AGENDA
PLANNING COMMISSION MEETING

February 6, 2025 - 6:00 PM
City Hall Council Chambers

Members of the public can participate in person at Lakeville City Hall, 20195 Holyoke Avenue. Members of the public may join the meeting via Teams Meeting, **Meeting ID: 288 995 085 506, Passcode: ZB6XQ6BL, or by calling Toll Number 1-323-433-2142; Conference ID: 465 329 689#.** The Chair will allow for public comments and questions at the appropriate time.

The City Council is provided background information for agenda items in advance by staff and appointed commissions, committees, and boards. Decisions are based on this information, as well as City policy, practices, input from constituents, and a council member's personal judgment.

1. Call to order and flag pledge

2. Roll Call

3. Approval of Minutes
   a. January 23, 2025 Planning Commission meeting minutes

4. Announcements

5. North Creek MHP Conditional Use Permit
   Public hearing to consider the application of Dirt Boys, Incorporated for a conditional use permit to allow the expansion of North Creek Manufactured Home Park for the development of manufactured home sites in the RSMH, Single Family Manufactured Home Park District and Shoreland Overlay District.
   a. North Creek CUP reports and exhibits

6. Staff Notices
   a. Planning Manager's Memo
   b. The City Council meeting at which the above item may be considered will be held on February 18, 2025.
   c. The next Planning Commission meeting is scheduled for February 20, 2025.

7. Adjourn

8. Joint Planning Comission and Parks, Recreation, and Natural Resources Comission work session.
   a. Tree Preservation Ordinance Amendment Discussion

CITY OF LAKEVILLE.
PLANNING COMMISSION MEETING MINUTES
January 23, 2025

Chair Majorowicz called the meeting to order at 6:00 p.m. in the Council Chambers at City Hall. The Pledge of Allegiance to the flag was given.

Members Present: Chair Jenna Majorowicz, Vice Chair Christine Zimmer, Scott Einck, Pat Kaluza, Jason Swenson, Amanda Tinsley, Patty Zuzek, Ex-Officio Jeff Hanson.

Members Absent: None

Staff Present: Tina Goodroad, Community Development Director; Kris Jenson, Planning Manager; Heather Botten, Senior Planner; Jon Nelson, Assistant City Engineer

3. Approval of the Meeting Minutes

The January 9, 2025 Planning Commission meeting minutes were approved as presented.

4. Announcements

Planning Manager Kris Jenson noted that the Parks, Recreation, and Natural Resources Committee did not hold their meeting on January 22, 2025 due to the lack of a quorum and therefore were unable to review and provide a recommendation for the Antlers Ridge 2nd Addition preliminary plat. The Committee did review the original Antlers Ridge preliminary plat on July 5, 2023 and recommended approval at that time.

Ms. Jenson stated if the agenda items are not tabled they will move forward to the February 3 City Council meeting.

5. Antlers Ridge 2nd Addition

Chair Majorowicz opened the public hearing to consider the application of Tamarack Land Lake Marion Commons, LLC for the preliminary plat for 26 twinhome lots to be known as Antlers Ridge 2nd Addition and a conditional use permit for a shoreland impact plan within the Shoreland Overlay District of Lake Marion, located east of Kenrick Avenue and west of Kensfield Trail.

Nater Herman, on behalf of Tamarack Land Lake Marion Commons, LLC presented a brief overview of the request.

Senior Planner Heather Botten presented the staff report. Ms. Botten stated that the Antlers Ridge 2nd Addition preliminary plat is a revision of the west portion of the original Antlers Ridge preliminary plat that was approved by the City Council on July 17, 2023. The original preliminary plat was for 54 twinhome units, 34 of which were included in the Antlers Ridge final plat approved

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by the City Council on July 15, 2024. The remaining portion of the preliminary plat has been revised and now includes 26 twinhome units and realigned 203rd Street for a future connection through the Marek Towning property with a future redevelopment of that property.

Ms. Botten noted that Antlers Ridge 2nd Addition is located within the Shoreland Overlay District of Lake Marion. City Code requires the developer to submit a shoreland impact plan and a conditional use permit application to allow development within the shoreland overlay district. The shoreland impact plan includes requirements that the plans address steep slopes, erosion control, access to public utilities, stormwater management, and site development best management practices. The request is in compliance with the general CUP criteria. Staff believes that Antlers Ridge 2nd Addition preliminary plat and conditional use permit is consistent with the land use and housing policies of the Comprehensive Plan and complies with the requirements of the Zoning Ordinance and Subdivision Ordinance and recommends approval of the requests with the nine stipulations listed in the staff report.

Chair Majorowicz opened the hearing to the public for comment.

The were no public comments.

Motion was made by Einck, seconded by Swenson, to close the public hearing at 6:08 p.m.

Voice vote was taken on the motion.

Ayes – unanimous

Chair Majorowicz asked for comments from the Planning Commission. Discussion points included:

- Commissioner Swenson asked about timing for redevelopment of the adjacent Marek property and whether screening should be added between the westernmost units and adjacent commercial property. The applicant responded that he did not have any definitive timing on redevelopment. Swenson asked the applicant to discuss possible screening with staff and commented that he is supportive of the plan and lot layout.
- Commission Kuluza agreed that a stipulation is not needed for the screening but requested that the applicant work with staff on the issue.
- Commissioner Einck asked the applicant to explain the drainage and grading that

Motion was made by Zimmer, seconded by Zuzek to recommend to City Council approval of the preliminary plat for 26 twinhome lots to be known as Antlers Ridge 2nd Addition and a conditional use permit for a shoreland impact plan within the Shoreland Overlay District of Lake Marion, located east of Kenrick Avenue and west of Kensfield Trail, subject to the following stipulations, and approval of the Findings of Fact dated January 23, 2025:

1. The site shall be developed in accordance with the plans approved by the City Council.
2. Five-foot-wide concrete sidewalks shall be constructed on the south side of 203rd Street.
3. Park dedication shall be subject to the recommendations of the Parks, Recreation, and Natural Resources Committee to be satisfied at the time of final plat.

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4. A homeowner's association must be established for ownership and maintenance of Lot 19, Block 1 and Lot 9, Block 2.
5. HOA documents must be submitted for review and provide proof of recording of the HOA documents and deeds conveying the common area lots to the HOA, prior to building permits issued for the attached townhomes
6. Twinhomes must meet the exterior materials requirements of Section 11-57-19 of the Zoning Ordinance.
7. The developer must submit dimensioned floor plans for the detached townhome units to verify compliance with the minimum requirements for above grade floor area established by Section 11-17-13.D of the Zoning Ordinance.
8. The developer shall provide details to verify compliance with the landscape requirements of Section 11-57-19 of the Zoning Ordinance.
9. Implementation of the recommendations listed in the engineering report dated January 16, 2025 and any subsequent correspondence.

Ayes: Zuzek, Tinsley, Kaluza, Majorowicz, Zimmer, Einck, Swenson

Nays: 0

6. **Airlake DEA**

Chair Majorowicz opened the public hearing to consider the application of Hat Trick Investments, LLC and Dakota Electric Association for a preliminary and final plat for a two outlot subdivision to be known as Airlake DEA, located east of Cedar Avenue (CSAH 23) and north of 225th Street.

Jeff Schoenecker, Dakota Electric Association presented a brief overview of the request.

Senior Planner Heather Botten presented the staff report. Ms. Botten stated the proposed plat includes two parcels of land totaling 115.57 acres. The plat consists of two outlots and the dedication of right-of-way for the extension of 222nd Street. The property is located east of Cedar Avenue (CSAH 23) and north of 225th Street. The subject property was annexed into the City in 2021. The property is guided Industrial in Comprehensive Land Use Plan and zoned I-2, General Industrial. The proposed outlots meet the minimum lot size and width requirements for future development in the I-2 district. The proposed preliminary plat meets the recommended goals and objectives of the zoning code and comprehensive plan. Staff recommends approval of the preliminary plat with the three stipulations listed in the staff report.

Chair Majorowicz opened the hearing to the public for comment.

The following public comments were received:

- Sean Regan, Hat Trick Investments, expressed his excitement to work with Dakota Electric Association on this opportunity for their new campus.

Motion was made by Zimmer, seconded by Einck to close the public hearing at 6:18 p.m.

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Voice vote was taken on the motion.

Ayes – unanimous

The Planning Commission had no questions or comments about the preliminary plat.

Motion was made by Kaluza, seconded by Einck to recommend to City Council approval of the Airlake DEA preliminary plat, subject to the stipulations listed below:

1. Implementation of the recommendations listed in the engineering report dated January 16, 2025 and any subsequent correspondence.
2. The final plat shall be in substantial conformance with the preliminary plans on file with the Community Development Department except as may be modified by the conditions herein.
3. A development contract and related agreements shall be approved by the City Council with the approval of the final plat.

Ayes: Tinsley, Kaluza, Majorowicz, Zimmer, Einck, Swenson, Zuzek,

Nays: 0

7. **Midwest ENT**

Chair Majorowicz opened the public hearing to consider an application by Midwest ENT for a variance to exceed the number of wall signs permitted on one elevation in the Freeway Corridor District, for a building to be located at 11020 161st Street.

Tony Benusa of Midwest ENT summarized the request. He explained Midwest ENT's business model and the desire to include the various services that will be available at the clinic.

Planning Manager Kris Jenson presented the staff report. Ms. Jenson stated that Midwest ENT has requested a variance to allow additional wall signs on their building, currently under construction at 11020 161st Street. Ms. Jenson summarized the variance review criteria and stated staff's position that the request had not met the practical difficulty threshold as outlined in the Zoning Ordinance.

Chair Majorowicz opened the hearing to the public for comment.

There was no public comment.

Motion was made by Kaluza, seconded by Zimmer to close the public hearing at 6:30 p.m.

Voice vote was taken on the motion.

Ayes – unanimous

Chair Majorowicz asked for comments from the Planning Commission. Discussion points included:

- Commissioner Zuzek asked for clarification about the business; Mr. Benusa stated that Midwest ENT is the sole tenant of the building but the business itself has separate business

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entities multiple LLCs for the separate business units and therefore in his opinion, operates more like a multi-tenant building. Commissioner Zuzek added that she believes the proposal is a reasonable request and the signs proposed are tasteful.

- Commissioner Zimmer asked about the lighting and design of the signs. Mr. Benusa indicated the signs are all of a similar design, will be backlit at night, and in scale with the building.
- Commission Kaluza noted that the City routinely updates the Zoning ordinance. He expressed support for staff's recommendation for denial due to the requirement to demonstrate a practical difficulty. It may be possible to review this situation in a future amendment. He added that he is excited about Midwest ENT coming to Lakeville.
- Mr. Benusa indicated that their three other metro locations all have the same signage, and that at least one location was granted a variance for signs.
- Commission Swenson clarified the building would be permitted multiple signs if there were multiple tenants. Ms. Jenson confirmed that to be correct but noted the businesses require an exclusive exterior entrance.
- Mr. O'Keefe asked if all the signs were in one box meeting the 150 square foot maximum size that would meet the ordinance requirement. Ms. Jenson indicated that is correct. ft that would work?
- Commissioner Zimmer asked about the spa entrance. Mr. Benusa stated that the spa is a separate entrance and that customers would not see a connection to the rest of the clinic, but the staff area extends across the back of the building to provide access to all areas. Inside the main entrance are multiple doors to different specialties.
- Commissioner Majorowicz acknowledged that she found the additional signage helpful when visiting the Eagan location.
- Commissioner Zuzek clarified whether the spa could have a separate sign. Ms. Jenson confirmed they could not due to the shared staff area at the rear of the building.
- Commissioner Einck stated that while he was sympathetic to the request, he would prefer to address the situation with an ordinance amendment.
- Commissioner Kaluza added that the Planning Commission and staff have to consider how a variance such as this, if approved, could impact future requests from other businesses. He agreed that a variance is not the appropriate method to address this issue.
- Commission Swenson echoed that sentiment and added that the Planning Commission has to follow the variance criteria and he would prefer the applicant look at options to meet the requirements by amending the sign design or consider an ordinance amendment.

Motion was made by Kaluza, seconded by Swenson to recommend to City Council denial of the variance to exceed the number of wall signs permitted on one elevation in the Freeway Corridor District for Midwest ENT and adopt the Findings of Fact dated January 23, 2025, as amended.

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Ayes: Kaluza, Majorowicz, Zimmer, Einck, Swenson, Zuzek, Tinsley

Nays: 0

There being no further business, the meeting was adjourned at 6:58 p.m.

Respectfully submitted,

Tina Goodroad, Community Development Director

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City of Lakeville
Community Development Dept

Memorandum

To: Planning Commission

From: Tina Goodroad, AICP, Community Development Director

Date: January 27, 2025

Subject: Packet Material for the February 6, 2025, Planning Commission Meeting

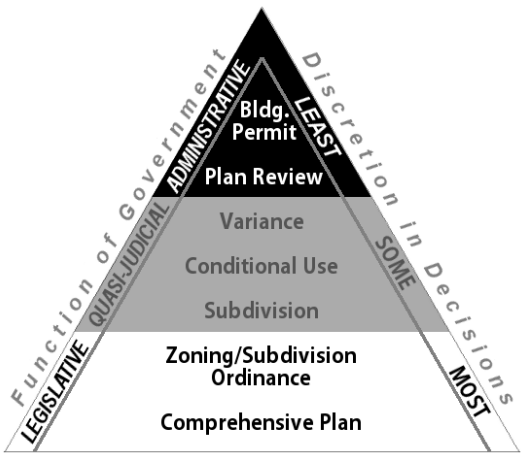
Agenda Item: North Creek Manufactured Home Park Conditional Use Permit

Application Action Deadline: March 1, 2025

INTRODUCTION

Dirt Boys, Inc., on behalf of North Creek of Lakeville, LLC is requesting a Conditional Use Permit to expand the existing North Creek Manufactured Home Community. This new addition will be located immediately south of the existing North Creek Manufactured Home community and north of the existing Country View Manufactured Home community and west of Pilot Knob Road (CSAH 31). The subject property and adjacent manufactured home communities are zoned RSMH, Single Family Manufacture Home Park District. Expansion of a manufactured home park is a conditional use in the RSMH zoning district and shoreland impact plan within the Shoreland Overlay District. The property includes one parcel totaling 26.52 acres.

The Conditional Use Permit request is **quasi-judicial**; the City's role is to determine the facts associated with the request and weigh those facts against the legal standards contained in the City Code and State Statute. In general, if the facts indicate the applicant meets the relevant legal standards of the code and will not compromise the general welfare, the applicant is likely entitled to approval. The City is, however, able to add conditions to the approval to ensure that any impacts to parks, roads, utilities, or other public infrastructure on and around the subject property are adequately addressed.



The following exhibits are attached for your review:
A. Location Map
B. Zoning Map
C. Phase III plan proposed in 1989 and 1997 (2 pages)
D. Existing Conditions Plan
E. Overall Grading and Erosion Control Plan
F. Overall Site Layout Plan
G. Site Layout Plans (4)
H. Site Layout Details
I. Tree Preservation Plan
J. Tree Inventory
K. Landscaping Plan
L. Traffic Study dated January 20, 2025
M. October 4, 2023 Neighborhood Meeting Notes

PLANNING ANALYSIS

Existing Conditions. The subject property is owned by North Creek of Lakeville LLC who also owns the existing North Creek Manufactured Home Park. The proposal includes the development of the community with private streets, amenities and a total of 130 home sites for single wide manufactured homes.

The first phase of North Creek had 105 homesites and was approved and constructed in 1984, while the second phase of 60 homesites was approved in late 1986. Phase three plans for 141 home sites were submitted in 1989 and again in 1997, though it's unclear why development did not move forward at those times. The site layout that was proposed at those times is attached as Exhibit C. The area of the North Creek and Country View manufactured home parks has been zoned for manufactured housing since at least 1974.

A neighborhood meeting was held October 4, 2023 when the original application for expansion was submitted and the meeting notes are attached as Exhibit K. Since that meeting, the application has completed additional studies, including a traffic study, and final stormwater plans were prepared that resulted in a reduction of the number of home sites proposed, from 153 to 130.

Adjacent Land Uses. Adjacent land uses and zoning are as follows:

North – North Creek (P/OS), North Creek MHP community (RSMH)
East – North Creek (P/OS), Country View MHP community (RSMH)
South – Country View MHP community (RSMH)
West – Single Family homes (RS-3)

Lot Setbacks. Section 11-55-15.B.8 establishes individual manufactured home lot setbacks based on when the park was created. For North Creek MHP, all manufactured homes must be setback a minimum of 20 feet from the front lot line and 10 feet from a side or rear lot line. The proposed units shown on the site plans all meet these setback requirements.

MUSA. The North Creek MHP is located within the current MUSA.

Shoreland Impact Plan. A portion of the development site is located within the shoreland overlay district of North Creek, which extends 300 feet from the centerline of the creek. The creek itself is within an outlot that was deeded to the City in 1994. The shoreland impact plan includes requirements that the plans address erosion control, access to public utilities, stormwater management, and site development best management practices. Community Development and Engineering staff have determined that the requirements of the shoreland overlay district have been met. and all proposed development is located outside of the floodplain. Engineering analysis of the site, with a focus on drainage, erosions control, and turf establishment, meets the requirements for a shore impact plan. The proposed plans have been sent to the DNR for their review but a response has not yet been received.

Site Design. A total of 130 home sites will be created across the site. The north portion of the site abuts the outlot containing North Creek, and all of the proposed development is located outside of the floodplain. An infiltration basin is proposed just south of the creek and a detention pond will be constructed at the south property line, east of Country View Trail. A four-foot-tall chain link fence will be installed between both basins and the new homesites. The applicant has also agreed to provide a six-foot solid fence along the west property line and the south property line, west of Country View Trail.

Proposed lots range in size from 4,770 sq ft to 13,905 square feet, with the majority of the lots having an area in the range of 4,770 to 4,950 square feet. Each home site includes an 18-foot wide, 20-foot-deep off-street parking pad, which provides the required two off-street parking spaces per unit. Twenty-six guest parking spaces are provided in three locations across the community. A required storm shelter is planned at the corner of County View Trail and Upper 175th Street which is well centralized in the community. Recreation and playground areas are provided at the northwest and southwest portions of the site.

Landscaping. Nearly each lot will have a front yard overstory tree. Additional plantings are proposed at the recreation areas and guest parking spaces, as well as along both stormwater basin. A solid row of overstory and coniferous trees will be planted along the west property line and continuing around the southwest corner of the site. The proposed plantings sizes on the plan meet ordinance requirements.

Tree Preservation. The tree preservation plan indicates that there are 733 trees existing on site, 82 of which are proposed to be saved, primarily located near North Creek. shall be submitted prior to issuance of a grading permit. The majority of the trees on site are Cottonwood, Siberian

or American Elm, and Willow. Six Green Ash trees are infected with Emerald Ash Borer, and therefore will be removed regardless of their location on the site. Trees and tree areas proposed to be saved must have appropriate protective fencing prior to any grading work beginning on site.

Sanitary Sewer and Water Services. All lots will be served with city sewer, water, and storm sewer services. See the January 27, 2025 Engineering report by Jon Nelson, Assistant City Engineer, for more information.

Conditional Use Permit Analysis

A conditional use permit application has been submitted to add units to a manufactured home park in the RSMH District. Section 11-4-7 lists the following performance standards for conditional use permits:

A. The use and the site in question shall be served by a street of sufficient capacity to accommodate the type and volume of traffic which would be generated, and adequate right of way shall be provided.

Private streets will serve this new portion of North Creek through a street extension of Fairgreen Avenue south from the existing North Creek community. All trips will be through the existing North Creek community to Pilot Knob Road (CSAH 31) via 173rd Street. This is the only possible access as Country View MHP has not agreed to a street connection on the south side of the development. Because the streets are all private, the City cannot require another property owner to provide access to an adjacent property owner. Country View MHP has agreed to allow a street to connect to the existing stub of Country View Trail and the installation of a gate, which will allow access in the event of an emergency.

B. The site design for access and parking shall minimize internal as well as external traffic conflicts and shall be in compliance with chapter 19 of the Zoning Ordinance.

Access to the site will be from Fairgreen Avenue extending from the existing North Creek MHP. Three additional private streets will serve the 130 home sites.

C. If applicable, a pedestrian circulation system shall be clearly defined and appropriate provisions made to protect such areas from encroachment by parked or moving vehicles.

Not applicable.

D. Adequate off-street parking and off-street loading shall be provided in compliance with chapters 19 and 20 of the Zoning Ordinance.

Two paved, off-street parking spaces are being provided for each of the new home sites. This complies with Section 11-19-13, which requires two off-street spaces per single family home.

E. Loading areas and drive-up facilities shall be positioned so as to minimize internal site access problems and maneuvering conflicts, to avoid visual or noise impacts on any "adjacent" residential use or district, and provided in compliance with chapter 20 of this title.

Not applicable.

F. Whenever a nonresidential use "is adjacent to" a residential use or district, a buffer area with screening and landscaping shall be provided in compliance with chapter 21 of this title.

While this new phase of the North Creek MHP is a residential use, it abuts existing single family homes to the west and the Country View MHP to the south. Development plans include the installation of a six-foot tall solid fence is along with the south and west property lines, west of Country View Trail.

G. General site screening and landscaping shall be provided in compliance with chapter 21 of this title.

A variety of overstory and coniferous trees are provided at the perimeter of the community with additional screening provided along the west property line where additional lot depth is provided. The majority of the proposed lots will also contain a minimum of one tree.

H. 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 and shall be in compliance with section 11-16-17 of the Zoning Ordinance.

The plans indicate that seven streetlights will be installed at locations around the development, primarily at intersections and guest parking areas. The proposed streetlights are 16 feet tall with a six-foot mast arm.

I. Potential exterior noise generated by the use shall be identified and mitigation measures as may be necessary shall be imposed to ensure compliance with section 11-16-25 of the Zoning Ordinance.

Not applicable.

J. The site drainage system shall be subject to the review and approval of the city engineer.

The Engineering Division has reviewed and determined that the proposed site development plans are acceptable, provided compliance with the January 27, 2025 Engineering report drafted by Jon Nelson, Assistant City Engineer.

K. The architectural appearance and functional design of the building and site shall not be so dissimilar to the existing or potential buildings and area so as to cause a blighting influence. All sides of the principal and accessory structures are to have essentially the same or coordinated, harmonious exterior finish materials and treatment.

Not applicable.

L. Provisions shall be made for daily litter control, an interior location for recycling, and trash handling and storage or an outdoor, enclosed receptacle area shall be provided in compliance with section 11-18-11 of the Zoning Ordinance.

Each home site is responsible for their own trash and recycling removal.

M. All signs and informational or visual communication devices shall be in compliance with chapter 23 of the Zoning Ordinance.

No additional signage is proposed to be added with these units.

N. The use and site shall be in compliance with any federal, state or county law or regulation that is applicable and any related permits shall be obtained and documented to the city.

Not applicable.

O. Any applicable business licenses mandated by this code are approved and obtained.

Not applicable.

P. The hours of operation may be restricted when there is judged to be an incompatibility with a residential use or district.

Not applicable

Q. The use complies with all applicable performance standards of the zoning district in which it is located and where applicable, any nonconformities shall be eliminated.

Not applicable.

R. All additional conditions pertaining to a specific site are subject to change when the council, upon investigation in relation to a formal request, finds that the general welfare and public betterment can be served as well or better by modifying or expanding the conditions set forth herein.

Not applicable.

RECOMMENDATION

Community Development Department staff recommends approval of the North Creek MHP conditional use permit, subject to the following stipulation:

1. That the site be developed in accordance with the plans approved by the City Council.
2. A fence permit shall be issued prior to installation of any fencing on the site. The privacy fence along the west and south property lines shall be installed prior to issuance of any permits for home placement.
3. Satisfy all conditions stipulated in the Engineering Memo dated January 27, 2025 prior to the issuance of a permit for home placement.
4. Tree protection measures must be in place prior to any grading or construction activity on site.
5. The applicant shall provide confirmation that an easement for the private road exists over the city greenway parcel and/or recording of such easement with the recording of the CUP.
6. The applicant shall provide confirmation of a shared easement for the northern lot private drives to serve the new expansion lot and/or recording of such easement with the recording of the CUP.

7. Preparation of drainage and utility easements along the grading extents of both stormwater basins and along the Special Flood Hazard Area (SFHA), as determined by FEMA, in favor of the City of Lakeville.

Findings of Fact for approval of the conditional use permit request are attached.

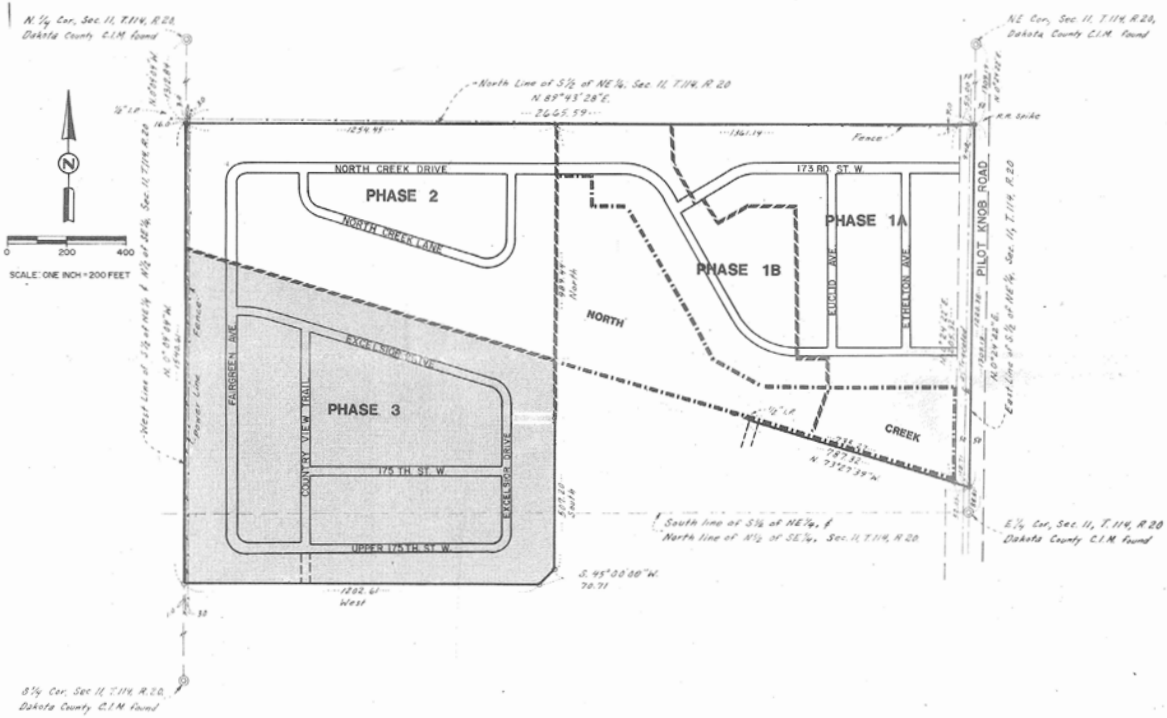
City of Lakeville
Location Map
North Creek
MHP CUP

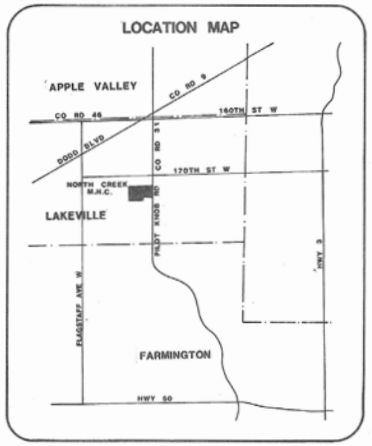
EXHIBIT A

170TH ST
RS-2
P/OS
RS-2
P/OS
Existing North
Creek MHP
PILOT KNOB ROAD (CSAH 31)
RM-2
173RD ST
RSMH
RSMH
P/OS
RSMH
RST-2
RS-3
FAIRFAX AVE
North Creek
MHP proposed
expansion area
RS-2
RSMH
Country
View MHP
RST-2
178TH ST
179TH ST
RST-2
RS-4
N
City of Lakeville
Zoning Map
North Creek
MHP CUP
EXHIBIT B

NORTH CREEK MOBILE HOME COMMUNITY

PHASE III





DRAWING LIST

1	TITLE SHEET
2	DEVELOPMENT PLAN
3	GRADING PLAN
4	COMPUTATION SHEET
5	DETAILS
6–10	SANITARY SEWER & WATER MAIN
11–12	STORM SEWER
13–16	STREET CONSTRUCTION

EXHIBIT C

REVISIONS:

I hereby certify that this plan or specification was prepared by me or under my direct supervision and that I am a duly registered professional engineer in the state of Minnesota.

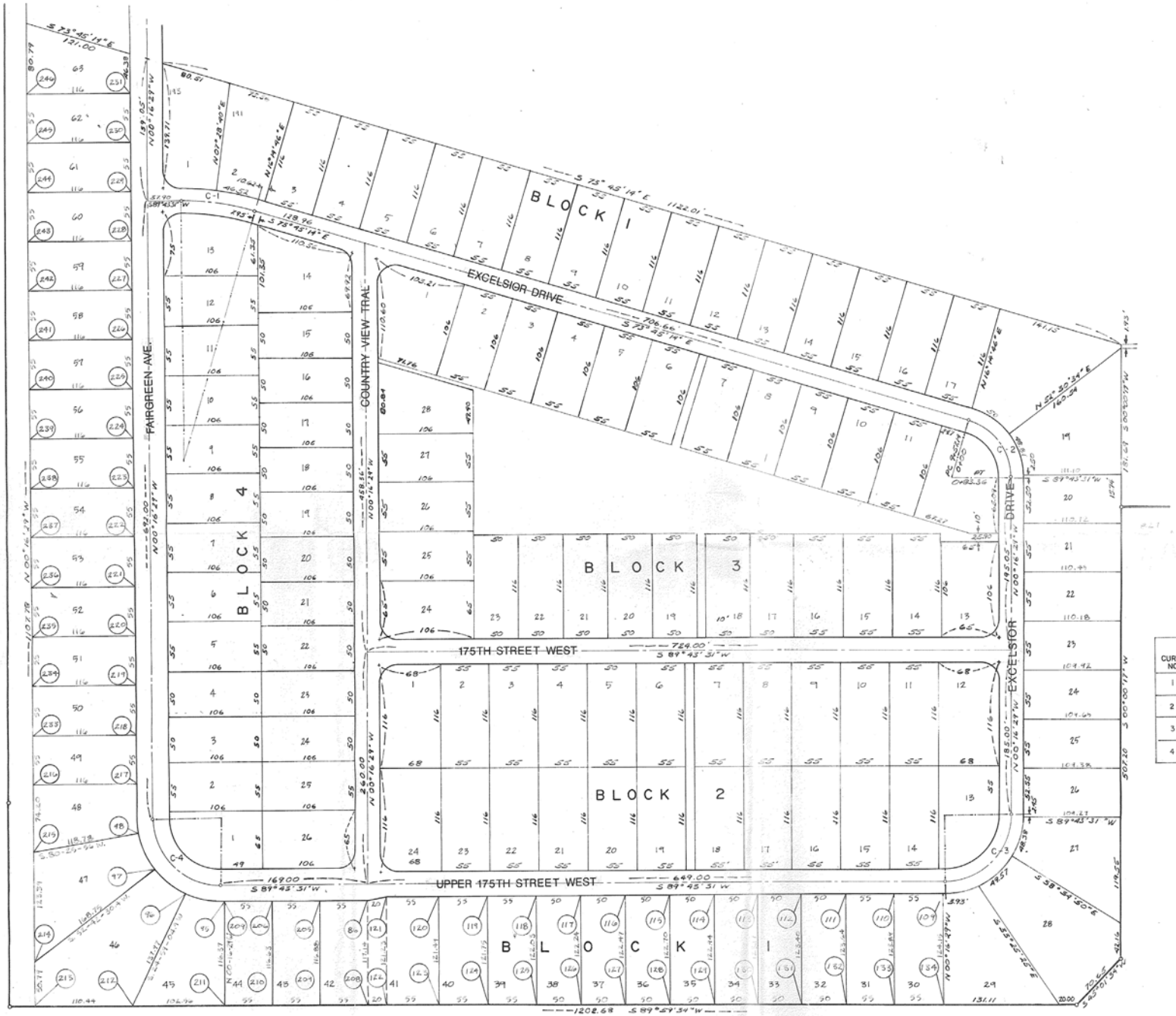
Date_____ Reg. No._____

MELCHERT / BLOCH ASSOCIATES

MOBILE HOME COMMUNITY NORTH CREEK LAKEVILLE, MINNESOTA

TITLE SHEET -PHASE 3-

1



CURVE NO.	CURVE DATA				
	Δ	R	T	L	CH
1	10°31'15"	290.00'	42.10'	83.62'	83.33'
2	73°28'45"	65.00'	48.52'	83.36'	77.76'
3	90°00'00"	75.00'	75.00'	117.81'	106.07'
4	90°00'00"	75.00'	75.00'	117.81'	106.07'

DESIGN
DRAWN
DATE

I hereby certify that this plan or specification was prepared by me or under my direct supervision and that I am a duly registered professional engineer in the state of Minnesota.
Date _____ Reg. No. _____

REVISIONS

OWNER:
NORTH CREEK COMPANY

MELCHERT / BLOCH ASSOCIATES INC.
LANDSCAPE ARCHITECTURE - ENGINEERING - SURVEYING
367 east kellogg blvd. st paul, minnesota 55101 612/291-9564

NORTH CREEK
MOBILE HOME COMMUNITY
COMPUTATION SHEET
-PHASE 3-

4

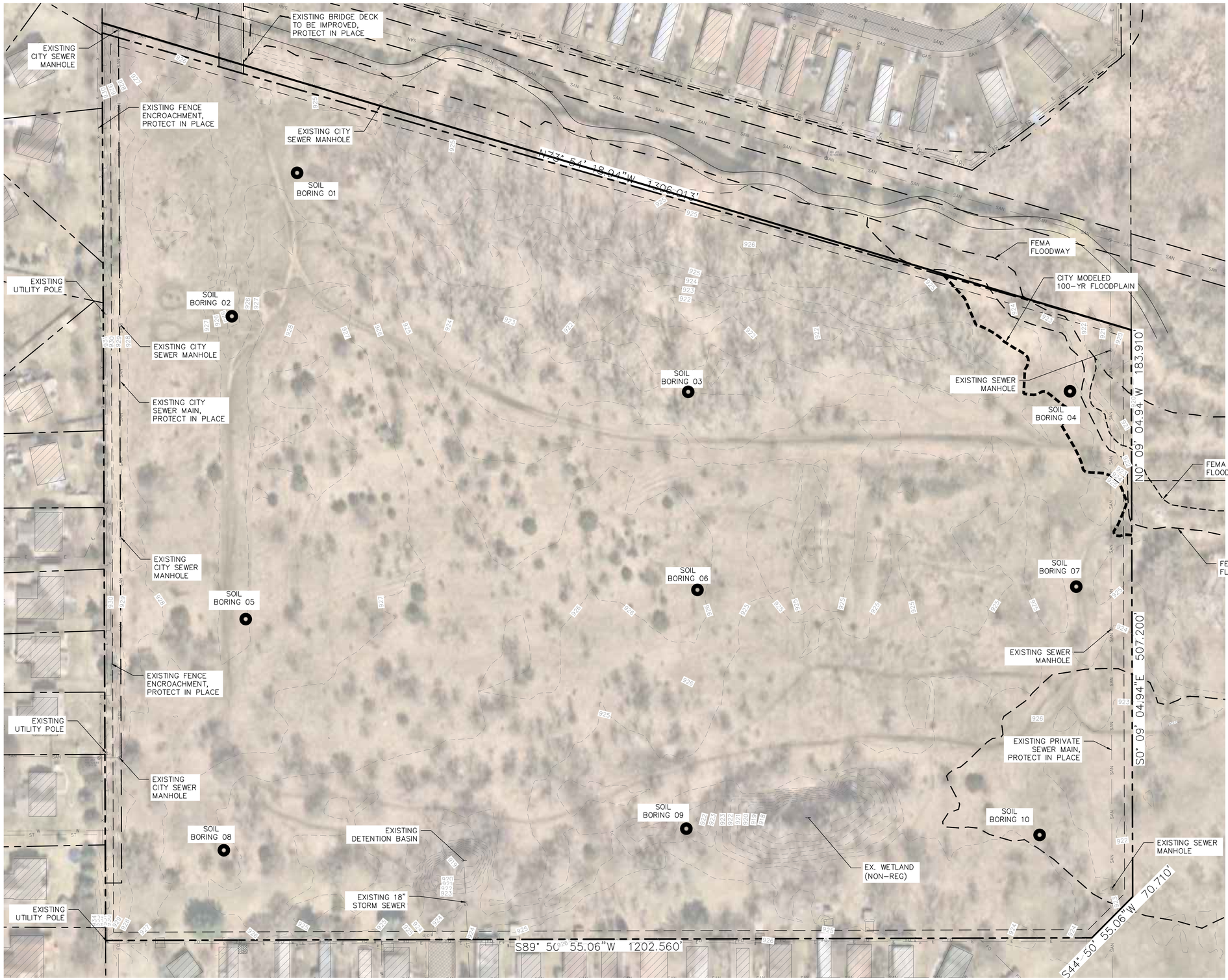


EXHIBIT D

Know what's **below.** **Call** before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

CLEARWELL
P:319-654-4911 CLEARWELLENG.COM
2135 BLAKE BLVD SE
CEDAR RAPIDS, IA 52403

SECTION #11
TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
EXISTING CONDITIONS PLAN

DATE
January 29, 2025

SCALE
0' 30' 60'
1" = 60 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

SHEET NO.
C02.0

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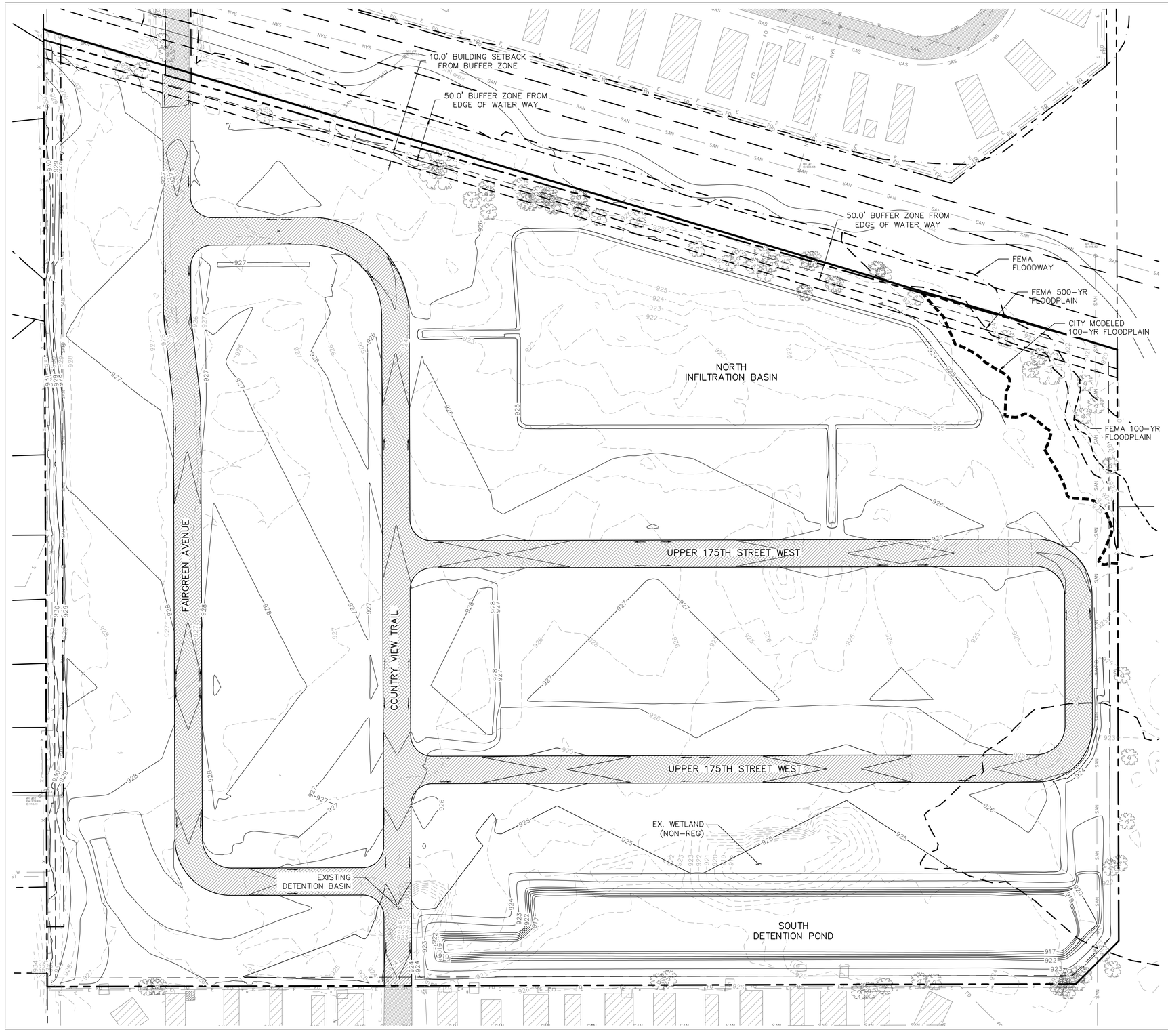

SWPPP NARRATIVE

THE NORTH CREEK ESTATES MANUFACTURED HOME COMMUNITY, LOCATED AT 17332 NORTH CREEK DRIVE IN LAKEVILLE, MN PROPOSES TO EXPAND THE COMMUNITY TO PROPERTY LOCATED ON THE SOUTH SIDE OF NORTH CREEK. THIS EXPANSION WILL ADD 130 NEW HOMES TO THE COMMUNITY. THE PROPOSED SITE IS OWNED BY NORTH CREEK ESTATES AND IS CURRENTLY UNDEVELOPED. THE PROPOSED EXPANSION WILL BE SERVED BY CITY OF LAKEVILLE SANITARY SEWER AND CITY OF LAKEVILLE WATER. BOTH UTILITIES WERE PREVIOUSLY EXTENDED TO THE BOUNDARIES OF THE SITE AND NO OFF-SITE WORK IS REQUIRED. THE PROJECT WILL INCLUDE STRIPPING OF TOPSOIL, EXCAVATION OF STORM WATER TREATMENT AREAS AND MASS GRADING OF THE SITE, INSTALLATION OF UNDERGROUND UTILITIES, PAVING OF INTERNAL ROADWAYS, FINAL GRADING AND ESTABLISHMENT OF PERMANENT VEGETATION.

TOTAL AREA: 26.5 ACRES
CONSTRUCTION AREA: 24.8 ACRES

AN EROSION CONTROL INSPECTION WILL BE COMPLETED EVERY 7 DAYS AND WITHIN 24 HOURS OF A 0.5 INCH OR GREATER RAIN EVENT. INSPECTIONS SHALL BE RECORDED WITHIN 24 HOURS OF BEING COMPLETED.

SEDIMENT TRACK OUT INTO PUBLIC STREETS AND INTERNAL PRIVATE STREETS SHALL BE REMOVED WITHIN 24 HOURS.

STABILIZATION WILL BE PLACED IMMEDIATELY IF CONSTRUCTION ACTIVITY CEASES FOR 14 DAYS.

STORM SEWER PIPE OUTLETS SHALL HAVE ENERGY DISSIPATION ADDED WITHIN 24 HOURS OF CONNECTION. DITCHES WITHIN 200 FEET OF A DISCHARGE POINT SHALL BE STABILIZED WITHIN 24 HOURS OF CONNECTION.

REDUNDANT PERIMETER CONTROLS ARE REQUIRED ALONG THE NORTHERN BOUNDARY OF THIS SITE. REDUNDANT CONTROLS SHALL BE SET AT LEAST 5 FEET APART.

STORM DRAIN INLET PROTECTION SHALL REMAIN IN PLACE UNTIL FINAL STABILIZATION IS ESTABLISHED.

ALL SITE CONTRACTORS AND SUBCONTRACTORS ARE RESPONSIBLE FOR FOLLOWING SWPPP REQUIREMENTS.

SHOULD ADDITIONAL EROSION CONTROL MEASURES BE NEEDED, THE CONTRACTOR SHALL CONTACT AND PROVIDE PHOTO DOCUMENTATION TO THE ENGINEER OF RECORD FOR DEVELOPMENT OF A SWPPP AMENDMENT.

CONTRACTOR EROSION CONTROL TRAINING DOCUMENTATION SHALL BE PROVIDED TO THE ENGINEER OF RECORD TO BE INCLUDED IN THE SWPPP DOCUMENT.

SPILLS OR SEDIMENT DISCHARGE FROM THE SITE SHALL BE IMMEDIATELY CLEANED UP AND ADDITIONAL EROSION CONTROL MEASURES SHALL BE INSTALLED TO CORRECT THE FAILURE. THE CONTRACTOR SHALL NOTIFY THE ENGINEER TO RECORD THE DISCHARGE IN THE SWPPP DOCUMENT.

THE CONTRACTOR SHALL LIMIT EQUIPMENT TO PROPOSED ROADWAY AREAS AFTER MASS GRADING TO AVOID SOIL COMPACTION. TOPSOIL SHALL BE RE-SPREAD AS PART OF FINAL GRADING.

STOCKPILES SHALL BE LOCATED OUTSIDE OF NATURAL BUFFER AREAS. SILT FENCE OR OTHER EFFECTIVE PERIMETER CONTROLS SHALL BE INSTALLED AROUND THE BASE OF STOCKPILES.

SLOPES OF 3:1 OR STEEPER MUST BE STABILIZED USING EROSION CONTROL BLANKET.

INSTALL TEMPORARY SEDIMENT BASINS AS REQUIRED AND SHOWN ON THE EROSION CONTROL PLAN.

HAZARDOUS WASTES SHALL BE STORED IN SEALED CONTAINERS UNDER COVER, WITH SECONDARY CONTAINMENT WHERE APPLICABLE.

SOLID WASTES SHALL BE COLLECTED REGULARLY, STORED IN AN AREA WITH PERIMETER PROTECTION AND PROPERLY DISPOSED OF.

SHOULD DEWATERING BE REQUIRED:
- DISPERSE DISCHARGE USING APPROPRIATE ENERGY DISSIPATION MEASURES
- DEWATERING CAN NOT CAUSE NUISANCE CONDITIONS OR EROSION
- USE APPROPRIATE BMP'S TO PREVENT SEDIMENT LADEN WATER FROM LEAVING THE PROJECT SITE.

ANY SEDIMENT DEPOSITED INTO SURFACE WATERS SHALL BE REMOVED WITHIN 7 CALENDAR DAYS OF DISCOVERY.

WHEN SILT FENCES ARE ½ FULL, SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 24 HOURS.

WHEN SEDIMENTATION BASINS ½ FULL, SEDIMENT DEPOSITS SHALL BE REMOVED WITHIN 72 HOURS.

AN INFILTRATION BASIN IS PROPOSED IN THE NORTHERN PART OF THE SITE. THIS BASIN SHALL NOT BE EXCAVATED WITHIN 3 FEET OF FINAL GRADE UNTIL THE CONTRIBUTION DRAINAGE AREAS HAVE BEEN STABILIZED.

EXHIBIT E

Know what's below. Call before you dig.

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NOTICE:
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SECTION #11
TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
GRADING & EROSION CONTROL PLAN

DATE
January 29, 2025

SCALE
0' 30' 60'
1" = 60 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

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REC SPACE

6' SOLID FENCE ALONG WEST BOUNDARY

GUEST PARKING

OPEN SPACE

4' CHAINLINK FENCE ALONG BACK OF ADJACENT LOTS

NORTH INFILTRATION BASIN

GATES PROVIDED FOR VEHICULAR ACCESS

4' CHAINLINK FENCE ALONG BACK OF ADJACENT LOTS

FEMA FLOODWAY

FEMA 500-YR FLOODPLAIN

CITY MODELED 100-YR FLOODPLAIN

FEMA 100-YR FLOODPLAIN

INSTALL 16' STREET LIGHT PER SPECS ON SHEET C09.1 (TYP)

STORM SHELTER

UPPER 175TH STREET WEST

FAIRGREEN AVENUE

COUNTRY VIEW TRAIL

FEMA 500-YR FLOODPLAIN

GUEST PARKING

UPPER 175TH STREET WEST

PLAYGROUND AREA W/ GUEST PARKING

FEMA 500-YR FLOODPLAIN

4' CHAINLINK FENCE AROUND PERIMETER OF POND

SOUTH DETENTION POND

GATES PROVIDED FOR VEHICULAR ACCESS

6' SOLID FENCE ALONG SOUTH BOUNDARY

TRANSITION TO 4' CHAINLING FENCE 20' FROM EDGE OF ROAD

EMERGENCY ACCESS GATE

EXHIBIT F

N

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SECTION #11
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CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT PLAN - OVERALL

DATE
January 29, 2025

SCALE
0' 30' 60'
1" = 60 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

SHEET NO.
C04.0

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KEY MAP

EXHIBIT G

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CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT PLAN 1

DATE
January 29, 2025

SCALE
0' 15' 30'
1" = 30 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

SHEET NO.
C04.1

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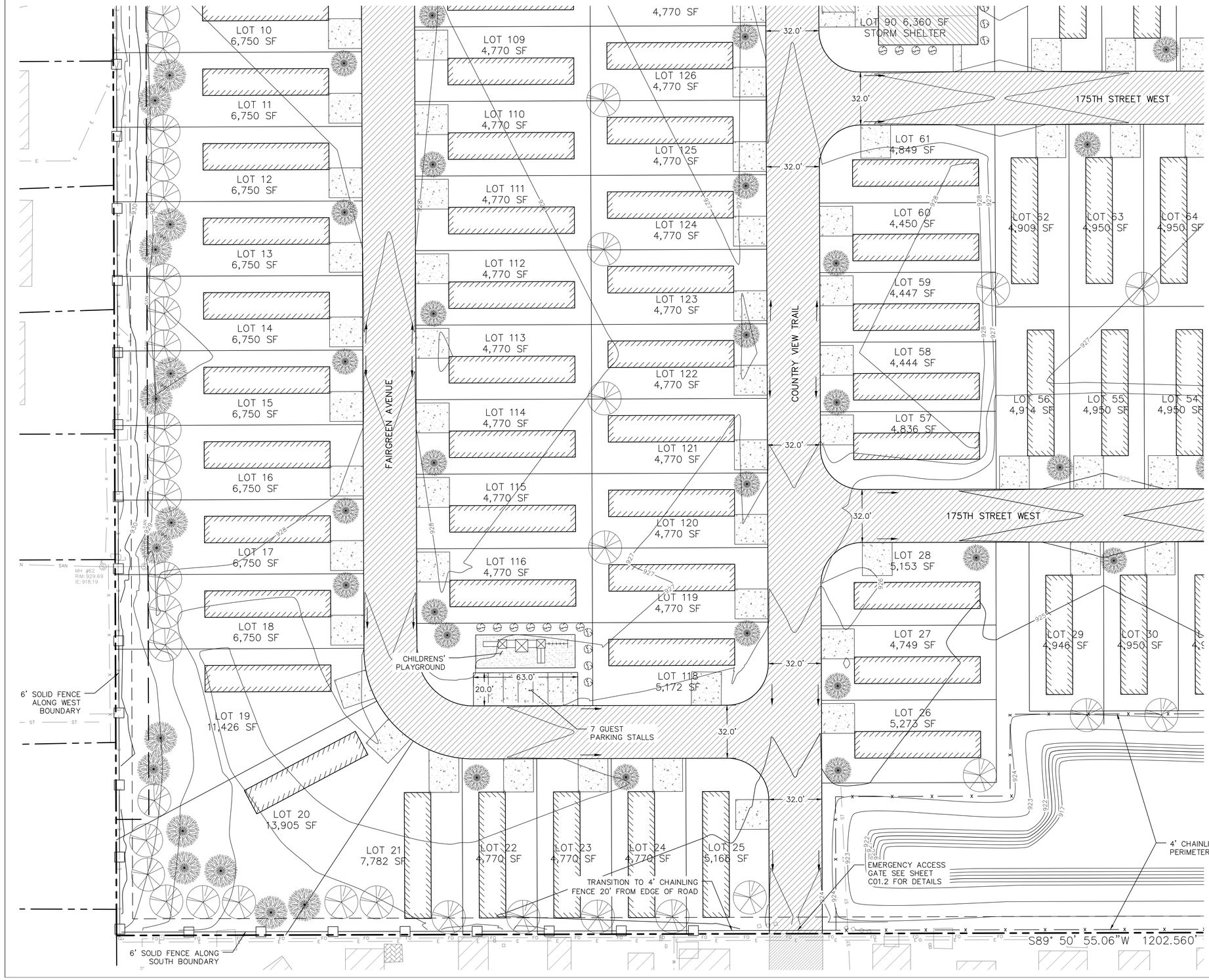

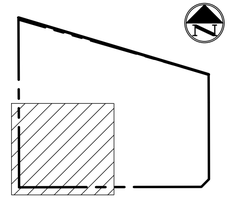

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CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT PLAN 2

DATE
January 29, 2025

SCALE
0' 15' 30'
1" = 30 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

SHEET NO. C04.2

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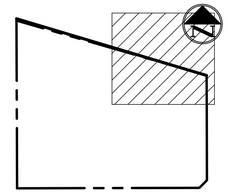

KEY MAP

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SECTION #11
TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT PLAN 3

DATE
January 29, 2025

SCALE
0' 15' 30'
1" = 30 FEET

REVISIONS

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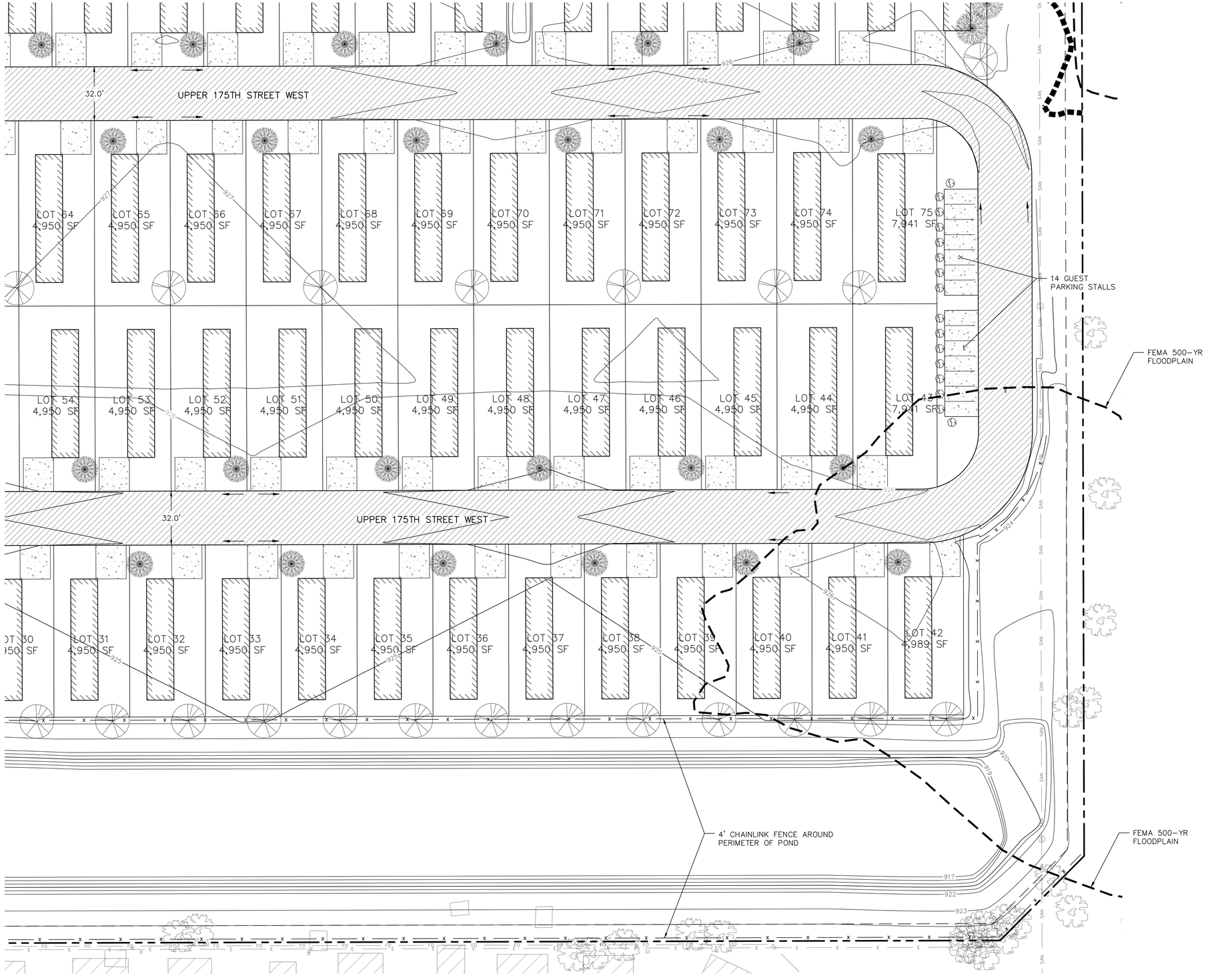

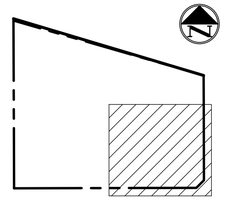

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CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT PLAN 4

DATE
January 29, 2025

SCALE
0' 15' 30'
1" = 30 FEET

REVISIONS

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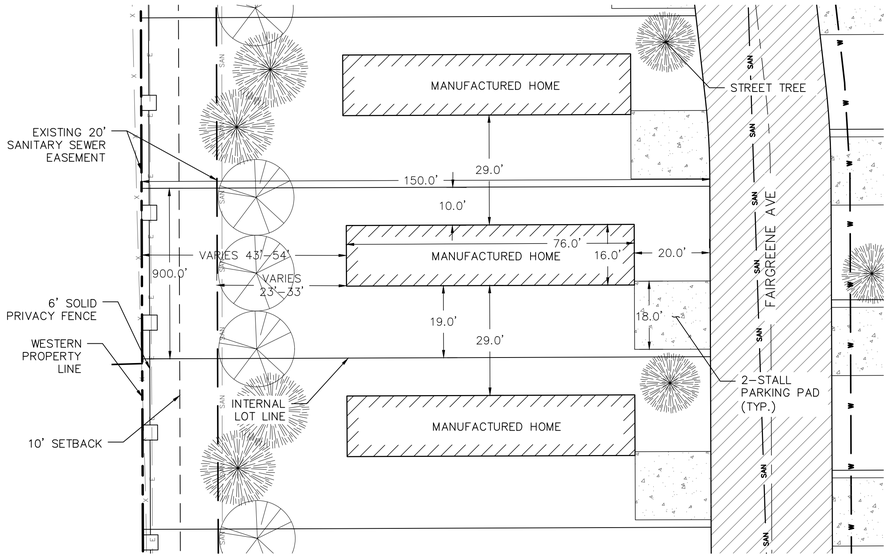
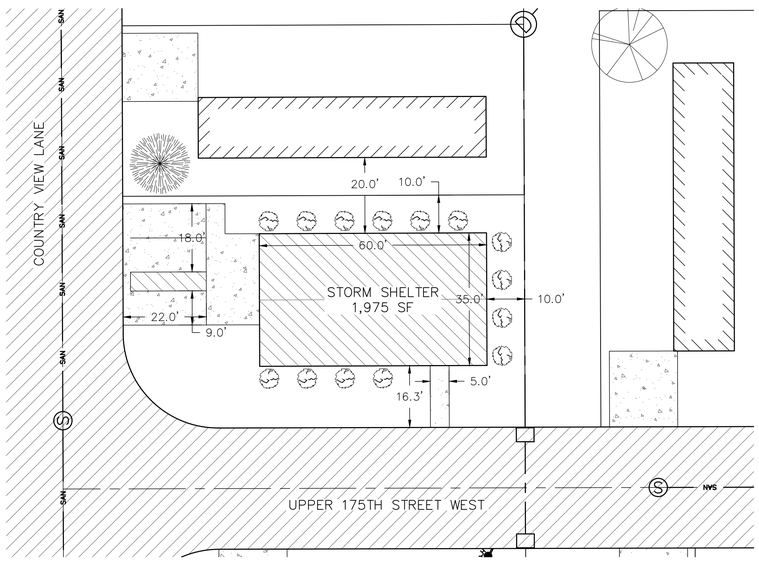


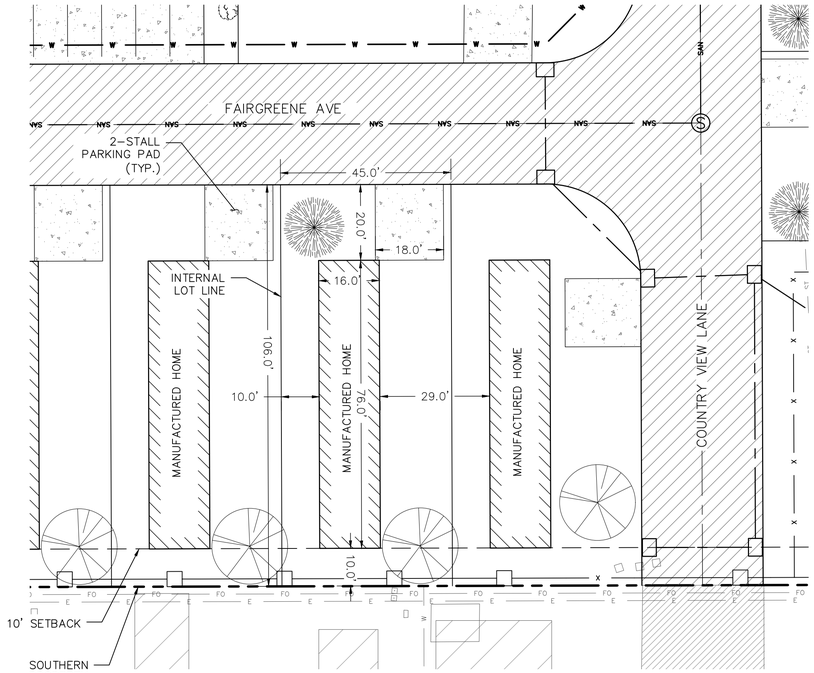
WEST PERIMETER LOT LAYOUT
SCALE: 1"=20'



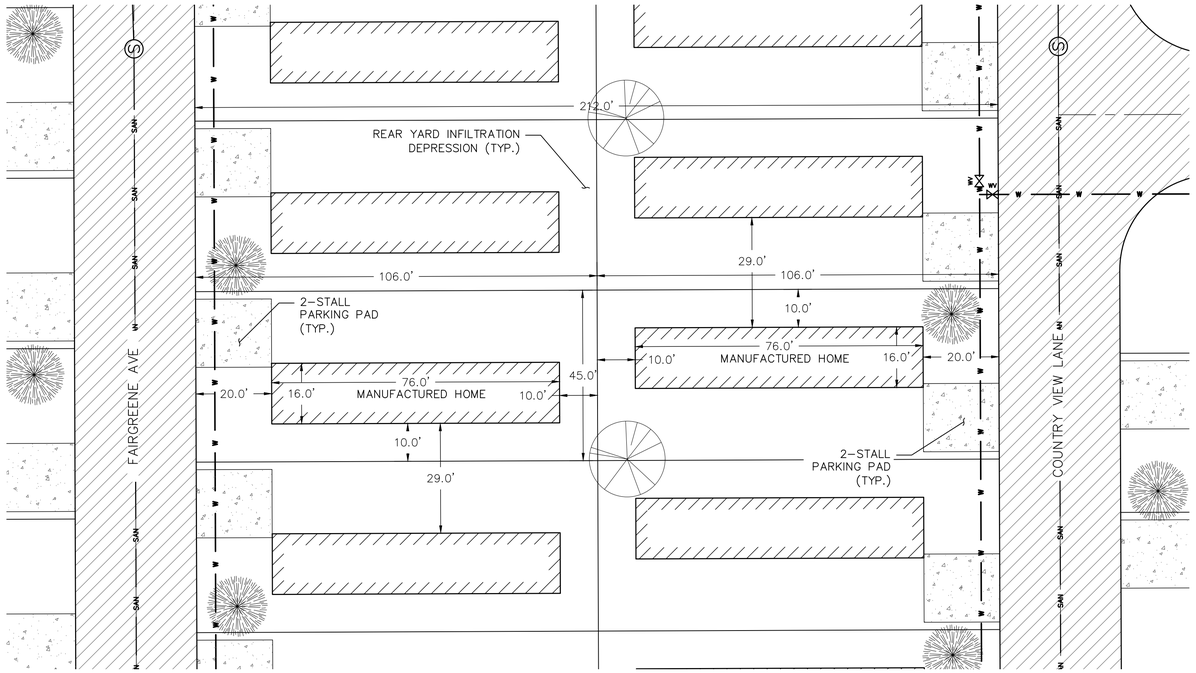
STORM SHELTER LOT LAYOUT
SCALE: 1"=20'

SITE NOTES

1. ALL TURF AND VEGETATION SHALL BE STRIPPED FROM THE SITE AND THE RESULTING GRADE SHOULD THEN BE PROOF ROLLED WITH A VIBRATORY STEEL WHEEL ROLLER TO DEVELOP ANY WEAK AREA. WEAK AREAS ENCOUNTERED SHOULD BE REMOVED, REPLACED AND COMPACTED WITH SIMILAR DRIER SOIL.
2. ENGINEERING FILL MAY BE REQUIRED IN SOME AREAS TO RAISE THE GRADE TO THE DESIGN ELEVATION FOR SOME OF THE PROPOSED BUILDING SITES AND TO ALLOW FOR PLACEMENT OF FOUNDATIONS IN THE SAND FILL. THIS FILL SHALL CONSIST OF GRANULAR MATERIAL. THIS FILL SHALL BE PLACED IN 6" TO 8" LIFTS AND COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. THICKER LIFTS MAY BE PLACED PROVIDED THE CONTRACTOR USES SPECIAL EQUIPMENT AND DEMONSTRATES THE ABILITY TO ACHIEVE THE REQUIRED COMPACTION.
3. THE SPACING, LOCATION AND NUMBER OF PIERS REQUIRED WILL BE PER MANUFACTURERS WRITTEN INSTALLATION INSTRUCTIONS FOR THE HOME BEING INSTALLED. IF THE MANUFACTURERS WRITTEN INSTRUCTIONS DO NOT EXIST, THEN PIERS WILL BE INSTALLED IN ACCORDANCE WITH THE DIMENSIONS OF THIS APPROVED PLAN.
4. THE AREA UNDER ALL UNITS SHALL BE FINISH GRADED IN SUCH A MANNER RESULTING IN POSITIVE DRAINAGE FROM THE CENTER OF THE UNIT WITH NO RUTS, CHANNELS OR DEPRESSIONS.
5. PER TEN STATE STANDARDS, 10 FEET SEPARATION SHALL BE MAINTAINED BETWEEN WATERMAINS AND SANITARY SEWERS.
6. NO GAS MAINS OR GAS SERVICE LEADS SHALL BE INSTALLED UNDER HOMES.
7. ALL DRIVES, WALKS, PATIOS, AND HOMES SHALL BE POSITIONED AS SHOWN ON THIS SHEET.
8. WALK BETWEEN PATIOS AND DRIVES SHALL BE CONSTRUCTED IN ACCORDANCE WITH BARRIER FREE DESIGN STANDARDS.
9. ALL CONCRETE SHALL HAVE 3000 PSI COMPRESSIVE STRENGTH AFTER CURING FOR 28 DAYS AND SHALL OBTAIN A USABLE STRENGTH OF 2250 PSI AFTER 14 DAYS.
10. ALL CONCRETE WALKS, PATIOS AND DRIVES SHALL BE PLACED ON UNDISTURBED SOIL OR UPON FILL THAT HAS BEEN COMPACTED TO 95% MODIFIED PROCTOR.
11. LOT DRIVEWAYS SHALL BE CONCRETE AND SHALL BE 4" (REINFORCED) THICK.



SOUTH PERIMETER LOT LAYOUT
SCALE: 1"=20'



INTERNAL LOT LAYOUT
SCALE: 1"=20'

EXHIBIT H

811
Know what's below.
Call before you dig.
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TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
SITE LAYOUT DETAILS

DATE
January 29, 2025

SCALE
0' 10' 20'
1" = 20 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003

SHEET NO. C04.5

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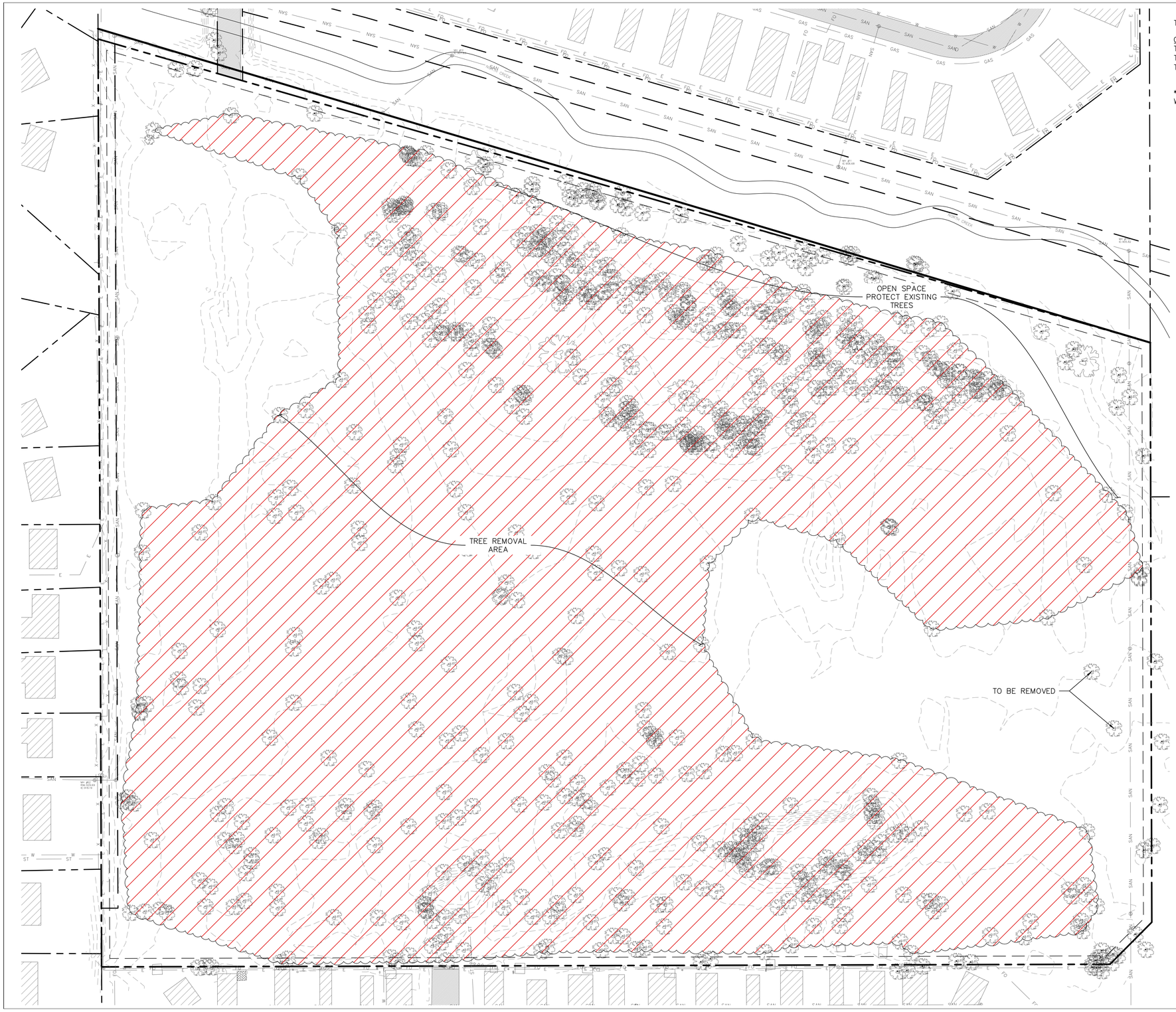

TREE NOTES:

CALCULATIONS	QTY	DBH
TOTAL EXISTING TREES	733	12,227"
TREES TO BE REMOVED	651	10,411"
TREES TO BE PRESERVED	82	1,817"

*GREEN ASH TREES SHOWING SIGNS OF EMERALD ASH BORER PRESENCE WILL BE REMOVED EVEN IF WITHIN PROTECTION AREA

TREE REMOVAL AREA

EXHIBIT I

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CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
TREE PRESERVATION PLAN

DATE
January 29, 2025

SCALE
0' 30' 60'
1" = 60 FEET

REVISIONS

DRAWN BY:
APPROVED BY: JWM
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SHEET NO.
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Tag No.	DBH	Common Name	Scientific Name	Status	Notes
6194	16	Cottonwood	Populus deltoides	Remove	
6195	14,6	Cottonwood	Populus deltoides	Remove	
6196	6	Siberian Elm	Ulmus pumila	Remove	
6197	6	Cottonwood	Populus deltoides	Remove	
6198	11,10	Cottonwood	Populus deltoides	Remove	
6199	15	Cottonwood	Populus deltoides	Remove	
6200	14	Cottonwood	Populus deltoides	Remove	
6201	13	Cottonwood	Populus deltoides	Remove	
6202	10,8,7	Cottonwood	Populus deltoides	Remove	
6203	9	Cottonwood	Populus deltoides	Remove	
6204	10	Willow	Salix sp.	Remove	
6205	12	Cottonwood	Populus deltoides	Remove	
6206	10	Cottonwood	Populus deltoides	Remove	
6207	6	Cottonwood	Populus deltoides	Remove	
6208	10	Box Elder	Acer negundo	Remove	
6209	14,6	Cottonwood	Populus deltoides	Remove	
6210	15	Cottonwood	Populus deltoides	Remove	
6211	16	Cottonwood	Populus deltoides	Remove	
6212	9	Cottonwood	Populus deltoides	Remove	
6213	17,7	Cottonwood	Populus deltoides	Remove	
6214	8	Cottonwood	Populus deltoides	Remove	
6215	18	Cottonwood	Populus deltoides	Remove	
6216	6	Box Elder	Acer negundo	Remove	
6217	15,15,8	Cottonwood	Populus deltoides	Remove	
6218	17,15	Cottonwood	Populus deltoides	Remove	
6219	17,11	Cottonwood	Populus deltoides	Remove	
6220	18	Cottonwood	Populus deltoides	Remove	
6221	12,11	Cottonwood	Populus deltoides	Remove	
6222	12	Cottonwood	Populus deltoides	Remove	
6223	17,16,16	Cottonwood	Populus deltoides	Remove	
6224	9	Cottonwood	Populus deltoides	Remove	
6225	7	Siberian Elm	Ulmus pumila	Remove	
6226	8	Siberian Elm	Ulmus pumila	Remove	
6227	10,8	Siberian Elm	Ulmus pumila	Remove	
6228	8	Siberian Elm	Ulmus pumila	Remove	
6229	6	Box Elder	Acer negundo	Remove	
6230	6	Box Elder	Acer negundo	Remove	
6231	6	Box Elder	Acer negundo	Remove	
6232	8	Siberian Elm	Ulmus pumila	Remove	
6233	8	Siberian Elm	Ulmus pumila	Remove	
6234	8	Siberian Elm	Ulmus pumila	Remove	
6235	7	Black Cherry	Prunus serotina	Remove	
6236	6	Siberian Elm	Ulmus pumila	Remove	
6237	8	Siberian Elm	Ulmus pumila	Remove	
6238	10	Siberian Elm	Ulmus pumila	Remove	
6239	12	Red Cedar	Juniperus virginiana	Remove	
6240	6	American Elm	Ulmus americana	Remove	
6241	8	Siberian Elm	Ulmus pumila	Remove	
6242	6	Siberian Elm	Ulmus pumila	Remove	
6243	6	Siberian Elm	Ulmus pumila	Remove	
6244	6	Siberian Elm	Ulmus pumila	Remove	
6245	6,6	Black Cherry	Prunus serotina	Remove	
6246	12	Siberian Elm	Ulmus pumila	Remove	in decline
6247	17,13	American Elm	Ulmus americana	Remove	
6248	6	Black Cherry	Prunus serotina	Remove	
6249	14	Siberian Elm	Ulmus pumila	Remove	
6250	7	Black Cherry	Prunus serotina	Remove	
6251	10	Red Cedar	Juniperus virginiana	Remove	
6252	7	Siberian Elm	Ulmus pumila	Remove	
6253	10,8	Siberian Elm	Ulmus pumila	Remove	
6254	13	American Elm	Ulmus americana	Remove	
6255	8	Red Cedar	Juniperus virginiana	Remove	
6256	9,8	Black Cherry	Prunus serotina	Remove	
6257	10	Red Cedar	Juniperus virginiana	Remove	
6258	10,9	American Elm	Ulmus americana	Remove	
6259	13	Siberian Elm	Ulmus pumila	Remove	
6260	9,7	Box Elder	Acer negundo	Remove	
6261	7,6	Cottonwood	Populus deltoides	Remove	
6262	11	Red Cedar	Juniperus virginiana	Remove	
6263	13,10	Siberian Elm	Ulmus pumila	Remove	
6264	13	Siberian Elm	Ulmus pumila	Remove	
6265	15	Siberian Elm	Ulmus pumila	Remove	
6266	18	Siberian Elm	Ulmus pumila	Remove	
6267	15,7	Siberian Elm	Ulmus pumila	Remove	
6268	8,6	Siberian Elm	Ulmus pumila	Remove	
6269	8	Siberian Elm	Ulmus pumila	Remove	
6270	8	Siberian Elm	Ulmus pumila	Remove	
6271	11	Siberian Elm	Ulmus pumila	Remove	
6272	10	Siberian Elm	Ulmus pumila	Remove	
6273	16,6	Siberian Elm	Ulmus pumila	Remove	
6274	6	Siberian Elm	Ulmus pumila	Remove	
6275	16	Siberian Elm	Ulmus pumila	Remove	
6276	23,22	Siberian Elm	Ulmus pumila	Remove	
6277	22,20	Siberian Elm	Ulmus pumila	Remove	
6278	8,6	Red Cedar	Juniperus virginiana	Remove	
6279	9	Siberian Elm	Ulmus pumila	Remove	
6280	16	White Pine	Pinus strobus	Preserve	
6281	12	White Pine	Pinus strobus	Preserve	
6282	16	White Pine	Pinus strobus	Preserve	
6283	16	Siberian Elm	Ulmus pumila	Remove	
6284	8	Siberian Elm	Ulmus pumila	Remove	
6285	20	Silver Maple	Acer saccharinum	Remove	
6286	19	Silver Maple	Acer saccharinum	Remove	
6287	10	Colorado Blue Spruce	Picea pungens	Remove	
6288	9	Colorado Blue Spruce	Picea pungens	Remove	
6289	10	Colorado Blue Spruce	Picea pungens	Remove	
6290	12	Siberian Elm	Ulmus pumila	Remove	
6291	18	Siberian Elm	Ulmus pumila	Remove	
6292	10	Siberian Elm	Ulmus pumila	Remove	
6293	15	Black Cherry	Prunus serotina	Remove	
6293	16	American Elm	Ulmus americana	Remove	
6294	15,10	Siberian Elm	Ulmus pumila	Remove	
6295	11	Siberian Elm	Ulmus pumila	Remove	
6296	10	American Elm	Ulmus americana	Remove	
6297	15,13,8	Siberian Elm	Ulmus pumila	Remove	
6298	12	Siberian Elm	Ulmus pumila	Remove	
6299	10	Cottonwood	Populus deltoides	Remove	
6300	7	Cottonwood	Populus deltoides	Remove	
6301	7	Siberian Elm	Ulmus pumila	Remove	
6302	11	Siberian Elm	Ulmus pumila	Remove	
6303	12	Siberian Elm	Ulmus pumila	Remove	
6304	23	Siberian Elm	Ulmus pumila	Remove	
6305	8	Siberian Elm	Ulmus pumila	Remove	
6306	8	American Elm	Ulmus americana	Remove	
6307	15	Siberian Elm	Ulmus pumila	Remove	
6308	9	Siberian Elm	Ulmus pumila	Remove	
6309	10,9,6	Siberian Elm	Ulmus pumila	Remove	
6310	9	Siberian Elm	Ulmus pumila	Remove	
6311	11	American Elm	Ulmus americana	Remove	
6312	10	Siberian Elm	Ulmus pumila	Remove	
6313	7	American Elm	Ulmus americana	Remove	
6314	9	American Elm	Ulmus americana	Remove	
6315	10	Siberian Elm	Ulmus pumila	Remove	
6316	15	Siberian Elm	Ulmus pumila	Remove	
6317	11	American Elm	Ulmus americana	Remove	
6318	10	Siberian Elm	Ulmus pumila	Remove	
6319	8	Siberian Elm	Ulmus pumila	Remove	
6320	16	Siberian Elm	Ulmus pumila	Remove	
6321	13	Black Cherry	Prunus serotina	Remove	
6322	14	American Elm	Ulmus americana	Remove	
6323	12	Green Ash	Fraxinus pennsylvanica	Remove	Emerald Ash Borer present
6324	8	Siberian Elm	Ulmus pumila	Remove	
6325	7	Siberian Elm	Ulmus pumila	Remove	
6326	7	Siberian Elm	Ulmus pumila	Remove	
6327	9,7	Black Cherry	Prunus serotina	Remove	
6328	7	Cottonwood	Populus deltoides	Remove	
6329	6	Red Cedar	Juniperus virginiana	Remove	
6330	9	Siberian Elm	Ulmus pumila	Remove	
6331	7	Siberian Elm	Ulmus pumila	Remove	in decline
6332	10	Siberian Elm	Ulmus pumila	Remove	
6333	8	Siberian Elm	Ulmus pumila	Remove	
6334	12	Red Cedar	Juniperus virginiana	Remove	
6335	7	Siberian Elm	Ulmus pumila	Remove	
6336	8	Siberian Elm	Ulmus pumila	Remove	
6337	12	Siberian Elm	Ulmus pumila	Remove	
6338	7,7,6,6,6	Box Elder	Acer negundo	Remove	
6339	12,11,10,10	Box Elder	Acer negundo	Remove	
6340	8	Grenn Ash	Fraxinus pennsylvanica	Remove	Emerald Ash Borer present
6341	8,6	Black Walnut	Juglans nigra	Remove	
6342	10	Box Elder	Acer negundo	Remove	
6343	11,7	Siberian Elm	Ulmus pumila	Remove	
6344	12,9	Siberian Elm	Ulmus pumila	Remove	damage along trunk on 12" trunk
6345	16,8	Siberian Elm	Ulmus pumila	Remove	
6346	10	Cottonwood	Populus deltoides	Preserve	
6347	7	Box Elder	Acer negundo	Remove	
6348	12,10,8,6,6	Siberian Elm	Ulmus pumila	Preserve	
6349	11,10,9,8	Grenn Ash	Fraxinus pennsylvanica	Remove-Due to Ash Borer	Emerald Ash Borer present

Tag No.	DBH	Common Name	Scientific Name	Status	Notes
6350	9,9,8,6	Grenn Ash	Fraxinus pennsylvanica	Remove-Due to Ash Borer	Emerald Ash Borer present
6351	14,13	Siberian Elm	Ulmus pumila	Preserve	
6352	13,11	Siberian Elm	Ulmus pumila	Remove	
6353	9	Siberian Elm	Ulmus pumila	Remove	
6354	10	Siberian Elm	Ulmus pumila	Remove	
6355	8	Siberian Elm	Ulmus pumila	Remove	
6356	7	Siberian Elm	Ulmus pumila	Remove	
6357	11,10	Siberian Elm	Ulmus pumila	Remove	
6358	7	Siberian Elm	Ulmus pumila	Remove	
6359	14	Siberian Elm	Ulmus pumila	Remove	
6360	11	Siberian Elm	Ulmus pumila	Remove	
6361	13	Siberian Elm	Ulmus pumila	Preserve	
6362	9,9	Box Elder	Acer negundo	Preserve	
6363	6	Siberian Elm	Ulmus pumila	Preserve	
6364	6	Siberian Elm	Ulmus pumila	Preserve	
6365	9	Siberian Elm	Ulmus pumila	Preserve	
6366	15,9,6	Siberian Elm	Ulmus pumila	Preserve	
6367	9	Siberian Elm	Ulmus pumila	Preserve	
6368	11	Siberian Elm	Ulmus pumila	Preserve	
6369	8	Siberian Elm	Ulmus pumila	Preserve	
6370	10	Siberian Elm	Ulmus pumila	Preserve	
6371	11	Siberian Elm	Ulmus pumila	Preserve	
6372	9	Siberian Elm	Ulmus pumila	Preserve	
6373	6	Grenn Ash	Fraxinus pennsylvanica	Remove-Due to A	Emerald Ash Borer present
6374	9	Siberian Elm	Ulmus pumila	Remove	
6375	7	Siberian Elm	Ulmus pumila	Remove	
6376	9	Siberian Elm	Ulmus pumila	Remove	
6377	17,15	Silver Maple	Acer saccharinum	Preserve	
6378	19,18,16	Silver Maple	Acer saccharinum	Preserve	
6379	25,16	Silver Maple	Acer saccharinum	Remove	
6380	16	Colorado Blue Spruce	Picea pungens	Preserve	
6381	12	Colorado Blue Spruce	Picea pungens	Preserve	
6382	14	Colorado Blue Spruce	Picea pungens	Preserve	
6383	22	Box Elder	Acer negundo	Remove	
6384	10	Siberian Elm	Ulmus pumila	Remove	
6385	6	Box Elder	Acer negundo	Remove	
6386	13,12,9	Silver Maple	Acer saccharinum	Remove	
6387	15	Siberian Elm	Ulmus pumila	Remove	
6388	9,7	Mountain Ash	Sorbus sp.	Remove	
6389	14,12	Siberian Elm	Ulmus pumila	Remove	
6390	8	Red Cedar	Juniperus virginiana	Remove	
6391	10	American Elm	Ulmus americana	Remove	
6392	14,13,10	Siberian Elm	Ulmus pumila	Remove	
6393	26	Siberian Elm	Ulmus pumila	Remove	
6394	13	Siberian Elm	Ulmus pumila	Remove	
6395	14	Siberian Elm	Ulmus pumila	Remove	
6396	7	Siberian Elm	Ulmus pumila	Remove	
6397	6	Siberian Elm	Ulmus pumila	Remove	
6398	8	Siberian Elm	Ulmus pumila	Remove	
6399	13	Siberian Elm	Ulmus pumila	Remove	
6400	10	Siberian Elm	Ulmus pumila	Remove	
6401	14,8	Siberian Elm	Ulmus pumila	Remove	
6402	14	Siberian Elm	Ulmus pumila	Remove	
6403	8	Siberian Elm	Ulmus pumila	Remove	
6404	6	Siberian Elm	Ulmus pumila	Remove	
6405	8,8	Crabapple	Malus sp.	Remove	
6406	6	Siberian Elm	Ulmus pumila	Remove	
6407	7	Siberian Elm	Ulmus pumila	Remove	
6408	6	Siberian Elm	Ulmus pumila	Remove	
6409	9	American Elm	Ulmus americana	Remove	
6410	9,6	Siberian Elm	Ulmus pumila	Remove	
6411	9	Red Cedar	Juniperus virginiana	Remove	
6412	10	Siberian Elm	Ulmus pumila	Remove	
6413	11,8,6	Siberian Elm	Ulmus pumila	Remove	
6414	6	Black Cherry	Prunus serotina	Remove	
6415	6	Siberian Elm	Ulmus pumila	Remove	
6416	6	Siberian Elm	Ulmus pumila	Remove	
6417	8	Red Cedar	Juniperus virginiana	Remove	
6418	13,11	Black Cherry	Prunus serotina	Remove	
6419	6	Red Cedar	Juniperus virginiana	Remove	
6420	7	American Elm	Ulmus americana	Remove	
6421	8	Grenn Ash	Fraxinus pennsylvanica	Remove	
6422	10	Siberian Elm	Ulmus pumila	Remove	50%dead
6423	9	Siberian Elm	Ulmus pumila	Remove	
6424	8	Crabapple	Malus sp.	Remove	
6425	11	Siberian Elm	Ulmus pumila	Remove	
6426	9,6	Siberian Elm	Ulmus pumila	Remove	
6427	6	American Elm	Ulmus americana	Remove	
6428	13	Red Cedar	Juniperus virginiana	Remove	
6429	10	Red Cedar	Juniperus virginiana	Remove	
6430	7	American Elm	Ulmus americana	Remove	
6431	9	Grenn Ash	Fraxinus pennsylvanica	Remove	Emerald Ash Borer present
6432	13	Siberian Elm	Ulmus pumila	Remove	
6433	12,9,8	Siberian Elm	Ulmus pumila	Remove	
6434	9,8,6	Siberian Elm	Ulmus pumila	Remove	
6435	15,13	Siberian Elm	Ulmus pumila	Remove	
6436	11	Box Elder	Acer negundo	Remove	70%dead
6437	9,9,9	Box Elder	Acer negundo	Remove	
6438	16	Siberian Elm	Ulmus pumila	Remove	
6439	16	Siberian Elm	Ulmus pumila	Remove	
6440	6	Siberian Elm	Ulmus pumila	Remove	
6441	11	Silver Maple	Acer saccharinum	Remove	
6442	7	Siberian Elm	Ulmus pumila	Remove	
6443	12,12	Box Elder	Acer negundo	Remove	
6444	12	American Elm	Ulmus americana	Remove	
6445	10	Siberian Elm	Ulmus pumila	Remove	
6446	6	Siberian Elm	Ulmus pumila	Remove	
6447	21	Siberian Elm	Ulmus pumila	Remove	
6448	18	American Elm	Ulmus americana	Remove	70%dead
6449	21,19	Siberian Elm	Ulmus pumila	Remove	
6450	22,20	American Elm	Ulmus americana	Remove	
6451	16	Siberian Elm	Ulmus pumila	Remove	
6452	16,10	Siberian Elm	Ulmus pumila	Remove	
6453	6	Siberian Elm	Ulmus pumila	Remove	
6454	7	Siberian Elm	Ulmus pumila	Remove	
6455	17,15	Siberian Elm	Ulmus pumila	Remove	
6456	27	Siberian Elm	Ulmus pumila	Remove	
6457	9,6	Siberian Elm	Ulmus pumila	Remove	
6458	10	Norway Maple	Acer platanoides	Remove	
6459	9	Silver Maple	Acer saccharinum	Remove	
6460	8	Silver Maple	Acer saccharinum	Remove	
6461	7	Silver Maple	Acer saccharinum	Remove	
6462	9	Silver Maple	Acer saccharinum	Remove	
6463	14	Box Elder	Acer negundo	Remove	
6464	21,14	Siberian Elm	Ulmus pumila	Remove	
6465	18,11	Siberian Elm	Ulmus pumila	Remove	
6466	8	Grenn Ash	Fraxinus pennsylvanica	Remove	
6467	15,13	Siberian Elm	Ulmus pumila	Remove	
6468	14	Siberian Elm	Ulmus pumila	Remove	
6469	16	Siberian Elm	Ulmus pumila	Remove	
6470	17	Siberian Elm	Ulmus pumila	Remove	
6471	8	Black Walnut	Juglans nigra	Remove	
6472	17,10,10	Siberian Elm	Ulmus pumila	Remove	
6473	16	Siberian Elm	Ulmus pumila	Remove	
6474	13	Siberian Elm	Ulmus pumila	Remove	
6475	9	Siberian Elm	Ulmus pumila	Remove	in major decline
6476	13	Black Walnut	Juglans nigra	Remove	
6477	7	Black Walnut	Juglans nigra	Remove	
6478	22	Siberian Elm	Ulmus pumila	Remove	
6479	6	Box Elder	Acer negundo	Remove	
6480	9	Siberian Elm	Ulmus pumila	Remove	
6481	15,12	Siberian Elm	Ulmus pumila	Remove	
6482	13	Siberian Elm	Ulmus pumila	Remove	
6483	6	Siberian Elm	Ulmus pumila	Remove	
6484	12,9,7	Siberian Elm	Ulmus pumila	Remove	
6485	8	Siberian Elm	Ulmus pumila	Remove	
6486	17,8	Siberian Elm	Ulmus pumila	Remove	
6487	20,15	Siberian Elm	Ulmus pumila	Remove	
6488	9	Siberian Elm	Ulmus pumila	Remove	
6489	10	Siberian Elm	Ulmus pumila	Remove	
6490	9	Siberian Elm	Ulmus pumila	Remove	
6491	23	Siberian Elm	Ulmus pumila	Remove	major damage along trunk
6492	20	Siberian Elm	Ulmus pumila	Remove	
6493	6	Siberian Elm	Ulmus pumila	Remove	
6494	13	Box Elder	Acer negundo	Remove	
6495	13	Siberian Elm	Ulmus pumila	Remove	
6496	6	Siberian Elm	Ulmus pumila	Remove	
6497	11	Red Pine	Pinus resinosa	Preserve	
6498	14	Red Pine	Pinus resinosa	Preserve	
6499	14	Siberian Elm	Ulmus pumila	Remove	

Tag No.	DBH	Common Name	Scientific Name	Status	Notes
6500	23	Siberian Elm	Ulmus pumila	Remove	
6501	25	Siberian Elm	Ulmus pumila	Remove	
6502	29	Cottonwood	Populus deltoides	Remove	
6503	22	Cottonwood	Populus deltoides	Remove	
6504	16	Cottonwood	Populus deltoides	Remove	
6505	16	Cottonwood	Populus deltoides	Remove	
6506	15	Willow	Salix sp.	Remove	split at base
6507	24	Cottonwood	Populus deltoides	Remove	
6508	2	Cottonwood	Populus deltoides	Remove	
6509	6	Cottonwood	Populus deltoides	Remove	
6510	21	Cottonwood	Populus deltoides	Remove	
6511	12,7	Willow	Salix sp.	Remove	
6512	9	American Elm	Ulmus americana	Remove	
6513	9	Siberian Elm	Ulmus pumila	Remove	
6514	6	Black Cherry	Prunus serotina	Remove	
6515	7	Siberian Elm	Ulmus pumila	Remove	
6516	33	Cottonwood	Populus deltoides	Remove	
6517	8,6	Willow	Salix sp.	Remove	
6518	13	Cottonwood	Populus deltoides	Remove	
6519	13	Cottonwood	Populus deltoides	Remove	
6520	7	Cottonwood	Populus deltoides	Remove	
6521	7	Willow	Salix sp.	Remove	
6522	6	Willow	Salix sp.	Remove	
6523	17,8	Willow	Salix sp.	Remove	
6524	14	Cottonwood	Populus deltoides	Remove	
6525	16,16,14	Willow	Salix sp.	Remove	
6526	11	Siberian Elm	Ulmus pumila	Remove	
6527	6	Black Cherry	Prunus serotina	Remove	
6528	7	Black Cherry	Prunus serotina	Remove	damage along trunk
6529	6	Black Cherry	Prunus serotina	Remove	
6530	13	Silver Maple	Acer saccharinum	Remove	
6531	17,17	Willow	Salix sp.	Remove	
6532	6	Willow	Salix sp.	Remove	
6533	20,20	Cottonwood	Populus deltoides	Remove	
6534	16,10	Cottonwood	Populus deltoides	Remove	
6535	17,17	Willow	Salix sp.	Remove	
6536	7,6	Siberian Elm	Ulmus pumila	Remove	
6537	10	Siberian Elm	Ulmus pumila	Remove	
6538	16	Willow	Salix sp.	Remove	
6539	9	Cottonwood	Populus deltoides	Remove	
6540	14,12	Willow	Salix sp.	Remove	
6541	34,24	Cottonwood	Populus deltoides	Remove	
6542	16,13	Willow	Salix sp.	Remove	
6543	19,13	Siberian Elm	Ulmus pumila	Remove	
6544	12	Box Elder	Acer negundo	Remove	
6545	9	Black Cherry	Prunus serotina	Remove	
6546	13	Willow	Salix sp.	Remove	
6547	13	Willow	Salix sp.	Remove	
6548	11	Willow	Salix sp.	Remove	
6549	9	Willow	Salix sp.	Remove	
6550	14,12,10,8	Willow	Salix sp.	Remove	
6551	6	Black Cherry	Prunus serotina	Remove	
6552	9,9	Siberian Elm	Ulmus pumila	Remove	
6553	18	Siberian Elm	Ulmus pumila	Remove	
6554	6	Crabapple	Malus sp.	Remove	
6555	14,10,10	Box Elder	Acer negundo	Remove	
6556	17,15	Siberian Elm	Ulmus pumila	Remove	
6557	10	Siberian Elm	Ulmus pumila	Remove	
6558	8	Siberian Elm	Ulmus pumila	Remove	
6559	8	Siberian Elm	Ulmus pumila	Remove	
6560	24	Siberian Elm	Ulmus pumila	Remove	
6561	11	Black Walnut	Juglans nigra	Remove	
6562	12	Siberian Elm	Ulmus pumila	Remove	
6563	24,18	Siberian Elm	Ulmus pumila	Remove	major decay along trunk
6564	9,7	Box Elder	Acer negundo	Preserve	
6565	9	Box Elder	Acer negundo	Preserve	
6566	17	Willow	Salix sp.	Preserve	
6567	10,10,9,9	Willow	Salix sp.	Preserve	
6568	7	Cottonwood	Populus deltoides	Preserve	
6569	32,23,22,18	Cottonwood	Populus deltoides	Preserve	
6570	19	Willow	Salix sp.	Preserve	
6571	16,12,8	Box Elder	Acer negundo	Remove	
6572	9	Willow	Salix sp.	Remove	
6573	20	Cottonwood	Populus deltoides	Preserve	
6574	23	Box Elder	Acer negundo	Preserve	
6575	10	Willow	Salix sp.	Preserve	
6576	13	Willow	Salix sp.	Remove	
6577	35	Cottonwood	Populus deltoides	Remove	
6578	6	Box Elder	Acer negundo	Remove	
6579	17	Cottonwood	Populus deltoides	Remove	
6580	23,10	Cottonwood	Populus deltoides	Remove	
6581	16	Cottonwood	Populus deltoides	Remove	
6582	6	Willow	Salix sp.	Remove	
6583	17	Cottonwood	Populus deltoides	Remove	
6584	13	Cottonwood	Populus deltoides	Remove	
6585	20	Cottonwood	Populus deltoides	Remove	
6586	18	Cottonwood	Populus deltoides	Remove	
6587	13	Cottonwood	Populus deltoides	Remove	
6588	21	Cottonwood	Populus deltoides	Remove	
6589	17	Cottonwood	Populus deltoides	Remove	
6590	14	Cottonwood	Populus deltoides	Remove	
6591	6	Cottonwood	Populus deltoides	Remove	
6592	14	Cottonwood	Populus deltoides	Remove	
6593	21	Cottonwood	Populus deltoides	Remove	
6594	7	Cottonwood	Populus deltoides	Remove	
6595	24	Cottonwood	Populus deltoides	Remove	
6596	13,11	Cottonwood	Populus deltoides	Remove	
6597	6	Cottonwood	Populus deltoides	Remove	
6598	15	Cottonwood	Populus deltoides	Remove	
6599	10	Cottonwood	Populus deltoides	Remove	
6600	8	Siberian Elm	Ulmus pumila	Remove	
6601	10,10	Cottonwood	Populus deltoides	Remove	
6602	24	Cottonwood	Populus deltoides	Remove	
6603	23	Cottonwood	Populus deltoides	Remove	
6604	22	Cottonwood	Populus deltoides	Remove	
6605	10	Cottonwood	Populus deltoides	Remove	
6606	9	Siberian Elm	Ulmus pumila	Remove	
6607	16	Cottonwood	Populus deltoides	Remove	
6608	26,18	Cottonwood	Populus deltoides	Remove	
6609	11,11	Willow	Salix sp.	Preserve	
6610	23	Cottonwood	Populus deltoides	Remove	
6611	12,10	Willow	Salix sp.	Preserve	
6612	19	Willow	Salix sp.	Preserve	
6613	18,17	Willow	Salix sp.	Preserve	
6614	22,21,10	Willow	Salix sp.	Preserve	
6615	23,10	Willow	Salix sp.	Preserve	
6616	22,17,14,11	Willow	Salix sp.	Preserve	14" trunk split at base
6617	9,8,8	Willow	Salix sp.	Preserve	
6618	9	Willow	Salix sp.	Preserve	
6619	14,11	Willow	Salix sp.	Preserve	
6620	23,20,20,20,9,7	Cottonwood	Populus deltoides	Remove	
6621	6	Willow	Salix sp.	Remove	
6622	7	Willow	Salix sp.	Remove	
6623	27	Cottonwood	Populus deltoides	Remove	
6624	6	Cottonwood	Populus deltoides	Remove	
6625	9	Cottonwood	Populus deltoides	Remove	
6626	10	Cottonwood	Populus deltoides	Remove	
6627	10,8	Cottonwood	Populus deltoides	Remove	
6628	23,10	Cottonwood	Populus deltoides	Remove	
6629	6	Box Elder	Acer negundo	Remove	
6630	9	Willow	Salix sp.	Remove	
6631	16,14,13,10	Box Elder	Acer negundo	Preserve	
6632	8,7	Willow	Salix sp.	Preserve	
6633	15,14	Willow	Salix sp.	Preserve	
6634	11,8	Willow	Salix sp.	Remove	
6635	10	Willow	Salix sp.	Remove	
6636	6,6	Willow	Salix sp.	Remove	
6637	6	Willow	Salix sp.	Remove	
6638	16	Siberian Elm	Ulmus pumila	Preserve	
6639	16	Cottonwood	Populus deltoides	Preserve	
6640	14,12,8	Cottonwood	Populus deltoides	Preserve	
6641	15,7	Cottonwood	Populus deltoides	Preserve	
6642	16,12,6	Cottonwood	Populus deltoides	Preserve	
6643	17	Cottonwood	Populus deltoides	Preserve	
6644	10	Cottonwood	Populus deltoides	Preserve	
6645	15,13	Cottonwood	Populus deltoides	Preserve	
6646	9	Cottonwood	Populus deltoides	Preserve	
6647	9	Cottonwood	Populus deltoides	Preserve	
6648	9,7	Cottonwood	Populus deltoides	Preserve	
6649	13	Cottonwood	Populus deltoides	Preserve	

Tag No.	DBH	Common Name	Scientific Name	Status	Notes
6650	15,13,12	Cottonwood	Populus deltoides	Preserve	
6651	16,9,6	Cottonwood	Populus deltoides	Preserve	
6652	10	Cottonwood	Populus deltoides	Preserve	
6653	23	Cottonwood	Populus deltoides	Remove	
6654	18,16,10	Cottonwood	Populus deltoides	Remove	
6655	12	Cottonwood	Populus deltoides	Remove	
6656	8	Cottonwood	Populus deltoides	Remove	
6657	7	Cottonwood	Populus deltoides	Remove	
6658	16	Cottonwood	Populus deltoides	Preserve	
6659	28	Cottonwood	Populus deltoides	Preserve	
6660	14,13	Cottonwood	Populus deltoides	Preserve	
6661	15,11,10	Cottonwood	Populus deltoides	Preserve	
6662	40	Cottonwood	Populus deltoides	Preserve	
6663	27	Cottonwood	Populus deltoides	Preserve	
6664	29	Cottonwood	Populus deltoides	Remove	
6665	9,8	Siberian Elm	Ulmus pumila	Remove	
6666	24	Cottonwood	Populus deltoides	Remove	
6667	7	Apple	Malus sp.	Remove	
6668	25	Cottonwood	Populus deltoides	Remove	
6669	7,7	Apple	Malus sp.	Remove	
6670	14,10	Siberian Elm	Ulmus pumila	Remove	
6671	9	Siberian Elm	Ulmus pumila	Remove	
6672	12,11,11,10,10,10	Siberian Elm	Ulmus pumila	Remove	
6673	17	Siberian Elm	Ulmus pumila	Remove	
6674	11	Siberian Elm	Ulmus pumila	Remove	
6675	11	Siberian Elm	Ulmus pumila	Remove	
6676	10,9,9,9,9	Cottonwood	Populus deltoides	Preserve	
6677	11,9	Siberian Elm	Ulmus pumila	Remove	
6678	14	Siberian Elm	Ulmus pumila	Preserve	
6679	16,7	Siberian Elm	Ulmus pumila	Preserve	
6680	12	Siberian Elm	Ulmus pumila	Remove	
6681	11,10	Siberian Elm	Ulmus pumila	Preserve	
6682	14,13	Siberian Elm	Ulmus pumila	Preserve	
6683	6	Cottonwood	Populus deltoides	Preserve	
6684	6	Cottonwood	Populus deltoides	Preserve	
6685	6,6	Box Elder	Acer negundo	Preserve	
6686	20,18,17	Willow	Salix sp.	Preserve	
6687	24	Cottonwood	Populus deltoides	Preserve	
6688	8	Mulberry	Morus sp.	Preserve	
6689	10	Willow	Salix sp.	Preserve	
6690	7,6	Grenn Ash	Fraxinus pennsylvanica	Remove	
6691	9,9	Siberian Elm	Ulmus pumila	Remove	
6692	7	Box Elder	Acer negundo	Remove	
6693	8	Cottonwood	Populus deltoides	Remove	
6694	12	Cottonwood	Populus deltoides	Remove	
6695	14,9,6	Cottonwood	Populus deltoides	Remove	
6696	7	Cottonwood	Populus deltoides	Remove	
6697	14	Cottonwood	Populus deltoides	Remove	
6698	14	Siberian Elm	Ulmus pumila	Remove	
6699	10	Siberian Elm	Ulmus pumila	Remove	
6700	9	Siberian Elm	Ulmus pumila	Remove	
6701	9,7	Black Cherry	Prunus serotina	Remove	
6702	15	Siberian Elm	Ulmus pumila	Remove	
6703	7	Siberian Elm	Ulmus pumila	Remove	
6704	7,6	Siberian Elm	Ulmus pumila	Remove	
6705	15	Cottonwood	Populus deltoides	Remove	
6706	19	Cottonwood	Populus deltoides	Remove	
6707	18	Cottonwood	Populus deltoides	Remove	
6708	14	Cottonwood	Populus deltoides	Remove	
6709	9	Cottonwood	Populus deltoides	Remove	
6710	9	Cottonwood	Populus deltoides	Remove	
6711	16	Cottonwood	Populus deltoides	Remove	
6712	16	Cottonwood	Populus deltoides	Remove	
6713	15,11	Cottonwood	Populus deltoides	Remove	
6714	12	Cottonwood	Populus deltoides	Remove	
6715	12	Cottonwood	Populus deltoides	Remove	
6716	20	Cottonwood	Populus deltoides	Remove	
6717	24	Cottonwood	Populus deltoides	Remove	
6718	16	Cottonwood	Populus deltoides	Remove	
6719	6	Cottonwood	Populus deltoides	Remove	
6720	19	Cottonwood	Populus deltoides	Remove	
6721	22	Cottonwood	Populus deltoides	Remove	
6722	24,23	Cottonwood	Populus deltoides	Remove	
6723	22	Cottonwood	Populus deltoides	Remove	
6724	18	Cottonwood	Populus deltoides	Remove	
6725	22,20	Cottonwood	Populus deltoides	Remove	
6726	18	Cottonwood	Populus deltoides	Remove	
6727	15	Cottonwood	Populus deltoides	Remove	
6728	13	Cottonwood	Populus deltoides	Remove	
6729	21,6	Cottonwood	Populus deltoides	Remove	
6730	27	Cottonwood	Populus deltoides	Remove	
6731	10	Cottonwood	Populus deltoides	Remove	
6732	11	Cottonwood	Populus deltoides	Remove	
6733	33	Cottonwood	Populus deltoides	Remove	
6734	38	Cottonwood	Populus deltoides	Remove	
6735	28,25	Cottonwood	Populus deltoides	Remove	
6736	23	Cottonwood	Populus deltoides	Remove	
6737	22	Cottonwood	Populus deltoides	Remove	
6738	32	Cottonwood	Populus deltoides	Remove	
6739	23,22	Cottonwood	Populus deltoides	Remove	
6740	10	Cottonwood	Populus deltoides	Remove	
6741	21	Cottonwood	Populus deltoides	Remove	
6742	22	Siberian Elm	Ulmus pumila	Remove	
6743	8	Cottonwood	Populus deltoides	Remove	
6744	12	Cottonwood	Populus deltoides	Remove	
6745	10,10	Cottonwood	Populus deltoides	Remove	
6746	25	Cottonwood	Populus deltoides	Remove	
6747	13	Cottonwood	Populus deltoides	Remove	
6747	25	Cottonwood	Populus deltoides	Remove	
6748	16	Cottonwood	Populus deltoides	Remove	
6749	19	Cottonwood	Populus deltoides	Remove	
6750	9	Cottonwood	Populus deltoides	Remove	
6751	27	Cottonwood	Populus deltoides	Remove	
6752	25	Cottonwood	Populus deltoides	Remove	
6753	28	Cottonwood	Populus deltoides	Remove	
6754	29	Cottonwood	Populus deltoides	Remove	
6755	8	Cottonwood	Populus deltoides	Remove	
6756	10	Cottonwood	Populus deltoides	Remove	
6757	6	Cottonwood	Populus deltoides	Remove	
6758	8	Cottonwood	Populus deltoides	Remove	
6759	9	Cottonwood	Populus deltoides	Remove	
6760	10	Cottonwood	Populus deltoides	Remove	
6761	21	Cottonwood	Populus deltoides	Remove	
6762	8	Siberian Elm	Ulmus pumila	Remove	
6763	6	Cottonwood	Populus deltoides	Remove	
6764	6	Cottonwood	Populus deltoides	Remove	
6765	12	Cottonwood	Populus deltoides	Remove	
6766	13	Cottonwood	Populus deltoides	Remove	
6767	15,6	Box Elder	Acer negundo	Remove	
6768	16	Cottonwood	Populus deltoides	Remove	
6769	21	Cottonwood	Populus deltoides	Remove	
6770	11	Cottonwood	Populus deltoides	Remove	
6771	8	Cottonwood	Populus deltoides	Remove	
6772	8	Cottonwood	Populus deltoides	Remove	
6773	22	Cottonwood	Populus deltoides	Remove	
6774	10	Cottonwood	Populus deltoides	Remove	
6775	21	Cottonwood	Populus deltoides	Remove	
6776	11	Cottonwood	Populus deltoides	Remove	
6777	10	Cottonwood	Populus deltoides	Remove	
6778	7	Cottonwood	Populus deltoides	Remove	
6779	18,15	Cottonwood	Populus deltoides	Remove	
6780	9	Cottonwood	Populus deltoides	Remove	
6781	10	Cottonwood	Populus deltoides	Remove	
6782	16	Cottonwood	Populus deltoides	Remove	
6783	24	Cottonwood	Populus deltoides	Remove	
6784	20,8	Cottonwood	Populus deltoides	Remove	
6785	6	Cottonwood	Populus deltoides	Remove	
6786	6	Cottonwood	Populus deltoides	Remove	
6787	18	Cottonwood	Populus deltoides	Remove	
6788	16	Cottonwood	Populus deltoides	Remove	decay at base
6789	9	Cottonwood	Populus deltoides	Remove	
6790	22	Cottonwood	Populus deltoides	Remove	
6791	15	Cottonwood	Populus deltoides	Remove	
6792	15	Cottonwood	Populus deltoides	Remove	
6793	10	Cottonwood	Populus deltoides	Remove	
6794	17	Cottonwood	Populus deltoides	Remove	
6795	17	Cottonwood	Populus deltoides	Remove	
6796	11	Cottonwood	Populus deltoides	Remove	
6797	16	Cottonwood	Populus deltoides	Remove	
6798	22,7	Cottonwood	Populus deltoides	Remove	
6799	12	Cottonwood	Populus deltoides	Remove	
6800	12	Cottonwood	Populus deltoides	Remove	

Tag No.	DBH	Common Name	Scientific Name	Status	Notes
6801	6	Cottonwood	Populus deltoides	Remove	
6802	9	Cottonwood	Populus deltoides	Remove	
6803	20	Cottonwood	Populus deltoides	Remove	
6804	15	Cottonwood	Populus deltoides	Remove	
6805	17	Cottonwood	Populus deltoides	Remove	
6806	23,23,19	Cottonwood	Populus deltoides	Remove	
6807	25	Cottonwood	Populus deltoides	Remove	
6808	8	Cottonwood	Populus deltoides	Remove	
6809	23,20	Cottonwood	Populus deltoides	Remove	
6810	10	Cottonwood	Populus deltoides	Remove	
6811	19	Cottonwood	Populus deltoides	Remove	
6812	17	Cottonwood	Populus deltoides	Remove	
6813	18	Cottonwood	Populus deltoides	Remove	major decay at base
6814	7,6	Cottonwood	Populus deltoides	Remove	
6815	6	Willow	Salix sp.	Remove	
6815	22	Cottonwood	Populus deltoides	Remove	
6816	10	American Elm	Ulmus americana	Remove	
6817	12	Cottonwood	Populus deltoides	Remove	
6818	10	Cottonwood	Populus deltoides	Remove	
6819	8	Willow	Salix sp.	Remove	
6820	6	Box Elder	Acer negundo	Remove	
6821	6	Cottonwood	Populus deltoides	Remove	
6822	6	Cottonwood	Populus deltoides	Remove	
6823	6	Cottonwood	Populus deltoides	Remove	
6824	7,6,6,6,6	Box Elder	Acer negundo	Remove	
6825	18,13	Cottonwood	Populus deltoides	Remove	
6826	7,6	Willow	Salix sp.	Remove	
6827	18	Cottonwood	Populus deltoides	Remove	
6828	24,23	Cottonwood	Populus deltoides	Remove	
6829	11	Cottonwood	Populus deltoides	Remove	
6830	18,18,7	Cottonwood	Populus deltoides	Remove	
6831	6	Cottonwood	Populus deltoides	Remove	
6832	9	Cottonwood	Populus deltoides	Remove	
6833	18	Cottonwood	Populus deltoides	Remove	
6834	20	Cottonwood	Populus deltoides	Remove	
6835	9	Cottonwood	Populus deltoides	Remove	
6836	19	Cottonwood	Populus deltoides	Remove	
6837	15	Cottonwood	Populus deltoides	Remove	
6838	14	American Elm	Ulmus americana	Remove	
6839	16	Cottonwood	Populus deltoides	Remove	
6840	8	Cottonwood	Populus deltoides	Remove	
6841	8	Siberian Elm	Ulmus pumila	Remove	
6842	17	Cottonwood	Populus deltoides	Remove	
6843	10	Siberian Elm	Ulmus pumila	Remove	
6844	19	Cottonwood	Populus deltoides	Remove	
6845	18	Cottonwood	Populus deltoides	Remove	
6846	10	Cottonwood	Populus deltoides	Remove	
6848	10	Cottonwood	Populus deltoides	Remove	
6849	13,9,9	Cottonwood	Populus deltoides	Remove	
6850	21	Cottonwood	Populus deltoides	Remove	
6851	10	Willow	Salix sp.	Remove	
6852	12	Cottonwood	Populus deltoides	Remove	
6853	6	Cottonwood	Populus deltoides	Remove	
6854	21	Cottonwood	Populus deltoides	Remove	
6855	6	Siberian Elm	Ulmus pumila	Remove	
6856	25	Cottonwood	Populus deltoides	Remove	
6857	15	Cottonwood	Populus deltoides	Remove	
6858	18	Cottonwood	Populus deltoides	Remove	
6859	25	Cottonwood	Populus deltoides	Remove	
6860	20	Cottonwood	Populus deltoides	Remove	
6861	19	Cottonwood	Populus deltoides	Remove	
6862	18	Cottonwood	Populus deltoides	Remove	
6863	6	Cottonwood	Populus deltoides	Remove	
6864	17	Cottonwood	Populus deltoides	Remove	
6865	20	Cottonwood	Populus deltoides	Remove	
6866	10	Willow	Salix sp.	Remove	
6867	19	Cottonwood	Populus deltoides	Remove	
6868	24	Cottonwood	Populus deltoides	Remove	
6869	40	Cottonwood	Populus deltoides	Remove	
6870	16,7	Box Elder	Acer negundo	Remove	
6871	23	Cottonwood	Populus deltoides	Remove	
6872	14	Cottonwood	Populus deltoides	Remove	
6873	9	American Elm	Ulmus americana	Remove	
6874	15	Siberian Elm	Ulmus pumila	Remove	
6875	14	Cottonwood	Populus deltoides	Remove	
6876	6	Cottonwood	Populus deltoides	Remove	
6877	15	Cottonwood	Populus deltoides	Remove	
6878	9	Cottonwood	Populus deltoides	Remove	
6879	10	Cottonwood	Populus deltoides	Remove	
6880	16,10	Willow	Salix sp.	Remove	
6881	19	Cottonwood	Populus deltoides	Remove	
6882	10	Cottonwood	Populus deltoides	Remove	
6883	13	Cottonwood	Populus deltoides	Remove	
6884	11	Cottonwood	Populus deltoides	Remove	
6885	14	Cottonwood	Populus deltoides	Remove	
6886	9	Willow	Salix sp.	Remove	
6887	13	Cottonwood	Populus deltoides	Remove	
6888	15	Cottonwood	Populus deltoides	Remove	
6889	6	Willow	Salix sp.	Remove	
6890	16	Cottonwood	Populus deltoides	Remove	
6891	14	Cottonwood	Populus deltoides	Remove	
6892	13,11	Cottonwood	Populus deltoides	Remove	
6893	10	Cottonwood	Populus deltoides	Remove	
6894	16	Cottonwood	Populus deltoides	Remove	
6895	10	Cottonwood	Populus deltoides	Remove	
6896	7	Willow	Salix sp.	Remove	
6897	7	Cottonwood	Populus deltoides	Remove	
6898	24	Cottonwood	Populus deltoides	Remove	
6899	17,16	Cottonwood	Populus deltoides	Remove	
6900	7	Box Elder	Acer negundo	Remove	
6901	12,10	Willow	Salix sp.	Remove	
6902	45	Cottonwood	Populus deltoides	Remove	
6903	12	Cottonwood	Populus deltoides	Remove	
6904	27,8	Cottonwood	Populus deltoides	Remove	
6905	21,12,8,8,8,7	Cottonwood	Populus deltoides	Remove	
6906	17,16	Cottonwood	Populus deltoides	Remove	
6907	12,7	Cottonwood	Populus deltoides	Remove	
6908	6	Cottonwood	Populus deltoides	Remove	
6909	19	Cottonwood	Populus deltoides	Remove	
6910	6	Cottonwood	Populus deltoides	Remove	
6911	6	Willow	Salix sp.	Remove	
6912	13	Cottonwood	Populus deltoides	Remove	
6913	9	Cottonwood	Populus deltoides	Remove	
6914	8	Willow	Salix sp.	Remove	
6916	11	Cottonwood	Populus deltoides	Remove	
6917	6	Willow	Salix sp.	Remove	
6918	9	Willow	Salix sp.	Remove	
6919	8	Willow	Salix sp.	Remove	
6920	10	Cottonwood	Populus deltoides	Remove	
6921	18	Cottonwood	Populus deltoides	Remove	
6922	9,8,8,7,6	Willow	Salix sp.	Remove	
6923	10	Box Elder	Acer negundo	Remove	
6924	21,19	Cottonwood	Populus deltoides	Remove	
6925	12	Cottonwood	Populus deltoides	Preserve	

EXHIBIT J

811 Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

CLEARWELL
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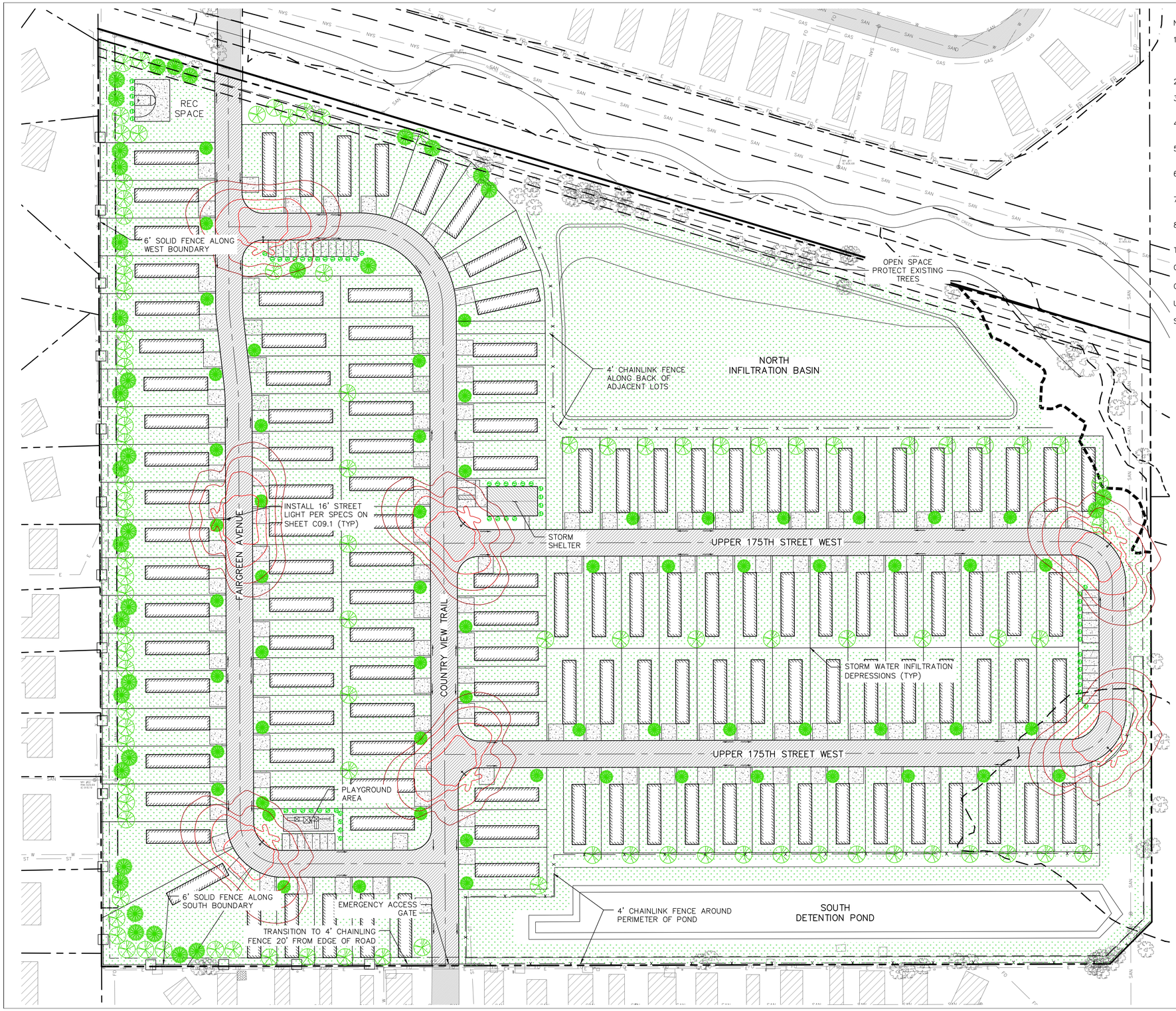
2135 BLAKE BLVD SE
CEDAR RAPIDS, IA 52403

SECTION #11
TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
TREE INVENTORY

DATE January 29, 2025
SCALE NO SCALE
REVISIONS
DRAWN BY:
APPROVED BY: JWM
JOB #: 2023-003
SHEET NO. C09.1

C:\Users\jmail\Clearwell Dropbox\Clearwell Projects\2023-003 NORTH CREEK MHC\DESIGN\AUTOCAD\NORTH CREEK SITE PLANS.dwg



NOTES:

1. INTERNAL STREET TREES SHALL BE PLANTED EVERY OTHER HOME ON ALTERNATING SIDES OF THE STREET. CORNER LOTS MAY NOT HAVE TREE DUE TO SIGHT DISTANCE RESTRICTIONS. STREET TREES WILL BE PLANTED AT THE TIME OF HOME INSTALLATION ON THE LOT SHOWN.
2. REFER TO PLANTING DETAILS ON C09.3.
3. UNDER STORY DECIDUOUS TREES SHALL BE PLANTED ALONG INTERNAL STREET FRONTAGES. ALTERNATE BETWEEN VARIETIES SHOWN BELOW.
4. DECIDUOUS TREES SHALL BE PLANTED IN OPEN AREAS. ALTERNATE BETWEEN VARIETIES SHOWN BELOW.
5. CONIFEROUS TREES PROVIDE FOR SCREENING, PRIMARILY ALONG WEST BOUNDARY OF THE SITE.
6. PARKING LOT SCREENING SHRUBS SHALL BE CENTERED ON EACH PARKING STALL. ALTERNATE BETWEEN THE VARIETIES SHOWN BELOW.
7. SHRUBS SHALL BE PLANTED ON A 1' HIGH BERM INSTALLED ALONG THE LENGTH OF THE PARKING LOT.
8. STREET TREES WILL BE PLANTED AS HOMES ARE SET.

TOTAL PROPOSED TREES = 195 TREES

CONIFEROUS TREES PROPOSED = 97 TREES (8' PLANTING HEIGHT)

OVER STORY TREES PROPOSED = 36 TREES (2 ½" DIA @ BREAST HEIGHT)

UNDER STORY TREES PROPOSED = 62 TREES (2 DIA @ BREAST HEIGHT)

SHRUBS PROPOSED = 61 SHRUBS (24–36 INCH)

UNDER STORY DECIDUOUS STREET TREES

ID	COMMON NAME	LATIN NAME	MATURE SPREAD	MATURE HEIGHT	QTY
ER	EASTERN REDBUD	CERCIS CANADENSIS	30'–35'	20'–30'	16
DH	DOWNY HAWTHORN	CRATAEGUS MOLLIS	20'–30'	30'–40'	16
AB	AUTUMN BRILLIANCE SERVICEBERRY	AMELANCHIER GRANDIFLORA	15'–25'	15'–25'	15
PF	PRAIRIE FIRE CRABAPPLE	MALUS PRAIREFIRE	15'–20'	15'–20'	15

OVER STORY DECIDUOUS TREES

ID	COMMON NAME	LATIN NAME	MATURE SPREAD	MATURE HEIGHT	QTY
RMB	RED MAPLE "BOWHALL"	ACER RUBRUM 'BOWHALL'	15'	45'	12
RVB	RIVER BIRCH	BETULA NIGRA	20'	40'	12
GSL	LITTLELEAF LINDEN	TILIA CORDATA	15'	45'	12

CONIFEROUS TREES

ID	COMMON NAME	LATIN NAME	MATURE SPREAD	MATURE HEIGHT	QTY
WF	WHITE FIR	ABIES CONCOLOR	15'–30'	30'–50'	33
AP	EASTERN WHITE PINE	PINUS STROBUS	20'–40'	50'–80'	32
NS	NORWAY SPRUCE	PICEA ABIES	20'–30'	40'–60'	32

PROPOSED SHRUB SPECIES

ID	COMMON NAME	LATIN NAME	MATURE SPREAD	MATURE HEIGHT	QTY
BP	BLUE POINT JUNIPER	JUNIPERUS CHINENSIS 'BLUE POINT'	9'	12'	30
EG	EMERALD GREEN ARBORVITAE	THUJA OCCIDENTALIS 'SMARAGD'	5'	15'	31

DECIDUOUS TREE

CONIFEROUS TREE

SHRUB

GRASS

INFILTRATION AREA

EXHIBIT K

Know what's below. Call before you dig.

THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL DETERMINE THE EXACT LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND AGREES TO BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTORS FAILURE TO EXACTLY LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.

NOTICE:
CONSTRUCTION SITE SAFETY IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR; NEITHER THE OWNER NOR THE ENGINEER SHALL BE EXPECTED TO ASSUME ANY RESPONSIBILITY FOR SAFETY OF THE WORK, OF PERSONS ENGAGED IN THE WORK, OF ANY NEARBY STRUCTURES, OR OF ANY OTHER PERSONS.

CLEARWELL
P:319-654-4911 CLEARWELLENG.COM
2135 BLAKE BLVD SE
CEDAR RAPIDS, IA 52403

SECTION #11
TOWNSHIP 114 NORTH, RANGE 20 WEST
CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK ESTATES OF LAKEVILLE, LLC
CONDITIONAL USE SITE PLANS
LANDSCAPING PLAN

DATE
January 29, 2025

SCALE
0' 30' 60'
1" = 60 FEET

REVISIONS

DRAWN BY:

APPROVED BY: JWM

JOB #: 2023-003

SHEET NO.
C09.2

C:\Users\jmail\Clearwell Dropbox\Clearwell Projects\2023-003 NORTH CREEK MHC\DESIGN\AUTOCAD\NORTH CREEK SITE PLANS.dwg

Memorandum

SRF No. 17509

To: Zach Johnson, PE, City Engineer
City of Lakeville

From: Brent Clark, PE, Project Manager
Ashley Sherry, PE, Engineer III

Date: January 20, 2025

Subject: North Creek Manufactured Homes Expansion Traffic Study

Introduction

SRF has completed a traffic study for the proposed North Creek Manufactured Home Park expansion in the City of Lakeville, Minnesota. The proposed development is generally located west of the Pilot Knob Road (CSAH 31), between 173rd Street and Country View Trail (see Figure 1: Project Location). The main objectives of the study are to evaluate existing operations within the study area, identify any transportation impacts associated with the proposed development, and recommend improvements to address any issues, if necessary. The following information provides the assumptions, analysis, and study recommendations offered for consideration.

Study Area Background

CSAH 9 Realignment

Recent improvements to the county roadway system have resulted in significant changes to travel patterns and traffic control within the study area. In 2020, 179th Street was reconstructed east of Cedar Avenue, completing the corridor from Cedar Avenue to Pilot Knob Road (CSAH 31). In 2023, the segment of Dodd Boulevard (west of Cedar Avenue) was removed to facilitate the realignment of CSAH 9 onto the 179th Street corridor. This realignment distributed CSAH 9 traffic along 179th Street, increasing traffic volumes at and north of the Pilot Knob Road (CSAH 31) and 179th Street intersection. To accommodate these changes, a traffic signal was constructed at the intersection to manage the higher traffic volumes and support the increase in eastbound left-turn movements.

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Project Location

North Creek Manufactured Homes Expansion Traffic Study
Lakeville, MN

Figure 1

CSAH 31 Corridor Study

The *Dakota County CSAH 31 Corridor Transportation Study* was developed by SRF Consulting Group in May 2007 (hereon referred to as the *CSAH 31 Corridor Study)* in collaboration with the City of Lakeville, Apple Valley, and Dakota County. The primary objective of the study was to identify a long-term access strategy for a three-mile segment of Pilot Knob Road (CSAH 31) from CSAH 42 (150th Street) to 180th Street. As part of the study, various access recommendations were provided at the primary study intersections for the proposed development, as summarized in Table 1. Based on discussions with City staff, the future build conditions section of the study includes an analysis of both the existing and future recommended access documented within the *CSAH 31 Corridor Study*. It should be noted that the *CSAH 31 Corridor Study* recommended that Country View Trail be converted to a three-quarter access when either the mobile home park is redeveloped or an alternative access is provided. However, it should be noted that an alternative access was never provided to the mobile home park area.

Table 1. *CSAH 31 Corridor Study* - Access Recommendations

CSAH 31 Intersection	Existing	Future Recommended
173rd Street	Full Access	Full Access
North Creek Drive	Full Access	3/4 Access
Country View Trail	Full Access	3/4 Access
179th Street (1)	Full Access	Full Access

(1) Traffic signal was recently constructed at the intersection.

Existing Conditions

Existing conditions were reviewed to establish a baseline to identify any future impacts associated with the proposed development. The evaluation of existing conditions includes a review of traffic volumes, roadway characteristics, and an intersection capacity analysis, which are summarized in the following sections.

Data Collection

Weekday a.m. and p.m. peak period vehicular turning movement and pedestrian/bicyclist counts were collected at the following study intersections on Thursday, October 10, 2024:

- Pilot Knob Road (CSAH 31) and 173rd Street
- Pilot Knob Road (CSAH 31) and North Creek Drive
- Pilot Knob Road (CSAH 31) and Country View Trail
- Pilot Knob Road (CSAH 31) and 179th Street (CSAH 9)

Roadway Characteristics

A field assessment was completed to identify various roadway characteristics within the transportation system study area, such as functional classification, general configuration, and posted speed limit. A summary of these roadway characteristics is shown in Table 2. Note that these are general characteristics and that there are some deviations within the area or segments of the roadways. For example, the speed limit of Pilot Knob Road (CSAH 31) transitions from 55-mph to 50-mph south of 179th Street (CSAH 9).

Table 2. Existing Roadway Characteristics

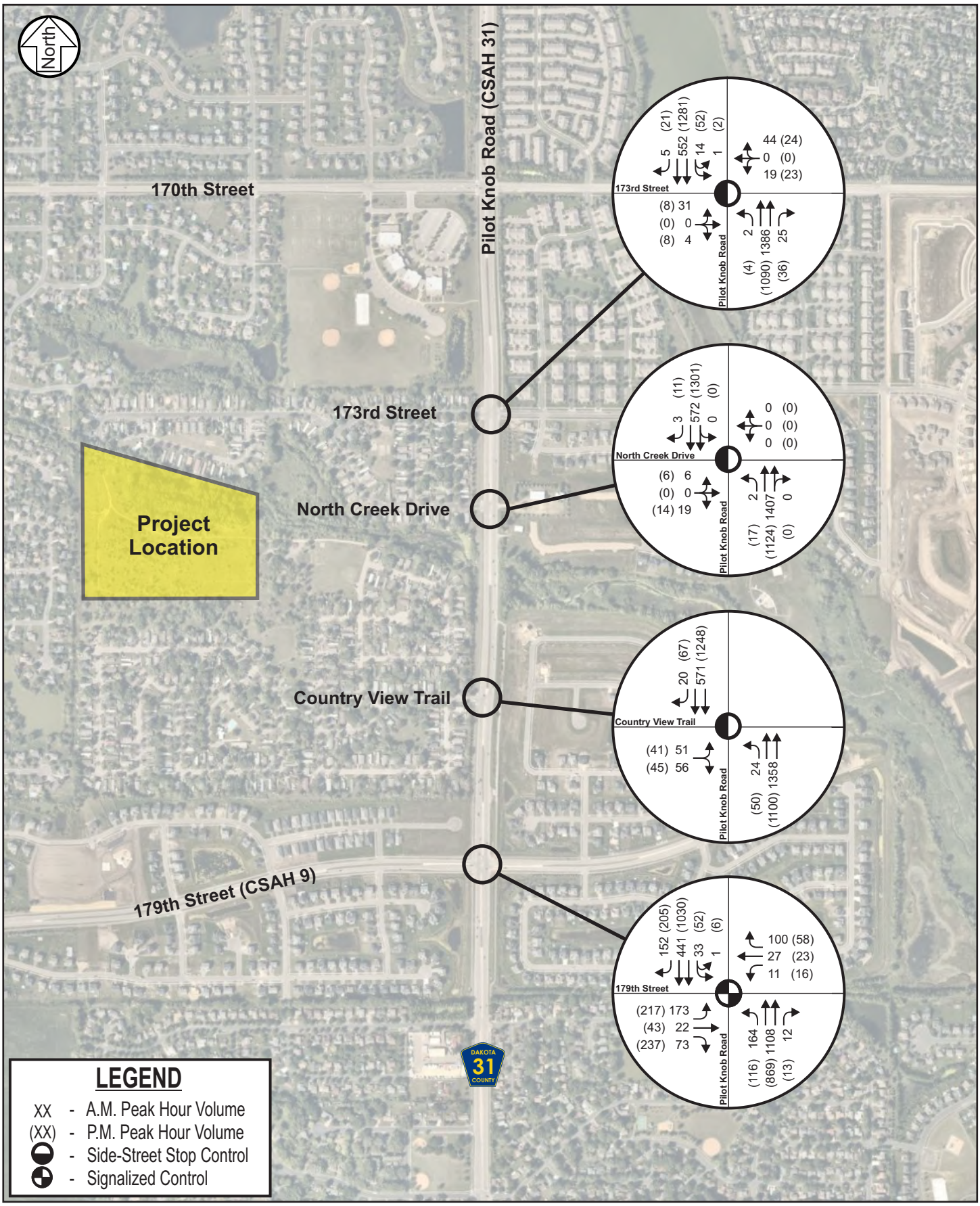
Roadway	Functional Classification (1)	General Configuration	Posted Speed Limit (mph)
Pilot Knob Road (CSAH 31)	A-Minor Expander	4-lane divided	55/50 (2)
173rd Street	Local Roadway	2-lane undivided	20/30 (3)
North Creek Drive	Local Roadway	2-lane undivided	20
Country View Trail	Local Roadway	2-lane undivided	20
179th Street (CSAH 9)	A-Minor Expander	2-lane divided	40/30 (4)

(1) Functional Classification based on the *City of Lakeville 2040 Transportation Plan*.
(2) Pilot Knob Road has a posted speed limit of 55-mph north and 50-mph south of 179th Street.
(3) 173rd Street has a posted speed limit of 20-mph west and 30-mph east of Pilot Knob Road (CSAH 31).
(4) 179th Street has a posted speed limit of 40-mph west and 30-mph east of Pilot Knob Road (CSAH 31).

From a traffic control perspective, the Pilot Knob Road (CSAH 31) and 179th Street (CSAH 9) intersection is signal controlled while the remaining study intersections are unsignalized with side-street stop control. Existing geometrics, traffic controls, and traffic volumes in the study area are shown in Figure 2.

Intersection Capacity Analysis

An intersection capacity analysis was completed using Synchro/SimTraffic software to establish a baseline condition to which future traffic operations could be compared. Capacity analysis results identify a Level of Service (LOS) which indicates how well an intersection is operating. Intersections are graded from LOS A through LOS F. The LOS results are based on average delay per vehicle, which correspond to the delay threshold values shown in Table 3. LOS A indicates the best traffic operation, while LOS F indicates an intersection where demand exceeds capacity. Overall intersection LOS A though LOS D is generally considered acceptable based on MnDOT guidelines.



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Existing Conditions

North Creek Manufactured Homes Expansion Traffic Study
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Figure 2

Table 3. Level of Service Criteria for Signalized and Unsignalized Intersections

LOS Designation	Signalized Intersection Average Delay/Vehicle (seconds)	Unsignalized Intersection Average Delay/Vehicle (seconds)
A	≤ 10	≤ 10
B	> 10 - 20	> 10 - 15
C	> 20 - 35	> 15 - 25
D	> 35 - 55	> 25 - 35
E	> 55 - 80	> 35 - 50
F	> 80	> 50

For side-street stop-controlled intersections, special emphasis is given to providing an estimate for the level of service of the side-street approach. Traffic operations at an unsignalized intersection with side-street stop control can be described in two ways. First, consideration is given to the overall intersection level of service. This takes into account the total number of vehicles entering the intersection and the capability of the intersection to support these volumes.

Second, it is important to consider the delay on the minor approach. Since the mainline does not have to stop, the majority of delay is attributed to the side-street approaches. It is typical of intersections with higher mainline traffic volumes to experience high-levels of delay (i.e., poor levels of service) on the side-street approaches, but an acceptable overall intersection level of service during peak hour conditions.

Results of the existing capacity analysis, which is shown in Table 4, indicate that all study intersections currently operate at an acceptable overall LOS C or better during the a.m. and p.m. peak hour, with the existing geometric layout, traffic controls, and signal timing. While all study intersections operate with an acceptable overall LOS, left-turn movements from side-street stop approaches were observed to be challenging during peak hours due to limited gaps along Pilot Knob Road (CSAH 31). These delays may result in aggressive maneuvers and/or safety risks at the study intersections, especially given the high travel speeds (i.e. 55-mph) along the corridor.

Table 4. Existing Intersection Capacity Analysis

Intersection	A.M. Peak Hour		P.M. Peak Hour	
	LOS	Delay	LOS	Delay
Pilot Knob Road (CSAH 31) and 173rd Street (1)	A/C	24 sec.	A/F	55 sec.
Pilot Knob Road (CSAH 31) and North Creek Drive (1)	A/A	7 sec.	A/C	20 sec.
Pilot Knob Road (CSAH 31) and Country View Trail (1)	A/D	27 sec.	A/F	81 sec.
Pilot Knob Road (CSAH 31) and 179th Street	C	21 sec.	C	27 sec.

(1) Indicates an unsignalized intersection with side-street stop control, where the overall LOS is shown followed by the worst side-street approach LOS. The delay shown represents the worst side-street approach delay.

The following information summarizes the operational, queueing, and/or safety issues identified as part of the existing capacity analysis and field observations:

Pilot Knob Road (CSAH 31) and 173rd Street:

- The eastbound and westbound left-turn movements operate at LOS E (49 seconds) and LOS F (105 seconds), respectively, during the p.m. peak hour.
- Left-turn movements were observed to be challenging at times; however, no significant queueing or safety issues were observed at the intersection. Although it may involve a reverse movement, users on 173rd Street destined to the south have an alternative route to the signalized intersection at Pilot Knob Road (CSAH 31)/170th Street.

Pilot Knob Road (CSAH 31) and Country View Trail:

- The eastbound approach operates at LOS F (81 seconds) and the eastbound left-turn movement has a delay of approximately 105 seconds during the p.m. peak hour. At times, maximum eastbound queues may extend to Eureka Avenue during the p.m. peak hour.
- The *CSAH 31 Corridor Study* provided a long-term recommendation for converting the intersection to a three-quarter access.

Pilot Knob Road (CSAH 31) and 179th Street (CSAH 9):

- The eastbound left-turn movement was observed to extend beyond storage approximately five (5) percent of the p.m. peak hour.

Proposed Development

As previously noted, the North Creek Manufactured Home Park expansion is generally located west of the Pilot Knob Road (CSAH 31), between 173rd Street and Country View Trail. The proposed development consists of a total of 130 single-family manufactured housing units and is expected to be fully constructed and operational by 2026. A preliminary site plan for the proposed development is illustrated in Figure 3, which was used as the basis for the traffic analysis. The development is proposed to include a connection to North Creek Drive, providing access to Pilot Knob Road (CSAH 31) via North Creek Drive and 173rd Street. An additional access connection to Country View Trail is also planned, however, this connection is expected to be gated and accessible only to emergency vehicles.

Traffic Forecasts

The year 2026 (i.e. full build) traffic forecasts take into account general background growth and traffic generated by the proposed development, as well as travel pattern changes with potential access restrictions previously recommended as part of the *CSAH 31 Corridor Study*. The following sections outline the overall traffic forecast development process and assumptions, as well as the proposed development trip generation.

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Site Plan

North Creek Manufactured Homes Expansion Traffic Study
Lakeville, MN

Figure 3

Background Traffic Growth

To account for general background growth in the area, an annual growth rate of one (1) percent was applied to the existing peak hour traffic volumes to develop future background forecasts. This growth rate was developed using a combination of historical average daily traffic (ADT) volumes from surrounding roadways as published by MnDOT, traffic forecasts from both the *City of Lakeville's Transportation Plan* and the *Dakota County Comprehensive Plan,* and engineering judgment.

CSAH 31 Corridor Study Access Recommendations

As previously noted, the *CSAH 31 Corridor Study* outlined various access recommendations for the primary study intersections of the proposed development, which are summarized in Table 1 (Page 3). Following discussions with City staff, a future build conditions scenario was evaluated to assess operations based on the previous access recommendations. With the proposed three-quarter access conversions at North Creek Drive and Country View Trail, changes in travel patterns are anticipated. As a result, all eastbound left-turns at Country View Trail were assumed to reroute to the 179th Street intersection and perform a southbound U-turn. For North Creek Drive, all eastbound left-turns were assumed to reroute to the 173rd Street intersection.

Proposed Development Trip Generation

To account for traffic impacts associated with the proposed development, a trip generation estimate was developed for the weekday a.m. and p.m. peak hours and a daily basis. The estimates, shown in Table 5, were developed using the *ITE Trip Generation Manual, 11th Edition*.

Table 5. Proposed Development Trip Generation Estimate

Land Use Type *(ITE Code)*	Size	A.M. Peak Hour		P.M. Peak Hour		Daily Trips
		In	Out	In	Out	
Mobile Home Park (240)	130 DU	11	40	47	28	926

Results of the trip generation estimate indicate that the proposed development is expected to generate approximately 51 a.m. peak hour, 75 p.m. peak hour, and 926 daily trips. The trips generated were distributed throughout the area based on the directional distribution shown in Figure 4, which was developed based on existing travel patterns and engineering judgement.

Traffic Forecast Summary

Based on the traffic forecast approach described in this study, peak hour traffic forecasts were developed for two future build conditions: with and without the *CSAH 31 Corridor Study* access recommendations. Figure 5 represents the existing roadway geometrics and includes general background growth and trips generated by the proposed development. Figure 6 is similar, but also accounts for travel pattern shifts expected as a result of access restrictions at North Creek Drive and Country View Trail.

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Directional Distribution

North Creek Manufactured Homes Expansion Traffic Study
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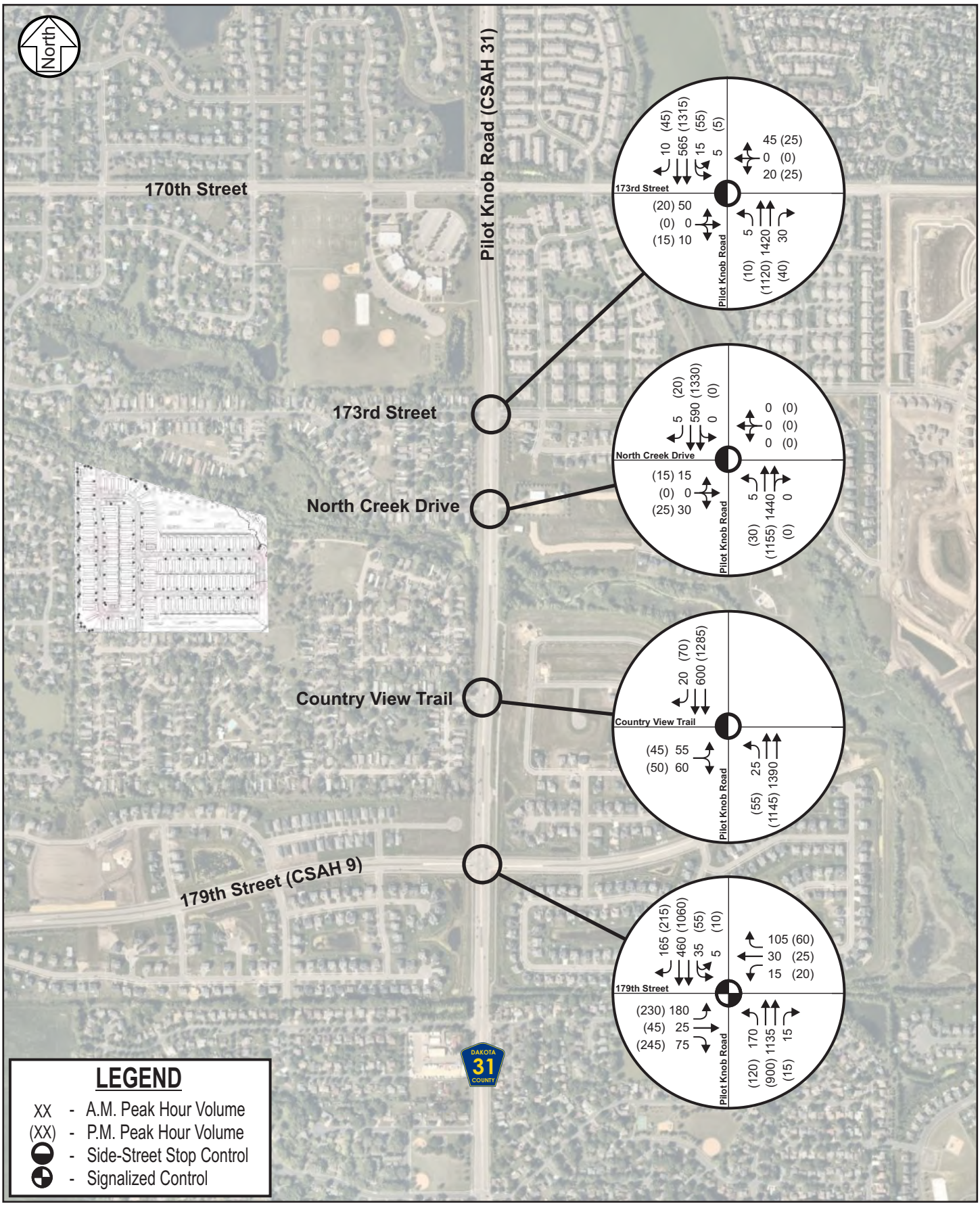
Figure 4



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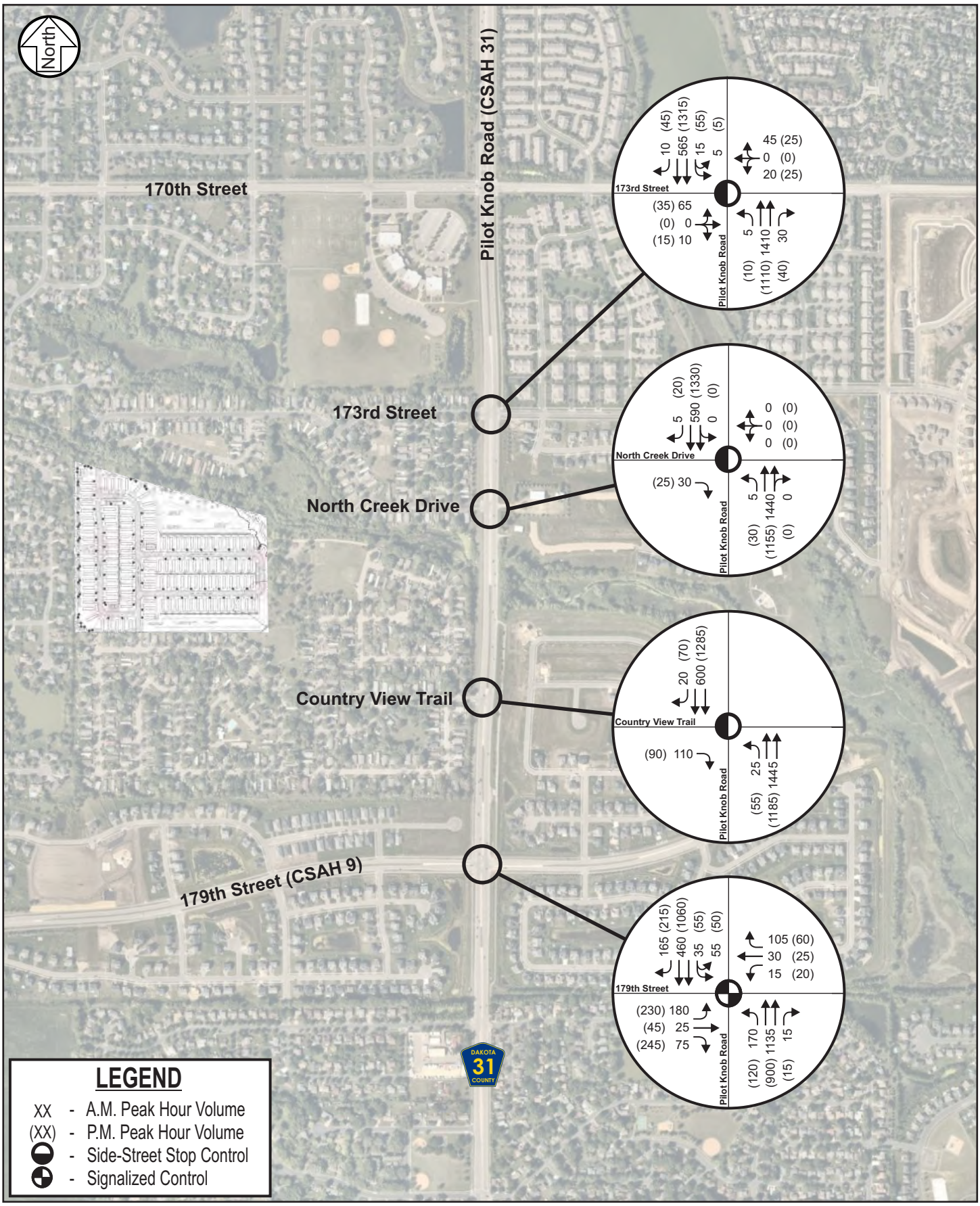
Year 2026 Build Conditions - Existing Geometry

North Creek Manufactured Homes Expansion Traffic Study
Lakeville, MN

Figure 5



Year 2026 Build Conditions - *CSAH 31 Corridor Study* Access Recommendations

Figure 6

North Creek Manufactured Homes Expansion Traffic Study
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Year 2026 Build Conditions

To determine how the study intersections will operate under year 2026 build conditions, an intersection capacity analysis was completed using Synchro/SimTraffic software. As mentioned previously, the future build conditions include an analysis of both the existing corridor layout and the access recommendations documented within the *CSAH 31 Corridor Study* (see Table 1 on Page 3 – Country View Trail and North Creek Drive converted to a three-quarter access). Results of the analysis, summarized in Table 6, indicate that all study intersections are expected to continue to operate at an overall LOS C or better during the weekday a.m. and p.m. peak hours. However, side-street stop delays and queueing are expected to worsen as area development occurs (i.e. from background growth and the proposed development), which may result in aggressive maneuvers and/or safety risks at the study intersections, especially given the high travel speeds (i.e. 55-mph) along the corridor.

Table 6. Year 2026 Build Conditions - With & Without *CSAH 31 Corridor Study* Access Recommendations

Intersection	LOS (Delay)			
	Existing Layout		*CSAH 31 Corridor Study* Access Recommendations	
	AM Peak	PM Peak	AM Peak	PM Peak
Pilot Knob Road (CSAH 31)/173rd Street (1)	A/D (31 sec)	A/F (76 sec)	A/E (45 sec)	A/F (89 sec)
Pilot Knob Road (CSAH 31)/North Creek Drive (1)	A/A (10 sec)	A/D (30 sec)	A/A (3 sec)	A/A (8 sec)
Pilot Knob Road (CSAH 31)/Country View Trail (1)	A/D (29 sec)	A/F (84 sec)	A/A (5 sec)	A/B (11 sec)
Pilot Knob Road (CSAH 31)/179th Street	C (21 sec)	C (27 sec)	C (24 sec)	C (28 sec)

(1) Indicates an unsignalized intersection with side-street stop control, where the overall LOS is shown followed by the worst side-street approach LOS. The delay shown represents the worst side-street approach delay.

The following information summarizes the operational and/or queueing issues that warrant consideration as traffic volumes increase:

Pilot Knob Road (CSAH 31) and 173rd Street:

- With the proposed development, both the eastbound and westbound left-turn movements are expected to have over 100 seconds of delay during the p.m. peak hour. Despite delays exceeding one minute, side-street queues are not expected to exceed four (4) vehicles and are not anticipated to extend to adjacent neighborhood intersections.
- If North Creek Drive was restricted to a three-quarter access, as suggested in the *CSAH 31 Corridor Study,* approximately 10-15 eastbound left-turn movements are expected to reroute to the intersection, which would further increase delay at the side-street stop approaches (i.e. 76 seconds to 89 seconds).
- The traffic signal at the adjacent CSAH 31/170th Street intersection is scheduled for modification in 2025 to include bi-modal signal heads. This change will introduce bi-modal signal phasing, potentially creating additional gaps in traffic flow at the intersection.
- Based on a cursory review of the available volumes, the intersection is not expected to meet peak hour warrants, even with the rerouted traffic expected as part of an access restriction at North Creek Drive. However, a full warrant analysis was not completed.

Pilot Knob Road (CSAH 31) and Country View Trail:

- As area growth occurs along Pilot Knob Road (CSAH 31), eastbound delay is expected to slightly worsen during peak hours. It should be noted, however, that without a connection to/from the proposed development to Country View Trail, the proposed development will not contribute to any additional trips exiting this approach.
- While a three-quarter access would provide a less direct route for users, it would reduce conflict points, improve safety, and can be accommodated operationally at the Pilot Knob Road (CSAH 31)/179th Street traffic signal under year 2026 conditions.

Pilot Knob Road (CSAH 31) and 179th Street (CSAH 9):

- The intersection is expected to operate at an acceptable LOS C during peak hours with and without the *CSAH 31 Corridor Study* access recommendations.
    - Under both scenarios the eastbound left-turn movement is expected to extend beyond storage approximately five (5) percent of the p.m. peak hour.
    - The current southbound left-turn signal phasing is expected to accommodate the anticipated U-turn movements resulting from access restrictions along the CSAH 31 corridor. However, it should be noted that the increase in U-turn movements may lead to conflicts with westbound right-turns on red.

Improvement Considerations

Operational issues were identified under existing conditions that are expected to worsen as area growth (i.e. general background traffic and the proposed development) occurs. Since access to the project area is limited to Pilot Knob Road (CSAH 31) and no alternative roadway connections are available to the north, west, or south, improvement options for the study intersections are limited. While access restrictions could be considered at all study intersections (besides 179th Street) from a safety perspective, this may lead to increased U-turns along the corridor and longer travel times for the residential users. Therefore, the following improvements along Pilot Knob Road (CSAH 31) are offered for consideration, which are summarized below. Further discussion should occur with area stakeholders to determine if access modifications should be implemented.

1) **173rd Street:** Monitor the intersection and consider traffic control improvements (i.e. traffic signal) if/when traffic volumes warrant and/or safety issues occur.
2) **North Creek Drive:** If/when traffic control improvements occur at 173rd Street, consider closing or restricting the North Creek Drive access to a right-in/right-out.
3) **Country View Trail:** Consider converting the intersection to a three-quarter access. Note the Pilot Knob Road (CSAH 31)/179th Street intersection is only approximately 1,000 feet south of the access and would provide a southbound protected phase for users destined northbound to make U-turn movements. As previously mentioned, the intersection has the capacity to accommodate these U-turn movements, though potential conflicts with westbound right-turn movements would need to be monitored.
    a) Consider removing the restricted/gated connection to Country View Trail, to allow users of the proposed development to utilize this connection.
4) **179th Street (CSAH 9):** Monitor the signal timing and consider adjustments to reduce eastbound left-turn queues, as well as evaluate whether additional time is needed for the southbound left-turn phase.

Site Plan Review

A review of the proposed site plan was completed to identify any issues and recommend potential improvements with regard to internal roadways, access, traffic controls, sight distance, and circulation. The following information should be considered when designing internal traffic controls and access roadways:

- Incorporate traffic controls, signing, and striping based on guidelines established in the *Manual on Uniform Traffic Control Devices* (MUTCD).
- Special consideration should be made to limit any sight distance impacts from future structures, landscaping, and signing.

In general, all roadways within the proposed development are expected to function adequately as two-lane facilities. Internal intersections are also expected to operate adequately with side-street stop control. As development occurs, internal intersections should be reviewed to determine if a higher-level of traffic control (i.e. an all-way stop) should be considered. In addition, special consideration should be made to limit any sight distance impacts from future landscaping and signing at all internal and external intersections within the study area.

Summary and Conclusion

SRF has completed a traffic study for the proposed North Creek Manufactured Home Park expansion in the City of Lakeville, Minnesota. The proposed development is generally located west of the Pilot Knob Road (CSAH 31), between 173rd Street and Country View Trail. Key findings of the traffic study are summarized below:

1) **Existing Conditions**

   a. While all study intersections operate with an acceptable overall LOS, left-turn movements from the side-street approaches of 173rd Street and Country View Trail operate at a LOS F during the p.m. peak hour. These movements were observed to be challenging due to limited gaps in traffic along Pilot Knob Road (CSAH 31).

2) Traffic Forecasts

   a. **Background Growth:** A one (1) percent annual growth rate was applied to existing peak hour traffic volumes to forecast 2026 background traffic.

   b. **CSAH 31 Corridor Study Access Restrictions:** A forecast scenario was developed to account for access changes previously recommended within the *CSAH 31 Corridor Study*, which included three-quarter access conversions at North Creek Drive and Country View Trail.

c. **Proposed Development:** The proposed development is expected to generate approximately 51 trips during the a.m. peak, 75 trips during the p.m. peak, and 926 daily trips.

3) Future Operations

a. **Year 2026 Build Conditions (Existing Geometry):** Side-street stop delays at 173rd Street and Country View Trail are expected to worsen as area development occurs (i.e. from background growth and the proposed development), which may result in aggressive maneuvers and/or safety risks at the study intersections, especially given the high travel speeds (i.e. 55-mph) along the corridor.

b. **Year 2026 Build Conditions (CSAH 31 Corridor Study Access Assumptions):** Access restrictions at Country View Trail would reduce conflict points, increase safety, and can be accommodated operationally at the Pilot Knob Road (CSAH 31)/179th Street traffic signal. However, implementing access restrictions at North Creek Drive are expected to increase delays at the 173rd Street intersection.

4) Improvement Considerations

a. Access to the project area is limited to Pilot Knob Road (CSAH 31), and no alternative connections are available to the north, west, or south, which limits the improvement options for the study intersections. However, potential improvements were offered for consideration, as summarized on Page 15. Further discussion should occur with area stakeholders to determine if access modifications should be implemented.

5) Site Plan Review

a. A review of the proposed site plan was completed to identify any issues and recommend potential improvements with regard to internal roadways, access, traffic controls, and circulation.

Appendix

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.3	0.0	0.2	0.1
Total Del/Veh (s)	23.8	22.1	0.9	0.8	1.9

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	6.7	1.4	0.3	1.1

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	27.1	4.0	0.7	4.3

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.2	1.9	0.6	0.0	0.7
Total Del/Veh (s)	37.7	24.8	17.5	18.6	20.6

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.0

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	R	UL
Maximum Queue (ft)	64	57	73	15	4	28
Average Queue (ft)	21	15	21	1	0	7
95th Queue (ft)	46	43	49	8	3	23
Link Distance (ft)	700	1154				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300	290	275
Storage Blk Time (%)		3	1			
Queuing Penalty (veh)		1	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	52	19
Average Queue (ft)	16	1
95th Queue (ft)	41	9
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	156	38	4
Average Queue (ft)	58	8	0
95th Queue (ft)	123	29	0
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	258	97	46	39	83	106	203	287	278	16	112	153
Average Queue (ft)	124	21	18	8	23	40	112	147	123	2	35	76
95th Queue (ft)	213	61	37	30	58	83	190	256	236	10	83	134
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	2							0	0			
Queuing Penalty (veh)	2							0	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	166	90
Average Queue (ft)	84	28
95th Queue (ft)	146	64
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.2	3.1	0.0	0.0	0.0		3.3	0.1	3.4	0.1
Total Del/Veh (s)	26.8	9.2	46.4	12.7	1.7	0.9	0.1		12.9	0.5	1.0	1.9

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	17.1	3.6	2.8	1.4	0.3	0.1	1.1

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	38.1	18.6	7.0	4.0	0.7	0.2	4.3

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	0.4	2.5	2.4	0.3	2.3	2.3	0.3	2.4	0.0	0.0	0.0
Total Del/Veh (s)	51.1	43.5	4.9	42.9	55.5	14.3	46.0	13.6	3.0	57.7	64.5	19.4

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.0	0.7
Total Del/Veh (s)	4.1	20.6

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.0

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	R	UL
Maximum Queue (ft)	64	57	73	15	4	28
Average Queue (ft)	21	15	21	1	0	7
95th Queue (ft)	46	43	49	8	3	23
Link Distance (ft)	700	1154				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300	290	275
Storage Blk Time (%)		3	1			
Queuing Penalty (veh)		1	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	52	19
Average Queue (ft)	16	1
95th Queue (ft)	41	9
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	156	38	4
Average Queue (ft)	58	8	0
95th Queue (ft)	123	29	0
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	258	97	46	39	83	106	203	287	278	16	112	153
Average Queue (ft)	124	21	18	8	23	40	112	147	123	2	35	76
95th Queue (ft)	213	61	37	30	58	83	190	256	236	10	83	134
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	2							0	0			
Queuing Penalty (veh)	2							0	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	166	90
Average Queue (ft)	84	28
95th Queue (ft)	146	64
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	1.9	0.0	0.4	0.2
Total Del/Veh (s)	34.0	55.4	0.7	1.3	2.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	20.2	1.1	0.5	1.0

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	80.5	3.9	1.4	5.1

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.2	2.4	0.5	0.0	0.6
Total Del/Veh (s)	41.1	31.2	18.8	26.4	26.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	32.9

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	R	UL
Maximum Queue (ft)	44	105	84	24	4	61
Average Queue (ft)	11	28	16	1	0	20
95th Queue (ft)	33	78	51	11	3	48
Link Distance (ft)	700	1154				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300	290	275
Storage Blk Time (%)		14	1			
Queuing Penalty (veh)		4	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	76	36
Average Queue (ft)	15	9
95th Queue (ft)	50	28
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	235	59	9
Average Queue (ft)	75	23	0
95th Queue (ft)	189	50	3
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	342	255	221	51	82	79	178	243	233	33	136	344
Average Queue (ft)	167	61	83	14	22	25	84	143	112	2	50	221
95th Queue (ft)	273	162	169	39	62	57	160	238	210	14	106	321
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	5	0	0					0				3
Queuing Penalty (veh)	14	0	1					0				2

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	354	82
Average Queue (ft)	233	26
95th Queue (ft)	343	59
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	5	
Queuing Penalty (veh)	11	

Network Summary

Network wide Queuing Penalty: 31

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	3.5	0.0	0.0	0.0	2.3	2.3	0.3	2.2	0.2
Total Del/Veh (s)	49.6	11.7	104.6	11.7	8.1	0.7	0.1	3.1	9.9	1.0	0.9	2.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	33.6	13.1	7.3	1.1	0.5	0.1	1.0

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	102.1	60.4	12.5	3.6	1.4	0.8	5.1

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	0.8	2.2	3.0	0.3	3.1	2.6	0.2	2.4	0.2	0.0	0.0
Total Del/Veh (s)	60.0	52.3	19.9	50.5	69.2	9.8	52.7	14.5	2.7	57.9	74.1	27.7

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.1	0.6
Total Del/Veh (s)	6.2	26.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	32.9

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	R	UL
Maximum Queue (ft)	44	105	84	24	4	61
Average Queue (ft)	11	28	16	1	0	20
95th Queue (ft)	33	78	51	11	3	48
Link Distance (ft)	700	1154				
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300	290	275
Storage Blk Time (%)		14	1			
Queuing Penalty (veh)		4	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	76	36
Average Queue (ft)	15	9
95th Queue (ft)	50	28
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	LR	L	R
Maximum Queue (ft)	235	59	9
Average Queue (ft)	75	23	0
95th Queue (ft)	189	50	3
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	342	255	221	51	82	79	178	243	233	33	136	344
Average Queue (ft)	167	61	83	14	22	25	84	143	112	2	50	221
95th Queue (ft)	273	162	169	39	62	57	160	238	210	14	106	321
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	5	0	0					0				3
Queuing Penalty (veh)	14	0	1					0				2

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	354	82
Average Queue (ft)	233	26
95th Queue (ft)	343	59
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	5	
Queuing Penalty (veh)	11	

Network Summary

Network wide Queuing Penalty: 31

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	2.4	0.0	0.3	0.2
Total Del/Veh (s)	31.4	20.4	0.9	0.8	2.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	9.6	1.5	0.3	1.3

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	28.8	4.3	0.7	4.5

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.3	2.0	0.6	0.0	0.7
Total Del/Veh (s)	37.2	23.6	18.4	18.9	21.0

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.8

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	92	43	55	20	33
Average Queue (ft)	33	14	22	1	6
95th Queue (ft)	68	40	46	10	23
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		3	1		
Queuing Penalty (veh)		1	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	70	25
Average Queue (ft)	23	2
95th Queue (ft)	52	13
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	152	50
Average Queue (ft)	58	10
95th Queue (ft)	119	34
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	254	178	54	48	106	116	221	299	306	30	82	172
Average Queue (ft)	126	21	19	9	24	42	114	152	130	3	29	82
95th Queue (ft)	204	99	41	32	66	83	189	258	247	15	66	145
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	1							0	0			
Queuing Penalty (veh)	1							1	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	194	114
Average Queue (ft)	90	34
95th Queue (ft)	162	81
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.3	3.3	0.0	0.0	0.0		3.4	0.2	3.0	0.2
Total Del/Veh (s)	34.7	13.4	41.4	12.3	2.7	0.9	0.1		14.7	0.5	1.0	2.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	22.5	5.2	3.0	1.5	0.3	0.1	1.3

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	40.5	17.8	7.0	4.3	0.8	0.3	4.5

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	0.6	2.5	2.2	0.3	2.4	2.4	0.3	2.3	0.0	0.0	0.0
Total Del/Veh (s)	49.7	46.9	5.5	42.4	55.3	13.1	48.8	14.3	3.4	34.5	67.0	20.1

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.0	0.7
Total Del/Veh (s)	5.3	21.0

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	26.8

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	92	43	55	20	33
Average Queue (ft)	33	14	22	1	6
95th Queue (ft)	68	40	46	10	23
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		3	1		
Queuing Penalty (veh)		1	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	70	25
Average Queue (ft)	23	2
95th Queue (ft)	52	13
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	152	50
Average Queue (ft)	58	10
95th Queue (ft)	119	34
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	254	178	54	48	106	116	221	299	306	30	82	172
Average Queue (ft)	126	21	19	9	24	42	114	152	130	3	29	82
95th Queue (ft)	204	99	41	32	66	83	189	258	247	15	66	145
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	1							0	0			
Queuing Penalty (veh)	1							1	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	194	114
Average Queue (ft)	90	34
95th Queue (ft)	162	81
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 3

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	1.8	0.0	0.4	0.3
Total Del/Veh (s)	76.4	58.8	0.8	1.4	3.0

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	30.3	1.3	0.6	1.4

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	83.8	4.0	1.5	5.2

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.3	2.3	0.6	0.0	0.7
Total Del/Veh (s)	41.7	28.8	19.1	26.7	26.9

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	33.9

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	107	76	56	49	61
Average Queue (ft)	28	27	12	7	20
95th Queue (ft)	81	65	37	29	47
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		15	0		
Queuing Penalty (veh)		4	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	97	58
Average Queue (ft)	27	14
95th Queue (ft)	68	40
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	185	62
Average Queue (ft)	80	24
95th Queue (ft)	174	51
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	309	251	198	48	63	85	163	270	244	35	142	373
Average Queue (ft)	176	49	88	12	18	25	82	146	115	3	52	229
95th Queue (ft)	279	145	168	36	48	58	146	240	214	18	111	334
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	7	0	0					0	0			4
Queuing Penalty (veh)	21	1	1					0	0			2

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	376	70
Average Queue (ft)	239	29
95th Queue (ft)	348	57
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	6	
Queuing Penalty (veh)	12	

Network Summary

Network wide Queuing Penalty: 41

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.2	3.5	0.0	0.0	0.0	2.0	2.3	0.3	2.3	0.3
Total Del/Veh (s)	101.8	34.7	107.7	7.8	11.2	0.7	0.1	4.4	9.4	1.1	0.8	3.0

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	59.2	17.5	9.7	1.1	0.6	0.1	1.4

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBL	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	111.8	58.8	13.5	3.6	1.5	0.9	5.2

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	1.0	2.4	2.7	0.3	2.9	2.7	0.3	2.3	0.0	0.0	0.0
Total Del/Veh (s)	59.8	58.3	22.0	45.2	68.7	10.3	50.5	15.2	3.3	75.7	67.2	28.4

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.1	0.7
Total Del/Veh (s)	6.4	26.9

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	33.9

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	107	76	56	49	61
Average Queue (ft)	28	27	12	7	20
95th Queue (ft)	81	65	37	29	47
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		15	0		
Queuing Penalty (veh)		4	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	LTR	L
Maximum Queue (ft)	97	58
Average Queue (ft)	27	14
95th Queue (ft)	68	40
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	LR	L
Maximum Queue (ft)	185	62
Average Queue (ft)	80	24
95th Queue (ft)	174	51
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	309	251	198	48	63	85	163	270	244	35	142	373
Average Queue (ft)	176	49	88	12	18	25	82	146	115	3	52	229
95th Queue (ft)	279	145	168	36	48	58	146	240	214	18	111	334
Link Distance (ft)		2122			1664			1167	1167			999
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	7	0	0					0	0			4
Queuing Penalty (veh)	21	1	1					0	0			2

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	376	70
Average Queue (ft)	239	29
95th Queue (ft)	348	57
Link Distance (ft)	999	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	6	
Queuing Penalty (veh)	12	

Network Summary

Network wide Queuing Penalty: 41

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.2	2.3	0.0	0.3	0.1
Total Del/Veh (s)	44.7	22.0	1.0	0.9	3.0

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.3	1.4	0.3	1.1

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	3.9	4.8	0.8	3.6

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.3	2.0	0.6	0.0	0.7
Total Del/Veh (s)	37.8	26.2	21.6	21.0	23.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	29.3

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	134	59	60	15	36
Average Queue (ft)	46	14	23	1	7
95th Queue (ft)	107	41	49	8	24
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		3	1		
Queuing Penalty (veh)		1	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	56	24
Average Queue (ft)	18	3
95th Queue (ft)	44	16
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	84	37
Average Queue (ft)	39	9
95th Queue (ft)	71	31
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	244	128	54	43	79	103	214	342	299	41	139	166
Average Queue (ft)	127	24	17	9	26	41	113	185	146	4	62	86
95th Queue (ft)	217	87	39	32	66	80	189	294	259	20	120	151
Link Distance (ft)		2122			1664			1167	1167			993
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	2						0	1	1			
Queuing Penalty (veh)	2						0	2	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	185	95
Average Queue (ft)	97	31
95th Queue (ft)	162	66
Link Distance (ft)	993	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 6

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.2	0.2	3.0	0.0	0.0	0.0	4.4	3.2	0.2	3.3	0.1
Total Del/Veh (s)	46.7	32.9	42.9	13.7	2.8	1.0	0.1	6.7	15.9	0.5	0.3	3.0

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.3	3.0	1.4	0.3	0.0	1.1

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	3.9	7.8	4.8	0.8	0.3	3.6

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	0.5	2.5	2.5	0.4	2.4	2.5	0.3	2.4	0.0	0.1	0.0
Total Del/Veh (s)	50.1	46.7	5.4	35.8	56.1	16.3	50.1	17.7	3.7	60.7	60.6	20.1

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.0	0.7
Total Del/Veh (s)	4.8	23.5

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	29.3

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	SB
Directions Served	LTR	LT	R	L	UL
Maximum Queue (ft)	134	59	60	15	36
Average Queue (ft)	46	14	23	1	7
95th Queue (ft)	107	41	49	8	24
Link Distance (ft)	700	1154			
Upstream Blk Time (%)					
Queuing Penalty (veh)					
Storage Bay Dist (ft)			50	300	275
Storage Blk Time (%)		3	1		
Queuing Penalty (veh)		1	0		

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	56	24
Average Queue (ft)	18	3
95th Queue (ft)	44	16
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	84	37
Average Queue (ft)	39	9
95th Queue (ft)	71	31
Link Distance (ft)	729	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		210
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	244	128	54	43	79	103	214	342	299	41	139	166
Average Queue (ft)	127	24	17	9	26	41	113	185	146	4	62	86
95th Queue (ft)	217	87	39	32	66	80	189	294	259	20	120	151
Link Distance (ft)		2122			1664			1167	1167			993
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	2						0	1	1			
Queuing Penalty (veh)	2						0	2	0			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	185	95
Average Queue (ft)	97	31
95th Queue (ft)	162	66
Link Distance (ft)	993	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)		
Queuing Penalty (veh)		

Network Summary

Network wide Queuing Penalty: 6

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	0.1	1.9	0.0	0.5	0.3
Total Del/Veh (s)	89.3	47.0	0.8	1.5	3.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0
Total Del/Veh (s)	8.2	1.2	0.6	1.0

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by approach

Approach	EB	NB	SB	All
Denied Del/Veh (s)	0.2	0.0	0.0	0.0
Total Del/Veh (s)	10.9	4.1	1.6	3.0

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by approach

Approach	EB	WB	NB	SB	All
Denied Del/Veh (s)	2.2	2.2	0.6	0.0	0.7
Total Del/Veh (s)	40.9	33.9	21.5	28.0	28.2

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	33.5

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	T	UL
Maximum Queue (ft)	125	72	54	40	4	60
Average Queue (ft)	38	22	13	6	0	19
95th Queue (ft)	108	55	39	26	0	44
Link Distance (ft)	700	1154			536	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300		275
Storage Blk Time (%)		11	0			
Queuing Penalty (veh)		3	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	65	48
Average Queue (ft)	14	13
95th Queue (ft)	45	37
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	R	L	R
Maximum Queue (ft)	104	57	4
Average Queue (ft)	41	24	0
95th Queue (ft)	81	53	3
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	295	239	182	56	74	74	188	273	259	37	179	377
Average Queue (ft)	172	49	90	13	20	24	91	163	130	3	89	232
95th Queue (ft)	261	151	163	41	53	55	168	247	227	18	159	354
Link Distance (ft)		2122			1664			1167	1167			993
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	4	0	0					0	0			5
Queuing Penalty (veh)	11	1	0					0	0			5

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	389	72
Average Queue (ft)	239	30
95th Queue (ft)	356	59
Link Distance (ft)	993	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	6	
Queuing Penalty (veh)	12	

Network Summary

Network wide Queuing Penalty: 33

10: Pilot Knob Road (CSAH 31) & 173rd Street Performance by movement

Movement	EBL	EBR	WBL	WBR	NBL	NBT	NBR	SBU	SBL	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.1	0.1	3.5	0.0	0.0	0.0	2.4	2.3	0.3	2.3	0.3
Total Del/Veh (s)	106.3	48.9	87.7	11.4	12.4	0.8	0.1	8.6	9.6	1.2	1.2	3.3

20: Pilot Knob Road (CSAH 31) & North Creek Drive Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.1	0.0	0.0	0.0	0.0	0.0
Total Del/Veh (s)	8.2	10.0	1.0	0.6	0.2	1.0

30: Pilot Knob Road (CSAH 31) & County View Trail Performance by movement

Movement	EBR	NBL	NBT	SBT	SBR	All
Denied Del/Veh (s)	0.2	0.1	0.0	0.0	0.0	0.0
Total Del/Veh (s)	10.9	14.0	3.7	1.6	0.8	3.0

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Denied Del/Veh (s)	2.4	0.9	2.2	3.1	0.2	2.7	2.6	0.3	2.3	0.1	0.0	0.0
Total Del/Veh (s)	59.4	51.1	22.3	60.8	73.1	9.9	53.7	17.4	3.5	73.4	70.5	28.1

40: Pilot Knob Road (CSAH 31) & 179th Street Performance by movement

Movement	SBR	All
Denied Del/Veh (s)	0.1	0.7
Total Del/Veh (s)	6.4	28.2

Total Network Performance

Denied Del/Veh (s)	0.8
Total Del/Veh (s)	33.5

Intersection: 10: Pilot Knob Road (CSAH 31) & 173rd Street

Movement	EB	WB	WB	NB	NB	SB
Directions Served	LTR	LT	R	L	T	UL
Maximum Queue (ft)	125	72	54	40	4	60
Average Queue (ft)	38	22	13	6	0	19
95th Queue (ft)	108	55	39	26	0	44
Link Distance (ft)	700	1154			536	
Upstream Blk Time (%)						
Queuing Penalty (veh)						
Storage Bay Dist (ft)			50	300		275
Storage Blk Time (%)		11	0			
Queuing Penalty (veh)		3	0			

Intersection: 20: Pilot Knob Road (CSAH 31) & North Creek Drive

Movement	EB	NB
Directions Served	R	L
Maximum Queue (ft)	65	48
Average Queue (ft)	14	13
95th Queue (ft)	45	37
Link Distance (ft)	1099	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		300
Storage Blk Time (%)		
Queuing Penalty (veh)		

Intersection: 30: Pilot Knob Road (CSAH 31) & County View Trail

Movement	EB	NB	SB
Directions Served	R	L	R
Maximum Queue (ft)	104	57	4
Average Queue (ft)	41	24	0
95th Queue (ft)	81	53	3
Link Distance (ft)	729		
Upstream Blk Time (%)			
Queuing Penalty (veh)			
Storage Bay Dist (ft)		210	290
Storage Blk Time (%)			
Queuing Penalty (veh)			

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	EB	EB	EB	WB	WB	WB	NB	NB	NB	NB	SB	SB
Directions Served	L	T	R	L	T	R	L	T	T	R	UL	T
Maximum Queue (ft)	295	239	182	56	74	74	188	273	259	37	179	377
Average Queue (ft)	172	49	90	13	20	24	91	163	130	3	89	232
95th Queue (ft)	261	151	163	41	53	55	168	247	227	18	159	354
Link Distance (ft)		2122			1664			1167	1167			993
Upstream Blk Time (%)												
Queuing Penalty (veh)												
Storage Bay Dist (ft)	215		215	225		225	275			275	265	
Storage Blk Time (%)	4	0	0					0	0			5
Queuing Penalty (veh)	11	1	0					0	0			5

Intersection: 40: Pilot Knob Road (CSAH 31) & 179th Street

Movement	SB	SB
Directions Served	T	R
Maximum Queue (ft)	389	72
Average Queue (ft)	239	30
95th Queue (ft)	356	59
Link Distance (ft)	993	
Upstream Blk Time (%)		
Queuing Penalty (veh)		
Storage Bay Dist (ft)		265
Storage Blk Time (%)	6	
Queuing Penalty (veh)	12	

Network Summary

Network wide Queuing Penalty: 33

NEIGHBORHOOD MEETING NOTES
NORTH CREEK MANUFACTURED HOME PARK CONDITIONAL USE PERMIT
OCTOBER 5, 2023

The owners of North Creek Manufactured Home Park (MHP) hosted a neighborhood meeting for residents of the North Creek MHP and nearby residents of the property on October 4, 2023 and located at 17332 North Creek Drive, Farmington (Lakeville). The owners of North Creek MHP propose an expansion to include 153 new home units on 26.5 acres south of the west North Creek MHP development. The new development would be access via an existing bridge culvert over North Creek with a proposed gated emergency access to Country View Manufactured Home Park (MHP). The neighborhood meeting was held at North Trail Elementary School located at 5580 – 170th Street, Farmington (Lakeville). The neighborhood meeting was attended by approximately 50 people.

Topics and questions including the following:

- Concerns of traffic flow due to a single access to the expanded area from a bridge over North Creek at the west end of the North Creek MHP.
- Country View MHP concerns about a private street access to their property allowing North Creek MHP. The owner of Country View MHP stated their objections to a connection. City staff indicated support from public safety personnel to include an open street connection or a gated street connection to allow for emergency vehicle access in due part of the single access for Country View MHP to Pilot Knob Road (CSAH 31).
- Increased amount of traffic existing to Pilot Knob Road.
- Residents of North Creek MHP raised concerns about existing infrastructure/street conditions/increased unit lot rents.
- Proposed new storm shelter, shelter access, capacity.
- Is an EAW or EIS required?
- Residents of the single family homes to the west concerned about site drainage, screening, need for a fence, trespassing by current residents, and perceived negative impact to their property values.

EXHIBIT M

CITY OF LAKEVILLE
DAKOTA COUNTY, MINNESOTA

NORTH CREEK MANUFACTURED HOME PARK CONDITIONAL USE PERMIT

FINDINGS OF FACT AND RECOMMENDATION

On February 6, 2025 the Lakeville Planning Commission met at its regularly scheduled meeting to consider the request of Dirt Boys, on behalf of North Creek of Lakeville, LLC for a conditional use permit for a manufactured home park use in the RSMH, Single Family Manufactured Home Park District. The Planning Commission conducted a public hearing on the proposed conditional use permit preceded by published and mailed notice. The applicant was present and the Planning Commission heard testimony from all interested persons wishing to speak.

FINDINGS OF FACT

1. The subject property is located in Comprehensive Planning District 3, which guides the property for Manufactured Housing.

2. The subject site is zoned RSMH, Single Family Manufactured Home Park District.

3. The legal description of the property is attached in Exhibit A.

4. Chapter 4 of the City of Lakeville Zoning Ordinance provides that a conditional use permit may not be issued unless certain criteria are satisfied. The criteria and our findings regarding them are:

   a. **The proposed action has been considered in relation to the specific policies and provisions of and has been found to be consistent with the official City Comprehensive Plan.**

      Finding: The proposed manufactured home community with 130 home pad sites are consistent with the guided manufactured housing use of the property.

   b. **The proposed use is or will be compatible with future land uses of the area**.

      Finding: The proposed manufactured home community is compatible with the existing and future land uses in the area.

   c. **The proposed use conforms with all performance standards contained in the Zoning Ordinance and the City Code**.

      Finding: Provided compliance with the stipulations of the conditional use permit, the 130 manufactured home pad sites and development amenities will conform to all performance standards contained in the Zoning Ordinance and City Code.

   d. **The proposed use can be accommodated with existing public services and will not overburden the City's service capacity.**

      Finding: The 130 manufactured home pad sites can be accommodated with existing public services and will not overburden the City's service capacity.

e. **Traffic generated by the proposed use is within capabilities of streets serving the property.**

Finding: The public and private streets serving this site are adequate to accommodate traffic from the new manufactured home units.

5. The report dated January 27, 2025, and prepared by Tina Goodroad, Community Development Director, is incorporated herein.

RECOMMENDATION

The Planning Commission recommends that the City Council approve the conditional use permit conditioned upon compliance with the planning report prepared by Tina Goodroad, Community Development Director, dated January 27, 2025.

DATED: February 6, 2025

LAKEVILLE PLANNING COMMISSION

BY: _____
Jenna Majorowicz, Chair

Exhibit A

That part of the Southwest Quarter of Section 27, Township 114, Range 20, Dakota County, Minnesota, lying South of a line beginning at the southeast corner of said Southwest Quarter of Section 27; thence north 0 degrees 04 minutes 11 seconds West along the east line of said Southwest Quarter, a distance of 865.83 feet; thence North 87 degrees 37 minutes 00 seconds West a distance of 610.37 feet; thence North 3 degrees 00 minutes 00 seconds West a distance of 316.50 feet; thence North 2 degrees 15 minutes 00 seconds East a distance of 216.08 feet; thence North 88 degrees 45 minutes 00 seconds West a distance of 461.93 feet; thence south 47 degrees 15 minutes 00 seconds West a distance of 610.00 feet; thence North 71 degrees 52 minutes 11 seconds West a distance of 1167.36 feet, more or less, to the west line of said Southwest Quarter of Section 27, and there terminating.

Dakota County, Minnesota

Abstract Property

City of Lakeville
Public Works – Engineering Division

Memorandum

To: Tina Goodroad, Community Development Director

From: Jon Nelson, Assistant City Engineer
McKenzie L. Cafferty, Environmental Resources Manager
Joe Masiarchin, Parks and Recreation Director

Copy: Zach Johnson, City Engineer
Julie Stahl, Finance Director
Dave Mathews, Building Official

Date: January 27, 2025

Subject: North Creek Manufactured Home Park

- Conditional Use Permit
- Grading and Erosion Control Plan Review
- Utility Plan Review
- Site Plan Review

BACKGROUND

Dirt Boys, Inc. has submitted a conditional use permit to expand and construct new home sites at the existing North Creek Manufactured Home Park. The proposed development is located south of and adjacent to the North Creek Greenway, east of Fairfax Avenue, west of Pilot Knob Road and north of 176th Street. The parent parcel consists of undeveloped land (PID 220110076012). The parcel is zoned RSMH, Single family manufactured home park district.

The proposed site plan will be completed by:

Applicant: Dirt Boys, Inc.
Engineer: Clearwell Engineering

SITE CONDITIONS

The North Creek Manufactured Home Park site primarily contains undeveloped land. The site is located within the North Creek Stormwater District. The site is bisected with the northern half of the site generally draining southwest to northeast and the south end of the site

generally draining west to east. The site is bordered to the north by the North Creek greenway, the east and south by existing manufactured homes and to the west by single family homes along Fairfax Avenue.

EASEMENTS

Prior to recording of the conditional use permit:

- A drainage and utility easement along the grading extents of both stormwater basins in favor of City of Lakeville shall be recorded.
- A drainage and utility easement along the Special Flood Hazard Area (SFHA), as determined by FEMA, in favor of City of Lakeville shall be recorded.
- A shared access easement shall be placed over the northern lot private roadways accessing the site from Pilot Knob Road (CSAH 31).
- A shared access easement shall be placed over the private roadway over the North Creek Greenway.

STREET AND SUBDIVISION LAYOUT

Pilot Knob Road

North Creek Manufactured Home Park is located west of Pilot Knob Road, a minor arterial roadway as identified in the City's Transportation Plan. A traffic impact study was finalized on January 20, 2025 in relation to North Creek Manufactured Home Park. The applicant shall be responsible for implementation of recommended improvements considered in the study deemed as the result of the traffic generated from the site.

Site Access

Access to the site is proposed via extension of the existing privately owned and maintained road, Fairgreen Avenue. The proposed new entrance shall utilize an existing crossing of North Creek to the site. An easement, by the city, will be required to be recorded with the CUP for this crossing. A gated access is proposed for emergency vehicle access only on the south end of the site, connecting to Country View Trail. The Applicant shall provide a $10,000 security for construction of a street connection to County View Trail.

CONSTRUCTION ACCESS

Construction traffic access and egress shall be restricted to a single entrance from Pilot Knob Road.

UTILITIES

SANITARY SEWER

North Creek Manufactured Home Park is located within subdistrict NC-20115 of the North Creek sanitary sewer district as identified in the City's Comprehensive Sanitary Sewer Plan. Wastewater will be conveyed through City sanitary sewer to the MCES interceptor sewer

monitored by meter M643A. Wastewater treatment is provided by the Empire Wastewater Treatment Facility.

Development of North Creek Manufactured Home Park includes the connection of an 8-inch privately owned and maintained sanitary sewer service to the existing 15-inch sanitary sewer with a manhole located within the greenway conservation area of North Creek Greenway to provide service to North Creek Manufactured Home Park. The Applicant shall provide a $10,000 security for connection to the public sanitary sewer.

Sanitary Sewer Connection Charge and M.C.E.S. Sac unit, established by MCES, are to be paid with a building permit application.

The Sanitary Sewer Availability Charge has not been collected on the site and is required prior to the issuance of a conditional use permit, calculated as follows:

130 units	x $327.00	= $42,510.00
Total Units North Creek MHP	2025 Unit Rate	Sanitary Sewer Availability Charge North Creek MHP

WATERMAIN

An existing 8-inch watermain service extends into the property in the southwest portion of the parcel. Development of North Creek Manufactured Home Park includes the connection of a 8-inch privately owned and maintained watermain service to the existing 8-inch public watermain. The Applicant shall provide a $10,000 security for connection to the public watermain.

Watermain Unit Charge is to be paid with a building permit application.

DRAINAGE AND GRADING

The site is located within subdistrict NCL-62 of the North Creek drainage district, as identified in the City's Water Resources Management Plan.

Development of North Creek Manufactured Home Park will include the construction of two privately owned and maintained stormwater basins consisting of one infiltration basin and one wet basin.

The Applicant shall sign a private maintenance agreement for both stormwater basins and dedicate drainage and utility easements over the stormwater management areas prior to recording of a conditional use permit. The storm basins will provide water quality treatment, volume reduction and rate control of the stormwater runoff generated from the proposed site improvements. A grading permit is required to be obtained from the City Engineering Department prior to construction commencing on the site.

The final grading plan shall identify all fill lots in which the building footings will be placed on fill material. The grading specifications shall also indicate that all embankments meet FHA/HUD 79G specifications. The Applicant shall certify to the City that all lots with footings placed on fill material are appropriately constructed. Building permits will not be issued until a soils report and an as-built certified grading plan have been submitted and approved by City staff.

North Creek Manufactured Home Park contains more than one acre of site disturbance. A National Pollution Discharge Elimination System General Stormwater Permit for construction activity is required from the Minnesota Pollution Control Agency for areas exceeding one acre being disturbed by grading. A copy of the Notice of Stormwater Permit Coverage must be submitted to the City upon receipt from the MPCA.

STORM SEWER

Privately owned and maintained storm sewer will be constructed within North Creek Manufactured Home Park. Private storm sewer constructed within North Creek Manufactured Home Park will convey runoff to two privately owned and maintained storm basins. The privately owned and maintained storm basins will ultimately outlet to North Creek. The outlet overflows will be protected by rip rap in accordance with city standards. The Applicant shall provide a $20,000 security prior to issuance of the conditional use permit for the two storm overflows to North Creek.

The Storm Sewer Charge has not been collected on the site and must be collected with the North Creek Manufactured Home Park Conditional Use Permit, calculated as follows:

Storm Sewer Charge Summary		
Gross Area of North Creek Manufactured Home Park		1,154,340.00 s.f.
Less Area of Storm Basins	(-)	218,236.00 s.f.
Total	=	936,104.00 s.f.

936,104.00 s.f.	x $0.198/s.f.	= $185,348.59
Net Area of North Creek MHP	Residential (multi-family) Area Charge	Total Storm Sewer Charge

FEMA FLOODPLAIN ANALYSIS

North Creek Manufactured Home Park is shown on Flood Insurance Rate Map (Map No. 27037C0208E; Eff. Date 12/2/2011) primarily as Zone X by the Federal Emergency Management Agency (FEMA). Based on this designation, the manufactured home lots within North Creek Manufactured Home Park are not located within a Special Flood Hazard Area (SFHA), as determined by FEMA.

North Creek crosses through the northeast corner of North Creek Manufactured Home Park and is designated as Zone AE, and therefore within a Special Flood Hazard Area (SFHA). The area mapped as Zone AE will be placed in a drainage and utility easement.

WETLANDS

A wetland delineation was completed for the site by Minnesota Natural Resource. On November 30, 2022, the Notice of Application was distributed to TEP members, and no objections were raised. Based on the information provided, including the site visit conducted on November 2, 2022, the wetland delineation for North Creek Manufactured Home Park, as detailed in the report, is approved for use in implementing the Wetland Conservation Act.

The North Creek Manufactured Home Park project qualifies for a "no-loss" determination under the Minnesota Wetland Conservation Act. Although a small, incidentally created wetland (0.11 acres) was identified, it was determined to have originated from past grading in historically upland soils. Therefore, its impact does not require mitigation.

TREE PRESERVATION

A tree preservation plan shall be submitted and approved by city staff prior to issuance of a grading permit. The tree preservation plan is required to meet the tree preservation Lakeville Subdivision Ordinance. Significant trees identified for preservation shall be protected and preserved through termination of all grading and construction activities.

EROSION CONTROL

The Applicant is responsible for meeting all the requirements outlined in the MPCA Construction Permit. The applicant must submit to the City a SWPPP for the site that meets all the requirements of the MPCA Construction Permit for review and approval before any land disturbance can take place.

Additional erosion control measures may be required during construction as deemed necessary by City staff. Any additional measures required shall be installed and maintained by the applicant.

The Applicant is responsible for the establishment of native vegetation within the privately owned and maintained basins. This may include mowing, spot spraying and overseeding until the areas are established and approved by the City.

The MS4 Administration Fee has not been collected on the parent parcels and will be required to be paid with the conditional use permit, calculated as follows:

$654,400.00	x 2% Grading Costs	= $13,088.00
Mass Grading Cost	MS4 Admin Fee	Total

SECURITIES

The Applicant shall provide a Letter of Credit as security for the Applicant-installed improvements relating to North Creek Manufactured Home Park. The security will be required prior to issuance of a conditional use permit.

CONSTRUCTION COSTS

Connect Storm Drainage	20,000.00
Connect to Country View	10,000.00
Connect to Existing Sanitary Sewer	10,000.00
Connect to Existing Watermain	10,000.00
Site Grading, Erosion Control, Restoration, Stormwater Basins and Grading Certification	170,000.00
SUBTOTAL - CONSTRUCTION COSTS	$ 220,000.00

OTHER COSTS

Applicant's Design (3.0%)	$ 6,600.00
Applicant's Construction Survey (2.5%)	5,500.00
City's Legal Expense (0.5%)	1,100.00
City Construction Observation (5.0%)	11,000.00
Applicant's Record Drawing (0.5%)	1,100.00
Landscaping	164,550.00
SUBTOTAL - OTHER COSTS	$189,850.00
TOTAL PROJECT SECURITIES	**$ 409,850.00**

CASH FEES

The Applicant shall submit the site and construction drawings in an electronic format. The electronic format shall be in .pdf and either a .dwg file (AutoCAD) or a .dxf format.

A cash fee for one-year of the Environmental Resources Fee shall be paid at the time of final plat approval and is calculated as follows:

130 units	x 0.25	x $61.52 / year	= $1,999.40
Dwelling Units North Creek MHP	Manufactured Homes Utility Factor	Environmental Resources Fee	Total

A cash fee for the preparation of addressing, property data, and City base map updating shall be paid prior to issuance of a conditional use permit and is calculated as follows:

1 lot	x $90.00/unit	= $90.00
Lots North Creek MHP	2025 Rate	Property Data & Asset/Infrastructure Mgmt. Fee North Creek MHP

The City shall invoice the Applicant for as-built services as based on consultant hourly rates.

The Applicant shall also pay a cash fee for City Engineering Administration. The fee for City Engineering Administration will be based on three percent (3.00%) of the estimated construction costs, or $6,600.00.

CASH REQUIREMENTS	
Sanitary Sewer Availability Charge	$42,510.00
Storm Sewer Charge	185,348.59
Environmental Resources Management Fee	1,999.40
MS4 Admin Fee	13,088.00
City Engineering Administration	6,600.00
TOTAL CASH REQUIREMENTS	**$249,545.99**

RECOMMENDATION

Engineering recommends approval of the site plan, grading plan, erosion control plan, and utility plan for North Creek Manufactured Home Park, subject to the requirements and stipulations within this report.

City of Lakeville
Community Development Dept

Memorandum

FYI

To: **Planning Commission**
From: **Kris Jenson, Planning Manager**
Date: **January 30, 2025**
Subject: **Future and Continued Planning Commission Agenda Items**
Summary of City Council Actions on Planning Commission Items

The following is a list of possible agenda items to be considered at upcoming Planning Commission meetings:

- Airlake DEA 2nd Addition preliminary plat
- Lord of Life townhomes preliminary plat, easement vacation, and variance

At their January 21, 2025 meeting, the City Council approved the following:

- Ordinance amending Title 11 of the City Code (Zoning Ordinance)
- Kenrick Corner Second Addition preliminary plat and easement vacation

City of Lakeville
Community Development Dept

Memorandum

To: Planning Commission and Parks, Recreation and Natural Resources Commission

From: Tina Goodroad, Community Development Director

Date: January 30, 2025

Subject: Packet Material for the February 6, 2025 joint work session

Agenda Item: Tree Preservation Ordinance Amendment

Over the past several months, Community Development and Forestry staff have been working on revisions to the Tree Preservation Ordinances that are included in the zoning and subdivision codes. In October, staff presented a summary of the current ordinances and consideration of what could be included in an update to the City Council, who supported the exploration of these ideas and to seek input from the Planning and Parks, Recreation and Natural Resources Commissions.

During the joint meeting staff will present a summary of the current ordinance and goals for the update. Staff has prepared a content outline for an updated ordinance that we will use for discussion at the joint meeting. Primary areas for discussion will include:

1) Scope of application- what types of development will be subject to this ordinance.
2) Removal threshold- for each development type, a removal threshold is proposed before replacement is required.
3) Removal calculations – how the inventory should be counted based on tree types, number of trees, and/or caliper inches.
4) Tree replacement requirements- how the replacement trees are to be calculated for any tree removal above the permitted removal threshold.

Input from this meeting will help staff prepare a final draft ordinance. Staff will also be reaching out to developers for their input on proposed amendments.

Once the review process is complete, a Planning Commission public hearing for the proposed ordinance will be scheduled.

Attachments
Summary of Current Ordinance
Tree Preservation Ordinance Outline
Removal Threshold Math
Comparison Chart (sending separately)

Summary of Tree Preservation Ordinance Review – January 2025

Benefits of trees:

- Property value – for both owners and developers
- Heating/cooling cost reductions
- Water quality improvement
- Storm water run-off and erosion control
- Shade
- Public health
- Neighborhood/community character

Why is it important to update the ordinance now?

- Development is shifting from agricultural land with few trees into wooded parcels where large portions of the city's tree canopy exist.
- We continue to hear from residents that trees are an important part of the community with concerns raised about the loss of trees when development occurs.
- Envision Lakeville: Community Values
    - *Access to a multitude of natural amenities and recreational opportunities: We value widespread access to nature, the outdoors, and all types of recreational opportunities.*
    - *Design that connects the community: We value a well-designed community, and we place a priority on development that enhances connectivity and accommodates our changing needs.*
    - Document highlights natural resources as a strength of the community.

The current state of our tree preservation ordinance:

- Does:
    - Applies to subdivisions and new home construction on custom graded lots under the subdivision ordinance.
    - Requires a certified tree preservation plan which identifies all significant trees (trees greater than 6" diameter) onsite and indicates which trees – if any – are to be preserved.
    - Identifies measures to be used to protect trees that are to be preserved.
    - Requires a financial security to ensure the proposed tree preservation measures are followed, or that damaged trees are replaced.
    - Requires replacement planting for trees that were identified by the development team to save, but which were removed or damaged during construction.
    - Prior to release of the security/issuance of the COO, requires written certification the tree preservation plan was followed including:
        - The status of all trees to be saved on the approved plan,
        - Whether tree protection measures were installed,
        - The status of trees that were to be removed,
        - Required replacement trees were planted.
    - Provides a developer driven framework to determine which trees on a site will be preserved.
    - Requires the development team to consider tree preservation when designing a site and to preserve, where feasible, all healthy trees of significant value.
- Does not:
    - Require the preservation of any trees on a site.
    - Provide community defined preservation standards on the number or types of trees/forests to be preserved (doesn't account for loss of forest benefits, community resilience, access to nature, character, and well-designed development to the surrounding and larger community).
    - Provide any site-specific requirements based on the land-type in which development occurs. (wooded vs agricultural lands)
    - Provide planting guidelines to promote tree diversity to limit future shade tree pest and disease issues.
    - Identify inspection requirements prior to release of security and issuance of COO.
    - Address development on individual lots, redevelopment, or expansion projects.

What are our goals with the update?

- Updates would better address and guide tree preservation efforts with the projected changes in the future context of development (woodland vs agricultural).
- Promotes tree preservation and establishes standards that account for different forest types and tree quality found on a site.
- Take into account the value of long-lived, high-quality trees such as oaks compared to relatively short-lived species such as boxelder and encourage the developers to prioritize high value trees and woodland.
- Provide a framework to preserve the existing benefits of trees and woodlands, including increases in property values, for the community.
- Establish a standard of tree preservation that aligns with community values.
- Establish clear and consistent levels of city oversight in development projects.

Our proposed updates would address:

Scope of Applicability:
The tree preservation ordinance would apply to subdivisions and new construction in Residential, Commercial, Industrial, and Institutional zoning districts. Projects would need to submit a tree preservation plan.

Removal Threshold:
A removal threshold is the maximum amount of diameter inches of significant trees that can be removed without requiring the planting of replacement trees.

Zoning code	Removal Threshold
RS-1 to RS-4	30 percent
RST-1, RST-2, RM-1 to RM-3 RH, RHCBD	50 percent
Commercial, Industrial, Institutional	60-70 percent

Tree Removal and Replacement Categories:
To prioritize the preservation of desirable trees and establish replanting requirements; trees are categorized as common, conifer/evergreen, and hardwood species. Removal thresholds are applied to common tree species first and hardwood species last.

Example: Residential*
Development in residential districts may remove or disturb up to 30% of the total significant diameter inches of trees surveyed on the site. Any removal or disturbance beyond this threshold requires restoration. The following calculation must be used to determine tree replacement requirements:

1. Calculate 30% of the total diameter inches (DBH) of significant trees on the site. This is the allowable tree removal limit, or the number of inches that can be removed without replacement.
2. Subtract the total diameter inches of common trees (which are significant) that will be removed from the allowable inches.
3. If any allowable inches remain, subtract the total diameter inches of coniferous/evergreen trees (which are significant) that will be removed from the remaining allowable inches.
4. If any allowable inches remain, subtract the total diameter inches (DBH) of hardwood deciduous trees (which are significant) that will be removed from the remaining allowable inches.

Trees which are considered Heritage Trees are unique to Lakeville due to their size and age. All reasonable measures shall be taken to preserve these trees. There is a 0% removal threshold, meaning every diameter inch (DBH) of heritage tree removed will require replacement in accordance with the standards of this section. No heritage tree will be considered exempt.

Tree Replacement Schedule:
Tree removals over the allowable tree removal limit on the parcel shall be replaced according to the following schedule:

1. Common tree species shall be replaced with new trees, at a rate of one-eighth (1/8) the diameter inches lost (i.e., 1 inch diameter of replacement trees for each 8 inches of tree diameter lost).
2. Coniferous/evergreen species shall be replaced with new trees, coniferous or deciduous, at a rate of one-fourth (1/4) the diameter inches lost (i.e., 1 inch diameter of replacement trees for each 4 inches of tree diameter lost).
3. Hardwood deciduous tree species shall be replaced with new hardwood deciduous trees at a rate of one-half (1/2) the diameter inches lost (i.e., 1 inch diameter of replacement trees for each 2 inches of tree diameter lost).
4. Heritage trees must be replaced at a rate of 1/1, one caliper inch of replacement for every diameter inch of tree removed.

*This method is implemented in city ordinances of Dayton, Woodbury, and Farmington. Inver Grove Heights has a similar, generalized, requirement. Most communities listed in the comparison table have set a removal threshold.

Additional proposed updates:

- Tree preservation plan requirements and protection measures will be clarified.
- The possibility of including incentives to preserve existing high-quality trees is being explored.
- Exceptions to the removal threshold calculation include:
    - Trees affected by an epidemic insect or disease issue, for example, ash trees;
    - Invasive tree species;
    - Trees in locations where public improvements will be made: streets, sidewalks, public stormwater management infrastructure.
- City review process

Topics for discussion:

- Scope of Applicability – Should we extend the TPP requirements to include other development types?
    - Properties within shoreland overlay
    - Building additions
    - Outlots
    - General grading
- Methods of calculating replacement requirements.
    - Refer to Example Calculation Document

TREE PRESERVATION ORDINANCE

1. INTENT AND PURPOSE

    a. Intention statement: Importance of tree preservation and replacement, recognizing that some level of tree removal is inevitable with development. Recognizes the benefits trees provide to the community.

2. DEFINITIONS:

    a. The following words and terms, whenever they occur in this section, are defined as follows:
    b. See list in Appendix A

3. SCOPE OF APPLICATION:
    a. The following types of development shall require a tree preservation plan, regardless of zoning district:
        i. New development at time of subdivision review
        ii. New building construction including:
            1. New Construction on a vacant lot
            2. New Construction on a metes and bound lot (infill)
            3. Residential tear down and re-build that is expanding the footprint of original structure

4. TREE PRESERVATION PLAN
    a. Indicates when a tree preservation plan is required.
    b. Identifies who must prepare and submit the tree preservation plan.
    c. Identifies the information that is to appear on the tree preservation plan.

5. REMOVAL THRESHOLDS AND REPLACEMENT REQUIREMENTS
    a. Establish removal thresholds based on development type. The removal threshold is the maximum amount of diameter inches of significant trees that can be removed without requiring the planting of replacement trees.
        i. Residential – 30%
            1. RS1-RS4
        ii. Multifamily – 50%
            1. RST-1 and RST-2
            2. RM-1 to RM-3
            3. RH and RHCBD
            4. RSMH
        iii. Commercial, Industrial, Institutional – 70%
    b. Removal Calculations
        i. Calculate the total percentage of tree removal on a site
        ii. Calculate the removal of:
            1. Common Deciduous Trees

2. Conifer/Evergreen Trees
3. Hardwood Deciduous Trees

iii. Heritage trees are not counted under the removal threshold but 100% of the heritage trees removed must be replaced at a rate of 1:1.

6. REQUIRED TREE PROTECTION MEASURES:
   a. Identifies measures required to protect significant trees and woodlands.
   b. Identifies external document where all tree protection standards and alternate best practices are listed.

7. TREE REPLACEMENT REQUIREMENTS
   a. The following replacement requirements apply to trees removed above the threshold as defined in section 5.
   b. Replacement policy: Replacement trees are required for any tree removal above the removal threshold, adjusted for tree type
      i. Common: 1/8 diameter inches lost must be replaced in caliper inches of replacement trees
      ii. Conifer: ¼ diameter inches lost
      iii. Hardwood deciduous: ½ diameter inches lost
      iv. Heritage trees: one hundred percent (100%) of diameter inches lost must be replaced
   c. Replacement tree requirements
      i. Define nursery stock and sizing requirements#
   d. Tree species diversity requirements and list of approved trees
   e. Planting locations:
      i. Identify where required trees are to be planted and where not to be planted
      ii. Landscape/Reforestation Plan
         1. Landscape buffer standards/individual lot requirements
   f. Fee in lieu
   g. Warranty Requirements

8. INCENTIVES
   a. Determine if heritage tree preservation or other incentives should be included.

9. EXCEPTIONS
   a. Significant trees removed under the following circumstances are exempt from removal threshold calculation:
      i. List: include public improvements, epidemic tree pests/disease, as determined by city, other

10. REVIEW, GUARANTEES, INSPECTION, ENFORCEMENT
    a. Review
    b. Amendments to the tree preservation/reforestation plan
    c. Financial guarantee

i. Update guarantees/securities
ii. Identify the release of funds

d. Implementation, inspection, and enforcement of the tree preservation plan
e. Final certifications and inspections
f. Removal of tree protection measures

Appendix A: Definitions (WORKING LIST, FURTHER TERMS AND EDITS NEEDED)

Buildable Area: *Work on definition related to area where structures can be placed on a parcel*

Caliper Inches: Stem diameter of nursery stock as identified by American Nursery Standards.

Common Trees - A deciduous overstory tree including cottonwood, poplars/aspen, box elder, willow, silver maple, elm, and any other tree species not defined as hardwood deciduous tree or a coniferous/evergreen tree or considered non-native to Minnesota.

Conifer Trees - A tree that bears cones and evergreen needle-like or scale like leaves year-round which reaches a height of at least 15 feet at maturity.

Critical root zone: The root protection area around a tree defined as a circle with a radius of 1 foot for every 1 inch of trunk diameter.

Destroyed or Damaged: A tree shall be considered destroyed or damaged for the purpose of required replacement if more than 30% of the root system or 30% of the trunk circumference is damaged.

DIAMETER (DBH): The measurement of a tree's trunk measured four and one-half feet (4.5') above the ground.

DRIP LINE: The farthest distance away from the trunk of a tree that rain or dew will fall directly to the ground from the leaves or branches of the tree or one foot (1') per one inch (1") of diameter, whichever is greater.

Hardwood Deciduous – A woody tree which has a defined crown, and which loses leaves annually including oaks, *(identify list or reference current city list)*

Heritage Tree – A hardwood deciduous tree greater than (choose size threshold) inches in diameter at 4.5’ or a conifer greater than (choose size threshold) inches in diameter at 4.5’.

Significant Woodland: An area of forested land that has contiguous tree canopy greater than 2 acres regardless of land ownership. *Does it matter if this is common trees?... should this be defined as hardwood/heritage, some percentage of

Hazard or Nuisance Tree – tree is dead, diseased, as determined by the city… (refer to shade tree ordinance or nuisance ordinance?) (define exceptions)

Public Improvements: (see exceptions section)

SIGNIFICANT TREE: A healthy tree measuring six inches (6") in diameter or greater.

Significant Diameter Inches: The total diameter inches of all significant trees inventoried in each category (hardwood deciduous, common, and conifer).

TREE CERTIFICATION: A certified inventory of trees on the site after work is complete listing all trees and their final disposition, which is signed by a licensed forester or landscape architect.

TREE PRESERVATION PLAN: A plan and inventory certified by a licensed or registered forester or landscape architect indicating all of the significant trees and their locations in the proposed development or on the lot. The tree preservation plan shall include the size, species, tag numbers, and location of all significant trees proposed to be saved and removed on the area of development, and the measures proposed to protect the significant trees to be saved.

TREE PROTECTION: Snow fencing or Orange polyethylene laminar safety netting or chain link fencing placed at the drip line of the significant trees to be preserved. The tree protection measures shall be shown on tree preservation plan drawings and remain in place until all grading and construction activity is terminated. (Ord. 673, sec. 1, 7-17-2000; amd. Ord. 866, sec. 39, 5-17-2010)

Example Calculation: Residential property with a 30% removal threshold

All diameter inches in calculations are from significant trees only.

Existing conditions:
1000 diameter inches total on site
500 diameter inches in common trees
200 diameter inches in coniferous trees
300 diameter inches in hardwood deciduous

Proposed changes:
500 diameter inches are removed, of those:
200 diameter inches are common
200 diameter inches are coniferous
100 diameter inches are hardwood deciduous

30% removal threshold means 300 diameter inches are allowed removal.

Removal threshold calculation:

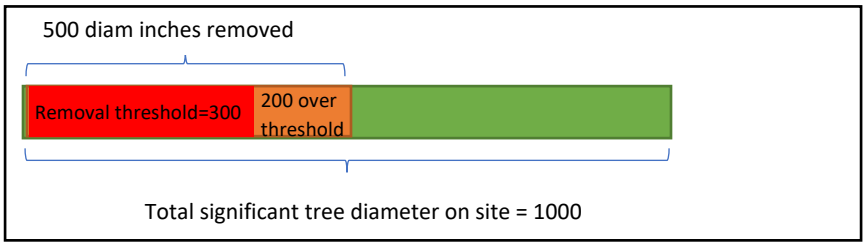
First, subtract common diameter inches from removal threshold

300-200 = 100 remaining allowable removal

Then, subtract coniferous diameter inches from removal threshold. Any remaining inches require replacement.

100-200 = 100 with a remaining 100 inches of coniferous trees that require replacement.

100 diameter inches of hardwood deciduous require replacement.



Out of the 500 diameter inches removed, 200 require replacement.

Replacement required calculation:

Coniferous: ¼ replacement

$100 * \frac{1}{4} = 25$ diameter inches worth of replacement trees

Hardwood deciduous: ½ replacement

$100 * \frac{1}{2} = 50$ diameter inches worth of replacement trees

Total replacement: 75 diameter inches worth of replacement trees.
Roughly 30 replacement trees at 2.5" each.

For example:
If the 1000 diameter inches are in 100 trees all 10 inches in diameter, 50 of those trees are removed, out of those 50, 30 trees are required to be replaced.