7718 SF |
| | IMPERVIOUS | 16218 SF |
| | NATURAL | 1480 SF |
| | TOTAL | 25416 SF |
| DA-05: | PERVIOUS PAVERS | 10573 SF |
| | IMPERVIOUS | 9255 SF |
| | NATURAL | 8580 SF |
| | TOTAL | 28408 SF |
| DA-06: | PERVIOUS PAVERS | 8374 SF |
| | IMPERVIOUS | 4015 SF |
| | TOTAL | 12389 SF |
| DA-07: | PERVIOUS PAVERS | 1892 SF |
| | IMPERVIOUS | 5166 SF |
| | TOTAL | 7058 SF |
| DA-08: | PERVIOUS PAVERS | 838 SF |
| | IMPERVIOUS | 8678 SF |
| | TOTAL | 9516 SF |
| DA-09: | IMPERVIOUS | 3660 SF |
| | NATURAL | 7994 SF |
| | TOTAL | 11654 SF |





HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 02/28/2025 | DRAFT NOT FOR CONSTRUCTION |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME: DAVID J. JULIFF
LIC. NO.: 23409 DATE: MM/DD/YYYY


IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

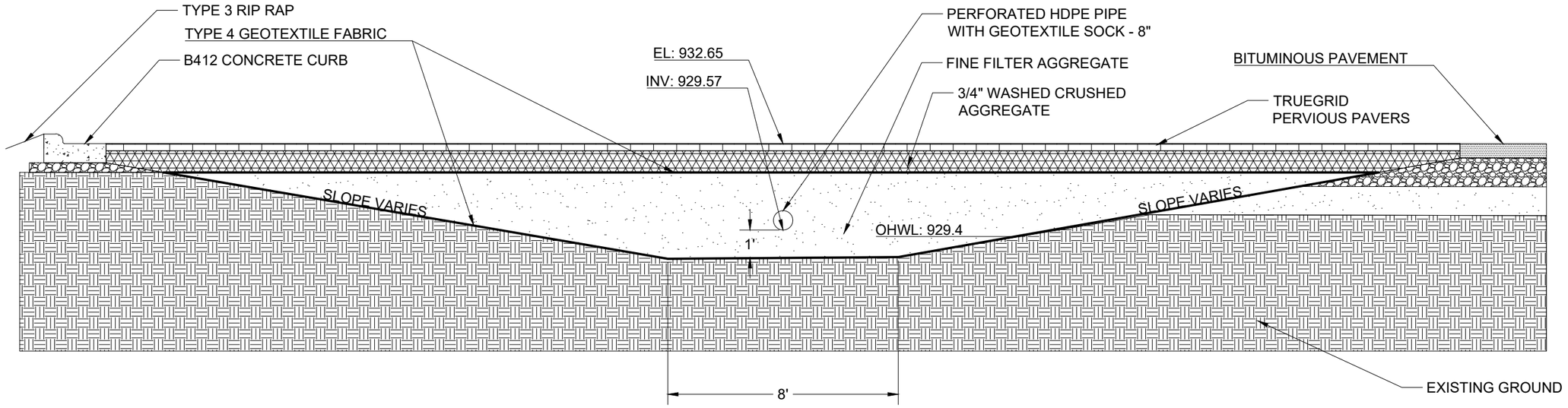

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| DJJ | GRW | SRW |

C303
STORMWATER MANAGEMENT PLAN

P031062406

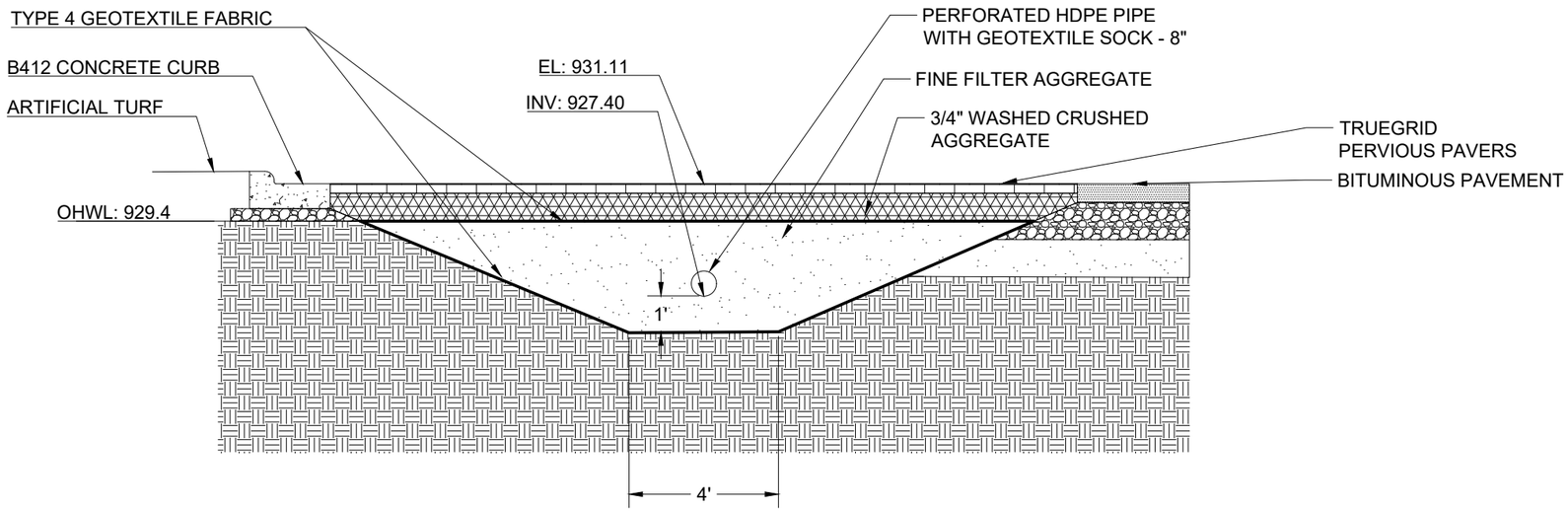
PROJ.NU...88


May 27, 2025 - 3:49pm
\\MODrive\IMO_Share\Projects\P031 Hennepin City\P031062406 N Arm Boat Launch Design\CADD\WGs\C300 - P03106 NORTH ARM - GRADING AND PROFILES.dwg




# PERVIOUS GRID PAVER
# CROSS SECTION A-A

NO SCALE




# PERVIOUS GRID PAVER
# CROSS SECTION B-B

NO SCALE

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

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|---|---|---|
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PRINTED NAME: DAVID J. JULIFF
LIC. NO.: 23409 DATE: MM/DD/YYYY

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

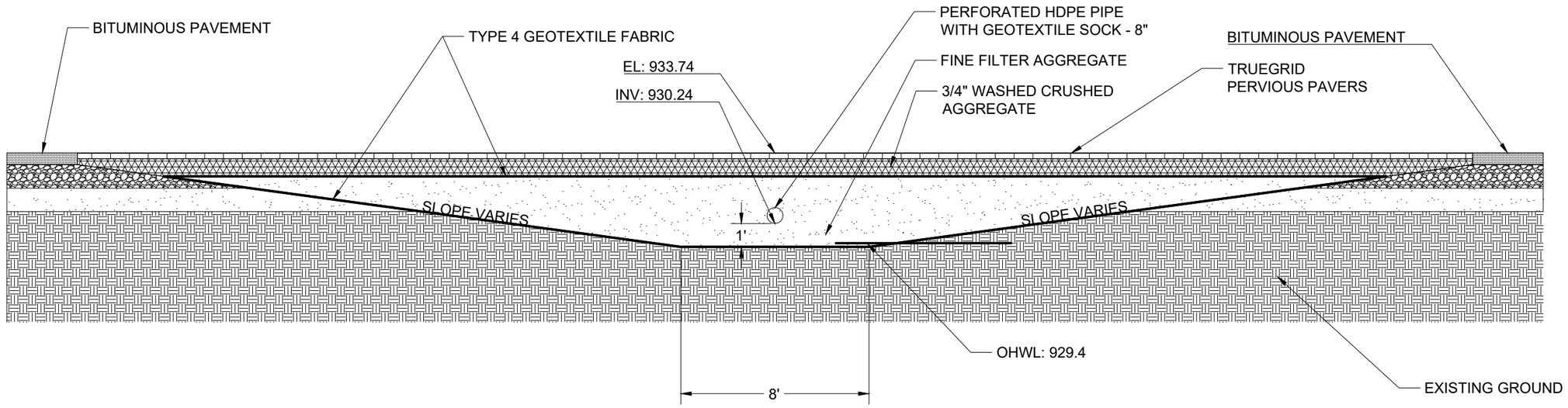
| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| DJJ | GRW | SRW |

C302A
FILTRATION TRENCH
CROSS SECTIONS

P031062406
PROJ.NUM.

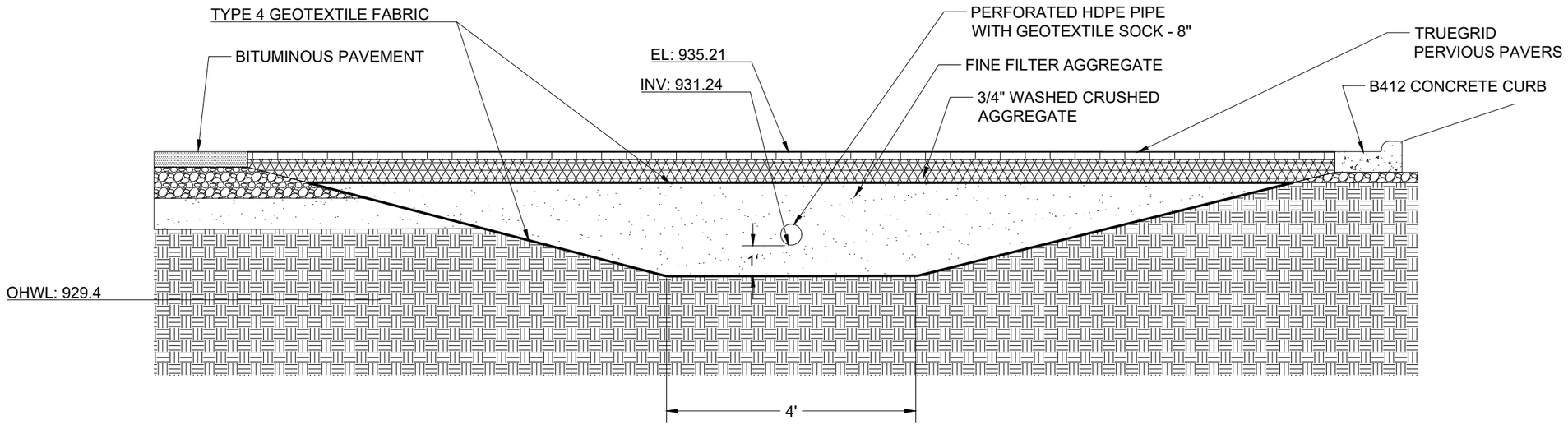


May 27, 2025 - 11:22am
\\IMODrive\IMO_Share\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CAD\DWGs\C300 - P03106 NORTH ARM - GRADING AND PROFILES.dwg




# PERVIOUS GRID PAVER
# CROSS SECTION C-C

NO SCALE




# PERVIOUS GRID PAVER
# CROSS SECTION D-D

NO SCALE

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| 1 | 02/28/2025 | DRAFT NOT FOR CONSTRUCTION |

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SIGNATURE:
PRINTED NAME: DAVID J. JULIFF
LIC. NO.: 23409 DATE: MM/DD/YYYY

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| DJJ | GRW | SRW |

C302B
FILTRATION TRENCH
CROSS SECTIONS

P031062406

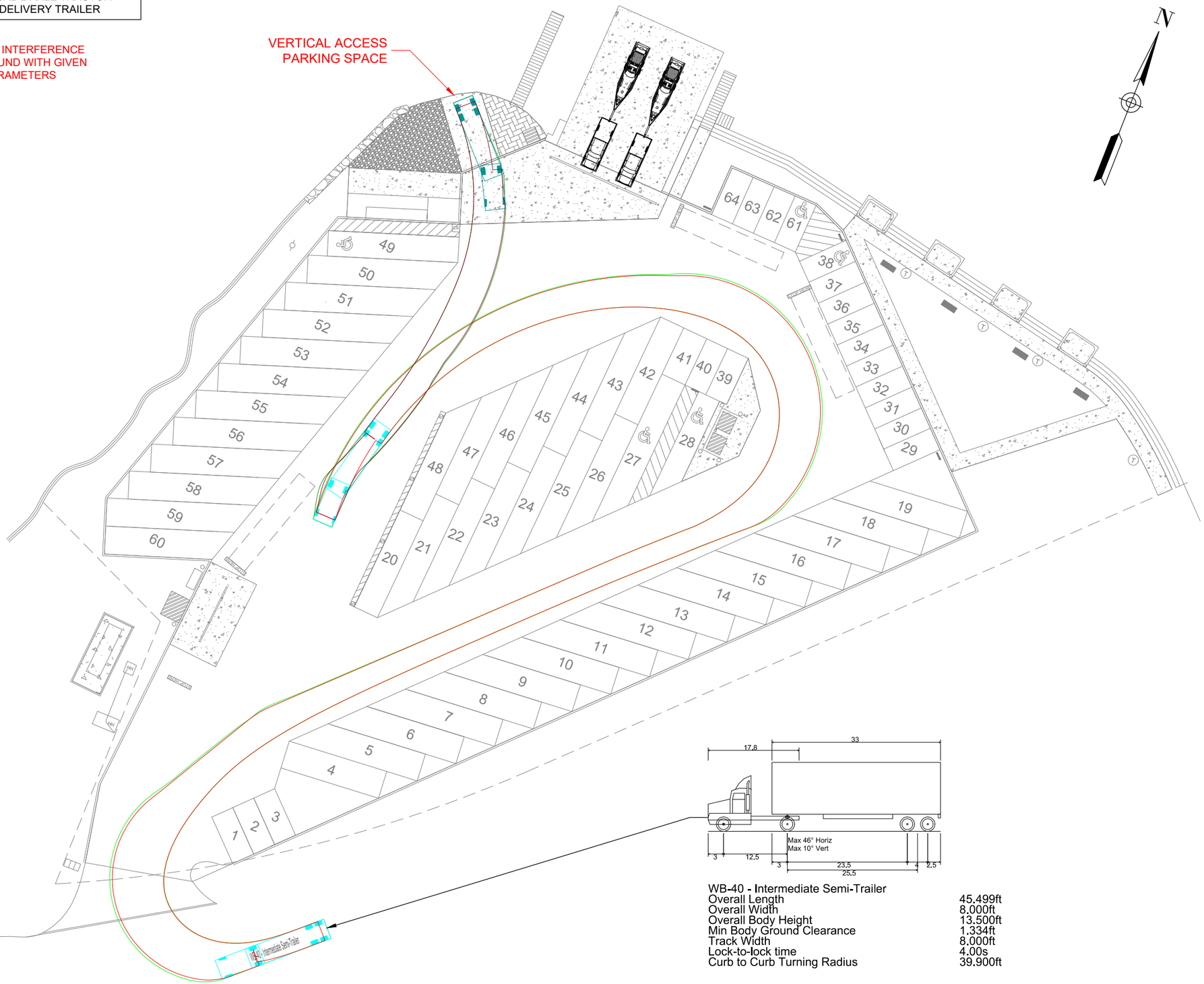
PROJ.NU



May 27, 2025 - 11:23am
\\IMODrive\IMO_Share\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CADD\WGs\C300 - P03106 NORTH ARM - GRADING AND PROFILES.dwg

VERTICAL ACCESS PARKING SPACE
VEHICLE MANEUVERABILITY EXHIBIT
WB-40 OTR TRACTOR + TRAILER
DAY CAB 2 AXLE TRACTOR
30FT DELIVERY TRAILER

NO INTERFERENCE FOUND WITH GIVEN PARAMETERS







| | |
|---|---|
| WB-40 - Intermediate Semi-Trailer | |
| Overall Length | 45.499ft |
| Overall Width | 8.000ft |
| Overall Body Height | 13.500ft |
| Min Body Ground Clearance | 1.334ft |
| Track Width | 8.000ft |
| Lock-to-lock time | 4.00s |
| Curb to Curb Turning Radius | 39.900ft |


HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

T TRASH RECEPTACLE

BENCH: BY OWNER

BOLLARD

0 40 80
SCALE IN FEET

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| ---- | --- | ---- |
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| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| ---- | --- | ---- |
| 1 | 9/22/25 | MANEUVERABILITY PLAN |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____
PRINTED NAME: ---
LIC. NO.: --- DATE: ----


IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898


| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| SRW | SRW | SRW |

# V100 MANEUVERABILITY AND PARKING PLAN

P031062406

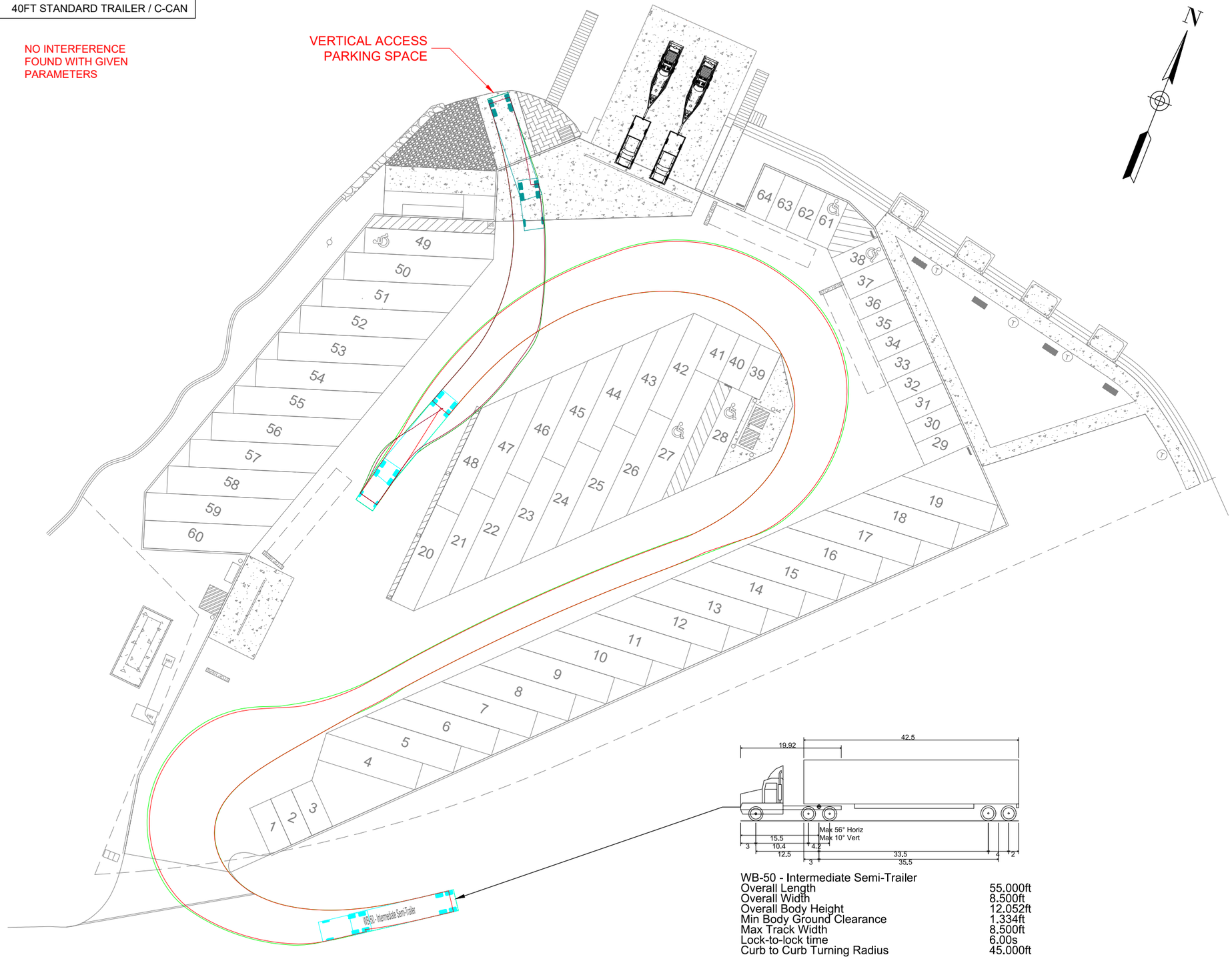
PROJ.NU..



Sep 22, 2025 - 9:38am
C:\Autodesk\Temporary Files\AcPublish_6680\V100 - P03106 NORTH ARM - MANEUVERABILITY AND PARKING PLAN.dwg

VERTICAL ACCESS PARKING SPACE
VEHICLE MANEUVERABILITY EXHIBIT
WB-50 OTR TRACTOR + TRAILER
DAY CAB 3 AXLE TRACTOR
40FT STANDARD TRAILER / C-CAN

NO INTERFERENCE FOUND WITH GIVEN PARAMETERS







| | |
|---|---|
| WB-50 - Intermediate Semi-Trailer | |
| Overall Length | 55.000ft |
| Overall Width | 8.500ft |
| Overall Body Height | 12.052ft |
| Min Body Ground Clearance | 1.334ft |
| Max Track Width | 8.500ft |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 45.000ft |

Sep 22, 2025 - 9:38am
C:\Autodesk\Temporary Files\AcPublish_6680\V100 - P03106 NORTH ARM - MANEUVERABILITY AND PARKING PLAN.dwg

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

T TRASH RECEPTACLE
BENCH: BY OWNER
BOLLARD

0 40 80
SCALE IN FEET

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

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|---|---|---|
| ---- | --- | ---- |
| ---- | --- | ---- |
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| 1 | 9/22/25 | MANEUVERABILITY PLAN |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE: _____
PRINTED NAME: ---
LIC. NO.: --- DATE: ----

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| SRW | SRW | SRW |

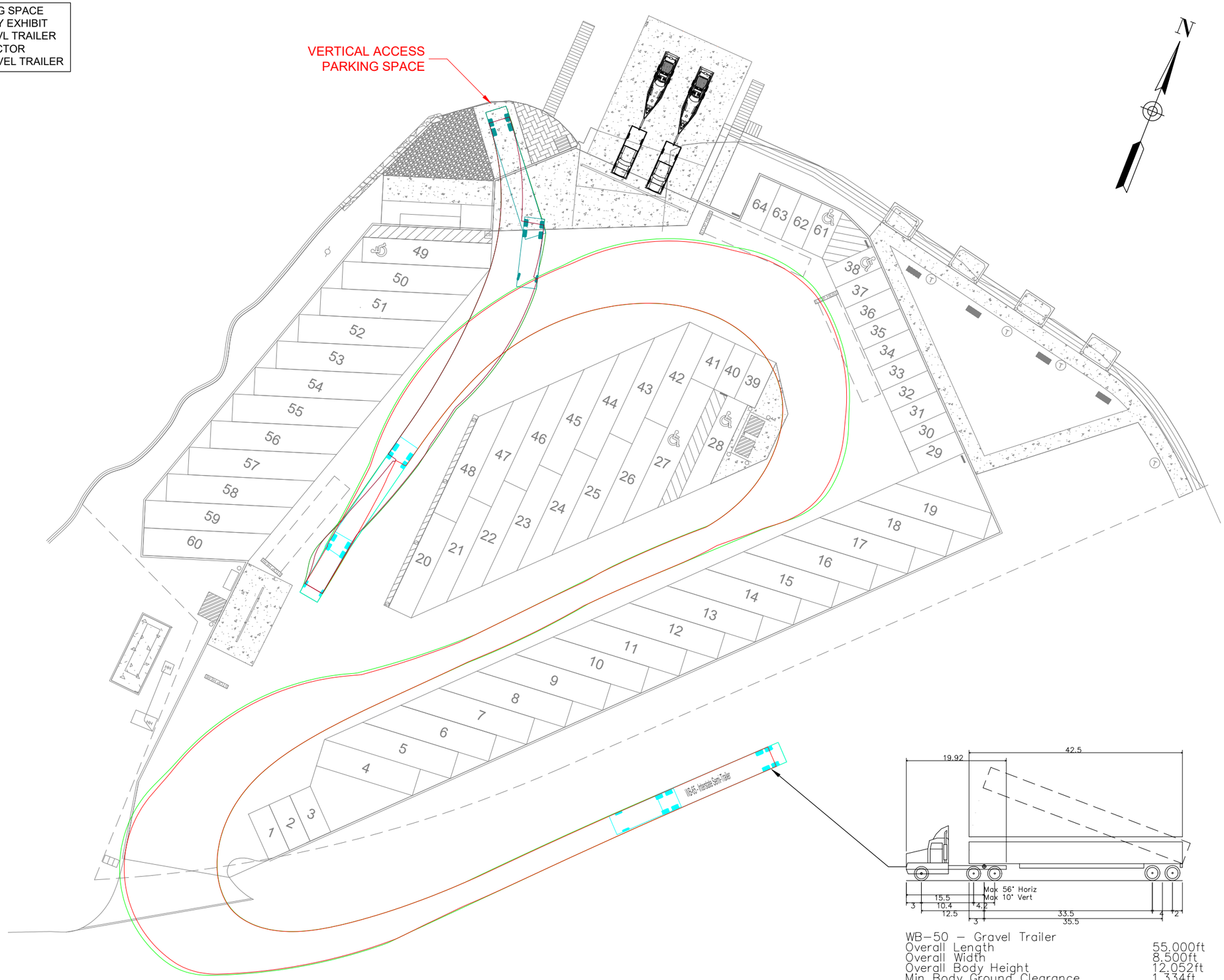
V101
MANEUVERABILITY AND PARKING PLAN

P031062406

PROJ.NU[illegible]92

VERTICAL ACCESS PARKING SPACE
VEHICLE MANEUVERABILITY EXHIBIT
WB-40 OTR TRACTOR + GRVL TRAILER
DAY CAB 3 AXLE TRACTOR
43FT END DUMP GRAVEL TRAILER

NO INTERFERENCE FOUND WITH GIVEN PARAMETERS







WB-50 – Gravel Trailer

| | |
|---|---|
| Overall Length | 55.000ft |
| Overall Width | 8.500ft |
| Overall Body Height | 12.052ft |
| Min Body Ground Clearance | 1.334ft |
| Max Track Width | 8.500ft |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 45.000ft |

Sep 22, 2025 - 9:39am
C:\Autodesk\Temporary Files\AcPublish_6680\V100 - P03106 NORTH ARM - MANEUVERABILITY AND PARKING PLAN.dwg


HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

Ⓣ TRASH RECEPTACLE
BENCH: BY OWNER
BOLLARD

0 40 80
SCALE IN FEET

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
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SIGNATURE:
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Minnetonka, MN 55343
Off: 952-446-7898

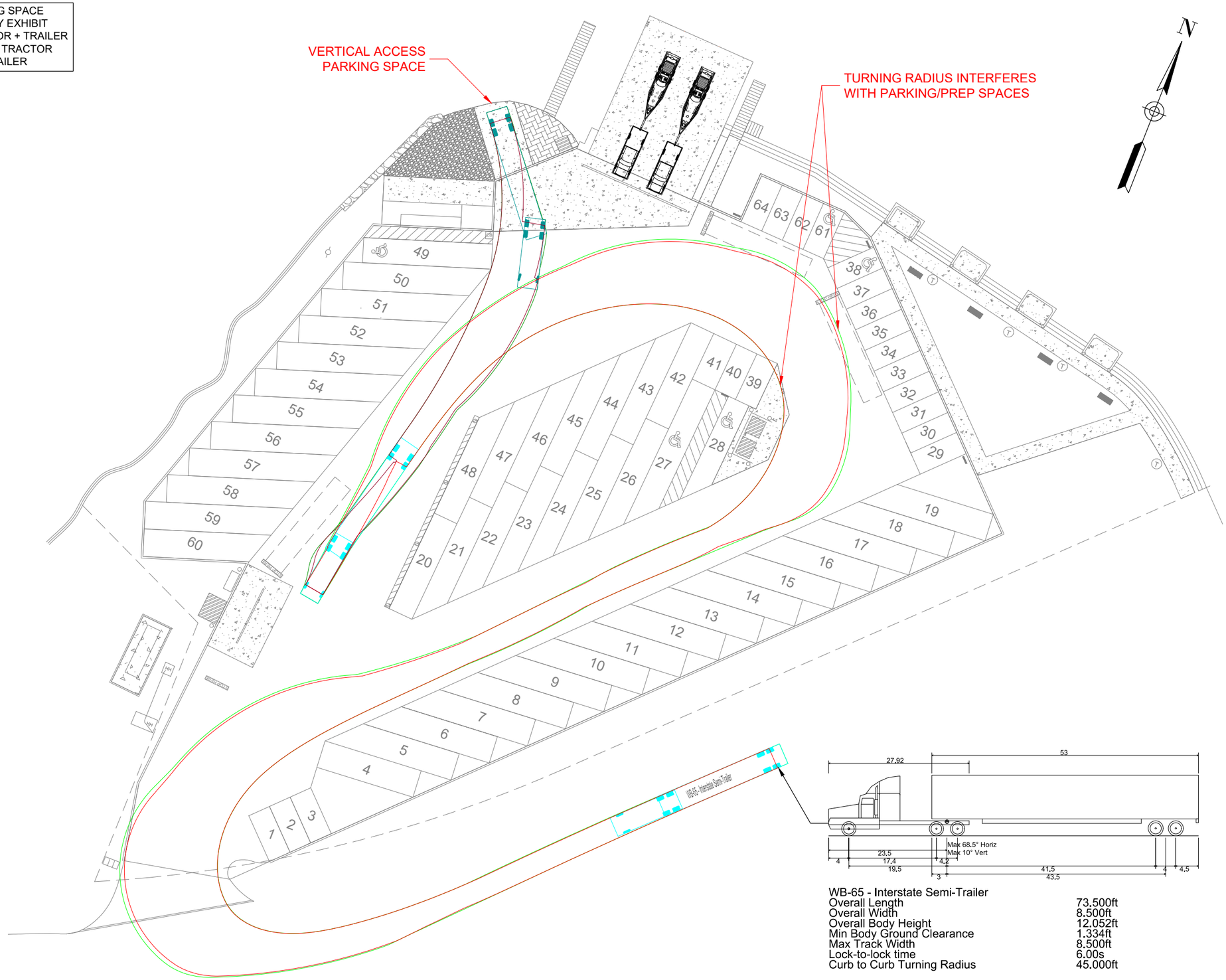

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| SRW | SRW | SRW |

## V102 MANEUVERABILITY AND PARKING PLAN

P031062406

PROJ.NU...

VERTICAL ACCESS PARKING SPACE
VEHICLE MANEUVERABILITY EXHIBIT
WB-65 INTERSTATE TRACTOR + TRAILER
SLEEPER CAB 3 AXLE TRACTOR
53FT INTERSTATE TRAILER







| | |
|---|---|
| WB-65 - Interstate Semi-Trailer | |
| Overall Length | 73.500ft |
| Overall Width | 8.500ft |
| Overall Body Height | 12.052ft |
| Min Body Ground Clearance | 1.334ft |
| Max Track Width | 8.500ft |
| Lock-to-lock time | 6.00s |
| Curb to Curb Turning Radius | 45.000ft |

Sep 22, 2025 - 9:39am
C:\Autodesk\Temporary Files\AcPublish_6680\V100 - P03106 NORTH ARM - MANEUVERABILITY AND PARKING PLAN.dwg

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

Ⓣ TRASH RECEPTACLE
BENCH: BY OWNER
BOLLARD

0 20 40
SCALE IN FEET

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

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| NO. | DATE | ISSUE RECORD |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME: ---
LIC. NO.: --- DATE: ----

IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| SRW | SRW | SRW |

V103
MANEUVERABILITY AND PARKING PLAN

P031062406

PROJ.NU..

**From:** Correy Farniok
**To:** Laura Oakden
**Subject:** RE: 3700 North Shore Drive- North Arm Boat Redesign Project- Plan Review, LA25-000033
**Date:** Friday, September 26, 2025 11:48:30 AM
**Attachments:** image001.png

---

Parking
-Will the larger parking spots be labeled (Vehicle with Trailers only)?
-Center Parking area – will there be barriers preventing vehicle from occupying( two drive thru) parking spots?
-Will contract and construction vehicle be allowed to parkin in vehicle with trailer parking.
-Who enforces construction material staging areas and commercial activities at this site when it conflicts with trailer parking?
-Are the smaller parking areas going to restrict trailer parking? I have seen trailers disconnected and a trailer is in one spot and the vehicle is in another. Will there be signage for use of these spots.

Maneuverability
Will the access be labeled with arrows for usage?
Will commercial activity be allowed on weekends during the typical boating season? Who enforces the usage if there are restrictions? Is it a good mix of commercial use and recreational use on weekends?

Use
Pontoon and Jet ski rental operations using this access - Who will regulate and enforce – Was a issue at the end of this boating season and is increasing in popularity.

Enforcement
-Who will be responsible for parking issues, rentals and commercial use violations?

Thank you

**Correy Farniok –Chief #501**
cfarniok@oronomn.gov
Office: 952-249-4700

**Orono Police Department**
2730 Kelley Parkway Orono, MN 55356
Admin: 952-249-4700
Fax: 952-476-3028
Emergency: 911

**Disclaimer:** This e-mail and any attachments may be confidential and are intended solely for the individual or organization to which they are addressed. They may contain privileged or confidential information and should not be disseminated. If you are not the intended recipient of this e-mail, you should not copy, distribute or take any action in reliance upon this e-mail or the attachments. If you received this e-mail in error, please notify the sender immediately and delete this message from your computer system. Thank you.

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**From:** Laura Oakden <loakden@oronomn.gov>
**Sent:** Monday, September 22, 2025 8:12 PM

**To:** Correy Farniok <CFarniok@oronomn.gov>; Shea Chwialkowski <schwialkowski@oronomn.gov>; Adam Edwards <aedwards@oronomn.gov>; DJ Goman <dgoman@oronomn.gov>; Joe Ruthenberg <jruthenberg@oronomn.gov>
**Subject:** RE: 3700 North Shore Drive- North Arm Boat Redesign Project- Plan Review, LA25-000033

Hello,

Hennepin County has submitted updated plans for this project. Please see the attached plans. All submitted plans are saved in the land use folder saved here:
Z:\Land Use Files\All LA Files\2021-2030\2025 #LA24-65 thru\LA25-000033-34 (3700 North Shore Dr (Vac, VAR, CUP)\Submittals

Please provide any comments back to me by **Monday September 29, 2025**, you can submit an email or a memo from your department. Your comments will be shared with the applicant and it will be included for the planning commission and council's consideration. I have the item set for the October 20 Planning Commission Meeting.

Thank you,

**Laura Oakden**
Community Development Director
City of Orono
Direct: 952-249-4602
2750 Kelley Parkway, Orono, MN 55356
www.oronomn.gov

---

**From:** Laura Oakden
**Sent:** Thursday, September 18, 2025 11:08 AM
**To:** Correy Farniok <CFarniok@oronomn.gov>; Shea Chwialkowski <schwialkowski@oronomn.gov>; Adam Edwards <aedwards@oronomn.gov>; DJ Goman <dgoman@oronomn.gov>; Joe Ruthenberg <jruthenberg@oronomn.gov>
**Subject:** 3700 North Shore Drive- North Arm Boat Redesign Project- Plan Review, LA25-000033

Hello Team,

Hennepin County has applied to redesign the North Arm Boat Landing. Please review the attached plans and provide me with comments, questions or concerns you may have. The application is still in incomplete however the county plans to submit the outstanding items by next week. Please provide any comments back to me by **Monday September 29, 2025**, you can submit a email or a memo from your department. Your comment will be included for the planning commission and council's consideration. I tentatively have the item set for the October 20 Planning Commission Meeting.

Let me know if you have any questions.
Thanks,

**Laura Oakden**
Community Development Director
City of Orono
Direct: 952-249-4602
2750 Kelley Parkway, Orono, MN 55356
www.oronomn.gov

Response to Orono Police Department Questions
Lake Minnetonka North Arm Public Access

Parking

Will the larger parking spots be labeled (Vehicle with Trailers only)?
Yes. This will make it enforceable.

Center parking Area – will there be barriers preventing vehicle from occupying two drive thru parking spots?
No. Unless it becomes a problem, then bollards or wheel stops will be installed.

Will contract and construction vehicle be allowed to park in vehicle with trailer parking.
No. That would not be consistent with the signage. Use by construction vehicles – including city projects such as water main issues – has historically occurred at public accesses throughout the state at times of low public use. We plan on being a good neighbor and use common sense. The Orono Police Department (PD) and the Hennepin County Sheriff's Office (HCSO) can address any complaints as deemed appropriate.

Who enforces construction material staging areas and commercial activities at this site when it conflicts with trailer parking?
Staging material is not allowed. The county has not witnessed any staging occurring. Parking rules do not distinguish between commercial and non-commercial users. Orono PD and the HCSO can address any complaint calls as deemed necessary. Lake Minnetonka is very large and there are only so many places to get on the water. It is understood that public access facilities represent a transportation pathway to go between land and water. For example, Emergency Management could take over the entire site. We must acknowledge transportation needs.

Are the smaller parking areas going to restrict trailer parking? I have seen trailers disconnected and a trailer is in one spot, and the vehicle is in another. Will there be signage for use of these spots.
The smaller parking spaces are vehicle only and will be signed accordingly. A disconnected trailer would violate the intended use as indicated by the signage. This has been historically challenged at the State level; to make this an enforceable action, the smaller parking spaces will be signed 'Single Car Parking Only'.

Maneuverability

Will the access be labeled with arrows for usage?
Yes. Clear and simple wayfinding cues increase safety and efficiency.

Will commercial activity be allowed on weekends during the typical boating season? Who enforces the usage if there are restrictions? Is it a good mix of commercial use and recreational use on weekends?
There are a variety of users at public accesses. Secondary uses are allowed provided they do not interfere

with or displace the recreational user. For any current or future use restrictions, the site can be signed and the Orono PD or the HCSO can address complaint calls.

Use

Pontoon and Jet ski rental operations use this access. This was an issue at the end of this boating season and is increasing in popularity. Who will regulate and enforce?
The issue with some pontoon and jet ski rentals was observed at numerous public accesses around the lake. The HCSO addressed the issue as deemed appropriate. Specific to North Arm, current and/or future regulations can be signed accordingly. Complaint calls can be addressed by the Orono PD and/or the HCSO. The two law enforcement agencies have a good working relationship and share the responsibility depending on the workload.

Enforcement

Who will be responsible for parking issues, rentals, and commercial use violations?
The Orono PD and/or the HCSO can take complaint calls. The two law enforcement agencies have a good working relationship. The MN DNR also provides some limited assistance at this facility.

November 13, 2025

Attn: David Juliff, Ismael Martinez-Ortiz
IMO Consulting Group

Guy Hoang, Tony Brough
Hennepin County

Dear North Arm Boat Launch Reconstruction Team,

Thank you for meeting last Wednesday, November 5th, to discuss Hennepin County's design updates and questions for the North Arm Boat Launch reconstruction project. It was helpful to reconvene and discuss the intent behind the current design, and how we can align that intent with the relevant water resource regulations.

**Incomplete Application**
As you are aware from our meeting, based on the current design and submittals, Hennepin County's application remains incomplete for the purpose of MCWD review, and within the meaning of Minnesota Statutes 15.99. Below is a summary of our recent key discussion points. I hope these are helpful in informing the next iteration of design, and the subsequent permit review.

**Shoreline and Streambank Stabilization Rule**
As we covered during the meeting, the stated policies underlying this MCWD rule are to limit disturbance of the natural shoreline, and where shoreline stabilization is needed, to promote naturalized methods to limit disturbance and impact to the ecological integrity of the riparian environment. The specific standards and requirements of this rule are directed at projects being proposed to stabilize eroding shorelines, boat launches, and sand blankets. Proposed shoreline improvements that don't fall under these categories are evaluated under more general standards, requiring a demonstrated need, sound design, and minimal impact.

As discussed, given this regulatory scope, two elements of the current shoreline design do not align neatly with the policy intent and standards of this rule: (1) The use, as fishing piers, of four 8' x 12' box culverts that would encroach lakeward approximately 4 feet, past the ordinary high-water level (OHW); and (2) approximately 190 linear feet of granite steps for fishing access to the lake, to be installed above and below the OHW of Lake Minnetonka. Because scaled sections have not been provided, these measurements are based on estimates from the provided plan sheets.

Neither of these shoreline improvements are proposed solely as a shoreline stabilization measure. As a result, neither readily conforms to, or is evaluated according to, the rule's standards for stabilization design. These two design elements intend to serve a public purpose of expanding access for fishing and other recreational uses. It is important that the design be tailored to fulfill the desired public purpose while minimizing impact on natural shoreline and the riparian environment.

Based on estimates derived from the current plan sheets, the County proposes to replace approximately 240 linear feet of existing riprap east of the boat launch, with approximately 190 linear feet of granite steps and approximately 50 linear feet of fishing piers, with the four fishing piers estimated to be 12 feet in length and 8 feet waterward. Since the purpose of this design is not to stabilize the bank against wave forces and shoreline erosion, the proposal is properly reviewed under Section 8 of the rule – Standards for Other Installations. While this section specifically references boat ramps and boating access structures, it also pertains to other structures, and the recreational access purpose of the steps makes it apt to consider the design under the same balancing framework as indicated for boating access more specifically. This is how MCWD has applied the rule to public access steps previously, including at Arden Park in Edina, which used select placement of limestone steps to provide access to Minnehaha Creek. Section 8 limits the width of shoreline access structures to 15 feet, and volume to 80 cubic yards below the OHW. The design also must avoid environmental impact, and safety or navigational hazard. Therefore, we would recommend that the County supports its application with the following types of information:

1. Background data and justification for the intended design
    a. E.g., data on the demand or projected demand for public fishing access at this location, possibly including fisheries data, as well as design standards or practices to support this level of demand.
2. Targeted locations for fishing access via steps
    a. E.g., review design alternatives more limited in width and amount of fill, for example interspersing hardened features with bioengineering, vegetated banks, and more naturalized shoreline designs to maximize natural setting while meeting public access and use needs.
    b. Documenting existing conditions for aquatic and riparian habitat within the project area.
3. Scaled cross sections and floodplain cut and fill calculations, to demonstrate no net fill.

Similarly, as we reviewed during our meeting, there are several open questions regarding the vertical fishing piers. As you relayed during the meeting, these piers would consist of concrete box culverts tipped on their sides and would encroach into Lake Minnetonka more than the existing

riprap along the shoreline. It would be helpful for you to provide photographs of other examples with this design and a scaled typical detail to understand more specifically the proposed configuration.

We also discussed that, as solid piers extending 4–5 feet into the lake, these would appear to constitute work within the public waters subject to Minnesota Department of Natural Resources (DNR) regulatory jurisdiction. To support your application process, MCWD staff would be willing to participate in a meeting with the DNR Area Hydrologist to review the proposed specifications of the steps and piers, and to determine the most appropriate and permittable direction for both.

Depending on the proposed shoreline design, your team may also need to submit a preconstruction notification to the United States Army Corps of Engineers (USACE) for review under Nationwide Permit No. 13 for Bank Stabilization. This may be necessary if the project involves 1) discharges of dredged or fill material into special aquatic sites; or (2) is in excess of 500 feet in length; or (3) will involve the discharge of dredged or fill material of greater than an average of one cubic yard per running foot as measured along the length of the treated bank, below the OHW.

We offer these notes regarding DNR and USACE permitting as informal input. You should, of course, confer directly with those agencies to confirm their jurisdiction and requirements.

**Stormwater Management Rule**

We also discussed the design concern relating to the stormwater filtration basin and the presence of shallow groundwater adjacent to the lake. The County advised that it is revising the basin design for purposes including meeting state NPDES and MCWD requirements for separation of the basin bottom from groundwater. For example, as we discussed, the basin noted by cross section B-B in the plans cannot be utilized because runoff would not pass through the full sand layer before mixing with groundwater. The project team advised that it believes the other stormwater basins can be upsized to avoid the area close to the lake with separation difficulties but if further treatment is necessary to meet volume control requirements, options include expanding upgradient basins and capturing, for treatment, runoff from offsite impervious surface that is currently untreated.

We understand that the current proposal includes an impermeable liner to maintain separation from groundwater. MCWD staff understands your reasoning for the current configuration, but after further internal discussion, we request that you make every feasible effort to set the liner at or above the OHW. This limits the risk of reduced system functionality and potential uplift from water beneath the liner and meets design requirements without complication. If this placement conflicts

with the required stone storage layer, 18 inches of filter media, and stone around the drain tile, we will review a liner elevation below OHW.

**Wetland Conservation Act**

The National Wetland Inventory and MCWD's Functional Assessment of Wetlands identify wetlands along the western boundary of the project site. We need to have a better understanding of how the proposed project may affect these wetlands. You have advised that the County intends to pursue a No-Loss determination, on the basis that the on-site wetlands are incidental. Based on previous conversations and the wetland memo received on October 13, 2025, from David Juliff, we understand these wetlands may qualify as incidental wetlands within the meaning of WCA, on the basis that the boat launch was constructed on fill placed in Lake Minnetonka in the 1960s.

Accordingly, we have discussed the need for a formal Wetland Conservation Act (WCA) No-Loss application and decision. To consider this request, MCWD needs the submission of a joint application form with supporting documentation for review by MCWD and the other members of the Technical Evaluation Panel (TEP) (representatives from the Board of Water and Soil Resources, Hennepin County, and the DNR). If impacts to the proposed incidental wetlands are expected, this should be outlined in your application.

To maintain the project timeline, as we noted on October 22, timely submission of the No-Loss application is necessary.

**Timeline**

We discussed that the County expects to bid the project in March or April 2026. With the City's review process ongoing, including evaluation of variances and permits, and a rescheduled Planning Commission meeting on November 17th, there is potential for the timeline to shift. However, as the MCWD permit application may need to go before the MCWD Board of Managers by public request through the required public comment period, or possibly because of a variance request, we discussed the benefit of selecting a tentative Board meeting date to collectively work toward.

During our meeting, we discussed your desire to bring the permit to the MCWD Board during the first meeting in February 2026. The Board will meet on February 12, 2026. To place this permit on the February 12 agenda, staff recommend the following target dates to maintain your timeline:

- **December 2025**: MCWD staff issue a 14-day public notice to allow time to gather public feedback, learn whether a request for Board review will be made, and provide the County time to consider any design-related comments. The overarching shoreline stabilization and

stormwater design, in addition to the WCA review should be substantially final by this date for MCWD staff to mail the notice.

- **January 22, 2026**: Plans should be reviewed, finalized, and found either to meet applicable requirements or to be sufficient to support a possible proposed variance or exception, at least three weeks in advance of the meeting.
- **February 12, 2026**: MCWD staff presents the permit application to the MCWD Board of Managers.

At your discretion, it may be helpful in the coming weeks to discuss any adjustments in the design that are proposed as a result of further agency review, such as the upcoming planning commission, and to do so in a cross-agency meeting with the DNR, City of Orono, and MCWD, to help streamline the next steps in these approval processes.

MCWD staff look forward to receiving updated submittals. I will follow up with a phone call to Guy and Ismael to briefly walk through this letter and ensure we are all on the same page.

Best regards,

*Abigail Couture*

Abigail Couture
Permitting Technician

CC:
Laura Oakden, City of Orono Community Development Director
James Wisker, MCWD District Administrator
Veronica Sannes, MCWD Permitting Lead

| SITE HARDCOVER | | |
|---|---|---|
| | EXISTING | PROPOSED |
| PERVIOUS GROUND: | 24064 SF | 16709 SF |
| IMPERVIOUS GROUND | 57495 SF | BITUMINOUS: 27151 SF |
| | | CONCRETE: 8304 SF |
| | | GRID PAVERS: 29395 SF |
| SITE TOTAL: | 81559 SF | |

| CUT/FILL | | |
|---|---|---|
| | SITE | FLOODPLAIN |
| CUT | 1060 CY | 172 CY |
| FILL | 311 CY | 165 CY |
| NET | 749 CY (CUT) | 7 CY (CUT) |

INSPECTION SHED
VERTICAL ACCESS POINT
CONCRETE PAVING
GRANITE RIP RAP
GRAVEL
ACCESSIBILITY LIFT
PROPOSED OSPREY NEST
BOAT DOCK
CONCRETE BOAT RAMP 45' X 60'
WATERCRAFT DOCK
STEPS
ADA FISHING PIER
LIGHTED FISHING PIERS
GRANITE EDGING
CONCRETE SIDEWALK
PREPARATION AREA (TYPICAL OF THREE)
CONCRETE CURB
AIS PREVENTION TOOLS
HOT WATER DECONTAMINATION SHED
CONCRETE SLAB 36' X 20'
EXISTING GENERATOR
SANITARY FORCEMAIN EASEMENT
PROPOSED PROPERTY LINE
ENTRY SIGN
ASPHALT
GRID PERVIOUS PAVERS
PROPERTY LINE
CONCRETE CURB TO PREVENT ROAD ENCROACHMENT
35.1'
24.9'
32.8'
30.0'
20.0'

LAKE MINNETONKA
NORTH ARM

OHWL = 929.4
$HWL_{100}$ = 931.5

LEGEND

- PROPOSED 931.5 CONTOUR
- EXISTING 931.5 CONTOUR
- PROPOSED 929.4 CONTOUR
- EXISTING 929.4 CONTOUR
- EXISTING FLOW ARROW
- PROPOSED FLOW ARROW
- EXISTING RIGHT-OF-WAY TO BE VACATED BY CITY


HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

BAR IS TWO INCHES ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS DRAWING ADJUST SCALES ACCORDINGLY.

| NO. | DATE | ISSUE RECORD |
|---|---|---|
| 1 | 02/28/2025 | DRAFT NOT FOR CONSTRUCTION |

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ENGINEER UNDER THE LAWS OF THE STATE OF MINNESOTA.

SIGNATURE:
PRINTED NAME: DAVID J. JULIFF
LIC. NO.: 23409 DATE: MM/DD/YYYY


IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898


| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| DJJ | GRW | SRW |

C201B
SITE PLAN

P031062406

PROJ.NUM.



May 16, 2025 - 5:46pm
K:\Projects\P031 Hennepin City\P031062406 N Arm Boat Launch Design\CAD\DWGs\C200 - P03106 NORTH ARM - LAYOUT PLANS.dwg

| DRAINAGE AREAS | | |
|---|---|---|
| DA-01: | IMPERVIOUS | 2405 SF |
| | NATURAL | 3951 SF |
| | TOTAL | 6356 SF |
| DA-03: | PERVIOUS PAVERS | 7718 SF |
| | IMPERVIOUS | 16218 SF |
| | NATURAL | 1480 SF |
| | TOTAL | 25416 SF |
| DA-05: | PERVIOUS PAVERS | 10573 SF |
| | IMPERVIOUS | 9255 SF |
| | NATURAL | 8580 SF |
| | TOTAL | 28408 SF |
| DA-06: | PERVIOUS PAVERS | 8374 SF |
| | IMPERVIOUS | 4015 SF |
| | TOTAL | 12389 SF |
| DA-07: | PERVIOUS PAVERS | 1892 SF |
| | IMPERVIOUS | 5166 SF |
| | TOTAL | 7058 SF |
| DA-08: | PERVIOUS PAVERS | 838 SF |
| | IMPERVIOUS | 8678 SF |
| | TOTAL | 9516 SF |
| DA-09: | IMPERVIOUS | 3660 SF |
| | NATURAL | 7994 SF |
| | TOTAL | 11654 SF |

CATCH BASIN 1
RIM: 931.0
INV IN SW: 927.49
INV OUT: 927.43

PROPOSED OHWL
CONTOUR 929.4

EXISTING OHWL
CONTOUR 929.4

TRENCH DRAIN 2
RIM: 930.75
INV OUT:929.5

EXISTING 100 YEAR
CONTOUR 931.5

PROPOSED 100 YEAR
CONTOUR 931.5

FILTRATION DEVICE 2
RIM:930.85
INV IN:929.50
INV OUT:927.75

OUTLET 1
INV OUT: 926.65

OUTLET 2
INV OUT: 926.59

LAKE MINNETONKA
NORTH ARM

OHWL = 929.4
$HWL_{100}$ = 931.5

CATCH BASIN 2
RIM: 931.38
INV IN SE: 927.16
INV IN S:927.18
INV IN SW: 927.13
INV OUT:927.07

DA-08
DA-09
DA-07
DA-01
DA-03
DA-06
DA-05

52LF 1.5%
32LF 1.5%
146LF 1.5%
35LF 1.5%
27LF 1%
35LF 1%
32LF 1.5%
61LF 2%
104LF 1%
72LF 1.6%
35LF 2%
256LF 1.6%

GRID PERVIOUS PAVERS

PROPOSED BITUMINOUS PAVEMENT

TRENCH DRAIN
RIM: 934.5
INV OUT:933.5

FILTRATION DEVICE 1
RIM:934.25
INV IN:933.5
INV OUT: 930.68

EXISTING PROPERTY LINE

CLEANOUT 1
RIM: 932.07
INV IN S: 928.26
INV OUT: 928.20

GRID PERVIOUS PAVERS

LEGEND

- PROPERTY LINE
- PERFORATED PIPE
- SOLID PIPE
- CATCH BASIN/MANHOLE
- OUTLET PIPE (LOCATION/SIZE TBD)
- FILTRATION/INFILTRATION AREAS (GRID PAVERS)


HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487


# LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

0 20 40 Feet

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| 1 | 02/28/2025 | DRAFT NOT FOR CONSTRUCTION |

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SIGNATURE:
PRINTED NAME: DAVID J. JULIFF
LIC. NO.: 23409 DATE: MM/DD/YYYY


IMO Consulting Group
Suite 100
12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898


| DESIGNED | DRAWN | CHECKED |
|---|---|---|
| DJJ | GRW | SRW |

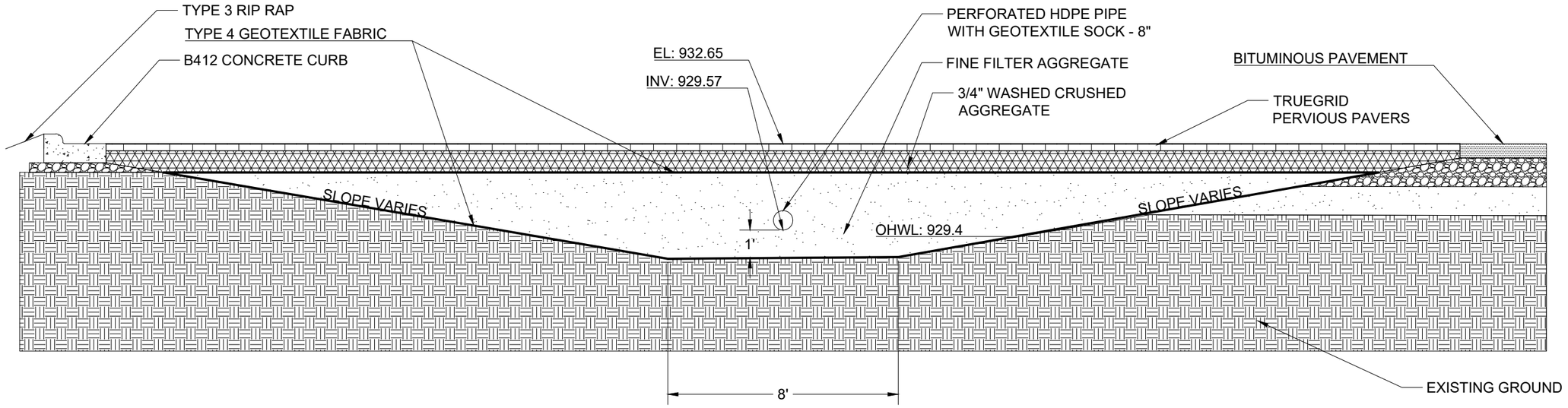
C303
STORMWATER MANAGEMENT PLAN

P031062406

PROJ.NUM.



May 27, 2025 - 3:49pm
\\MODrive\IMO_Share\Projects\P031 Hennepin Cty\P031062406 N Arm Boat Launch Design\CADD\WGs\C300 - P03106 NORTH ARM - GRADING AND PROFILES.dwg




# PERVIOUS GRID PAVER
# CROSS SECTION A-A

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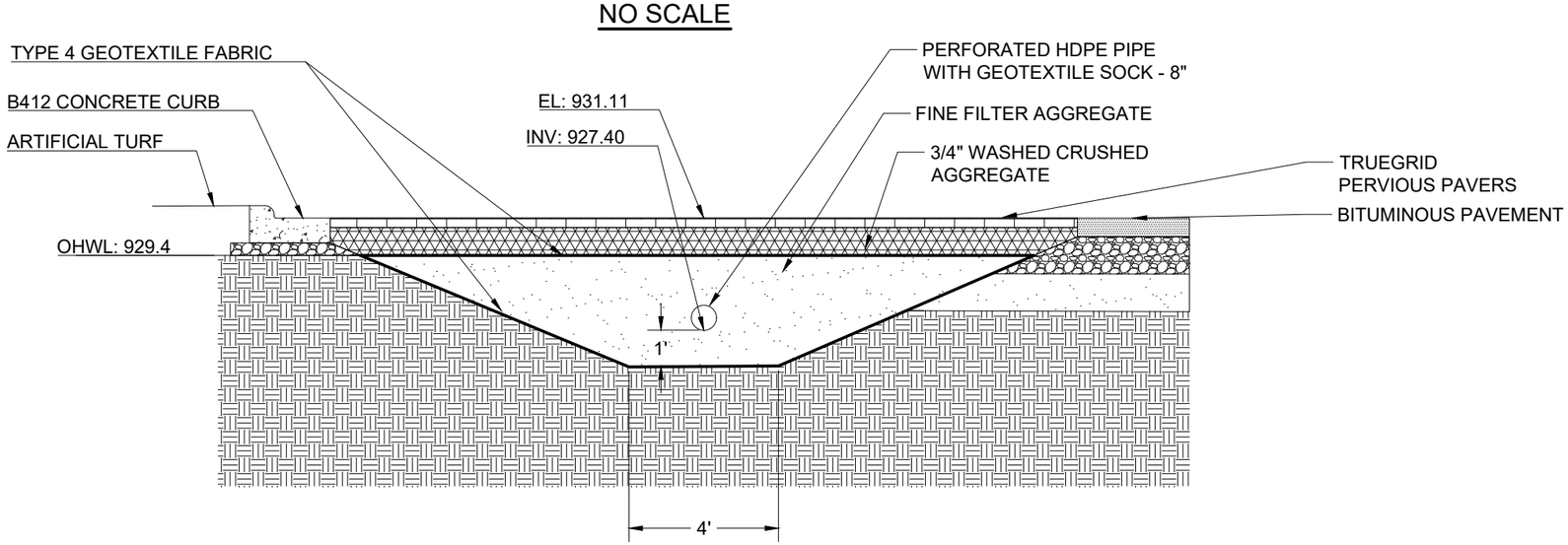


# PERVIOUS GRID PAVER
# CROSS SECTION B-B

NO SCALE

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

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IMO Consulting Group
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12900 Whitewater Drive
Minnetonka, MN 55343
Off: 952-446-7898

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C302A
FILTRATION TRENCH
CROSS SECTIONS

P031062406

PROJ.NO.



May 27, 2025 - 11:22am
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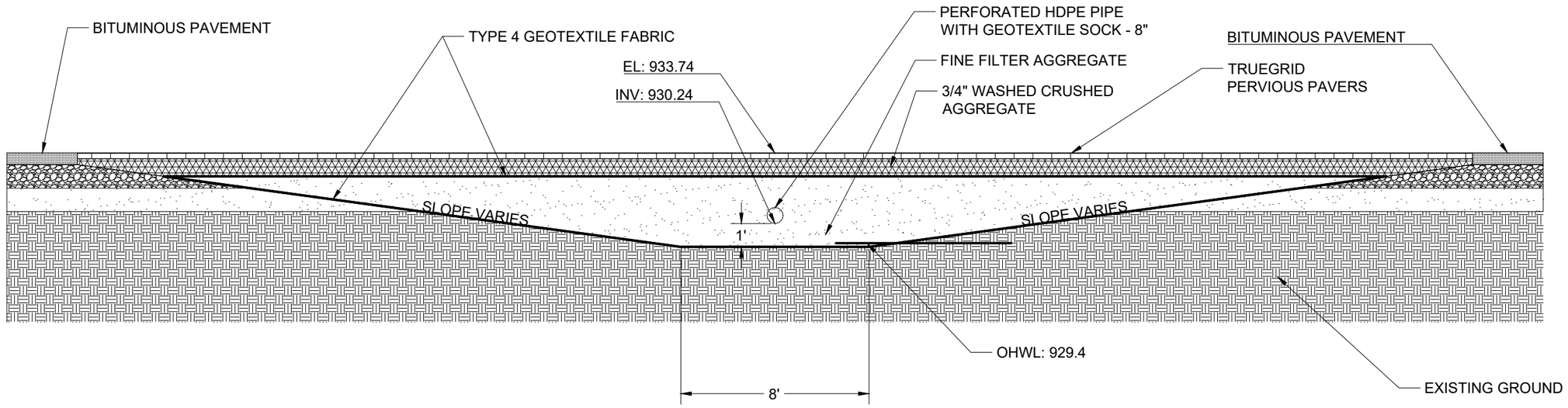
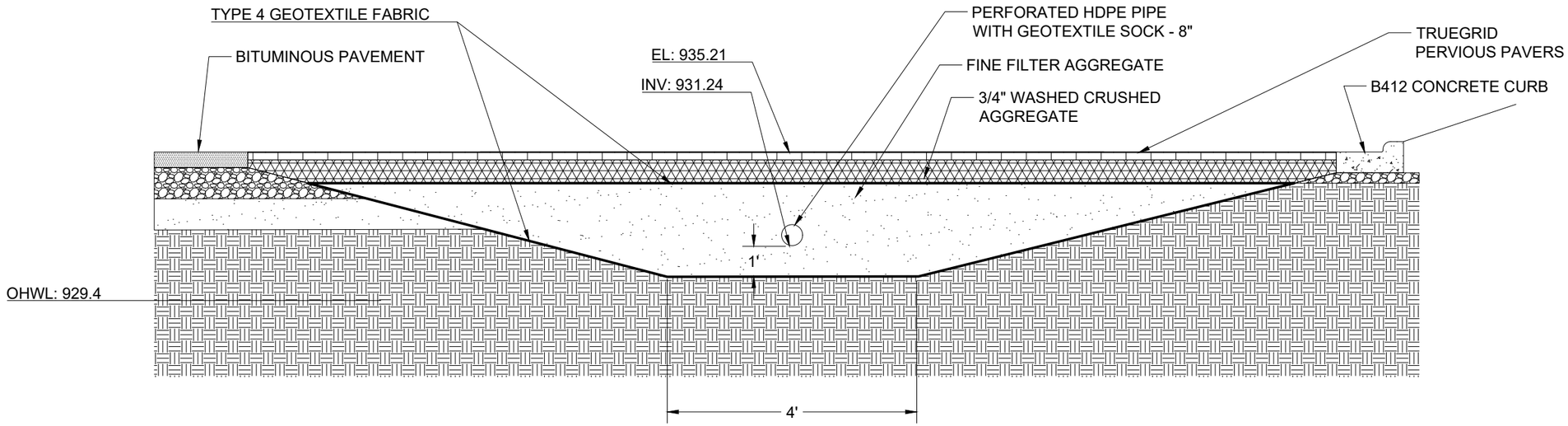



# PERVIOUS GRID PAVER
# CROSS SECTION C-C

NO SCALE




# PERVIOUS GRID PAVER
# CROSS SECTION D-D

NO SCALE

HENNEPIN COUNTY
300 South 6th Street
Minneapolis, MN 55487

LAKE MINNETONKA NORTH ARM PUBLIC ACCESS

ALL CONTRACTORS AND SUBCONTRACTORS SHALL VERIFY ALL DIMENSIONS BY MEASUREMENT AT THE BUILDING AND/OR SITE

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IMO Consulting Group
Suite 100
12900 Whitewater Drive
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C302B
FILTRATION TRENCH
CROSS SECTIONS

P031062406

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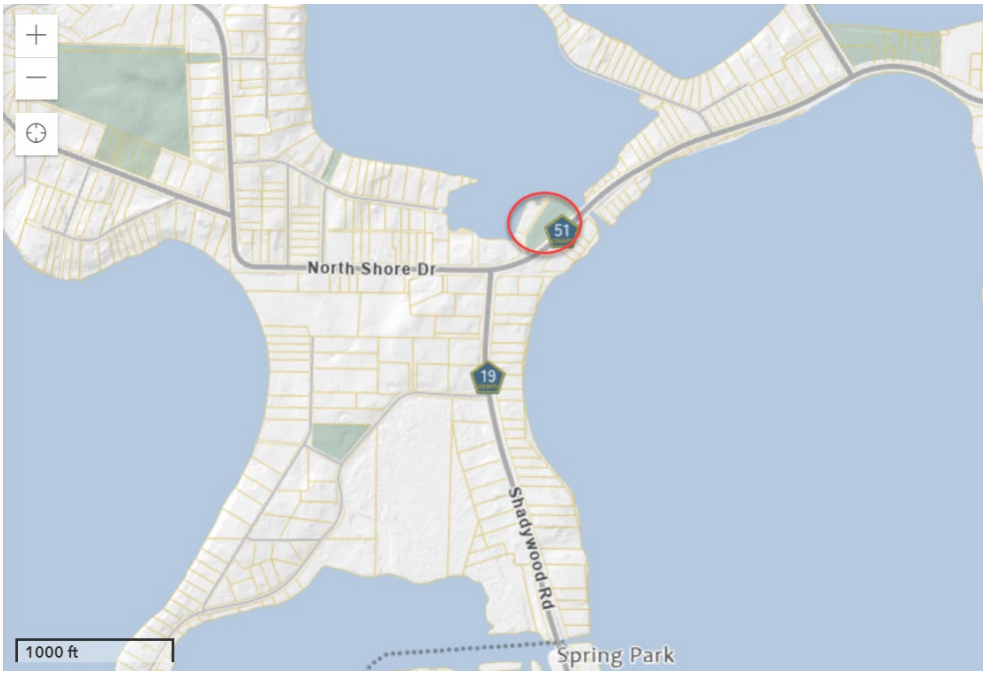
# WETLAND ASSESSMENT REPORT (September - 2025)

**North Arm Public Access**
**Orono, MN**

**Prepared by: Tony Brough, Hennepin County Environment & Energy.**

**Project**: This project is a complete re-design of the North Arm public access and Shore-fishing site located NE of CSAH 51 and CSAH 19. Hennepin County engineer consultant and project manager have submitted specific plan sheets. Hennepin County Project Manager is Nguyen (Guy) Hoang Nguyen.Hoang@hennepin.us (612-814-1088).

## Site Location Map:




**Method**:
Given the project scope, a modified Level 1 wetland delineation method was followed which is a simple, rapidly applied method that results in sufficient qualitative data as described in the *1987 Corps of Engineers Wetland Delineation Manual* (Waterways Experiment Station Technical Report Y-87-1, January, 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual – Northcentral and Northeast Region. All in-house information was analyzed including the Soil Survey, NWI, topographic maps, several historic aerial photos, and the PWI. This was then field verified and should be sufficient for wetland permit determinations for this type of no-loss or exempt activity.

**WCA Regulations / Exemptions**:
No WCA regulated wetlands exist within the project activities. The project should be determined a no-loss regarding the WCA. Due to the historic fill, the southern wetland boundary is immediately associated with the OHW of Lake Minnetonka and the remaining shoreline is a vertical seawall or shoreline riprap.

Within the project site, there are two small areas with wetland vegetation which were created as sediment traps in 1996 for the sole purpose of treating effluent. The WCA does not regulate activities in these areas due to incidental wetlands exception. The remainder of the project area is non-wetland asphalt, gravel rock, steel seawall, riprap, and upland grasses.

**Findings**:

South Lakeshore Boundary (*mapped in red*):
Atypical conditions exist with fill material being placed on this project site between 1957 and 1964. This disturbance occurred more than 60 years ago, these man-induced changes are now the "normal circumstances." Therefore, the application of the multiparameter approach in making wetland determinations is mostly based on the presence of hydrophytic vegetation and wetland hydrology per the 1987 Federal Manual.



The fill material has created a 2:1 slope along the shoreline that immediately changes from Lake Minnetonka shoreline to fill material dominated by foxtail, smooth brome, poison ivy, buckthorn, black locust, mulberry, siberian elm, and grapevine. This boundary matches the OHW and is mapped below.

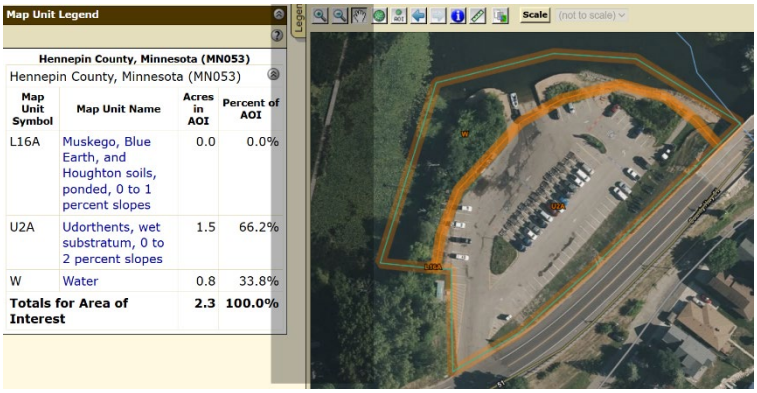
**Conclusions:**
Based on the above review of the Soil Survey, the National Wetlands Inventory and field verification there are no existing wetlands on the property.




*National Wetlands Inventory*




*Soil Survey*



Map Unit Legend

Hennepin County, Minnesota (MN053)

Hennepin County, Minnesota (MN053)

| Map Unit Symbol | Map Unit Name | Acres in AOI | Percent of AOI |
|---|---|---|---|
| L16A | Muskego, Blue Earth, and Houghton soils, ponded, 0 to 1 percent slopes | 0.0 | 0.0% |
| U2A | Udorthents, wet substratum, 0 to 2 percent slopes | 1.5 | 66.2% |
| W | Water | 0.8 | 33.8% |
| **Totals for Area of Interest** | | **2.3** | **100.0%** |

1957 Aerial



1964 Aerial



***1972 Pictures***



If any additional information or questions arise, please feel free to contact me at 612-348-4378 (Tony Brough).



**Lake Minnetonka North Arm Boat Launch - Stormwater Management Memo**
**(Minnehaha Creek Watershed District Permit Application) - September 5, 2025**

Hennepin County intends to reconstruct the existing North Arm Boat Launch to create a much more aesthetically pleasing and accessible place for all. Fishing piers, docks, a new boat ramp, boat cleaning facilities and site lighting are all part of the proposed project. In addition, the project will include a sustainable system of stormwater management that not only meets but exceeds the Minnehaha Creek Watershed District stormwater management criteria. Through a combination of permeable paving, sand filters, underground storage, swirl concentrators and natural vegetation we have developed an integrated system that captures the runoff from the site and detains/treats all the water prior to discharge to Lake Minnetonka.

This memo is an updated Stormwater Management Memo that incorporates the hydrologic and hydraulic (H&H) analysis of the North Arm Public Lake Access based on the final Storm Drainage Concept that is intended to be constructed in 2026-2027. We developed a "Preliminary Design Report" which conceptualized the proposed improvements in January of 2022 and completed a Final Report in April of 2023.

The emphasis of this study is the evaluation of stormwater volume, rate, and pollutant load being discharged from the site to Lake Minnetonka. The proposed Best Management Practices (BMPs) in and around the site will help achieve a reduction in each of these areas from the current conditions. With the current design, approximately 92% of the entire drainage area (which includes a portion of CSAH 51 – North Shore Drive) is being collected and treated.

## A. EXISTING CONDITIONS

Hydrology:

1. A site visit was conducted on August 1, 2021. Preliminary details such as the observable drainage patterns, existing landscaping, and boat decontamination practices were recorded. Historic aerial photos were also reviewed.
2. Hennepin County performed a topographic survey and a draft was provided to IMO. This information was used to verify existing drainage patterns and pervious/impervious areas.
3. The entire contributable drainage area is approximately 2.3 acres.
4. Drainage from the site consists of runoff from North Shore Drive, the bituminous parking lot, and the vegetated portions of the site. Runoff ultimately outflows directly into Lake Minnetonka from all parts of the site.
5. There are no existing water quality treatment or other stormwater management practices present on the site. There are two sediment traps that have reached the end of their service life.
6. A Web Soil Survey was completed, and the results suggest that this site is unsuitable for infiltration without removal and replacement of the existing soils.

7. Soil borings were performed on February 23, 2023. The geotechnical report and the boring logs are included as an appendix to this report.

Hydraulic Modeling:

1. The existing conditions were modeled in HydroCAD, with the property divided into three distinct drainage areas:
    a) The West Side Forest and Grass Area.
        i. To the west of the parking lot is a grassy area that drains into a wooded area before draining into the lake.
    b) The West Side of the Parking Lot.
        i. The bituminous parking lot is split roughly down the middle with the midpoint of the center aisle of parking stalls acting as the division. This drainage area, to the west of this boundary, ultimately outflows via the boat launch ramp.
    c) The East Side of the Parking Lot.
        i. The drainage area to the south and east of the previously described boundary, including the runoff from North Shore Drive, outflows to the northeast.

**Table 1: Existing Conditions**
(Peak Flow and Runoff Volume Results)

| 1-YEAR | | |
|---|---|---|
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) |
| 6.130 | 0.294 | 95,800 |
| **10-YEAR** | | |
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) |
| 12.570 | 0.618 | 201,376 |
| **100-YEAR** | | |
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) |
| 23.880 | 1.216 | 396,235 |

Note that the quantity shown in the Runoff Volume is discharged directly to the lake.

## B. PROPOSED CONDITIONS

Improvements:
The proposed stormwater management improvement components of the project consist of a combination of permeable pavement, sand filter trenches beneath the permeable pavement, perforated pipe at the bottom of the sand filters, and swirl concentrators.

1. The site design layout was completed by IMO Consulting Group in 2025.
2. Stormwater from the adjacent County Road will continue to contribute to the overall runoff from the site and will be treated prior to being released to Lake Minnetonka. Note that today this water discharges directly to the lake.
3. All site improvements are within the property boundary.

4. The site plan introduces approximately 0.68 acres of permeable pavement. The permeable pavement will filter out phosphorous, metals, and other solid waste from the stormwater and is intended to provide sufficient storage to attenuate the first inch of rainfall and will infiltrate back into the water table.
    a) As anticipated, the soil report confirms that infiltration is infeasible. Hence, the subgrade will need to be excavated and replaced with engineered fill and drain tile that will allow filtered and treated runoff to reach the lake.
5. The proposed grading of the site is designed to maximize the effectiveness of the permeable pavement by directing the majority of runoff from the site to these areas. Areas along the shoreline will continue to drain directly to the lake.
6. Water from the decontamination stations will be directed to swirl concentrators (FILTRATION DEVICE 1 in Figure C303) for pretreatment prior to discharge into the filtration system.
7. Other improvements unrelated to the site's H&H include: two new docks, a decontamination shed, several decontamination stations, ADA compliant sidewalks, a new accessible lift and lighted fishing piers.

Hydraulic Modeling:

1. The proposed conditions split the property into nine distinct drainage areas (See Figure C303).
2. While the high traffic portions of the parking lot will remain bituminous, approximately 0.68 acres of permeable pavement will be added. These portions of the parking lot will have a lower CN value than other forms of impervious pavement. This means that water will move more slowly across these areas, percolate into the permeable pavement, and ultimately infiltrate into the groundwater table through a layer of sand. Excess runoff will be collected by a perforated pipe at the bottom of the filtration trench.

Results – HydroCAD

1. In the 1-Year and 10-year events, 100% of the runoff and approximately 96% of the 100-year event from the contributing drainage areas is treated.
2. In the 1-Inch, 24-Hour rainfall event there will be no direct discharge from the site and 100% of the stormwater volume was either infiltrated or captured/stored via the voids in the permeable pavement and filtration trenches.
3. The peak flows and volumes to the lake through the site will be drastically reduced. In the 1-, 10-, and 100-Year rainfall events the runoff volumes discharging to the lake will be decreased by approximately 70%, 53%, and 43%, respectively.

| Table 2: Proposed Conditions (Peak Flow and Runoff Volume Results - Entire Drainage Area) | | | |
|---|---|---|---|
| 1-YEAR | | | |
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) | Filtration Level |
| 3.3 | 0.9 | 28,665 | 100% |
| 10-YEAR | | | |
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) | Filtration Level |
| 6.8 | 0.3 | 94,214 | 100% |
| 100-YEAR | | | |
| Peak Flow (CFS) | Runoff Volume (AC-FT) | Runoff Volume (Gal.) | Filtration Level |
| 14.9 | 0.69 | 225,479 | 96% |

Minimal Impact Design Standards (MIDS) Calculator

1. In addition to the H&H analysis performed, the proposed stormwater BMPs were analyzed using the MIDS Calculator, which is distributed by the Minnesotan Pollution Control Agency (MPCA). MIDS Calculator models site conditions and the affect that BMPs will have. It quantifies BMP attenuation and pollutants removal.
2. For those areas of the site where BMPs are proposed, the BMPs will be nearly 100% effective at controlling the volume and pollutant loads prescribed by the MPCA, which accounts for the first 1.1 inches of rainfall, which is a more restrictive standard than that of MCWD (1 inch).

## C. CONCLUSIONS/RECCOMENDATIONS

1. The proposed site improvements significantly reduce the outflow rates, volumes, and pollutants from the site.
2. The proposed BMPs allow the site to exceed the standards of both MCWD and the MPCA.
3. Overall, the North Arm Public Lake Access will be more accessible to more groups of people and provide a wider array of services. Site impacts will be reduced, which will improve the water quality of Lake Minnetonka.
4. As part of the project design, a new maintenance plan will be part of the final documents. That plane includes routine sweeping of the lot, removal of sediment from the permeable pavers, and other maintenance activities based on the final products installed in the project and is intended to extend the service life of the components.

Should you have any questions or concerns regarding this report, please contact us at your convenience.

Sincerely,

David J, Juliff, P.E. (MN), LEED AP
IMO Consulting Group

Ismael Martinez-Ortiz, President
IMO Consulting Group

# REPORT OF GEOTECHNICAL EXPLORATION

North Arm Bay Boat Launch
Mound, MN

**AET Project No. P-0016964**

**Date: April 10, 2023**

**Prepared for:**
IMO Consulting Group
12900 Whitewater Drive, Suite 100
Minnetonka, Minnesota 55343

Geotechnical • Materials
Forensic • Environmental
Building Technology
Petrography/Chemistry

**American Engineering Testing**
550 Cleveland Avenue North
St. Paul, MN 55114-1804
TeamAET.com • 800.792.6364

April 10, 2023

IMO Consulting Group
12900 Whitewater Drive, Suite 100
Minnetonka, Minnesota 55343

Attn: David Juliff
djuliff@IMOconsultinggroup.com

RE: Report of Geotechnical Exploration
North Arm Bay Boat Launch
3700 North Shore Drive
Mound, MN
AET Report No. P-0016964

Dear David Juliff:

American Engineering Testing, Inc. (AET) is pleased to present the results of our subsurface exploration program for your North Arm Bay Boat Launch project in Wayzata, MN. These services were performed according to our proposal to you dated December 6, 2022.

Please contact me if you have any questions about the report.

Sincerely,
**American Engineering Testing, Inc.**

Katherine E. Zadrozny, PE (MN)
**Engineer II**
kzadrozny@TeamAET.com
P 651.789.4674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# SIGNATURE PAGE

Prepared for:

IMO Consulting Group
12900 Whitewater Drive, Suite 100
Minnetonka, Minnesota 55343

Attn: David Juliff
djuliff@IMOconsultinggroup.com

Prepared by:

American Engineering Testing, Inc.
550 Cleveland Avenue North
Saint Paul, Minnesota 55114
(651) 659-9001/www.amengtest.com

Authored by:

Katherine E. Zadrozny, PE (MN)
Engineer II

Reviewed by:

Derek S. Van Heuveln, PE (MN)
Senior Engineer/Department Manager

I hereby certify that this report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under Minnesota Statute Section 326.02 to 326.15

Name: Katherine E. Zadrozny
Date: April 10, 2023 License #: 54248


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APPENDIX A – Geotechnical Field Exploration and Testing
Boring Log Notes
Unified Soil Classification System
AASHTO Classification System
Figure 1 - Boring Locations
Subsurface Boring Logs
Gradation Curves

APPENDIX B – Geotechnical Report Limitations and Guidelines for Use

# 1.0 INTRODUCTION

Hennepin County is proposing improvements to the existing boat launch along North Shore Drive in the North Arm Bay of Lake Minnetonka in Mound, MN. The improvements consist of a new storm water management system that will include elements of water retention and/or water infiltration. To assist planning and design, you have authorized American Engineering Testing, Inc. (AET) to conduct a subsurface exploration program at the site and conduct soil laboratory testing. This report presents the results of the above services.

# 2.0 SCOPE OF SERVICES

AET's services were performed according to our proposal to you dated December 6, 2022, which you authorized on December 8, 2022. The authorized scope consists of the following.

- Drilling and sampling 4 standard penetration test (SPT) borings to 20 feet in depth.
- Reviewing the recovered soil samples and perform limited laboratory soil testing.
- Conducting a geotechnical engineering review based on the data and preparing this report.

These services were conducted for geotechnical purposes only. The scope is not intended to explore for the presence or extent of environmental contamination in the soil or groundwater.

# 3.0 PROJECT INFORMATION

It is AET’s understanding that Hennepin County is planning to improve the boat launch on North Arm Bay with a stormwater management system. We understand infiltration trenches will be constructed with bottom depths about 12 to 14 feet below existing grade, corresponding to about 2 to 4 feet below water table. We understand the infiltration system is planned to consist of, from bottommost layer to uppermost layer: filter fabric, coarse aggregate, filter fabric, pea gravel, filter fabric, sand subgrade. Drain tile may also be implemented as added assurance that the stormwater runoff reaches the infiltration trenches.

# 4.0 SUBSURFACE EXPLORATION AND TESTING

## 4.1 Field Exploration Program

The subsurface exploration program conducted for the project consisted of four standard penetration test borings performed on February 3, 2023. The logs of the borings and details of the methods used appear in Appendix A.

The logs contain information concerning soil layering, soil classification, geologic origins, and moisture condition. Relative density description or consistency is noted for the natural soils, which is based on the standard penetration resistance (N-value).

The boring locations are shown on Figure 1 in Appendix A. The borings were located and staked in the field by IMO personnel. Final boring location coordinates and elevations were collected by AET personnel using a handheld GPS with sub-meter accuracy.

### 4.2 Laboratory Testing

In addition to the visual-manual classification of the soil samples, we performed moisture content and sieve analysis tests on select samples. The test results appear in Appendix A on the individual boring logs adjacent to the samples upon which they were performed and/or attached data sheets.

## 5.0 SITE CONDITIONS

### 5.1 Surface Observations

Site surface conditions are a bituminous paved parking lot with sod and vegetation-covered areas on the perimeter. At the time of drilling, areas of the site were being used for excess snow storage. The site topography is relatively flat with a gentle slope downward north to the lake shore. The fill soils on site were found to be frozen to a depth of 4 feet below grade, which does not allow our drilling team to collect reliable N-value blow counts during the sample collection process, so we obtained auger samples in the upper 4 feet as noted on the logs.

### 5.2 Subsurface Soils/Geology

The subsurface soils mostly consisted of partially frozen fill soils overlying layers of swamp deposits and coarse alluvium to the boring termination depths of 20 to 21½ feet below grade.

The fill depth is about 12 feet below existing grades and consists of lean clay with sand, sandy lean clay, clayey sand, and silty sand. Below the bituminous pavement a layer of apparent aggerate base layer consisting of silty sands with varying amounts of gravel was present in all four of the borings. No historical pavement data was available to verify this assessment.

The coarse alluvium in Boring B-2 consists of loose silty sand with organic fines and was observed below the sapric peat to the boring termination depth of 21½ feet. All other borings terminated in swamp-deposited soils.

The swamp deposited soils found at 12 feet in depth in every boring consisted of sapric peat, organic clay, and bog lime. Swamp deposited soils had water contents that ranged from 58% to 232%, and single-digit N-values.

### 5.3 Groundwater

Groundwater was observed in borings B-2 and B-4 at depths of 9 and 10 feet, respectively. This correlates to an elevation of approximately 926½ feet based on the surface elevations recorded.

Groundwater levels fluctuate due to varying seasonal and annual rainfall and snow melt amounts, as well as other factors. Given the proximity to the lake, the groundwater level is generally expected to be very close to the adjacent lake levels. Minnesota Department of Natural Resources (MnDNR) provides an ordinary high water level of 929.4 feet for the North Arm of Lake Minnetonka.

## 6.0 Storm Water Management

The planned bottom elevation of the infiltration system is planned to be 2 to 4 feet below the 10-foot depth water table. The MPCA highly recommends that infiltration practices not be used in existing fill soils (see Design criteria for infiltration - Minnesota Stormwater Manual (state.mn.us), refer to the ***Soils*** subsection) due to the potential variability in these materials. Fill soils were found extending to a depth of about 12 feet at the boring locations. The Minnesota Pollution Control Agency's (MPCA) *Minnesota Stormwater Manual* provides recommendations for design infiltration rates based on soil type (Design infiltration rates - Minnesota Stormwater Manual (state.mn.us)).

Further, organic soils have relatively high variability in infiltration capabilities and are generally not recommended for infiltration practices. The native soil types encountered below the fill per the Unified Soil Classification System are sapric peat and organic clay. Based on the soil types encountered in the borings and the depth of fill, we recommend excavating the fill and organic soils to the desired depth below the water table. Based on the conversation with IMO, we understand the infiltration trench system will be constructed of a base layer of filter fabric with coarse aggerate placed between another layer of filter fabric. A layer of pea gravel will then be placed between the final layer of filter fabric and the backfilling granular material. We also understand drain tile may be implemented as added assurance stormwater runoff will get to the infiltration trenches.

Based on our sieve analysis results and visual-manual classification, the corresponding MPCA Design infiltration rate for the limiting soil types, organic clay (USCS classification OL/OH), is

0.06 inches/hour. This infiltration rate represents the long-term infiltration capacity of a practice and is not meant to exhibit the capacity of the soils in their natural state or recompacted (i.e. fill) state. These values also assume a minimum separation of 3 feet between the bottom of the infiltration practice and the seasonably high ground water table.

# 7.0 CONSTRUCTION CONSIDERATIONS

## 7.1 Potential Difficulties

### *7.1.1 Groundwater in Excavation*

There is the potential for groundwater to appear in the infiltration trench excavations at this site. The groundwater table will need to be lowered in the project area to allow construction in the dry. It is the responsibility of the contractor to design the dewatering system. In our experience, groundwater control in clayey and organic soils is generally accomplished using sump pits and pumps, and groundwater control in sands is generally accomplished using well points or dewatering wells. The project contractor should consider groundwater control, which will need to be carefully planned and executed, as part of their installation process. The level of groundwater drawdown should be achieved before the excavation reaches the planned elevation, and maintained at least 2 feet below the lowest anticipated subgrade or subcut elevation. The water table should not be lowered more than necessary to provide a dry excavation, to reduce the risk of settlement of adjacent structures, pavements, and sewers. It is the responsibility of the Owner and the designers of the dewatering system to assess the effects of lowering the groundwater on adjacent structures, pavements, or sewers.

### *7.1.2 Disturbance of Soils*

The on-site soils can be disturbed under construction traffic, especially if the soils are wet. If soils become disturbed, they should be subcut to the underlying undisturbed soils. The subcut soils can then be dried and recompacted back into place, or they should be removed and replaced with drier imported fill.

### *7.1.3 Cobbles and Boulders*

The soils at this site can include cobbles and boulders. This may make excavating procedures somewhat more difficult than normal if they are encountered.

## 7.2 Excavation Backsloping

If excavation faces are not retained, the excavations should maintain maximum allowable slopes in accordance with *OSHA Regulations (Standards 29 CFR), Part 1926, Subpart P, "Excavations"*

(can be found on www.osha.gov). Even with the required OSHA sloping, water seepage or surface runoff can potentially induce sideslope erosion or sloughing which could require slope maintenance.

### 7.3 Observation and Testing

The recommendations in this report are based on the subsurface conditions found at our test boring locations. Since the soil conditions can be expected to vary away from the soil boring locations, we recommend on-site observation by a geotechnical engineer/technician during construction to evaluate these potential changes. Soil density testing should also be performed on new fill placed in order to document that project specifications for compaction have been satisfied.

## 8.0 TEST STANDARDS

When we refer to a test Standard in this report, we mean that our services were performed in general accordance with that standard. Compliance with any other standards referenced within the specified standard is neither inferred nor implied.

## 9.0 LIMITATIONS

Within the limitations of scope, budget, and schedule, we have endeavored to provide our services according to accepted geotechnical engineering practices at this time and location. Other than this, no warranty, express or implied, is intended. Essential information regarding risk management and proper use of this report is given in Appendix B entitled “Geotechnical Report Limitations and Guidelines for Use.”

# Appendix A

Geotechnical Field Exploration and Testing
Boring Log Notes
Unified Soil Classification System
AASHTO Soil Classification System
Figure 1 Boring Locations
Subsurface Boring Logs
Gradation Curves

# Appendix A
# Geotechnical Field Exploration and Testing
# Report No. P-0016964

## A.1 FIELD EXPLORATION

The subsurface conditions at the site were explored by drilling and sampling four standard penetration test borings. The locations of the borings appear on Figure 1, preceding the Subsurface Boring Logs in this appendix.

## A.2 SAMPLING METHODS

### A.2.1 Split-Spoon Samples (SS) - Calibrated to $N_{60}$ Values

Standard penetration (split-spoon) samples were collected in general accordance with ASTM: D1586 with one primary modification. The ASTM test method consists of driving a 2-inch O.D. split-barrel sampler into the in-situ soil with a 140-pound hammer dropped from a height of 30 inches. The sampler is driven a total of 18 inches into the soil. After an initial set of 6 inches, the number of hammers blows to drive the sampler the final 12 inches is known as the standard penetration resistance or N-value. Our method uses a modified hammer weight, which is determined by measuring the system energy using a Pile Driving Analyzer (PDA) and an instrumented rod.

In the past, standard penetration N-value tests were performed using a rope and cathead for the lift and drop system. The energy transferred to the split-spoon sampler was typically limited to about 60% of its potential energy due to the friction inherent in this system. This converted energy then provides what is known as an $N_{60}$ blow count.

The most recent drill rigs incorporate an automatic hammer lift and drop system, which has higher energy efficiency and subsequently results in lower N-values than the traditional $N_{60}$ values. By using the PDA energy measurement equipment, we are able to determine the actual energy generated by the drop hammer. With the various hammer systems available, we have found highly variable energies ranging from 55% to over 100%. Therefore, the intent of AET's hammer calibrations is to vary the hammer weight such that hammer energies lie within about 60% to 65% of the theoretical energy of a 140-pound weight falling 30 inches. The current ASTM procedure acknowledges the wide variation in N-values, stating that N-values of 100% or more have been observed. Although we have not yet determined the statistical measurement uncertainty of our calibrated method to date, we can state that the accuracy deviation of the N-values using this method is significantly better than the standard ASTM Method.

### A.2.2 Disturbed Samples (DS)/Spin-up Samples (SU)

Sample types described as "DS" or "SU" on the boring logs are disturbed samples, which are taken from the flights of the auger. Because the auger disturbs the samples, possible soil layering and contact depths should be considered approximate.

### A.2.3 Sampling Limitations

Unless actually observed in a sample, contacts between soil layers are estimated based on the spacing of samples and the action of drilling tools. Cobbles, boulders, and other large objects generally cannot be recovered from test borings, and they may be present in the ground even if they are not noted on the boring logs.

Determining the thickness of "topsoil" layers is usually limited, due to variations in topsoil definition, sample recovery, and other factors. Visual-manual description often relies on color for determination, and transitioning changes can account for significant variation in thickness judgment. Accordingly, the topsoil thickness presented on the logs should not be the sole basis for calculating topsoil stripping depths and volumes. If more accurate information is needed relating to thickness and topsoil quality definition, alternate methods of sample retrieval and testing should be employed.

## A.3 CLASSIFICATION METHODS

Soil descriptions shown on the boring logs are based on the Unified Soil Classification (USC) system. The USC system is described in ASTM: D2487 and D2488. Where laboratory classification tests (sieve analysis or Atterberg Limits) have been performed, accurate classifications per ASTM: D2487 are possible. Otherwise, soil descriptions shown on the boring logs are visual-manual judgments. Charts are attached which provide information on the USC system, the descriptive terminology, and the symbols used on the boring logs.

Visual-manual judgment of the AASHTO Soil Group is also noted as a part of the soil description. A chart presenting details of the AASHTO Soil Classification System is also attached.

The boring logs include descriptions of apparent geology. The geologic depositional origin of each soil layer is interpreted primarily by observation of the soil samples, which can be limited. Observations of the surrounding topography, vegetation, and development can sometimes aid this judgment.

### A.4 WATER LEVEL MEASUREMENTS

The groundwater level measurements are shown at the bottom of the boring logs. The following information appears under "Water Level Measurements" on the logs:

- Date and Time of measurement
- Sampled Depth: lowest depth of soil sampling at the time of measurement
- Casing Depth: depth to bottom of casing or hollow-stem auger at time of measurement
- Cave-in Depth: depth at which measuring tape stops in the borehole
- Water Level: depth in the borehole where free water is encountered
- Drilling Fluid Level: same as Water Level, except that the liquid in the borehole is drilling fluid

The true location of the water table at the boring locations may be different than the water levels measured in the boreholes. This is possible because there are several factors that can affect the water level measurements in the borehole. Some of these factors include permeability of each soil layer in profile, presence of perched water, amount of time between water level readings, presence of drilling fluid, weather conditions, and use of borehole casing.

### A.5 LABORATORY TEST METHODS

#### A.5.1 Water Content Tests

Conducted per AET Procedure 01-LAB-010, which is performed in general accordance with ASTM: D2216 and AASHTO: T265.

#### A.5.2 Sieve Analysis of Soils (thru #200 Sieve)

Conducted in general accordance with ASTM:D6913, Method A.

### A.6 TEST STANDARD LIMITATIONS

Field and laboratory testing is done in general conformance with the described procedures. Compliance with any other standards referenced within the specified standard is neither inferred nor implied.

### A.7 SAMPLE STORAGE

Unless notified to do otherwise, we routinely retain representative samples of the soil recovered from the borings for a period of 30 days.

# BORING LOG NOTES

## DRILLING AND SAMPLING SYMBOLS

| Symbol | Definition |
|---|---|
| AR: | Sample of material obtained from cuttings blown out the top of the borehole during air rotary procedure. |
| B, H, N: | Size of flush-joint casing |
| CAS: | Pipe casing, number indicates nominal diameter in inches |
| COT: | Clean-out tube |
| DC: | Drive casing; number indicates diameter in inches |
| DM: | Drilling mud or bentonite slurry |
| DR: | Driller (initials) |
| DS: | Disturbed sample from auger flights |
| DP: | Direct push drilling; a 2.125 inch OD outer casing with an inner 1½ inch ID plastic tube is driven continuously into the ground. |
| FA: | Flight auger; number indicates outside diameter in inches |
| HA: | Hand auger; number indicates outside diameter |
| HSA: | Hollow stem auger; number indicates inside diameter in inches |
| LG: | Field logger (initials) |
| MC: | Column used to describe moisture condition of samples and for the ground water level symbols |
| N (BPF): | Standard penetration resistance (N-value) in blows per foot (see notes) |
| NQ: | NQ wireline core barrel |
| PQ: | PQ wireline core barrel |
| RDA: | Rotary drilling with compressed air and roller or drag bit. |
| RDF: | Rotary drilling with drilling fluid and roller or drag bit |
| REC: | In split-spoon (see notes), direct push and thin-walled tube sampling, the recovered length (in inches) of sample. In rock coring, the length of core recovered (expressed as percent of the total core run). Zero indicates no sample recovered. |
| SS: | Standard split-spoon sampler (steel; 1.5" is inside diameter; 2" outside diameter); unless indicated otherwise |
| SU | Spin-up sample from hollow stem auger |
| TW: | Thin-walled tube; number indicates inside diameter in inches |
| WASH: | Sample of material obtained by screening returning rotary drilling fluid or by which has collected inside the borehole after "falling" through drilling fluid |
| WH: | Sampler advanced by static weight of drill rod and hammer |
| WR: | Sampler advanced by static weight of drill rod |
| 94mm: | 94 millimeter wireline core barrel |
| ▼: | Water level directly measured in boring |
| ▽: | Estimated water level based solely on sample appearance |

## TEST SYMBOLS

| Symbol | Definition |
|---|---|
| CONS: | One-dimensional consolidation test |
| DEN: | Dry density, pcf |
| DST: | Direct shear test |
| E: | Pressuremeter Modulus, tsf |
| HYD: | Hydrometer analysis |
| LL: | Liquid Limit, % |
| LP: | Pressuremeter Limit Pressure, tsf |
| OC: | Organic Content, % |
| PERM: | Coefficient of permeability (K) test; F - Field; L - Laboratory |
| PL: | Plastic Limit, % |
| $q_p$: | Pocket Penetrometer strength, tsf (approximate) |
| $q_c$: | Static cone bearing pressure, tsf |
| $q_u$: | Unconfined compressive strength, psf |
| R: | Electrical Resistivity, ohm-cms |
| RQD: | Rock Quality Designation of Rock Core, in percent (aggregate length of core pieces 4" or more in length as a percent of total core run) |
| SA: | Sieve analysis |
| TRX: | Triaxial compression test |
| VSR: | Vane shear strength, remolded (field), psf |
| VSU: | Vane shear strength, undisturbed (field), psf |
| WC: | Water content, as percent of dry weight |
| %-200: | Percent of material finer than #200 sieve |

## STANDARD PENETRATION TEST NOTES
### (Calibrated Hammer Weight)

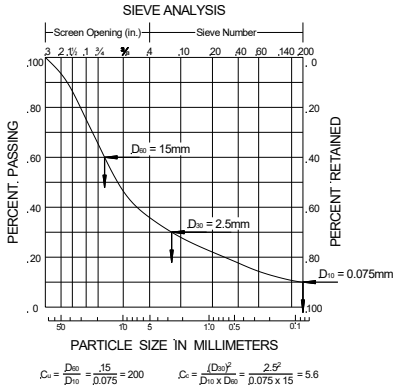
The standard penetration test consists of driving a split-spoon sampler with a drop hammer (calibrated weight varies to provide $N_{60}$ values) and counting the number of blows applied in each of three 6" increments of penetration. If the sampler is driven less than 18" (usually in highly resistant material), permitted in ASTM: D1586, the blows for each complete 6" increment and for each partial increment is on the boring log. For partial increments, the number of blows is shown to the nearest 0.1' below the slash.

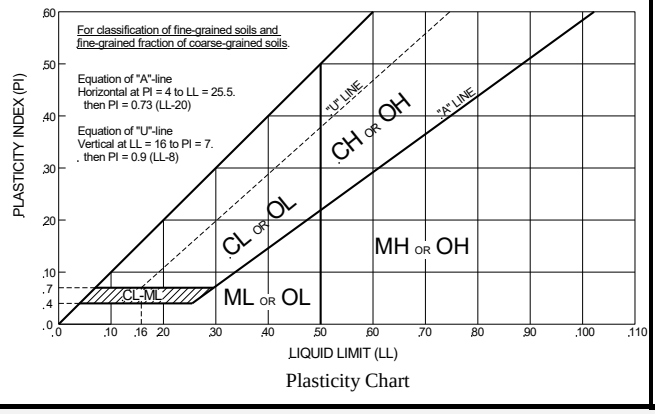
The length of sample recovered, as shown on the "REC" column, may be greater than the distance indicated in the N column. The disparity is because the N-value is recorded below the initial 6" set (unless partial penetration defined in ASTM: D1586 is encountered) whereas the length of sample recovered is for the entire sampler drive (which may even extend more than 18").

# UNIFIED SOIL CLASSIFICATION SYSTEM
## ASTM Designations: D 2487, D2488

**AMERICAN ENGINEERING TESTING, INC.**

| Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests[A] | | | | Soil Classification: Group Symbol | Soil Classification: Group Name[B] |
|---|---|---|---|---|---|
| Coarse-Grained Soils More than 50% retained on No. 200 sieve | Gravels More than 50% coarse fraction retained on No. 4 sieve | Clean Gravels Less than 5% fines[C] | Cu≥4 and 1≤Cc≤3[E] | GW | Well graded gravel[F] |
| | | | Cu<4 and/or 1>Cc>3[E] | GP | Poorly graded gravel[F] |
| | | Gravels with Fines more than 12% fines[C] | Fines classify as ML or MH | GM | Silty gravel[F,G,H] |
| | | | Fines classify as CL or CH | GC | Clayey gravel[F,G,H] |
| | Sands 50% or more of coarse fraction passes No. 4 sieve | Clean Sands Less than 5% fines[D] | Cu≥6 and 1≤Cc≤3[E] | SW | Well-graded sand[I] |
| | | | Cu<6 and/or 1>Cc>3[E] | SP | Poorly-graded sand[I] |
| | | Sands with Fines more than 12% fines[D] | Fines classify as ML or MH | SM | Silty sand[G,H,I] |
| | | | Fines classify as CL or CH | SC | Clayey sand[G,H,I] |
| Fine-Grained Soils 50% or more passes the No. 200 sieve<br><br>(see Plasticity Chart below) | Silts and Clays Liquid limit less than 50 | inorganic | PI>7 and plots on or above "A" line[J] | CL | Lean clay[K,L,M] |
| | | | PI<4 or plots below "A" line[J] | ML | Silt[K,L,M] |
| | | organic | Liquid limit–oven dried / Liquid limit – not dried <0.75 | OL | Organic clay[K,L,M,N]<br>Organic silt[K,L,M,O] |
| | Silts and Clays Liquid limit 50 or more | inorganic | PI plots on or above "A" line | CH | Fat clay[K,L,M] |
| | | | PI plots below "A" line | MH | Elastic silt[K,L,M] |
| | | organic | Liquid limit–oven dried / Liquid limit – not dried <0.75 | OH | Organic clay[K,L,M,P]<br>Organic silt[K,L,M,Q] |
| Highly organic soil | | | Primarily organic matter, dark in color, and organic in odor | PT | Peat[R] |



Plasticity Chart

### Notes

[A]Based on the material passing the 3-in (75-mm) sieve.

[B]If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

[C]Gravels with 5 to 12% fines require dual symbols:
GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

[D]Sands with 5 to 12% fines require dual symbols:
SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

[E]$Cu = D_{60} / D_{10}$, $Cc = \frac{(D_{30})^2}{D_{10} \times D_{60}}$

[F]If soil contains ≥15% sand, add "with sand" to group name.

[G]If fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

[H]If fines are organic, add "with organic fines" to group name.

[I]If soil contains ≥15% gravel, add "with gravel" to group name.

[J]If Atterberg limits plot is hatched area, soil is a CL-ML silty clay.

[K]If soil contains 15 to 29% plus No. 200 add "with sand" or "with gravel", whichever is predominant.

[L]If soil contains ≥30% plus No. 200, predominantly sand, add "sandy" to group name.

[M]If soil contains ≥30% plus No. 200, predominantly gravel, add "gravelly" to group name.

[N]PI≥4 and plots on or above "A" line.

[O]PI<4 or plots below "A" line.

[P]PI plots on or above "A" line.

[Q]PI plots below "A" line.

[R]Fiber Content description shown below.

## ADDITIONAL TERMINOLOGY NOTES USED BY AET FOR SOIL IDENTIFICATION AND DESCRIPTION

### Grain Size

| Term | Particle Size |
|---|---|
| Boulders | Over 12" |
| Cobbles | 3" to 12" |
| Gravel | #4 sieve to 3" |
| Sand | #200 to #4 sieve |
| Fines (silt & clay) | Pass #200 sieve |

### Gravel Percentages

| Term | Percent |
|---|---|
| A Little Gravel | 3% - 14% |
| With Gravel | 15% - 29% |
| Gravelly | 30% - 50% |

### Consistency of Plastic Soils

| Term | N-Value, BPF |
|---|---|
| Very Soft | less than 2 |
| Soft | 2 - 4 |
| Firm | 5 - 8 |
| Stiff | 9 - 15 |
| Very Stiff | 16 - 30 |
| Hard | Greater than 30 |

### Relative Density of Non-Plastic Soils

| Term | N-Value, BPF |
|---|---|
| Very Loose | 0 - 4 |
| Loose | 5 - 10 |
| Medium Dense | 11 - 30 |
| Dense | 31 - 50 |
| Very Dense | Greater than 50 |

### Moisture/Frost Condition

(MC Column)

D (Dry): Absence of moisture, dusty, dry to touch.

M (Moist): Damp, although free water not visible. Soil may still have a high water content (over "optimum").

W (Wet/ Waterbearing): Free water visible, intended to describe non-plastic soils. Waterbearing usually relates to sands and sand with silt.

F (Frozen): Soil frozen

### Layering Notes

Laminations: Layers less than ½" thick of differing material or color.

Lenses: Pockets or layers greater than ½" thick of differing material or color.

### Peat Description

| Term | Fiber Content (Visual Estimate) |
|---|---|
| Fibric Peat: | Greater than 67% |
| Hemic Peat: | 33 – 67% |
| Sapric Peat: | Less than 33% |

### Organic Description (if no lab tests)

Soils are described as *organic*, if soil is not peat and is judged to have sufficient organic fines content to influence the Liquid Limit properties. *Slightly organic* used for borderline cases.

Root Inclusions

With roots: Judged to have sufficient quantity of roots to influence the soil properties.

Trace roots: Small roots present, but not judged to be in sufficient quantity to significantly affect soil properties.

# AASHTO SOIL CLASSIFICATION SYSTEM

AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS

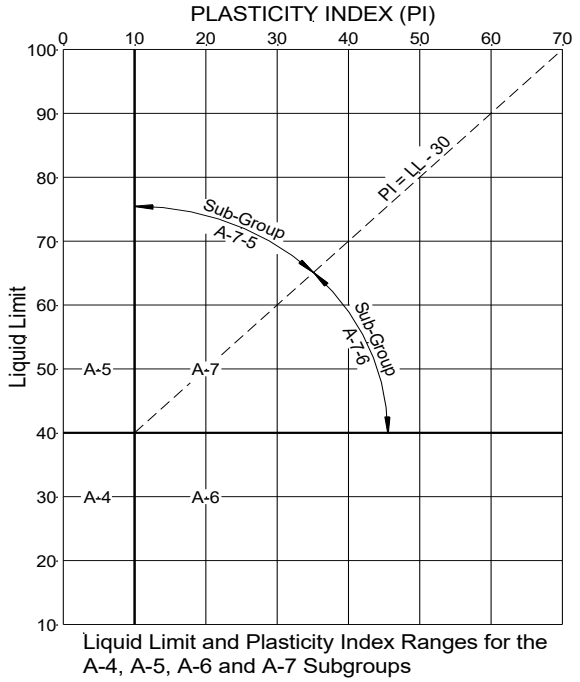
Classification of Soils and Soil-Aggregate Mixtures

| General Classification | Granular Materials (35% or less passing No. 200 sieve) | | | | | | | Silt-Clay Materials (More than 35% passing No. 200 sieve) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Group Classification | A-1 | | | A-2 | | | | | | | A-7 |
| | A-1-a | A-1-b | A-3 | A-2-4 | A-2-5 | A-2-6 | A-2-7 | A-4 | A-5 | A-6 | A-7-5<br>A-7-6 |
| Sieve Analysis, Percent passing: | | | | | | | | | | | |
| No. 10 (2.00 mm) | 50 max. | .... | .... | .... | .... | .... | .... | .... | .... | .... | .... |
| No. 40 (0.425 mm) | 30 max. | 50 max. | 51 min. | .... | .... | .... | .... | .... | .... | .... | .... |
| No. 200 (0.075 mm) | 15 max. | 25 max. | 10 max. | 35 max. | 35 max. | 35 max. | 35 max. | 36 min. | 36 min. | 36 min. | 36 min. |
| Characteristics of Fraction Passing No. 40 (0.425 mm) | | | | | | | | | | | |
| Liquid limit | .... | | .... | 40 max. | 41 min. | 40 max. | 41 min. | 40 max. | 41 min. | 40 max. | 41 min. |
| Plasticity index | 6 max. | | N.P. | 10 max. | 10 max. | 11 min. | 11 min. | 10 max. | 10 max. | 11 min. | 11 min. |
| Usual Types of Significant Constituent Materials | Stone Fragments, Gravel and Sand | | Fine Sand | Silty or Clayey Gravel and Sand | | | | Silty Soils | | Clayey Soils | |
| General Ratings as Subgrade | Excellent to Good | | | | | | | Fair to Poor | | | |

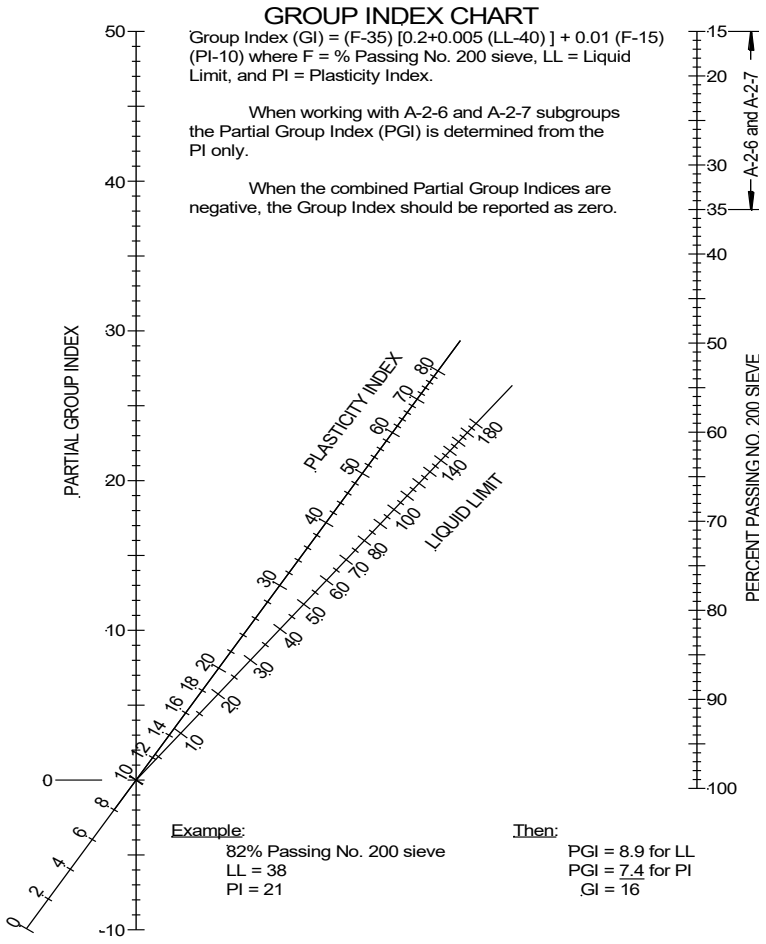
The placing of A-3 before A-2 is necessary in the "left to right elimination process" and does not indicate superiority of A-3 over A-2.

Plasticity index of A-7-5 subgroup is equal to or less than LL minus 30. Plasticity index of A-7-6 subgroup is greater than LL minus 30.

Group A-8 soils are organic clays or peat with organic content >5%.




Liquid Limit and Plasticity Index Ranges for the A-4, A-5, A-6 and A-7 Subgroups




**Definitions of Gravel, Sand and Silt-Clay**

The terms "gravel", "coarse sand", "fine sand" and "silt-clay", as determinable from the minimum test data required in this classification arrangement and as used in subsequent word descriptions are defined as follows:

GRAVEL - Material passing sieve with 3-in. square openings and retained on the No. 10 sieve.

COARSE SAND - Material passing the No. 10 sieve and retained on the No. 40 sieve.

FINE SAND - Material passing the No. 40 sieve and retained on the No. 200 sieve.

COMBINED SILT AND CLAY - Material passing the No. 200 sieve

BOULDERS (retained on 3-in. sieve) should be excluded from the portion of the sample to which the classificaiton is applied, but the percentage of such material, if any, in the sample should be recorded.

The term "silty" is applied to fine material having plasticity index of 10 or less and the term "clayey" is applied to fine material having plasticity index of 11 or greater.




| | | | | |
|---|---|---|---|---|
| AMERICAN ENGINEERING TESTING | **PROJECT** North Arm Bay Boat Launch; Mound, Minnesota | | | **AET NO.** P-0016964 |
| | **SUBJECT** Boring Locations | | | **DATE** April, 2023 |
| | **SCALE** As Shown | **DRAWN BY** KZ | **CHECKED BY** DV | **FIGURE 1** |

# SUBSURFACE BORING LOG

AET JOB NO: **P-0016964** LOG OF BORING NO. **B-1 (p. 1 of 1)**

PROJECT: **North Arm Bay Boat Launch; Mound, MN**

SURFACE ELEVATION: **936.7** LATITUDE: **44.949983** LONGITUDE: **-93.617785**

| DEPTH IN FEET | MATERIAL DESCRIPTION | GEOLOGY | N | MC | SAMPLE TYPE | REC IN. | FIELD & LABORATORY TESTS WC | DEN | LL | PL | %-#200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 5" Bituminous pavement | FILL | | F | | | | | | | |
| 1 | FILL, mostly silty sand with gravel, dark brown, frozen (A-1-b) | | | F | | | | | | | |
| 2 | | | | | | | | | | | |
| 3 | FILL, mostly clayey sand, a little gravel, brownish gray, frozen to 4' (A-6) | | | F/M | | | 15 | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | 11 | M | SS | 11 | 14 | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | 8 | M | SS | 21 | 13 | | | | 27 |
| 9 | | | | | | | | | | | |
| 10 | | | 8 | M | SS | 13 | 16 | | | | |
| 11 | | | | | | | | | | | |
| 12 | SAPRIC PEAT, dark brown (PT) (A-8) | SWAMP DEPOSIT | | | | | | | | | |
| 13 | | | 5 | M | SS | 24 | 152 | | | | |
| 14 | | | | | | | | | | | |
| 15 | ORGANIC CLAY, trace shells and roots, dark brown, soft (OL/OH)( (A-8) | | 3 | M | SS | 21 | 149 | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | BOG LIME, white and light gray (OL/OH) (A-8) | | | | | | | | | | |
| 19 | | | 2 | M/W | SS | 19 | 58 | | | | |
| 20 | **END OF BORING** | | | | | | | | | | |

DEPTH: DRILLING METHOD

**0-18' 3.25" HSA**

BORING COMPLETED: **2/3/23**

DR: **TA** LG: **AG** Rig: **41**

WATER LEVEL MEASUREMENTS

| DATE | TIME | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |
|---|---|---|---|---|---|---|
| **2/3/23** | **12:56** | **20.0** | **18.0** | **18.5** | | **None** |

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-LAT-LONG P-0016964.GPJ AET+CPT+WELL.GDT 4/7/23

# SUBSURFACE BORING LOG

AET JOB NO: **P-0016964** LOG OF BORING NO. **B-2 (p. 1 of 1)**

PROJECT: **North Arm Bay Boat Launch; Mound, MN**

SURFACE ELEVATION: **937.1** LATITUDE: **44.950027** LONGITUDE: **-93.617504**

| DEPTH IN FEET | MATERIAL DESCRIPTION | GEOLOGY | N | MC | SAMPLE TYPE | REC IN. | FIELD & LABORATORY TESTS WC | DEN | LL | PL | %-#200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 5" Bituminous pavement | FILL | | F | | | | | | | |
| 1 | FILL, mostly silty sand with gravel, dark brown, frozen (A-1-b) | | | F | | | | | | | |
| 2 | FILL, mostly clayey sand, a little gravel, brownish gray to brown, frozen to 4' (A-6) | | | | | | 12 | | | | |
| 3 | | | | F/M | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | 15 | M | SS | 14 | 26 | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | 11 | M | SS | 15 | 22 | | | | |
| 9 | | | | | | | | | | | |
| 10 | FILL, mostly lean clay with sand, a little gravel, gray and brown (A-6) | | 6 | M | SS | 18 | 32 | | | | |
| 11 | | | | | | | | | | | |
| 12 | SAPRIC PEAT, dark brown (PT) (A-8) | SWAMP DEPOSIT | | | | | | | | | |
| 13 | | | 4 | M | SS | 23 | 222 | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | 6 | M | SS | 22 | 212 | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | 3 | M | SS | 24 | 108 | | | | |
| 19 | | | | | | | | | | | |
| 20 | SILTY SAND WITH ORGANIC FINES, trace shells and roots, fine to medium grained, gray, wet, loose (SM) (A-2-4) | COARSE ALLUVIUM | 6 | W | SS | 21 | | | | | |
| 21 | **END OF BORING** | | | | | | | | | | |

| DEPTH: DRILLING METHOD | WATER LEVEL MEASUREMENTS | | | | | | |
|---|---|---|---|---|---|---|---|
| | DATE | TIME | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |
| **0-19½' 3.25" HSA** | **2/3/23** | **9:38** | **14.0** | **12.0** | **11.0** | | **10.2** |
| | **2/3/23** | **9:41** | **14.0** | **12.0** | **11.0** | | **10.0** |
| BORING COMPLETED: **2/3/23** | **2/3/23** | **10:08** | **21.5** | **19.5** | **19.5** | | **16.2** |
| DR: **TA** LG: **AG** Rig: **41** | | | | | | | |

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-LAT-LONG P-0016964.GPJ AET+CPT+WELL.GDT 4/7/23

# SUBSURFACE BORING LOG

AET JOB NO: **P-0016964** LOG OF BORING NO. **B-3 (p. 1 of 1)**

PROJECT: **North Arm Bay Boat Launch; Mound, MN**

SURFACE ELEVATION: **935.3** LATITUDE: **44.950249** LONGITUDE: **-93.617211**

| DEPTH IN FEET | MATERIAL DESCRIPTION | GEOLOGY | N | MC | SAMPLE TYPE | REC IN. | FIELD & LABORATORY TESTS WC | DEN | LL | PL | %-#200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4" Bituminous pavement | FILL | | F | | | | | | | |
| 1 | FILL, mostly silty sand, a little clayey sand, dark brown, frozen (A-2-4) | | | F | | | | | | | |
| 2 | FILL, mostly clayey sand, a little gravel, brownish gray, frozen to 4' (A-6) | | | | | | 15 | | | | |
| 3 | | | | F/M | | | | | | | |
| 4 | | | | | | | | | | | |
| 5 | | | | | | | | | | | |
| 6 | | | 9 | M | SS | 17 | 26 | | | | |
| 7 | | | | | | | | | | | |
| 8 | FILL, mostly sandy lean clay, slightly organic, a little gravel, trace roots, gray and brown (A-6) | | 4 | M/W | SS | 20 | 35 | | | | |
| 9 | | | | | | | | | | | |
| 10 | FILL, mostly sitly sand with organic fines, a little gravel, medium to fine grained, gray, a little white, wet, lenses of bog lime (A-2-4 or A-8) | | 10 | M/W | SS | 20 | | | | | 29 |
| 11 | | | | | | | | | | | |
| 12 | SAPRIC PEAT, dark brown (PT) (A-8) | SWAMP DEPOSIT | | | | | | | | | |
| 13 | | | 5 | M | SS | 23 | 232 | | | | |
| 14 | | | | | | | | | | | |
| 15 | | | | | | | | | | | |
| 16 | | | 3 | M | SS | 24 | 229 | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | 4 | M | SS | 24 | 139 | | | | |
| 20 | **END OF BORING** | | | | | | | | | | |

DEPTH: DRILLING METHOD

**0-18' 3.25" HSA**

BORING COMPLETED: **2/3/23**

DR: **TA** LG: **AG** Rig: **41**

WATER LEVEL MEASUREMENTS

| DATE | TIME | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |
|---|---|---|---|---|---|---|
| **2/3/23** | **11:54** | **20.0** | **18.0** | **18.5** | | **None** |

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-LAT-LONG P-0016964.GPJ AET+CPT+WELL.GDT 4/7/23

# SUBSURFACE BORING LOG

AET JOB NO: **P-0016964** LOG OF BORING NO. **B-4 (p. 1 of 1)**

PROJECT: **North Arm Bay Boat Launch; Mound, MN**

SURFACE ELEVATION: **935.3** LATITUDE: **44.950126** LONGITUDE: **-93.617166**

| DEPTH IN FEET | MATERIAL DESCRIPTION | GEOLOGY | N | MC | SAMPLE TYPE | REC IN. | FIELD & LABORATORY TESTS WC | DEN | LL | PL | %-#200 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 0 | 4" Bituminous pavement | FILL | | F | | | | | | | |
| 1 | FILL, mostly silty sand with gravel, dark brown, frozen (A-1-b) | | | F | | | | | | | |
| 2 | FILL, mostly clayey sand, a little gravel, brownish gray, frozen to 4' (A-2-6) | | | F | | | | | | | |
| 3 | | | | | | | | | | | |
| 4 | | | | F/M | | | | | | | |
| 5 | FILL, mostly sandy lean clay, a little gravel, gray and brown (A-6) | | 11 | M | SS | 16 | 20 | | | | |
| 6 | | | | | | | | | | | |
| 7 | | | | | | | | | | | |
| 8 | | | 10 | M | SS | 2 | 17 | | | | |
| 9 | | | | ▼ | | | | | | | |
| 10 | FILL, mixture of sandy lean clay and silty sand, a little gravel, trace roots, a piece of wood, brown and gray (A-2-4 and A-6) | | 5 | M/W | SS | 11 | 21 | | | | |
| 11 | | | | | | | | | | | |
| 12 | SAPRIC PEAT, dark brown (PT) (A-8) | SWAMP DEPOSIT | | | | | | | | | |
| 13 | | | 5 | M/W | SS | 24 | 120 | | | | |
| 14 | | | | | | | | | | | |
| 15 | ORGANIC CLAY, trace shells and roots, gray and brown, soft (OL/OH) (A-8) | | 4 | M | SS | 19 | 157 | | | | |
| 16 | | | | | | | | | | | |
| 17 | | | | | | | | | | | |
| 18 | | | | | | | | | | | |
| 19 | | | 3 | M | SS | 24 | 104 | | | | |
| 20 | **END OF BORING** | | | | | | | | | | |

DEPTH: **0-18'** DRILLING METHOD: **3.25" HSA**

BORING COMPLETED: **2/3/23**

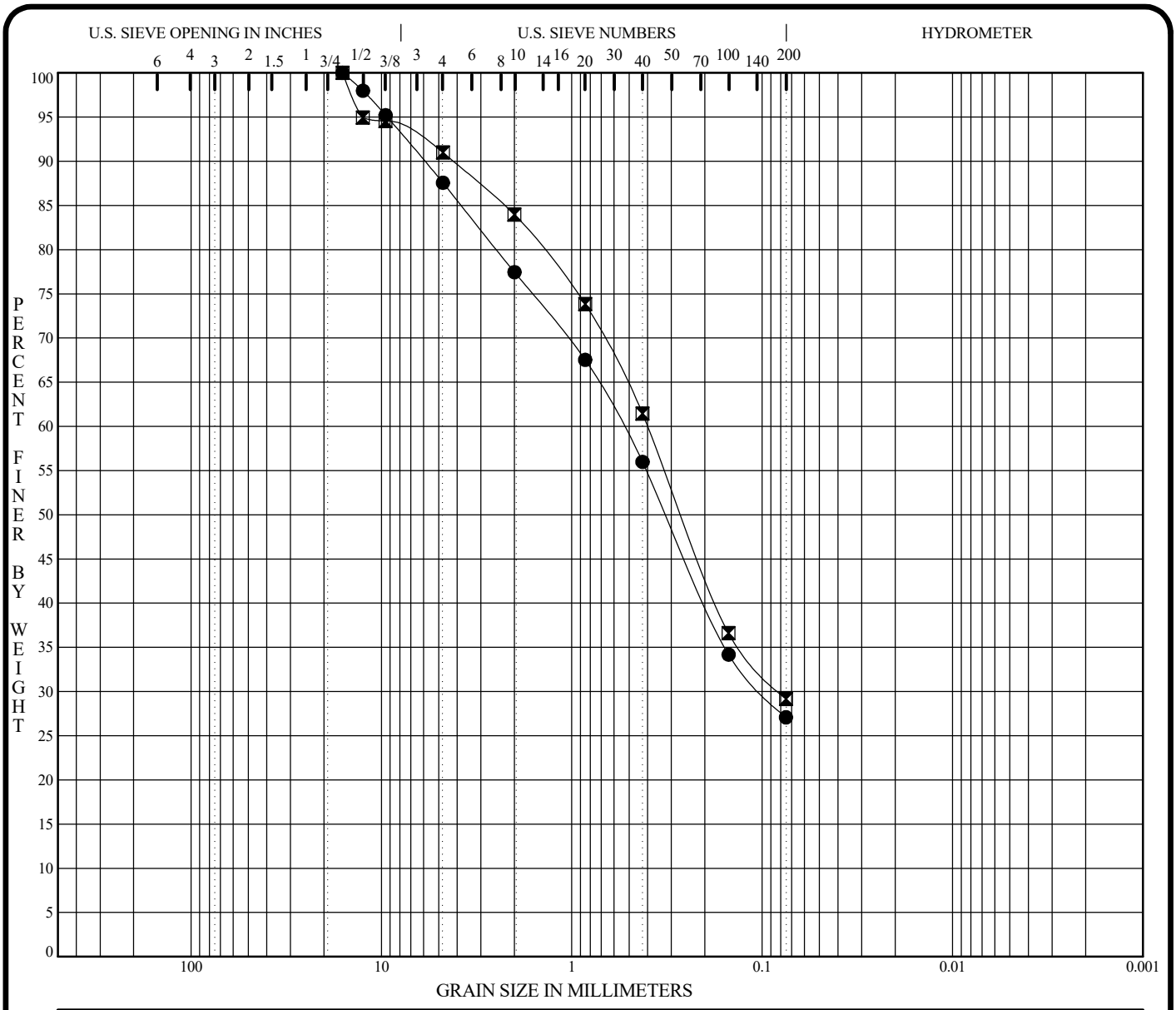
DR: **TA** LG: **AG** Rig: **41**

WATER LEVEL MEASUREMENTS

| DATE | TIME | SAMPLED DEPTH | CASING DEPTH | CAVE-IN DEPTH | DRILLING FLUID LEVEL | WATER LEVEL |
|---|---|---|---|---|---|---|
| **2/3/23** | **10:47** | **11.5** | **9.5** | **9.5** | | **9.1** |
| **2/3/23** | **10:52** | **11.5** | **9.5** | **9.5** | | **9.1** |
| **2/3/23** | **11:03** | **20.0** | **18.0** | **18.0** | | **17.9** |

NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG

AET_CORP W-LAT-LONG P-0016964.GPJ AET+CPT+WELL.GDT 4/7/23




| COBBLES | GRAVEL | | SAND | | | SILT OR CLAY |
|---|---|---|---|---|---|---|
| | coarse | fine | coarse | medium | fine | |

| | Specimen Identification | | Classification | MC% | LL | PL | PI | Cc | Cu |
|---|---|---|---|---|---|---|---|---|---|
| ● | **B-1** | **7.0'** | **FILL - Clayey Sand** | **13** | | | | | |
| ⊠ | **B-3** | **9.5'** | **FILL - Silty Sand** | | | | | | |

| | Specimen Identification | | D100 | D60 | D30 | D10 | %Gravel | %Sand | %Silt | %Clay |
|---|---|---|---|---|---|---|---|---|---|---|
| ● | **B-1** | **7.0'** | **16.00** | **0.54** | **0.100** | | **12.4** | **60.5** | **27.1** | |
| ⊠ | **B-3** | **9.5'** | **16.00** | **0.40** | **0.081** | | **9.0** | **61.8** | **29.2** | |

PROJECT **North Arm Bay Boat Launch; Mound, MN**

AET JOB NO. **P-0016964**

DATE **2/3/23**

American Engineering Testing, Inc.
550 Cleveland Avenue North
St. Paul, MN 55114
Telephone: (651) 659-9001
Fax: (651) 659-1347

# GRADATION CURVES

# Appendix B

Geotechnical Report Limitations and Guidelines for Use

# Appendix B
# Geotechnical Report Limitations and Guidelines for Use
# Report No. P-0016964

## B.1 REFERENCE

This appendix provides information to help you manage your risks relating to subsurface problems which are caused by construction delays, cost overruns, claims, and disputes. This information was developed and provided by GBA[1], of which we are a member firm.

## B.2 RISK MANAGEMENT INFORMATION

### B.2.1 Understand the Geotechnical Engineering Services Provided for this Report

Geotechnical engineering services typically include the planning, collection, interpretation, and analysis of exploratory data from widely spaced borings and/or test pits. Field data are combined with results from laboratory tests of soil and rock samples obtained from field exploration (if applicable), observations made during site reconnaissance, and historical information to form one or more models of the expected subsurface conditions beneath the site. Local geology and alterations of the site surface and subsurface by previous and proposed construction are also important considerations. Geotechnical engineers apply their engineering training, experience, and judgment to adapt the requirements of the prospective project to the subsurface model(s). Estimates are made of the subsurface conditions that will likely be exposed during construction as well as the expected performance of foundations and other structures being planned and/or affected by construction activities.

The culmination of these geotechnical engineering services is typically a geotechnical engineering report providing the data obtained, a discussion of the subsurface model(s), the engineering and geologic engineering assessments and analyses made, and the recommendations developed to satisfy the given requirements of the project. These reports may be titled investigations, explorations, studies, assessments, or evaluations. Regardless of the title used, the geotechnical engineering report is an engineering interpretation of the subsurface conditions within the context of the project and does not represent a close examination, systematic inquiry, or thorough investigation of all site and subsurface conditions.

### B.2.2 Geotechnical Engineering Services are Performed for Specific Purposes, Persons, and Projects, and At Specific Times

Geotechnical engineers structure their services to meet the specific needs, goals, and risk management preferences of their clients. A geotechnical engineering study conducted for a given civil engineer will not likely meet the needs of a civil-works constructor or even a different civil engineer. Because each geotechnical engineering study is unique, each geotechnical engineering report is unique, prepared solely for the client.

Likewise, geotechnical engineering services are performed for a specific project and purpose. For example, it is unlikely that a geotechnical engineering study for a refrigerated warehouse will be the same as one prepared for a parking garage; and a few borings drilled during a preliminary study to evaluate site feasibility will not be adequate to develop geotechnical design recommendations for the project.

Do not rely on this report if your geotechnical engineer prepared it:

- for a different client.
- for a different project or purpose.
- for a different site (that may or may not include all or a portion of the original site); or
- before important events occurred at the site or adjacent to it, e.g., man-made events like construction or environmental remediation, or natural events like floods, droughts, earthquakes, or groundwater fluctuations.

Note, too, the reliability of a geotechnical-engineering report can be affected by the passage of time, because of factors like changed subsurface conditions; new or modified codes, standards, or regulations; or new techniques or tools. If you are the least bit uncertain about the continued reliability of this report, contact your geotechnical engineer before applying the recommendations in it. A minor amount of additional testing or analysis after the passage of time – if any is required at all – could prevent major problems.

1 Geoprofessional Business Association, 1300 Piccard Drive, LL14, Rockville, MD 20850
Telephone: 301/565-2733: www.geoprofessional.org, 2019

**B.2.3 Read the Full Report**
Costly problems have occurred because those relying on a geotechnical-engineering report did not read the report in its entirety. Do not rely on an executive summary. Do not read selective elements only. Read and refer to the report in full.

**B.2.4 You Need to Inform Your Geotechnical Engineer About Change**
Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

- the site's size or shape.
- the elevation, configuration, location, orientation, function or weight of the proposed structure and the desired performance criteria.
- the composition of the design team; or
- project ownership.

As a general rule, always inform your geotechnical engineer of project or site changes – even minor ones – and request an assessment of their impact. The geotechnical engineer who prepared this report cannot accept responsibility or liability for problems that arise because the geotechnical engineer was not informed about developments the engineer otherwise would have considered.

**B.2.5 Most of the "Findings" Related in This Report Are Professional Opinions**
Before construction begins, geotechnical engineers explore a site's subsurface using various sampling and testing procedures. Geotechnical engineers can observe actual subsurface conditions only at those specific locations where sampling and testing is performed. The data derived from that sampling and testing were reviewed by your geotechnical engineer, who then applied professional judgement to form opinions about subsurface conditions throughout the site. Actual sitewide-subsurface conditions may differ – maybe significantly – from those indicated in this report. Confront that risk by retaining your geotechnical engineer to serve on the design team through project completion to obtain informed guidance quickly, whenever needed.

**B.2.6 This Report's Recommendations Are Confirmation-Dependent**
The recommendations included in this report – including any options or alternatives – are confirmation-dependent. In other words, they are not final, because the geotechnical engineer who developed them relied heavily on judgement and opinion to do so. Your geotechnical engineer can finalize the recommendations only after observing actual subsurface conditions exposed during construction. If through observation your geotechnical engineer confirms that the conditions assumed to exist actually do exist, the recommendations can be relied upon, assuming no other changes have occurred. The geotechnical engineer who prepared this report cannot assume responsibility or liability for confirmation-dependent recommendations if you fail to retain that engineer to perform construction observation.

**B.2.7 This Report Could Be Misinterpreted**
Other design professionals' misinterpretation of geotechnical engineering reports has resulted in costly problems. Confront that risk by having your geotechnical engineer serve as a continuing member of the design team, to:

- confer with other design-team members.
- help develop specifications.
- review pertinent elements of other design professionals' plans and specifications; and
- be available whenever geotechnical engineering guidance is needed.

You should also confront the risk of constructors misinterpreting this report. Do so by retaining your geotechnical engineer to participate in prebid and preconstruction conferences and to perform construction-phase observations.

**B.2.8 Give Constructors a Complete Report and Guidance**
Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious

problems this practice has caused, include the complete geotechnical engineering report, along with any attachments or appendices, with your contract documents, but be certain to note conspicuously that you've included the material for information purposes only. To avoid misunderstanding, you may also want to note that "informational purposes" means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected from the report, only from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to and be sure to allow enough time to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

**B.2.9 Read Responsibility Provisions Closely**

Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined engineering properties like steel and concrete. That lack of understanding has nurtured unrealistic expectations that have resulted in disappointments, delays, cost overruns, claims, and disputes. To confront that risk, geotechnical engineers commonly include explanatory provisions in their reports. Sometimes labeled "limitations," many of these provisions indicate where geotechnical engineers' responsibilities begin and end, to help others recognize their own responsibilities and risks. Read these provisions closely. Ask questions. Your geotechnical engineer should respond fully and frankly.

**B.2.10 Geoenvironmental Concerns Are Not Covered**

The personnel, equipment, and techniques used to perform an environmental study – e.g., a "phase-one" or "phase-two" environmental site assessment – differ significantly from those used to perform a geotechnical engineering study. For that reason, a geotechnical engineering report does not usually provide environmental findings, conclusions, or recommendations, e.g., about the likelihood of encountering underground storage tanks or regulated contaminants. Unanticipated subsurface environmental problems have led to project failures. If you have not obtained your own environmental information about the project site, ask your geotechnical consultant for a recommendation on how to find environmental risk-management guidance.

**B.2.11 Obtain Professional Assistance to Deal with Moisture Infiltration and Mold**

While your geotechnical engineer may have addressed groundwater, water infiltration, or similar issues in this report, the engineer's services were not designed, conducted, or intended to prevent migration of moisture – including water vapor – from the soil through building slabs and walls and into the building interior, where it can cause mold growth and material-performance deficiencies. Accordingly, proper implementation of the geotechnical engineer's recommendations will not in itself be sufficient to prevent moisture infiltration. Confront the risk of moisture infiltration by including building-envelope or mold specialists on the design team. Geotechnical engineers are not building-envelope or mold specialists.



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**From:** Nguyen Hoang
**To:** Laura Oakden
**Subject:** FW: [External] RE: North Arm Access Permit?
**Date:** Wednesday, September 24, 2025 9:01:41 AM
**Attachments:** image002.png
image003.png

---

FYI. See below.

Thanks,

Nguyen 'Guy' Hoang
Project Architect
Hennepin County Facility Services
300 South Sixth Street, A-22
Minneapolis, MN 55487
Office: (612) 814-1088

---

**From:** Thomas Tully <ttully@lmcd.org>
**Sent:** Tuesday, September 23, 2025 5:04 PM
**To:** Tony Brough <Tony.Brough@hennepin.us>
**Cc:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>; Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Subject:** [External] RE: North Arm Access Permit?

**CAUTION:** This email was sent from outside of Hennepin County. Unless you recognize the sender and know the content, do not click links or open attachments.

Good evening,

In the past the LMCD has licensed Municipal Launch Sites as a part of greater Municipal Multiple Dock Licenses.

While the LMCD Code does require a Municipal Launch License (LMCD Code 6-3.09). I am uncertain on a few of the requirements.

The LMCD has a history of licensing these in different ways. Some administrative, some with a public hearing, some are missing a paper trail which is why I was uncertain as to if the LMCD played a role at all.

I will be speaking with the LMCD Legal Counsel in the morning and will promptly follow up.

Best

**Thomas Tully**
Manager of Code Enforcement | Lake Minnetonka Conservation District
5341 Maywood Road, Suite 200 | Mound, MN 55364
Ph 952-745-0789 | Fx 952-745-9085 | Ttully@lmcd.org

*To preserve and enhance the Lake Minnetonka experience*

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www.twitter.com/LakeMtkaCD
www.lmcd.org

---

**From:** Tony Brough <Tony.Brough@hennepin.us>
**Sent:** Tuesday, September 23, 2025 9:55 AM
**To:** Thomas Tully <ttully@lmcd.org>
**Cc:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>; Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Subject:** North Arm Access Permit?

Tom.

Following up to my request quite a while ago. Can you verify with us that an LMCD permit is not required for our North Arm Public Access project.

THANKS

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**Disclaimer:** If you are not the intended recipient of this message, please immediately notify the sender of the transmission error and then promptly permanently delete this message from your computer system.

| | |
|---|---|
| **From:** | Eric Evenson |
| **To:** | Bob Tunheim; Alisa Benson; Jon Schwingler; Steve Persian; Jacqueline Ricks; Chris Bollis; jonressler@outlook.com; Thomas Brandabur; Andrew Jarnot; Kelly Prchal; Shane Weltzin; Mark McCutcheon; Adam Edwards; Laura Oakden |
| **Cc:** | "Mediacom" |
| **Subject:** | Proposed Expansion of Commercial/Industrial Use at the North Arm Landing |
| **Date:** | Monday, October 6, 2025 10:01:25 AM |
| **Attachments:** | image001.png<br>Letter to commissioners Edelson and Anderson 10-3-25.pdf |

Dear Mayor, Council, Planning Commission members, and others:

I am sending you the letter below and the attached letter to Hennepin County at the request of Tom Frahm.

Thanks,
EE

---

**Please enter my letter below and attached letter to the County into the public comments for the North Arm Landing proposal**

October 6, 2025

Dear Mayor Bob Tunheim, Council Members, and Planning Commission Members,

I am writing to you as a lifelong resident of Lake Minnetonka—having lived on its shores for over 50 years—a former business owner, past member of both the Orono Planning Commission and City Council, and current President of the Lake Minnetonka Association. Above all, I am someone who cares deeply about the stewardship and long-term health and use of this treasured lake.

I am deeply concerned about Hennepin County's proposed redesign of the North Arm Landing and its apparent intent to expand commercial and industrial uses at the site. This proposal threatens to alter the character of the surrounding residential community, compromise recreational access, and undermine the environmental integrity of the lake. I have shared these concerns with Commissioners Edelson and Anderson (see attached letter).

From my experience in city planning, the proposed improvements to accommodate barges and commercial activities at the site constitute either a non-permitted use or an expansion of a non-conforming use—neither of which is allowed under the current zoning ordinance for areas designated as One Family Lake Shore Residential (LR-1C).

Having previously lived near the North Arm Landing on County Road 51, I wholeheartedly agree with the April 16, 2025 letter from Hennepin County Sheriff Dawanna Witt, who warned that *"a mix of semi-trailers, dump trucks, and heavy machinery and trucks with boats and trailers could cause traffic issues… [and which] could shut down the launch for extended periods of time."* Based on my own experience, I am confident this outcome is not only likely—it is inevitable.

I urge the Planning Commission and City Council to uphold existing city and county policies that protect and support recreational use of this public asset and preserve the livability of surrounding

neighborhoods. I also strongly encourage the City not to vacate any easements or ownership rights it may hold on the site. Doing so would diminish the City's ability to safeguard its future interests regarding the use and oversight of the landing.

Sincerely,

Tom Frahm, President
Lake Minnetonka Association
info@LMAssociation.org

October 3, 2025

Hennepin County Commissioners Edelson and Anderson
Government Center A2400
300 South Sixth Street
Minneapolis, MN 55487

Subject: Follow-Up on Stakeholder Meeting for Lake Minnetonka

Dear Commissioners Edelson and Anderson:

On behalf of the Lake Minnetonka Association (LMA) board, I'm writing to follow up on Commissioners Edelson's offer during our May 27, 2025 Zoom meeting to convene stakeholders in the Lake Minnetonka area. We deeply appreciate your willingness to engage in a dialogue about the lake's challenges and the need for greater coordination among those invested in its future.

Recognizing the demands on your time and your team's schedule, we would be honored to organize and host this meeting at your convenience.

The urgency of convening stakeholders is underscored by Hennepin County's recent proposal to expand the North Arm Landing for industrial and commercial purposes. This proposal raises important questions about the future of Lake Minnetonka and highlights the need for coordinated dialogue among those who care deeply about its environmental, recreational, and economic health.

As a resident of Lake Minnetonka for over 50 years, and having served on both the City of Orono's Planning Commission and Orono City Council, I've had the privilege of helping shape the City's Comprehensive Plan and zoning ordinance. These documents reflect our community's enduring commitment to preserving the lake's residential character and environmental integrity. The guiding principles of Orono's Zoning Code (Sec. 6.12.050) affirm this intent: *"It is not the [city's] intention to expand or allow all such commercial or industrial activity to a degree where it conflicts with the primary residential use and the other guiding principles."*

This issue extends well beyond a routine land use decision. Advancing the proposed expansion of commercial and industrial activity at North Arm Landing would significantly diminish the quality of life for nearby homeowners, increase traffic on residential streets, and pose risks and inconveniences to recreational users of the site. Moreover, it directly contradicts your stated concern that "*stakeholders and policymakers are not communicating frequently, which creates gaps in policy and decision making*."

It is a mistake to expand commercial and industrial use at the landing without first developing a comprehensive, lake-wide strategy that balances the needs of all stakeholders—commercial operators, lakeshore residents, and recreational users. Proceeding with the proposed redesign ignores the broader context and sends a troubling message: that Hennepin County is willing to use its considerable legal and institutional power to shape Lake Minnetonka's future unilaterally.

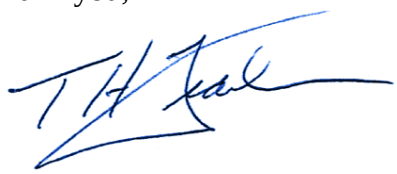
Such an approach undermines public trust and erodes the collaborative spirit essential to protecting and preserving Lake Minnetonka for generations to come. Responsible stewardship of the lake demands inclusive planning, transparent decision-making, and respect for the diverse interests that make this shared resource so valuable.

While the LMA fully supports the County's efforts to maintain North Arm Landing and its other public landings, we respectfully request the following actions:

1. **Remove proposed structures** from the current plan that would facilitate or encourage commercial and industrial use of the site.
2. **Prohibit commercial and industrial activities** in areas zoned for residential use, and redirect such operations to locations already designated for commercial purposes.
3. **Develop a comprehensive, lake-wide access plan** that:
   - Balances the operational needs of commercial entities,
   - Reflects the priorities and concerns of nearby homeowners,
   - Ensures appropriate staff oversight of County-owned landings,
   - Addresses emergency access requirements, and
   - Provides strong environmental protections at all accesses.

Since its founding in 1960, the Lake Minnetonka Association has been a steadfast voice for lakeshore owners, local businesses, and stakeholders throughout the region. Our mission is clear: to preserve, protect, and promote the responsible use of Lake Minnetonka through outreach, advocacy, and community-driven action. We invite you to join us in safeguarding the health of the lake, the quality of life for its residents, and the enduring legacy of Lake Minnetonka for generations to come.

Thank you,



Tom Frahm, President, Lake Minnetonka Association

cc. LMA Board
Orono Mayor Bob Tunheim and City Council
Orono Planning Commission

**From:** Correy Farniok
**To:** Laura Oakden
**Subject:** FW: North Arm Access Redesign
**Date:** Wednesday, January 29, 2025 12:46:59 PM
**Attachments:** image001.png

---

**FYI**

-------- Original message --------
From: Eric Evenson <evensoneric@comcast.net>
Date: 1/29/25 1:38 PM (GMT-05:00)
To: 'Kristopher Guentzel' <Kristopher.Guentzel@hennepin.us>, Nguyen.Hoang@hennepin.us
Cc: 'Ann Hoelscher' <ann@hoelscher-law.com>, 'LMCD' <lmcd@lmcd.org>, 'GABRIEL JABBOUR' <gabrieljabbour@msn.com>, "'Anderson, Rich'" <rich@nsmarina.com>, 'Tony Brough' <Tony.Brough@hennepin.us>, imartinez@imoconsultinggroup.com, 'Heather M Edelson' <Heather.Edelson@hennepin.us>, 'Raina Meyer' <Raina.Meyer@hennepin.us>, 'Cole Roepke' <Cole.Roepke@hennepin.us>, 'Adam Edwards' <aedwards@oronomn.gov>, jRuthenberg@oronomn.gov, btunheim@oronomn.gov, abenson@oronomn.gov, cberrett@oronomn.gov, spersian@oronomn.gov, jricks@oronomn.gov
Subject: North Arm Access Redesign

Kris, Nguyen, and all,

I hope to attend the open house this afternoon for the North Arm Access redesign but thought it would be useful if I send you some of my comments and questions in advance.

I want to thank Hennepin County for its efforts to improve the North Arm Bay Access. A well designed and well maintained access will improve the experience of lake visitors, reduce conflicts when launching, and enhance the appearance of the neighborhood.

On the other hand, a poorly designed access will increase traffic on neighborhood streets, lead to more conflicts among users, and encourage uses which exceed the carrying capacity in the surrounding bays.

I echo many of the concerns raised by others that:

- Minnetonka needs, more than ever, a dedicated site for commercial and industrial launches, loading , unloading, and staging. But that should not be the North Arm access. As you may know, the most heavily used commercial-industrial access on Lake Minnetonka is slated for redevelopment and will soon be closed. This will increase industrial uses of other lake accesses. Waiting to address this concern is foolish. There is only a short window of opportunity time to find a dedicated commercial access on the lake.

The proposed improvements to the North Arm access to make it easier to launch commercial-industrial equipment will result more heavy equipment, earth movers, trailers with several tons or rock, and other industrial equipment using residential streets. This sort of use is incompatible with residential neighborhoods and is contrary the fundamentals of thoughtful land use planning. Facilitating more commercial-industrial use at the North Arm access will create public safety concerns, noise issues, lead to conflicts at the access, increase the cost and frequency of repairs to surrounding streets, and will require more county oversight and maintenance of the access.

Improvements to the North Arm access must be done in context of overall access needs of the entire lake and within the context of the carrying capacity of the bays near the access. The County must find and dedicate a commercial-industrial access on the lake which can be designed and maintained to support large equipment, have adequate areas for storage and staging, and which meets the needs of contractors who use heavy equipment. Contractors and marina owners have already told the county that many commercial-industrial uses require several hours to unload, take days to months to complete the projects, and they will need to be places for staging and to parking for days. The North Arm access lacks the space and is the wrong location for commercial-industrial uses. It is unclear why these concerns are still not reflected in the proposed redesign.

It is unclear how the proposed design of the North Arm access fits within the Lake Minnetonka Access Plan developed and approved by the LMCD, DNR, County, cities, and others on Lake Minnetonka. Without clearly demonstrating the proposed redesign of the North Arm access in consistent with the Lake Minnetonka Access Plan and generally accepted zoning principles, homeowners and others may have a basis to sue for injunctive relief to prevent the reconstruction of the site. This will add unnecessary delays and costs to the project.

History and intent of North Arm access has been for an access for fishermen and family use. The large commercial-industrial use of it would not only be in conflict with those who use it now but it would create an imminent danger for the less experienced boater/driver using the access.

It has been over 30 years since an access survey was done for Lake Minnetonka and has been over 20 years since a boat count has been done. A redesign to encourage more commercial-industrial use at the North Arm Access without first understanding overall access needs, changes in the numbers, sizes, or types of boats on Lake Minnetonka, and the needs of commercial-industrial contractors is a mistake. The proposed design is, at best, based on anecdotal information.

Some improvements are needed at the North Arm access to reduce trash, improve parking, make it easier to launch recreational boats, and help prevent the transport of AIS. But no changes should be made to facilitate commercial-industrial use.

Rather, the county should prohibit vehicles 10 tons or greater or trailers rated greater than 10,000 pounds from use at the North Arm Landing. This will reduce county and city maintenance costs, ameliorate conflicts, and allow most recreational boats and light commercial uses, but would prevent heavy commercial-industrial use at this access.

Thank you for the opportunity to comment,

Eric

**Eric Evenson, Director**
**Lake Minnetonka Association**
Mobile: 612-250-5514 (preferred)
Office: 612-LMA (562)-0444
www.LMAssociation.org

April 16, 2025

Dear Mr. Hoang:

Thank you for allowing feedback on the North Arm Landing Project. Enhancing access to Public Waters in MN is of utmost importance. We thank you for you dedication in helping create that opportunity for water enthusiasts in Minnesota. We do have some suggestions that are based off what we have seen while working and enjoying water related recreation.

1. A recycling and garbage area should be available at the site. We understand that some people could abuse this and use it for other garbage. That is still better than throwing it in the ditch or another area. Having recycling type dumpsters are in line with the counites climate pledge.

We request some type of garbage and recycling are added to the location.

2. Considering the size of the roads around this landing and landing, a mix of semi-trailers, dump trucks, heavy machinery and trucks with boats and trailers could cause traffic issues. With the understanding that barges and docks will need to use this area, they generally are able to launch very quickly. This is not true of dump trucks of material and heavy equipment. This could shut down the launch for extended periods of time.

We request that heavy machinery and large construction equipment be restricted from use at this location. We believe this can be accomplished with cooperation with cities and time limits determined by city ordinance.

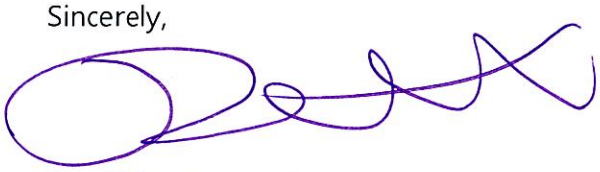
Other, more minor, areas that we see as potential challenges are designated parking areas that specific for fishing only, will be difficult to enforce. Law enforcement does not have authority to differentiate on who uses what spot as long as cars are not parked in trailer only parking.

We hope to work in partnership in this project for very clear signage in one spot that will define lake rules, AIS prevention, safety information and other Natural Resources information.

We would like to thank you for already implementing past suggestions. We, and others, believed that some parking spots would be too short for the type of boats on Lake Minnetonka. I see that you have increased some of the spots to 50' and 11' wide. This is great news for, thank you for being flexible.

This is going to be a tremendous landing and will help increase public access to a very valuable resource to many who would otherwise not be able to enjoy the lake. Thank you for your hard work.

Sincerely,



Sheriff Dawanna Witt
Hennepin County Sheriff's Office

| | |
|---|---|
| **From:** | amybherman |
| **To:** | Laura Oakden |
| **Cc:** | Matt Herman |
| **Subject:** | North Arm access redesign |
| **Date:** | Tuesday, September 23, 2025 1:30:00 PM |

Laura:

Bob Tunheim recommended that I contact you regarding concerns about the North Arm access redesign planned by Hennepin County. My husband, Matt, and I have lived across from the North Arm access for more than 25 years. We appreciate Hennepin County's work to improve the North Arm access, but have deep concerns about elements of the redesign that encourage commercial and industrial use of the access. Here is an overview of our concerns:

---

**Objection to dedicated commercial barge launch**

- Commercial and industrial water vehicles regularly use the landing; clear, enforceable commercial-use policies are needed.
- The North Arm access is already congested and sits adjacent to homes and private docks; the area is not suitable for large barge loads or frequent commercial traffic.
- A dedicated vertical access for barges will increase congestion, safety risks, parking pressure in nearby neighborhoods and may escalate tension between recreational users and commercial businesses.
- Commercial operators should use marinas or launches designed for heavy loading and parking, not a small, residential public landing close to a busy channel.

---

**Preserve natural buffers**

- Trees and shrubs currently screen parking and reduce noise for nearby homes.
- Removing the buffer will expose the area to parking and traffic noise, reduce privacy, harm water quality and degrade the character of the neighborhood.
- Retain the existing vegetation or replace it with equivalent buffer.

---

**Limit new infrastructure**

- Longer docks, a vertical access for barges and expanded parking risk changing the landing from low-impact recreational use to a high impact commercial and industrial access hub.
- Minimize infrastructure to preserve the residential, recreational focus and maintain traffic flow at the Hendrickson Channel.

---

**Trash and litter prevention**

- Removing trash receptacles will worsen the problem with litter.
- Keep clearly marked trash bins, post anti-dumping signage, and ensure regular county maintenance.

---

**Requests to the committee**

1. Reject a dedicated vertical access point for barges at North Arm Bay and require commercial and industrial operators to use marinas or properly equipped facilities.
2. Preserve the existing tree and shrub buffer or replace it with equivalent vegetative screening.
3. Limit new docks, fishing pods, lighting, and parking to preserve the residential, recreational character of the North Arm access and allow water traffic to flow unimpeded through Hendrickson Channel.
4. Keep trash bins onsite, post clear anti-dumping signs, and ensure regular county trash upkeep.

Our hope is that recreational users and neighborhood integrity will be emphasized with a redesign of the North Arm access and not lead to routine usage by commercial and industrial entities.

Attached are a few photos from what I saw this morning at the North Arm Access: a pickup and trailer parked across several parking spots, signage advertising boat decking, and a pickup with a heavy-duty trailer. These photos are just a small example of the commercial businesses taking advantage of the public access.

Thank you for your consideration in keeping the North Arm access focused on recreation and in keeping with a residential area.

Regards,

Matthew and Amy Herman
(612) 237-0782 (Amy)
amybherman@gmail.com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| | |
|---|---|
| **From:** | Bob Tunheim |
| **To:** | Adam Edwards; Laura Oakden |
| **Subject:** | Fwd: North Arm access redesign cc list |
| **Date:** | Tuesday, September 30, 2025 11:38:08 AM |
| **Attachments:** | North Arm Access_ltr_sigs_Sept 30 2025.pdf |

FYI
---------- Forwarded message ----------
From: amybherman <amybherman@gmail.com>
Date: Sep 30, 2025 10:36 AM
Subject: North Arm access redesign cc list
To: Bob Tunheim <btunheim@oronomn.gov>,Alisa Benson <abenson@oronomn.gov>,Jon Schwingler <jschwingler@oronomn.gov>,Steve Persian <spersian@oronomn.gov>,Jacqueline Ricks <jricks@oronomn.gov>,evensoneric@comcast.net
Cc:

September 21, 2025
Hennepin County Public Works
Attn: Nguyen 'Guy' Hoang
701 Fourth Avenue South
Minneapolis, MN 55415

CC: Bob Tunheim  City of Orono mayor and Orono city council members, Hennepin County commissioners, Lake Minnetonka Association, Eric Evenson Executive Director

Dear Mr. Hoang:

Many City of Orono residents living near the North Arm access have expressed concerns about the current redesign proposal. Improvements to public spaces, such as North Arm, should prioritize community use and recreational enjoyment. The current plan encourages the expansion of commercial and industrial use for this recreational access, which is located among residential neighborhoods.

**Summary of Requests**

We respectfully urge the committee to:

- Remove the vertical access point and direct commercial and industrial operators to appropriate launch and load pickup areas.
- Preserve or replace the existing tree and shrub buffer as it currently exists.
- Limit infrastructure expansion to maintain the site's recreational focus, including reducing lighting and additional dockage.
- Retain trash bins and enforce proper waste disposal.
- Uphold existing city and county policies to protect and support recreational use of this public asset and the livability of surrounding neighborhoods.

We hope the North Arm access redesign will prioritize recreational use and neighborhood integrity over commercial and industrial interests. Thank you for your consideration.

Please see the attached pdf with included signatures of neighbors surrounding the North Arm access.

Sincerely,

*Matt*

Matthew Herman
3825 Cherry Avenue
Orono, MN 55364

Amy Herman
612-237-0782
amybherman@gmail.com

September 21, 2025
Hennepin County Public Works
Attn: Nguyen 'Guy' Hoang
701 Fourth Avenue South
Minneapolis, MN 55415

CC: Bob Tunheim City of Orono mayor and Orono city council members, Hennepin County commissioners, Lake Minnetonka Association, Eric Evenson Executive Director

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- Uphold existing city and county policies to protect and support recreational use of this public asset and the livability of surrounding neighborhoods.

We hope the North Arm access redesign will prioritize recreational use and neighborhood integrity over commercial and industrial interests. Thank you for your consideration.

Sincerely,

Matthew Herman
3825 Cherry Avenue
Orono, MN 55364

Neighbors and Residents in Agreement with the above bulleted recommendations:

NAME: CARIN OFFERMAN

ADDRESS: 3826 CHERRY AVE

MOUND MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: Eric Svien

ADDRESS: 3826 Cherry Ave

Mound, MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: Allan Larson

ADDRESS: 3852 Cherry Ave

Mound MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: Dereck Weerts

ADDRESS: 1575 Maple Place

Mound, MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: Carolyn Hardy

ADDRESS: 1579 Maple Place

Orono, MN 55364

SIGNATURE: [signature] DATE: 9.23.25

Neighbors and Residents in Agreement with the above bulleted recommendations:

NAME: Brekken Crawford

ADDRESS: 1587 Maple Place
Mound, MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: Jay Bram

ADDRESS: 1595 Maple Pl
Mound, MN 55364

SIGNATURE: [signature] DATE: 9/23/25

NAME: MARK Dobratz

ADDRESS: 3865 N Shore Mounds, MN

SIGNATURE: [signature] DATE: 9/23/25

NAME: Mark Dobratz

ADDRESS: 3865 N. Shore Dr.
Mound MN 55364

SIGNATURE: [signature] DATE: 9-23-25

NAME: Evelyn Haas

ADDRESS: 3820 North Shore Dr
Wayzata Mn 55391

SIGNATURE: [signature] DATE: 9-23-25

Neighbors and Residents in Agreement with the above bulleted recommendations:

NAME: Gary Wollner

ADDRESS: 1030 Loma Linda AVE, Mound, MN 55364

SIGNATURE: Gary W. Woll DATE: 9/25/25

NAME: STEVE ENGLUND

ADDRESS: 3855 CHERRY AVE MOUND MN 55364

SIGNATURE: Steve M England DATE: 9-25-25

NAME: Alysen Pratt

ADDRESS: 1565 Maple Place Mound MN 55364

SIGNATURE: Alysen Pratt DATE: 9-25-25

NAME:

ADDRESS:

SIGNATURE: DATE:

NAME:

ADDRESS:

SIGNATURE: DATE:

Neighbors and Residents in Agreement with the above bulleted recommendations:

NAME: Paula Johnson

ADDRESS: 3818 N Shore Dr (Orono)
Wayzata 55391

SIGNATURE: [signature] DATE: 9-23-2025

NAME:

ADDRESS:

SIGNATURE: [signature] DATE: 9-23-25

NAME: Marvin B. Blair

ADDRESS: 4764 No Shore Dr. 55391

SIGNATURE: Nancy Lee Blair DATE: 9-23-25

NAME: William WINTHEISER

ADDRESS: 3818 NORTH SHORE DRIVE
ORONO MN 55391

SIGNATURE: [signature] DATE: 9-23-25

NAME: MaryLou Lutz

ADDRESS: 3570 N Shore Dr
Orono 55391

SIGNATURE: MaryLou Lutz DATE: 9/23/25

| | |
|---|---|
| **From:** | GABRIEL JABBOUR |
| **To:** | Kristopher Guentzel; Cole Roepke; Shane M Magnuson |
| **Cc:** | Eric Evenson-Marden; Adam Edwards; Melanie Curtis; Bob Tunheim; Alisa Benson; Claire Berrett; Steve Persian; Jacqueline Ricks; Laura Oakden |
| **Subject:** | Fw: North arm |
| **Date:** | Friday, January 17, 2025 10:30:43 AM |
| **Attachments:** | PATR_000021.pdf |

Sent from Outlook

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>@hennepin.us

**Sent:** Friday, January 17, 2025 10:10 AM
**To:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>; Cole Roepke <Cole.Roepke@hennepin.us>; Shane M Magnuson <Shane.Magnuson>
**Cc:** Eric Evenson-Marden <evensoneric@comcast.net>; Adam Edwards <aedwards@oronomn.gov>; Melanie Curtis <MCurtis@oronomn.gov>; btunheim@oronomn.gov <btunheim@oronomn.gov>; abenson@oronomn.gov <abenson@oronomn.gov>; cberrett@oronomn.gov <cberrett@oronomn.gov>; spersian@oronomn.gov <spersian@oronomn.gov>; jricks@oronomn.gov <jricks@oronomn.gov>; loakden@oronomn.gov <loakden@oronomn.gov>
**Subject:** North arm

Kris

Thank you for taking the time to listen to my concerns. I want to re emphasize my concerns
1) Minnetonka will need, more than ever, a site for commercial and industrial launch, loading , unloading and staging
2) The vision the county has that the site would be used for a short 30 minutes for launching and loding barges is false. It might be true for a pickup unloading a boat lift but not for the scope of the projects that will need access- please see enclosed photos. From earth movers to 70ft. 18 wheelers that will take hours to unload and days if not months to complete the projects and there need to be places to park for days.
3) The proposal for commercial/industrial use of the access is clearly outside the zoning of the parcel and in violation of the public access task force mandated by the governor which requires that the accesses will be spread throughout the community. I am enclosing the task force report. Clustering such activity within half a mile nestled in a residential community is unacceptable. Two marinas, two public accesses within a half a mile stretch within an Orono residential community.
4) History and intent of North Arm access has been an access for fishermen and family use. The large industrial use of it would not only be in conflict with those who use it now but it would create an imminent danger for the less experienced boater/ driver using the access.
5) The proposed use would drastically change the characteristics of the area , not only on water, but throughout surrounding land and feeder roads to the site

Respectfully,
Gabriel Jabbour
612-599-2838

Sent from Outlook


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| **From:** | GABRIEL JABBOUR |
| **To:** | Eric Evenson-Marden; Adam Edwards; Melanie Curtis; Bob Tunheim; Alisa Benson; Claire Berrett; Steve Persian; Jacqueline Ricks; Laura Oakden |
| **Subject:** | Fw: North Arm Access Zoning |
| **Date:** | Monday, February 3, 2025 1:20:10 PM |

The more I look at the proposed redesign of the North Arm access and look at city code, the more I am concerned the County is acting illegally. I am no expert in the nuances of the Orono zoning ordinance, so I encourage you to talk with someone more knowledgeable than me. Nevertheless, I believe Tony either does not understand or does not care about local zoning. It troubles me he is asking barge operators to advocate for him. Well duh, of course barge operators will support Tony, they are getting government to pay for improvements at a public site for their private use.

While I go into more detail below, my questions are:

1) Is the County subject to city zoning?
2) Is the North Arm access regulated as a publicly owned park or playground in a LR-C1 district?
3) Are commercial or industrial uses allowed in a LR-C1 district?
4) Is the proposed redesign of the site an expansion of the use of the site? (It has always been an public access, but they are adding additional docks and another ramp to accommodate barges) - BTW, all three lanes are seldom used at the same time at the Maxwell Bay access - I collected data over two summers and seldom saw all three lanes use at the same time).
5) Did the city ever approve the industrial or commercial uses shown in your photographs or which are being advocated by Hennepin County staff? If yes, are they "conforming uses" in a LR-C1 district?
6) If no, are they "legal non-conforming uses?" If so, is the proposed expansion of the nonconforming uses as shown in the County's plan allowed by city code?
7) Are the uses of the site by barges as described by the county and as shown in your photographs either "industrial uses" or are they "commercial uses" in a shore land overlay zone?
8) If industrial, is it even allowed in a shore land setback zone (there is no provision for this in city code)? If commercial, is it permitted in a LR-1C zone?

I have attended both open houses for the proposed North Arm Access Redesign. Based on what I was told and what I've seen in your photographs, I believe Tony Borough is operating the access illegally and the proposed design of the North Arm Access is not consistent with the City of Orono's zoning code and; therefore, should not be approved. I recognize zoning can be nuanced and there may be parts of the code that I do not understand, so I encourage you to talk with someone much more knowledgeable then me.

The North Arm Access is located in in an zoned as One Family Lakeshore Residential: LR-1C and in a shore land overlay district (see links and images below). City Code, Sec. 78-347. "Permitted uses," states:

> *Within the LR-1C one-family lakeshore residential district, no land or structure shall be used*

*except for one or more of the following uses:*

*(1) City-owned public service structures that have been approved by the city council after the required public hearings for public improvement projects, provided that…*

*(2) Reserved.*

*(3) Municipal buildings.*

*(4) Reserved.*

*(5) One-family detached dwellings.*

*(6) Personal wireless service antennas and towers…*

*(7) Publicly owned parks and playgrounds*

Since the North Arm Access is publicly owned, it would be allowed under paragraph (7) and be subject to Orono's regulations governing parks and playgrounds. Neither commercial or industrial uses are allowed in areas zoned LR-1C or in city parks or play grounds without approval of the city. I am not aware the City of Orono has ever given Hennepin County permission to use the North Arm Access for commercial or industrial use. Therefore, as currently operated by Hennepin County Environmental Services, it is in violation of local ordinance. Furthermore, Hennepin County Environmental Services plans to illegally expand commercial and industrial uses at this site.

Hennepin County staff and consultants have publically said the North Arm site is being modified to better accommodate commercial barges and shows an additional dock and storage area for commercial/industrial uses on its proposed plan (see below). Hennepin County also posted on its website that the County will be "*Adding a vertical access point to separate commercial use at launch*" (https://www.hennepin.us/en/residents/conservation/north-arm). Tony Borough, Hennepin County Environmental Services, told me he has reached out directly to the five major barge operators in the Lake Minnetonka area for their input into the proposed expansion. This is in total disregard to local rules which prohibits expanding the commercial/industrial use of the North Arm access. Tony Borough also indicated to me he was advised by the Hennepin County Attorney's office "*as long as the County does not expand the use at the site, the uses are allowed*." This implies commercial or industrial use of the access is a legal nonconforming use. It is not - simply because something is done illegally in the past, does not make it legal. Even if this was a legal nonconforming use (which it is not), city code prohibits the county from expanding a nonconforming use. The county clearly admits they intend to expand commercial use at this site. .

Use of the North Shore access by barges will increase in the very near future. One of the busiest barge accesses on the lake (next to Minnetonka Marina) has been rezoned and is slated for redevelopment. This will put more pressure on public accesses for barges. The new generation of barges come in modules designed to hauled over land and assembled and disassembled at launch sites. As the current fleet of barges on Lake Minnetonka are replaced, barge traffic will increase significantly at public accesses. Hennepin County should be looking for a dedicated commercial/industrial site on the lake.

As stated earlier, the North Arm Access is located in a Shore Land Overlay Zone. Article IX. Shore Land Management, Division 1, Sec. 78-1211 defines commercial use and industrial use in a shore land zone as follows:

*Commercial use* means the principal use of the land and/or buildings for the sale, lease,

rental or trade of products, goods and services.
*Industrial use* means the use of land or buildings for the production, manufacture, warehousing, storage or transfer of goods, products, commodities or other wholesale items.

Article IX, Division 1, Sec. 78-1289 "*Standards for commercial, public and semipublic uses,*" states: *"Surface-water-oriented commercial uses and public or semipublic uses with similar needs to have access to and use of public waters may be located on parcels or lots with frontage on public waters, if permitted by the underlying zoning district standards."* Hennepin County staff calls the proposed expansion of the North Arm access a "commercial use." This is misleading and inaccurate. As described by Tony Borough and the County's consultants, and shown in the attached photographs, the site is clearly being used illegally for industrial purposes and is being redesigned to expand its use for the storage and transfer of rocks and heavy equipment. Furthermore, even if this was a commercial use (it's not – it's industrial), commercial use is not allowed in a LR-1C zoning district.

Article IX, Division 1, Sec. 78-1286. - New public and private roads, specifies: *"New public and private roads, driveways, parking areas, and public or private watercraft access ramps shall not be constructed within the Shore Setback of the public waters enumerated in section 78-1217. If no alternatives exist, such improvements shall be subject to the standard zoning variance review procedure, and such review shall consider the following…*". The proposed redesign is an expansion of the use of the North Arm access by adding two new docks and an industrial loading area to better accommodate industrial uses at the site and are not allowed by Orono Zoning Code. Industrial use in an residential area and in a facility designed for recreational watercraft and anglers is dangerous and inconsistent with basic land use principles. Hard cover appears to extens to the OHW. This is also not allowed.

Without the express approval from the City of Orono, Hennepin County's current use of the North Arm access appears to be illegal and should be discontinued. The proposed redesign of the access will increase the illegal use of the site and will use public funds to encourage an expansion of unlawful behavior.

City Official Map - https://www.oronomn.gov/DocumentCenter/View/3239/Zoning-Map-12-21-pdf
Orono City Zoning Code (Subdivision IV. - LR-1C One-Family Lakeshore Residential District) - https://library.municode.com/mn/orono/codes/code_of_ordinances?nodeId=TITVILAUS_CH78ZORE_ARTIVDIRE_DIV4LAREDI_SDIVOMILAREDI
Article IX (Soreland Management) - https://library.municode.com/mn/orono/codes/code_of_ordinances?nodeId=TITVILAUS_CH78ZORE_ARTIXSHMA


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**From:** Adam Edwards
**To:** Laura Oakden
**Subject:** FW: [External] Fw: RE:
**Date:** Monday, May 19, 2025 10:27:54 AM

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FYI

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**From:** Heather M Edelson <Heather.Edelson@hennepin.us>
**Sent:** Monday, May 19, 2025 10:15 AM
**To:** GABRIEL JABBOUR <gabrieljabbour@msn.com>; Clara F Wicklund <Clara.Wicklund@hennepin.us>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Alisa Benson <abenson@oronomn.gov>; JACQUELINE RICKS <mijajosa@aol.com>; Steve Persian <steve.persian@outlook.com>; Adam Edwards <aedwards@oronomn.gov>; Correy Farniok <CFarniok@oronomn.gov>; Raina Meyer <Raina.Meyer@hennepin.us>; Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>; Ketki Varsha <Ketki.Varsha@hennepin.us>; Kevin Anderson <Kevin.Anderson@hennepin.us>; Anderson, Rich <rich@nsmarina.com>; Ann hoelscher <ann@hoelscher-law.com>; JIm Brimeyer <jbrimeyer@lmcd.org>; Thomas Tully <ttully@lmcd.org>
**Subject:** Re: [External] Fw: RE:

Gabriel,

Thank you for this email and highlighting your concerns.

Kristopher, can we get a call schedule with you, Mr. Jabbour and myself this week to discuss the concern highlighted in this email?

I am copying Clara my assistant to help schedule as well.

Heather Edelson
Hennepin County Commissioner | District 6

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**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Saturday, May 17, 2025 5:20:09 PM
**To:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Alisa Benson <abenson@oronomn.gov>; JACQUELINE RICKS <mijajosa@aol.com>; Steve Persian <steve.persian@outlook.com>; Adam Edwards <aedwards@oronomn.gov>; cfarniok@ci.orono.mn.us <cfarniok@ci.orono.mn.us>; Heather M Edelson <Heather.Edelson@hennepin.us>; Raina Meyer <Raina.Meyer@hennepin.us>; Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>; Ketki Varsha <Ketki.Varsha@hennepin.us>; Kevin Anderson <Kevin.Anderson@hennepin.us>; Anderson, Rich <rich@nsmarina.com>; Ann hoelscher <ann@hoelscher-law.com>; JIm Brimeyer <jbrimeyer@lmcd.org>; Thomas Tully <ttully@lmcd.org>
**Subject:** [External] Fw: RE:

**CAUTION:** This email was sent from outside of Hennepin County. Unless you recognize the sender and know the content, do not click links or open

attachments.

To All,

It’s becoming obvious to me that more and more Lake Minnetonka interests are not being protected. It’s accelerating to a crisis. In the past four years, besides the thousands of hours trying to bring back what for years was the standards we were accustomed to and were built on logic and safety. Most of my time was spent trying to convince the powers that be( mostly Hennepin county environmental services) to do the right thing with an enormous amount of pushback and denial that there were any problems. Following resentments and circling the wagon and eventually prevailing with less than 10% of my time solving problems and the rest is arguing with staff and elected officials.

1) I’m including photos to demonstrate my concerns on the latest issue- North Arm landing. If the pictures don’t speak to you, I don’t know what it’s going to take. The first three is how I spent my Sunday afternoon before dinner.









The second three are the unlawful use of the site and what industrial use looks like.







And the four photos are what an average hill slide looks like and what it takes to rebuild it (

four years, thousands of yards of dirt ,hundreds of tons of rocks and years of vegetation).









In addition to all building material and supplies needed to be delivered to the islands on Minnetonka, the removal of debris, fallen trees, channel maintenance, septic tank pump outs, removal of abandoned boats, mattresses, barrels, sunken boats and cars, and much more maintenance that needs to be provided to mainland shorelines that are not accessible by equipment on land













2) the County letter in 1973 clearly understanding the need for a site on the water for the above activities. See attached.

That site mentioned in the letter has served and is still faithfully serving the lake and the private sector. It is the only site on the lake that can handle large commercial/industrial activities and very will no longer be available. The site has been rezoned as a high density residential, and I am planning to develop it. The business model around the country is to have smaller barges to be transported to a body of water and joined together after launch. That's the future of services on the lake. The county publicly stated, in a meeting, that the barges would take less than 10 minutes to unload. I have operated marinas on the lake for over 35 years and can tell you this is false and shows how staff don't have a clue about barges.

Conclusion

The North Arm Landing project does not take any of the above into account.

The two DNR accesses on the lake prohibit barge activity If they cannot manage and be a good custodian of the present activities in North Arm when the zoo comes to town who is going to manage it. How are services going to be provided to the lake?

Who is protecting Minnetonka?

Gabriel JABBOUR - FOUNDER

Lake Guardian

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Letter Submitted to Hennepin County 9.24.25
Letter Submitted to Planning Commission 10.20.25
Gabriel Jabbour

September 24, 2025

Dear Commissioners, Edelson and Anderson,

It is disappointing and frustrating that County staff and consultants have been unwilling to address the concerns that several others and I have raised about the proposed redesign of the North Arm Landing on Lake Minnetonka. It is upsetting that your staff is dismissive of my over 34 years' experience as a marina operator , 54 years living at the lake and my history of working closely with Hennepin County and the State of Minnesota to help generate public support, acquire, design and build public accesses on Lake Minnetonka. I have personally launched and landed tens of thousands of boats, including barges and some of the largest boats on the lake.

I have communicated to staff that the proposed redesign of the North Arm Landing endangers the public's health, safety, and welfare. This concern is shared by the Hennepin County Sheriff (letter attached). Further, the proposed expansion of the site to accommodate commercial/industrial barges is illegal under state statute and Orono code.

As shown in the attached photographs taken at the North Arm Landing, the site is used by several commercial/industrial barge operators to launch, fuel, and service their barges and to stage their operations. These activities are illegal at this location. The photographs also show the site is heavily used by recreational boaters and anglers. Recent surveys show that over 64% of activity occurs before 7am and after 5pm, at the same time many barges are being launched or removed from the lake. The mix of commercial/industrial use and recreational use at this site is dangerous and is prohibited by existing zoning.

- *The North Arm Landing is located in a One-Family Lakeshore Residential District (LR-1C) in Orono (see attached map).The LR-1C zoning is intended to provide for combination of medium-density residential development and limited agricultural activity. Commercial/industrial is an illegal nonconformity LR-1C district and is therefore prohibited.*

- *When an ordinance prohibits a use, a city cannot allow the use unless it adopts an amendment to a city's zoning ordinance in accordance with the procedures of the Municipal Planning Act. Cities must not grant variances to engage in prohibited uses."* (Mn Statutes, Chapter 462.357, Subd. 6, paragraph 2).

County staff claims the Hennepin County Attorney's Office has advised them that commercial/industrial use of the North Arm Landing is a "legal nonconforming use" since it has been used commercial/industrial activities in the past. However, staff have been unable to provide a written statement from the County Attorney. Nevertheless, this is incorrect - the commercial/industrial use of the North Arm Landing is an "illegal nonconformity." Please note:

- *Any legal non-conforming use would have needed to exist prior to when the Orono City Zoning Code was enacted in 1975. County staff have provided no evidence that this site was used for commercial/industrial uses prior to 1975. (Orono Zoning Code: Sec. 6.12.310, (a), paragraph 2)).*

- *Illegal nonconformities are those that were not permitted when the zoning district was established. Illegal nonconformities do not have the rights associated with legal nonconformities. While these uses may exist because a prior zoning ordinance was not enforced, a city's failure to enforce a prior zoning ordinance does not give a landowner the legal right to continue an illegal nonconformity.*

While commercial/industrial use of the site is illegal, even if Hennepin County were able to demonstrate the commercial/industrial use at the North Arm Landing is a legal nonconforming use, the proposed design would still not be allowed.

Under Minnesota Statute and Orono Zoning Code, the proposed changes at the North Arm Landing will constitute an expansion of nonconforming uses or the relocation of those uses to another part of the property and are therefore prohibited. A new "vertical access" for barges, a new staging area for commercial use, and redesign of the parking and traffic lanes to accommodate commercial/industrial use at this site are clearly expansions or relocation of nonconforming uses and are prohibited under Minnesota statute and the Orono City Zoning Code. (Minnesota Statutes, Chapter 462.357, Subd. 1e, paragraph (a) and Orono Zoning Code: Sec. 6.12.310, (a) (2)). See also:

- *Orono Zoning Code: Sec. 6.12.310. - Nonconforming structures and uses.*
  (c) *Nonconforming structures.*
  (3) *Expansion of nonconforming structures.* The term "expansion of nonconforming structures" includes any increase in a dimension, size, area, volume, or height; any placement of a structure or part thereof where none existed before; any addition of a site feature such as, but not limited to, a deck, patio, fence, driveway, parking area, or swimming pool; any improvement that would allow the land to be more intensely developed; and any exterior storage, signs, or lighting. No expansion of nonconforming structures shall be permitted except as specifically listed and allowed herein...

  (4) *Relocation.* No nonconforming structure shall be moved to another lot or to any other part of the parcel of land upon which the same was constructed at the time of this section's adoption unless such movement shall bring the nonconformance into compliance with the requirements of the zoning code.

Over the past several months, County staff have solicited the input from several large, commercial barge operators on the redesign of the North Arm Landing. It is unconscionable that County staff are soliciting support for the expansion of an illegal use at this site. It appears staff wants to garner the favor of commercial businesses, many of whom are not from the Orono area, rather than support the residents who live near the landing.

The resulting design intensifies the hardcover on a sensitive shoreland site and is apparently designed to accommodate industrial and commercial uses which are unlawful. The county planners have ignored Orono's land development standards and its zoning regulations. To add insult to injury, it will no doubt fall to local police to try to enforce local ordinances after the dust settles.

The proposed redesign of the North Arm Landing removes the trees and other vegetation along the north and northwest shorelands of the site. This vegetation screens surrounding residential properties from the lights, noise, and traffic at the Landing and from CR 51. While the County proposes to replace the trees, intensive vegetation removal is not permitted under Orono Shore land Regulations. See Orono Zoning Code Sec. 6.12.6300 (b) - Vegetation alterations:

- Intensive vegetation clearing within 75 feet of the shoreline of public waters identified in section 6.12.5970, on steep slopes or within the bluff impact zone within the shoreland overlay district is prohibited. Limited clearing of shrubs and trees less than six inches in diameter and cutting, pruning, and trimming of trees of any size is allowed to provide a view to the water from the principal dwelling site and to accommodate the placement of permitted stairways and landings, picnic areas, access paths, beach and watercraft access areas, and permitted lockboxes, provided that the screening of structures, vehicles or other facilities as viewed from the water, assuming summer, leaf-on conditions, is not substantially reduced.

It is unclear why Hennepin County is subsidizing commercial/industrial access on Lake Minnetonka. Nevertheless, if the County wishes to provide commercial/industrial access on Lake Minnetonka, please note:

- Hennepin County already owns an access located in Spring Park located about 1.2 miles and 2.17 minutes from the North Arm Landing.
- The Spring Park site is zoned for commercial use, located on a major highway, is adjacent to a large storage area owned by the Hennepin County Public Works, and next to the Sheriff's Water Patrol Office where it could be monitored 24/7.
- The site is used routinely to launch and remove some of the largest boats on Lake Minnetonka and can easily accommodate commercial barges. Additionally, the site is more centrally located than the North Arm site.
- Spending tax money to provide for additional commercial/industrial use at the North Arm Landing is unnecessary and wasteful.

I encourage you not to support expanding the commercial/industrial uses at the North Arm Landing and to provide a design that is more compatible with a residential area and which meets the zoning requirements of the site.

Sincerely,

Gabriel Jabbour





# Industrial use





# The use in north arm resulting in spill-over  in maxwell landing





# Unsupervised for 3+ years















# Commercial activity

## Barge repair







liminating vegetation that serves as sound and visual barrier between launch and residential district






The use in image above is incompatible with use below




Industrial use + intended public use = potential harm







Commercial activity




Boat rental



Henn. Co Boat Launch North ARM

196

**Melanie Curtis**

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Monday, October 21, 2024 8:36 AM
**To:** Tony Brough; Melanie Curtis; JIm Brimeyer; Anderson, Rich; Eric Evenson-Marden; heather.edelson@hennepin.us; Shane M Magnuson; Kristopher.Guentzel@hennepin.us; imartinez@imoconsultinggroup.com
**Subject:** North Arm
**Attachments:** mpd (1).pdf; PATR_000021.pdf

Resized_20240704_134501_531895491994491_1720461918277.jpeg

20240704_134501_resized_1.jpg

20240623_165604_resized_2.jpg

20240623_165554_resized_1.jpg

20240516_112428_resized_1.jpg

20240516_112629_resized_1.jpg

20240516_112413_resized_1.jpg

20240508_155911_resized_1.jpg

20240508_155918_resized_1.jpg

Hi All,

I thought I would summarize my thoughts in writing. For background information I was intimately involved in the acquisition, funding , building and community meetings for the Maxwell bay and Grays bay public access sites. I worked with the city, state and county. What you see there is the result of years of planning and negotiating. From no trailer parking from Norenberg to Fletcher's to eliminating one of the access sites on Grays Bay and converting the dam access to be car top only. Our little strip of land on Maxwell and North Arm is extremely dense, within half a mile or so we have two public access sites at two marinas. It has a disproportionate amount of density and use. Expanding the use is in conflict of the Public Access Report commissioned by Governor Carlson and agreed on by all stakeholders and government agencies involved on Lake Minnetonka. The proposed redesign of the access is not user friendly and does not lend itself to be used by the average person who is not trained to pull a trailer regularly. Adding a commercial component to this access will be disastrous. I'm not sure that staff understand what that means. I'm including some photos that were taken this summer. Commercial is Not a handful of docks being delivered. When such activities occur it renders the access unusable for many many hours and changes the traffic patterns around the lake and puts an enormous amount of pressure on the residential community. I applaud the county for recognizing and trying to deal with the need for commercial access but trying to jam everything in one small site will render the site dangerous and unavailable for the average use. the county identified the need for commercial use in the early 70's which was temporarily handled (for the past few decades) by Minnetonka Portable Dredging. Please see attached document. It is my belief that the county owes it to the resource and the community to man the accesses and staff should visit daily and put a weight and size restriction to prevent a few to dominate its use and frustrate the general public by their inability to use it.

Feel free to call me. Thank you for listening.

Respectfully,
Gabriel Jabbour
612-599-2838

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612-799-5534 • HAGENLL.COM

**From:** GABRIEL JABBOUR
**To:** Kristopher Guentzel; "Heather M Edelson"; "Kevin Anderson"
**Cc:** Bob Tunheim; Adam Edwards; Laura Oakden
**Subject:** North Arme
**Date:** Thursday, October 30, 2025 9:14:43 PM

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Kristopher

I thought I'd share with you some of my observations so you can deal with it prior to submitting your final application. I pass by North Arm Landing four times a day on my way to and from work. I'm not there 24/7. I take the info you provided seriously and I would like to share some inconsistencies with you.

1. At the start, you indicated that barges typically take 10 minutes and you amended it to 20 minutes. I respect respectfully disagree with you. Please see the photos-and if you like I can send you the timestamp for each photo showing the activity throughout the day for hours at a time for several weeks per project
2. Some kind advice to you and your department, if the county does not man the site, you will have to do major repairs annually on this site. Note the steel track on the backhoe, most if not all this started in the last 2 years.
3. I am including guidelines mandated by OSHA for construction sites. I am in the process of finding out, through consultants, if those guidelines extend to staging sites. As an owner of a marina, where such activity does occur, I have access to webinars provided by the industry that I am including for you, clearly what is happening on that site does not meet any of the minimum standard for best practices.
4. Your intention to continue shore fishing availability on the site cannot occur if all the parking on site is occupied by the workers leaving no availability for fisherman.
5. If it is deemed that the staging site should be treated similarly to a construction site assurance of compliance will fall upon the city.
6. This activity will clearly be considered an attractive nuisance and may attract children who are present at the site and there are separate rules for that.
7. Please keep in mind the photos you see, have made it impossible to use the site at peak season for annual removal of all the residents boats.

Gabriel

---

While I understand the County is proposing to eliminate the "vertical access" in order to accommodate commercial and industrial uses at North Arm Landing, I have not heard whether the County also intends to eliminate those commercial/industrial uses from the site altogether.
If those uses are allowed to continue, I believe the County may be in violation of certain sections of

the Minnesota Building Code related to public safety.

My concern is that building officials may only evaluate conditions within the construction site itself, without considering safety impacts in off-site, public areas that are being used for staging, loading, or other construction-related activities.

Construction sites and heavy machinery are "attractive nuisances." An "attractive nuisance," is a legal doctrine used in civil liability cases but is not specifically called out in Minnesota Statutes or rules. Nevertheless, there is case law Minnesota where this is defined (see below).
**Section 3306** of the **2015 MN Building Code** (https://codes.iccsafe.org/content/MBC2015/chapter-33-safeguards-during-construction) deals with requirements for safety barriers and protections at construction sites, including provisions to protect pedestrians from hazards posed by nearby construction activities. **Section 3308** deals with the temporary storage of materials used for construction.

> ***MN BUILDING CODE - SECTION 3306 - PROTECTION OF PEDESTRIANS***
>
> ***3306.1 Protection required.*** *Pedestrians shall be protected during construction, remodeling and demolition activities as required by this chapter and Table 3306.1. Signs shall be provided to direct pedestrian traffic…*
>
> ***3306.3 Directional barricades.*** *Pedestrian traffic shall be protected by a directional barricade where the walkway extends into the street. The directional barricade shall be of sufficient size and construction to direct vehicular traffic away from the pedestrian path.*
>
> ***3306.4 Construction railings.*** *Construction railings shall be not less than 42 inches (1067 mm) in height and shall be sufficient to direct pedestrians around construction areas.*
>
> ***3306.5 Barriers.*** *Barriers shall be not less than 8 feet (2438 mm) in height and shall be placed on the side of the walkway nearest the construction. Barriers shall extend the entire length of the construction site. Openings in such barriers shall be protected by doors which are normally kept closed…*
>
> ***3308.1 Storage and handling of materials.*** *The temporary use of streets or public property for the storage or handling of materials or of equipment required for construction or demolition, and the protection provided to the public shall comply with the provisions of the applicable governing authority and this chapter.*

**Attractive Nuisance Case Law:**
There is considerable case law regarding "attractive nuisance" in Minnesota. I believe if the County and the City of Orono allows heavy equipment operation in a recreational area used by children and families they are a significant risk of a lawsuit. Most case law cites Mn Supreme Court Case:
GIMMESTAD v. ROSE BROTHERS CO. INC., 194 Minn. 531 (1935).

My understanding of law is at best sketchy, but the law generally holds that if an activity (in this case heavy equipment ) is in or near a recreational zone used by children and families (such as a public access), the city or county should know or reasonably anticipate children will be present or will

wander into the equipment-operation area. They are especially vulnerable to lawsuits since the "remedy" could be easily achieved by requiring fencing or monitoring the site.
https://minnesota.lexroll.com/gimmestad-v-rose-brothers-co-inc-194-minn-531-1935/?utm_source=chatgpt.com
Citation from Best v. District of Columbia, 291 U.S. 411, 419, 54 S.Ct. 487, 491, 78 L. ed. 882, 887. In the Best case, from which these quotations are made, the court held [syllabus, 78 L. ed. 882, 883]:

> "The owner of a wharf, unfenced, close to the street, and with a barrier partly down, upon which children are attracted to play by piles of sand unloaded thereon, may be held liable for the death of a five-year-old child who, while playing there, fell through a hole and was drowned." And there, as here, if the persons in charge of the property [291 U.S. 419] "had reason to anticipate that use, there was a duty to take reasonable precautions either to prevent it or to keep" the premises in such shape and state of repair that children would not be exposed to the danger incident to such use.

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**From:**
**To:** 'Gigi Jabbour' <gigi@minnetonkamarina.com>; 'GABRIEL JABBOUR' <gabrieljabbour@msn.com>
**Subject:** Would the proposed expansion for barges at the North Arm Launch meet the definition of a Marine Terminal?

**29 CFR OSHA Maritime Regulations Part 1917 and 1918** ***Marine terminal*** means wharves, bulkheads, quays, piers, docks and other berthing locations and adjacent storage or adjacent areas and structures associated with the primary movement of cargo or materials from vessel to shore or shore to vessel including structures which are devoted to receiving, handling, holding, consolidating and loading or delivery of waterborne shipments or passengers, including areas devoted to the maintenance of the terminal or equipment. The term does not include production or manufacturing areas nor does the term include storage facilities directly associated with those production or manufacturing areas.

**1910.16(a)(1) Part 1918** of this chapter shall apply exclusively, according to the provisions thereof, to all employment of every employee engaged in longshoring operations or related employment aboard any vessel. All cargo transfer accomplished with the use of shore-based material handling devices shall be governed by part 1917 of this chapter.

**29 Sub B Chapter 17 Part 1918** *Longshoring operations* means the loading, unloading, moving or handling of cargo, ship's stores, gear, or any other materials, into, in, on, or out of any vessel.

**From:** Gigi Jabbour [mailto:gigi@minnetonkamarina.com]
**Sent:** Friday, October 17, 2025 11:35 AM
**Subject:** Osha

Gigi Jabbour, CMM

Minnetonka Marina
23500 Smithtown Road
Shorewood, MN 55331
952-474-0600
www.minnetonkamarina.com

---------- Forwarded message ---------

Georgette Jabbour
23500 Smithtown Rd
Shorewood, MN, USA
---
File Downloads:
---
Click on the link to Download: https://marinaassociation.org/store_download.asp?key=Pa55Bp0BqRZS6BRf9gJimLYCy5EPmu

Click on the link to Download: https://marinaassociation.org/store_download.asp?key=QuN6OfRcOzhfccgLlNx3ylEG20Jxh2

Click on the link to Download: https://marinaassociation.org/store_download.asp?key=6p2UG7LntkCHg0JbGzX5oeDeEIHEP8

**From:** GABRIEL JABBOUR
**To:** Kristopher Guentzel; Heather M Edelson; Kevin Anderson
**Cc:** Bob Tunheim; Adam Edwards; Laura Oakden
**Subject:** RE: [External] North Arme
**Date:** Friday, October 31, 2025 4:25:16 PM

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Kris

This barg is a narrow and the boats were able the launch because the barge driver was on one side of the ramp and they were small boats.

But the point should be Commercial and industrial use in residential zone and the safety of mixed use.

Gabriel

Sent from my Galaxy

-------- Original message --------
From: Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
Date: 10/31/25 3:50 PM (GMT-06:00)
To: GABRIEL JABBOUR <gabrieljabbour@msn.com>, Heather M Edelson <Heather.Edelson@hennepin.us>, Kevin Anderson <Kevin.Anderson@hennepin.us>
Cc: Bob Tunheim <btunheim@oronomn.gov>, Adam Edwards <aedwards@oronomn.gov>, Laura Oakden <loakden@oronomn.gov>
Subject: RE: [External] North Arme

Good afternoon Gabriel,

Thank you for providing the feedback below. I plan to review it more thoroughly next week along with our staff. The building codes and CFRs you list are new to me, frankly, but I'll be sure to take a look to better understand their applicability to our project and to North Arm overall.

Of the photos you provided, the one that stood out most to me was '5.jpg' that showed two boats launching (or loading, hard to tell) next to a barge. If you happen to know more about how that went and whether they or others were impeded from using the access because of the commercial traffic I'd appreciate more info.

Thanks Gabriel and have a happy Halloween!

**Kris Guentzel**
Land & Water Supervisor
Hennepin County Environment and Energy

Office: 612-596-1171 | Cell: 612-430-0933
kristopher.guentzel@hennepin.us | www.hennepin.us/environment

Pronouns: he/him

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Thursday, October 30, 2025 9:11 PM
**To:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>; Heather M Edelson <Heather.Edelson@hennepin.us>; Kevin Anderson <Kevin.Anderson@hennepin.us>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Adam Edwards <aedwards@oronomn.gov>; Laura Oakden <loakden@oronomn.gov>
**Subject:** [External] North Arme

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Kristopher

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2. Some kind advice to you and your department, if the county does not man the site, you will have to do major repairs annually on this site. Note the steel track on the backhoe, most if not all this started in the last 2 years.

3. I am including guidelines mandated by OSHA for construction sites. I am in the process of finding out, through consultants, if those guidelines extend to staging sites. As an owner of a marina, where such activity does occur, I have access to webinars provided by the industry that I am including for you, clearly what is happening on that site does not meet any of the minimum standard for best practices.

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*mm) in height and shall be sufficient to direct pedestrians around construction areas.*

***3306.5 Barriers.*** *Barriers shall be not less than 8 feet (2438 mm) in height and shall be placed on the side of the walkway nearest the construction. Barriers shall extend the entire length of the construction site. Openings in such barriers shall be protected by doors which are normally kept closed…*

***3308.1 Storage and handling of materials.*** *The temporary use of streets or public property for the storage or handling of materials or of equipment required for construction or demolition, and the protection provided to the public shall comply with the provisions of the applicable governing authority and this chapter.*

**Attractive Nuisance Case Law:**

There is considerable case law regarding "attractive nuisance" in Minnesota. I believe if the County and the City of Orono allows heavy equipment operation in a recreational area used by children and families they are a significant risk of a lawsuit. Most case law cites Mn Supreme Court Case: GIMMESTAD v. ROSE BROTHERS CO. INC., 194 Minn. 531 (1935).

My understanding of law is at best sketchy, but the law generally holds that if an activity (in this case heavy equipment ) is in or near a recreational zone used by children and families (such as a public access), the city or county should know or reasonably anticipate children will be present or will wander into the equipment-operation area. They are especially vulnerable to lawsuits since the "remedy" could be easily achieved by requiring fencing or monitoring the site.

https://minnesota.lexroll.com/gimmestad-v-rose-brothers-co-inc-194-minn-531-1935/?utm_source=chatgpt.com

Citation from Best v. District of Columbia, 291 U.S. 411, 419, 54 S.Ct. 487, 491, 78 L. ed. 882, 887. In the Best case, from which these quotations are made, the court held [syllabus, 78 L. ed. 882, 883]:

> "The owner of a wharf, unfenced, close to the street, and with a barrier partly down, upon which children are attracted to play by piles of sand unloaded thereon, may be held liable for the death of a five-year-old child who, while playing there, fell through a hole and was drowned." And there, as here, if the persons in charge of the property [291 U.S. 419] "had reason to anticipate that use, there was a duty to take reasonable precautions either to prevent it or to keep" the premises in such shape and state of repair that children would not be exposed to the danger incident to such use.

**From:**
**To:** 'Gigi Jabbour' <gigi@minnetonkamarina.com>; 'GABRIEL JABBOUR' <gabrieljabbour@msn.com>
**Subject:** Would the proposed expansion for barges at the North Arm Launch meet the definition of a Marine Terminal?

**29 CFR OSHA Maritime Regulations Part 1917 and 1918** ***Marine terminal*** means wharves, bulkheads, quays, piers, docks and other berthing locations and adjacent storage or adjacent areas and structures associated with the primary movement of cargo or materials from vessel to shore or shore to vessel including structures which are devoted to receiving, handling, holding, consolidating and loading or delivery of waterborne shipments or passengers, including areas devoted to the maintenance of the terminal or equipment. The term does not include production or manufacturing areas nor does the term include storage facilities directly associated with those production or manufacturing areas.

**1910.16(a)(1) Part 1918** of this chapter shall apply exclusively, according to the provisions thereof, to all employment of every employee engaged in longshoring operations or related employment aboard any vessel. All cargo transfer accomplished with the use of shore-based material handling devices shall be governed by part 1917 of this chapter.

**29 Sub B Chapter 17 Part 1918** *Longshoring operations* means the loading, unloading, moving or handling of cargo, ship's stores, gear, or any other materials, into, in, on, or out of any vessel.

**From:** Gigi Jabbour [mailto:gigi@minnetonkamarina.com]
**Sent:** Friday, October 17, 2025 11:35 AM
**Subject:** Osha

Gigi Jabbour, CMM
Minnetonka Marina
23500 Smithtown Road
Shorewood, MN 55331
952-474-0600

www.minnetonkamarina.com

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Georgette Jabbour
23500 Smithtown Rd
Shorewood, MN, USA
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**From:** GABRIEL JABBOUR
**To:** Kristopher Guentzel; Heather M Edelson; Kevin Anderson
**Cc:** Bob Tunheim; Adam Edwards; Laura Oakden
**Subject:** Re: [External] North Arme
**Date:** Tuesday, November 4, 2025 5:01:40 PM

---

Kris,

I thought I would share some additional photos that I took today. The barge comes in the harbor taking over most of the waterway within 500 feet of the lakeshore in order to maneuver, as it enters the bay from the channel and immediately has to turn 360 degrees in order to be facing the ramp. It makes it impossible for any boats to approach. This barge took up 100% of the ramp. The process goes as follows:
Barge will dock
The backhoe will move off the barge on to the land
The truck will unload a 40 yd dumpster full of material that they just brought to load onto the barge and place it on the parking lot
Truck will back up onto the barge and remove the empty container
Truck will unload the empty container on to the parking lot
Truck will load the container with the material in it and place it on the barge
Truck loads the empty container and leaves the landing to bring a new one full of material
The backhoe move back to the front of the barge
The barge disembarks occupying , through maneuvers, a 500ft circle

I think the county should be extremely concerned about the activity on land more than the activity on the water. I would be happy to send you photos when the LMCD harvester capsized close to that site and the effort it took to get it back to your site in Spring Park (24 hours of intense labor that I was intimately and physically involved with)

Respectfully,
Gabriel

Sent from Outlook

---

**From:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Sent:** Friday, October 31, 2025 3:50 PM
**To:** GABRIEL JABBOUR <gabrieljabbour@msn.com>; Heather M Edelson <Heather.Edelson@hennepin.us>; Kevin Anderson <Kevin.Anderson@hennepin.us>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Adam Edwards <aedwards@oronomn.gov>; Laura Oakden <loakden@oronomn.gov>
**Subject:** RE: [External] North Arme

Good afternoon Gabriel,

Thank you for providing the feedback below. I plan to review it more thoroughly next week along with our staff. The building codes and CFRs you list are new to me, frankly, but I'll be sure to take a look to better understand their applicability to our project and to North Arm overall.

Of the photos you provided, the one that stood out most to me was '5.jpg' that showed two boats launching (or loading, hard to tell) next to a barge. If you happen to know more about how that went and whether they or others were impeded from using the access because of the commercial traffic I'd appreciate more info.

Thanks Gabriel and have a happy Halloween!

**Kris Guentzel**
Land & Water Supervisor
Hennepin County Environment and Energy

Office: 612-596-1171 | Cell: 612-430-0933
kristopher.guentzel@hennepin.us | www.hennepin.us/environment
Pronouns: he/him

---

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Thursday, October 30, 2025 9:11 PM
**To:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>; Heather M Edelson <Heather.Edelson@hennepin.us>; Kevin Anderson <Kevin.Anderson@hennepin.us>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Adam Edwards <aedwards@oronomn.gov>; Laura Oakden <loakden@oronomn.gov>
**Subject:** [External] North Arme

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Kristopher

I thought I'd share with you some of my observations so you can deal with it prior to submitting your final application. I pass by North Arm Landing four times a day on my way to and from work. I'm not there 24/7. I take the info you provided seriously and I would like to share some inconsistencies with you.

1. At the start, you indicated that barges typically take 10 minutes and you amended it to 20 minutes. I respect respectfully disagree with you. Please see the photos-and if you like I can send you the timestamp for each photo showing the activity throughout the day for hours at a time for several weeks per project

2. Some kind advice to you and your department, if the county does not man the site, you will have to do major repairs annually on this site. Note the steel track on the backhoe, most if not all this started in the last 2 years.
3. I am including guidelines mandated by OSHA for construction sites. I am in the process of finding out, through consultants, if those guidelines extend to staging sites. As an owner of a marina, where such activity does occur, I have access to webinars provided by the industry that I am including for you, clearly what is happening on that site does not meet any of the minimum standard for best practices.
4. Your intention to continue shore fishing availability on the site cannot occur if all the parking on site is occupied by the workers leaving no availability for fisherman.
5. If it is deemed that the staging site should be treated similarly to a construction site assurance of compliance will fall upon the city.
6. This activity will clearly be considered an attractive nuisance and may attract children who are present at the site and there are separate rules for that.
7. Please keep in mind the photos you see, have made it impossible to use the site at peak season for annual removal of all the residents boats.

Gabriel

---

While I understand the County is proposing to eliminate the "vertical access" in order to accommodate commercial and industrial uses at North Arm Landing, I have not heard whether the County also intends to eliminate those commercial/industrial uses from the site altogether.
If those uses are allowed to continue, I believe the County may be in violation of certain sections of the Minnesota Building Code related to public safety.

My concern is that building officials may only evaluate conditions within the construction site itself, without considering safety impacts in off-site, public areas that are being used for staging, loading, or other construction-related activities.

Construction sites and heavy machinery are "attractive nuisances." An "attractive nuisance," is a legal doctrine used in civil liability cases but is not specifically called out in Minnesota Statutes or rules. Nevertheless, there is case law Minnesota where this is defined (see below).
**Section 3306** of the **2015 MN Building Code** (https://codes.iccsafe.org/content/MBC2015/chapter-33-safeguards-during-construction) deals with requirements for safety barriers and protections at construction sites, including provisions to protect pedestrians from hazards posed by nearby construction activities. **Section 3308** deals with the temporary storage of materials used for construction.

***MN BUILDING CODE - SECTION 3306 - PROTECTION OF PEDESTRIANS***

***3306.1 Protection required.*** *Pedestrians shall be protected during construction, remodeling and demolition activities as required by this chapter and Table 3306.1. Signs shall be provided to direct pedestrian traffic…*

***3306.3 Directional barricades.*** *Pedestrian traffic shall be protected by a directional barricade where the walkway extends into the street. The directional barricade shall be of sufficient size and construction to direct vehicular traffic away from the pedestrian path.*

***3306.4 Construction railings.*** *Construction railings shall be not less than 42 inches (1067 mm) in height and shall be sufficient to direct pedestrians around construction areas.*

***3306.5 Barriers.*** *Barriers shall be not less than 8 feet (2438 mm) in height and shall be placed on the side of the walkway nearest the construction. Barriers shall extend the entire length of the construction site. Openings in such barriers shall be protected by doors which are normally kept closed…*

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Citation from Best v. District of Columbia, 291 U.S. 411, 419, 54 S.Ct. 487, 491, 78 L. ed. 882, 887. In the Best case, from which these quotations are made, the court held [syllabus, 78 L. ed. 882, 883]:

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---

**From:**
**To:** 'Gigi Jabbour' <gigi@minnetonkamarina.com>; 'GABRIEL JABBOUR' <gabrieljabbour@msn.com>
**Subject:** Would the proposed expansion for barges at the North Arm Launch meet the definition of a Marine Terminal?

**29 CFR OSHA Maritime Regulations Part 1917 and 1918** ***Marine terminal*** means wharves, bulkheads, quays, piers, docks and other berthing locations and adjacent storage or adjacent areas and structures associated with the primary movement of cargo or materials from vessel to shore or shore to vessel including structures which are devoted to receiving, handling, holding, consolidating

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**From:** Gigi Jabbour [mailto:gigi@minnetonkamarina.com]
**Sent:** Friday, October 17, 2025 11:35 AM
**Subject:** Osha

Gigi Jabbour, CMM
Minnetonka Marina
23500 Smithtown Road
Shorewood, MN 55331
952-474-0600
www.minnetonkamarina.com

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**From:** Adam Edwards
**To:** GABRIEL JABBOUR; Bob, Tunheim Orono Mayor
**Cc:** Laura Oakden; Bob Tunheim
**Subject:** RE: Public water access rights
**Date:** Friday, October 31, 2025 10:37:24 AM

---

Gabe,

Thanks. This is helpful.

Adam

---

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Friday, October 31, 2025 8:49 AM
**To:** Bob, Tunheim Orono Mayor <retunheim@gmail.com>; Adam Edwards <aedwards@oronomn.gov>
**Subject:** FW: Public water access rights

You might fimef this helpful

-------- Original message --------
From: "Doll, Adam (DNR)" <adam.doll@state.mn.us>
Date: 4/17/23 12:36 PM (GMT-06:00)
To: "gabrieljabbour@msn.com" <GABRIELJABBOUR@msn.com>
Subject: Public water access rights

Hi Gabe,

Thank you for your questions regarding public access to Minnesota's waters. Water access rights are tied to Minnesota case law; previous cases have established that the public is considered a riparian landowner when public roads are abutting the water, or at public water accesses. As riparian landowners the public has riparian rights and they are entitled to exercise their rights over the entire surface of a lake. Riparian rights include the right to wharf out to a navigable depth; to take water for domestic and agricultural purposes; to take ice; to fish, boat, hunt, swim; to such other uses as water bodies are normally put. Additionally, one riparian owner cannot keep others from using all of the lake. The DNR has a great summary page covering water law basics if you or anyone would like to see specific case ruling sources and citations. It can be viewed HERE.

Public access is defined in statute MS 97A.015 Subd. 40. Definitions: "Public access. "Public access" means an access that is publicly owned and accessible to the public without charge." It has been the policy of Minnesota's public water access program to provide access to public water free of charge. All aspects of the program are paid for by boaters and anglers, with license and registration fees and

boat gasoline tax and excise tax. This is commonly known as the user pay, user benefit system. State statute does not give the DNR the authority to close public water access sites. All state lands bordering on or adjacent to meandered lakes and other public waters and watercourses are withdrawn from sale (MS. 92.45). Additionally, the DNR may not stock lakes without public access (MS. 97C.201). The DNR has a history of including public water access acquisitions and development projects in US Fish and Wildlife grants. In these instances, the parcel has federal interest in the property and contains restrictions that limit the use of the land for which it was purchased. These restrictions are intended to protect both the state and the federal investments for the site to be used by the public for the purposes acquired into perpetuity.

With more than 2.5 million acres of rivers and lakes, Minnesota is renowned for its abundant water recreation opportunities. In 2022, there were 819,000 watercraft registered in Minnesota, a number that has held steady for a decade. Minnesota is 2nd in the nation for the number of registered watercraft (with only Florida having more) . Boating is good for Minnesota's economy as a $3.1 billion economic engine in the state supporting 10,900 jobs and 690 businesses (source: National Marine Manufacturers Association, 2019). Many of these businesses and jobs rely on public water access infrastructure to serve boaters, paddlers anglers, and other water recreationalists.

If you have questions at all or would like to discuss these topics further please don't hesitate to contact me.

Thank you,
Adam

**Adam Doll**
Watercraft Inspection Coordinator | Ecological and Water Resources

**Minnesota Department of Natural Resources**
500 Lafayette Road
Saint Paul, MN 55155
Phone: 651.259-5056
Email: adam.doll@state.mn.us
mndnr.gov



mndnr.gov

**From:** Adam Edwards
**To:** Laura Oakden
**Subject:** FW: Lake Barges
**Date:** Thursday, November 6, 2025 9:00:38 AM

---

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Wednesday, November 5, 2025 5:59 PM
**To:** Adam Edwards <aedwards@oronomn.gov>; Laura Oakden <loakden@oronomn.gov>
**Subject:** FW: Lake Barges

**From:** DON ANTHONY <dcjmt@aol.com>
**Date:** October 9, 2025 at 4:09:33 PM CDT
**Subject: Lake Barges**

In 1994 when I got into the barge business there were only 4 barge companies: Minnetonka Portable Dredging, Dock and Lift Services, Kurt Bee, and myself, Don Anthony's Boat Lift Services.
I kept my barge at Grays Bay Marina.
Minnetonka Portable Dredging had commercial property on the lake while the others were kept at private residences on the lake.

Between 1994 & 2015 many more barges came onto the lake: Niccum Dock, Fineline Docks, Crepeau Docks, Concept Landscaping, and others.

Since 2015 there has been an explosion of others building barges and using them on the lake. Some are launched and removed daily from the public ramps and others are kept at residences throughout the year.

WA
Sent from my iPhone

**From:** Adam Edwards
**To:** Laura Oakden
**Subject:** FW: FW:
**Date:** Thursday, November 6, 2025 9:00:22 AM

---

**From:** GABRIEL JABBOUR <gabrieljabbour@msn.com>
**Sent:** Wednesday, November 5, 2025 6:06 PM
**To:** Adam Edwards <aedwards@oronomn.gov>; Ann LAURENT <ann.laurent@icloud.com>
**Cc:** Bob Tunheim <btunheim@oronomn.gov>; Alisa Benson <abenson@oronomn.gov>; Jaqueline Ricks <mijajosa@aol.com>
**Subject:** FW:

Sent from my Galaxy

Lake Minnetonka barges

4 barge company's on the lake when I started in 1994.

Always kept my barge at a marina summer & winter.

When I sold business in 2015 there were 9 barges on the lake how ever only 2 were kept at a marina. The others were kept at residence on the lake.

Then there was an explosion of transient barges from 2016 to now of over 30 + barges that come and go on and off the lake or are left at residences during the install & removal season.

They're 4 or 5 barges that do rip rap shoreline work and the others are dock and boat lift install / removal barges.

Don Anthony

Sent from my Galaxy

**From:** GABRIEL JABBOUR
**To:** Adam Edwards; Laura Oakden
**Subject:** Fw: North Arm Nov 14 at 7:30 am
**Date:** Friday, November 14, 2025 1:36:34 PM

---

Sent from Outlook

---

**From:** Georgette Jabbour <gigijabbour@gmail.com>
**Sent:** Friday, November 14, 2025 10:19 AM
**To:** Gabriel E Jabbour <gabrieljabbour@msn.com>
**Subject:** North Arm Nov 14 at 7:30 am


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# REPORT OF THE 1992
# LAKE MINNETONKA
# LAKE ACCESS TASK FORCE

To The

Lake Minnetonka Conservation District

May 11, 1994

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# HISTORY AND BACKGROUND

Launch ramps and car-trailer parking at Lake Minnetonka have been under discussion for many years. The Minnesota State Constitution states that the waters of the state will be free and open to the public. The Department of Natural Resources (DNR) in response to the Outdoor Recreation Act 1975 (Minnesota Statue 86A.01-11) established a policy to "provide free and adequate public access to all of Minnesota's lakes consistent with demand and resource capabilities". This policy has been carried out throughout the state, usually with the cooperation of the local community which usually sees a launch ramp with free car/trailer parking as a benefit. To obtain this free access, the DNR set policies for what constitutes reliable, free car/trailer parking. The DNR attempts to utilize the following guidelines:

1. One car/trailer parking space for every 20 acres of lake surface Lake Minnetonka's 14,000 acres requires a minimum of 700 spaces.
2. Ramps with remote lots must have signs showing where to park the car/trailer.
3. There must be street signs on major roads near the ramp showing the direction to the ramp.
4. Car/trailer parking spaces must be in sight and less than 1500 feet from the launch ramp.
5. Street or remote lot parking doesn't count.
6. Car/trailer parking spaces must be available 24 hours per day, 7 days per week.
7. Car only spots for car-top boats don't count.
8. Parking must be free except in parks where the same fee is charged all park users.

Because the DNR did not recognize existing car/trailer parking spaces that did not meet their standards they determined that there were only 143 car/trailer parking spaces on Lake Minnetonka. They published information and testified before various bodies that there were only 143 car/trailer parking spaces for Lake Minnetonka when there should be 700 minimum according to their standard of one per twenty acres. People outside the lake area communities got the impression that the Lake area was trying to keep people off "their lake" so they could keep it for themselves. The DNR continued to pursue a policy of trying to obtain launch ramps and car/trailer parking on Lake Minnetonka.

On the other hand, the local lake area communities believed counts showing 1,000 to 1,200 empty trailers attached to cars parked around the lake on the busiest days. They claimed there were substantially more than the 700 car/trailer parking spaces and the lake didn't need any more car/trailer parking. In fact, they claimed that the boats off the trailers were the major cause of the increased crowding on the lake. What followed was more than a decade of struggles between the DNR and the local Lake Minnetonka communities over launch ramps and free car/trailer parking.

In 1982, the DNR announced plans to purchase property at King's Point to develop a launch ramp with free car/trailer parking that met their standards. The local communities claimed 1,200 car/trailer spaces existed and vigorously objected to the DNR plan. In 1983, an appeal to the governor resulted in the launch ramp project being canceled and a Governor's Access Study Commission being appointed to study access on Lake Minnetonka. (The King's Point launch ramp was built in 1987).

The commission issued a report that:

1. Public parking availability is a crucial component of adequate boat launch facilities.
2. 700 car/trailer parking spaces is fair and reasonable for Lake Minnetonka.
3. Equitable distribution of car/trailer parking around the lake is desirable.

4. Parking standards for Lake Minnetonka may need to be adjusted.

After the report was issued, there was no rush to build the 700 car/trailer parking places by any body or agency. The lake area communities believed there were more than the 700 car/trailer parking spaces called for in the report and the lake didn't need another 700. They questioned why the local communities should pay to build car/trailer parking for people outside their area, even though community residents were also users.

Because of the lack of action in providing for the needed car/trailer parking, the Metropolitan Council did another lake access study in 1986. It confirmed the 700 car/trailer parking space amount as being a fair and reasonable number.

In 1987, as a result of no action in providing car/trailer parking spaces and no plans to build them, the Metropolitan Council told the LMCD that they would seek state legislative action for a regional or state agency to take over governing of Lake Minnetonka to be assured the car/trailer parking was provided, unless the LMCD prepared a formal plan showing how the car/trailer parking would be accomplished. The LMCD believed the car/trailer parking could not be considered without developing an overall long range management plan for the lake that would include adequate free car/trailer parking. The LMCD Management Plan was published at the end of 1990 and approved in December 1991.

The LMCD Management Plan which the DNR, the Metropolitan Council, the cities and many others helped develop, reaffirmed the 700 car/trailer parking space goal as being fair and reasonable. Three additional fundamental points were discussed:

1. For Lake Minnetonka 700 parking spaces would be both the minimum and the maximum.
2. Once the 700 car/trailer spaces are established, other street car/trailer parking ought to be eliminated. The cities and the county will be encouraged to erect and enforce "no car/trailer parking" signs as long as the 700 goal continues to be met.
3. The LMCD, with assistance from the DNR, should review the existing parking quality standards to determine if some adjustments could be made for the special situation on Lake Minnetonka.

In the fall of 1991, the DNR took an option on property on Maxwell Bay with the intent of developing a launch ramp with free car/trailer parking. Objections surfaced in the city of Orono. Orono tried to persuade the DNR not to exercise its option on the property until a plan for the entire lake was developed according to the LMCD management plan. At this time, the LMCD was just beginning to organize its Access Committee. When the DNR purchased the Maxwell Bay property, the DNR commissioner wrote a letter to both the LMCD and the city of Orono. The letter stated that the DNR would postpone development of the Maxwell Bay property until a task force appointed by the LMCD developed a detailed plan for car/trailer parking for all of Lake Minnetonka.

# INTRODUCTION

The Lake Access Task Force was recommended by the commissioner of the DNR, and convened by a LMCD resolution in January, 1992. The purpose of this task force was to develop a detailed plan to meet the lake access objectives in the LMCD Management Plan for Lake Minnetonka. The LMCD invited representatives from

1. Its member cities
2. Government agencies sharing responsibility for the management of Lake Minnetonka, including; the DNR, Metropolitan Council, Hennepin County, Hennepin Parks, the Minnehaha Creek Watershed District (MCWD), and others.
3. Interested citizen's groups such as the Minnesota Sportfishing Congress (MSC), Fisherman Advocating Intelligent Regulation (FAIR), the Lake Minnetonka Lakeshore Owners Association (LMLOA), and others

   For a roster, see APPENDIX 1, page 12.

Subcommittees of this group conducted detailed studies and submitted their reports to the task force. Meetings began in March of 1992 and continued through May of 1993. Staff from the LMCD and the DNR assisted. Participants gave generously of their time and support. The LMCD Lake Access Committee drafted this final report.

Appendices to this report contain information to document:

1. Task Force spokespersons (ORIGINAL DESIGNEES)
2. Existing public access sites and commercial marinas (map 1)
3. Standards for car/trailer parking;
4. 1992 Current and Potential Car/Trailer Parking Inventory
5. Model Parking Agreement
6. DNR Landowner's Bill of Rights
7. DNR Acquisition Procedure
8. Access site criteria for evaluation
9. Lake Zone Map 2
10. Proceedings summary

# TASK FORCE GOALS

The goals adopted by the 1992 Task Force were to:

1. Review all types of existing boater access to Lake Minnetonka.*
2. Affirm the prior goal of 700 certifiable car/trailer parking spaces for reliable free public access to Lake Minnetonka.
3. Affirm the Management Plan goal of closing street parking to car/trailers as the 700 car/trailer parking goal is reached.
4. Establish standards for certifying car/trailer parking that meet the special needs of Lake Minnetonka and the boating public.
5. Conduct a reliable, detailed inventory of existing car/trailer parking spaces. Count potential car/trailer parking spaces.
6. Develop a model car/trailer parking agreement and obtain agreements where possible.
7. Explore prospective access sites and develop a list of sites for potential development.
8. Review the principle and define equitable distribution.
9. Examine the possibility for commercial marinas to provide some free public car/trailer parking.

* The focus of this Task Force was on the free public access to the lake via car/trailer parking at boat launch ramps. In the process of this study, a review was made of many other kinds of access. see APPENDIX 2, page 13.

# EXISTING ACCESS

The Task Force reviewed the studies done by the LMCD, DNR, earlier task forces, 1991 and 1992 LMCD boat count, the 1992 LMLOA car/trailer count study, and the 1993 Jabbour aerial car/trailer survey. The following table categorizes access to Lake Minnetonka.

Boat Storage Count and Nice Weekend In Use Boat Count by Origination

| Where Boats Originate | 1992 Boats Stored at docks & Racks (1) | Percent of Boats Stored that are Active on the Water (4) Max Peak | Avg Peak | Max Peak Count (2)(5) | Ave Peak Use Count (3)(5) | Percent of Boats On the Water (5) | |
|---|---|---|---|---|---|---|---|
| Riparian Residents & Out Lots | 5,973 | 9% | 6% | 530 | 379 | 29 | % |
| Comm'l Marinas & Yacht Clubs | 1,862 | 29% | 21% | 549 | 392 | 30 | % |
| Municipal docks | 1,012 | 33% | 23% | 329 | 235 | 18 | % |
| Car/trailer launch ramp | | | | 421 | 300 | 23 | % |
| TOTAL | 8,847 | | | 1,829 | 1,306 | 100 | % |

1. From 1992 LMCD Boat Count adjusted by estimating empty racks & unrented slips at Commercial Marinas, Yacht Clubs, and Municipal docks
2. Single Weekend Day Peak Use Study: 1984=1836, 1986=2142, 1987=2252, 1992=1829
3. Average Weekend Peak Use Study: 1984=1318, 1986=1453, 1987=1370, 1992=1306
4. Active maximum peak use count uses estimate assuming the average peak use proportions remain constant for the maximum peak use.
5. 1992 LMCD/DNR aerial count of boats in use on nice Saturday and Sunday afternoons.

# GOAL OF 700 CAR/TRAILER PARKING SPACES

The task force confirmed the goal of 700 reliable free car/trailer parking spaces (meeting the standards of appendix 3) and agreed with the goal of closing street parking to car/trailers as the 700 car/trailer parking goal becomes established. This agrees with the 1991 LMCD Management Plan. It is compatible with the policy of one parking place for every 20 acres of water surface. It is the minimum number of spaces required under the DNR public water access program in the metropolitan area.

The goal of 700 was first established by the task forces of 1983 and confirmed in the study of 1986. It is conservative, considering that the demand for boating recreation exceeds 1 parking space per 20 acres of water on most of the metropolitan area lakes. Compared to standards in other parts of the country, it is also conservative. Some states provide 1 parking space per 10 acres of water surface.

The Task Force considered lowering the goal. The Lake Minnetonka Lake Shore Owners Association (LMLOA) believes that 700 parking spaces would increase boat density and reduce the enjoyment of the lake by lakeshore users. Taking into consideration that there are over 700 car/trailer spaces used to access the lake now, and street parking will be eliminated when the 700 goal is reached, the net effect will be fewer boats on the lake and no increases in density. Thus, the 700 goal was reaffirmed.

## ELIMINATION OF STREET CAR/TRAILER PARKING

There was consideration in the LMCD Management Plan whereby other street car/trailer parking would be eliminated as the goal of 700 was being established, and when the 700 goal was complete, all other street parking ought to be removed as a way of limiting crowding on the lake. Task Force data made clear that currently, on a good day many more than 700 car/trailers are parked around the lake. Therefore, when the 700 goal is met and other street parking is abolished there will be a net decrease in boats on the lake from car/trailers.

## PARKING STANDARDS FOR CAR/TRAILER PARKING

Earlier task force parking standards for quality, reliable free car/trailer parking for Lake Minnetonka were reviewed. Access design, location of parking, security of personal property, and safety of boaters maneuvering their car/trailers, were among considerations discussed in reaching agreement on the physical standards. After much discussion the Task Force adopted the following physical standards: see APPENDIX 3, pages 14 and 15:

1. 700 is a fair and reasonable number without increases in the future.
2. Car/trailer parking must be within 2000 feet of the ramp.
3. Street or remote lot car/trailer parking over 1500 feet from a ramp must have a make ready dock..
4. 350 of the 700 spaces must be available 7 days per week, 24 hours per day. 700 must be available on weekends, of which 350 may have limited hours.
5. Up to 10% of the spaces at any one ramp may be spaces for cars only (assumes cartop boats).
6. Parking must be free except in parks where the same fee is charged all park users.
7. Ramps off busy highways or streets must have a turnaround to prevent car/trailers from backing down from busy roads.

The Task Force agreed that every other year the LMCD should take a physical inventory of the actual car/trailer parking around the lake and certify the number that meet the above physical standards as well as reliability standards listed below..

Car/trailer parking space meeting the physical standards listed in APPENDIX 3 will be certifiable by the LMCD as counting toward the 700 goal on the following basis:

a. 100% of the street or remote lot parking spaces will count if:
   - There is a parking agreement OR
   - The street or remote parking is signed "car/trailer only"

b. 80% of the street or remote lot parking spaces will count if:
   - There are signs at the launch ramp showing where to park.
   - There are street signs pointing out the direction to the launch ramp.
   - The ramp and parking locations can be put on an access map

c. 60% of the street or remote lot parking spaces will count if none of the above are met.

Reliable parking meets the standards of appendix 3. The Task Force recommends upgrading all parking to reduce undesirable parking. The changes from prior standards allow the Task Force greater flexibility

in certifying more car/trailer parking spaces. As can be seen in this report, the number increased from 143 to 516.

# PARKING INVENTORY

To determine the number of existing and potential car/trailer parking spaces capable of being certified to the newly adopted standards, data was gathered from a variety of sources and in a number of ways. Site lists were provided by LMCD member cities. Site visits were made and aerial photographs were used. Spaces inventoried included:

1. Parking in on-site lots at existing lake access points
2. Available on-street parking within 2,000 feet
3. Off-site lots, public and private
4. Future additional committed spaces
5. Car/trailer parking spaces potentially available

The total potential car/trailer parking spaces certifiable to the new physical standards was 735. The original inventory is in APPENDIX 4, page 16. Substantially higher numbers of car/trailers are being parked free at peak times in good weather than the inventory has identified.

## The 1993 LMCD Car/Trailer Parking

| Parking Space Categories | 1992 Current and Potential Car/Trailer Inventory (1) | Total In Use or Available Today | Total in Use that Meet the Physical Standard | Total In Use that Meet the Reliability Standard & LMCD Certified | Total Additional Future Planned to be Certified | Total in Use and Planned LMCD Certified |
|---|---|---|---|---|---|---|
| In Access Lots | | | | | | |
| North Arm | 65 | 80 | 80 | 80 | 0 | 80 |
| Grays Bay Csway | 37 | 37 | 17 | 17 | 0 | 17 |
| Grays Bay Dam | 20 | 20 | 20 | 20 | 0 | 20 |
| Spring Park | 148 | 86 | 86 | 86 | 0 | 86 |
| Kings Point | 0 | 32 | 32 | 32 | 0 | 32 |
| Phelps Bay | 10 | 4 | 4 | 4 | 0 | 4 |
| Henn. Reg. Park | 80 | 0 | 0 | 0 | 48 | 48 |
| Maxwell Bay | N/A | 0 | 0 | 0 | 76 | 76 |
| SUBTOTAL | 360 | 259 | 239 | 239 | 124 | 363 |
| In Remote lots | | | | | | |
| Carsons Bay | 93 | 93 | 70 | 43 | 27 | 70 |
| On the Street | | | | | | |
| North Arm | 31 | 31 | 31 | 31 | 0 | (2) 0 |
| Williams St. | 40 | 40 | 40 | 40 | 0 | 40 |
| Cooks Bay | 110 | 43 | 43 | 26 | 17 | 43 |
| Wayzata Bay | 101 | 101 | 0 | 0 | 0 | 0 |
| SUBTOTAL | 282 | 215 | 114 | 97 | 17 | 83 |
| GRAND TOTAL | 735 | 567 | 423 | 379 | 168 | 516 |

(1) Includes credit for spaces reserved in lots for car top carried watercraft, 7 at North Arm Access, and 3 at Grays Bay Dam.

(2) 31 car/trailer spaces will be eliminated in the vicinity of North Arm and Maxwell Bay as part of an agreement with Orono when the DNR access at Maxwell Bat is in operation.

The Task Force recognizes there is additional car/trailer parking beyond 2000 feet that is available today and not part of the above count. It, also, recognizes there are additional small launch ramps in use and available today that are not in the above count.

This report adopts a new and lower inventory in an effort to be very conservative after consultation with Hennepin County and the cities. The revised total inventory of 516 car trailer spaces represents parking that is available now, or that can reasonably be made available on a stable long-term basis. There are approximately 379 car/trailer parking spaces currently available and that are being certified by the LMCD. Of these, approximately 282 spaces are in public access lots. An additional 97 spaces are in on-street parking sites. Approximately 168 future spaces are either committed or negotiable. Note that when Maxwell Bay is completed, 31 on street spaces will be eliminated. This results in a total of 516 potential car/trailer parking spaces that are now believed to be available or planned and which meet the new parking standards and that can be certified by the LMCD. Parking agreements need to be reached with communities, counties, agencies and private commercial marinas to convert some existing parking from uncertified to certified .

# PARKING AGREEMENTS AND DNR COST SHARING

One result of the 1986 task force was the improvement in the process that secures parking spaces at or near existing public access sites that can be considered to be "reliable". To make new or existing parking reliable over the years a parking agreement can be secured with the property owner that requires the car/trailer parking to remain available in place unless canceled under the agreement. If the parking spaces are lost, a good faith effort will be made to replace them with other parking spaces somewhere else. The LMCD and the DNR will assist communities to relocate them. The Task Force continued this recommendation and developed a current model agreement. The Lake Access Parking Agreement form for evaluating public access parking agreements are provided in APPENDIX 5, pages 17-19.

These agreements should be between the LMCD and the local unit of government or property owner. The DNR will assist with these agreements by providing funding where appropriate. The DNR can share cost with cities and/or agencies on access and parking facilities improvement, including land acquisition. The DNR by cooperative agreement can reimburse cities for dedicated free car/trailer parking.
The DNR Landowner's Bill of Rights describes the procedure used by the DNR in the purchase of potential access sites. The Lake Minnetonka acquisition process is the DNR commitment to work cooperatively in this area. see APPENDIX 6 and 7 pages 20-24.

The first agreement was signed in May of 1993 with the City of Minnetrista. The agreement with that city was for a total of 44 parking spaces at the following sites:

1. Williams Street in Halsteds Bay: 40 car/trailer parking spaces
2. Tuxedo Boulevard in Phelps Bay: 4 car/trailer parking spaces

Other sites also have a high potential for adding to reliable parking by agreement, namely:

1. **Orono:**
    a. Hennepin County North Arm ramp and on-site lot (80 spaces)
    b. County Road 51, serving Hennepin County North Arm ramp (31 spaces)
2. **Spring Park**, Spring Park Bay, with accompanying county maintenance yard nearby in Orono (86 spaces)
3. **Deephaven**:
    a. Carsons Bay, Minnetonka Blvd. ramp with city maintenance lot (30 spaces)
    b. Carsons Bay, Minnetonka Blvd. ramp with school lot on Vinehill Road (40 spaces)
4. **Wayzata**: Wayzata Bay County Road 16 ramp , County Road 16 (40 spaces)
5. **Mound**: Mound Park Bay ramp, Cooks Bay (43 spaces)

# NEW ACCESS SITES

The Task Force recommends the following sites as having the potential for becoming lake access sites. The Site Evaluation Criteria are provided in APPENDIX 8, page 25.

***Potential Sites***

1. Tonka Bay City Dock, channel to Gideons Bay
2. Timber Lane, Gideons Bay, Shorewood
3. Mai-Tai Restaurant Site, Excelsior Bay, Excelsior (property was sold)
4. 456 Arlington Ave., Wayzata Bay (private residence), Wayzata
5. Pelican Point, Spring Park Bay, Mound
6. Lost Lake, Cooks Bay, Mound
7. Advance Machine, West Arm, Spring Park

***Grays Bay Causeway***

The unimproved substandard public access on Trunk Highway 101 will not be redeveloped as planned. This represents a setback for public access development. The 32 spaces planned for the causeway had been considered committed. The Minnesota Department of Transportation has abandoned plans to improve the site. However, Wayzata and Minnetonka are continuing discussions about improvements at the site.

***Maxwell Bay***

Up to 76 additional car/trailer parking spaces may be provided when the launch ramp is in place at Maxwell Bay, Orono. This site continues to be examined. DNR Trails & Waterways and the City of Orono are negotiating to purchase alternate properties.

# EQUITABLE DISTRIBUTION

Subcommittees discussed equitable distribution of car/trailer parking at Lake Minnetonka. The principle adopted in earlier task force reports of dividing the lake into zones with equitable distribution was endorsed. see APPENDIX 9, page 26. Each city is encouraged to contribute to the overall goal. If it cannot contribute it may be asked to make voluntary payments for maintenance to those cities who do provide car/trailer access.

# MARINA POTENTIAL FOR LAKE ACCESS

During the summer months most marinas have relatively empty boat storage lots that have the potential for parking car/trailers if the marina has a launch ramp. Many now provide some fee based boat launching service. These marinas could possibly provide some free car/trailer parking and ramp use to the public. The operators or owners might expect some type of reimbursement. The DNR could possibly provide funding and the LMCD will cooperate.

The Task Force identified six conditions and issues to be considered in determining the potential free public access use of marinas:

1. Ability to extend existing capacity.
2. Extent to which a marina already serves the public through fee paid access. (Fee paid public access does not meet the definition of free and open public access.)
3. Attitude of nearby homeowners toward public access use.
4. Duration of public use, considered for a trial basis only until proven feasible.
5. Management issues, such as reserving parking for public use, and compensation to the marina owner consistent with public access operations and public policy.
6. Possible DNR funding constraints from annual operations budgets and overall cost effectiveness.

# PROCEEDINGS SUMMARY

The Lake Access Task Force study is documented in a proceedings summary. This chronology highlights the various subcommittee, committee, and Task Force meetings which took place among city, agency, and community organizations. These groups participated in the research, deliberations and consensus findings. See APPENDIX 10, pages 27-35.

# ACKNOWLEDGMENTS

This study depended upon collaboration of community representatives, municipal, regional and state officials. Task Force meetings provided a public platform for full discussion of access to Lake Minnetonka. Subcommittee members invested extensive volunteer hours. All participants deserve recognition. The Task force thanks every individual and organization for their contributions.

# 1992 LAKE ACCESS TASK FORCE
## DESIGNATED SPOKESPERSON
## (Original Appointees by Organizations)

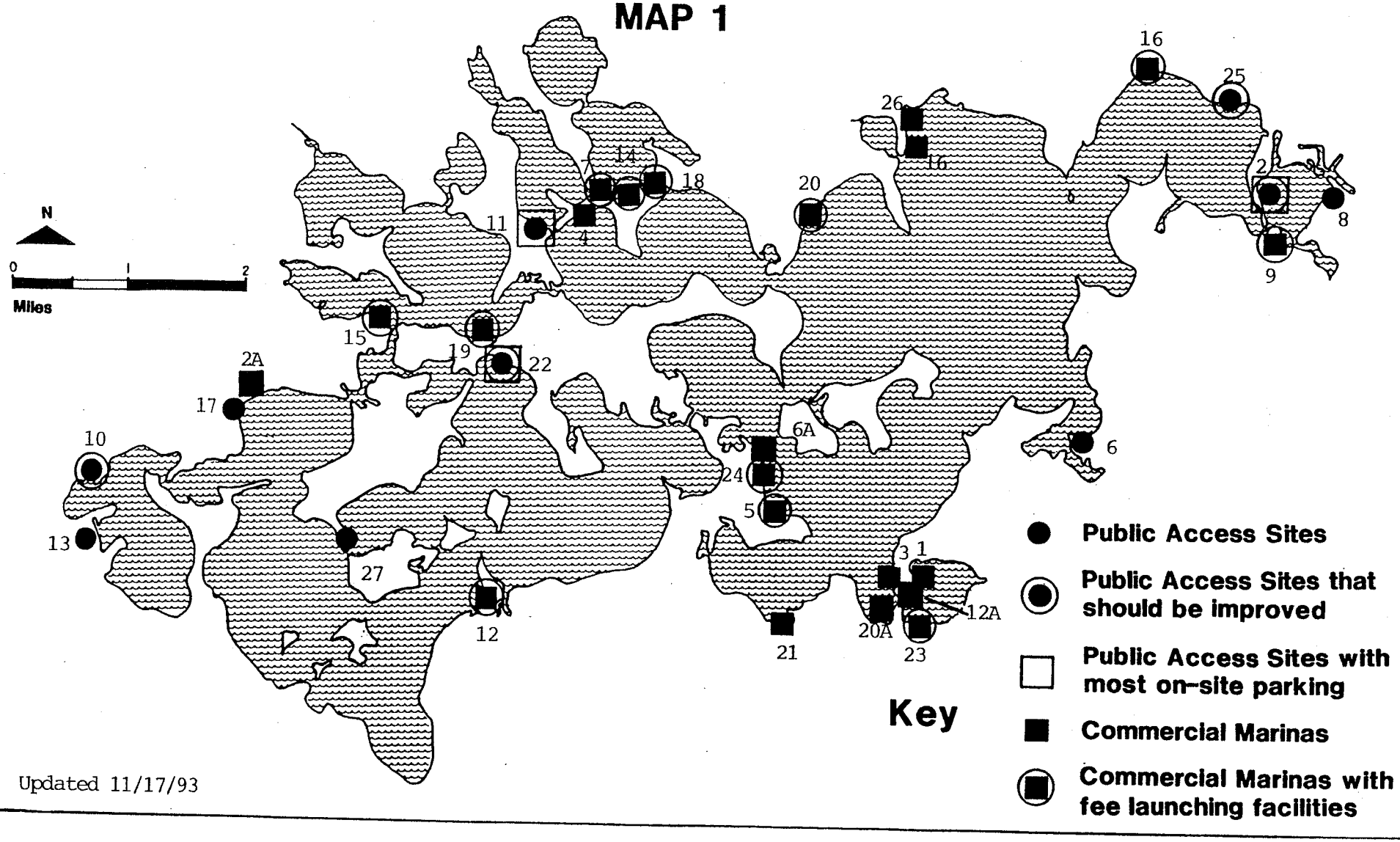
| NAME | POSITION/TITLE | ORGANIZATION |
|---|---|---|
| James N. Grathwol (Task Force Chair) | Board Member | LMCD, City of Excelsior |
| Richard Engebretson | Mayor | City of Deephaven |
| Lucille Crow | Mayor | City of Excelsior |
| Alan M. Albrecht | Mayor | City of Greenwood |
| Ann Perry | Planning Director | City of Minnetonka |
| Tom Markle | City Council | City of Minnetonka Beach |
| Wally Clevenger | Mayor | City of Minnetrista |
| Skip Johnson | Mayor | City of Mound |
| Gabriel Jabbour | City Council | City of Orono |
| Kristy Stover | City Council | City of Shorewood |
| Jerry Rockvam | Mayor | City of Spring Park |
| Vern Haug | Mayor | City of Tonka Bay |
| Jerry Schmieg | Mayor | City of Victoria |
| Barry Petit | City Council | City of Wayzata |
| Nick Duff | Mayor | City of Woodland |
| Tad Jude | Commissioner | Hennepin County |
| Douglas Bryant | Superintendent | Hennepin Parks |
| Don Germanson | President | Lake Minnetonka Lakeshore Owners Association |
| Thomas S. Maple | Manager | Minnehaha Creek Watershed District |
| Gary Larson | Co-Chair | Fisherman Advocating Intelligent Regulation |
| John F. Schneider | President | MN Sportfishing Congress |
| Beverly Blomberg | Orono Resident | Maxwell Bay Residents |

### AGENCY STAFF

| | | |
|---|---|---|
| Dennis Asmussen | Director | MN DNR Trails & Waterways |
| Mike Markell | Water Recreation Supervisor | MN DNR Trails & Waterways |
| Gordon Kimball | Regional Supervisor | MN DNR Trails & Waterways |
| Martha Reger | Area Supervisor | MN DNR Trails & Waterways |
| Larry Killien | Regional Supervisor | MN DNR Trails & Waterways |
| Donald W. Buckhout | ADR Coordinator | State Office of Planning |
| Eugene R. Strommen | Executive Director | LMCD |
| Rachel Thibault | Adminis. Technician | LMCD |

# EXISTING PUBLIC ACCESS SITES AND COMMERCIAL MARINAS

## MAP 1




Updated 11/17/93

(SEE KEY ON REVERSE SIDE)

LAKE MINNETONKA CONSERVATION DISTRICT

Existing Public Access Sites and Commercial Marinas

| | | |
|---|---|---|
| 1 | Beans Greenwood Marina* | St Albans Bay |
| 2 | Causeway - Hwy. 101 | Grays Bay |
| 2A | Chapman Place Marina | Cooks Bay |
| 3 | Cochrane Boat Yards* | St Albans & Excelsior |
| 4 | Crystal Bay Service* | Crystal Bay |
| 5 | Curlys Minnetonka Marina | Lower Lake South |
| 6 | Deephaven, City of | Carsons Bay |
| 6A | Dennis Boats* | Lower Lake South |
| 7 | Gayle Marina | Maxwell Bay |
| 8 | Grays Bay Access (by Dam) | Grays Bay |
| 9 | Grays Bay Resort & Marina | Grays Bay |
| 10 | Halsted Drive Access | Halsted Bay |
| 11 | Hendrickson Bridge Access | North Arm |
| 12 | Howards Point Marina | South Upper Lake |
| 12A | Kreslins* | St Albans Bay |
| 13 | Kings Point Access - DNR | Halsted Bay |
| 14 | Lakeside Marina | Maxwell Bay |
| 15 | Minnetonka Boat Rental* | Harrisons Bay |
| 16 | Minnetonka Boat Works (W) & (O)* | Wayzata,Tanager,Browns Bay |
| 17 | Mound, City of | Cooks Bay |
| 18 | North Shore Drive Marina | Maxwell Bay |
| 19 | Rockvam Boatyards | Coffee Cove |
| 20 | Sailors World Marina | Smiths Bay |
| 20A | Schmitts Marina* | Excelsior Bay |
| 21 | Shorewood Yacht Club & Marina* | Gideons Bay |
| 22 | Spring Park Access | Spring Park Bay |
| 23 | Excel Marina | St Albans Bay |
| 24 | Tonka Bay Marina | Lower Lake South |
| 25 | Wayzata, City of | Wayzata Bay |
| 26 | Windward Marine* | Browns Bay |
| 27 | Tuxedo Road Access | Phelps Bay |

*No launching facilities

11/17/93

# PARKING STANDARDS

## LAKE MINNETONKA PUBLIC ACCESSES

The 1992 Lake Minnetonka Lake Access Task Force has adopted the goal of 700 long-term reliable spaces for car/trailer parking in the vicinity of present and future access sites at Lake Minnetonka. The Task Force further agrees that the Lake Minnetonka Conservation District (LMCD) implement these standards for identifying and counting of car/trailer parking spaces and monitor progress toward the 700 goal on a continuing basis.

The following set of standards has been adopted by the Task Force for application to Lake Minnetonka:

1. All spaces must be within 2,000' of a public access point. For car/trailers parked between 1,500' and 2,000', a temporary boat mooring facility at the ramp site for a number of boats equal to 10% of the parking spaces must be provided.

2. All parking locations away from the access site should be provided with a long-term agreement, three year minimum, with five years more desirable, on file with the LMCD. Within that time availability, if any designated spaces need to be removed, they must be replaced with comparable spaces.

3. The location of parking spaces, either off-street or on-street away from the access site, must be identified by clear, aesthetically attractive, consolidated, capable of being inexpensively updated, signage.

4. All off-street spaces must be illustrated on a plan on file with the LMCD. The plan shall clearly indicate each car/trailer space and adequate ingress, egress and maneuvering space. Parking space minimum size standards (in feet):

| | |
|---|---|
| Vehicle only | 9 X 19 (Handicapped 12 x 19) |
| Car/trailer | 10 X 40 |

Off-street designated trailer parking on grass is acceptable if vehicle is parked on graded/paved surface.

5. All spaces must be available on an unrestricted, first-come-first-served basis, 700 reliable spaces will be available from Memorial Day to Labor Day from 5 pm on Fridays until midnight Sundays, and on holidays. Fifty per cent of reliable spaces will be available weekdays. Hours of availability will be determined by LMCD in cooperation with the DNR.

Vehicle-only spaces (no trailer) on public access parking lots can be counted toward the total goal of 700 car/trailer spaces provided that the number of such spaces counted for any given lot does not exceed 10% of the total number of spaces on that lot. (Example: Out of 50 total parking spaces on a lot, seven are for vehicle only. Only five of the seven may be counted toward the goal of 700 [i.e., 10% of 50=5].)

6. All on-street spaces should meet the following additional standards:

6.1 Minimum length of 50 feet per space.

6.2 Adequate shoulder width to preclude door opening into a traffic lane and to provide a safe route to the access point.

6.3 Of the total non-designated (non-signed) on-street parking spaces, only 80% are considered to be reliable in order to account for non-access related public parking.

6.4 Designated and signed on-street car/trailer parking spaces will be counted 100% for car/trailer use.

6.5 On-street car/trailer parking spaces must be illustrated on a plan by street name on file with the LMCD.

## CURRENT AND POTENTIAL CAR/TRAILER PARKING INVENTORY

1992

| Zone/Goal | Access | Potential Total Certifiable to New Standards to 2,000' | Currently Available in Lots | Additional spaces Currently Used on a Regular basis to 2,000'(1) | Future Additional Committed Spaces | Negotiable Spaces tp 2,000' |
|---|---|---|---|---|---|---|
| 1 / 139 | North Arm | 96 | 63 | 31 | 0 | 2 |
| | Subtotal | 96 | 63 | 31 | 0 | 2 |
| 2 / 144 | Grays Bay Causeway | 37 | 17 | 0 | 20 | 0 |
| | Grays Bay Dam | 20 | 20 | 0 | 0 | 0 |
| | Wayzata Bay | 101 | 0 | 64 | 0 | 37 |
| | Subtotal | 158 | 37 | 64 | 20 | 37 |
| 3 / 155 | Carsons Bay | 93 | 0 | 30 | 0 | 63 |
| | Subtotal | 93 | 0 | 30 | 0 | 63 |
| 4 / 126 | Spring Park Bay | 148 | 16 | 70 | 0 | 62 |
| | Phelps Bay/Tuxedo Blvd. | 10 | 0 | 4 | 0 | 6 |
| | Subtotal | 158 | 16 | 74 | 0 | 68 |
| 5 / 136 | Kings Point | 0 (3) | 32 (3) | 0 | 0 | 0 |
| | Williams Street | 40 | 0 | 28 | 0 | 12 |
| | Hennepin Regional Park | 80 (3) | 0 | 0 | 80 | 0 |
| | Cooks Bay | 110 | 0 | 73 | 0 | 37 |
| | Subtotal | 230 | 32 | 101 | 80 | 49 |
| | TOTAL | 735 | 148 | 300 | 100 | 219 |

(1) Additional car/trailer parking is believed available.
(2) Hennepin County maintenance lot, within 1,500' on County Road 15.
(3) Existing 32 car/trailer parking at the King's Point DNR site is subject to review of the agreement to close this site upon the opening of the Hennepin Regional Park sites.

# LAKE MINNETONKA CONSERVATION DISTRICT

## Lake Access Model Parking Agreement

This Agreement is made between the Lake Minnetonka Conservation District (LMCD) and the (  ) both public corporations organized and existing under the laws of the State of Minnesota.

WITNESSETH:

WHEREAS the LMCD and (  ) are jointly concerned with providing public boating access to Lake Minnetonka, meeting the Parking Standards for Lake Minnetonka, and

WHEREAS the LMCD and (  ) recognize that a goal of 700 car/trailer spaces will be provided in the vicinity of present and future access sites around the lake on as equitable a basis as possible,

NOW, THEREFORE, it is agreed by the LMCD and (  ) that the conditions for car/trailer parking for the public access identified on the checklist identified as Exhibit "A" and Parking Site Plan identified as Exhibit "B" meet Parking Standards on the checklist as indicated.

IN WITNESS WHEREOF, the LMCD and (  ) have caused this agreement to be duly executed this ____ day of _____, 19__.

LAKE MINNETONKA
CONSERVATION DISTRICT: AGENCY/CITY:_____

_____

By_____ By_____

EXHIBIT A

Checklist for Evaluating Lake Minnetonka
Public Access Car/Trailer Parking Agreements

1. Access Name _____

2. Access City _____ Lake Zone No. _____

3. Car/Trailer (C/T) Parking by Location: # of spaces
   a. Off-street, on access site . . . . . _____
   (On-site designated trailer parking on grass is acceptable if vehicle is parked on graded or paved surface.)
   b. Off-street, remote from access site . . . . . _____
   * Distance in feet from access site _____
   c. On-street, less than 1,500 feet:
   * Designated signed C/T only, count 100% of C/T parking spaces available . . . . . _____
   * Not signed, count 75% of spaces available _____
   d. On-street, 1,501 feet to 2,000 feet:
   * Designated signed C/T only, count 100% of C/T parking spaces available . . . . . _____
   * Not signed, count 75% of spaces available _____

4. Vehicle Only Parking Spaces - these count up to 10% of total number of C/T spaces on lot:
   # of standard vehicles spaces 9' x 19' _____
   # of handicapped vehicle spaces 12' x 19' _____
   Total # of vehicle only spaces . . . . . _____
   Count total vehicle only spaces or 10% of total C/T parking spaces in lots whichever is less _____

5. Total, car/trailer parking spaces at site . . . . . _____

COOPERATING PROVISIONS: Initial as accepted:

1. Access site plan illustrating each C/T space with adequate ingress, egress, and maneuvering space is kept on file and current with LMCD. _____

2. Signage provided at access site is clear, aesthetically attractive, consolidated for easy updating. _____

3. All spaces are available on unrestricted, first-come, first-served basis, from Memorial Day to Labor Day, 5:00 pm Friday until midnight Sunday. Fifty percent (50%) of spaces meeting Parking Standards are available weekdays. _____

Checklist for Evaluating Lake Minnetonka
Public Access Car/Trailer Parking Agreement

4. All on-street parking spaces meet the following standards:
   a. Minimum length of 50 feet per space. _____
   b. Adequate shoulder width to preclude door opening into traffic lane. _____
   c. Safe pedestrian route to access point provided. _____
   d. On-street car/trailer parking spaces are illustrated and kept current on a plan by street name on file with the LMCD. _____
5. A temporary boat mooring facility is provided at the ramp site for a number of boats equal to 10% of the C/T parking spaces at the site for C/T parking spaces between 1,501 feet and 2,000 feet. New facilities must meet Federal A.D.A. requirements for handicapped persons. _____
6. Agency/city reserves the right to make changes in access site plan off-street parking or on-street designated or non-designated parking as public policy priorities may require, with a good faith effort to replace lost C/T spaces at the earliest possible date, notifying the LMCD of anticipated changes. LMCD and MN DNR agree to cooperate with city/agency in relocation of lost slips, including locations elsewhere in the lake, and at other access. _____
7. City retains approval privilege on any actions of an agency regulating parking allowances or restrictions on county or state highways affecting C/T parking in the vicinity of an access site. _____
8. Agency/city agrees to enter into this agreement for a period of _____ years (five years desired) in recognition of the valuable recreational opportunities offered on Lake Minnetonka. _____

MINNESOTA DEPARTMENT OF NATURAL RESOURCES
LANDOWNER'S BILL OF RIGHTS

State parks, water access sites, wildlife management areas, state forest, fisheries projects, recreational trails, canoe and boating routes, wild and scenic rivers, scientific and natural areas and the State water bank program all provide recreational opportunities for the general public or protection of the State' natural resources. Each of these programs authorizes either the purchase of the fee title to land or the purchase of a lesser interest in land, such as an easement.

Selling land to the Department of Natural Resources is in many ways similar to selling it to a private party, but in other ways is different from standard real estate transactions. Because of the many Federal and State laws that govern land acquisition, it often takes eight months to a year and a half to sell land to the Department of Natural Resources. These laws were designed both to protect private landowners' rights and to assure that public money is well spent to serve the public interest. This letter describes the Department of Natural Resources' land acquisition procedure. Please keep it for future reference.

Land Identification

The management programs select the tracts of land which they feel would most help them to carry out their programs. Once your land has been identified for purchase, you will be contacted by a Department of Natural Resources representative who will explain what your land would be used for if it is purchased and will also explain the land acquisition to you. You are free to decide whether or not to sell your land to the State. If you are willing to consider selling it, the State will have your land appraised and you will then decide if you want to sell it at the appraised value. If you do not want to sell your land to the State, you are under no obligation to do so. However, you may be contacted again in the future to see if you might have changed your mind.

Appraisal Process

The State will hire a qualified appraiser to determine the fair market value of your property. You will be invited to accompany the appraiser during his or her inspection of the property, if you so desire.

You also have the right to hire and appraiser to provide an independent opinion of value for your property. You will be notified of the deadline for your appraisal to be submitted if you would like it to be reviewed along with the State's appraisal. After the appraisals are reviewed, a fair market value will be established as just compensation for your property. If your land is purchased by the State, you may be reimbursed up to $500 for the cost of your appraisal providing you submit a copy of that report and a paid receipt for it. It is not necessary for you to submit your appraisal for review in order to be reimbursed for it.

Negotiation Process

The State is not allowed to discuss the price until after the appraisal is completed and will not discuss the price with anyone but the landowner or his agent. Documents regarding the purchase of your property will be public records once the purchase is completed. At the beginning of the negotiation period, you will be given a summary of the approved appraisal. This summary will include the final conclusion of value, the total number of acres and types of land appraised, the valuation of all buildings and improvements being purchased, and any special elements of value. The same person who appraised your property for the State will not act as a negotiator for its purchase.

Purchase Procedure

The Department of Natural Resources will acquire your property by means of an option, which is an offer from the landowner to sell. The option, including all special provisions, legal descriptions and elements of execution, must be reviewed by the State as to its legality and acceptability. The State shall have 15 days after receiving an option to notify the landowner in writing if the option is not approved and the reasons therefore. If you are not notified of an option's disapproval, you should assume it is approved.

Unless you request otherwise in writing, the option period shall be no more than two months if no survey is required. If a survey is required, the option period shall be no more than nine months. These time limits do not apply to wildlife management areas that require county board approval. The option period begins on the last date on which the option is signed by a landowner. Before the end of the option period, the State shall decide whether or not to purchase the land and shall notify the landowner of its decision by either a Notice of Election to Purchase or a letter explaining the reasons for not purchasing the property. If the State does not elect to purchase property on which it has approved and accepted an option, it will pay the landowner $500.00 after the option period expires.

After signing the option, you have one month to mail or deliver an Abstract of Title to the Department of Natural Resources. If your land title is registered, you should submit your Owner's Duplicate Certificate of Title plus a Registered Property Abstract instead of an Abstract of Title. The State will have the abstract brought up to date at its own expense. Within one month from the Notice of Election to Purchase or delivery of the Abstract,whichever is later, the Attorney General will provide a title opinion which will identify any defects in your title to be cleared up before the purchase can be completed. You will then have 120 days to make your title marketable.

The landowner is required to pay all taxes that are due in the year in which the deed or easement is signed, including Green Acres deferred taxes. Once the taxes are paid and all title defects are cured, the Attorney General will send you a Warranty Deed or other conveyance document to sign and return.

The State pays the abstracting and recording fees related to the sale. If your property is held as security for a loan or advance of credit that requires or permits the imposition of a pre-payment penalty, this penalty shall also be reimbursed by the State. The costs of clearing title defects, payment of taxes and related attorney's fees are not reimbursable.

Method of Payment

Payment for the land is mailed to the landowner after the signed deed or other conveyance document has been recorded and the abstract brought up to date. Depending on the County Recorder's workload, this may take anywhere from two to four weeks. Assuming your title is marketable and you act expeditiously to complete the transaction, payment must be made no later than 90 days after the Notice of Election to Purchase.

You may choose to be paid in either a lump sum or in up to four separate payments. The State does not pay interest on monies held during an installment agreement.

Vacating Your Property

You have the right to continue occupancy of your property until 90 days after the date of the deed. You may stay an addition 90 days by paying a fair market rent to the State, with the prior written approval of the management program for which your property is being purchased. If you do not vacate your property within 180 days of the date of the deed, you will automatically waive your right to any relocation benefits to which you may otherwise be entitled.

Relocation Benefits

The State is obligated to pay relocation expense any time they displace owners or tenants from their residences, displace a business or cause a business to cease operating. Moving expenses are the most common relocation benefit. A relocation advisor is assigned to work with anyone who might be displaced by State land acquisition to guide them in locating a new home or business.

Legal Rights

You have the right to accept or reject the State's offer for your property. If you accept the offer, you may receive or waive any relocation assistance, services, payments and benefits. You also have the right to accept the State's offer for the property and to contest the relocation benefits.

You have the right to seek the advice of any attorney regarding any aspect of your land sale. You also have the right to have the State acquire your land by condemnation at your written request and with the agreement of the Commissioner of the Department of Natural Resources. The primary laws governing Department of Natural Resources land acquisition procedures are, Public Law 91-646 and Minnesota Statutes Section 84.0274.

For further information, contact: Department of Natural Resources
Bureau of Land Acquisition and Exchange Section
500 Lafayette Road, Box 30
St. Paul, Minnesota 55155-4030
(612) 296-4097

# LAKE MINNETONKA ACQUISITION PROCESS

This document will describe the process the DNR will use to acquire land on Lake Minnetonka.

## BACKGROUND

A Process to provide Public Water Access (PWA) in the metropolitan area was developed by the Metropolitan Council, The Minnesota Department of Natural Resources (MNDNR), and the State Planning Agency under the direction of the Legislative Commission on Minnesota Resources (LCMR).

These agencies produced a document that outlined a Site Selection Criteria, a Lake Ranking system and an Access Priority List. The MNDNR and other public agencies use these procedures to develop accesses in the metropolitan area. This document is available from the Metropolitan Council.

## PROCESS

On a priority bay or lake area, public property is investigated for access suitability. If none is available or useable, a search for suitable sites is begun. Often on heavily developed lakes or bays, the actual acquisition process begins with a parcel of land becoming available that meets the criteria. The MNDNR purchases only from willing sellers and the owner must be willing to sell the parcel for a public water access.

When the landowner indicates a willingness to sell, the acquisition process and timeline are explained. If the landowner agrees to proceed, the Landowner Bill of Rights Letter is signed. This letter verifies that the landowner understands the process and has agreed to work with the MNDNR.

If the site meets the criteria and the landowner agrees to proceed, the MNDNR will have the property appraised to determine its fair market value. After the appraisal has been approved, an offer to purchase can be made.

If the landowner agrees with the value, then the MNDNR may take an option on the property. The option will indentify such things as, the land to be purchased, the price, the length of time required to complete the negotiations.

After the option is signed by the landowner, the MNDNR, within 5 working days, will notify the city and the LMCD, in writing, of its actions. Notification can not be made prior to the signing of the option due to confidentiality requirements.

## PUBLIC INVOLVEMENT

The proposal will be discussed with the city, (citizens, council members, etc) and other interested members of the public. Assuming there are no valid reasons for rejecting the property or the project, the MNDNR will work and cooperate with the city and the LMCD to complete the acquisition and development..

The MNDNR will use various methods to inform and involve the public. The processes used will include: Formal Public Meetings, Informal Public Meetings, Open Houses, Question and Answer Sessions at City Council Meetings and Meetings with neighbors and concerned individuals.

The MNDNR will continue to keep the city and the LMCD informed and involved in the design of the acces from the initial concept stage through final design. Examples of items that will be discussed are: traffic flow, parking lot layout, drainage and runoff, landscaping, signage.

This cooperative process does not end with the construction of the access. After the access is developed the MNDNR will continue to work with the city and the residents on access maintenance and operations procedures.

# LAKE ACCESS TASK FORCE
# ACCESS SITE EVALUATION CRITERIA

These evaluation criteria should be used in selecting potential new access sites for fishing craft and small recreation boats. The standard are not expected to be perfectly achieved. Each should be seriously considered and graded. Other evaluation criteria may be considered on a site-specific basis.

1. Relationship to residential areas -- Positive and negative impacts of the site on adjacent residential areas, such as distance between a site and nearby homes, screening the site from homes, noise, traffic, etc.

2. Accessibility to primary highways -- Potential sites near major highways (State Highways 7 and 101, County Roads 19 and 15 are examples) to reduce traffic impact on residential streets. Safety on site, on water and egress to both.

3. Public use precedent -- Sites which are already in public ownership or in commercial or industrial use, or isolated from other residential areas, and where public facilities or services have been provided and accepted, have the least neighborhood impact.

4. Intensity of boating use near a potential access site -- Sections of the lake where there is intense boating, or crowding in channels, should be downgraded.

5. Cost -- Property acquisition, development and maintenance costs.
6. Physical development constraints -- positive and negative features on land and in the water and changes possible to make the potential site usable.

7. Visual impacts -- Positive and negative visual impressions as seen from land and water.

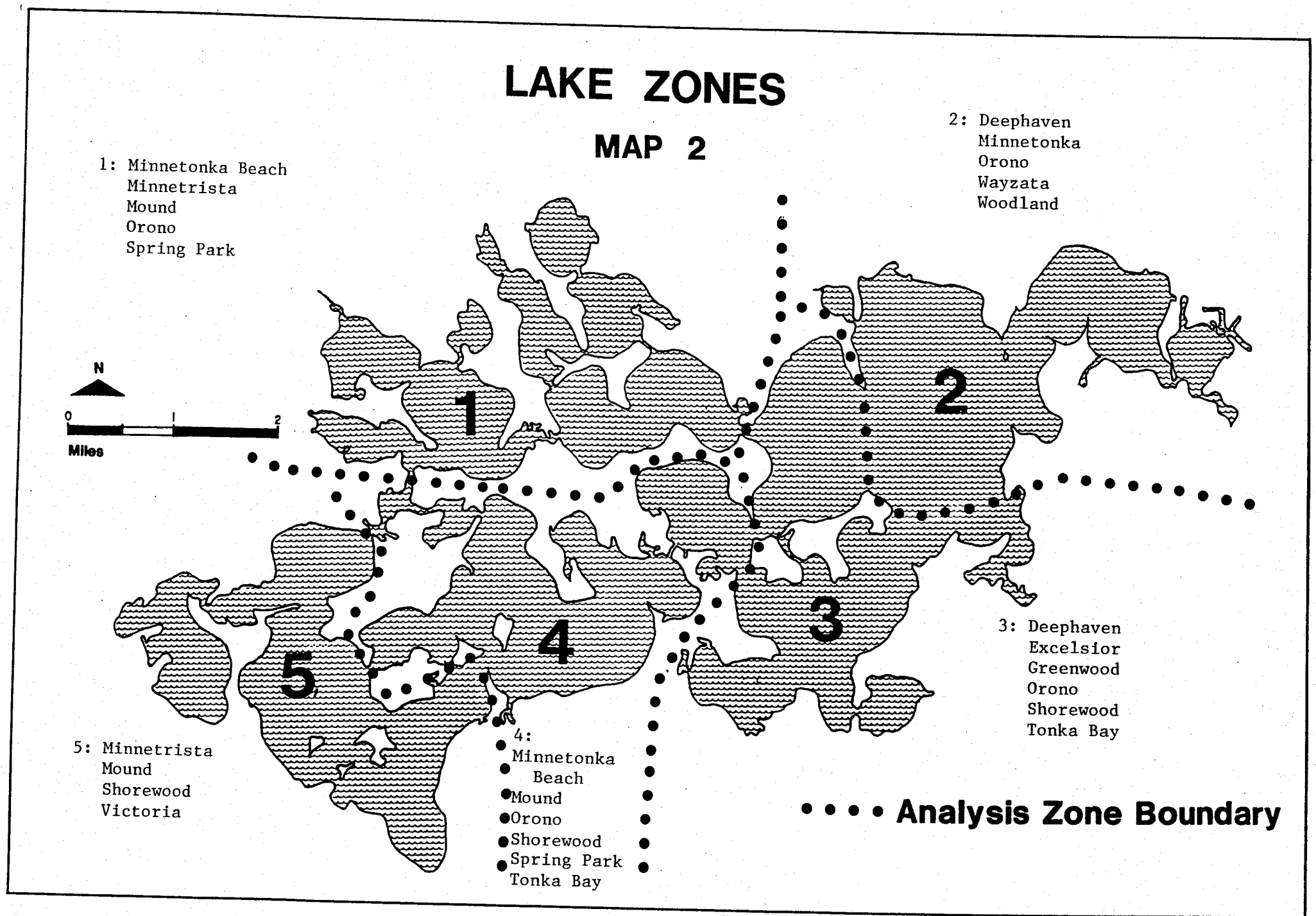
8. Multiple use opportunities for the site -- Sites that provide shore fishing, pier fishing, picnic areas, toilets, etc., along with boat access are preferred.

9. Site size -- Larger sites with off-street parking are preferred.

10. Environmental considerations -- dredging, fill, run-off control, wetlands preservation, etc.

**Footnotes:**
1. Sites shall not be excluded because there is limited access for large boats.
2. Sites will be preferred that provide equitable distribution.
3. Sellers must be willing, city must cooperate and other agencies must approve.

Adopted: March 18, 1993


LAKE ZONES
MAP 2
1: Minnetonka Beach
Minnetrista
Mound
Orono
Spring Park
2: Deephaven
Minnetonka
Orono
Wayzata
Woodland
N
0
1
2
Miles
1
2
3
4
5
3: Deephaven
Excelsior
Greenwood
Orono
Shorewood
Tonka Bay
4:
Minnetonka
Beach
Mound
Orono
Shorewood
Spring Park
Tonka Bay
5: Minnetrista
Mound
Shorewood
Victoria
Analysis Zone Boundary

# PROCEEDINGS SUMMARY
# 1992 LAKE ACCESS TASK FORCE STUDY
# FOR LAKE MINNETONKA

## TASK FORCE CHRONOLOGY

The initial Task Force meeting was held 3/11/92. Its purpose goal and objectives were introduced as follows:

PURPOSE -- to establish a plan to meet the Management Plan lake access policies developed in the 1983 and 1986 Lake Minnetonka Task Force studies.

GOAL -- coordination of an immediate inter-agency inventory, study and assessment of the car/trailer (c/t) parking spaces at public access ramps to meet the 700 reliable c/t objective.

OBJECTIVES:

a. Establish criteria in the LMCD Code for acceptable year-round lake access, including access ramps, lakeside and remote c/t parking, handicapped access and signage.

b. Conduct a joint study of all access ramps and associated c/t parking, identifying all existing ramps and associated lake parking.

c. Develop a plan for and provide LMCD-approved boat access ramps with 700 reliable c/t parking spaces.

d. Widen or otherwise improve efficiency of existing ramps for use by more than one c/t at a time.

e. Resolve DNR's Maxwell Bay access proposal in accord with Management Plan policies and objectives and in accord with the 1983 and 1986 Task Force Study recommendations by:
   1) Activating the Lake Access Task Force, appointing representatives of affected communities, DNR, LMLOA and citizens to implement the public access siting process.
   2) Facilitate a cooperative effort to address land use issues that are the basis for objections raised by the City of Orono.
   3) Conduct a feasibility study of land purchase between Gayle's Marina and the DNR property.
   4) City of Orono, LMCD and DNR cooperate in securing funding for the Maxwell Bay access properties.

   NOTE:After cooperation on obtaining funding through the Legislative Commission on Minnesota Resources (LCMR), the Task Force and LMCD were asked by Orono officials to not further participate in Maxwell Bay negotiations between the DNR and the City of Orono.

The Task Force formed three subcommittees, namely:

Data Gathering
Standards
Steering

## DATA GATHERING SUBCOMMITTEE C/T PARKING INVENTORY DEVELOPMENT

A 4/15/92 inventory of existing or planned c/t parking spaces was conducted by LMCD and DNR staff from contacts made among city and county staff.

That inventory was compared to the 1983 Task Force inventory for the five zones of the lake. The comparison of c/t parking spaces by zones was as follows:

| Zone | | Goal | 1983 Total | 1992 Total |
|---|---|---|---|---|
| 1 | North Arm | **139** | **60** | **63** |
| 2 | Grays Bay Hwy 101 | | 24 | 37 |
| | Grays Bay Dam | | 19 | 19 |
| | Wayzata Bay Hwy 16 | | 3 | 25 |
| | **Sub Total** | **144** | **46** | **81** |
| 3 | Carsons Bay | **155** | **0** | **40** |
| 4 | Spring Park Bay | | 79 | 93 |
| | Phelps Bay | | 0 | 4 |
| | **Sub Total** | **126** | **79** | **97** |
| 5 | Halsted, Wms. St. | | 0 | 30 |
| | Halsted, Kings Point | | 0 | 32 |
| | Henn. Regional Park | | 0 | 100 |
| | Cooks Bay, Mount Park | | 0 | 30 |
| | **Sub Total** | **136** | **0** | **192** |
| | **Grand Total** | **700** | **185** | **473** |

These counts were later revised based upon a more detailed inventory conducted in June by LMCD staff of c/t street parking potentially available to 2,000' from the access, identified later in this report.

Criteria were needed to identify reliable c/t parking spaces. The Standards Committee was asked to develop such criteria.

## STANDARDS SUBCOMMITTEE ACTIONS

FACILITATOR ENGAGED. The LMCD engaged a state facilitator to meet the diverse interests involved in the proceedings:

1. Decisions would result from a consensus.
2. Persons participating would only be those holding designated membership in the Task Force.
3. The Task Force would work in good faith.

TASK ASSIGNMENTS:

1. MN DNR staff examined c/t parking spaces in public access ramp lots.
2. LMCD staff counted street parking utilizing 1985 c/t parking criteria, adjusting criteria by extending distance from access site from 1,500' to 2,000'.
3. Aerial photographs of public access sites taken.
4. DNR/LMCD staff drafted parking space standards from the 1986 standards previously considered.

TASK ASSIGNMENT RESULTS:

C/T PARKING INVENTORY OF 7/15/93. A street inventory of actual and potential c/t parking spaces up to 2,000' from accesses was conducted. Potential spaces included future public access sites, one private lot, public lots in other agency jurisdictions (school districts) and street locations subject to city/county approval.

A surveyor wheel measurement device was used to calculate an accurate 50' c/t parking space and for determining accurate distance from the launch ramp. Results of the inventory count of 7/15/92 were:

C/T Parking Spaces at present or planned access ramps:

| | |
|---|---|
| North Arm | 63 |
| Grays Bay 101 Causeway | 37 |
| Grays Bay Dam | 19 |
| Kings Point, DNR | 32 |
| Spring Park Ramp | 19 |
| Spring Park/Orono County Lot | 70 |
| Hennepin Regional Park | 100 |
| Sub Total | 340 |

Potential C/T Parking Space Additions:

| | |
|---|---|
| Streets, city & county | 82 |
| Off street, private & city | 86 |
| Sub Total | 168 |

Existing Street Availability:

| | |
|---|---|
| City/county (99 of the 337 at Williams Street, Halsted Bay access) | 337 |
| **GRAND TOTAL** | **845** |

DNR ANALYSIS OF C/T PARKING SPACES AT ACCESS LOTS:

The c/t parking space count at access on-site lots differ only slightly from 1983 and 1986 counts. Some car-only parking spaces could be converted to c/t parking spaces.

AERIAL SURVEY OF PUBLIC ACCESS SITES

Aerial photos of c/t parking conditions at public access sites on a high-use day illustrated crowded conditions. Opportunities for improvements or expansion of parking capacity either on or off-site were noted.

RELIABLE C/T PARKING SPACE STANDARDS

Seven criteria and three supplemental recommendations applying to Parking Standards were prepared 7/15/92 for Task Force approval.

GRANT RECOMMENDATION FOR MAXWELL BAY LAND ACQUISITION

A Legislative Commission on Minnesota Resources (LCMR) grant recommendation for $944,000 for land acquisition to develop a public access site on Maxwell bay, subject to Legislative approval, was announced.

## JOINT DATA GATHERING/STANDARDS SUBCOMMITTEE ACTIONS

C/T PARKING INVENTORY REVIEW

Subcommittee action of 8/12/92 amended the 7/15/92 c/t Parking Inventory from 845 to 755 c/t parking spaces. A reduction of 59 spaces from 99 to a net of 40 spaces at the Williams St. Halsted Bay access, and a reduction of 32 spaces from 100 to 68 spaces at the Hennepin Regional Park resulted in a 755 adjusted count.

PARKING STANDARDS RECOMMENDATION:

Starting with the seven criteria and three supplemental recommendations of 7/15/92, the joint subcommittee review recommended Parking Standards for Task Force consideration and adoption.

EQUITABLE DISTRIBUTION OF ACCESS SITES:

Equitable distribution of parking sites throughout the five lake zones was identified as a priority.

PARKING INVENTORY:

With minor footnote adjustments, the Parking Inventory of 755 current and potential c/t parking spaces was finalized and recommended for presentation to the Task Force.

## STEERING COMMITTEE RECOMMENDATIONS

The recommendations of the Data Gathering and Standards Subcommittee meeting of 9/9/92 was confirmed. Additional issues were recommended for Task Force consideration:

1. Coordinate site acquisition for Maxwell Bay
2. Coordinate access development of Grays Bay Hwy. 101 Causeway and subsequent closing of Grays Bay Dam access
3. Coordinate access development of Hennepin Regional Park

## LAKE ACCESS TASK FORCE ACTIONS

Lake Access Task Force actions taken 10/21/93:

1. Parking Standards were adopted.

2. The Lake Minnetonka Lakeshore Owners Assn. (LML0A) presented their board position calling for a reduction of the 700 c/t parking spaces goal.
   DNR, LMCD and sport fishing representatives supported the 700 c/t parking spaces goal. This goal originated in the 1983 Task Force Study. It is based upon Lake Minnetonka's 14,000 acre capacity to accommodate one boat per 20 acres of water surface. No consensus was reached on changing the goal. Consensus required substantially unanimous agreement.

3. The LMCD Lake Access Committee, appointed January, 1992, was activated to:
   a. Coordinate related lake access objectives and policies with the Task Force.
   b. Carry out lake access objectives and policies in the Management Plan which will not be addressed by the Task Force.

## LMCD BOARD ACTION ON TASK FORCE POSITIONS

Upon recommendation by the LMCD Lake Access Committee, the LMCD board on 10/28/92 approved Task Force positions on:

1. Parking Standards for Lake Minnetonka Public Accesses
2. Parking Inventory of 755 current and potential c/t parking spaces
3. A draft model Parking Agreement for cities or agencies identifying c/t parking spaces which meet the Parking Standards.
4. Parking Agreements to be secured by LMCD with cities or agencies.

## TASK FORCE ACTIONS

Lake Access Task Force actions taken on 12/9/92:

1. Approved Current and Potential C/T Parking Inventory total adjusted to 735 c/t parking spaces, subject to meeting adopted Parking Standards, and subject to agreements with cities or agencies within which the existing public accesses are located. (The 8/12/92 Parking Inventory was adjusted from 755 to 735 as a result of the Hennepin Regional Park planned access count being adjusted to 80 upon agreement with the City of Minnetrista and Suburban Hennepin Regional Park District.)

2. Goal of 700 c/t parking spaces on which Task Force consensus was not reached was referred to the LMCD board for a final decision.

3. All cities encouraged to make a concerted effort to provide their share of lake access c/t parking spaces. Cities were further encouraged to coordinate and cooperate to meet zone goals.

## LMCD LAKE ACCESS COMMITTEE REPORT

The Lake Access Committee actions taken on 3/16/93:

1. Committee chair outlined a policy to persuade cities or agencies to make decisions on public accesses in the best interest of the most public use of the lake.

2. Existing public access sites proposed for evaluation against a grading scale as to safety, quality, size.

## LAKE ACCESS TASK FORCE ACTIONS

Lake Access Task Force Actions taken 3/18/93:

1. Model Public Access C/T Parking Agreement approved incorporating adopted Parking Standards.

2. Access Site Evaluation Criteria ten point outline approved with recommended footnotes approved.

3. Aerial slide photo documentation of existing and potential access sites presented. Sites suggested from this aerial survey are to serve as a future guide for access site inquiries and proposals.

## ACCESS SITING SUBCOMMITTEE ACTIONS

Access Siting Subcommittee Actions taken 4/6/93:

1. MN DNR Landowner Bill of Rights was reviewed. The Bill of Rights was accepted for recommendation to the Task Force. The procedures detailed in the Bill of Rights would remain in effect after the Task Force completes this study. Public review of a future access site negotiation brought forward by the DNR was concluded to be the affected city's responsibility.
2. A list of some 40 potential access sites taken from the March aerial survey and a list developed by the 1983 Task Force Study was edited to review properties no longer available due to development or other current uses making the property unavailable.

## STEERING COMMITTEE ACTIONS

Steering Committee actions taken 4/6/93:

. MN DOT position on its reduced Hwy. 101 causeway bridge and road rebuilding, excluding the causeway public access upgrading, was received.

## ACCESS SITING SUBCOMMITTEE ACTIONS

Access Siting Subcommittee actions taken 4/14/93:

1. Potential public access sites were presented for review against the 1993 ten point Access Site Evaluation Criteria. All marina sites were removed for separate consideration. Eight other sites were removed as no longer available.

## ACCESS SITING SUBCOMMITTEE ACTIONS

Access Siting Subcommittee actions taken 5/4/93:

1. Potential access sites reviewed per Access Site Evaluation Criteria, with added conditions:
   a. All sites must have willing sellers.
   b. City cooperation must be secured in advancing the access site.
   c. Agency cooperation must be secured in advance of a site being selected.

2. Potential access sites remaining on the list as a result of comparison to the review criteria were:
   * Tonka Bay City Dock, channel to Gideons Bay
   * Timber Lane, Gideons Bay, Shorewood
   * Mai Tai, Excelsior Bay
   * 456 Arlington Ave, Wayzata Bay (private residence)
   * Pelican Point, Spring Park Bay, Mound
   * Lost Lake, Cooks Bay, Mound
   * Advance Machine, West Arm, Spring Park

3. Marinas as potential access sites were recommended to be examined for public access use under the following conditions:
   a. Potential use of extending existing capacity.
   b. Extent to which the marina already serves the public for fee paid access.
   c. Attitude of nearby homeowners for public access use.
   d. Considering any public access use as a temporary trial.
   e. Management issues to be addressed such as how public parking/launch space would be reserved and accounted for in a mix of fee paid launch service
   f. MN DNR budget constraints in funding leased space

## LMCD LAKE ACCESS COMMITTEE ACTION

Lake Access Committee action taken 5/7/93:

1. The Lake Access Parking Agreement with the City of Minnetrista was accepted and recommended to the LMCD board for acceptance.

## LAKE ACCESS TASK FORCE MEETING ACTIONS

Lake Access Task Force actions taken 5/12/93:

1. The seven potential access sites were accepted as identified by the Access Siting Subcommittee 5/4/93.

2. Marina sites having potential to accommodate public access through agreement with the DNR will be considered separately from the seven potential access sites accepted 5/4/93. The six conditions under which marina sites would be evaluated for public access as detailed by the Access Siting Committee 5/4/93 were also accepted.
3. The Maxwell Bay access site is recognized as in negotiations between the City of Orono and MN DNR.

## LMCD LAKE ACCESS COMMITTEE ACTIONS

Lake Access Committee action of 6/15/93 approved tasks which the LMCD committee intends to continue processing:

1. Determine the equitable distribution of public access among existing and potential new access sites.

2. Evaluate and negotiate with commercial marinas for their potential in providing c/t parking and launch service:
   a. Apply equitable distribution criteria.
   b. DNR to negotiate agreements for space/service provided.

3. Assess means by which existing public accesses may be upgraded for safety and greater user satisfaction.

4. Board members to work with LMCD and DNR staff in finalizing c/t parking agreements with cities and agencies having existing public accesses.

5. Access signage to be developed per agreement provisions, cities and agencies asked to assist.

###

October 14th, 2025

My name is Tom Niccum,

In the early 1970's my family purchased Minnetonka Portable Dredging, located at 500 West Lake Street in Excelsior Minnesota. Minnetonka Portable Dredging is a Marine Construction Company providing shoreline riprap, permanent piling docks, dredging and barge services for island construction needs, which includes construction equipment delivered for necessary building projects, propane truck and septic truck deliveries for services needed on the Island.

Throughout the 70', 80's and 90's our company has been one of the only companies that could provide these services for the needs of the Lake Minnetonka Community, within the recent 10-15 year time frame there has been a very significant increase of lake service providers with barges operating out of the Public Accesses on the lake.

Tom Niccum

CITY OF ORONO

*Street Address:*
2750 Kelley Parkway
Orono, MN 55356

*Mailing Address:*
P.O. Box 66
Crystal Bay, MN 55323

*Telephone* (952) 249-4600
*Fax* (952) 249-4616
www.ci.orono.mn.us

**SENT VIA U.S. CERTIFIED MAIL:**

Sarah Strommen
Commissioner of the Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4040

Ms. Strommen:

**RE: Proposed Vacation of unimproved right-of-way bisecting PID: 0811923340061, 3700 North Shore Drive to include portions of Cherry Ave and an Alley**
**File: #LA25-000033**

The City of Orono has been requested to vacate portions of unimproved right-of-way Cherry Ave and an Alley bisecting existing PID: 0811923340061 which terminate at or about the OHWL; as depicted on the enclosed.

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This item will be presented on the October 20, 2025 Planning Commission Meeting agenda for a public hearing. Receipt of your comments by or before Monday, October 13th would be appreciated. Please contact me directly at loakden@oronomn.gov or 952.249.4602 for more information of if you have any questions.

Thank you for your input.

Sincerely,
**CITY OF ORONO**

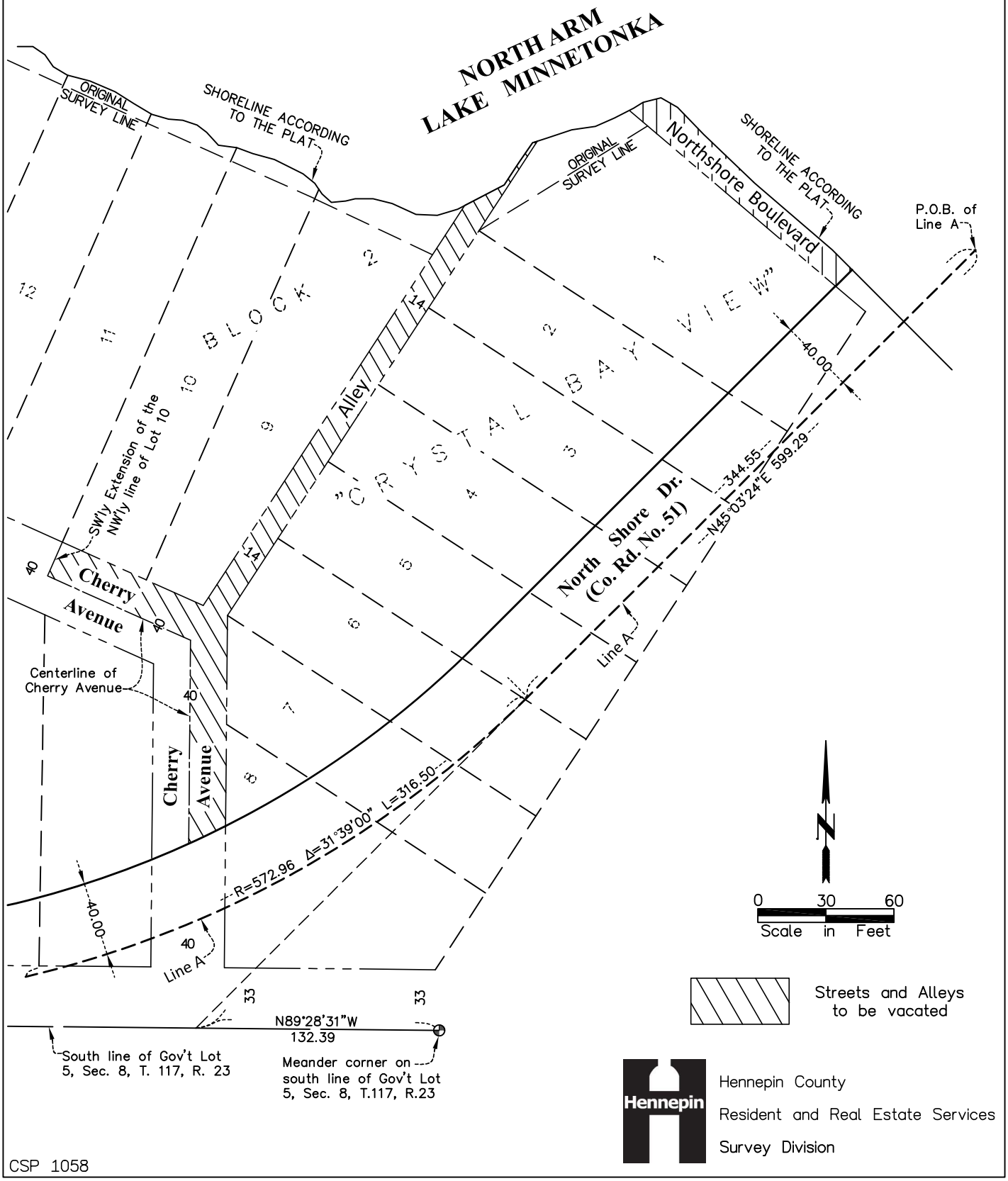
Laura Oakden,
Community Development Director

Enclosure

c: via email

# Exhibit A

**Depiction of Streets and Alleys being vacated**




Hennepin County
Resident and Real Estate Services
Survey Division

CSP 1058

## LEGAL DESCRIPTION:

Lots 1, 2, 3, 4, 5, 6, 7, 8, 9, and 10, Block 2, "Crystal Bay View" Hennepin County, Minnesota
(Per. Doc. No. 2147991)

(Abstract Property)

## LEGEND

- Boundary Line
- Survey Line
- Government Section Line
- Lot Line
- Edge of water
- B618 Concrete Curb and Gutter
- Wetland Edge
- Landscape Edge
- 931.3 — 100-Year Flood Contour Line
- 935 — Major Contour Line
- 934 — Minor Contour Line
- Metal Guardrail
- Wood Fence
- UE — Underground Electric
- GAS — Underground Gas
- 18 inch Sanitary Line
- COM — Underground Communication
- Easement Line
- Set 1/2 inch capped iron Pipe with a Plastic Cap Engraved with Minnesota License Number 48177 unless otherwise noted
- Found 1-1/4 inch capped iron Pipe unless otherwise noted
- Hennepin County Cast Iron Monument
- Aluminum Disk
- Guard Post
- Sign
- Light Pole
- Electric Meter
- Communication Riser
- HH — Hand Hole
- Sanitary Sewer Manhole
- Handicap Parking Space
- Deciduous Tree
- Concrete
- Rip-Rap

## GENERAL NOTES:

1.) Utility information is from actual field measurements as marked by utility companies or plans furnished by utility and public agencies. Project ticket number: 221572388. Contact Gopher State One Call (Phone: 651-454-0002) for exact field location prior to any excavation. Where additional or more detailed information is required, excavation, and/or a private utility locate request may be necessary.

2.) Number of Regular Parking Spaces: 48
Number of Handicap Parking Spaces: 5
Number of Boat Trailer Parking Spaces: 14
Total Number of Parking Spaces: 67

3.) 100-Year Flood Elevation (Hennepin Countywide FEMA Flood Insurance Study (FIS) dated November 4, 2016) & Ordinary High Water Level (OHWL) were found on the MN DNR Lake Flood Elevations Online map and converted to NAVD88 from NGVD29 using the NGS NCAT coordinate conversion tool.

## LIST OF POSSIBLE ENCHROACHMENTS:

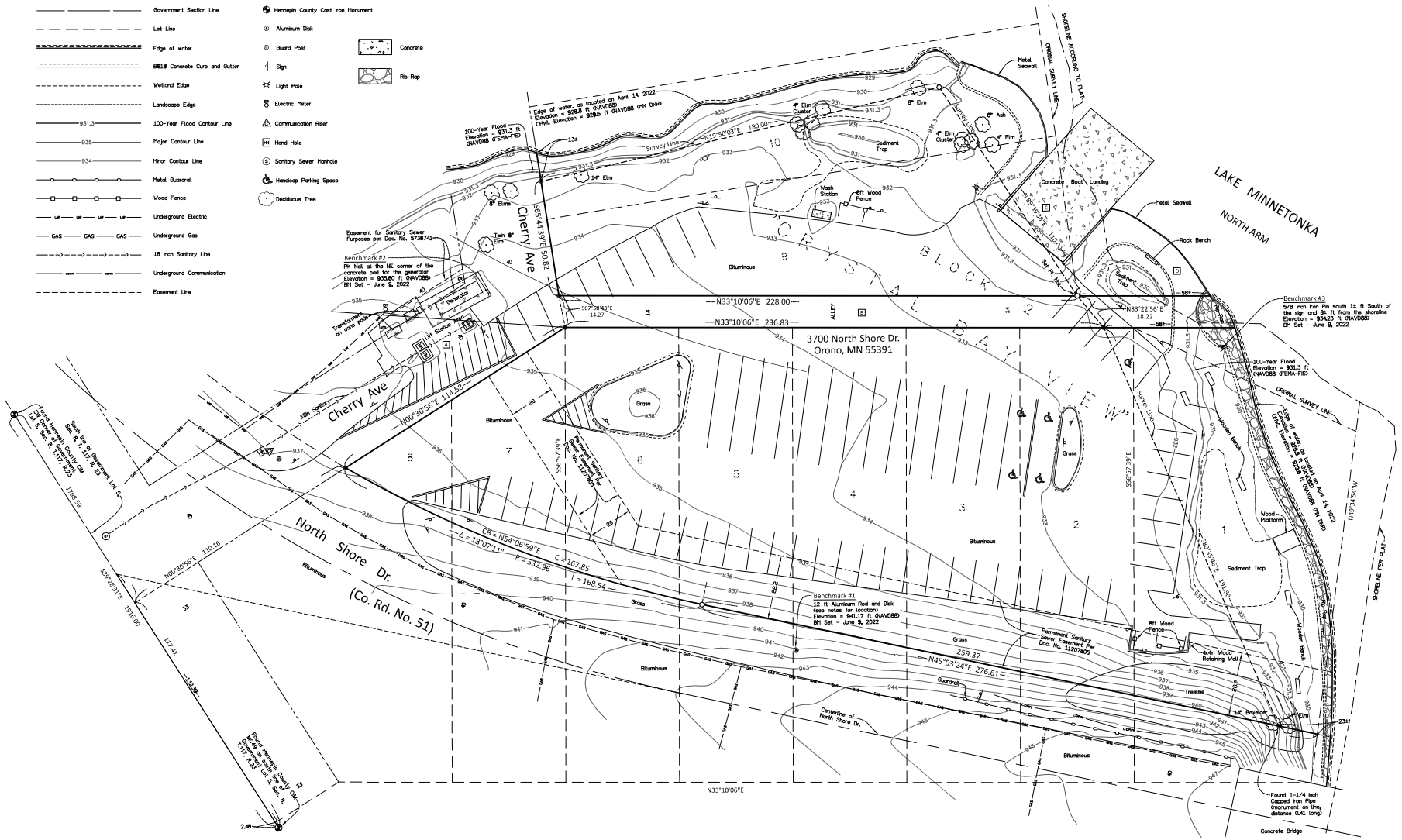
The following list of possible encroachments is only the opinion of this surveyor; should not be interpreted as a legal opinion and should not be interpreted as a complete listing.

Possible encroachments are indicated on Survey with boxed letters as listed below.

- A Parking lot and various utilities cross into street on south and westerly property line
- B Parking lot crosses into alley
- C Concrete boat launch
- D Metal Seawall for boat launch and gravel area

## SURFACE AREA CALCULATIONS:

| | | |
|---|---|---|
| East of Alley: | 51,241 sq. ft. | 1.18 acres |
| West of Alley: | 19,719 sq. ft. | 0.45 acres |
| TOTAL AREA: | 70960 sq. ft. | 1.63 acres |




Project Name:

**3700 North Shore Drive**
**Orono, Minnesota**

Project No.:

**CSP-1058**

Professional Services:

HENNEPIN COUNTY
Resident and Real Estate Services
Survey Division

Suite A-703 300 South 6th Street
Minneapolis, MN 55487

Professional Signature:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2015 Minimum Standard Detail Requirements for Hennepin County Boundary Surveys, and includes Items (1,2,3,4,5,7ab,8,9,10b,11b,14,15,19) of Table A thereof. The field work was completed on (April 19, 2022). I hereby certify that this survey, plan, or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

April 19, 2022
Timothy C. Eklund
License. No. 48177
Date

Quality Control:

| | |
|---|---|
| JRS, DMP | DD, BK |
| Field Crew | Drawn By |
| TE | August 1, 2022 |
| Checked By | Review Date |

Revisions:

| | |
|---|---|
| May 5, 2024 | Added Sanitary Sewer Easement |
| Sept. 24, 2024 | Revised the NE'ly line of North Shore Dr. (CR 51) to fit monuments along Rd. |

Disclaimer/Notes:

Project Benchmarks:

1. 12 ft Aluminum Rod and Disk "SAMS on the grass embankment 11± ft from the edge of North Shore Dr. and 71± ft from the end of the guardrail
   Elevation = 941.17 ft
2. PK Nail at the NE corner of the concrete pad for the generator
   Elevation = 935.60 ft
3. 5/8 inch Iron Pin south 1± ft of the yellow sign and 8± ft from the shoreline
   Elevation = 934.23 ft

(NAVD88 derived using GPS-RTK methods)

This survey was prepared without the benefit of current title work. Easements, appurtenances and encumbrances may exist in addition to those shown hereon. This Survey is subject to any facts that may be disclosed by a full and accurate title search.

0 20 40
Scale in Feet

BEARINGS SHOWN ON THIS SURVEY ARE BASED ON THE SOUTH LINE OF THE SOUTHWEST QUARTER OF SECTION 8, TOWNSHP 117, RANGE 23 AND HAVE AN ASSUMED BEARING OF S89°28'31"E USING HENNEPIN COUNTY GROUND COORDINATE SYSTEM RELATIVE TO NAD83(86).

Sheet Title:

**BOUNDARY AND TOPOGRAPHIC SURVEY**

Sheet No.:

**Sheet 1 of 1**

CITY OF ORONO

Street Address:
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Telephone (952) 249-4600
Fax (952) 249-4616
www.ci.orono.mn.us

14 August 2025

Chuck Mayers
CenterPoint Energy
PO Box 1165
Minneapolis, MN 55440-1165

**RE: Proposed Vacation of unimproved right-of-way bisecting PID: 0811923340061, 3700 North Shore Drive to include portions of Cherry Ave and an Alley**
**File: #LA25-000033**

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This item will be presented on the November 21, 2022 Planning Commission Meeting agenda for a public hearing. Receipt of your comments by or before Monday, November 14th would be appreciated. Please contact me directly at loakden@oronomn.gov or 952.249.4602 for more information of if you have any questions.

Thank you for your input.

Sincerely,
**CITY OF ORONO**

Laura Oakden,
Community Development Director

Enclosure

c: via email

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14 August 2025

Century Link

SENT VIA EMAIL: Nre.easement@centurylink.com

**RE: Proposed Vacation of unimproved right-of-way bisecting PID: 0811923340061, 3700 North Shore Drive to include portions of Cherry Ave and an Alley**
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Community Development Director

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14 August 2025

Office of the President
Frontier Communications
PO Box 5156
Tampa, FL 33675

**RE: Proposed Vacation of unimproved right-of-way bisecting PID: 0811923340061, 3700 North Shore Drive to include portions of Cherry Ave and an Alley**
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14 August 2025

Robert Craig
Mediacom
1670 Lake Drive W
Chanhassen, MN 55317

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14 August 2025

Xcel Energy
Attn: Mason Padilla
414 Nicollet Mall (MP-8A)
Minneapolis, MN 55401

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Sarah Strommen
Commissioner of the Department of Natural Resources
500 Lafayette Road
St. Paul, MN 55155-4040

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**CITY OF ORONO**

Laura Oakden,
Community Development Director

Enclosure

c: via email

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14 August 2025

Sean W. Lawler
Land Rights Agent
Xcel Energy
414 Nicollet Mall (MP-8A)
Minneapolis, MN 55401

**RE: Proposed Vacation of unimproved right-of-way bisecting PID: 0811923340061, 3700 North Shore Drive to include portions of Cherry Ave and an Alley**
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Sincerely,
**CITY OF ORONO**

Laura Oakden,
Community Development Director

Enclosure

c: via email

c: via email

**From:** Mayers, Charles J
**To:** Katie Fitzsimmons
**Cc:** Mayers, Charles J
**Subject:** RE: [External Email] vacation request for Orono
**Date:** Wednesday, September 3, 2025 9:23:37 AM
**Attachments:** image001.png
image002.png
image003.png
image004.png
image005.png

---

Hi Katie,

Sorry for the delay,  CenterPoint Energy has no issues or concerns with the Vacation request.  We have no facilities in the vacated area.

Have a great safe day, Katie.

Chuck Mayers


Chuck Mayers **SR/WA**
Senior Agent, Right of Way
System Integrity & Operation Support
612-321-5381 w. | 952-334-9180 c.
Charles.mayers@centerpointenergy.com


---

**From:** Katie Fitzsimmons <kfitzsimmons@oronomn.gov>
**Sent:** Monday, August 18, 2025 10:22 AM
**To:** Mayers, Charles J <charles.mayers@CenterpointEnergy.com>
**Subject:** [External Email] vacation request for Orono

> You don't often get email from kfitzsimmons@oronomn.gov. Learn why this is important

Good morning!

Please see the attached letter and enclosure regarding a vacation request in Orono. Please reach out with any questions or comments. This information was also mailed to you.

Katie

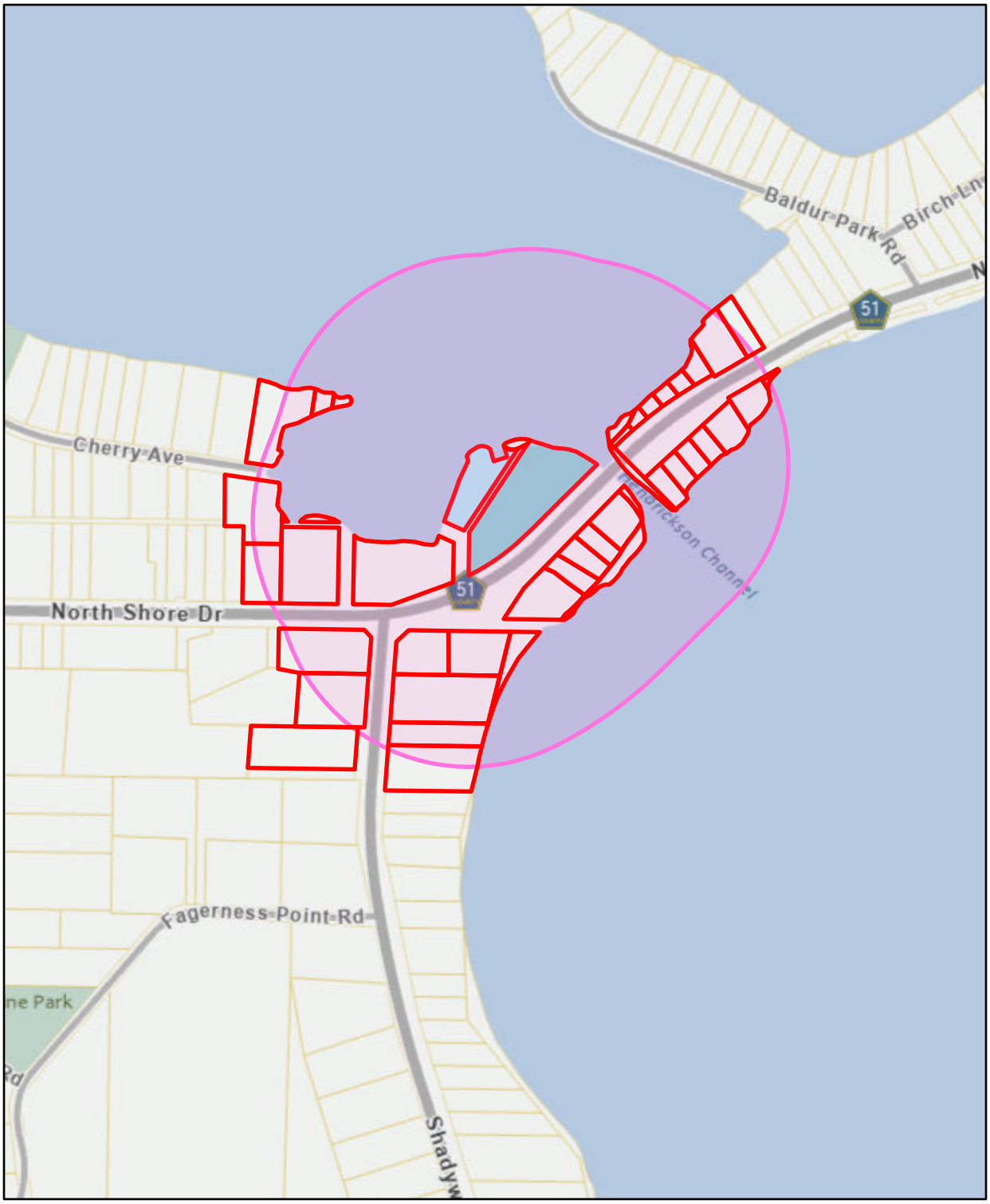
**Katie Fitzsimmons**

Planning Assistant
Direct: 952.249.4620
2750 Kelley Parkway, Orono, MN 55356
**oronomn.gov**

All permitting can be done through the city's online portal, here**.**

# Hennepin County Locate & Notify Map

Date: 7/25/2025




**Buffer Size:** 500

**Map Comments:**

3700 North Shore Dr

0 100 200 400 Feet

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

For more information, contact Hennepin County GIS Office
300 6th Street South, Minneapolis, MN 55487 / gis.info@hennepin.us

38 08-117-23 33 0001
JAMES W BECK
5152 BELMONT AVE S
MINNEAPOLIS MN 55419

38 08-117-23 33 0059
EVELYN B HAAS
3820 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 33 0089
MATTHEW B & AMY B HERMAN
3825 CHERRY AVE
MOUND MN 55364

38 08-117-23 34 0001
COUNTY OF HENNEPIN
FACILITIES SERVICES
300 S 6TH STREET MC 228
MINNEAPOLIS MN 55487

38 08-117-23 34 0002
COUNTY OF HENNEPIN
FACILITIES SERVICES
300 S 6TH STREET MC 228
MINNEAPOLIS MN 55487

38 08-117-23 34 0003
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MINNEAPOLIS MN 55487

38 08-117-23 34 0004
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MINNEAPOLIS MN 55487

38 08-117-23 34 0005
COUNTY OF HENNEPIN
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300 S 6TH STREET MC 228
MINNEAPOLIS MN 55487

38 08-117-23 34 0006
COUNTY OF HENNEPIN
FACILITIES SERVICES
300 S 6TH STREET MC 228
MINNEAPOLIS MN 55487

38 08-117-23 34 0007
ADAM LEHR
3645 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0008
ADAM LEHR & ASHLEY LEHR
3645 NORTHSHORE DRIVE
ORONO MN 55391

38 08-117-23 34 0009
MARK E WELCH
3625 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0010
ERIC ZEHNDER/GENA ZEHNDER
3619 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0011
GOLDEN PROPERTIES 1989 LLC
3605 NORTH SHORE DR
ORONO MN 55391

38 08-117-23 34 0020
KEVIN P LAWSON
ELIZABETH LAWSON
3580 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0050
AL & DONNA HAGEN
P O BOX 5
CRYSTAL BAY MN 55323

38 08-117-23 34 0051
ROBERT S COPOULS
MARY E COPOULS
7985 LEA CIRCLE
BLOOMINGTON MN 55438

38 08-117-23 34 0052
MELISSA PLACHECKI
3675 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0056
STEVEN R & JANNA S SUNDBY
3587 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0061
COUNTY OF HENNEPIN
300 S 6TH STREET MC228
MINNEAPOLIS MN 55487

38 08-117-23 34 0062
CELESTA OREL
FRANK S ARONE
3590 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0063
NANCY L BLAIR
3768 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0064
PAULA J JOHNSON
3818 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0065
JON RESSLER
CHRISTINE RESSLER
3683 NORTH SHORE DR
WAYZATA MN 55391

38 08-117-23 34 0066
FRANK PLACHECKI
3685 NORTH SHORE DR
WAYZATA MN 55391

38 17-117-23 21 0010
OMNI CUSTOM BUILDERS LLC
9145 LAKESIDE DR
VICTORIA MN 55386

38 17-117-23 21 0011
OMNI CUSTOM BUILDERS LLC
9145 LAKESIDE DRIVE
VICTORIA MN 55386

38 17-117-23 21 0012
DON & KIM ROSACKER
1620 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 21 0013
DORIS ELAINE FINN
1640 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 21 0014
JOHN L MORRISON JR
KATHERINE HALL MORRISON
11636 TIMBERLINE RD
MINNETONKA MN 55305

38 17-117-23 21 0029
BARRY JON CARLSON
DEBBIE MARIE CARLSON
3805 NORTH SHORE DR
MOUND MN 55364

38 17-117-23 21 0030
JOSEPH P LELAND
1635 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 21 0031
KYLE & ANGELA HANEPHIN
4601 PARK COMMONS DR
ST LOUIS PARK MN 55416

**From:** Laura Oakden
**To:** "Nguyen Hoang"; Kristopher Guentzel
**Cc:** Tony Brough; Ismael Martinez-Ortiz
**Subject:** RE: [External] North Arm Boat Landing Follow Up
**Date:** Wednesday, October 15, 2025 12:16:00 PM

---

Hello Guy,

Thank you for your response. I will move your application to the November 17th Planning Commission. Please submit updated plans and information back to me by **Monday October 27th.**

I am also extending the review timeline for the project. We are extending the time period for City action under Minn. Stat. § 15.99, subd. 3(f). With a complete submittal date of September 22nd; the initial 60-day period would normally end on November 21st; the application review time period is now hereby extended until January 20th, 2026. This is a routine extension requiring no action from you.

Let me know if you have any questions.
Thank you,

**Laura Oakden**
Community Development Director
City of Orono
Direct: 952-249-4602
2750 Kelley Parkway, Orono, MN 55356
www.oronomn.gov

---

**From:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>
**Sent:** Wednesday, October 15, 2025 11:46 AM
**To:** Laura Oakden <loakden@oronomn.gov>; Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Cc:** Tony Brough <Tony.Brough@hennepin.us>; Ismael Martinez-Ortiz <imartinez@imoconsultinggroup.com>
**Subject:** RE: [External] North Arm Boat Landing Follow Up

Hello Laura,

Please remove the application from Monday's agenda and put us on the November 17th Planning Commission Meeting agenda.

Hennepin County sees great value in having Orono staff recommendation to approve the application at the Planning Commission Meeting. We will address the outstanding comments/questions and submit amended plans ASAP.

Thanks,

Nguyen 'Guy' Hoang

Project Architect
Hennepin County Facility Services
300 South Sixth Street, A-22
Minneapolis, MN 55487
Office: (612) 814-1088

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**From:** Laura Oakden <loakden@oronomn.gov>
**Sent:** Wednesday, October 15, 2025 10:33 AM
**To:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Cc:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>
**Subject:** RE: [External] North Arm Boat Landing Follow Up

Hi Kris,

I called and left you a voicemail this morning, however I wanted to outline the options going forward for your team to consider.

With your current application (as applied), I identified a number of questions and points for you to clarify (See attached). Additionally, there are elements on the site we cannot support, specifically the vertical lift supporting the barge/industrial activity. My direction to our Planning Commission for Monday' night will have a *split recommendation* for approval of many of the elements, however staff will be recommending denial of any elements associated with the vertical lift. My recommendation will also include a request for clarification and improvements of the landscape screening of the site. But overall, staff's recommendation will be to *deny as applied*. I anticipate the planning commission will want to table your application until the outstanding comments and questions are addressed and amended plans are submitted. This would tentatively bring you application back to the planning commission for their November 17th meeting.

If you are planning to amend your plans to remove the vertical lift, I recommend removing your application from the Monday's agenda. This would allow you to submit your updated plans and allow city staff to review the updated plan for the November 17th Planning Commission Meeting, hopefully with a recommendation to approve.

Let me know how you want to proceed. I am available for a phone call as well.
Thank you,

**Laura Oakden**
Community Development Director
City of Orono
Direct: 952-249-4602
2750 Kelley Parkway, Orono, MN 55356
www.oronomn.gov

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**From:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Sent:** Tuesday, October 14, 2025 6:43 PM

**To:** Laura Oakden <loakden@oronomn.gov>
**Cc:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>
**Subject:** Re: [External] North Arm Boat Landing Follow Up

Good evening Laura,
I need to follow up with Lisa tomorrow and we're not able to meet until the afternoon. If we need to change approach I'll want to chat with the project team too so I likely won't be able to follow up with you until Thursday.
Kris

Get Outlook for iOS

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**From:** Laura Oakden <loakden@oronomn.gov>
**Sent:** Tuesday, October 14, 2025 5:17:07 PM
**To:** Kristopher Guentzel <Kristopher.Guentzel@hennepin.us>
**Cc:** Nguyen Hoang <Nguyen.Hoang@hennepin.us>
**Subject:** [External] North Arm Boat Landing Follow Up

> **CAUTION:** This email was sent from outside of Hennepin County. Unless you recognize the sender and know the content, do not click links or open attachments.

Hi Kris,

Just following up from that commissioner's phone call. Can you please provide me with a timeline for your project and if you are planning to amend you plans? It might be easier to have a phone call to discuss. I am free tomorrow morning 830-930 and 1030-noon.

Let me know if you are available.

**Laura Oakden**
Community Development Director
City of Orono
Direct: 952-249-4602
2750 Kelley Parkway, Orono, MN 55356
www.oronomn.gov

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computer system.

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 5.2

**Title:** LA25-000047, Brian Peters, 1978 Shadywood Road, Lake Setback and Average Lakeshore Setback Variances (Staff: Melanie Curtis)

**Presenter:** Melanie Curtis, Planner

**Section:** Public Hearings

1. **Purpose:**
   This application contemplates variances to construct an open porch addition and privacy screen on a lakeside deck.

2. **MN§15.99 Application Deadline:**
   This application was received and considered complete on October 21, 2025. The 60-day review period will end on December 20, 2025.

3. **Background:**
   The applicant proposes to construct a 202 square foot roofed porch over the existing deck on the property, 48 feet from the OHWL, where a 75-foot setback is required. Additionally, they propose to install a 5-foot-tall privacy screen on the north side of the deck, and remove/relocate the existing 18" stair tread to the center of the deck; the stair will be reduced in depth by half, reducing the hardcover by 6 square feet. The proposed privacy screen encroaches approximately 2 feet into the average lakeshore setback. For a comprehensive analysis of the application and practical difficulty, please refer to the Planning Report attached to this report as **Exhibit A**.

4. **Public Comment:**
   Supportive comments were received, see **Exhibit H**.

5. **Staff Recommendation:**
   Staff recommends approval as applied.

6. **Planning Commission Action Requested:**
   The Planning Commission should consider a motion to approve as applied.

**Exhibits**

Exhibit A - Planning Report
Exhibit B - Application_Narrative
Exhibit C - Practical Difficulty
Exhibit D - Survey
Exhibit E - Plans
Exhibit F - Hardcover Calculation
Exhibit G - Aerial photos
Exhibit H - Public Comments
Exhibit I - Map and List

**PC Exhibit A**

***Date Application Received*: 10/21/2025**
***Date Application Considered as Complete*: 10/21/2025**
***60-Day Review Period Expires*: 12/20/2025**

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Melanie Curtis, Planner MCC

**Date:** 17 November 2025

**Subject:** #LA25-000047, Brian Peters, 1978 Shadywood Road
Variance
Public Hearing

| |
|---|
| ***Application Summary:*** The applicant is requesting a 75-foot lake setback variance to construct a covered porch over an existing lakeside deck, install a privacy screen, and relocate a deck stair tread. An average lakeshore setback variance is also required for a portion of the privacy screen. |
| ***Staff Recommendation:*** Planning Department Staff recommends approval. |

**Background**
The applicant proposes to construct a 202 square foot roofed porch over the existing deck on the property, 48 feet from the OHWL where a 75-foot setback is required. Additionally, the applicant would like to install a 5-foot-tall privacy screen on the north side of the deck (10.1 feet wide), and remove/relocate the existing 18" stair tread to the center of the deck; the stair will be reduced in depth by half, reducing the hardcover by 6 square feet. The proposed privacy screen encroaches approximately 2 feet into the average lakeshore setback.



**Practical Difficulties Analysis**
Applicant Submittal Information: The applicant has identified a number of factors, including lot size, the proximity of the home to the lake, as practical difficulties supporting the requested variances. Additionally, they have provided supporting documentation regarding Practical Difficulties attached as Exhibit C, and should be asked for additional testimony regarding the application.

Planning Staff Practical Difficulty Analysis: Staff concurs with the applicant's assessment of the practical difficulties and finds that although the project will result in additional building footprint within the lake

setback, it will not result in new encroachments within the lake setback, as the porch and privacy screen will be constructed over an existing improvement (deck). The average lakeshore setback encroachment by the privacy screen is minimal, and the affected neighbor had indicated that their view will not be adversely impacted.

**LOT ANALYSIS WORKSHEET**

**Section 6.12.1550 and 6.12.6240 – Setbacks:**

The house and deck are set at an angle to the shoreline, resulting in the measurement range (noted below) in the setback measurements. The proposed setback listed is the closest point of the improvement to the OHWL.

| LR-1C DISTRICT | Required | Existing | Proposed |
|---|---|---|---|
| Rear / Street | 30’ | House ~38’ to ~47’ | No change |
| North Side | 10’ | House 10’<br>Deck 9.6’ | House No Change<br>Covered porch 36’ |
| South Side | 10’ | House 20’<br>Deck 24’ | Covered porch 41’ |
| Lakeshore | 75’ | House 57’<br>Deck ~41’ to ~57’<br>Deck step ~47.8’ | ***Covered porch ~48’***<br>***Deck privacy screen ~41’***<br>***Deck Step ~47’*** |
| Average Lakeshore | The porch project will conform to the average lakeshore setback; the privacy screen will encroach approximately 2 feet into the ALS. | | |

**Section 6.12.1550 – Lot Area/Width:**

| LR-1C DISTRICT | Lot Area | Lot Width |
|---|---|---|
| Required | 21,780 s.f. (0.5 acres) | 100’ |
| Actual | 13,850 s.f. (0.32 acre) | 108’@ 75’ / 101’@ OHWL |

**Section 6.12.6930 – Structural Building Coverage:**

| Total Lot Area | Total Structural Coverage |
|---|---|
| 13,850 s.f. (0.32 acre) | Allowed: 2,770 s.f. (20%) s.f.<br>Existing: 2401 s.f. (17.3%)<br>Proposed: 2,603 s.f. (18.7%) |

**Section 6.12.9110 and 6.12.9210 – Hardcover Calculations:**

The existing and proposed hardcover calculations below have been adjusted by staff to address some inaccuracies – lot area, building coverage, and the change to the deck stair tread, which is not reflected in the submitted hardcover calculation worksheets. The existing tread is 12.5 square feet, and the proposed stair tread is 6.5 square feet. Refer to the staff-adjusted hardcover calculation worksheets attached as **Exhibit F.**

| Stormwater Overlay District Tier | Total Area in Zone | Allowed Hardcover | Existing Hardcover | Proposed Hardcover |
|---|---|---|---|---|
| Tier 1 | 13,850 s.f. | 3,462.5 s.f.<br>(25 %) | 4,418 s.f.<br>(31.9%) | 4,412 s.f.<br>(31.8%) |

**Applicable Regulations:**

75-foot Lake Setback & Average Lakeshore Setback Variances (Section 6.12.6240)

The proposal does not add new hardcover to the property; rather, the plan reflects a 6 square foot reduction (stair tread change). The 75-foot setback significantly encumbers the property and cuts the house in half. The proposed porch is considered to be an expansion of the building footprint and will be situated 48 feet from the OHWL, constructed over the existing deck, entirely within the 75-foot setback requiring a variance.

A 5-foot-tall privacy screening fence is proposed to be placed on top of the deck on the north side, where the applicant plans to place their outdoor cooking area. The deck is 18 inches from grade, so the total height of the privacy screen will be 6.5 feet. This side of the deck is 41 feet from the lake; therefore, a lake setback variance is required for the screening fence. A portion of the privacy screen is also within the average lakeshore setback.

**Governing Regulation:**

**Variance (Section 6.12.530)**

*In reviewing applications for variance, the Planning Commission shall consider the effect of the proposed variance upon the health, safety, and welfare of the community, existing and anticipated traffic conditions, light and air, danger of fire, risk to the public safety, and the effect on values of property in the surrounding area. The Planning Commission shall consider recommending approval for variances from the literal provisions of the Zoning Code in instances where their strict enforcement would cause practical difficulties because of circumstances unique to the individual property under consideration, and shall recommend approval only when it is demonstrated that such actions will be in keeping with the spirit and intent of the Orono Zoning Code.* Economic considerations alone do not constitute practical difficulties. Practical difficulties also include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. §216C.06, subd. 14, when in harmony with this chapter. The board or the council may not permit, as a variance, any use that is not permitted under this chapter for property in the zone where the affected person's land is located. The board or council may permit, as a variance, the temporary use of a one-family dwelling as a two-family dwelling.

According to MN §462.357 Subd. 6(2) variances shall only be permitted when:

1. The variance is in harmony with the general intent and purpose of the Ordinance. **The proposed variance is in harmony with the purpose of the Ordinance. The property includes difficulties in its size and proximity to the lake. The proposed porch addition will not encroach closer to the lake than the existing deck and does not encroach into the average lakeshore setback. The average lakeshore setback variance requested for the privacy screen is minimal and will not further impact views of the lake for adjacent properties.**
2. The variance is consistent with the comprehensive plan. **The proposed variances to construct a small open porch addition and privacy screen, resulting in a 6 square foot reduction in hardcover on this property, are consistent with the comprehensive plan.**
3. The applicant establishes that there are practical difficulties.
    a. The property owner proposes to use the property in a reasonable manner not permitted by the official controls; **The request to allow the privacy screen and open porch addition entirely within the 75-foot setback and (a portion of the privacy screen within the) average lakeshore setback appears to be reasonable considering the location of the existing home and its proximity to the lake, the orientation of the neighboring homes is reasonable.**
    b. There are circumstances unique to the property not created by the landowner; **The location of the existing home prevents changes or expansions, particularly on the lake side. The proposed overall hardcover level is being reduced, and the privacy screen and porch**

**addition will not impact the views of the lake from the neighboring homes. The circumstances are unique to the property;** and

**c.** The variance will not alter the essential character of the locality. **The variances requested to permit the construction of a privacy screen and a small, open porch addition to the home, designed over an existing deck to minimize impacts on the lake. The location will not impact the neighbors' views of the lake and will fit the character of the neighborhood according to the submitted information.**

Additionally, City Code Section 6.12.530 provides additional parameters within which a variance may be granted as follows:

4. Economic considerations alone do not constitute practical difficulties. **Economic considerations have not been a factor in the variance approval determination.**
5. Practical difficulties also include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. § 216C.06, subd. 17, when in harmony with Orono City Code Chapter 6.12. **This condition is not applicable.**
6. The board or the council may not permit as a variance any use that is not permitted under Orono City Code Chapter 6.12 for property in the zone where the affected person's land is located. **This condition is not applicable, as improvements to the principal building are allowed in the LR-1C District.**
7. The board or council may permit, as a variance, the temporary use of a one-family dwelling as a two-family dwelling. **This condition is not applicable.**
8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property. **The existing home's proximity and orientation to the lakeshore and the location of the adjacent homes create difficulties for the Owners in improving the property consistent with the homes in their neighborhood.**
9. The conditions do not apply generally to other land or structures in the district in which the land is located. **The unique condition of the extreme proximity of the home to the lake creates difficulties for the owners.**
10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant. **Granting the variances is necessary for the preservation of the property rights of the owners.**
11. The granting of the proposed variance will not in any way impair health, safety, comfort, or morals, or in any other respect be contrary to the intent of this chapter. **Granting the requested variances in this unique situation is not contrary to the intent of the zoning chapter.**
12. The granting of such variance will not merely serve as a convenience to the applicant, but is necessary to alleviate demonstrable difficulty. **The requested variances are necessary to address the limited building area of the property and do not merely serve as a convenience to the applicant.**

The Commission may recommend, or the Council may impose conditions in granting variances. Any conditions imposed must be directly related to and must bear a rough proportionality to the impact created by the variance. No variance shall be granted or changed beyond the use permitted in this chapter in the district where such land is located.

**Public Comments**

Supportive comments have been received from the neighbors on either side of the applicant's home, attached as **Exhibit H**.

**Issues for Consideration**

1. Does the Planning Commission find that the property owner proposes to use the property in a reasonable manner that is not permitted by an official control?
2. Does the Planning Commission find that the variances, if granted, will not alter the essential character of the neighborhood?
3. Does the Commission find it necessary to impose conditions to mitigate the impacts created by the granting of the requested variances?
4. Are there any other issues or concerns with this application?

**Planning Staff Recommendation**

Planning Staff recommends approval of the application as applied.

PC
Exhibit B

# Land Use Application Summary

**Application Date:** 10/21/2025

**Address:** 1978 Shadywood RD
Orono, MN 55391

**Parcel Number:** 1711723240026

**Land Use Number:** LA25-000047

**Application Submitted By:** Agent on behalf of property owner

**Owner:**

**Name:** BRIAN R PETERS
**Address:** 1978 SHADYWOOD RD WAYZATA MN 55391

**Applicant:**

**Name:** Nick Rukamp
**Company:** Decks Elevated LLC
**Address:** 1161 E Wayzata Blvd #29
Wayzata, MN 55391

**Contact Information:**

**Associated Contact:** BRIAN R PETERS

**Associated Contact:** David Burda

**Associated Contact:**

**Associated Contact:**

**Project Description:** Covered roof over deck, moving step outside existing footprint, backsplash on outdoor kitchen

**Land Use Application Type:**

- Amendmend Application ☐
- Appeal of Admin Decision ☐
- Concept Application ☐
- Conditional Use Permit ☐
- Site Plan Application ☐
- Subdivision Application ☐
- Subdivision Exception ☐
- Vacation Application ☐
- Variance Application ☑

**Applicant Signature:**



# Project Summary

1978 Shadywood Road
Wayzata, MN 55391

**General Overview:**
Homeowners are proposing to construct a two-season porch of approximately 260SF over a portion of its existing deck along with an outdoor kitchen and high-top table seating for three. Due to setback constraints given the placement of the house relative to the lakeshore, variance approval is needed for the new two-season porch, the relocation of an existing 8' single step and new decorative backsplash wall for the new kitchen area.

**Project Rationale:**
Homeowners desire to expand the functionality and livability of its existing indoor / outdoor space. At present, our small single family rambler house provides limited indoor entertainment space for guests and family outings, especially during the spring, summer and fall seasons. The addition of the two-season porch that will contain both retractable screens and vinyl window shades on all three sides will nicely expand the homes' functionality and livability for most of the year. Maximizing our use of outdoor space is a top priority for us as it is likely for most who reside in Minnesota, especially those that are fortunate enough to live on the lake as we are. Having covered space will allow us to enjoy the outdoors more regularly even when the weather is marginal with wind and or rain. It will protect us from hot summer days when the sun's intensity requires shade. It also provides a level of safety for those more sensitive to the sun without compromising their ability to still enjoy the outdoors with others.

The existing step is being relocated to the center of the porch for safety reasons and aesthetically makes the most sense. In total, the two-season porch will encompass approximately 260SF (23' x 11'- 3") when accounting for the 18-inch overhang on each of the north and south side of the porch and 12-inch overhang on the lake side. Apart from the 12-inch overhang on the lake side, the entire new structure falls within the existing deck structure. The proposed 12-inch overhang will help keep water from hitting the patio furniture and better facilitate water runoff away from the deck and step and is consistent with the overhangs on the existing house. The new addition of 260SF when combined with our existing roof coverage of the house (1,825SF) and detached garage (576SF) falls within the city's 20% limit (2,661SF / 13,850SF = 19.2%).

The new decorative backsplash fixture measuring 10'- 2" wide and 60" tall is being installed for a variety of functional reasons that include defining the kitchen space, providing protection to the cabinetry and grill, serving as a backsplash to prevent items from falling off the backside and serving as a mounting surface for task lighting and hooks for utensils. The backsplash is a modest 24" above the countertop and most averaged height individuals can comfortably see over the top. And finally, the decorative wall does not impede the sight line of either of our adjoining neighbors and both are fully supportive of the project as noted in their respective signed letters.

PC
Exhibit C

# PRACTICAL DIFFICULTIES DOCUMENTATION FORM

***LA25-000047***

**1. The property owner proposes to use the property in a reasonable manner not permitted by the Zoning Chapter.**

**Response:** Applicant Response:
The applicant has established practical difficulties that justify the requested variance. First, the proposed two-season porch is a reasonable residential improvement consistent with normal use in this zoning district, but it is not permitted under current setback requirements. Second, the need for the variance is due to unique circumstances not created by the landowner, including the lot size, placement of existing home and proximity to the shoreline, which limits the applicant's buildable area. Third, the proposed addition will not alter the essential character of the locality. The proposed two-season porch is modest in scale, designed to match the home, and is in keeping with similar residential structures in the area. It will not negatively affect neighbors or the surrounding environment. As for the relocation of the step and the addition of the decorative backsplash fixture, both add to the safety and functionality of the project's intent. Rationale for both requests are detailed in the attached Project Summary. Additionally, both adjoining neighbors fully support the project as noted in their respective letters.

**2. The plight of the landowner is due to circumstances unique to his property not created by the landowner.**

**Response:** Applicant Response:
The applicant has established practical difficulties that justify the requested variance. First, the proposed two-season porch is a reasonable residential improvement consistent with normal use in this zoning district, but it is not permitted under current setback requirements. Second, the need for the variance is due to unique circumstances not created by the landowner, including the lot size, placement of existing home and proximity to the shoreline, which limits the applicant's buildable area. Third, the proposed addition will not alter the essential character of the locality. The proposed two-season porch is modest in scale, designed to match the home, and is in keeping with similar residential structures in the area. It will not negatively affect neighbors or the surrounding environment. As for the relocation of the step and the addition of the decorative backsplash fixture, both add to the safety and functionality of the project's intent. Rationale for both requests are detailed in the attached Project Summary. Additionally, both adjoining neighbors fully support the project as noted in their respective letters.

**3. The variance, if granted, will not alter the essential character of the locality.**

**Response:** Applicant Response:
The applicant has established practical difficulties that justify the requested variance. First, the proposed two-season porch is a reasonable residential improvement consistent with normal use in this zoning district, but it is not permitted under current setback requirements. Second, the need for the variance is due to unique circumstances not created by the landowner, including the lot size, placement of existing home and proximity to the shoreline, which limits the applicant's buildable area. Third, the proposed addition will not alter the essential character of the locality. The proposed two-season porch is modest in scale, designed to match the home, and is in keeping with similar residential structures in the area. It will not negatively affect neighbors or the surrounding environment. As for the relocation of the step and the addition of the decorative backsplash fixture, both add to the safety and functionality of the project's intent. Rationale for both requests are detailed in the attached Project Summary. Additionally, both adjoining neighbors fully support the project as noted in their respective letters.

**4. Economic considerations alone do not constitute practical difficulties if reasonable use for the property exists under the terms of the Zoning Chapter.**

**Response:** Applicant Response:
Economic considerations are not the sole basis for this variance request. The need arises due to the property's unique site conditions, specifically, lot size, placement of existing home and proximity to the shoreline, which limit compliance with the current setback requirements. The goal is to allow a reasonable residential use that respects the property's physical constraints, not to avoid construction costs or maximize property value.

**5. Practical difficulties include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minnesota Statutes, Section 116J.06, Subd. 2, when in harmony with this Chapter.**

**Response:** Applicant Response:
The proposed two-season porch, relocation of step and addition of a decorative backsplash fixture does not involve a solar

energy system, so inadequate access to direct sunlight is not a factor in this request. However, practical difficulties exist due to lot size, placement of existing home and proximity to the shoreline, which limit compliance with zoning standards. These difficulties are consistent with the intent of the statute, which recognizes that not all hardships are financial or self-created.

**6. The Board of Appeals and Adjustments or the Council may not permit as a variance any use that is not allowed under this Chapter for property in the zone where the affected person's land is located.**

**Response:** Applicant Response:
The proposed two-season porch and step is allowed residential use under Orono City Code Chapter 78 for the zoning district in which the property is located. The variance request pertains to a rear-yard setback constraint and does not involve any use that is not otherwise permitted in this district. The use remains fully consistent with the zoning code. Although the proposed decorative backsplash fixture exceeds the railing code height of 36", its purpose is not to act as a customary deck railing but rather a functioning fixture in the overall outdoor kitchen design and use. It's the only singular fixture that exceeds this height restriction, which is modest in scale (10' – 2" wide by 5' tall) and does not adversely impact the sight lines of each adjoining neighbor, both of whom are in full support of the project as submitted. Rationale for the decorative backsplash fixture is summarized on the attached Project Summary.

**7. The Board or Council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling.**

**Response:** Applicant Response:
This clause does not apply to the current variance request. The proposed improvements are being made to a single-family residence and do not involve the temporary or permanent conversion of the home into a two-family dwelling. The property will continue to be used as a single-family residence, consistent with the zoning district and permitted uses.

**8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property.**

**Response:** Applicant Response:
The property's proximity to the shoreline limits the applicant's buildable area and results in unusual setback constraints not experienced by other lots farther from natural features. These special conditions are physical in nature, not economic or self-imposed, and are peculiar to this site and its immediate surroundings.

**9. The conditions do not apply generally to other land or structures in the district in which said land is located.**

**Response:** Applicant Response:
The conditions necessitating this variance do not apply generally to other properties in the zoning district. This property is uniquely affected by lot size, placement of existing home and proximity to the shoreline, which are not common to many lots in the area. These site-specific constraints make compliance with current setback requirements unusually difficult, whereas other properties in the district typically have more standard configurations that allow for compliant development.

**10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant.**

**Response:** Applicant Response:
Granting this variance is necessary to preserve the applicant's ability to reasonably enjoy a substantial property right, specifically, the ability to improve one's home with a modest two-season porch and outdoor kitchen, which are not unusual features of single-family homes in this area. Without the variance, the applicant would be unable to make these improvements solely due to unique physical constraints of the lot. Other homes in the area have comparable additions that do not require variances, so this request ensures fair and equitable use of the property. The proposed two-season porch will provide expanded functional living space for most of the year and enhance the livability of the home with minimal expansion of the overall hardcover footprint.

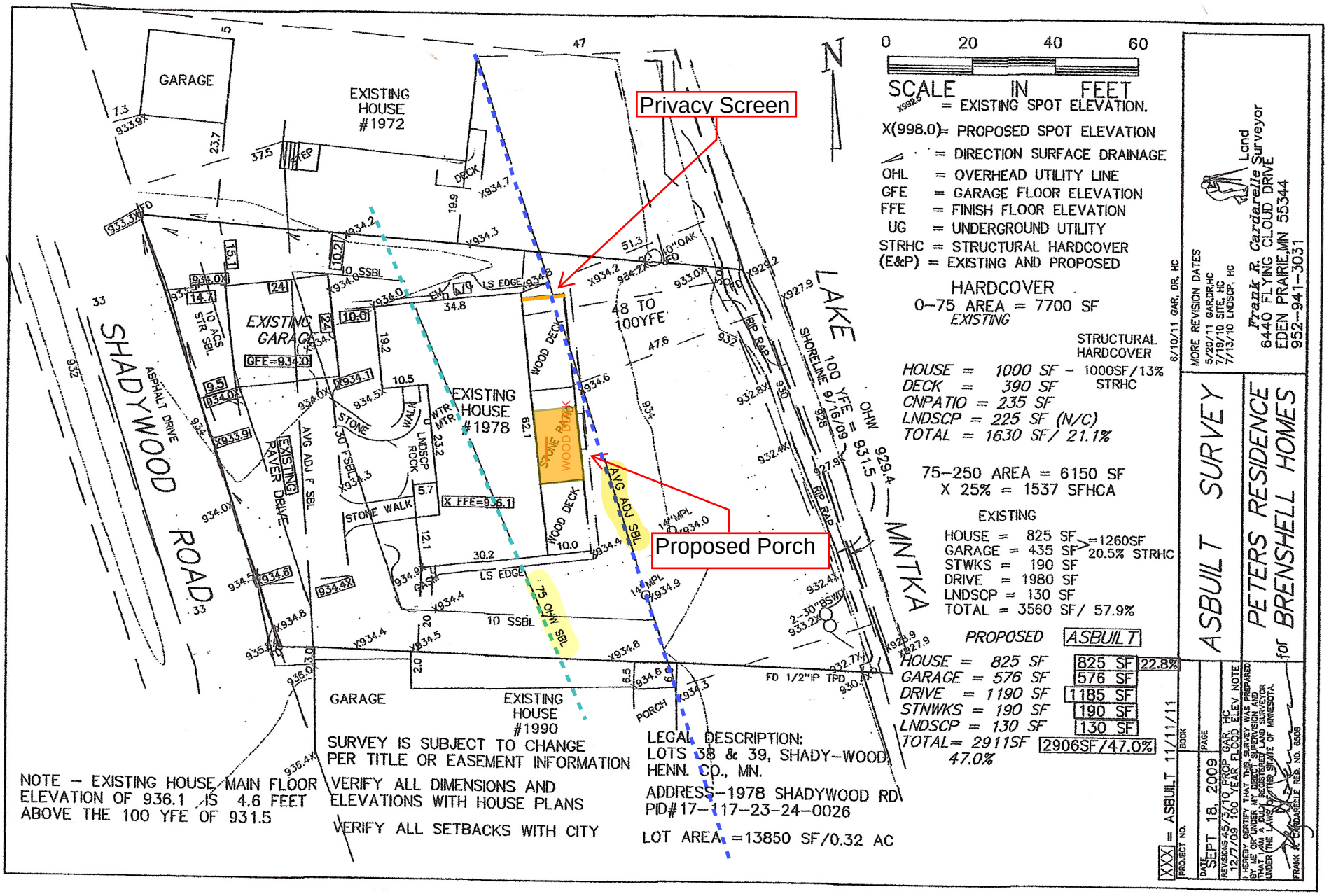
**11. The granting of the proposed variance will not in any way impair health, safety, comfort, morals, or in any other respect be contrary to the intent of the Zoning Code.**

**Response:** Applicant Response:
Granting the proposed variance will not impair health, safety, comfort, or morals, nor will it be contrary to the intent of Orono City Code Chapter 78. The additions have been designed with appropriate materials and construction standards, and it will not impact sight lines, drainage, access, or emergency services. The proposed two-season porch and new kitchen area is consistent in scale and appearance with neighboring homes and maintains the residential character of the

neighborhood. The variance request respects the underlying goals of the zoning code to promote orderly, safe, and compatible development.

**12. The granting of such variance will not merely serve as a convenience to the applicant but is necessary to alleviate demonstrable difficulty.**

**Response:** Applicant Response:
The requested variance is not being sought merely for convenience. It is necessary to alleviate a demonstrable difficulty caused by the unique physical characteristics of the property, specifically, lot size, location of existing home and proximity to the shoreline. These factors make it impractical to construct a modest two-season porch in full compliance with zoning requirements. The variance allows for a reasonable residential improvement that would be permitted on many other properties without the same constraints. This request is rooted in a need to overcome a legitimate physical limitation of the property, not in a desire to gain an advantage or convenience beyond what is typical for similarly situated properties.


Privacy Screen
Proposed Porch
GARAGE
EXISTING HOUSE #1972
EXISTING GARAGE
EXISTING HOUSE #1978
EXISTING HOUSE #1990
SHADYWOOD ROAD
LAKE MINTKA
SCALE IN FEET
0 20 40 60
= EXISTING SPOT ELEVATION.
X(998.0)= PROPOSED SPOT ELEVATION
= DIRECTION SURFACE DRAINAGE
OHL = OVERHEAD UTILITY LINE
GFE = GARAGE FLOOR ELEVATION
FFE = FINISH FLOOR ELEVATION
UG = UNDERGROUND UTILITY
STRHC = STRUCTURAL HARDCOVER
(E&P) = EXISTING AND PROPOSED
HARDCOVER
0–75 AREA = 7700 SF
EXISTING
STRUCTURAL HARDCOVER
HOUSE = 1000 SF – 1000SF/13% STRHC
DECK = 390 SF
CNPATIO = 235 SF
LNDSCP = 225 SF (N/C)
TOTAL = 1630 SF/ 21.1%
75–250 AREA = 6150 SF
X 25% = 1537 SFHCA
EXISTING
HOUSE = 825 SF =1260SF
GARAGE = 435 SF 20.5% STRHC
STWKS = 190 SF
DRIVE = 1980 SF
LNDSCP = 130 SF
TOTAL = 3560 SF/ 57.9%
PROPOSED ASBUILT
HOUSE = 825 SF 825 SF 22.8%
GARAGE = 576 SF 576 SF
DRIVE = 1190 SF 1185 SF
STNWKS = 190 SF 190 SF
LNDSCP = 130 SF 130 SF
TOTAL= 2911SF 2906SF/47.0%
47.0%
NOTE – EXISTING HOUSE MAIN FLOOR ELEVATION OF 936.1 IS 4.6 FEET ABOVE THE 100 YFE OF 931.5
SURVEY IS SUBJECT TO CHANGE PER TITLE OR EASEMENT INFORMATION
VERIFY ALL DIMENSIONS AND ELEVATIONS WITH HOUSE PLANS
VERIFY ALL SETBACKS WITH CITY
LEGAL DESCRIPTION:
LOTS 38 & 39, SHADY-WOOD HENN. CO., MN.
ADDRESS–1978 SHADYWOOD RD
PID#17–117–23–24–0026
LOT AREA =13850 SF/0.32 AC
ASBUILT SURVEY
PETERS RESIDENCE
for BRENSHELL HOMES
Land Surveyor
Frank R. Cardarelle
6440 FLYING CLOUD DRIVE
EDEN PRAIRIE,MN 55344
952–941–3031
MORE REVISION DATES
6/10/11 GAR, DR, HC
5/20/11 GAR,DR,HC
7/19/10 SITE, HC
7/13/10 LNDSCP, HC
= ASBUILT 11/11/11
PROJECT NO. XXX
DATE SEPT 18, 2009
BOOK
PAGE
REVISIONS 45/3/10 PROP GAR, HC
12/7/09 100 YEAR FLOOD ELEV NOTE
I HEREBY CERTIFY THAT THIS SURVEY WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY REGISTERED LAND SURVEYOR UNDER THE LAWS OF THE STATE OF MINNESOTA.
FRANK R. CARDARELLE REG. NO. 6508

PC
Exhibit E

# SUMMARY OF BUILD DETAILS

**1) FOOTING DETAILS -** EXISTING HELICAL PIERS (TORQUE REPORTS WILL BE PROVIDED)
**2) BEAM DETAILS -** EXISTING.

**3) JOIST DETAILS -** EXISTING.

**4) LEDGER DETAILS -** EXISTING

**5) DECKING DETAILS -** EXISTING

**6) FASCIA DETAILS -** EXISTING

**8) STAIRCASE DETAILS -** TREX TRANSCEND STAIR TREADS IN HATTERAS WITH AZEK PAINT PRO RISER.

**9) ROOF BEAMS DETAILS -** 1 3/4 X 11 7/8 LVL.

**10) ROOF DETAILS:** - 2X10 FIR RAFTERS 16"OC

VARIANCE REQUEST:

1. ADDITION OF COVERED ROOF OVER TOP OF EXISTING DECK.
2. ADDITION OF STEP OUTSIDE OF EXISTING FOOT PRINT.
3. ADDITION OF ALUMINUM BACKSPLASH / PRIVACY WALL.

## TABLE OF CONTENTS


1 COVER PAGE
3 SUMMARY OF DETAILS
4 PROJECT DESIGN
5 EXISTING FRAMING DETAILS
6 EXISTING PROJECT DETAILS

9 PRIVACY WALL DETAILS

11 ROOF FRAMING DETAIL
12 PORCH FRAMING DETAIL
13 3-D RENDERING
14 3-D RENDERING


## EXISTING CONDITIONS



**DESIGN FOR**

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

**SHEET TITLE**

Summary of Details

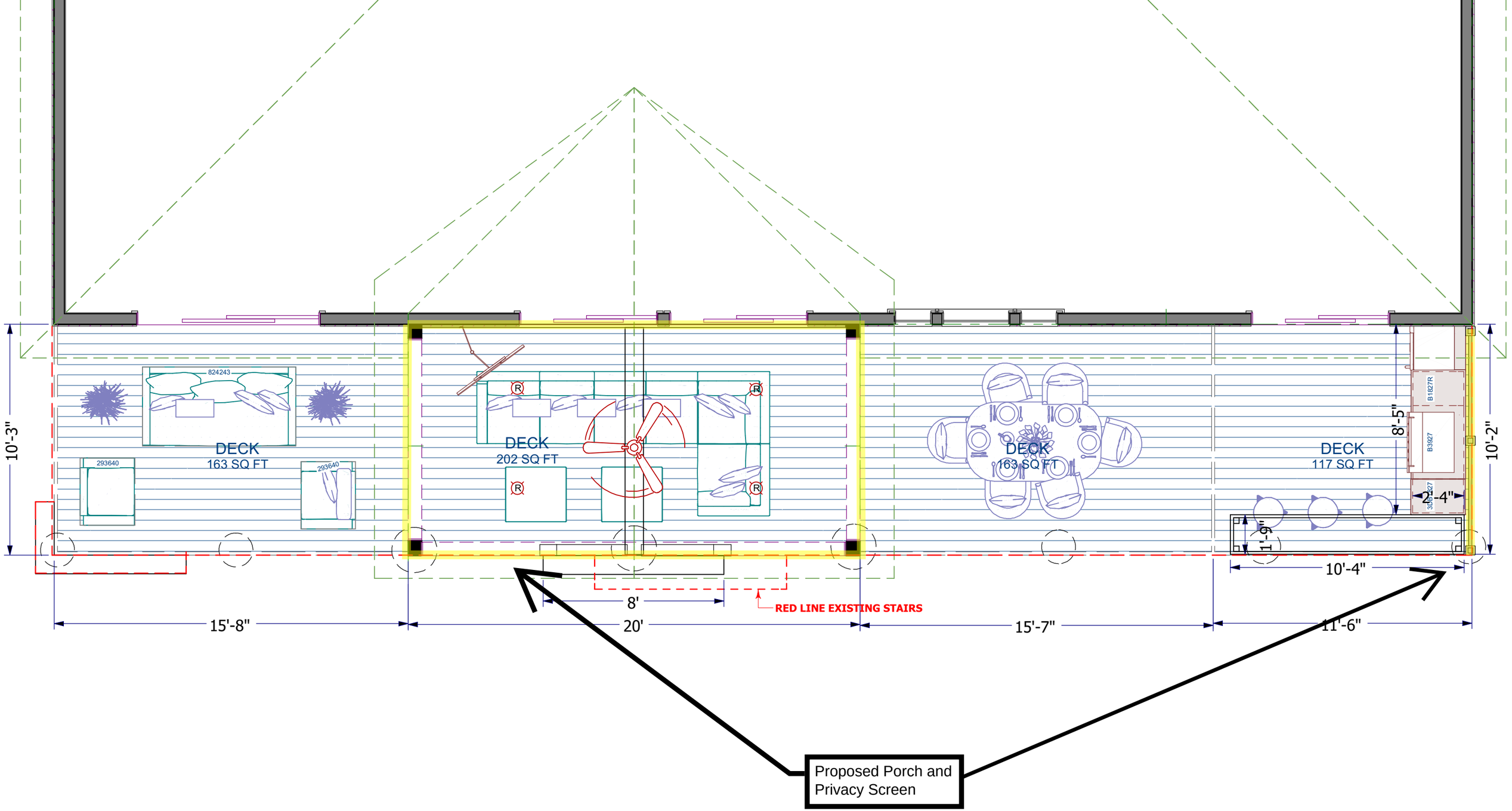
**SHEET DETAILS**

DATE 10/20/2025
SCALE 1/4"
SHEET NUMBER: 3

**DESIGN BY**


DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638


DECKS ELEVATED




**DESIGN FOR**

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

**SHEET TITLE**

Project Design Version 4

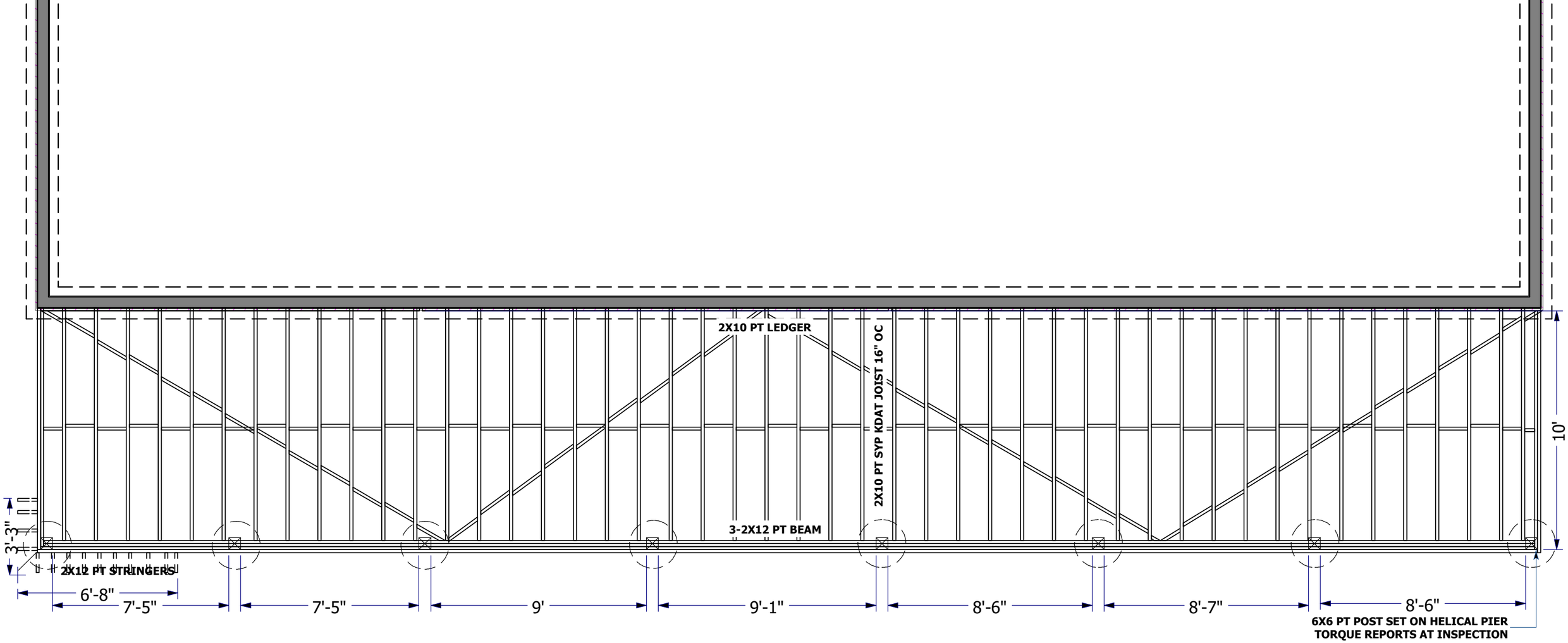
**SHEET DETAILS**

DATE 10/20/2025
SCALE 1/4"
SHEET NUMBER: 4

**DESIGN BY**

DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED




DESIGN FOR

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

SHEET TITLE

**Existing Framing Details - Foundation Level**

SHEET DETAILS

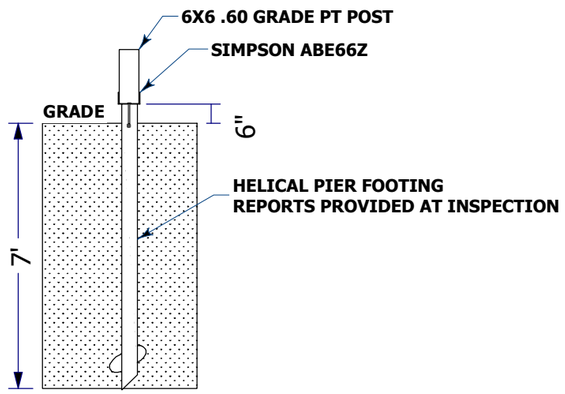
DATE 9/8/2025
SCALE 1/4"
SHEET NUMBER: 5

DESIGN BY

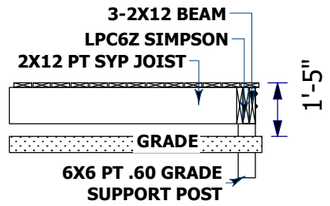
DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED

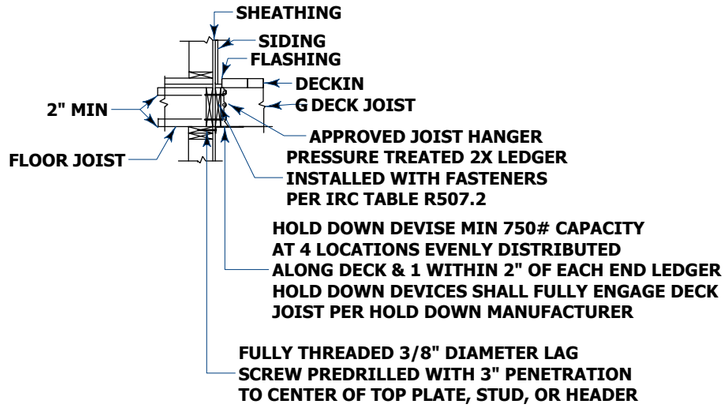
## PD-1 FOOTING DETAIL



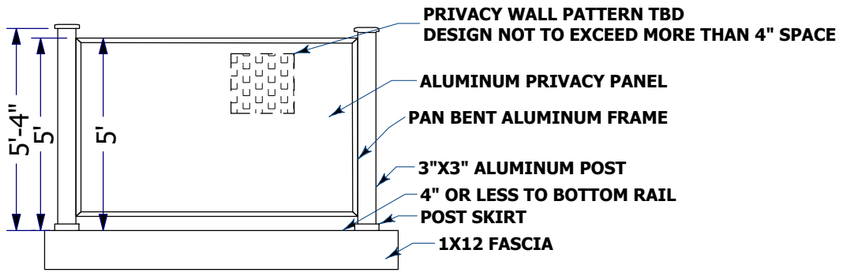

## PD-2 BEAM DETAIL



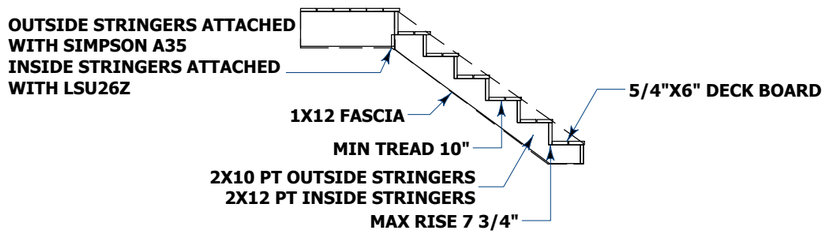

## PD-3 LEDGER DETAIL




## PD-4 RAILING DETAIL




## PD-5 STAIRCASE DETAIL




DESIGN FOR

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

SHEET TITLE

Existing Project Details

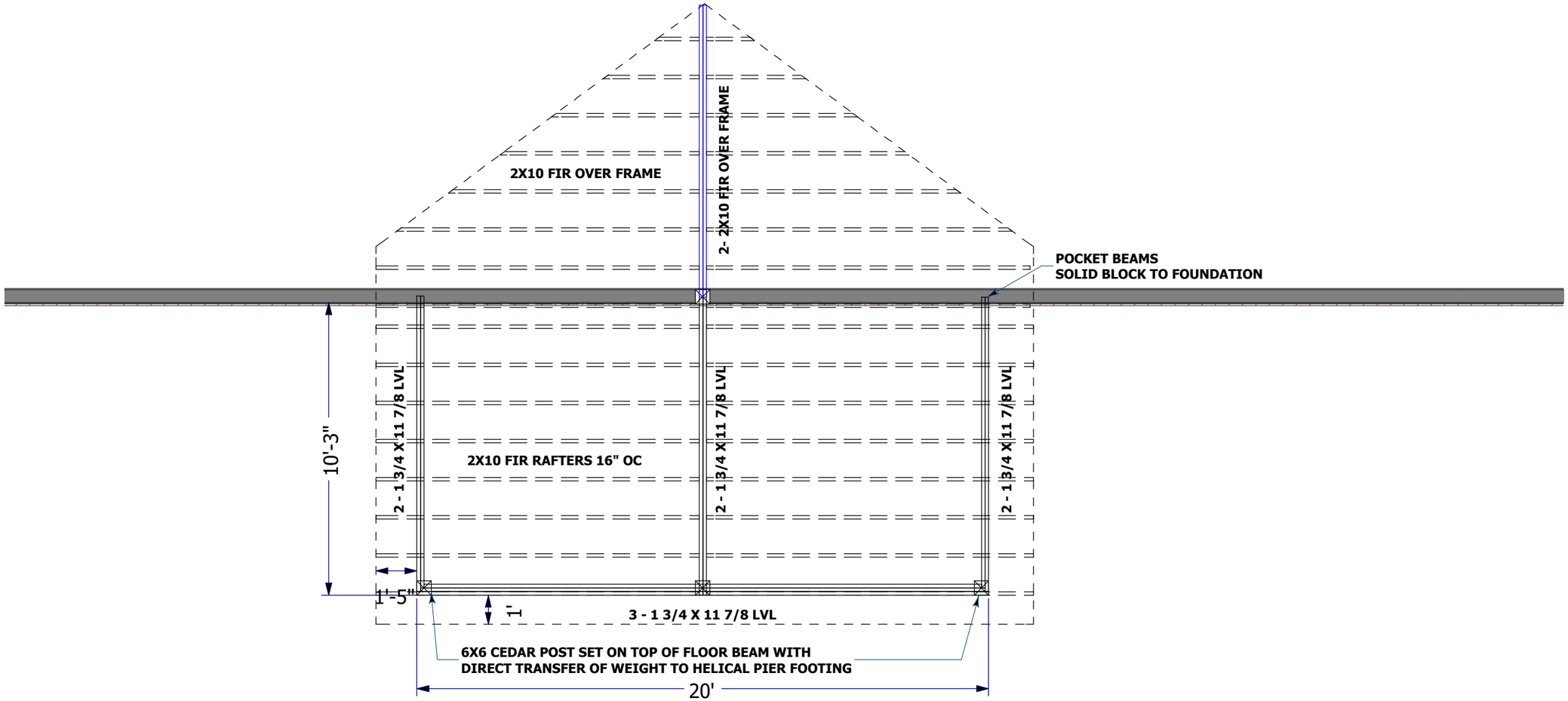
SHEET DETAILS

DATE 9/8/2025
SCALE 1/4"
SHEET NUMBER: 6

DESIGN BY

DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED




**DESIGN FOR**

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

**SHEET TITLE**

Roof Framing Details

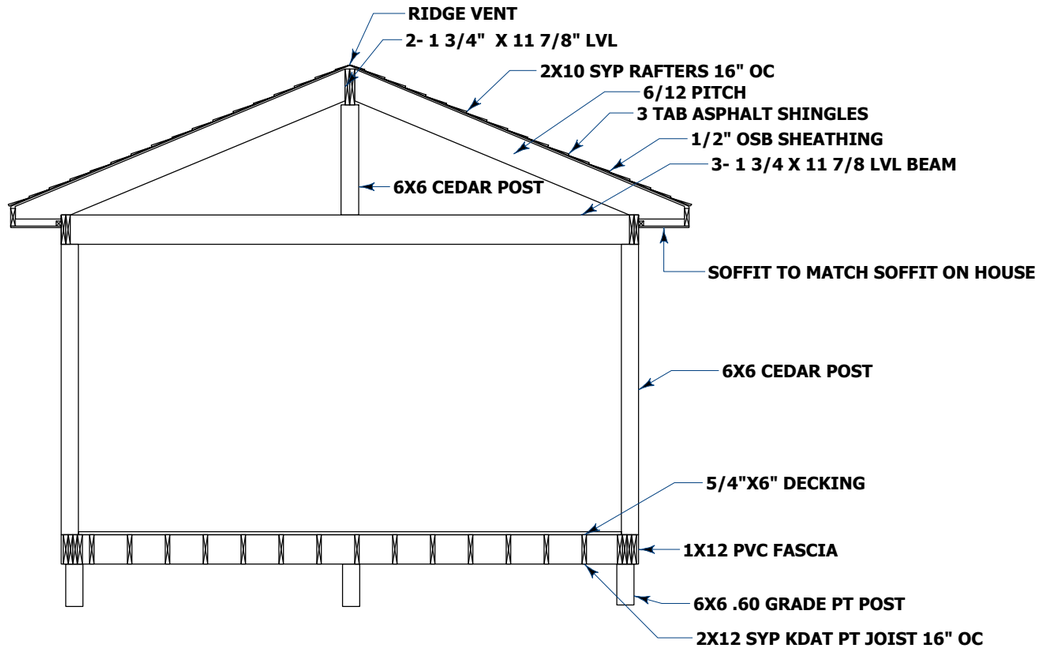
**SHEET DETAILS**

DATE 10/20/2025
SCALE 1/4"
SHEET NUMBER: 11

**DESIGN BY**

DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED




DESIGN FOR

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

SHEET TITLE

Porch Framing Details

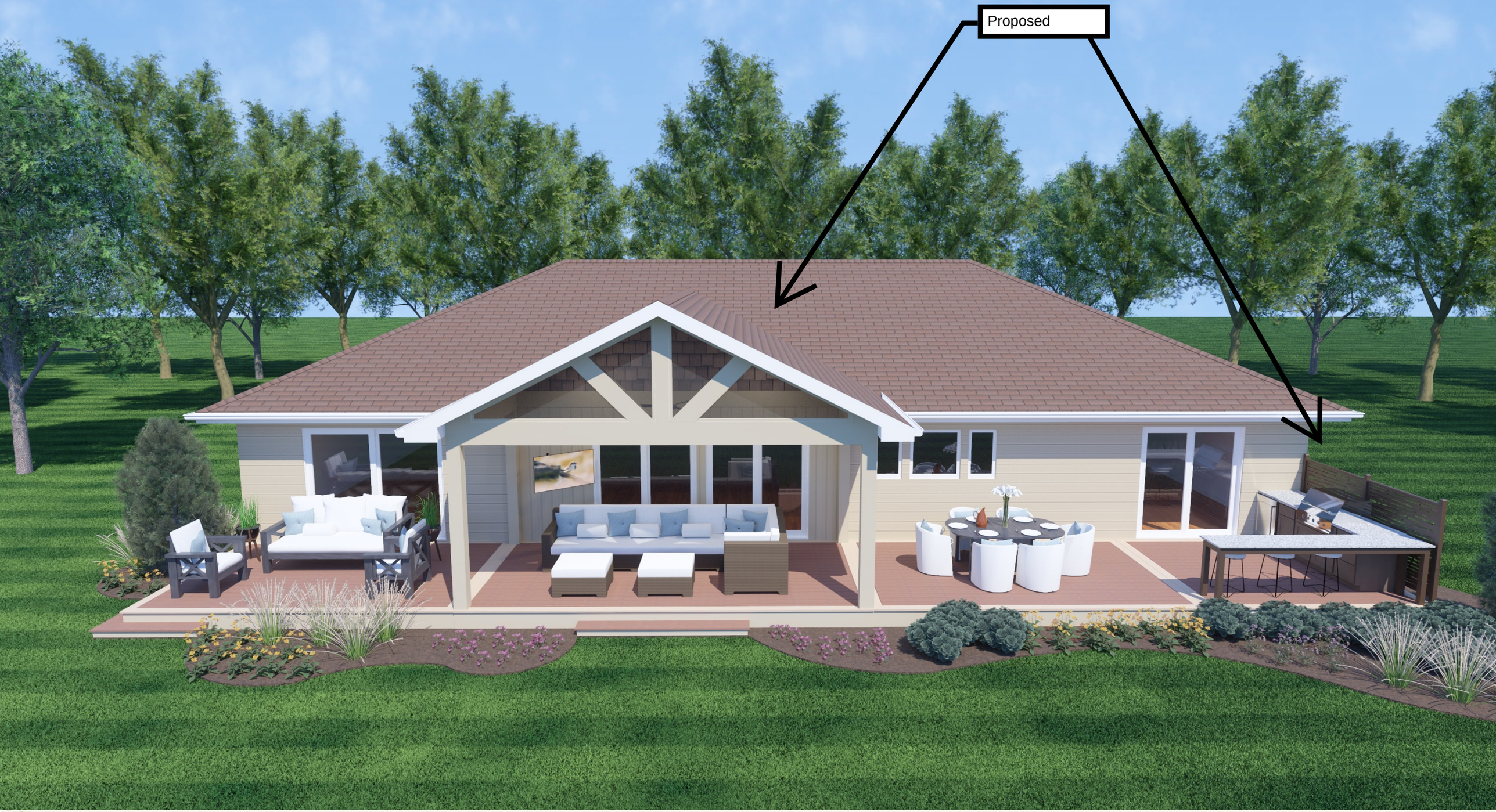
SHEET DETAILS

DATE 10/20/2025
SCALE 1/4"
SHEET NUMBER: 12

DESIGN BY

DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED




DESIGN FOR

Brian & Lynn Peters
1978 Shadywood Rd
Orono, MN 55391

SHEET TITLE

3-D Rendering

SHEET DETAILS

DATE 10/20/2025 SHEET NUMBER: 13

DESIGN BY

DECKS ELEVATED
1161 E WAYZATA BLVD #29
WAYZATA, MN 55391
LIC: BC804638

DECKS ELEVATED

**PC Exhibit F**

* staff edits *

City of Orono

# Hardcover Calculation Worksheet

Property Address: 1978 Shadywood Rd

Prepared by: Nick Rukamp per info from Survey Date: 8/20/25

Stormwater Quality Overlay District Tier: (Circle one) **Tier 1*** **Tier 2** **Tier 3** **Tier 4** **Tier 5**

**Step 1: EXISTING HARDCOVER**

In the following table identify all items of existing hardcover on the property, keyed by letter to site plan or survey (must accompany this form). Use as many lines as necessary to accurately depict the existing hardcover status of the property. *For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | Building | 2401 | ~~1401~~ S.F. |
| B | Driveway | | 1190 S.F. |
| C | Concrete walk | | 190 S.F. |
| ~~D~~ | ~~Landscaping~~ | | ~~130~~ S.F. |
| E | Deck > Deck | | 390 S.F. |
| F | Patio | | 235 S.F. |
| G | stair tread | | 12.5 S.F. |
| H | | | S.F. |
| I | | | S.F. |
| J | | | S.F. |
| K | | | S.F. |
| L | | | S.F. |
| M | | | S.F. |
| N | | | S.F. |
| O | | | S.F. |
| P | | | S.F. |
| Q | | | S.F. |
| R | | | S.F. |
| S | | | S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Existing Hardcover | | 4418.5 | ~~3536~~ S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | S.F. |
| (3) Net Existing Hardcover [Subtract line (2) from line (1)] | | | S.F. |
| (4) Total Lot Area | | 13,850 | ~~7700~~ S.F. |
| **Existing Hardcover Percentage [ (3) ÷ (4) ]** | | | 31.9 ~~46~~ % |

City of Orono

# Hardcover Calculation Worksheet

Property Address: 1978 Shadywood Rd

Prepared by: Nick Rukamp per info from Survey Date: 8/20/25

Stormwater Quality Overlay District Tier: (Circle one) **Tier 1** **Tier 2** **Tier 3** **Tier 4** **Tier 5**

**Step 2: PROPOSED HARDCOVER**

In the following table, identify all items of proposed hardcover on the property, keyed by letter to the site plan or survey (must accompany this form). Include all existing hardcover items that are intended to remain, as well as all proposed hardcover items that will be added. Use as many lines as necessary to accurately depict the proposed hardcover of the property. For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | Building | 2401 | ~~1401~~ S.F. |
| B | Driveway | | 1190 S.F. |
| C | Concrete walk | | 190 S.F. |
| D | ~~Landscaping~~ | | ~~130~~ S.F. |
| E | New Deck | adjust for porch roof | ~~625~~ 423 S.F. |
| F | ~~Soffit overhang from roof over deck~~ | | ~~23~~ S.F. |
| G | deck stair tread | | 6.5 S.F. |
| H | porch roof | | 202 ) S.F. |
| I | | | S.F. |
| J | | | S.F. |
| K | | | S.F. |
| L | | | S.F. |
| M | | | S.F. |
| N | | | S.F. |
| O | | | S.F. |
| P | | | S.F. |
| Q | | | S.F. |
| R | | | S.F. |
| S | | | S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Proposed Hardcover | | 4412.5 | ~~3559~~ S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | S.F. |
| (3) Net Proposed Hardcover [Subtract line (2) from line (1)] | | | S.F. |
| (4) Total Lot Area | | 138510 | ~~7700~~ S.F. |
| **Proposed Hardcover Percentage [ (3) ÷ (4) ]** | | 31.8 | ~~46.2~~ % |

**PC Exhibit G**

Property Map

Search by Address or PID ▾ search help ⓘ

1978 Shadywood Road, Orono

Results | Property Links

| | |
|---|---|
| **PID** | 1711723240026 |
| **Address** | 1978 Shadywood Rd,<br>Orono, MN 55391 |

| Owner/Taxpayer | |
|---|---|
| **Owner** | Brian R Peters Rev Tr Et Al |
| **Taxpayer** | BRIAN R PETERS<br>1978 SHADYWOOD RD<br>WAYZATA MN 55391 |
| **Tax Parcel** | |
| **Parcel Area** | 0.31 acres<br>13,608 sq ft |
| **Torrens/Abstract** | Torrens |
| **Addition** | Shady-Wood |
| **Lot** | 039 |
| **Block** | |
| **Metes & Bounds** | Lots 38 And 39 |
| **Tax Data (Assessed 2024, Payable 2025)** | |
| **Market Value** | $1,796,000 |
| **Total Tax** | $18,863.68 |
| **Property Type** | Residential |
| **Homestead** | Homestead |
| **Year Built** | 1940 |
| **Tax Data (Assessed 2025, Payable 2026)** | |
| **Market Value** | $1,844,000 |
| **Property Type** | Residential |
| **Homestead** | Homestead |
| **Year Built** | 1940 |
| **Sales** | |
| **Sale Code** | Excluded From Ratio Studies |
| **Sale Price** | $530,000 |
| **Sale Date** | 10/2009 |
| **Tax District** | |
| **School Dist** | 277 |
| **Sewer Dist** | |
| **Watershed Dist** | 3 |

**This data is updated monthly March - December; prior month end data is reflected by mid-month**




Subject

Panorama
Tue Apr 25 2023



PC
Exhibit H

FROM THE DESK OF

# SEAN WENHAM AND LEAH SPLAVEC

October 20, 2025

Melanie Curtis
City of Orono
2750 Kelley Parkway
Orono, MN 55356

Dear Melanie,

It has been brought to our attention that Brian Peters and Lynne James, at 1978 Shadywood Road are doing a substantial project at their home.

Brian has shared the plans and we are quite impressed. We welcome the patio project. Please don't hesitate to contact us directly at 612-730-5626.

Sincerely yours,

Sean P Wenham
612-730-5626
spwenham@icloud.com

Leah N Splavec
612-202-8642
splavsf@gmail.com

1972 Shadywood Rd

Michael R. Mischke
1972 Shadywood Road
Orono, MN 55391
763-544-2605

October 20, 2025

Brian Peters
1978 Shadywood Road
Orono, MN 55391

Dear Brian,

I am in receipt of your patio design and renderings sent to me on 10/20/25 and have reviewed them accordingly. I'm in full support of your new patio.

Let me know if you need anything else from me regarding this project.

Best Regards,

Michael R. Mischke

**PC Exhibit I**

17 17-117-23 31 0003
RESTAURANTS NO LIMIT INC
3746 SUNSET DR
SPRING PARK MN 55384

17 17-117-23 31 0045
MSP HOLDINGS LLC
5666 ALEXANDRA DR
MINNETRISTA MN 55364

17 17-117-23 31 0049
RESTAURANTS NO LIMIT INC
3746 SUNSET DR
SPRING PARK MN 55384

38 17-117-23 24 0013
MARK J KOSEK
1875 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0014
GABRIEL JABBOUR
23500 SMITHTOWN ROAD
SHOREWOOD MN 55331-1726

38 17-117-23 24 0019
MICHAEL LUNDBERG
1890 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0020
MEGAN TULLY MCMANUS
1910 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0021
JAN P GASTERLAND
1133 THORN ST
ST PAUL MN 55106

38 17-117-23 24 0022
DAVID A ELMQUIST
1930 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0023
WILLIAM KENNETH MELIN
1940 SHADYWOOD RD
ORONO MN 55391

38 17-117-23 24 0024
DAVID & CYNTHIA BURDA
1966 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0025
MICHAEL MISCHKE
1972 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0026
BRIAN R PETERS
1978 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0027
LEAH N SPLAVEC REVOCABLE TRU
1990 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 24 0028
THOMAS M KELLER
RENEE A KELLER
1998 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 31 0001
CAMBRIA COMPANY LLC
805 ENTERPRISE DR E
STE H
BELLE PLAINE MN 56011

38 17-117-23 31 0002
JOHN E HADLEY
RANDI J CHASE
2016 SHADYWOOD RD
ORONO MN 55391

38 17-117-23 31 0011
SCOTT R PALMER
JAYNE R PALMER
2024 SHADYWOOD RD
WAYZATA MN 55391

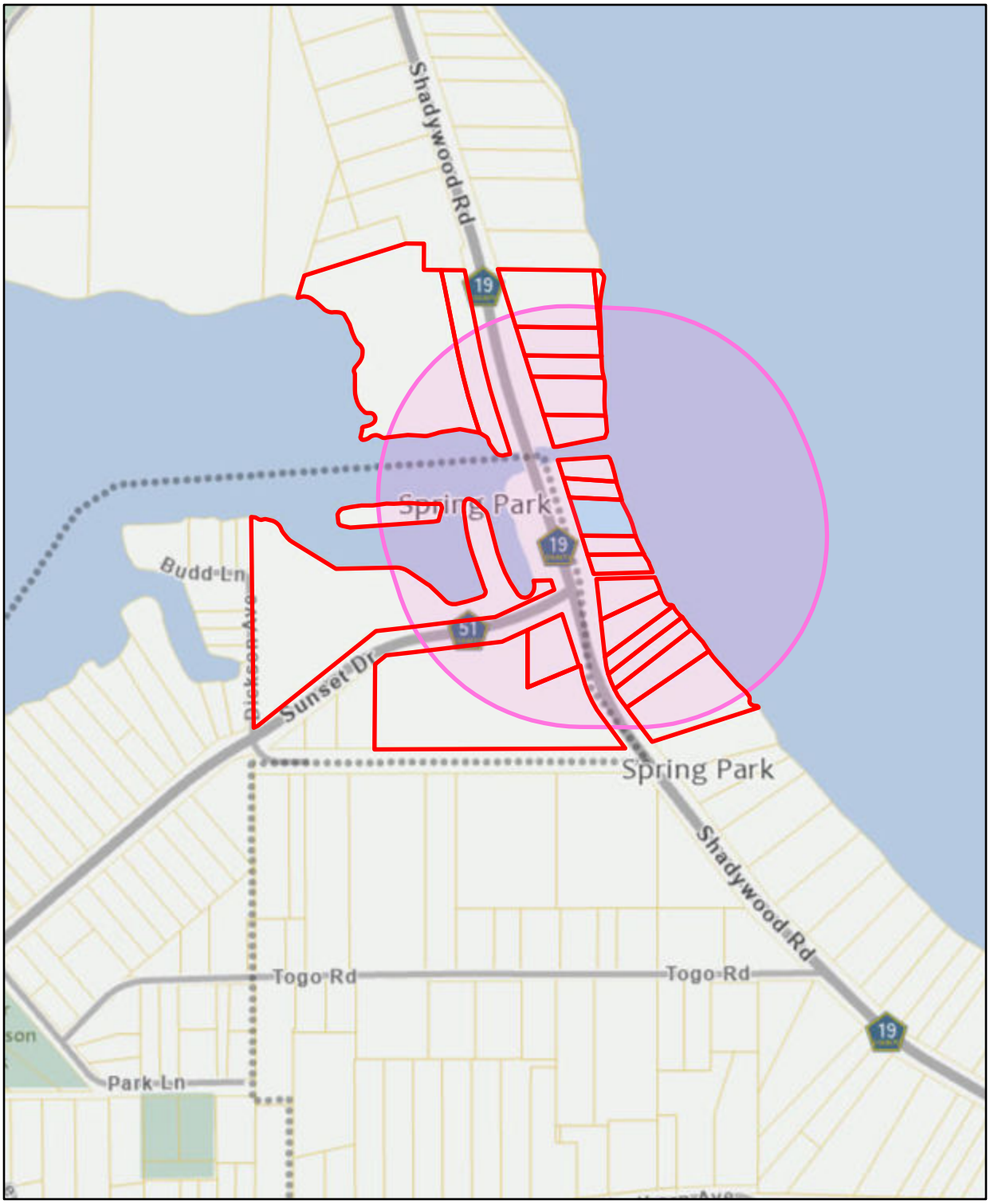
38 17-117-23 31 0012
CHRISTOPHER G WOLF
KIMBERLY S WOLF
2032 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 31 0013
DAVID CHARLES ZOSCHKE
JUDY KAY ZOSCHKE
2040 SHADYWOOD RD
WAYZATA MN 55391

38 17-117-23 31 0052
KATHRYN H SCHAEFER
TIMOTHY G SCHAEFER
2060 SHADYWOOD RD
WAYZATA MN 55391

# Hennepin County Locate & Notify Map

Date: 10/21/2025




**Buffer Size:** 500

**Map Comments:**

1978 Shadywood Rd

0 100 200 400 Feet

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

For more information, contact Hennepin County GIS Office
300 6th Street South, Minneapolis, MN 55487 / gis.info@hennepin.us

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 5.3

**Title:** LA25-000048, Hoxie Homes, 755 Tonkawa Rd, Variance (Matthew Karney)

**Presenter:** Matt Karney, Planner

**Section:** Public Hearings

1. **Purpose:**
   The applicant requests approval of average lakeshore setback variance to construct an accessory sauna building.

2. **MN§15.99 Application Deadline:**
   The application was made on October 22, 2025 and deemed complete on November 5, 2025. The 60-day review period expires on January 4, 2026.

3. **Background:**

   The applicant proposes a 148 square foot sauna on the property adjacent to the existing residence, with the proposed location is outside of the 75-foot lakeshore setback, but within the average lakeshore setback. The property most recently had a conditional use permit approved in December 2024 for the rebuilding of a lakeside deck and retaining wall system.

4. **Public Comment:**
   No public comments have been received.

5. **Staff Recommendation:**
   Planning Staff recommends approval as applied.

6. **Planning Commission Action Requested:**
   If the commission agrees with staff's analysis; a motion should be made for approval of the application.

**Exhibits**

A - Staff Report
B - Application & Practical Difficulties
C - Aerial Imagery
D - Cover Letter
E -Survey
F - Building Plans
G - Mailing

**Date Application Received: 10/22/2025**
**Date Application Deemed Complete: 11/05/2025**
**60-Day Review Period Expires: 01/04/2026**

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Matthew Karney, Planner

**Date:** 17 November 2025

**Subject:** #LA25-000048, Hoxie Homes & Remodeling, LLC, 755 Tonkawa Road
Variance – Public Hearing

| |
|---|
| ***Application Summary:*** The applicant requests approval of an average lakeshore setback variance to construct an accessory building. |
| ***Staff Recommendation:*** Planning Department Staff recommends approval of the variance. |

**Background**
The applicant proposes an accessory sauna building lakeward of the existing principal residence on the property. The proposed building is 148 square feet in size, and is proposed to be located 79.9 feet from the lakeshore, 139 feet lakeward of the average lakeshore setback The property is compliant with other zoning standards, including hardcover.

The City Council approved LA24-000060, a conditional use permit for new and replacement retaining walls above a deteriorating deck near the lakeshore on December 9, 2024. This project is currently in-progress.

**Practical Difficulties Analysis**
Applicant Submittal Information:
The applicant has proposed a reasonable building location mindful of the 75' lakeshore setback, and articulates it will not impact lake views.

Planning Staff Practical Difficulty Analysis:
The proposed building is screened by the principal residence, when looking from the residence on the adjacent property to the south. There is significant vegetation and distance between the proposed building and the nearest principal buildings on the property to the north, where the proposed building will be sufficiently buffered and screened. The average lakeshore setback is designed to protect lake views, and the proposed building does not impact the lakeviews of either adjacent property.

**LOT ANALYSIS WORKSHEET**

**Section 6.12.1450 – Setbacks: Accessory Buildings <1,000 square feet**

| LR-1B District | Required | Existing | Proposed |
|---|---|---|---|
| Interior Side (North) | 10' | N/A | 11.4' Proposed Accessory Building |
| Lakeshore | 75' | N/A | 79.9' Proposed Accessory Building |
| Average Lakeshore | At its closest, the ALS is 129 feet from the lakeshore. The proposed building is located 139 feet lakeward of the ALS line, which is approximately the distance of the existing house lakeward of the ALS. | | |

**Section 6.12.9000 – Hardcover Calculations:**

| Stormwater Overlay District Tier | Total Area in Zone | Allowed Hardcover | Existing Hardcover | | Proposed Hardcover | |
|---|---|---|---|---|---|---|
| Tier 1 | 101,429 s.f. | 25,357 s.f. (25 %) | 16,823 s.f. (16.6%) | 2,517 s.f. within 75' setback | 17,264 s.f. (17%) | 2,517 s.f. within 75' setback |

**Applicable Regulations:**

Average Lakeshore Setback Variance (Section 6.12.6240)

The property is situated between a residential property on the south and a non-residential property, Camp Teko, where the average lakeshore setback line is measured from the closest lakeward protrusions of the nearest principal building, north of the property, to the closest lakeward protrusion on the residence on the property to the south. The average lakeshore setback line is a minimum of 129 feet from the OHWL (south) and 213 feet from the OHWL (north). The proposed accessory building is located approximately the same distance lakeward of the average lakeshore setback line as the existing house. Despite the proposed building being located this distance lakeward of the average lakeshore setback, the potential impacts to lake views on either adjacent property is anticipated to be minimal, if at all.

**Governing Regulation: Variance (Section 6.12.530)**

*In reviewing applications for variance, the Planning Commission shall consider the effect of the proposed variance upon the health, safety, and welfare of the community, existing and anticipated traffic conditions, light and air, danger of fire, risk to the public safety, and the effect on values of property in the surrounding area. The Planning Commission shall consider recommending approval for variances from the literal provisions of the Zoning Code in instances where their strict enforcement would cause practical difficulties because of circumstances unique to the individual property under consideration, and shall recommend approval only when it is demonstrated that such actions will be in keeping with the spirit and intent of the Orono Zoning Code.* Economic considerations alone do not constitute practical difficulties. Practical difficulties also include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. §216C.06, subd. 14, when in harmony with this chapter. The board or the council may not permit, as a variance, any use that is not permitted under this chapter for property in the zone where the affected person's land is located. The board or council may permit, as a variance, the temporary use of a one-family dwelling as a two-family dwelling.

According to MN §462.357 Subd. 6(2) variances shall only be permitted when:

1. The variance is in harmony with the general intent and purpose of the Ordinance:

   *The average lakeshore setback is intended to protect lake views from the principal buildings adjacent lakeshore properties. The proposed building is screened sufficiently by the existing house and tree canopy. This criterion is met.*

2. The variance is consistent with the comprehensive plan:

   *The proposed variance to construct an accessory building that supports a residential use in LR-1B zoning is consistent with the comprehensive plan. This criterion is met.*

3. The applicant establishes that there are practical difficulties.
   a. The property owner proposes to use the property in a reasonable manner not

permitted by the official controls:

*The proposal for a less than 200 square foot accessory building is reasonable. The location of the average lakeshore setback on the property creates a difficulty for the owner as the proposed building will be adequately screened from both adjacent properties. This criterion is met.*

b. There are circumstances unique to the property not created by the landowner:

*The average lakeshore setback excludes a significant amount of the property from the placement of the proposed building. The proposed location meets the intent of the regulation and will not impact lake views. This criterion is met.*

c. The variance will not alter the essential character of the locality:

*The character of the locality will not be altered with the granting of a variance. The average lakeshore setback is to protect lake views, and lake views will not be impacted with the proposal. This criterion is met.*

Additionally, City Code 78-123 provides additional parameters within which a variance may be granted as follows:

4. Economic considerations alone do not constitute practical difficulties:

*Economic considerations are not a practical difficulty supporting the variance request. This criterion is met.*

5. Practical difficulties also include but are not limited to inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. § 216C.06, subd. 17, when in harmony with Orono City Code Chapter 78:

*This condition is not applicable.*

6. The board or the council may not permit as a variance any use that is not permitted under Orono City Code Chapter 78 for property in the zone where the affected person's land is located:

*Accessory buildings are permitted within LR-1B zoning. The property is between two and three acres in size and is permitted up to 2,400 square feet of accessory buildings. This proposal will have the allowable square footage of accessory buildings at 1,214 square feet. This criterion is met.*

7. The board or council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling:

*This condition is not applicable.*

8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property:

*Both the conditions of the property, and the application of the average lakeshore are unique. The proposed accessory building, although it doesn't meet the average lakeshore setback, is meeting the intent of the regulation. This criterion is met.*

9. The conditions do not apply generally to other land or structures in the district in which the land is located:

*The conditions of the property do not apply generally to other land or structures within the district. The varying distances between principal buildings and the lakeshore on the adjacent properties has a substantial impact on the building envelope of the subject property, given the lack of visual impact the proposed building will have on the adjacent properties. This criterion is met.*

10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant:

*The approval of a variance for the proposed accessory building is necessary for the preservation and enjoyment of the owner's property rights. The proposed building will not impact lake views, but is impacted by the setback in place to protect lake views. This criterion is met.*

11. The granting of the proposed variance will not in any way impair health, safety, comfort or morals, or in any other respect be contrary to the intent of this chapter:

*The variance to construct the proposed building will not impact the health, safety, comfort and morals of other residents in the area. The variance meets the intent of the average lakeshore setback where the lake views on adjacent properties will not be impacted. This criterion is met.*

12. The granting of such variance will not merely serve as a convenience to the applicant but is necessary to alleviate demonstrable difficulty:

*The granting of the requested variance is reasonable and would alleviate a difficulty placed on the owner. This criterion is met.*

The Commission may recommend or Council may impose conditions in granting of variances. Any conditions imposed must be directly related to and must bear a rough proportionality to the impact created by the variance. No variance shall be granted or changed beyond the use permitted in this chapter in the district where such land is located.

**Public Comments**
No public comments have been received as of the submittal of this report.

**Planning Staff Recommendation**
Planning Staff recommends approval as applied.

**List of Exhibits**

Exhibit A. Staff Report
Exhibit B. Application & Practical Difficulties
Exhibit C. Imagery
Exhibit D. Cover Letter
Exhibit E. Survey
Exhibit F. Building Plans
Exhibit G. Mailing List & Map

# Land Use Application Summary

**Application Date:** 10/22/2025

**Address:** 755 Tonkawa RD
Orono, MN 55356

**Parcel Number:** 0511723330003

**Land Use Number:** LA25-000048

**Application Submitted By:** Agent on behalf of property owner

**Owner:**

**Name:** WINTERTREE LLC
**Address:** 755 TONKAWA RD LONG LAKE MN 55356

**Applicant:**

**Name:** Jeff Hoxie
**Company:** Hoxie Homes & Remodeling LLC
**Address:** 364 Industrial Boulevard
Waconia, MN 55387

**Contact Information:**

**Associated Contact:**
**Associated Contact:**
**Associated Contact:**
**Associated Contact:**

**Project Description:** Accessory structure/Sauna build

**Land Use Application Type:**

- Amendmend Application ☐
- Appeal of Admin Decision ☐
- Concept Application ☐
- Conditional Use Permit ☐
- Site Plan Application ☐
- Subdivision Application ☐
- Subdivision Exception ☐
- Vacation Application ☐
- Variance Application ☑

**Applicant Signature:**



# PRACTICAL DIFFICULTIES DOCUMENTATION FORM
***LA25-000048***

**1. The property owner proposes to use the property in a reasonable manner not permitted by the Zoning Chapter.**

**Response:** The owner wishes to use this as a sauna only

**2. The plight of the landowner is due to circumstances unique to his property not created by the landowner.**

**Response:** The location of this sauna is difficult due to the location of the existing home and the setback to the lake when originally built. The location selected we feel works with the existing landscape while staying as far away from the lake as possible.....while also not sitting in the middle of the front yard

**3. The variance, if granted, will not alter the essential character of the locality.**

**Response:** It will not

**4. Economic considerations alone do not constitute practical difficulties if reasonable use for the property exists under the terms of the Zoning Chapter.**

**Response:** This is not a difficulty due to cost....simply location in regards to existing home.

**5. Practical difficulties include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minnesota Statutes, Section 116J.06, Subd. 2, when in harmony with this Chapter.**

**Response:** Our difficulty is the location to build the sauna. We can maintain a 75' setback to the lake but struggle with the average setback ordinance. We are unsure how to measure the average setback line to the "camp" buildings located to the NW.

**6. The Board of Appeals and Adjustments or the Council may not permit as a variance any use that is not allowed under this Chapter for property in the zone where the affected person's land is located.**

**Response:** Understood

**7. The Board or Council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling.**

**Response:** N/A

**8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property.**

**Response:** Understood

**9. The conditions do not apply generally to other land or structures in the district in which**

**said land is located.**

**Response:** I don't believe so

**10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant.**

**Response:** Correct

**11. The granting of the proposed variance will not in any way impair health, safety, comfort, morals, or in any other respect be contrary to the intent of the Zoning Code.**

**Response:** It will not

**12. The granting of such variance will not merely serve as a convenience to the applicant but is necessary to alleviate demonstrable difficulty.**

**Response:** We feel this location is optimal for the continuity within the property

**Exhibit C – Aerial Imagery of 755 Tonkawa Road, Orono**





City of Orono, 10/22/2025

I, Jeff Hoxie owner of Hoxie Homes & Remodeling LLC, write to you today on behalf of Andrea Nelson in regards to her property @
755 Tonkawa Road
Orono, Mn 55356

Andrea has hired our company to construct a detached building on her property to be used as a year round sauna.

It has been brought to our attention that the existing home on the property is located within the 75' lakeshore setback as well as the average lakeshore setback. This hardship is what is driving our request for a variance on where to locate the new sauna structure in relationship to the existing home.

The existing home was built in 1965. Andrea purchased this home a few years ago and is looking to maintain the existing home along with updating it with more modern amenities; a sauna being one of those features. Ideally, this structure would have been located closer to the lake like she originally wished but we were informed we needed to stay out of the 75' lakeshore setback. Our current proposed location does refrain from entering that 75' lakeside setback. It also maintains the 10' side yard setback. Our hardship is the average lakeshore setback line. We wish to appeal this setback line as it is coming off a camp building to the north property. We also don't feel that locating the sauna in the front yard is a good location due to the grade of the property and proximity to the main house.

Thank you for your consideration,

Jeff Hoxie
Hoxie Homes & Remodeling LLC
jeff@hoxiehomes.com
952-457-4275

## DESCRIPTION OF PROPERTY SURVEYED

Parcel 1: All that part of Lot 1, Auditor's Subdivision Number 217, Hennepin County, Minnesota lying Northwesterly of a line drawn parallel with and 150 feet Southeasterly, measured at right angles from the Northwesterly line of said Lot 1;

Parcel 2: All that part of Lot 1, Auditor's Subdivision Number 217, Hennepin County, Minnesota lying Northwesterly of a line parallel with and 200 feet Southeasterly measured at right angles from the Northwesterly line of said Lot 1 and lying Southeasterly of a line drawn parallel with and 150 feet Southeasterly measured at right angles from the northwesterly line of said Lot 1;

Parcel 3: The Southeasterly 20 feet of Lot 11, Auditor's Subdivision Number 207, Hennepin County, Minnesota.

## STANDARD NOTES

1) **Site Address**: 755 Tonkawa Road, Orono, Minnesota 55356

2) A title opinion was not furnished to the surveyor as part of this survey. Only easements per the recorded plat are shown unless otherwise denoted hereon.

3) **Flood Zone Information**: X (area determined to be outside of the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 27053C0303F, effective date of November 4th 2016.

4) **Parcel Area Information**: Gross Area: 101,429s.f.± – 0.328 acres±
*We do not affirmatively insure the quantity of acreage set forth in the description

5) **Benchmark**: Elevations are based on the Lake Minnetonka Benchmark, Brass disk in concrete curb at the exit of Grays bay Dam area. Benchmark elevation = 932.7 feet (NGVD 29)

6) **Zoning Information**: The current Zoning for the subject property is LR-1B (One Family Lakeshore Residential) per the City of Orono's zoning map dated December 2021. The setback, height, and floor space area restrictions for said zoning designation are as follows:

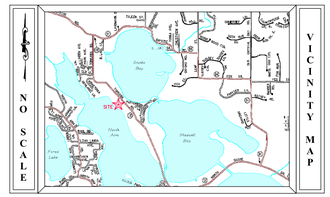
Principal Structure Setbacks - Street: 35 feet (Tonkawa Road)
Side: 10 feet
Rear: 30 feet
Lake: 75 feet (From Ordinary High Water Line)
Height: 30 feet
Hardcover: 25 percent of lot area (Tier 1)

*Please note that the zoning information shown hereon may have been amended through a city process. We recommend that a zoning letter be obtained from the Zoning Administrator for the current restrictions for this site. All setback information and hardcover data for planning and design must be verified by all parties involved in the design and planning process prior to any planning or construction.

We have not received the current zoning classification and building setback requirements from the insurer.

7) **Utilities**: We have shown the location of utilities on the surveyed property by observed evidence only. There may be underground utilities encumbering the subject property we are unaware. Please note that we have not placed a Gopher State One Call for this survey. There may or may not be underground utilities in the mapped area, therefore extreme caution must be exercise before any excavation takes place on or near this site. Also, please note that seasonal conditions may inhibit our ability to visibly observe all the utilities located on the subject property. Before digging, you are required by law to notify Gopher State One Call at least 48 hours in advance at 651/454-0002.

**Proposed Elevations**
Proposed Top of Foundation Sauna = 957.5

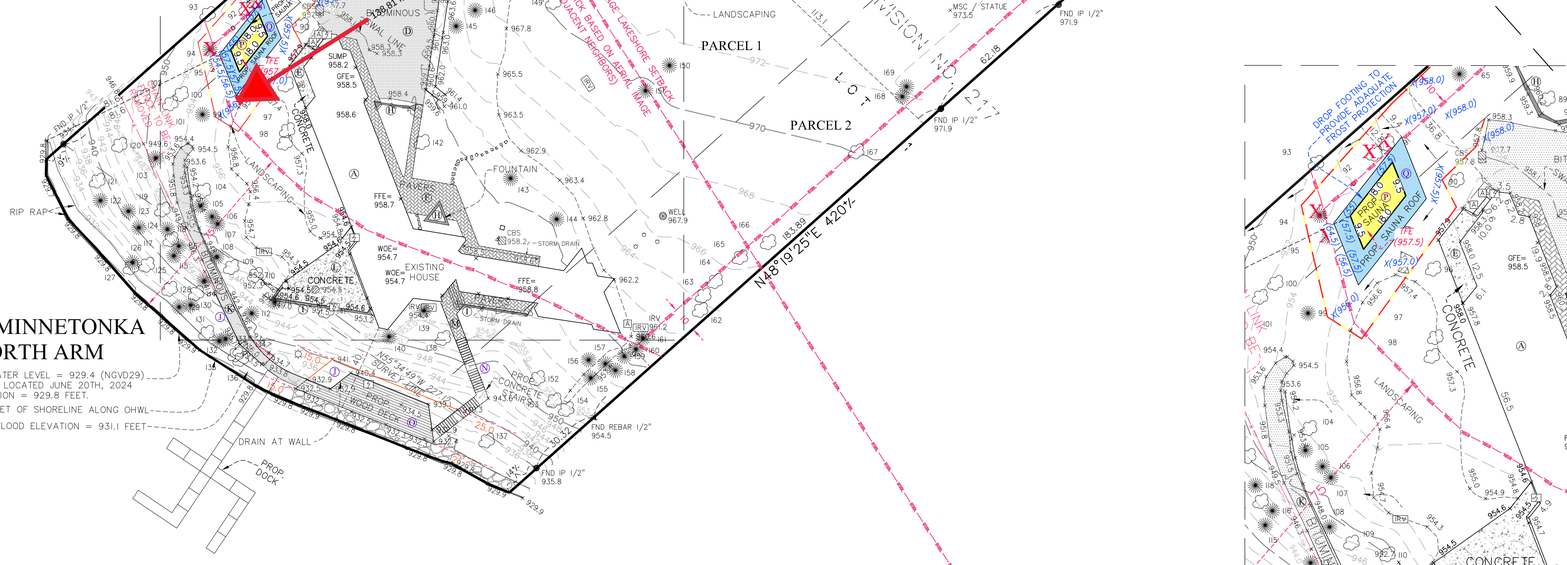


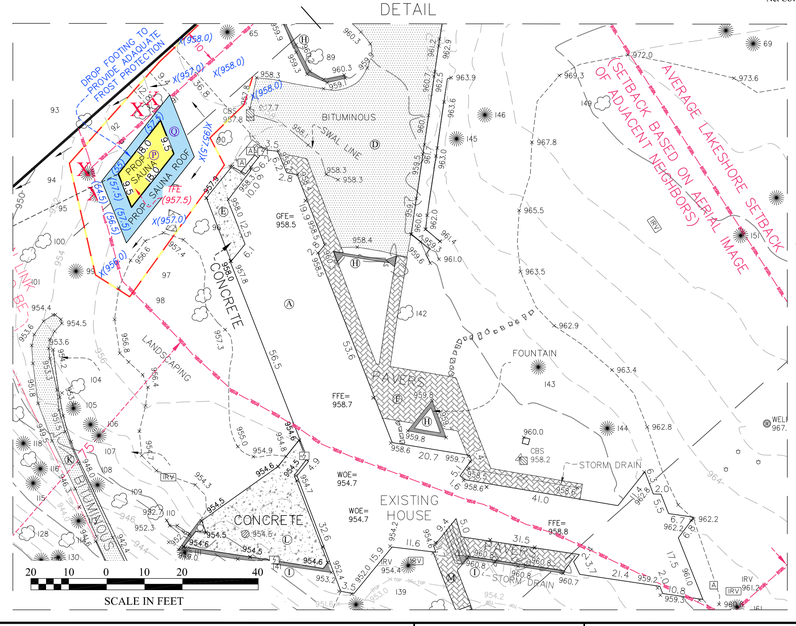

### Existing Hardcover

| | | |
|---|---|---|
| Lot Area | = | 101,429 S.F. |
| (A) House Area | = | 3,974 S.F. |
| (B) Detached Garage Area | = | 544 S.F. |
| (C) Studio Area | = | 522 S.F. |
| (D) Bituminous Driveway | = | 7,551 S.F. |
| (E) Concrete Area | = | 967 S.F. |
| (F) Pavers Area | = | 848 S.F. |
| Deck Area | = | 889 S.F. |
| (H) Retaining Walls Area | = | 77 S.F. |
| (I) Retaining Walls W/in 75' | = | 229 S.F. |
| (K) Bitimunus w/in 75' | = | 529 S.F. |
| (L) Concrete w/in 75' | = | 589 S.F. |
| (M) Pavers w/in 75' | = | 254 S.F. |
| Gross Area | = | 16,973 S.F. |
| Excludable Hardcover | | |
| (H) Retaining Walls Area | = | 77 S.F. |
| Wood decking | = | 100 S.F. |
| Exludable Hardcover | = | 177 S.F. |
| Net Hardcover | | |
| Gross area | = | 16,973 S.F. |
| Excludable hardcover | = | - 177 S.F. |
| Net Hardcover | = | 16,796 S.F. |
| Net Coverage | = | 16.56% |

### Proposed Hardcover

| | | |
|---|---|---|
| Lot Area | = | 101,429 S.F. |
| (A) House Area | = | 3,974 S.F. |
| (B) Detached Garage Area | = | 544 S.F. |
| (C) Studio Area | = | 522 S.F. |
| (D) Bituminous Driveway | = | 7,551 S.F. |
| (E) Concrete Area | = | 967 S.F. |
| (F) Pavers Area | = | 848 S.F. |
| Deck Area (removed) | = | 0 S.F. |
| (H) Retaining Walls Area | = | 77 S.F. |
| (I) Retaining Walls W/in 75' | = | 63 S.F. |
| (J) Prop. Ret Walls w/in 75' | = | 99 S.F. |
| (K) Bitimunus w/in 75' | = | 529 S.F. |
| (L) Concrete w/in 75' | = | 589 S.F. |
| (M) Pavers w/in 75' | = | 254 S.F. |
| (N) Prop. Concrete Stairs | = | 198 S.F. |
| (O) Prop. Deck | = | 619 S.F. |
| (P) Prop. Sauna | = | 148 S.F. |
| (Q) Prop. Sauna Roof | = | 293 S.F. |
| Gross Area | = | 17,163 S.F. |
| Excludable Hardcover | | |
| (H) Retaining Walls Area | = | 77 S.F. |
| Wood decking | = | 100 S.F. |
| Exludable Hardcover | = | 177 S.F. |
| Net Hardcover | | |
| Gross area | = | 17,163 S.F. |
| Excludable hardcover | = | - 177 S.F. |
| Net Hardcover | = | 16,887 S.F. |
| Net Coverage | = | 16.65% |




NORTH

Bearings are based on the Hennepin County Coordinate System (NAD 83 - 1986 adj.)

SCALE IN FEET

## SURVEY LEGEND

- CAST IRON MONUMENT
- IRON PIPE MONUMENT SET
- IRON PIPE MONUMENT FOUND
- DRILL HOLE FOUND
- CHISELED "X" MONUMENT SET
- CHISELED "X" MONUMENT FOUND
- REBAR MONUMENT FOUND
- PK NAIL MONUMENT SET
- PK NAIL MONUMENT FOUND
- PK NAIL W/ ALUMINUM DISC
- SURVEY CONTROL POINT
- A/C UNIT
- CABLE TV PEDESTAL
- ELECTRIC TRANSFORMER
- ELECTRIC METER
- ELECTRIC OUTLET
- YARD LIGHT
- LIGHT POLE
- GAS METER
- POWER POLE
- GUY WIRE
- ROOF DRAIN
- LIFT STATION
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM DRAIN
- CATCH BASIN
- FLARED END SECTION
- TREE CONIFEROUS
- TREE DECIDUOUS
- TREE CONIFEROUS REMOVED
- TREE DECIDUOUS REMOVED
- TELEPHONE PEDESTAL
- WATER METER
- WELL
- CURB STOP
- GATE VALVE
- HYDRANT
- IRRIGATION VALVE
- WOE WALKOUT ELEVATION
- FFE FIRST FLOOR ELEVATION
- GFE GARAGE FLOOR ELEVATION
- TOF TOP OF FOUNDATION ELEV.
- LOE LOWEST OPENING ELEV.
- CONCRETE
- BITUMINOUS
- BUILDING SETBACK LINE
- CONCRETE CURB
- 960 CONTOUR EXISTING
- 960 CONTOUR PROPOSED
- GUARD RAIL
- DRAIN TILE
- ELECTRIC UNDERGROUND
- FENCE
- GAS UNDERGROUND
- OVERHEAD UTILITY
- TREE LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE UNDERGROUND
- RETAINING WALL
- WATERMAIN

| FIELD CREW | NO. | BY | DATE | REVISION |
|---|---|---|---|---|
| XXX | 1 | DLS | 07/29/2024 | ADDED WETLAND |
| DRAWN | 2 | MNM | 3/28/2025 | ADDED PROPOSED DECK, STAIRS, AND DOCK |
| JR/EMW | 3 | EMW | 4/2/2025 | UPDATE HARDCOVER |
| CHECKED | 4 | ABE | 10/29/2025 | ADD PROPOSED SAUNA |
| DLS | 5 | ABE | 11/13/2025 | move sauna, remove ret walls, update grades |
| DATE | | | | |
| 6/18/24 | | | | |

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I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 28th day of March, 2025.

Daniel L. Schmidt, PLS — Minnesota License No. 26147
schmidt@sathre.com

SATHRE-BERGQUIST, INC.
14000 25TH AVENUE NORTH, SUITE 120
PLYMOUTH MN 55447 (952) 476-6000
WWW.SATHRE.COM

TWP:117-RGE.23-SEC.05
Hennepin County

ORONO, MINNESOTA

# CERTIFICATE OF SURVEY

PREPARED FOR:
TRAVIS VAN LIERE STUDIO

FILE NO. 90950-005

1 / 2

# TREE INVENTORY

| Tree # | Species | DBH | Condition | Stems | Removed |
|---|---|---|---|---|---|
| 1 | Juniper | 11.5 | Fair | 1 | |
| 2 | Juniper | 7.5 | Fair | 1 | |
| 3 | Juniper | 8.0 | Good | 1 | |
| 4 | Juniper | 8.5 | Good | 1 | |
| 5 | Ash, green | 23.0 | Good | 1 | |
| 6 | Ash, green | 10.0 | Good | 1 | |
| 7 | Ash, green | 9.5 | Fair | 1 | |
| 8 | Ash, green | 14.0 | Fair | 1 | |
| 9 | Ash, green | 6.0 | Poor | 1 | |
| 10 | Elm, American | 11.5 | Good | 1 | |
| 11 | Ash, green | 15.0 | Fair | 1 | |
| 12 | Ash, green | 14.0 | Fair | 1 | |
| 13 | Ash, green | 8.5 | Fair | 1 | |
| 14 | Ash, green | 16.0 | Fair | 1 | |
| 15 | Ash, green | 12.0 | Fair | 1 | |
| 16 | Ash, green | 11.0 | Fair | 1 | |
| 17 | Elm, American | 26.0 | Poor | 1 | |
| 18 | Ash, green | 11.0 | Fair | 1 | |
| 19 | Ash, green | 10.5 | Fair | 1 | |
| 20 | Ash, green | 10.0 | Fair | 1 | |
| 21 | Ash, green | 16.0 | Fair | 1 | |
| 22 | Ash, green | 24.0 | Fair | 1 | |
| 23 | Ash, green | 15.5 | Fair | 1 | |
| 24 | Ash, green | 9.5 | Fair | 1 | |
| 25 | Ash, green | 10.0 | Fair | 1 | |
| 26 | Ash, green | 8.0 | Fair | 1 | |
| 27 | Ash, green | 11.0 | Poor | 1 | |
| 28 | Ash, green | 9.0 | Poor | 1 | |
| 29 | Ash, green | 7.0 | Poor | 1 | |
| 30 | Ash, green | 15.5 | Fair | 1 | |
| 31 | Ash, green | 12.5 | Fair | 1 | |
| 32 | Ash, green | 12.0 | Fair | 1 | |
| 33 | Ash, green | 13.5 | Fair | 1 | |
| 34 | Ash, green | 8.5 | Fair | 1 | |
| 35 | Maple, sugar | 11.5 | Good | 1 | |
| 36 | Ash, green | 9.5 | Fair | 1 | |
| 37 | Elm, American | 6.5 | Good | 1 | |
| 38 | Cherry, black | 12.5 | Good | 1 | |
| 39 | Ash, green | 11.5 | Fair | 1 | |
| 40 | Maple, amur | 13.5 | Poor | 1 | |
| 41 | Maple, amur | 8.0 | Fair | 1 | |
| 42 | Maple, amur | 7.5 | Fair | 1 | |
| 43 | Maple, amur | 11.0 | Good | 1 | |
| 44 | Ash, green | 9.0 | Good | 1 | |
| 45 | Ash, green | 8.0 | Fair | 1 | |
| 46 | Boxelder | 8.0 | Fair | 1 | |
| 47 | Ash, green | 19.0 | Fair | 1 | |
| 48 | Maple, sugar | 14.0 | Good | 1 | |
| 49 | Crabapple | 8.5 | Fair | 1 | |
| 50 | Crabapple | 11.5 | Fair | 1 | |
| 51 | Crabapple | 9.5 | Fair | 1 | |
| 52 | Crabapple | 7.5 | Fair | 1 | |
| 53 | Ash, green | 18.5 | Fair | 1 | |
| 54 | Boxelder | 8.5 | Fair | 1 | |
| 55 | Ash, green | 15.5 | Fair | 1 | |
| 56 | Crabapple | 6.5 | Fair | 1 | |

| Tree # | Species | DBH | Condition | Stems | Removed |
|---|---|---|---|---|---|
| 57 | Elm, American | 7.5 | Good | 1 | |
| 58 | Boxelder | 9.5 | Good | 1 | |
| 59 | Elm, American | 11.0 | Good | 1 | |
| 60 | Juniper | 17.5 | Good | 1 | |
| 61 | Elm, American | 9.5 | Good | 1 | |
| 62 | Elm, American | 8.0 | Good | 1 | |
| 63 | Pine, white | 4.5 | Good | 1 | |
| 64 | Elm, American | 12.0 | Good | 1 | |
| 65 | Pine, red | 13.0 | Good | 1 | |
| 66 | Ash, green | 27.0 | Poor | 1 | |
| 67 | Boxelder | 9.5 | Poor | 1 | |
| 68 | Ash, green | 38.5 | Fair | 1 | |
| 69 | Spruce, white | 27.0 | Fair | 1 | |
| 70 | Spruce, white | 12.5 | Fair | 1 | |
| 71 | Ash, green | 31.0 | Poor | 1 | |
| 72 | Spruce, white | 6.5 | Fair | 1 | |
| 73 | Spruce, white | 5.0 | Fair | 1 | |
| 74 | Boxelder | 18.0 | Good | 1 | |
| 75 | Hackberry | 13.5 | Good | 1 | |
| 76 | Boxelder | 17.0 | Good | 1 | |
| 77 | Elm, American | 8.5 | Good | 1 | |
| 78 | Boxelder | 27.0 | Poor | 1 | |
| 79 | Maple, Norway | 25.0 | Good | 1 | |
| 80 | Ash, green | 17.0 | Fair | 1 | |
| 81 | Ash, green | 12.0 | Poor | 1 | |
| 82 | Boxelder | 24.0 | Fair | 1 | |
| 83 | Ash, green | 8.5 | Fair | 1 | |
| 84 | Ash, green | 8.5 | Fair | 1 | |
| 85 | Ash, green | 6.0 | Fair | 1 | |
| 86 | Ash, green | 9.5 | Fair | 1 | |
| 87 | Ash, green | 14.0 | Fair | 1 | |
| 88 | Oak, red | 19.0 | Good | 1 | |
| 89 | Oak, red | 23.5 | Good | 1 | |
| 90 | Oak, red | 27.0 | Good | 1 | |
| 91 | Basswood | 15.5 | Fair | 1 | X |
| 92 | Basswood | 18.5 | Good | 1 | X |
| 93 | Hackberry | 12.5 | Good | 1 | |
| 94 | Pine, red | 8.5 | Fair | 1 | X |
| 95 | Pine, red | 9.5 | Good | 1 | X |
| 96 | Oak, red | 15.5 | Good | 1 | |
| 97 | Oak, red | 28.0 | Good | 1 | |
| 98 | Oak, red | 29.0 | Good | 1 | |
| 99 | Pine, red | 10.5 | Good | 1 | |
| 100 | Ash, green | 17.0 | Poor | 1 | |
| 101 | Oak, bur | 10.5 | Good | 1 | |
| 102 | Basswood | 12.5 | Good | 2 | |
| 103 | Juniper | 15.0 | Good | 1 | |
| 104 | Basswood | 42.0 | Good | 2 | |
| 105 | Juniper | 4.0 | Good | 1 | |
| 106 | Juniper | 2.5 | Fair | 1 | |
| 107 | Juniper | 4.0 | Good | 1 | |
| 108 | Juniper | 3.5 | Good | 1 | |
| 109 | Oak, bur | 17.5 | Good | 1 | |
| 110 | Oak, bur | 17.0 | Good | 1 | |
| 111 | Juniper | 9.5 | Good | 1 | |
| 112 | Juniper | 7.0 | Good | 1 | |

| Tree # | Species | DBH | Condition | Stems | Removed |
|---|---|---|---|---|---|
| 113 | Juniper | 4.5 | Good | 1 | |
| 114 | Oak, bur | 17.0 | Good | 1 | |
| 115 | Juniper | 3.5 | Good | 1 | |
| 116 | Juniper | 5.0 | Good | 1 | |
| 117 | Oak, bur | 10.5 | Good | 1 | |
| 118 | Juniper | 5.5 | Good | 1 | |
| 119 | Oak, bur | 27.0 | Good | 1 | |
| 120 | Maple, sugar | 16.0 | Good | 1 | |
| 121 | Oak, bur | 17.5 | Good | 1 | |
| 122 | Juniper | 7.5 | Fair | 1 | |
| 123 | Juniper | 7.0 | Good | 1 | |
| 124 | Juniper | 9.0 | Good | 1 | |
| 125 | Oak, bur | 19.0 | Good | 1 | |
| 126 | Juniper | 12.0 | Fair | 1 | |
| 127 | Elm, American | 8.0 | Good | 1 | |
| 128 | Elm, red | 11.5 | Fair | 1 | |
| 129 | Juniper | 3.0 | Fair | 1 | |
| 130 | Juniper | 9.5 | Fair | 1 | |
| 131 | Elm, red | 7.0 | Fair | 1 | |
| 132 | Juniper | 4.5 | Good | 1 | |
| 133 | Juniper | 4.5 | Good | 1 | |
| 134 | Basswood | 6.0 | Good | 1 | |
| 135 | Basswood | 9.0 | Good | 1 | |
| 136 | Basswood | 8.5 | Good | 1 | |
| 137 | Oak, bur | 30.5 | Good | 1 | |
| 138 | Oak, red | 21.5 | Good | 1 | |
| 139 | Pine, mugo | 29.0 | Good | 7 | |
| 140 | Juniper | 18.5 | Good | 1 | |
| 141 | Oak, bur | 30.5 | Good | 1 | |
| 142 | Oak, red | 31.0 | Good | 1 | |
| 143 | Pine, Scots | 21.0 | Good | 1 | |
| 144 | Pine, white | 8.0 | Good | 4 | |
| 145 | Spruce, white | 14.0 | Poor | 1 | |
| 146 | Spruce, white | 17.0 | Fair | 1 | |
| 147 | Spruce, white | 16.0 | Fair | 1 | |
| 148 | Juniper | 29.0 | Good | 2 | |
| 149 | Magnolia | 17.0 | Good | 1 | |
| 150 | Juniper | 22.5 | Good | 1 | |
| 151 | Juniper | 19.5 | Good | 1 | |
| 152 | Oak, red | 17.0 | Good | 1 | |
| 153 | Oak, bur | 12.0 | Good | 1 | |
| 154 | Elm, American | 7.5 | Good | 1 | |
| 155 | Douglasfir | 7.5 | Good | 1 | |
| 156 | Douglasfir | 10.0 | Good | 1 | |
| 157 | Douglasfir | 8.0 | Good | 1 | |
| 158 | Douglasfir | 11.0 | Good | 1 | |
| 159 | Douglasfir | 8.5 | Good | 1 | |
| 160 | Douglasfir | 7.0 | Good | 1 | |
| 161 | Douglasfir | 12.0 | Good | 1 | |
| 162 | Elm, American | 16.0 | Good | 1 | |
| 163 | Oak, red | 12.0 | Good | 1 | |
| 164 | Ash, green | 12.5 | Fair | 1 | |
| 165 | Elm, red | 31.0 | Good | 1 | |
| 166 | Boxelder | 17.5 | Fair | 1 | |
| 167 | Ash, green | 30.0 | Fair | 1 | |
| 168 | Juniper | 8.5 | Fair | 1 | |
| 169 | Juniper | 20.5 | Good | 1 | |

TREES REMOVED

TOTAL CALIPER INCHES = 2,301.5

TOTAL CALIPER INCHES REMOVED = 52

Prepared By:
Stephan Nicholson CF
Certified Forester #2369
Certified Arborist MN4305-A
TreeBiz LLC 651-336-8095

| FIELD CREW | NO. | BY | DATE | REVISION |
|---|---|---|---|---|
| XXX | | | | |
| DRAWN | | | | |
| JR/EMW | | | | |
| CHECKED | | | | |
| DLS | | | | |
| DATE | | | | |
| 6/18/24 | | | | |

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I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 2nd day of July, 2024.

Daniel L. Schmidt, PLS Minnesota License No. 26147
schmidt@sathre.com

SATHRE-BERGQUIST, INC.
14000 25TH AVENUE NORTH, SUITE 120
PLYMOUTH MN 55447 (952) 476-6000
WWW.SATHRE.COM

TWP:117-RGE.23-SEC.05
Hennepin County

ORONO, MINNESOTA

TREE SURVEY
PREPARED FOR:
TRAVIS VAN LIERE STUDIO

FILE NO.
90950-005

2
2

**UNLESS NOTED OTHERWISE ON THE PLANS AND/OR IN THE DETAILS, THESE NOTES SHALL APPLY. IF THERE ARE DISCREPANCIES BETWEEN THE PLANS, DETAILS, SPECIFICATIONS, AND THESE NOTES, THE CONTRACTOR SHALL CONFORM TO THE MORE STRINGENT REQUIREMENTS, UNLESS CLARIFIED WITH THE STRUCTURAL ENGINEER OF RECORD (SER) PRIOR TO WORK.**

**MATERIAL STRENGTHS**

- STRUCTURAL STEEL FASTENERS
  - ANCHOR RODS - ASTM F1554, GR. 36, FY = 36 KSI
  - THREADED RODS - ASTM A36, FY = 36 KSI
- REINFORCING STEEL
  - DEFORMED BARS - ASTM A615, GR. 60, FY = 60 KSI
- CONCRETE
  - F 'C = COMPRESSIVE STRENGTH IN 28 DAYS
  - 4,000 PSI UNLESS NOTED OTHERWISE
  - 5,000 PSI FOR FOOTINGS
- STRUCTURAL LUMBER
  - ALL DIMENSIONAL LUMBER - #2 SPRUCE PINE FIR (SPF) OR EQUAL
  - LAMINATED VENEER LUMBER (LVL)
    - E = 2,000,000 PSI
    - FB = 2600 PSI
  - LAMINATED STRAND LUMBER (LSL)
    - E = 1,300,000 PSI
    - FB = 1,700 PSI
  - PARALLEL STRAND LUMBER (PSL)
    - E = 2,000,000 PSI
    - FB = 2900 PSI
  - TREATED LUMBER - #2 SOUTHERN PINE OR EQUAL

**DESIGN LOADS**

- ROOF
  - DEAD LOAD
    - 17 PSF (7 PSF TOP CHORD + 10 PSF BOTTOM CHORD)
  - SNOW LOAD
    - ROOF SNOW LOAD = 35 PSF
- WIND
  - ULTIMATE DESIGN WIND SPEED 115 MPH
  - 3 SECOND GUST.
  - EXPOSURE C, I = 1.0
  - RISK CATEGORY II
  - WIND SHEAR WALLS HAVE BEEN DESIGNED USING IRC R301.1.3.

**EXISTING CONDITIONS**

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURE WHERE THEY AFFECT THIS CONSTRUCTION PRIOR TO FABRICATION.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID ADDING LOAD OR STRESS TO ANY ADJACENT STRUCTURES DURING CONSTRUCTION.

**TEMPORARY BRACING**

- ALL STRUCTURAL MEMBERS ARE DESIGNED FOR IN-PLACE LOADS AND FULLY CURED MATERIALS. CONTRACTOR IS RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS AS REQUIRED AT ALL STAGES OF CONSTRUCTION UNTIL COMPLETION OF THIS PROJECT.
- PROVIDE TEMPORARY LATERAL SUPPORT FOR ALL WALLS UNTIL WALLS ARE ADEQUATELY BRACED BY PERMANENT STRUCTURE.
- PROVIDE REQUIRED TEMPORARY BRACING FOR ALL FRAMING UNTIL PERMANENT BRACING, FLOOR AND WALLS ARE IN PLACE.
- SHORE FOUNDATION WALLS RETAINING EARTH UNTIL FLOOR FRAMING AND BASEMENT SLAB ARE IN PLACE. USE CAUTION WHEN OPERATING EQUIPMENT ADJACENT TO FOUNDATION WALLS.

**GENERAL SOIL NOTES**

- THE STRUCTURE HAS BEEN DESIGNED USING A PRESUMPTIVE LOAD-BEARING VALUE OF 2000 PSF IN ACCORDANCE WITH TABLE R401.4.1 OF THE 2018 IRC ON VIRGIN SOIL OR COMPACTED GRANULAR FILL FOR FOOTINGS.
- PRESUMPTIVE SOIL BEARING VALUE TO BE VERIFIED BY A GEOTECHNICAL ENGINEER WHERE REQUIRED BY THE BUILDING OFFICIAL PER R401.4. WE RECOMMEND THE OWNER ENGAGES A GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING VALUES.
- ANY DISCREPANCIES IN THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE SHALL BE REPORTED IMMEDIATELY.
- THE EXISTING FOOTINGS HAVE BEEN ASSUMED TO BE TYPICAL SPREAD FOOTINGS ON GOOD SOILS THAT ARE ASSUMED TO BE PERFORMING ADEQUATELY.
- REMOVE ALL TOP SOIL, UNCOMPACTED FILL, OR OTHER POOR SOIL FROM THE CONSTRUCTION AREA.
- SLOPE THE SITE TO DRAIN AWAY FROM THE BUILDING.
- INSTALL GUTTERS AND DOWNSPOUTS WITH LONG EXTENSIONS RECOMMENDED.
- INSTALL DRAIN TILE RECOMMENDED.
- BACKFILL WITH GRANULAR SOILS RECOMMENDED.

**FOOTINGS/FOUNDATIONS**

- ALL FOOTINGS ARE TO BE FORMED. ALL STUMPS, ROOTS AND DEBRIS MUST BE REMOVED FROM THE SOIL TO A DEPTH OF AT LEAST 12" BELOW THE SURFACE OF THE GROUND IN THE AREA OCCUPIED BY THE BUILDING. FOOTINGS SHALL BE PLACED ON VIRGIN SOIL OR COMPACTED GRANULAR FILL.
- WALL FOOTINGS ARE CAST-IN-PLACE CONCRETE WITH CONTINUOUS REINFORCING PLACED 3" CLEAR OF BOTTOM AND 2" CLEAR AT TOP AND SIDES.
- WALL FOOTINGS ARE CENTERED UNDER WALLS AND COLUMN FOOTINGS UNDER COLUMNS.
- WALL FOOTINGS SHALL BE A MINIMUM OF 8" THICK WITH A 4" PROJECTION EACH SIDE OF WALL. REINFORCE WITH 2 - #4 CONTINUOUS BOTTOM BARS.
- PROVIDE 30 BAR DIAMETER LAP AT SPLICES AND FULL CROSSING LAP AT CORNERS AND INTERSECTIONS. TIE ALL REINFORCING IN PLACE. SET FOOTING REINFORCING ON CHAIRS OR MASONRY BRICK TO OBTAIN 3" CLEARANCE FROM BOTTOM OF FOOTING.
- MAINTAIN MINIMUM FROST DEPTH OF 48" FOR ALL EXTERIOR FOOTINGS.
- FOOTING ELEVATIONS, IF SHOWN ON THE PLAN, INDICATE TOP OF FOOTING.
- TOP OF FOOTING SHALL BE PLACED 8" BELOW THE TOP OF SLABS ON GRADE, OR PLACED TO MAINTAIN FROST DEPTH, WHICHEVER IS DEEPER.
- STEP FOOTINGS IN A UNIFORM MANNER USING A 2:1 HORIZONTAL TO VERTICAL SLOPE.
- CAST DOWELS IN FOOTING FOR FOUNDATION WALLS ABOVE. DOWELS SHALL BE THE SAME QUANTITY, SIZE, AND SPACING AS THE VERTICAL WALL REINFORCING. DOWELS SHALL BE 30" LONG AND EXTEND TO 3" CLEAR OF BOTTOM OF FOOTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING HOT WEATHER CONCRETE REQUIREMENTS PER ACI 305 AND COLD WEATHER CONCRETE REQUIREMENTS PER ACI 306.
- SHORE ALL FOUNDATION WALLS APPROPRIATELY BEFORE BACKFILLING AND COMPACTING.
- FOUNDATIONS SUPPORTING WOOD SHALL EXTEND AT LEAST 6" ABOVE THE ADJACENT FINISHED GRADE.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TANKS PRIOR TO BEGINNING EXCAVATION.
- THE CONTRACTOR SHALL FOLLOW IRC FIGURE R403.1.7.1 FOR FOUNDATION CLEARANCES TO SLOPES UNLESS INDICATED OTHERWISE BY THE SOILS ENGINEER.

**CONCRETE**

- PROVIDE READY-MIXED CONCRETE PER ASTM C94. PORTLAND CEMENT SHALL BE ASTM C150, TYPE I. USE ONLY ONE BRAND OF CEMENT THROUGHOUT THE WORK. PROVIDE CONCRETE AGGREGATES MEETING THE REQUIREMENTS OF ASTM C33.
- MAXIMUM AGGREGATE SIZE SHALL BE 3/4" FOR GRADE BEAMS AND SLABS. WATER SHALL BE CLEAN, FREE OF DELETERIOUS AMOUNTS OF ACIDS, ALKALIS, OR ORGANIC MATERIALS, AND SHALL BE CONSIDERED POTABLE. PROVIDE ADMIXTURES TO REDUCE WATER CONTENT, PROVIDE AIR-ENTRAINMENT, OR ALTER THE QUALITY OF THE CONCRETE TO MEET THE JOB CONDITIONS.
- PLACE REINFORCING 2" CLEAR TO OUTSIDE FACE AND 1 1/2" CLEAR TO INSIDE FACE OF CONCRETE WALL.
- PROVIDE #4 X 4'-0" LONG (EQUAL LEGS) HORIZONTAL REINFORCING CORNER BARS AT 18" O.C. AT OUTSIDE CORNER OF WALL AND 2 - #4 VERTICAL SUPPORT BARS.
- ALL WALL OPENINGS LARGER THAN 12" SHALL HAVE 2 - #5 AT ALL SIDES EXTENDING 2'-0" BEYOND EACH EDGE OF OPENING WITH 2 - #5 X 4'-0" DIAGONAL BARS AT EACH CORNER OF OPENING.
- WALL REINFORCING SHALL BE CONTINUOUS THROUGH COLUMNS AND PILASTERS.
- PROVIDE FULL DEVELOPMENT AND SPLICE LENGTHS PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) OR ACI 318 REQUIREMENTS.
- ALL CONCRETE EXPOSED TO WEATHER, FREEZE-THAW CONDITIONS OR DE-ICING CHEMICALS SHALL CONTAIN 5% - 7% ENTRAINED AIR.
- DESIGN INTENT IS FOR ALL CONCRETE TO BE FULLY CURED PRIOR TO BACKFILLING AND INSTALLING STRUCTURE.
- SLUMP SHALL BE DETERMINED BY ASTM C143 AS FOLLOWS:

| | |
|---|---|
| FOOTINGS | 3" - 4" |
| WALLS, COLUMNS | 3" - 5" |
| SLABS ON GRADE | 3" - 4" |
| STRUCTURAL SLABS, BEAMS | 3" - 4" |

- CONCRETE SHALL NOT BE LAID WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW 40 DEGREES FAHRENHEIT, UNLESS APPROVED METHODS ARE USED DURING CONSTRUCTION TO PREVENT DAMAGE TO THE CONCRETE. ALL MATERIALS USED AND SURFACES BUILT UPON SHALL BE FREE OF SNOW AND ICE.
- WOOD BEAMS POCKETED INTO CONCRETE SHALL BE PROVIDED WITH A 1/2" AIR SPACE ON TOP, END, AND SIDES UNLESS TREATED WOOD OR STEEL PLATES ARE USED.
- CONCRETE SHALL NOT BEAR PERMANENTLY ON WOOD MEMBERS.

**SLABS ON GRADE**

- ALL SLABS ON GRADE SHALL BE REINFORCED PER PLAN NOTES.
- SLABS ON GRADE ADJACENT TO FOUNDATION WALLS RETAINING EARTH SHALL BE A MINIMUM OF 3 1/2" THICK.
- CONSTRUCTION AND/OR CONTROL JOINTS SHALL OCCUR AT A MAXIMUM OF 8'-0" O.C. AT EXTERIOR SLABS ON GRADE, AND AT A MAXIMUM OF 10'-0" O.C. AT INTERIOR SLABS ON GRADE.
- CONSTRUCTION AND/OR CONTROL JOINTS SHALL BE LAID OUT IN A RECTANGULAR PATTERN WITH LONG TO SHORT SIDE RATIO LESS THAN OR EQUAL TO 1.5 AND WITH NO RE-ENTRANT CORNERS.
- CONTROL JOINTS FOR SLABS ON GRADE SHALL BE SAW CUT AS SOON AS CONCRETE CAN ACCEPT IT WITHOUT RAVELING
- DO NOT CUT STRUCTURAL SLABS OR TOPPING SLABS UNLESS AUTHORIZED BY THE STRUCTURAL ENGINEER.
- ALL CONTROL/CONSTRUCTION JOINTS SHALL BE CONTINUOUS AND NOT STAGGERED OR OFFSET.
- CONTROL JOINTS SHALL BE CLEANED AND SEALED FOR CURING PURPOSES AS SOON AS POSSIBLE.
- VERIFY FLOOR FINISHES AND CONTROL/CONSTRUCTION JOINT LOCATIONS WITH OWNER AND ARCHITECT.

**DIMENSION LUMBER**

- DESIGN ASSUMES LUMBER IS FREE OF SIGNIFICANT SPLITS AND CHECKS, AND CONTRACTOR WILL VISUALLY INSPECT DURING INSTALLATION.
- SILLS AND ALL OTHER LUMBER IN CONTACT WITH CONCRETE OR MASONRY AND WITHIN 8" OF FINISHED GRADE SHALL BE PRESERVATIVE TREATED WOOD. IN CRAWLSPACES OR UNEXCAVATED AREAS WITHIN THE BUILDING FOUNDATION, WOOD SHALL BE PRESERVATIVE TREATED FOR JOISTS WITHIN 18" OF EXPOSED GROUND AND/OR GIRDERS WITHIN 12" OF EXPOSED GROUND.
- PRESERVATIVE TREATED WOOD SHALL BE IN ACCORDANCE WITH THE AMERICAN WOOD PROTECTION ASSOCIATION, STANDARD U1.
- TREAT ALL CUT ENDS OF TREATED MATERIAL.
- ALL LUMBER IS TO BE GRADE STAMPED, WHICH IS TO CONTAIN GRADING AGENCY, MILL NUMBER OR NAME, GRADE OF LUMBER, SPECIES OR SPECIES GROUPING OR COMBINATION DESIGNATION, RULES UNDER WHICH GRADED, WHERE APPLICABLE, AND CONDITION OF SEASONING AT TIME OF MANUFACTURE.
- ALL LUMBER SHALL BE SEASONED TO A MOISTURE CONTENT OF 19% OR LESS, WITH THE INDICATION OF "S-DRY" ON THE GRADE STAMP.
- ALL LUMBER SHALL BE PROTECTED FROM THE ELEMENTS.
- SILL PLATES TO BE BOLTED TO FOUNDATION WALL WITH 1/2" DIAMETER GALV ANCHOR BOLTS AT 4'-0" O.C. MAXIMUM. BOLTS TO EXTEND 9" MINIMUM INTO SOLIDLY GROUTED FOUNDATION WALL. EACH SILL PLATE TO HAVE A MINIMUM OF 2 BOLTS WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES OR LESS THAN 4 1/2 INCHES FROM EACH END OF THE PLATE SECTION. USE 1/8"X2"X2" GALV WASHERS, SLIGHTLY CRUSHING PLATE.
- MINIMUM NAILING SHALL BE IN ACCORDANCE WITH TABLE R602.3(1) OF THE 2018 IRC UNLESS NOTED OTHERWISE.
- ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE.
- EXTERIOR WALLS SHALL BE 2 X 6 STUDS @ 16" O.C. UNLESS NOTED OTHERWISE.
- INTERIOR NON-LOAD-BEARING WALLS SHALL BE 2 X 4 STUDS @ 16" O.C. UNLESS NOTED.
- TYPICAL OPENINGS TO HAVE A MINIMUM OF 2 BEARING (TRIMMER OR JACK) STUDS AND 1 FULL-HEIGHT KING STUD.
- HEADERS NOT NOTED TO BE 2 - 2 X 6 UP TO 4'-0" SPAN AND 2 - 2 X 8 FROM 4'-0" TO 6'-0" SPAN.
- WOOD HEADERS SHALL HAVE A MINIMUM 3" LENGTH OF BEARING AT EACH END OR BEAR THE ENTIRE LENGTH OF THE BEARING STUDS.
- BEAMS SHALL BEAR ON A MINIMUM OF 3" ALONG THEIR LENGTH AND FULLY ALONG THEIR WIDTH AND HAVE A MINIMUM OF 2 TYPICAL WALL STUDS SUPPORTING THEM.
- JOISTS SHALL BEAR THE FULL WIDTH OF SUPPORTING MEMBERS (STUD WALL, BEAMS, ETC.).
- PROVIDE SOLID VERTICAL BLOCKING AT ALL JOIST SPACES BELOW WOOD COLUMNS. PROVIDE MATCHING COLUMNS TO FOUNDATION AT LOWER LEVELS BELOW COLUMNS COMPRISED OF 3 OR MORE STUDS.
- ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH PREFABRICATED JOIST HANGERS.
- 1 ½" NAILS SHALL NOT BE USED AT JOIST HANGERS UNLESS SPECIFIED FOR THE SPECIFIC JOIST HANGER BY THE MANUFACTURER.
- 1 ½" NAILS SHALL NOT BE USED FOR BEAM AND GIRDER HANGERS.
- SEE HANGER MANUFACTURER CATALOG FOR REQUIRED NAILS OR SCREWS FOR 100% ALLOWABLE LOADING.
- BEAMS OR HEADERS MADE OF 2X'S SHALL BE NAILED TOGETHER WITH 2 - ROWS 16D NAILS (.162" X 3 ½") AT 12" O.C. ALONG EACH EDGE, TYPICAL FOR EACH LUMBER PLY.
- NAIL BUILT UP POSTS MADE OF 2X STUD MATERIAL WITH 2 - ROWS 16D NAILS 12" OC EACH PLY, UP TO 3-PLIES. SCREW BUILT UP POSTS MADE OF 2X STUD MATERIAL WITH ¼"X6" SDS SCREWS 8" OC STAGGERED FOR 4-PLIES.
- ATTACH 2-PLY LVL BEAMS WITH 2-ROWS OF ¼"X3 ½" SDS SCREWS 16" OC UNLESS NOTED.
- ATTACH 3-PLY LVL BEAMS WITH 2-ROWS OF ¼"X3 ½" SDS SCREWS 16" OC BOTH FACES UNLESS NOTED.
- ATTACH 4-PLY LVL BEAMS WITH 2-ROWS OF ¼"X6" SDS SCREWS 16" OC BOTH FACES UNLESS NOTED.
- SPACING OF BRIDGING FOR JOISTS SHALL NOT EXCEED 8'-0".
- DOUBLE ALL JOISTS UNDER PARALLEL PARTITIONS OR SINGLE FLOOR TRUSS.
- ALL PLYWOOD AND OSB SHALL BE INSTALLED PER AMERICAN PLYWOOD ASSOCIATION STANDARDS, INCLUDING THE USE OF CONSTRUCTION ADHESIVE FOR FASTENING TO FLOOR JOISTS.
- ALL FASTENERS AND HANGERS IN CONTACT WITH TREATED LUMBER SHALL BE G185 HOT DIPPED GALVANIZED OR EQUAL.
- LUMBER GRADING RULES AND WOOD SPECIES SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 20-99 AS PUBLISHED BY THE DEPARTMENT OF COMMERCE. GRADING RULES SHALL BE BY AN AGENCY CERTIFIED BY THE BOARD OF REVIEW OF THE AMERICAN LUMBER STANDARDS COMMITTEE.
- PERFORMANCE REQUIREMENTS, ADHESIVE BOND PERFORMANCE, PANEL CONSTRUCTION AND WORKMANSHIP, DIMENSIONS AND TOLERANCES, MARKING, AND MOISTURE CONTENT OF WOOD-BASED STRUCTURAL-USE PANELS SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 2-92, AS PUBLISHED BY THE DEPARTMENT OF COMMERCE.
- PLACE SHEETROCK CONTROL JOINTS MAX 30FT APART PER THE WALL AND CEILING BUREAU TECHNICAL BULLETIN.
- DO NOT DRILL OR NOTCH PLUMBING HOLES NEAR KNOTS IN ANY FRAMING.

**WOOD TRUSSES**

- RESPONSIBILITIES OF THE CONTRACTOR, BUILDING DESIGNER, TRUSS MANUFACTURER, AND TRUSS DESIGNER SHALL FOLLOW THE PUBLICATION "TPI 1-2022 NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION."
- TRUSS SUPPLIER SHALL NOTIFY SER OF ANY PROPOSED REVISIONS TO THE LAYOUT INDICATED ON THIS PLAN. REVISIONS THAT AFFECT THE STRUCTURAL DESIGN WILL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE SER.
- VERIFY ALLOWABLE BEARING LOCATIONS FOR GIRDER TRUSSES WITH SER PRIOR TO FINAL DESIGN STAGE. PROVIDE METAL BEARING ENHANCERS AS NECESSARY TO UTILIZE STUD COLUMNS SHOWN ON PLAN.
- ALL PREFABRICATED WOOD TRUSSES SHALL BE FURNISHED IN ACCORDANCE WITH DESIGNS PREPARED USING THE DESIGN LOADS AND SPAN CONDITIONS INDICATED, INCLUDING DESIGNING GABLE END TRUSS WEBS FOR PERPENDICULAR TO FACE WIND LOADS.
- TRUSS MANUFACTURER SHALL PROVIDE A TRUSS LAYOUT AND TRUSS DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- TRUSSES SHALL BE DESIGNED FOR TOP AND BOTTOM CHORD SUPERIMPOSED DEAD AND LIVE LOADS AS INDICATED ABOVE.
- TRUSS SUPPLIER SHALL DESIGN TRUSSES TO SUPPORT ADDITIONAL DEAD LOAD FROM, BUT NOT LIMITED TO, SPRINKLER LINES, RAIN LEADER SYSTEMS, PIPING, CABLE TRAYS, DUCTWORK, KITCHEN ISLANDS, ETC., AS PER IBC. COORDINATE WITH ARCHITECTURAL/MECHANICAL/ELECTRICAL AS REQUIRED. GENERAL CONTRACTOR TO VERIFY LOCATION AND MAGNITUDE OF ALL SUCH LOADS WITH TRUSS SUPPLIER AND SER PRIOR TO FABRICATION OF TRUSSES.
- SEE ARCHITECTURAL PLANS FOR ATTIC DRAFT STOP LOCATIONS AND DESIGN ROOF TRUSSES ACCORDINGLY.
- LIVE LOAD DEFLECTION OF ROOF TRUSSES SHALL BE LIMITED TO 1/360 OF THE SPAN.
- PROVIDE L/600 DEFLECTION LIMITS FOR ALL INDIVIDUAL BOTTOM CHORD MEMBERS BETWEEN PANEL POINTS.
- DESIGN TRUSSES FOR TOP CHORD BEARING OR BOTTOM CHORD BEARING AS SHOWN ON DRAWINGS.
- TRUSS CONFIGURATION, PITCH, OVERHANG, ETC. SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS.
- SPACING OF ROOF TRUSSES SHALL NOT EXCEED 24" O.C.
- LUMBER FOR WOOD TRUSSES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- TRUSS MANUFACTURER TO PROVIDE GIRDER TRUSSES, HIP JACKS, AND STEP-DOWN TRUSSES AS REQUIRED AND DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS. PROVIDE HIP-SETS, DORMERS, AND PIGGY-BACK TRUSSES AS REQUIRED.
- TRUSS MANUFACTURER TO SPECIFY IF ROOF SHEATHING NEEDS TO BE APPLIED BEFORE PLACING "OVER-FRAMING".
- PROVIDE METAL FRAMING ANCHORS AT TRUSS BEARING TO MECHANICALLY FASTEN TRUSS TO BEARING WALL OR SUPPORTING MEMBER AS SHOWN IN DETAILS.
- TRUSS MANUFACTURER SHALL PROVIDE TRUSS TO TRUSS CONNECTION HANGERS.
- BRIDGING, AND BRACING OF TRUSS COMPRESSION AND TENSION MEMBERS, SHALL BE INSTALLED IN ACCORDANCE WITH THE TRUSS MANUFACTURER'S DESIGN AND DIRECTIONS.
- NO CUTTING, NOTCHING, OR MODIFICATIONS OF TRUSSES WILL BE ALLOWED WITHOUT THE MANUFACTURER'S WRITTEN APPROVAL.
- CONTRACTOR SHALL PROVIDE PERMANENT AND TEMPORARY DIAGONAL, LATERAL, AND CROSS BRACING IN ACCORDANCE WITH THE PUBLICATION "BCSI 2025 BUILDING COMPONENT SAFETY INFORMATION, GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" BY THE TRUSS PLATE INSTITUTE AND WOOD TRUSS COUNCIL OF AMERICA AND AS OTHERWISE NECESSARY. FOR SPANS LONGER THAN 60FT., CONTRACTOR SHALL HIRE A STRUCTURAL ENGINEER TO DESIGN THE NECESSARY BRACING.
- PERMANENT BOTTOM CHORD BRACING AND WEB BRACING SHALL BE LOCATED AS SHOWN ON THE TRUSS DRAWINGS AND SHALL BE MINIMUM 2 X 4 WITH 2 - 16D NAILS TO END WALLS AND TRUSSES, LAPPING TWO TRUSS SPACES AT SPLICES.

**WALL SHEATHING**

- WALL SHEATHING SHALL BE MINIMUM 15/32" THICK APA RATED PANELS, RATED FOR SPACING OF SUPPORTING MEMBERS. A MINIMUM 32/16 SPAN RATING IS RECOMMENDED. BLOCK ALL JOINTS.
- PROVIDE EXTERIOR OR EXPOSURE 1 GRADE. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS, AND LONG DIMENSION OF PANEL SHALL BE EITHER PERPENDICULAR OR PARALLEL TO SUPPORTS. FASTEN WALL SHEATHING WITH 8D NAILS SPACED AT 4" O.C. AT SUPPORTED EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS. LEAVE AN 1/8" GAP AT ALL END AND EDGE JOINTS TO ALLOW FOR EXPANSION. STAGGER END JOINTS OF PANELS. REFER TO PLAN AND NOTES FOR ANY SPECIAL SHEAR WALL NAILING AND BOLTING CONDITIONS. GYPSUM SHEATHING TO BE A MINIMUM OF 1/2" THICK FASTENED WITH 6D COOLER OR WALLBOARD NAILS AT 7" O.C. TO ALL FRAMING MEMBERS UNLESS NOTED OTHERWISE.
- NAIL "ZIPS" PER MANUFACTURER'S INSTALLATION WITH 0.131" SHANK NAILS WITH 1 ½" FRAMING PENETRATION INTO FRAMING A MAXIMUM 4" OC.

**ROOF SHEATHING**

- ROOF SHEATHING SHALL BE MINIMUM 15/32" THICK APA RATED PANELS, RATED FOR SPACING OF SUPPORTING MEMBERS. A MINIMUM OF 32/16 SPAN RATING IS RECOMMENDED. PROVIDE PANEL CLIPS, ONE BETWEEN EACH SUPPORT, FOR SUPPORTS SPACED GREATER THAN 16" O.C.
- PROVIDE EXTERIOR OR EXPOSURE 1 GRADE. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS, AND LONG DIMENSION OF PANEL SHALL BE PERPENDICULAR TO SUPPORTS. FASTEN ROOF SHEATHING WITH 8D NAILS SPACED AT 4" O.C. AT SUPPORTED EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS. LEAVE AN 1/8" GAP AT ALL END AND EDGE JOINTS TO ALLOW FOR EXPANSION. DESIGN OF ROOF SHEATHING ASSUMES THAT THE ROOF WILL BE PROPERLY INSULATED AND VENTILATED. REFER TO APA PUBLICATION N335N "PROPER INSTALLATION OF APA RATED SHEATHING FOR ROOF APPLICATIONS."

**LVL WOOD MEMBERS**

- LVL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED LAMINATED VENEER LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**PSL WOOD MEMBERS**

- PSL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED PARALLEL STRAND LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**LSL WOOD MEMBERS**

- LSL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED LAMINATED STRAND LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**ADHESIVE/EXPANSION ANCHORS**

- ADHESIVE AND EXPANSION ANCHORS SHALL BE PROVIDED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADHESIVE ANCHORING SYSTEM TO BE SIMPSON AT-G3 ADHESIVE. CONCRETE SCREWS SHALL BE SIMPSON TITEN. ALTERNATE ANCHORING SYSTEM MAY BE SUBMITTED FOR APPROVAL. "FAST SET EPOXY" IS NOT PERMITTED. REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



REHKAMP LARSON ARCHITECTS INC.
2732 West 43rd Street, Mpls, MN 55410
Tel. 612-285-7275

**Nelson Residence**
755 Tonkawa Road
Orono, MN 55356

PROJECT PHASE:
PERMIT SET

PROJECT NUMBER:
24-016

ISSUE DATE:
SEPTEMBER 17, 2025

DRAWN BY:
EB, AM

**SEPTEMBER 17, 2025 PERMIT SET**

**S00**

**STRUCTURAL NOTES**



# NELSON SAUNA

755 Tonkawa Road
Orono, MN 55356

**GENERAL NOTE:**
FULL SIZE SET: 24" X 36". SCALE AS NOTED.
HALF SIZE SET: 11" X 17". SCALE IS 1/2 OF NOTED.

## DRAWING INDEX

**ARCHITECTURAL SHEETS**

| 5 4 3 2 1 P | | |
|---|---|---|
| ● | A00 | COVER |
| | ---- | EXIST. SURVEY |
| ● | A01 | SITE DIAGRAM |
| ● | A02 | SAUNA SITE DIAGRAM |
| ● | A11 | SAUNA FLOOR PLAN |
| ● | A12 | SAUNA ROOF PLAN |
| ● | A20 | EXTERIOR ELEVATIONS |
| ● | A21 | EXTERIOR ELEVATIONS |
| ● | A30 | BUILDING SECTION |
| ● | E11 | RCP/ELECTRICAL DIAGRAMS |

**STRUCTURAL SHEETS**

| | | |
|---|---|---|
| ● | S00 | STRUCTURAL NOTES |
| ● | S10 | FOOTING & FOUNDATION DIAGRAM |
| ● | S11 | ROOF FRAMING DIAGRAM |
| ● | S50 | STRUCTURAL DETAILS |

**CONTACTS**

**Owner:**

Andrea Nelson

Contacts:

**Architect:**

Rehkamp Larson Architects Inc.
2732 West 43rd Street
Minneapolis, MN 55410
612.285.7275

Contacts:
Jean Rehkamp Larson, AIA
jean@rehkamplarson.com

Anders Matney, AIA
anders@rehkamplarson.com

**Builder:**

Hoxie Homes & Remodeling
364 Industrial Boulevard
Waconia, MN 55387
952-217-6825

Contacts:
Jeff Hoxie
jeff@hoxiehomes.com

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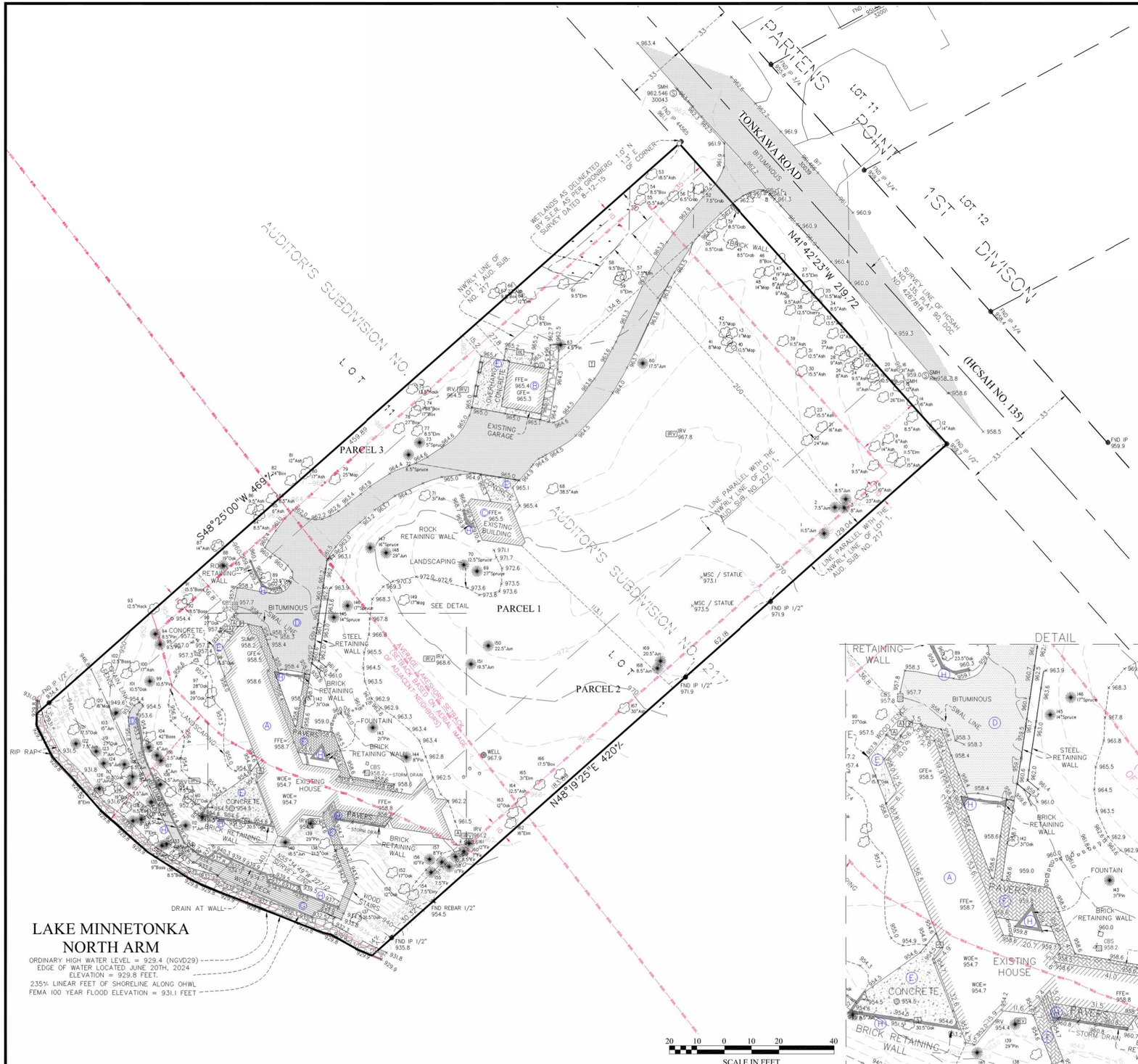
A00
COVER







LAKE MINNETONKA
NORTH ARM

ORDINARY HIGH WATER LEVEL = 929.4 (NGVD29)
EDGE OF WATER LOCATED JUNE 20TH, 2024
ELEVATION = 929.8 FEET
235½ LINEAR FEET OF SHORELINE ALONG OHWL
FEMA 100 YEAR FLOOD ELEVATION = 931.1 FEET

## DESCRIPTION OF PROPERTY SURVEYED

Parcel 1: All that part of Lot 1, Auditor's Subdivision Number 217, Hennepin County, Minnesota lying Northwesterly of a line drawn parallel with and 150 feet Southeasterly, measured at right angles from the Northwesterly line of said Lot 1;

Parcel 2: All that part of Lot 1, Auditor's Subdivision Number 217, Hennepin County, Minnesota lying Northwesterly of a line parallel with and 200 feet Southeasterly measured at right angles from the Northwesterly line of said Lot 1 and lying Southeasterly of a line drawn parallel with and 150 feet Southeasterly measured at right angles from the northwesterly line of said Lot 1;

Parcel 3: The Southeasterly 20 feet of Lot 11, Auditor's Subdivision Number 207, Hennepin County, Minnesota.

## STANDARD NOTES

1) **Site Address**: 755 Tonkawa Road, Orono, Minnesota 55356

2) A title opinion was not furnished to the surveyor as part of this survey. Only easements per the recorded plat are shown unless otherwise denoted hereon.

3) **Flood Zone Information**: X (area determined to be outside of the 0.2% annual chance floodplain) per Flood Insurance Rate Map, Community Panel No. 27053C0303F, effective date of November 4th 2016.

4) **Parcel Area Information**: Gross Area: 101.429s.f.± ~ 0.328 acres±
*We do not affirmatively insure the quantity of acreage set forth in the description

5) **Benchmark**: Elevations are based on the Lake Minnetonka Benchmark, Brass disk in concrete curb at the exit of Grays bay Dam area. Benchmark elevation = 932.7 feet (NGVD 29)

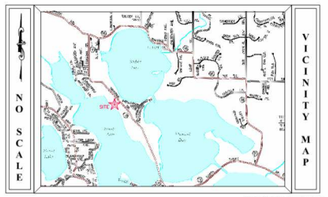
6) **Zoning Information**: The current Zoning for the subject property is LR-1B (One Family Lakeshore Residential) per the City of Orono's zoning map dated December 2021. The setback, height, and floor space area restrictions for said zoning designation are as follows:

Principal Structure Setbacks -
Street: 35 feet (Tonkawa Road)
Side: 10 feet
Rear: 30 feet
Lake: 75 feet (From Ordinary High Water Line)
Height: 30 feet
Hardcover: 25 percent of lot area (Tier 1)

*Please note that the zoning information shown hereon may have been amended through a city process. We recommend that a zoning letter be obtained from the Zoning Administrator for the current restrictions for this site. All setback information and hardcover data for planning and design must be verified by all parties involved in the design and planning process prior to any planning or construction.

We have not received the current zoning classification and building setback requirements from the insurer.

7) **Utilities**: We have shown the location of utilities on the surveyed property by observed evidence only. There may be underground utilities encumbering the subject property we are unaware. Please note that we have not placed a Gopher State One Call for this survey. There may or may not be underground utilities in the mapped area, therefore extreme caution must be exercise before any excavation takes place on or near this site. Also, please note that seasonal conditions may inhibit our ability to visibly observe all the utilities located on the subject property. Before digging, you are required by law to notify Gopher State One Call at least 48 hours in advance at 651/454-0002.







Bearings are based on the Hennepin County Coordinate System (NAD 83 - 1986 adj.)

30 15 0 15 30 60
SCALE IN FEET

## SURVEY LEGEND

- CAST IRON MONUMENT
- IRON PIPE MONUMENT SET
- IRON PIPE MONUMENT FOUND
- DRILL HOLE FOUND
- CHISELED "X" MONUMENT SET
- CHISELED "X" MONUMENT FOUND
- REBAR MONUMENT FOUND
- PK NAIL MONUMENT SET
- PK NAIL MONUMENT FOUND
- PK NAIL W/ ALUMINUM DISC
- SURVEY CONTROL POINT
- A/C UNIT
- CABLE TV PEDESTAL
- ELECTRIC TRANSFORMER
- ELECTRIC MANHOLE
- ELECTRIC METER
- ELECTRIC OUTLET
- YARD LIGHT
- LIGHT POLE
- FIBER OPTIC MANHOLE
- FIRE DEPT. HOOK UP
- FLAG POLE
- FUEL PUMP
- FUEL TANK
- PROPANE TANK
- GAS METER
- GAS VALVE
- GAS MANHOLE
- GENERATOR
- GUARD POST
- HAND HOLE
- MAIL BOX
- PIEZOMETER
- POWER POLE
- GUY WIRE
- ROOF DRAIN
- LIFT STATION
- SANITARY MANHOLE
- SANITARY CLEANOUT
- STORM MANHOLE
- STORM DRAIN
- CATCH BASIN
- FLARED END SECTION
- TREE CONIFEROUS
- TREE DECIDUOUS
- TREE CONIFEROUS REMOVED
- TREE DECIDUOUS REMOVED
- TELEPHONE MANHOLE
- TELEPHONE PEDESTAL
- UTILITY MANHOLE
- UTILITY PEDESTAL
- UTILITY VAULT
- WATERMAIN MANHOLE
- WATER METER
- WATER SPIGOT
- WELL
- MONITORING WELL
- CURB STOP
- GATE VALVE
- HYDRANT
- IRRIGATION VALVE
- POST INDICATOR VALVE
- SIGN
- SOIL BORING
- WOE WALKOUT ELEVATION
- FFE FIRST FLOOR ELEVATION
- GFE GARAGE FLOOR ELEVATION
- TOF TOP OF FOUNDATION ELEV.
- LOE LOWEST OPENING ELEV.
- CONCRETE
- BITUMINOUS
- BUILDING SETBACK LINE
- CABLE TV
- CONCRETE CURB
- CONTOUR EXISTING
- CONTOUR PROPOSED
- GUARD RAIL
- DRAIN TILE
- ELECTRIC UNDERGROUND
- FENCE
- FIBER OPTIC UNDERGROUND
- GAS UNDERGROUND
- OVERHEAD UTILITY
- TREE LINE
- SANITARY SEWER
- STORM SEWER
- TELEPHONE UNDERGROUND
- RETAINING WALL
- UTILITY UNDERGROUND
- WATERMAIN
- TRAFFIC SIGNAL
- RAILROAD TRACKS
- RAILROAD SIGNAL
- RAILROAD SWITCH
- SATELLITE DISH
- WETLAND BUFFER SIGN

| FIELD CREW | NO. | BY | DATE | REVISION |
|---|---|---|---|---|
| XXX | 1 | DLS | .07/29/2024 | ADDED WETLAND |
| DRAWN | | | | |
| JR/EMW | | | | |
| CHECKED | | | | |
| DLS | | | | |
| DATE | | | | |
| 6/18/24 | | | | |

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I hereby certify that this survey, plan or report was prepared by me or under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Dated this 2nd day of July, 2024.

Daniel L. Schmidt, PLS Minnesota License No. 26147
schmidt@sathre.com

SATHRE-BERGQUIST, INC.
14000 25TH AVENUE NORTH, SUITE 120
PLYMOUTH MN 55447 (952) 476-6000
WWW.SATHRE.COM

TWP:117-RGE.23-SEC.05
Hennepin County

ORONO, MINNESOTA

# CERTIFICATE OF SURVEY

PREPARED FOR:
TRAVIS VAN LIERE STUDIO

FILE NO.
90950-005




1 **SITE DIAGRAM - SAUNA**
1/16" = 1'-0" 24x36 1/32" ON 11x17 = 1'-0"

**REHKAMP LARSON ARCHITECTS INC.**
2732 West 43rd Street, Mpls, MN 55410
Tel. 612-285-7275

**Nelson Residence**
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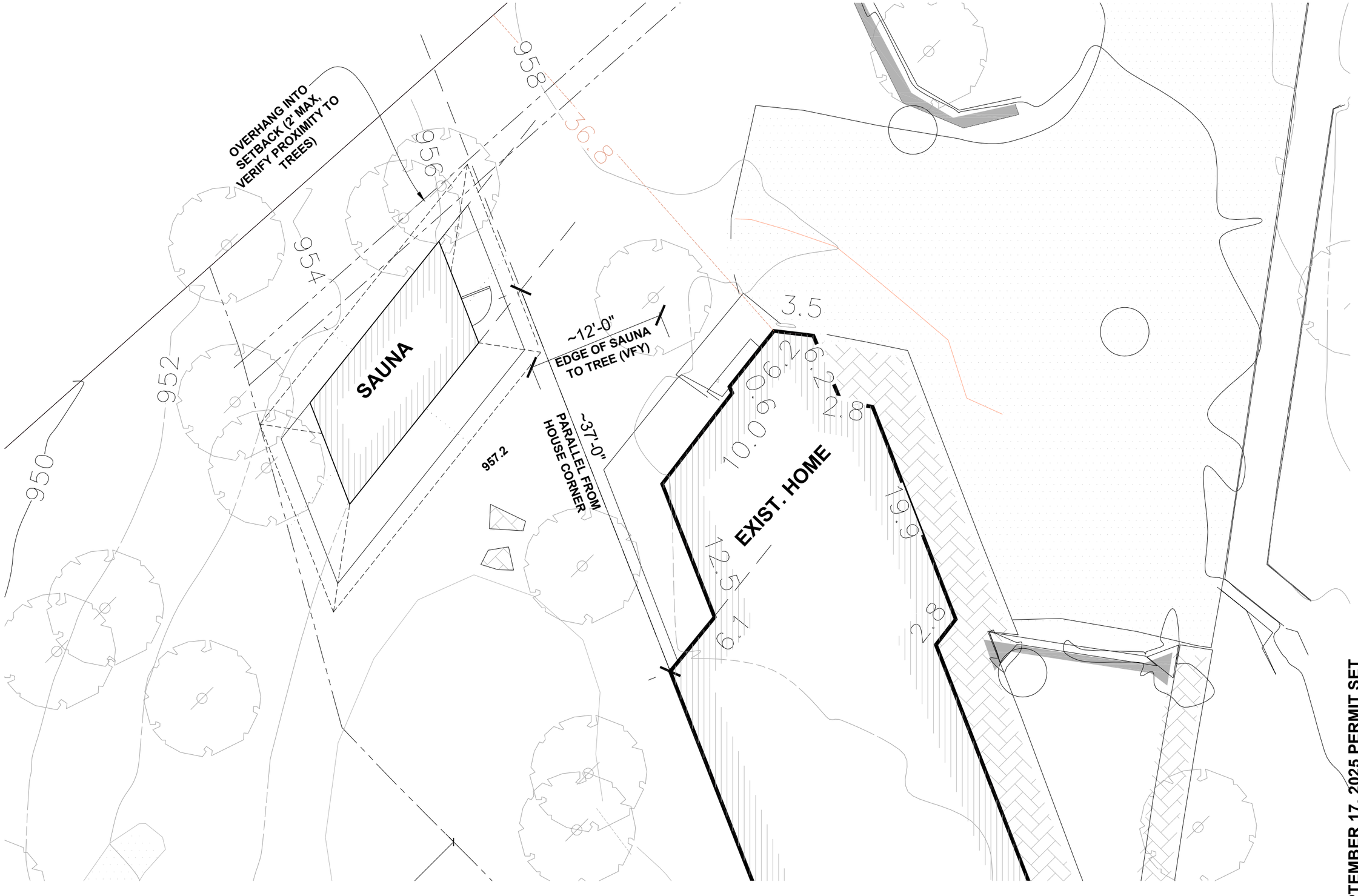
JRL, CP, AM

**SEPTEMBER 17, 2025 PERMIT SET**

# A01

**SAUNA SITE DIAGRAM**




1 **SITE DIAGRAM - SAUNA**
1/4" = 1'-0" 24x36 1/8" ON 11x17 = 1'-0"

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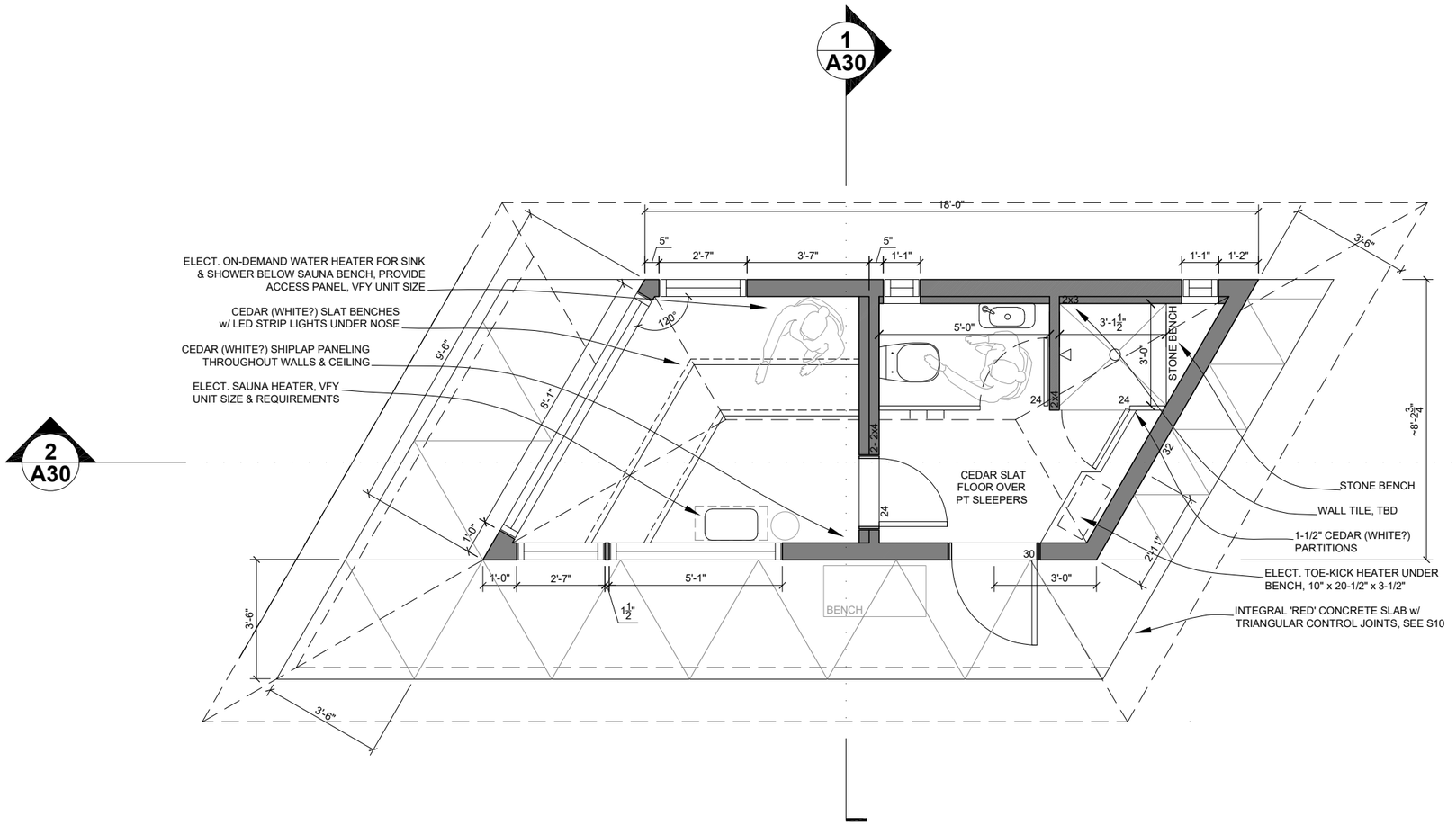
# A02

**SAUNA SITE DIAGRAM**




## 1 SAUNA FLOOR PLAN

1/2" = 1'-0" on 24x36  1/4" = 1'-0" on 11x17

FINISHED SQFT = 148

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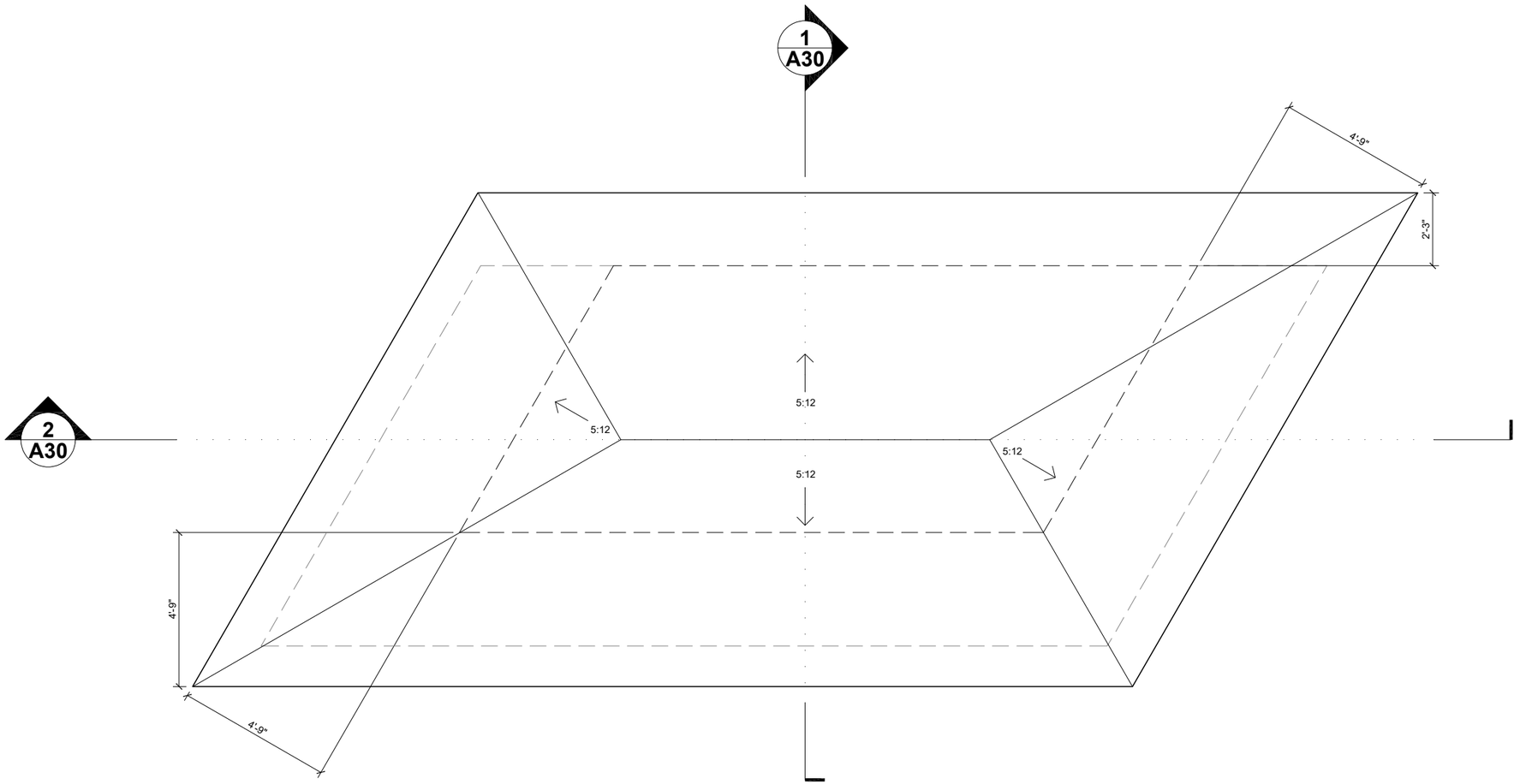
# A11

**SAUNA FLOOR PLAN**




1 **SAUNA ROOF PLAN**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

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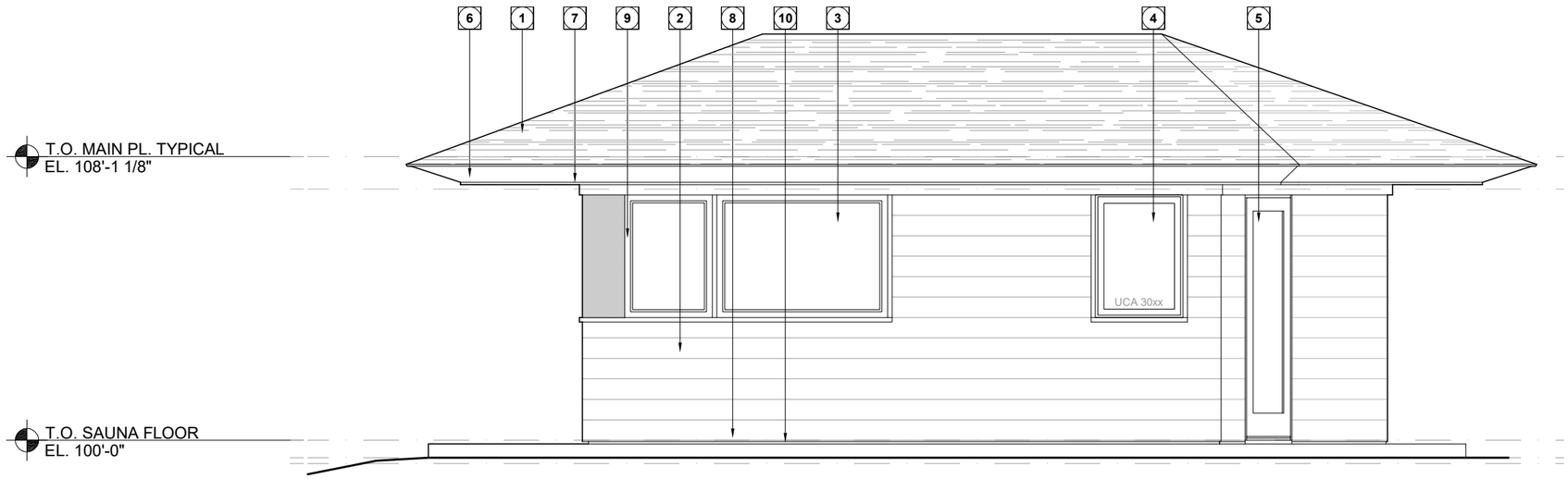
# A12

**SAUNA ROOF PLAN**




## KEYED NOTES

**ROOF:**
1. WOOD SHAKES

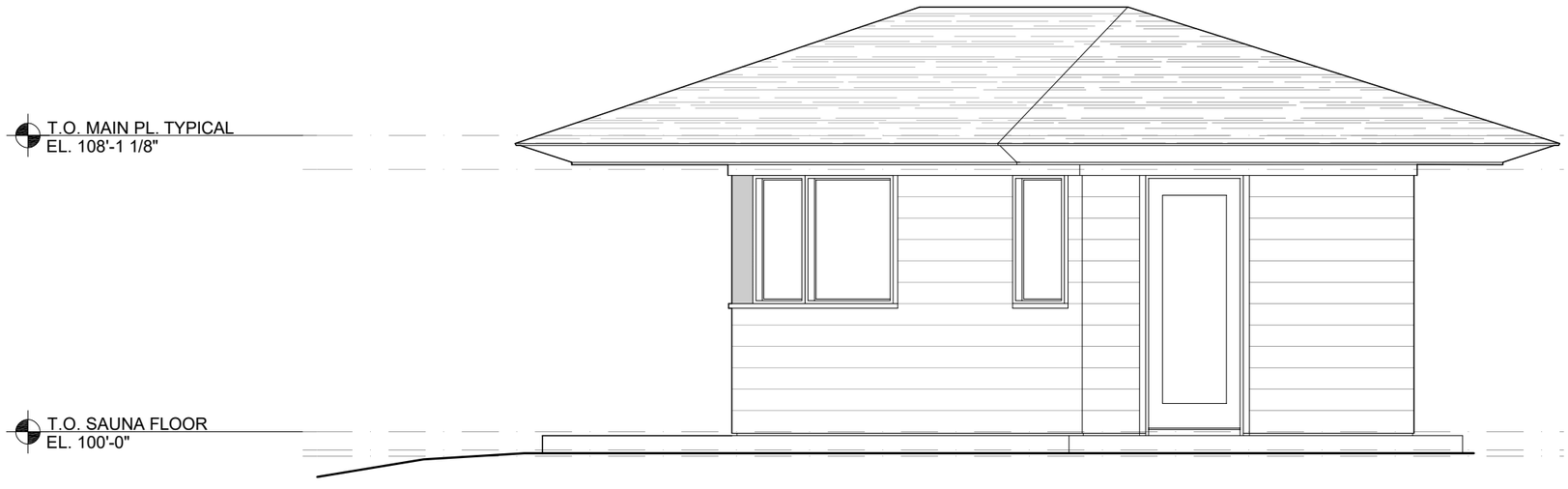
**WALLS:**
2. T&G SIDING FOR PAINT, MITER CORNERS, CUSTOM MILL TO TIME OUT

**WINDOWS & DOOR:**
3. SITE BUILT w/ INSULATED GLASS, MATCH EXIST.
4. MARVIN ULTIMATE CASEMENT, CUSTOM SIZE TO TIMEOUT
5. MARVIN WOOD ULTIMATE FRENCH DOOR

**EXTERIOR MILLWORK:**
6. BUILT-UP WOOD FASCIA, MATCH EXIST.
7. T&G SOFFIT, MATCH EXIST.
8. PROFILED WATERTABLE BOARD
9. CASING, MATCH EXIST.

**SURFACES:**
10. INTEGRAL RED CONCRETE, MATCH EXIST.

**1 SOUTHEAST ELEVATION**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17




**2 NORTHEAST ELEVATION**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

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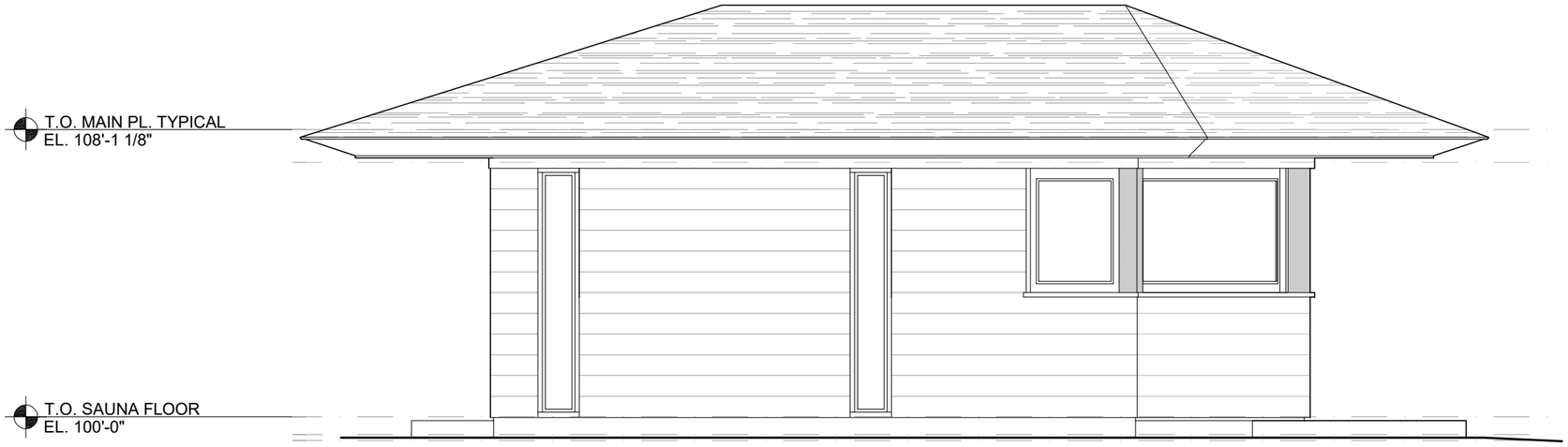
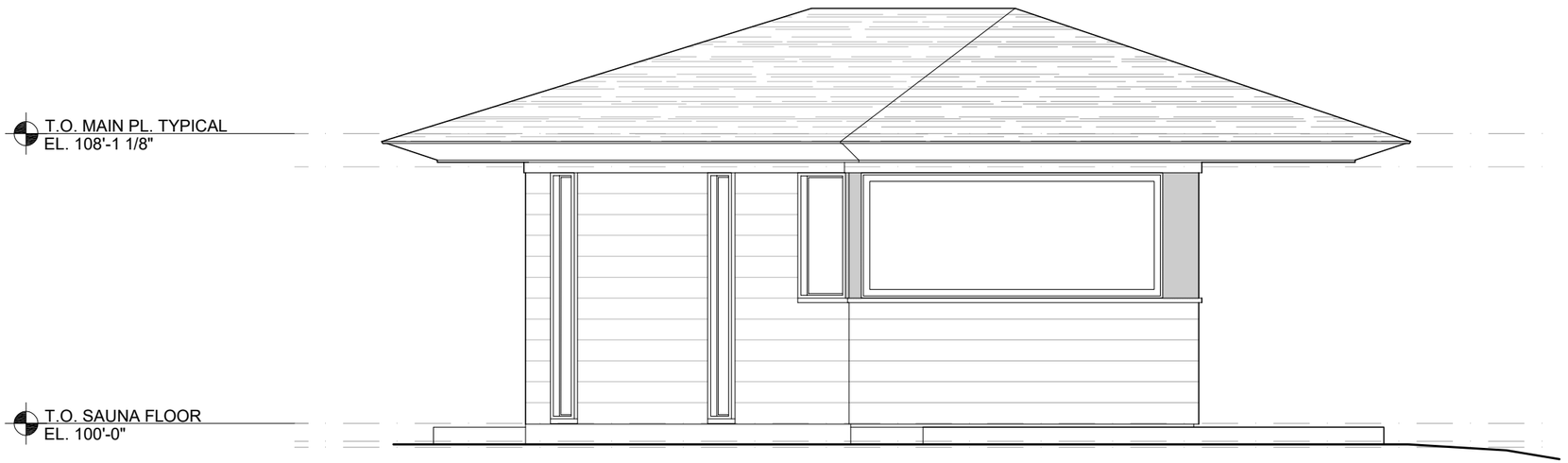
# A20

**SAUNA EXTERIOR ELEVATIONS**




1 **NORTHWEST ELEVATION**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17




2 **SOUTHWEST ELEVATION**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

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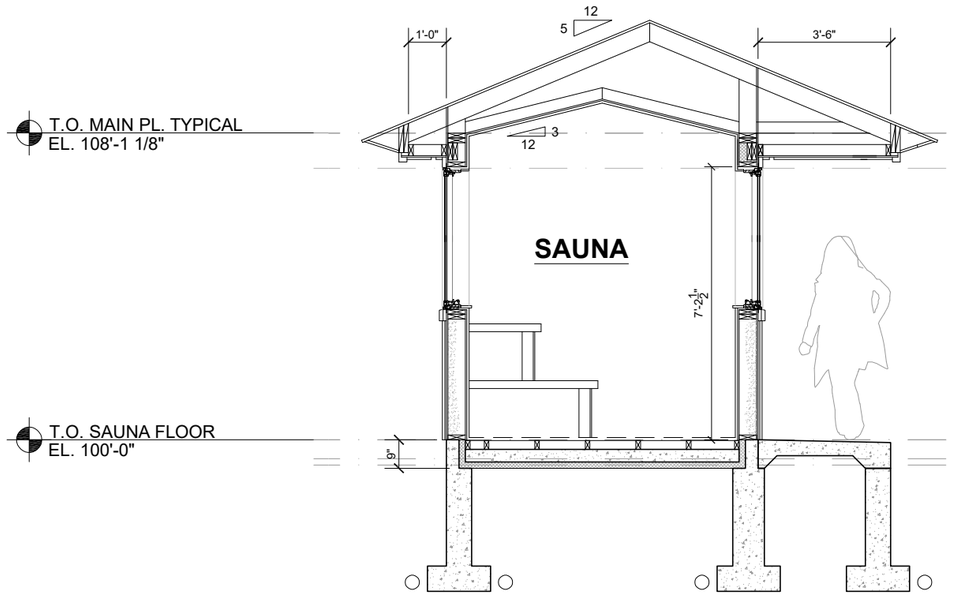
# A21

**SAUNA EXTERIOR ELEVATIONS**




1 **SECTION DIAGRAM**
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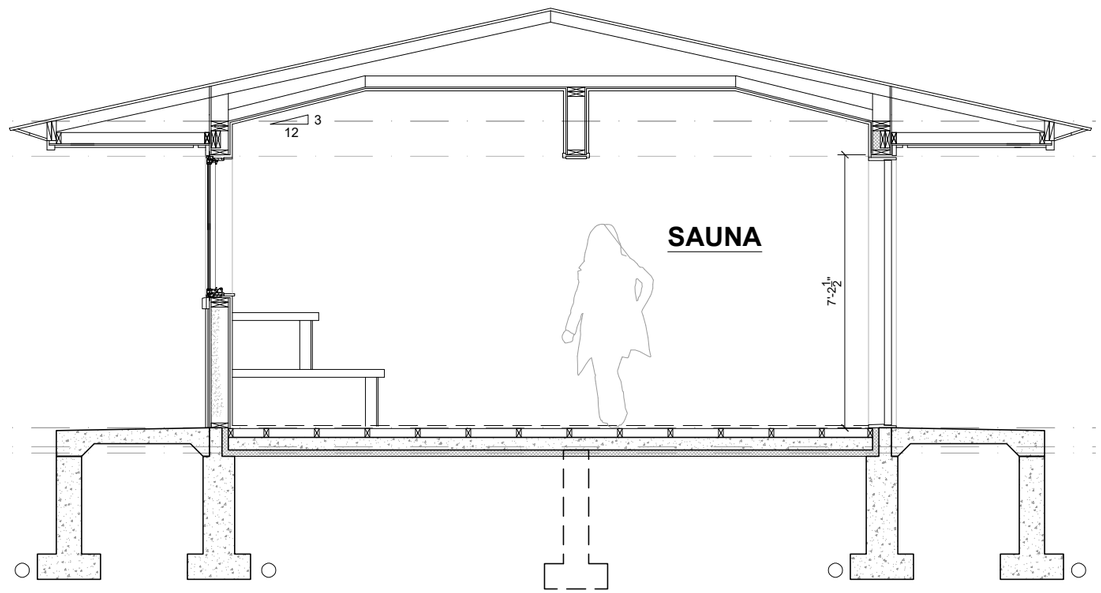


2 **SECTION DIAGRAM**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

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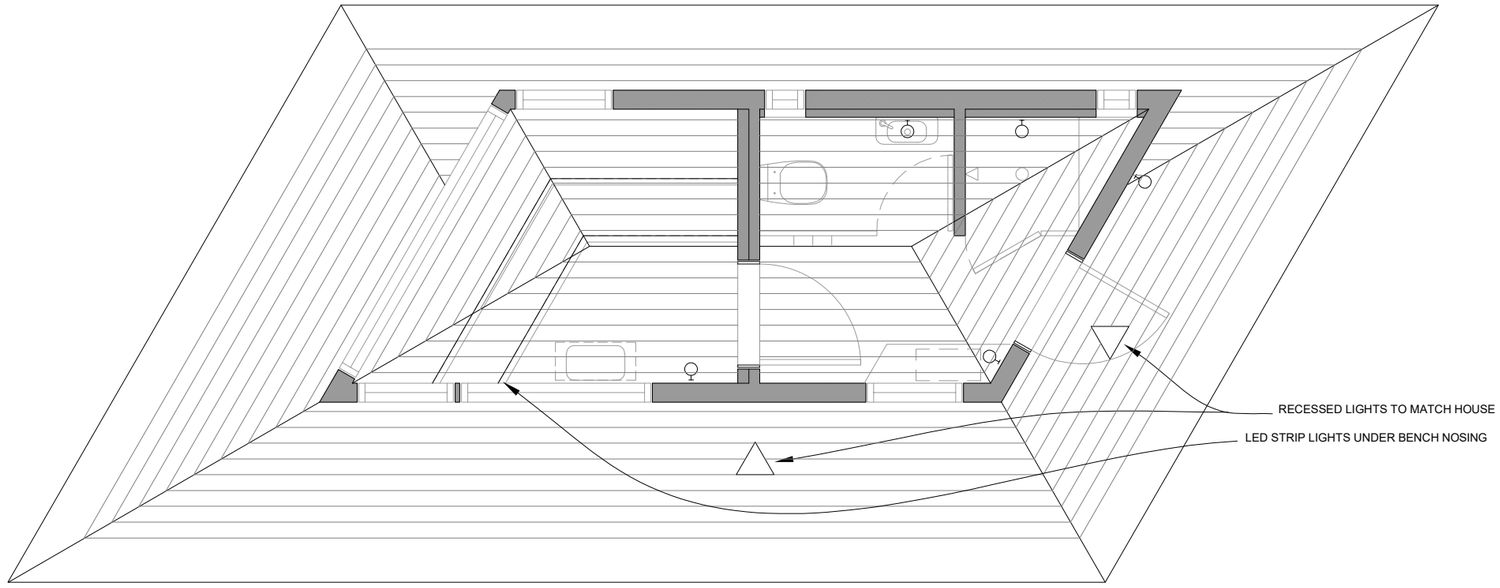
# A30

**SAUNA SECTION DIAGRAMS**




1 **SAUNA REFLECTED CEILING PLAN & ELECTRICAL DIAGRAM**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

## ELEC PLAN SYMBOLS

- WALL MOUNTED LIGHT
- RECESSED CAN LIGHT
- RECESSED, DIRECTIONAL CAN LIGHT
- UNDER CABINET LED STRIP LIGHT
- PENDANT LIGHT
- CEILING MOUNTED LIGHT
- FLOOR LIGHT
- CLOSET LIGHT FIXTURE
- CEILING FAN
- SECURITY LIGHT
- DUPLEX OUTLET
- SWITCHED OUTLET
- FLOOR DUPLEX OUTLET
- FLOOR DUPLEX OUTLET
- CABLE/ DATA
- THERMOSTAT
- FAN
- SMOKE DETECTOR
- SWITCH
- SWITCH + MOTION SENSOR
- EXISTING SWITCH
- KEYPAD SWITCH

## ELEC PLAN GEN. NOTES

1. ASSUME BASIC SWITCHING
2. VERIFY LOCATION OF SWITCHES AND LIGHTS WITH OWNER & ARCHITECT AT WALK-THRU
3. ASSUME ALL SWITCHES TO HAVE DIMMERS - VFY AT WALK-THRU
4. VERIFY FINISH OF SWITCHES, PLATES, & RECESSED LIGHTS WITH OWNER & ARCHITECT
5. ALL VISIBLE AV, MECHANICAL & ELECTRICAL EQUIPMENT TO BE COORDINATED WITH OWNER ON SITE
6. OUTLETS ARE SHOWN FOR SPECIFIC FUNCTIONS AND ARE IN ADDITION TO THOSE REQUIRED BY CODE - COORDINATE FINAL LOCATIONS OF ALL OUTLETS, SWITCHES AND FIXTURES ON SITE W/ OWNER & ARCHITECT
6. PROVIDE CODE REQUIRED POWER RECEPTACLES AND DETECTORS IN ADDITION TO THOSE SHOWN ON PLANS
7. ALL CEILINGS TO BE CEDAR T&G
8. LEAVE TAILS AT ALL SCONCES
9. PROVIDE BLOCKING FOR ALL FIXTURES AS NECESSARY
10. VERIFY LOCATION OF ANY/ALL EXTERIOR OUTLETS

**REHKAMP LARSON ARCHITECTS INC.**
2732 West 43rd Street, Mpls, MN 55410
Tel. 612-285-7275

**Nelson Residence**
755 Tonkawa Road
Orono, MN 55356

PROJECT PHASE:
PERMIT SET
PROJECT NUMBER:
24-016
ISSUE DATE:
SEPTEMBER 17, 2025
DRAWN BY:
JRL, AM

**SEPTEMBER 17, 2025 PERMIT SET**

E11
**RCP & ELECT. DIAGRAM**

**UNLESS NOTED OTHERWISE ON THE PLANS AND/OR IN THE DETAILS, THESE NOTES SHALL APPLY. IF THERE ARE DISCREPANCIES BETWEEN THE PLANS, DETAILS, SPECIFICATIONS, AND THESE NOTES, THE CONTRACTOR SHALL CONFORM TO THE MORE STRINGENT REQUIREMENTS, UNLESS CLARIFIED WITH THE STRUCTURAL ENGINEER OF RECORD (SER) PRIOR TO WORK.**

**MATERIAL STRENGTHS**

- STRUCTURAL STEEL FASTENERS
  - ANCHOR RODS - ASTM F1554, GR. 36, FY = 36 KSI
  - THREADED RODS - ASTM A36, FY = 36 KSI
- REINFORCING STEEL
  - DEFORMED BARS - ASTM A615, GR. 60, FY = 60 KSI
- CONCRETE
  - F 'C = COMPRESSIVE STRENGTH IN 28 DAYS
  - 4,000 PSI UNLESS NOTED OTHERWISE
  - 5,000 PSI FOR FOOTINGS
- STRUCTURAL LUMBER
  - ALL DIMENSIONAL LUMBER - #2 SPRUCE PINE FIR (SPF) OR EQUAL
  - LAMINATED VENEER LUMBER (LVL)
    - E = 2,000,000 PSI
    - FB = 2600 PSI
  - LAMINATED STRAND LUMBER (LSL)
    - E = 1,300,000 PSI
    - FB = 1,700 PSI
  - PARALLEL STRAND LUMBER (PSL)
    - E = 2,000,000 PSI
    - FB = 2900 PSI
  - TREATED LUMBER - #2 SOUTHERN PINE OR EQUAL

**DESIGN LOADS**

- ROOF
  - DEAD LOAD
    - 17 PSF (7 PSF TOP CHORD + 10 PSF BOTTOM CHORD)
  - SNOW LOAD
    - ROOF SNOW LOAD = 35 PSF
- WIND
  - ULTIMATE DESIGN WIND SPEED 115 MPH
  - 3 SECOND GUST.
  - EXPOSURE C, I = 1.0
  - RISK CATEGORY II
  - WIND SHEAR WALLS HAVE BEEN DESIGNED USING IRC R301.1.3.

**EXISTING CONDITIONS**

- CONTRACTOR SHALL VERIFY ALL DIMENSIONS, ELEVATIONS, AND DETAILS OF EXISTING STRUCTURE WHERE THEY AFFECT THIS CONSTRUCTION PRIOR TO FABRICATION.
- CONTRACTOR SHALL TAKE PRECAUTIONS TO AVOID ADDING LOAD OR STRESS TO ANY ADJACENT STRUCTURES DURING CONSTRUCTION.

**TEMPORARY BRACING**

- ALL STRUCTURAL MEMBERS ARE DESIGNED FOR IN-PLACE LOADS AND FULLY CURED MATERIALS. CONTRACTOR IS RESPONSIBLE FOR BRACING, WITHOUT OVERSTRESSING, ALL STRUCTURAL ELEMENTS AS REQUIRED AT ALL STAGES OF CONSTRUCTION UNTIL COMPLETION OF THIS PROJECT.
- PROVIDE TEMPORARY LATERAL SUPPORT FOR ALL WALLS UNTIL WALLS ARE ADEQUATELY BRACED BY PERMANENT STRUCTURE.
- PROVIDE REQUIRED TEMPORARY BRACING FOR ALL FRAMING UNTIL PERMANENT BRACING, FLOOR AND WALLS ARE IN PLACE.
- SHORE FOUNDATION WALLS RETAINING EARTH UNTIL FLOOR FRAMING AND BASEMENT SLAB ARE IN PLACE. USE CAUTION WHEN OPERATING EQUIPMENT ADJACENT TO FOUNDATION WALLS.

**GENERAL SOIL NOTES**

- THE STRUCTURE HAS BEEN DESIGNED USING A PRESUMPTIVE LOAD-BEARING VALUE OF 2000 PSF IN ACCORDANCE WITH TABLE R401.4.1 OF THE 2018 IRC ON VIRGIN SOIL OR COMPACTED GRANULAR FILL FOR FOOTINGS.
- PRESUMPTIVE SOIL BEARING VALUE TO BE VERIFIED BY A GEOTECHNICAL ENGINEER WHERE REQUIRED BY THE BUILDING OFFICIAL PER R401.4. WE RECOMMEND THE OWNER ENGAGES A GEOTECHNICAL ENGINEER TO VERIFY SOIL BEARING VALUES.
- ANY DISCREPANCIES IN THE ASSUMED ALLOWABLE SOIL BEARING PRESSURE SHALL BE REPORTED IMMEDIATELY.
- THE EXISTING FOOTINGS HAVE BEEN ASSUMED TO BE TYPICAL SPREAD FOOTINGS ON GOOD SOILS THAT ARE ASSUMED TO BE PERFORMING ADEQUATELY.
- REMOVE ALL TOP SOIL, UNCOMPACTED FILL, OR OTHER POOR SOIL FROM THE CONSTRUCTION AREA.
- SLOPE THE SITE TO DRAIN AWAY FROM THE BUILDING.
- INSTALL GUTTERS AND DOWNSPOUTS WITH LONG EXTENSIONS RECOMMENDED.
- INSTALL DRAIN TILE RECOMMENDED.
- BACKFILL WITH GRANULAR SOILS RECOMMENDED.

**FOOTINGS/FOUNDATIONS**

- ALL FOOTINGS ARE TO BE FORMED. ALL STUMPS, ROOTS AND DEBRIS MUST BE REMOVED FROM THE SOIL TO A DEPTH OF AT LEAST 12" BELOW THE SURFACE OF THE GROUND IN THE AREA OCCUPIED BY THE BUILDING. FOOTINGS SHALL BE PLACED ON VIRGIN SOIL OR COMPACTED GRANULAR FILL.
- WALL FOOTINGS ARE CAST-IN-PLACE CONCRETE WITH CONTINUOUS REINFORCING PLACED 3" CLEAR OF BOTTOM AND 2" CLEAR AT TOP AND SIDES.
- WALL FOOTINGS ARE CENTERED UNDER WALLS AND COLUMN FOOTINGS UNDER COLUMNS.
- WALL FOOTINGS SHALL BE A MINIMUM OF 8" THICK WITH A 4" PROJECTION EACH SIDE OF WALL. REINFORCE WITH 2 - #4 CONTINUOUS BOTTOM BARS.
- PROVIDE 30 BAR DIAMETER LAP AT SPLICES AND FULL CROSSING LAP AT CORNERS AND INTERSECTIONS. TIE ALL REINFORCING IN PLACE. SET FOOTING REINFORCING ON CHAIRS OR MASONRY BRICK TO OBTAIN 3" CLEARANCE FROM BOTTOM OF FOOTING.
- MAINTAIN MINIMUM FROST DEPTH OF 48" FOR ALL EXTERIOR FOOTINGS.
- FOOTING ELEVATIONS, IF SHOWN ON THE PLAN, INDICATE TOP OF FOOTING.
- TOP OF FOOTING SHALL BE PLACED 8" BELOW THE TOP OF SLABS ON GRADE, OR PLACED TO MAINTAIN FROST DEPTH, WHICHEVER IS DEEPER.
- STEP FOOTINGS IN A UNIFORM MANNER USING A 2:1 HORIZONTAL TO VERTICAL SLOPE.
- CAST DOWELS IN FOOTING FOR FOUNDATION WALLS ABOVE. DOWELS SHALL BE THE SAME QUANTITY, SIZE, AND SPACING AS THE VERTICAL WALL REINFORCING. DOWELS SHALL BE 30" LONG AND EXTEND TO 3" CLEAR OF BOTTOM OF FOOTING.
- CONTRACTOR SHALL BE RESPONSIBLE FOR IMPLEMENTING HOT WEATHER CONCRETE REQUIREMENTS PER ACI 305 AND COLD WEATHER CONCRETE REQUIREMENTS PER ACI 306.
- SHORE ALL FOUNDATION WALLS APPROPRIATELY BEFORE BACKFILLING AND COMPACTING.
- FOUNDATIONS SUPPORTING WOOD SHALL EXTEND AT LEAST 6" ABOVE THE ADJACENT FINISHED GRADE.
- THE CONTRACTOR SHALL VERIFY THE LOCATION OF ALL EXISTING UNDERGROUND UTILITIES AND TANKS PRIOR TO BEGINNING EXCAVATION.
- THE CONTRACTOR SHALL FOLLOW IRC FIGURE R403.1.7.1 FOR FOUNDATION CLEARANCES TO SLOPES UNLESS INDICATED OTHERWISE BY THE SOILS ENGINEER.

**CONCRETE**

- PROVIDE READY-MIXED CONCRETE PER ASTM C94. PORTLAND CEMENT SHALL BE ASTM C150, TYPE I. USE ONLY ONE BRAND OF CEMENT THROUGHOUT THE WORK. PROVIDE CONCRETE AGGREGATES MEETING THE REQUIREMENTS OF ASTM C33.
- MAXIMUM AGGREGATE SIZE SHALL BE 3/4" FOR GRADE BEAMS AND SLABS. WATER SHALL BE CLEAN, FREE OF DELETERIOUS AMOUNTS OF ACIDS, ALKALIS, OR ORGANIC MATERIALS, AND SHALL BE CONSIDERED POTABLE. PROVIDE ADMIXTURES TO REDUCE WATER CONTENT, PROVIDE AIR-ENTRAINMENT, OR ALTER THE QUALITY OF THE CONCRETE TO MEET THE JOB CONDITIONS.
- PLACE REINFORCING 2" CLEAR TO OUTSIDE FACE AND 1 1/2" CLEAR TO INSIDE FACE OF CONCRETE WALL.
- PROVIDE #4 X 4'-0" LONG (EQUAL LEGS) HORIZONTAL REINFORCING CORNER BARS AT 18" O.C. AT OUTSIDE CORNER OF WALL AND 2 - #4 VERTICAL SUPPORT BARS.
- ALL WALL OPENINGS LARGER THAN 12" SHALL HAVE 2 - #5 AT ALL SIDES EXTENDING 2'-0" BEYOND EACH EDGE OF OPENING WITH 2 - #5 X 4'-0" DIAGONAL BARS AT EACH CORNER OF OPENING.
- WALL REINFORCING SHALL BE CONTINUOUS THROUGH COLUMNS AND PILASTERS.
- PROVIDE FULL DEVELOPMENT AND SPLICE LENGTHS PER CONCRETE REINFORCING STEEL INSTITUTE (CRSI) OR ACI 318 REQUIREMENTS.
- ALL CONCRETE EXPOSED TO WEATHER, FREEZE-THAW CONDITIONS OR DE-ICING CHEMICALS SHALL CONTAIN 5% - 7% ENTRAINED AIR.
- DESIGN INTENT IS FOR ALL CONCRETE TO BE FULLY CURED PRIOR TO BACKFILLING AND INSTALLING STRUCTURE.
- SLUMP SHALL BE DETERMINED BY ASTM C143 AS FOLLOWS:

| | |
|---|---|
| FOOTINGS | 3" - 4" |
| WALLS, COLUMNS | 3" - 5" |
| SLABS ON GRADE | 3" - 4" |
| STRUCTURAL SLABS, BEAMS | 3" - 4" |

- CONCRETE SHALL NOT BE LAID WHEN THE TEMPERATURE OF THE OUTSIDE AIR IS BELOW 40 DEGREES FAHRENHEIT, UNLESS APPROVED METHODS ARE USED DURING CONSTRUCTION TO PREVENT DAMAGE TO THE CONCRETE. ALL MATERIALS USED AND SURFACES BUILT UPON SHALL BE FREE OF SNOW AND ICE.
- WOOD BEAMS POCKETED INTO CONCRETE SHALL BE PROVIDED WITH A 1/2" AIR SPACE ON TOP, END, AND SIDES UNLESS TREATED WOOD OR STEEL PLATES ARE USED.
- CONCRETE SHALL NOT BEAR PERMANENTLY ON WOOD MEMBERS.

**SLABS ON GRADE**

- ALL SLABS ON GRADE SHALL BE REINFORCED PER PLAN NOTES.
- SLABS ON GRADE ADJACENT TO FOUNDATION WALLS RETAINING EARTH SHALL BE A MINIMUM OF 3 1/2" THICK.
- CONSTRUCTION AND/OR CONTROL JOINTS SHALL OCCUR AT A MAXIMUM OF 8'-0" O.C. AT EXTERIOR SLABS ON GRADE, AND AT A MAXIMUM OF 10'-0" O.C. AT INTERIOR SLABS ON GRADE.
- CONSTRUCTION AND/OR CONTROL JOINTS SHALL BE LAID OUT IN A RECTANGULAR PATTERN WITH LONG TO SHORT SIDE RATIO LESS THAN OR EQUAL TO 1.5 AND WITH NO RE-ENTRANT CORNERS.
- CONTROL JOINTS FOR SLABS ON GRADE SHALL BE SAW CUT AS SOON AS CONCRETE CAN ACCEPT IT WITHOUT RAVELING
- DO NOT CUT STRUCTURAL SLABS OR TOPPING SLABS UNLESS AUTHORIZED BY THE STRUCTURAL ENGINEER.
- ALL CONTROL/CONSTRUCTION JOINTS SHALL BE CONTINUOUS AND NOT STAGGERED OR OFFSET.
- CONTROL JOINTS SHALL BE CLEANED AND SEALED FOR CURING PURPOSES AS SOON AS POSSIBLE.
- VERIFY FLOOR FINISHES AND CONTROL/CONSTRUCTION JOINT LOCATIONS WITH OWNER AND ARCHITECT.

**DIMENSION LUMBER**

- DESIGN ASSUMES LUMBER IS FREE OF SIGNIFICANT SPLITS AND CHECKS, AND CONTRACTOR WILL VISUALLY INSPECT DURING INSTALLATION.
- SILLS AND ALL OTHER LUMBER IN CONTACT WITH CONCRETE OR MASONRY AND WITHIN 8" OF FINISHED GRADE SHALL BE PRESERVATIVE TREATED WOOD. IN CRAWLSPACES OR UNEXCAVATED AREAS WITHIN THE BUILDING FOUNDATION, WOOD SHALL BE PRESERVATIVE TREATED FOR JOISTS WITHIN 18" OF EXPOSED GROUND AND/OR GIRDERS WITHIN 12" OF EXPOSED GROUND.
- PRESERVATIVE TREATED WOOD SHALL BE IN ACCORDANCE WITH THE AMERICAN WOOD PROTECTION ASSOCIATION, STANDARD U1.
- TREAT ALL CUT ENDS OF TREATED MATERIAL.
- ALL LUMBER IS TO BE GRADE STAMPED, WHICH IS TO CONTAIN GRADING AGENCY, MILL NUMBER OR NAME, GRADE OF LUMBER, SPECIES OR SPECIES GROUPING OR COMBINATION DESIGNATION, RULES UNDER WHICH GRADED, WHERE APPLICABLE, AND CONDITION OF SEASONING AT TIME OF MANUFACTURE.
- ALL LUMBER SHALL BE SEASONED TO A MOISTURE CONTENT OF 19% OR LESS, WITH THE INDICATION OF "S-DRY" ON THE GRADE STAMP.
- ALL LUMBER SHALL BE PROTECTED FROM THE ELEMENTS.
- SILL PLATES TO BE BOLTED TO FOUNDATION WALL WITH 1/2" DIAMETER GALV ANCHOR BOLTS AT 4'-0" O.C. MAXIMUM. BOLTS TO EXTEND 9" MINIMUM INTO SOLIDLY GROUTED FOUNDATION WALL. EACH SILL PLATE TO HAVE A MINIMUM OF 2 BOLTS WITH ONE BOLT LOCATED NOT MORE THAN 12 INCHES OR LESS THAN 4 1/2 INCHES FROM EACH END OF THE PLATE SECTION. USE 1/8"X2"X2" GALV WASHERS, SLIGHTLY CRUSHING PLATE.
- MINIMUM NAILING SHALL BE IN ACCORDANCE WITH TABLE R602.3(1) OF THE 2018 IRC UNLESS NOTED OTHERWISE.
- ALL WALLS SHALL HAVE A SINGLE BOTTOM PLATE AND DOUBLE TOP PLATE.
- EXTERIOR WALLS SHALL BE 2 X 6 STUDS @ 16" O.C. UNLESS NOTED OTHERWISE.
- INTERIOR NON-LOAD-BEARING WALLS SHALL BE 2 X 4 STUDS @ 16" O.C. UNLESS NOTED.
- TYPICAL OPENINGS TO HAVE A MINIMUM OF 2 BEARING (TRIMMER OR JACK) STUDS AND 1 FULL-HEIGHT KING STUD.
- HEADERS NOT NOTED TO BE 2 - 2 X 6 UP TO 4'-0" SPAN AND 2 - 2 X 8 FROM 4'-0" TO 6'-0" SPAN.
- WOOD HEADERS SHALL HAVE A MINIMUM 3" LENGTH OF BEARING AT EACH END OR BEAR THE ENTIRE LENGTH OF THE BEARING STUDS.
- BEAMS SHALL BEAR ON A MINIMUM OF 3" ALONG THEIR LENGTH AND FULLY ALONG THEIR WIDTH AND HAVE A MINIMUM OF 2 TYPICAL WALL STUDS SUPPORTING THEM.
- JOISTS SHALL BEAR THE FULL WIDTH OF SUPPORTING MEMBERS (STUD WALL, BEAMS, ETC.).
- PROVIDE SOLID VERTICAL BLOCKING AT ALL JOIST SPACES BELOW WOOD COLUMNS. PROVIDE MATCHING COLUMNS TO FOUNDATION AT LOWER LEVELS BELOW COLUMNS COMPRISED OF 3 OR MORE STUDS.
- ALL BEAMS AND JOISTS NOT BEARING ON SUPPORTING MEMBERS SHALL BE FRAMED WITH PREFABRICATED JOIST HANGERS.
- 1 ½" NAILS SHALL NOT BE USED AT JOIST HANGERS UNLESS SPECIFIED FOR THE SPECIFIC JOIST HANGER BY THE MANUFACTURER.
- 1 ½" NAILS SHALL NOT BE USED FOR BEAM AND GIRDER HANGERS.
- SEE HANGER MANUFACTURER CATALOG FOR REQUIRED NAILS OR SCREWS FOR 100% ALLOWABLE LOADING.
- BEAMS OR HEADERS MADE OF 2X'S SHALL BE NAILED TOGETHER WITH 2 - ROWS 16D NAILS (.162" X 3 ½") AT 12" O.C. ALONG EACH EDGE, TYPICAL FOR EACH LUMBER PLY.
- NAIL BUILT UP POSTS MADE OF 2X STUD MATERIAL WITH 2 - ROWS 16D NAILS 12" OC EACH PLY, UP TO 3-PLIES. SCREW BUILT UP POSTS MADE OF 2X STUD MATERIAL WITH ¼"X6" SDS SCREWS 8" OC STAGGERED FOR 4-PLIES.
- ATTACH 2-PLY LVL BEAMS WITH 2-ROWS OF ¼"X3 ½" SDS SCREWS 16" OC UNLESS NOTED.
- ATTACH 3-PLY LVL BEAMS WITH 2-ROWS OF ¼"X3 ½" SDS SCREWS 16" OC BOTH FACES UNLESS NOTED.
- ATTACH 4-PLY LVL BEAMS WITH 2-ROWS OF ¼"X6" SDS SCREWS 16" OC BOTH FACES UNLESS NOTED.
- SPACING OF BRIDGING FOR JOISTS SHALL NOT EXCEED 8'-0".
- DOUBLE ALL JOISTS UNDER PARALLEL PARTITIONS OR SINGLE FLOOR TRUSS.
- ALL PLYWOOD AND OSB SHALL BE INSTALLED PER AMERICAN PLYWOOD ASSOCIATION STANDARDS, INCLUDING THE USE OF CONSTRUCTION ADHESIVE FOR FASTENING TO FLOOR JOISTS.
- ALL FASTENERS AND HANGERS IN CONTACT WITH TREATED LUMBER SHALL BE G185 HOT DIPPED GALVANIZED OR EQUAL.
- LUMBER GRADING RULES AND WOOD SPECIES SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 20-99 AS PUBLISHED BY THE DEPARTMENT OF COMMERCE. GRADING RULES SHALL BE BY AN AGENCY CERTIFIED BY THE BOARD OF REVIEW OF THE AMERICAN LUMBER STANDARDS COMMITTEE.
- PERFORMANCE REQUIREMENTS, ADHESIVE BOND PERFORMANCE, PANEL CONSTRUCTION AND WORKMANSHIP, DIMENSIONS AND TOLERANCES, MARKING, AND MOISTURE CONTENT OF WOOD-BASED STRUCTURAL-USE PANELS SHALL CONFORM TO VOLUNTARY PRODUCT STANDARD PS 2-92, AS PUBLISHED BY THE DEPARTMENT OF COMMERCE.
- PLACE SHEETROCK CONTROL JOINTS MAX 30FT APART PER THE WALL AND CEILING BUREAU TECHNICAL BULLETIN.
- DO NOT DRILL OR NOTCH PLUMBING HOLES NEAR KNOTS IN ANY FRAMING.

**WOOD TRUSSES**

- RESPONSIBILITIES OF THE CONTRACTOR, BUILDING DESIGNER, TRUSS MANUFACTURER, AND TRUSS DESIGNER SHALL FOLLOW THE PUBLICATION "TPI 1-2022 NATIONAL DESIGN STANDARD FOR METAL PLATE CONNECTED WOOD TRUSS CONSTRUCTION."
- TRUSS SUPPLIER SHALL NOTIFY SER OF ANY PROPOSED REVISIONS TO THE LAYOUT INDICATED ON THIS PLAN. REVISIONS THAT AFFECT THE STRUCTURAL DESIGN WILL NOT BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL BY THE SER.
- VERIFY ALLOWABLE BEARING LOCATIONS FOR GIRDER TRUSSES WITH SER PRIOR TO FINAL DESIGN STAGE. PROVIDE METAL BEARING ENHANCERS AS NECESSARY TO UTILIZE STUD COLUMNS SHOWN ON PLAN.
- ALL PREFABRICATED WOOD TRUSSES SHALL BE FURNISHED IN ACCORDANCE WITH DESIGNS PREPARED USING THE DESIGN LOADS AND SPAN CONDITIONS INDICATED, INCLUDING DESIGNING GABLE END TRUSS WEBS FOR PERPENDICULAR TO FACE WIND LOADS.
- TRUSS MANUFACTURER SHALL PROVIDE A TRUSS LAYOUT AND TRUSS DRAWINGS PRIOR TO BEGINNING CONSTRUCTION.
- TRUSSES SHALL BE DESIGNED FOR TOP AND BOTTOM CHORD SUPERIMPOSED DEAD AND LIVE LOADS AS INDICATED ABOVE.
- TRUSS SUPPLIER SHALL DESIGN TRUSSES TO SUPPORT ADDITIONAL DEAD LOAD FROM, BUT NOT LIMITED TO, SPRINKLER LINES, RAIN LEADER SYSTEMS, PIPING, CABLE TRAYS, DUCTWORK, KITCHEN ISLANDS, ETC., AS PER IBC. COORDINATE WITH ARCHITECTURAL/MECHANICAL/ELECTRICAL AS REQUIRED. GENERAL CONTRACTOR TO VERIFY LOCATION AND MAGNITUDE OF ALL SUCH LOADS WITH TRUSS SUPPLIER AND SER PRIOR TO FABRICATION OF TRUSSES.
- SEE ARCHITECTURAL PLANS FOR ATTIC DRAFT STOP LOCATIONS AND DESIGN ROOF TRUSSES ACCORDINGLY.
- LIVE LOAD DEFLECTION OF ROOF TRUSSES SHALL BE LIMITED TO 1/360 OF THE SPAN.
- PROVIDE L/600 DEFLECTION LIMITS FOR ALL INDIVIDUAL BOTTOM CHORD MEMBERS BETWEEN PANEL POINTS.
- DESIGN TRUSSES FOR TOP CHORD BEARING OR BOTTOM CHORD BEARING AS SHOWN ON DRAWINGS.
- TRUSS CONFIGURATION, PITCH, OVERHANG, ETC. SHALL BE INDICATED ON THE ARCHITECTURAL DRAWINGS.
- SPACING OF ROOF TRUSSES SHALL NOT EXCEED 24" O.C.
- LUMBER FOR WOOD TRUSSES SHALL BE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.
- TRUSS MANUFACTURER TO PROVIDE GIRDER TRUSSES, HIP JACKS, AND STEP-DOWN TRUSSES AS REQUIRED AND DESIGNED TO SUPPORT ALL SUPERIMPOSED LOADS. PROVIDE HIP-SETS, DORMERS, AND PIGGY-BACK TRUSSES AS REQUIRED.
- TRUSS MANUFACTURER TO SPECIFY IF ROOF SHEATHING NEEDS TO BE APPLIED BEFORE PLACING "OVER-FRAMING".
- PROVIDE METAL FRAMING ANCHORS AT TRUSS BEARING TO MECHANICALLY FASTEN TRUSS TO BEARING WALL OR SUPPORTING MEMBER AS SHOWN IN DETAILS.
- TRUSS MANUFACTURER SHALL PROVIDE TRUSS TO TRUSS CONNECTION HANGERS.
- BRIDGING, AND BRACING OF TRUSS COMPRESSION AND TENSION MEMBERS, SHALL BE INSTALLED IN ACCORDANCE WITH THE TRUSS MANUFACTURER'S DESIGN AND DIRECTIONS.
- NO CUTTING, NOTCHING, OR MODIFICATIONS OF TRUSSES WILL BE ALLOWED WITHOUT THE MANUFACTURER'S WRITTEN APPROVAL.
- CONTRACTOR SHALL PROVIDE PERMANENT AND TEMPORARY DIAGONAL, LATERAL, AND CROSS BRACING IN ACCORDANCE WITH THE PUBLICATION "BCSI 2025 BUILDING COMPONENT SAFETY INFORMATION, GUIDE TO GOOD PRACTICE FOR HANDLING, INSTALLING AND BRACING OF METAL PLATE CONNECTED WOOD TRUSSES" BY THE TRUSS PLATE INSTITUTE AND WOOD TRUSS COUNCIL OF AMERICA AND AS OTHERWISE NECESSARY. FOR SPANS LONGER THAN 60FT., CONTRACTOR SHALL HIRE A STRUCTURAL ENGINEER TO DESIGN THE NECESSARY BRACING.
- PERMANENT BOTTOM CHORD BRACING AND WEB BRACING SHALL BE LOCATED AS SHOWN ON THE TRUSS DRAWINGS AND SHALL BE MINIMUM 2 X 4 WITH 2 - 16D NAILS TO END WALLS AND TRUSSES, LAPPING TWO TRUSS SPACES AT SPLICES.

**WALL SHEATHING**

- WALL SHEATHING SHALL BE MINIMUM 15/32" THICK APA RATED PANELS, RATED FOR SPACING OF SUPPORTING MEMBERS. A MINIMUM 32/16 SPAN RATING IS RECOMMENDED. BLOCK ALL JOINTS.
- PROVIDE EXTERIOR OR EXPOSURE 1 GRADE. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS, AND LONG DIMENSION OF PANEL SHALL BE EITHER PERPENDICULAR OR PARALLEL TO SUPPORTS. FASTEN WALL SHEATHING WITH 8D NAILS SPACED AT 4" O.C. AT SUPPORTED EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS. LEAVE AN 1/8" GAP AT ALL END AND EDGE JOINTS TO ALLOW FOR EXPANSION. STAGGER END JOINTS OF PANELS. REFER TO PLAN AND NOTES FOR ANY SPECIAL SHEAR WALL NAILING AND BOLTING CONDITIONS. GYPSUM SHEATHING TO BE A MINIMUM OF 1/2" THICK FASTENED WITH 6D COOLER OR WALLBOARD NAILS AT 7" O.C. TO ALL FRAMING MEMBERS UNLESS NOTED OTHERWISE.
- NAIL "ZIPS" PER MANUFACTURER'S INSTALLATION WITH 0.131" SHANK NAILS WITH 1 ½" FRAMING PENETRATION INTO FRAMING A MAXIMUM 4" OC.

**ROOF SHEATHING**

- ROOF SHEATHING SHALL BE MINIMUM 15/32" THICK APA RATED PANELS, RATED FOR SPACING OF SUPPORTING MEMBERS. A MINIMUM OF 32/16 SPAN RATING IS RECOMMENDED. PROVIDE PANEL CLIPS, ONE BETWEEN EACH SUPPORT, FOR SUPPORTS SPACED GREATER THAN 16" O.C.
- PROVIDE EXTERIOR OR EXPOSURE 1 GRADE. PANELS SHALL BE CONTINUOUS OVER TWO OR MORE SPANS, AND LONG DIMENSION OF PANEL SHALL BE PERPENDICULAR TO SUPPORTS. FASTEN ROOF SHEATHING WITH 8D NAILS SPACED AT 4" O.C. AT SUPPORTED EDGES AND 6" O.C. AT INTERMEDIATE SUPPORTS. LEAVE AN 1/8" GAP AT ALL END AND EDGE JOINTS TO ALLOW FOR EXPANSION. DESIGN OF ROOF SHEATHING ASSUMES THAT THE ROOF WILL BE PROPERLY INSULATED AND VENTILATED. REFER TO APA PUBLICATION N335N "PROPER INSTALLATION OF APA RATED SHEATHING FOR ROOF APPLICATIONS."

**LVL WOOD MEMBERS**

- LVL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED LAMINATED VENEER LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**PSL WOOD MEMBERS**

- PSL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED PARALLEL STRAND LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**LSL WOOD MEMBERS**

- LSL MEMBERS NOTED ON DRAWINGS ARE ENGINEERED LAMINATED STRAND LUMBER AS MANUFACTURED BY THE WEYERHAEUSER COMPANY. ALTERNATE AT CONTRACTOR'S OPTION OF EQUAL DESIGN PROPERTIES.
- SIZES SHOWN ON PLAN ARE ACTUAL SIZE.

**ADHESIVE/EXPANSION ANCHORS**

- ADHESIVE AND EXPANSION ANCHORS SHALL BE PROVIDED AND INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS. ADHESIVE ANCHORING SYSTEM TO BE SIMPSON AT-G3 ADHESIVE. CONCRETE SCREWS SHALL BE SIMPSON TITEN. ALTERNATE ANCHORING SYSTEM MAY BE SUBMITTED FOR APPROVAL. "FAST SET EPOXY" IS NOT PERMITTED. REFERENCE DRAWINGS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.



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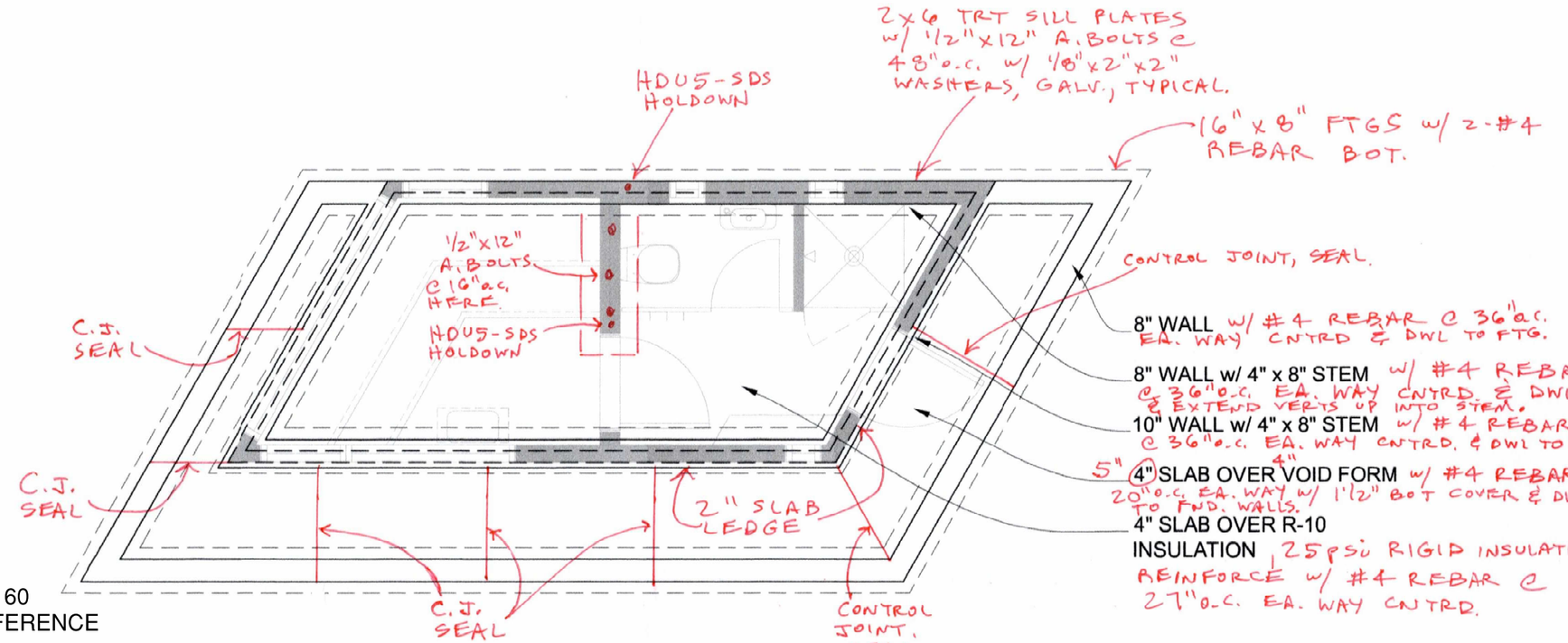
**S00**

**STRUCTURAL NOTES**




1 **SAUNA FOOTING & FOUNDATION DIAGRAM**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

NOTE: CONTROL JOINTS TO BE AT 60 DEGREE ANGLE, SEE A11 FOR REFERENCE

EMB & BA
1 OF 2
8-5-25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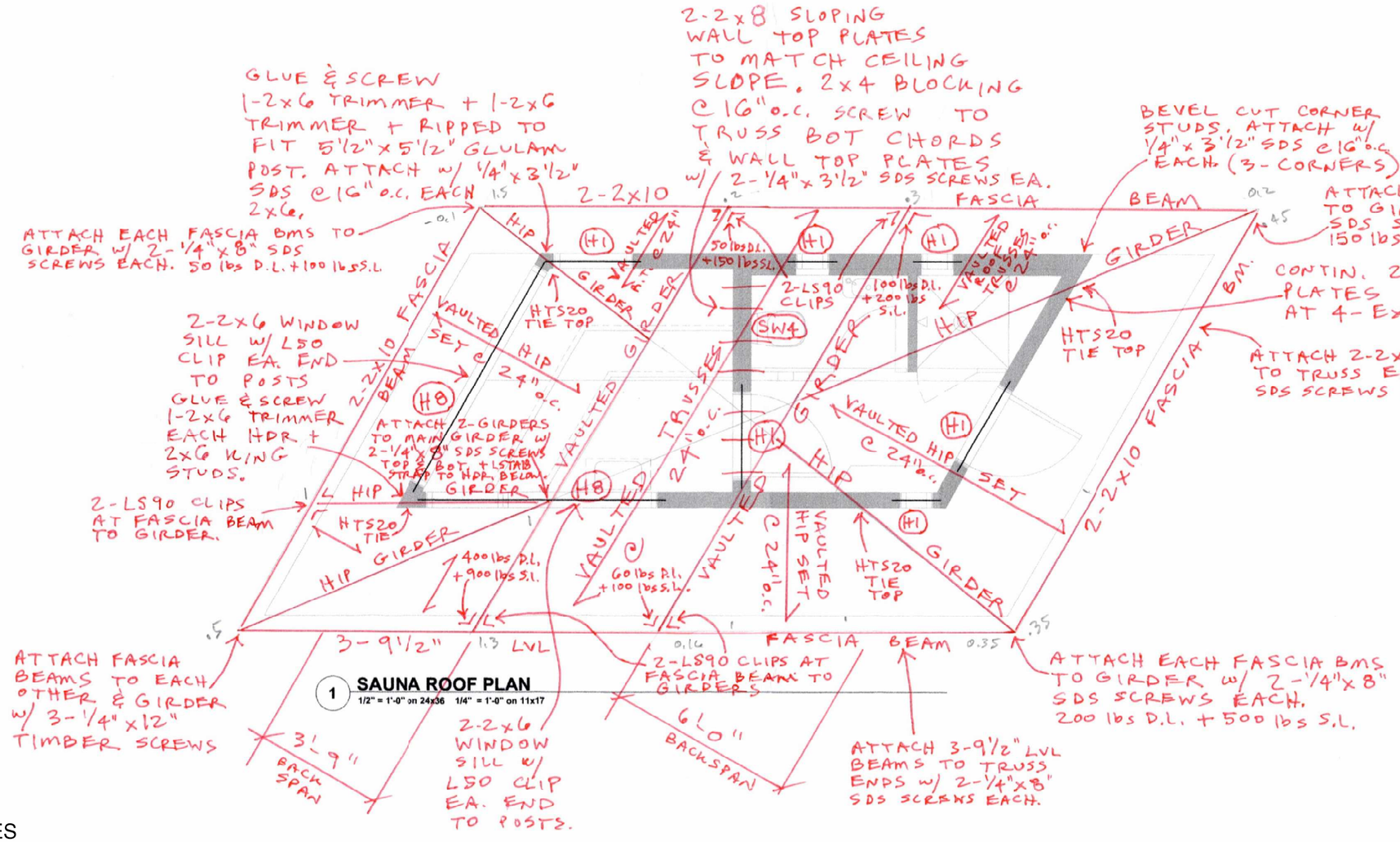
**FTG. & FND. STRUCT. DIAGRAM**




1 **SAUNA ROOF PLAN**
1/2" = 1'-0" on 24x36 1/4" = 1'-0" on 11x17

ROOF FRAMING NOTES

See structural notes for more information.
Attach all truss/rafter ends with Simpson H2.5A ties or ¼"x6" SDS screws up into wall plates.
Use 1/2" plywood roof sheathing, see structural notes for nailing.
Provide minimum 1 – 2x trimmer studs and 1 – 2x king stud unless noted.
Block solid below all posts to foundation.
Locate girders as shown.
Marks thus, "2", indicate number of bearing studs required. If number not shown, provide minimum of 2 studs (3" bearing length), full width of beam/header/girder truss must be supported.
Mend all fascia board butt splices with Simpson LSTA24 horizontal strap.
See plan for shear wall locations and schedule, marked thus, "SW1". Shear wall sheathing shall be directly applied to studs. If "ZIPS" sheathing is being used, the "ZIPS" sheathing shall be ½" thinner at the shear wall locations to flush out with adjacent panels.
Extend plywood wall sheathing up face of truss heel and nail to trusses. Stop short for venting as required.
Exterior studs to be 2x6 at 16" oc.

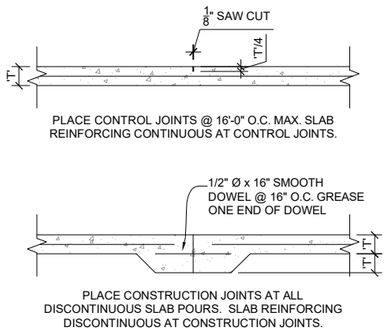

**REHKAMP LARSON ARCHITECTS INC.**
2732 West 43rd Street, Mpls, MN 55410
Tel. 612-285-7275


**Nelson Residence**
755 Tonkawa Road
Orono, MN 55356

PROJECT PHASE:
CONSTRUCTION DOCUMENTS
PROJECT NUMBER:
24-016
ISSUE DATE:
SEPTEMBER 17, 2025
DRAWN BY:
EB, AM

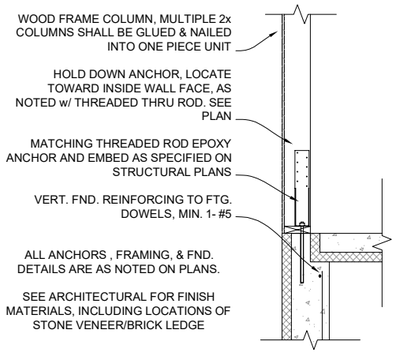
**SEPTEMBER 17, 2025 PERMIT SET**

**S11**
**ROOF FRAMING DIAGRAM**



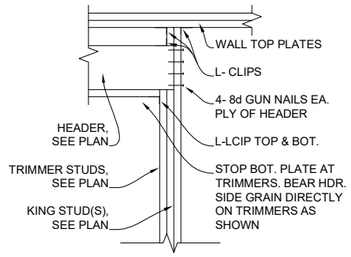

## 4 CONC. SLAB JOINTS, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**



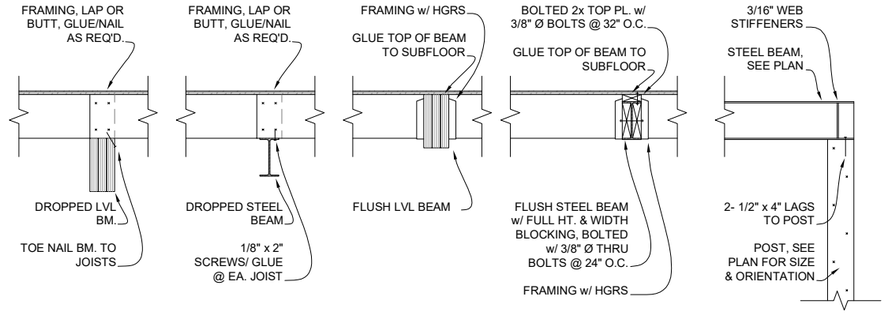

## 3 SHEARWALL HOLDOWNS, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**




## 2 HEADER, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**



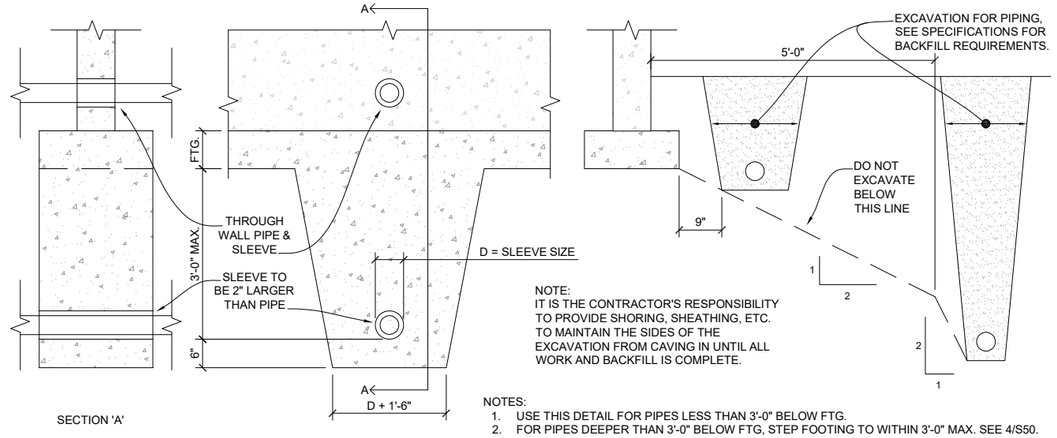

## 1 STRUCTURAL BEAMS, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**




## 6 STEPPED FOOTING, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**




NOTES:
1. USE THIS DETAIL FOR PIPES LESS THAN 3'-0" BELOW FTG.
2. FOR PIPES DEEPER THAN 3'-0" BELOW FTG, STEP FOOTING TO WITHIN 3'-0" MAX. SEE 4/S50.

## 5 SUB-SLAB PIPING, TYP.

**3/4" = 1'-0" on 24x36 3/8" = 1'-0" on 11x17**

### WOOD HEADER SCHEDULE

| MARK | PLYS & SIZE | MARK | PLYS & SIZE | MARK | PLYS & SIZE |
|---|---|---|---|---|---|
| H1 | 2- 2x6 | H9 | 3- 1-3/4" x 7-1/4" LVL | H17 | 3- 1-3/4" x 14" LVL |
| H2 | 2- 2x8 | H10 | 2- 1-3/4" x 9-1/2" LVL | H18 | 4- 1-3/4" x 14" LVL |
| H3 | 3- 2x8 | H11 | 3- 1-3/4" x 9-1/2" LVL | H19 | 2- 1-3/4" x 16" LVL |
| H4 | 2- 2x10 | H12 | 4- 1-3/4" x 9-1/2" LVL | H20 | 3- 1-3/4" x 16" LVL |
| H5 | 3- 2x10 | H13 | 2- 1-3/4" x 11-7/8" LVL | H21 | 4- 1-3/4" x 16" LVL |
| H6 | 2- 2x12 | H14 | 3- 1-3/4" x 11-7/8" LVL | H22 | 2- 1-3/4" x 18" LVL |
| H7 | 3- 2x12 | H15 | 4- 1-3/4" x 11-7/8" LVL | H23 | 3- 1-3/4" x 18" LVL |
| H8 | 2- 1-3/4" x 7-1/4" LVL | H16 | 2- 1-3/4" x 14" LVL | H24 | 4- 1-3/4" x 18" LVL |

(HxxF) 'FLUSH' BEAM/HEADER (TOP OF BEAM = TOP OF JOISTS)

(HxxFB) 'BOTTOM FLUSH' BEAM/HEADER (BOT. OF BEAM = BOT. OF JOISTS)

(2) DENOTES 'X' 2x BRG. STUDS

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PROJECT PHASE: PERMIT SET
PROJECT NUMBER: 24-016
ISSUE DATE: SEPTEMBER 17, 2025
DRAWN BY: EB, AM

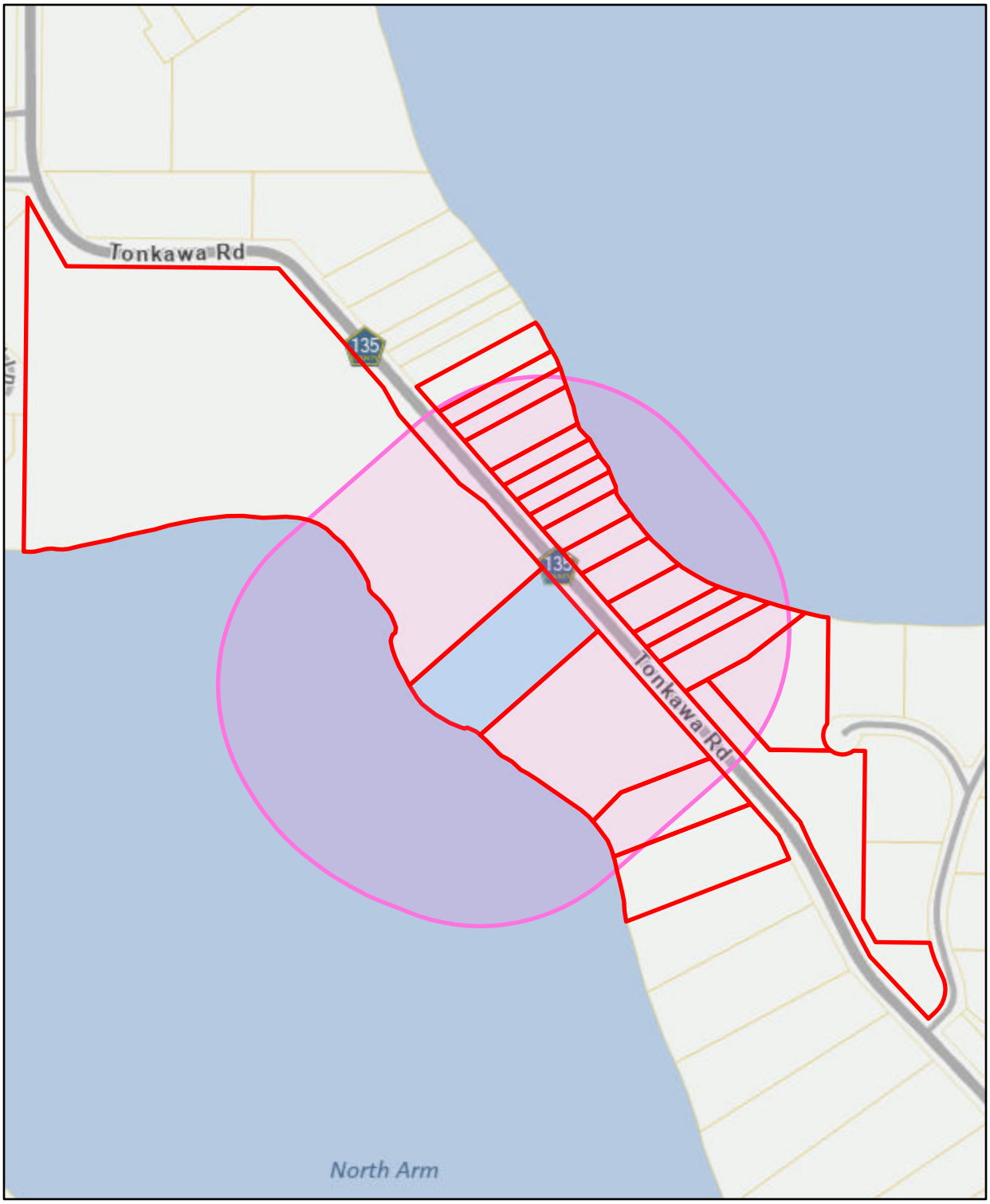
**SEPTEMBER 17, 2025 PERMIT SET**

# S50

**STRUCTURAL DETAILS**

# Hennepin County Locate & Notify Map

Date: 10/22/2025




**Buffer Size:** 500

**Map Comments:**

755 Tonkawa

0 100 200 400 Feet

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

For more information, contact Hennepin County GIS Office
300 6th Street South, Minneapolis, MN 55487 / gis.info@hennepin.us

38 05-117-23 33 0003
WINTERTREE LLC
755 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 33 0011
WELDON W GILBERTSON
684 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 33 0012
OLIVIA M BRADLEY
16277 W WINDCREST DR
SURPRISE AZ 85374

38 05-117-23 33 0013
BARBARA PUGH-MCCREIGHT
692 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 33 0014
TED H SPOONER
117 PORTLAND AVE APT 508
MINNEAPOLIS MN 55401

38 05-117-23 33 0015
THOMAS P GOODYEAR
712 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 33 0019
TEMPLE ISRAEL OF MINNEAPOLIS
2324 EMERSON AVE S
MPLS MN 55405

38 05-117-23 34 0001
STANLEY S SANDIFORD
722 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0002
PATRICK J MIDDLETON
KATHLEEN J MIDDLETON
720 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0003
STEVE & SARA ZAWOYSKI
724 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0004
BRUCE R & COLLEEN LEA
740 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0005
EJA LLC
4802 NICOLLET AVE
MINNEAPOLIS MN 55419

38 05-117-23 34 0006
KAREN E WEATHERS
750 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0007
BRENT BORDSON
NANCY BORDSON
760 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0008
DAVID G LATZKE
770 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0009
CHADLER & BARBARA ANDERSON
774 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0010
KEITH MENZEL
780 TONKAWA RD
LONG LAKE MN 55356

38 05-117-23 34 0013
GREGORY & AGNIESZKA HATFIELD
875 PARTENWOOD LA
LONG LAKE MN 55356

38 08-117-23 21 0001
THE LANDSBERG FAMILY TRUST
801 TONKAWA RD
LONG LAKE MN 55356

38 08-117-23 21 0002
SCOTT BISSEN/MICHELLE MOREY
825 TONKAWA RD
LONG LAKE MN 55356

38 08-117-23 21 0003
DAVID W LARSON ET AL
847 TONKAWA RD
LONG LAKE MN 55356

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 5.4

**Title:** LA25-000049, O2 Design o/b/o Stephen & Stacey Stenehjem, 1450 Bracketts Point Road, CUP: Retaining Wall (Staff: Melanie Curtis)

**Presenter:** Melanie Curtis, Planner

**Section:** Public Hearings

1. **Purpose:**
   To review a conditional use permit (CUP) for a new, replacement retaining wall within the 75-foot shore setback area.

2. **MN§15.99 Application Deadline:**
   This application was received and deemed complete on October 22, 2025. Therefore, the 60-day review period will end on December 21, 2025.

3. **Background:**
   The applicant is requesting approval to construct a new/replacement retaining wall within 75 feet of the OHWL of Lake Minnetonka. The new wall is part of a larger, in-kind project to rebuild an existing legally nonconforming boathouse and walls within the shore setback. The subject wall is proposed in a new location to support new lake access stairs. The new wall is necessary to support the existing slope and will be completely screened from the lake by the new stairway.

   Please refer to the Planning Report attached as **Exhibit A** for a full analysis of the project.

4. **Public Comment:**
   One public comment in support of the project has been received and is attached as **Exhibit J**.

5. **Staff Recommendation:**
   Staff recommends approval as applied.

6. **Planning Commission Action Requested:**
   Planning Commission should consider a motion to approve the CUP as applied.

**Exhibits**

Exhibit A - Planning Report
Exhibit B - Application
Exhibit C - Narrative
Exhibit D - Survey
Exhibit E - Plans
Exhibit F - Aerial Photos
Exhibit G - Site Photos
Exhibit H - Hardcover
Exhibit I - Platting history
Exhibit J - Neighbor Comments
Exhibit K - Map and List

PC
Exhibit A

***Date Application Received*: 10/22/2025**
***Date Application Considered as Complete*: 10/22/2025**
***60-Day Review Period Expires*: 12/21/2025**

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Melanie Curtis, Planner MCC

**Date:** 17 November 2025

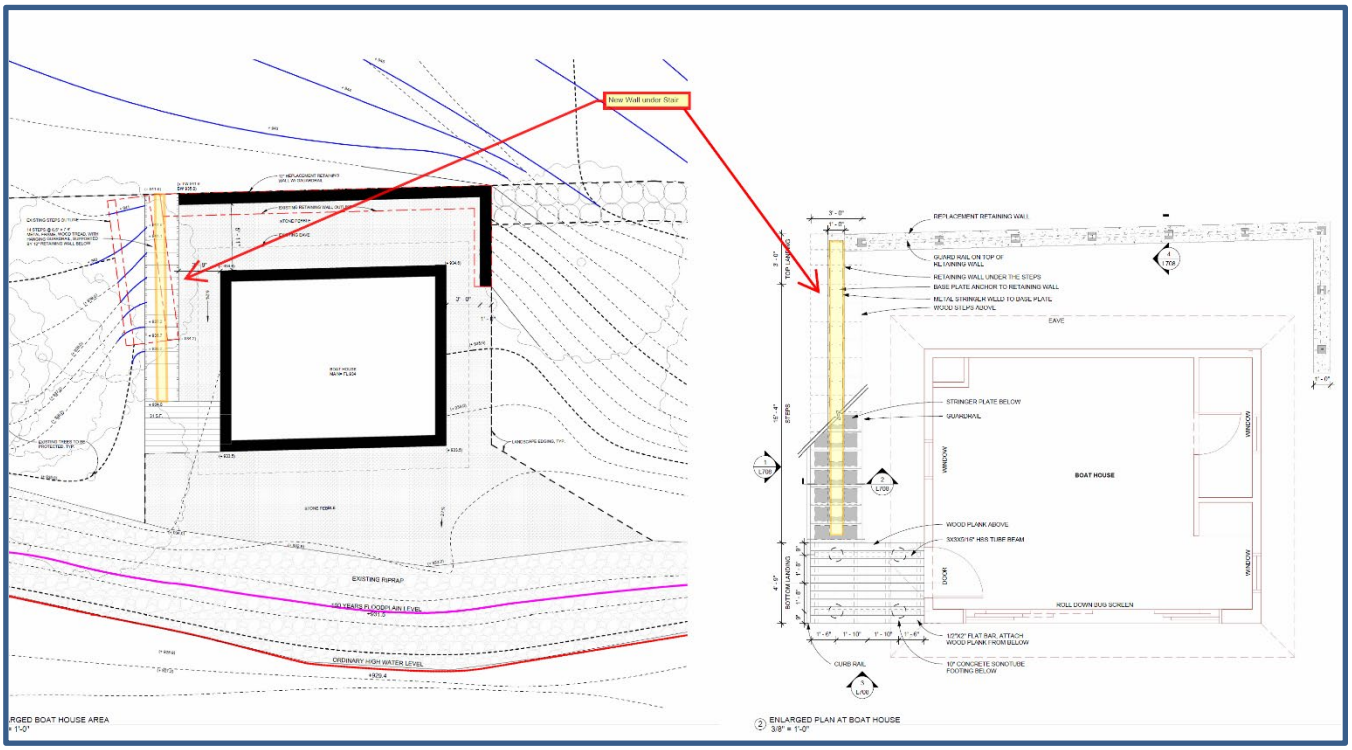
**Subject:** #LA25-000049, O2 Design o/b/o Stephen + Stacey Stenehjem, 1450 Bracketts Point Road
Conditional Use Permit
Public Hearing

| |
|---|
| ***Application Summary:*** The property owner is requesting a conditional use permit to allow a new retaining wall to be reconstructed within 75 feet of the lake. |
| ***Staff Recommendation:*** Approval of a CUP for a new retaining wall within the 75-lake setback. |

**Background**

The subject property was part of a larger estate (Lot 8 of the plat *Rearrangement of Orono Point)* prior to the plat of *Bracketts Point* in 1981. Refer to **Exhibit I** for a brief summary of the platting history. The 2007 plat of *Bracketts Point 2nd Addition* created the subject lot (Lot 1, Block 1, Bracketts Point 2nd). The boathouse, stairs, and associated walls were the only improvements on Lot 1, and the property has remained vacant since that time.

The current owners purchased the property in June of 2023; a building permit has been issued for a new residence. They plan to rebuild the existing boathouse in-kind and, as part of the project, will reconstruct the walls surrounding the boathouse with different materials, resulting in a smaller footprint. The lake access stairs will also be reconstructed and reconfigured; as a result, one of the existing walls supporting the stairs will be constructed in a different location (under the new stairs), requiring a conditional use permit. The hardcover associated with the boathouse, walls, and stairs will be reduced by 8 square feet from the existing condition.



**Applicable Regulations:**

CUP for Walls within the 75-foot Lake setback (Chapter 6.12 Section 6240)

The code provides for new walls within the lake yard via a CUP. According to Section 6.12.6240, new walls and altered/relocated replacement walls greater than four feet in height must be:

1. Designed to correct an established erosion problem; and
2. Suitable given the demonstrated need; and
3. Designed by a registered engineer or landscape architect, depending on project scope; and
4. Designed to be the minimum size necessary to control the erosion problem.

**GOVERNING REGULATIONS:**

**Conditional Use Permit (Sections 6.12.4090 & 6.12.6240)**

*Section 6.12.6240 (5)(c)* states that walls in the shore setback zone, new walls shall require a conditional use permit. New walls and changed or relocated replacement walls, greater than 4 feet in height, must meet the following conditions. The wall must be:

1. Designed to correct an established erosion problem; *the project includes in-kind replacement of failing walls and installation of a new, reconfigured lake access stair, which is allowed. The one new wall, requiring CUP approval, is a supportive wall for the new stair. Although it is new, the wall is necessary to support the permitted stairs, given the topography. This criterion has been met,* and

2. Suitable given the demonstrated need; *the walls provide stability to the slope and help to reduce erosion. The construction of the wall is necessary to support the slope in conjunction with the new stairway. This criterion has been met,* and

3. Designed by a registered engineer or landscape architect, depending on the project scope; *the applicant has provided structural plans for the walls designed by a registered landscape architect and a structural engineer. This criterion has been met,* and

4. Designed to be the minimum size necessary to control the erosion problem. *The new wall is necessary to support the permitted lake access stair, considering the placement of the stair within the full project scope to reconstruct the boathouse and walls in-kind. This criterion has been met.*

The Planning Commission may recommend, and the Council may grant a Conditional Use Permit (CUP) as the use permit was applied for or in modified form. Based on the application and the evidence submitted, the city must find that the proposed use at the proposed location is, or will be:

1) Consistent with the community management plan; *the protection and preservation of the natural lake shoreline is an identified priority of the Comprehensive Plan. The property owners have a right to reconstruct the existing legally nonconforming improvements in-kind. The new stair will comply with building code and, as a result, will be placed in a new location and configuration, requiring the new wall in a new location within the existing condition. The new wall will not be visible from the lake as it will be situated beneath the new stairway. This criterion is met.*

2) Compliant with the zoning code, including any conditions imposed on specific uses as required by Article V, Division 3 of the City Code; *retaining walls within the lakeyard are permitted where they are deemed necessary to protect the integrity of the slope. The applicant provided a design from a professional engineer for the walls, which provides slope stability and erosion control. The applicant has provided an extensive landscape plan for the property; however, the new wall subject to the CUP will be completely screened by the stair improvement. This criterion is met.*

3) Adequately served by police, fire, roads, and stormwater management; *the property meets this standard.*

4) Provided with an adequate water supply and sewage disposal system; *the property meets this standard.*

5) Not expected to generate excessive demand for public services at public cost; *the property meets this standard.*

6) Compatible with the surrounding area, as the area is used both presently and as it is planned to be used in the future; *the existing stone retaining walls, boathouse, and stairway are failing. The applicant is proposing to replace the improvements in kind except for the stairway change, which is permitted. The proposed new wall supporting the stairway will not change the existing character of the property. This criterion is met.*

7) Consistent with the character of the surrounding area, unless a change of character is called for in the community management plan, *the proposed project is consistent with the character of the property. This criterion is met.*

8) Compatible with the character of buildings and site improvements in the surrounding area, unless a change of character is called for in the community management plan; *the new retaining wall will be screened from view from the lake by the stairway it is constructed to support. This criterion is met.*

9) Not expected to substantially impair the use and enjoyment of the property in the area or have a materially adverse impact on the property values in the area when compared to the impairment or impact of generally permitted uses; *the lakeshore wall improvements on the subject property should not impact the neighboring property values or the enjoyment of the neighboring property owners.*

10) Provided with screening and buffering adequate to mitigate undesirable views and activities likely to disturb surrounding uses; *the applicant has provided a plan to provide screening of the retaining wall (by the stair) when viewed from the lake. This criterion is met.*

11) Not create a nuisance which generates smoke, noise, glare, vibration, odors, fumes, dust, electrical interference, general unsightliness, or other means; *the walls on the subject property are not anticipated to create a nuisance situation. This criterion is met.*

12) Not cause excessive non-residential traffic on residential streets, parking needs that cause a demonstrable inconvenience to adjoining properties, traffic congestion, or unsafe access; *the retaining walls should not have any impact on residential streets or traffic. This criterion is met.*

13) Designed to take into account the natural, scenic, and historic features of the area and to minimize environmental impact; *the applicant has proposed adequate landscaping to screen the walls to be compatible with the character of the improvements within the surrounding area. This criterion is met.*

14) All exterior lighting shall be so directed so as not to cast glare toward or onto the public right-of-way or neighboring residential uses or districts; *the lake yard improvements should not result in any lighting or glare being cast off the property toward the public street, the neighbors, or the lake;* and

15) Not detrimental to the public health, public safety, or general welfare. *This is true of the project.*

A CUP may be granted subject to such conditions as the Council may prescribe. Additionally, a CUP shall remain in effect as long as the conditions imposed by the City Council are observed, but nothing in this section shall prevent the city from enacting or amending official controls to change the status of conditional uses.



**Analysis**
The new retaining wall is proposed to support a new lake access stair. As designed, the new wall will run perpendicular to the lake, and will be completely screened from the lake by the stairs it is supporting. Plans designed by a registered landscape architect and a structural engineer have been provided.

Refer to **Exhibit E,** the construction plans, to review the in-kind and new improvements. The boathouse and walls will be replaced in-kind; the new wall will be situated under the new stairs as support of the slope and will anchor the stairway. The plans also reflect the replacement of the existing railing at the top of the 6 ½ foot retaining wall behind the boathouse. The guard rail on the wall is not required by the Building Code, as there is no improved walking surface abutting the wall. Only the portion of the guard rail on top of the wall that exists today can be replaced. The stairway guard rail proposed is required by the Building Code and permitted.

**Public Comments**
Supportive comments from one neighbor have been received, **Exhibit J**.

**Issues for Consideration**
1. Does the Planning Commission find that the property owner proposes to use the property in a reasonable manner that is not permitted by an official control?
2. Does the Commission find it necessary to impose conditions to mitigate the impacts created by the new wall, subject to the CUP?
3. Are there any other issues or concerns with this application?

**Planning Staff Recommendation**
Planning Staff recommends approval of the CUP for the new retaining wall as proposed.

PC
Exhibit B

# Land Use Application Summary

**Application Date:** 10/22/2025

**Address:** 1450 Bracketts Point RD
Orono, MN 55391

**Parcel Number:** 1111723330007

**Land Use Number:** LA25-000049

**Application Submitted By:** Agent on behalf of property owner

**Owner:**

**Name:** STEPHEN PETER STENEHJEM
**Address:** STACEY M STENEHJEM 16143 CROSBY COVE RD

**Applicant:**

**Name:** Han Zhang
**Company:** O2 Design
**Address:** 115 Washington AVE N
Minneapolis, MN 55401

**Contact Information:**

**Associated Contact:** Erik Yerigan

**Associated Contact:**

**Associated Contact:**

**Associated Contact:**

**Project Description:** Replacement retaining wall over 4ft tall within 75' lakeshore setback zone.

**Land Use Application Type:**

- Amendmend Application ☐
- Appeal of Admin Decision ☐
- Concept Application ☐
- Conditional Use Permit ☑
- Site Plan Application ☐
- Subdivision Application ☐
- Subdivision Exception ☐
- Vacation Application ☐
- Variance Application ☐

**Applicant Signature:**



PC
Exhibit C

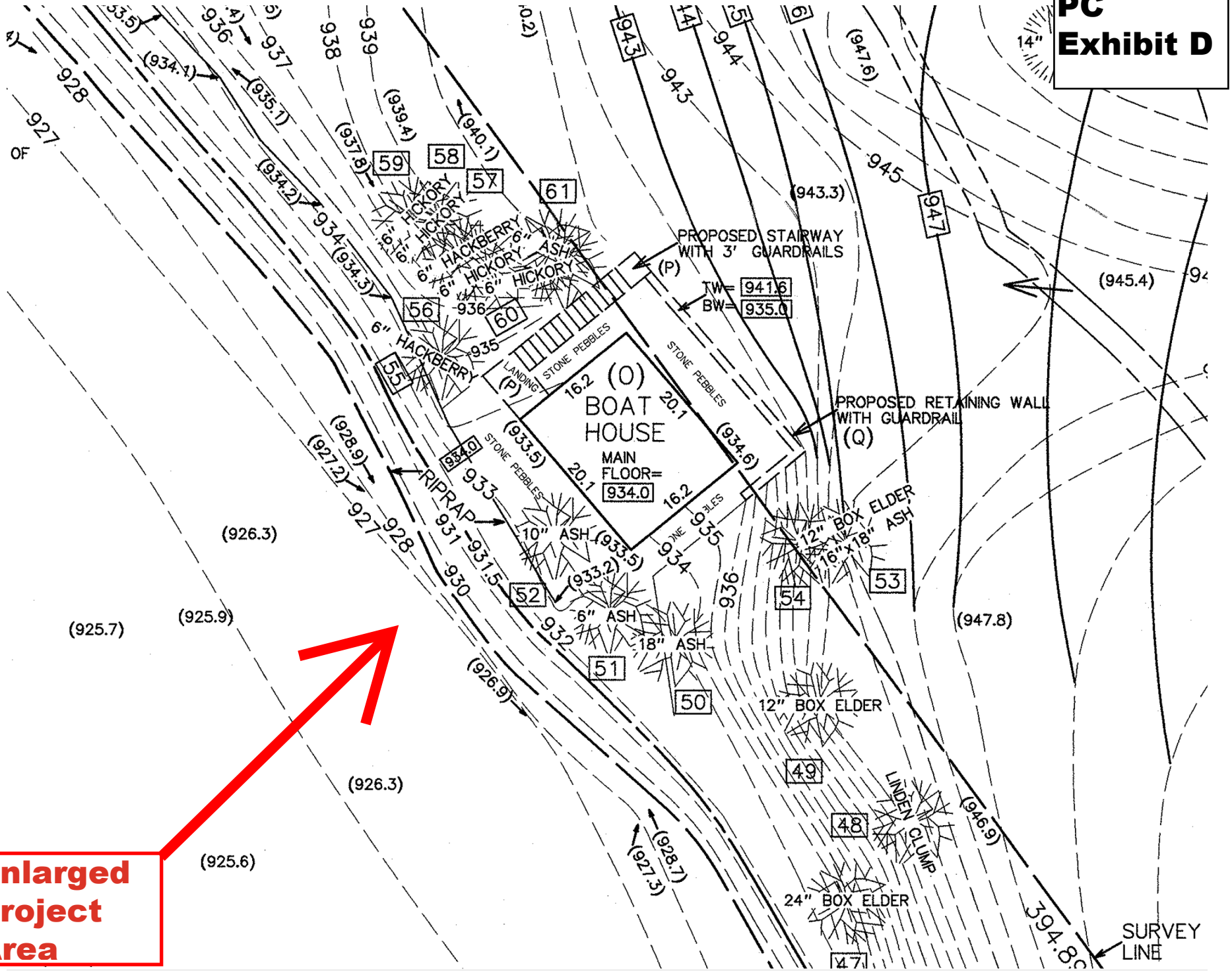
Project narrative:

**Replacement Retaining Wall over 4 Ft Tall Within 75' Lakeshore Setback Zone.**

Replace the existing approx. 7' retaining walls on the north and northeast sides of the boathouse. The new concrete walls will match the existing height and footprint but will be thinner than the current bulging stone walls.

Replace the existing boathouse steps with new steps featuring a minor layout adjustment. The retaining wall on the west side of the boathouse will be replaced to retain the grade to the west and recessed beneath the steps.

The boathouse will be replaced with an in-kind structure. A building permit will be submitted following conditional use permit approval for the site retaining wall, as directed by city staff.


PC
Exhibit D
PROPOSED STAIRWAY
WITH 3' GUARDRAILS
(P)
TW= 941.6
BW= 935.0
PROPOSED RETAINING WALL
WITH GUARDRAIL
(Q)
(O)
BOAT
HOUSE
MAIN
FLOOR=
934.0
16.2
20.1
20.1
16.2
LANDING
STONE PEBBLES
RIPRAP
6" HICKORY
6" HACKBERRY
6" ASH
10" ASH
6" ASH
18" ASH
12" BOX ELDER
16"x18" ASH
12" BOX ELDER
LINDEN CLUMP
24" BOX ELDER
SURVEY
LINE
394.8'
Enlarged
Project
Area

25-011C

# CERTIFICATE OF SURVEY FOR
# REHKAMP LARSON ARCHITECTS
## OF LOT 1, BLOCK 1, & PART OF OUTLOTS A & B, BRACKETTS POINT 2ND ADDITION & ADJACENT VACATED BRACKETTS POINT ROAD HENNEPIN COUNTY, MINNESOTA

LEGAL DESCRIPTION :

Lot 1, Block 1, Bracketts Point 2nd Addition, together with the adjoining vacated Bracketts Point Road as shown and dedicated in the plat of Bracketts Point 2nd Addition; AND those parts of Outlots A & B, Bracketts Point 2nd Addition which lie westerly of the following described line; Beginning at a point on the northwesterly line of said Outlot A a distance of 26.00 feet northeasterly from the most westerly corner of said Outlot A; thence southeasterly to a point on the southwesterly line of said Outlot B, said point being the northerly point of the 58.76 foot segment bearing North 54 degrees 20 minutes West as shown on said plat; thence south-westerly deflecting right 90 degrees to its intersection with Lake Minnetonka, and said line there ending. Hennepin County, Minnesota.

o : denotes iron marker

(908.3) : denotes existing spot elevation, mean sea level datum

910.8 : denotes proposed spot elevation

—917—: denotes existing contour line, mean sea level datum

—930—: denotes proposed contour line

Bearings shown are based on assumed datum.

This survey intends to show the boundaries of the above described property, existing topography, spot elevations, visible utilities and trees, and lake depths in the area of an adjacent possible dock area, and the proposed location of a proposed house, driveway, boat house stairway and wall and proposed grades thereon. It does not purport to show any other improvements or encroachments.

No title work has been furnished regarding existing easements or other title matters.

Utilities shown are those marked by Gopher State One call, or those that are visible.

NOTE: All fence, gate and associated structures, monuments, as well as the hot tub and swimming pool are shown in approximate locations. Final design to be submitted through a separate permit application in the future.

PROPOSED ELEVATIONS : (per architect, verify)

1) Garage = 948.25
2) Main level = 948.5
3) Lower level = 936.3
4) Lower theater drop = 934.8
5) Lowest floor = 934.11

0 20 40 80

SCALE IN FEET

Project Area

| DATE | REVISIONS |
|---|---|
| 1-17-25 | UPDATED AND REVISED |
| 6-27-25 | PROPOSED HOUSE, DRIVEWAY AND GRADES SHOWN |
| 7-11-25 | REVISED PROPOSED GRADES & SOME WALKS/DRIVE/MECH. |
| 7-14-25 | PROPOSED GRADES REVISED, PROPOSED F.E.S. SHOWN PER ARCHITECT |
| 8-19-25 | CHAIN-LINK FENCE, ENTRY MONUMENTS AND SAND BEACH SHOWN PER ARCHITECT |
| 10-20-25 | PROPOSED STAIRWAY, DECK LANDING AND RETAINING WALL AT BOAT HOUSE SHOWN |

I hereby certify that this plan, specification, or report was prepared by me, or under my direct supervision, and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Mark S. Gronberg

Mark S. Gronberg Minnesota License Number 12755

PROJECT

DATE 9-18-23
SCALE 1"=20'
JOB NO 25-011C

GRONBERG & ASSOCIATES, INC.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS
445 NORTH WILLOW DRIVE LONG LAKE, MN 55356
952-473-4141

**PC Exhibit E**

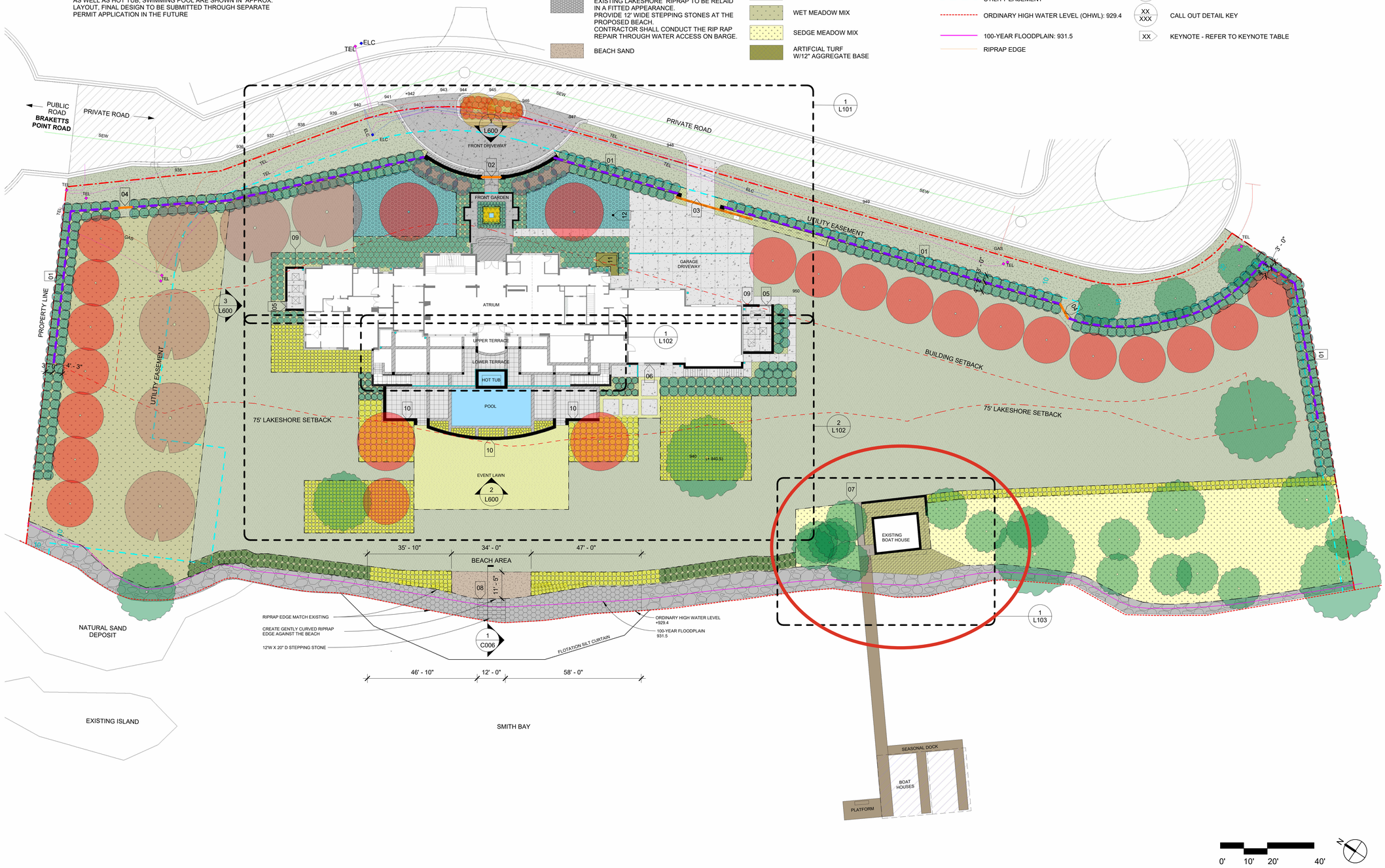
## OVERALL LAYOUT KEYNOTES

| KEY | ELEMENTS |
|---|---|
| 01 | CHAINLINK FENCE |
| 02 | FRONT ENTRANCE GATE |
| 03 | GARAGE ENTRANCE GATE |
| 04 | MAINTENANCE GATE |
| 05 | UTILITY CORRAL |
| 06 | LOWER GARAGE ENTRY |
| 07 | WATER ACCESS REPLACEMENT AT THE BOAT HOUSE |
| 08 | PROPOSED STEPPING STONES AT THE BEACH |
| 09 | UTILITY CORRAL SCREENING WALL |
| 10 | SITE RETAINING WALL |
| 11 | DOG RELIEF AREA, NO PERIMETER FENCE |
| 12 | FLAG POLE |

ALL FENCE, GATE AND ASSOCIATED STRUCTURES, MONUMENTS, AS WELL AS HOT TUB, SWIMMING POOL ARE SHOWN IN APPROX. LAYOUT, FINAL DESIGN TO BE SUBMITTED THROUGH SEPARATE PERMIT APPLICATION IN THE FUTURE

## LEGEND

- BLUESTONE PAVER
- CONCRETE TYPE 1 (STANDARD COLOR)
- CONCRETE TYPE 2 (INTEGRAL DARK GREY)
- PORCELAIN PAVER ON PEDESTAL OVER CONCRETE SUB-BASE
- MEXICAN BEACH PEBBLES
- EXISTING LAKESHORE RIPRAP, RANDOMLY LAID. REMOVE WEEDS AND TRASH, FILL IN LARGE GAPS WITH MATCHING RIPRAP ABOVE WATER LEVEL
- EXISTING LAKESHORE RIPRAP TO BE RELAID IN A FITTED APPEARANCE. PROVIDE 12' WIDE STEPPING STONES AT THE PROPOSED BEACH. CONTRACTOR SHALL CONDUCT THE RIP RAP REPAIR THROUGH WATER ACCESS ON BARGE.
- BEACH SAND
- WOOD DECKING
- PREMIUM TURF SOD EVENT LAWN W/ 12" SAND BASE AND DRAINAGE
- PREMIUM TURF SEED W/ 12" SAND BASE
- TURF SOD
- PLANTING BED WITH HARDWOOD MULCH
- GROUND COVER TYPE 1
- GRASS PLANTING BED
- WET MEADOW MIX
- SEDGE MEADOW MIX
- ARTIFICIAL TURF W/12" AGGREGATE BASE
- PAVEMENT JOINT
- LANDSCAPE EDGING
- PROPERTY LINE
- BUILDING SETBACK
- GATES
- CHAINLINK FENCE
- UTILITY EASEMENT
- ORDINARY HIGH WATER LEVEL (OHWL): 929.4
- 100-YEAR FLOODPLAIN: 931.5
- RIPRAP EDGE
- GAS — GAS
- SEW — SEWER
- ELC — UNDERGROUND ELECTRIC
- TEL — UNDERGROUND TELECOM
- TEL — TELECOM BOX
- ELC — ELECTRIC BOX
- XX / XXX — SECTION DETAIL KEY
- XX / XXX — CALL OUT DETAIL KEY
- XX — KEYNOTE - REFER TO KEYNOTE TABLE
- EXISTING TREES
- TRANSPLANTED TREES
- PROPOSED DECIDUOUS TREES
- PROPOSED EVERGREEN TREES




**RESIDENCE**

1450 BRACKETTS POINT ROAD, WAYZATA, MN 55391


Landscape Architecture
Masterplanning
Environmental Design

115 Washington Avenue North
Suite 200
Minneapolis, MN 55410
612-359-9144

130 East Randolph Street
Suite 3100
Chicago, IL 60601

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www.O2.design


**SHEET REVISIONS**

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|---|---|
| CONDITIONAL USE PERMIT | 10/20/2025 |
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376

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota

Name THOMAS R. OSLUND

Date 10/20/2025

Registration Number 18662

Signature

THOMAS R. OSLUND
REGISTERED LANDSCAPE ARCHITECT
18662
STATE OF MINNESOTA

# ILLUSTRATIVE SITE PLAN

**PERMIT SET**

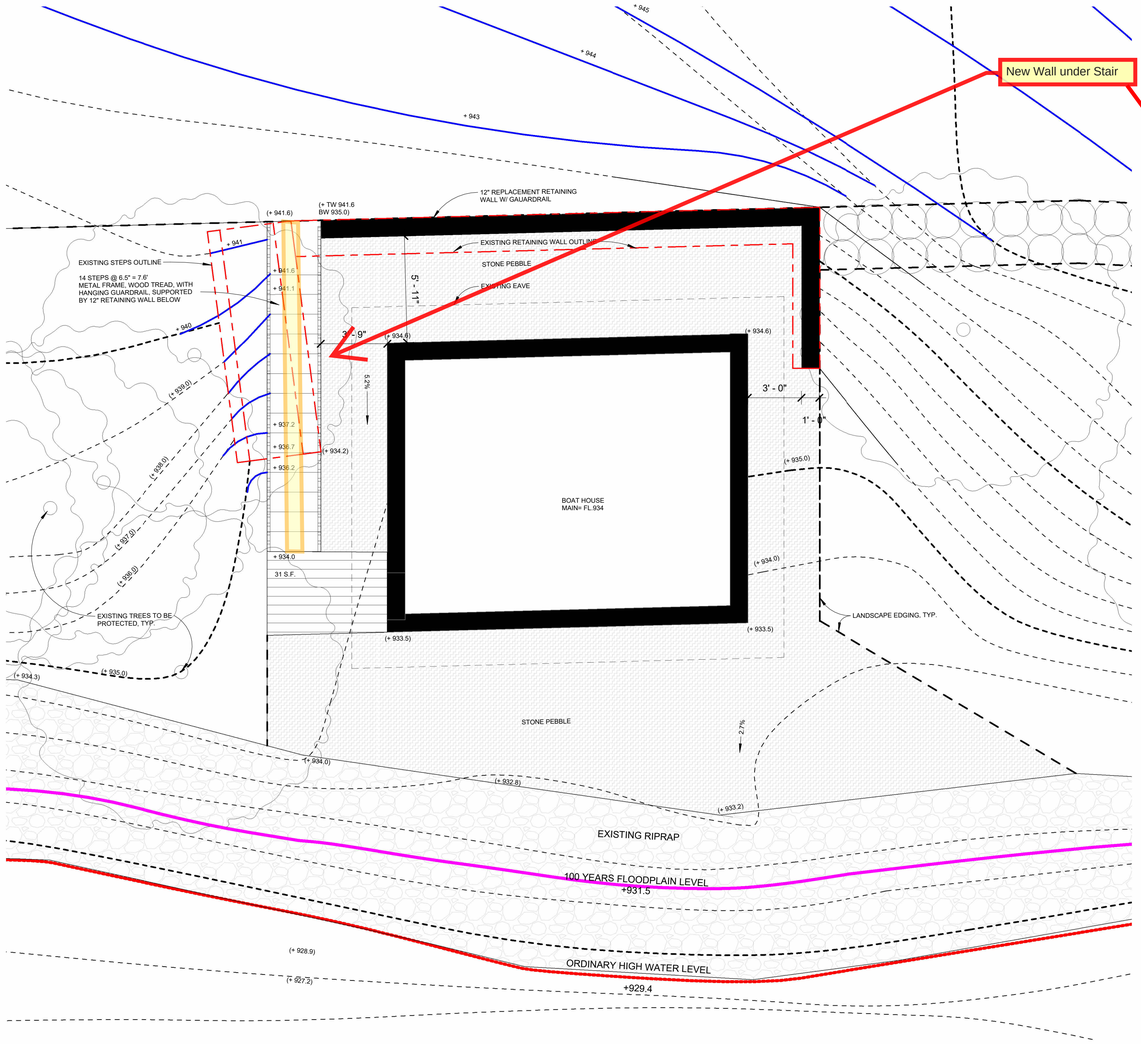
Date: 10/20/25

Scale: 1" = 20'-0"

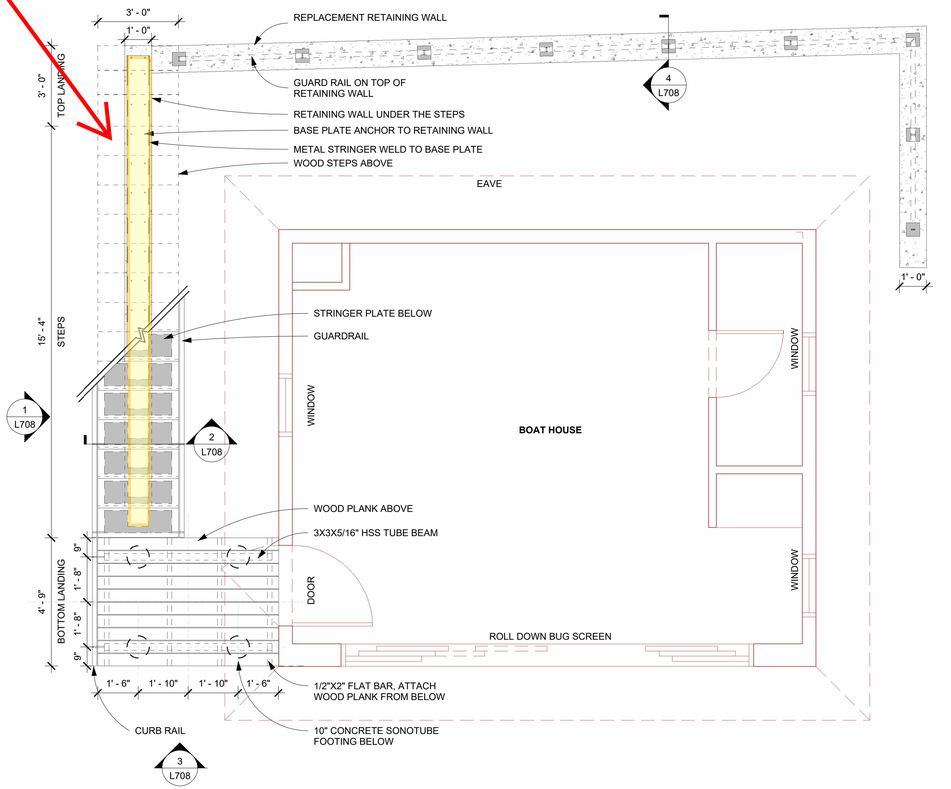
Project Number: 5095.002

Drawn/Checked: HZH HZH

L100




1 ENLARGED BOAT HOUSE AREA
1/4" = 1'-0"




2 ENLARGED PLAN AT BOAT HOUSE
3/8" = 1'-0"

## HARD COVER WITHIN 75' SETBACK CALCULATION

| EXISTING | | PROPOSED | |
|---|---|---|---|
| BOAT HOUSE | 325 S.F. | BOAT HOUSE | 325 S.F. |
| BOAT HOUSE STEPS | 39 S.F. | BOAT HOUSE STEPS | 86 S.F. |
| BOAT HOUSE RETAINING WALL | 91 S.F. | BOAT HOUSE RETAINING WALL | 36 S.F. |
| **TOTAL** | **455 S.F.** | **TOTAL** | **445 S.F.** |

**Project Name:**

**STENEHJEM RESIDENCE**

1450 BRACKETTS POINT ROAD,
WAYZATA, MN 55391


Landscape Architecture
Masterplanning
Environmental Design

115 Washington Avenue North
Suite 200
Minneapolis, MN 55410
612-359-9144

130 East Randolph Street
Suite 3100
Chicago, IL 60601

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www.O2.design


**SHEET REVISIONS**

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|---|---|
| CONDITIONAL USE PERMIT | 10/20/2025 |
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Name THOMAS R. OSLUND

Date 10/20/2025

Registration Number 18662

Signature

THOMAS R. OSLUND
REGISTERED LANDSCAPE ARCHITECT
18662
STATE OF MINNESOTA

ENLARGED BOAT HOUSE LAYOUT PLAN

**PERMIT SET**

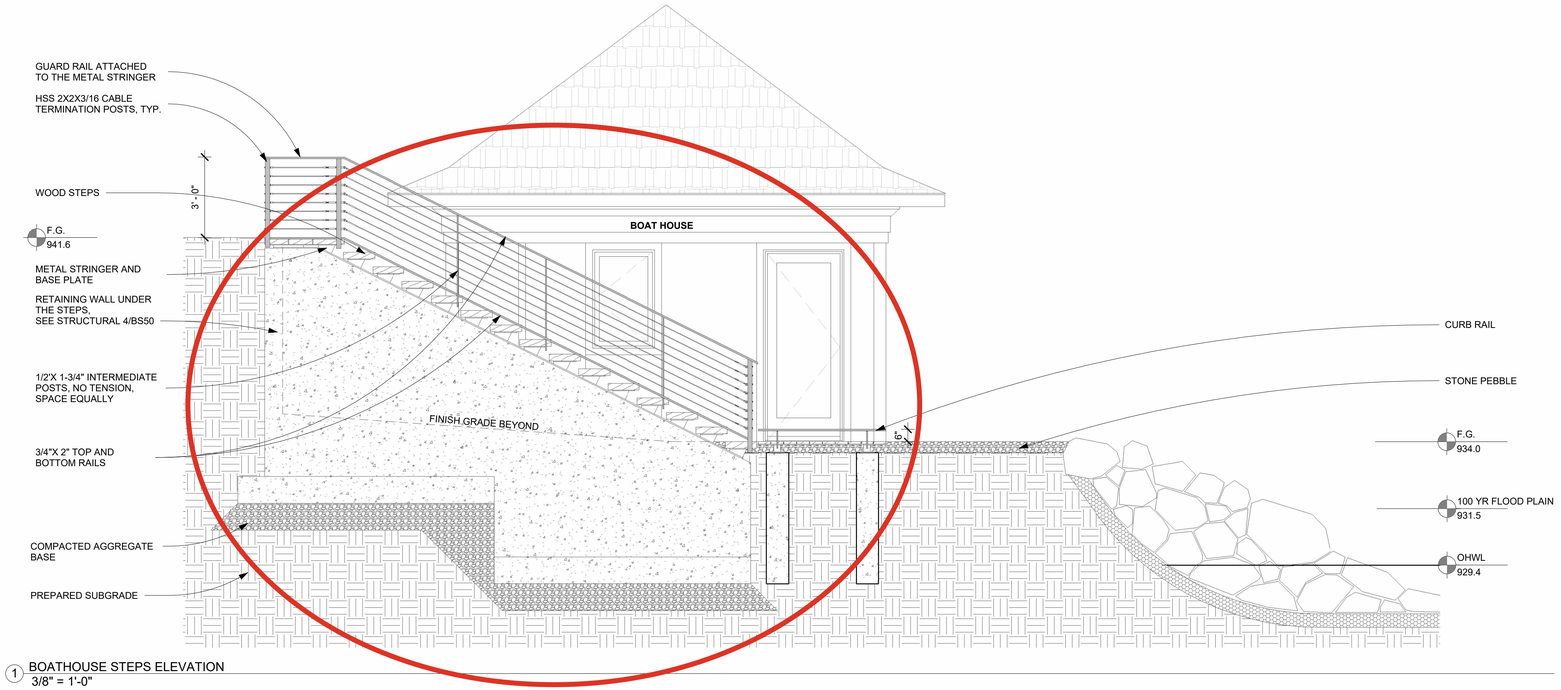
Date: 10/20/25

Scale: As indicated

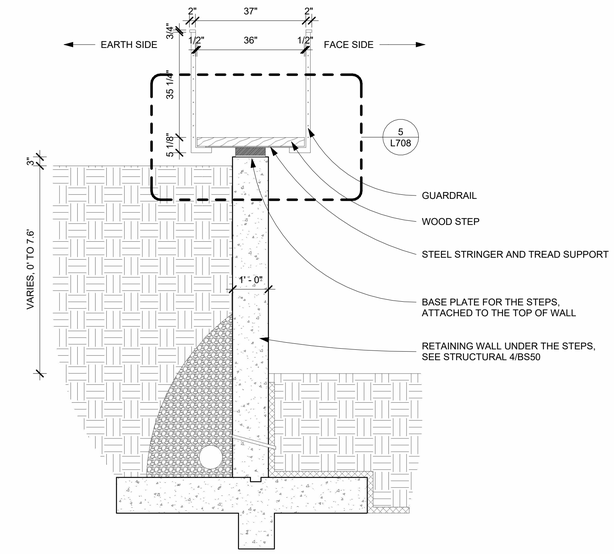
Project Number: 5095.002

Drawn/Checked: HZH

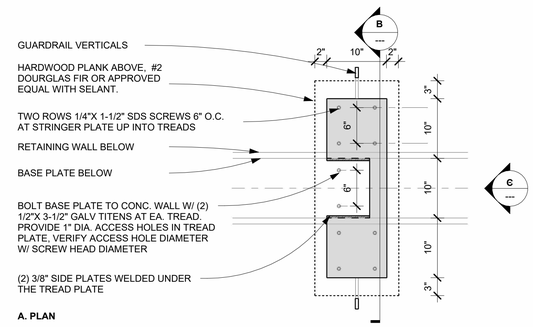
L103



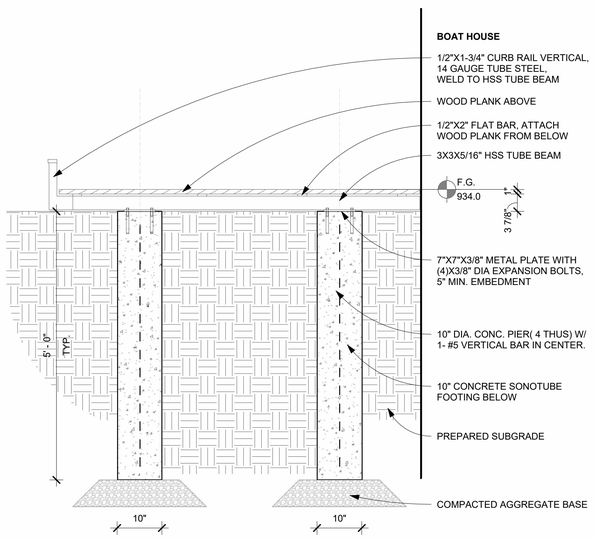

1 BOATHOUSE STEPS ELEVATION
3/8" = 1'-0"



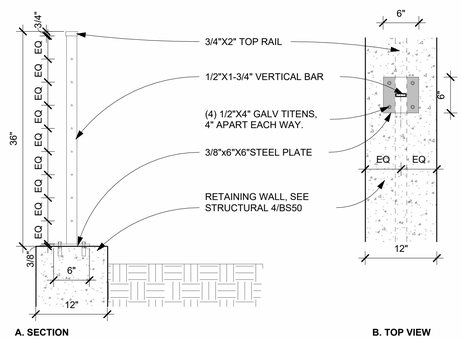

2 RETAINING WALL UNDER THE STEPS
1/2" = 1'-0"




A. PLAN

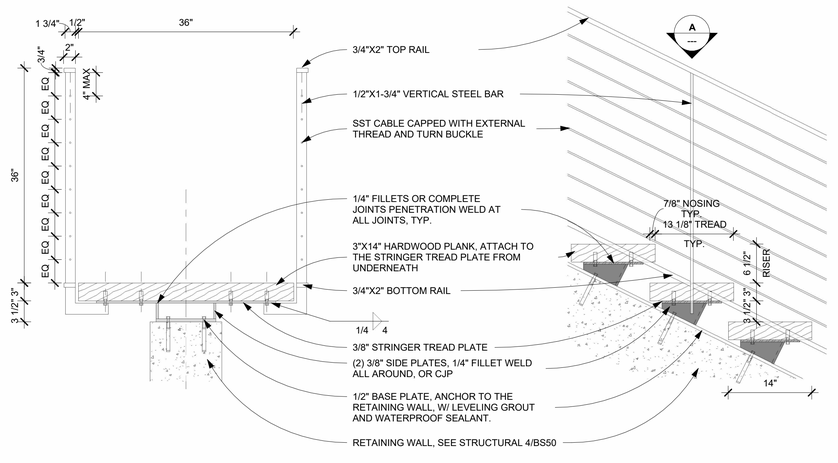



3 BOTTOM LANDING SECTION
3/4" = 1'-0"




A. SECTION B. TOP VIEW

4 GUARD RAIL ON RETAINING WALL DETAIL
1" = 1'-0"




B. CROSS SECTION C. ELEVATION

5 BOATHOUSE STEPS DETAIL
1" = 1'-0"

**Project Name:**

# STENEHJEM RESIDENCE

1450 BRACKETTS POINT ROAD, WAYZATA, MN 55391


Landscape Architecture
Masterplanning
Environmental Design

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Suite 200
Minneapolis, MN 55410
612-359-9144

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Chicago, IL 60601

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**SHEET REVISIONS**

| | |
|---|---|
| CONDITIONAL USE PERMIT | 10/20/2025 |
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I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota

Name THOMAS R. OSLUND

Date 10/20/2025

Registration Number 18662

Signature

THOMAS R. OSLUND
REGISTERED LANDSCAPE ARCHITECT
18662
STATE OF MINNESOTA

## LANDSCAPE DETAILS - BOATHOUSE

**PERMIT SET**

Date: 10/20/25

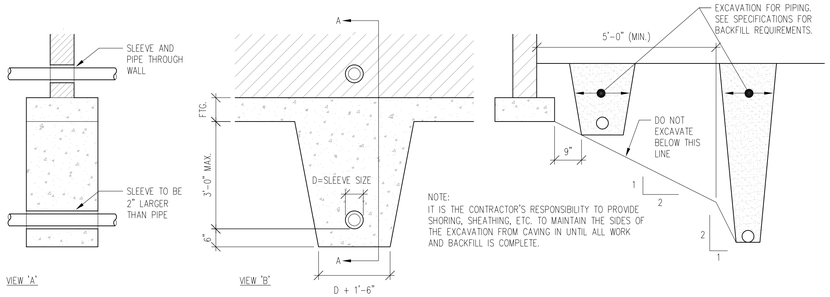
Scale: As indicated

Project Number: 5095.002

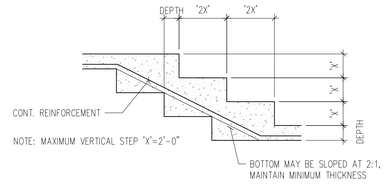
Drawn/Checked: Author Checker

L708

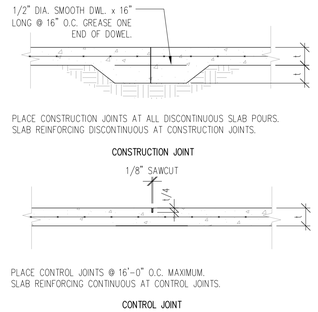
NOTES:
1. USE THIS DETAIL FOR PIPES LESS THAN 3'-0" BELOW FTG.
2. FOR PIPES DEEPER THAN 3'-0" BELOW FTG. USE STEPPED FTG DETAIL TO STEP FTG. TO WITHIN 3'-0" MAXIMUM.



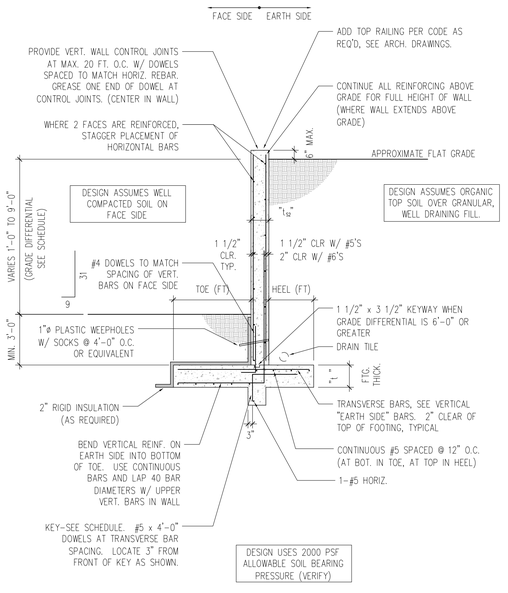

## 1 TYPICAL UNDERGROUND EXCAVATION DETAIL
NTS



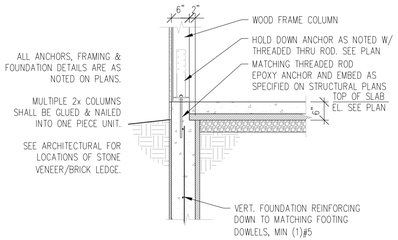

## 2 TYP. STEPPED FOOTING DETAIL
NTS



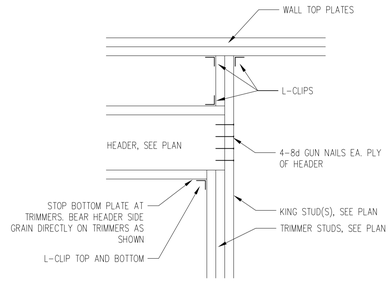

## 3 TYP. SLAB ON GRADE JOINTS
NTS




## 4 CONCRETE RETAINING WALL
NTS




## 8 SHEAR WALL @ HOLDOWNS
1/2"=1'-0"




## 12 TYP. HEADER DETAIL
NTS

### 8" RETAINING WALL SCHEDULE

| GRADE DIFFERENTIAL | WALL DIMENSIONS | | | | VERTICAL REINFORCEMENT | | HORIZONTAL REINFORCEMENT | | KEY |
|---|---|---|---|---|---|---|---|---|---|
| | TOE | HEEL | FTG. | STEM | FACE SIDE | EARTH SIDE | FACE SIDE | EARTH SIDE | |
| (FT) | "$L_t$" | "$L_w$" | "$t_f$" | "t" | | | | | |
| 1'-0" to 2'-0" | 1'-0" | 1'-0" | 12" | 8" | -- | #5 @ 36" O.C. | -- | #5 @ 22" O.C. | -- |
| 2'-1" to 3'-0" | 1'-3" | 1'-0" | 12" | 8" | -- | #5 @ 36" O.C. | -- | #5 @ 22" O.C. | -- |
| 3'-1" to 4'-0" | 1'-6" | 1'-4" | 12" | 8" | -- | #5 @ 24" O.C. | -- | #5 @ 22" O.C. | -- |
| 4'-1" to 5'-0" | 2'-0" | 1'-10" | 12" | 8" | -- | #5 @ 15" O.C. | -- | #5 @ 22" O.C. | -- |
| 5'-1" to 6'-0" | 2'-6" | 2'-4" | 12" | 8" | -- | #5 @ 9" O.C. | -- | #5 @ 22" O.C. | -- |

### 10" RETAINING WALL SCHEDULE

| GRADE DIFFERENTIAL | WALL DIMENSIONS | | | | | VERTICAL REINFORCEMENT | | HORIZONTAL REINFORCEMENT | | KEY |
|---|---|---|---|---|---|---|---|---|---|---|
| | TOE | HEEL | FTG. | STEM 1 | STEM 2 | FACE SIDE | EARTH SIDE | FACE SIDE | EARTH SIDE | |
| (FT) | "$L_t$" | "$L_w$" | "$t_f$" | "$t_{s1}$" | "$t_{s2}$" | | | | | |
| 1'-0" to 3'-0" | 1'-6" | 1'-0" | 12" | 6" | 10" | #4 @ 2'-0", DOWELED TO FOOTING | #5 @ 36" O.C. | -- | #5 @ 22" O.C. | -- |
| 3'-0" to 6'-0" | 2'-6" | 2'-0" | 12" | 6" | 10" | | #5 @ 12" O.C. | -- | #5 @ 22" O.C. | -- |
| 6'-0" to 9'-0" | 4'-0" | 3'-0" | 14" | 6" | 10" | | #6 @ 6" O.C. | -- | #5 @ 22" O.C. | 12" D x 12" T |

### 12" RETAINING WALL SCHEDULE

| GRADE DIFFERENTIAL | WALL DIMENSIONS | | | | VERTICAL REINFORCEMENT | | HORIZONTAL REINFORCEMENT | | KEY |
|---|---|---|---|---|---|---|---|---|---|
| | TOE | HEEL | FTG. | STEM | FACE SIDE | EARTH SIDE | FACE SIDE | EARTH SIDE | |
| (FT) | "$L_t$" | "$L_w$" | "$t_f$" | "t" | | | | | |
| 1'-0" to 2'-0" | 0'-9" | 0'-9" | 12" | 12" | #4 @ 2'-0", DOWELED TO FOOTING | #5 @ 36" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 2'-1" to 3'-0" | 1'-0" | 1'-0" | 12" | 12" | | #5 @ 36" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 3'-1" to 4'-0" | 1'-3" | 1'-3" | 12" | 12" | | #5 @ 36" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 4'-1" to 5'-0" | 1'-6" | 1'-9" | 12" | 12" | | #5 @ 24" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 5'-1" to 6'-0" | 2'-0" | 2'-0" | 12" | 12" | | #5 @ 18" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 6'-1" to 7'-0" | 2'-3" | 2'-6" | 12" | 12" | | #5 @ 13" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 7'-1" to 8'-0" | 2'-9" | 3'-3" | 14" | 12" | | #6 @ 12" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | -- |
| 8'-1" to 9'-0" | 3'-0" | 4'-0" | 15" | 12" | | #6 @ 9" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | 12" D x 12" T |
| 9'-1" to 10'-0" | 3'-3" | 4'-6" | 16" | 12" | | #6 @ 7" O.C. | #4 @ 24" O.C. | #5 @ 22" O.C. | 12" D x 12" T |

* SPACING CAN BE ACHIEVED BY EXTENDING TOE REINF./DOWELS TO MID-POINT OF RETAINED HEIGHT. ALTERNATIVELY, ADDING VERTICALS THAT LAP THE DOWELS BY 40 BAR DIAMETERS AND EXTEND TO HALF-RETAINED HEIGHT IS ACCEPTABLE.

ALL REBAR: GRADE 60 (ASTM A615)
ALL CONCRETE: COMPRESSIVE STRENGTH OF 4,000 PSI

REHKAMP LARSON ARCHITECTS INC.
2732 West 43rd Street, Mpls, MN 55410
Tel. 612-285-7275

**Stenehjem Boathouse**
1450 Brackett's Point Road
Orono, MN 55391

I HEREBY CERTIFY THAT THIS PLAN, SPECIFICATION, OR REPORT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION AND THAT I AM A DULY LICENSED ARCHITECT UNDER THE LAWS OF THE STATE OF MINNESOTA.
PRINT NAME: MARK LARSON, AIA
SIGNATURE:
LICENSE #: 26372
DATE: SEPT 4, 2025

PROJECT PHASE:
PERMIT SET

PROJECT NUMBER:
24-051

ISSUE DATE:
Sept 4, 2025

DRAWN BY:
ML, CP, JK

I hereby certify that this plan, specification or report were prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Minnesota.
Eric M. Bunkers
Date: 9-8-25 Reg. No. 26490

Bunkers & Associates LLC
structural engineers
6687 Forest Street
Farmington, MN 55024
651.366.2853

BS50

**STRUCTURAL DETAILS**

**PC Exhibit F**

Property Map

Search by Address or PID ▾ search help ⓘ

1450 Bracketts Point Road, Orono

Results | Property Links

| | |
|---|---|
| **PID** | 1111723330011 |
| **Address** | 1450 Bracketts Point Rd,<br>Orono, MN 55391 |
| **Owner/Taxpayer** | |
| **Owner** | S P Stenehjem/S M Stenehjem |
| **Taxpayer** | STEPHEN PETER STENEHJEM<br>STACEY M STENEHJEM<br>16143 ROSBY COVE RD<br>WAYZATA MN 55391 |
| **Tax Parcel** | |
| **Parcel Area** | 2.1 acres<br>91,640 sq ft |
| **Torrens/Abstract** | Abstract |
| **Addition** | Bracketts Point 2nd Addn |
| **Lot** | 001 |
| **Block** | 001 |
| **Metes & Bounds** | Also Those Parts Of Outlots A And B, Which Lie Westerly Of The Following Described Line: Beginning At A Point On The Northwesterly Line Of Said<br>**Note: This Is A Partial Metes & Bounds Description.** |
| **Tax Data (Assessed 2024, Payable 2025)** | |
| **Market Value** | $5,280,000 |
| **Total Tax** | $62,706.46 |
| **Property Type** | Vacant Land-Residential |
| **Homestead** | Non-Homestead |
| **Year Built** | |
| **Tax Data (Assessed 2025, Payable 2026)** | |
| **Market Value** | $5,280,000 |
| **Property Type** | Vacant Land-Residential |
| **Homestead** | Non-Homestead |
| **Year Built** | |
| **Sales** | |
| **Sale Code** | |
| **Sale Price** | |
| **Sale Date** | |
| **Tax District** | |
| **School Dist** | 278 |
| **Sewer Dist** | |
| **Watershed Dist** | 3 |

**This data is updated monthly March - December; prior month end data is reflected by mid-month**




Panorama
Sun Apr 6 2025

**PC Exhibit G**

**RESIDENCE**

1450 BRACKETTS POINT ROAD, WAYZATA, MN 55391


Landscape Architecture
Masterplanning
Environmental Design

115 Washington Avenue North
Suite 200
Minneapolis, MN 55410
612-359-9144

130 East Randolph Street
Suite 3100
Chicago, IL 60601

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www.02.design


**SHEET REVISIONS**

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|---|---|
| CONDITIONAL USE PERMIT | 10/20/2025 |
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1. EXISTING BOATHOUSE STEPS



2. EXISTING RETAINING WALL



3. EXISTING BOATHOUSE LOOKING TOWARD THE LAKE



4. EXISTING BOATHOUSE



5. EXISTING BOATHOUSE VIEWING FROM TOP OF THE RETAINING WALL

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Landscape Architect under the laws of the State of Minnesota

Name THOMAS R. OSLUND

Date 10/20/2025

Registration Number 18662

Signature

THOMAS R. OSLUND
REGISTERED
LANDSCAPE
ARCHITECT
18662
STATE OF MINNESOTA

# EXISTING CONDITIONS - BOAT HOUSE AREA

**PERMIT SET**

Date: 10/20/25

Scale:

Project Number: 5095.002

Drawn/Checked: MN HZH

C007

PC
Exhibit H

City of Orono

# Hardcover Calculation Worksheet

Property Address: 1450 BRACKETTS POINT ROAD (REHKAMP LARSON ARCHITECTS)

Prepared by: GRONBERG & ASSOCIATES, INC. Date: ~~6-27-25~~ 8-19-25

Stormwater Quality Overlay District Tier: (Circle one) (Tier 1) Tier 2 Tier 3 Tier 4 Tier 5

**Step 2: PROPOSED HARDCOVER**

In the following table, identify all items of proposed hardcover on the property, keyed by letter to the site plan or survey (must accompany this form). Include all existing hardcover items that are intended to remain, as well as all proposed hardcover items that will be added. Use as many lines as necessary to accurately depict the proposed hardcover of the property. For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | HOUSE | | 6264 S.F. |
| B | FRONT STOOP | | 158 S.F. |
| C | STOOP | | 56 S.F. |
| D | FRONT WALK | | 660 S.F. |
| E | DRIVEWAY IN FRONT | | 1205 S.F. |
| F | DRIVEWAY TO GARAGE | | 2232 S.F. |
| G | WALK | | 214 S.F. |
| H | CONCRETE APRON | | 267 S.F. |
| I | PORCHES + STAIRWAYS | | 1401 S.F. |
| J | POOL | | 544 S.F. |
| K | HOT TUB | | 109 S.F. |
| L | POOL PATIO + STEPS | | 1707 S.F. |
| M | MECH. & A/C PADS | | 64 S.F. |
| N | SITE WALLS | | 58 S.F. |
| O | BOAT HOUSE (EXISTING) | | 325 S.F. |
| P | BOAT HOUSE STEPS (EXISTING) | | 39 S.F. |
| Q | BOAT HOUSE RET. WALL (EXISTING) | | 91 S.F. |
| R | SCREEN WALLS & PILLARS | | 75 S.F. |
| S | DRIVEWAY ENTRANCE GATE MONUMENTS | | 16 S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Proposed Hardcover | | | 15,485 S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| Q | BOAT HOUSE RET. WALL | | 91 S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | 91 S.F. |
| (3) Net Proposed Hardcover [Subtract line (2) from line (1)] | | | 15,394 S.F. |
| (4) Total Lot Area | | | 94,910 S.F. |
| **Proposed Hardcover Percentage [ (3) ÷ (4) ]** | | | 16.22 % |

EXISTING CONDITION

**455 s.f.**

City of Orono

# Hardcover Calculation Worksheet

Property Address: 1450 BRACKETTS POINT ROAD (REHKAMP LARSON ARCHITECTS)

Prepared by: GRONBERG & ASSOCIATES, INC. Date: ~~6-27-25~~ ~~8-19-25~~ 10-20-25

Stormwater Quality Overlay District Tier: (Circle one) (Tier 1) Tier 2 Tier 3 Tier 4 Tier 5

**Step 2: PROPOSED HARDCOVER**

In the following table, identify all items of proposed hardcover on the property, keyed by letter to the site plan or survey (must accompany this form). Include all existing hardcover items that are intended to remain, as well as all proposed hardcover items that will be added. Use as many lines as necessary to accurately depict the proposed hardcover of the property. For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | HOUSE | | 6264 S.F. |
| B | FRONT STOOP | | 158 S.F. |
| C | STOOP | | 56 S.F. |
| D | FRONT WALK | | 660 S.F. |
| E | DRIVEWAY IN FRONT | | 1205 S.F. |
| F | DRIVEWAY TO GARAGE | | 2232 S.F. |
| G | WALK | | 214 S.F. |
| H | CONCRETE APRON | | 267 S.F. |
| I | PORCHES + STAIRWAYS | | 1401 S.F. |
| J | POOL | | 544 S.F. |
| K | HOT TUB | | 109 S.F. |
| L | POOL PATIO + STEPS | | 1707 S.F. |
| M | MECH. & A/C PADS | | 64 S.F. |
| N | SITE WALLS | | 58 S.F. |
| O | BOAT HOUSE (REPLACEMENT IN KIND) | | 325 S.F. |
| P | BOAT HOUSE STEPS + LANDING (REPLACE W. ADJ. LAYOUT) | | 86 S.F. |
| Q | BOAT HOUSE RET. WALL (REPLACEMENT IN KIND) | | 36 S.F. |
| R | SCREEN WALLS & PILLARS | | 75 S.F. |
| S | DRIVEWAY ENTRANCE GATE MONUMENTS | | 16 S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Proposed Hardcover | | | 15,477 S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| Q | BOAT HOUSE RET. WALL | | 36 S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | 36 S.F. |
| (3) Net Proposed Hardcover [Subtract line (2) from line (1)] | | | 15,441 S.F. |
| (4) Total Lot Area | | | 94,910 S.F. |
| **Proposed Hardcover Percentage [ (3) ÷ (4) ]** | | | 16.27 % |

Proposed condition

smaller footprint

stair ~~footprint~~ landing 31 s.f.

**447 s.f.**

PC
Exhibit I

# ORONO POINT

LOT 3 SEC. 11 T. 117 N. R 23 W OF THE 5TH PRIN. MERIDIAN.

Scale: 1 inch = 100 Ft.

Know All Men By These Presents: That Mr George A. Brackett and Annie M Brackett his wife owners and proprietors of the following described property lying in Hennepin County, State of Minnesota: to wit: Lot 3 Section 11 Town 117 North Range 23 West of the 5th Principal Meridian. have caused the same to be surveyed and platted as ORONO POINT as shown by the annexed plat and we hereby donate and dedicate to the public and to public use forever all the streets shown thereon.
Witness our hands and seals this 16th day of July A.D. 1888.

In presence of
J. R. Kingman
Chas. H. Woods

Geo. A. Brackett seal

Annie M. Brackett seal

State of Minnesota } ss
County of Hennepin }

On this 17th day of July A.D. 1888 personally appeared before me George A. Brackett and Annie M. Brackett, his wife, to me known to be the persons described in and who executed the above instrument and they acknowledged that they executed the same as their own free act and deed.

J. R. Kingman
Notary Public
Hennepin Co. Minn.

I hereby certify that I have surveyed and platted the land described as ORONO POINT. That I have placed iron posts as shown on the annexed plat: that said annexed plat is correct and that all distances are in feet and decimals of a foot.

A. C. Libby
Civil Engineer

State of Minnesota } ss
County of Hennepin }

On this 16th day of July A.D. 1888 personally appeared before me A.C. Libby to me well known and he acknowledged that he signed the above certificate as his own free act and deed.

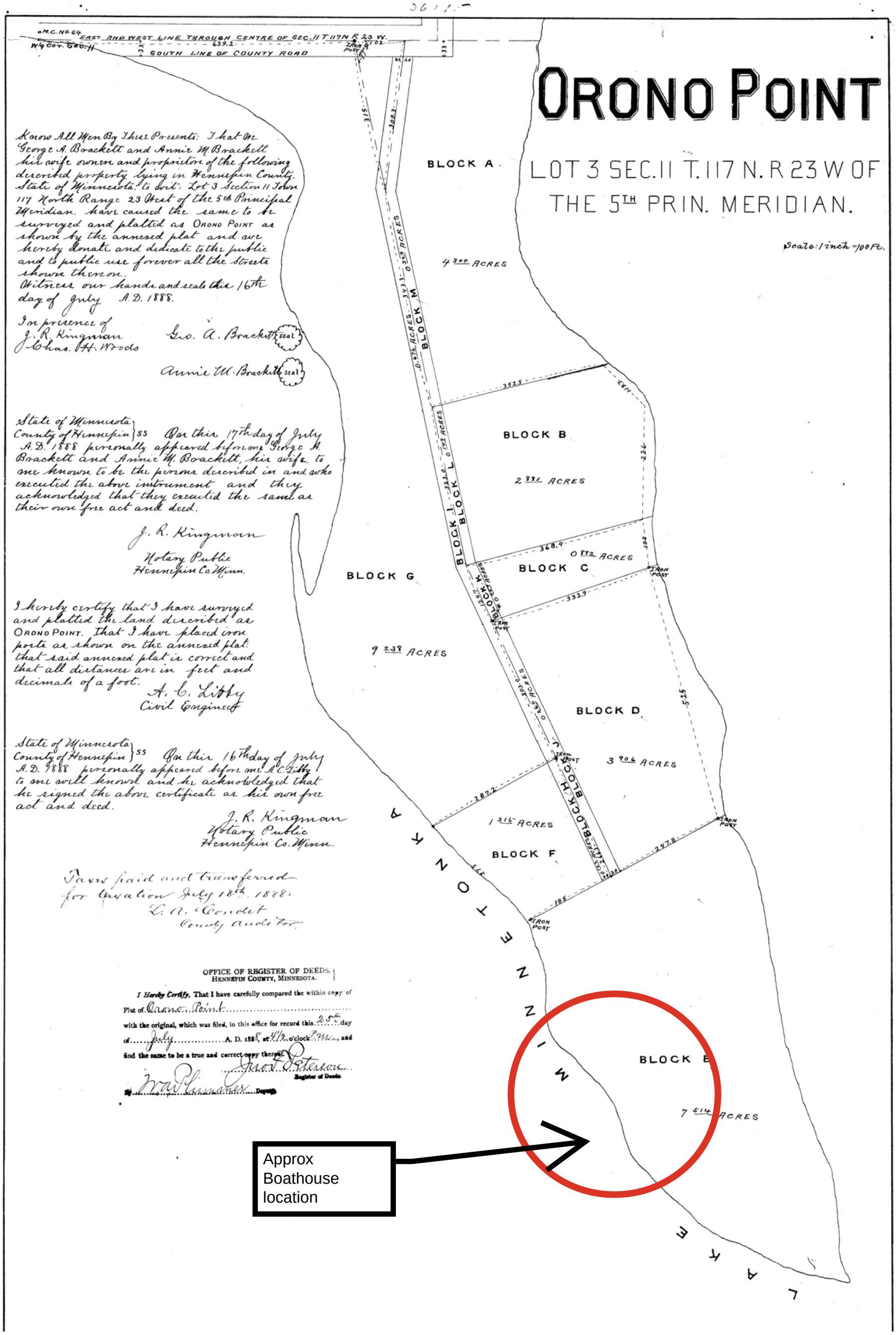
J. R. Kingman
Notary Public
Hennepin Co. Minn.

Taxes paid and transferred for taxation July 18th, 1888.
L. R. Crandet
County Auditor.

OFFICE OF REGISTER OF DEEDS.
HENNEPIN COUNTY, MINNESOTA.

I Hereby Certify, That I have carefully compared the within copy of Plat of Orono Point with the original, which was filed, in this office for record this 25th day of July A. D. 1888, at 4½ o'clock P.M., and find the same to be a true and correct copy thereof.

Geo. F. Peterson
Register of Deeds.
By Wm. Plummer Deputy.



Copy

COMPARED BY

# MAP OF REARRANGEMENT OF ORONO POINT, HENNEPIN COUNTY, MINNESOTA.

Scale, 100 feet to an inch

N

VAR. 10 E.

LAKE MINNETONKA

Approx Boathouse location

1 W.H. Dunwoody and E.L. Carpenter.

2 E.S. Slater.

3 W.H. Dunwoody and E.L. Carpenter.

4 P.L. Howe

5 Helen G. Abbott

8 Carrie C. Woods

9 W.H. Dunwoody

10 W.H. Dunwoody and E.L. Carpenter

Florence W. Carpenter

Kate L. Dunwoody

MINNETONKA

AVENUE

CENTER AVENUE

BORDER

EAST AND WEST LINE THROUGH COUNTY ROAD CENTER OF SEC. 11 T. 117 N. R. 23 W.

LINE BETWEEN ORIGINAL BLOCKS A and B

LINE BETWEEN ORIGINAL BLOCKS B and G, K and L

LINE BETWEEN ORIGINAL BLOCKS C and D

Corner of Original Blocks J and K

CORNER OF ORIGINAL BLOCKS L AND M

CORNER OF ORIGINAL BLOCKS H AND J

NORTHWESTERLY LINE OF ORIGINAL BLOCK E

Stone Post

226.0 · 100 · 525.6 · 569.3 · 124.7 · 87°30' · 443.3 · 303.3 · 315.0 · 970 · 74.0 · 200.0 · 270' · 100' · 323.0 · 332.9 · 352.5 · 368.4 · 119.7 · 639.2

Texes paid on the within described property for 1903
Daniel C. Bell
County Treas.
James

Texes Paid and Transfer Entered Nov 20 1903
HUGH R. SCOTT, AUDITOR.
Hennepin Co., Minn.
By L.S. Ogden Deputy

I, E.T. Abbott, a Surveyor, do hereby certify that I have surveyed the land described in the foregoing dedication and that I have divided the same into lots as shown on the accompanying map, which said map correctly represents such survey and division; that the lots are numbered in progressive numbers; that the dimensions of all lots and the widths of all streets and avenues as on said map shown are designated by figures denoting feet and decimals of a foot.; and that I have placed at the Southeast corner of lot Ten (10), a stone post from which further surveys may be made. And I further state under oath that the lot lines as shown on the accompanying map are in accordance with the record titles as now at the date of these presents exist; that is to say that E.L. Carpenter and W.H. Dunwoody are joint owners, share and share alike, of lots One (1), Three (3) and Ten (10), that Edwin S. Slater is the owner of lot Two (2), that P.L. Howe is the owner of lot Four (4), that Helen G. Abbott is the owner of lot Five (5), that Kate L. Dunwoody is the owner of Lot Six (6), that Florence Welles Carpenter is the owner of lot Seven (7), that Carrie C. Woods is the owner of lot Eight (8), that William H. Dunwoody is the owner of lot Nine (9), as indicated on the accompanying map of the Rearrangement of said Orono Point; and that the lines of the several lots as last above set forth and as shown on said Rearrangement are in exact conformity with the record title of said above described owners as they now exist at the date of these presents.

In testimony whereof witness my hand and seal this Sixth day of November, A.D. 1903.

In the presence of, F.W. Galloway, Theresa Byrne

E.T. Abbott {Seal} Surveyor.

STATE OF MINNESOTA } ss.
COUNTY HENNEPIN }

I Hereby Certify that the within Plat of Rearrangement of Orono Point was filed for record in this office on the 20th day of November 03 at 1 P.M. and was duly recorded in Book of Plats, Page

Register of Deeds March 15, 1904 P. W. Skog

KNOW ALL MEN BY THESE PRESENTS,

That we, P.L. Howe and Minnie A. Howe, (his wife), Carrie C. Woods, (widow), William H. Dunwoody and Kate L. Dunwoody, (husband and wife), Elbert L. Carpenter and Florence Welles Carpenter, (husband and wife), Amos W. Abbott and Helen G. Abbott, (husband and wife), Edwin S. Slater and Sarah L. Slater, (husband and wife), owners and proprietors of all of the Blocks in Orono Point, Hennepin County, Minnesota, according to the recorded Plat of same, on file and of record in the office of the Register of Deeds of said Hennepin County, comprising all of lot Three (3), in section number Eleven (11), Township One hundred and seventeen (117) North, Range number Twenty-three (23) West, Fifth P.M., have and by these presents do dedicate the same to be laid out, platted and subdivided, and to be known as the Rearrangement of Orono Point, in accordance with and as shown on the accompanying map. And, whereas, in the original Plat as recorded of said Orono Point no streets or avenues or other public grounds were dedicated to the Public south of the County Road which is on the North line of said Lot number Three (3), and the several deeds for the said blocks in said original Orono Point, was reserved and conveyed to the several owners, certain rights of way in common over certain blocks and portions of the same. Now therefore in consideration of the sum of One Dollar (1.00) in hand paid by and to each and everyone of the above named parties, the receipt whereof is hereby acknowledged said above named parties hereby release, each to the other and quit claim all interest right or title, in and to Said rights of way, and to their heirs and assigns forever, and the parties thereto in further consideration of the said above release and quit-claim hereby dedicate to the use of the Public forever all streets as on accompanying map shown, which are to be in lieu of and to take the place of said above mentioned rights of way.

In testimony to our agreement and acceptance of all matters and things above set forth we have hereunto set our hands and affixed our Seals, this Fifth day of November, A.D. 1903.

In the presence of, E.T. Abbott, S.E. Burton.

P.L. Howe {Seal}
Minnie A. Howe {Seal}
Carrie C. Woods {Seal}
William H. Dunwoody {Seal}
Kate L. Dunwoody {Seal}
Elbert L. Carpenter {Seal}
Florence Welles Carpenter {Seal}
Amos W. Abbott {Seal}
Helen G. Abbott {Seal}
Edwin S. Slater {Seal}
Sarah L. Slater {Seal}

STATE OF MINNESOTA } ss.
COUNTY HENNEDIN }

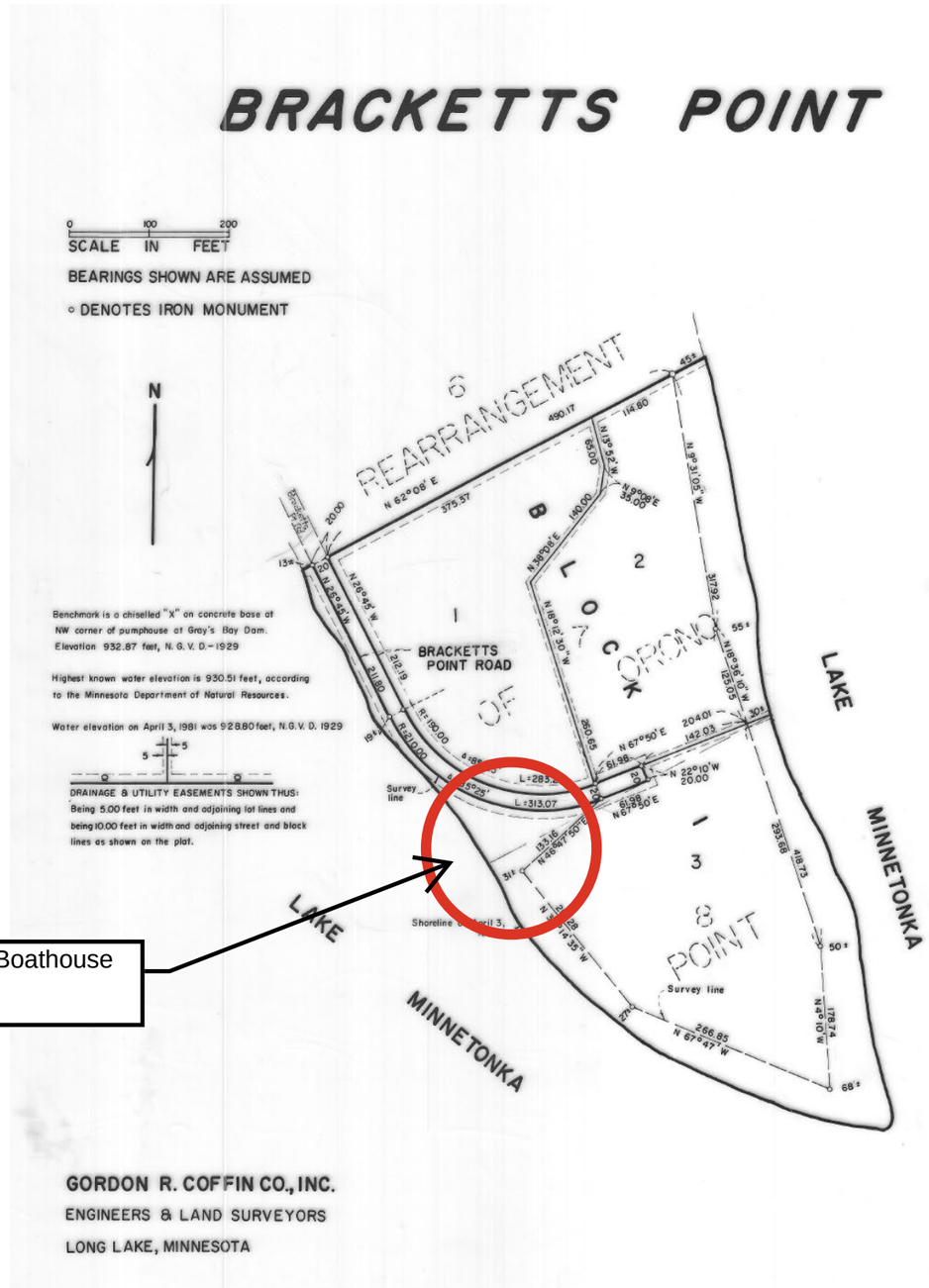
Personally appeared before me, E.T. Abbott, a Notary Public within and for said County, the above named P.L. Howe and Minnie A. Howe, his wife, Carrie C. Woods, William H. Dunwoody and Kate L. Dunwoody, Elbert L. Carpenter and Florence Welles Carpenter, Amos W. Abbott and Helen G. Abbott, Edwin S. Slater and Sarah L. Slater, the signers of the above Dedication, all personally to me known to be the identical persons who executed the foregoing instrument and acknowledged such execution to be their free act and deed.

Witness my hand and official seal this Fifth day of November, A.D. 1903.

E.T. Abbott, Notary Public, {Notarial Seal}

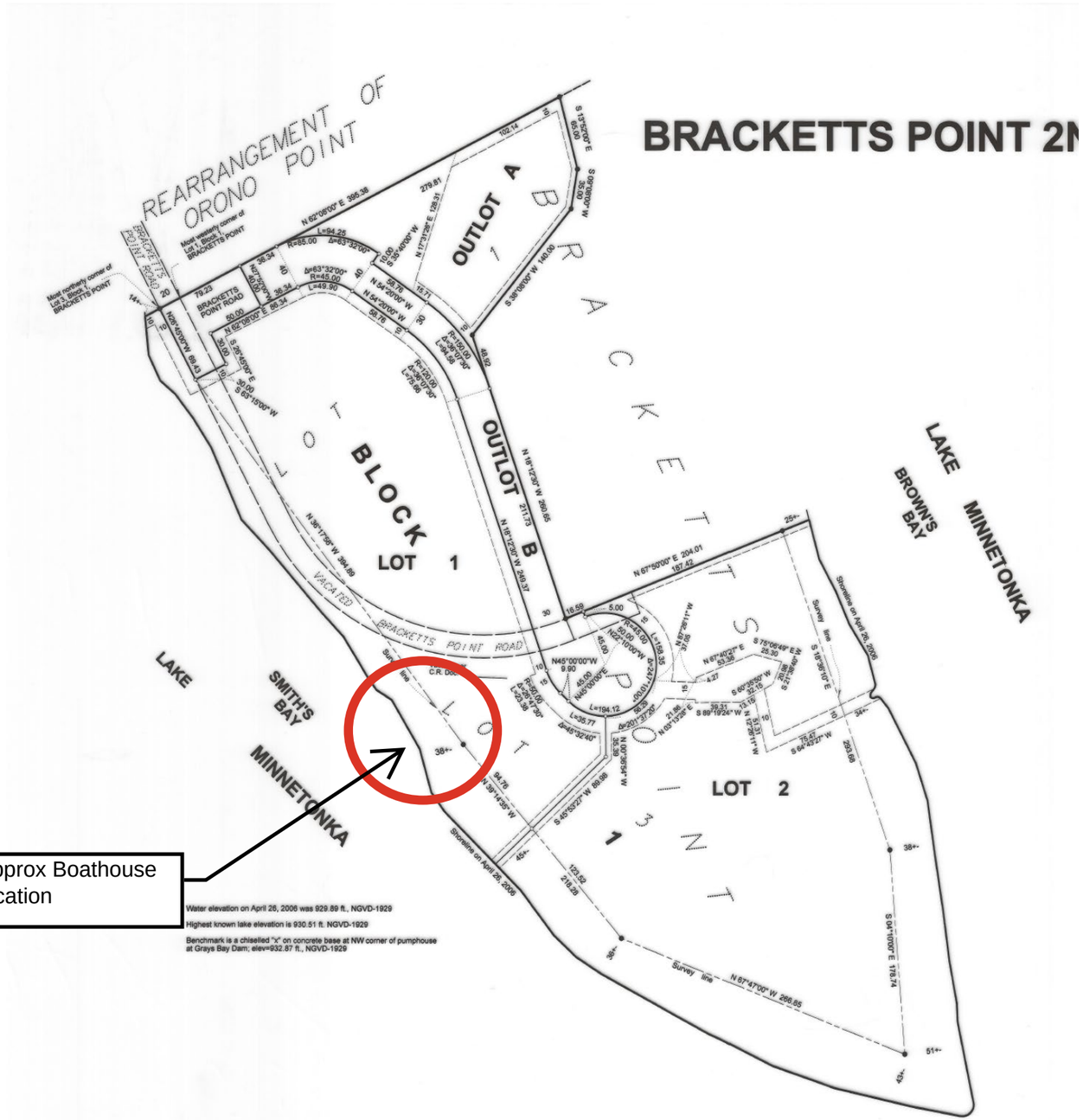


Approx Boathouse location

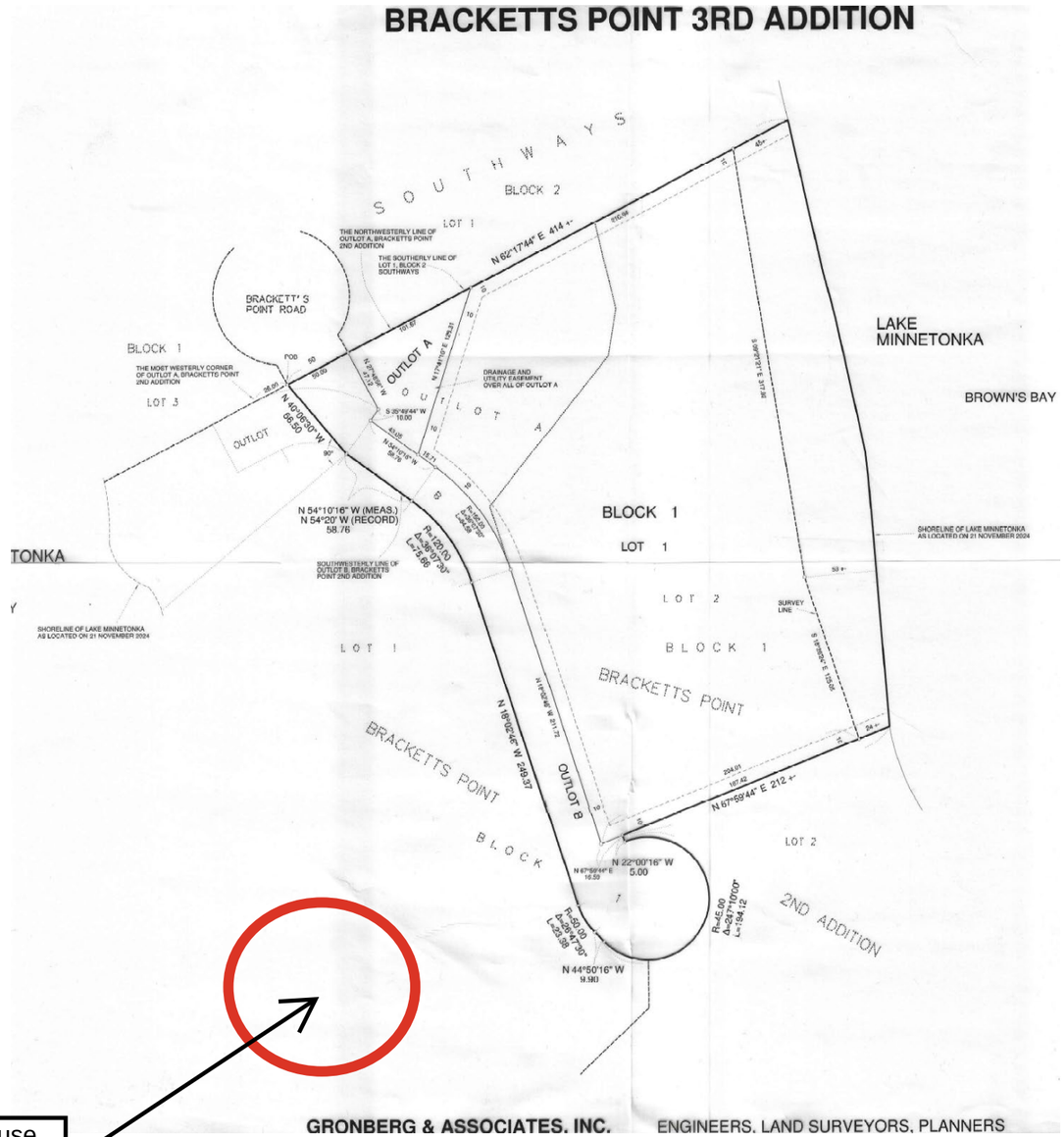




Approx Boathouse location




Approx Boathouse location


BRACKETTS POINT 3RD ADDITION
SOUTHWAYS
BLOCK 2
LOT 1
N 82°17'44" E 414 +-
THE NORTHWESTERLY LINE OF OUTLOT A, BRACKETTS POINT 2ND ADDITION
THE SOUTHERLY LINE OF LOT 1, BLOCK 2 SOUTHWAYS
BRACKETT'S POINT ROAD
BLOCK 1
THE MOST WESTERLY CORNER OF OUTLOT A, BRACKETTS POINT 2ND ADDITION
LOT 3
OUTLOT
OUTLOT A
DRAINAGE AND UTILITY EASEMENT OVER ALL OF OUTLOT A
N 40°08'30" W 66.30
S 25°49'44" W 10.00
N 54°10'16" W (MEAS.) N 54°20' W (RECORD) 58.76
SOUTHWESTERLY LINE OF OUTLOT B, BRACKETTS POINT 2ND ADDITION
R=120.00 Δ=38°30'30" L=79.86
R=45.00 Δ=267°10'00" L=184.12
LAKE MINNETONKA
BROWN'S BAY
TONKA
SHORELINE OF LAKE MINNETONKA AS LOCATED ON 21 NOVEMBER 2024
SHORELINE OF LAKE MINNETONKA AS LOCATED ON 21 NOVEMBER 2024
BLOCK 1
LOT 1
LOT 2
SURVEY LINE
BLOCK 1
BRACKETTS POINT
BRACKETTS POINT
BLOCK
N 19°05'26" W 249.57
OUTLOT B
N 67°59'44" E 212 +-
LOT 2
N 22°00'16" W 5.00
N 67°59'44" E 10.00
N 44°50'16" W 9.90
2ND ADDITION
GRONBERG & ASSOCIATES, INC.
ENGINEERS, LAND SURVEYORS, PLANNERS

PC
Exhibit J

Anderson 1220 & 1435 Bracketts Point Rd

3 NOV 2025

Planning Comm Orono:

RE: LA25-000049

We own 1220 Bracketts Pt + 1435 Bracketts Point. We fully support the variance + use application for 1450 Bracketts Pt. Please approve this for our new neighbors as we own the property next door.

Thanks, Richard + Susan Anderson

PC
Exhibit K

38 11-117-23 32 0023
WAYZATA BAY LLC
1265 BRACKETTS POINT RD
WAYZATA MN 55391

38 11-117-23 32 0025
BRACKETT POINT PROPERTY LLC
20840 PRAIRIE HILLS LANE
PRIOR LAKE MN 55372

38 11-117-23 33 0010
ANDERSON 2020 DESCENANTS TR
KATHLEEN C & RICHARD A
1220 BRACKETTS POINT RD
WAZATA MN 55391

38 11-117-23 33 0011
STEPHEN PETER STENEHJEM
STACEY M STENEHJEM
16143 ROSBY COVE RD
WAYZATA MN 55391

38 11-117-23 33 0014
WAYZATA BAY LLC
1265 BRACKETTS POINT RD
ORONO MN 55391

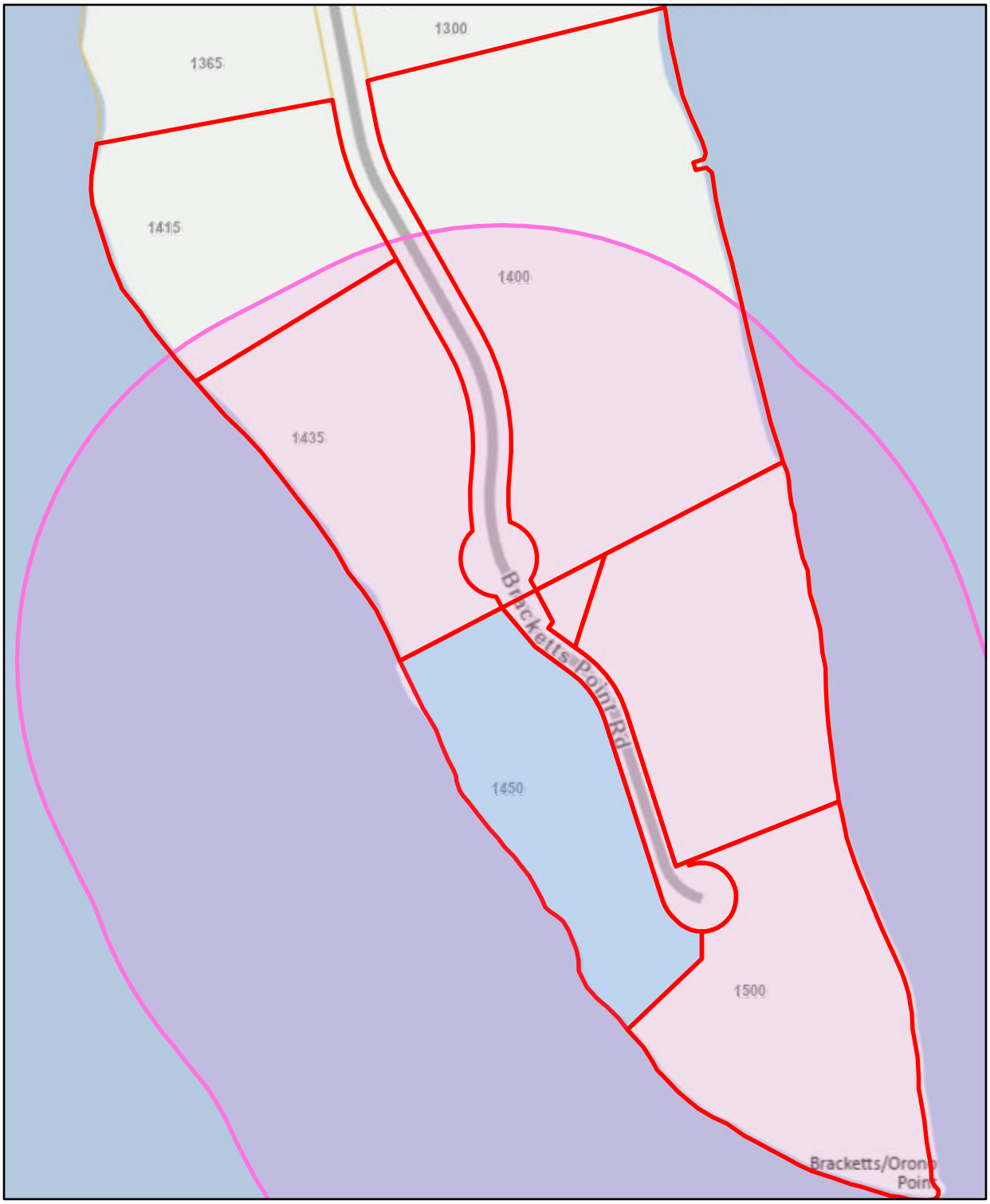
38 11-117-23 33 0015
BRUCE PADDOCK
1450 BRACKETTS POINT RD
ORONO MN 55391

38 11-117-23 33 0016
BRUCE PADDOCK
1450 BRACKETTS POINT RD
ORONO MN 55391

38 11-117-23 34 0001
BRUCE PADDOCK
155 LAKE ST #2000
WAYZATA MN 55391

# Hennepin County Locate & Notify Map

Date: 10/27/2025




**Buffer Size:** 500

**Map Comments:**

1450 Brackett

0 50 100 200 Feet

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

For more information, contact Hennepin County GIS Office
300 6th Street South, Minneapolis, MN 55487 / gis.info@hennepin.us

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 5.5

**Title:** LA25-000051, Ungerman Inc., 4680 North Shore Dr, Variance (Matthew Karney)

**Presenter:** Matt Karney, Planner

**Section:** Public Hearings

1. **Purpose:**
   The applicant requests approval of a rear yard setback variance to construct an addition to an existing accessory building.

2. **MN§15.99 Application Deadline:**
   The application was made on October 22, 2025 and deemed complete on November 10, 2025. The 60-day review period expires on January 9, 2026.

3. **Background:**

   The applicant proposes a 6-foot bump-out to an existing, non-conforming oversized accessory building to allow for the interior storage of boats and trailers. Oversized accessory buildings (greater than 1,000 square feet) are required to meet principal building setbacks. The 1,008 square-foot garage is located 10-feet from the rear property line, where a setback of 30-feet is applicable. The 236 square-foot addition extends to the east from the existing building, where a majority of the proposed bump-out will be located within the setback. The garage is three-stories in height, but the bump-out is only on the lowest level, with a balcony above it. The bump-out is proposed in an area of existing hardcover, where the driveway is placed.

4. **Public Comment:**
   No public comments have been received as of the submittal of this report.

5. **Staff Recommendation:**
   Planning Staff recommends denial as applied. The applicant shall provide an updated, correctly scaled site plan prior to the City Council meeting on December 8, 2025.

6. **Planning Commission Action Requested:**
   If the commission agrees with staff's analysis; a motion should be made to recommend denial of the application.

**Exhibits**

A - Staff Report
B - Application
C - Aerial Imagery
D - Cover Letter
E - Site Plan
F - Building Plans

G - Hardcover Information
H - Mailing Information

**Date Application Received: 10/22/2025**
**Date Application Deemed Complete: 11/10/2025**
**60-Day Review Period Expires: 01/09/2026**

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Matthew Karney, Planner

**Date:** 17 November 2025

**Subject:** #LA25-000051, Ungerman Inc., 4680 North Shore Drive
Variance – Public Hearing

| |
|---|
| ***Application Summary:*** The applicant requests approval of a rear yard setback variance to construct an addition to an existing accessory building. |
| ***Staff Recommendation:*** Planning Department Staff recommends denial of the variance. |

**Background**
The applicant proposes an addition to the existing detached garage in the rear of the property. The existing garage is 1,008 square feet and is classified as an oversized accessory building (OAB), which follows principal building setbacks in the underlying zone district. The garage is located approximately 10 feet from the rear property line where a 30-foot setback is required, and is considered nonconforming. The proposed addition is a 6-foot bump-out to provide the owner interior storage for boats and trailers. The 236-square foot addition will be on the ground level only, but will provide a balcony to the second level of the garage. No additional hardcover is proposed as the addition will be located over the existing parking surface.

Due to the topography of the site, the existing garage has three levels. Beyond the proposed addition, the applicant is proposing a general remodel of the garage that will allow for the owner to utilize the space as an office.

**Practical Difficulties Analysis**
Applicant Submittal Information:
The applicant has stated the proposed addition will be screened from neighboring properties by the existing steep grades surrounding the garage and will allow the owner to utilize an existing building for their storage needs. Alternative options would involve significant site work or involve different impacts to setbacks and/or hardcover.

Planning Staff Practical Difficulty Analysis:
The proposed addition will expand the footprint of a non-conforming OAB. Despite the conditions of the property being unique, staff contends a practical difficulty has not been established. The six-foot addition will further increase the nonconformity of the existing garage and lead to additional massing facing the neighbor to the east. Although the request for additional storage is to accommodate larger possessions such as a boat, there is already reasonable use of the existing garage.

**LOT ANALYSIS WORKSHEET**

**Section 6.12.1450 – Setbacks: Oversized Accessory Buildings, >1,000 square feet**

| LR-1B District | Required | Existing | Proposed |
|---|---|---|---|
| Rear (North) | 30’ | 10’ Existing Garage | 11’ Proposed Addition |
| Interior Side (West) | 10’ | 16’ Existing Garage | No Change with Addition |

**Section 6.12.6930 – Structural Building Coverage:**

| Total Lot Area | Total Structural Coverage |
|---|---|
| 26,435 s.f.<br>0.61 acres | Allowed: 5,287 s.f. *<br>Existing: 2,530 (9.6%)<br>Proposed: 2,764 s.f. (10.5%) |

*Maximum footprint of structures cannot exceed 20% of lot size on lots >10,000 s.f. Code Sec. 78-1403 (a)(1)

**Section 6.12.9000 – Hardcover Calculations:**

| Stormwater Overlay District Tier | Allowed Hardcover | Existing Hardcover | Proposed Hardcover |
|---|---|---|---|
| Tier 2 | 7,930 s.f. (30 %) | 7,849 s.f. (29.7%) | 7,849 s.f. (29.7%) |

**Applicable Regulations:**

LR-1B Rear Setback Variance (Section 6.12.1450)

An OAB must meet principal building setbacks, as a means to create separation between larger buildings and other properties. The property and existing building are unique, with the garage being three stories in height, built into a steep slope. Without a variance, the only work that would be permitted on this building within the setback would be in-kind improvements, or an expansion of a portion of the building that is at least 30-feet from the rear property line.

**Governing Regulation: Variance (Section 6.12.530)**

*In reviewing applications for variance, the Planning Commission shall consider the effect of the proposed variance upon the health, safety, and welfare of the community, existing and anticipated traffic conditions, light and air, danger of fire, risk to the public safety, and the effect on values of property in the surrounding area. The Planning Commission shall consider recommending approval for variances from the literal provisions of the Zoning Code in instances where their strict enforcement would cause practical difficulties because of circumstances unique to the individual property under consideration, and shall recommend approval only when it is demonstrated that such actions will be in keeping with the spirit and intent of the Orono Zoning Code.* Economic considerations alone do not constitute practical difficulties. Practical difficulties also include, but are not limited to, inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. §216C.06, subd. 14, when in harmony with this chapter. The board or the council may not permit, as a variance, any use that is not permitted under this chapter for property in the zone where the affected person's land is located. The board or council may permit, as a variance, the temporary use of a one-family dwelling as a two-family dwelling.

According to MN §462.357 Subd. 6(2) variances shall only be permitted when:

1. The variance is in harmony with the general intent and purpose of the Ordinance:

   *The intent of increased setbacks for an oversized accessory building (OAB) is to provide additional separation between larger buildings and adjacent properties. A variance to expand a legal nonconforming OAB by 23% is not in harmony with the intent and purpose of the setback. This criterion is not met.*

2. The variance is consistent with the comprehensive plan:

   *The proposed variance to add on to an existing accessory building supporting a residential use in LR-1B zoning is consistent with the comprehensive plan. This criterion is met.*

3. The applicant establishes that there are practical difficulties.
    a. The property owner proposes to use the property in a reasonable manner not permitted by the official controls:

    *The proposal to improve an existing building to better meet an owner's needs is reasonable; however, the increase in size to this already nonconforming OAB is not reasonable. This criterion is not met.*

    b. There are circumstances unique to the property not created by the landowner:

    *The building was constructed by a previous owner within the rear setback of the property. This criterion is met.*

    c. The variance will not alter the essential character of the locality:

    *The character of the locality would be altered with the approval of a variance. A variance would further increase a nonconformity and create a further deviation from the intent of the increased setbacks for an OAB. This criterion is not met.*

Additionally, City Code 78-123 provides additional parameters within which a variance may be granted as follows:

4. Economic considerations alone do not constitute practical difficulties:

*Economic considerations are not a practical difficulty supporting the variance request. This criterion is met.*

5. Practical difficulties also include but are not limited to inadequate access to direct sunlight for solar energy systems. Variances shall be granted for earth-sheltered construction as defined in Minn. Stat. § 216C.06, subd. 17, when in harmony with Orono City Code Chapter 78:

*This condition is not applicable.*

6. The board or the council may not permit as a variance any use that is not permitted under Orono City Code Chapter 78 for property in the zone where the affected person's land is located:

*OABs are permitted within the LR-1B zoning district. The property is less than one acre in size and is permitted up to 2,000 square feet for accessory buildings. This criterion is met.*

7. The board or council may permit as a variance the temporary use of a one-family dwelling as a two-family dwelling:

*This condition is not applicable.*

8. The special conditions applying to the structure or land in question are peculiar to such property or immediately adjoining property:

*The existing garage consists of three floors built into a steep slope. This garage is located in an area where there is reasonable separation between it and the other buildings on the immediately adjacent properties. This criterion is met.*

9. The conditions do not apply generally to other land or structures in the district in which the land is located:

*The conditions of the property do not apply generally to other land or structures within the district. The existing garage is a unique condition for the area, given its height and location, built into the slope. This criterion is met.*

10. The granting of the application is necessary for the preservation and enjoyment of a substantial property right of the applicant:

*Approval of the variance is not necessary for the preservation and enjoyment of the owner's property rights. The owner has the benefit of an existing, legal nonconforming OAB that can be improved in-kind without further increasing the size of the building. This criterion is not met.*

11. The granting of the proposed variance will not in any way impair health, safety, comfort or morals, or in any other respect be contrary to the intent of this chapter:

*The variance to construct the proposed building addition could impact the health, safety, comfort and morals of other residents in the area. Although the addition is not decreasing the distance between the existing garage and the rear property line, it is expanding towards the closest neighbor, where the massing of the existing garage is most visible. OABs are subject to more rigorous standards to adequately mitigate their potential impacts to surrounding properties and this proposal is contrary to the intent of this chapter. This criterion is not met.*

12. The granting of such variance will not merely serve as a convenience to the applicant but is necessary to alleviate demonstrable difficulty:

*The granting of the requested variance would be a convenience to the applicant, as a practical difficulty has not been established. Despite the uniqueness surrounding the topography of the site and the location of the existing garage, the further increase in size to an existing nonconforming OAB does not meet the intent of the city code. This criterion is not met.*

The Commission may recommend or Council may impose conditions in granting of variances. Any conditions imposed must be directly related to and must bear a rough proportionality to the impact created by the variance. No variance shall be granted or changed beyond the use permitted in this chapter in the district where such land is located.

**Public Comments**
No public comments have been received as of the submittal of this report.

**Planning Staff Recommendation**
Planning Staff recommends denial as applied. If the application proceeds to the City Council, a correctly scaled site plan should be submitted by the applicant.

**List of Exhibits**

Exhibit A. Staff Report
Exhibit B. Application
Exhibit C. Imagery
Exhibit D. Cover Letter
Exhibit E. Site Plan
Exhibit F. Building Plans
Exhibit G. Hardcover Information
Exhibit H. Mailing List & Map

# Land Use Application Summary

| | |
|---|---|
| **Application Date:** | 10/22/2025 |
| **Address:** | 4680 North Shore DR<br>Orono, MN 55364 |
| **Parcel Number:** | 0711723320050 |
| **Land Use Number:** | LA25-000051 |
| **Application Submitted By:** | Agent on behalf of property owner |
| **Owner:** | **Name:** AARON COHODES GOLDSTEEN<br>**Address:** 4680 NORTH SHORE DR MOUND MN 55364 |
| **Applicant:** | **Name:** Ungerman Inc<br>**Company:** Ungerman Inc<br>**Address:** 14000 21st Ave N<br>Plymouth, MN 55447 |
| **Contact Information:** | **Associated Contact:**<br>**Associated Contact:**<br>**Associated Contact:**<br>**Associated Contact:** |
| **Project Description:** | Proposed One-Story Garage Bump-Out on Detached Garage and Interior and Exterior Rehabilitation |
| **Land Use Application Type:** | Amendmend Application ☐<br>Appeal of Admin Decision ☐<br>Concept Application ☐<br>Conditional Use Permit ☐<br>Site Plan Application ☐<br>Subdivision Application ☐<br>Subdivision Exception ☐<br>Vacation Application ☐<br>Variance Application ☑ |
| **Applicant Signature:** |  |

**Exhibit C – Aerial Imagery of 4680 North Shore Drive, Orono**





**Ungerman, Inc.**
Property Restoration & Construction Specialists
14000 21st Avenue North | Plymouth, MN 55447 | (612)825-2800 | www.ungerman.net

Date: November 3, 2025

City of Orono
City Hall
2750 Kelley Parkway
Orono, MN 55356
Attn: Mayor and Members of the City Council

Dear Mayor and Members of the City Council,

My name is Ron Ungerman, President of Ungerman, Inc., a property restoration and general contracting firm. I am writing on behalf of the homeowner, who is currently out of town and unable to submit this variance application personally. The purpose of this letter is to provide a project narrative outlining the proposed garage extension and rehabilitation of the existing detached garage located on the subject property.

I have been in contact with Matthew Karney of the City of Orono, who confirmed that the existing garage is non-conforming due to its proximity to the rear and side property lines. Accordingly, a variance is required prior to permitting. We respectfully request the City's review and approval of this variance to allow for the proposed improvements to this long-standing structure.

Project Description
The homeowner proposes constructing a one-story garage extension on the east (front) side of the existing detached garage. The extension will project approximately six (6) feet into the existing driveway footprint, resulting in no net increase in impervious surface area.

The intent of the garage extension is to provide adequate interior depth to securely store the homeowner's boat and trailer indoors. The existing garage is bordered by steep, wooded slopes to the west (rear) and north, which naturally screen it from view. The new garage extension will remain below surrounding grade, preserving the property's visual character and minimizing impact on neighboring views.

Site Context & Existing Structure
The detached garage has been on the property for several decades, predating the main residence. While structurally sound, the exterior siding, roofing, and upper-level finishes have deteriorated over time. The project therefore includes both the proposed garage

extension and a comprehensive rehabilitation of the existing structure.

Upon completion, the upper level will serve as private, non-rental space used solely by the homeowner as a home office, workshop, and workout area. The owner has no intent to convert this structure into a rental dwelling unit and is agreeable to any condition or covenant the City deems appropriate to ensure compliance.

Practical Difficulty
Due to the property's topography and the placement of the existing structure, extending the garage six feet to the east is the only practical and minimal means of achieving the project's purpose. This approach avoids disturbance of steep slopes, eliminates the need for major excavation, and does not increase impervious coverage.

Alternative expansion directions would encroach further into required setbacks, necessitate substantial earthwork, and remove established vegetation along the west and north slopes. Relocating or reconstructing the garage elsewhere on the lot would result in unreasonable financial hardship due to demolition and site redevelopment costs.

The east-side garage extension thus represents a reasonable and appropriate use of the property, consistent with its existing layout while maintaining driveway access and minimizing environmental and visual impacts.

Design & Community Considerations
• The garage extension will match existing materials, colors, and architectural style for a seamless appearance.
• The structure will remain screened by existing vegetation and terrain, preserving neighborhood character.
• The project will enhance aesthetics and property maintenance by improving an aging structure.
• The garage extension will not increase impervious surface area or alter existing drainage patterns.

Purpose & Benefits
The proposed project will:
• Provide functional enclosed storage for the homeowner's boat and related equipment.
• Rehabilitate and modernize a long-standing structure.
• Enhance property value and complement surrounding homes.
• Preserve neighborhood appearance and character.
• Remain strictly non-residential in use.

Conclusion
The proposed 6-foot garage extension and rehabilitation will preserve and enhance an existing structure, improve functionality and aesthetics, and remain consistent with the

intent and spirit of the City's zoning ordinance.

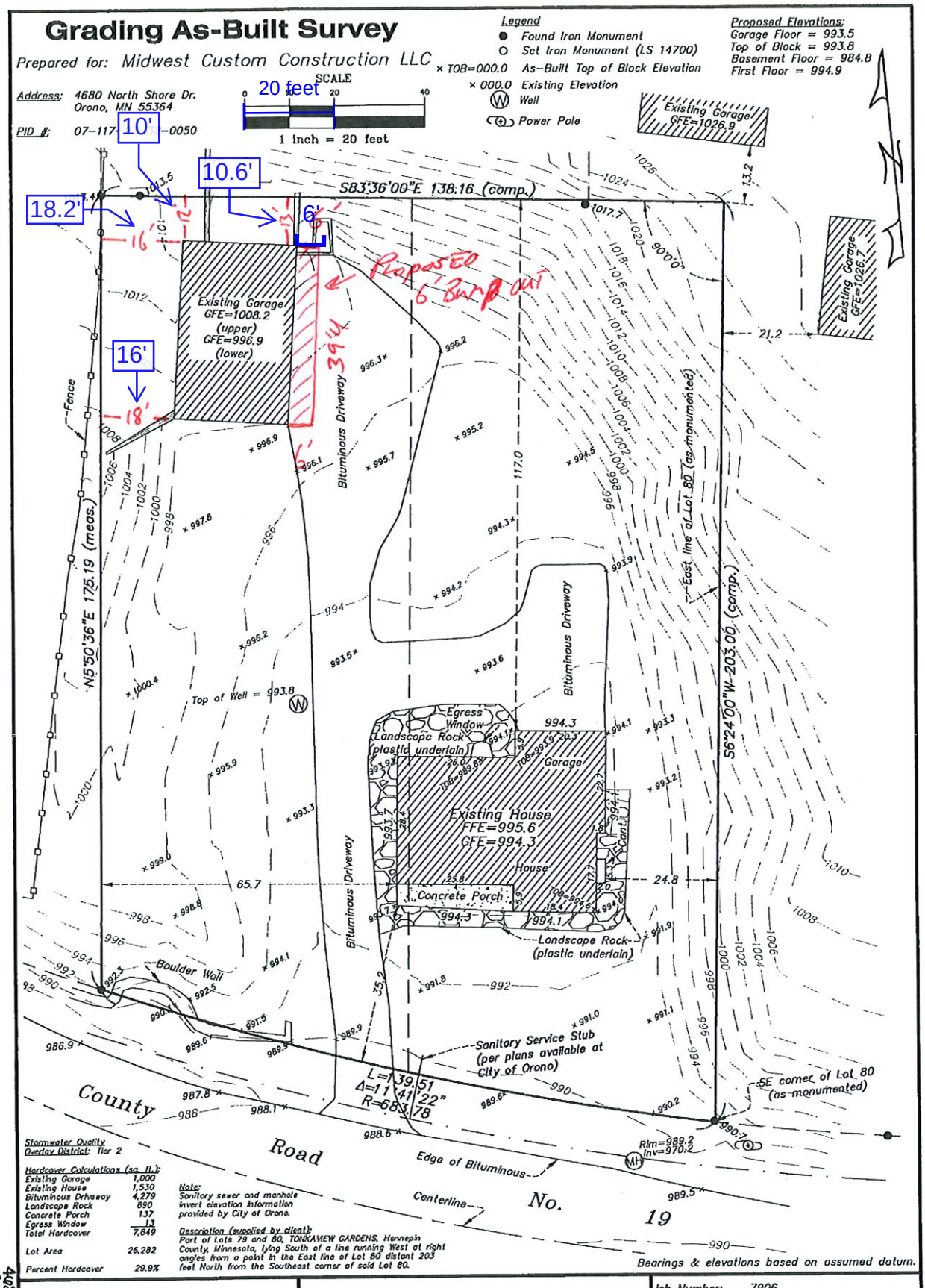
We sincerely appreciate the City Council's and staff's time, guidance, and consideration throughout this process. Please let me know if any additional information, drawings, or revisions are needed.

Thank you for your time and thoughtful review.

Sincerely,
Ron Ungerman
President | Ungerman, Inc.
14000 21st Avenue North
Plymouth, MN 55447
(612) 825-2800
ronjr@ungerman.net

Staff annotated measurements (MAK)






SCHOBORG LAND SERVICES INC.
763-972-3221
www.SchoborgLand.com
8997 Co. Rd. 13 SE
Delano, MN 55328

I hereby certify that this certificate of survey was prepared by me or under my direct supervision and that I am a duly Registered Land Surveyor under the laws of the State of Minnesota.

Paul B. Schoborg

Paul B. Schoborg

Date: Oct 21, 2015 Registration No. 14700

| | |
|---|---|
| Job Number: | 7906 |
| Book/Page: | LL |
| Survey Date: | 11/13, 11/14, 11/17(2014) 10/12/15 |
| Drawing Name: | johnson.dwg |
| Drawn by: | KLB |
| Revisions: | 12-08-14, 12-18-14, |
| | 2-23-15 (foundation as-built) |
| | 10-13-15 (final as-built) |

4680 North Shore Dr. 2014-01358 As-Built Survey

As-Built survey

4680 North Shore Dr. 2014-01358

## STRUCTURAL NOTES

**Unless noted otherwise on the plans and/or in the details, these notes shall apply. If there are discrepancies between the plans, details, specifications, and these notes, the contractor shall conform to the more stringent requirements, unless clarified with the Structural Engineer of Record (SER) prior to work.**

**MATERIAL STRENGTHS**

Structural Steel
- HSS Rectangular and Square – ASTM A500 Gr. C, Fy = 50 ksi
- W and WT shapes – ASTM A992, Fy = 50 ksi
- Misc. structural steel – ASTM A36, Fy = 36 ksi

Structural Steel Fasteners
- Anchor rods – ASTM F1554, Gr. 36, Fy = 36 ksi
- Threaded rods – ASTM A36, Fy = 36 ksi

Reinforcing Steel
- Deformed Bars – ASTM A615, Gr. 60, Fy = 60 ksi
- Masonry Joint Reinforcing – ASTM A951, Fy = 70 ksi

Concrete
- f ´c = compressive strength in 28 days
- 4,000 psi unless noted otherwise
- 5,000 psi for footings
- 3,000 psi for masonry corefill

Masonry
- Concrete Masonry Units – ASTM C90
- f ´m = net area compressive strength of masonry based on IBC table 2105.2.2.1.2
- 2,000 psi unless noted

Structural Lumber
- All dimensional lumber - #2 Spruce Pine Fir (SPF) or equal
- Laminated Veneer Lumber (LVL)
  - E = 2,000,000 psi
  - Fb = 2600 psi
- Laminated Strand Lumber (LSL)
  - E = 1,300,000 psi
  - Fb = 1,700 psi
- Parallel Strand Lumber (PSL)
  - E = 2,000,000 psi
  - Fb = 2900 psi
- Treated lumber - #2 Southern Pine or equal

**DESIGN LOADS**

Roof
- Dead load
  - 15 psf
- Snow load
  - Roof snow load = 35 psf

Floors
- Dead load
  - 15 psf & 100 psf
- Live loads
  - 40 psf, 50 psf at garage

Wind
- Ultimate Design Wind Speed 115 mph
- 3 second gust.
- Exposure B, I = 1.0
- Risk Category II
- Wind shear walls have been designed using IRC R301.1.3.

**EXISTING CONDITIONS**

Contractor shall verify all dimensions, elevations, and details of existing structure where they affect this construction prior to fabrication.
Contractor shall take precautions to avoid adding load or stress to any adjacent structures during construction.

**TEMPORARY BRACING**

All structural members are designed for in-place loads and fully cured materials. Contractor is responsible for bracing, without overstressing, all structural elements as required at all stages of construction until completion of this project.
Provide temporary lateral support for all walls until walls are adequately braced by permanent structure.
Provide required temporary bracing for all framing until permanent bracing, floor and walls are in place.
Shore foundation walls retaining earth until floor framing and basement slab are in place. Use caution when operating equipment adjacent to foundation walls.

**GENERAL SOIL NOTES**

The structure has been designed using a presumptive load-bearing value of 2000 psf in accordance with Table R401.4.1 of the 2018 IRC on virgin soil or compacted granular fill for footings.
Presumptive soil bearing value to be verified by a geotechnical engineer where required by the building official per R401.4.
Any discrepancies in the assumed allowable soil bearing pressure shall be reported immediately.
The existing footings have been assumed to be typical spread footings on good soils that are assumed to be performing adequately.
Remove all top soil, uncompacted fill, or other poor soil from the construction area.
Slope the site to drain away from the building.
Install gutters and downspouts with long extensions recommended.
Backfill with granular soils recommended.

**FOOTINGS/FOUNDATIONS**

All footings are to be formed. All stumps, roots and debris must be removed from the soil to a depth of at least 12" below the surface of the ground in the area occupied by the building. Footings shall be placed on virgin soil or compacted granular fill.
Wall footings are cast-in-place concrete with continuous reinforcing placed 3" clear of bottom and 2" clear at top and sides.
Wall footings are centered under walls and column footings under columns.
Wall footings shall be a minimum of 8" thick with a 4" projection each side of wall. Reinforce with 2 - #4 continuous bottom bars.
Column footings shall be a minimum of 10" thick, with plan dimensions as shown on drawing. Reinforce with #4 bottom bars at 8" o.c. each way.
Provide 30 bar diameter lap at splices and full crossing lap at corners and intersections. Tie all reinforcing in place. Set footing reinforcing on chairs or masonry brick to obtain 3" clearance from bottom of footing.
Maintain minimum frost depth of 42" for all exterior footings.
Footing elevations, if shown on the plan, indicate top of footing.
Top of footing shall be placed 8" below the top of slabs on grade, or placed to maintain frost depth, whichever is deeper.
Step footings in a uniform manner using a 2:1 horizontal to vertical slope.
Cast dowels in footing for foundation walls above. Dowels shall be the same quantity, size, and spacing as the vertical wall reinforcing. Dowels shall be 30" long and extend to 3" clear of bottom of footing.
Contractor shall be responsible for implementing hot weather concrete requirements per ACI 305 and cold weather concrete requirements per ACI 306.
Shore all foundation walls appropriately before backfilling and compacting.
Foundations supporting wood shall extend at least 6" above the adjacent finished grade.
At foundation endwalls, provide perpendicular full-height blocking at 24" o.c. in the first three joist spaces. Glue and nail to joists and subfloor. Attach to sill plate with Simpson L50Z clip or equal.
The contractor shall verify the location of all existing underground utilities and tanks prior to beginning excavation.
The contractor shall follow IRC Figure R403.1.7.1 for foundation clearances to slopes unless indicated otherwise by the soils engineer.

**CONCRETE**

Provide ready-mixed concrete per ASTM C94. Portland cement shall be ASTM C150, Type I. Use only one brand of cement throughout the work. Provide concrete aggregates meeting the requirements of ASTM C33.
Maximum aggregate size shall be 3/4" for grade beams and slabs. Water shall be clean, free of deleterious amounts of acids, alkalis, or organic materials, and shall be considered potable. Provide admixtures to reduce water content, provide air-entrainment, or alter the quality of the concrete to meet the job conditions.
Place reinforcing 2" clear to outside face and 1 1/2" clear to inside face of concrete wall.
Provide #4 x 4'-0" long (equal legs) horizontal reinforcing corner bars at 18" o.c. at outside corner of wall and 2 - #4 vertical support bars.
All wall openings larger than 12" shall have 2 - #5 at all sides extending 2'-0" beyond each edge of opening with 2 - #5 x 4'-0" diagonal bars at each corner of opening.
Wall reinforcing shall be continuous through columns and pilasters.
Provide full development and splice lengths per Concrete Reinforcing Steel Institute (CRSI) or ACI 318 requirements.
All concrete exposed to weather, freeze-thaw conditions or de-icing chemicals shall contain 5% - 7% entrained air.
Design intent is for all concrete to be fully cured prior to backfilling and installing structure.

Slump shall be determined by ASTM C143 as follows:

| | |
|---|---|
| Footings | 3" - 4" |
| Walls, columns | 3" - 5" |
| Slabs on grade | 3" - 4" |
| Structural slabs, beams | 3" - 4" |
| Masonry grout | 8" - 11" |

Concrete shall not be laid when the temperature of the outside air is below 40 degrees Fahrenheit, unless approved methods are used during construction to prevent damage to the concrete. All materials used and surfaces built upon shall be free of snow and ice.
Wood beams pocketed into concrete shall be provided with a 1/2" air space on top, end, and sides unless treated wood or steel plates are used.
Concrete shall not bear permanently on wood members.

**SLABS ON GRADE**

All slabs on grade shall be reinforced with polypropylene fiber reinforcement.
Slabs on grade adjacent to foundation walls retaining earth shall be a minimum of 3 1/2" thick.
Construction and/or control joints shall occur at a maximum of 8'-0" o.c. at exterior slabs on grade, and at a maximum of 10'-0" o.c. at interior slabs on grade.
Construction and/or control joints shall be laid out in a rectangular pattern with long to short side ratio less than or equal to 1.5 and with no re-entrant corners.
Control joints for slabs on grade shall be saw cut as soon as concrete can accept it without raveling
Do not cut structural slabs or topping slabs.
All control/construction joints shall be continuous and not staggered or offset.
Control joints shall be cleaned and sealed for curing purposes as soon as possible.
Verify floor finishes and control/construction joint locations with owner and architect.

**REINFORCED CONCRETE MASONRY WALLS**

Hollow unit concrete masonry shall be ASTM C90.
Mortar shall be per ASTM C270: Type M or S for below-grade, load bearing and exterior masonry; Type N for all interior non-load bearing above-grade masonry.
All masonry units shall be placed in running bond.
Provide special shapes for jambs, columns, pilasters, control joints, corners and lintels.
See plans for location and spacing of reinforcement in walls. When one bar is in a single core, place in center, unless noted otherwise. When two bars are in a single core, place one near each face.
Place at least one vertical reinforcing bar in wall corners.
Provide ¼" diameter ties 8" oc set into joints in all lintel and bearing plate masonry columns.
Vertical steel shall be lapped 48 bar diameters at all splices.
Provide full mortar bedded face shells and webs around all grouted cells for full bearing and to prevent leakage into adjacent cells.
Grout shall be per ASTM C476.
Fill masonry core at vertical columns with 3,000 psi grout vibrated in place.
Wall construction shall not exceed heights of 4'-0" before placement of core grout unless cleanout holes are provided at the bottom of each grout lift, then a maximum height of 8'-0" before placement of core grout.
Provide ladder or truss style horizontal joint reinforcing, fabricated with galvanized 9 gauge wire, placed every 2nd course.
Provide bond beam with 2 - #4 at top of walls.
Provide corner bars with 2'-0" legs for each horizontal bar in all bond beams at corners and intersecting walls.
Refer to dimension lumber notes for anchor bolt requirements.
Masonry shall not be laid or grouted when the temperatures of the outside air is below 40 degrees Fahrenheit, unless approved methods are used during construction to prevent damage to the masonry. All materials used and surfaces built upon shall be free of snow and ice.
Wood beams pocketed into masonry shall be provided with a 1/2" air space on top, end, and sides unless treated wood or steel plates are used. Solid grout the masonry voids below beam a minimum of 2 courses below bearing.
Masonry shall not bear permanently on wood members.
Place control joints in above grade masonry walls such that no straight run of wall exceeds the lesser of 40 feet or 3 times the height.
See architectural plans for location and detail of wall control joints.

**STRUCTURAL STEEL**

All structural steel shall be designed, fabricated, and erected according to the specifications of the American Institute of Steel Construction (A.I.S.C.) Latest Adoption.
Structural steel supplier shall supply all cap plates, bearing assemblies, base plates, stiffeners, splices, and connections, and shall follow standard AISC details unless noted on drawings.
All welding shall be done by the shielded arc process using E70 electrodes in accordance with the rules of the American Welding Society (A.W.S.) Structural Welding Code, Latest Adoption. All welders shall be certified by the rules of the American Welding Society.
Tighten anchor bolts and grout column base plates before installing steel beams.
Provide complete detailed shop drawings to the contractor for review and approval prior to fabrication.
Provide 5/16" full height web stiffeners at all column and support locations.
Design intention when columns bear on beams is to have bearing plates match beam width x column width + 6".
Contractor shall install oversized hardened and thickened column base plate washers and nuts for all anchor rods (minimum 4 – anchor rods) for leveling and installation as required by AISC.

**CABLE RAILINGS**

Horizontal cables shall be minimum 1/8" diameter with a minimum yield stress of 80,000 psi and spaced 3" oc with a maximum span of 3'-0".
Design assumes enough tension is developed at each cable to maintain a 4" space between the cables per the IRC.
We recommend the cables be installed as close to 70 degrees as possible, and re-torqued when the temperature changes to maintain proper cable tension.
Cable railing systems are similar to all deck railing systems that need constant maintenance to perform adequately, such as checking for rotted wood, rusted fasteners, and stretched cables. Maintenance is out of our design control and typically cannot be accounted for in design and shall be the responsibility of the owner.
Cables can stretch and expand/contract with temperature changes, we recommend the owner re-torque the cables as required to maintain the proper tension in the cables. We also recommend the base plate fasteners be periodically checked for tightness and rot, similar to standard wood deck railing systems.
Cable railings shall have top and bottom horizontal rails and end posts to provide a closed system for the railing design.
Refer to manufacturer's recommendations for maximum cable run length, with a maximum vertical cable post spacing of 3ft.

**DIMENSION LUMBER**

Design assumes lumber is free of significant splits and checks, and contractor will visually inspect during installation.
Sills and all other lumber in contact with concrete or masonry and within 8" of finished grade shall be preservative treated wood. In crawlspaces or unexcavated areas within the building foundation, wood shall be preservative treated for joists within 18" of exposed ground and/or girders within 12" of exposed ground.
Preservative treated wood shall be in accordance with the American Wood Protection Association, Standard U1.
Treat all cut ends of treated material.
All lumber is to be grade stamped, which is to contain grading agency, mill number or name, grade of lumber, species or species grouping or combination designation, rules under which graded, where applicable, and condition of seasoning at time of manufacture.
All lumber shall be seasoned to a moisture content of 19% or less, with the indication of "S-Dry" on the grade stamp.
All lumber shall be protected from the elements.
Sill plates to be bolted to foundation wall with 1/2" diameter galv anchor bolts at 2'-0" o.c. maximum. Bolts to extend 9" minimum into solidly grouted foundation wall. Each sill plate to have a minimum of 2 bolts with one bolt located not more than 12 inches or less than 4 1/2 inches from each end of the plate section. Use 1/8"x2"x2" galv washers, slightly crushing plate.
Minimum nailing shall be in accordance with Table R602.3(1) of the 2018 IRC unless noted otherwise.
All walls shall have a single bottom plate and double top plate.
Exterior walls shall be 2 x 6 studs @ 16" o.c. unless noted otherwise.
Typical openings to have a minimum of 2 bearing (trimmer or jack) studs and 1 full-height king stud.
Headers not noted to be 2 – 2 x 6 up to 4'-0" span and 2 – 2 x 8 from 4'-0" to 6'-0" span.
Wood headers shall have a minimum 3" length of bearing at each end or bear the entire length of the bearing studs.
Beams shall bear on a minimum of 3" along their length and fully along their width and have a minimum of 2 typical wall studs supporting them.
Joists shall bear the full width of supporting members (stud wall, beams, etc.).
Provide solid vertical blocking at all joist spaces below wood columns. Provide matching columns to foundation at lower levels below columns comprised of 3 or more studs.
All beams and joists not bearing on supporting members shall be framed with prefabricated joist hangers.
1 ½" nails shall not be used at joist hangers unless specified for the specific joist hanger by the manufacturer.
1 ½" nails shall not be used for beam and girder hangers.
See hanger manufacturer catalog for required nails or screws for 100% allowable loading.
Beams or headers made of 2x's shall be nailed together with 2 – rows 16d nails (.162" x 3 ½") at 12" o.c. along each edge, typical for each lumber ply.
Nail built up posts made of 2x stud material with 2 – rows 16d nails 12" oc each ply, up to 3-plies. Screw built up posts made of 2x stud material with ¼"x6" SDS screws 8" oc staggered for 4-plies.
Attach 2-ply LVL beams with 2-rows of ½"x3 ½" SDS screws 16" oc unless noted.
Attach 3-ply LVL beams with 2-rows of ½"x3 ½" SDS screws 16" oc both faces unless noted.
Attach 4-ply LVL beams with 2-rows of ½"x6" SDS screws 16" oc both faces unless noted.
Spacing of bridging for joists shall not exceed 8'-0".
Double all joists under parallel partitions or single floor truss.
All plywood and OSB shall be installed per American Plywood Association standards, including the use of construction adhesive for fastening to floor joists.
All fasteners and hangers in contact with treated lumber shall be G185 hot dipped galvanized or equal.
Lumber grading rules and wood species shall conform to Voluntary Product Standard PS 20-99 as published by the Department of Commerce. Grading rules shall be by an agency certified by the Board of Review of the American Lumber Standards Committee.
Performance requirements, adhesive bond performance, panel construction and workmanship, dimensions and tolerances, marking, and moisture content of Wood-based Structural-use Panels shall conform to Voluntary Product Standard PS 2-92, as published by the Department of Commerce.
Place sheetrock control joints max 30ft apart per the Wall and Ceiling Bureau Technical Bulletin.
Do not drill or notch plumbing holes near knots in any framing.

**WALL SHEATHING**

Wall sheathing shall be minimum 15/32" thick APA rated panels, rated for spacing of supporting members. A minimum 32/16 span rating is recommended. Block all joints.
Provide Exterior or Exposure 1 grade. Panels shall be continuous over two or more spans, and long dimension of panel shall be either perpendicular or parallel to supports. Fasten wall sheathing with 8d nails spaced at 4" o.c. at supported edges and 6" o.c. at intermediate supports. Leave an 1/8" gap at all end and edge joints to allow for expansion. Stagger end joints of panels. Refer to plan and notes for any special shear wall nailing and bolting conditions.
Gypsum sheathing to be a minimum of 1/2" thick fastened with 6d cooler or wallboard nails at 7" o.c. to all framing members unless noted otherwise.
Nail "ZIPS" per manufacturer's installation with 0.131" shank nails with 1 ½" framing penetration into framing a maximum 4¨ oc.

**ROOF SHEATHING**

Roof sheathing shall be minimum 23/32" thick APA rated panels, rated for spacing of supporting members. A minimum of 48/24 span rating is recommended. Provide panel clips, one between each support, for supports spaced greater than 16" o.c.
Provide Exterior or Exposure 1 grade. Panels shall be continuous over two or more spans, and long dimension of panel shall be perpendicular to supports.
Fasten roof sheathing with 8d nails spaced at 4" o.c. at supported edges and 6" o.c. at intermediate supports. Leave an 1/8" gap at all end and edge joints to allow for expansion. Design of roof sheathing assumes that the roof will be properly insulated and ventilated. Refer to APA publication N335N "Proper Installation of APA Rated Sheathing for Roof Applications."

**FLOOR SHEATHING**

Floor sheathing shall be minimum 23/32" thick tongue and groove APA rated panels, rated for spacing of supporting members. A minimum of 48/24 span rating is recommended. Provide Exposure 1 grade. Panels shall be continuous over two or more spans, and long dimension of panel shall be perpendicular to supports. Fasten sheathing with construction adhesive and 8d nails spaced at 4" o.c. at supported edges and 6" o.c. at intermediate supports.

**LVL WOOD MEMBERS**

LVL members noted on drawings are engineered laminated veneer lumber as manufactured by the Weyerhaeuser Company. Alternate at contractor's option of equal design properties.
Sizes shown on plan are actual size.

**PSL WOOD MEMBERS**

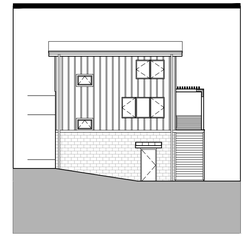
PSL members noted on drawings are engineered parallel strand lumber as manufactured by the Weyerhaeuser Company. Alternate at contractor's option of equal design properties.
Sizes shown on plan are actual size.

**LSL WOOD MEMBERS**

LSL members noted on drawings are engineered laminated strand lumber as manufactured by the Weyerhaeuser Company. Alternate at contractor's option of equal design properties.
Sizes shown on plan are actual size.

**ADHESIVE/EXPANSION ANCHORS**

Adhesive and expansion anchors shall be provided and installed in strict accordance with the manufacturer's instructions. Adhesive anchoring system to be Simpson AT-G3 adhesive. Concrete screws shall be Simpson Titen. Alternate anchoring system may be submitted for approval. "Fast Set epoxy" is not permitted. Reference drawings for additional information and requirements.



# Goldsteen Outbuilding

## Addition/Remodel

4680 North Shore Drive
Orono, MN 55364

ARCHITECT:

351 Highview Road
Hudson WI 54016
651 . 442 . 3771

michael huber architects

STRUCTURAL ENGINEER:

Bunkers & Associates, LLC
6687 Forest Street
Farmington, MN 55024
651.366.2853

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of The State of Minnesota.

PRINT NAME Eric M. Bunkers

SIGNATURE

DATE: 8-20-25 LICENSE NO: 26490

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| | |
|---|---|
| Project No.: | 25034 |
| Date: | 8.20.25 |
| Revisions: | REV. 1 9.11.25 |
| | REV. 2 10.20.25 |
| | REV. 3 11.3.25 |

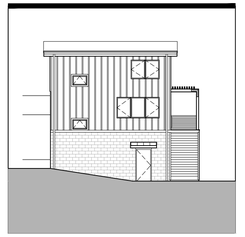
PERMIT SET

Title

STRUCTURAL NOTES

Sheet Number

S0



# Goldsteen Outbuilding

## Addition/Remodel

4680 North Shore Drive
Orono, MN 55364

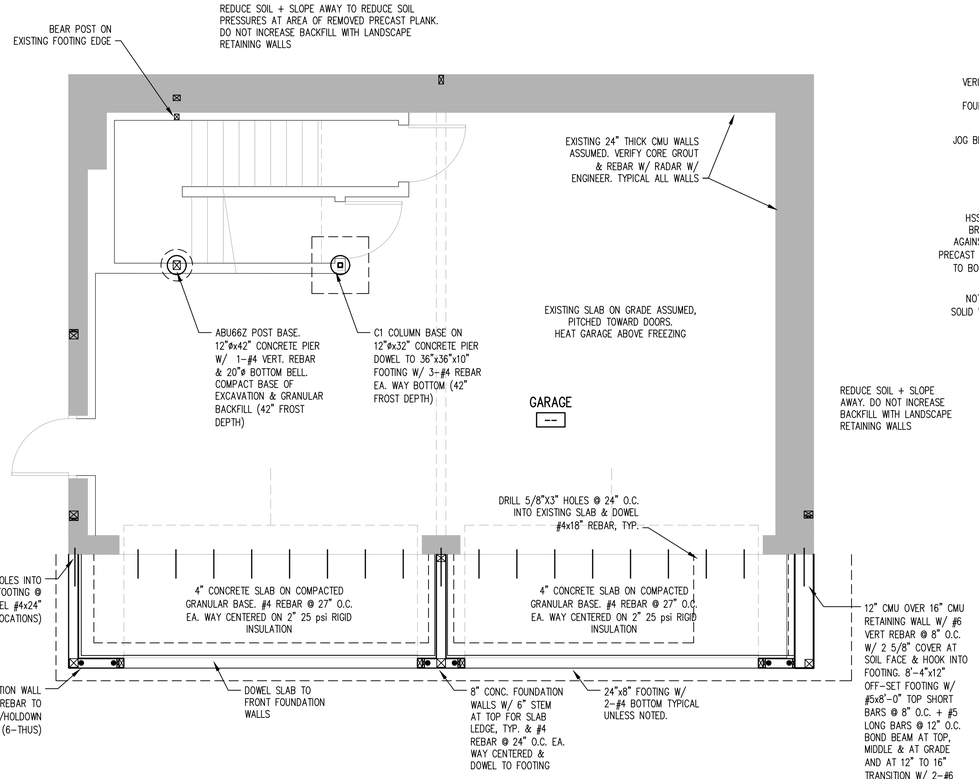
ARCHITECT:

351 Highview Road
Hudson WI 54016
651 . 442 . 3771

michael huber architects

STRUCTURAL ENGINEER:

Bunkers & Associates, LLC
6687 Forest Street
Farmington, MN 55024
651.366.2853




## 1 FOUNDATION PLAN

PLAN NORTH

1/4"=1'-0"

1. SEE STRUCTURAL NOTES ON S0 FOR MORE INFORMATION, INCLUDING ANCHOR BOLTS SIZE AND SPACING.
2. SEE ARCHITECTURAL DRAWINGS FOR SLOPED SLABS AND FLOOR DRAINS.
3. MAINTAIN MINIMUM OF 48" FROST COVER (FINAL GRADE EELVATION TO BOTTOM OF FOOTING) AT ALL EXTERIOR WALL FOOTINGS.
4. STEP FOOTINGS AS NECESSARY TO MAINTAIN COVER AND TO CLEAR UNDERGROUND UTILITIES. SEE 2/S3.
5. SEE DETAIL 1/S3 FOR TYPICAL UNDERGROUND PIPING EXCAVATION.
6. PROVIDE CONSTRUCTION AND CONTROL JOINTS AS REQUIRED. SEE DETAIL 3/S3 AND STRUCTURAL NOTES AND VERIFY LOCATIONS WITH ARCHITECT & OWNER.



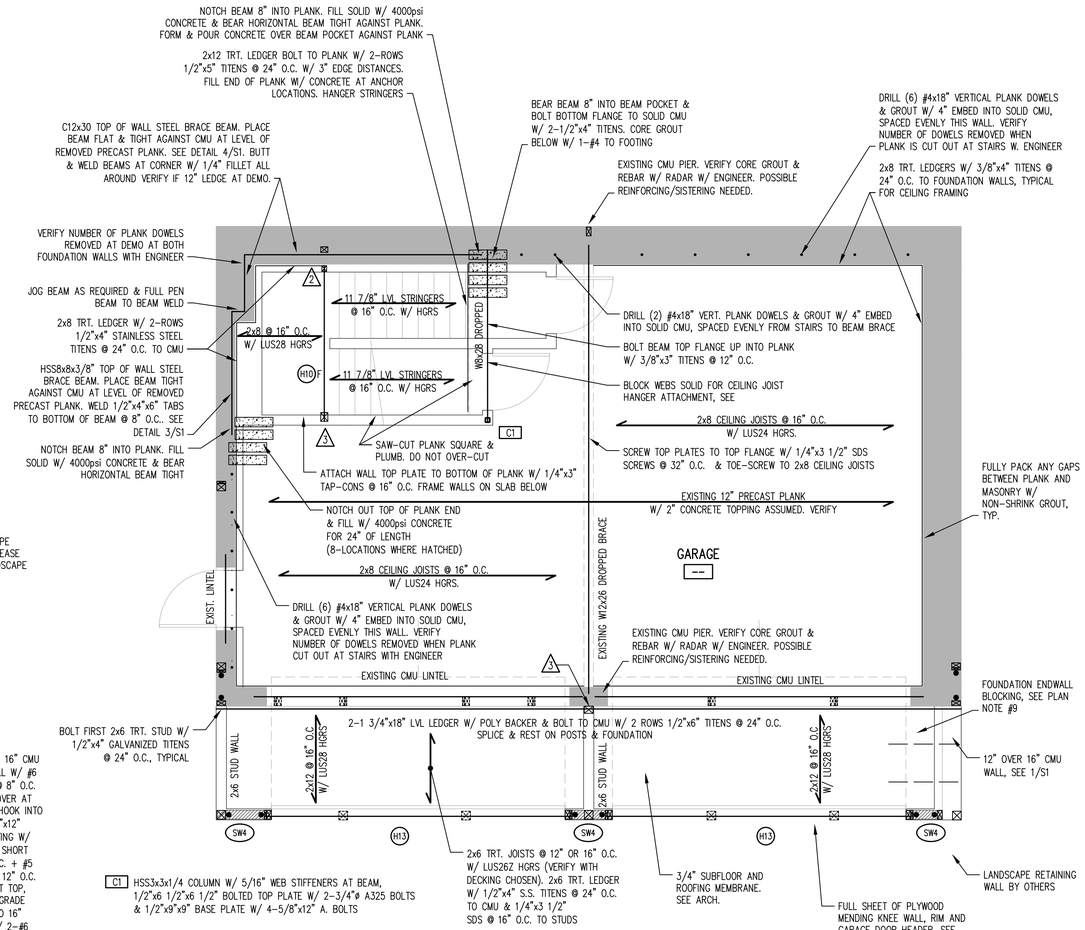

## 3 WEST WALL BRACE

3/4"=1'-0"




## 4 NORTH WALL BRACE

3/4"=1'-0"




C1 HSS3x3x1/4 COLUMN W/ 5/16" WEB STIFFENERS AT BEAM, 1/2"x6 1/2"x6 1/2" BOLTED TOP PLATE W/ 2-3/4"ø A325 BOLTS & 1/2"x9"x9" BASE PLATE W/ 4-5/8"x12" A. BOLTS

## 2 MAIN FLOOR FRAMING PLAN

PLAN NORTH

1/4"=1'-0"

1. SEE STRUCTURAL NOTES ON S0 FOR MORE INFORMATION.
2. PROVIDE MINIMUM 2-2x6 TRIMMER STUDS AND 1-2x6 KING STUD UNLESS NOTED.
3. BLOCK SOLID BELOW ALL POSTS TO FOUNDATION.
4. VERIFY KITCHEN ISLAND WEIGHT WITH ENGINEER.
5. MARKS THUS, " 3 ", INDICATE NUMBER OF BEARING STUDS REQUIRED. IF NUMBER NOT SHOWN, PROVIDE MINIMUM OF 2 STUDS (3" BEARING LENGTH), FULL WIDTH OF BEAM/HEADER/GIRDER TRUSS MUST BE SUPPORTED.
6. INTERIOR BEARING STUD WALLS TO BE 2x4 @ 16" O.C.
7. REMOVE INSULATION BEHIND WALL SHEATHING BEHIND LEDGERS FOR DIRECT WOOD TO WOOD SCREW CONNECTIONS AND LENGTHEN SCREWS AS REQUIRED FOR MINIMUM 2" PENETRATION INTO FRAMING.
8. PROVIDE 2x6 TREATED SILL PLATE WITH GALVANIZED 1/2" ANCHOR BOLTS AT 48" O.C. WITH 1/8"x2"x2" GALVANIZED WASHERS SLIGHTLY CRUSHING PLATE.
9. AT ENDWALLS, INSTALL 2x12 BLOCKS ON EDGE IN FIRST THREE JOIST SPACES AT 24" O.C. AND PLACE TIGHT TO SILL PLATE, FLOOR JOISTS, RIM AND SUBFLOOR GLUED & SCREWED W/ GLUE AND 4-#9x3" SCREWS EACH END.
10. USE TRIPLE ZINC COATED G185 OR STAINLESS STEEL FASTENERS AND HARDWARE FOR GREEN TREATED MEMBERS. TREAT ALL CUT ENDS OF TREATED MATERIAL
11. NEW FINISH CRACKS ARE LIKELY AND CAN BE COMMON IN REMODEL CONSTRUCTION.

## HEADER SCHEDULE

| MARK | SIZE | MARK | SIZE |
|---|---|---|---|
| H1 | 2-2x6 | H13 | 3 1/2" x 11 7/8" LVL |
| H2 | 2-2x8 | H14 | 5 1/4" x 11 7/8" LVL |
| H3 | 3-2x8 | H15 | 7" x 11 7/8" LVL |
| H4 | 2-2x10 | H16 | 3 1/2" x 14" LVL |
| H5 | 3-2x10 | H17 | 5 1/4" x 14" LVL |
| H6 | 2-2x12 | H18 | 7" x 14" LVL |
| H7 | 3-2x12 | H19 | 3 1/2" x 16" LVL |
| H8 | 3 1/2" x 7 1/4" LVL | H20 | 5 1/4" x 16" LVL |
| H9 | 5 1/4" x 7 1/4" LVL | H21 | 7" x 16" LVL |
| H10 | 3 1/2" x 9 1/2" LVL | H22 | 3 1/2" x 18" LVL |
| H11 | 5 1/4" x 9 1/2" LVL | H23 | 5 1/4" x 18" LVL |
| H12 | 7" x 9 1/2" LVL | H24 | 7" x 18" LVL |
| HX F=FLUSH BEAM | | HX FB=FLUSH BOTTOM BEAM | |

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of The State of Minnesota.

PRINT NAME Eric M. Bunkers

SIGNATURE

DATE: 8-20-25 LICENSE NO: 26490

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Project No.: 25034
Date: 8.20.25
Revisions: REV. 1 9.11.25
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REV. 3 11.3.25

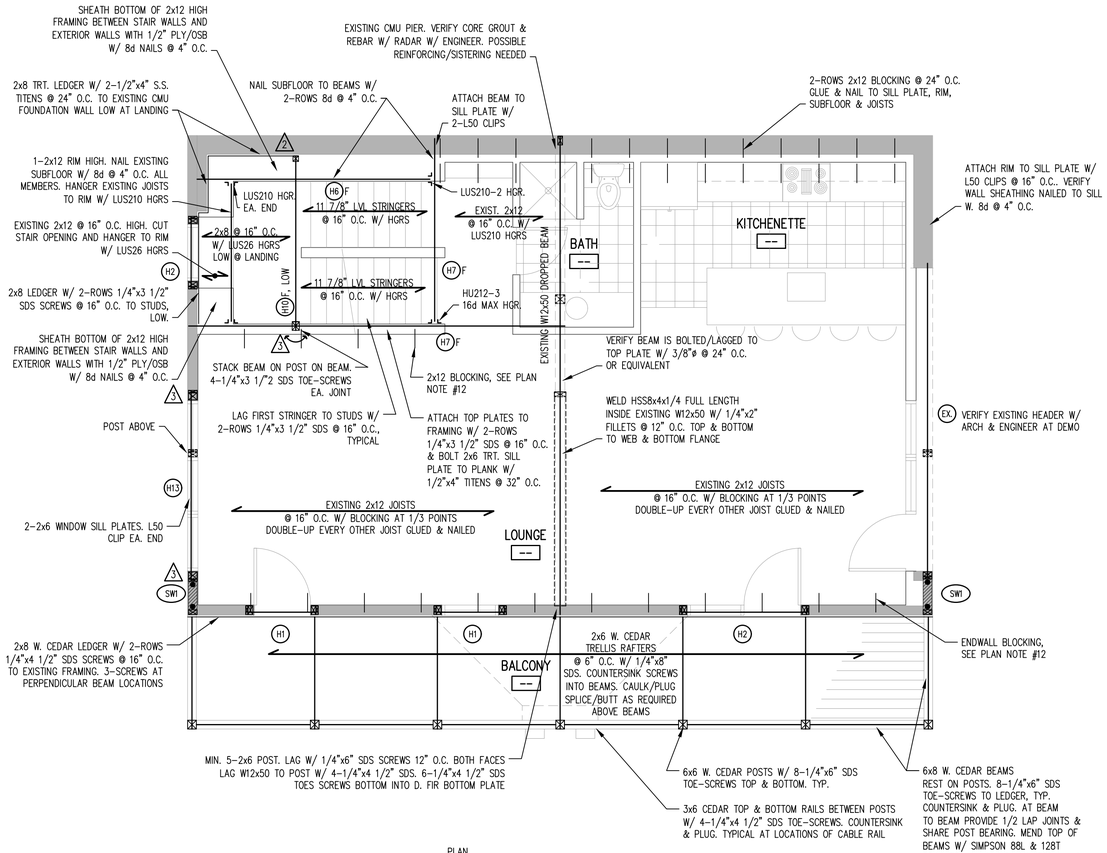
PERMIT SET

Title

STRUCTURAL PLANS

Sheet Number

S1

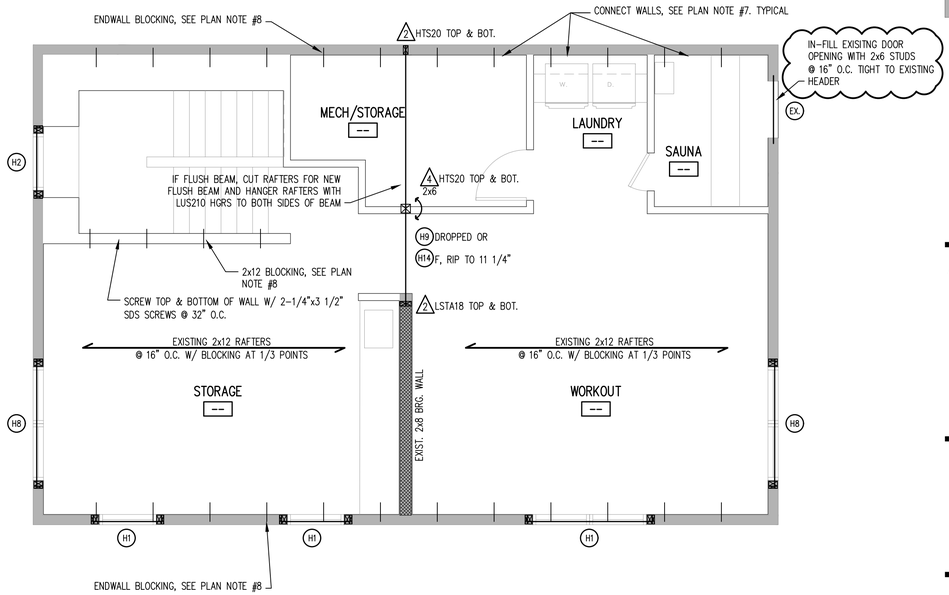



## 1 UPPER FLOOR FRAMING PLAN

1/4"=1'-0"

PLAN NORTH

1. SEE STRUCTURAL NOTES ON S0 FOR MORE INFORMATION.
2. ATTACH ALL FLOOR JOISTS ENDS WITH SIMPSON 1/4"x4 1/2" SDS SCREWS EA. END FROM WALL PLATES UP INTO BOTTOM OF JOISTS.
3. USE 3/4" T&G PLYWOOD FLOOR SHEATHING/ROOF SHEATHING. SEE STRUCTURAL NOTES FOR NAILING.
4. PROVIDE MINIMUM 2-2x6 TRIMMER STUDS AND 1-2x6 KING STUD UNLESS NOTED.
5. BLOCK SOLID BELOW ALL POSTS TO FOUNDATION.
6. MARKS THUS, "△X", INDICATE NUMBER OF BEARING STUDS REQUIRED. IF NUMBER NOT SHOWN, PROVIDE MINIMUM OF 2 STUDS (3" BEARING LENGTH), FULL WIDTH OF BEAM/HEADER/GIRDER TRUSS MUST BE SUPPORTED.
7. SEE PLAN FOR SHEAR WALL LOCATIONS AND SCHEDULE, MARKED THUS "(SWX)". SHEAR WALL SHEATHING SHALL BE DIRECTLY APPLIED TO STUDS.
8. REMOVE INSULATION BEHIND WALL SHEATHING BEHIND LEDGERS FOR DIRECT WOOD TO WOOD SCREW CONNECTIONS AND LENGTHEN SCREWS AS REQUIRED FOR MINIMUM 2" PENETRATION INTO FRAMING.
9. EXTERIOR STUD WALLS TO BE 2x6 AT 16" O.C. TYPICAL.
10. BUTT EXISTING WALL PLATES AND NAIL TO NEW WALL PLATES AT ALL INTERSECTING WALLS WITH TP39 NAIL PLATE. ATTACH FIRST STUD TO EXISTING WITH 1/4"x4 1/2" SDS SCREWS @ 16" O.C.
11. PROVIDE BOLTED 2x TOP PLATES WITH 3/8" DIAMETER BOLTS @ 24" O.C. AT TOP FLANGES AT STEEL BEAMS OR EQUIVALENT. VERIFY EXISTING.
12. AT ENDWALLS, PROVIDE 2x12 BLOCKS AT 36" O.C. GLUED & SCREWED TO WALL TOP PLATES, RIM, SUBFLOOR AND FIRST JOIST W/ GLUE AND 4-#9x3" SCREWS EACH END.
13. NEW FINISH CRACKS ARE LIKELY AND CAN BE COMMON IN REMODEL CONSTRUCTION.




## 2 ROOF FRAMING PLAN

1/4"=1'-0"

PLAN NORTH

1. SEE STRUCTURAL NOTES ON S0 FOR MORE INFORMATION.
2. ATTACH ALL RAFTER ENDS WITH SIMPSON 1/4"x6" SDS SCREWS TO WALL PLATES.
3. PROVIDE MINIMUM 2-2x6 TRIMMER STUDS AND 1-2x6 KING STUD UNLESS NOTED.
4. BLOCK SOLID BELOW ALL POSTS TO FOUNDATION.
5. MARKS THUS, "△X", INDICATE NUMBER OF BEARING STUDS REQUIRED. IF NUMBER NOT SHOWN, PROVIDE MINIMUM OF 2 STUDS (3" BEARING LENGTH), FULL WIDTH OF BEAM/HEADER/GIRDER TRUSS MUST BE SUPPORTED.
6. EXTERIOR STUD WALLS TO BE 2x6 AT 16" O.C. TYPICAL.
7. BUTT EXISTING WALL PLATES AND NAIL TO NEW WALL PLATES AT ALL INTERSECTING WALLS WITH TP39 NAIL PLATE. ATTACH FIRST STUD TO EXISTING WITH 1/4"x4 1/2" SDS SCREWS @ 16" O.C.
8. AT ENDWALLS, PROVIDE 2x12 BLOCKS AT 36" O.C. GLUED & SCREWED TO WALL TOP PLATES, RIM, SUBFLOOR AND FIRST JOIST WITH GLUE AND 4-#9x3" SCREWS EACH END..
9. NEW FINISH CRACKS ARE LIKELY AND CAN BE COMMON IN REMODEL CONSTRUCTION.

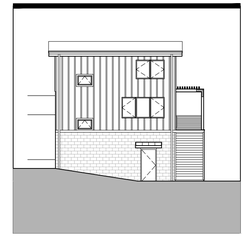
## SHEAR WALL SCHEDULE

| MARK | TYPE |
|---|---|
| (SW1) | 15/32" PLYWOOD ONE FACE. FASTEN W/ 8d @ 4" O.C. AT ALL PANEL EDGES AND INTERMEDIATE SUPPORTS. BLOCK ALL PANEL JOINTS. SIMPSON MSTC40 VERT. STRAP EA. END TO FRAMING BELOW. NAIL SOLE PLATE AND FRAMING AT TOP W/ 6-16d @ 16" O.C. SEE 4/S4. |
| (SW2) | MINIMUM 1/2" SHEET ROCK EA. FACE, BLOCK ALL SEAMS. SCREWS 4" O.C.. ANCHOR CORNERS TO FRAMING BELOW WITH 2-SIMPSON LSTA24 VERT. STRAPS. NAIL SOLE PLATE W/ 4-16d NAILS PER FOOT. CONNECT TOP PLATE TO FRAMING W/ SIMPSON LS50 CLIPS @ 24" O.C. SEE 4/S4. |
| (SW3) | 15/32" PLYWOOD ONE FACE. FASTEN W/ 8d @ 4" O.C. AT ALL PANEL EDGES AND INTERMEDIATE SUPPORTS. BLOCK ALL PANEL JOINTS. 2-SIMPSON MSTA24 VERT. STRAPS EA. END TO FRAMING BELOW. NAIL SOLE PLATE AND FRAMING AT TOP W/ 6-16d @ 16" O.C. SEE 4/S4. |
| (SW4) | 15/32" PLYWOOD BOTH FACES. FASTEN W/ 8d @ 4" O.C. AT ALL PANEL EDGES AND INTERMEDIATE SUPPORTS. BLOCK ALL PANEL JOINTS. 2-2x CORNER POSTS. USE SIMPSON HDU5 HOLD DOWN EACH END OF WALL. USE 5/8" THREADED EPOXY ROD W/ 15" EMBED INTO FOUNDATION WALL & #5 VERT. NAIL SOLE PLATE AND FRAMING AT TOP W/ 6-16d @ 16" O.C. SEE 2 & 7/S4. |

● INDICATES HOLDOWN OR STRAP LOCATIONS, MIN. 1-2x POST TYPICAL. MIN. 2-2x POSTS AT SW4 CORNER POSTS.

## HEADER SCHEDULE

| MARK | SIZE | MARK | SIZE |
|---|---|---|---|
| (H1) | 2-2x6 | (H13) | 3 1/2" x 11 7/8" LVL |
| (H2) | 2-2x8 | (H14) | 5 1/4" x 11 7/8" LVL |
| (H3) | 3-2x8 | (H15) | 7" x 11 7/8" LVL |
| (H4) | 2-2x10 | (H16) | 3 1/2" x 14" LVL |
| (H5) | 3-2x10 | (H17) | 5 1/4" x 14" LVL |
| (H6) | 2-2x12 | (H18) | 7" x 14" LVL |
| (H7) | 3-2x12 | (H19) | 3 1/2" x 16" LVL |
| (H8) | 3 1/2" x 7 1/4" LVL | (H20) | 5 1/4" x 16" LVL |
| (H9) | 5 1/4" x 7 1/4" LVL | (H21) | 7" x 16" LVL |
| (H10) | 3 1/2" x 9 1/2" LVL | (H22) | 3 1/2" x 18" LVL |
| (H11) | 5 1/4" x 9 1/2" LVL | (H23) | 5 1/4" x 18" LVL |
| (H12) | 7" x 9 1/2" LVL | (H24) | 7" x 18" LVL |
| (HX) F=FLUSH BEAM | | (HX) FB=FLUSH BOTTOM BEAM | |



# Goldsteen Outbuilding

## Addition/Remodel

4680 North Shore Drive
Orono, MN 55364

ARCHITECT:

351 Highview Road
Hudson WI 54016
651 . 442 . 3771

michael huber architects

STRUCTURAL ENGINEER:

Bunkers & Associates, LLC
6687 Forest Street
Farmington, MN 55024
651.366.2853

I hereby certify that this plan, specification or report was prepared by me or under my direct supervision and that I am a duly licensed Engineer under the laws of The State of Minnesota.

PRINT NAME Eric M. Bunkers

SIGNATURE

DATE: 8-20-25 LICENSE NO: 26490

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Project No.: 25034
Date: 8.20.25
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REV. 3 11.3.25

PERMIT SET

Title

STRUCTURAL PLANS

Sheet Number

S2

City of Orono

# Hardcover Calculation Worksheet

Property Address: 4680 NORTH SHORE DRIVE.

Prepared by: RAY UNGERMAN Date: 11/12/25

Stormwater Quality Overlay District Tier: (Circle one) **Tier 1*** **Tier 2** **Tier 3** **Tier 4** **Tier 5**

**Step 1: EXISTING HARDCOVER**

In the following table identify all items of existing hardcover on the property, keyed by letter to site plan or survey (must accompany this form). Use as many lines as necessary to accurately depict the existing hardcover status of the property. *For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | EXISTING GARAGE | | 1000 S.F. |
| B | EXISTING HOUSE | | 1530 S.F. |
| C | BITUMINOUS DRIVEWAY | | 4279 S.F. |
| D | LANDSCAPE ROCK | | 890 S.F. |
| E | CONCRETE PORCH | | 137 S.F. |
| F | EGRESS WINDOW | | 13 S.F. |
| G | | | S.F. |
| H | | | S.F. |
| I | | | S.F. |
| J | | | S.F. |
| K | | | S.F. |
| L | | | S.F. |
| M | | | S.F. |
| N | | | S.F. |
| O | | | S.F. |
| P | | | S.F. |
| Q | | | S.F. |
| R | | | S.F. |
| S | | | S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Existing Hardcover | | | 7,849 S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | S.F. |
| (3) Net Existing Hardcover [Subtract line (2) from line (1)] | | | S.F. |
| (4) Total Lot Area | | | 26,282 S.F. |
| **Existing Hardcover Percentage [ (3) ÷ (4) ]** | | | 29.9 % |

City of Orono

# Hardcover Calculation Worksheet

Property Address: 4680 North Shore Drive

Prepared by: Rae Unger Man Date: 11/12/2025

Stormwater Quality Overlay District Tier: (Circle one) **Tier 1** **Tier 2** **Tier 3** **Tier 4** **Tier 5**

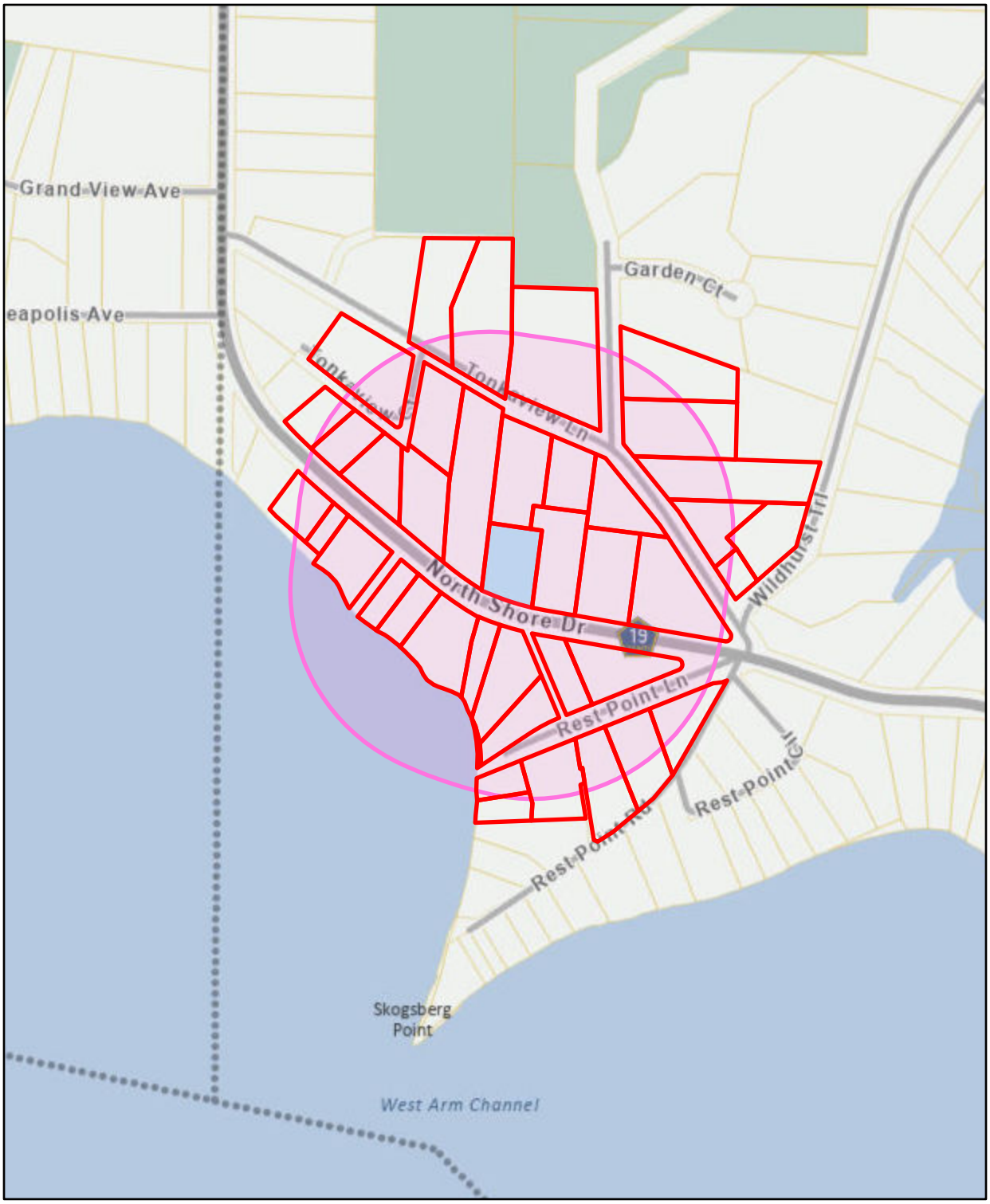
**Step 2: PROPOSED HARDCOVER**

In the following table, identify all items of proposed hardcover on the property, keyed by letter to the site plan or survey (must accompany this form). Include all existing hardcover items that are intended to remain, as well as all proposed hardcover items that will be added. Use as many lines as necessary to accurately depict the proposed hardcover of the property. For Tier 1 properties, identify any features by letter that are within the 75-foot setback or split at the 75' setback line and calculate hardcover square footage separately for each portion.

| Key to Survey | Hardcover Item (Describe) | Length x Width | Total (Square Feet) |
|---|---|---|---|
| (Example) | (Garage) | (24' x 30') | (720 S.F.) |
| A | Existing Garage | | 1234 S.F. * |
| B | Existing House | | 1530 S.F. |
| C | Bituminous Driveway | | 3945 S.F. * |
| D | Landscape Rock | | 890 S.F. |
| E | Concrete Porch | | 137 S.F. |
| F | Eggress Window | | 13 S.F. |
| G | | | S.F. |
| H | | | S.F. |
| I | | | S.F. |
| J | | | S.F. |
| K | | | S.F. |
| L | | | S.F. |
| M | | | S.F. |
| N | | | S.F. |
| O | | | S.F. |
| P | | | S.F. |
| Q | | | S.F. |
| R | | | S.F. |
| S | | | S.F. |
| T | | | S.F. |
| U | | | S.F. |
| V | | | S.F. |
| W | | | S.F. |
| X | | | S.F. |
| Y | | | S.F. |
| Z | | | S.F. |
| (1) Total Proposed Hardcover | | | 7,849 S.F. |
| **Excludable Hardcover (See City Code Sec 78-1684):** | | | |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| | | | S.F. |
| (2) Total Excludable Hardcover | | | S.F. |
| (3) Net Proposed Hardcover [Subtract line (2) from line (1)] | | | S.F. |
| (4) Total Lot Area | | | 26,282 S.F. |
| **Proposed Hardcover Percentage [ (3) ÷ (4) ]** | | | 29.9 % |

# Hennepin County Locate & Notify Map

Date: 10/27/2025




**Buffer Size:** 500

**Map Comments:**

4680 North Shore

0 100 200 400 Feet

This data (i) is furnished 'AS IS' with no representation as to completeness or accuracy; (ii) is furnished with no warranty of any kind; and (iii) is notsuitable for legal, engineering or surveying purposes. Hennepin County shall not be liable for any damage, injury or loss resulting from this data.

For more information, contact Hennepin County GIS Office
300 6th Street South, Minneapolis, MN 55487 / gis.info@hennepin.us

38 07-117-23 23 0036
STEVEN F & JOAN VALEK
4720 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 23 0037
STEVEN F & JOAN VALEK
4720 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 31 0031
PATTI MAE HYLEN
PO BOX 67
NORWOOD YOUNG AMERICA MN
55368

38 07-117-23 31 0040
ANDREW & HITOMI ZABILLA
1297 WILDHURST TRAIL
ORONO MN 55364

38 07-117-23 32 0002
JAMES HESSEL HOUTMAN
KRISTINE JOANN HOUTMAN
204 WHISPERING PINES AVE
FRIENDSWOOD TX 77546

38 07-117-23 32 0003
TERRY CHRISTIANSON
4641 TONKA VIEW LANE
MOUND MN 55364

38 07-117-23 32 0004
ALLEN BREDESON
4735 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0009
VIKTORYIA BANCHUK
6627 TESSMAN LN
BROOKLYN PARK MN 55445

38 07-117-23 32 0010
RYAN P TURNER
4745 TONKAVIEW CT
MOUND MN 55364

38 07-117-23 32 0011
JAMES & MARTHA HARTFIEL
4749 TONKAVIEW CT
MOUND MN 55364

38 07-117-23 32 0014
L GREENHAGEN & V GREENHAGEN
4739 TONKAVIEW CT
MOUND MN 55364

38 07-117-23 32 0019
MATTHEW MICHAEL JASPER
4745 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0020
THOMAS J CORNELISSEN
KAREN PRESTON
4753 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0021
NAM PHAM
THU PHAN
8812 138TH ST W
SAVAGE MN 55378

38 07-117-23 32 0024
KATHLEEN G ASH
4615 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0025
ERICH K BLAUFUSS
ELIZABETH BLAUFUSS
4625 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0026
JAMES R & DAWN ABRAHAMSON
4629 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0027
ALENA C SEVERSON
WILLIAM L SEVERSON
4635 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0030
STEPHANIE FERRELL
1310 REST POINT LA
MOUND MN 55364

38 07-117-23 32 0034
CHRISTINA C NILLISSEN
PO BOX 814
WAYZATA MN 55391 0814

38 07-117-23 32 0038
JAMES HOUTMAN TRUSTEE
KRISTINE HOUTMAN TRUSTEE
204 WHISPERING PINES AVE
FRIENDSWOOD TX 77546

38 07-117-23 32 0039
DAVID MILLER/JENNIFER MILLER
1350 REST POINT LA
MOUND MN 55364

38 07-117-23 32 0043
KENNETH J HICKEY
4640 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0045
JEFFREY P PRUITT
KATHERINE A PRUITT
1220 GARDEN CT
MOUND MN 55364

38 07-117-23 32 0046
CHELSEA MARIE GROSS
KENNETH C MURPHY JR
1240 GARDEN CT
MOUND MN 55364

38 07-117-23 32 0047
JAMIE J WOODBURN
4690 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0050
AARON COHODES GOLDSTEEN
4680 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0052
KEVIN J GROVER AND
SUSAN K GROVER
1315 REST POINT LA
MINNETRISTA MN 55364

38 07-117-23 32 0053
GEORGE THOMAS AHERN
CANDACE F AHERN
1345 REST POINT LA
MOUND MN 55364

38 07-117-23 32 0054
GEORGE T AHERN
CANDACE F AHERN
1345 REST POINT LA
MOUND MN 55364

38 07-117-23 32 0056
KELLI GILLSPIE-COEN
STEVEN C COEN
4685 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0057
KIM G & HONI L MARONDE
4755 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0058
ANDREW H & TRACY K RASCHER
4705 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0059
YASMINA AHMED
4695 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0061
AMY J MIGLINI
1371 REST POINT LA
MOUND MN 55364

38 07-117-23 32 0063
AMANDA M ERICKSON
RYAN B FLATEN
4620 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0064
ROAL REVOCABLE INTERVIVOS TR
4655 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0065
DAVID DARROW
JENNIFER ZICK
4685 TONKAVIEW LA
MOUND MN 55364

38 07-117-23 32 0066
BRADLEY K ARENDS
TEMPEST A ARENDS
4725 NORTH SHORE DR
MOUND MN 55364

38 07-117-23 32 0067
JUSTIN B HOUSTON
ALLISON J HOUSTON
4731 NORTH SHORE DR
MOUND MN 55364

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 6.1

**Title:** Chair Appointment Discussion

**Presenter:** Laura Oakden, Community Development Director

**Section:** New Business

1. **Purpose:**
   The Planning Commission should discuss and make a recommendation for a Chair and Vice Chair for 2026.

2. **Background:**
   The Chair of the Planning Commission leads the meeting including public hearings, discussions and signs required documents for the commission. The appointment of the chair has fluctuated overtime. Historically, the commission would make a recommendation to the council. In the past few years, the city council wanted to give commission members the opportunity to act as chair with 1 year appoints for the chair. The Council sets all appoints for the upcoming year at their December Council Meeting.

   Planning Commission Chair History:

| Chair | Years |
|---|---|
| John Thiesse | 2016-2019 |
| Jon Ressler | 2020 |
| Scott Kirchner | 2021 |
| Mark McCutcheon | 2022 |
| Chris Bollis | 2023-2025 |

3. **Staff Recommendation:**
   The Commission should discuss the positions of Chair and Vice Chair for 2026

4. **Planning Commission Action Requested:**
   Motion to recommend a Chair and Vice Chair to the City Council for Consideration.

**AGENDA ITEM**

**Date:** November 17, 2025 **Item:** 6.2

**Title:** LA25-000044, Scott England o/b/o Barbara Lupient, 3220 Wayzata Blvd W, Sketch Plan (Laura Oakden)

**Presenter:** Laura Oakden, Community Development Director

**Section:** New Business

1. **Purpose:**
   The applicant is requesting comments on a proposed 26-unit detached townhome development located on the south side of Lake Classen on the north side of Wayzata Boulevard.

2. **Background:**
   The plans provided by the developer show 26 detached townhome villas. The project includes a viewing platform at the lakeshore for residents to enjoy and access Lake Classen. The applicant is proposing a large conservation easement area surrounding the lake to implement protection for the sensitive natural environment.

   The proposal involves two contiguous parcels zoned RR-1B, One Family Rural Residential, and are guided for rural residential use in the 2040 Comprehensive Plan. The parcels are not located within the MUSA and, therefore, are not eligible for sanitary sewer services without an amendment to the Comprehensive Plan. The parcels are located on Lake Classen, which is a Natural Environment Lake with a 150-foot lakeshore setback for all structures.

3. **Public Comment:**
   A sketch plan is not a public hearing, but the Commission may receive and consider public comments during the public meeting. The applicant held a neighborhood meeting on November 5, 2025. The applicant submitted documentation from this meeting.

4. **Staff Recommendation:**
   The Planning Commission should review the Issues for Consideration identified in the Staff Report and provide non-binding feedback to the applicant.

5. **Planning Commission Action Requested:**
   Provide feedback on the proposed development to the applicant as it related to the city's guiding documents.

**Exhibits**

Ex A. Planning Staff Report, LA25-000044 (3220 Wayzata Blvd W) Sketch Plan
Ex B. Application
Ex C. Narrative
Ex D. Site Plans
Ex F. Existing Tree Analysis
Ex G. Comp Plan Maps (Rural, MUSA, Utility Services)
Ex H. Chapter 3B - Land Use Plan (Through Amend 6)

Ex I. Example Building Plans
Ex J. NeighborhoodExamples
Ex K. MCWD NOD
Ex L. Neighborhood Meeting Summary

**To:** Chair Bollis and Planning Commission Members
Adam Edwards, City Administrator

**From:** Laura Oakden, Community Development Director

**Date:** 17 November 2025

**Subject:** LA25-000044, Scott England o/b/o Barbara Lupient, 3220 Wayzata Blvd W, Sketch Plan

| |
|---|
| ***Application Summary:*** The applicant is requesting comment regarding a proposed development for 26 detached townhomes on the south side of Lake Classen, on the north side of Wayzata Blvd. |
| ***Staff Recommendation:*** Planning Department Staff requests Planning Commission comment on the issues noted below. |

**Background**

The proposal is for two contiguous parcels:

| | | |
|---|---|---|
| 3211823110001 | 3220 Wayzata Blvd W | 9.94 acres |
| 33118232200001 | 3200 Wayzata Blvd W | 3.27 acres |

Both parcels are zoned RR-1B and guided for rural residential use in the 2040 Comprehensive Plan. The parcels are not located within the MUSA, and therefore are not eligible for sanitary sewer services, without an amendment to the Comprehensive Plan. The parcels are located on Lake Classen, which is a Natural Environment Lake requiring a 150-foot lakeshore setback for all structures. Based on the existing zoning, the minimum lot size is 2 acres, with 200 feet of width, measured at the lake shore and 150 feet.

**Proposal**

The plans provided by the developer show 26 detached townhome villas. The proposed homes will be single-story with combination of 2-3 car garages, with additional off-street parking in the driveway. The applicant hopes to achieve a small neighborhood feel that provides a housing type that is in high demand. The project includes a viewing platform area at the lake for the residents to enjoy and access Lake Classen. The applicant is proposing a large conservation easement area surrounding the lake shore to implement protection for the sensitive natural environment. Access to the site is provided via two new entrances off of Wayzata Blvd West, subject to the approval of Hennepin County.

**Analysis**

Comprehensive Plan, MUSA expansion: The project as proposed, will require an amendment to the Comprehensive Plan for both land use and an expansion of the MUSA boundary. For expansions of the MUSA boundary, the Metropolitan Council requires a minimum density of 3 dwelling units per acre. The upcoming Comprehensive Plan Amendment (2050) will require the city to meet a 3.5 units per acre density.

Net Density: The property is roughly 14 gross acres in size. The developer is proposing a large conservation area of roughly 4.5 acres. The conservation area can be subtracted from the developable land area for density calculation purposes if the area is owned and maintained by a

governing agency. If the conservation area is removed, the adjusted land area would be approximately 8.5 acres. The 26-unit project, at 8.5 acres, would result in an estimated density of 3.1 units/acre.

Overall, the City's density is currently 3 units per acre. Should the acreage of this proposed development be included in the MUSA area, the development would allow the City to maintain a density of 3 units per acre for all MUSA areas. As proposed, this development would meet the city's *current* 2040 Comprehensive Plan density guidelines. It would not meet the 2050 Comprehensive Plan Guidelines, which are required to be adopted by the end of 2028.

The following summarizes the 2040 Comprehensive Plan's prioritization of projects when considering a MUSA expansion:

| | |
|---|---|
| ***Priority 1*** | ***Properties that abut the shoreline of Lake Minnetonka and all other Orono lakes.*** |
| Priority 2 | Properties that abut City-protected tributaries, and all other properties within the Shoreland Overlay District. |
| Priority 3 | Existing substandard developed lots not covered by Priorities 1 and 2 and developed prior to 1985 that have failing septic systems and do not have an alternative site available to replace said system. |
| ***Priority 4*** | ***New development using clustering that permanently preserves blocks of open space.*** |
| Priority 5 | Conforming developed lots not covered by Priorities 1 and 2 and developed prior to 1985 that have failing septic systems and do not have an alternative site available to replace said system. |
| Priority 6 | New or existing development not covered by Priorities 1, 2, 3, 4 or 5. |

The Comprehensive Plan notes that "*When a new or existing residential development meeting all required development standards is adjacent to existing sewer lines and the developer or homeowners agree to bear all costs of extending municipal sewer to the development, but only when inclusion of such development in the MUSA will not result in a decrease in the City's sewered density since 2000 as calculated by the Metropolitan Council*." The property owner is advised that all costs to extend services are their responsibility.

Sanitary sewer will be "available" to serve the property, although the feasibility study to determine pipe and lift station sizing for the three parcels on the south side of Wayzata Boulevard did not factor in the subject property.

Comprehensive Plan, Land Use: The Plan talks at length about the rural character of Orono, and the protection of natural resources, noting that the delineation of the urban and rural areas is **fixed** (see Page 3B-15). This project would be the first expansion of the Defined Urban Area since at least 2021. Part of the City's solution to retain its rural character is to place higher densities at appropriate locations in the city, such as Navarre. Ordinances are in place for the protection of lakes and streams (storm water management, setbacks from lakes, etc.). The Planning Commission and Council should determine if the site is appropriate for an urban density (greater than 1 unit per two acres). If so, they should determine if the proposed development provides an appropriate level of density.

Land Uses surrounding Lake Classen include a city park, Susan Lurton Dog Park, the Orono

School District's athletic and school facilities, and single-family residential uses, with most properties exceeding 2 acres in size.

Zoning: Orono does not have a high-density residential zoning district; existing high-density projects such as Stonebay, Orono Senior Housing, Orono Woods, and Orono Trails are zoned Residential Planned Unit Development or RPUD. The zoning ordinance states that no property within 250 feet of the OHWL of a protected water is to be rezoned to RPUD (see zoning code section 6.12.3160[(1)]); Lake Classen is classified as a Protected Water. If the Planning Commission and Council support the project, some modifications to the zoning ordinance will be necessary, through either the creation of a new zoning district or the modification of an existing district. The Planning Commission should provide guidance as to its appetite for necessary modifications.

The City Zoning has a Planned Unit Development or PUD zoning district, which is applicable for this development based on its location. The site is located on Wayzata Boulevard ("Old Highway 12"), which is one of the only areas where PUD developments are permitted. The City Code stipulates that the proposed PUD development should coordinate the needs of the proposed development and the surrounding uses with the conservation of woodlands and wetlands, the protection of health, safety, and welfare of the community, and the residents of the PUD

There are zoning options for the proposed developer to explore for zoning districts, whether an RPUD or PUD district. Leniency may be requested depending on the scale and location of the improvements.

**Public Comments**
To date, no public comments have been received. The applicant held a neighborhood meeting on November 5, 2025. The applicant has submitted supporting documentation from this meeting. A sketch plan is not a public hearing, but the Commission may receive and consider public comments during the public meeting.

**Issues for Consideration**
1. Does the Planning Commission support expansion of the MUSA boundary to include the subject properties?
2. Does the Planning Commission support the expansion of urban densities into the subject property, and if so, is the proposed Urban Low density of 3.1 units/acre acceptable given the transition to 3.5 units/acre by 2028?
3. The proposed conservation easement must be owned and maintained by a governing agency. This is critical for the site to provide an estimated density of 3.1 units per acre (26 units/ 8.5 acres), meeting the required density of 3 units per acre. The Planning Commission should ask the applicant for additional testimony regarding this requirement and provide feedback on city ownership and maintenance of the development's conservation area.
4. Does the Planning Commission support the modification of the zoning ordinance to facilitate the proposed development?
5. Are there any other issues or concerns with this application?

**Staff Recommendation**
The Planning Commission should review the Issues for Consideration and provide non-binding feedback to the applicant.

# Land Use Application Summary

**Application Date:** 09/17/2025

**Address:** 3220 Wayzata Boulevard West
Orono, MN 55356

**Parcel Number:** 3211823110001

**Land Use Number:** LA25-000044

**Application Submitted By:** Agent on behalf of property owner

**Owner:**
**Name:** BARBARA LUPIENT
**Address:** C/O LUPIENT AUTOMOTIVE GRP 7100 WAYZATA BLVD #200

**Applicant:**
**Name:** Mike Waldo
**Company:** Ron Clark Construction
**Address:** 7500 W 78th Str
Edina, MN 55439

**Contact Information:**
**Associated Contact:**
**Associated Contact:**
**Associated Contact:**
**Associated Contact:**

**Project Description:** 26 Lot Detached Villa Single Family neigborhood

**Land Use Application Type:**
- Amendmend Application ☐
- Appeal of Admin Decision ☐
- Concept Application ☑
- Conditional Use Permit ☐
- Site Plan Application ☐
- Subdivision Application ☐
- Subdivision Exception ☐
- Vacation Application ☐
- Variance Application ☐

**Applicant Signature:**

RonClark
Construction & Design

7500 West 78th Street Edina, MN 55439
www.ronclark.com

Friday, September 19, 2025

Laura Oakden
Community Development Director
City of Orono
2750 Kelley Parkway, Orono, MN 55356

RE: 3200 & 3220 Wayzata Boulevard Site

**Ron Clark Construction** is proposing a 26-unit Detached Villa home neighborhood on the existing property located at 3200 & 3220 Wayzata Boulevard. This property has been owned by one family for over 40 years. They have been excellent stewards of the property during that time and would now like to see it take its next step by providing a benefit to the city through the addition of high-quality new housing stock that will allow new generations to enjoy the land.

The proposed single-family detached villa neighborhood will feature twenty-six (26) one-story villa homes. Each home will have a combination of 2 and 3 car garages and have additional parking for two guest cars in each driveway. Additional guest parking will be available along the street.

The overall goal is to work in balance with the existing natural elements of the site, while maintaining compliance with Met Council density requirements, adding a new housing style, and creating a small neighborhood that enhances the city. The one-level design is in high demand among existing Orono residents seeking a "lifestyle" option while remaining in Orono. This also makes their existing homes available to families looking to raise their children while attending Orono schools.

We believe this represents the best use for the site by creating new high-quality empty-nester housing, improving water quality flowing into adjacent Lake Clauson and the Minnehaha Creek Watershed District, ensuring single-story homes minimize impact to existing views for neighbors across the lake, creating value for the existing area, helping bring city utilities to the area to assist other properties along Wayzata Boulevard, and delivering a substantial increase to the city's tax base.

While other potential uses exist for this site either now or in the future, we believe this villa home proposal is most consistent with city goals relating to housing quality, quality of life, and maintaining a lower-density feel as a buffer between the higher density to the south and to Classen Lake and the larger lots to the north—all while providing residents with a highly desired housing option that allows them to remain in Orono.

# Planning

The proposed development plan features twenty-six (26) single-family villa homes located on a new private road with two access points onto Wayzata Boulevard. The goal with any site plan is

to integrate the homes with the surrounding area. The topographical survey shows the land is high in the center where it meets Wayzata Boulevard and gently slopes toward the lake in each direction. Our design allows the road to flow along the middle elevation of the site and naturally creates walkout single-story homes on the lake side. These homes will be a minimum of 150 feet back from the OHWL (ordinary high water level) of the lake, and we are proposing a 100-foot conservation easement to preserve the healthy trees in the first 100 feet from the lake edge.

As shown in the 3D renderings created from our tree and topo survey, the scale of our single-level ranch-style homes places the structure and roofline at or below the existing tree canopy. The 3D perspective view from the lake side demonstrates minimal change in neighbors' views across the lake when compared to other development options for this site. We have discussed with staff the creation of a conservation area along most of the 100-foot buffer area along the lake that will be managed by the Homeowners Association with city oversight. This provides long-term preservation and maintenance of the natural area and healthy trees along the lake edge.

# City Process and Steps Involved

City review and approval steps needed to develop this new neighborhood:

1. Sketch Plat Review with comments from Staff, Neighbors, Planning Commission, and City Council
2. Expansion of the Municipal Services area
3. Amend the Comprehensive Plan for the site to Urban Low Density Residential (3-8 units/acre)
4. Rezone property to PRD (Planned Residential District) to facilitate the detached villa-style neighborhood along with preservation of natural open spaces
5. Preliminary Plat and creation of conservation area along lake

The first step involves applying for a Sketch Plat Review, allowing us to receive comments from Staff, Neighbors, Planning Commission, and City Council. Based on this feedback, we will update our design and prepare a formal land use submittal.

The second step involves bringing this site into the municipal services area. This change makes sense from an environmental perspective by avoiding additional private well and septic systems on the site. From the city's perspective, it adds a home style the city needs and utilizes public infrastructure that will be built or already exists along Wayzata Boulevard. The site to the south has been planned for higher-density residential development and will have city sewer and water extended to it, with those pipes directly adjacent to our site. We will work with the city and neighboring property owners to coordinate extending city water and sewer to both sites.

The next step, once the city supports extending urban services to the site, involves amending the Comprehensive Plan to change the Land Use Designation to Urban Low Density Residential (3-8 units/acre). The purpose of this designation is to enhance neighborhood appearance through preservation of natural open spaces, counteract the effects of urban congestion and monotony,

provide cohesive structure to neighborhood design, offer recreation opportunities close to home, and improve the general welfare of city residents. This zoning allows us to create a beautiful villa home neighborhood and establish a large conservation easement along the lake.

The next step is to update the zoning for the property to PRD (Planned Residential District). This zoning will allow the creation of the Detached Villa neighborhood along with the large conservation easement. We will continue to work with staff to determine the setbacks and other standards needed to achieve the site plan shown. We currently are proposing front yard setback of 25 feet, side yard setbacks of 7 1/2 feet on each side and a rear yard setback of 25 feet.

The final step is the Preliminary Plat and Conservation Easement, this part of the final review and approval process that defines in greater detail all items discussed above. We are working to achieve a 3.1 units/acre density for the developable land. The site is approximately 24 acres with 11 acres of lake, 4.5 acres of right-of-way and conservation area, leaving 8.5 acres developable (26 ÷ 8.5 = 3.1 units/acre).

Steps 2-5 will be reviewed simultaneously as part of a single submittal so each step remains consistent with prior steps, allowing comprehensive evaluation of all elements together.

# Housing and Architecture

The single-family villa homes will be designed to integrate with the existing neighborhood while adding a new housing style not currently available in the neighborhood and with limited availability within the city. We are planning a mix of home designs ranging between 2,800 and 3,500 square feet. The home designs will offer two-car-plus garages, sunrooms, porches, and decks with a variety of floor plans and exterior styles. While the overall architecture is still in development, our other villa neighborhoods provide insight into the quality of homes and variety of exterior designs we deliver. We have included pictures of homes and site plans from other similar neighborhoods in our submittal package. We welcome everyone to tour our current model homes:  at Greenway Villa in Golden Valley, Ridgewood Ponds in Minnetonka, Pike Lake Landing in Prior Lake & Lotus Villas in Eden Prairie, visit www.ronclark.com for more information and directions. We are committed to energy-efficient building practices as part of the Minnesota Green Path Builder program; the program has increased requirements that create homes that are 50% more energy efficient than current Minnesota energy code standards.

# Site Design

The lots are designed on the 24-acre property to preserve the majority of existing trees adjacent to the lake and within the proposed conservation easement area, taking advantage of the beautiful lake and wooded views around the site boundaries.

We have investigated and documented the wetlands and existing trees on the site. The watershed has approved the wetland delineation and lake edge determination with the DNR. The tree and

topographical survey we completed was used to create the site plan, minimize grading, and create simple, attractive water quality management areas to enhance water quality. Additionally, connecting to city sewer and water will eliminate the need for six new large underground septic systems and private wells that would be required if the site were developed under its current zoning. We will continue working with city staff and watershed staff to create a high-quality, environmentally sensitive neighborhood for Orono.

## Stormwater Management

Stormwater from the site will be collected and routed to a new biofiltration basin created on-site as both a functional and aesthetic amenity to store and filter water into the soils below. The system will be designed to meet requirements of both the City and the Watershed District.

## Homeowners Association

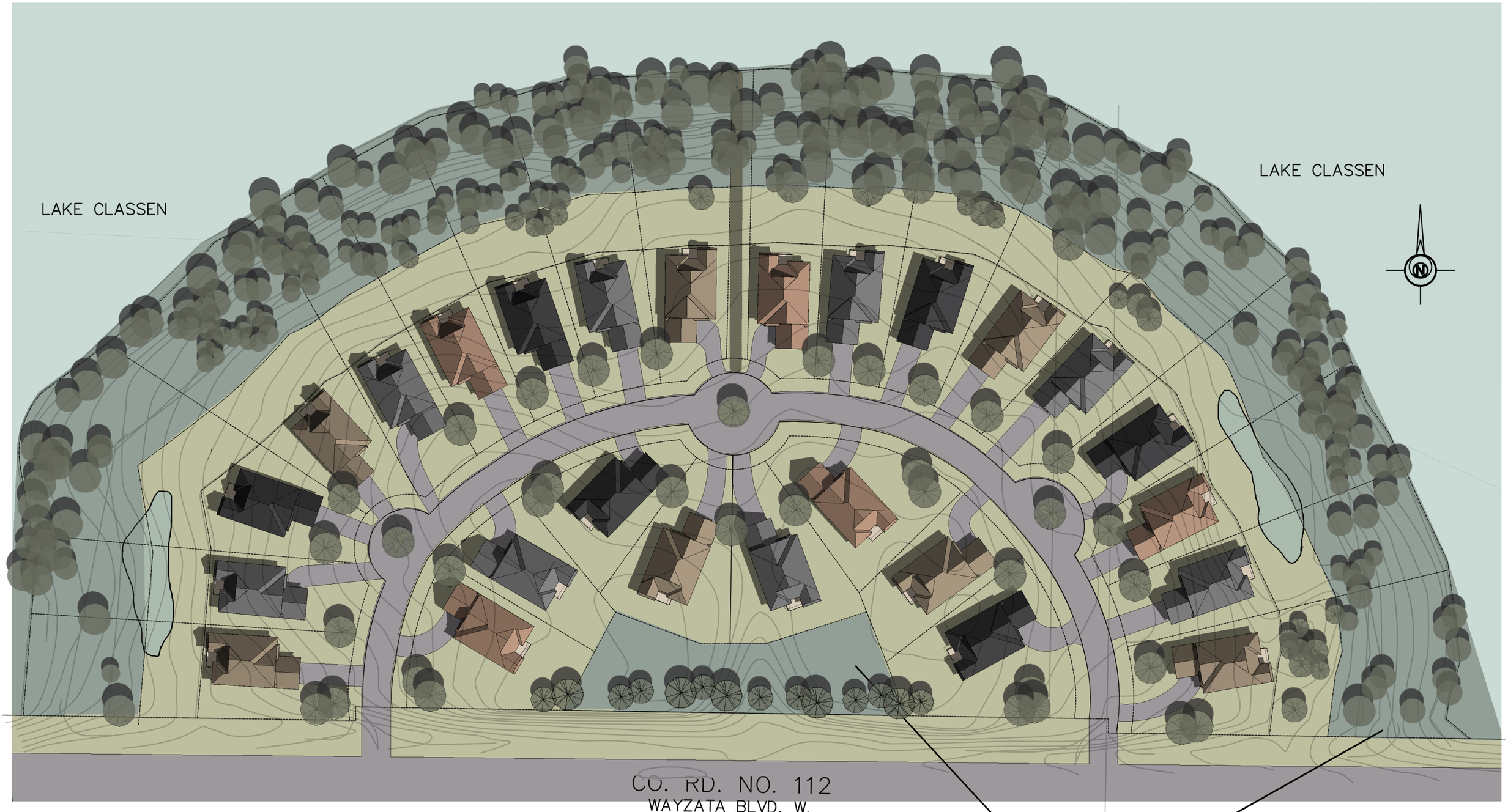
A Homeowners Association will be established for the neighborhood. The association will maintain each home's lawn, landscaping and snow removal, along with maintaining all common area landscaping. This allows control and proper use of street and lawn products that will not affect the lake. The association will also provide funding to maintain and manage the proposed conservation area along the lake edge.

## Development Team

**Project Architect & Site Planner** — Whitten Associates, Inc. — Tim Whitten and Heather Maanum

**Project Consultant** — Webber Architects and Planners — Neil Webber

**Developer** — Ron Clark Construction — Mike Waldo & Landon Wittenberg




# SITE PLAN

1"=80'-0"

9.17.25

LAKE CLASSEN

LAKE CLASSEN

CO. RD. NO. 112
WAYZATA BLVD. W.

CONSERVATION AREA

9.17.25

WHITTEN ASSOCIATES, INC. | LUPIENT SITE, ORONO, MN | RON CLARK CONSTRUCTION




**Proposed DNR OHWL for Site Design = 974.5-ft**

N

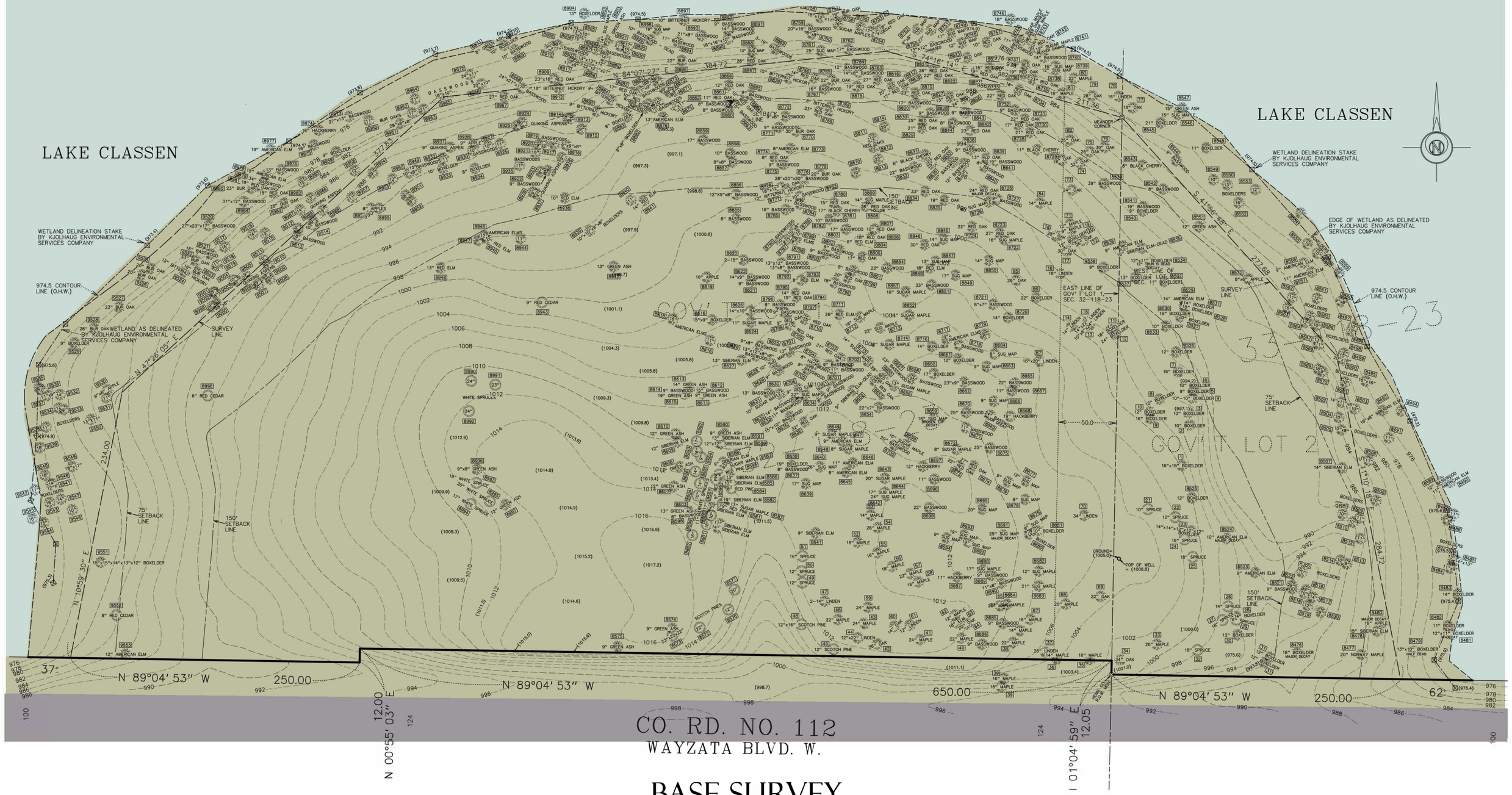
0 250 Feet

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

Source: MNGEO Spatial Commons, USFWS

**3220 Wayzata Blvd W (KES 2022-188)**
**Orono, Minnesota**

Note: Boundaries indicated on this figure are approximate and do not constitute an official survey product.

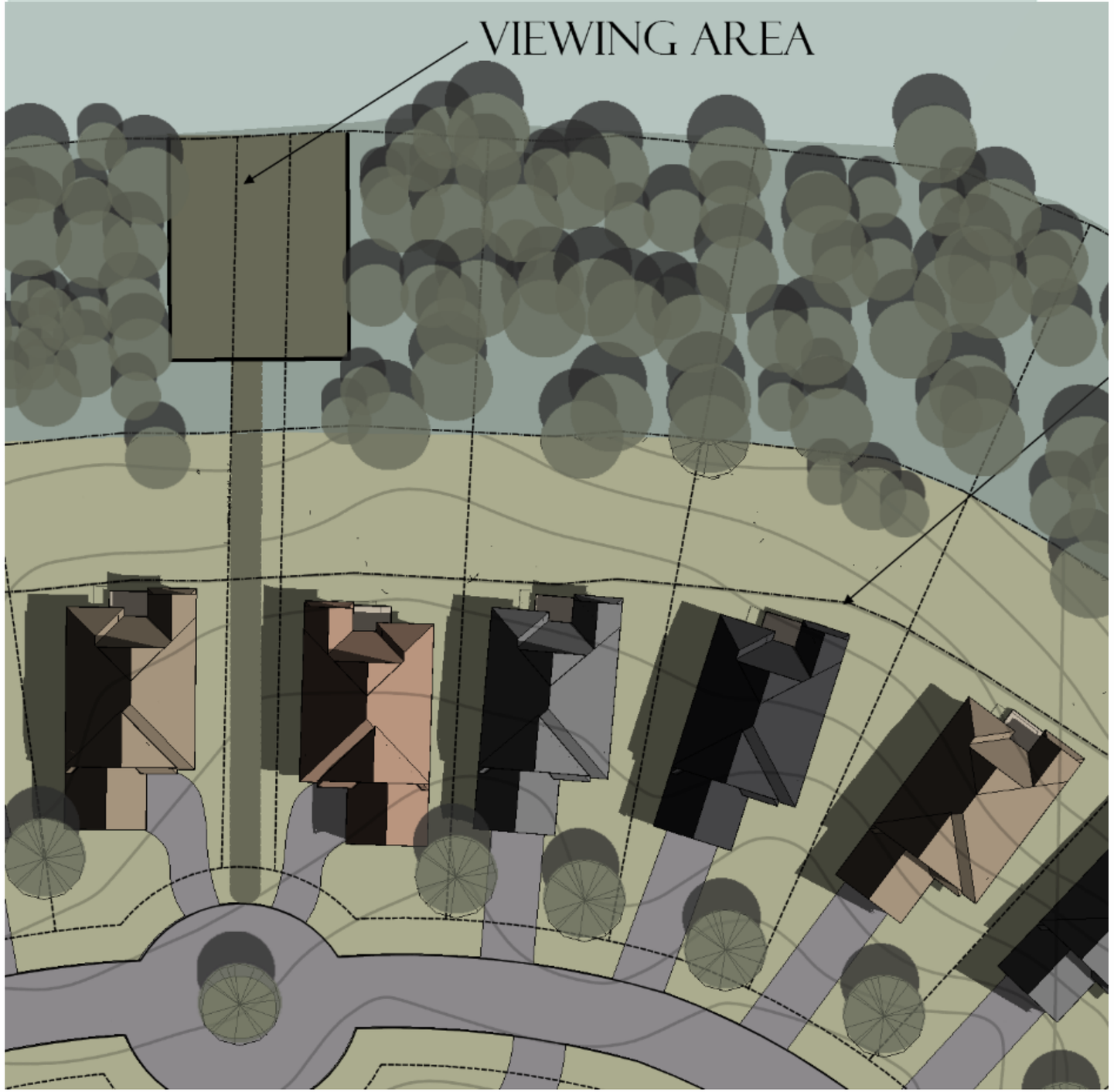



# BASE SURVEY

**SCALE: 1" = 80'-0"**

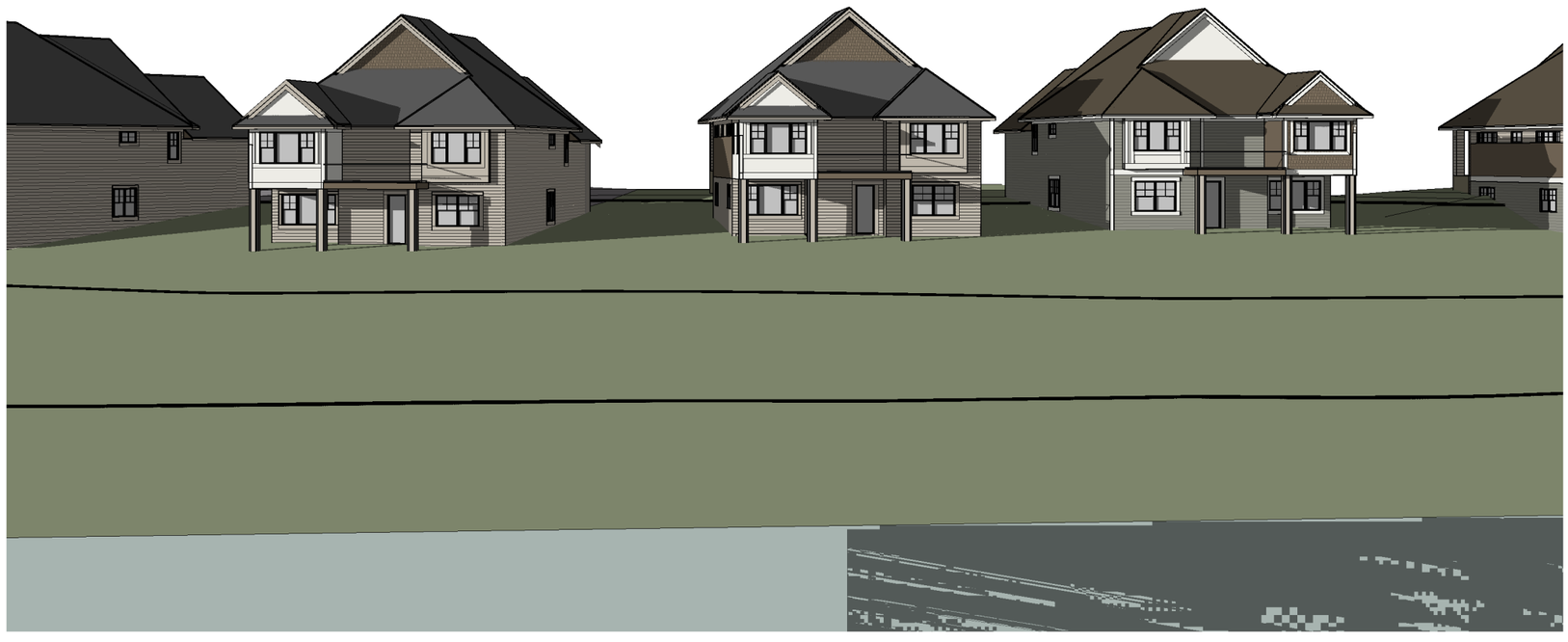
9.18.25

WHITTEN ASSOCIATES, INC. | LUPIENT SITE, ORONO, MN | RON CLARK CONSTRUCTION




# ENLARGED SITE PLAN

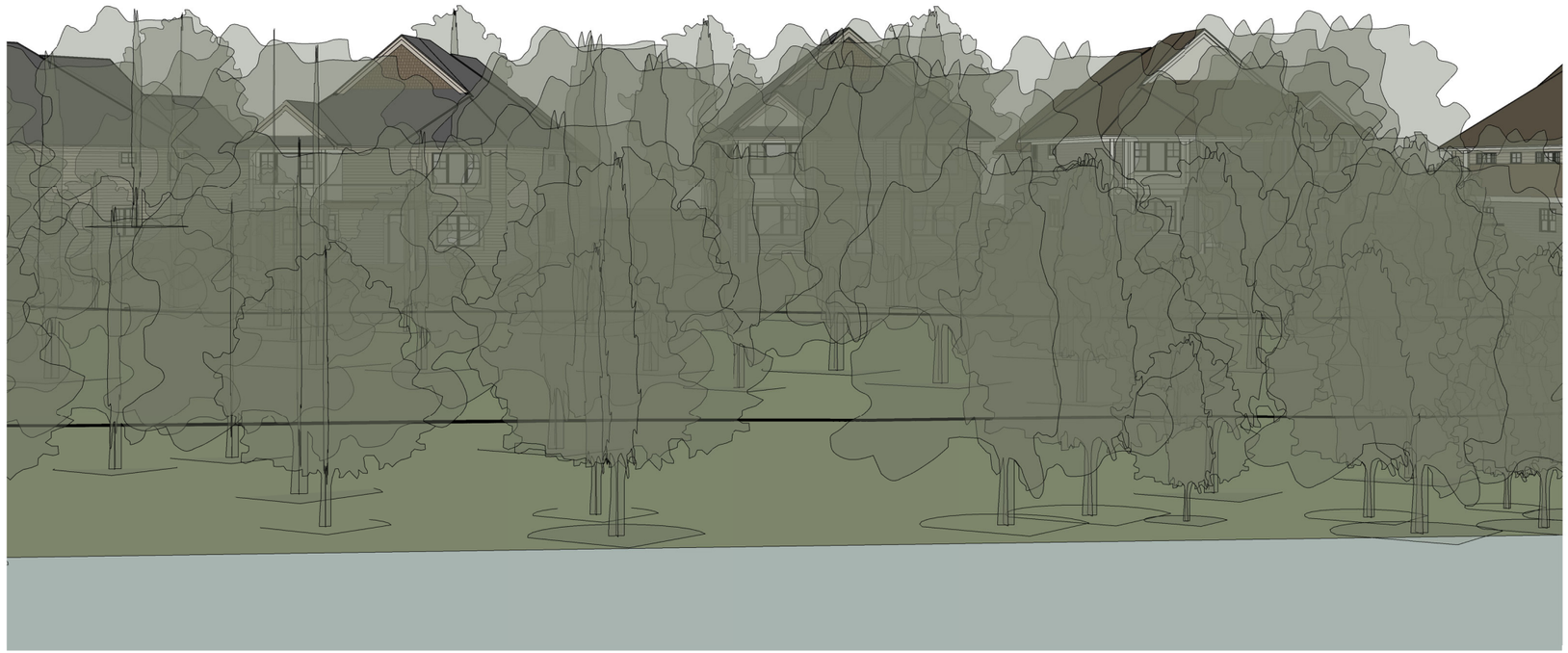
9.18.25



# PERSPECTIVE VIEW FROM NE

NO SCALE

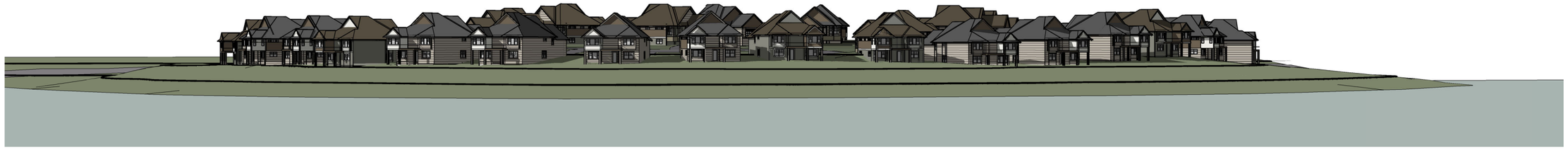
9.18.25



# PERSPECTIVE VIEW FROM NE

NO SCALE

9.18.25



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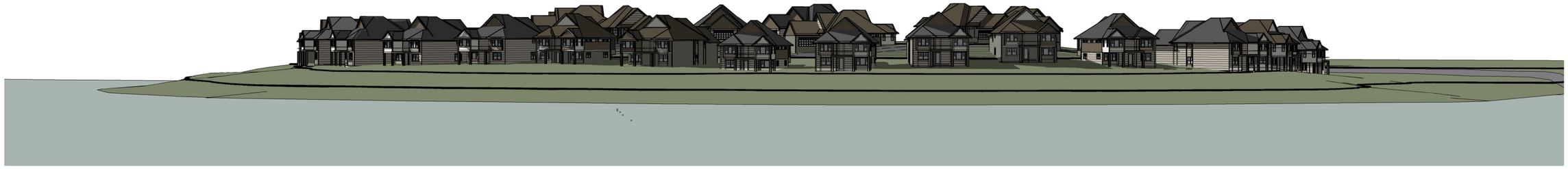
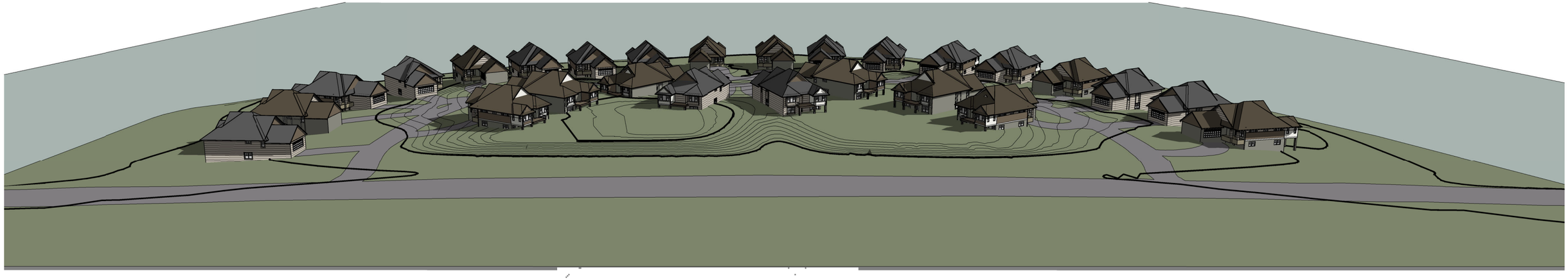


# PERSPECTIVE VIEW FROM NW

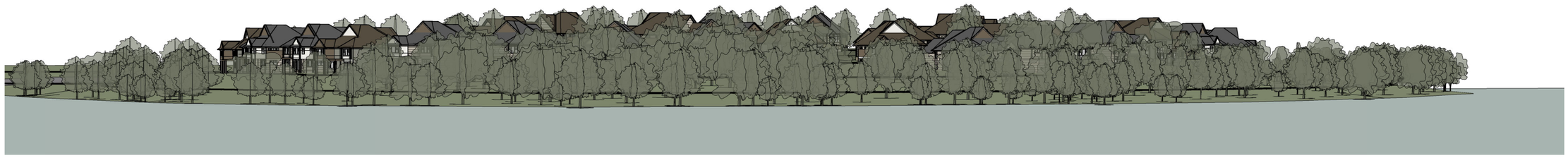
NO SCALE



# PERSPECTIVE VIEW FROM WAYZATA BLVD.

NO SCALE

9.18.25



# PERSPECTIVE VIEW FROM NE

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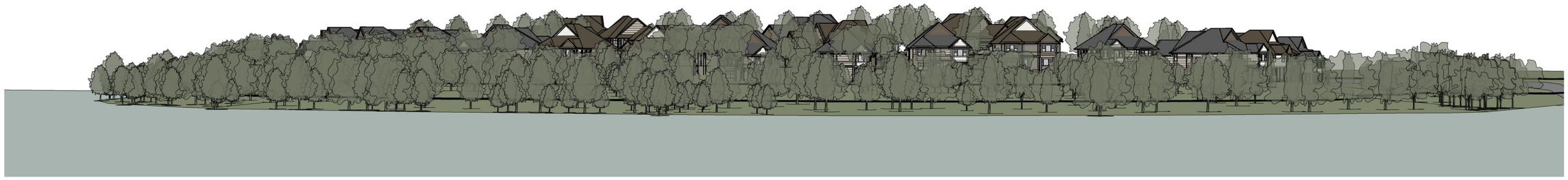
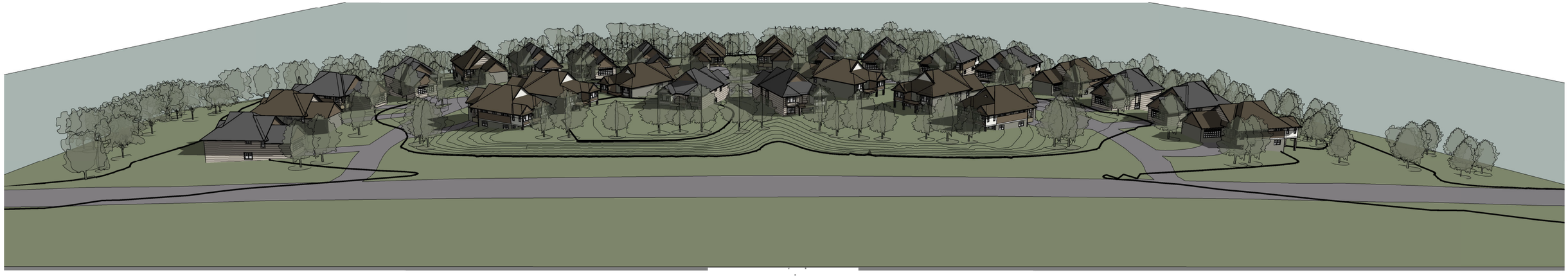


# PERSPECTIVE VIEW FROM NW

NO SCALE



# PERSPECTIVE VIEW FROM WAYZATA BLVD.

NO SCALE

9.18.25

MIDWEST NATURAL RESOURCES

May 8, 2023

Mr. Mike Waldo
Ron Clark Construction
7500 West 78th St.
Edina, MN 55439

RE: Tree Assessment Lake Classen Site – Orono, MN

Mr. Waldo,

Midwest Natural Resources, Inc. (MNR) was contracted by Ron Clark Construction to assess and document the tree cover type and general condition of the wooded areas within the Lake Classen site located north of Wayzata Blvd. in Orono, Minnesota. This memo details the current vegetative tree cover of the plant communities encountered within the property as well as providing general recommendations for site clearing and woodland/forest management following grading activities.

The Lake Classen site is a 14-acre property with two vacant residences and out-buildings, land covered in deciduous woodland/forest, planted evergreen tree areas, an apple orchard area, areas of open grassland with scattered trees, and part of the wetland fringe to Lake Classen. Surrounding much of the site to the east, west, and north is a large wetland complex associated with Lake Classen. County Road 112 (Wayzata Blvd.) borders the site along its southern boundary.

Included with this memo is **Figure 1** that depicts the location and extent of each plant community that was mapped and assessed within the site. In general, a good portion of the wooded areas on-site include a remnant Mesic Oak Forest with a similar sized area covered by deciduous woodland dominated by box-elder. The planted evergreen tree areas and the old apple orchard make up a considerably smaller area of the overall tree cover across the site.

The following is a detailed description of each treed community mapped within the site. Four different wooded areas are described as occurring within the site's boundary and include: altered/non-native deciduous woodland, mesic oak-dominated woodland/forest, planted evergreen tree areas, and old apple orchard area.

## Altered/Non-Native Deciduous Woodland

**Approximate Area = 5.0 acres**

Mapped within the site are three separate areas that would be classified as Altered/Non-Native Deciduous Woodland. Altered/Non-Native Deciduous Woodland are not dominated by oaks, aspens, birches, sugar maple, or basswoods. These plant communities are typically a result of past land disturbance such as pasturing or land alteration. Typical tree species that make up the canopy of this type of community includes: box elder, green ash, and cottonwood. Elm also associates with this community as well as the occasional hackberry, aspen, oak, and basswood.

For the most part the altered/non-native communities within the Lake Classen site are dominated primarily by box elder with green ash, quaking aspen, American elm, Siberian elm, red cedar, and

basswood. In general, within these areas are moderate to high levels of the non-native, invasive shrub common buckthorn. Buckthorn within the eastern part of the site is very dense with little overstory tree regeneration being observed.

**Trees inventoried within the Altered/Non-Native Deciduous Woodland areas**

- Box Elder (*Acer negundo*)
- Green Ash (*Fraxinus pennsylvanica*)
- Quaking Aspen (*Populus tremuloides*)
- Red Cedar (*Juniperus virginiana*)
- American Elm (*Ulmus americana*)
- Siberian Elm (*Ulmus pumila*)
- Basswood (*Tilia americana*)

**Management Recommendations**

Within these altered/non-native woodland areas, consideration should be made to manage remaining green ash trees that will be saved following construction of the proposed development (areas not to be graded). With emerald ash borer (EAB) being identified on-site, it would be recommended to remove all live green ash trees within any area that is proposed not to be graded. Removal of healthy ash trees is a common method of sanitation utilized by cities across MN and in the Midwest where EAB is a problem. Removal of these trees helps minimize the spread of this insect to adjacent wooded areas that may be free of EAB. Although this may seem like an extreme measure to take, removing green ash trees that appear healthy now will minimize the obligation of the future homeowner's association who will at some point have to deal with the removal of dead and/or dying green ash trees if they were to remain.

The unwanted burden and cost placed on the future homeowners to remove dead and dying ash is not reasonable when actions can be taken prior to construction of new homes and installation of services like roads and utilities. If ash trees are left standing after the construction of the development, their removal will likely be considerably more costly due to obstacles (homes) now being in the way. Removing the trees during the land clearing stage of development is a more cost-effective and efficient method of dealing with EAB and it will also benefit the future HOA of not having to bear the unnecessary costs of ash removals.

For areas of this plant community that will remain after land clearing takes place it is recommended to remove any dead or dying trees that were identified in the individual tree inventory completed by MNR. Any other tree within this community that may be considered a hazard should be either pruned to correct the structural issue or should be removed altogether depending on its overall condition.

In addition to ash management within this community, the removal of the invasive, non-native shrub common buckthorn is also recommended. Areas of buckthorn that was observed in this community ranged from moderate to heavily infested. In order to manage this invasive species, efforts should focus on the removal and herbicide treatment of cut buckthorn shrubs. It would be recommended to work with a professional restoration company to perform this type of woodland restoration work. This task is not a one-time effort and any work that would be accomplished during land clearing should be relayed to the future HOA so follow-up treatments can be implemented for several years to follow. By beginning to manage this invasive species on-site, it will improve the ecological condition of this community and will also help reduce the off-site

spread of the plant by birds who disperse the seed when eating the berries and depositing it to surrounding wooded areas.

## Mesic Oak-Dominated Woodland/Forest

**Approximate Area = 4.5 acres**

Mapped within the site is one contiguous wooded area that would be classified as a Mesic Oak-Dominated woodland/forest that is succeeding to Maple-Basswood Forest. This native plant community is a remnant of a larger forested area that likely covered more of the property prior to it being utilized as a residence with past land-altering activities. This native plant community is dominated by large, mature red oak, sugar maple, and basswood trees with several other deciduous trees occurring throughout. It is noted that the majority of this mapped area from Wayzata Blvd. north to the property line is where red oak, sugar maple and basswood are most common. Large, mature bur oak trees are more common along the steep slope at the north property line and are less common within the red oak-maple-basswood area. Unlike the altered/non-native communities that are mapped on-site, the mesic oak woodland/forest has considerably less buckthorn present at the shrub layer. However, areas along the steep slopes do have some level of buckthorn infestation in isolated pockets but are not even close to the levels encountered in the altered/non-native woodlands.

**Management Recommendations**

For areas of this native plant community that will remain after land clearing takes place it is recommended to remove any dead or dying trees that were identified in the individual tree inventory completed by MNR. In addition to these trees, any other tree that may be considered a hazard should be either pruned to correct the structural issue or should be removed altogether depending on its overall condition. Any green ash trees that are located within this community should also be removed for the same reasons stated earlier in this memo.

Although there is much less common buckthorn present within this community compared to the altered/non-native woodland on-site, it would be recommended to also manage this invasive shrub species within the areas that will remain after land clearing. Since there is less buckthorn within this community, managing this invasive species will be less intensive and efforts will likely yield better long-term results. As was mentioned before, this task is not a one-time effort and any work that would be accomplished during land clearing within this plant community should be relayed to the future HOA so follow-up treatments can be implemented for several years to follow.

**Trees inventoried within the Mesic Oak-Dominated Woodland/Forest area**

- Red Oak, (*Quercus rubra*)
- Bur Oak (*Quercus macrocarpa*)
- Sugar Maple (*Acer saccharum*)
- Basswood (*Tilia americana*)
- Hackberry (Celtis occidentalis)
- Bitternut Hickory (*Carya cordiformis*)
- Quaking Aspen (*Populus tremuloides*)
- Black Cherry (*Prunus serotina*)
- Green Ash (*Fraxinus pennsylvanica*)

## Planted Evergreen Tree Areas

**Approximate Area = 0.35 acre**

Mapped within the site are three separate areas of planted evergreen trees. These areas are located west of the vacant home in the middle of the site and occur as small groupings and clusters as well as an area that was planted in rows. It is highly likely these trees were planted sometime in the past by a previous land owner since no other evergreen trees are found within the deciduous woodlands/forest except for the very occasional red cedar which has volunteered around the site.

Since this part of the site where the planted evergreens trees are located is proposed to be entirely graded, no management recommendations are needed for these areas.

**Trees inventoried within the Planted Evergreen areas**

- White Spruce, (*Picea glauca*)
- Red Pine (*Pinus resinosa*)
- Scotch Pine (*Pinus sylvestris*)

## Apple Orchard Area

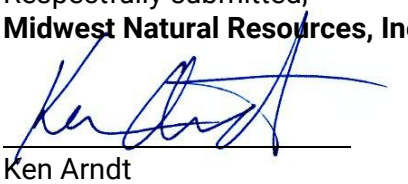
**Approximate Area = 1.5 acres**

Mapped within the site is an old apple orchard area with mature, overgrown apple trees planted in rows within the western half of the site. This area consists of occasional apple trees with unmaintained grasses growing at the herbaceous layer as well as scattered volunteer deciduous trees (ash and elm mainly) throughout. Sometime in the past, a previous land owner established the apple orchard but now many of these trees are in a state of decline and would be considered overmature. In many of the apple trees it is common to observe the symptoms of major internal decay as well as crown dieback.

Since this part of the site where the old apple orchard is located is proposed to be entirely graded, no management recommendations are needed for these areas.

In conclusion, MNR will be able to assist you during the land clearing stage of development to implement any EAB or common buckthorn management efforts that you may consider. We will also be able to assist you during land clearing activities in identifying hazardous trees, trees that may need structural pruning, or trees that may need to be pruned or removed in order to maintain safe work access. If you have any questions regarding the information provided in this memo, feel free to contact me.

Respectfully submitted,
**Midwest Natural Resources, Inc**.



Ken Arndt
Sr. Forest Ecologist
Certified Arborist MN-4033a




Photo Source: 2018 color Hennepin 3 in

0 100 200 Feet

**Tree Assessment Areas**
**Ron Clark Construction**
**Lake Classen Site**
**Orono, MN**

**Figure 1**

# 2040 Comprehensive Plan

Orono, MN

# Defined Urban and Rural Areas

November 2018

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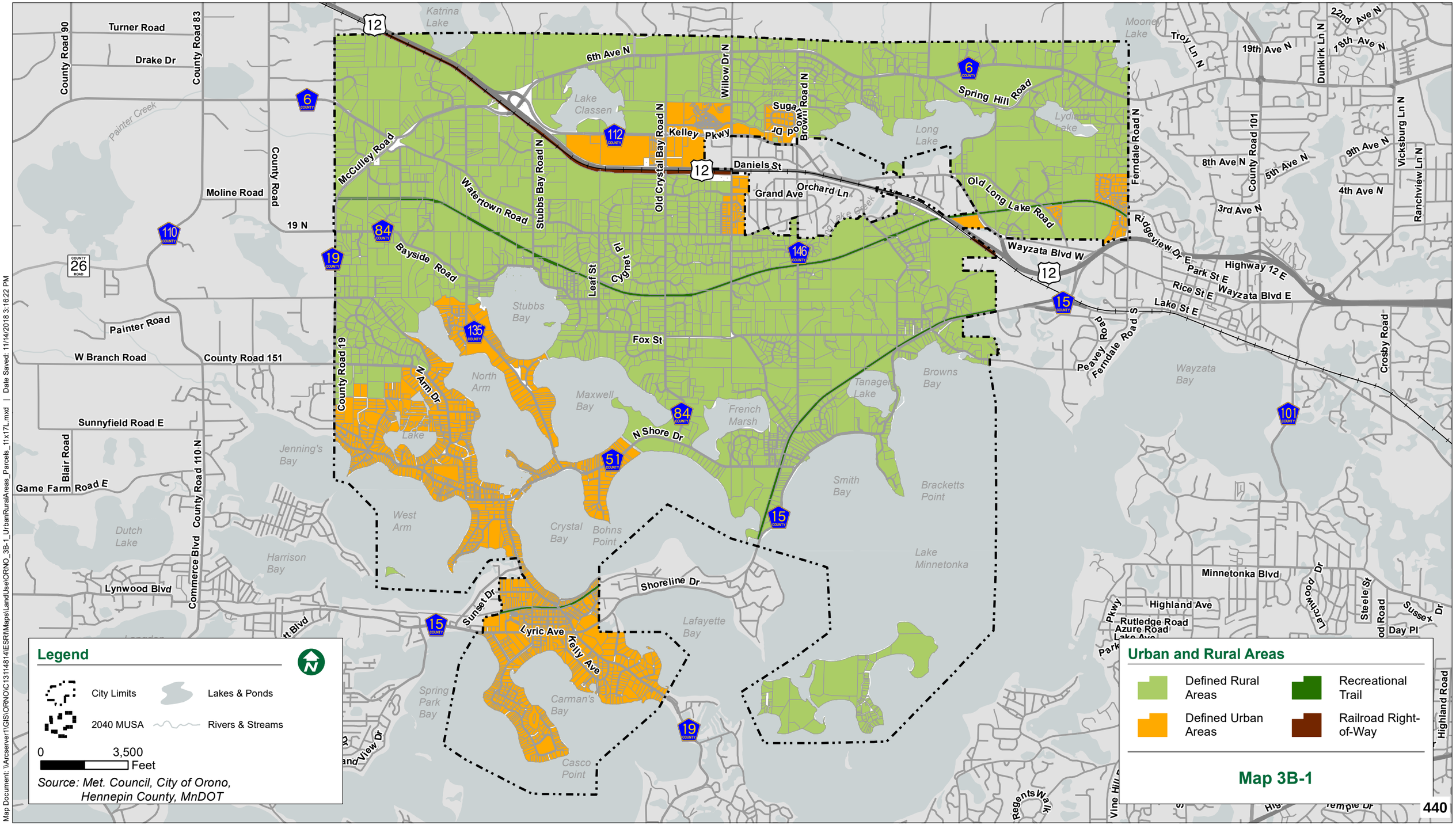



## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

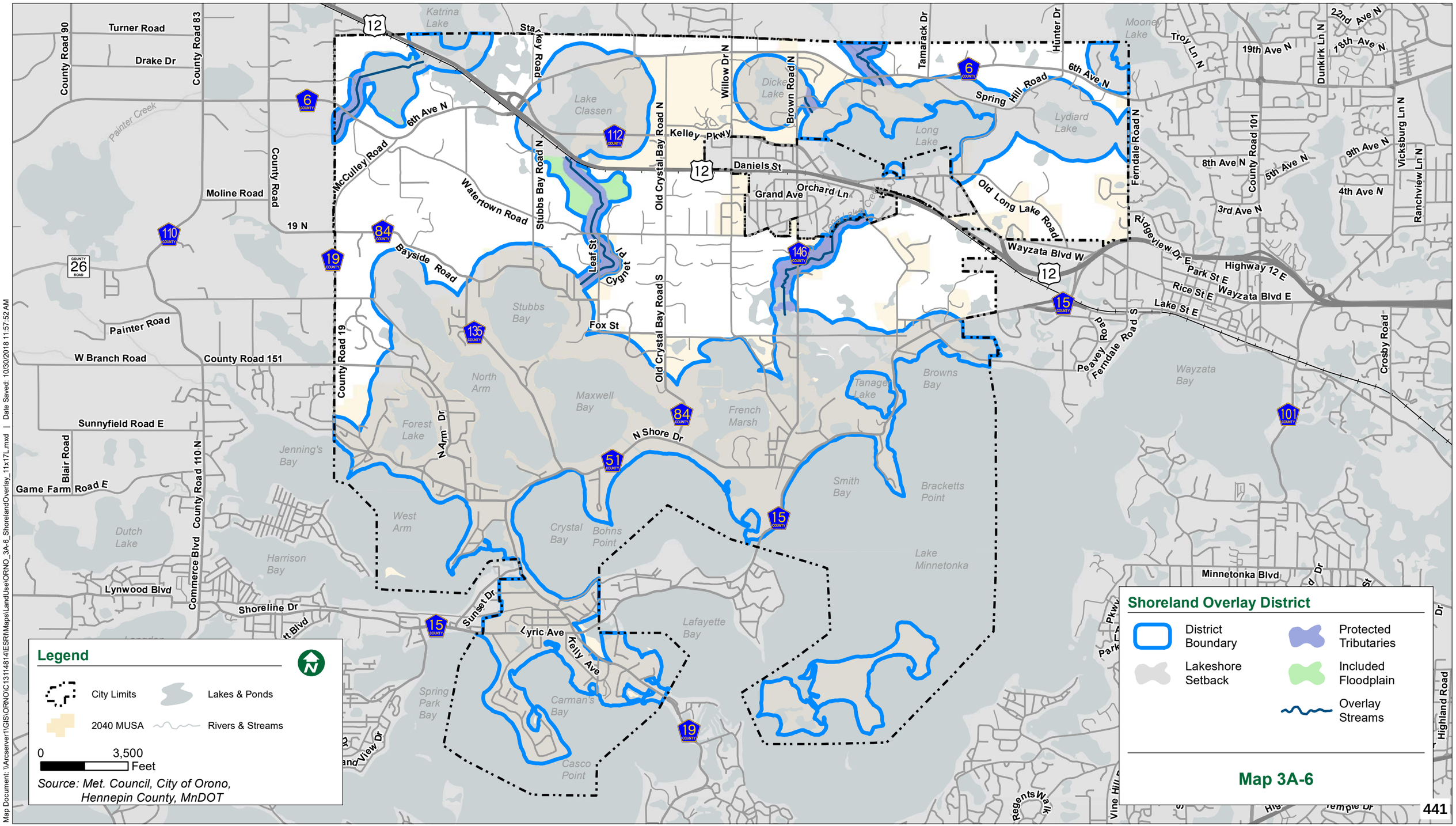
## Urban and Rural Areas

- Defined Rural Areas
- Defined Urban Areas
- Recreational Trail
- Railroad Right-of-Way

**Map 3B-1**



Map Document: \\Arcserver1\GIS\ORNO\C13114814\ESRI\Maps\LandUse\ORNO_3B-1_UrbanRuralAreas_Parcels_11x17L.mxd | Date Saved: 11/14/2018 3:16:22 PM




## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Shoreland Overlay District

- District Boundary
- Lakeshore Setback
- Protected Tributaries
- Included Floodplain
- Overlay Streams

**Map 3A-6**



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# 2040 Comprehensive Plan

Orono, MN

# Proposed Future Land Use

August 2021

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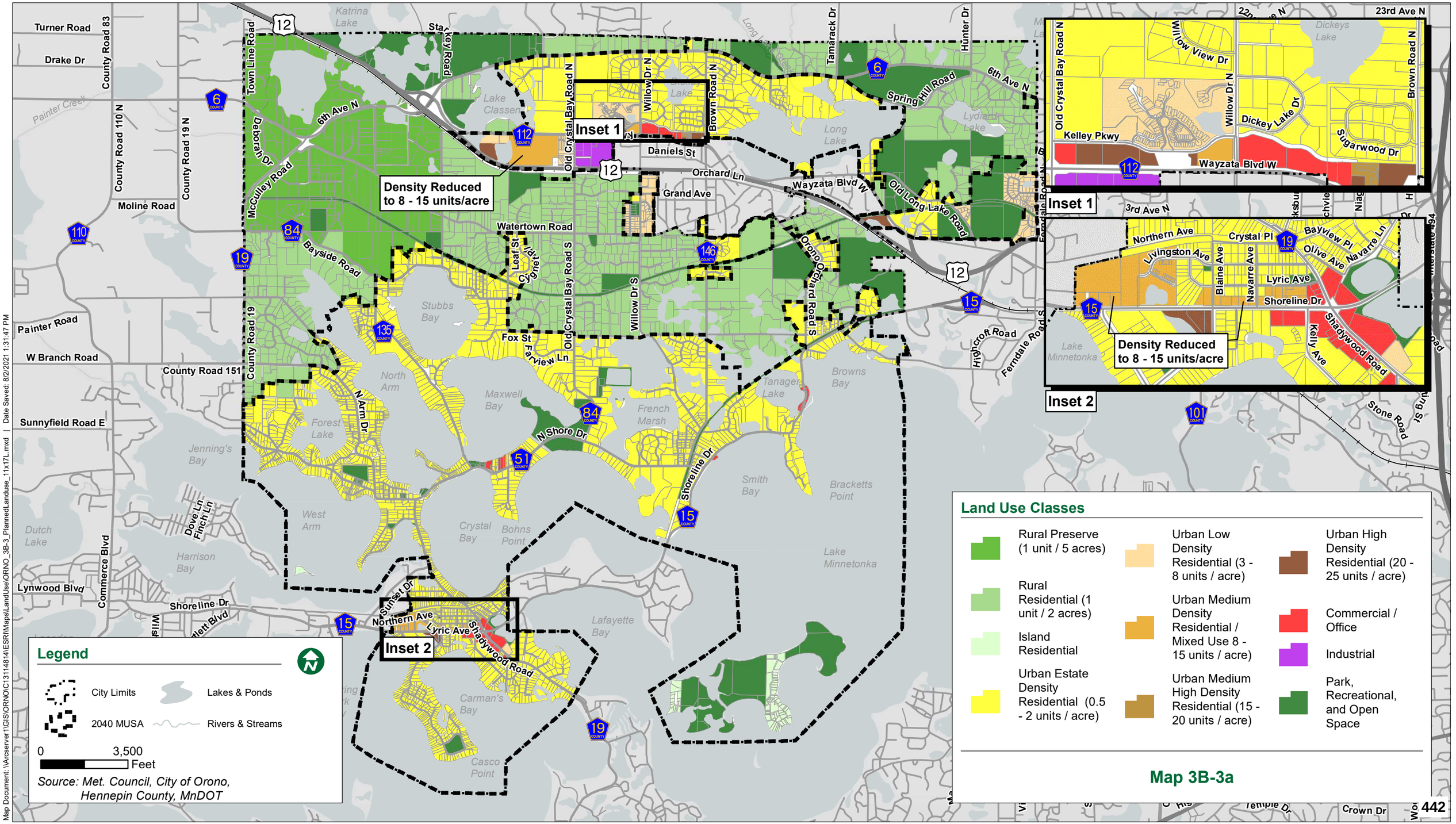


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# 2040 Comprehensive Plan

Orono, MN

## Existing Land Use

November 2018

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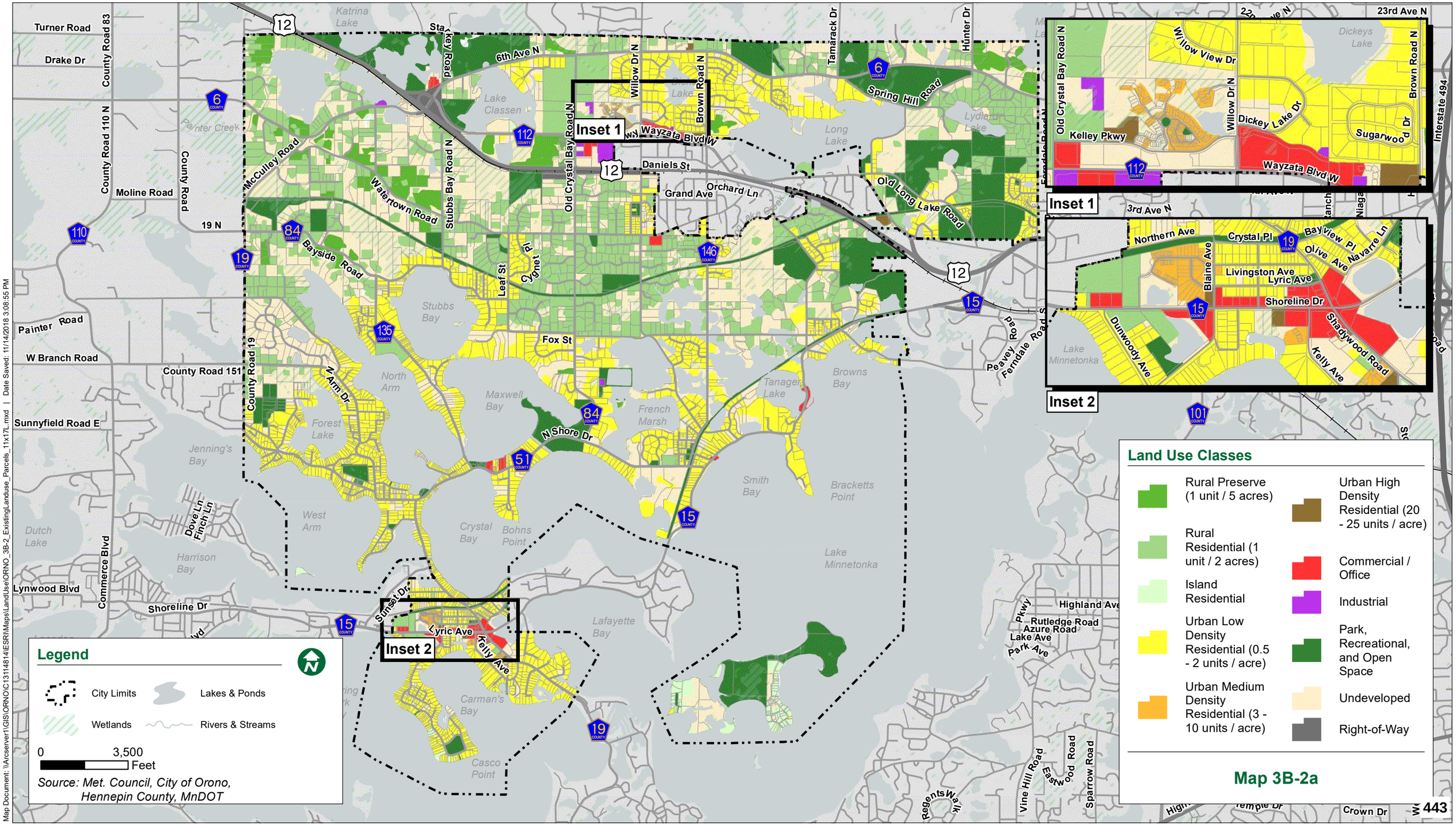


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## MUSA Expansion History

| MUSA Part | Addition Name | Lift Station Service Area | CMP Amendment / Date | | Zoning District | Acres |
|---|---|---|---|---|---|---|
| 1 | Navarre / Forest Lake / Tonkaw a | LS-59 | #1135 | 4/14/1980 | LR-1B/C, B-1 to 5 | 1,285 |
| 2 | Orono Schools & Industrial park | LS-60 | #1135 | 4/14/1980 | RR-1B, I | 64 |
| 3 | Hackberry | LS-60 | #1135 | 4/14/1980 | R-1B | 17 |
| 4 | Herrick Circle | Wayz | #1135 | 4/14/1980 | R-1A | 7 |
| 5 | Chevy Chase Ferndale Green | Wayz | #1135 | 4/14/1980 | R-1A | 47 |
| 6 | Mtka Bluffs / Orono La / W Ferndale | DSI | #1337 | 11/23/1981 | LR-1A, RR-1B | 87 |
| 7 | County Road 15 Marinas | DSI | #1337 | 11/23/1981 | LR-1A, B-2 | 4 |
| 8 | Crystal Bay | DSI | #2131 | 2/23/1987 | LR-1A, RR-1B | 44 |
| 9 | Fulmer Property* | LS-60 | #2131 | 2/23/1987 | RR-1B | 3 |
| 10 | Hw y 12 Corridor West | LS-60 | #2437 | 5/23/1988 | Various | 242 |
| 11 | Hw y 12 Corridor East | Wayz | #2437 | 5/23/1988 | RR-1B | 10 |
| 12 | North Shore / Scotch Pine | LS-59 | #3283 | 5/24/1993 | LR-1A | 119 |
| 13 | 650 Brow n Rd. N. | LS-60 | #3283 | 5/24/1993 | LR-1A | 3 |
| 14 | Fairw ay Hills Addition | Wayz | #3283 | 5/24/1993 | RR-1B | 5 |
| 15 | *Long Lake / Fleming Trail* ** | | #3283 | 5/24/1993 | | 24 |
| 16 | Stubbs Bay | LS-59 | #3153 | 8/10/1992 | LR-1A, RR-1B | 179 |
| 17 | Oono Sew er Plant Property | LS-59 | #3348 | 10/25/1993 | RR-1B | 4 |
| 18 | Nettles Property | DSI | #3348 | 10/25/1993 | LR-1A | 4 |
| 19 | North Long Lake | LS-60 | #3791 | 10/28/1996 | LR-1A | 22 |
| 20 | Long Lake Country Club | LS-60 | #3791 | 10/28/1996 | LR-1A | 23 |
| 21 | East Long Lake | LS-60 | #3791 | 10/28/1996 | LR-1A, RR-1B | 20 |
| 22 | Orono Orchards | DSI | #3791 | 10/28/1996 | RR-1B | 40 |
| 23 | Fox Ridge | LS-60 | #3791 | 10/28/1996 | RR-1B | 16 |
| 24 | Weber hills | DSI | #3791 | 10/28/1996 | RR-1B | 48 |
| 25 | Edgew ood Hills | DSI | #3791 | 10/28/1996 | RR-1B | 20 |
| 26 | Bracketts Point | DSI | #3791 | 10/28/1996 | LR-1A | 34 |
| 27 | Foxhill | DSI | #3791 | 10/28/1996 | LR-1A | 43 |
| 28 | Bayridge / Hartw ood | DSI | #3791 | 10/28/1996 | LR-1A | 28 |
| 29 | Orono Schools Hockey Arena | LS-60 | #3791 | 10/28/1996 | RR-1B | 75 |
| 30 | Dillman Property | LS-60 | #3791 | 10/28/1996 | RR-1B | 3 |
| 31 | Maw ell Bay Area | LS-59 | #4195 | 10/9/1998 | LR-1A | 165 |
| 32 | Dumas Orchard | LS-60 | #4723 | 11/13/2001 | RR-1B / RPUD | 70 |
| 33 | Lake Classen NE | LS-60 | #4723 | 11/14/2001 | RR-1B | 49 |
| 34 | East Hackberry | LS-60 | #4723 | 11/15/2001 | RR-1B / RPUD | 29 |
| 35 | Van Eeckhout (Creekside) | LS-60 | #4723 | 11/16/2001 | RR-1B PRD | 31 |
| 36 | Bluffs Extensions Hamm-Goetten | DSI | #4723 | 11/17/2001 | RR-1B | 23 |
| 37 | Tanager Lake | DSI | #4723 | 11/18/2001 | LR-1A | 82 |
| 38 | Murphy North Shore | DSI | #4723 | 11/19/2001 | LR-1A | 79 |
| 39 | Dickey Lake Shoreland | LS-60 | #4723 | 11/20/2001 | RR-1B | 145 |
| 40 | Long Lake Shoreland | LS-60 | #4723 | 11/21/2001 | LR-1A | 218 |
| 41 | St. Edw ards Church | Plym | #4723 | 11/22/2001 | RR-1B | 4 |
| 42 | French Lake Shoreland | LS-59 | #4723 | 11/23/2001 | RR-1B | 362 |
| 43 | Old Long Lake Road | Wayz | #5063 | 10/27/2003 | RR-1B | 19 |
| 45 | Myrtlew ood Road | Wayz | #5673 | 10/8/2007 | RR-1B | 30 |
| 46 | 5 & 15 Brow n Road South | LS-60 | #5959 | 9/13/2010 | RR-1B | 4 |
| 47 | 465 & 525 Leaf Street | LS-59 | #5959 | 9/13/2010 | RR-1B | 7 |
| 48 | 3060 Fox Street | LS-59 | #5959 | 9/13/2010 | RR-1B | 1 |
| 49 | 850 Wayzata Boulevard | Wayz | #5959 | 9/13/2010 | RR-1B | 6 |
| 50 | 3245 Wayzata Boulevard | LS-60 | #5959 | 9/13/2010 | RR-1B | 29 |
| **Proposed:** | | | | | | |
| 51 | 1003 Wildhurst Trail | LS-17 | | | RR-1B | 10 |

** Demolished for Highway 12 right-of-way*
*** Annexed to City of Long Lake*
*DSI = Downstream Interceptor*

**Map 4B-2**

### Legend

City Limits
2040 MUSA
Lakes & Ponds
Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

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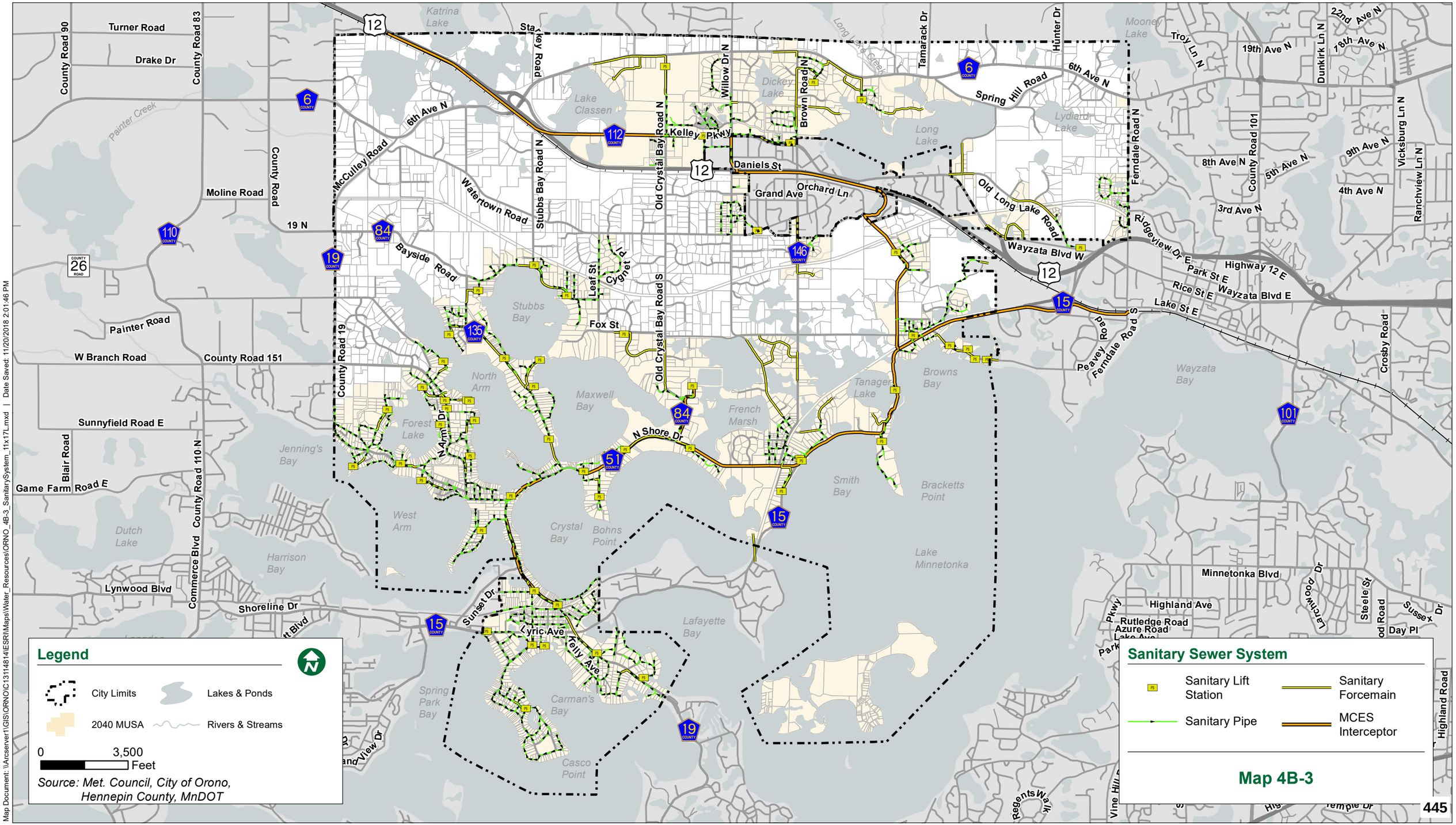


## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Sanitary Sewer System

- Sanitary Lift Station
- Sanitary Pipe
- Sanitary Forcemain
- MCES Interceptor

**Map 4B-3**



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# 2040 Comprehensive Plan

Orono, MN

## Water Service Area

November 2018

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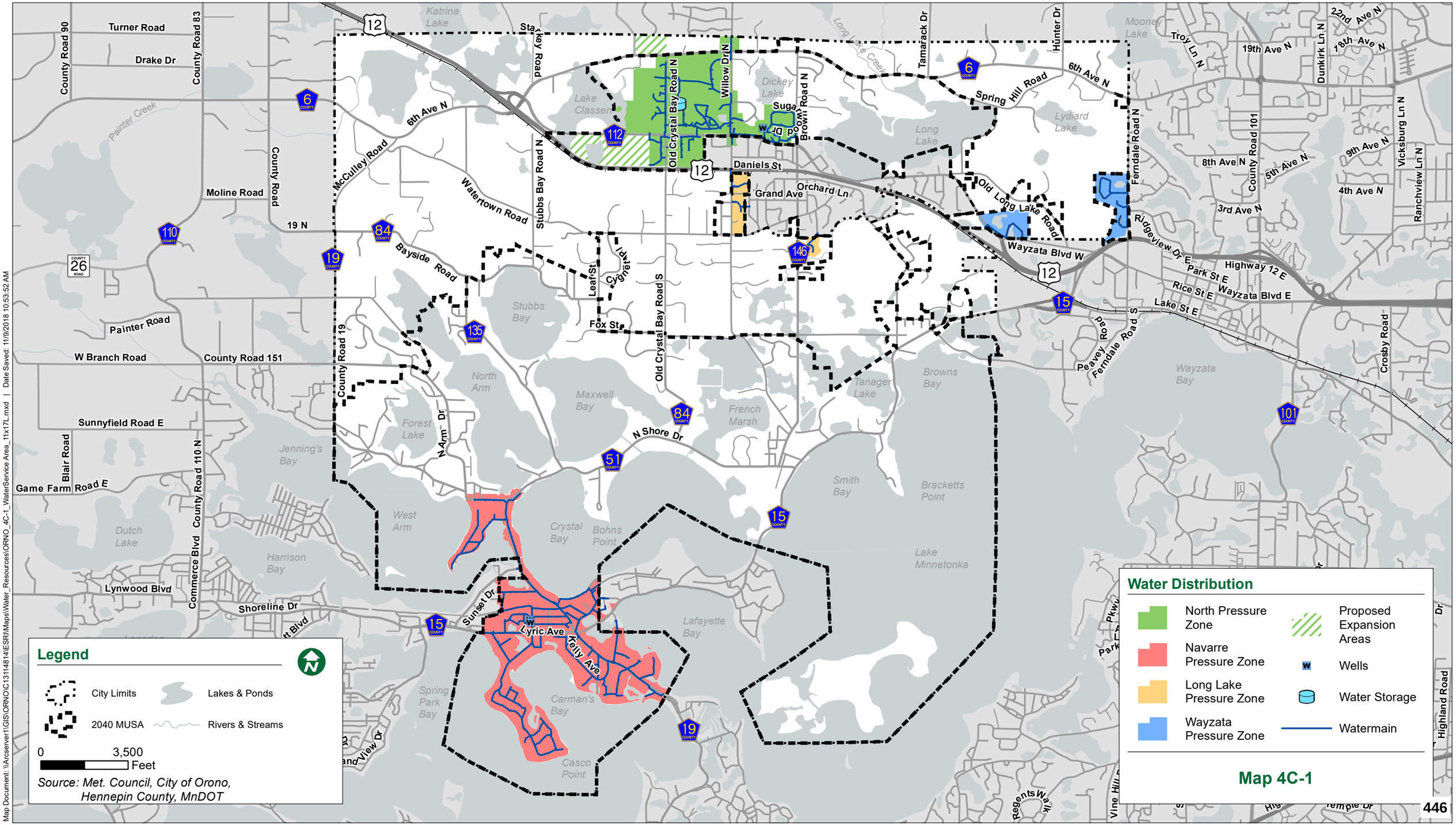
Turner Road
Drake Dr
County Road 90
County Road 83
Painter Creek
Moline Road
County Road
19 N
McCulley Road
6th Ave N
Watertown Road
Stubbs Bay Road N
Old Crystal Bay Road N
Willow Dr N
Brown Road N
Daniels St
Grand Ave
Orchard Ln
Old Long Lake Road
Tamarack Dr
Hunter Dr
Spring Hill Road
Ferndale Road N
Mooney Lake
Troy Ln N
19th Ave N
22nd Ave N
18th Ave N
Dunkirk Ln N
8th Ave N
5th Ave N
9th Ave N
4th Ave N
3rd Ave N
County Road 101
Vicksburg Ln N
Ranchview Ln N
Ridgeview Dr E
Park St E
Rice St E
Lake St E
Highway 12 E
Wayzata Blvd E
Wayzata Blvd W
Peavey Road S
Ferndale Road S
Crosby Road
Bayside Road
Leaf St
Cygnet Ln
Fox St
Old Crystal Bay Road S
Painter Road
W Branch Road
County Road 151
County Road 19
Sunnyfield Road E
Blair Road
Game Farm Road E
County Road 110 N
Commerce Blvd
Lynwood Blvd
Shoreline Dr
N Arm Dr
N Shore Dr
Sunset Dr
W Lyric Ave
Kelly Ave
Regents Walk
Vine Hill Rd
Highland Road
Katrina Lake
Lake Classen
Dickey Lake
Long Lake Creek
Long Lake
Lydiard Lake
Stubbs Bay
North Arm
Maxwell Bay
Forest Lake
Jenning's Bay
Dutch Lake
Harrison Bay
West Arm
Crystal Bay
Bohns Point
Carman's Bay
Spring Park Bay
Casco Point
Lafayette Bay
Smith Bay
Bracketts Point
Lake Minnetonka
French Marsh
Tanager Lake
Browns Bay
Wayzata Bay
Water Tower
Water Tower
Water Tower

# 2040 Comprehensive Plan

Orono, MN

# Proposed Expansion Areas

November 2018

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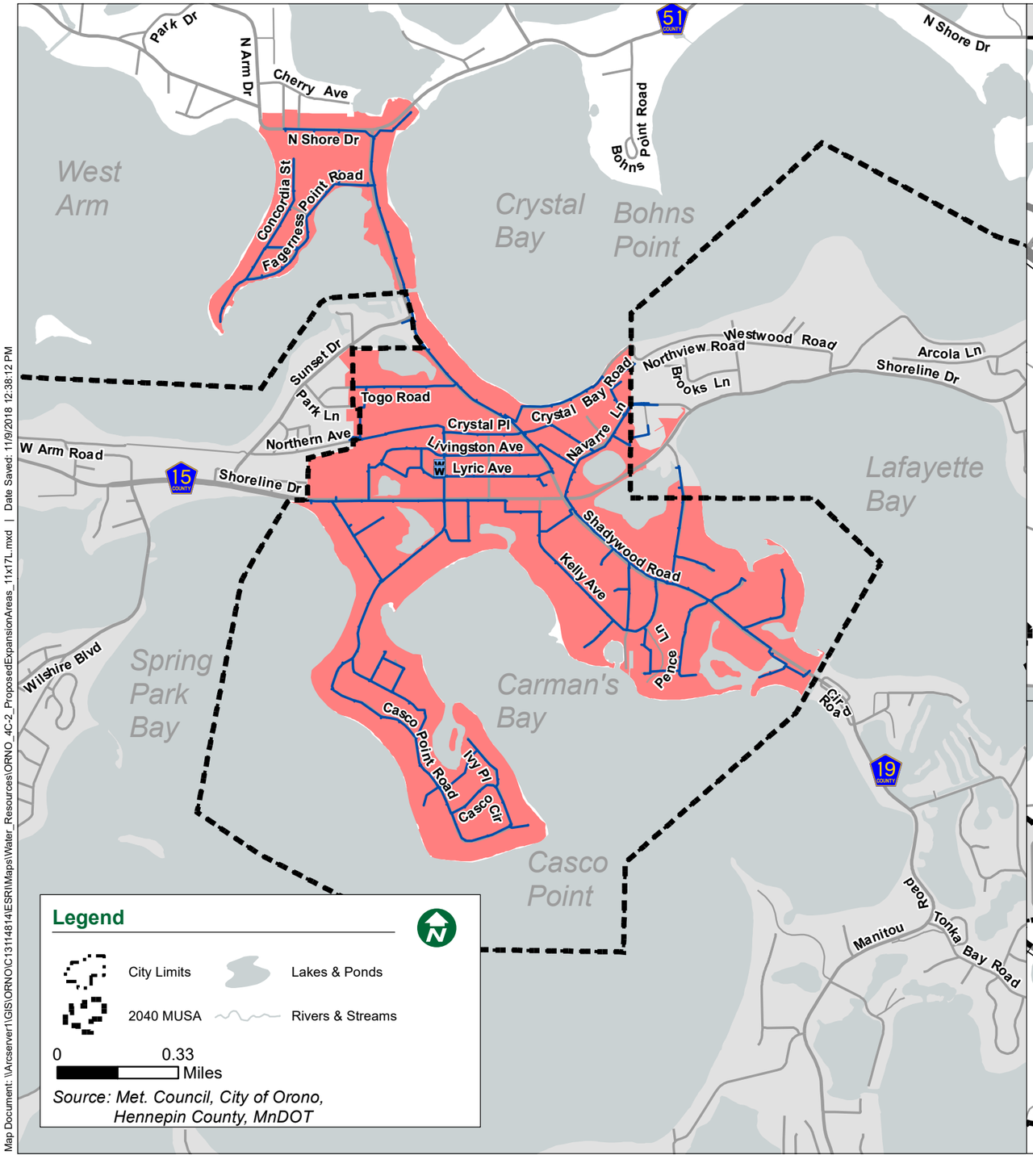


## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 0.33 Miles

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Water Distribution

- North Pressure Zone
- Navarre Pressure Zone
- Long Lake Pressure Zone
- Wayzata Pressure Zone
- Proposed Expansion Areas
- Wells
- Water Storage
- Watermain

**Map 4C-2**



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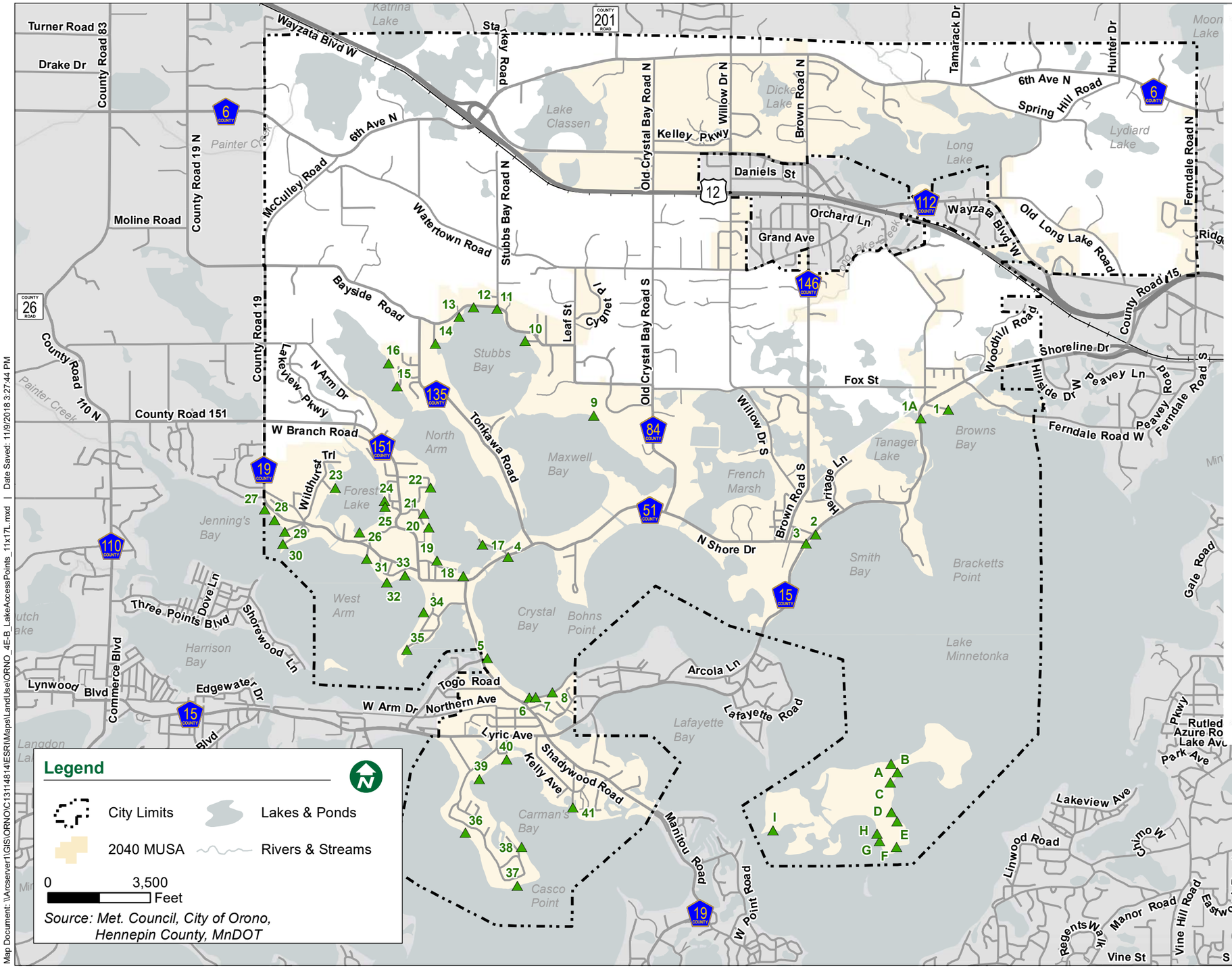


## City of Orono Lake Minnetonka Access Points

Designated Use and Current Status

Updated 4/1/01, 5/21/08, 1/1/18

| No. | Access/Street Name | Plat Section | Between Address #s | Designated Use | Notes |
|---|---|---|---|---|---|
| **Brown's Bay (Lower Lake)** | | | | | |
| 1 | End of Orono Lane | 2-S | 1355/1385 | No public access | Not open for public use plat map indicates questionable abutment of shoreline |
| 14 | Shoreline Drive - "Molly's Corner" (Outlot A, Dragonfly Hill) | 2-S | Across from 1410 Shoreline | Shore Fishing | Hennepin County provides an informal parking area and trailhead at this wide spot along Shoreline Drive; popular fishing spot; winter vehicular access feasible |
| **Smith Bay (Lower Lake)** | | | | | |
| 2 | Shoreline Drive at Spatse | 10-S | Adj to 1955 | Winter Only | Gated in summer; winter vehicular access allowed. As of 2016 privately owned with city easment for lake access and sanitary back up generator. |
| 3 | North Shore Drive at Shoreline Drive | 10-S | | No public access | Tracts 5&U, RLS 192, these tracts are on the steep slope adjacent to Shoreline Drive; due to slope and safety issues this access point is not open for public use |
| **Crystal Bay** | | | | | |
| 4 | North Shore Drive at Bandit Park Road | 8-S | 3498/3510 | Winter Only | 30' wide platted road right-of-way |
| 5 | Shadywood Road at Sunset Dr | 17-N | 1998/2000 | Drainage way | 15.2' wide platted alley - closely abutting homes on either side |
| 6 | Crystal Bay Road (West end) | 17-S | Adj to 2284 Shadywood | Pedestrian Access / Bathing | 66' wide platted road extending to lakeshore; City also owns 4 adjacent tiny lakeshore parcels to the east for an additional 200' of shoreline, over which a number of inland private parcels claim deeded access rights for "boating and bathing". |
| 7 | Crystal Bay Road (Relocated extension of Bayview Place in plat of "Wallace's Addition...") | 17-S | 3405/3415 | Pedestrian Access | 20' relocated alley from Railroad property to shoreline; potential lake access from railway corridor. The only known documentation is Doc. 8567616 deed filed Nov. 10, 1908 from Wallace et al to Preble which states that the 20' strip is "hereinfore taken for street purposes" and notes that the platted alley between Lots 18 and 19 was vacated by the District Court. |
| 8 | Crystal Bay Road (Platted extension of Orchard Alley) | 17-S | 3339/3345 | Utilities | 23' wide platted roadway; contains municipal sewer lines, potential access from neighborhood and Railroad/Trail corridor to lakeshore |
| **Maxwell Bay** | | | | | |
| 9 | Gibbs Landing - Fox St. | 4-S | Adj to 3125 | Pedestrian year-round, vehicles winter only | Tax records show access as Outlot A, owned by owner of 3125, City has easement over Outlot, City maintains access |
| **Stubbs Bay** | | | | | |
| 10 | Eastlake Street | 5-N | 3424/3465 | Winter Only | 30' platted road gated March 1 - Dec. 1 |
| 11 | Bayside Rd. at Stubbs Bay Rd. | 5-N | 3580/3640 | Fishing Dock | 33' platted road. ("Oak Street" in plat of "Bay View Park"). Also used for winter access by snowmobiles off Luce Line. |
| 12 | Bayside Rd | 5-N | Across from 3640, 3700, 3750 Bayside | No public access | Two 60' platted roads and one 65' platted road to the Lake (Park, Spring, and Maple Streets in plat of Bay View Park, and Theresa St. in plat of Orteville on Lake Minnetonka). These potential access points are not opened for public use. |
| 13 | Bayside Rd. | 5-N | West side of 3775 Bayside | No public access | 50' realigned platted road (Realigned "Lake Street" in the plat of Otterville on Lake Minnetonka) (See street file 3775 Bayside). Not opened for public use. |
| 14 | Westlake Street | 5-N | 372/389 | Pedestrian Access | 30' platted road right-of-way extending to lakeshore; walking access only. |
| **North Arm Bay** | | | | | |
| 15 | Park Lane | 6-S | 607/669 | Fishing Dock | 60' wide platted road, paved to shoreline - usable for boat launch but there is no parking available |
| 16 | Oak Street | 6-S | Adj to 4119 | Drainage way | 30' wide platted road, not developed, steep slopes and ravine limit use |
| 17 | Bohler Park Road | 8-S | Across from 1384/1392 | Winter Access | NW end of platted developed road as it extends to shoreline |
| 18 | Oak Place (Platted road in plat of "Crystal Bay View") | 8-S | 3768/3818 North Shore Dr | No public access | 60' wide platted undeveloped road extending from North Shore Drive across platted Cherry Ave to shoreline; mostly wetland or under water. Encroached by shared driveway |
| 19 | Sandy Beach (Extension of Maple Place) | 8-S | 3898/3908 Cherry Ave | Swimming Beach | 60' wide platted roadway used for City beach |
| 20 | Grant Street | 8-S | 1310 Spruce/1330 Cherry H | Drainage way | 50' wide platted road, undeveloped |
| 21 | Spruce Place | 8-S | 1250/1260 | No public access | 60' wide (remaining after partial vacation) platted roadway, undeveloped, Encroached |
| 22 | Loma Linda Avenue | 8-N | 1098/1130 | Fishing Dock | 60' wide platted road; also useful for vehicular access |
| **Forest Lake** | | | | | |
| 23 | Forest Lake Landing | 7-N | 4415/4440 | Pedestrian Access | 60' wide platted road right-of-way , access not developed, walking use only. Encroachments present |
| 24 | Elmwood Avenue | 7-N | South of 1199 | Drainage way | 20' wide platted road/alley undeveloped right-of-way leading to shoreline |
| 25 | "Summit Avenue" (Extension of Elmwood Avenue) | 7-S | 1067/1101 | Drainage way utilities | 50' wide platted road undeveloped right-of-way to shoreline, drainage way |
| 26 | "Bluff Street" | 7-S | West side of 1453 Park Dr | Drainage way | 50' wide platted road right-of-way to shoreline, not developed, drainage way |
| **West Arm Bay** | | | | | |
| 27 | North Shore Drive west end (adjacent to Orono/Minnetonka border) | 7-S | "4705" Shoreline | Drainage way | 33' platted right-of-way corridor extension of Co. Rd. 19 plus tax-forfeited Lot 10, Block 6, "Bergquist and Wickland's Park..."; undeveloped corridor primarily for drainage purposes due to very steep slopes |
| 28 | North Shore Drive at "Adams Street" Extension | 7-S | 4731/4745 | Drainage way | 40' platted road right-of-way extension in plat of "Bergquist and Wickland's Park..." undeveloped, very steep, used for drainage |
| 29 | Rest Point Lane | 7-S | 1340/1345 | Pedestrian Access | 33' platted right-of-way corridor, pavement does not extend to lake |
| 30 | Rest Point Road | 7-S | 1405/1410 | Pedestrian Access | 16' platted road right-of-way widens to about 40' at shoreline, paved but no boat launching available |
| 31 | Orchard Beach Place | 7-S | West of 1530 | Pedestrian Access | 50' platted road right-of-way extends to shoreline; tree growth and topography limits vehicular access |
| 32 | Highwood Lane Extension | 7-S | 4156/4167 Highwood Rd | Drainage way | 20' platted alley right-of-way to shoreline; steep slope to shoreline, undeveloped |
| 33 | Highwood Road Alley | 7-S | 4051/4075 | Drainage way | 20' platted alley right-of-way to shoreline, not developed |
| 34 | Corral Road Extension | 17-N | 1785/1825 Concordia | Drainage way pedestrian access | 20' platted alley mainly for drainage but also walking access |
| 35 | Fagernese Point Accretions | 18-N | Across from 1965/1985 Fagernes Pt Rd | No public access | Accretions to the 60' originally platted road in the plat of "Fagernes"; title registrations by most abutting owners have resulted in dedicated right-of-way no longer abutting shoreline; it appears that there is no public access remaining |
| **Spring Park Bay** | | | | | |
| 36 | Casco Point Beach | 20-S | 2871/2879 Casco Pt Rd | Swimming Beach | 60' wide platted road ("Carman St") used as a City swimming beach |
| 37 | Casco Circle | 20-S | 3105/3205 | Drainage way | 60' wide platted road right-of-way to shoreline at the south side of Casco Circle - undeveloped |
| **Carmans Bay** | | | | | |
| 38 | "Ivy Lane" (Ivy Place) | 20-S | 3486/3508 | Drainage way | 60' wide platted road right-of-way extending to shoreline east of Ivy Place - steep, used for drainage |
| 39 | "Spring Street" | 20-S | 2600/2618/Casco Point Rd | Pedestrian Access | 60' wide platted road right-of-way from Casco Point Road to shoreline along south side of plat of "Kaster Cove" - undeveloped, walking access only |
| 40 | Carman Street | 20-S | 2490 Carman/ 3555 Frederick | Fishing dock | 30' wide platted road right-of-way extending to shoreline, fishing dock |
| 41 | Lydiard Beach | 20-S | End of Lydiard Rd | Swimming Beach | 60' wide platted road right-of-way extending to shoreline, used as a City swimming beach |
| **Big Island** | | | | | |
| A | N. End of "Lasso Avenue" | 23-N | 110 | | 33' wide platted roadway adjacent to Lot 46, Morse Island Park |
| B | E. end of "Tootsie Avenue" | 23-N | 110/120 | | 33' wide platted roadway adjacent to Lot 45, Morse Island Park - slope makes use difficult |
| C | Unnamed Street | 23-N | 120/140 | | 90' wide platted roadway between Lots 38 and 39, Morse Island Park - City has established drivable gravel road for emergency & service vehicle access |
| D | "Boy Place" | 23-N | 210/260 | | 50' +/- wide platted roadway between Lots 21 and 54, Morse Island Park |
| E | "Meadow Lane East Extended" | 23-S | 180/190 | | 20' wide platted roadway between Lots 59 and 60, Morse Island Park - steep slope makes use difficult |
| F | "Meta-Comet Avenue South" | 23-S | 340 | | 33' wide platted roadway between Lot F Morse Island Park and Lot 3, Morse Island Park 2nd Addition |
| G | "Massasoit Avenue West End" | 23-S | 440/450 | | 33' wide platted roadway between Lot 1, Morse Island Park and Lot 1, Scrivers subdivision of Lot E, Morse Island Park - steep slope |
| H | "Meadow Lane Alley" | 23-S | 450/460 | | 16' platted alley between Lots 5 and 6, Morse Island Park - drivable for emergency and service vehicles |
| I | "Pleasant View Street" | 22-S | 570/600 | | 30' platted roadway between Lot 9, Pleasant View Lake Minnetonka and Lot 3, Island Pointe |

## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Lake Access Points

▲ Lake Access Points

**Map 4E-2**



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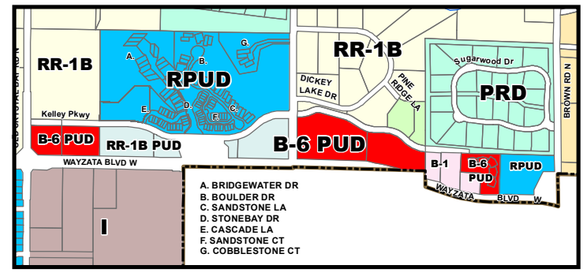
# City of Orono

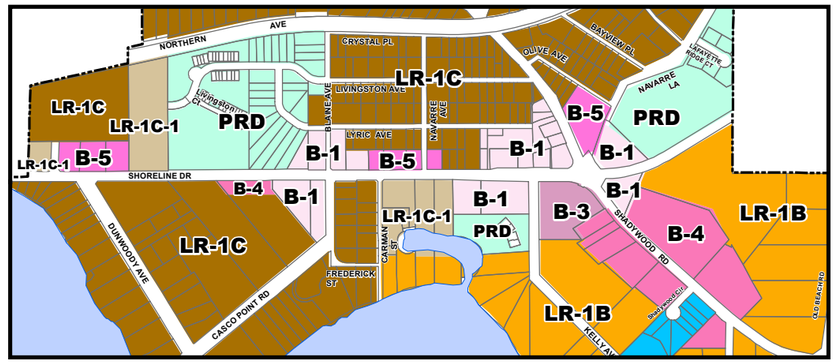
# Zoning Map 2018

November 2018

INSET 1




INSET 2




## ZONING DISTRICTS

**Business**
- B-1 - Retail Sales
- B-2 - Lakeshore
- B-3 - Shopping Center
- B-4 - Office/Professional
- B-5 - Limited Neighborhood
- B-6 PUD - Highway Commercial

**Industrial**
- I - Industrial

**Recreational**
- RS - Seasonal Recreational

**Rural Residential**
- RR-1A - One Family Rural Residential - 5 Acres
- RR-1B - One Family Rural Residential - 2 Acres

**Lakeshore Residential**
- LR-1A - One Family Lakeshore Residential - 2 Acres
- LR-1B - One Family Lakeshore Residential - 1 Acre
- LR-1C - One Family Lakeshore Residential - 1/2 Acre
- LR-1C-1 - One Family Lakeshore Residential Subdistrict - 1/2 Acre

**Residential**
- R-1A - One Familyl Residential - 1 Acre
- R-1B - One Family Residential - 1/2 Acre

**Planned Unit Development**
- RPUD - Residential Planned Unit Development
- RR-1B PUD
- PRD - Planned Residential Development
- PUD/RR-1B

**Other**
- City Limits
- Section Boundary
- Lakes
- Parcels

The Zoning Designation on this map are a representation on a combination of maps, ordinances and City Code requirements which make up the complete City of Orono Zoning Regulations. Information on Planned Development is available at the City Hall. All Zoning requirements and Zoning designations on specific properties are subject to change.

For updated Zoning information, please contact the City of Orono Planning and Zoning Department at planning@ci.orono.mn.us or call (952) 249-4620.

This map reflects all valid Zoning amendments up to and including Ordinance no. 60, third Series adopted May 11, 2009

0 3,000 Feet

Source:
Zoning data created and maintained by the City of Orono Planning and Zoning Department. Parcel data obtained from Hennepin County Taxpayer Division.

BOLTON & MENK
Real People. Real Solutions.

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3B-A Navarre Area Plan

# CMP PART 3B

# LAND USE PLAN

## *INTRODUCTION*

This Land Use Plan is a refinement and restatement of the ongoing planning practices of Orono citizens. It respects and maintains the historic development patterns of the City. It continues the basic land use concepts developed by Orono Township in 1950 and it conforms to the goals established by the first organized comprehensive planning attempts in the mid 1960's.

This Plan is prepared and presented for the following purposes:

1. **The Land Use Plan is intended to be a management tool for City officials, City staff, and other parties involved in land development and growth management in Orono.** Orono's land use plan indicates the basic location, density and types of land uses in the City that are considered to be compatible with environmental conditions and beneficial to the long term health, safety and welfare of the City and its citizens alike.

2. **The Land Use Plan is intended to be a guide for future development so as to reinforce our environmental protection commitment and to ensure such development will be consistent with existing land use.** This Plan is compatible with the plans of nearby cities for land use of abutting neighborhoods and for overall levels of services and facilities.

3. **The Land Use Plan is intended to advise the Metropolitan Council and our municipal neighbors of Orono's planning and growth management programs.** The Land Use Plan illustrates and coordinates the various goals and policies of all the elements of the Community Management Plan.

4. **The Land Use Plan is intended to be used as a basis for public facilities planning.** The Land Use Plan plays an important role in determining each neighborhood's ultimate population, the required capacity of public facilities, and an appropriate capital improvements program.

5. **The Land Use Plan is intended to be used as the basis for developing responsible ordinances for land use management.** Zoning and subdivision controls have been established and will continue to be refined to implement the intent of this Land Use Plan.

## *SCOPE*

**The time framework of the Land Use Plan is intended to be consistent with the regional planning period of 2020 through 2040 and with the City's permanent planning policy for rural Orono.**

Orono's long range land use plans call for permanent maintenance of the existing low density rural residential areas. There is to be no staged growth plan and no expansion of the existing urban service area. This commitment is particularly important to the many Orono citizens who are making private investments based upon this concept.

## *BASIC LAND USE CONCEPTS AND PRINCIPLES*

**Orono's planning programs have long recognized the development paradox, or urbanization spiral, which often results from arbitrary planning assumptions or from incomplete analysis of planning alternatives.** The most striking example in Orono's situation is the documented evidence that over-extension of sanitary sewers, ostensibly to solve a pollution problem, can easily in itself cause irretrievable water quality degradation of Lake Minnetonka. Chapter 1 of this Plan outlines the "urbanization spiral".

Nutrient management technologies such as NURP ponds, alum treatments, and a wide variety of Best Management Practices provide added tools to manage runoff from rural densities. However, Orono cannot and will not rely solely on man- made systems for preserving water quality, and will not increase density to pay for stormwater management infrastructure.

**A principal goal of Orono's planning program is the protection of natural resources and environmental amenities, particularly the water quality of Lake Minnetonka.** The Environmental Protection Plan emphasizes Orono's unique environmental position in relation to the long-term health of Lake Minnetonka. Retention of natural vegetation, light, air, and open space will be promoted. Shorelines will be protected from erosion and alteration.

**Water quality preservation is dependent upon effective sewage treatment programs.** Urbanized areas, shoreland areas and remaining existing higher-density housing clusters within the Rural area have been or will be provided with municipal sanitary sewer to prevent discharge of untreated or insufficiently treated sewage effluent into the Lake. In the rural areas, low density land use can be safely served long-term by individual on-site sewage treatment systems.

**Historic development patterns have resulted in a city which is partially urban and partially rural.** These two development patterns offer a variety of housing to meet residents' lifestyle and service desires.

**The citizens of Orono have determined that a long range planning objective of the City is the permanent retention of the rural community**. This objective is in line with the existing developed density of the area, and with the similar plans of other cities abutting the rural area.

**Orono is partly in the Metropolitan Urban Service Area (MUSA) and partly outside the current MUSA.** The MUSA was established by Metropolitan Council to define the extent of areas where urban services will be provided and urban scale development will occur.

**Urban and rural neighborhoods require differing levels of public services and facilities.** The urban areas of Orono have sufficient density to require, and to financially support, municipal sewer and water

services, increased police and fire protection, public works projects and public recreational facilities. These areas have such facilities in place and in sufficient capacity to accommodate all projected urban development. The rural areas have limited density and have environmental restraints prohibiting urban density encroachments.

**Orono expects future development in both the urban and the rural portions of the city.** The urban area is expected to have new residential infill development on the existing vacant lots and undeveloped parcels at densities consistent with the Community Management Plan. Additional of higher density housing is anticipated in the planning term to accommodate a wider range of affordability and lifecycle housing needs, overall urban density will remain relatively low.

The rural area is expected to have continued infill residential development. Non-residential development will likely be limited to open space recreation.

**Over time, changes in national priorities, population trends, metropolitan plans and metropolitan facilities have continued to reinforce the planning and development objectives of Orono.** Community leaders have consistently held firm to the quality over quantity in approving development proposals, and will continue to do so.

The projected population is a direct result of Orono's environmental protection policies and is consistent with the proposed public facilities plans of Orono, the Hennepin County Public Works Department, the Minnesota Department of Transportation and Metropolitan Council Environmental Services (MCES). Table 3B-1 illustrates Orono Population and Household growth, from 1970, projected through 2040. The most recent data supplied by the Met Council, in 2016, shows 7,691 people in 3,037 households.

**Table 3B-1: Orono Population, Households, and Employment 1970 - 2040 (Amendments 1-6)**
**(Sewered and Unsewered Forecasts)**

| **Population** | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| **Year** | **1970** | **1980** | **1990** | **2000** | **2010** | **2016** | **2020** | ***2030*** | ***2040*** |
| Sewered | -- | -- | -- | -- | 4,429 | -- | 5,834 | *6,170* | *6,740* |
| Unsewered | -- | -- | -- | -- | 3,008 | -- | 2,603 | *2,630* | *2,760* |
| **Total City** | **6,787** | **6,845** | **7,285** | **7,538** | **7,437** | **7,691** | **8,437** | ***8,800*** | ***9,500*** |
| **Household** | | | | | | | | | |
| **Year** | **1970** | **1980** | **1990** | **2000** | **2010** | **2016** | **2020** | **2030** | **2040** |
| Sewered | -- | -- | -- | -- | 1,780 | 2,253 | 2,306 | 2,455 | 2,785 |
| Unsewered | -- | -- | -- | -- | 1046 | 784 | 1,029 | 1,105 | 1,115 |
| **Total City** | **2,146** | **2,291** | **2,613** | **2,766** | **2,826** | **3,037** | **3,335** | **3,560** | **3,900** |
| Persons/HH | 3.16 | 2.99 | 2.79 | 2.73 | 2.63 | 2.53 | 2.53 | 2.47 | 2.44 |
| **Employment** | | | | | | | | | |
| | 500 | 809 | 980 | 951 | 1562 | 1579 | 1700 | 1780 | 1800 |

Source: Metropolitan Council System Statement

Table 3B-1a illustrates the number of households need to be created based on the 2016 updated numbers.

In summary, the city will need to add 523 sewered households to meet 2030 projections, and 340 households in the 2030s to meet 2040 forecasts.

**Table 3B-1a: Orono Households 2010 – 2040 Amendments 1-6**
**(Sewered and Unsewered adjusted Forecasts)**

| Household | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Year** | **2010** | **2016** | **2020 Est.** | **Change from 2016** | **2030 Est.** | **Change from 2016** | **2040 Est** | **Change from 2030** |
| Sewered | 1780 | 2253 | 2306 | 53 | 2,498 | 192 | 2,785 | 287 |
| Unsewered | 1046 | 784 | 1029 | 245 | 1105 | 76 | 1,113 | 8 |
| **Total City** | **2,826** | **3037** | **3,335** | **298** | **3,560** | **225** | **3,900** | **340** |

Source: Metropolitan Council System Statement, City Utility Accounts

Regional transportation plans have been revised since the 1970's to accommodate the increased traffic levels on Highway 12 through Orono and Long Lake. Environmental and social pressures have eliminated any plans for expansion of County Road 15 along the lakeshore. Orono will continue to promote and implement strategies to reroute traffic away from the lakeshore areas.

Regional sewer service facilities plans were revised three decades ago in response to Orono's plans for low-density development. The final Orono-Long Lake Interceptor is in place with a design capacity for less than 8,400 Orono residents and a limited service area. In the early 1980's, the Maple Plain Interceptor was similarly designed to provide only limited capacity for Orono. These capacity limitations are consistent with Orono's goals for the rural area.

**Orono's commercial and economic development has always been centered in the historic town centers.** The shopping, employment, education and social needs of Orono residents have been met by commercial facilities and shopping centers located in Navarre and in surrounding communities. Promotion of duplicate facilities in Orono would tend to be uneconomic and counterproductive.

**Orono's housing plan is intended to accommodate all planned population growth in a wide variety of housing opportunities.**
New urban housing will be in a variety of forms including single family homes on scattered vacant lots throughout the sewered area; planned residential developments including mixed single family, attached townhome, and apartment dwelling units on vacant sewered parcels along Wayzata Boulevard and in the Navarre Area.

Most new rural housing will be on new lots of two to five acres net dry-buildable area, all with prior approved site evaluation and proof of adequate septic system operation. In Shoreland areas previously brought into the MUSA, new low- density rural development may be provided with municipal sewers to afford the maximum level of protection for Lake Minnetonka and other Orono lakes.

**Orono's comprehensive sewer policy plan is designed to provide an adequate, safe level of sewage treatment and waste water disposal for all urban and rural properties.** Sewage treatment policies respect the limited regional capacity and the differing levels of service required by urban and rural neighborhoods. Municipal sewer capacity is available for projected urban development within the existing

urban service area.

**Orono's transportation plan is tailored to the different needs of urban and rural neighborhoods.** Near the lakeshore and in some rural areas, the collector roads are relatively slow speed with circuitous alignment dictated by the hills and bays rather than by commuter preference.

The urban areas are provided with a typical network of city streets connecting residential and shopping areas with each other. The rural area is gridded-off with a core system of publicly maintained collector and minor arterial streets running at regular intervals.

**Orono's parks and open space facilities reflect different urban and rural characteristics.** In the urban area, the City provides numerous small neighborhood parks and playgrounds offering centers for neighborhood activities such as swimming, skating, softball, and soccer. In addition, three larger preserves (Casco Circle, Saga Hill, and Highwood) offer substantial "natural" areas. In the rural area, a variety of City-owned parks and preserves offer a range of active and passive recreation opportunities. Large public and quasi-public recreational facilities include Three Rivers Park District lands, several golf courses, a gun club, the Luce Line state Trail, the Dakota Rail Trail, as well as two 'big woods' Scientific and Natural Areas.

## *LAND USE GOALS AND POLICIES*

Orono's Land Use Plan is based upon the following goals and policies which in turn have been actively developed and fostered by Orono residents over the last 45 years.

**Land Use Goals**

1. **To reinforce Orono's environmental protection commitment, with special emphasis on the protection of Lake Minnetonka and Orono's other lakes.**

2. **To maintain the historic identity and character of the separate urban and rural neighborhoods.**

3. **To provide appropriate places for a variety of local residential, educational, recreational, industrial and neighborhood commercial activities.**

4. **To protect neighborhoods from encroachment of incompatible land uses.**

5. **To coordinate Orono's land uses with that of neighboring communities.**

6. **To coordinate land uses and developed density with the financial and physical capabilities of the City.**

**General Land Use Policies**

1. The boundary between Orono's Urban and Rural Areas is fixed. Orono's Urban Area will not be strictly defined by the Metropolitan Urban Service Area (MUSA) boundary or future expansions of the MUSA boundary but will be fixed by this and the other elements of the Community Management Plan. Orono's defined Urban and Rural Areas are best described by the planned development types and densities. Orono's Urban and Rural areas are depicted and

fixed by Map 3B-1.

2. The Metropolitan Urban Service Area (MUSA) will define the areas of Orono where municipal sewers may be extended. The MUSA will include all parts of Orono's Urban Area and may include parts of Orono's Rural Area where appropriate. The MUSA boundary in Orono will define areas where sewer exists or where it may be extended to serve existing or new development, but will not define the areas where general urban services will be provided, and it will not strictly define the boundary between higher density and low-density development.

3. Orono's land use plans will be based upon environmental protection policies. Land use and development must assure the conservation, protection and preservation of sensitive environmental resources in accordance with the goals and policies of the Environmental Protection Plan.

4. Development density will be limited throughout the city to a level which will not overload the natural surface water drainage and filtration system. Urbanization increases the rate and quantity of surface runoff while decreasing the water quality. To the extent that it is practical and feasible, the City will supplement existing natural assimilation capacities with man- made ponding areas, but will not allow increases in development density beyond the defined density as a result of such supplementation.

5. The wetlands, floodplains, and marshlands of the city will be protected and preserved as wildlife habitats, as unique open spaces, and as an economically practical and effective method of flood protection and storm water runoff filtration. Wherever possible, the City will acquire open space and flowage easements for conservation of these lands. The city will not support the filling of a wetland to provide a buildable lot.

6. Protection of lake resources will allow reasonable access, use and enjoyment while preventing overcrowding and excessive encroachment. In conformance with Orono's Shoreland Management regulations, Orono will prohibit overly dense development within 1,000 feet of Lake Minnetonka. Lake use regulations will be promoted to limit excessive boat density and overuse of sensitive bays.

7. Lake shorelines will be protected from alteration. Shoreland areas, whether bluff, beach or floodplain, are sensitive environmental features with significant impact on lake water quality, aesthetic values and land use function. These same factors act to draw development which can be destructive if not properly regulated. Natural vegetation in shoreland areas will be preserved insofar as practical and reasonable in order to limit surface runoff and soil erosion, and to utilize excess nutrients. Clearcutting will be prohibited. In areas of soil or wave action erosion, material stone rip rap shoreline protection will be encouraged. Where determined to be feasible and practical, alternative natural methods of shoreline protection other than rip-rap will be promoted. Excavation, filling and other grade changes at or near the shoreline for the sole purpose of accommodating development will be discouraged.

8. The City will work to encourage and facilitate slope stabilization measures prior to slope failures.

9. Development or alteration of floodplains will be restricted. The City will observe and administer Flood Plain regulations as required by the DNR.

10. Orono's land use plan will promote the preservation of open space, light and air. Sufficient open spaces will be provided in each neighborhood and on each lot to prevent overcrowding and to ensure adequate light, air and recreation for all residents.

11. Private ownership, maintenance and stewardship of the land, including open space and many types of improvements, is favored over public ownership as being in the best and most beneficial interests of the property owner and the public, providing for more intimate, responsive and economical land management.

12. No land owner should be denied the right to develop his land by any staged growth, land banking or no-growth policy, provided the development can be accomplished within the performance standards, policies and requirements of the Community Management Plan.

13. Future development must enhance the community. Land development should respect preserve the value of the land and the integrity, stability and beauty of the community.

14. Physical improvements required to accommodate new development must be provided by the developer. It is the policy of the City that development pays for itself, physical improvements such as roads, drainage and utilities required to accommodate new subdivisions or development should be designed, financed and installed directly by the benefited developer as a precondition to development In addition, this philosophy includes developer responsibility for special fire protection equipment or devices in the case of unusual land uses or building configurations, and/or special security services in the case of unusual public safety situations.

15. All physical improvements must conform to city standards. Physical improvements related to health, safety or community systems such as roads, pathways, drainage or utility systems will be designed, located and constructed to uniform, City-established standards to ensure proper functioning and compatibility with overall City plans.

16. Developers must dedicate lands required for public use. Land subdivision or any development that results in increased land use density, and hence increased demand for municipal services, will be expected to include public dedication of lands necessary for additional road rights of way, parks, playgrounds, trails, open space, ponds or storm water holding areas whenever such facilities are directly used by the subdivided land or required by such density increase. If the individual development's property is not conducive to public land dedication, then in lieu of lands the developer may be required to contribute funds for the municipal purchase of such lands or the improvement of such facilities proportionate to the cumulative effect of such density increase from multiple small developments.

17. No land will be permitted to be subdivided or built upon which is held unsuitable by the City for the proposed use because of flood hazards, inadequate drainage, soil formations with severe limitations for development, severe erosion potential, unfavorable topography, inadequate water supply or sewage disposal capabilities, or any other feature likely to be harmful to the health, safety, or welfare of the future residents of the proposed subdivision or of the community.

**Urban Land Use Policies**

1. **The majority of Orono's urban area will be reserved for residential land use.** Many urban residences will be intimately associated with the lake shoreline and will be subject to density restrictions because of sensitive environmental conditions. Medium and High Density multi-family residential uses will be limited to locations near existing shopping and transportation services, but will not be appropriate within 1,000 feet of the shoreline of Lake Minnetonka except when in close proximity to the Navarre commercial area abutting CR 15 or CR 19.

2. **Commercial areas will be provided for neighborhood service businesses. The primary function of Orono's commercial areas will be to provide those retail, commercial and service businesses which are directly necessary to serve Orono's urban and rural residents.** Commercial development will be limited to areas where full urban services, including municipal sanitary sewer and adequate transportation are available. Commercial development of a regional nature (i.e. “big box” retail) which would increase traffic, particularly on collector streets serving low density residential development, will be discouraged. Mixed Use Residential and Commercial Development is targeted for select traditionally commercial areas to provide a healthy base of customers for these limited commercial areas.

3. **Lakeshore commercial areas will be provided for public access and limited lake-user services.** Orono's residents and other lake users require lake access, fishing supplies, boat service and boat repair facilities which are unique to our location on a recreational development lake. Orono's Land Use Plan will provide locations for such special-purpose businesses where appropriate from both the land use and the lakeside environmental standpoint. No use or location will be permitted to adversely affect the lake quality or the public's general usage of the lake. All lakeshore commercial is to be limited to areas where full urban services, including municipal sanitary sewer and adequate transportation are available.

4. **The City will encourage private unification and coordination of the existing commercial areas.** Unplanned strip commercial developments will be discouraged. Coordinated projects designed to aesthetically enhance, unify and identify the business areas will be encouraged.

5. **Future industrial development will be limited to the area of the existing Orono industrial park.** No other location in Orono combines the availability of transportation and public utilities with remoteness from sensitive environmental features. In addition, this land use is consistent with Long Lake's neighboring industrial development.

6. **Commercial and industrial development will not be permitted to adversely affect**

**neighboring residential property.** The location, scale and types of commercial and industrial development will be controlled so as not to encroach upon or adversely impact the primary residential land uses in Orono. Wherever possible, natural land forms or buffers will be required between different land uses.

7. **Public urban services must be available for all future commercial, industrial and urban-residential development.** Commercial, industrial and urban-density residential uses will be permitted only where municipal sanitary sewer, water, adequate transportation, police and fire protection services are available.

8. **Urban development will utilize the capacity of existing public facilities.** New land uses and development will be allowed to infill existing vacant properties within the urban service area consistent with environmental limitations and with the existing or planned capacities of water, sewer, drainage transportation and recreational facilities. New development will not be permitted to overburden these services at the expense of the existing users.

9. **Land use standards will limit the impact of urban encroachment on Lake Minnetonka.** Minimum lot width will space out docks and structural encroachments while increasing areas of natural vegetation. Lake use regulations promulgated by the Lake Minnetonka Conservation District and supplemented with City regulations if necessary will limit the number of boats per property and the amount of public waters available for private docking and boat storage.

10. **Retention of natural vegetation will limit the impact of urbanization as visible from the lake.** Building heights will be limited to less than the typical tree height. Minimum green belts will be provided with prohibitions against clearcutting or excessive thinning of vegetation. Natural vegetation will be preserved on slopes and retaining walls will be discouraged except when absolutely necessary to prevent erosion, in which case they will be screened with natural vegetation.

**Rural Land Use Policies**

**Orono's rural area will be reserved for permanent low-density residential land use.** Orono's rolling rural area is not suitable for commercial agriculture. Likewise, the delicate balance of storm water nutrient loading vs. marshland assimilative capacity precludes expansion of the urban service area without major environmental problems for Lake Minnetonka. Therefore, the ideal land use for that portion of Orono located outside of the Urban Service Area is the planned low-density rural residential land use. Commercial and industrial uses will not be permitted in the rural area.

**Orono's rural area provides the opportunity for quasi- agricultural land uses.** Greenhouses, orchards, small hobby farms, riding stables, and recreation areas such as large golf courses and park reserves are not possible in more crowded urban areas but they are compatible with rural residential properties. Thus, the total commercial activity of Orono is broader and more varied than if the City were all urban or all rural.

**Rural density is limited by natural conditions.** Development of rural Orono is naturally limited by a number of conditions including wetlands, steep slopes and areas of high water table, factors which influence building locations and transportation options as well as the location and spacing

of on-site sewage treatment systems which rely on soil treatment of sewage effluent.

**The existing rural area will not be urbanized.** Orono's Community Management Plan is not a staged growth plan. Municipal urban services will not be extended into the rural area or across open, rural lands.

**Rural land uses and densities do not require urban services.** Urban services are not compatible with rural land use. Extension of certain urban services, such as extensive public road maintenance or municipal sewer or water cannot be economically justified or easily provided to developments in rural areas or at rural densities.

**Rural development will be subject to proven on-site sewage treatment capability.** Future development in the rural area will be contingent upon the developer providing prior technical evidence that the site contains sufficient suitable land for all development, an acceptable primary drainfield area, and reserved space for at least one alternate drainfield area. The zoning area requirements for rural Orono will therefore be based upon minimum areas of dry, buildable, contiguous land exclusive of roadways, wetlands, streams or areas of high water table.

**Rural land use densities will allow maximum retention of private woods and open space.** Low rural densities will accommodate home-sites without affecting the traditional vistas of open fields and woods. The retention of these woodlands and marshlands will then assure permanent habitat for our wildlife. Public open space will be provided on a large-scale or Park Reserve basis, but neighborhood or mini-parks are unnecessary because of the large amount of available privately owned and maintained open space.

**Rural lakeshore areas within the Shoreland and within the MUSA will be provided with municipal sewer service upon request.** Municipal sewer service connections will be available to new or existing residences within the designated Shoreland Overlay District and within the MUSA when requested, costs to connect will be the responsibility of the property owner. However, this policy will not preclude development of such areas using fully conforming Individual Sewage Treatment Systems.

**Lakeshore Residential Land Use Policies**

Although Orono's lakeshore has a wide range of diversity in lot size and home size, the predominant character of Orono's lakeshore is natural. Natural is defined in part by much of the lakeshore being historically developed as large estate lots with homes set back a substantial distance from the lakeshore, or being developed as moderate homes on moderate lots leaving substantial open space. Natural includes remnants of native forests and vegetation, protection of the lakeshore from hardcover and impervious surface encroachments. The exception to the natural lakeshore is the areas where historically small cottages were built on small lots close to the lakeshore. These cottages in many cases have been updated, remodeled or expanded into year-round homes.

The key goal of the City's Comprehensive Plan is to protect Lake Minnetonka, and other Orono lakes and waterways which includes the preservation of the natural character of the lakeshore and the water quality of the lakes.

As the demand for, and value of, lakeshore property has dramatically increased, so has the pressure to expand or replace older homes with much larger homes. This pressure has the potential to substantially alter the natural character of the lakeshore, and the more open and natural environment enjoyed by property owners along much of the lakeshore in Orono.

The following policies will guide the City in addressing development on the lakeshore.

1. **Lake Minnetonka shall be protected as a natural and recreational resource.**

2. **The natural character of the lakeshore shall be preserved, and when possible, enhanced.**

3. **The views and open space currently enjoyed by lakeshore property owners shall be reasonably protected.**

4. **The size of a house to be allowed on a lot shall be determined, in part, based on the size of the lot, as well as on the shape and topography of the lot.**

5. **The increase in massing of structures on the lakeshore shall be limited.**

## ***2040 REGIONAL DEVELOPMENT FRAMEWORK***

Accommodating future growth of the Metro Area is a concern that will require wide-ranging resources. The Metropolitan Council in 2015 adopted "Thrive MSP 2040" to provide a plan for addressing the challenges that will be faced by the Twin Cities area over the next two decades in accommodating expected growth in the region. Forecasts indicate the metro area will grow by 820,000 people between 2010 and 2040, and as the average household size continues to shrink (from 2.55 in 2010 to 2.43 by 2040) an additional 389,000 households must be accommodated.

In addressing the challenges of growth, Metropolitan Council has acknowledged that a "one size fits all" approach to implementing the Regional Development Framework is not appropriate, and has designated Geographic Planning Areas to identify communities with similar types of growth. In general, Orono's area within the MUSA boundary is designated as "Emerging Suburban Edge" and the areas outside the MUSA boundary are "Rural Residential". Metropolitan Council has identified a set of implementation strategies for each of these categories, as well as an umbrella of strategies that will apply to all communities. Map 3C-1 outlines the Community Designations and the community responsibilities.

Each local community is required to address how it will plan for its share of regional affordable housing needs for the decade 2021-2030. Metropolitan Council has apportioned the forecasted need among each of the municipalities in the 7-county metro area. Minnesota Statutes require that comprehensive plans include an implementation program that describes public programs, fiscal devices and other specific actions to be undertaken in stated sequence to implement the comprehensive plan and ensure conformity with metropolitan system plans. One required element is a housing implementation program, "…including official controls to implement the housing element of the land use plan, which will provide sufficient existing and new housing to meet the local unit's share of the metropolitan area need for low and moderate income housing." Orono's share is forecasted at **154** new affordable housing units for the decade 2021-

2030.

## *EXISTING AND FUTURE LAND USE SUMMARY*

Map 3B-2 depicts the existing land uses in Orono as of 2016. Table 3B-2: Orono Existing Land Use Summary, shows just over 1/3 of Orono's total area is in open water; of the remaining 2/3 that is land area, 92% is devoted to residential, parks & open space uses, or underdeveloped.

**Table 3B-2: Orono Existing Land Use Summary (2016)**

| Land Use Category | Acreage | % of City |
|---|---|---|
| Rural Preserve | 302 | 1.97% |
| Rural Residential | 2,098 | 13.66% |
| Island Residential | 76 | 0.49% |
| Urban Estate Density Residential | 2,441 | 15.90% |
| Urban Low Density Residential | 32 | 0.21% |
| Urban High Density Residential | 21 | 0.14% |
| Commercial/ Office | 86 | 0.56% |
| Industrial | 35 | 0.23% |
| Park, Recreational and Open Space | 1,529 | 9.96% |
| Undeveloped | 3367 | 21.93% |
| Right-of-Way | 137 | |
| **TOTAL** | **15,356** | **65%** |
| Source: Existing Land Use Map | | |

Note: Open Water is a dominant natural feature of Orono and represents 34.03 percent of the "land" area of Orono. However, because it is not a land use, it is not included in Table 3B-2 above or on Map 3B-2a.

Map 3B-3 indicates the proposed land use plan of the city, identifying appropriate land uses and densities for each individual neighborhood. This land use map will form the basis for land use and zoning decisions over the next 20 years. Table 3B-3 is a summary of Orono's Planned Land Use. Note that the Summary reflects that the planned uses are to be allowed to take effect immediately rather than being staged over a period of years, thus the 2030 and 2040 predicted acreages are the same as 2020 levels.

| Table 3B-3: Orono Planned Land Use Summary (Amendments 1-6) | | | | | | |
|---|---|---|---|---|---|---|
| **Land Use Category** | **2020 Acreage** | **% of City** | **2030 Acreage** | **% of City** | **2040 Acreage** | **% of City** |
| Rural Preserve (1 unit / 5 acres) | 1207 | 8.39% | 1207 | 8.39% | 1207 | 8.39% |
| Rural Residential (1 unit / 2 acres) | 2808 | 19.52% | 2808 | 19.52% | 2808 | 19.52% |
| Island Residential | 55 | 0.38% | 55 | 0.38% | 55 | 0.38% |
| Urban Estate Density Residential (0.5 – 2 units /acre) | 3177 | 22.08% | 3177 | 22.08% | 3177 | 22.08% |
| Urban Low Density Residential (3 -8 units/ acre) | 165 | 1.15% | 165 | 1.15% | 165 | 1.15% |
| Urban Med Residential/ Mixed Use (8 – 15 units / acre) | 86 | 0.60% | 86 | 0.60% | 86 | 0.60% |
| Urban Medium High Density Residential (15 -20 units per acre) | 3 | 0.02% | 3 | 0.02% | 3 | 0.02% |
| Urban High Density Residential (20 -25 units per acre) | 51 | 0.35% | 51 | 0.35% | 51 | 0.35% |
| Commercial/ Office | 46 | 0.32% | 46 | 0.32% | 46 | 0.32% |
| Industrial | 42 | 0.29% | 42 | 0.29% | 42 | 0.29% |
| Park, Recreational and Open Space | 1570 | 10.91% | 1570 | 10.91% | 1570 | 10.91% |
| **TOTAL** | **9,210** | **64%** | **9,210** | **64%** | **9,210** | **64%** |

Percentages based on total city area, including 6014 acres of open water and Highway rights of way

Source: Proposed Land Use Map

The Plan does not suggest a change in land use over the next 20 years, after the adoption of this Update. The land uses identified in Map3B-3a and Map 3B-3b are outlined in greater detail below.

1. **Lakes and Open Water**
   Areas within the city boundary of open water. The Lakes and associated watersheds are a significant influence on the quality of life and character of the City. However, since they are not a land use, they are not included in the land use calculations for the city. Open water constitutes approximately 34% of the surface area of the City.

2. **Rural Preserve (1 unit per 5 acres)**
   The northwest corner of the City is planned for a lower density of one unit per five acres. This area has been developed to provide large lot and quasi agricultural home sites. The extension of municipal water or sewer is not intended for these areas. Residential dwelling units will be provided as single family detached structures.

3. **Rural Residential (1 unit per 2 acres)**
   This is the typical rural residential density developed and planned to be permanently self-supporting. No rural density will be allowed greater than one unit per two acres except for those residences in existing rural housing clusters that were originally developed many decades ago and in most cases have been provided with municipal sewer within the past 3 decades. New rural developments may include housing clustering when environmental and site conditions allow, provided the overall density within the development conforms to these requirements, and provided that all sewage treatment needs can be adequately met within. Residential dwelling units will be provided as single family detached

structures.

4. **Urban Estate Residential (0.5-2 units per acre)**
   This is intended for areas that have developed in a land use pattern of lots developed many decades ago smaller than 1 acre, and have access to sanitary sewer services. These lots have a particular impact on lake water quality, and lake character and storm water management, massing, and hardcover controls are critical to the retention of this character. Residential dwelling units will be provided as single family detached structures.

5. **Urban Low Residential (3-8 units per acre)**
   This higher density will be reserved for properties deemed by the City Council to be so uniquely situated that residential development at the prescribed density will not negatively impact surrounding land uses. Such properties must have municipal sewer and water available. Other factors that will be taken into consideration in determining the appropriate locations for this density will include proximity to and the need for other urban utilities and services in relation to the proposed use; transportation system impacts and site access; and the ability of the proposed use to meet City housing goals. Residential dwelling units will be provided as single and two family structures.

6. **Urban Medium / Mixed Use Residential (8-15 units per acre)**
   This land use designation is reserved for specific sites, which based on their proximity to services and transportation corridors are deemed appropriate for higher density projects.

   The Mixed Use Residential designation is intended for established commercial areas on higher classification transportation routes to introduce an element of higher density residential. This residential component will serve to augment the commercial uses with a near-by customer base and to provide an efficient use of land. The properties targeted for Mixed Use classification are in the Navarre area, including a number of commercially zoned properties abutting Shadywood Road, and additional commercial and residential properties abutting Shoreline Drive. This Mixed Use designation is intended to allow for the possibility of higher density multi-family residential development such as senior and assisted living, townhomes, condominiums or apartment buildings. Under the Mixed Use designation, properties currently zoned for residential use are not intended to be converted to commercial property, but existing commercial property could be converted to higher-density residential use or mixed residential-commercial uses in the same buildings. The City may also consider new zoning standards to regulate potential mixed-use projects.

   The Metropolitan Council requires that communities provide a measurement of forecasted employment. Acceptable measures include floor area ratios, building footprint percentages or impervious surface percentages. The City anticipates mixed use within the context of the neighborhood, and not necessarily specific to a particular parcel. Where employed, the City can envision ground level commercial services, with 2$^{nd}$ and 3$^{rd}$ level residential, though that is not the expected universal development pattern. The employment and service centers in Orono are very suburban in nature, equating to low Floor Area Ratios (FAR). The City anticipates development and redevelopment of its employment and service centers to continue that development pattern, given the City's goals toward open space, stormwater management, and relatively modest building scale. The City anticipates its commercial and mixed use areas to be driven by retail and service industries, with a corresponding FAR between 0.2 and 0.35.

   Properties in Area E of Table 3B-4 and Map 3B-4 are the primary candidates for mixed use

development. The City has identified 51 net acres of properties that could be developed or redeveloped in the next 20 years. Based on the height limit (30 feet) and the desire for commercial services to mix with residential, the City anticipates 70% of Area E to convert to residential uses, the remaining 30% to Commercial. Assuming a FAR ratio of 0.25 to 0.45, there is the potential of 418,000 and 731,000 sq ft of building area. Assuming up to a third of that being used for Commercial purposes, that nets between 125,400 and 219,500 sq ft of commercial space, in Area E.

| | Total Sq Ft (Total SF * FAR) | 1/3 of area for Commercial | Jobs, Assuming 1000 sqft per worker |
|---|---|---|---|
| FAR 0.25 | 522,720 | 172,498 | 172 |
| FAR 0.45 | 940,896 | 310,496 | 310 |

Applying the Commercial Building Energy Consumption Survey findings*, in particular the median square feet per worker, we can extrapolate a conservative estimate of 1000 sq ft per worker, based on likely retail, office or service employment, census region, climate, and number of floors. This yields a range of potential employment of between 172 and 310 workers in Area E alone.

* Commercial Building Energy Consumption Survey completed by the US Energy Information Administration, updated December, 2016

7. **Urban Medium High Density Residential (15-20 units per acre)**
This land use designation is reserved for specific sites, which based on their proximity to services and transportation corridors, are deemed appropriate for higher density projects, but not appropriate for the highest densities. Other factors that will be taken into consideration in determining the appropriate locations for this density will include proximity to and the need for other urban utilities and services in relation to the proposed use; transportation system impacts and site access; and the ability of the proposed use to meet City housing goals. Residential dwelling units are anticipated to be provided as 3-5 unit townhomes, apartments, condominiums, and senior housing structures, no higher than 30 feet in defined height.

8. **Urban High Density Residential (20-25 units per acre)**
This land use designation is reserved for specific sites, which based on their proximity to services and transportation corridors, are deemed appropriate for higher density projects. Other factors that will be taken into consideration in determining the appropriate locations for this density will include proximity to and the need for other urban utilities and services in relation to the proposed use; transportation system impacts and site access; and the ability of the proposed use to meet City housing goals. Residential dwelling units are anticipated to be provided as 4 unit townhomes, apartments, condominiums, and senior housing structures, no higher than 30 feet in defined height.

9. **Island Residential (1 unit per 5 acres)**
The Island residential is characterized by limited access, utilities, and municipal services for properties originally developed as seasonal cabins. The Land use category is intended to preserve this land use without encouraging additional subdivision. This area is envisioned for seasonal occupancy in single family detached structures.

10. **Commercial/ Office**

Commercial/ Office is the general land use describing 3 sub land use categories: Lakeshore Commercial, Navarre Commercial District, and Orono/ Long Lake Business District. Urban commercial development is limited to two areas which are provided with all the necessary urban services and facilities.

LAKESHORE COMMERCIAL Lakeshore Commercial, restricted to lake access and lake user service businesses, including marinas, are appropriate for a lakeside community and require a lakeshore location. Special performance standards are necessary to assure protection of the lake environment. Parking, utilities, lake/ Highway access, and pedestrian circulation must be considered in siting new Lake Shore Commercial Uses.

NAVARRE COMMERCIAL DISTRICT. See also Urban Medium High Density Residential/ Mixed Use. The major commercial center of Orono will continue to be Navarre. This area will provide opportunity for neighborhood retail and service businesses, plus professional offices. Accessory functions such as offices and living units or limited multi-family developments will be considered appropriate in or near the Navarre commercial area. The scale and type of retail uses in a pedestrian-friendly environment is the most important development parameter for the Navarre commercial area. The City will encourage redevelopment of individual commercial sites in Navarre to allow for an expanded range of neighborhood services and local small business opportunities.

The Navarre Commercial District extends along either side of Shoreline Drive from the intersection of County Roads 15 and 19 westward to the Orono-Spring Park border, and along both sides of Shadywood Road from Lyric Avenue to Lydiard Avenue. The commercial uses along these intersecting corridors are typically only one tier deep, with virtually all commercial properties abutting either Shoreline Drive or Shadywood Road. Additionally, the commercial properties are not continuous, with residential properties scattered among them, making for a somewhat fragmented business district that is spread out over a mile in length from end to end. Along these two corridors the second tier of development is typically residential.

Past City planning efforts for the Navarre area have identified a number of challenges to be addressed as Navarre redevelops in the years to come:

1. High traffic volumes and the existing traffic management infrastructure result in poor pedestrian accessibility. Pedestrians have limited options for crossing CR 15 or CR 19. The Park and Ride facility location and inflexibility of bus routes (partially due to the location and configuration of the P&R lot) requires that bus patrons cross CR 15 on at least one leg of their commute.

2. Parking availability is a limiting factor for expansion or redevelopment of existing businesses.

3. Beautification efforts are hindered by road width and right-of-way constraints as well as financial constraints.

4. Aging buildings are ripe for redevelopment yet provide low rental rates that allow local

businesses to survive and thrive, reducing the incentive to redevelop.

5. There is little architectural cohesiveness among the existing buildings.

6. Compatibility of certain business uses with the closely adjacent residential neighborhood can become an issue.

7. Desire to expand pedestrian connectivity to adjoining neighborhoods and to Dakota Rail Trail.

8. Introduction of higher density mixed use (residential and commercial) development to select sites identified in the Land Use Plan.

ORONO/LONG LAKE BUSINESS AREA

An additional commercial area is designated along Wayzata Boulevard where the availability of transportation and utilities as well as proximity to similar commercial developments in Orono and Long Lake, make commercial use appropriate.

Orono will coordinate its commercial development planning related to Wayzata Boulevard area with the City of Long Lake to ensure the Long Lake downtown area remains vital and viable, to focus retail development in a compact downtown retail area, and to prevent the extension of retail development west of Willow Drive in Orono.

The retail development in the Wayzata Boulevard area will be community or neighborhood scale rather than "big box" regional scale development. The types of retail uses will be those that focus on providing services to the residents and businesses of Long Lake and Orono, while also drawing from the reduced traffic stream on Wayzata Boulevard resulting from opening of the new Highway 12 corridor. However, the retail development is not to draw substantial traffic from beyond Orono.

The development plans for the Highway 12 area will encourage locally-owned and operated businesses that provide services to Orono and Long Lake residents. Additionally, the Highway 12 retail area will be a pedestrian-friendly area. This involves providing trails/sidewalks along the roadways providing access to the retail uses. It also involves providing public amenities that provide a sense of place and provide a gathering place for the public.

Parameters for commercial use of this area are as follows:

1. The area affected is property lying between Kelley Parkway and Wayzata Boulevard, west of Willow Drive and east of Old Crystal Bay Road.

2. Allowed uses in this area include professional offices, limited service uses, retail uses accessory to the office use, and senior and assisted living uses.

3. Access to all uses will be via Kelley Parkway. Direct access to Willow Drive, if allowed, are intended to be right-in/right-out only. There shall be no direct access points onto Wayzata Boulevard.

4. "Big box" retail uses will not be allowed within this area.

**9. Park/ Recreation/ Open Space**

Park, Recreation, and Open Space Land Use includes public and private parks and natural areas throughout the community. The recreational facilities identified on the Land Use Plan are principally large natural or open space areas which are compatible with their Rural Area location.

**10. Industrial**

This district provides space for industrial activities for companies that are able and willing to achieve superior standards of design and environmental protection. Industrial land uses should be restricted to areas abutting major transportation corridors and individually cited so as to minimum negative impacts on residential areas. Based on their heavy hardcover needs, industrial areas should be located further than 1,000 feet from lakes. The Metropolitan Council requires that communities provide a measurement of forecasted employment. Acceptable measures include floor area ratios, building footprint percentages or impervious surface percentages. Orono anticipates that new development in the Industrial land use will tend to result in FAR of 0.32 to 0.4. There is about 10 acres of vacant or underdeveloped industrially guided property. Applying the same methodology as outlined in the Mixed Use section:

| | Total Sq Ft (Total SF * FAR) | Jobs, Assuming 1500 sqft per warehouse worker |
|---|---|---|
| FAR 0.32 | 139,392 | 93 |
| FAR 0.40 | 174,240 | 116 |

The City can anticipate an additional 93-116 jobs upon the full buildout of the Industrial areas. These two areas, using the conservative estimates outlines, demonstrate Orono can accommodate employment growth projections.

**11. Major Highway and Railway Uses**

Identifies land occupied by federal or state highways and railway improvements.

## *NAVARRE AREA PLAN*

In 2018, the City completed the Navarre Area Plan (NAP) with the aid of a Planning Consultant, WSB and Associates. This planning process focused on the land range vision and land use goals for the Navarre area, and to inform the Comprehensive Plan, for this update. The proposed land uses shown on Map 3B-3 include the findings from the Navarre Area Plan. Map 3B-3a shows the Navarre area specifically.

The Navarre Planning Process employed a Planning Advisory Committee (PAC), consisting of 13 members of the Navarre area community, including business owners and operators and residents. The Planning Process included three PAC meetings, an open house in January, and a Joint Work session in April. Public comment was collected via the open house, work session, on-line surveys, and the use of a social media tool, Social Pinpoint. The full report, including the appendices detailing the comments received, and the market study, are attached in Appendix 3B-A of this chapter.

The NAP evaluated several factors influencing the changes in the Navarre neighborhood over the next 20

years, including the market, traffic and transportation. The goal of the PAC was to influence and guide this change toward a Navarre area that can serve as a pseudo "downtown" of Orono, while still respecting the core Orono values as a small, rural community.

A market study was completed by Maxfield and Associates, tested the land use assumptions made by the land use plan. The market study was used to adjust the planned land use map from the 2030 to the 2040 Plan.

Traffic and transportation issues are a major influence on the character and change in Navarre. In 2019, Hennepin County is expected to improve the intersection of County Roads 15 and 19 (Shoreline and Shadywood Road), though these improvements are not expected to increase capacity. Capacity challenges of this section of the community are discussed in the Transportation Chapter.

The findings of the Navarre Area Plan are highlighted below.

**Interaction with Lake Minnetonka**

- As part of any redevelopment proposals involving parcels on the south side of Shoreline Drive between Carman Street and Kelly Avenue, the City should work with developers to identify opportunity areas that allow for viewing, sitting, and walking near the lakeshore. Fishing or boating connections to Lake Minnetonka are not anticipated.

**Future Development**

- Cautiously consider allowing increased building heights and residential density in areas along Shoreline Drive and Shadywood Road (where appropriate) to increase pedestrian traffic and encourage additional retail development.
- Consider incorporating incentives into the zoning ordinance that allow for higher density in exchange for enhanced architectural features, underground parking, public amenities, plazas, open spaces, and recreation areas.
- Adopt architectural and design regulations where appropriate to require pedestrian scale design. Consider regulations for maximum building setbacks, minimum window coverage, location of parking facilities, architectural materials, façade articulation, and entryways.
- Review all permitted and conditional commercial uses within zoning districts along Shoreline Drive and Shadywood Road to ensure that the types of desired businesses are allowed in Navarre. Types of allowable uses should focus on small scale neighborhood goods and services and avoid those that do not have a large customer draw.
- Consider reduced parking requirements for businesses that provide bicycle parking.
- Explore acquiring additional property for providing shared parking and periodic public gatherings for Navarre businesses.
- Host a developer round table to discuss obstacles to development in Navarre. Be prepared to address those obstacles.
- Consider developing a façade improvement program to encourage the revitalization of neglected commercial buildings. Revolving loan funds may keep the money working within Navarre.

**Transportation Improvements**

- Work with Hennepin County on a plan for future improvements to Shoreline Drive and Shadywood Road that improves safety and mobility for pedestrians and cyclists. Consider eliminating some of the free right turns at the northwest, southwest, and southeast corners to help narrow the intersection, reduce speeds, and improve vehicle predictability. Check in with Hennepin County staff bimonthly and use the Navarre Small Area Plan PAC as the review committee for potential improvements.
- Explore options for adding pedestrian and streetscaping amenities with any roadway improvements such as wider sidewalks, decorative pavement, landscaping, benches, and other ornamental features.
- Meet with Hennepin County transportation staff to discuss potential improvements to alternate arterials that would relieve traffic pressure on Shoreline Drive and Shadywood Road through Navarre. Discuss options to reduce traffic volumes on Shoreline Drive and Shadywood Road.
- Consider plans for access and the impact of expected traffic volume on Shoreline Drive and Shadywood Road with any redevelopment along these roads. Work with Hennepin County on developing an access management plan for properties that may redevelop along these roadways.

**Shadywood Trail Connection**

- Continue to have discussions with Hennepin County and Three Rivers Park District regarding the trail connection along Shadywood Road to keep the process moving forward.
- Engage with impacted property owners early to identify necessary mitigation required.
- Conduct additional public engagement regarding the trail as part of the community engagement surrounding the intersection improvements.

**Community Events**

- Encourage the development of a community festival.
- Consider collaboration with nearby communities on an event that incorporates multiple destinations along the trail.
- Utilize the city-owned parking lot on the north side of Shoreline Drive and west of Shadywood Road as a possible location for hosting tents, bands, and vendors associated with an event.
- Should the block northwest of Shoreline Drive and Shadywood Lane (Maxfield Study Block 4) redevelop, that redevelop should include a space available for public gatherings such as an annual festival.
- Leverage an annual festival as an opportunity to do enhanced branding for Navarre.
- Explore opportunities for collaboration with the Mound farmers' market to organize a farmers' market along the Dakota Rail Trail in Navarre.
- Consider the formation of a Navarre Business Association.

**Tear Downs**

- Review development standards applicable to single-family homes in Navarre. Review to ensure that adequate controls are in place to ensure that new development is compatible with the existing character and scale of the neighborhood, while still encouraging the

redevelopment of blighted properties. Such standards could include requirements for floor area ratio, height, hardcover, architectural materials, landscaping, and accessory structures.

- Proactively address blighted properties through the City's code enforcement process so that existing homes are well maintained. Consider revisions to the City's code enforcement process or adopting fines if non-compliance is an issue.
- Review its demolition and construction regulations. If the regulation updates require addition administration and monitoring by City staff, consideration should be given to increasing the demolition permit fee commensurate with the addition staffing demand.

## ***WHATS CHANGED***

This update of the Comprehensive Plan introduces higher residential density along Kelley Parkway and Wayzata Boulevard, lowers density for the properties adjacent to the fire station on Willow, removes residential mixed use density along Shadywood, and introduces additional properties to potential mixed use development/ redevelopment along Shoreline in Navarre. These changes are all reflected on maps 3B-3a and 3B-3b.

## ***FUTURE DEVELOPMENT/ STAGED DEVELOPMENT***

The City does not intend to establish a staged growth plan, limiting a property owner from the use of their land, provided the development can be accomplished within the performance standards, policies and requirements of the Community Management Plan. The City anticipates its growth to occur in the same manner has been employed over the last three decades. The majority of subdivision based growth will occur via the splitting of larger lots into subdivisions of less than 6 new building sites. Small areas of the community are conducive to higher density. These projects have served to accommodate our aging community, and provide additional housing and neighborhood options not prevalent in Orono.

The City's new residential growth within the MUSA area is expected in one of 5 primary areas, depicted on Map 3B-4 Planned Development areas, and summarized in Table 3B-4, Predicted Growth in Sewered Areas. The table predicts growth over the next 2 decades and identifies the MUSA part and the Traffic Analysis Zone impacted. Assuming development at the minimum range, the city will meet its household growth projection for 2030 and 2040. The city also maintains opportunity for property owners to provide housing to meet affordability goals.

The Net Density for the sewered areas of Orono identified in Table 3B-4, is summarized for clarity on Table 3B-5. The763 units planned to be served by sanitary sewer services over the next 20 plus years yields a net density of 3.21 units per acre.

| Predicted Growth in Sewered Areas, Net Density Table 3B-4 (Amendments 1-6) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I |
| Name | Land Use Category | Net Residential Acres (NRA) | Lowest Guided Density | Predicted # of units (C x D) | 2021-2030 Growth (Households) | 2031-2040 Growth (Households) | MUSA Part | TAZ Zone |
| Area A | | | | | | | | |
| Dumas | Urban Medium Density/ Mixed Use (8-15 u/a) | 25.1 | 8 | 200.8 | | 200.8 | 32 | 921 |
| Eisinger Meadows | Urban Low (3-8 u/a) | 5 | 3 | 15 | 15 | | | |
| Eisinger Flats | Urban High (20-25 u/a) | 10 | 20 | 200 | 200 | | 50 | 921 |
| Area A Total | | 40.1 | | 415.8 | 215 | 200.8 | | |
| Area B | | | | | | | | |
| "St. Thomas Prop" | Urban Medium Density/ Mixed Use (8-15 u/a) | 3.69 | 8 | 29.52 | 29.52 | 0 | 10 | 922 |
| 2060 Wayzata | Urban Medium High (15-20 u/a) | 2.51 | 15 | 37.65 | 37.65 | | 10 | 923 |
| Area B Total | | 6.2 | | 67.17 | 67.17 | 0 | | |
| Area C, North Fire Station Area | | | | | | | | |
| Hwy 12 frontage | Urban Low **(3-8 u/a)** | 1.71 | 3 | 5.13 | | 5.13 | 34 | 929 |
| Garden Prop. | Urban Low **(3-8 u/a)** | 3.41 | 3 | 10.23 | | 10.23 | 34 | 929 |
| Glendale Drive | Urban Low **(3-8 u/a)** | 3.82 | 3 | 11.46 | | 11.46 | 34 | 929 |
| Area C Total | | 8.94 | | 26.82 | 0 | 26.82 | | |
| Area D (Sewer extension into large lot areas/ Lake protection) Urban Low Density | | | | | | | | |
| 690 Brown Rd | Urban **Estate** (0.5-2 Units /Acre) | 18 | 0.5 | 9 | | 9 | 40 | 927 |
| 740 Brown Rd | Urban **Estate** (0.5-2 Units /Acre) | 3.18 | 0.5 | 1.59 | | 1.59 | 40 | 927 |
| 3400 Fox | Urban **Estate** (0.5-2 Units /Acre) | 5.26 | 0.5 | 2 | | 2 | 31 | 954 |
| 3295 Fox | Urban **Estate** (0.5-2 Units /Acre) | 4.23 | 0.5 | 2 | | 2 | 31 | 931 |
| 3345 Fox | Urban **Estate** (0.5-2 Units /Acre) | 4.69 | 0.5 | 2 | | 2 | 31 | 931 |
| 3350 Fox | Urban **Estate** (0.5-2 Units /Acre) | 7.12 | 0.5 | 3 | | 3 | 31 | 954 |
| 3320 Fox | Urban **Estate** (0.5-2 Units /Acre) | 3.06 | 0.5 | 1 | | 1 | 31 | 954 |
| 3300 Fox | Urban **Estate** (0.5-2 Units /Acre) | 4.55 | 0.5 | 2 | | 2 | 31 | 954 |
| 3280 Fox | Urban **Estate** (0.5-2 Units /Acre) | 4.95 | 0.5 | 2 | | 2 | 31 | 954 |
| 3250 Fox | Urban **Estate** (0.5-2 Units /Acre) | 5.31 | 0.5 | 2 | | 2 | 31 | 954 |
| 3200 Fox | Urban **Estate** (0.5-2 Units /Acre) | 4.12 | 0.5 | 2 | | 2 | 31 | 954 |
| 3175 Fox | Urban **Estate** (0.5-2 Units /Acre) | 7.49 | 0.5 | 3 | | 3 | 31 | 954 |
| 3125 Fox | Urban **Estate** (0.5-2 Units /Acre) | 7.44 | 0.5 | 3 | | 3 | 31 | 954 |
| 825 Old Crystal Bay Road | Urban **Estate** (0.5-2 Units /Acre) | 17.61 | 0.5 | 8 | | 8 | 31 | 954 |
| 1700 Shoreline | Urban **Estate** (0.5-2 Units /Acre) | 20.14 | 0.5 | 10 | | 10 | 37 | 955 |
| 1100 Millston Rd | Urban **Estate** (0.5-2 Units /Acre) | 12.7 | 0.5 | 6 | | 6 | 37 | 955 |
| 1003 Wildhurst | Urban **Estate** (0.5-2 Units /Acre) | 10 | 0.5 | 4 | | 4 | 1 | 953 |
| 135 Orono Orchard Rd | Urban **Estate** (0.5-2 Units /Acre) | 13 | 0.5 | 6 | 6 | | 53 | 928 |
| 365 Old Crystal Bay Road | Urban **Estate** (0.5-2 Units /Acre) | 5.85 | 0.5 | 2 | | 2 | 54 | 931 |
| Area D Total | | 158.7 | | 70.59 | 6 | 64.59 | | |

| Predicted Growth in Sewered Areas, Net Density Table 3B-4 Continued (Amendments 1-6) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| A | B | C | D | E | F | G | H | I |
| Name | Land Use Category | Net Residential Acres (NRA) | Lowest Guided Density | Predicted # of units (C x D) | 2021-2030 Growth (Households) | 2031-2040 Growth (Households) | MUSA Part | TAZ Zone |
| Area E Navarre Area | | | | | | | | |
| 3880 Shoreline (Hennepin Cty) | Urban Medium/ Mixed Use (8-15 u/a) | 9.37 | 8 | 74.96 | | 74.96 | 1 | 958 |
| 3890 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.68 | 8 | 5.44 | | 5.44 | 1 | 958 |
| 3860 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.64 | 8 | 5.12 | | 5.12 | 1 | 958 |
| 3850 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.78 | 8 | 6.24 | | 6.24 | 1 | 958 |
| 3800 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.7 | 8 | 5.6 | | 5.6 | 1 | 958 |
| 3596 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.62 | 8 | 4.96 | | 4.96 | 1 | 958 |
| 2389 Blaine | Urban Medium/ Mixed Use (8-15 u/a) | 1.11 | 8 | 8.88 | | 8.88 | 1 | 958 |
| 3574 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.47 | 8 | 3.76 | | 3.76 | 1 | 958 |
| 3572 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.31 | 8 | 2.48 | | 2.48 | 1 | 958 |
| 3542 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.46 | 8 | 3.68 | | 3.68 | 1 | 958 |
| 3502 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.31 | 8 | 2.48 | | 2.48 | 1 | 958 |
| 3496 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.31 | 8 | 2.48 | | 2.48 | 1 | 958 |
| 3480 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.15 | 8 | 1.2 | | 1.2 | 1 | 958 |
| 3472 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.15 | 8 | 1.2 | | 1.2 | 1 | 958 |
| 3468 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.15 | 8 | 1.2 | | 1.2 | 1 | 958 |
| 3465 Lyric | Urban Medium/ Mixed Use (8-15 u/a) | 0.62 | 8 | 4.96 | | 4.96 | 1 | 958 |
| 3440 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 0.15 | 8 | 1.2 | | 1.2 | 1 | 958 |
| Forfiet Land | Urban Medium/ Mixed Use (8-15 u/a) | 0.15 | 8 | 1.2 | | 1.2 | 1 | 958 |
| Forfiet Land | Urban Medium/ Mixed Use (8-15 u/a) | 0.1 | 8 | 0.8 | | 0.8 | 1 | 958 |
| Parking Lot | Urban Medium/ Mixed Use (8-15 u/a) | 0.86 | 8 | 6.88 | | 6.88 | 1 | 958 |
| 2520 Shadywood | Urban Low Density (3-8 u/a) | 2.02 | 3 | 6.06 | 6.06 | | 1 | 956 |
| 3770 Shoreline | Urban Medium/ Mixed Use (8-15 u/a) | 4 | 8 | 32 | 32 | | 1 | 958 |
| Area E Total | | 24.11 | | 182.78 | 38.06 | 144.72 | | |
| **Planned Totals** | | **238.1** | | **763** | **326** | **437** | | |

| Table 3B-5 Net Density by Land Use (Amendments 1-6) | | | |
|---|---|---|---|
| **Planned Development Area** | | **Net Residential Acres (NRA)** | **# of units (NRA x lowest guided density)** |
| Urban Estate Residential (0.5-2 u/a) | | 158.8 | 70.5 |
| Urban Low Residential (3-8 u/a) | | 16.0 | 47.9 |
| Urban Medium High/ Mixed Use Residential (8-15 u/a) | | 50.9 | 407.0 |
| Urban Medium High (15-20 u/a) | | 2.5 | 37.7 |
| Urban High Density Residential (20-25 u/a) | | 10.0 | 200.0 |
| **Totals** | | **238.2** | **763.1** |
| **Net Density of Sewered Growth** | | | **3.2** |

This Net Density of Sewered Growth is consistent with the Emerging Suburban Edge designation requiring 3-5 units per acre.

63% of the land (and 6% of the number of households) identified for future sewered growth falls within Orono's Urban Low Density areas. Development of these areas typically follows a piecemeal pattern as individual properties split into 1-3 units, where lots can accommodate subdivision. 20% of the land (and 40% of the identified for future growth) is in the Navarre area; Due to the costs associated with redevelopment, including acquisition of multiple parcels, and the city's conservative view of public financial aid to private sector development, it is anticipated that this growth will be slow. The balance of the predicted sewered growth will occur on the remaining larger parcels where municipal services are available currently.

Table 3B-6 below illustrates that based on predicted development patterns, the City can meet its projected growth in the sewered areas.

| Table 3B-6 Planned Development in MUSA areas by Decade (Amendments 1-6) | | | | | | | |
|---|---|---|---|---|---|---|---|
| **Households** | | | | | | | |
| **Year** | **2010** | **2016** | **2020 Est.** | **2030 Est.** | **Change from 2016** | **2040 Est** | **Change from 2030** |
| Households (all city) | 2826 | 3037 | 3335 | 3,560 | 225 | 3,900 | 340 |
| Growth predicted (MUSA areas only) | | | | | 326 | | 437 |
| Surplus (Deficit) | | | | | 101 | | 97 |
| Source: Metropolitan Council System Statement, City Utility Accounts, Table 3B-4 | | | | | | | |

Based on the planned growth identified in Table 3B-4, there are no negative impacts to wastewater or transportation systems. At build out, additional water storage and/or conservation measures may be necessary in the Navarre area, as described in Chapter 4C of this Plan.

## ***EMPLOYMENT***

Employment levels in the City have grown slowly, and are expected to remain static over the next two decades, as shown in Figure 3B-1 below and Table 3B-1.

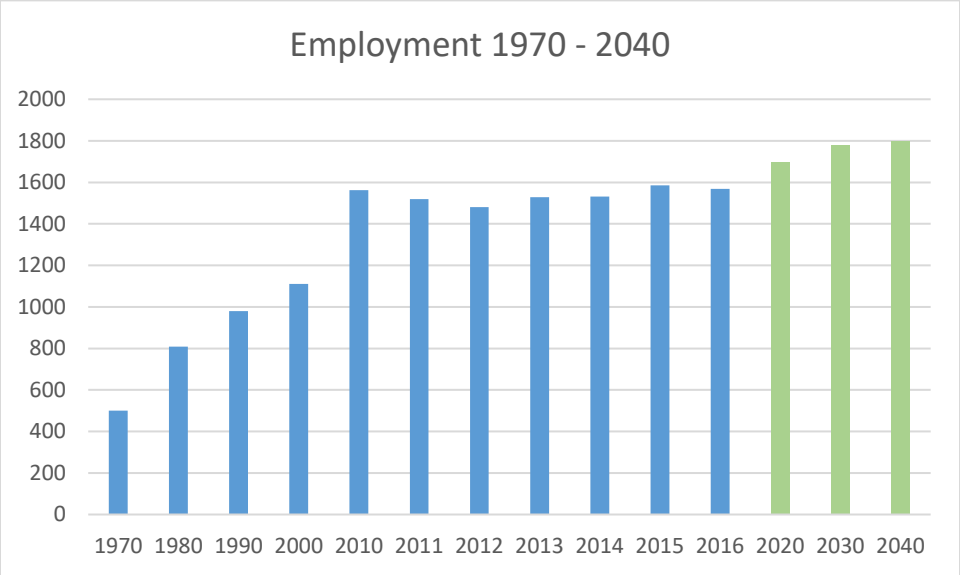
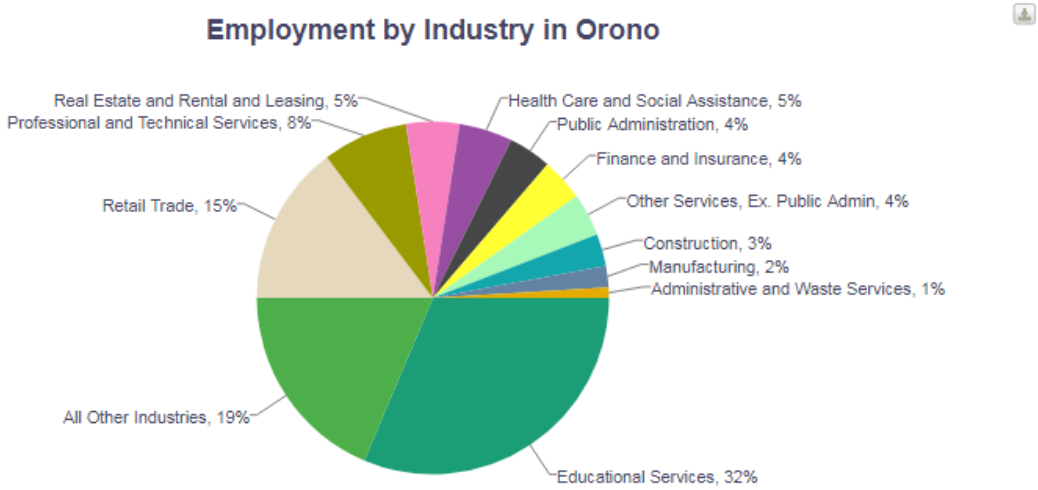



Figure 3B-1 Employment

As illustrated in Figure 3B-2, Education services are highest employer by industry at 32% of all jobs in Orono. Retail trade is the third highest employer at 15% of jobs. The City anticipates employment growth to occur as existing businesses evolve and grow. With the exception of new commercial areas along the west side of Shadywood, the City does not anticipate the expansion of commercial areas in the city.




Source: Quarterly Census of Employment and Wages, Minnesota Department of Employment and Economic Development, 2nd quarter data: Metropolitan Council staff have estimated some data points.

Figure 3B-2 Employment by Industry

## *HISTORIC SITE PRESERVATION PLAN*

Orono began to develop in the mid 19th Century, and many of the vestiges of early development are still present, in the form of standing buildings and structures, foundations, fence lines, roadway corridors, place names and other more subtle reminders of the past. Additionally, due to Orono's unique location on the shores of Lake Minnetonka, prehistoric native burial mound sites are known to have existed in various locations throughout the City.

Orono has long encouraged the preservation of historic sites and structures, but has never adopted a formal preservation plan. Because no formal plan has been in place, many historic properties have been lost or significantly changed as development and redevelopment progressed. The subdividing of many of the old lakeshore estate properties has typically left a stately mansion surrounded by modern high-end homes rather than formal grounds.

The City is fortunate that the West Hennepin Pioneer's Association Museum is located in neighboring Long Lake, with its members serving as an invaluable resource for helping to preserve the past.

### Historic Preservation Policies

1. In order to ensure that Orono's heritage is preserved, the City will consider development of a Historic Preservation Plan. The intent of such a plan would be to establish goals, policies and local regulations resulting in preservation of historic sites, buildings, place names, corridors, etc.

2. Orono will work with the State Historic Preservation Office (SHPO) in determining whether properties proposed for development contain historically significant resources which should be preserved.

# Defined Urban and Rural Areas

February 2019

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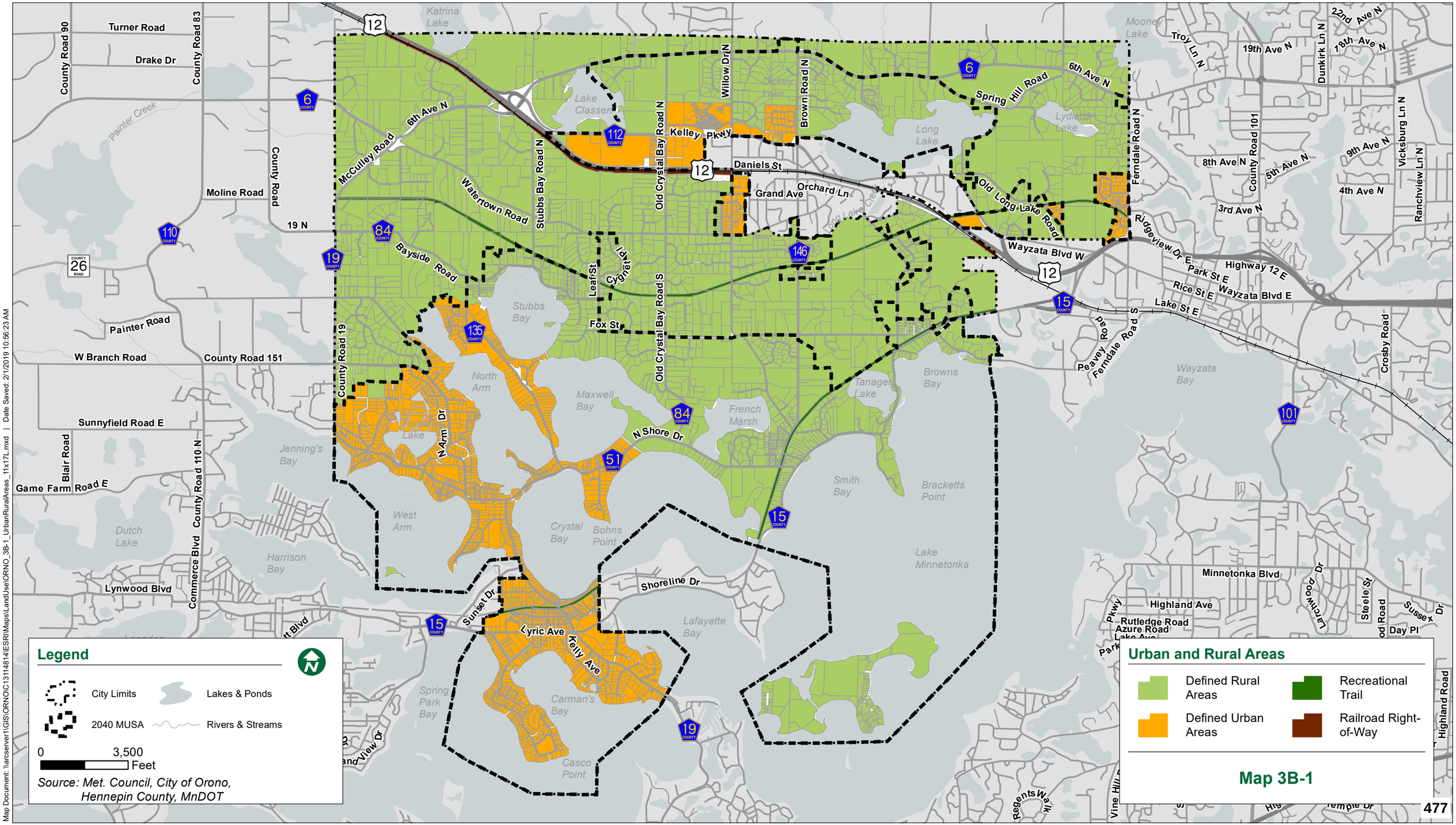
Real People. Real Solutions.




## Legend

City Limits
2040 MUSA
Lakes & Ponds
Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Urban and Rural Areas

- Defined Rural Areas
- Defined Urban Areas
- Recreational Trail
- Railroad Right-of-Way

**Map 3B-1**



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# 2040 Comprehensive Plan

Orono, MN

# Proposed Future Land Use

August 2021

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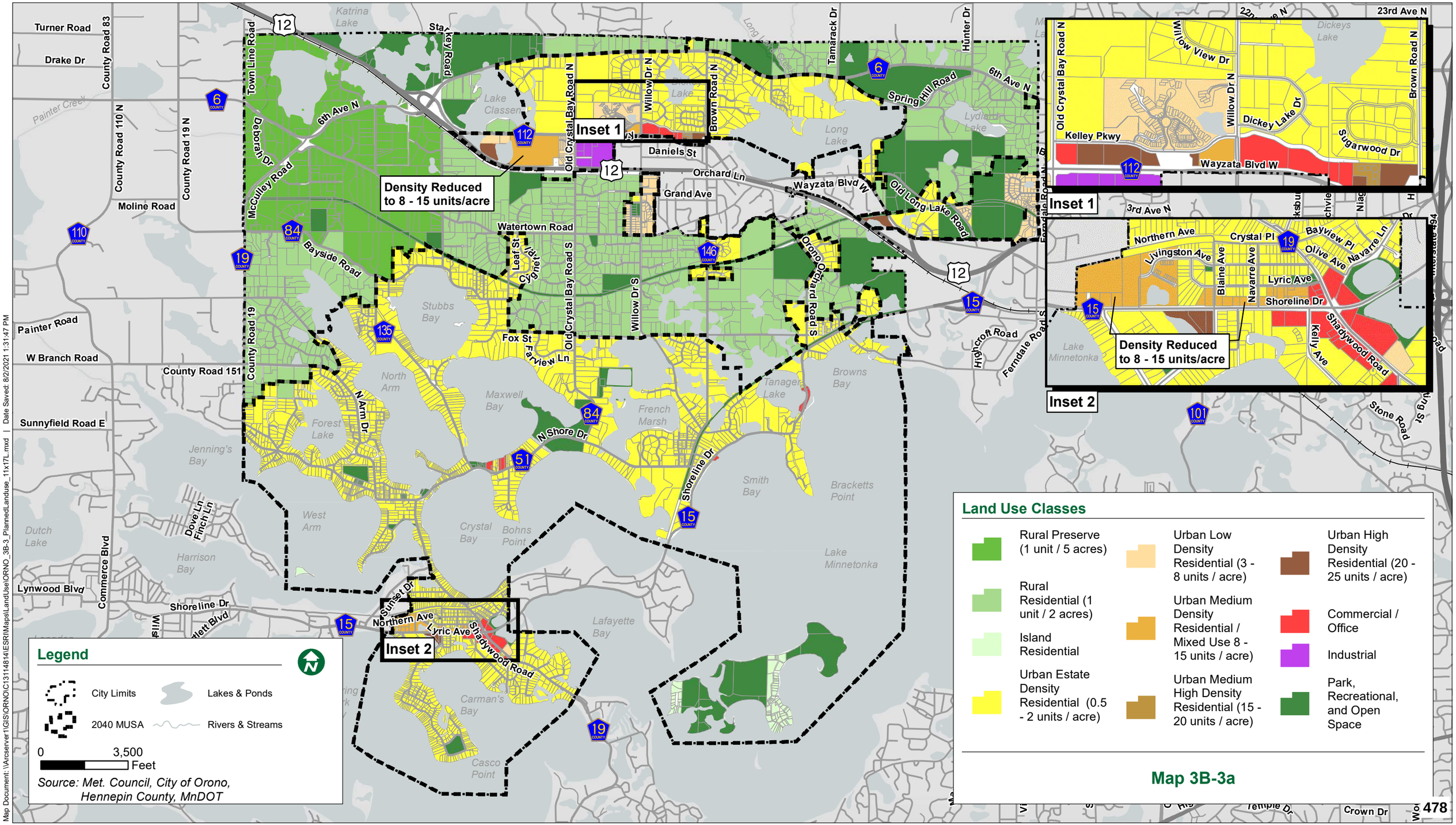


Map 3B-3a

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# Future Land Use - Navarre

August 2021

BOLTON & MENK
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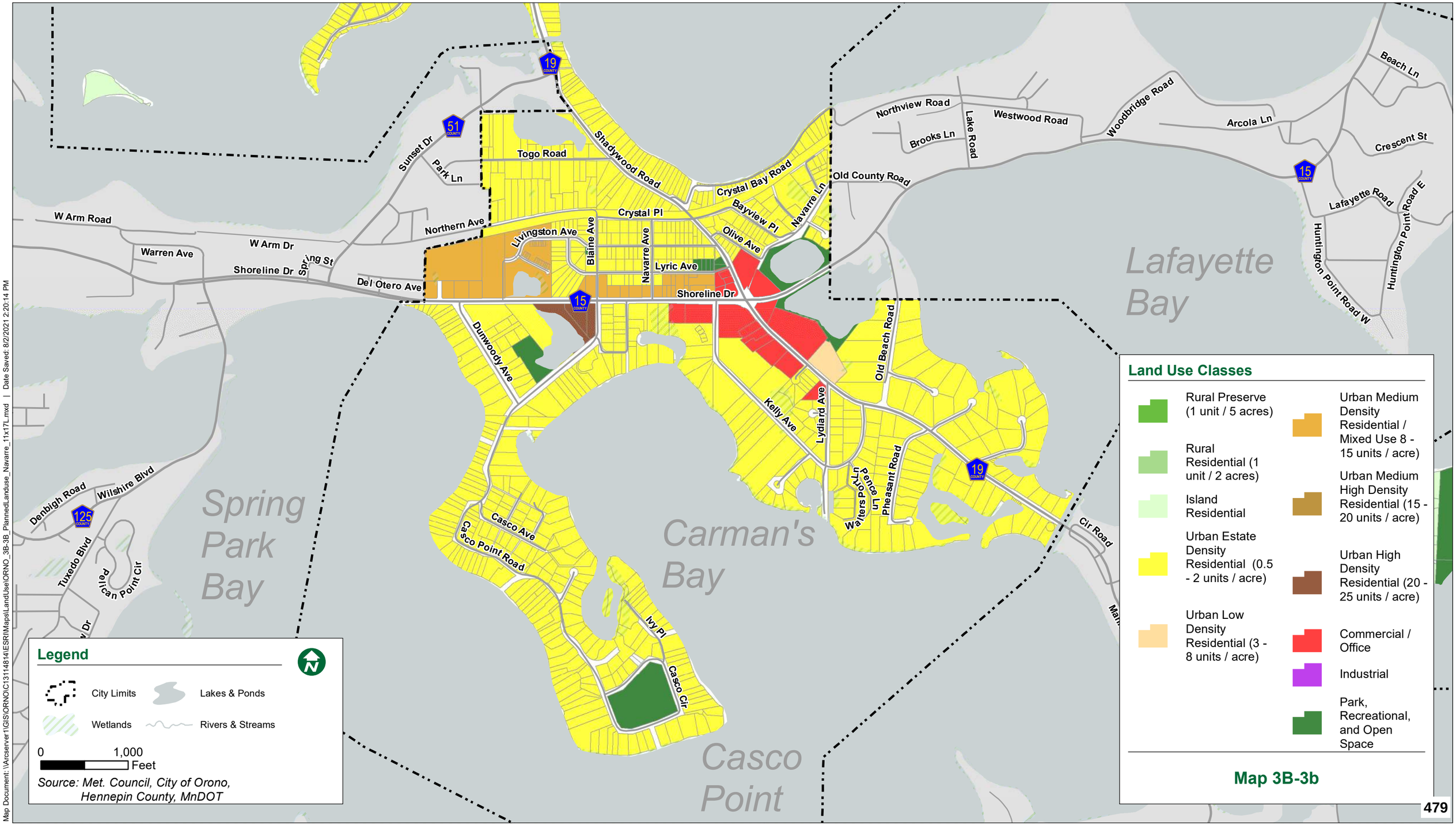


## Land Use Classes

- Rural Preserve (1 unit / 5 acres)
- Rural Residential (1 unit / 2 acres)
- Island Residential
- Urban Estate Density Residential (0.5 - 2 units / acre)
- Urban Low Density Residential (3 - 8 units / acre)
- Urban Medium Density Residential / Mixed Use 8 - 15 units / acre)
- Urban Medium High Density Residential (15 - 20 units / acre)
- Urban High Density Residential (20 - 25 units / acre)
- Commercial / Office
- Industrial
- Park, Recreational, and Open Space

## Legend

City Limits
Lakes & Ponds
Wetlands
Rivers & Streams

0 1,000 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

**Map 3B-3b**



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# 2040 Comprehensive Plan

Orono, MN

# Planned Development Sites

February 2019

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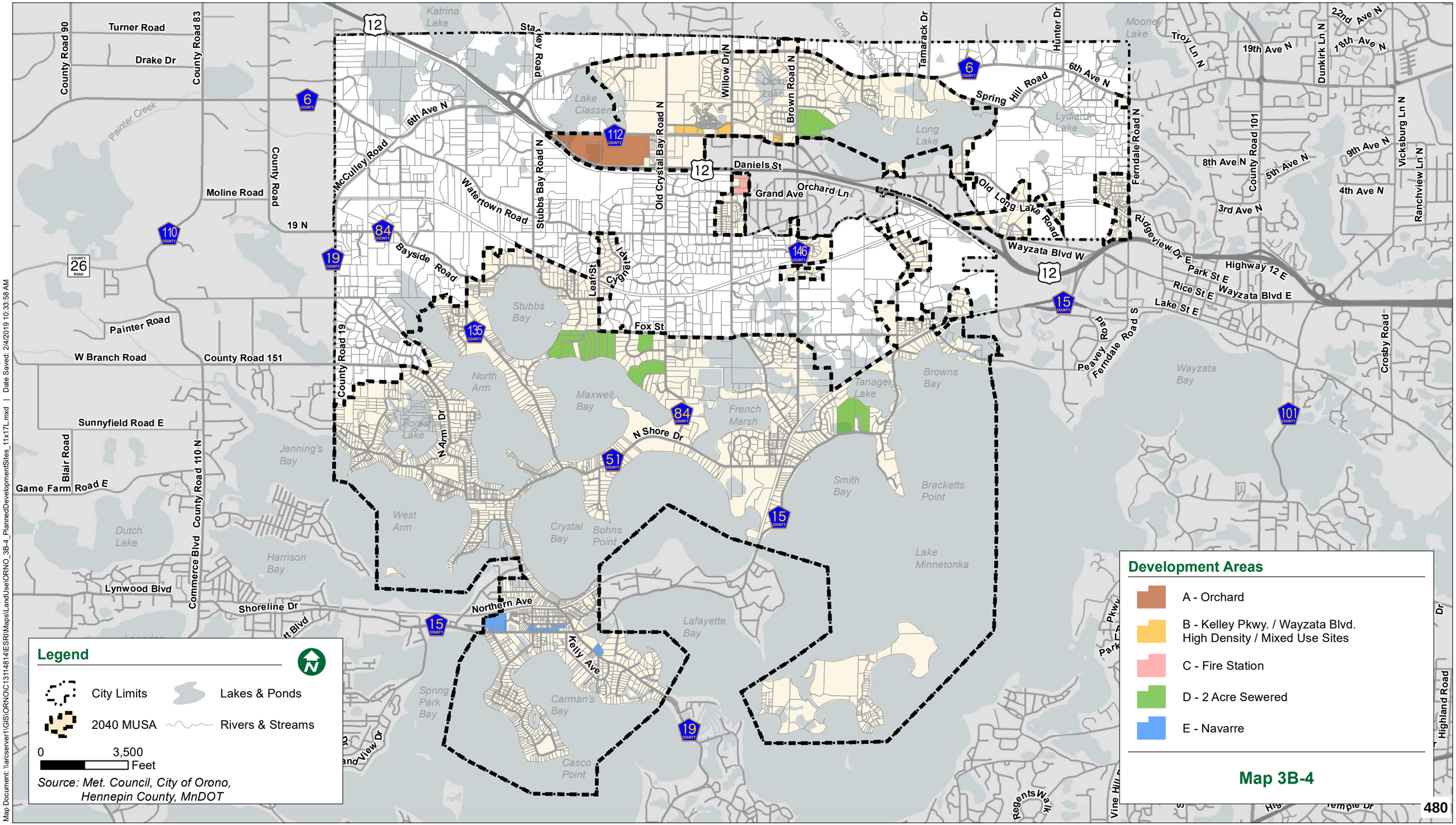
Real People. Real Solutions.




## Legend

- City Limits
- 2040 MUSA
- Lakes & Ponds
- Rivers & Streams

0 3,500 Feet

*Source: Met. Council, City of Orono, Hennepin County, MnDOT*

## Development Areas

- A - Orchard
- B - Kelley Pkwy. / Wayzata Blvd. High Density / Mixed Use Sites
- C - Fire Station
- D - 2 Acre Sewered
- E - Navarre

**Map 3B-4**

Map Document: \\arcserver1\GIS\ORNO\C13114814\ESRIMaps\LandUse\ORNO_3B-4_PlannedDevelopmentSites_11x17L.mxd | Date Saved: 2/4/2019 10:33:58 AM

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# Introduction

## Overview of Process

The Navarre Small Area Plan process began in the Fall of 2017. The Navarre area is generally located at the intersection of County Roads 19 (Shoreline Drive) and 15 (Shadywood Road). The study area (**Figure 1**) includes the residential area north of Shoreline Drive, south of Crystal Place, west of Bayview Place, east of the city limits, and the commercial areas along Shoreline and Shadywood Road. The Navarre area represents Orono's historic town center. A number of planning initiatives have been done for the area over the last twenty years, however, have not been fully acted on. The intent of this plan is to develop a vision for the area to guide policy and investment decisions.

The process began with a consultation with the City Council on Monday, September 11, 2017, to discuss the issues that would be evaluated as part of the plan, including:

- Explore expanding the Navarre neighborhood to touch and interact with Lake Minnetonka
- Develop strategies that can build on the success of the Dakota Rail Trail.
- Encourage trail users to be customers of the Navarre businesses.
- Examine and determine the commercial and multi-family markets for Navarre and the surrounding area to determine the appropriate development opportunities.
- Design guidelines, zoning tools, and/or regulations for the remodels and tear-downs of the existing single-family homes.
- Engage the residents, business owners, and elected officials to determine the feasibility of any redevelopment strategies.
- Create clear redevelopment strategies for implementation.

A Planning Advisory Committee (PAC) made up of fourteen Navarre area stakeholders was selected by the City Council to help guide the planning process around these topics. The first meeting of the PAC took place on Thursday, October 19, 2017 and included an overview of past planning studies and included a SWOT analysis discussion about the Navarre area. A community open house was held on Thursday, November 16, 2017 at the Long Lake Fire Station #2. The open house included several interactive activities aimed at getting feedback about what people want to see in Navarre and what they would like to change. An online engagement tool, Social Pinpoint, was also utilized to gather feedback. Social Pinpoint allowed participants to identify areas in the neighborhood where there are issues and to identify things they would like to see. Several survey questions were also collected using Social Pinpoint.

Following the community open house and gathering responses from Social Pinpoint, a PAC meeting was held on Thursday, January 11, 2018 to present the findings from the community engagement. The discussion focused on the seven key issues presented to the City Council and a direction forward on each issue was determined. The draft report of this small area plan was presented to the PAC on Thursday, March 8 and to the City Council and the Planning Commission during a joint Work Session on April 9, 2018. The Navarre Small Area Plan was incorporated as part of the 2040 Comprehensive Plan update, which was adopted on December 10, 2018.

## Previous Planning Studies

Several planning initiatives have been undertaken for the Navarre area in recent history. The following information provides an overview of those studies since 2006 to provide context for this small area plan process.

Navarre Moratorium / DSU Study – 2006

In July of 2005, the City Council imposed a moratorium on development applications for the Navarre commercial area with the intent to study the area and develop a framework to guide future investment. The City enlisted the services of Dahlgren, Shardlow, and Uban (DSU) to provide an analysis of the existing conditions and to conduct a workshop with business and property owners and surrounding neighbors to present an analysis of existing conditions, explain the City Council's objectives, and facilitate a discussion about the future of the area. The discussion included a SWOT analysis of the Navarre area. Approximately 75 members of the public were in attendance. A narrative summarizing the outcomes of the workshop identified three objectives for the area:

1. Preserve the small-town atmosphere of Navarre
2. Creation of community area around the lakeshore
3. Encourage a functional, thriving business district

DSU also conducted a joint City Council and Planning Commission meeting to present the workshop findings and assist the City in determining next steps for planning to support reinvestment in the Navarre area. This included a presentation of concept renderings depicting various improvements within the public right-of-way, including pedestrian amenities such as decorative sidewalk, seating areas, public art, enhanced landscaping, and signage. One concept explored the possibility of a roundabout at the intersection of Shoreline Drive and Shadywood Road.

Comprehensive Plan Discussion – 2010

In 2010, following the completion of the City's comprehensive plan, City staff and the City Council discussed options for updating the City's zoning map and ordinances for properties guided for higher density or mixed use. In the case of Navarre, the discussion included the possibility of developing a Mixed-Use Overlay District; however, this was never implemented.

Navarre Community Initiative – 2011

The Navarre Community Initiative (NCI) is a group formed in late 2011 made up of residents and business owners of the Navarre area intended to provide input to the City Council regarding potential improvements for the area. In addition, the intent of the group is to enhance Navarre's quality of life with special emphasis on public safety, beautification, and preservation. The group's work includes defining short-term and long-term projects and enlisting the support of a variety of community partners to assist in their implementation. A City staff member serves as a liaison to the committee for communication purposes between the committee and City Council.

In early 2012, NCI and the City sent a letter and questionnaire to Navarre businesses soliciting their thoughts and ideas for the area. Out of 58 questionnaires, only six responses were received.

In the spring of 2012, NCI presented a petition to Navarre residents, which read "Agreeing with concerns that current traffic conditions in Navarre are a clear and present danger, I support safety improvements that affect pedestrians, bikers and autos as the number one priority in our Navarre community." The petition received approximately 200 signatures

On July 16, 2012, members of NCI, city staff, and the Mayor conducted a walking tour of Navarre to identify issues and opportunities for the neighborhood.

Hennepin County / Community Design Group – Hennepin County Pedestrian Plan 2012

On August 28, 2012, a group meeting was held at the Freshwater Institute as part of a series of meetings conducted by Hennepin County and Community Design Group to gather local input regarding the Hennepin County pedestrian plan and to identify issues with safe walking along county roads. Approximately 50 participants attended the meeting. The outcome of this process

was a final plan that seeks to improve conditions for walking in Hennepin County so that it can become a safer, more convenient, and more enjoyable transportation choice.

City of Orono / Hennepin County – Street Light and Sidewalk Improvements – 2013

The City of Orono held a series of meetings to gather input from residents and businesses regarding future planning for Navarre. Meetings took place on February 11, April 8 and June 10, 2013 at Orono City Hall. Meetings included updates on recent activities regarding Navarre as well as review of street lighting options under consideration and discussion of sidewalk issues. Hennepin County Transportation Department staff were also involved in the process to discuss potential pedestrian and traffic safety improvements currently being studied. A survey was developed that allowed residents to comment on proposed street light alternatives. Following the public participation process, the City completed a streetlight and sidewalk improvement project in the summer of 2014. In addition, Hennepin County revised their striping plan for the crosswalks in response to recommendations from the City and residents at the June 10 meeting. There were approximately 40 attendees at the February 11 meeting, 35 attendees at the April 8 meeting, and 20 attendees at the June 10 meeting.

Blue Cross Blue Shield Minnesota – Navarre Demonstration Project 2014-2015

In collaboration with Blue Cross Blue Shield Minnesota, the City held two open house meetings with Navarre residents and businesses to develop ideas for a potential Active Living Demonstration project. Demonstration projects are short-term projects or pop-up events intended to show what potential permanent improvements could look like. The City held the meetings to gather feedback on what issues could be addressed as part of the demonstration project. Objectives identified as part of the meetings included traffic calming and making the area more pedestrian friendly. Ideas for projects included bringing in temporary boulevard trees, improving trail connections to businesses, and providing community gathering spaces. The City had planned to seek grant funds from Blue Cross Blue Shield Minnesota for the demonstration project; however, due to the timing of the resignation of the City's Community Development Director, a grant application was not completed by the City. The NCI agreed to go forward with a scaled back version of some of the projects.

*Navarre Study Area Map – Figure 1*



# Interaction with Lake Minnetonka

## Lake Interaction Opportunities

One of the key issues identified for this study was whether the Navarre neighborhood can be expanded to touch and interact with Lake Minnetonka. Few opportunities exist to physically connect with the lake based on the Navarre boundaries shown in **Figure 1**. The most logical location to provide any sort of connection would be along the south side of Shoreline Drive between Carman Street and Kelly Avenue. The PAC identified this area as possible opportunity to connect with Lake Minnetonka. Should any of these properties redevelop in the future, it is possible that development could occur in a way that provides views of the lake. Through the community engagement process, feedback was received that was overwhelmingly opposed to any active lake access, such as a public launch, in this location. Environmental concerns were cited as the primary reasons. Therefore, connections with the lake in this area should be passive and limited to views and opportunities to walk or sit near the lakeshore. If development is proposed in the future, the city should work with developers to create a public space near the lakeshore, where appropriate. When redevelopment opportunities along the Lake present themselves, the City should consider if those redevelopment could provide a possible connection for the Navarre neighborhood with Lake during the redevelopment.

# Future Development

## Market Study Considerations

Maxfield Research and Consulting, LLC was hired to conduct a market study to evaluate potential development opportunities in the Navarre area. The entire market study is attached to this report as **Appendix A**. The scope included a review of key demographic trends, assessment of current market conditions for housing, and analysis of the current commercial market in the Lake Minnetonka area.

The study identifies seven potential redevelopment areas and describes the potential land uses that could result. These land uses are an indication of what the market would support but do not

necessarily represent the desires of the neighborhood. The seven redevelopment areas are identified in **Figure 2**. The study finds that many of the properties could accommodate a variety of different land uses given their location, access, and surrounding land uses. Recommended uses based on market demand include retail, for-sale townhomes, for-sale condominiums, senior housing, and rental housing.

*Market Study Map – Figure 2*

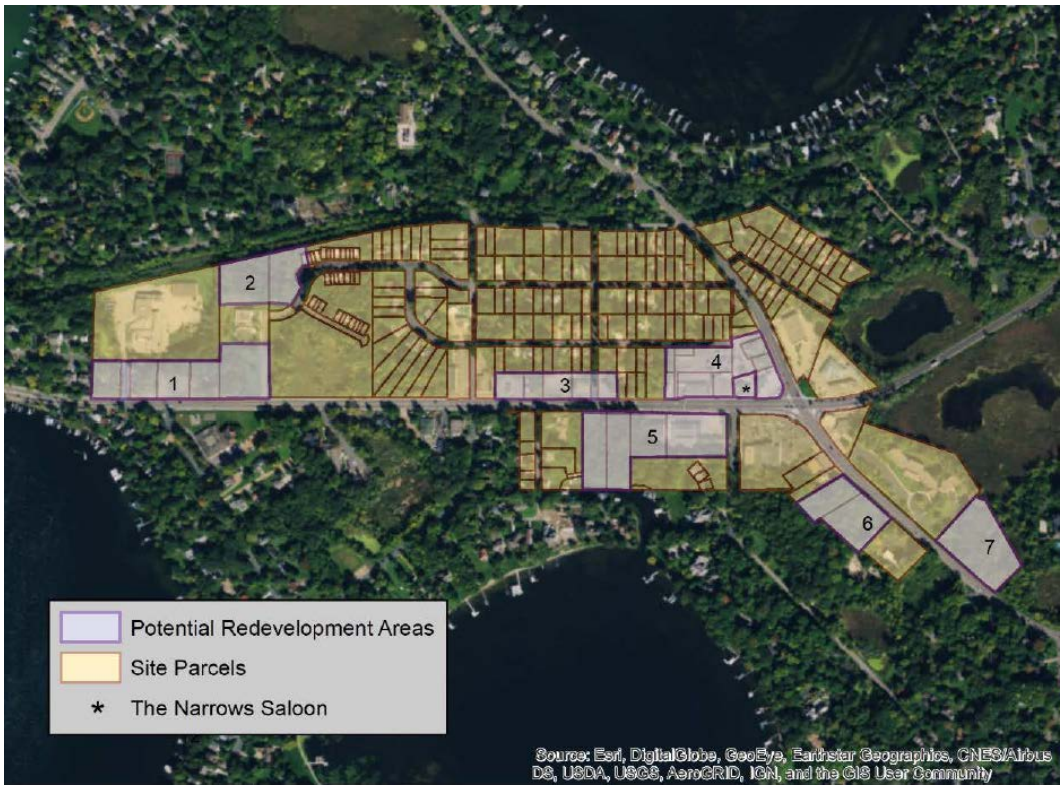



**TABLE 29**
**SUMMARY OF REDEVELOPMENT SITE POTENTIAL USES**

| Site Area | Combined Acres | Mid-rise Housing | TH Housing | Commercial Component | Retail Component | Mixed Use/ Multi-Use |
|---|---|---|---|---|---|---|
| 1 | 3.66 | x | | x | | |
| 2 | 4.58 | x | x | | | |
| 3 | 1.86 | x | | x | | |
| 4 | 2.60 | x | | x | x | x |
| 5 | 6.78 | x | | x | x | x |
| 6 | 2.22 | x | | x | | |
| 7 | 2.63 | x | | x | | x |

Source: Maxfield Research & Consulting, LLC

## Commercial Market

The market study finds that Navarre and the greater Lake Minnetonka area is under-retailed. An opportunity exists to attract additional retail businesses to the Navarre area along Shoreline Drive or Shadywood Road. The market study identifies Sites #4 and #5 (see Table 29 above) as being the most attractive to retail tenants. Attracting additional retail businesses to Navarre would also

be consistent with feedback received through the community engagement process, as the neighborhood desires a more robust commercial district with places to go. There is currently no market for speculative office development. Build-to-suit office development may occur for specific businesses but those decisions on site attractiveness would consider different factors than considered in this market study.

### Residential Market

In looking at the market-supported residential uses, for-sale townhomes would likely only be supported on Site #2, due to higher land costs on the other sites. Mid-rise for-sale condominiums and rental housing could likely be supported on all of the sites. Residential densities for multi-family housing in third-tier suburbs, such as Orono, are generally in the 25 to 40 units an acre range. Increasing the number of residential units near the intersection of Shoreline Drive and Shadywood Road would likely increase the potential for greater pedestrian traffic and provide support for additional retail businesses. Higher residential densities also help to justify public investment in pedestrian infrastructure such as enhanced pavement, lighting, benches, decorations and landscaping. Mixed responses were received regarding the desire for higher residential density in Navarre; however, there was overwhelming support for pedestrian improvements and additional retail businesses and places to go. Generally, higher residential densities are required to justify spending on pedestrian improvements and to attract additional retail businesses. Navarre will need to consider these tradeoffs carefully when reviewing future proposals for higher density residential housing.

### Other Uses Considered

The market for hospitality has been oversaturated and therefore a hotel is not likely to be supported at any of the identified locations. If lake access were available, a small boutique hotel could be a possibility in Navarre. Additionally, office uses will be very difficult to attract in Navarre as the office market cannot generate the rents needed to support new construction; however, an office building with a built-to-suit tenant would be an ideal use for several of the identified sites.

# Transportation Improvements

## Improvements to County Road Intersection

Overwhelmingly, residents of the Navarre area find the intersection of Shoreline Drive (County Rd 15) and Shadywood Road (County Rd 19) to be dangerous and unwelcoming to pedestrians and cyclists. Traffic volumes, speeds, and the orientation of the intersection all contribute to unfavorable pedestrian conditions.

Based on feedback received through the citizen engagement process, a priority for the neighborhood is to make the area more pedestrian friendly. With both of these roadways under the jurisdiction of Hennepin County, the City will need to work closely with the County to ensure that future improvements meet the needs of the neighborhood.

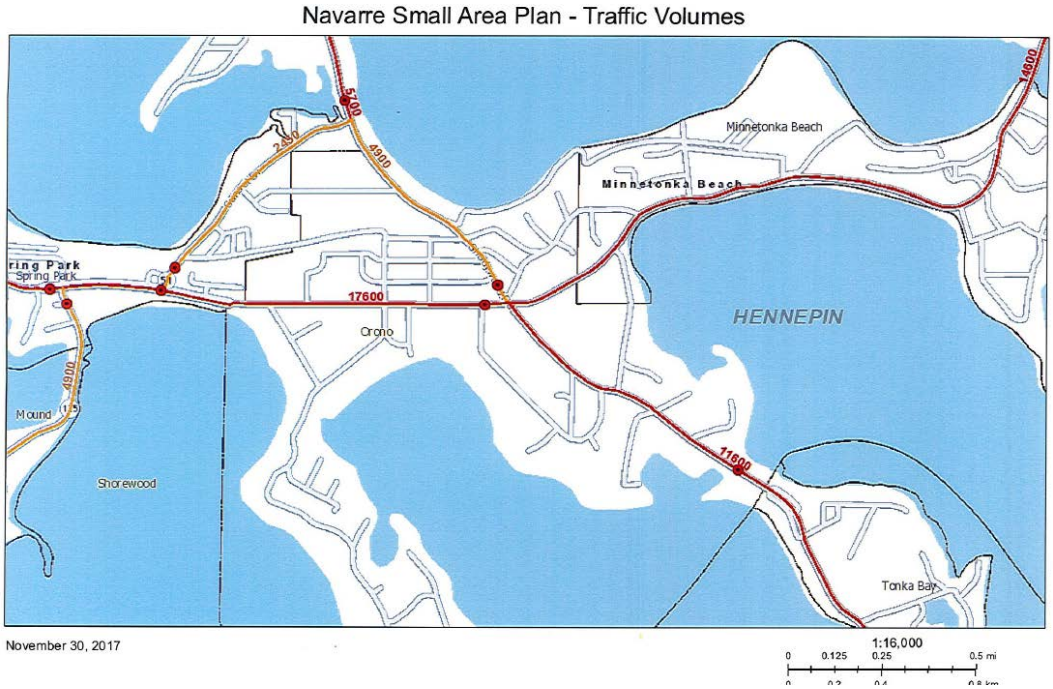
As part of any road improvement, an objective should be to reduce speeds of motor vehicles and consider all modes of transportation. This may be achieved with lane narrowing or other optical illusions to get drivers to respond accordingly. However, since the roadway is already at capacity in terms of traffic volumes, it is unlikely that improvements will aim to drastically reduce speeds.

Another objective should be to tighten up the intersection and make traffic movements for all modes of traffic more predictable. Eliminating some of the free-right turns at the northwest, southwest, and southeast corners of 15/19 intersection should be options that are considered, which would help narrow the intersection, reduce speeds, and improve vehicle predictability.

Hennepin County has obtained federal funding to make safety improvements to the intersection. The project is scheduled in the County's capital improvement plan for 2019. Hennepin County

may begin community outreach in 2018. In addition to broader community engagement, utilizing the PAC from this small area plan as a focus group could provide the County a good opportunity for enhanced local input.

*Traffic Volumes Map – Figure 3*




## Arterial Capacity

The segments of Shoreline Drive and Shadywood Road within the Navarre area would be classified as three lane undivided roadways with a capacity of 15,000 to 17,000 vehicles per day. Current and projected traffic volumes are consistent with that of a four-lane undivided roadway, as shown in **Figure 4**. The objective of the neighborhood to enhance pedestrian and bicycle mobility is not consistent with a common transportation goal to move as many vehicles through the area as quickly as possible. This plan supports improvements to the intersection that improve safety for pedestrians and cyclists while still reasonably accommodating vehicle traffic. The City should continue to work with Hennepin County on a plan that achieves safety improvements for pedestrians and cyclists, while also exploring improvements to other arterials in the area that could relieve some of the traffic pressure through Navarre.

Figure 4 - Planning Level Urban Roadway Capacities

| Facility Type | | Daily Two-way Volume (vehicles) | | Shoreline Drive (County Road 15) | |
|---|---|---|---|---|---|
| | | Lower Threshold | Higher Threshold | Current Traffic Level | 2030 Traffic Forecast |
| Arterials | Two lane undivided | 10,000 | 12,000 | N/A | N/A |
| | Two lane divided or Three lane undivided | 15,000 | 17,000 | 17,800 | N/A |
| | Four lane undivided | 18,000 | 22,000 | | 18,100 |

# Trail to Businesses Connection

## Shadywood Trail Connection

The Dakota Rail Trail is a valuable recreation and transportation asset to the Navarre Community, spanning 13 miles through the communities of St. Bonifacius, Minnetrista, Mound, Spring Park, Minnetonka Beach, Orono, and Wayzata. As a highly-used bike and walking trail, an opportunity exists to connect trail users to the Navarre area. Presently, there is not an ideal physical connection to draw people from the trail towards the businesses and the park. At the time of this report, Hennepin County, Three Rivers Park District, and the City of Orono have discussed an unformalized agreement to fund a trail connection south of the trail along Shadywood Road to the park. This connection was also well supported throughout the community engagement process. The implementation of this trail connection should be a priority for Navarre. Additional analysis will need to be done to identify the necessary mitigation required to impacted property owners. Additional community engagement should also be done regarding the trail connection and could be done concurrently with the engagement surrounding the intersection improvements. The City of Orono should continue to have discussions with Hennepin County and Three Rivers Park District regarding the trail connection to keep the process moving forward.

# Community Events

Through the community engagement process, it was found that there is a desire to create a sense of place and enhanced sense of community. One of the ways this could be achieved is through community events. Through the community engagement process, people responded favorably to the idea of an annual festival in Navarre. An annual festival would bring people to the area and create an awareness of what Navarre is. The community engagement process also revealed a desire to see enhanced branding for Navarre. The city-owned parking lot on the north side of Shoreline Drive and west of Shadywood Road provides a centralized location and public open space for an event. The enhancement of this public space to accommodate uses in addition to parking should be explored. An event could be centered around the Dakota Rail Trail and include some kind of race or walkathon. An event could be coordinated in collaboration with nearby communities and feature different attractions along the trail. In addition to an annual event, Navarre could host a regular farmers' market in collaboration with Mound, which currently hosts a farmers' market along the trail.

The Navarre Community Initiative had developed a community event as late at 2016 which was well received. Any community event will require continued leadership from those within the community, most likely in the form of volunteer residents and area stakeholders.

Community partners should consider the formation of a 501(c)3 organization should be explored for the purpose of managing an annual festival. Partnerships with the City of Orono, Hennepin County, and Three Rivers Park District could be beneficial in carrying on a successful ongoing festival. With a 501(c)3 organization, the public or agencies may donate resources or in-kind services to assist in the cost of any event, such as police or public works assistance.

# Existing Single-Family Housing

In highly desirable areas, including the Navarre community, existing single-family homes are more frequently torn down to reconstruct newer single-family homes. In some cases, this is beneficial, as blighted properties are removed and larger homes bring in increased property value and young families. In other cases, there may be issues, such as new development being inconsistent with the existing neighborhood character and disruption during the construction. Navarre has already experienced some signs of this development pressure. As such, outreach was done regarding this topic as part of the small area plan process. Generally, people responded that their concern surrounding the tear down and rebuild of single family homes in the area is low to moderate. The top two issues identified for which there is a moderate level of concern include preservation of existing neighborhood character and the height of new development. The City should review development standards applicable to single family homes in Navarre and make sure that adequate controls are in place to ensure that new development is compatible with the existing character and scale of the neighborhood, while still encouraging redevelopment of blighted properties to occur. A proactive approach to code enforcement and property maintenance should also be taken to address properties that are deteriorating and detracting from the neighborhood.

# Implementation

## Interaction with Lake Minnetonka

- As part of any redevelopment proposals involving parcels on the south side of Shoreline Drive between Carman Street and Kelly Avenue, work with developers to identify opportunity areas that allow for viewing, sitting, and walking near the lakeshore. Fishing or boating connections to Lake Minnetonka are not anticipated.

## Future Development

- Consider allowing increased building heights and residential density in areas along Shoreline Drive and Shadywood Road (where appropriate) to increase pedestrian traffic and encourage additional retail development.
- Consider incorporating incentives into the zoning ordinance that allow for higher density in exchange for enhanced architectural features, underground parking, public amenities, plazas, open spaces, and recreation areas.
- Adopt architectural and design regulations where appropriate to require pedestrian scale design. Consider regulations for maximum building setbacks, minimum window coverage, location of parking facilities, architectural materials, façade articulation, and entryways.
- Review all permitted and conditional commercial uses within zoning districts along Shoreline Drive and Shadywood Road to ensure that the types of desired businesses are allowed in Navarre. Types of allowable uses should focus on small scale neighborhood goods and services and avoid those that do not have a large customer draw.
- Consider reduced parking requirements for businesses that provide bicycle parking.

- Explore acquiring additional property for providing shared parking and periodic public gatherings for Navarre businesses.
- Host a developer round table to discuss obstacles to development in Navarre. Be prepared to address those obstacles.
- Consider developing a façade improvement program to encourage the revitalization of neglected commercial buildings. Revolving loan funds may keep the money working within Navarre.

## Transportation Improvements

- Work with Hennepin County on a plan for future improvements to Shoreline Drive and Shadywood Road that improves safety and mobility for pedestrians and cyclists. Consider eliminating some of the free right turns at the northwest, southwest, and southeast corners to help narrow the intersection, reduce speeds, and improve vehicle predictability. Check in with Hennepin County staff bimonthly and use the Navarre Small Area Plan PAC as the review committee for potential improvements.
- Explore options for adding pedestrian and streetscaping amenities with any roadway improvements such as wider sidewalks, decorative pavement, landscaping, benches, and other ornamental features.
- Meet with Hennepin County transportation staff to discuss potential improvements to alternate arterials that would relieve traffic pressure on Shoreline Drive and Shadywood Road through Navarre. Discuss options to reduce traffic volumes on Shoreline Drive and Shadywood Road.
- Consider plans for access and the impact of expected traffic volume on Shoreline Drive and Shadywood Road with any redevelopment along these roads. Work with Hennepin County on developing an access management plan for properties that may redevelop along these roadways.

## Shadywood Trail Connection

- Continue to have discussions with Hennepin County and Three Rivers Park District regarding the trail connection along Shadywood Road to keep the process moving forward.
- Engage with impacted property owners early to identify necessary mitigation required.
- Conduct additional public engagement regarding the trail as part of the community engagement surrounding the intersection improvements.

## Community Events

- Encourage the development of a community festival. Community partners should consider forming a 501(c)3 organization to assist in fundraising and administration of a community festival.
- Consider collaboration with nearby communities on an event that incorporates multiple destinations along the trail.
- Utilize the city-owned parking lot on the north side of Shoreline Drive and west of Shadywood Road as a possible location for hosting tents, bands, and vendors associated with an event.
- Should the block northwest of Shoreline Drive and Shadywood Lane (Maxfield Study Block 4) redevelop, that redevelop should include a space available for public gatherings such as an annual festival.
- Leverage an annual festival as an opportunity to do enhanced branding for Navarre.
- Explore opportunities for collaboration with the Mound farmers' market to organize a farmers' market along the Dakota Rail Trail in Navarre.
- Consider the formation of a Navarre Business Association.

## Tear Downs

- Review development standards applicable to single-family homes in Navarre. Review to ensure that adequate controls are in place to ensure that new development is compatible with the existing character and scale of the neighborhood, while still encouraging the redevelopment of blighted properties. Such standards could include requirements for floor area ratio, height, hardcover, architectural materials, landscaping, and accessory structures.
- Proactively address blighted properties through the City's code enforcement process so that existing homes are well maintained. Consider revisions to the City's code enforcement process or adopting fines if non-compliance is an issue.
- Review its demolition and construction regulations. If the regulation updates require addition administration and monitoring by City staff, consideration should be given to increasing the demolition permit fee commensurate with the addition staffing demand.

**LIST OF APPENDICES**

Market Study

Public Engagement

Traffic Information

December 19, 2017

## MEMORANDUM

TO: Mr. Eric Zweber
**WSB & Associates**

FROM: Mr. Matt Mullins & Ms. Hannah Bonestroo
**Maxfield Research and Consulting, LLC**.

RE: Initial Market Assessment for the Navarre Small Area Plan in Orono, Minnesota

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## Introduction/Purpose and Scope of Research

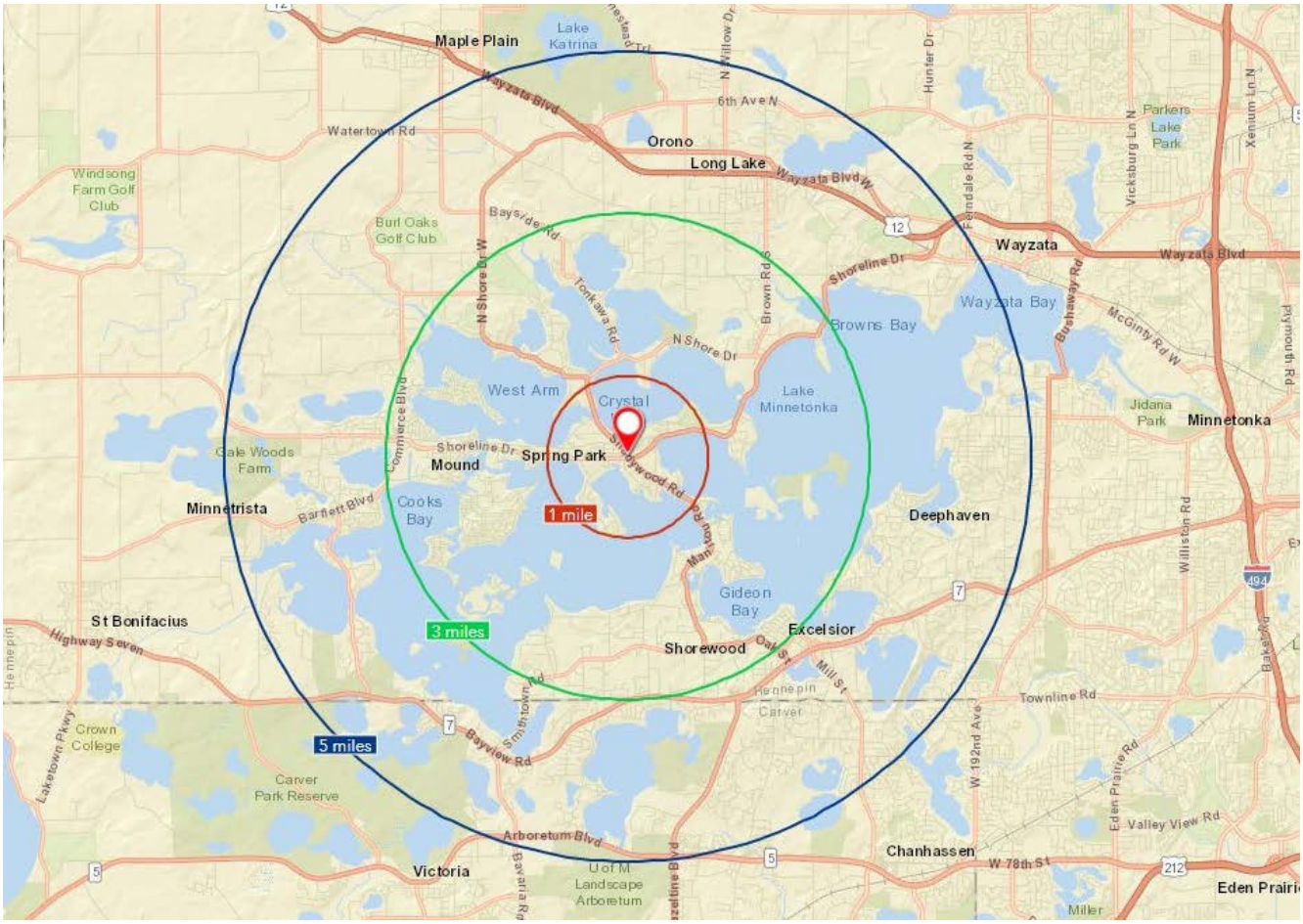
This memorandum contains an initial market assessment to evaluate the potential development opportunities in Navarre neighborhood located in Orono, Minnesota. The scope of the study includes a review of key demographic trends, an assessment of current market conditions for housing, and analysis of the current commercial market in the Lake Minnetonka area.

The methodology used to calculate demand in this memorandum is proprietary to Maxfield Research but is consistent with methodologies used by analysts throughout the housing industry. This report includes primary and secondary research. Primary research includes interviews with rental property and self-storage managers gathering data on existing and proposed rental and self-storage properties. Secondary research is credited to the source when used, and is usually data from the U.S. Census or regional planning agencies. Secondary research is always used as a basis for analysis, and is carefully reviewed in light of other factors that may impact projections such as residential building permit data or migration trends.

## Navarre Trade Area

Navarre is located within the City of Orono. While Orono only has a population of just over 8,000 people (Esri 2017), approximately 56,000 other people (Esri 2017) live within a 5-mile radius of the site set from the intersection of Shadywood Road and Shoreline Drive. Notable communities within a five-mile radius of Navarre include: Wayzata, Mound, Shorewood, Spring Park, Long Lake, Maple Plain, Medina, Excelsior, Minnetrista, and Chanhassen. Downtown Minneapolis is only a 20-30-minute drive from Navarre via Highway 12/394. The neighborhood is located along Shoreline Drive which is utilized by around 17,600 vehicles each day (MnDOT).

**Navarre 1-Mile, 3-Mile, & 5-Mile Radius**



## Neighborhood Analysis

Navarre is a community of 342 people (Esri 2017) that covers just over 100 acres in southern Orono, MN. Orono, located in Hennepin County, has a population of 8,179 (Esri 2017). Situated on Shoreline Drive, the subject area is almost completely surrounded by Lake Minnetonka, the ninth largest lake in Minnesota and a popular attraction for boaters, sailors, and fishermen. The site is bordered to its West by Spring Park, to its South by Tonka Beach, and is about 18.5 miles away from Downtown Minneapolis.

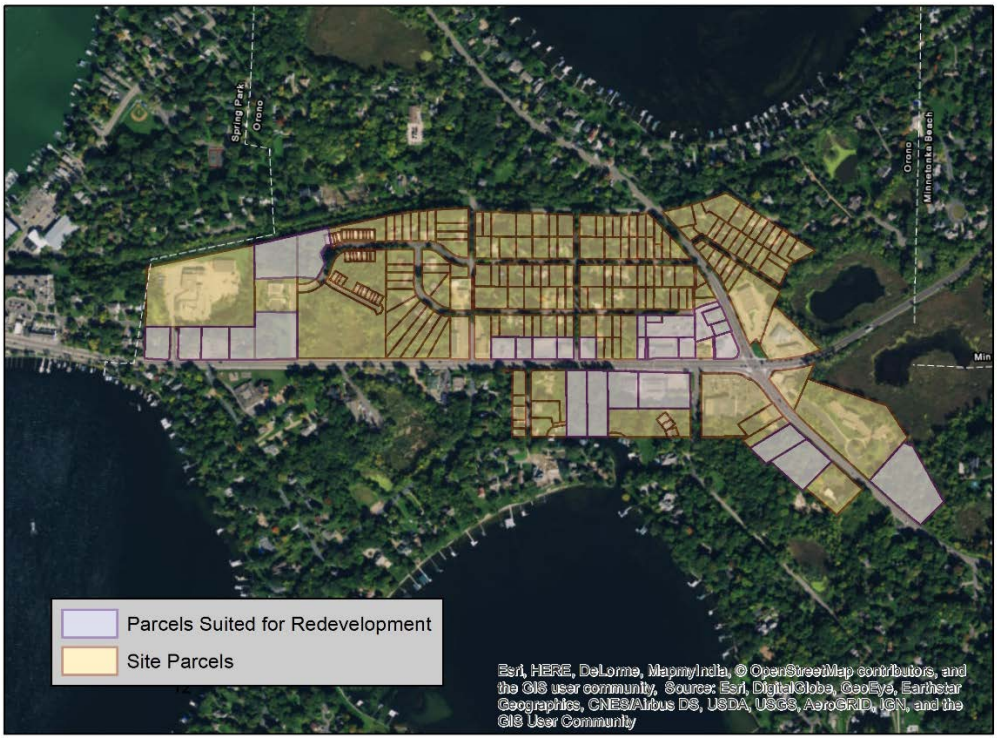
The site area consists of 230 parcels comprising of a variety of uses. Residential land uses are by far the most common type of use present representing roughly 60% of parcels and 38% of acres. There are 24 vacant parcels in Navarre of various land uses. Of special interest are 27 parcels, mostly along Shoreline Drive, which are particularly suited for redevelopment. The following table, maps, and photos depict the site location and the surrounding land uses.

**TABLE 1**
**PARCEL SUMMARY**
**NAVARRE**

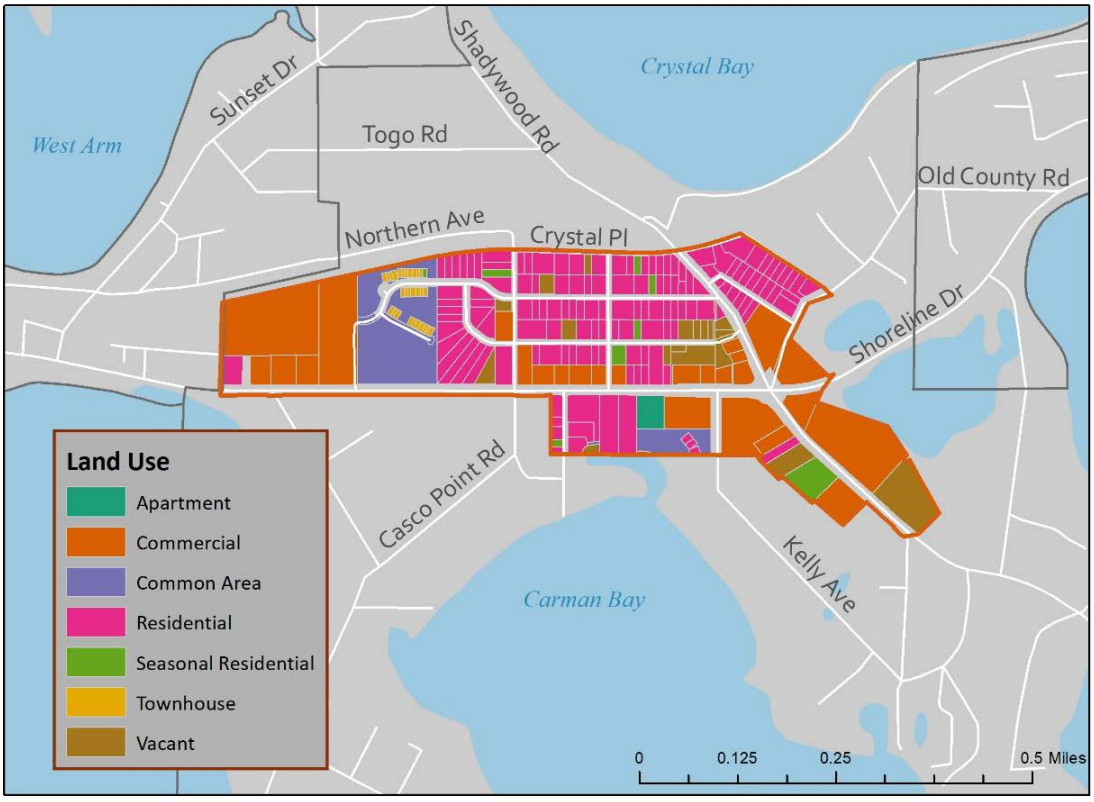
| Land Use | Parcels | Acres | Estimated Market Values | | |
|---|---|---|---|---|---|
| | | | Land | Building | Total |
| Apartments | 1 | 0.96 | $285,000 | $510,000 | $795,000 |
| Commerical | 26 | 33.60 | $5,654,000 | $7,441,000 | $13,095,000 |
| Common Area | 6 | 10.39 | $0 | $0 | $0 |
| Residential | 137 | 38.80 | $12,703,000 | $16,571,000 | $29,274,000 |
| Seasonal- Residential | 8 | 2.50 | $554,000 | $801,000 | $1,355,000 |
| Townhouse | 28 | 1.04 | $672,000 | $4,143,000 | $4,815,000 |
| Vacant | 24 | 14.01 | $663,000 | $0 | $663,000 |
| **Subtotal** | **230** | **101.3** | **$20,531,000** | **$29,466,000** | **$49,997,000** |

Source: Realist Tax, Maxfield Research & Consulting LLC

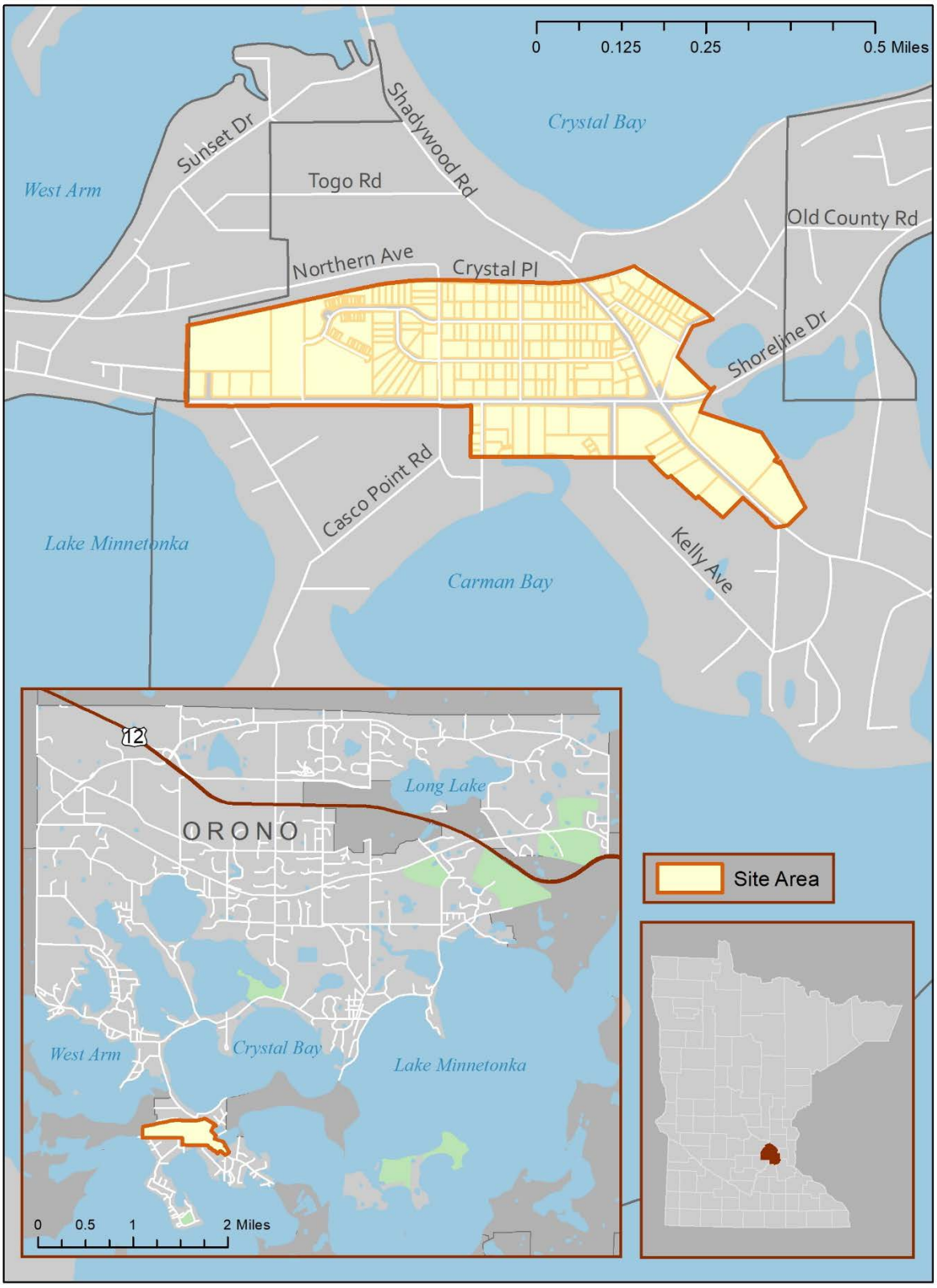
## Navarre Site Parcels



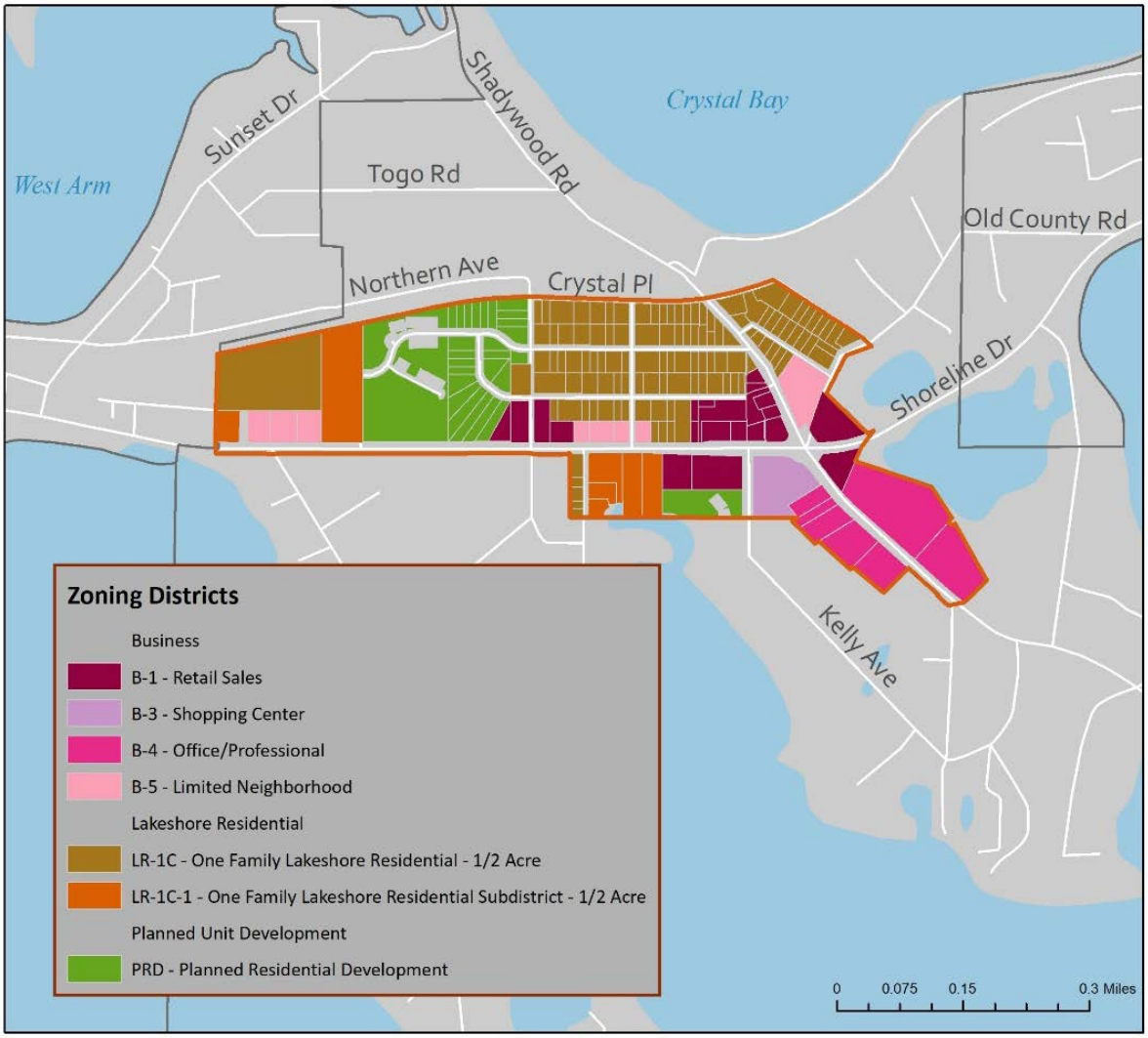

## Navarre Land Use by Parcel



## Navarre Site Location



**Navarre Zoning, 2017**




## Traffic Counts

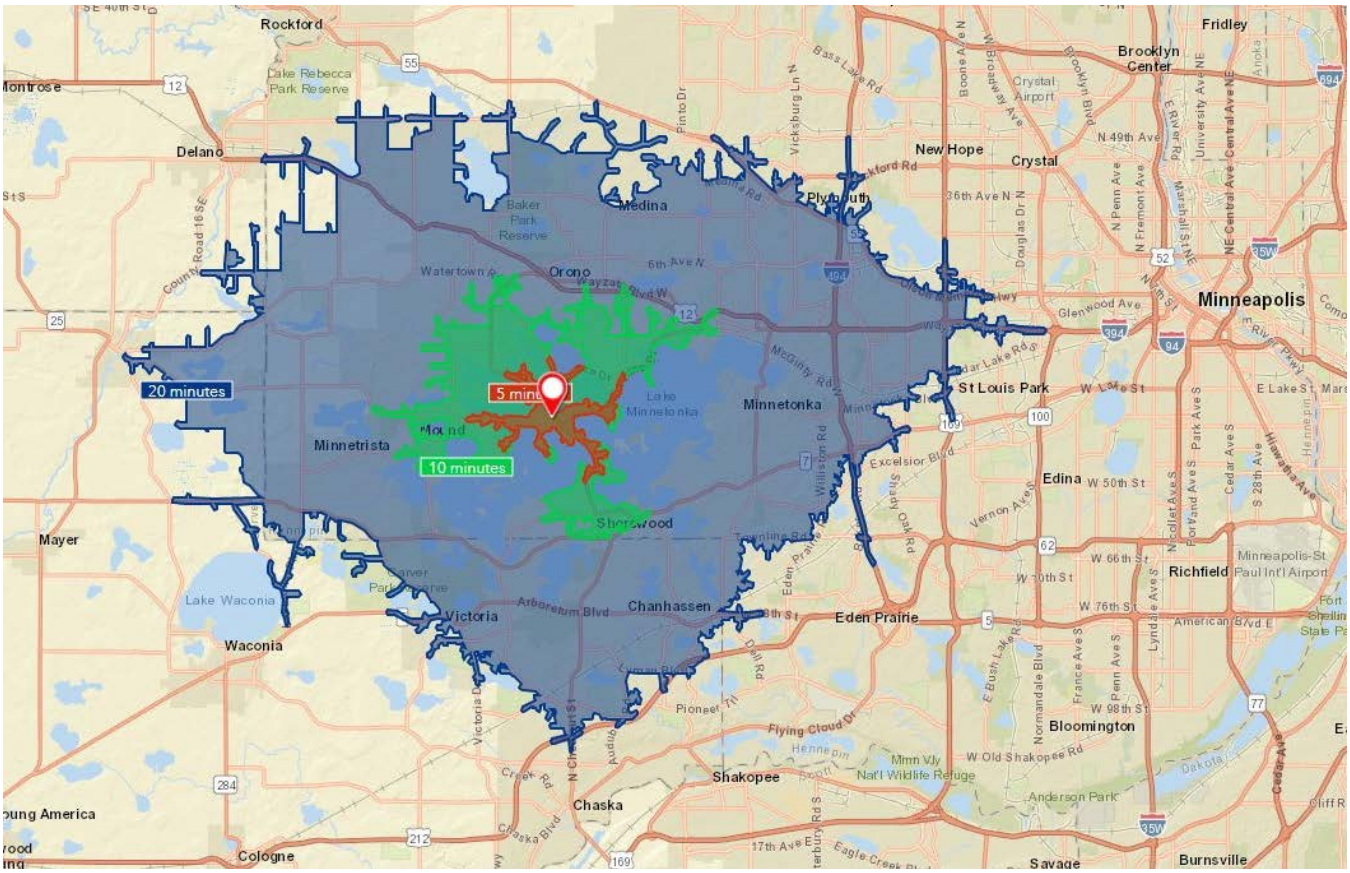
Traffic counts are provided by the Minnesota Department of Transportation (MnDOT). Traffic counts are reported as the number of vehicles expected to pass a given location on an average day of the year. This value is called the "annual average daily traffic" and are represented on traffic count or traffic volume maps. The AADT is based on a short-term traffic count, usually 48 hours, taken at the location. This count is then adjusted for the variation in traffic volume throughout the year and the average number of axles per vehicle. Short-term counts are collected over a three-year cycle.

According to MnDOT 17,600 vehicles utilize Shoreline Drive on the southern border of Navarre daily. Shadywood Road, which runs through the eastern half of Navarre, has an annual average daily traffic count of 4,900, while Sunset Drive, just west of the site, has and AADT of 2,490.

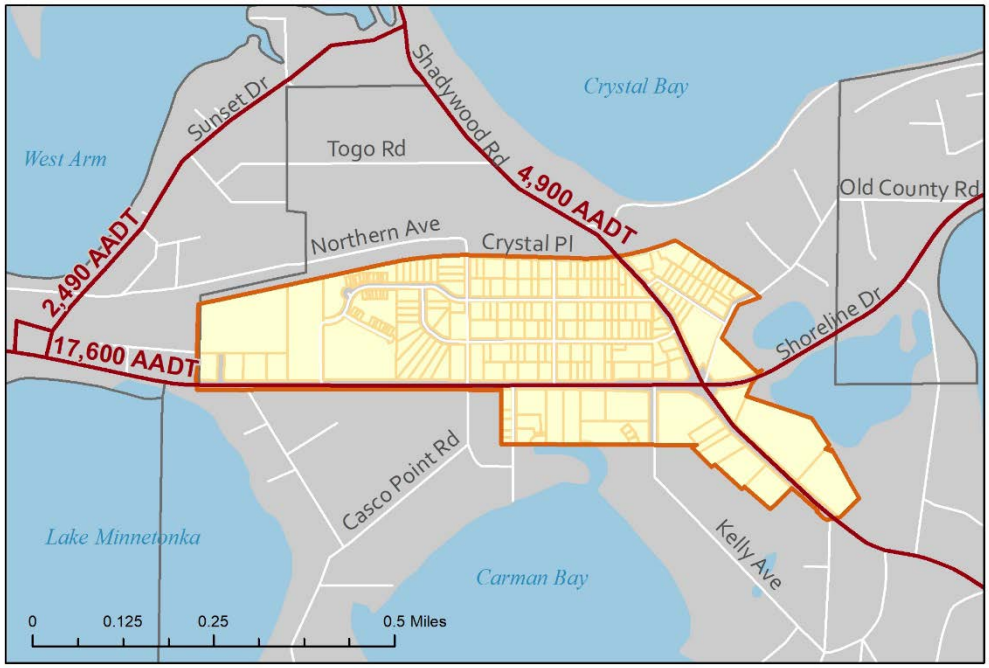
The maps on the following page illustrate the drive times from the subject property and traffic counts. This information is helpful in determining a draw area for various services in the area. It is also useful to determine access to workforce as potential business operations would likely give strong consideration to commuting patterns when making location decisions.

As shown, the Site can be reached within a 20 to 30-minute drive of Downtown Minneapolis.

**Navarre Drive Time**



**Navarre Traffic Counts**




## Population & Household Growth Trends

Population and household growth trends and projections are analyzed in this section because these are key indicators of the potential demand for new housing units and additional commercial space in a community. We also analyze data on population age distribution, household income, household tenure, and household type to determine the housing and shopping needs of the local household base.

Table 2 presents population and household growth trends in the Market Area from 2000 to 2022. The 2000 and 2010 population and household figures were obtained from the U.S. Census Bureau. The 2017 estimate and projection for 2022 are based on data provided by ESRI with adjustments made by Maxfield Research to reflect current year data. The following are key points from Table 2.

- As of 2017, Orono is estimated to have 8,179 people. Between 2000 and 2010, the population decreased 1.3% (-101) while the number of households increased 2.1% (+58).

- In 2017, the population of Navarre is estimated to make up 4.2% of the total population of Orono. While Hennepin County experienced growth between 2000 and 2010, Orono decreased in population. However, both the city and county are expected to grow from 2017 to 2022.

- Although the population of Navarre was only 342 persons in 2017; the population increases to over 2,100 persons within a one-mile radius, nearly 21,000 within three miles, and over 56,000 within five-miles.

- Household growth outpaced population growth during the 2000s and is forecast to do so through 2022. The aging of the baby-boom generation, declining birth rates, and many couples choosing to postpone having children until later in life are all factors contributing to a declining average household size. These trends will continue to generate demand for more diverse housing products such as townhomes, and condominiums.

**TABLE 2**
**POPULATION AND HOUSEHOLD GROWTH TRENDS AND PROJECTIONS**
**MARKET AREA**
**2000 to 2022**

| | U.S. Census | | Estimate | Forecast | Change 2000 to 2010 | | Change 2017 to 2022 | |
|---|---|---|---|---|---|---|---|---|
| | 2000 | 2010 | 2017 | 2022 | No. | Pct. | No. | Pct. |
| **POPULATION** | | | | | | | | |
| Navarre | N/A | N/A | 342 | 357 | N/A | N/A | 15 | 4.4% |
| Navarre 1-mile radius | N/A | N/A | 2,102 | 2,195 | N/A | N/A | 93 | 4.4% |
| Navarre 3-mile radius | N/A | N/A | 20,890 | 21,826 | N/A | N/A | 936 | 4.5% |
| Navarre 5-mile radius | N/A | N/A | 56,133 | 58,823 | N/A | N/A | 2,690 | 4.8% |
| Orono City | 7,538 | 7,437 | 8,179 | 8,678 | -101 | -1.3% | 499 | 6.1% |
| Hennepin County | 1,116,200 | 1,152,425 | 1,248,638 | 1,312,919 | 36,225 | 3.2% | 64,281 | 5.1% |
| **HOUSEHOLDS** | | | | | | | | |
| Navarre | N/A | N/A | 175 | 181 | N/A | N/A | 6 | 3.4% |
| Navarre 1-mile radius | N/A | N/A | 932 | 968 | N/A | N/A | 36 | 3.9% |
| Navarre 3-mile radius | N/A | N/A | 8,723 | 9,090 | N/A | N/A | 367 | 4.2% |
| Navarre 5-mile radius | N/A | N/A | 21,685 | 22,670 | N/A | N/A | 985 | 4.5% |
| Orono City | 2,763 | 2,821 | 3,080 | 3,253 | 58 | 2.1% | 173 | 5.6% |
| Hennepin County | 456,129 | 473,856 | 511,605 | 536,306 | 17,727 | 3.9% | 24,701 | 4.8% |
| **PERSONS PER HOUSEHOLD** | | | | | | | | |
| Navarre | N/A | N/A | 1.95 | 1.97 | | | | |
| Orono City | 2.73 | 2.64 | 2.66 | 2.67 | | | | |
| Hennepin County | 2.45 | 2.43 | 2.44 | 2.45 | | | | |

Sources: U.S. Census Bureau; ESRI; Maxfield Research and Consulting, LLC

## Age Distribution

The age distribution of a community's population helps in assessing the type of housing and commercial services needed. For example, younger and older people are more attracted to higher density housing located near urban services and entertainment while middle-aged people (particularly those with children) traditionally prefer lower-density single-family homes. In terms of retail, younger people typically seek services such as entertainment, electronics, and specialty apparel. Child stores increase in popularity for the 25 to 34 and 35 to 44 age cohorts while home furnishings are more frequently sought by the 45 to 54 and 55 to 64 age groups.

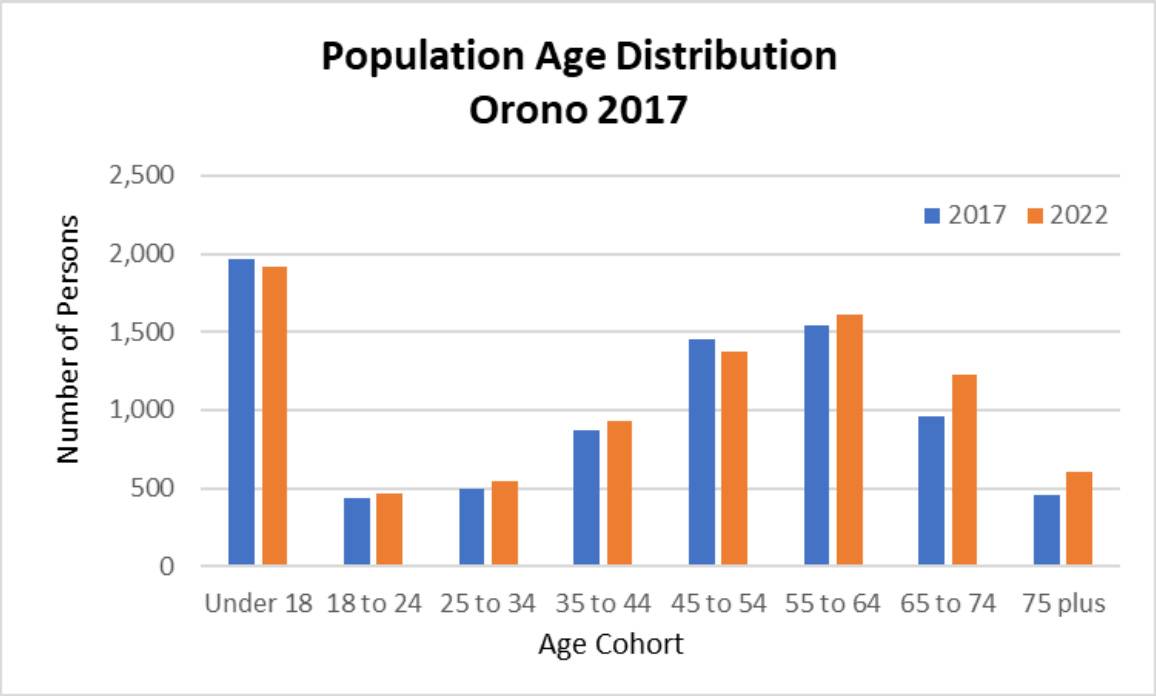
Table 3 presents the age distribution of the Market Area population from 2000 to 2022. Information from 2000 and 2010 is sourced from the U.S. Census. The 2017 estimates and projections for 2022 were calculated by Maxfield Research based on information from local building permits and economic conditions. The following are key trends about the age distribution of the Market Area's population.

- In 2017, we estimate that the largest adult cohort by age in Navarre is 45 to 54 totaling 63 people (19.4% of the total population), followed by the 55 to 64 age group with 56 people (17.3%). The same trend was found in Orono where the two largest age cohorts are also 45 to 54 (21.0%) and 55 to 64 (17.8%).

- The greatest growth is projected to occur among older adults. Aging of baby boomers led to a 51.4% increase (+1,537 people) in the 55 to 64 population between 2000 and 2010 in Orono. As this group ages, the 65 to 74 and 75 plus age groups are projected to experience rapid growth from 2017 to 2022, expanding 28.0% and 32.8%, respectively.

- A decline in the middle age cohorts is projected between 2017 and 2022 in Orono. The 45 to 54 age cohort is expected to decline 5.8%.

- The weak growth projected for the middle age population is a result of the comparatively small number of people who will move into those age cohorts between 2017 and 2022, a phenomenon known as the "baby bust." The "baby bust" is often referred to the generation of children born between 1965 and 1980, an era when the United States birthrate dropped sharply.


Population Age Distribution
Orono 2017
Number of Persons
2,500
2,000
1,500
1,000
500
0
2017
2022
Under 18
18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 74
75 plus
Age Cohort

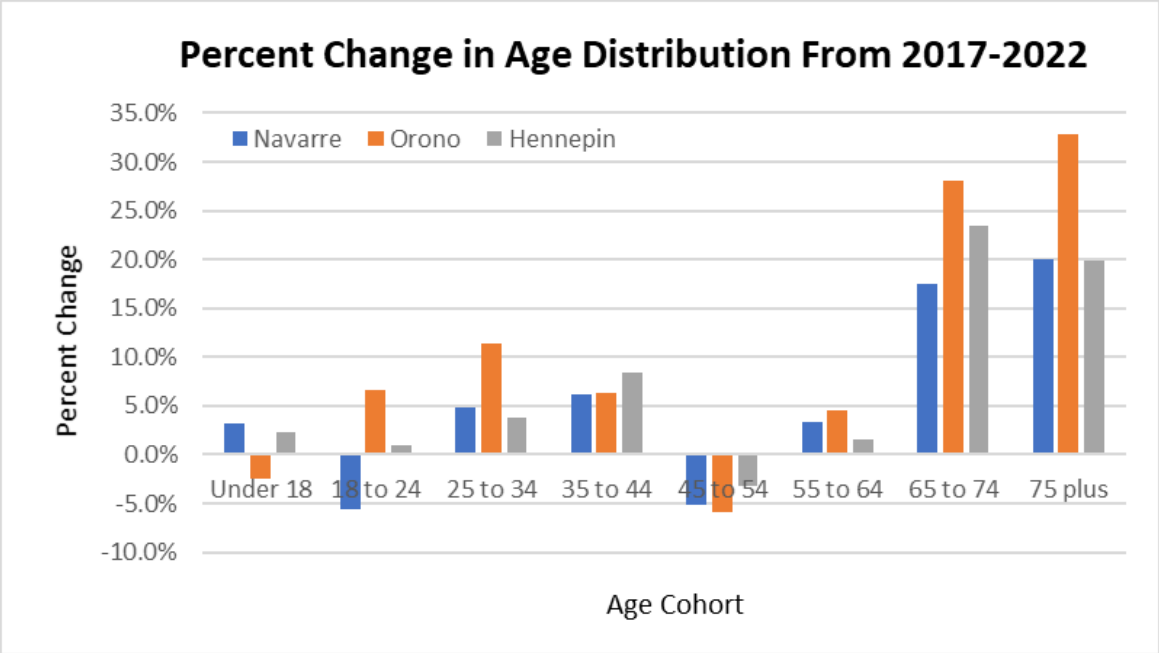

Percent Change in Age Distribution From 2017-2022
Percent Change
35.0%
30.0%
25.0%
20.0%
15.0%
10.0%
5.0%
0.0%
-5.0%
-10.0%
Navarre
Orono
Hennepin
Under 18
18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 74
75 plus
Age Cohort

**TABLE 3**

**POPULATION AGE DISTRIBUTION**

**PRIMARY MARKET AREA**

**2000-2022**

| | U.S. Census | | ESRI | | Change 2000-2010 | | Change 2017-2022 | |
|---|---|---|---|---|---|---|---|---|
| | 2000 | 2010 | 2017 | 2022 | No. | Pct. | No. | Pct. |
| **Site Area** | | | | | | | | |
| Under 18 | N/A | 66 | 63 | 65 | N/A | N/A | 2 | 3.2% |
| 18 to 24 | N/A | 16 | 18 | 17 | N/A | N/A | -1 | -5.6% |
| 25 to 34 | N/A | 36 | 41 | 43 | N/A | N/A | 2 | 4.9% |
| 35 to 44 | N/A | 49 | 48 | 51 | N/A | N/A | 3 | 6.3% |
| 45 to 54 | N/A | 63 | 58 | 55 | N/A | N/A | -3 | -5.2% |
| 55 to 64 | N/A | 56 | 61 | 63 | N/A | N/A | 2 | 3.3% |
| 65 to 74 | N/A | 26 | 40 | 47 | N/A | N/A | 7 | 17.5% |
| 75 plus | N/A | 12 | 15 | 18 | N/A | N/A | 3 | 20.0% |
| **Total** | **N/A** | **324** | **344** | **359** | **N/A** | **N/A** | **15** | **44.4%** |
| **Orono City** | | | | | | | | |
| Under 18 | 2,062 | 1,976 | 1,968 | 1,920 | -86 | -4.2% | -48 | -2.4% |
| 18 to 24 | 337 | 325 | 439 | 468 | -12 | -3.6% | 29 | 6.6% |
| 25 to 34 | 597 | 400 | 493 | 549 | -197 | -33.0% | 56 | 11.4% |
| 35 to 44 | 1,414 | 914 | 872 | 927 | -500 | -35.4% | 55 | 6.3% |
| 45 to 54 | 1,578 | 1,559 | 1,454 | 1,369 | -19 | -1.2% | -85 | -5.8% |
| 55 to 64 | 874 | 1,323 | 1,537 | 1,607 | 449 | 51.4% | 70 | 4.6% |
| 65 to 74 | 420 | 587 | 956 | 1,224 | 167 | 39.8% | 268 | 28.0% |
| 75 plus | 256 | 353 | 457 | 607 | 97 | 37.9% | 150 | 32.8% |
| **Total** | **7,538** | **7,437** | **8,176** | **8,671** | **-101** | **51.7%** | **495** | **81.4%** |
| **Hennepin County** | | | | | | | | |
| Under 18 | 267,502 | 261,345 | 268,719 | 274,768 | -6,157 | -2.3% | 6,049 | 2.3% |
| 18 to 24 | 108,767 | 113,551 | 124,686 | 125,843 | 4,784 | 4.4% | 1,157 | 0.9% |
| 25 to 34 | 183,860 | 187,523 | 191,588 | 198,828 | 3,663 | 2.0% | 7,240 | 3.8% |
| 35 to 44 | 191,872 | 154,304 | 164,543 | 178,271 | -37,568 | -19.6% | 13,728 | 8.3% |
| 45 to 54 | 156,068 | 171,130 | 161,675 | 156,373 | 15,062 | 9.7% | -5,302 | -3.3% |
| 55 to 64 | 85,773 | 133,758 | 160,972 | 163,600 | 47,985 | 55.9% | 2,628 | 1.6% |
| 65 to 74 | 59,737 | 66,516 | 101,312 | 125,133 | 6,779 | 11.3% | 23,821 | 23.5% |
| 75 plus | 62,621 | 64,298 | 75,143 | 90,103 | 1,677 | 2.7% | 14,960 | 19.9% |
| **Total** | **1,116,200** | **1,152,425** | **1,248,638** | **1,312,919** | **36,225** | **64.1%** | **64,281** | **57.1%** |

Sources: U.S. Census; ESRI; Maxfield Research & Consulting, LLC

## Household Income Distribution

Income data is useful in that it can reflect wage trends and helps assess living conditions and reveal demand for different types of services. This data also helps determine demand for different types of owned and rented housing based on the size of the market at specific cost levels. In general, housing costs of up to 30 percent of income are considered affordable by the Department of Housing and Urban Development (HUD). Household income data also helps ascertain demand for different types of retail services. People with lower incomes are likely to seek out discount retailers and spend a higher proportion of their income on necessities like grocery items. Retail services and goods such as dining and home furnishings will experience higher spending from more moderate-income households while upper income households will also shop for specialty apparel, recreation and sporting goods, and luxury items.

The next three tables present data on household income by age of householder in 2017 and 2022 for Navarre, Orono, and Hennepin County. The data is estimated by ESRI and adjusted by Maxfield Research and Consulting, LLC to reflect the most current local household estimates and projections. The following are key points.

- In 2017, the median household income for Navarre is estimated to be $91,744. This value is lower than the estimate for Orono ($136,259), but significantly higher than that of Hennepin County ($68,497). However, the median income for Navarre is expected to increase by 15.5% to $105,955 by 2022.

- As households age through the lifecycle, their household income tends to peak in their late 40s and early 50s. This trend is evident in the Market Area as the age 45 to 54 cohort has the highest estimated income at $189,487 in Orono.

- Rental housing often targets younger renter households. The median household income in Orono is $63,804 for the under-25 age group and $102,544 for the 25 to 34 age group. Households earning the median income for these age groups could afford monthly housing costs estimated at $1,595 and $2,564, respectively.

- Households in the 35 to 44 age group that may delay buying a home could afford a $3,879 monthly rent, based on the median household income of $155,158.

- The median sale price for new construction multifamily housing units (twinhomes and detached townhomes) in Orono is approximately $677,00 (based on recently sold and active listings). Assuming that a potential home buyer has good credit and makes a 20% down payment, a household would need to have a minimum annual income of roughly $166,000 to be income-qualified for a new construction multifamily unit purchased at the median price in Orono.

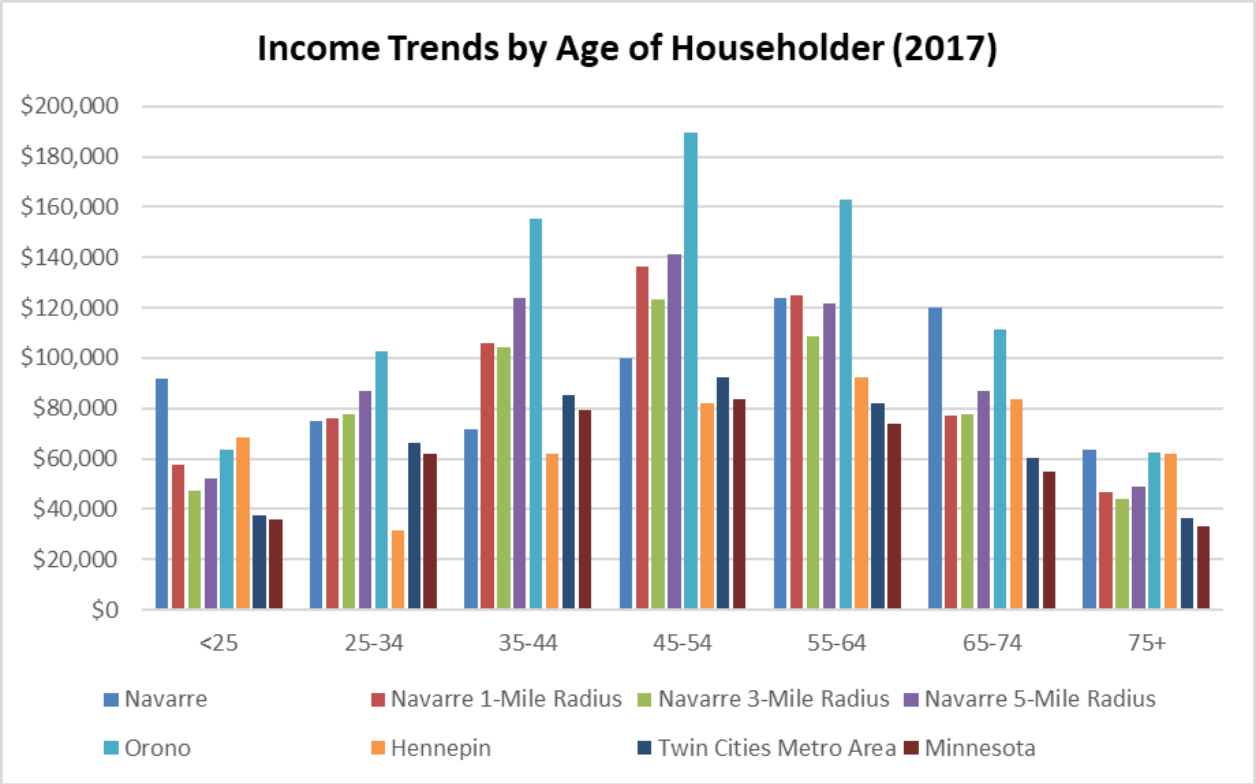

Income Trends by Age of Householder (2017)
$200,000
$180,000
$160,000
$140,000
$120,000
$100,000
$80,000
$60,000
$40,000
$20,000
$0
<25
25-34
35-44
45-54
55-64
65-74
75+
Navarre
Navarre 1-Mile Radius
Navarre 3-Mile Radius
Navarre 5-Mile Radius
Orono
Hennepin
Twin Cities Metro Area
Minnesota

**TABLE 4**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**NAVARRE**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $15,000 to $24,999 | 8 | 0 | 1 | 1 | 1 | 1 | 3 | 1 |
| $25,000 to $34,999 | 6 | 0 | 1 | 1 | 1 | 1 | 1 | 1 |
| $35,000 to $49,999 | 29 | 1 | 5 | 5 | 4 | 5 | 6 | 3 |
| $50,000 to $74,999 | 28 | 1 | 5 | 5 | 5 | 6 | 4 | 2 |
| $75,000 to $99,999 | 18 | 1 | 3 | 4 | 3 | 3 | 3 | 1 |
| $100,000 to $149,999 | 31 | 1 | 4 | 6 | 7 | 8 | 4 | 1 |
| $150,000 to $199,999 | 14 | 0 | 2 | 3 | 4 | 4 | 1 | 0 |
| $200,000+ | 38 | 0 | 2 | 7 | 11 | 13 | 4 | 1 |
| **Total** | **175** | **4** | **23** | **32** | **36** | **42** | **27** | **11** |
| **Median Income** | **$91,744** | **$75,000** | **$71,478** | **$100,000** | **$123,670** | **$120,118** | **$63,528** | **$46,511** |
| **2022** | | | | | | | | |
| Less than $15,000 | 3 | 0 | 0 | 0 | 0 | 1 | 1 | 1 |
| $15,000 to $24,999 | 9 | 0 | 1 | 1 | 1 | 1 | 3 | 2 |
| $25,000 to $34,999 | 6 | 0 | 1 | 1 | 0 | 1 | 1 | 2 |
| $35,000 to $49,999 | 25 | 1 | 4 | 4 | 3 | 4 | 6 | 3 |
| $50,000 to $74,999 | 27 | 1 | 5 | 5 | 4 | 5 | 5 | 2 |
| $75,000 to $99,999 | 17 | 1 | 3 | 4 | 2 | 3 | 3 | 1 |
| $100,000 to $149,999 | 36 | 1 | 5 | 7 | 7 | 9 | 6 | 1 |
| $150,000 to $199,999 | 17 | 0 | 2 | 4 | 4 | 5 | 1 | 1 |
| $200,000+ | 43 | 0 | 3 | 8 | 12 | 14 | 5 | 1 |
| **Total** | **181** | **4** | **24** | **34** | **33** | **43** | **31** | **14** |
| **Median Income** | **$105,955** | **$75,000** | **$81,880** | **$110,312** | **$144,931** | **$131,812** | **$71,613** | **$43,660** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | -0 | 0 | 0 | 0 | 0 | -0 | -0 | -0 |
| $15,000 to $24,999 | 1 | 0 | -0 | -0 | -0 | -0 | -0 | 1 |
| $25,000 to $34,999 | -0 | 0 | -0 | -0 | -1 | -0 | -0 | 1 |
| $35,000 to $49,999 | -4 | -0 | -1 | -1 | -1 | -1 | -0 | -0 |
| $50,000 to $74,999 | -1 | -0 | -0 | -0 | -1 | -1 | 1 | -0 |
| $75,000 to $99,999 | -1 | -0 | -0 | -0 | -1 | -0 | -0 | -0 |
| $100,000 to $149,999 | 5 | -0 | 1 | 1 | -0 | 1 | 2 | -0 |
| $150,000 to $199,999 | 3 | 0 | -0 | 1 | -0 | 1 | -0 | 1 |
| $200,000+ | 5 | 0 | 1 | 1 | 1 | 1 | 1 | -0 |
| **Total** | **-1** | **-0** | **-0** | **-0** | **-4** | **-1** | **3** | **2** |
| **Median Income** | **$14,211** | **$0** | **$10,402** | **$10,312** | **$21,261** | **$11,694** | **$8,085** | **-$2,851** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

**TABLE 5**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**NAVARRE 1-MILE RADIUS**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 24 | 2 | 2 | 2 | 2 | 6 | 4 | 6 |
| $15,000 to $24,999 | 44 | 2 | 4 | 4 | 3 | 4 | 18 | 9 |
| $25,000 to $34,999 | 36 | 2 | 5 | 5 | 4 | 6 | 7 | 7 |
| $35,000 to $49,999 | 126 | 5 | 21 | 19 | 17 | 23 | 25 | 16 |
| $50,000 to $74,999 | 148 | 5 | 27 | 21 | 23 | 32 | 26 | 14 |
| $75,000 to $99,999 | 97 | 4 | 17 | 18 | 16 | 20 | 17 | 5 |
| $100,000 to $149,999 | 155 | 3 | 20 | 26 | 31 | 39 | 30 | 6 |
| $150,000 to $199,999 | 69 | 1 | 9 | 14 | 19 | 19 | 5 | 2 |
| $200,000+ | 237 | 2 | 15 | 38 | 64 | 79 | 32 | 6 |
| **Total** | **938** | **26** | **120** | **147** | **180** | **229** | **165** | **71** |
| **Median Income** | **$97,619** | **$57,692** | **$76,100** | **$106,122** | **$136,225** | **$124,911** | **$77,335** | **$46,812** |
| **2022** | | | | | | | | |
| Less than $15,000 | 24 | 2 | 2 | 2 | 1 | 6 | 5 | 6 |
| $15,000 to $24,999 | 43 | 2 | 4 | 3 | 3 | 3 | 17 | 11 |
| $25,000 to $34,999 | 33 | 2 | 5 | 5 | 2 | 4 | 7 | 8 |
| $35,000 to $49,999 | 114 | 4 | 18 | 17 | 14 | 18 | 26 | 17 |
| $50,000 to $74,999 | 133 | 4 | 25 | 19 | 17 | 26 | 27 | 15 |
| $75,000 to $99,999 | 99 | 4 | 18 | 18 | 14 | 19 | 19 | 7 |
| $100,000 to $149,999 | 174 | 3 | 22 | 31 | 31 | 43 | 37 | 8 |
| $150,000 to $199,999 | 81 | 1 | 11 | 17 | 20 | 21 | 7 | 4 |
| $200,000+ | 268 | 2 | 19 | 43 | 66 | 87 | 43 | 9 |
| **Total** | **968** | **24** | **124** | **155** | **167** | **226** | **187** | **85** |
| **Median Income** | **$108,471** | **$60,207** | **$84,347** | **$116,920** | **$153,886** | **$141,252** | **$89,341** | **$50,556** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | -0 | -0 | -0 | -0 | -1 | -0 | 1 | -0 |
| $15,000 to $24,999 | -1 | -0 | -0 | -1 | -0 | -1 | -1 | 2 |
| $25,000 to $34,999 | -3 | -0 | -0 | -0 | -2 | -2 | -0 | 1 |
| $35,000 to $49,999 | -13 | -1 | -3 | -2 | -3 | -5 | 1 | 1 |
| $50,000 to $74,999 | -16 | -1 | -2 | -2 | -6 | -6 | 1 | 1 |
| $75,000 to $99,999 | 1 | -0 | 1 | -0 | -2 | -1 | 2 | 2 |
| $100,000 to $149,999 | 19 | -0 | 2 | 5 | -0 | 4 | 7 | 2 |
| $150,000 to $199,999 | 12 | -0 | 2 | 3 | 1 | 2 | 2 | 2 |
| $200,000+ | 31 | -0 | 4 | 5 | 2 | 7 | 11 | 3 |
| **Total** | **-13** | **-2** | **-3** | **-1** | **-15** | **-12** | **10** | **9** |
| **Median Income** | **$10,852** | **$2,515** | **$8,247** | **$10,798** | **$17,661** | **$16,341** | **$12,006** | **$3,744** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

**TABLE 6**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**NAVARRE 3-MILE RADIUS**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 438 | 15 | 30 | 37 | 53 | 114 | 92 | 97 |
| $15,000 to $24,999 | 472 | 19 | 35 | 45 | 44 | 80 | 113 | 136 |
| $25,000 to $34,999 | 432 | 16 | 51 | 48 | 57 | 80 | 77 | 103 |
| $35,000 to $49,999 | 907 | 32 | 111 | 117 | 134 | 175 | 180 | 158 |
| $50,000 to $74,999 | 1,349 | 34 | 174 | 171 | 230 | 303 | 252 | 185 |
| $75,000 to $99,999 | 1,048 | 19 | 138 | 165 | 209 | 261 | 192 | 64 |
| $100,000 to $149,999 | 1,572 | 11 | 160 | 244 | 386 | 435 | 264 | 72 |
| $150,000 to $199,999 | 789 | 5 | 65 | 143 | 238 | 217 | 98 | 23 |
| $200,000+ | 1,716 | 5 | 74 | 255 | 540 | 573 | 216 | 53 |
| **Total** | **8,723** | **156** | **838** | **1,225** | **1,891** | **2,238** | **1,484** | **891** |
| **Median Income** | **$91,867** | **$47,455** | **$77,430** | **$104,070** | **$123,273** | **$108,725** | **$77,839** | **$44,226** |
| **2022** | | | | | | | | |
| Less than $15,000 | 460 | 16 | 28 | 40 | 40 | 103 | 109 | 124 |
| $15,000 to $24,999 | 468 | 18 | 33 | 41 | 31 | 63 | 124 | 158 |
| $25,000 to $34,999 | 407 | 13 | 44 | 45 | 35 | 66 | 83 | 121 |
| $35,000 to $49,999 | 847 | 31 | 98 | 102 | 99 | 139 | 195 | 183 |
| $50,000 to $74,999 | 1,233 | 29 | 153 | 155 | 165 | 245 | 271 | 215 |
| $75,000 to $99,999 | 1,062 | 22 | 141 | 165 | 169 | 248 | 230 | 87 |
| $100,000 to $149,999 | 1,783 | 13 | 184 | 289 | 364 | 473 | 348 | 112 |
| $150,000 to $199,999 | 908 | 5 | 81 | 173 | 223 | 244 | 142 | 40 |
| $200,000+ | 1,922 | 5 | 90 | 299 | 498 | 636 | 307 | 87 |
| **Total** | **9,090** | **152** | **852** | **1,309** | **1,624** | **2,217** | **1,809** | **1,127** |
| **Median Income** | **$101,249** | **$48,659** | **$85,486** | **$113,653** | **$133,315** | **$120,668** | **$86,626** | **$47,567** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | 22 | 1 | -2 | 3 | -13 | -11 | 17 | 27 |
| $15,000 to $24,999 | -4 | -1 | -2 | -4 | -13 | -17 | 11 | 22 |
| $25,000 to $34,999 | -25 | -3 | -7 | -3 | -22 | -14 | 6 | 18 |
| $35,000 to $49,999 | -60 | -1 | -13 | -15 | -35 | -36 | 15 | 25 |
| $50,000 to $74,999 | -116 | -5 | -21 | -16 | -65 | -58 | 19 | 30 |
| $75,000 to $99,999 | 14 | 3 | 3 | 0 | -40 | -13 | 38 | 23 |
| $100,000 to $149,999 | 211 | 2 | 24 | 45 | -22 | 38 | 84 | 40 |
| $150,000 to $199,999 | 119 | 0 | 16 | 30 | -15 | 27 | 44 | 17 |
| $200,000+ | 206 | 0 | 16 | 44 | -42 | 63 | 91 | 34 |
| **Total** | **42** | **-4** | **-18** | **10** | **-210** | **-111** | **190** | **185** |
| **Median Income** | **$9,382** | **$1,204** | **$8,056** | **$9,583** | **$10,042** | **$11,943** | **$8,787** | **$3,341** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

**TABLE 7**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**NAVARRE 5-MILE RADIUS**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 908 | 34 | 64 | 72 | 108 | 238 | 182 | 210 |
| $15,000 to $24,999 | 953 | 34 | 70 | 80 | 91 | 173 | 251 | 254 |
| $25,000 to $34,999 | 1,012 | 30 | 110 | 104 | 134 | 190 | 179 | 265 |
| $35,000 to $49,999 | 1,861 | 61 | 227 | 218 | 267 | 361 | 346 | 381 |
| $50,000 to $74,999 | 2,852 | 73 | 363 | 338 | 478 | 599 | 525 | 476 |
| $75,000 to $99,999 | 2,412 | 43 | 301 | 367 | 484 | 613 | 466 | 138 |
| $100,000 to $149,999 | 4,128 | 29 | 403 | 615 | 1,064 | 1,161 | 657 | 199 |
| $150,000 to $199,999 | 2,411 | 14 | 213 | 452 | 723 | 654 | 275 | 80 |
| $200,000+ | 5,093 | 20 | 243 | 824 | 1,635 | 1,609 | 584 | 178 |
| **Total** | **21,632** | **338** | **1,994** | **3,070** | **4,984** | **5,599** | **3,465** | **2,181** |
| **Median Income** | **$106,948** | **$52,275** | **$86,704** | **$123,984** | **$141,240** | **$121,815** | **$86,651** | **$48,954** |
| **2022** | | | | | | | | |
| Less than $15,000 | 964 | 36 | 65 | 78 | 81 | 218 | 215 | 271 |
| $15,000 to $24,999 | 943 | 33 | 66 | 70 | 59 | 133 | 274 | 308 |
| $25,000 to $34,999 | 954 | 25 | 99 | 97 | 85 | 155 | 190 | 303 |
| $35,000 to $49,999 | 1,743 | 60 | 205 | 185 | 197 | 289 | 369 | 438 |
| $50,000 to $74,999 | 2,613 | 64 | 328 | 300 | 328 | 483 | 561 | 549 |
| $75,000 to $99,999 | 2,433 | 43 | 314 | 363 | 383 | 580 | 563 | 187 |
| $100,000 to $149,999 | 4,575 | 31 | 470 | 701 | 964 | 1,238 | 868 | 304 |
| $150,000 to $199,999 | 2,708 | 14 | 259 | 532 | 660 | 727 | 389 | 127 |
| $200,000+ | 5,686 | 19 | 300 | 964 | 1,533 | 1,759 | 831 | 281 |
| **Total** | **22,618** | **325** | **2,106** | **3,290** | **4,289** | **5,581** | **4,259** | **2,768** |
| **Median Income** | **$113,617** | **$52,254** | **$97,540** | **$135,702** | **$152,691** | **$133,557** | **$97,629** | **$51,960** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | 56 | 2 | 1 | 6 | -27 | -20 | 33 | 61 |
| $15,000 to $24,999 | -10 | -1 | -4 | -10 | -32 | -40 | 23 | 54 |
| $25,000 to $34,999 | -58 | -5 | -11 | -7 | -49 | -35 | 11 | 38 |
| $35,000 to $49,999 | -118 | -1 | -22 | -33 | -70 | -72 | 23 | 57 |
| $50,000 to $74,999 | -240 | -9 | -35 | -38 | -150 | -116 | 36 | 73 |
| $75,000 to $99,999 | 20 | -0 | 13 | -4 | -101 | -33 | 97 | 49 |
| $100,000 to $149,999 | 447 | 2 | 67 | 86 | -100 | 77 | 211 | 105 |
| $150,000 to $199,999 | 296 | -0 | 46 | 80 | -63 | 73 | 114 | 47 |
| $200,000+ | 593 | -1 | 57 | 140 | -102 | 150 | 247 | 103 |
| **Total** | **97** | **-12** | **9** | **-0** | **-530** | **-240** | **433** | **437** |
| **Median Income** | **$6,669** | **-$21** | **$10,836** | **$11,718** | **$11,451** | **$11,742** | **$10,978** | **$3,006** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

**TABLE 8**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**ORONO CITY**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 56 | 2 | 2 | 4 | 5 | 17 | 9 | 17 |
| $15,000 to $24,999 | 87 | 2 | 4 | 6 | 8 | 15 | 32 | 20 |
| $25,000 to $34,999 | 78 | 1 | 5 | 7 | 10 | 15 | 19 | 21 |
| $35,000 to $49,999 | 180 | 4 | 19 | 21 | 26 | 34 | 35 | 41 |
| $50,000 to $74,999 | 377 | 9 | 34 | 39 | 59 | 71 | 75 | 90 |
| $75,000 to $99,999 | 322 | 6 | 32 | 49 | 60 | 77 | 69 | 29 |
| $100,000 to $149,999 | 555 | 2 | 39 | 72 | 131 | 152 | 125 | 34 |
| $150,000 to $199,999 | 333 | 1 | 25 | 56 | 97 | 88 | 48 | 18 |
| $200,000+ | 1,092 | 3 | 38 | 157 | 363 | 348 | 144 | 39 |
| **Total** | **3,080** | **30** | **198** | **411** | **759** | **817** | **556** | **309** |
| **Median Income** | **$136,259** | **$63,804** | **$102,544** | **$155,158** | **$189,487** | **$163,004** | **$111,200** | **$62,452** |
| **2022** | | | | | | | | |
| Less than $15,000 | 62 | 2 | 2 | 4 | 6 | 14 | 12 | 22 |
| $15,000 to $24,999 | 87 | 2 | 5 | 6 | 3 | 12 | 33 | 26 |
| $25,000 to $34,999 | 74 | 1 | 5 | 7 | 6 | 13 | 20 | 22 |
| $35,000 to $49,999 | 171 | 4 | 17 | 18 | 20 | 29 | 36 | 47 |
| $50,000 to $74,999 | 353 | 7 | 32 | 33 | 41 | 57 | 79 | 104 |
| $75,000 to $99,999 | 331 | 6 | 36 | 46 | 50 | 74 | 81 | 38 |
| $100,000 to $149,999 | 622 | 2 | 44 | 79 | 125 | 161 | 160 | 51 |
| $150,000 to $199,999 | 366 | 1 | 29 | 61 | 92 | 92 | 64 | 27 |
| $200,000+ | 1,186 | 3 | 45 | 169 | 346 | 371 | 195 | 57 |
| **Total** | **3,253** | **28** | **215** | **423** | **689** | **823** | **680** | **394** |
| **Median Income** | **$141,731** | **$65,462** | **$108,435** | **$162,213** | **$200,001** | **$174,822** | **$119,256** | **$67,060** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | 6 | 0 | 0 | 0 | 1 | -3 | 3 | 5 |
| $15,000 to $24,999 | 0 | 0 | 1 | 0 | -5 | -3 | 1 | 6 |
| $25,000 to $34,999 | -4 | 0 | 0 | 0 | -4 | -2 | 1 | 1 |
| $35,000 to $49,999 | -9 | 0 | -2 | -3 | -6 | -5 | 1 | 6 |
| $50,000 to $74,999 | -24 | -2 | -2 | -6 | -18 | -14 | 4 | 14 |
| $75,000 to $99,999 | 9 | 0 | 4 | -3 | -10 | -3 | 12 | 9 |
| $100,000 to $149,999 | 67 | 0 | 5 | 7 | -6 | 9 | 35 | 17 |
| $150,000 to $199,999 | 33 | 0 | 4 | 5 | -5 | 4 | 16 | 9 |
| $200,000+ | 94 | 0 | 7 | 12 | -17 | 23 | 51 | 18 |
| **Total** | **46** | **-2** | **6** | **-5** | **-48** | **-21** | **57** | **58** |
| **Median Income** | **$5,472** | **$1,658** | **$5,891** | **$7,055** | **$10,514** | **$11,818** | **$8,056** | **$4,608** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

**TABLE 9**
**HOUSEHOLD INCOME BY AGE OF HOUSEHOLDER**
**HENNEPIN COUNTY**
**2017 & 2022**

| | | Age of Householder | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | **Total** | **<25** | **25-34** | **35-44** | **45-54** | **55-64** | **65 -74** | **75+** |
| **2017** | | | | | | | | |
| Less than $15,000 | 44,258 | 5,988 | 7,575 | 5,589 | 5,278 | 7,799 | 5,294 | 6,735 |
| $15,000 to $24,999 | 42,732 | 4,274 | 7,349 | 5,400 | 4,341 | 5,867 | 6,290 | 9,211 |
| $25,000 to $34,999 | 40,300 | 3,349 | 8,681 | 5,917 | 4,874 | 5,646 | 5,229 | 6,604 |
| $35,000 to $49,999 | 59,869 | 3,731 | 12,622 | 9,333 | 8,414 | 8,907 | 8,261 | 8,601 |
| $50,000 to $74,999 | 85,577 | 3,925 | 18,235 | 14,698 | 14,278 | 14,539 | 11,084 | 8,818 |
| $75,000 to $99,999 | 65,409 | 1,996 | 13,762 | 12,898 | 11,960 | 12,396 | 8,335 | 4,062 |
| $100,000 to $149,999 | 85,199 | 1,230 | 15,432 | 18,274 | 18,676 | 18,690 | 9,352 | 3,545 |
| $150,000 to $199,999 | 40,399 | 590 | 5,686 | 8,865 | 11,237 | 8,852 | 3,999 | 1,170 |
| $200,000+ | 47,862 | 353 | 4,452 | 9,802 | 13,383 | 13,151 | 5,085 | 1,636 |
| **Total** | **511,605** | **25,436** | **93,794** | **90,776** | **92,441** | **95,847** | **62,929** | **50,382** |
| **Median Income** | **$68,497** | **$31,725** | **$62,192** | **$82,052** | **$92,581** | **$83,783** | **$62,080** | **$38,534** |
| **2022** | | | | | | | | |
| Less than $15,000 | 45,953 | 6,145 | 7,586 | 6,027 | 4,898 | 7,410 | 6,102 | 7,785 |
| $15,000 to $24,999 | 41,982 | 4,105 | 6,729 | 4,805 | 3,720 | 5,253 | 6,933 | 10,437 |
| $25,000 to $34,999 | 37,952 | 3,108 | 7,731 | 5,405 | 3,922 | 4,879 | 5,760 | 7,147 |
| $35,000 to $49,999 | 56,015 | 3,556 | 11,215 | 8,320 | 7,071 | 7,554 | 8,957 | 9,342 |
| $50,000 to $74,999 | 80,045 | 3,732 | 16,650 | 13,595 | 11,774 | 12,606 | 11,981 | 9,707 |
| $75,000 to $99,999 | 67,819 | 2,343 | 14,146 | 13,323 | 11,019 | 11,943 | 10,018 | 5,027 |
| $100,000 to $149,999 | 101,536 | 1,546 | 18,805 | 22,176 | 19,881 | 20,840 | 12,917 | 5,371 |
| $150,000 to $199,999 | 48,706 | 759 | 7,297 | 11,004 | 11,875 | 10,169 | 5,769 | 1,833 |
| $200,000+ | 56,298 | 416 | 5,701 | 11,940 | 13,770 | 14,554 | 7,428 | 2,489 |
| **Total** | **536,306** | **25,710** | **95,860** | **96,595** | **87,930** | **95,208** | **75,865** | **59,138** |
| **Median Income** | **$76,759** | **$32,967** | **$70,962** | **$92,712** | **$102,495** | **$94,729** | **$70,010** | **$40,513** |
| **Change 2017 - 2022** | | | | | | | | |
| Less than $15,000 | 1,695 | 157 | 11 | 438 | -380 | -389 | 808 | 1,050 |
| $15,000 to $24,999 | -750 | -169 | -620 | -595 | -621 | -614 | 643 | 1,226 |
| $25,000 to $34,999 | -2,348 | -241 | -950 | -512 | -952 | -767 | 531 | 543 |
| $35,000 to $49,999 | -3,854 | -175 | -1,407 | -1,013 | -1,343 | -1,353 | 696 | 741 |
| $50,000 to $74,999 | -5,532 | -193 | -1,585 | -1,103 | -2,504 | -1,933 | 897 | 889 |
| $75,000 to $99,999 | 2,410 | 347 | 384 | 425 | -941 | -453 | 1,683 | 965 |
| $100,000 to $149,999 | 16,337 | 316 | 3,373 | 3,902 | 1,205 | 2,150 | 3,565 | 1,826 |
| $150,000 to $199,999 | 8,307 | 169 | 1,611 | 2,139 | 638 | 1,317 | 1,770 | 663 |
| $200,000+ | 8,436 | 63 | 1,249 | 2,138 | 387 | 1,403 | 2,343 | 853 |
| **Total** | **7,958** | **42** | **-794** | **1,542** | **-5,536** | **-3,359** | **8,823** | **7,240** |
| **Median Income** | **$8,262** | **$1,242** | **$8,770** | **$10,660** | **$9,914** | **$10,946** | **$7,930** | **$1,979** |

Sources: ESRI; US Census Bureau; Maxfield Research & Consulting, LLC

## Household Type

As with age distribution, the trends in types of households impact demand for different types of housing. Table 10 presents data on the types of households in the Market Area in 2010 and 2015. Family households include married-couple families with children (so-called "traditional" families), married couples without children (mostly empty nesters, but also young married couples without children), and other-family households (single parents and unmarried couples with children). Non-family households include persons living alone and roommates (unrelated individuals living together, including unmarried couples without children).

- In 2015, there were a total of 3,184 family households in Orono including 766 married couples with children, 1,130 married couples without children, and 182 other families. Married couples without children include empty nesters, who are increasingly a market for for-sale multifamily housing and younger couples without children, who are also a primary market for rental housing.

- From 2010 to 2015, the greatest growth among family households in Orono was among “other” families, which grew by 81 households (80.2%). This is in contrast with the decrease by 119 households (-13.4%) in the number of married couples with children in Orono.

- Conversely, from 2010 to 2015 in Hennepin County, the number of families categorized as “other” decreased by 269 households (-0.6%) and the number of married couples with children increased by 65 households (0.1%).

- There were 1,106 non-family households in Orono in 2015. This includes 126 persons living alone and 980 roommate households. Persons living alone added 28 households (28.6%) to Orono from 2010 to 2015, while the number of roommate households increased by 339 (52.9%). Roommate households consist of unrelated persons living with each other to share housing costs and unmarried couples without children, among others. These persons also tend to be younger and often prefer to live in locations that are closer to entertainment, activities, and other nightlife.

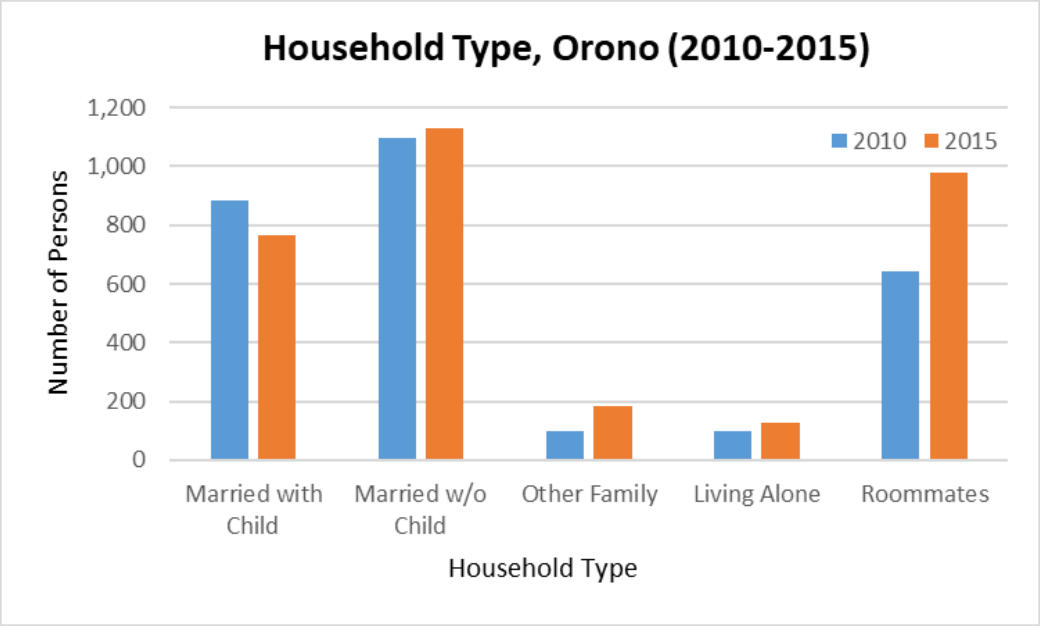



**TABLE 10**
**HOUSEHOLD TYPE**
**PRIMARY MARKET AREA**
**2010 & 2015**

| | | | Family Households | | | | | | Non-Family Households | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Total HH's | | Married w/ Child | | Married w/o Child | | Other * | | Living Alone | | Roommates ** | |
| *Households* | 2010 | 2015 | 2010 | 2015 | 2010 | 2015 | 2010 | 2015 | 2010 | 2015 | 2010 | 2015 |
| Orono City | 2,821 | 3,184 | 885 | 766 | 1,096 | 1,130 | 101 | 182 | 98 | 126 | 641 | 980 |
| Hennepin County | 472,586 | 488,941 | 94,635 | 94,700 | 112,311 | 120,473 | 45,268 | 44,999 | 22,026 | 23,774 | 198,346 | 204,995 |
| **State of Minnesota** | **1,895,127** | **2,087,227** | **477,615** | **443,212** | **540,630** | **617,297** | **236,896** | **288,506** | **509,468** | **584,008** | **130,518** | **154,204** |
| ***Percent*** | | | | | | | | | | | | |
| Orono City | 100.0 | 100.0 | 31.4% | 24.1% | 38.9% | 35.5% | 3.6% | 5.7% | 3.5% | 4.0% | 22.7% | 30.8% |
| Hennepin County | 100.0 | 100.0 | 20.0% | 19.4% | 23.8% | 24.6% | 9.6% | 9.2% | 4.7% | 4.9% | 42.0% | 41.9% |
| **State of Minnesota** | **100.0** | **100.0** | **25.2%** | **21.2%** | **28.5%** | **29.6%** | **12.5%** | **13.8%** | **26.9%** | **28.0%** | **6.9%** | **7.4%** |
| | **Change 2010-2015** | | | | | | | | | | | |
| | **No.** | **Pct.** | **No.** | **Pct.** | **No.** | **Pct.** | **No.** | **Pct.** | **No.** | **Pct.** | **No.** | **Pct.** |
| Orono City | 363 | 12.9% | -119 | -13.4% | 34 | 3.1% | 81 | 80.2% | 28 | 28.6% | 339 | 52.9% |
| Hennepin County | 16,355 | 3.5% | 65 | 0.1% | 8,162 | 7.3% | -269 | -0.6% | 1,748 | 7.9% | 6,649 | 3.4% |
| **State of Minnesota** | **192,100** | **10.1%** | **-34,403** | **-7.2%** | **76,667** | **14.2%** | **51,610** | **21.8%** | **74,540** | **14.6%** | **23,686** | **18.1%** |

* Single-parents with children
** Includes unmarried couples without children and group quarters

Sources: U. S. Census; ESRI, Inc.; Maxfield Research and Consulting, LLC

## Summary of Demographic Trends

The following points summarize key demographic trends that will impact development in Navarre.

- The population in Orono is forecast to grow by 499 people (+6.1%) and 173 households (+5.6%) between 2017 and 2022.
- The population over age 65 is expected to experience a substantial increase in Orono, as a result of the aging of the baby boom generation.
- Median incomes are rising in Orono, with a 4.0% increase forecast between 2017 and 2022 as incomes rise from $136,259 to $141,731.
- Only 15% of residential units in Orono are renter-occupied. Out of renter-occupied units, 66.7% are single-family homes, the rest are in structures with 50 or more units.
- Between 2010 and 2015, married couple households with children decreased in Orono, while married couple households without children, other family households and householders living alone increased.

## Orono Building Permit Data

Based on building permit data obtained from Metropolitan Council, Table 11 presents the number of housing units added in Orono since 2007.

- A total of 360 new housing units were delivered in Orono between 2007 and 2016. Approximately 83% of the permitted units were for single-family homes (298), while 17.2% were for multifamily units (62 units).
- The number of new permits generally increased each year since 2007. The number of permitted single-family housing units added from 2012 to 2016 (205 units) was over double of those added from 2007 to 2011 (93 units).

**TABLE 11**
**RESIDENTIAL CONSTRUCTION BUILDING PERMITTED UNITS ISSUED**
**ORONO, MN**
**2007 to 2017**

| Year | Units Permitted | | Total Units |
|---|---|---|---|
| | Family | Multifamily | |
| 2007 | 23 | 0 | 23 |
| 2008 | 23 | 0 | 23 |
| 2009 | 20 | 0 | 20 |
| 2010 | 10 | 0 | 10 |
| 2011 | 17 | 62 | 79 |
| 2012 | 25 | 0 | 25 |
| 2013 | 39 | 0 | 39 |
| 2014 | 42 | 0 | 42 |
| 2015 | 62 | 0 | 62 |
| 2016 | 37 | 0 | 37 |
| **Total** | **298** | **62** | **360** |

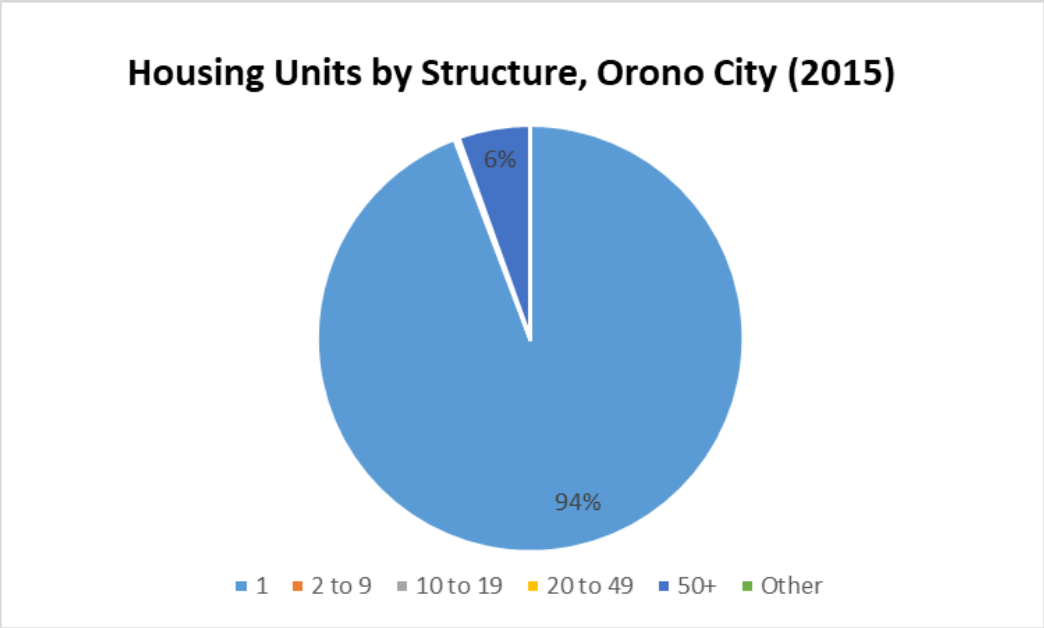
Sources: Met Council; Maxfield Research & Consulting LLC

## Housing Units by Structure Type

Based on Census data, Table 12 presents the number of housing units by housing type as compared with housing tenure. Housing types compared include single-family detached units, townhouse units, and multifamily units. Multifamily includes duplex, triplex, and four-plex units as well as buildings with five or more units.

- Out of all residential housing units in Orono about 94% were single-family homes, while only 6% of units were multifamily. However, when considering housing tenure, out of owner-occupied units, 99% were single family homes, while out of renter-occupied units 66.7% of units were single family homes.

- For Hennepin County in 2015, single detached homes accounted for 90.4% of owner-occupied housing units. The largest portion of renter-occupied units in Hennepin County were those in structures containing 50 or more units accounting for 32.2% of all units. This compares with just in Orono, where structures containing 50 or more units were the only type of multifamily structure.


Housing Units by Structure, Orono City (2015)
6%
94%
1
2 to 9
10 to 19
20 to 49
50+
Other

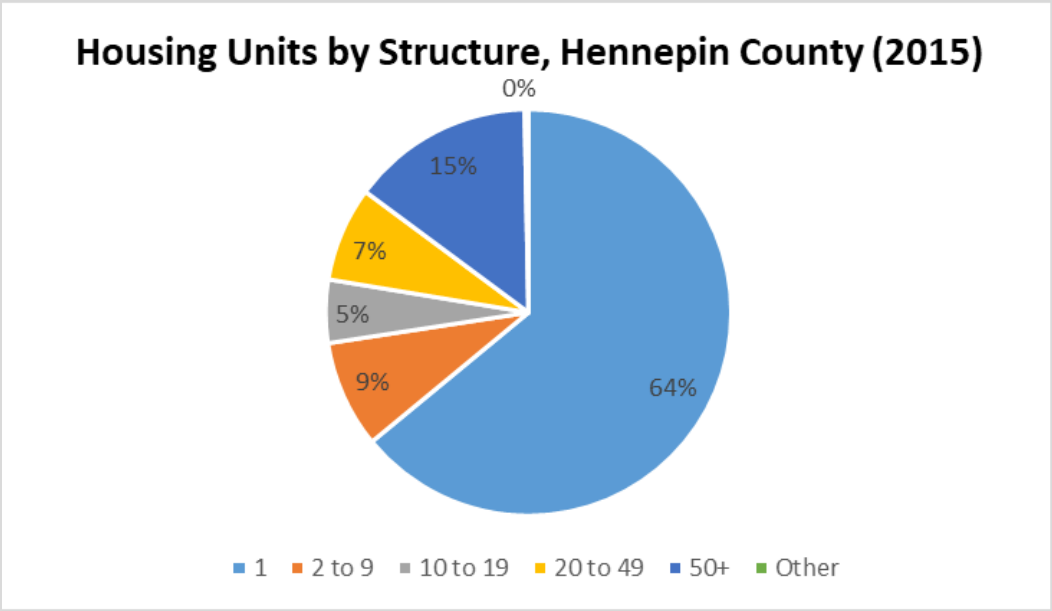

Housing Units by Structure, Hennepin County (2015)
0%
15%
7%
5%
9%
64%
1
2 to 9
10 to 19
20 to 49
50+
Other

**TABLE 12**
**HOUSING UNITS BY STRUCTURE & TENURE**
**PRIMARY MARKET AREA**
**2015**

| | ORONO CITY | | | | HENNEPIN COUNTY | | | |
|---|---|---|---|---|---|---|---|---|
| Units in Structure | Owner-Occupied | Pct. | Renter-Occupied | Pct. | Owner-Occupied | Pct. | Renter-Occupied | Pct. |
| 1, detached | 2,615 | 96.6% | 239 | 50.0% | 247,800 | 80.6% | 23,400 | 12.8% |
| 1, attached | 66 | 2.4% | 80 | 16.7% | 30,109 | 9.8% | 12,592 | 6.9% |
| 2 | 0 | 0.0% | 0 | 0.0% | 4,012 | 1.3% | 12,829 | 7.0% |
| 3 to 4 | 10 | 0.4% | 0 | 0.0% | 2,669 | 0.9% | 8,885 | 4.9% |
| 5 to 9 | 0 | 0.0% | 0 | 0.0% | 2,588 | 0.8% | 10,911 | 6.0% |
| 10 to 19 | 0 | 0.0% | 0 | 0.0% | 2,076 | 0.7% | 22,573 | 12.3% |
| 20 to 49 | 0 | 0.0% | 0 | 0.0% | 4,620 | 1.5% | 32,276 | 17.7% |
| 50 or more | 15 | 0.6% | 159 | 33.3% | 12,573 | 4.1% | 58,794 | 32.2% |
| Mobile home | 0 | 0.0% | 0 | 0.0% | 910 | 0.3% | 446 | 0.2% |
| Boat, RV, van, etc. | 0 | 0.0% | 0 | 0.0% | 38 | 0.0% | 95 | 0.1% |
| **Total** | **2,706** | **100%** | **478** | **100%** | **307,395** | **100%** | **182,801** | **100%** |

Sources: U.S. Census Bureau - American Community Survey; Maxfield Research and Consulting LLC

## Housing Resale Values

Table 13 presents recently sold single family homes, condos/townhomes, and multi-family homes in Navarre and Orono from January 2017 to mid-November 2017.

- A total of 186 properties were identified as recently sold in Orono with 153 single family homes listed and 33 condo or multi-family homes.

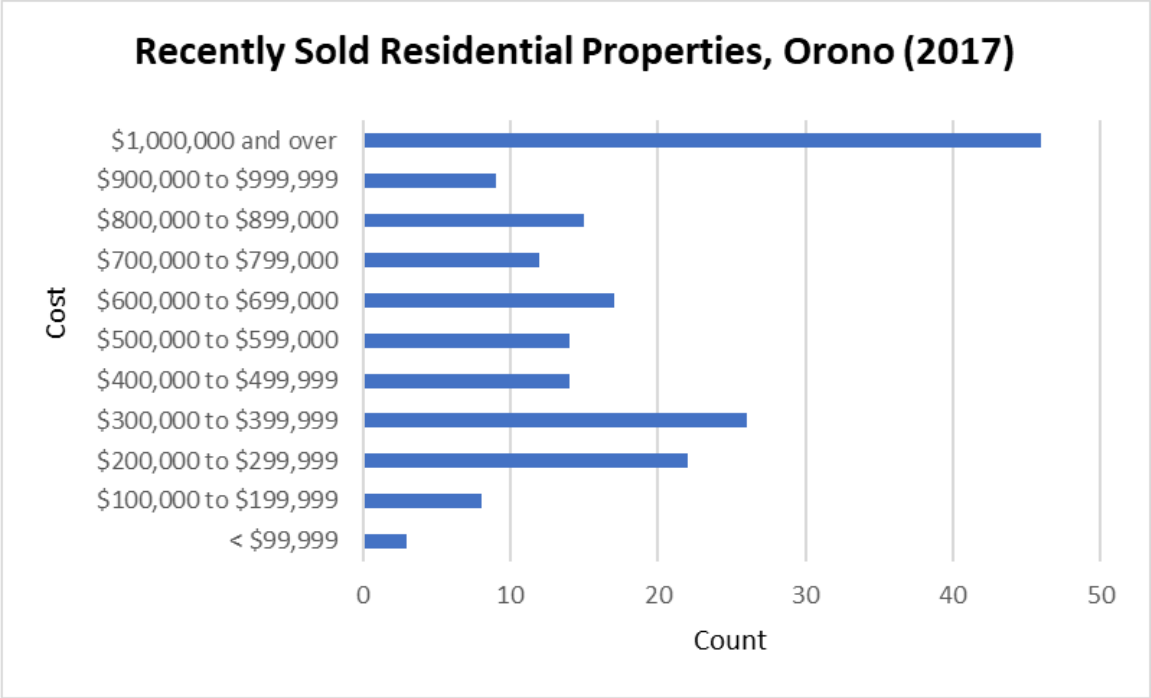
- The largest percentage (30%) of single family homes in Orono were sold for over $1,000,000. Only 5% of single family homes were sold for less than $200,000.

- Only 16 homes have sold through mid-November 2017 in Navarre. Compared to Orono proper the housing market in Navarre is much more affordable as the average and median sales price was $215,305 and $206,500, respectively. The housing stock is also older and smaller as the average home size was 1,476 finished square feet.

**TABLE 13**
**RECENTLY SOLD (JANUARY 2017- NOVEMBER 2017)**
**MARKET AREA**

| | Single Family Homes | | | | Condo/ Townhomes/ Multi-Family Homes | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Navarre | | Orono | | Navarre | | Orono | | Navarre | | Orono | |
| **Cost** | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| < $99,999 | 0 | 0% | 0 | 0% | 0 | 0% | 3 | 9% | 0 | 0% | 3 | 2% |
| $100,000 to $199,999 | 3 | 33% | 8 | 5% | 3 | 43% | 0 | 0% | 6 | 38% | 8 | 4% |
| $200,000 to $299,999 | 5 | 56% | 13 | 8% | 4 | 57% | 9 | 27% | 9 | 56% | 22 | 12% |
| $300,000 to $399,999 | 1 | 11% | 12 | 8% | 0 | 0% | 14 | 42% | 1 | 6% | 26 | 14% |
| $400,000 to $499,999 | 0 | 0% | 14 | 9% | 0 | 0% | 0 | 0% | 0 | 0% | 14 | 8% |
| $500,000 to $599,000 | 0 | 0% | 13 | 8% | 0 | 0% | 1 | 3% | 0 | 0% | 14 | 8% |
| $600,000 to $699,000 | 0 | 0% | 12 | 8% | 0 | 0% | 5 | 15% | 0 | 0% | 17 | 9% |
| $700,000 to $799,000 | 0 | 0% | 11 | 7% | 0 | 0% | 1 | 3% | 0 | 0% | 12 | 6% |
| $800,000 to $899,000 | 0 | 0% | 15 | 10% | 0 | 0% | 0 | 0% | 0 | 0% | 15 | 8% |
| $900,000 to $999,999 | 0 | 0% | 9 | 6% | 0 | 0% | 0 | 0% | 0 | 0% | 9 | 5% |
| $1,000,000 and over | 0 | 0% | 46 | 30% | 0 | 0% | 0 | 0% | 0 | 0% | 46 | 25% |
| Total | 9 | 100% | 153 | 100% | 7 | 100% | 33 | 100% | 16 | 100% | 186 | 100% |

Sources: Trulia; Realtor.com; RE/MAX; Maxfield Research & Consulting, LLC



## Active Listings

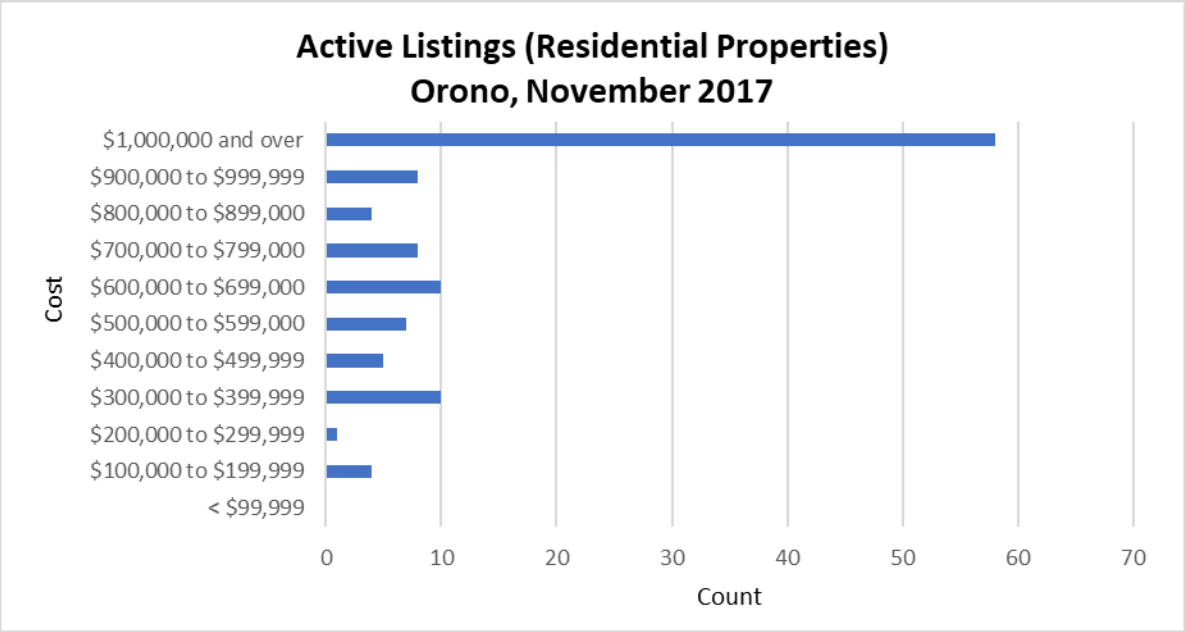
Table 14 presents currently listed, for-sale single family homes, condos, and multi-family homes in Navarre and Orono as of mid-November 2017.

- A total of 115 properties were identified as actively listed for-sale in Orono with 101 single family homes listed and 14 condo or multi-family homes.
- The largest percentage (50%) of single family homes in Orono were listed for over $1,000,000 with only 5% listed for under $300,000.
- Only seven homes were listed for sale in the Navarre area. The median list price of these listings was $288,450.

**TABLE 14**
**ACTIVE LISTINGS**
**NOVEMBER 2017**

| | Single Family Homes | | | | Condo/ Townhomes/ Multi-Family Homes | | | | Total | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Navarre | | Orono | | Navarre | | Orono | | Navarre | | Orono | |
| Cost | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent | Count | Percent |
| < $99,999 | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% | 0 | 0% |
| $100,000 to $199,999 | 3 | 50% | 4 | 4% | 0 | 0% | 0 | 0% | 3 | 43% | 4 | 3% |
| $200,000 to $299,999 | 0 | 0% | 1 | 1% | 0 | 0% | 0 | 0% | 0 | 0% | 1 | 1% |
| $300,000 to $399,999 | 1 | 17% | 7 | 7% | 0 | 0% | 3 | 21% | 1 | 14% | 10 | 9% |
| $400,000 to $499,999 | 1 | 17% | 4 | 4% | 0 | 0% | 1 | 7% | 1 | 14% | 5 | 4% |
| $500,000 to $599,000 | 0 | 0% | 4 | 4% | 1 | 100% | 3 | 21% | 1 | 14% | 7 | 6% |
| $600,000 to $699,000 | 0 | 0% | 6 | 6% | 0 | 0% | 4 | 29% | 0 | 0% | 10 | 9% |
| $700,000 to $799,000 | 0 | 0% | 6 | 6% | 0 | 0% | 2 | 14% | 0 | 0% | 8 | 7% |
| $800,000 to $899,000 | 1 | 17% | 3 | 3% | 0 | 0% | 1 | 7% | 1 | 14% | 4 | 3% |
| $900,000 to $999,999 | 0 | 0% | 8 | 8% | 0 | 0% | 0 | 0% | 0 | 0% | 8 | 7% |
| $1,000,000 and over | 0 | 0% | 58 | 57% | 0 | 0% | 0 | 0% | 0 | 0% | 58 | 50% |
| Total | 6 | 100% | 101 | 100% | 1 | 100% | 14 | 100% | 7 | 100% | 115 | 100% |

Sources: Zillow; Realtor.com; RE/MAX; Maxfield Research & Consulting, LLC




## New For-Sale Housing Projects

Table 15 presents active and pending for-sale new construction single family homes in Orono as of mid-November 2017.

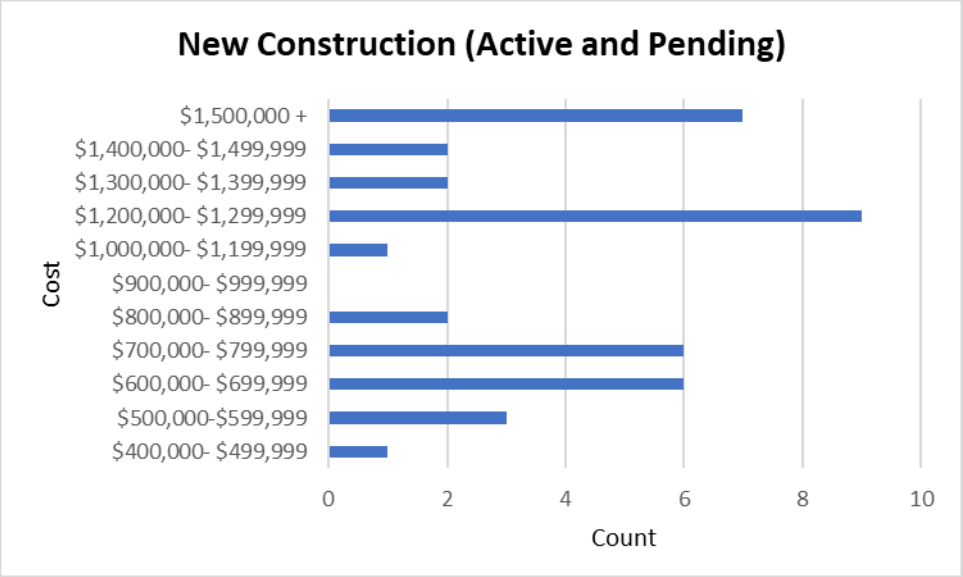
- A total of 39 new construction projects were identified as actively listed for-sale in Orono.

- The largest percentage (54%) of single family homes in Orono were listed for over $1,000,000 with no active or pending new construction homes listed for under $400,000.

- The median price per square foot (PSF) of a new single-family home in Orono is $253 PSF; compared to $210 PSF for a for-sale multifamily home (twinhome or detached townhome).

**TABLE 15**
**NEW CONSTRUCTION PROJECTS (ACTIVE AND PENDING)**
**ORONO**

| Cost | Count | Percent |
|---|---|---|
| $400,000- $499,999 | 1 | 3% |
| $500,000-$599,999 | 3 | 8% |
| $600,000- $699,999 | 6 | 15% |
| $700,000- $799,999 | 6 | 15% |
| $800,000- $899,999 | 2 | 5% |
| $900,000- $999,999 | 0 | 0% |
| $1,000,000- $1,199,999 | 1 | 3% |
| $1,200,000- $1,299,999 | 9 | 23% |
| $1,300,000- $1,399,999 | 2 | 5% |
| $1,400,000- $1,499,999 | 2 | 5% |
| $1,500,000 + | 7 | 18% |
| Total | 39 | 100% |



## Selected Multifamily Housing Developments

Table 16 lists selected multifamily housing developments in Navarre and from other Lake Minnetonka area communities. Data comprises of both for sale and rental properties and includes the number of units and bedrooms and pricing. The following points summarize the current market for multifamily residential units in Navarre.

- The for-sale units range in size from 850 square feet to 4,600 square feet, while the for-rent units range in size from 450 to 2,049 square feet.

- Pricing for the for-sale condominium units is at the luxury end as prices range from $273,917 to over $3,500,000. Most of new condominium product is being developed in Downtown Wayzata with prices starting at $500,000 with most product selling for over $1,000,000.

- Pricing for the for-rent units ranges from $750 per month for a studio to $3,575 per month for a two-bedroom unit.

- Besides *The Mist on Lake Minnetonka* which was built in 2007, all the other for-rent projects predate 2000. The for-sale units were all built after 2000.

**TABLE 16**
**SELECTED MULTIFAMILY UNITS**
**NAVARRE SURROUNDING AREA**

| Name | Type | Yr. Open | No. of Units | Bedrooms | Size Range Min - Max | Cost Range Min - Max | Price/ Sqft Avg. |
|---|---|---|---|---|---|---|---|
| **For Sale** | | | | | | | |
| **The Landing**<br>815 Wayzata Blvd E; Wayzata | Condos | 2017 | 31 | 2-3 BR | 1,220 - 4,600 | $825,000 - $3,500,000 | $719 |
| **Meyer Place at Ferndale**<br>105 Lake St E; Wayzata | Condos | 2017 | 21 | 2-4BR | 2,000 - 4,000 | $1,290,000 - $2,399,000 | $622 |
| **The Regatta**<br>801 Lake St E; Wayzata | Condos | 2015 | 59 | 1-2BR | 850 - 4,000 | $500,000 - $2,000,000 | $544 |
| **Lakeview Lofts**<br>4100 Spring St; Spring Park | Condos | 2005 | 32 | 1-2BR | 1,297 - 1,534 | $273,917 - $380,202 | $230 |
| **For Rent** | | | | | | | |
| **The Mist on Lake Minnetonka**<br>4201 Sunset Dr; Spring Park | Apartments | 2007 | 121 | 1-2BR | 1,260 - 2,049 | N/A - $3,575 | N/A |
| **Minnetonka Edgewater**<br>4177 Shoreline Dr; Spring Park | Apartments | 1967 | 82 | 0-2BR | 450 - 1,078 | $875 - $1,450 | $1.64 |
| **Bayview Apartments**<br>2400 Interlachen Rd; Spring Park | Apartments | 1969 | 107 | 0-3BR | 500 - 1,200 | $750 - $1,500 | $1.33 |
| **Parkshore Apartments**<br>4601 Shoreline Dr; Spring Park | Apartments | 1984 | 92 | 1-2BR | 643 - 1,050 | N/A N/A | N/A |

Source: Maxfield Research & Consulting, LLC

**Selected Multifamily & Commercial Development**



*The Mist on Lake Minnetonka*



*Lakeview Lofts*



*The Regatta*



*The Landing - Hotel*

## Senior Housing

The term “senior housing” refers to any housing development that is restricted to persons age 55 or older. Today, senior housing includes a spectrum of housing alternatives, which occasionally overlap, thus making the differences somewhat ambiguous. However, the level of support services offered best distinguishes them. The following figure classifies senior housing projects into five categories based on the level of support services that are offered.

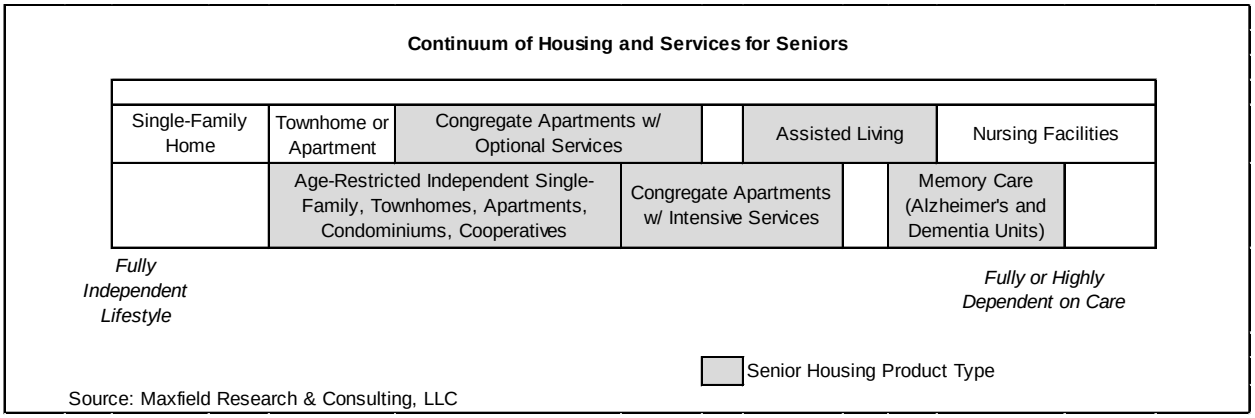



Table 17 shows the inventory of existing market rate senior housing products in Navarre and the surrounding Lake Minnetonka communities that would be competitive with a new market rate senior housing development on the subject property.

- As displayed in Table 17, five properties with a total of over 300 units were identified near the Orono area.

- Four out of five projects offered assisted living care and only one out of the five projects offered solely adult/few services units.

- Although there are no senior housing developments in Navarre, a large senior housing campus is located to the west in Spring Park (Lake Minnetonka Shores).

**TABLE 17**
**SELECTED SENIOR HOUSING DEVELOPMENTS**
**NAVARRE SURROUNDING AREA**
**NOVEMBER 2017**

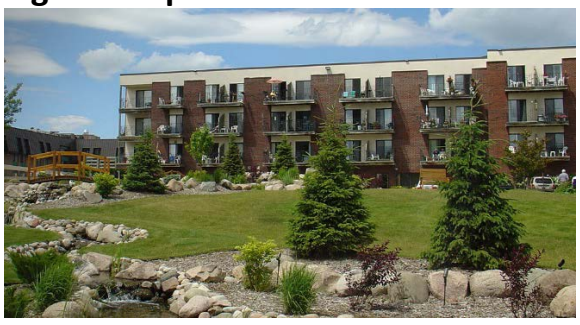
| Project/ Address | Year Built | Number of Units | Services |
|---|---|---|---|
| **Presbyterian Homes and Services (Folkestone)**<br>100 Promenade Ave; Wayzata | 2013 | 254 | Adult/ Few Services/ Assisted Living/ Memory Care |
| **Trails of Orono**<br>875 Wayzata Blvd; Wayzata | 2012 | 76 | Assisted Living/ Memory Care |
| **Orono Woods Senior Apartments**<br>2040 Wayzata Blvd; Long Lake | 2002 | 62 | Adult/ Few Services |
| **Long Lake Assisted Living LLC**<br>345 North Brown Rd; Long Lake | 2005 | N/A | Assisted Living/ Housing With Services |
| **Sojourn Suites LLC**<br>3645 Lyric Ave; Navarre<br>(8 locations total) | 1984 | 2-7 per location | Assisted Living/ Housing With Services/ Memory Care |
| **Presbyterian Homes and Services (Lake Minnetonka Shores)**<br>4527 Shoreline Dr; Spring Park | 1978 | 131 | Adult/ Few Services/ Assisted Living/ Memory Care |

Source: Maxfield Research & Consulting, LLC

## Selected Senior Housing Developments



*Folkestone*


*Presbyterian Homes- Lake Minnetonka Shores*



*Trails of Orono*



*Long Lake Assisted Living*

## Consumer Expenditure Patterns

Table 18 shows estimated consumer expenditures and average expenditures per households for retail goods and services in Navarre and Orono compared to all of Hennepin County in 2017. Data was obtained from ESRI based on Consumer Expenditure Surveys from the Bureau of Labor Statistics.

The table shows the average expenditures per household in the Market Area by product or service. The average expenditure reflects the average amount spent per household, while the total expenditure reflects the aggregate amount spent by all households. In addition, a Spending Potential Index (SPI) is illustrated for comparison purposes. The SPI is based on households and represents the annual expenditures for a product or service relative to the national average which is given a benchmark index of 100. An SPI of 115 indicates that the average annual expenditure by local consumers is 15% above the national average.

Two-thirds of the national economy is driven by consumer spending. Consumer spending is influenced by market conditions and trends. In times of economic troubles, market conditions drive spending patterns toward convenience and necessities, whereas in times of a booming economy consumer trends feature opportunity and luxury items. During the most recent recession, when the housing market began its decline in late 2006 into 2007, consumer spending and consumer confidence followed. Households decreased spending, increased savings, and reduced credit card debt as many households were faced with job losses.

As the nation exited the recession, consumers gained confidence and spending gradually recovered. Consumer confidence continues to grow suggesting economic growth with higher consumption.

The following are key points from the household expenditures table.

- Overall, Navarre residents will spend an estimated $6.9 million on retail goods and services in 2017, excluding housing, finance/insurance, and travel expenditures, as well as vehicle purchases.

- Average annual expenditures (excluding the categories mentioned above) are estimated to be $38,538 per household in Navarre. This compares to an average of $27,506 per household for Hennepin County.

- As reflected in the SPI, expenditures by Navarre and Orono households are higher than the Hennepin County average in every product and service category.

- Among the retail categories, Market Area spending was greatest for Food at Home (i.e. groceries) at an average of $8,353 per household in Navarre compared to $6,052 per household in Hennepin County.

- Spending was also high for Food Away from Home ($5,693 per Navarre household) and Entertainment and Recreation goods and services ($5,375 per household in Navarre).

**TABLE 19**
**ESTIMATED HOUSEHOLD EXPENDITURES BY SELECTED PRODUCT TYPE**
**PRIMARY MARKET AREA**
**2017**

| | Navarre Annual Expenditures | | Orono City Expenditures | Hennepin County Expenditures | Spending Potential Index to USA | | |
|---|---|---|---|---|---|---|---|
| | Total | Average | Average | Average | | | |
| Category | ($000's) | Per HH | Per HH | Per HH | Navarre | Orono City | Hennepin County |
| **Goods & Services** | | | | | Index | Index | Index |
| Apparel & Services | $650 | $3,715 | $5,299 | $2,674 | 172 | 245 | 124 |
| Entertainment and Recreation | $941 | $5,375 | $7,662 | $3,749 | 172 | 246 | 120 |
| Nonprescription Drugs | $38 | $215 | $292 | $148 | 168 | 229 | 116 |
| Prescription Drugs | $113 | $646 | $869 | $434 | 166 | 224 | 112 |
| Eye Glasses & Contact Lenses | $29 | $163 | $229 | $111 | 173 | 243 | 117 |
| Personal Care Products | $141 | $804 | $1,097 | $574 | 171 | 233 | 122 |
| Child Care | $145 | $826 | $1,235 | $609 | 172 | 258 | 127 |
| School Books & Supplies | $46 | $263 | $369 | $195 | 170 | 239 | 126 |
| Smoking Products | $110 | $631 | $706 | $472 | 152 | 170 | 113 |
| Computer Hardware | $53 | $304 | $429 | $220 | 176 | 248 | 127 |
| Computer Software | $4 | $20 | $29 | $15 | 176 | 251 | 132 |
| Pets | $178 | $1,017 | $1,408 | $682 | 171 | 236 | 114 |
| **Food** | | | | | Index | Index | Index |
| Food at Home | $1,462 | $8,354 | $11,114 | $6,052 | 166 | 221 | 120 |
| Food Away from Home | $996 | $5,693 | $7,818 | $4,121 | 171 | 235 | 124 |
| Alcoholic Beverages | $173 | $990 | $1,423 | $705 | 178 | 256 | 127 |
| **Home** | | | | | Index | Index | Index |
| Home Mortgage Payment/Rent | $2,726 | $15,574 | $24,766 | $9,967 | 181 | 287 | 116 |
| Maintenance & Remodeling Services | $622 | $3,557 | $5,845 | $2,218 | 183 | 301 | 114 |
| Maintenance & Remodeling Material | $121 | $689 | $1,138 | $433 | 170 | 281 | 107 |
| Utilities | $1,456 | $8,317 | $11,246 | $5,898 | 165 | 223 | 117 |
| **Household Furnishings, Equipment, & Operations** | | | | | Index | Index | Index |
| Household Textiles | $29 | $167 | $240 | $118 | 175 | 252 | 124 |
| Furniture | $174 | $995 | $1,400 | $711 | 174 | 245 | 124 |
| Rugs | $8 | $43 | $69 | $29 | 185 | 299 | 125 |
| Major Appliances | $96 | $549 | $772 | $363 | 171 | 241 | 113 |
| Small Appliances | $15 | $83 | $113 | $60 | 172 | 233 | 124 |
| Housewares | $29 | $163 | $222 | $114 | 172 | 234 | 120 |
| Luggage | $4 | $22 | $35 | $15 | 181 | 292 | 128 |
| Telephone & Accessories | $21 | $118 | $151 | $86 | 171 | 218 | 125 |
| Lawn & Garden | $129 | $739 | $1,113 | $469 | 176 | 265 | 112 |
| Moving/Storage/Freight Express | $19 | $111 | $143 | $86 | 174 | 223 | 134 |
| Housekeeping Supplies | $209 | $1,195 | $1,610 | $842 | 168 | 226 | 118 |
| **Financial & Insurance** | | | | | Index | Index | Index |
| Investments | $2,069 | $11,825 | $20,817 | $7,512 | 191 | 336 | 121 |
| Vehicle Loans | $775 | $4,430 | $5,684 | $3,156 | 163 | 209 | 116 |
| Owners & Renters Insurance | $156 | $889 | $1,298 | $569 | 172 | 251 | 110 |
| Vehicle Insurance | $345 | $1,973 | $2,671 | $1,408 | 168 | 227 | 120 |
| Life/Other Insurance | $134 | $764 | $1,232 | $495 | 179 | 288 | 116 |
| Health Insurance | $1,089 | $6,225 | $8,733 | $4,237 | 170 | 239 | 116 |

CONTINUED

**TABLE 19 CONTINUED**
**ESTIMATED HOUSEHOLD EXPENDITURES BY SELECTED PRODUCT TYPE**
**PRIMARY MARKET AREA**
**2017**

| Category | Navarre Annual Expenditures Total ($000's) | Navarre Annual Expenditures Average Per HH | Orono City Expenditures Average Per HH | Hennepin County Expenditures Average Per HH | Spending Potential Index to USA: Navarre | Spending Potential Index to USA: Orono City | Spending Potential Index to USA: Hennepin County |
|---|---|---|---|---|---|---|---|
| **Transportation** | | | | | **Index** | **Index** | **Index** |
| Cars and Trucks (Net Outlay) | $656 | $3,746 | $4,893 | $2,635 | 167 | 218 | 117 |
| Gasoline and Motor Oil | $794 | $4,535 | $5,917 | $3,257 | 164 | 213 | 117 |
| Vehicle Maintenance/Repair | $318 | $1,818 | $2,515 | $1,276 | 170 | 235 | 119 |
| **Travel** | | | | | **Index** | **Index** | **Index** |
| Airline Fares | $163 | $933 | $1,501 | $645 | 183 | 295 | 127 |
| Lodging | $167 | $951 | $1,500 | $634 | 182 | 286 | 121 |
| Vehicle Rental | $8 | $48 | $75 | $32 | 182 | 282 | 123 |
| Food & Drink on Trips | $155 | $888 | $1,358 | $600 | 180 | 275 | 122 |
| **Average Annual Household Expenditures Summary** | | | | | | | |
| **Goods & Services** | $2,446 | $12,962 | $18,217 | $9,202 | | | |
| **Food** | $2,631 | $15,036 | $20,354 | $10,878 | | | |
| **Home** | $4,924 | $28,138 | $42,995 | $18,517 | | | |
| **Household** | $733 | $4,186 | $5,868 | $2,893 | | | |
| **Financial and Insurance** | $4,569 | $26,106 | $40,436 | $17,376 | | | |
| **Transportation** | $1,767 | $10,099 | $13,325 | $7,168 | | | |
| **Travel** | $494 | $2,821 | $4,434 | $1,910 | | | |
| ***Total*** | ***$17,564*** | ***$99,349*** | ***$145,627*** | ***$67,944*** | | | |

**Note: The Spending Potential Index is based on households and represents the amount spent for a product or service relative to the national average of 100.**

Sources: ESRI; Maxfield Research & Consulting, LLC

## Retail Demand Potential and Leakage

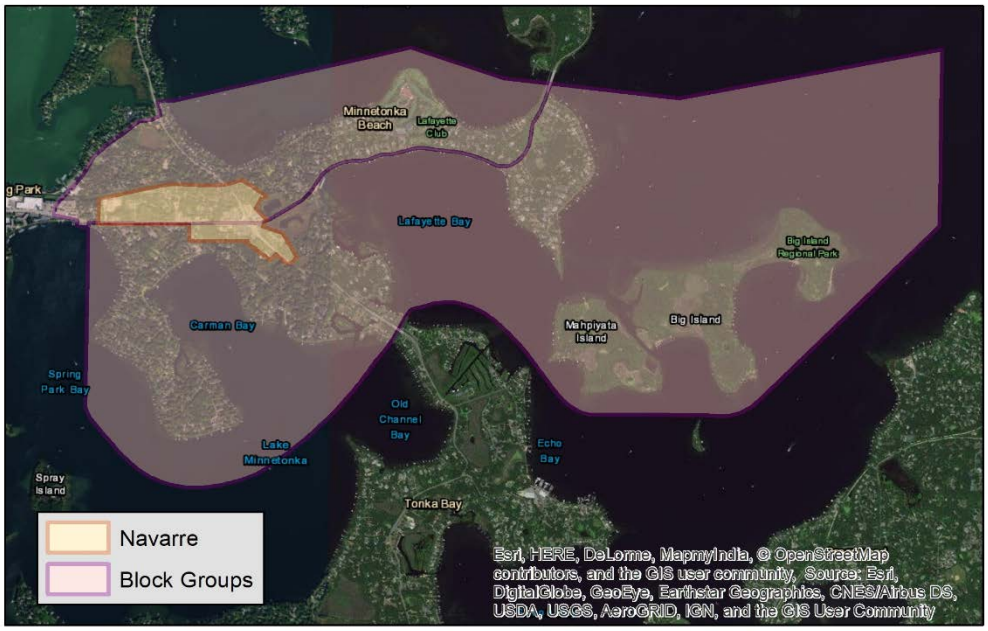
Tables 20 through 24 on the following pages present current retail sales and consumer expenditure data for Block Groups 27053072031 and 27053072032; Orono; Hennepin County; and a 5-mile radius around Navarre. Due to ESRI data limitations, information could not be provided for the Navarre site area and instead the two block groups closest to the site were analyzed (see map on the following page). The sales information is from ESRI based on household counts. This information lists retail demand (potential sales), retail supply to consumers (retail sales) and provides a picture of the gap between the area's retail supply and demand. A positive value represents "leakage" of retail opportunity to stores outside of the Market Area. A negative value represents a "surplus," where more customers are coming into the area for retail goods and services than there are households in the area.

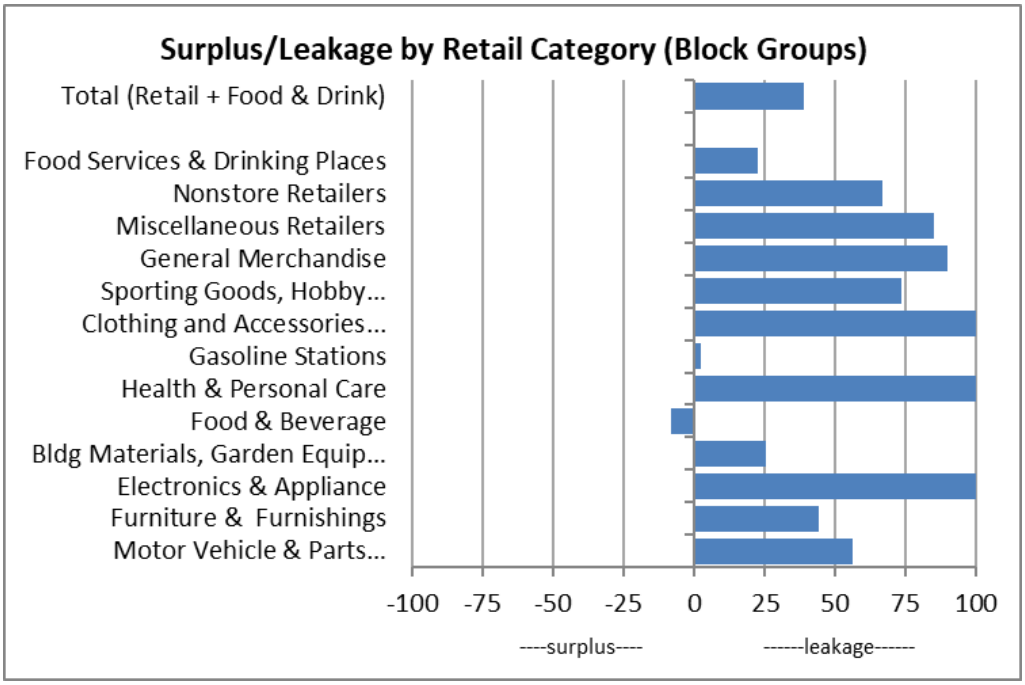
- As depicted in the tables and illustrated in the following graphs, leakages exist in most retail industry segments in both Navarre and Orono. For the Navarre area block groups,

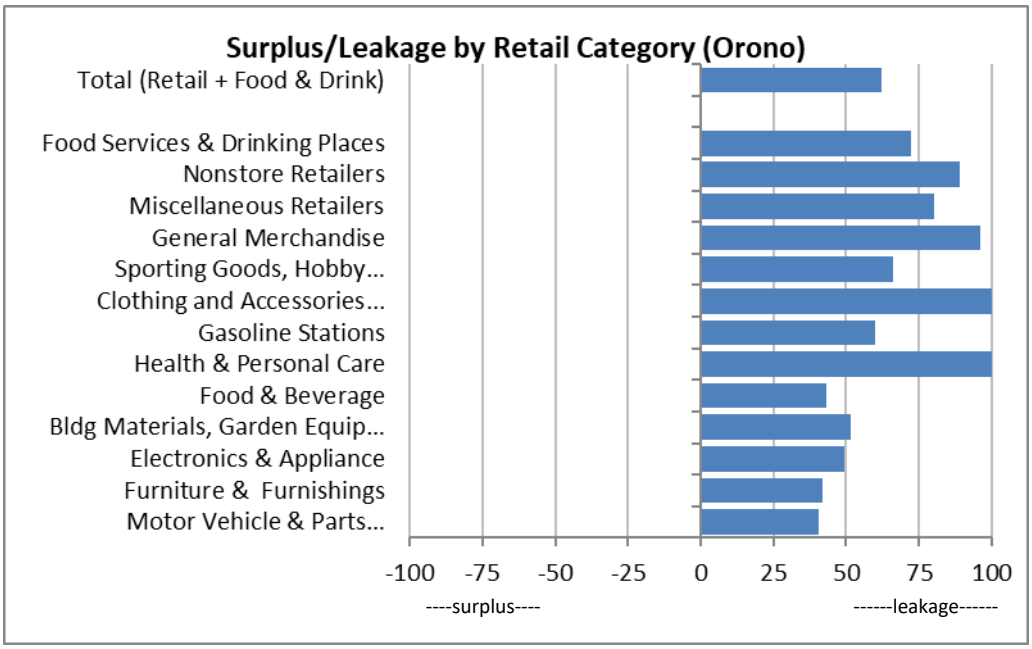
the total Retail Trade industry (including Food and Drink) experienced a $46.5 million sales leakage in 2017, while Orono experienced a $209.8 million sales leakage.

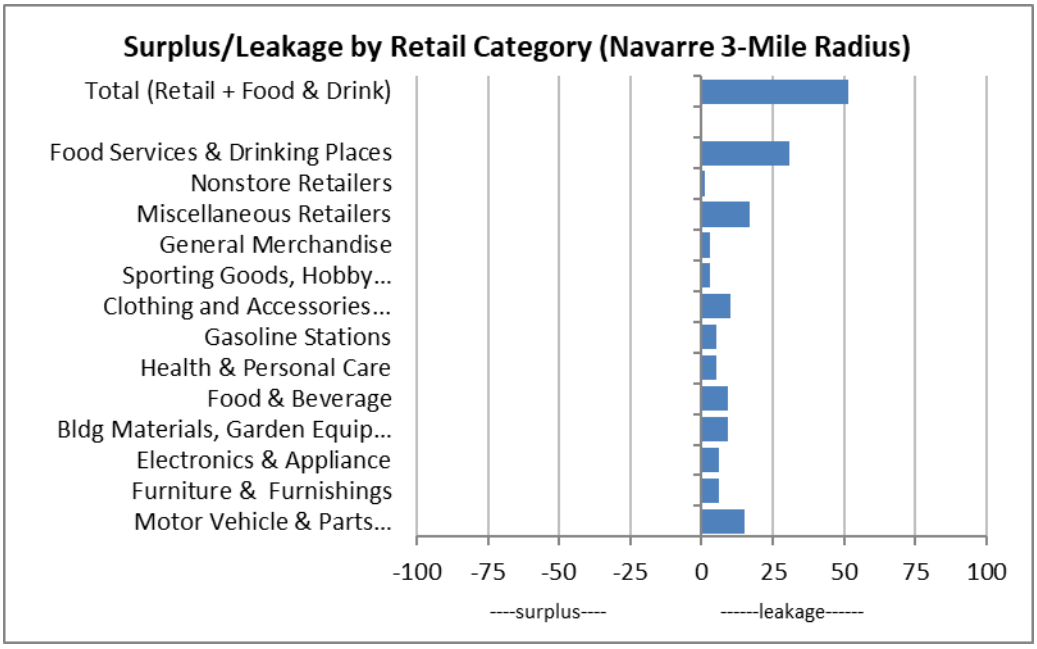
- There is high leakage in Orono and from within the three- and five-mile radius of Navarre. This suggests the Navarre area is under retailed and could support new commercial development.

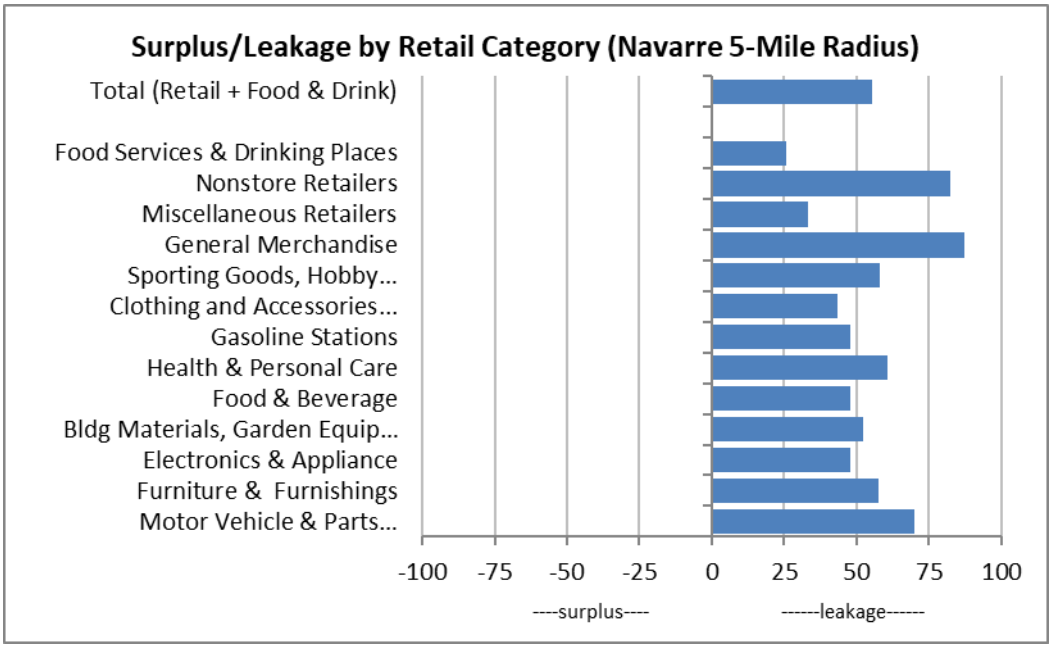
**Navarre Site Block Groups**




Surplus/Leakage by Retail Category (Block Groups)
Total (Retail + Food & Drink)
Food Services & Drinking Places
Nonstore Retailers
Miscellaneous Retailers
General Merchandise
Sporting Goods, Hobby...
Clothing and Accessories...
Gasoline Stations
Health & Personal Care
Food & Beverage
Bldg Materials, Garden Equip...
Electronics & Appliance
Furniture & Furnishings
Motor Vehicle & Parts...
-100 -75 -50 -25 0 25 50 75 100
----surplus----
------leakage------


Surplus/Leakage by Retail Category (Orono)
Total (Retail + Food & Drink)
Food Services & Drinking Places
Nonstore Retailers
Miscellaneous Retailers
General Merchandise
Sporting Goods, Hobby...
Clothing and Accessories...
Gasoline Stations
Health & Personal Care
Food & Beverage
Bldg Materials, Garden Equip...
Electronics & Appliance
Furniture & Furnishings
Motor Vehicle & Parts...
-100 -75 -50 -25 0 25 50 75 100
----surplus----
------leakage------


Surplus/Leakage by Retail Category (Navarre 3-Mile Radius)
Total (Retail + Food & Drink)
Food Services & Drinking Places
Nonstore Retailers
Miscellaneous Retailers
General Merchandise
Sporting Goods, Hobby...
Clothing and Accessories...
Gasoline Stations
Health & Personal Care
Food & Beverage
Bldg Materials, Garden Equip...
Electronics & Appliance
Furniture & Furnishings
Motor Vehicle & Parts...
-100 -75 -50 -25 0 25 50 75 100
----surplus----
------leakage------


Surplus/Leakage by Retail Category (Navarre 5-Mile Radius)
Total (Retail + Food & Drink)
Food Services & Drinking Places
Nonstore Retailers
Miscellaneous Retailers
General Merchandise
Sporting Goods, Hobby...
Clothing and Accessories...
Gasoline Stations
Health & Personal Care
Food & Beverage
Bldg Materials, Garden Equip...
Electronics & Appliance
Furniture & Furnishings
Motor Vehicle & Parts...
-100 -75 -50 -25 0 25 50 75 100
----surplus----
------leakage------

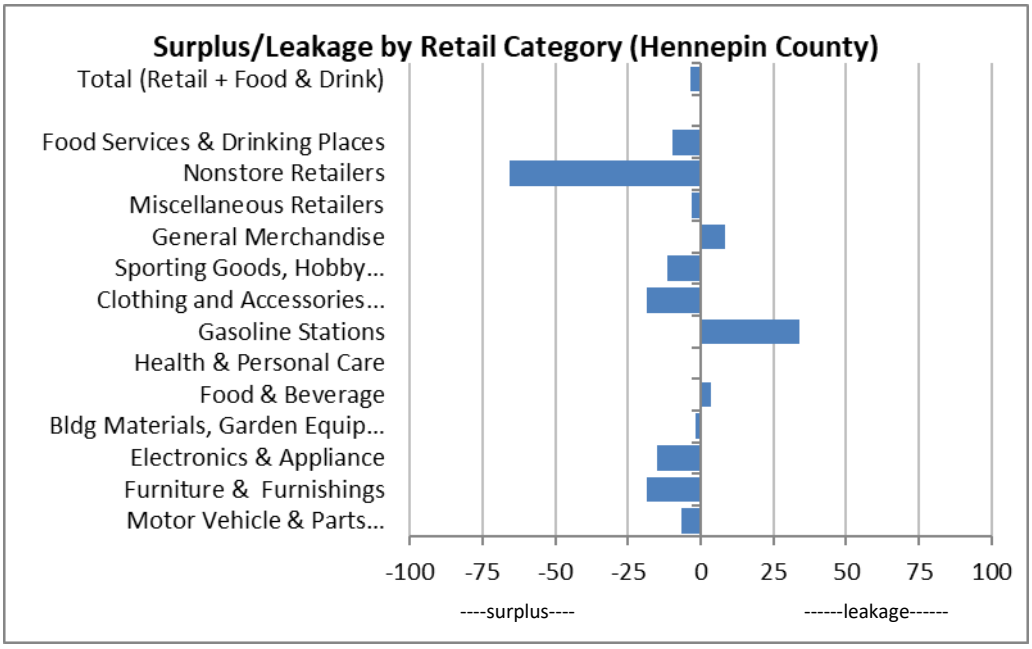

Surplus/Leakage by Retail Category (Hennepin County)
Total (Retail + Food & Drink)
Food Services & Drinking Places
Nonstore Retailers
Miscellaneous Retailers
General Merchandise
Sporting Goods, Hobby...
Clothing and Accessories...
Gasoline Stations
Health & Personal Care
Food & Beverage
Bldg Materials, Garden Equip...
Electronics & Appliance
Furniture & Furnishings
Motor Vehicle & Parts...
-100
-75
-50
-25
0
25
50
75
100
----surplus----
------leakage------

**TABLE 20**
**RETAIL DEMAND POTENTIAL AND LEAKAGE**
**BLOCK GROUPS 27053072031 AND 27053072032**
**2017**

| Industry Group (NAICS Code) | Demand (Retail Potential) | Supply (Retail Sales) | Retail Gap (Demand - Supply) | Surplus/Leakage Factor | Number of Businesses |
|---|---|---|---|---|---|
| **SUMMARY** | | | | | |
| Total Retail Trade and Food & Drink (NAICS 44-45, 722) | $83,246,161 | $36,712,858 | $46,533,303 | 38.8 | 24 |
| Total Retail Trade (NAICS 44-45) | $74,923,922 | $31,455,599 | $43,468,323 | 40.9 | 18 |
| Total Food & Drink (NAICS 722) | $8,322,239 | $5,257,259 | $3,064,980 | 22.6 | 6 |
| **EXPENDITURE TYPE** | | | | | |
| **Motor Vehicle & Parts Dealers** | **$15,332,266** | **$4,274,957** | **$11,057,309** | **56.4** | **5** |
| Automobile Dealers | $12,220,953 | $0 | $12,220,953 | 100.0 | 0 |
| Other Motor Vehicle Dealers | $1,736,499 | $0 | $1,736,499 | 100.0 | 0 |
| Auto Parts, Accessories & Tire Stores | $1,374,814 | $4,274,957 | ($2,900,143) | (51.3) | 5 |
| **Furniture & Home Furnishings Stores** | **$2,433,512** | **$938,640** | **$1,494,872** | **44.3** | **1** |
| Furniture Stores | $1,446,739 | $0 | $1,446,739 | 100.0 | 0 |
| Home Furnishings Stores | $986,773 | $938,640 | $48,133 | 2.5 | 1 |
| **Electronics & Appliance Stores** | **$2,864,604** | **$0** | **$2,864,604** | **100.0** | **0** |
| **Bldg Materials, Garden Equip. & Supply Stores** | **$5,412,792** | **$3,223,242** | **$2,189,550** | **25.4** | **3** |
| Bldg Material & Supplies Dealers | $4,894,588 | $3,223,242 | $1,671,346 | 20.6 | 3 |
| Lawn & Garden Equip & Supply Stores | $518,204 | $0 | $518,204 | 100.0 | 0 |
| **Food & Beverage Stores** | **$11,791,677** | **$13,854,475** | **($2,062,798)** | **(8.0)** | **2** |
| Grocery Stores | $9,646,239 | $13,368,035 | ($3,721,796) | (16.2) | 1 |
| Specialty Food Stores | $596,215 | $0 | $596,215 | 100.0 | 0 |
| Beer, Wine & Liquor Stores | $1,549,223 | $486,440 | $1,062,783 | 52.2 | 1 |
| **Health & Personal Care Stores** | **$5,225,483** | **$0** | **$5,225,483** | **100.0** | **0** |
| **Gasoline Stations** | **$7,998,282** | **$7,625,612** | **$372,670** | **2.4** | **2** |
| **Clothing & Clothing Accessories Stores** | **$4,167,426** | **$0** | **$4,167,426** | **100.0** | **0** |
| Clothing Stores | $2,807,837 | $0 | $2,807,837 | 100.0 | 0 |
| Shoe Stores | $576,622 | $0 | $576,622 | 100.0 | 0 |
| Jewelry, Luggage & Leather Goods Stores | $782,967 | $0 | $782,967 | 100.0 | 0 |
| **Sporting Goods, Hobby, Book & Music Stores** | **$2,352,042** | **$354,365** | **$1,997,677** | **73.8** | **1** |
| Sporting Goods/Hobby/Musical Instr Stores | $2,043,401 | $354,365 | $1,689,036 | 70.4 | 1 |
| Book, Periodical & Music Stores | $308,641 | $0 | $308,641 | 100.0 | 0 |
| **General Merchandise Stores** | **$13,233,944** | **$708,161** | **$12,525,783** | **89.8** | **1** |
| Department Stores Excluding Leased Depts. | $9,975,419 | $0 | $9,975,419 | 100.0 | 0 |
| Other General Merchandise Stores | $3,258,525 | $708,161 | $2,550,364 | 64.3 | 1 |
| **Miscellaneous Store Retailers** | **$2,875,558** | **$228,135** | **$2,647,423** | **85.3** | **2** |
| Florists | $168,075 | $95,461 | $72,614 | 27.6 | 1 |
| Office Supplies, Stationary & Gift Stores | $605,024 | $0 | $605,024 | 100.0 | 0 |
| Used Merchandise Stores | $375,089 | $0 | $375,089 | 100.0 | 0 |
| Other Miscellaneous Store Retailers | $1,727,370 | $132,674 | $1,594,696 | 85.7 | 1 |
| **Nonstore Retailers** | **$1,236,336** | **$248,012** | **$988,324** | **66.6** | **1** |
| Electronic Shopping & Mail-Order Houses | $960,637 | $0 | $960,637 | 100.0 | 0 |
| Vending Machine Operators | $54,560 | $0 | $54,560 | 100.0 | 0 |
| Direct Selling Establishments | $221,139 | $248,012 | ($26,873) | (5.7) | 1 |
| **Food Services & Drinking Places** | **$8,322,239** | **$5,257,259** | **$3,064,980** | **22.6** | **6** |
| Special Food Services | $200,835 | $227,460 | ($26,625) | (6.2) | 1 |
| Drinking Places - Alcoholic Beverages | $508,937 | $1,048,301 | ($539,364) | (34.6) | 1 |
| Restaurants/Other Eating Places | $7,612,467 | $3,981,498 | $3,630,969 | 31.3 | 4 |

**Note:** All figures quoted in 2016 dollars. Supply (retail sales ) estimates sales to consumers by establishments, sales to businesses are excluded. Demand (retail potential) estimates the expected amout spent by consumers at a retail establishment. Leakage/Surplus factor measures the relationship between supply and demand at ranges from +100 (total leakage) to -100 (total surplus). A positive value represents "leakage" of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area.

Sources: ESRI; Maxfield Research & Consulting, LLC

**TABLE 21**
**RETAIL DEMAND POTENTIAL AND LEAKAGE**
**NAVARRE 3-MILE RADIUS**
**2017**

| Industry Group (NAICS Code) | Demand (Retail Potential) | Supply (Retail Sales) | Retail Gap (Demand - Supply) | Surplus/Leakage Factor | Number of Businesses |
|---|---|---|---|---|---|
| **SUMMARY** | | | | | |
| Total Retail Trade and Food & Drink (NAICS 44-45, 722) | $535,612,858 | $172,168,743 | $363,444,115 | 51.3 | 120 |
| Total Retail Trade (NAICS 44-45) | $482,523,379 | $133,891,510 | $348,631,869 | 56.6 | 89 |
| Total Food & Drink (NAICS 722) | $53,089,479 | $38,277,232 | $14,812,247 | 16.2 | 31 |
| **EXPENDITURE TYPE** | | | | | |
| **Motor Vehicle & Parts Dealers** | **$99,423,043** | **$23,897,095** | **$75,525,948** | **61.2** | **15** |
| Automobile Dealers | $79,182,070 | $2,050,214 | $77,131,856 | 95.0 | 3 |
| Other Motor Vehicle Dealers | $11,338,855 | $16,703,910 | ($5,365,055) | (19.1) | 6 |
| Auto Parts, Accessories & Tire Stores | $8,902,118 | $5,142,971 | $3,759,147 | 26.8 | 6 |
| **Furniture & Home Furnishings Stores** | **$15,746,253** | **$4,068,157** | **$11,678,096** | **58.9** | **6** |
| Furniture Stores | $9,240,709 | $705,683 | $8,535,026 | 85.8 | 1 |
| Home Furnishings Stores | $6,505,543 | $3,362,474 | $3,143,069 | 31.9 | 5 |
| **Electronics & Appliance Stores** | **$18,233,322** | **$7,727,957** | **$10,505,365** | **40.5** | **6** |
| **Bldg Materials, Garden Equip. & Supply Stores** | **$36,688,185** | **$10,731,333** | **$25,956,852** | **54.7** | **9** |
| Bldg Material & Supplies Dealers | $33,012,711 | $9,129,145 | $23,883,566 | 56.7 | 8 |
| Lawn & Garden Equip & Supply Stores | $3,675,474 | $1,602,187 | $2,073,287 | 39.3 | 1 |
| **Food & Beverage Stores** | **$75,096,200** | **$36,591,107** | **$38,505,093** | **34.5** | **9** |
| Grocery Stores | $61,451,947 | $29,157,128 | $32,294,819 | 35.6 | 3 |
| Specialty Food Stores | $3,792,310 | $445,514 | $3,346,796 | 79.0 | 1 |
| Beer, Wine & Liquor Stores | $9,851,942 | $6,988,465 | $2,863,477 | 17.0 | 5 |
| **Health & Personal Care Stores** | **$33,767,842** | **$7,834,775** | **$25,933,067** | **62.3** | **5** |
| **Gasoline Stations** | **$50,957,027** | **$18,086,810** | **$32,870,217** | **47.6** | **5** |
| **Clothing & Clothing Accessories Stores** | **$26,545,442** | **$14,016,785** | **$12,528,657** | **30.9** | **10** |
| Clothing Stores | $17,836,647 | $5,358,116 | $12,478,531 | 53.8 | 7 |
| Shoe Stores | $3,687,554 | $0 | $3,687,554 | 100.0 | 0 |
| Jewelry, Luggage & Leather Goods Stores | $5,021,241 | $8,658,669 | ($3,637,428) | (26.6) | 3 |
| **Sporting Goods, Hobby, Book & Music Stores** | **$14,934,881** | **$1,638,205** | **$13,296,676** | **80.2** | **3** |
| Sporting Goods/Hobby/Musical Instr Stores | $12,986,768 | $1,638,205 | $11,348,563 | 77.6 | 3 |
| Book, Periodical & Music Stores | $1,948,113 | $0 | $1,948,113 | 100.0 | 0 |
| **General Merchandise Stores** | **$84,610,381** | **$1,448,666** | **$83,161,715** | **96.6** | **3** |
| Department Stores Excluding Leased Depts. | $63,775,567 | $0 | $63,775,567 | 100.0 | 0 |
| Other General Merchandise Stores | $20,834,815 | $1,340,482 | $19,494,333 | 87.9 | 2 |
| **Miscellaneous Store Retailers** | **$18,422,426** | **$7,523,946** | **$10,898,480** | **42.0** | **17** |
| Florists | $1,228,539 | $606,436 | $622,103 | 33.9 | 2 |
| Office Supplies, Stationary & Gift Stores | $3,891,558 | $3,026,738 | $864,820 | 12.5 | 3 |
| Used Merchandise Stores | $2,366,857 | $714,706 | $1,652,151 | 53.6 | 3 |
| Other Miscellaneous Store Retailers | $10,935,473 | $3,176,066 | $7,759,407 | 55.0 | 8 |
| **Nonstore Retailers** | **$8,098,379** | **$326,676** | **$7,771,703** | **92.2** | **1** |
| Electronic Shopping & Mail-Order Houses | $6,149,255 | $0 | $6,149,255 | 100.0 | 0 |
| Vending Machine Operators | $346,660 | $0 | $346,660 | 100.0 | 0 |
| Direct Selling Establishments | $1,602,464 | $248,012 | $1,354,452 | 73.2 | 1 |
| **Food Services & Drinking Places** | **$53,089,479** | **$38,277,232** | **$14,812,247** | **16.2** | **31** |
| Special Food Services | $1,337,609 | $414,454 | $923,155 | 52.7 | 2 |
| Drinking Places - Alcoholic Beverages | $3,310,413 | $1,935,735 | $1,374,678 | 26.2 | 2 |
| Restaurants/Other Eating Places | $48,441,457 | $35,927,043 | $12,514,414 | 14.8 | 27 |

**Note:** All figures quoted in 2016 dollars. Supply (retail sales ) estimates sales to consumers by establishments, sales to businesses are excluded. Demand (retail potential) estimates the expected amout spent by consumers at a retail establishment. Leakage/Surplus factor measures the relationship between supply and demand at ranges from +100 (total leakage) to -100 (total surplus). A positive value represents "leakage" of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area.

Sources: ESRI; Maxfield Research & Consulting, LLC

**TABLE 22**
**RETAIL DEMAND POTENTIAL AND LEAKAGE**
**NAVARRE 5-MILE RADIUS**
**2017**

| Industry Group (NAICS Code) | Demand (Retail Potential) | Supply (Retail Sales) | Retail Gap (Demand - Supply) | Surplus/Leakage Factor | Number of Businesses |
|---|---|---|---|---|---|
| **SUMMARY** | | | | | |
| Total Retail Trade and Food & Drink (NAICS 44-45, 722) | $1,465,161,877 | $420,595,936 | $1,044,565,941 | 55.4 | 309 |
| Total Retail Trade (NAICS 44-45) | $1,319,383,170 | $334,264,186 | $985,118,984 | 59.6 | 233 |
| Total Food & Drink (NAICS 722) | $145,778,708 | $86,331,750 | $59,446,958 | 25.6 | 76 |
| **EXPENDITURE TYPE** | | | | | |
| **Motor Vehicle & Parts Dealers** | **$273,031,317** | **$48,007,748** | **$225,023,569** | **70.1** | **25** |
| Automobile Dealers | $217,457,583 | $7,977,305 | $209,480,278 | 92.9 | 4 |
| Other Motor Vehicle Dealers | $31,302,300 | $33,208,460 | ($1,906,160) | (3.0) | 12 |
| Auto Parts, Accessories & Tire Stores | $24,271,434 | $6,821,983 | $17,449,451 | 56.1 | 9 |
| **Furniture & Home Furnishings Stores** | **$43,421,622** | **$11,715,267** | **$31,706,355** | **57.5** | **15** |
| Furniture Stores | $25,407,690 | $996,344 | $24,411,346 | 92.5 | 2 |
| Home Furnishings Stores | $18,013,933 | $10,718,923 | $7,295,010 | 25.4 | 13 |
| **Electronics & Appliance Stores** | **$49,869,939** | **$17,626,389** | **$32,243,550** | **47.8** | **15** |
| **Bldg Materials, Garden Equip. & Supply Stores** | **$101,657,303** | **$31,946,126** | **$69,711,177** | **52.2** | **28** |
| Bldg Material & Supplies Dealers | $91,455,405 | $24,836,604 | $66,618,801 | 57.3 | 22 |
| Lawn & Garden Equip & Supply Stores | $10,201,898 | $7,109,522 | $3,092,376 | 17.9 | 6 |
| **Food & Beverage Stores** | **$203,992,841** | **$71,428,021** | **$132,564,820** | **48.1** | **23** |
| Grocery Stores | $166,772,659 | $51,905,277 | $114,867,382 | 52.5 | 8 |
| Specialty Food Stores | $10,286,259 | $2,154,202 | $8,132,057 | 65.4 | 4 |
| Beer, Wine & Liquor Stores | $26,933,923 | $17,368,543 | $9,565,380 | 21.6 | 11 |
| **Health & Personal Care Stores** | **$91,628,133** | **$22,411,233** | **$69,216,900** | **60.7** | **12** |
| **Gasoline Stations** | **$138,114,753** | **$48,440,917** | **$89,673,836** | **48.1** | **12** |
| **Clothing & Clothing Accessories Stores** | **$72,910,482** | **$28,807,127** | **$44,103,355** | **43.4** | **31** |
| Clothing Stores | $48,930,743 | $15,583,803 | $33,346,940 | 51.7 | 22 |
| Shoe Stores | $10,193,797 | $0 | $10,193,797 | 100.0 | 0 |
| Jewelry, Luggage & Leather Goods Stores | $13,785,942 | $13,191,567 | $594,375 | 2.2 | 9 |
| **Sporting Goods, Hobby, Book & Music Stores** | **$41,017,804** | **$10,807,870** | **$30,209,934** | **58.3** | **12** |
| Sporting Goods/Hobby/Musical Instr Stores | $35,693,853 | $9,021,925 | $26,671,928 | 59.6 | 10 |
| Book, Periodical & Music Stores | $5,323,950 | $1,785,946 | $3,538,004 | 49.8 | 1 |
| **General Merchandise Stores** | **$231,338,399** | **$15,872,083** | **$215,466,316** | **87.2** | **10** |
| Department Stores Excluding Leased Depts. | $174,570,783 | $9,654,682 | $164,916,101 | 89.5 | 1 |
| Other General Merchandise Stores | $56,767,617 | $6,217,401 | $50,550,216 | 80.3 | 8 |
| **Miscellaneous Store Retailers** | **$50,280,409** | **$25,083,031** | **$25,197,378** | **33.4** | **47** |
| Florists | $3,459,149 | $914,561 | $2,544,588 | 58.2 | 4 |
| Office Supplies, Stationary & Gift Stores | $10,669,342 | $9,460,044 | $1,209,298 | 6.0 | 12 |
| Used Merchandise Stores | $6,484,743 | $1,967,103 | $4,517,640 | 53.5 | 7 |
| Other Miscellaneous Store Retailers | $29,667,175 | $12,741,323 | $16,925,852 | 39.9 | 23 |
| **Nonstore Retailers** | **$22,120,166** | **$2,118,375** | **$20,001,791** | **82.5** | **4** |
| Electronic Shopping & Mail-Order Houses | $16,870,797 | $1,246,433 | $15,624,364 | 86.2 | 1 |
| Vending Machine Operators | $942,008 | $230,841 | $711,167 | 60.6 | 1 |
| Direct Selling Establishments | $4,307,361 | $641,100 | $3,666,261 | 74.1 | 2 |
| **Food Services & Drinking Places** | **$145,778,708** | **$86,331,750** | **$59,446,958** | **25.6** | **76** |
| Special Food Services | $3,728,365 | $949,922 | $2,778,443 | 59.4 | 5 |
| Drinking Places - Alcoholic Beverages | $9,107,936 | $3,564,223 | $5,543,713 | 43.7 | 3 |
| Restaurants/Other Eating Places | $132,942,406 | $81,817,605 | $51,124,801 | 23.8 | 68 |

**Note:** All figures quoted in 2016 dollars. Supply (retail sales ) estimates sales to consumers by establishments, sales to businesses are excluded. Demand (retail potential) estimates the expected amout spent by consumers at a retail establishment. Leakage/Surplus factor measures the relationship between supply and demand at ranges from +100 (total leakage) to -100 (total surplus). A positive value represents "leakage" of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area.

Sources: ESRI; Maxfield Research & Consulting, LLC

**TABLE 23**
**RETAIL DEMAND POTENTIAL AND LEAKAGE**
**ORONO CITY**
**2017**

| Industry Group (NAICS Code) | Demand (Retail Potential) | Supply (Retail Sales) | Retail Gap (Demand - Supply) | Surplus/Leakage Factor | Number of Businesses |
|---|---|---|---|---|---|
| **SUMMARY** | | | | | |
| Total Retail Trade and Food & Drink (NAICS 44-45, 722) | $273,377,507 | $63,595,140 | $209,782,367 | 62.3 | 39 |
| Total Retail Trade (NAICS 44-45) | $245,936,678 | $59,162,800 | $186,773,878 | 61.2 | 33 |
| Total Food & Drink (NAICS 722) | $27,440,829 | $4,432,340 | $23,008,489 | 72.2 | 6 |
| **EXPENDITURE TYPE** | | | | | |
| **Motor Vehicle & Parts Dealers** | **$50,578,889** | **$21,468,058** | **$29,110,831** | **40.4** | **7** |
| Automobile Dealers | $40,231,314 | $1,378,783 | $38,852,531 | 93.4 | 1 |
| Other Motor Vehicle Dealers | $5,803,044 | $16,354,747 | ($10,551,703) | (47.6) | 2 |
| Auto Parts, Accessories & Tire Stores | $4,544,531 | $3,734,528 | $810,003 | 9.8 | 4 |
| **Furniture & Home Furnishings Stores** | **$8,166,792** | **$3,353,614** | **$4,813,178** | **41.8** | **2** |
| Furniture Stores | $4,761,449 | $0 | $4,761,449 | 100.0 | 0 |
| Home Furnishings Stores | $3,405,343 | $3,353,614 | $51,729 | 0.8 | 2 |
| **Electronics & Appliance Stores** | **$9,444,296** | **$3,201,648** | **$6,242,648** | **49.4** | **3** |
| **Bldg Materials, Garden Equip. & Supply Stores** | **$19,381,412** | **$6,201,401** | **$13,180,011** | **51.5** | **5** |
| Bldg Material & Supplies Dealers | $17,380,098 | $4,781,741 | $12,598,357 | 56.8 | 4 |
| Lawn & Garden Equip & Supply Stores | $2,001,314 | $1,419,660 | $581,654 | 17.0 | 1 |
| **Food & Beverage Stores** | **$37,825,732** | **$14,968,478** | **$22,857,254** | **43.3** | **3** |
| Grocery Stores | $30,734,280 | $14,482,038 | $16,252,242 | 35.9 | 2 |
| Specialty Food Stores | $1,894,083 | $0 | $1,894,083 | 100.0 | 0 |
| Beer, Wine & Liquor Stores | $5,197,369 | $486,440 | $4,710,929 | 82.9 | 1 |
| **Health & Personal Care Stores** | **$17,043,787** | **$0** | **$17,043,787** | **100.0** | **0** |
| **Gasoline Stations** | **$25,217,387** | **$6,279,916** | **$18,937,471** | **60.1** | **2** |
| **Clothing & Clothing Accessories Stores** | **$13,882,519** | **$0** | **$13,882,519** | **100.0** | **0** |
| Clothing Stores | $9,254,983 | $0 | $9,254,983 | 100.0 | 0 |
| Shoe Stores | $1,891,861 | $0 | $1,891,861 | 100.0 | 0 |
| Jewelry, Luggage & Leather Goods Stores | $2,735,675 | $0 | $2,735,675 | 100.0 | 0 |
| **Sporting Goods, Hobby, Book & Music Stores** | **$7,694,959** | **$1,561,511** | **$6,133,448** | **66.3** | **3** |
| Sporting Goods/Hobby/Musical Instr Stores | $6,689,415 | $1,561,511 | $5,127,904 | 62.1 | 3 |
| Book, Periodical & Music Stores | $1,005,544 | $0 | $1,005,544 | 100.0 | 0 |
| **General Merchandise Stores** | **$43,125,150** | **$850,552** | **$42,274,598** | **96.1** | **2** |
| Department Stores Excluding Leased Depts. | $32,641,652 | $0 | $32,641,652 | 100.0 | 0 |
| Other General Merchandise Stores | $10,483,498 | $850,552 | $9,632,946 | 85.0 | 2 |
| **Miscellaneous Store Retailers** | **$9,361,046** | **$1,029,610** | **$8,331,436** | **80.2** | **5** |
| Florists | $710,279 | $364,997 | $345,282 | 32.1 | 2 |
| Office Supplies, Stationary & Gift Stores | $2,001,624 | $290,005 | $1,711,619 | 74.7 | 1 |
| Used Merchandise Stores | $1,215,961 | $0 | $1,215,961 | 100.0 | 0 |
| Other Miscellaneous Store Retailers | $5,433,182 | $374,608 | $5,058,574 | 87.1 | 2 |
| **Nonstore Retailers** | **$4,214,709** | **$248,012** | **$3,966,697** | **88.9** | **1** |
| Electronic Shopping & Mail-Order Houses | $3,185,449 | $0 | $3,185,449 | 100.0 | 0 |
| Vending Machine Operators | $173,941 | $0 | $173,941 | 100.0 | 0 |
| Direct Selling Establishments | $855,319 | $248,012 | $607,307 | 55.0 | 1 |
| **Food Services & Drinking Places** | **$27,440,829** | **$4,432,340** | **$23,008,489** | **72.2** | **6** |
| Special Food Services | $691,993 | $225,549 | $466,444 | 50.8 | 1 |
| Drinking Places - Alcoholic Beverages | $1,778,415 | $863,307 | $915,108 | 34.6 | 1 |
| Restaurants/Other Eating Places | $24,970,421 | $3,343,484 | $21,626,937 | 76.4 | 4 |

**Note:** All figures quoted in 2016 dollars. Supply (retail sales ) estimates sales to consumers by establishments, sales to businesses are excluded. Demand (retail potential) estimates the expected amout spent by consumers at a retail establishment. Leakage/Surplus factor measures the relationship between supply and demand at ranges from +100 (total leakage) to -100 (total surplus). A positive value represents "leakage" of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area.

Sources: ESRI; Maxfield Research & Consulting, LLC

**TABLE 24**
**RETAIL DEMAND POTENTIAL AND LEAKAGE**
**HENNEPIN COUNTY**
**2017**

| Industry Group (NAICS Code) | Demand (Retail Potential) | Supply (Retail Sales) | Retail Gap (Demand - Supply) | Surplus/Leakage Factor | Number of Businesses |
|---|---|---|---|---|---|
| **SUMMARY** | | | | | |
| Total Retail Trade and Food & Drink (NAICS 44-45, 722) | $23,168,709,937 | $24,969,872,273 | ($1,801,162,336) | (3.7) | 9,278 |
| Total Retail Trade (NAICS 44-45) | $20,858,232,830 | $22,157,297,456 | ($1,299,064,626) | (3.0) | 6,390 |
| Total Food & Drink (NAICS 722) | $2,310,477,107 | $2,812,574,817 | ($502,097,710) | (9.8) | 2,888 |
| **EXPENDITURE TYPE** | | | | | |
| **Motor Vehicle & Parts Dealers** | **$4,308,548,701** | **$4,935,215,848** | **($626,667,147)** | **(6.8)** | **494** |
| Automobile Dealers | $3,446,131,266 | $4,381,372,658 | ($935,241,392) | (11.9) | 192 |
| Other Motor Vehicle Dealers | $481,691,364 | $241,203,595 | $240,487,769 | 33.3 | 89 |
| Auto Parts, Accessories & Tire Stores | $380,726,071 | $312,639,595 | $68,086,476 | 9.8 | 213 |
| **Furniture & Home Furnishings Stores** | **$671,176,633** | **$973,802,560** | **($302,625,927)** | **(18.4)** | **372** |
| Furniture Stores | $404,679,267 | $719,995,929 | ($315,316,662) | (28.0) | 162 |
| Home Furnishings Stores | $266,497,366 | $253,806,631 | $12,690,735 | 2.4 | 210 |
| **Electronics & Appliance Stores** | **$779,650,061** | **$1,050,461,363** | **($270,811,302)** | **(14.8)** | **423** |
| **Bldg Materials, Garden Equip. & Supply Stores** | **$1,467,246,241** | **$1,520,171,215** | **($52,924,974)** | **(1.8)** | **557** |
| Bldg Material & Supplies Dealers | $1,324,440,594 | $1,439,612,015 | ($115,171,421) | (4.2) | 476 |
| Lawn & Garden Equip & Supply Stores | $142,805,647 | $80,559,200 | $62,246,447 | 27.9 | 81 |
| **Food & Beverage Stores** | **$3,305,974,043** | **$3,075,748,654** | **$230,225,389** | **3.6** | **745** |
| Grocery Stores | $2,719,393,786 | $2,448,193,873 | $271,199,913 | 5.2 | 361 |
| Specialty Food Stores | $168,265,811 | $171,408,676 | ($3,142,865) | (0.9) | 187 |
| Beer, Wine & Liquor Stores | $418,314,446 | $456,146,105 | ($37,831,659) | (4.3) | 197 |
| **Health & Personal Care Stores** | **$1,444,064,248** | **$1,457,795,870** | **($13,731,622)** | **(0.5)** | **511** |
| **Gasoline Stations** | **$2,267,501,559** | **$1,113,835,678** | **$1,153,665,881** | **34.1** | **247** |
| **Clothing & Clothing Accessories Stores** | **$1,142,973,158** | **$1,663,179,726** | **($520,206,568)** | **(18.5)** | **1,060** |
| Clothing Stores | $774,154,614 | $1,257,723,092 | ($483,568,478) | (23.8) | 725 |
| Shoe Stores | $161,601,699 | $177,000,222 | ($15,398,523) | (4.5) | 120 |
| Jewelry, Luggage & Leather Goods Stores | $207,216,845 | $228,456,412 | ($21,239,567) | (4.9) | 215 |
| **Sporting Goods, Hobby, Book & Music Stores** | **$647,455,533** | **$812,335,807** | **($164,880,274)** | **(11.3)** | **531** |
| Sporting Goods/Hobby/Musical Instr Stores | $561,028,522 | $691,618,003 | ($130,589,481) | (10.4) | 438 |
| Book, Periodical & Music Stores | $86,427,011 | $120,717,804 | ($34,290,793) | (16.6) | 93 |
| **General Merchandise Stores** | **$3,683,528,480** | **$3,118,258,947** | **$565,269,533** | **8.3** | **300** |
| Department Stores Excluding Leased Depts. | $2,768,054,392 | $2,128,058,707 | $639,995,685 | 13.1 | 103 |
| Other General Merchandise Stores | $915,474,088 | $990,200,240 | ($74,726,152) | (3.9) | 197 |
| **Miscellaneous Store Retailers** | **$799,727,609** | **$848,126,062** | **($48,398,453)** | **(2.9)** | **998** |
| Florists | $45,527,447 | $63,012,000 | ($17,484,553) | (16.1) | 107 |
| Office Supplies, Stationary & Gift Stores | $167,282,748 | $177,651,900 | ($10,369,152) | (3.0) | 265 |
| Used Merchandise Stores | $104,884,138 | $121,419,040 | ($16,534,902) | (7.3) | 163 |
| Other Miscellaneous Store Retailers | $482,033,276 | $486,043,122 | ($4,009,846) | (0.4) | 463 |
| **Nonstore Retailers** | **$340,386,564** | **$1,588,365,726** | **($1,247,979,162)** | **(64.7)** | **152** |
| Electronic Shopping & Mail-Order Houses | $264,788,750 | $1,542,255,474 | ($1,277,466,724) | (70.7) | 95 |
| Vending Machine Operators | $15,365,586 | $18,042,785 | ($2,677,199) | (8.0) | 19 |
| Direct Selling Establishments | $60,232,228 | $28,067,467 | $32,164,761 | 36.4 | 38 |
| **Food Services & Drinking Places** | **$2,310,477,107** | **$2,812,574,817** | **($502,097,710)** | **(9.8)** | **2,888** |
| Special Food Services | $57,042,060 | $85,543,664 | ($28,501,604) | (20.0) | 94 |
| Drinking Places - Alcoholic Beverages | $138,339,841 | $116,543,152 | $21,796,689 | 8.6 | 127 |
| Restaurants/Other Eating Places | $2,115,095,206 | $2,610,488,001 | ($495,392,795) | (10.5) | 2,667 |

**Note:** All figures quoted in 2016 dollars. Supply (retail sales ) estimates sales to consumers by establishments, sales to businesses are excluded. Demand (retail potential) estimates the expected amout spent by consumers at a retail establishment. Leakage/Surplus factor measures the relationship between supply and demand at ranges from +100 (total leakage) to -100 (total surplus). A positive value represents "leakage" of retail opportunity outside the trade area. A negative value represents a surplus of retail sales, a market where customers are drawn in from outside the trade area.

Sources: ESRI; Maxfield Research & Consulting, LLC

## Selected Available Office Space

Table 25 presents office space that is currently available for lease as of mid-November 2017 in the communities surrounding Navarre including properties in Long Lake, Mound, Orono, Shorewood, Spring Park, Tonka Bay, and Wayzata. A total of 26 properties available for lease were identified.

- The selected properties range in lease rate from $10.03 Net to $45.00 NNN.
- A majority (18/26) of the properties are in Wayzata and none are within Navarre.
- The space available in the properties ranges from 150 square feet to 160,000 square feet.
- Metro-wide, the office market continues to be soft with vacancies averaging between 15% and 18% in the Twin Cities.

**TABLE 25**
**SELECTED AVAILABLE OFFICE SPACE**
**OUTSIDE NAVARRE**

| Property Name/ Address | City | Year Built | Bldg Size | Minimum Divisible | Maximum Contiguous | Available SF | Vacancy | Lease Rate |
|---|---|---|---|---|---|---|---|---|
| **1850 Wayzata Blvd**<br>1850 Wayzata Blvd | Long Lake | 1905 | 7,500 | 130 | 275 | 275 | N/A | $13.33 FSG |
| **432 Mill St**<br>432 Mill St | Long Lake | 1937 | 1,728 | 576 | 5,576 | 576 | N/A | $20.83 Gross |
| **2350 Wayzata Blvd**<br>2350 Wayzata Blvd | Long Lake | 1990 | 18,000 | 200 | 480 | 980 | N/A | Negotiable |
| **Freshwater Building**<br>2500 Shadywood Rd | Orono | 1974 | 51,149 | 295 | 2,013 | 6,368 | 6,368 | $17.50 Gross |
| **Casco Run**<br>3701 Shoreline Dr | Orono | 1982 | 6,474 | 1,000 | 1,000 | 1,000 | 1,000 | $20.00 Gross |
| **Orono Medical & Dental Center**<br>2765 Kelley Pkwy | Orono | 2003 | 16,800 | 2,477 | 2,477 | 2,477 | 2,477 | $20.00 NNN |
| **South Lake Office Building**<br>23505 Smithtown Rd | Shorewood | 2007 | 26,036 | 330 | 673 | 1,003 | 1,003 | $27.61 - $27.64 Gross |
| **Tonka Business Center**<br>4154 Shoreline Dr | Spring Park | 1953 | 142,156 | 200 | 7,112 | 7,112 | 0 | $10.50 NNN |
| **Twelve Oaks Office Center Bldg 5**<br>1001 Twelve Oaks Center Dr | Wayzata | 1978 | 24,024 | 732 | 1,756 | 6,854 | 5,098 | $10.03 - $12.53 Net |
| **Twelve Oaks Office Center Bldg 4**<br>901 Twelve Oaks Center Dr | Wayzata | 1978 | 24,024 | 261 | 1,500 | 6,355 | 6,355 | $10.03 - $15.00 Net |
| **Twelve Oaks Office Center Bldg 1**<br>600 Twelve Oaks Center Dr | Wayzata | 1979 | 23,266 | 195 | 1,825 | 6,841 | 5,793 | $11.03 - $15.70 Net |
| **Twelve Oaks Office Center Bldg 2**<br>700 Twelve Oaks Center Dr | Wayzata | 1977 | 23,220 | 209 | 1,758 | 4,040 | 3,437 | $11.25 - $13.80 Net |
| **Wayzata Crossings**<br>1415 E Wayzata Blvd | Wayzata | 1970 | 35,000 | 840 | 7,000 | 7,840 | 7,000 | $12.00 - $17.00 Net |
| **Twelve Oaks Office Center Bldg 3**<br>801 Twelve Oaks Ctr | Wayzata | 1978 | 24,024 | 299 | 496 | 1,135 | 1,135 | $12.53 Net |
| **Wayzata Executive Park Bldg 3**<br>1907 Wayzata Blvd | Wayzata | 2001 | 42,110 | 1,910 | 5,168 | 8,639 | 6,729 | $16.00 NNN |
| **Wayzata Executive Park Bldg 2**<br>1905 Wayzata Blvd | Wayzata | 2001 | 37,806 | 5,979 | 5,979 | 5,979 | 5,979 | $16.00 NNN |
| **Arne Professional Building**<br>101 W Lake St | Wayzata | 1996 | 9,316 | 150 | 150 | 150 | 150 | $24.00 NNN |
| **100 West Lake**<br>100 Lake St | Wayzata | 1997 | 12,000 | 6,355 | 10,648 | 10,648 | 0 | $30.00 Net |
| **Wayzata Specialty Center**<br>1120 E Wayzata Blvd | Wayzata | N/A | 16,000 | 1,500 | 16,000 | 16,000 | 16,000 | $30.00 NNN |
| **Wayzata Marquee Place**<br>641 Lake St | Wayzata | 1987 | 56,000 | 192 | 192 | 192 | 192 | $35.00 Gross |
| **445 Lake St E**<br>445 Lake St E | Wayzata | 1988 | 37,710 | 3,000 | 6,330 | 6,330 | 0 | $40.00 - $45.00 NNN |
| **701 Building**<br>701 Lake St | Wayzata | 2004 | 25,000 | 3,005 | 3,005 | 3,005 | 3,005 | $48.00 Gross |
| **201 Lake Street-Westway Building**<br>201 Lake St | Wayzata | 1997 | 33,220 | 2,466 | 2,466 | 2,466 | 2,466 | Negotiable |
| **326-332 Broadway Ave**<br>326 Broadway Ave | Wayzata | N/A | 17,899 | 2,420 | 6,541 | 11,971 | 11,971 | Negotiable |
| **315 Lake St E**<br>315 Lake St | Wayzata | 2009 | 28,000 | 2,055 | 2,055 | 2,055 | 0 | Negotiable NNN |
| **Piper Jaffray Building**<br>319 Barry Ave | Wayzata | 1988 | 29,754 | 1,895 | 1,895 | 1,895 | 1,895 | Negotiable NNN |

Sources: Xceligent; Maxfield Research & Consulting, LLC

**TABLE 26**
**SELECTED AVAILABLE OFFICE SPACE**
**OUTSIDE NAVARRE**

| City | Number of Properties Available For Lease | Average Bldg Size | Average Available SF | Lease Rates |
|---|---|---|---|---|
| Long Lake | 3 | 9,076 | 610 | $13.33 FSG - $20.83 Gross |
| Mound | 0 | N/A | N/A | N/A |
| Orono | 3 | 24,807 | 3,281 | $17.50 Gross - $20.00 NNN |
| Shorewood | 1 | 26,036 | 1,003 | $27.61 Gross - $27.64 Gross |
| Spring Park | 1 | 142,156 | 7,112 | $10.50 NNN |
| Tonka Bay | 0 | N/A | N/A | N/A |
| Wayzata | 18 | 27,687 | 5,689 | $10.03 Net - $45.00 NNN |

Sources: Xceligent; Maxfield Research & Consulting, LLC

## Selected Available Retail Space

Table 27 presents retail space that is currently available for lease as of mid-November 2017 in the area outside Navarre including properties in Long Lake, Mound, Orono, Shorewood, Spring Park, Tonka Bay, and Wayzata. A total of 18 properties available for lease were identified.

- The selected properties range in lease rate from $12.00 Net to $40.00 Net.
- A majority (8/18) of the properties are in Wayzata and none are within Navarre.

**TABLE 27**
**SELECTED FOR LEASE RETAIL SPACE**
**OUTSIDE NAVARRE**

| Property Name/ Address | City | Specific Use | Bldg Size | Gross Land Area | Year Built | Tenancy | Minimum Divisible | Maximum Contiguous | Available SF | Vacancy | Lease Rate | Taxes/SF | Operating Expenses/SF | Tax Year |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **2073 A Wayzata Blvd**<br>2073 W Wayzata Blvd | Long Lake | Freestanding | 2,587 | 98,446 | 2005 | Single-Tenant | 1,000 | 2,587 | 2,587 | 2,587 | $12.00 - $20.00 NNN | $5.28 | $5.55 | 2016 |
| **Mound Marketplace**<br>2131 Commerce Blvd | Mound | Neighborhood Ctr | 52,879 | 270,407 | 2003 | Multi-Tenant | 1,597 | 2,985 | 6,580 | 6,580 | $18.00 - $22.00 Net | $4.95 | $3.90 | 2017 |
| **Commerce Place - Retail**<br>2200 Commerce Blvd | Mound | Conv/Strip Ctr | 40,053 | 14,375 | 1986 | Multi-Tenant | 839 | 17,504 | 28,789 | 28,789 | $8.00 - $18.00 Net | $1.77 | $2.98 | 2017 |
| **Shorewood Village Center**<br>23470 Highway 7 | Shorewood | Neighborhood Ctr | 62,308 | 286,189 | 1975 | Multi-Tenant | 1,419 | 3,393 | 6,435 | 6,435 | Negotiable NNN | $4.71 | $6.49 | 2017 |
| **Waterford Center**<br>19905 Highway 7 | Shorewood | Conv/Strip Ctr | 22,930 | 147,233 | 1994 | Multi-Tenant | 1,500 | 5,706 | 7,206 | 7,206 | $16.50 NNN | N/A | $7.23 | 2016 |
| **Marina Center**<br>4669 Shoreline Dr | Spring Park | Conv/Strip Ctr | 47,135 | 507,038 | 1964 | Multi-Tenant | 2,800 | 2,800 | 2,800 | 2,800 | $12.00 Net | $3.85 | $2.12 | 2016 |
| **Lakeview Lofts**<br>4100 Spring St | Spring Park | Neighborhood Ctr | 60,000 | 24,019 | 2005 | Multi-Tenant | 3,964 | 3,964 | 3,964 | 3,964 | $23.00 NNN | N/A | N/A | N/A |
| **Marina Center - Pad Site**<br>4659 Shoreline Dr | Spring Park | Freestanding | 9,120 | 87,120 | N/A | Multi-Tenant | 1,680 | 9,120 | 9,120 | 9,120 | Negotiable | N/A | N/A | N/A |
| **Tonka Village Shopping Center**<br>24324 Smithtown Rd | Tonka Bay | Neighborhood Ctr | 25,000 | 273,992 | N/A | Single-Tenant | 25,000 | 25,000 | 25,000 | 25,000 | Negotiable NNN | $3.45 | $4.04 | 2017 |
| **Tonka Village Shopping Center**<br>5609 Manitou Rd | Tonka Bay | Neighborhood Ctr | 37,126 | 283,140 | 1959 | Multi-Tenant | 1,823 | 7,441 | 9,264 | 9,264 | Negotiable NNN | $3.45 | $4.04 | 2017 |
| **Wayzata Marquee Place**<br>603 Lake St E | Wayzata | Mixed Use | 72,000 | 24,394 | 1946 | Multi-Tenant | 600 | 1,289 | 1,889 | 1,889 | $25.00 NNN | $12.00 | $8.68 | 2017 |
| **1330 Wayzata Blvd**<br>1330 Wayzata Blvd | Wayzata | General | 4,500 | 29,621 | N/A | Multi-Tenant | 2,300 | 2,300 | 2,300 | 2,300 | $40.00 Net | $3.00 | $7.00 | 2017 |
| **240 Minnetonka Unit 103**<br>240 Minnetonka | Wayzata | Other | 1,094 | N/A | N/A | Single-Tenant | 1,094 | 1,094 | 1,094 | 1,094 | $25.00 NNN | N/A | N/A | N/A |
| **The Promenade of Wayzata**<br>801 E Lake St | Wayzata | Community Ctr | 108,739 | 632,491 | 2014 | Multi-Tenant | 984 | 20,588 | 65,665 | 65,665 | Negotiable NNN | $11.72 | $4.69 | 2017 |
| **Wayzata Village Shoppes**<br>812 Lake St | Wayzata | Neighborhood Ctr | 43,127 | 119,790 | 1964 | Multi-Tenant | 1,215 | 1,215 | 1,215 | 1,215 | Negotiable NNN | $7.29 | $4.25 | 2017 |
| **240 Minnetonka Unit 102**<br>240 Minnetonka Ave S | Wayzata | Other | 734 | 25,000 | N/A | Multi-Tenant | 734 | 734 | 734 | 734 | $25.00 NNN | N/A | N/A | N/A |
| **Colonial Square Shopping Center**<br>1125 Wayzata Blvd | Wayzata | Neighborhood Ctr | 93,338 | 325,393 | 1959 | Multi-Tenant | 1,313 | 1,313 | 1,313 | 1,313 | Negotiable NNN | $8.85 | $3.69 | 2017 |
| **Cross Creek Shoppes**<br>748 E Lake St | Wayzata | General | 10,145 | 28,314 | 1968 | Multi-Tenant | 1,239 | 2,994 | 4,233 | 4,233 | Negotiable NNN | N/A | $16.00 | 2017 |

Sources: Xceligent; Maxfield Research & Consulting, LLC

## Conclusions

The impetus for this study was to complete a high-level initial analysis of the future development potential in Navarre. Previous sections examined the demographic, economic, and market performance of various real estate uses in the Navarre area. This section summarizes the market potential findings and makes recommendations on the most appropriate product types that may be captured in Navarre.

Potential Redevelopment Sites

Maxfield Research & Consulting, together with WSB, identified potential areas is Navarre that could support redevelopment. Table 28 identifies parcels of interest sorted into seven potential redevelopment areas. The table shows the parcel address and PID, owner, acreage, land use, last date of sale (if applicable), and current market values and property taxes. The redevelopment areas range in size from 1.86 acres up to 6.78 acres. The following summarizes the redevelopment sites and the potential land uses that could result.

- Site #1: The first site is the western-most site in Navarre located just north of Shoreline Drive and south of the 6.4-acre Hennepin County property. This redevelopment consists of five parcels that comprise about 3.7 acres and include a mix of commercial and residential properties. Most of the property is about 200-feet deep off Shoreline Drive.

  Recommended land uses could include:
  - Mid-rise housing
  - Stand-alone commercial sites
  - Small retail center

  Because of the traffic along Shoreline Drive, this site would be accessed by a "right-in right-out" and could experience a longer wait time to make a left turn out of the site.

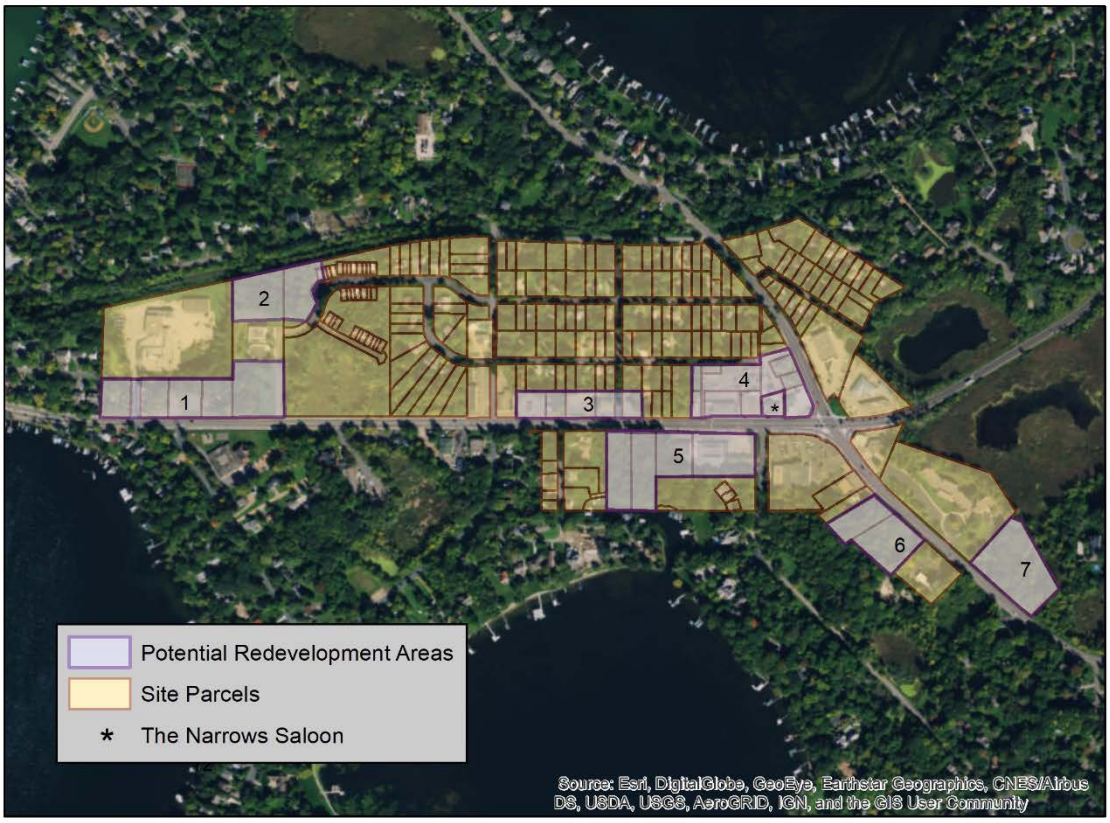
- Site #2: This property consists of three properties that collectively are about 4.5-acres. These sites are not presently on the tax rolls and are either tax forfeited properties or owned by the City of Orono. The site is wooded and located directly to the north of the Navarre Fire Department and west of a for-sale townhome development. The site also abuts the railroad track to the north.

  Recommended land uses could include:
  - For-sale twin homes or villas
  - Attached for-sale townhomes
  - Mid-rise housing

**TABLE 28**
**PARCELS OF INTEREST**
**NAVARRE**

| Number | Address | Owner Name | Land Type | Year Built | Sale Date | Sale Price | Acres | Market Value Total | Taxes Total |
|---|---|---|---|---|---|---|---|---|---|
| **Potential Redevlopment Area 1** | | | | | | | | | |
| 1 | 3890 Shoreline Dr | E J & M J Held | Residential | 1991 | Mar-93 | $105,000 | 0.68 | $320,000 | $3,361 |
| 2 | 3860 Shoreline Dr | David Umbehocker | Commercial-Preferred | 1930 | N/A | $0 | 0.64 | $196,000 | $5,272 |
| 3 | 3850 Shoreline Dr | Leeryan Of Minneapolis LLC | Commercial-Preferred | 1987 | Nov-02 | $790,000 | 0.78 | $759,000 | $23,802 |
| 4 | 3800 Shoreline Dr | M E Brewer & B L Brewer | Commercial-Preferred | 1956 | Jun-01 | $239,900 | 0.70 | $290,000 | $8,366 |
| 5 | 38 Address Unassigned | City Of Orono | Vacant Land-Residential | N/A | N/A | $0 | 0.86 | $0 | $0 |
| | | | | | | **Total** | 3.66 | $1,565,000 | $40,801 |
| **Potential Redevlopment Area 2** | | | | | | | | | |
| 6 | 38 Address Unassigned | Hennepin Forfeited Land | Vacant Land-Residential | N/A | N/A | $0 | 0.10 | $0 | $0 |
| 7 | 38 Address Unassigned | Hennepin Forfeited Land | Vacant Land-Residential | N/A | N/A | $0 | 0.15 | $0 | $0 |
| 8 | 3770 Shoreline Dr | City of Orono | Commercial-Preferred | 2003 | N/A | $0 | 4.33 | $0 | $0 |
| | | | | | | **Total** | 4.58 | $0 | $0 |
| **Potential Redevelopment Area 3** | | | | | | | | | |
| 9 | 3542 Shoreline Dr | Shoreline-Navarre LLC | Commercial-Preferred | 1986 | Sep-04 | $35,000 | 0.46 | $528,000 | $16,199 |
| 10 | 3502 Shoreline Dr | Lowell R Zitzloff | Commercial-Non Preferred | 1950 | Apr-82 | $60,981 | 0.31 | $289,000 | $9,512 |
| 11 | 3574 Shoreline Dr | R L & G H Plaisted | Commercial-Preferred | 1959 | Jan-03 | $561,705 | 0.47 | $183,000 | $4,844 |
| 12 | 3572 Shoreline Dr | Leis In Grace LLC | Commercial-Preferred | 1947 | Aug-13 | $250,000 | 0.31 | $226,000 | $6,260 |
| 13 | 3496 Shoreline Dr | Skyt Properties LLC | Commercial-Preferred | 1979 | Nov-13 | $320,000 | 0.31 | $339,000 | $9,979 |
| | | | | | | **Total** | 1.86 | $1,565,000 | $46,793 |
| **Potential Redevelopment Area 4** | | | | | | | | | |
| 14 | 3416 Shoreline Dr | Germ-Tom Partnership | Commercial-Preferred | 1955 | Jul-87 | $360,000 | 0.54 | $581,000 | $18,368 |
| 15 | 3400 Shoreline Dr | 3400 Properties LLC | Commercial-Preferred | 1954 | Feb-07 | $375,000 | 0.29 | $643,000 | $19,984 |
| 16 | 3440 Shoreline Dr | Richard W Bloomquist | Residential | 1951 | Aug-99 | $122,000 | 0.15 | $215,000 | $3,984 |
| 17 | 2377 Shadywood Rd | Lake Country Corp Investment | Commercial-Preferred | 2005 | Sep-15 | $387,000 | 0.24 | $378,000 | $11,262 |
| 18 | 38 Address Unassigned | City Of Orono | Vacant Land-Commercial | N/A | N/A | $0 | 0.47 | $0 | $0 |
| 19 | 3360 Shoreline Dr | Leroy David Koehnen | Commercial-Preferred | 1969 | Oct-84 | $155,000 | 0.44 | $383,000 | $11,427 |
| 20 | 2385 Shadywood Rd | S H Schmidt/S J Schmidt Trst | Commercial-Preferred | 1937 | N/A | $0 | 0.18 | $197,000 | $5,305 |
| * | 3400 Shoreline Dr | 3400 Properties LLC | Commercial-Preferred | 1954 | Feb-07 | $375,000 | 0.29 | $643,000 | $19,984 |
| | | | | | | **Total** | 2.60 | $2,397,000 | $90,315 |
| **Potential Redevelopment Area 5** | | | | | | | | | |
| 21 | 2474 Carman St | W E Edwards & D M Edwards Tr | Residential Lake Shore | 1990 | N/A | $0 | 2.00 | $1,130,000 | $13,601 |
| 22 | 2480 Carman St | R A Edwards Et Al Trustees | Residential Lake Shore | 1965 | N/A | $0 | 2.24 | $1,116,000 | $13,418 |
| 23 | 3465 Shoreline Dr | Navarre Realty LLC | Apartment | 1952 | Jan-80 | $210,000 | 0.96 | $795,000 | $17,384 |
| 24 | 3423 Shoreline Dr | Brook Investment Group LLC | Commercial-Preferred | 1952 | Nov-07 | $1,700,000 | 1.58 | $782,000 | $24,688 |
| | | | | | | **Total** | 6.78 | $3,823,000 | $69,091 |
| **Potential Redevelopment Area 6** | | | | | | | | | |
| 25 | 2455 Shadywood Rd | Jeanne M Englund | Vacant Land-Commercial | N/A | N/A | $0 | 0.88 | $137,000 | $3,432 |
| 26 | 2465 Shadywood Rd | David J Delaney Trustee | Seasonal-Residential Rec | 1920 | Dec-09 | $205,000 | 1.34 | $164,000 | $1,766 |
| | | | | | | **Total** | 2.22 | $301,000 | $5,199 |
| **Potential Redevelopment Area 7** | | | | | | | | | |
| 27 | 2520 Shadywood Rd | Ugorets 8098 LLC | Vacant Land-Residential | N/A | N/A | $0 | 2.63 | $0 | $0 |
| | | | | | | **Total** | 2.63 | $0 | $0 |

* The Narrows Saloon
Source: Realist Tax; Maxfield Research & Consulting,LLC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Potential Redevelopment Areas
Site Parcels
* The Narrows Saloon
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

## Sites of Interest for Redevelopment



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*3*



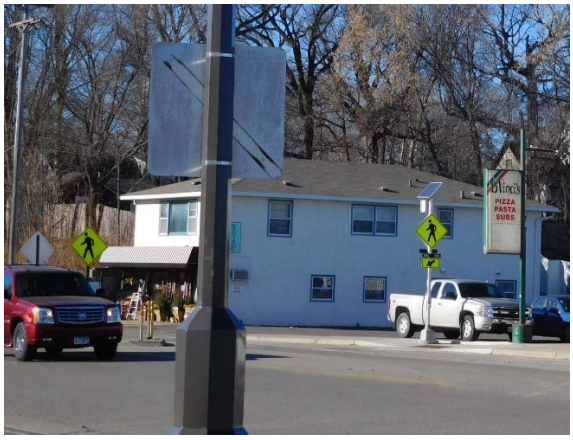

*9*




*10*




*11*

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*19*



*23*




*24*




*27*

- Site #3: The third redevelopment area consists of five commercial properties that make-up 1.86 total acres; the smallest redevelopment area. Most of the commercial buildings are dated as they were constructed between 1947 and 1986. All of the properties have frontage on Shoreline Drive and are surrounding by housing land uses to the north of the parcels. This area would have access and visibility to Shoreline Drive motorists; however, it will be challenging making left turns out of the site.

  Recommended land uses could include:
  - Mid-rise housing
  - Modest commercial development

- Site #4: Located at the northwest quadrant of Shoreline Drive and Shadywood Road; this redevelopment area has the potential be the "gateway" into the Navarre neighborhood. The property is at "main and main" and benefits from higher traffic counts and excellent access and visibility from both roadways. As a result, this site could be the cornerstone for future redevelopment in Navarre. Collectively the site is 2.6 acres across eight parcels. Most of the existing uses are commercial, however there are two commercial uses located in low-density residential structures. Because of this location, this site should be the top priority for attracting redevelopment in Navarre.

  Recommended land uses could include:
  - Commercial concentration – front loaded design towards the roadways (parking in rear)
  - Mixed-use or multi-use development with a mid-rise housing component

- Site #5. This potential redevelopment area also has Shoreline Drive frontage, however on the south side of the roadway. The site is anchored by the east parcel that contains 1.58 acres and is adjacent to the Lunds/Byerly's. The site encompasses four parcels with 6.78-acres; however, two the properties are zoned residential lake shore that could be subdivided and maintained by the current land owner. As a result, the total developable is about 5.75 acres should the lakeshore properties subdivide the property to align with the two other commercial properties.

  Recommended land uses could include:
  - Commercial development
  - Mid-rise housing development
  - Mixed-use development featuring housing and first-level commercial space

- Site #6. Along Shadywood Road about one block south of the Lunds/Byerly's are two parcels that comprise 2.2 acres. Both properties have thick vegetation to the west and could be combined to create a more marketable site.

  Recommended land uses could include:
  - Stand-alone commercial building
  - Smaller mid-rise housing development.

- Site #7. A vacant 2.6-acre site is in the far southeastern boundary of Navarre area. The property is east of Shadywood Road and south of the five-acre commercial site located directly north of the site. The site has the potential to be the gateway into Navarre for the northbound traveler on Shadywood Road.

  Recommended land uses could include:
  - Stand-alone commercial development
  - Mid-rise housing development
  - Mixed-use development – 1st floor commercial with housing

**TABLE 29**
**SUMMARY OF REDEVELOPMENT SITE POTENTIAL USES**

| Site Area | Combined Acres | Mid-rise Housing | TH Housing | Commercial Component | Retail Component | Mixed Use/ Multi-Use |
|---|---|---|---|---|---|---|
| 1 | 3.66 | x | | x | | |
| 2 | 4.58 | x | x | | | |
| 3 | 1.86 | x | | x | | |
| 4 | 2.60 | x | | x | x | x |
| 5 | 6.78 | x | | x | x | x |
| 6 | 2.22 | x | | x | | |
| 7 | 2.63 | x | | x | | x |

Source: Maxfield Research & Consulting, LLC

Recommended Real Estate Types

The previous section outlined the seven potential redevelopment areas. Many of the properties could encompass a few different land use types given their location, access, and surrounding land uses. The recommended product types that are recommended include:

- Retail: As illustrated in the earlier leakage figures, Navarre and the Lake Minnetonka area is under-retailed. Navarre has an opportunity to capture these retail sales on property either Shoreline Drive or Shadywood Road. Among all the redevelopment areas, the site at the northwest quadrant of Shoreline Drive and Shadywood Road has the greatest potential to capture commercial tenants. However, this site will likely need to attract regional or national tenants given the site acquisition and development costs at this location. These credit-worthy tenants will have the means to pay higher lease rates that will be required to support redevelopment.

  Other sites in Navarre are more likely to cater to "niche or boutique" retailers that may have fled other higher-rent properties in other Lake Minnetonka communities.

  Because the Navarre area and Orono show leakage in nearly every category of retail sales; Navarre can support more retail than what could be developed given the acreage available within redevelopment sites identified. Several of the identified sites could support retail and there would still be excess demand for retail goods and services. Redevelopment sites #4 and #5 will be the most attractive sites for retail tenants.

- Office: An office building with a build-to-suit tenant would be an excellent land use for several of the identified sites. However, this will be predicated on the ability to secure a single tenant who will commit to a built-to-suit office structure. The multi-tenant office market continues to be very soft with high vacancies and with rents that cannot support new construction costs. The office market continues to be the soft spot in the Twin Cities commercial real estate market and that is likely to continue in the short-term as companies squeeze square footages and more employees work remotely. Since the office market is the weakest commercial real estate product type in the Metro Area; office space will be more challenging to develop in Navarre unless a single-tenant user seeks out new construction.

- Hospitality: The Twin Cities is experiencing a major building boom in the hospitality sector due to a variety of conditions: 2018 Super Bowl, future Final Four, and improved economic conditions. However, with all the new supply occupancies have peaked and the hotel market is at equilibrium. If a site had lake access a small, boutique hotel could be considered in Navarre; however, since a lake site is unavailable we do not recommend a hotel concept at any of the identified locations.

- For-Sale Townhomes: Because townhomes require a lower density than traditional multifamily housing; most of the sites would not be well-suited for townhomes. Townhome land costs are usually lower than other multifamily densities hence the financial return on townhomes would be lower than other housing types located in multi-story concepts. However, the site just north of the fire station would make an excellent location for for-sale housing – either a townhome, twinhome, or villa style concept. The site would be well-received for a for-sale housing concept. Based on the site acreage of about 4.6 sites; this site may be able to accommodate upwards of 35 to 45 attached townhome units.

- For-Sale Condominiums: The condominium market is ripe for new development as the market was hit hard from the recession and from the lack of new construction from the state law governing condominium development. However, this past year the Minnesota Legislature recently modified the condominium state statute that is resulting in condominium developers looking to re-enter the market. New condo construction has focused on the upper-end of the market in Downtown Wayzata and Downtown Minneapolis. Condominiums in Orono would be well-received and would provide an excellent product for existing residents to downsize from larger lake homes for maintenance-free living. As a result, we find a condominium development would be well-received in Navarre and would serve a niche in the marketplace.

  Suburban condominium development should be able to support densities of about 20 to 30 units per acre.

- Senior Housing: Long-term the senior housing outlook is very promising given the aging of the population and future demographic shifts. Orono and the Lake Minnetonka area has an older demographic with significant growth in the 65+ population. However, there are several service-based senior housing communities located within five miles of Navarre that would compete with a new development in Navarre. At that same time, there may be an opportunity for active-adult products such as an age-restricted rental, for-sale 55+ condominium, or senior cooperative. However, the Navarre area can likely support one active adult product in the short-term. Suburban senior housing projects are averaging about 25 units or more per acre across the Metro Area.

- Rental Housing: Navarre and Orono have few rental properties; the City of Orono has an 85% home ownership rate and the majority of rentals are located in single-family housing stock. The Twin Cities is experiencing a major rental housing building boom as rental housing has been a preferred asset class over the past seven years, however the majority of new construction has been located in locations closer to the core. The Navarre area may be able to support one rental housing development; however, because of development costs a new rental concept would have high rents targeting lifestyle renters. Many of these renters could be from the 55+ demographic who want to downsize from their single-family home. Rental housing could be developed in a stand-alone building or as part of a mixed-use development with first-level commercial space.

  New suburban rental properties in the Metro Area vary considerably between the inner-ring communities and the outer-ring communities. Densities closer to the core are averaging over 50 units per acre; whereas densities in the third-tiers and beyond are averaging 25 to 40 units per acre. Combined with properties in the two core cities; the average density for new apartments in the entire Metro Area is 74 units per acre for all new development in 2017.

**Community Text Responses**

| Describe Navarre as it exists today in just three words | What three things do you love the most about Navarre? | What are the top three things you would change about Navarre? |
|---|---|---|
| Drive-thru | Small town feel (3) | Create some character for Navarre - it is a blank slate |
| Old growth woods | You know everyone | Lighting - more pedestrian (2) |
| Small | The new remodeled storefronts of Narrows is a nice look | Streetscape - planters, Christmas trees, benches |
| Crossroads of lake (2) | Walking all year round - sidewalks clean and plowed in winter | Crosswalk - very dangerous |
| Up north feeling | Everything you need right there - Lund's, liquor store, gas station | Make it pedestrian friendly! (4) |
| Autopart store central | Location (easy drive to downtown Minneapolis, center of Lake Minnetonka, urban yet woodsy feel) | More of a town square feeling |
| | Dakota trail (3) | Nicer storefronts |
| | Lake | Create a sense of place |
| | Can walk to fill many retail needs from home | Increase local businesses and move toward an exterior design patate over time |
| | Lund's | Landscape on County Road 15 - too much concrete |
| | Narrows | Restaurant or coffee shop |

**Key Strategies Priority Matrix**

| | | | | | |
|---|---|---|---|---|---|
| **Highest Priority** | Continue the tradition of Navarre Restiral | Planned for a future where it was safe to walk and bike and had a zoning/use code that favored local retail like a bike shop | Made Navarre unique! | Walkability and safety | They planned for a future where people were walking and biking - not driving! |
| | We need more businesses that serve the community not office space, not apartment buildings or senior living - seniors do not spend any money, they will not revitalize the town - please don't make the same mistakees as Spring Park or Wayzata - tax income over common sense. Excelsior is a good example, charming | Design standards, service businesses for area residents, sit down restaurant | Design standards | | |
| | Someone champion community events/improvements | Human-scale development | Better sense of community - more widespread enthusiasm and support for social and recreational activities | They thought about the environment. They didn't put parking lots everywhere. | They worked to redesign downtown to be more walking friendly - less concrete, more landscaping |
| | Use standards for retail | Very little multifamily and only over retail | | | |
| | | | | | |
| | | | | | |
| **Lower Priority** | | | | | |

Navarre Community Engagement

**Spectrum Survey**

Open House: November 16, 2017

| | Average Ranking (Strongly Agree = 1; Strongly Disagree = 5) | Category by Average Ranking | Percent Agree or Strongly Agree |
|---|---|---|---|
| I plan to live in Navarre for the forseeable future. | 1.5 | I strongly agree | 100% |
| I would recommend Navarre as a great place to live. | 1.9 | I agree | 90% |
| Navarre needs more businesses. | 2.0 | I agree | 89% |
| Sidewalks and trails are well-maintained. | 2.7 | No opinion/neutral | 56% |
| There is adequate parking. | 3.0 | No opinion/neutral | 50% |
| I can walk to the places I need to go. | 2.9 | No opinion/neutral | 44% |
| Navarre is the Downtown of Orono. | 3.1 | No opinion/neutral | 44% |
| Navarre should be vibrant and active day, night, and on weekends. | 2.8 | No opinion/neutral | 44% |
| There is a strong sense of community. | 3.4 | No opinion/neutral | 27% |
| I feel comfortable as a pedestrian. | 3.7 | I disagree | 33% |
| There is a need for greater variety in housing options. | 3.9 | I disagree | 14% |
| Navarre needs more residents. | 3.6 | I disagree | 11% |

Navarre Community Engagement

Survey Monkey Online Engagement

**Survey Monkey Responses**

| Please check the following boxes that accurately describe you | | |
|---|---|---|
| | Number | Percent |
| I am a resident of Navarre | 20 | 77% |
| I am a resident outside of Navarre, but in Orono | 4 | 15% |
| I am not a resident of Orono | 2 | 8% |
| I own or operate a business in Navarre | 1 | 4% |

| Rate your desire to see regular community events in Navarre from 1-5 (1 = not at all desired, 5 = very desired) | | |
|---|---|---|
| | Number | |
| 0 | 0 | |
| 1 | 2 | |
| 2 | 5 | |
| 3 | 7 | |
| 4 | 3 | |
| 5 | 9 | |
| | Average | 3.4615385 |

| What types of events would you like to see in Navarre? | | |
|---|---|---|
| | Number | Percent |
| Annual Festival | 15 | 62.50% |
| Quarterly/Holiday shopping events | 10 | 41.67% |
| Races/Events centered around the Dakota Rail Trail | 11 | 45.83% |
| Enhanced branding for Navarre | 15 | 62.50% |
| Cultural events | 7 | 29.17% |

Navarre Community Engagement

Survey Monkey Online Engagement

**Survey Monkey Responses**

| Do you consider Navarre the Downtown of Orono? | | |
|---|---|---|
| | Number | Percent |
| Yes | 16 | 61.54% |
| No | 4 | 15.38% |
| I have not thought about it | 6 | 23.08% |

| Overall, please rate your level of concern regarding the teardown and rebuild of single-family homes in Navarre from 1-5 (1 = not at all concerned, 5 = very concerned). | | |
|---|---|---|
| | Number | |
| 0 | 2 | |
| 1 | 8 | |
| 2 | 4 | |
| 3 | 3 | |
| 4 | 8 | |
| 5 | 0 | |
| | Average | 2.28 |

| Regarding the tear down and rebuild of single-family homes in Navarre, which of the following issues are important to you? | | |
|---|---|---|
| | Number | Percent |
| Preservation of existing neighborhood character | 11 | 57.89% |
| Building massing | 7 | 36.84% |
| Building height | 9 | 47.37% |
| Loss of affordable housing | 7 | 36.84% |
| Issues related to construction | 8 | 42.11% |

Navarre Community Engagement

Survey Monkey Online Engagement

**Survey Monkey Responses**

| Rate your desire for new multi-family residential and commercial development in Navarre from 1-5 (1 = not at all desired, 5 = very desired). | | |
|---|---|---|
| | Number | |
| 0 | 3 | |
| 1 | 8 | |
| 2 | 4 | |
| 3 | 2 | |
| 4 | 5 | |
| 5 | 4 | |
| | Average | 2.384615 |

| Rate your desire for new multi-family residential and commercial development in the City of Orono from 1-5 (1 = not at all desired, 5 = | | |
|---|---|---|
| | Number | |
| 0 | 2 | |
| 1 | 4 | |
| 2 | 5 | |
| 3 | 4 | |
| 4 | 7 | |
| 5 | 4 | |
| | Average | 2.8461538 |

| Regarding new multi-family residential and commercial development in Navarre, which of the following characteristics are desirable? | | |
|---|---|---|
| | Number | Percent |
| Affordable housing | 4 | 16.67% |
| Provision of additional business types and services | 15 | 62.50% |
| Places to go and things to do in Navarre | 21 | 87.50% |
| Increased population density | 7 | 29.17% |
| Building heights of 3 stories or more | 4 | 16.67% |

**Survey Monkey Responses**

| Regarding new multi-family residential and commercial development in the City of Orono, which of the following characteristics are desired? | | |
|---|---|---|
| | Number | Percent |
| Affordable housing | 5 | 22.73% |
| business types and | 13 | 59.09% |
| Places to go and things to do in Orono | 19 | 86.36% |
| Increased population density | 3 | 13.64% |
| Building heights of 3 stories or more | 4 | 18.18% |

| Comments | | |
|---|---|---|
| Wide variety of housing is important | Just like Minneapolis we need revitalization - tear them down | main concern is pressure on existing infrastructure, damage to lake, inadequate roads |
| New development must conform to the neighborhood current density | I think its great to have old dilapidated homes torn down and lovely new single family homes replace them | better support of existing business |
| No affordable housing at ALL!! No apartments! | No concerns, but single family housing ONLY (no apartments) | walkability, connection to other neighborhoods and amenities |
| NOT multi-family residential any place | I'm for anything that improves the quality and value of the housing stock. Tear downs are good. | Holiday market, car show… |
| if its not broke; don't fix it | Construction site mtc is important, but easily dealt with | Outdoor music in the park in the summer weekend afternoons |
| Pedestrian and bike connections across the community | Build more beautiful new homes | I think any and all community events are important |


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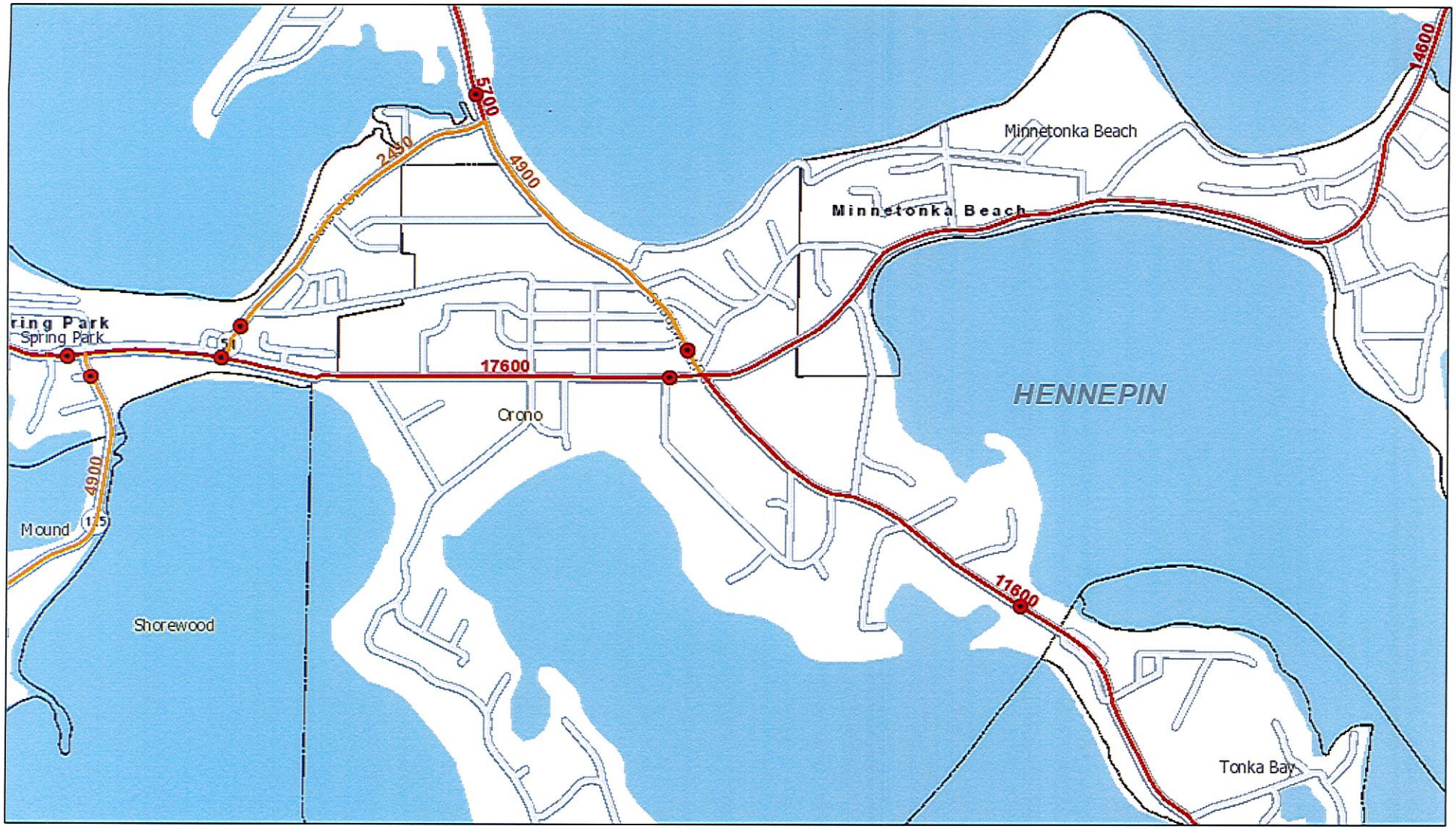
**Social Pinpoint Map Responses**

| | Places I Like to Go/Be | | Trouble Spots: Places I Avoid | | Good Location for a new Amenity or Development |
|---|---|---|---|---|---|
| 39 | Great park - wonderful job | 33 | Really didn't need another auto parts store. Navarre and community can have a better image than 3 gas stations and 2 auto part stores | 39 | Put a land bridge over 15 to connect the neighborhoods |
| 43 | New to area, use all the services, improve store fronts | 9 | Too much concrete, need it developed to host pop-ups? | 37 | New park location on both sides of the road |
| 41 | Would be nice to have a nice entry point and better signage at the entry to the trail | 8 | Wasted space/find a better location for co shop! | 40 | On the main drag - need better Christmas decorations! There were even lights strung across the street. Also need pretty planters |
| 42 | Love the trail - non traffic wonderful place to ride, easy accessibility | | | 49 | Beautification of street and sidewalk - Great start with new light fixtures and banners - however, they are too high for pedestrian enjoyment and not at people scale. Need a consistent plan for plantings to create some neighborhood charm and character - I have a design background and have done lots of master planning and lighting for places like Edinborough Park - Edina, Minneapolis/St. Paul airport, and landscaping |
| 45 | Central gathering place | | | 36 | Direct access to Lake Minnetonka in Navarre, either a park or residential development |
| | | | | 44 | Pedestrian only, like a square, gathering spot, benches/fountain, meeting place |
| | | | | 42 | Add/develop new businesses on the Dakota Trail |
| | | | | 45 | Great land to have a walking path to town |

| | | | | | |
|---|---|---|---|---|---|
| | | | | 41 | Need better shops - especially on south side of street |
| | | | | 43 | Sit down restaurant option, nice casual dining |
| | | | | 38 | More multiple unit housing/city controlled already |
| | | | | 35 | Empty lot since 1965 tornado, not attractive. Great spot for development. Can't we get Champion auto parts to do something with their building? Disappointed that Patrick's bakery idea was turned down. It was an opportunity to have a slightly more upscale coffee shop/restaurant that is pleasant and not filled with contractors. |

# Navarre Small Area Plan - Traffic Volumes




November 30, 2017

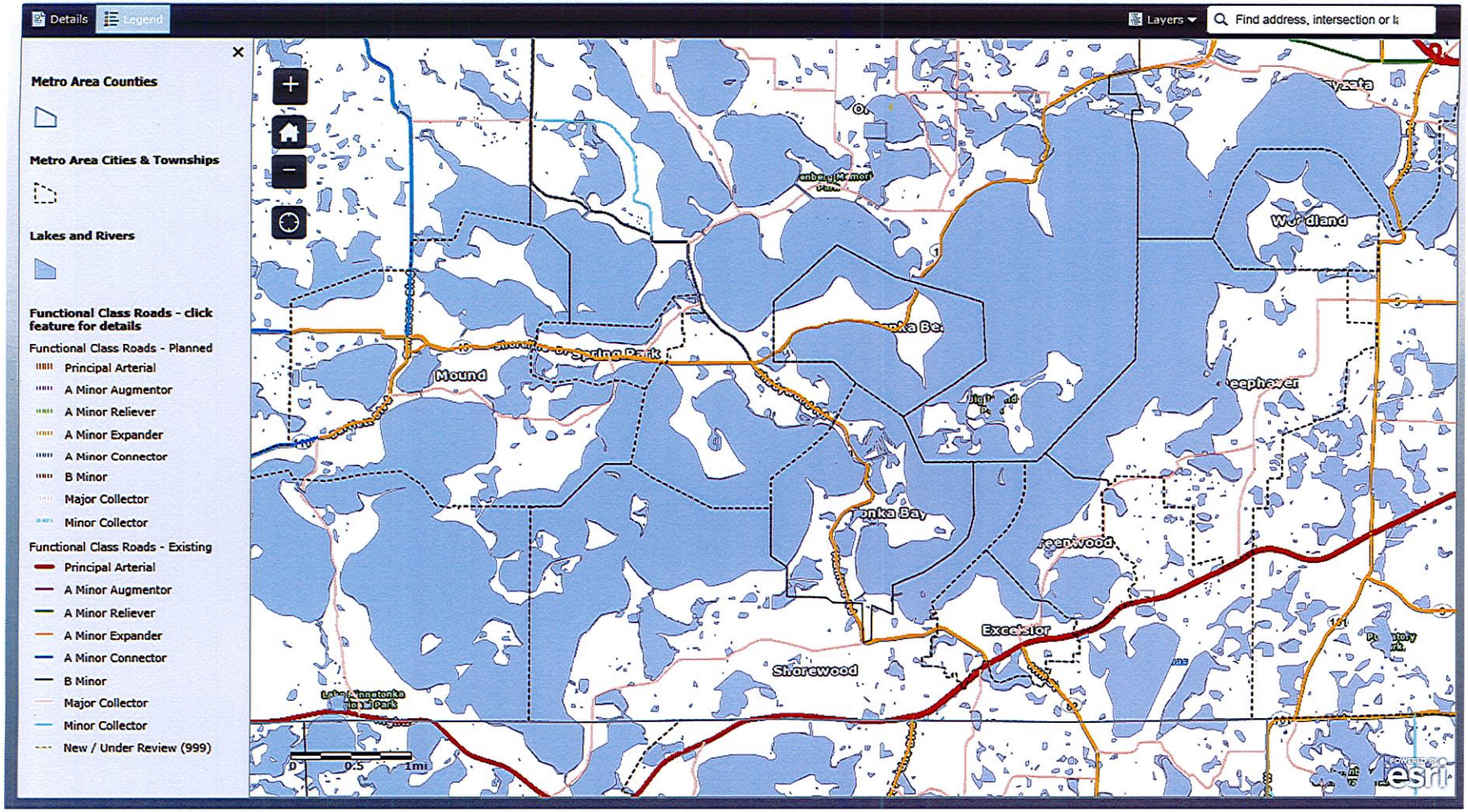
1:16,000

0 0.125 0.25 0.5 mi

0 0.2 0.4 0.8 km

Source: MnDOT Traffic Volumes Interactive Map

# Functional Class Road Review

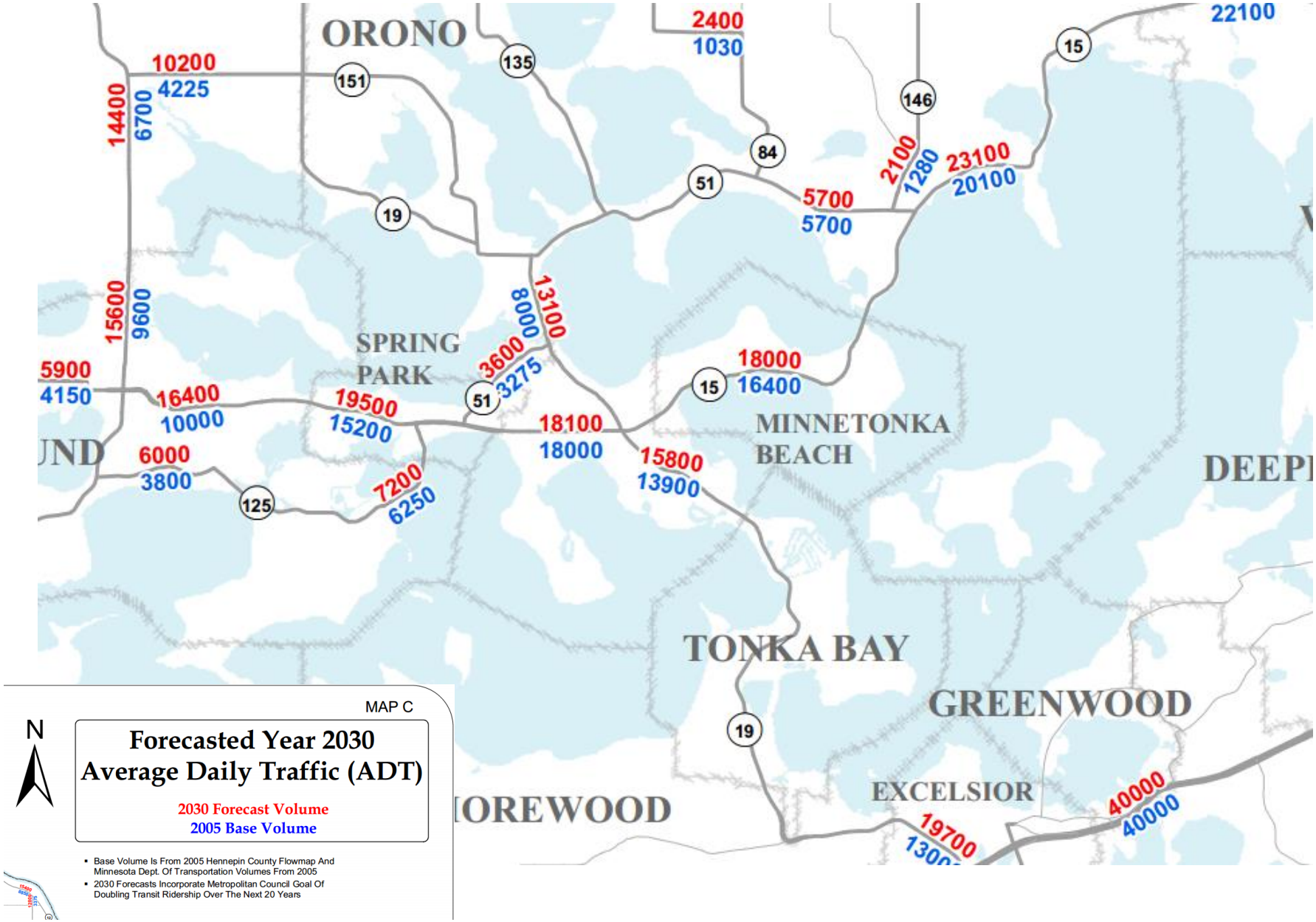



Shoreline Drive (CSAH 15): A-Minor Arterial

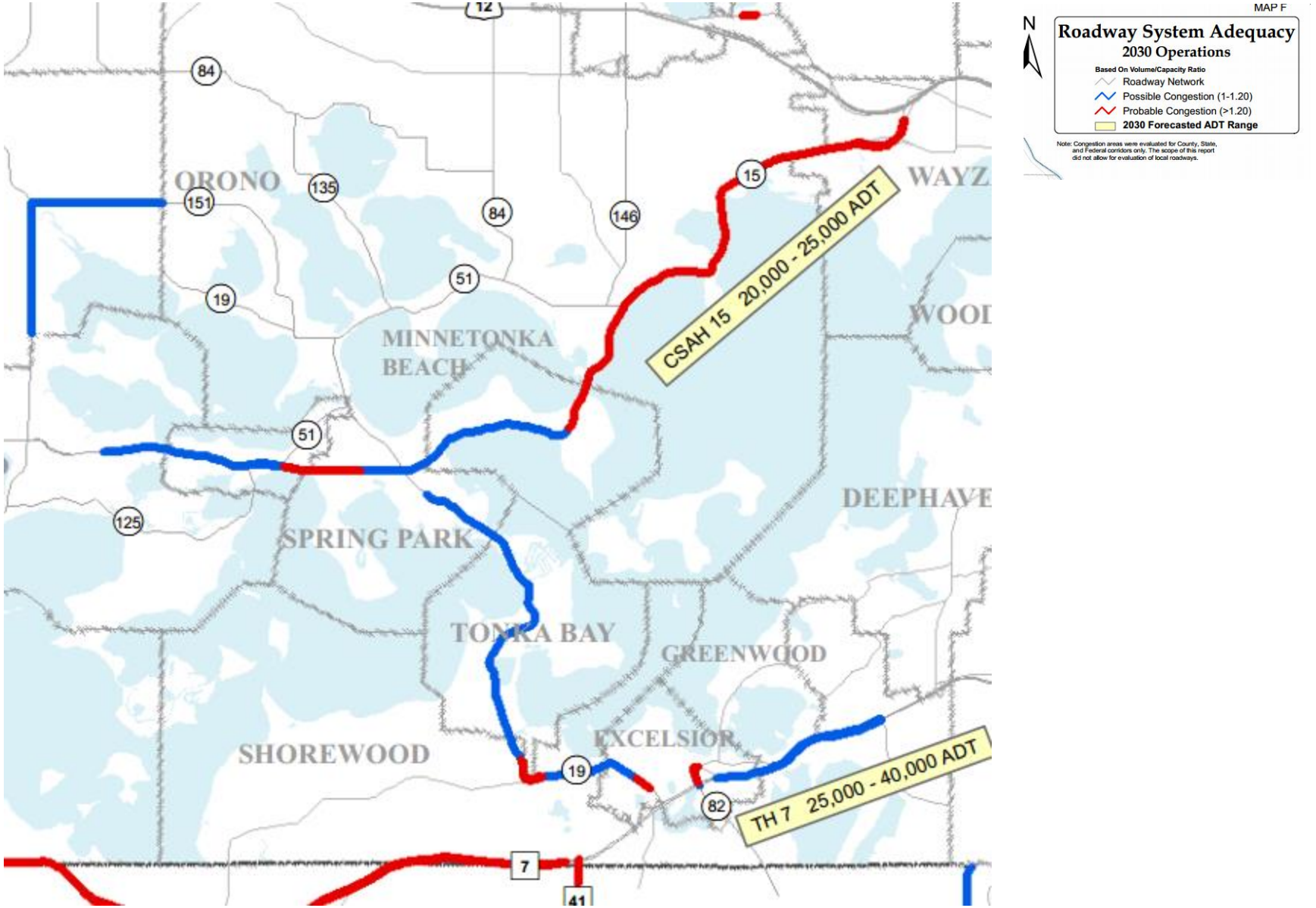
Shadywood Road (CSAH 19): A-Minor Arterial south of Shoreline Drive;

B-Minor Arterial north of Shoreline Drive

Source: Met Council Functional Classification Interactive Map



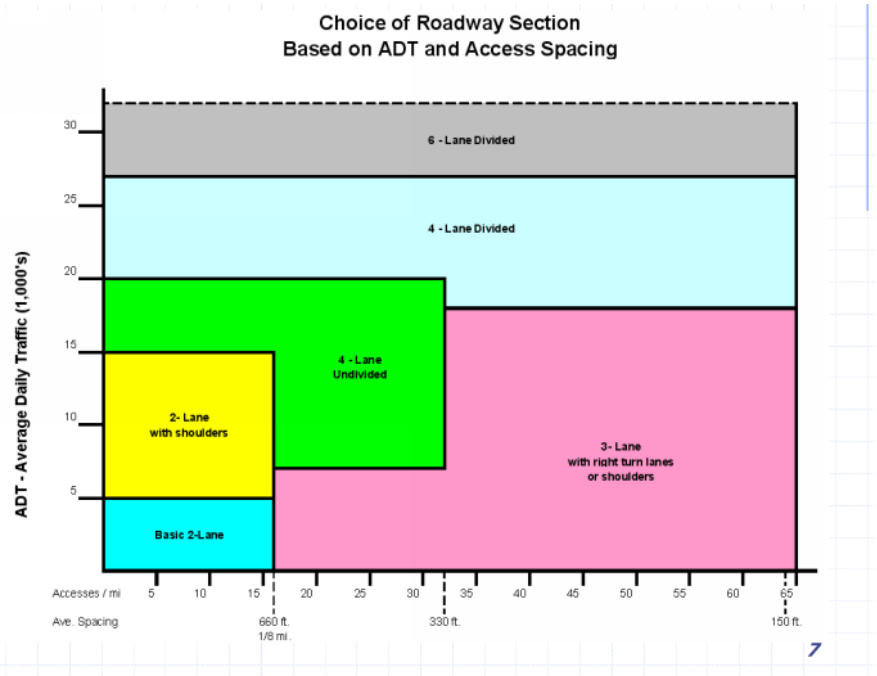

Source: Hennepin County 2030 Transportation Plan

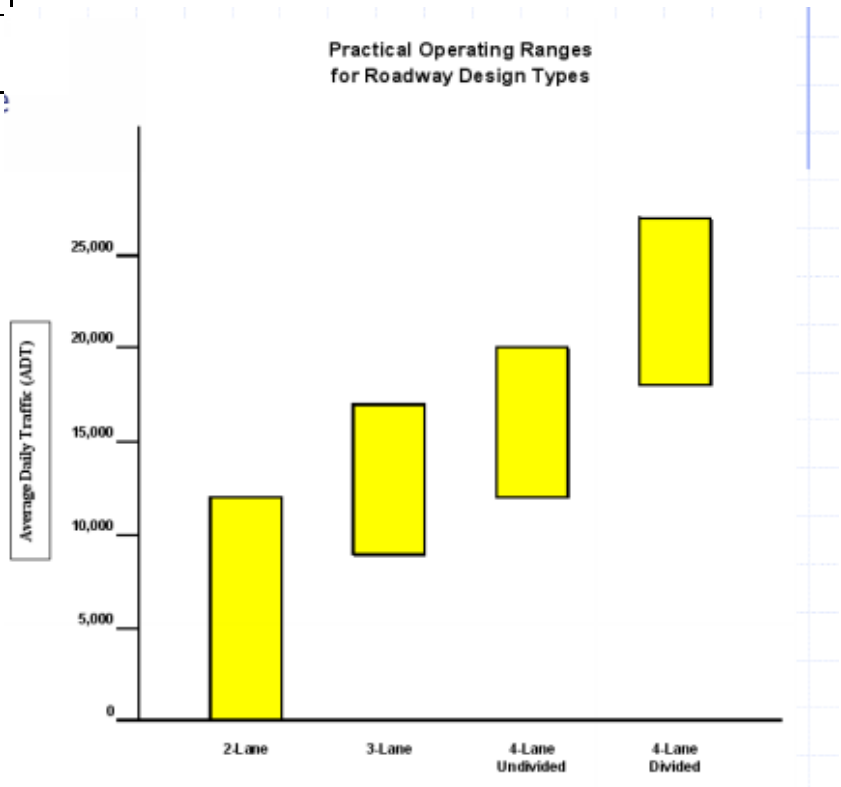



Source: Hennepin County 2030 Transportation Plan

## Planning Level Urban Roadway Capacities

| Facility Type | | Daily Two-way Volume (vehicles) Lower Threshold | Higher Threshold |
|---|---|---|---|
| Arterials | Two lane undivided | 10,000 | 12,000 |
| | Two lane divided or Three lane undivided | 15,000 | 17,000 |
| | Four lane undivided | 18,000 | 22,000 |
| | Four lane divided or five lane undivided | 28,000 | 32,000 |
| Freeways | Four lane freeway | 60,000 | 80,000 |
| | Six lane freeway | 90,000 | 120,000 |
| | Eight lane freeway or higher | Calculated on a segment by segment basis | |



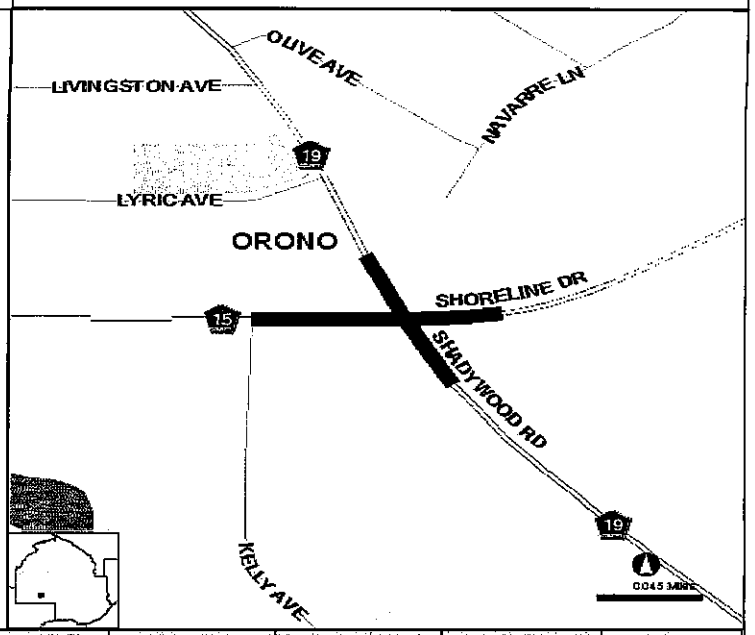



**Project Name:** 2151000 CSAH 15 - Geometric improvements to CSAH 19 intersection
**Major Program:** Public Works
**Department:** Transportation Roads & Bridges

**Funding Start:** 2018
**Funding Completion:** 2019

**Summary:**
Revise the intersection of Shoreline Drive (CSAH 15) at Shadywood Road (CSAH 19) in the City of Orono.

**Purpose & Description:**
Federal funding was awarded in 2015 through the Highway Safety Improvement Program (HSIP) to address existing safety concerns. The existing intersection is unique due to the abundance of driveways, including gas stations in three of the quadrants, within close proximity of the intersection. The proposed project will improve safety and traffic operations by implementing a new striping configuration on Shadywood Road (CSAH 19) to provide left-turn lanes, installing flashing yellow arrows to better facilitate left-turning movements, and eliminating channelized right-turn islands to provide traffic calming whenever feasible. The project will also include a replacement of the traffic signal system that has reached the end of its service life and an upgrade of the ADA accommodations to ensure accessibility.




| REVENUES | Budget to Date | Act & Enc To Date | Balance | 2018 Budget | 2019 Estimate | 2020 Estimate | 2021 Estimate | 2022 Estimate | Beyond 2022 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Property Tax | - | 67,000 | (67,000) | - | - | - | - | - | - | - |
| Federal General | - | - | - | - | 656,000 | - | - | - | - | 656,000 |
| Mn/DOT State Aid - Regular | - | - | - | 250,000 | 432,000 | - | - | - | - | 682,000 |
| **Total** | **-** | **67,000** | **(67,000)** | **250,000** | **1,088,000** | **-** | **-** | **-** | **-** | **1,338,000** |

| EXPENDITURES | Budget to Date | Act & Enc To Date | Balance | 2018 Budget | 2019 Estimate | 2020 Estimate | 2021 Estimate | 2022 Estimate | Beyond 2022 | Total |
|---|---|---|---|---|---|---|---|---|---|---|
| Land | - | - | - | 200,000 | - | - | - | - | - | 200,000 |
| Construction | - | 67,000 | (67,000) | - | 1,088,000 | - | - | - | - | 1,088,000 |
| Consulting | - | 5,213 | (5,213) | 50,000 | - | - | - | - | - | 50,000 |
| Equipment | - | - | - | - | - | - | - | - | - | - |
| Furnishings | - | - | - | - | - | - | - | - | - | - |
| Other Costs | - | - | - | - | - | - | - | - | - | - |
| Contingency | - | - | - | - | - | - | - | - | - | - |
| **Total** | **-** | **72,213** | **(72,213)** | **250,000** | **1,088,000** | **-** | **-** | **-** | **-** | **1,338,000** |



Source: Hennepin County Transportation CIP

**Project Name:** 2151000 CSAH 15 - Geometric improvements to CSAH 19 intersection
**Major Program:** Public Works
**Department:** Transportation Roads & Bridges

**Funding Start:** 2018
**Funding Completion:** 2019

| Current Year's CIP Process Summary | Budget to Date | 2018 Budget | 2019 Estimate | 2020 Estimate | 2021 Estimate | 2022 Estimate | Beyond 2022 | Total |
|---|---|---|---|---|---|---|---|---|
| Department Requested | - | 250,000 | 1,088,000 | - | - | - | - | 1,338,000 |
| Administrator Proposed | - | 250,000 | 1,088,000 | - | - | - | - | 1,338,000 |
| CBTF Recommended | - | 250,000 | 1,088,000 | - | - | - | - | 1,338,000 |
| Board Approved Final | - | - | - | - | - | - | - | - |

**Scheduling Milestones (major phases only):**
The funding of this project begins in 2019 with completion in 2020.

| | |
|---|---|
| Scoping: | 2015 - 2016 |
| Design: | TBD |
| Procurement: | TBD |
| Construction: | 2019 |
| Completion: | TBD |

**Board Resolutions / Supplemental Information:**

**Project's Effect on Annual Operating Budget:**
No impact to department staff or annual operating costs are anticipated by this project.

| | |
|---|---|
| Annual Impact for Requesting Department: | 0 |
| Annual Impact for all other Depts: | 0 |
| **Total** | **0** |

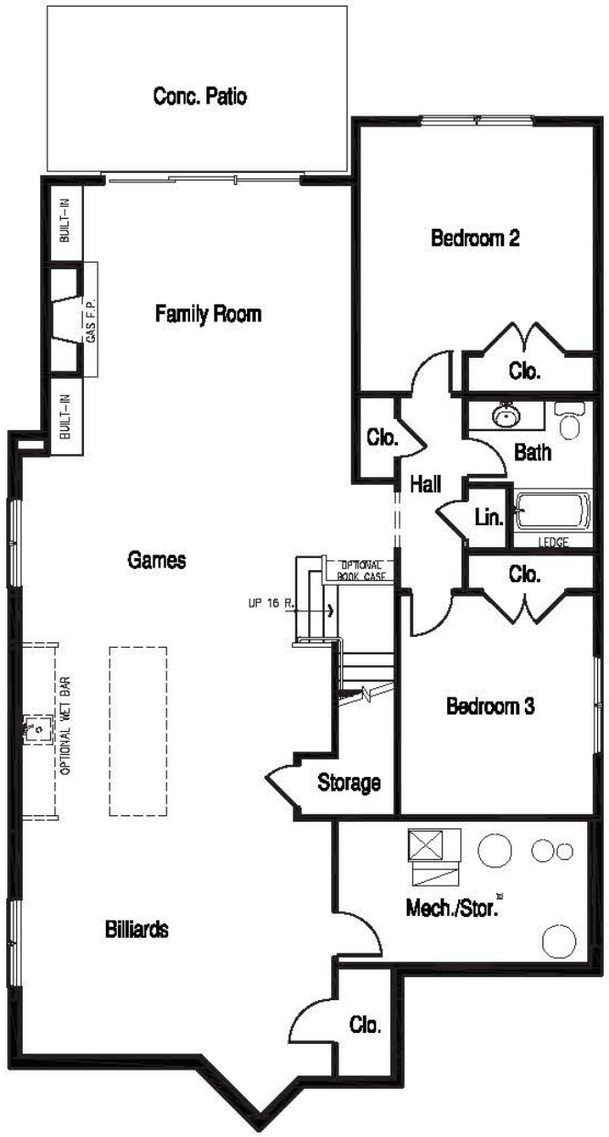
**Changes from Prior CIP:**

- Added $50,000 consultant cost to reflect experience
- Increased construction cost by $193,000 based upon engineer's estimate update
- Increased costs financed with State Aid

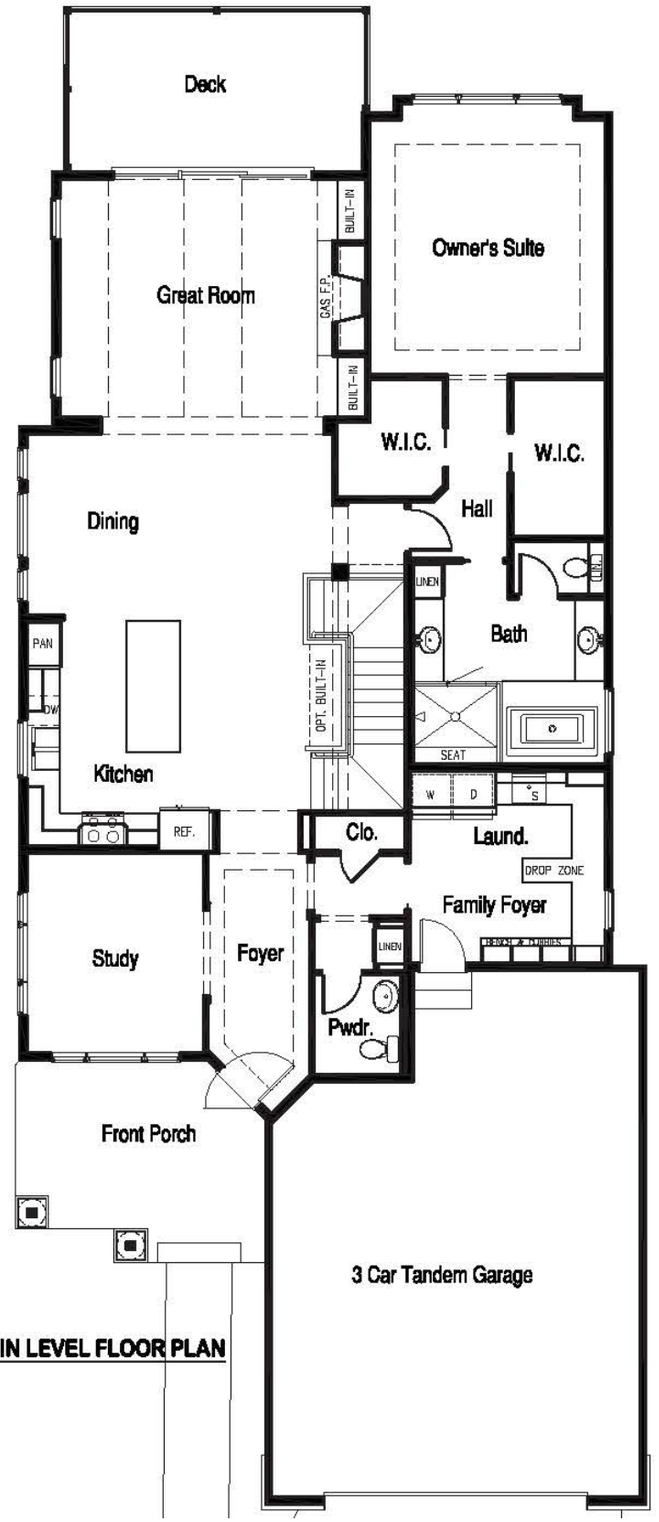
| Last Year's CIP Process Summary | Budget to Date | 2017 | 2018 | 2019 | 2020 | 2021 | Beyond | Total |
|---|---|---|---|---|---|---|---|---|
| Department Requested | - | - | - | 200,000 | 895,000 | - | - | 1,095,000 |
| Administrator Proposed | - | - | - | 200,000 | 895,000 | - | - | 1,095,000 |
| CBTF Recommended | - | - | - | 200,000 | 895,000 | - | - | 1,095,000 |
| Board Approved Final | - | - | - | 200,000 | 895,000 | - | - | 1,095,000 |

# Example Villa Floor Plans

## VILLA HOME




LOWER LEVEL FLOOR PLAN

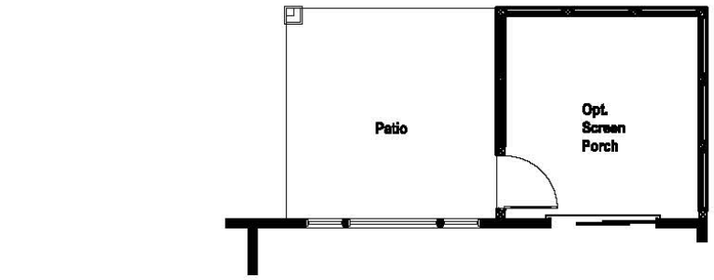


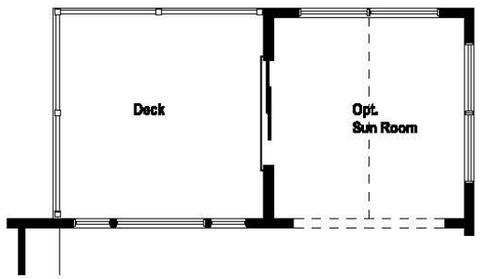

MAIN LEVEL FLOOR PLAN

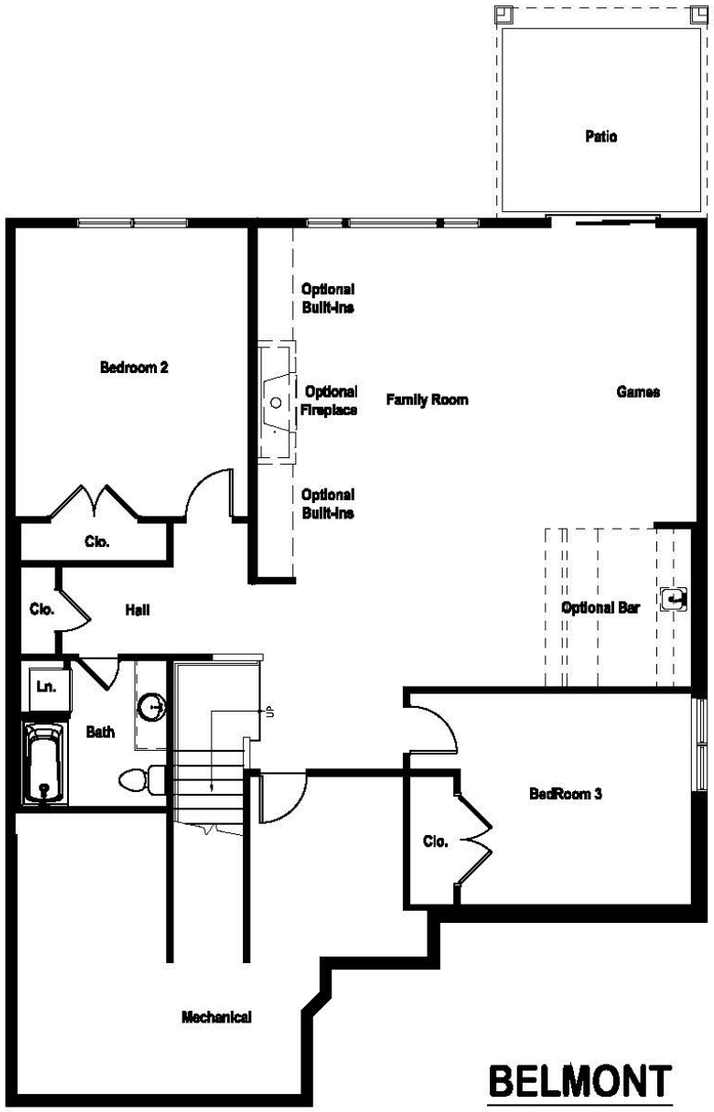
## ALEXANDER

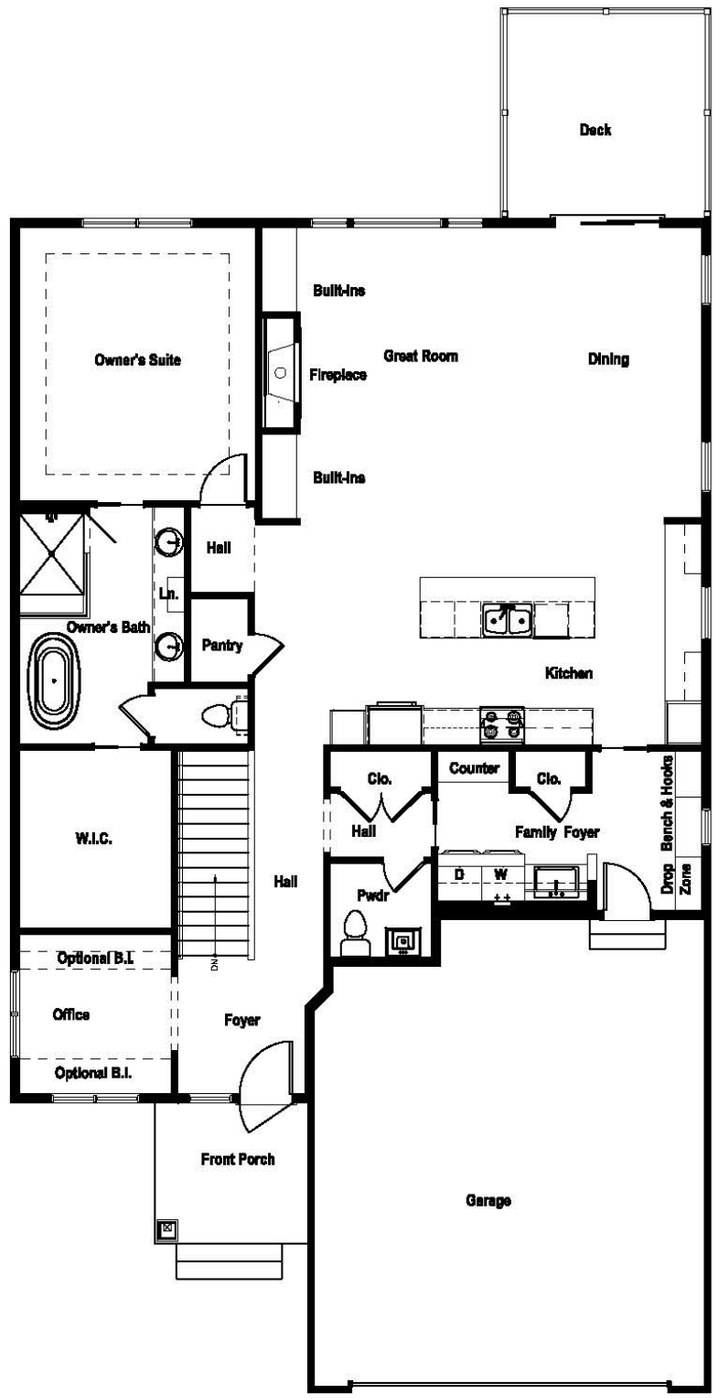
| | |
|---|---|
| Main Level | 1940 sq ft |
| Lower Level | 1735 sq ft |
| **TOTAL** | **3675 sq ft** |

# Example Villa Floor Plans




**BELMONT**

**MAIN LEVEL**
**1804 S.F.**
**LOWER LEVEL**
**1428 S.F.**
**TOTAL**
**3232 S.F.**
**OPT. SUN ROOM**
**144 S.F.**
**UNFIN. MECH**
**376 S.F.**

**07/12/2022**

# Example Villa Floor Plans



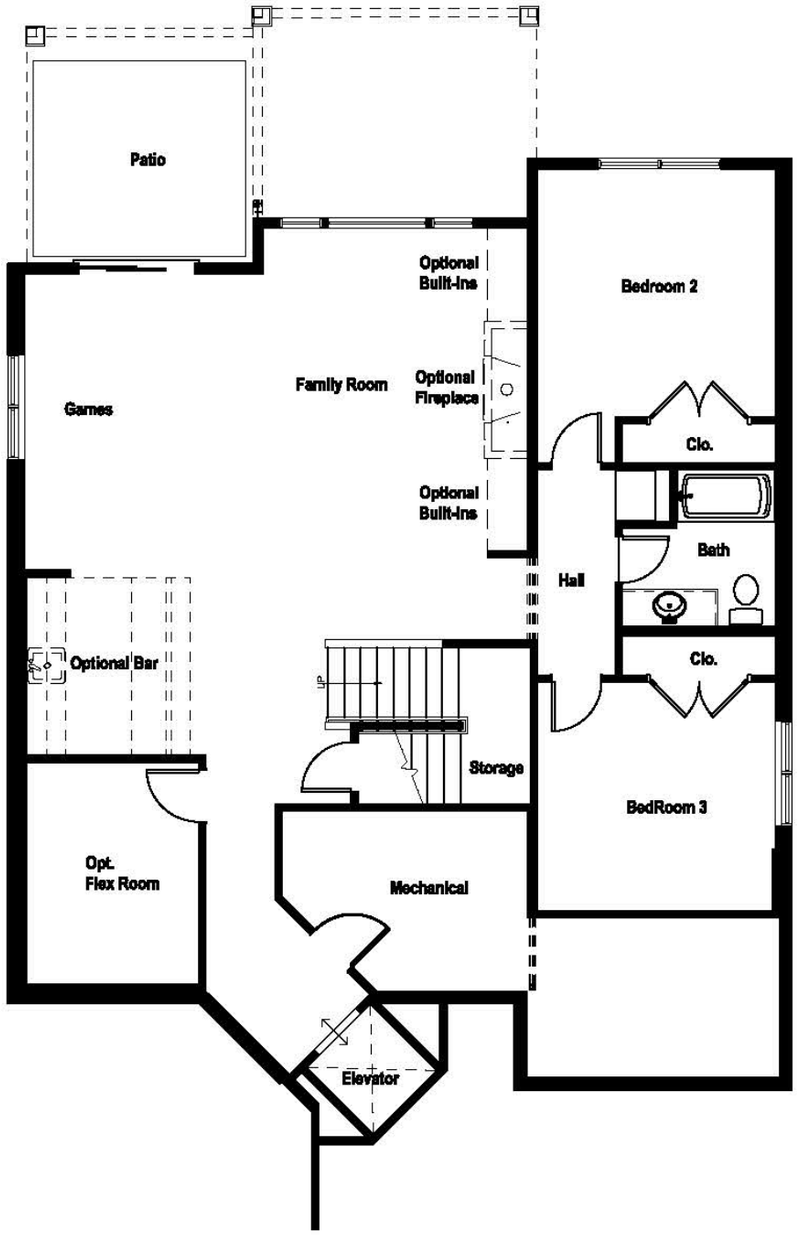

3,368 with Porch and Flex

**07/12/2022**

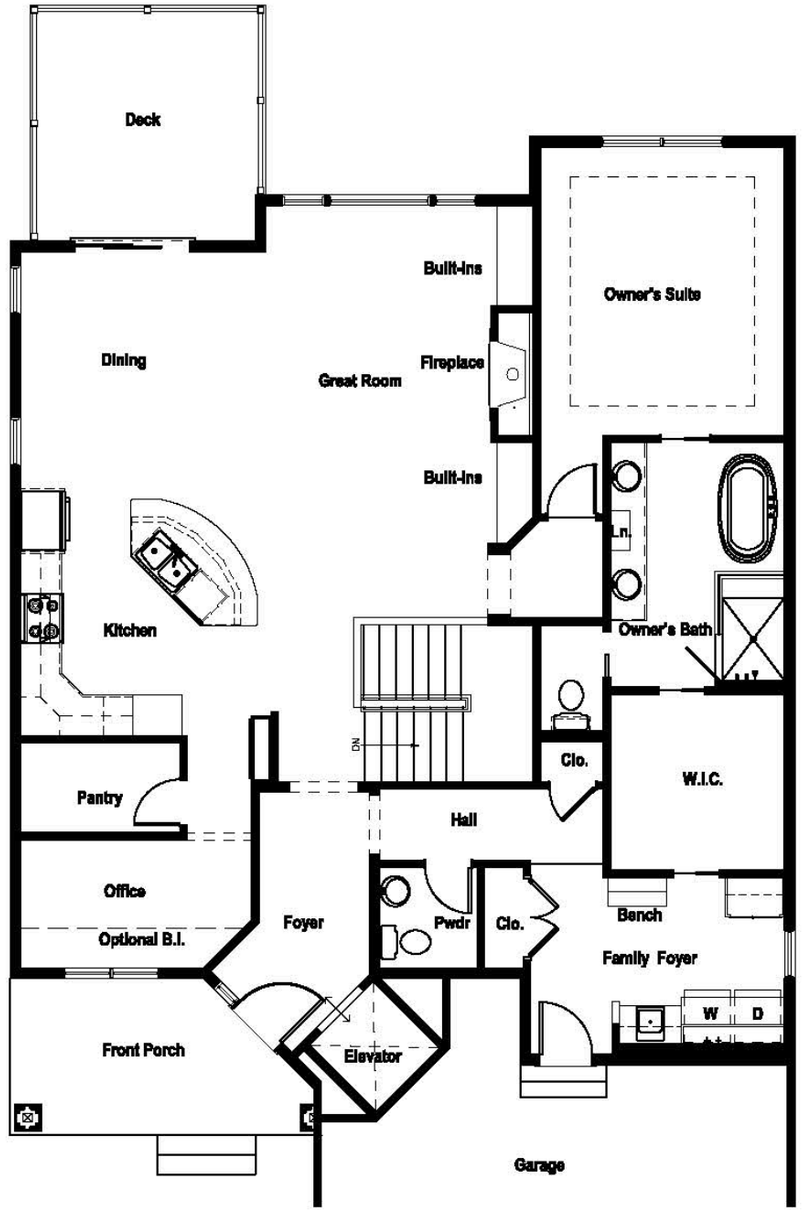
**IRONWOOD**

**MAIN LEVEL**
1688 S.F.
**LOWER LEVEL**
1400 S.F.
**TOTAL**
3088 S.F.
**OPT. SUN ROOM**
143 S.F.
**OPT. FLEX ROOM**
137 S.F.
**UNFIN. MECH**
151 S.F.

# Example Villa Floor Plans




PIKE LAKE LANDING
MANCHESTER (LOWER LEVEL W/ ELEVATOR)
7–12–22




PIKE LAKE LANDING
MANCHESTER (MAIN LEVEL W/ ELEVATOR)
7–12–22

# Example Villa Floor Plans

## VILLA HOME




**RAMSEY**
98 Barton Court

| | |
|---|---|
| Main Level | 1668 sq ft |
| Lower Level | 1300 sq ft |
| **TOTAL** | **2968 sq ft** |
| *OPT Flex Room* | *147 sq ft* |

# 3200-3220 Wayzata Boulevard – Sketch Plan Review Submittal
# September 17, 2025



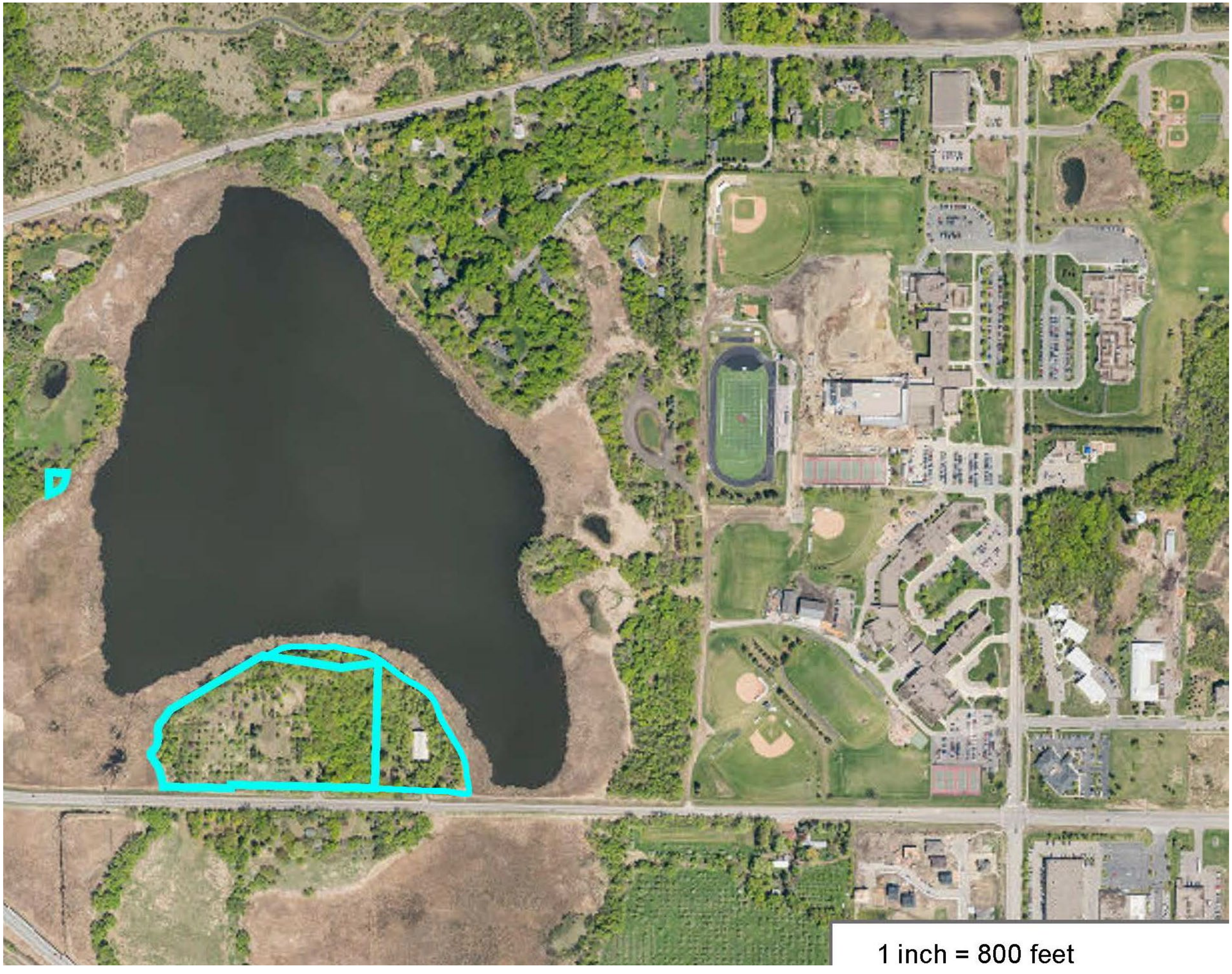
**Detached Villa example from Legacy Oaks in Minnetonka**

WHITTEN ASSOCIATES, INC.

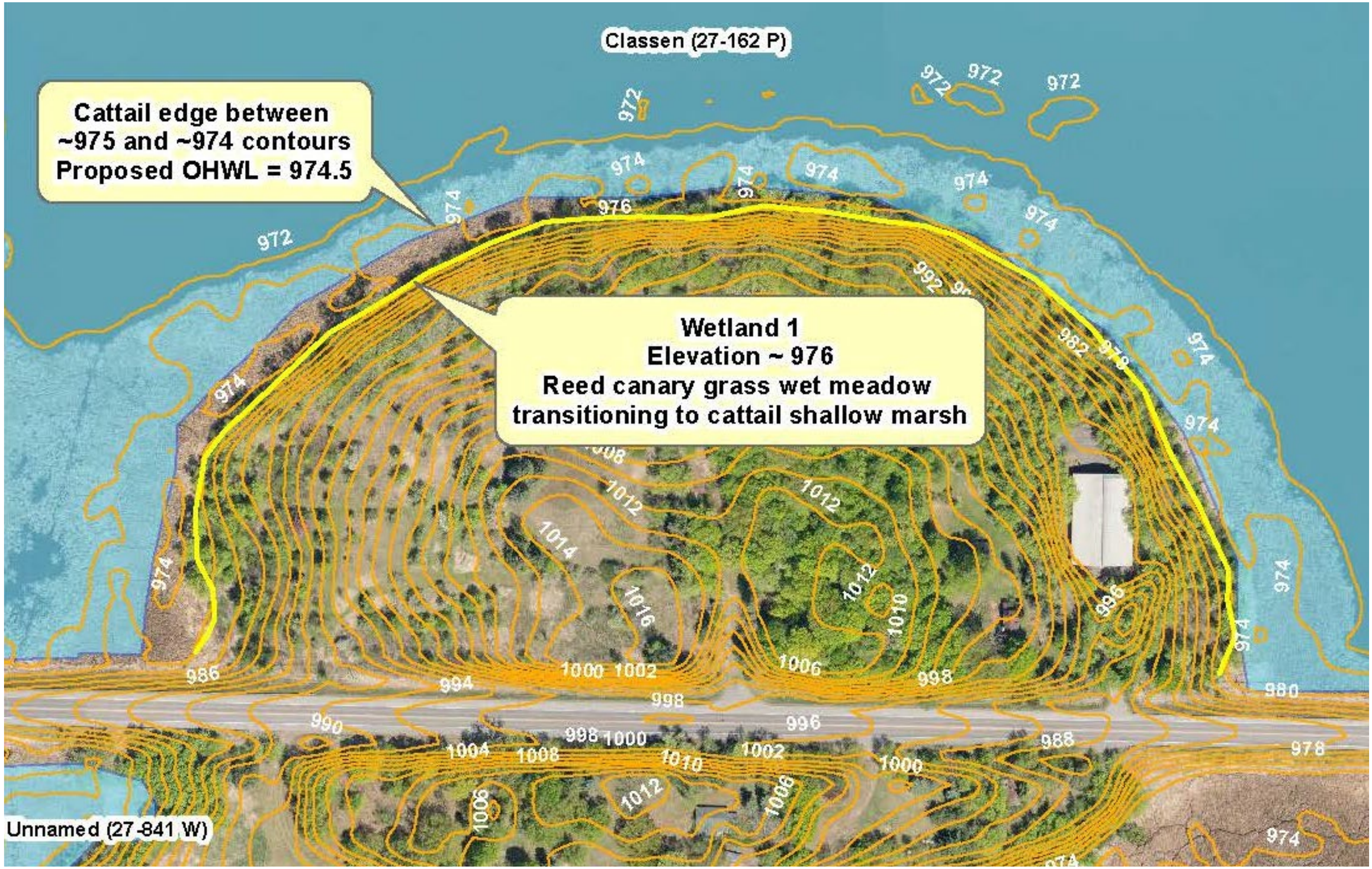
NEIL WEBER, AIA
WEBER architects & planners

RonClark Construction & Design

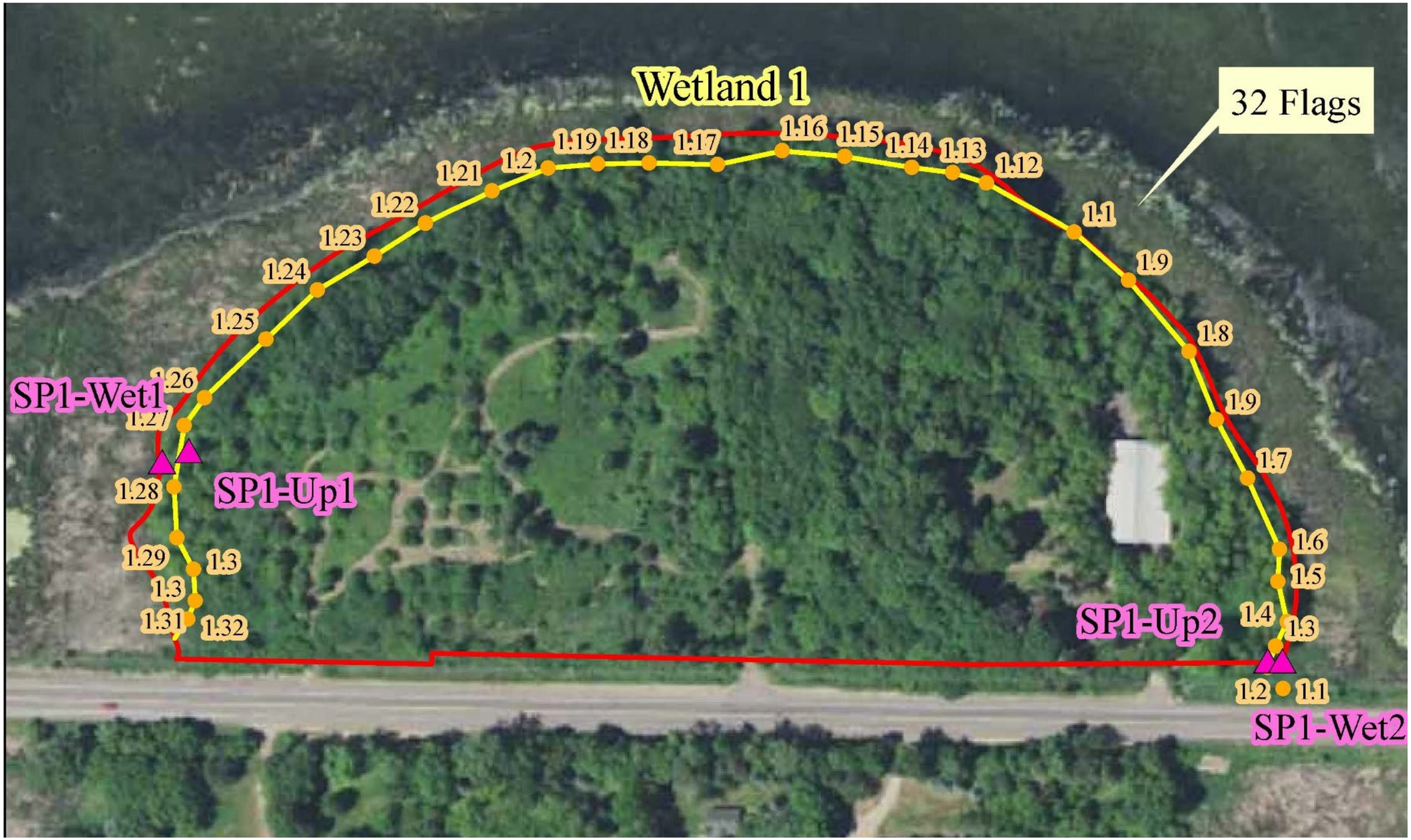
# 3200-3220 Wayzata Boulevard – Overall Area Map



# 3200-3220 Wayzata Boulevard
# Classen Lake DNR OHWL (Ordinary High-Water Level)



# 3200-3220 Wayzata Boulevard – Wetland Delineation – Approved by Minnehaha Creek Watershed District



# Pictures from our Legacy Oaks Neighborhoods



# Pictures from our Legacy Oaks Neighborhoods



# Pictures from our Legacy Oaks Neighborhoods



# Pictures from our Legacy Oaks Neighborhoods



# Other Villa Exterior options



# Pictures from our Legacy Oaks Neighborhood



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods



# Pictures from Various Ron Clark Neighborhoods

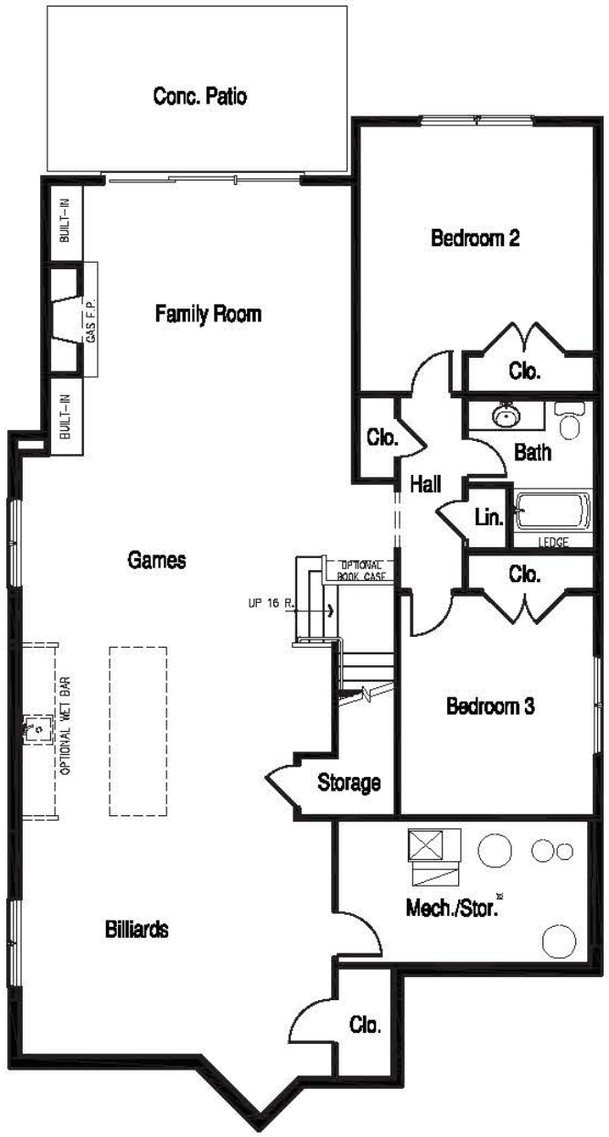


# Pictures from Various Ron Clark Neighborhoods

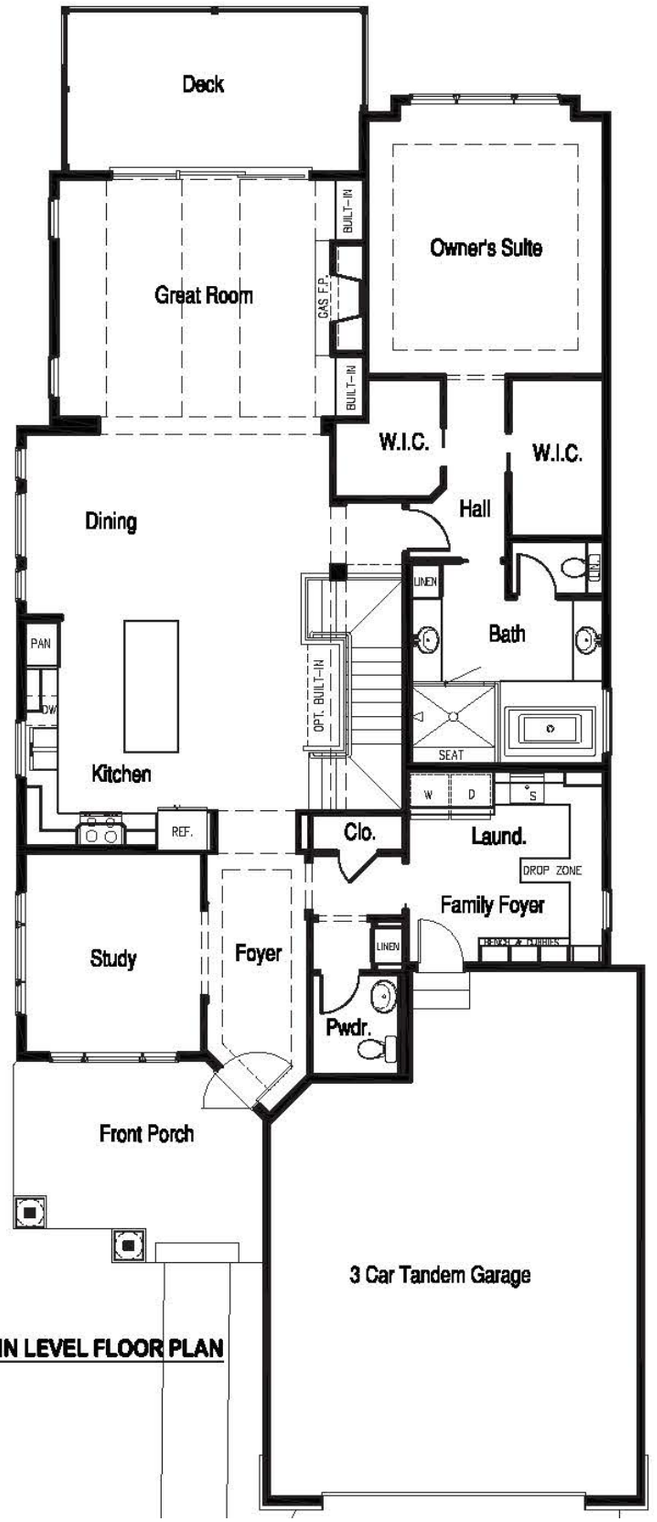


# Example Villa Floor Plans

## VILLA HOME




LOWER LEVEL FLOOR PLAN

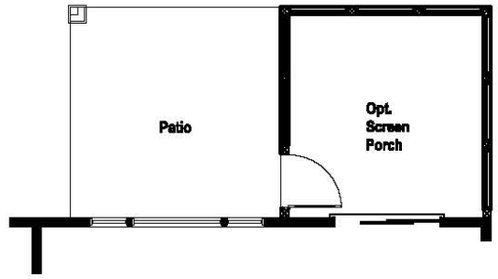


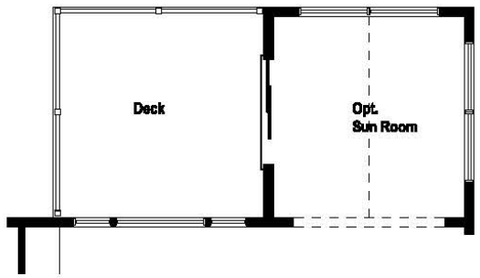

MAIN LEVEL FLOOR PLAN

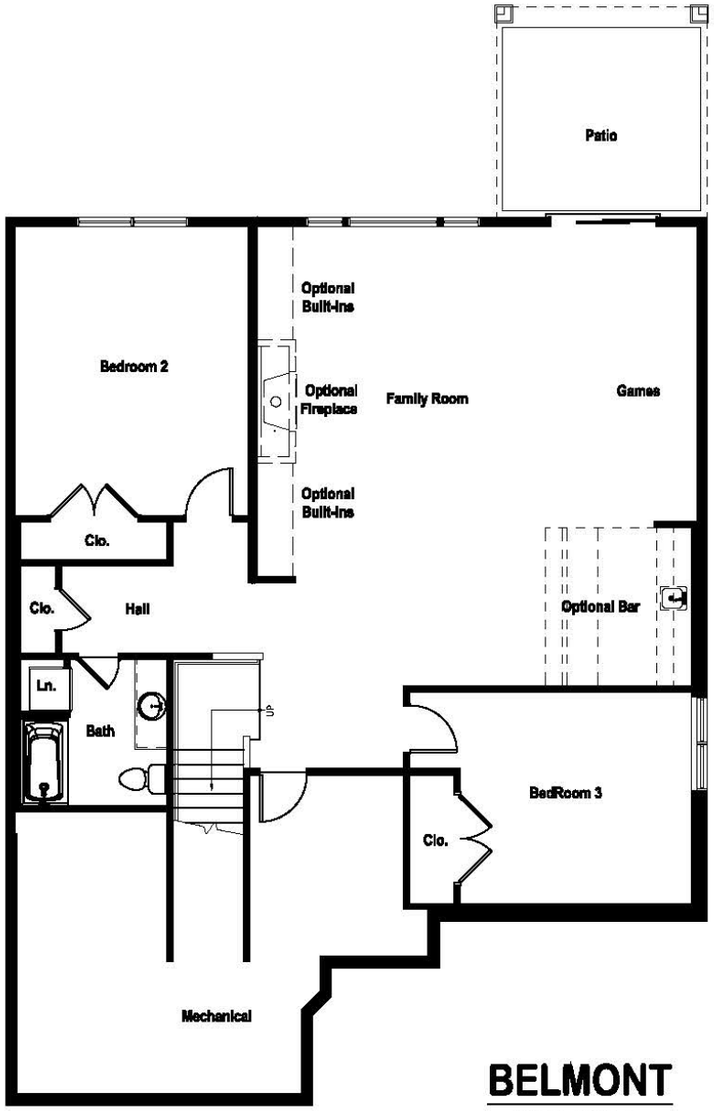
### ALEXANDER

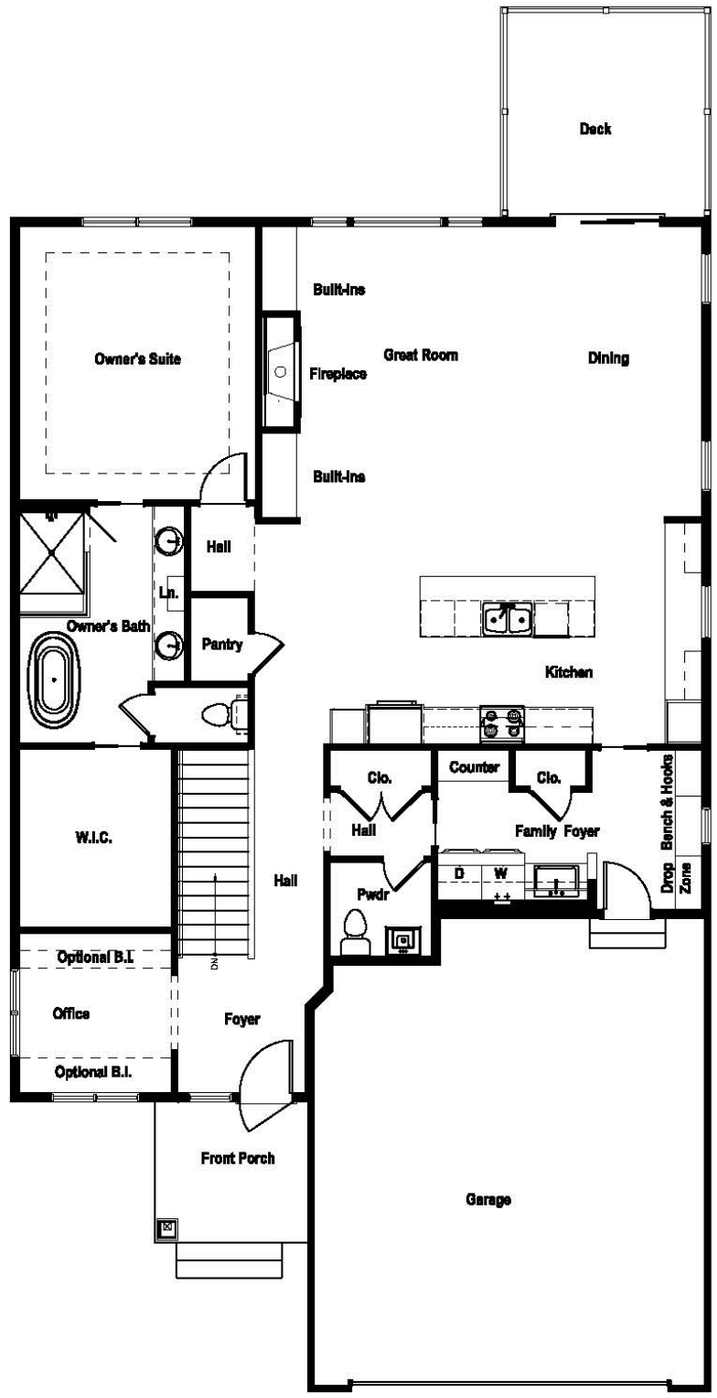
| | |
|---|---|
| Main Level | 1940 sq ft |
| Lower Level | 1735 sq ft |
| **TOTAL** | **3675 sq ft** |

# Example Villa Floor Plans




**BELMONT**

**MAIN LEVEL**
**1804 S.F.**
**LOWER LEVEL**
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**07/12/2022**

# Example Villa Floor Plans

## VILLA HOME




**RAMSEY**
98 Barton Court

| | |
|---|---|
| Main Level | 1668 sq ft |
| Lower Level | 1300 sq ft |
| **TOTAL** | **2968 sq ft** |
| *OPT Flex Room* | *147 sq ft* |

BOARD OF WATER AND SOIL RESOURCES

# Minnesota Wetland Conservation Act
# Notice of Decision

| | |
|---|---|
| **Local Government Unit:** Minnehaha Creek Watershed District | **County:** Hennepin |
| **Applicant Name:** Barbara Lupient Revocable Trust | **Applicant Representative:** Melissa Barrett, Kjolhaug Environmental Services |
| **Project Name:** 3220 Wayzata Blvd W, Orono | **LGU Project No. (if any):** W22-062 |
| **Date Complete Application Received by LGU:** 10/25/2022 | |
| **Date of LGU Decision:** 11/14/2022 | |
| **Date this Notice was Sent:** 11/14/2022 | |

**WCA Decision Type -** check all that apply

☒ Wetland Boundary/Type ☐ Sequencing ☐ Replacement Plan ☐ Bank Plan (not credit purchase)
☐ No-Loss (8420.0415) ☐ Exemption (8420.0420)
Part: ☐ A ☐ B ☐ C ☐ D ☐ E ☐ F ☐ G ☐ H Subpart: ☐ 2 ☐ 3 ☐ 4 ☐ 5 ☐ 6 ☐ 7 ☐ 8 ☐ 9

**Replacement Plan Impacts** (replacement plan decisions only)

| |
|---|
| Total WCA Wetland Impact Area: |
| Wetland Replacement Type: ☐ Project Specific Credits: ☐ Bank Credits: |
| Bank Account Number(s): |

**Technical Evaluation Panel Findings and Recommendations (attach if any)**

☒ Approve ☐ Approve w/Conditions ☐ Deny ☐ No TEP Recommendation

**LGU Decision**

☐ Approved with Conditions (specify below)[1] ☒ Approved[1] ☐ Denied
List Conditions:

**Decision-Maker for this Application:** ☒ Staff ☐ Governing Board/Council ☐ Other:

**Decision is valid for:** ☒ 5 years (default) ☐ Other (specify):

[1] *Wetland Replacement Plan approval is not valid until BWSR confirms the withdrawal of any required wetland bank credits. For project-specific replacement a financial assurance per MN Rule 8420.0522, Subp. 9 and evidence that all required forms have been recorded on the title of the property on which the replacement wetland is located must be provided to the LGU for the approval to be valid.*

**LGU Findings** – Attach document(s) and/or insert narrative providing the basis for the LGU decision[1].

☐ Attachment(s) (specify):
☐ Summary:

The Barbara Lupient Revocable Trust has applied for wetland type confirmation for the wetlands located on/at 3220 Wayzata Blvd W, Orono MN.

A wetland delineation was conducted by Kjolhaug Environmental Services on October 20, 2022. The delineation shows four wetlands within the project area. Wetland 1A and 1 were identified as a Type 2/3 PEM1B/PEM1C wetland.
MCWD reviewed the delineation report and is in agreement with the types and boundaries as shown. MCWD approves the wetland boundaries and types as shown in the delineation report. This decision is valid for five years. A future project located on this property may require a permit from the MCWD.

[1] *Findings must consider any TEP recommendations.*

**Attached Project Documents**

| |
|---|
| ☒ Site Location Map ☐ Project Plan(s)/Descriptions/Reports (specify): |

**Appeals of LGU Decisions**

If you wish to appeal this decision, you must provide a written request within 30 calendar days of the date you received the notice. All appeals must be submitted to the Board of Water and Soil Resources Executive Director along with a check payable to BWSR for $500 *unless* the LGU has adopted a local appeal process as identified below. The check must be sent by mail and the written request to appeal can be submitted by mail or e-mail. The appeal should include a copy of this notice, name and contact information of appellant(s) and their representatives (if applicable), a statement clarifying the intent to appeal and supporting information as to why the decision is in error. Send to:

Appeals & Regulatory Compliance Coordinator
Minnesota Board of Water & Soils Resources
520 Lafayette Road North
St. Paul, MN 55155
travis.germundson@state.mn.us

Does the LGU have a local appeal process applicable to this decision?

☐ Yes[1] ☐ No

[1]*If yes, all appeals must first be considered via the local appeals process.*

**Local Appeals Submittal Requirements** (LGU must describe how to appeal, submittal requirements, fees, etc. as applicable)

| |
|---|
| |

**Notice Distribution (include name)**

*Required on all notices:*

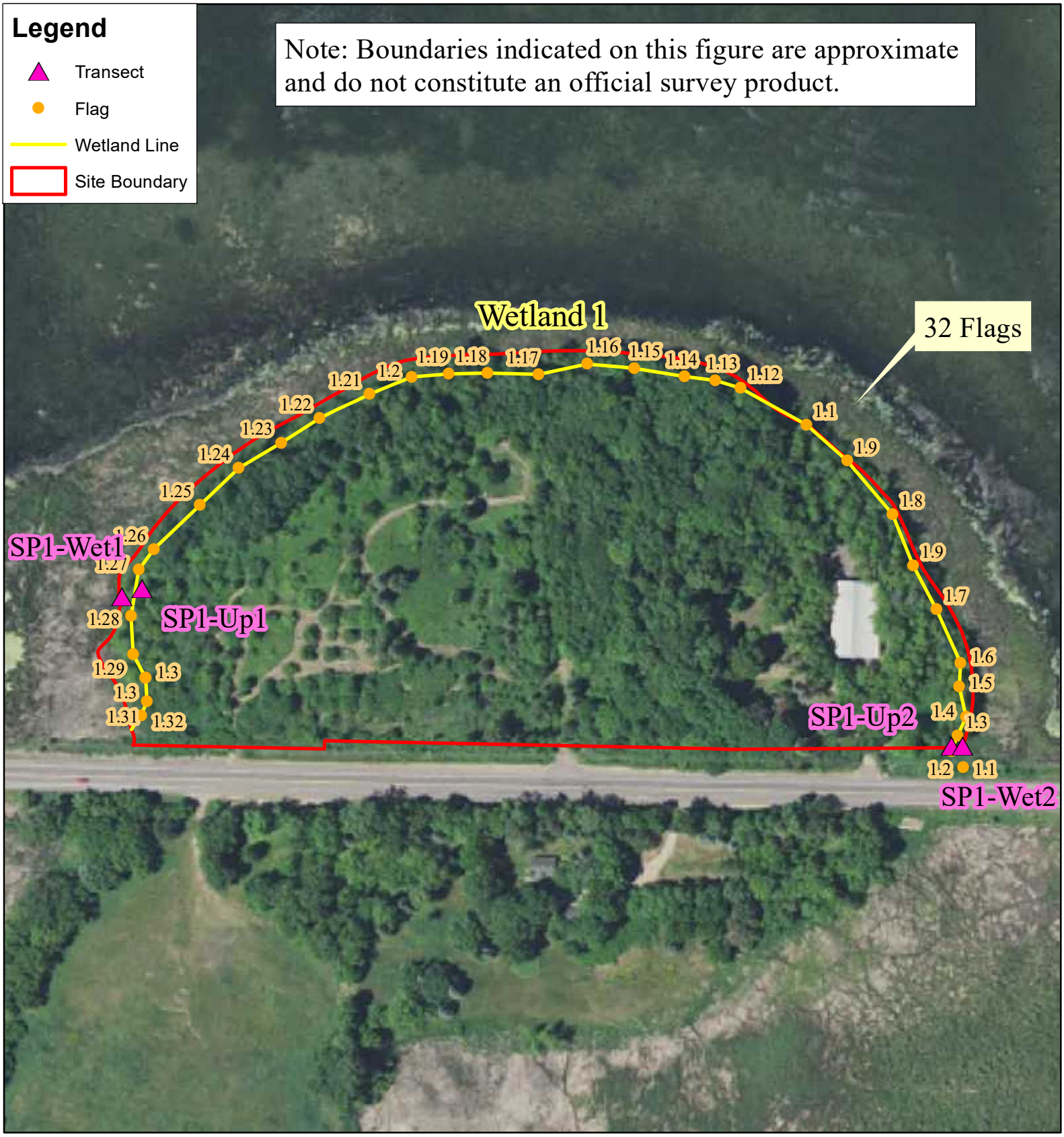
| |
|---|
| ☒ SWCD TEP Member: Stacey Lijewski- stacey.lijewski@co.hennepin.mn.us<br>☒ BWSR TEP Member: Jed Chesnut- jed.chesnut@state.mn.us |
| ☐ LGU TEP Member (if different than LGU contact): |
| ☒ DNR Representative: Wes Saunders-Pearce- wes.saunders-pearce@state.mn.us |
| ☐ Watershed District or Watershed Mgmt. Org.: |
| ☒ Applicant: ricklupient@gmail.com, mwaldo@ronclark.com<br>☒ Agent/Consultant: melissa@kjolhaugenv.com |

*Optional or As Applicable:*

| |
|---|
| ☐ Corps of Engineers**:** usace_requests_mn@usace.army.mil |
| ☐ BWSR Wetland Mitigation Coordinator (required for bank plan applications only): |
| ☐ Members of the Public (notice only): ☐ Other: |

| | |
|---|---|
| **Signature:** Abigail Ernst | **Date:** 11/14/2022 |

**This notice and accompanying application materials may be sent electronically or by mail. The LGU may opt to send a summary of the application to members of the public upon request per 8420.0255, Subp. 3.**




**Wetland Summary Figure**

0 500 Feet

N

**3220 Wayzata Blvd. (KES 2022-188)**
**Orono, MN**

KJOLHAUG ENVIRONMENTAL SERVICES COMPANY

**Source: MNGEO Spatial Commons, USFWS**

# Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

## Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

## Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

## Submission Instructions

Send the completed joint application form and all required attachments to:

**U.S Army Corps of Engineers.** Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select "Minnesota" from the contact Information box. Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

**Section 401 Water Quality Certification:** Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

**Wetland Conservation Act Local Government Unit:** Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

**DNR Public Waters Permitting:** In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

# PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

**Applicant/Landowner Name:** Barbara Lupient Revocable Trust u/a/d/ April 13, 2000
**Mailing Address:** Barbara Lupient c/o Lupient Automotive Group 7100 Wayzata Boulevard, Suite 200 Golden Valley, MN 55426
**Phone:** Rick Lupient 612-790-1800
**E-mail Address:** ricklupient@gmail.com

**Authorized Contact (do not complete if same as above):** Mike Waldo, Ron Clark Construction
**Mailing Address:** 7500 West 78th Street
**Phone:** 952-947-3037
**E-mail Address:** mwaldo@ronclark.com

**Agent Name:** Melissa Barrett, Kjolhaug Environmental Services
**Mailing Address:** 2500 Shadywood Road, Suite 130, Orono, MN 55331
**Phone:** 952-388-3752
**E-mail Address:** melissa@kjolhaugenv.com

# PART TWO: Site Location Information

**County: Hennepin** **City/Township: Orono**
**Parcel ID and/or Address: 3220 Wayzata Blvd W, PID: 32-118-23-11-0001, 33-118-23-22-0001**
**Legal Description (Section, Township, Range): S:33 T:118N R:23W**
**Lat/Long (decimal degrees): 44.98, -93.61**
**Attach a map showing the location of the site in relation to local streets, roads, highways.**
**Approximate size of site (acres) or if a linear project, length (feet): 13.21 acres**

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

# PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

**Application is for delineation concurrence/approval.**

# PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

| **Aquatic Resource ID** (as noted on overhead view) | **Aquatic Resource Type** (wetland, lake, tributary etc.) | **Type of Impact** (fill, excavate, drain, or remove vegetation) | **Duration of Impact** Permanent (P) or Temporary (T)[1] | **Size of Impact**[2] | **Overall Size of Aquatic Resource** [3] | **Existing Plant Community Type(s)** in Impact Area[4] | **County, Major Watershed #, and Bank Service Area #** of Impact Area[5] |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

# PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: [signature] CEO Date: 10/21/2022

I hereby authorize _____ to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] **The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.**

# Attachment A
# Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☒ **Wetland Type Confirmation**

☒ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☐ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

# Attachment B
# Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

# Attachment C
# Avoidance and Minimization

**Project Purpose, Need, and Requirements**. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

**Avoidance**. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

**Minimization**. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

**Off-Site Alternatives**. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

# Attachment D
# Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

**Replacement/Compensatory Mitigation via Wetland Banking**. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

| Wetland Bank Account # | County | Major Watershed # | Bank Service Area # | Credit Type (if applicable) | Number of Credits |
|---|---|---|---|---|---|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

**Project-Specific Replacement/Permittee Responsible Mitigation**. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

| WCA Action Eligible for Credit[1] | Corps Mitigation Compensation Technique[2] | Acres | Credit % Requested | Credits Anticipated[3] | County | Major Watershed # | Bank Service Area # |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Project Name and/or Number:

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: _____ Date:

Project Name and/or Number:

# Attachment E

# Local Government Road Wetland Replacement Program (LGRWRP) Eligibility Application Form for WCA-Regulated Impacts Only

**This attachment must be completed by local government road authorities (county, city, township) who wish to use the LGRWRP for satisfying state and federal wetland replacement requirements for qualifying road reconstruction, rehabilitation, or replacement projects. Instructions on how to prepare an application for the LGRWRP, the process, and the benefits of the program can be found here.**

The local road authority must complete this attachment, obtain signatures from the local WCA Technical Evaluation Panel (TEP), and provide the complete application form and attachments to the Board of Water and Soil Resources (BWSR) Wetland Bank Administration. Your entire application must also be submitted to the U.S. Army Corps of Engineers if you want the LGRWRP to satisfy any federal wetland replacement requirements.

**U.S. Army Corps of Engineers Permit Number** (if already assigned and known):

1) Explain how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. You should describe current road conditions and deficiencies and how the project will rectify them. Also identify and describe project design features that minimize impacts to wetlands. Attach supporting documents and information as applicable.

2) Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach a delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers.

3) Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

In the table below, identify **only wetland impacts from Part 4 that are regulated by WCA** and qualify for the LGRWRP. Wetland impacts regulated by WCA are any wetland areas that are drained or filled, any permanently or semi-permanently flooded wetland areas that are excavated, and any wetland areas that are excavated and converted to a nonwetland, deepwater habitat. Consult the TEP if you are unsure what wetland impacts are regulated by WCA.

Each impact type should be identified separately **(i.e. Fill, Drain, Excavation are three separate impact types).**

| **Wetland Impact ID** (same as noted in **Part 4** and on overhead view) | **Type of Impact** (fill, excavate, or drain) – *Choose only one per line* | **Size of Impact** (square feet or acres to 0.01) | **Existing Plant Community Type(s)** in Impact Area[1] – *Choose only one per line* | **County, Major Watershed #, and Bank Service Area #** of Impact[2] |
|---|---|---|---|---|
| *EXAMPLE* | *Fill* | *0.14 ac* | *Shallow marsh* | *21, 7* |
| *EXAMPLE* | *Excavate* | *0.27 ac* | *Shallow marsh* | *21, 7* |
| | | | | |
| | | | | |
| | | | | |
| | **TOTAL** | | | |

[1]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* as modified in MN Rules 8420.0405 Subp. 2.

[2] Maps of Major Watersheds and Bank Service Areas can be found here or refer to maps in MN Rules 8420.0522 Subp. 7.

Project Name and/or Number:

**Road Authority Signature:** By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Attachment E are regulated by the MN WCA and eligible for the MN Local Government Road Wetland Replacement Program.

Local Road Authority Representative Name: Employer:

Signature: _____ Date:

**Technical Evaluation Panel Concurrence**:

**By signing below, TEP members attest that each wetland impact listed in Attachment E is regulated by WCA and meets eligibility requirements for replacement by the LGRWRP.**

**LGU TEP Member Name**: LGU Name:

Signature: _____ Date:

Check here ☐ if LGU and SWCD TEP member are one in the same and leave SWCD TEP member blank.

**SWCD TEP Member Name**: SWCD Name:

Signature: _____ Date:

**BWSR TEP Member Name**:

Signature: _____ Date:

**DNR TEP Member Name:**

Signature: _____ Date:

A majority of the TEP must sign for BWSR to process the application and satisfy state and federal wetland replacement/mitigation requirements. The road authority must send the TEP-signed Attachment E and all other application materials to:

**Wetland Bank Administration**
**Minnesota Board of Water & Soil Resources**
**520 Lafayette Road North**
**Saint Paul, MN 55155**

**Materials can be submitted electronically to:** amy.waters@state.mn.us

# Neighborhood Meeting – 3200-3220 Wayzata Blvd Site

Ron Clark Construction is holding a neighborhood information meeting regarding the site 3200-3220 Wayzata Blvd , Wayzata, MN 55356

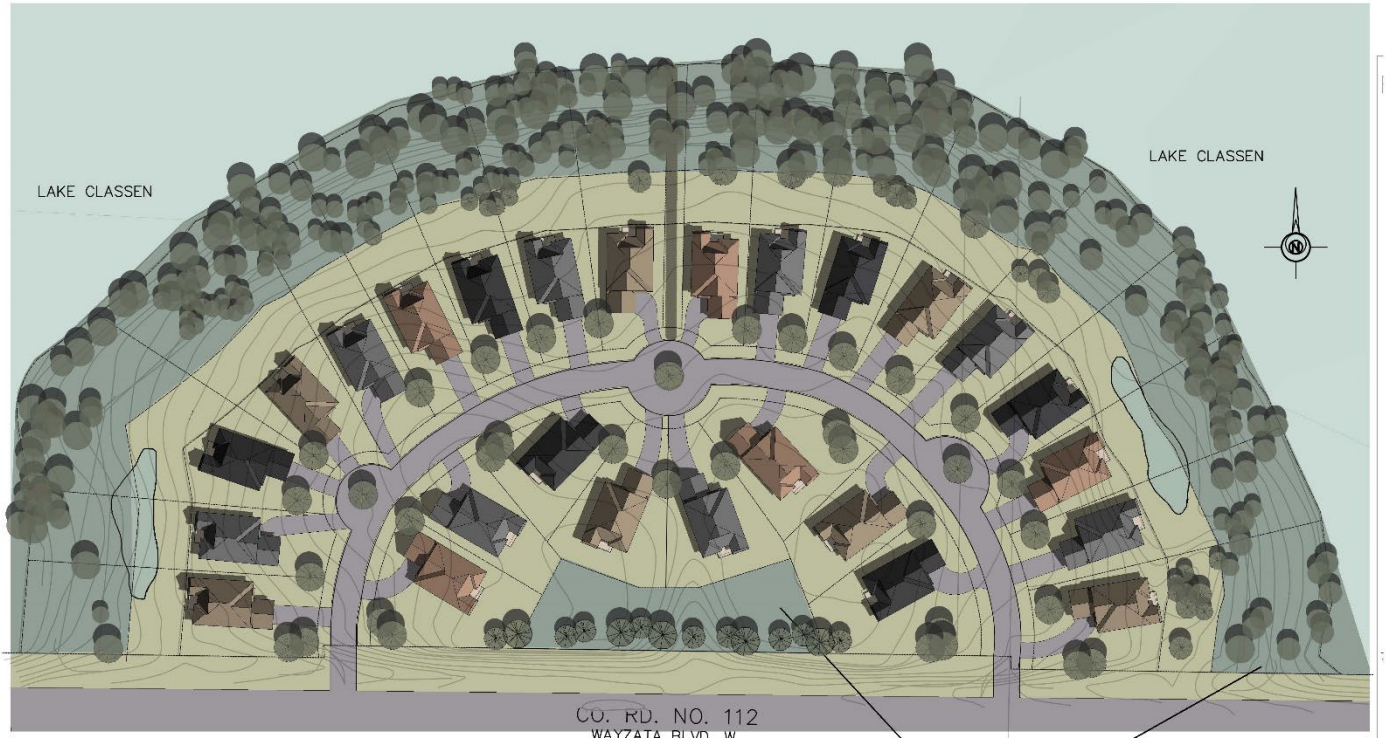
We are purposing 26 detached villas – all with main level living and finished lower levels, with finished square footages ranging from 2,800- 3,700 square feet with 2+-car garages. These will be similar to the Villa Homes we built at Legacy Oaks and are currently being built at Ridgewood Ponds, both in Minnetonka, along with Greenway Villas in Golden Valley and Lotus Villas in Eden Prairie. We have focused on single-level homes with walkouts to keep a lower profile from the Lake, they will fit in well with the existing community, while providing a much-needed empty nester product for Orono.

**Neighborhood Meeting**
**Wednesday, November 5th, 2025 5:00 – 6:00 pm**

**Location: Orono City Hall, 2750 Kelley Parkway, Orono, MN 55356**
**In the Council Chambers**

**OTHER IMPORTANT DATES: - watch the city website to confirm these dates**

1.) **November 17,2025 6:00 p.m. Planning Commission meeting – Concept Review**
2.) **November 24, 2025, 6:00 p.m. City Council meeting – Concept Review**




If you are unable to attend, please feel free to contact us for more information:

Mike Waldo / mwaldo@ronclark.com 952-947-3037

or Landon Wittenberg / lwittenberg@ronclark.com 952-947-3014

**3200-3220 Wayzata Blvd Orono - Neighborhood Meeting Recap 11/5/2025 5:00-6:15PM**

Invite was sent out to 25 property owners within about ½ mile of property

**Attendees**

Stacey Royal
Heidi Cole
Charles Cole
Nancy Brantingham
Tom Sawyer

Reviewed site plan and perspective views from the lake and other similar projects we have:

Discussed density in relation to current zoning for site. – reviewed the city process for the change in Municipal service area, with the property across the street having utilities brought to it, very logical for this property to be included also

Open to permanent dock/boardwalk but prefer no vertical structure, lighting, canoe rack or access to lake.

Concerned with speed limit on old highway 12, is there a possibility of working with the city to reduce the speed as these properties develop?

Discussed expected change in traffic- discussed the lower trips by empty nesters along with minimal impact at peak traffic hours.

Discussed potential street lighting at intersections, exterior lighting on both the front and back of homes, would like to limit flood lights on rear of home if possible.

All exterior lighting will be downlighting, lighting on the front of the homes is on photocell.

Discussed the potential effects on Lake Classen, would like Lake to maintain as-is, all natural, in combination with us, the city and watershed, the water quality going into the lake will improve as it will now be treated in storm water system and ponds prior to any discharge into the lake

Stated we are planning for a wetland buffer & conservation easement along the lake, this will be recorded with the plat and monitored by both the City and the HOA, the Conservation easement to preserve the heathy trees along the lake was very well received

Discussed erosion control measures taken during construction to prevent any runoff into the lake during grading, street and home construction.

Reviewed proposed city approval timelines, as well as expected construction/delivery/sell out timeline.

As with any neighborhood meeting the preference was for no development, but I think after the discussion, they understood that something was going to be built here and that this dingle level Villa home proposal would have minimal effect on the lake and their existing views, etc.

# Lake Classen
**PROPERTY OWNERS;**

David and Stacey Royal
3135 Jamestown Road
Long Lake, MN 55356

Gary A Larson
3085 Jamestown Road
Long Lake, MN 55356

Merrill and Heidi Cole
3145 Jamestown Road
Long Lake, MN 55356

Todd and Tiffany Madson
3155 Jamestown Road
Long Lake, MN 55356

Raymond and Leslie Szmanda
3225 6th Avenue North
Long Lake, MN 55356

Michael and Ava Wichman
3265 6th Avenue North
Long Lake, MN 55356

Thomas and Nancy Sawyer
3405 6th Avenue North
Long Lake, MN 55356

Gail Ledstrom
23439 Midland Trail E
Lewisburg, WV 24901

ANDREW L PAGE
JULIE M PAGE
3050 JAMESTOWN RD
LONG LAKE MN 55356

ROBERT T FAYFIELD
JEANNE E HOENE
3105 COUNTY RD 6
ORONO MN 55356

RICK D ANDERSON
DAVID J LIND
3220 W BDE MAKA SKA PKWY 301
MINNEAPOLIS MN 55416

WILLIAM/LAUREL MACLACHLAN
3565 SIXTH AVE N
LONG LAKE MN 55356

LAKE IMOGENE LLC
200 EAGAN WOODS DR #350
EAGAN MN 55121

ASPECT DESIGN GROUP
422 2ND STREET
EXCELSIOR MN 55331

KAY TOUCHETTE REVOC TRUST
510 GROVELAND AVE #304
MINNEAPOLIS MN 55403

PAUL R SANDER
NATALIA N SANDER
16499 BEVERLY DRIVE
EDEN PRAIRIE MN 55347

KRISTI SCHERWEIT
JUSTIN PAQUETTE
3065 JAMESTOWN RD
LONG LAKE MN 55356

NEIL A & STEPHANIE A RILEY
3175 JAMESTOWN RD
LONG LAKE MN 55356

HENRY & NANCY BRANTINGHAM
3185 CO RD NO 6
LONG LAKE MN 55356

LUCAS & ERIKA KERANEN
3045 SIXTH AVE N
LONG LAKE MN 55356

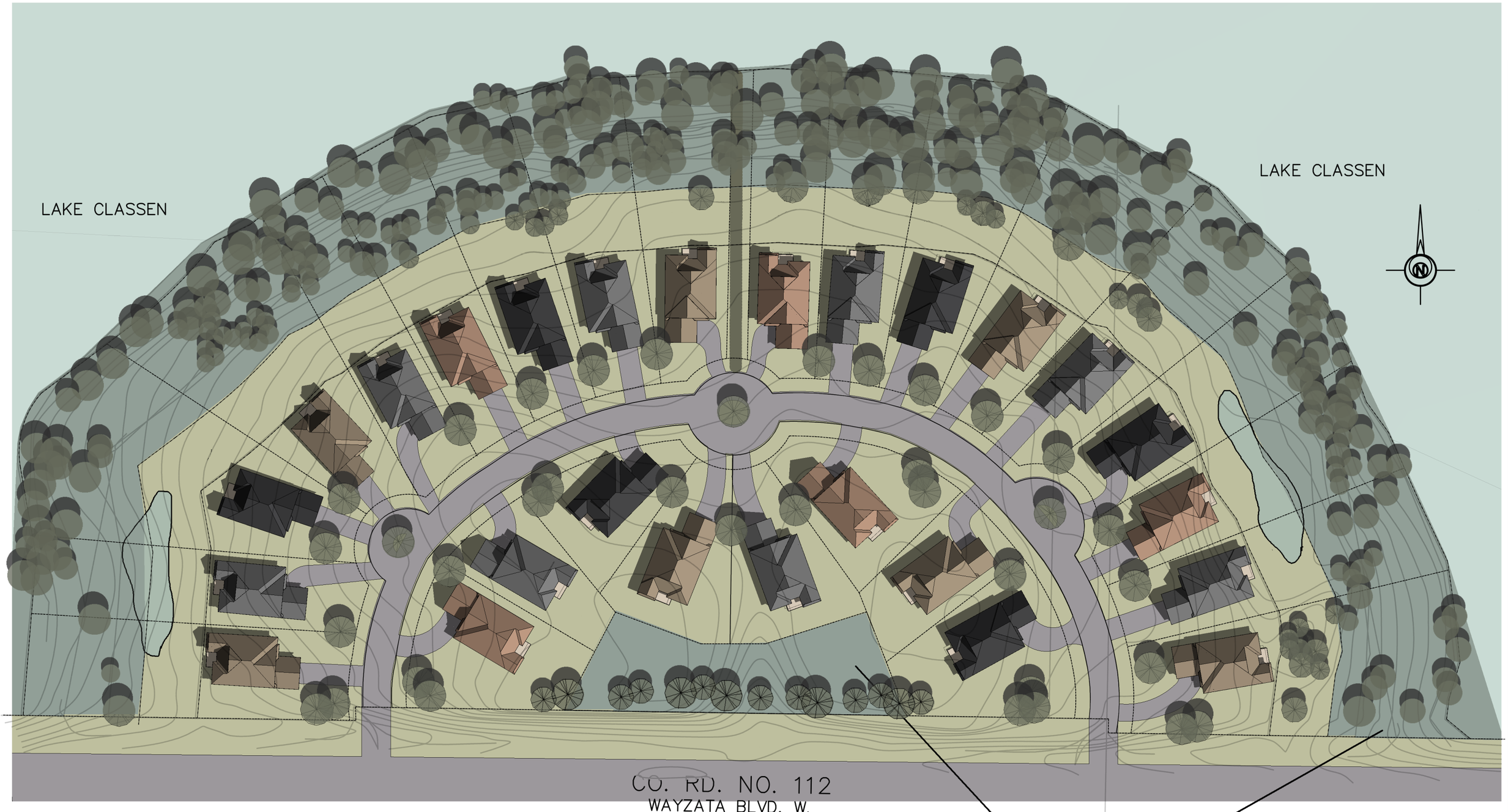
BRENT & ANGELA MCKEE
3025 SIXTH AVE N
LONG LAKE MN 55356

JAMES T SWANSON
2995 JAMES TOWN RD
LONG LAKE MN 55356

LAKEWEST LLC 14525
HIGHWAY 7 #265
MINNEONKA MN 55345

KATHRYN DUMAS
ROBERT DUMAS
3025 WAYZATA BLVD
BOX 607
LONG LAKE MN 55356

ORONO IND SCHOOL DIST NO 278
685 OLD CRYSTAL BAY RD N
LONG LAKE MN 55356



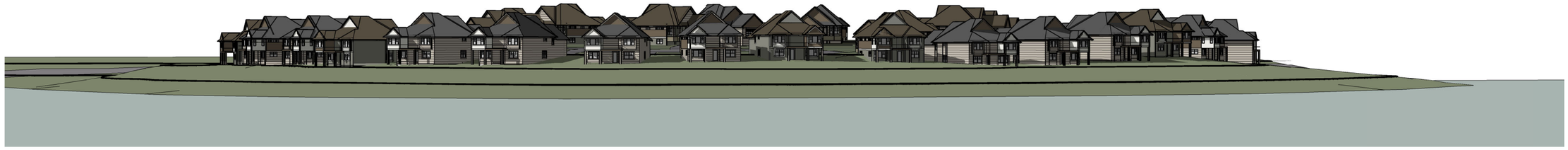

# SITE PLAN

1"=80'-0"

9.17.25

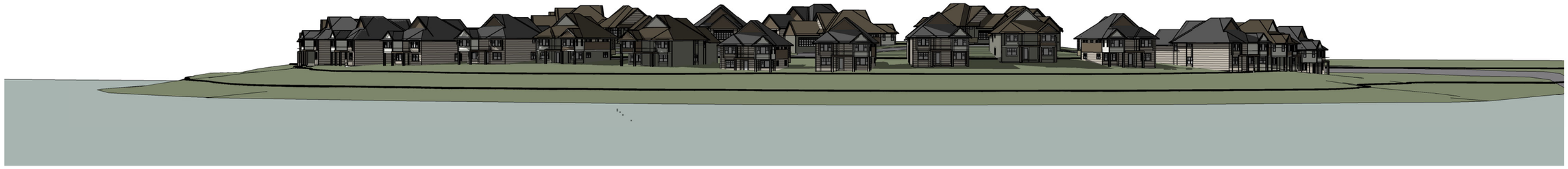
WHITTEN ASSOCIATES, INC. | LUPIENT SITE, ORONO, MN | RON CLARK CONSTRUCTION

617



# PERSPECTIVE VIEW FROM NE

NO SCALE



# PERSPECTIVE VIEW FROM NW

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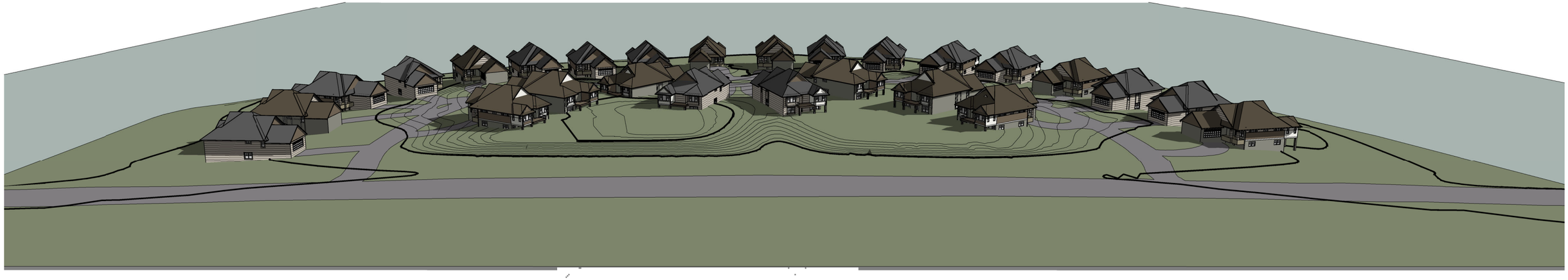
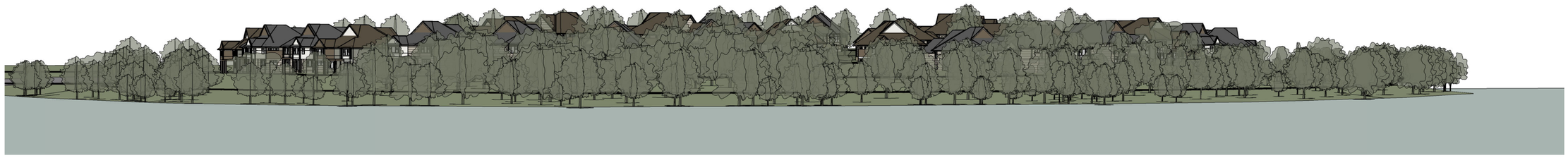


# PERSPECTIVE VIEW FROM WAYZATA BLVD.

NO SCALE

9.18.25



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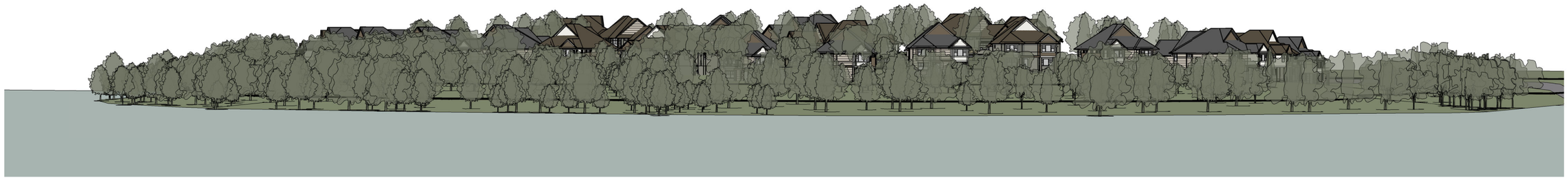

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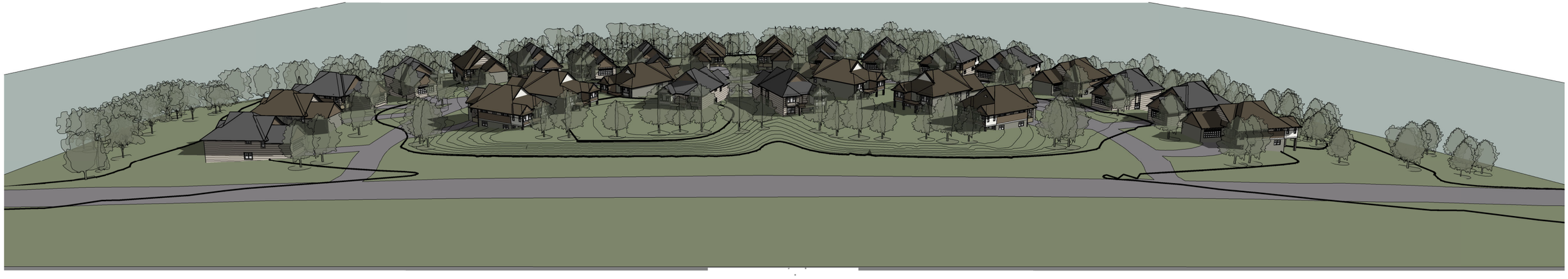

# PERSPECTIVE VIEW FROM WAYZATA BLVD.

NO SCALE

9.18.25

WHITTEN ASSOCIATES, INC. | LUPIENT SITE, ORONO, MN | RON CLARK CONSTRUCTION

619