

CITY OF MINNETRISTA



REQUEST FOR CITY COUNCIL ACTION

Subject: Application from J & J Minnetrista, LLC (Mackenthun's) for concept review of a grocery store and multi-family apartment building on property located within the Woodland Cove Master Planned Unit Development.

Prepared By: Nickolas Olson, Senior City Planner

Meeting Date: July 18, 2022

Overview: J & J Minnetrista, LLC (Mackenthun's) (the "Applicant") has submitted an application for a Concept Plan Review of a grocery store and multi-family apartment building at the property generally known as PID# 34-117-24-33-0013. The proposed development site is located within the Woodland Cove Master Planned Unit Development ("Woodland Cove").

Background: Woodland Cove is a 1,071 unit, 490 acre mixed use development located off of Highway 7 and Kings Point Road. To date, a total of 11 phases (3 lake and 8 non-lake) have been approved and roughly 616 homes have either received a permit or been completed. The framework for Woodland Cove was developed through a Master Development Agreement with, among other things, goals and objectives for the development. When it came to commercial and multi-family portion of the development, the Master Development Agreement laid out a very conceptual idea for what might ultimately be developed. This was intentionally done this way to provide the City and the developer with flexibilities to consider a wide array of options given the relative unknown of what the market might support given the limited existing commercial and lack of multi-family located within Minnetrista.

During the review of the preliminary plat for Woodland Cove, the realignment of (Carver) County Road 11 and Kings Point Road to meet at a common intersection on Highway 7 was studied. A committee was established including the City, MNDOT, Carver County, Three Rivers Park District and the developer to determine the appropriate type of intersection control, location of the intersection on Highway 7, and general configuration of the intersection. With the proposed Woodland Cove development, a revised Intersection Control Evaluation (ICE) was completed, documenting a roundabout as the most appropriate intersection control. In addition to the (Carver) County Road 11/Kings Point Road and Highway 7 intersection, the intersection of Highway 7 and County Road 44 has been upgraded to include a new traffic control signal system.

As part of the proposed Woodland Cove development plan, a connection to County Road 44 using the existing Lotus Drive has been made. A detailed analysis was completed to

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determine the amount of traffic that would use this connection from the proposed development to County Road 44.

It wasn't until 2021, when Mackenthun's approached City staff about the prospects of opening a location on the portion of Woodland Cove north and west of roundabout at Highway 7 and Kings Point Road that the City saw real interest in the site. During the many discussions, City staff suggested it might make sense for Mackenthun's to put together a concept plan application for the City to provide comments on and give direction on future submittals.

Discussion: The concept plan is an initial presentation of the applicant's intention and serves as the basis for conceptual discussion between the city and the applicant. The purpose of the review is to allow staff, the Planning Commission, and the City Council an opportunity to guide the applicant as to what is generally expected by the city, and to alert an applicant to potential problems with the proposal. This feedback can then be used by an applicant to make an informed decision on whether to proceed with a formal application. The concept plan review does not require any formal approval or denial from the City Council.

- **Comprehensive Plan:** As part of this concept, the City Council should look at the total number of multi-family units allowed (108) and what is being proposed (140-148). While Woodland Cove was preliminarily approved for 1,071 total units, the City allowed for ability to consider increasing the number of units up to 1,259, or an additional 188 units, without the need for a Comprehensive Plan Amendment. The proposed unit increase of 32 units is well within the total allowed without an amendment. The City Council should provide feedback on the proposal and determine what would be an acceptable increase for the City to consider.

Planning Commission Meeting: The Planning Commission reviewed and discussed the proposed concept plan at their June 27, 2022 meeting. During the meeting, the Planning Commission heard comments from the Applicant, the potential developer of the multi-family apartment building, and a total of 6 residents of Woodland Cove. While there appeared to be some support for the Applicant and the product they produce, there were concerns from the residents regarding the concept plan. Those concerns seemed to center around traffic. The neighborhood is concerned with the amount of traffic the proposed use will generate and the impact that will have on the adjacent streets and highways, specifically the roundabout at the intersection of Kings Point Road and Highway 7. Other concerns raised included noise and views from the adjacent neighborhood. After hearing from the developers and the comments of the public, the Planning Commission provided the Applicant with some comments to think about as they move forward in the process. The Planning Commission is aware of the concerns regarding traffic, congestion, noise, and lights. It was mentioned that the City should engage MNDOT regarding Highway 7 and the roundabout to see what, if anything, needs to be done there. There were additional traffic concerns on the east side of the building, which includes the coffee shop drive thru, customer grocery pick up, and the grocery store loading docks all

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on the same side. The Planning Commission also was interested in the possibility of moving the proposed building location on the site, potentially to the north, and the inclusion of sidewalks adjacent to the development along Kings Point Road. One comment that a resident made that the Planning Commission appreciated was having the Applicant look to include landscaping, preferably bushes over trees, and the use of berms to help create a buffer between the proposed grocery store and the adjacent neighborhood. Lastly, there were some concerns regarding the potential unit number, but the Planning Commission recognized that the unit number might not directly mean less residents and trips since the developer offers a wide variety of number of bedroom options in the products they offer.

Recommended Action: Since a concept plan does not require any formal action from the City, the City Council should review the materials and information provided within this staff report and provide the Applicant with guidance on a future application submittal. When providing guidance, the City Council should work to develop a consensus amongst themselves.

Attachments:

1. Applicant Narrative
2. Concept Plan Set
3. Concept Renderings for Grocery Store
4. Sample Images and Concept Elevations for Multifamily
5. Review Memo from City Engineer

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Mackenthun's – Minnetrista, MN

Concept Plan Review – Narrative to Plan Commission Meeting Comments

July 11, 2022

1. **Site Layout/Orientation** – several options were evaluated for the layout and orientation of the grocery store, and supporting functions, before selecting the proposed layout:
 - a. Option #1 – Grocery store located at the South end of the commercial parcel, with the back of the building facing HWY 7 and the storefront facing North:
 - i. In northern climates such as MN, best practice in grocery store design is to avoid a North-facing storefront. The winter climate, and associated freeze-thaw cycle, creates a hazard for patrons, and a liability for grocery operators, related to the following:
 1. Ice and snow build-up at the storefront pedestrian walkways.
 2. Ice and snow build-up/overhang at storefront building structure that can fall onto patrons entering and exiting the grocery facility.
 - ii. This layout creates insufficient space and additional congestion for the ingress/egress and circulation of the delivery vehicles.
 1. Note – the grocery storefront drive aisle must align with Woodland Cove Blvd on East side of King's point Road.
 2. Insufficient space available for delivery vehicle movements to access unloading areas.
 3. Insufficient space available for delivery vehicle movements for ingress/egress at South site access point from King's Point Road.
 - iii. This layout results in the need for multiple "storefront" elevations for the grocery store, causing a cost burden for the grocery store developer.
 - iv. Screening the grocery back-of house areas is more difficult in this layout, as there is less space available for landscape berms and landscaping.
 - b. Option #2 – Grocery store located at the West end of the commercial parcel, with the back of the building facing West and the storefront facing East:
 - i. There is insufficient East-to-West depth of the commercial parcel to accommodate the following:
 1. Parking field for the grocery store.
 2. Depth of the grocery building.
 3. Space for grocery delivery vehicle movements and back-of-house functions.
 - ii. An East-facing grocery facility increases the possibility of ice and snow hazard issues related to the MN winter climate.
 - c. Option #3 – Grocery store located at the far North end of the commercial parcel, with the grocery storefront facing South:
 - i. The optimum location for the grocery storefront aisle/drive is to align it with Woodland Cove Blvd, which would not be possible with this layout. This creates difficulties with layout of the primary ingress/egress into the commercial site across from Woodland Cove Blvd, the grocery store parking field and the grocery storefront aisle/drive.
 - ii. Difficulty in creating the outlot parcel to be dedicated to the City of Minnetrista for the potential, future fire station.

- iii. Difficulty with ingress/egress, circulation pathways and delivery vehicle movements to serve the grocery store.
- iv. Pushing the grocery store to the North property line would create outlot pads to the South of the grocery parking field, which would be conducive to retail and quick-serve users.
 - 1. Retail and quick-serve users conducive to this layout could exasperate the concern related to traffic and circulation within the commercial site, as well as ingress/egress for the commercial site.
 - 2. There are two commercial, retail outlots available for sale on the East side of King's Point Road.
- v. Difficulty in creating two access points to the multi-family site.
- d. Option #4 – Grocery storefront aligns with Woodland Cove Blvd intersection within King's Point Road (current, proposed layout):
 - i. South-facing storefront is best practice for grocery store design.
 - ii. This layout allows for the optimum location for the grocery storefront aisle/drive, aligned with Woodland Cove Blvd on the East side of King's Point Road.
 - iii. Allows for use of existing curb cut in King's Point Road across from Cranesbill Road for ingress/egress for North private drive.
 - iv. Allows for use of existing curb cut in King's Point Road for ingress/egress for South private drive.
 - v. Allows for delivery vehicle movements to access grocery unloading areas, as well as for delivery vehicle movements for ingress/egress at North site access point from King's Point Road.
 - vi. Creates outlots for residual commercial users along North property line:
 - 1. 0.66-acre outlot parcel to be dedicated to the City of Minnetrista for the potential, future fire station.
 - 2. 2.19-acre outlot parcel to for one or more potential commercial users.
 - vii. Allows for two access points to the multi-family site – (1) from the North private drive and (1) from the South private drive.
 - viii. A pylon/monument sign near the South private drive will help draw attention to the Mackenthun's storefront from HWY 7 and Kings Point Road.

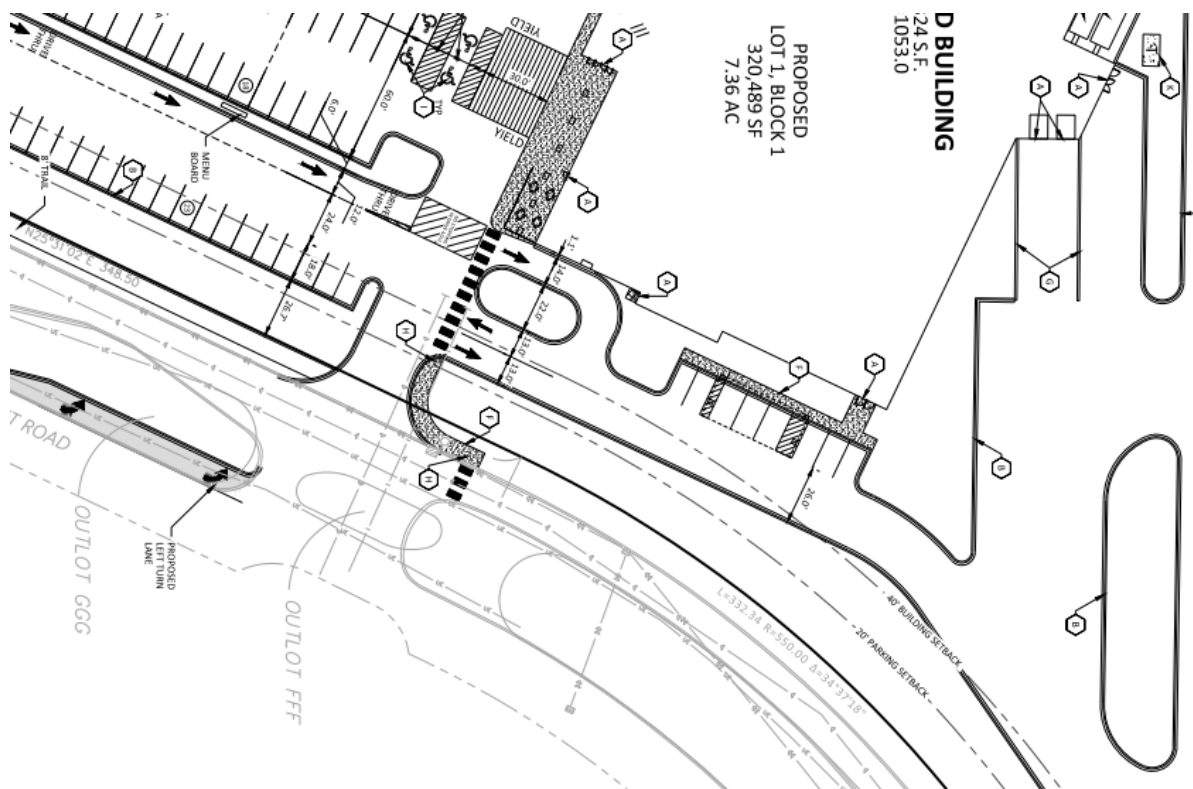
2. Caribou Coffee drive-thru:

- a. The proposed drive-thru queuing lane exceeds current Caribou Coffee design standards for the following:
 - i. Capacity for quantity of cars from the Menu Board to the Pick-up Window.
 - ii. Distance from the start of the drive-thru lane to the Pick-up Window.
- b. Way-finding signage will assist drive-thru patrons as follows:
 - i. Entrance into the commercial development from King's Point Road.
 - ii. Start of the drive-thru queuing lane within the commercial development.
 - iii. Clearance bar, preview board, menu board to guide patrons within the drive-thru queuing lane.
 - iv. Parking lot striping to be utilized at the grocery storefront aisle/drive to prevent drive-thru patrons from blocking the drive aisle.
 - v. The Pick-up Window signage to be incorporated so easily recognizable.

- vi. Directional signage to be incorporated to guide patrons exiting the Pick-up Window.
- c. Typical peak hours for a Caribou Coffee drive-thru such as the one proposed is 7:00 AM to 11:00 AM.
- d. Caribou Coffee has successfully implemented the proposed layout in other grocery-anchored commercial developments in MN and WI.
- e. It is highly recommended to incorporate a drive-thru, as it has a significant impact on the success of the Caribou Coffee franchise.

3. Circulation at East side of grocery store:

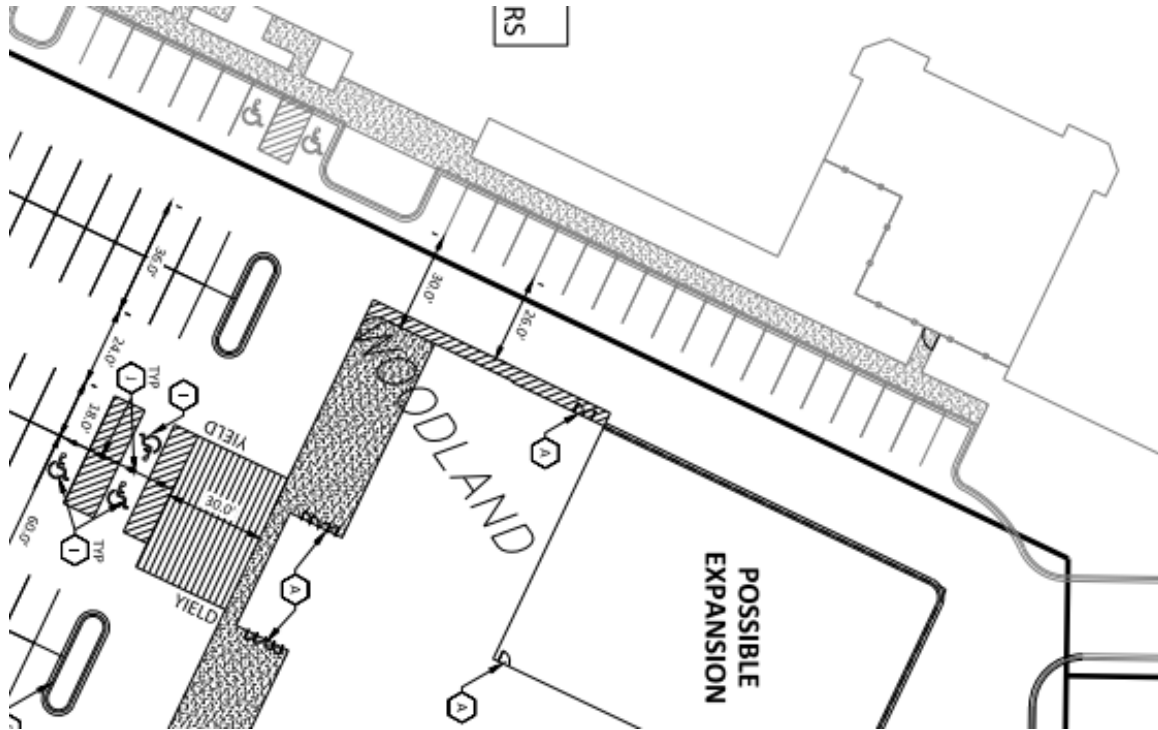
- a. See below for a revised site layout for East side of grocery store:



- i. Parking row along King's Point Road is eliminated to create additional circulation space, as well as reduce potential congestion.
- ii. Revised drive-thru egress layout for Caribou Coffee drive-thru.
- iii. Revised, defined separation of the Caribou Coffee drive-thru and online parking pick-up parking area.
- iv. Revised curb-line at loading dock/delivery area for improve delineation of delivery circulation.

4. Wine & Spirits deliveries/apartment parking coordination:

- a. See below for a revised site layout for the Wine & Spirits deliveries at the West side of grocery store.



- b. The width of the access drive West of the grocery store is 26', with an additional 4' striped area adjacent to the building for pull-off for wine & spirits' delivery vehicles.
- c. This layout is effective for allowing access of delivery vehicles as well as allowing ingress/egress for apartment parking stalls West of the grocery store.
- d. Wine & Spirits anticipated delivery stats:
- Anticipated quantity of delivery trucks per day – (1).
 - Anticipated timing of delivery each day – mid-morning.
 - Typical type of truck delivering product – semi-truck.
 - Typical method to unload delivery truck? – 2-wheeled carts.
 - Typical timeframe to unload a truck? – (1) hour.

5. Screening of North side and NE corner of grocery store:

- a. Landscape berms and landscape screening to be incorporated at the following areas to screen the grocery store delivery areas:
- Landscape island in the Northeast corner of the grocery parcel.
 - Landscape islands separating the grocery delivery areas and the North private drive.
 - Perimeter of the grocery store Future Expansion area.

6. Noise.

- a. Anticipated quantity of delivery trucks each day:
 - i. Monday:
 - 1. Semi-trucks: (5).
 - 2. Small delivery trucks (DSD): (10).
 - ii. Tuesday:
 - 1. Semi-trucks: (5).
 - 2. Small delivery trucks (DSD): (15).
 - iii. Wednesday:
 - 1. Semi-trucks: (4).
 - 2. Small delivery trucks (DSD): (9).
 - iv. Thursday:
 - 1. Semi-trucks: (8).
 - 2. Small delivery trucks (DSD): (18).
 - v. Friday:
 - 1. Semi-trucks: (7).
 - 2. Small delivery trucks (DSD): (15).
 - vi. Saturday:
 - 1. Semi-trucks: (2).
 - 2. Small delivery trucks (DSD): (3).
 - vii. Sunday - None
- b. Anticipated timing of deliveries – between 6:00 AM and 1:00 PM.
- c. Landscape berms and landscape screening to be incorporated at the following areas to buffer noise from grocery store delivery areas:
 - i. Landscape island in the Northeast corner of the grocery parcel.
 - ii. Landscape islands separating the grocery delivery areas and the North private drive.
 - iii. Perimeter of the grocery store Future Expansion area.

7. Water usage:

- a. Per the WSB report dated 6/24/22 within the Concept Plan Review report to the City of Minnetrista:
 - i. The site is served by the City's South System.
 - ii. The existing water supply capacity of the City's South System is 2,160,000 gpd.
 - iii. After factoring in the proposed commercial development improvements, the City's average day demand and maximum day demand are projected to increase to 710,000 gpd and 1,657,000 gpd respectively.

8. Apartment density:

- a. The proposed multifamily project will contain 140 - 148 units and complies with the current zoning of R-5 - High Density Multiple Family Residential with a PUD overlay and Mixed Residential in the 2040 Comprehensive Plan. While Woodland Cove was preliminary approved for 1,071 units (108 for multifamily) when the PUD was approved in 2012, the City is allowed to consider increasing the number of units up to 1,259, or an additional 188 units. The proposed increase of up to 40 units is within the total allowed without a Comprehensive

Plan Amendment. Increasing the number of units allows the developer to provide higher level of finishes and amenities such as a pool, clubroom, and fitness center, while also staying with the intent of the City's land use goals. Woodland Cove's Master Development Agreement laid out a very conceptual idea for might ultimately be developed. This was intentionally done this way to provide the City and the developer with flexibilities to consider a wide array of options given the relative unknown of what the market might support given the limited existing commercial and lack of multifamily located in Minnetrista.

- b. The proposed building is four stories of apartments over a two-story podium for enclosed parking. The building is placed to utilize the natural slope of the site. The result is that the building appears to be only 4-stories from the east side which is the side viewed by adjacent parcels and public ways. The west side of the project abuts the wooded conservation area. In addition, material and color changes, as well as the entrance canopy on the east side further reduce the mass of the building to bring it to more of a human scale. The northeast façade of the building is broken up by an 80-foot wide at-grade amenity area to provide visual relief along the east elevation.

9. Apartment Traffic/Parking:

- a. The multifamily project would include approximately 228 underground parking stalls. This is equivalent to 1.54 - 1.63 stalls per unit, or 1.08 -1.16 stalls per bedroom. This is a similar stall to unit ratio to Doran Companies' project Carrick in Tonka Bay. There is sufficient parking for residents' needs.
 - i. Carrick – Tonka Bay: 1.63 stalls per unit or 1.15 stalls per bedroom.
- b. Forty-eight surface parking stalls are also provided for guest/future resident parking. There will be signs indicating which stalls will be for guest parking to avoid guest parking to flow into the grocery store parking. Guests would have to register their name and vehicle information to park in the guest stalls so property management can track guests and restrict residents from using the surface stalls.
- c. The residents would access the underground parking within the building by the north or south private drives. This avoids having resident parking flow through the middle of the grocery store parking lot. Providing abundant parking in these areas is intended to keep surrounding streets free from parking cars.
- d. The proposed site is not within close proximity to transit. However, if new bus routes service the area, property management could add screens that show bus routes and times in the lobby.

10. Traffic in Woodland Cove:

- a. Woodland Cove is a master planned community and an AUAR for overall development was completed and last updated in 2017. As a part of the AUAR, a traffic study was completed which included the commercial area proposed for development. WSB, the City's consulting engineer, has been requested to review the traffic demand of the proposed development with respect to what was included in the 2017 AUAR update. Furthermore, we understand that MnDOT has reconfigured the round-a-bout from a two-lane to a single-lane configuration. WSB will review to determine if this reconfiguration has reduced the overall capacity of the round-a-bout and/or has reduced the level of service for any of the adjoining streets.

11. Pedestrian access to commercial area:

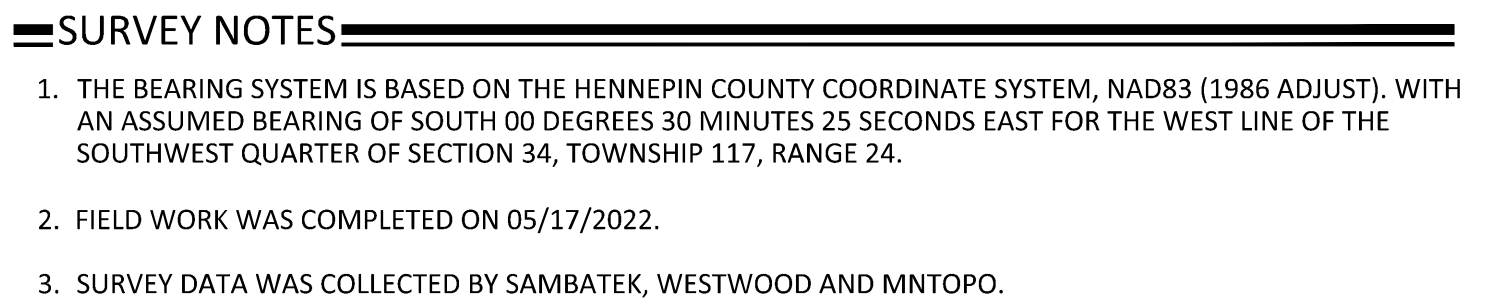
- a. A sidewalk is proposed along the front of Mackenthun's that will allow pedestrian connections from the apartments to the sidewalk along Woodland Cove Boulevard. An additional sidewalk is proposed along the southern drive access which proposes a trail connection along the west side of Kings Point Road to the public trail along Highway 7. We understand that sidewalks were not proposed along Kings Point Road as a part of Woodland Cove Master Development Plan to focus pedestrian connectivity on the vast trail network that meanders through the overall development.

12. Snow storage:

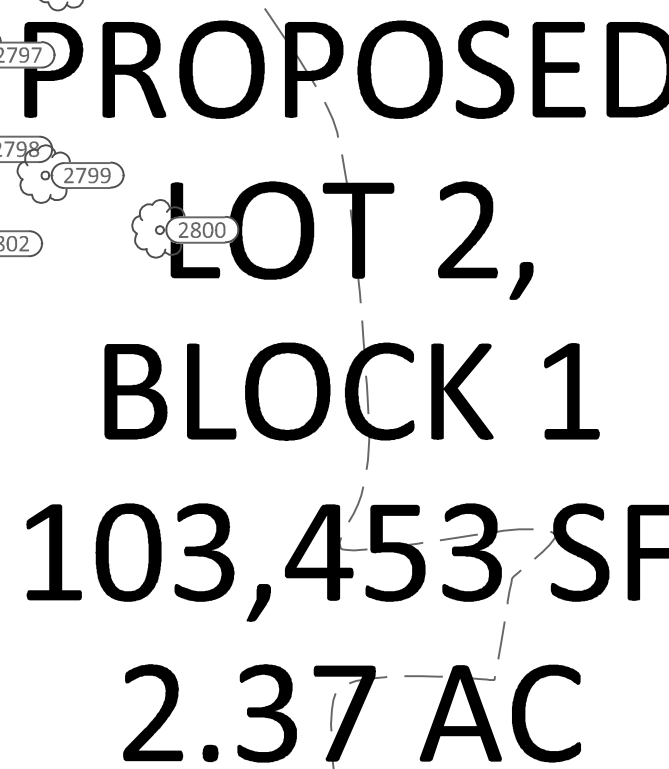
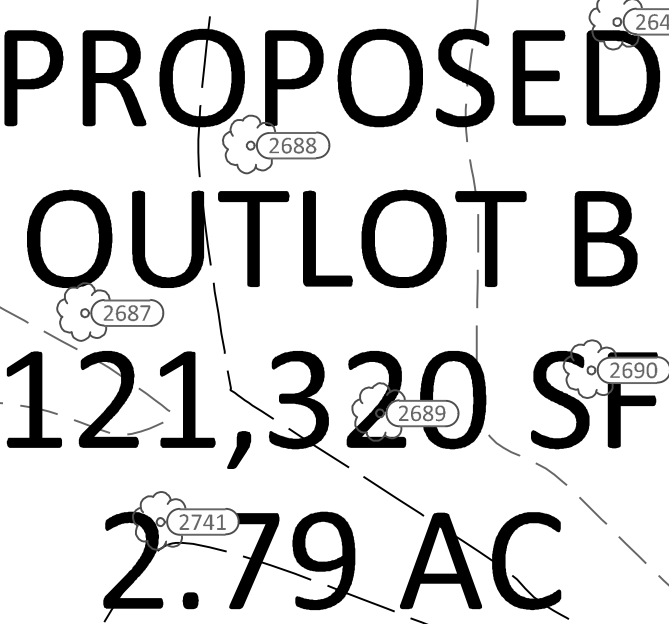
- a. As typical with commercial retail and apartment developments, snow will be cleared from driveways and parking lots by a private contractor. Snow is typically moved to remote locations of the parking areas for storage. When necessary, the snow will be loaded and removed from the site to maintain appropriate parking and accessibility. Due to a desire to accommodate water re-use from the stormwater facilities, we do not believe that snow will be stored within the stormwater management areas.

13. Site lighting:

- a. Site lighting will be designed in accordance with the City code and will be uniform for the entire development. Lighting is anticipated to be pole mounted downcast full cutoff LED light fixtures, which allow for directing and controlling the light levels for the project area. Minimum light levels will be maintained to provide a safe and comfortable environment for customers, associates, residents and visitors. When and where appropriate, certain lights may be on a timing that will allow the lights to turn off during non-business hours. A photometric plan is being prepared and will be submitted as a part of the Site Plan review application.




SHEET
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1 OF 2
REV.



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I hereby certify that this plan, survey, or report was prepared by me under my direct supervision and that I am a duly Licensed Land Surveyor under the laws of the State of Minnesota.

Print Name: Mark R. Salo



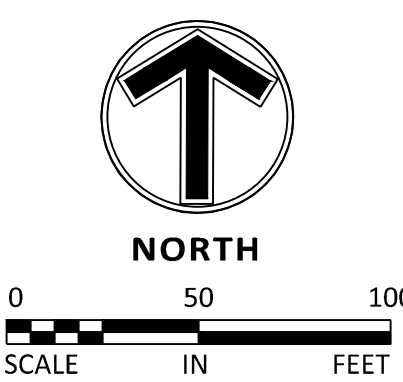
Date 5/27/2022 License # 43933

DRAWN BY EJH
DESIGNED BY
CHECKED BY MRS
PROJECT NO. 50879



SKETCH PLAN TREE INVENTORY
J & J MINNETRISTA, LLC
MACKENTHUNS DEVELOPMENT 05/27/2022
CITY SKETCH PLAN APPLICATION
MINNETRISTA, MN

SHEET
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REV.





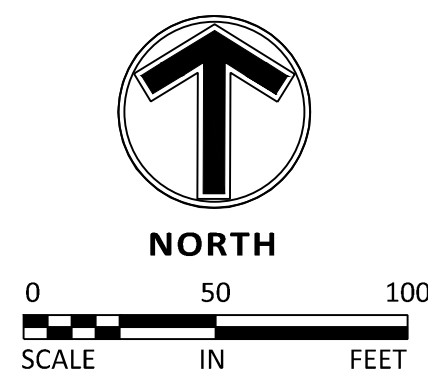
CONSULTANT CONTACT LIST:

OWNER WOODLAND COVE, LLC 2 CARLSON PKWY, SUITE 230 PLYMOUTH, MN 55447 TEL CONTACT:	CIVIL ENGINEER SAMBATEK 12800 WHITEWATER DRIVE, SUITE 300 MINNETONKA, MN 55343 TEL 763-476-6010 CONTACT: CHAD AYERS, PE
DEVELOPER J & J MINNETRISTA, LLC 851 MARKETPLACE DRIVE WACONIA, MN 55387 TEL CONTACT:	SURVEYOR SAMBATEK 12800 WHITEWATER DRIVE, SUITE 300 MINNETONKA, MN 55343 TEL 763-476-6010 ECONTACT: MARK SALO, RLS
AUTHORIZED AGENT DBS GROUP, LLC 2700 NATIONAL DRIVE, SUITE 101 ONALASKA, WI 54650 608-881-6007 x102 CONTACT: CHRIS WALTERS	

DEVELOPMENT SUMMARY

AREA		
LOT 1 BLOCK 1	320,489 SF	7.36 AC
LOT 2 BLOCK 1	103,453 SF	2.37 AC
LOT 1 BLOCK 2	28,792 SF	0.66 AC
OUTLOT A	225,248 SF	5.17 AC
OUTLOT B	121,320 SF	2.79 AC
OUTLOT C	95,609 SF	2.19 AC
GROSS SITE AREA	894,911 SF	20.54 AC
ZONING		
EXISTING ZONING	R-5 HIGH DENSITY RESIDENTIAL	
PROPOSED ZONING	PUD	
EXISTING SETBACKS		
BUILDING		40 FT
PARKING		20 FT
PARKING PROVIDED*		
LOT 1 BLOCK 1		283 STALLS
LOT 2 BLOCK 1		228 STALLS
IMPERVIOUS AREA*		
LOT 1 BLOCK 1	253,828 SF	5.83 AC
LOT 2 BLOCK 1	74,792 SF	1.72 AC
OPEN SPACE AREA*		
LOT 1 BLOCK 1	66,661 SF	1.53 AC
LOT 2 BLOCK 1	28,661 SF	0.66 AC
OUTLOT A	225,248 SF	5.17 AC
OUTLOT B	121,320 SF	2.79 AC
TOTAL	441,890 SF	10.15 AC

*LOTS EXCLUDED DUE TO NO IMMANENT PLANS FOR DEVELOPMENT



NO	DATE	BY	CKD	APPR	COMMENT

I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

PRELIMINARY
DESIGN REVIEW
PERMIT SUBMITTAL
CONSTRUCTION DOCUMENTS

DRAWN BY JMW
DESIGNED BY GDA
CHECKED BY CA
PROJECT NO. 50879



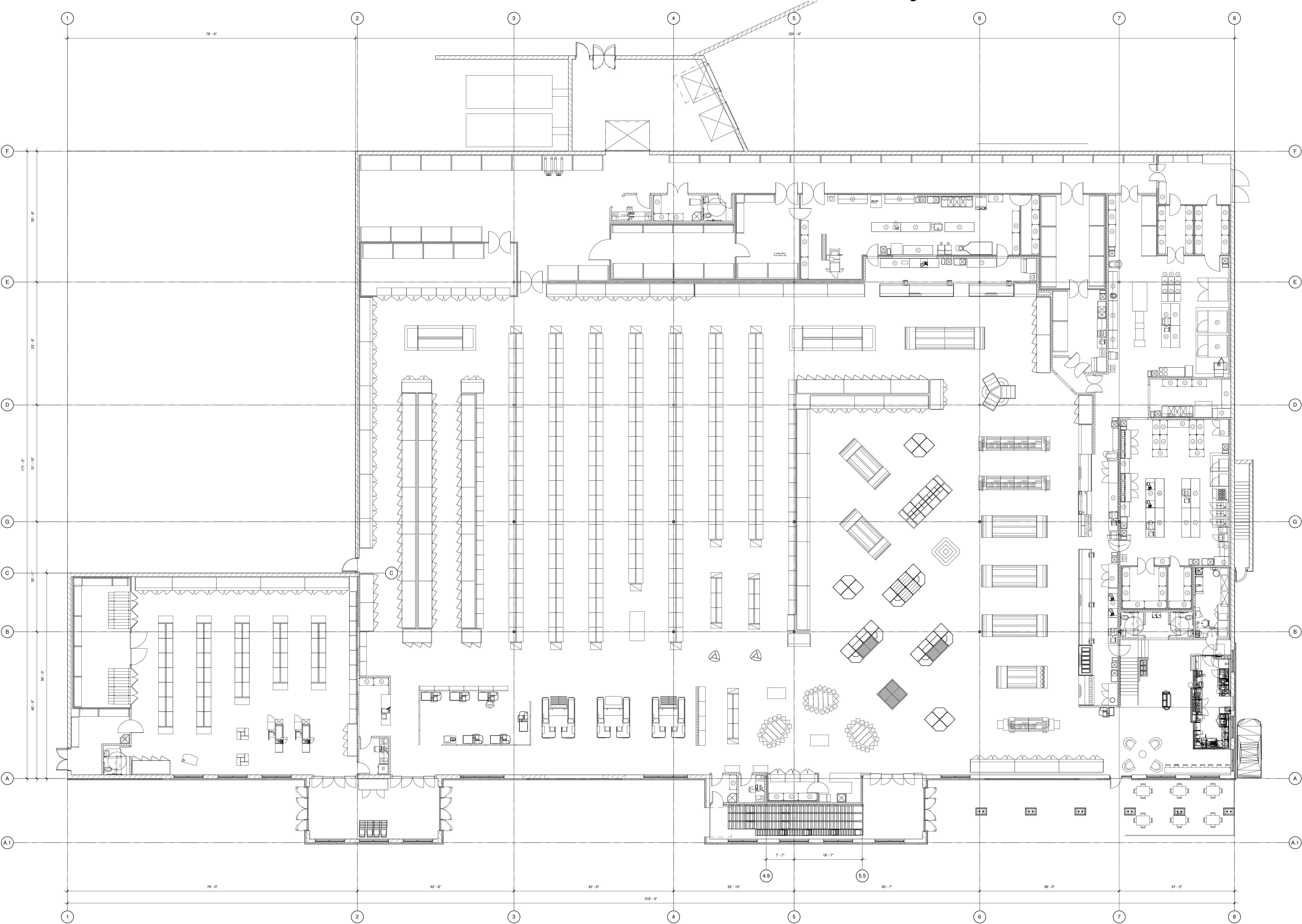
CONCEPT WITH AERIAL

J & J MINNETRISTA, LLC
MACKENTHUN'S DEVELOPMENT
CITY SKETCH PLAN APPLICATION 05/27/2022
MINNETRISTA, MN

Mackenthuns Grocery



Mackenthuns Grocery



1 DIMENSIONED 1ST FLOOR PLAN
A-20 3/32" = 1'-0"

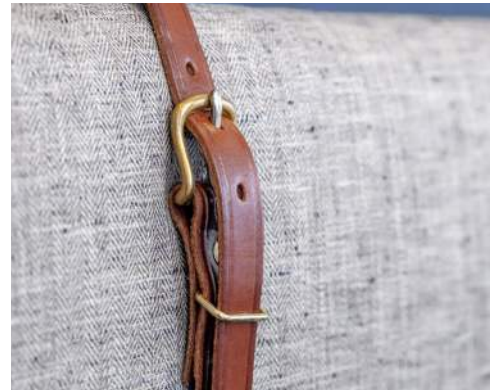


LOBBY





BUSINESS CENTER + COWORK





ENTERTAINMENT SUITE



CLUB ROOM





FITNESS CENTER





APARTMENT INTERIOR



TOWNHOME INTERIOR







July 12, 2022

Mr. Nickolas Olson
City Planner
City of Minnetrista
7701 County Road 110 West
Minnetrista, MN 55364

Re: Mackenthun's Development
Concept Plan Review – Revised July 12, 2022
ML No. 22018

Dear Mr. Olson:

We have completed our initial review of the application submittal for the proposed Mackenthun's Development project. The project involves grading, parking lot paving, storm sewer and stormwater BMP construction, watermain and sanitary sewer construction, and appurtenant work. The application materials were reviewed against the City's design requirements. The following items were submitted for review:

- Land Use Application, Dated 5/26/2022
- Mackenthun's Sketch Plans, Sambatek, Dated 5/27/2022
- Mackenthun's Sketch Plan Application Narrative, Sambatek, Dated 5/27/2022
- ALTA Commit for Title Insurance, Dated 05/26/2022

The following review comments represent recommendations from an engineering standpoint appropriate for this concept plan review.

General

1. The proposed improvements include construction of a new residential building and a new grocery, grading, parking lot paving, storm sewer and stormwater BMP construction, watermain and sanitary sewer construction, and appurtenant work.
2. Access to the site is proposed from Kings Point Road via Trunk Highway 7.

Grading and Elevations

1. The proposed site grade is consistent with the surrounding grades and appears to be acceptable from a drainage standpoint.
2. The finished floor elevation (FFE) of the proposed residential building is 1054. This may result a large amount of fill, or will necessitate a large retaining wall, behind (north and west of) the building.

Layout and Parking

1. The design appears to allow for adequate circulation of vehicles, with residents of the residential building accessing through a dedicated private street directly to the underground parking garage.
2. 162 parking spaces are required per City Code for the grocery store, and 283 are provided. 7 spaces are dedicated as Americans with Disabilities Act (ADA) compliant, which meets the required amount.

3. 210 parking spaces are required per City Code for the residential building, and 228 are provided. 2 spaces are dedicated as ADA compliant on the surface level parking. The Applicant will be required to provide an adequate number of ADA compliant parking within the parking garage.
4. The developer shall provide information including determining trip generation calculations for ADT, AM peak and PM peak, and identifying what roadway improvements (if any) are recommended (e.g. restriping, installation/extension of turn lanes, traffic control needs).

Sanitary Sewer and Watermain

1. The proposed development will be located in the City's South System. The South System is served by Well No. 3 on County Road 44, Well No. 4 on Lotus Drive, Well No. 5 on South Saunders Lake Drive, and Well Nos. 6 and 7 on Kings Point Road. Water from Well Nos. 6 and 7 is pumped to the South Water Treatment Plant (WTP) which has a treatment capacity of 1,000 gpm (1,440,000 gpd). The existing supply capacity is for the South System is 2,160,000 gpd, and includes water from Well Nos. 3, 6, and 7. Water from Well No. 3 is treated by chemical addition at the well house, but not treated for iron or manganese at the South WTP. Currently, water from Well No. 3 is being incorporated into the South Water System supply by Public Work Staff. Capacity from Well Nos. 4 and 5 is not included in this analysis due to their poor water quality. They are only to be used as backup in case of a supply emergency. They can supply an additional 900 gpm of unfiltered water.

An estimate of the average and maximum day demands calculated for the proposed development was completed. The South System's existing average day demand and maximum day demand are **approximately** 536,000 gpd and 1,387,000 gpd, respectively. Once the development is constructed and operational (mid-2024 per Applicant), the City's average day demand and maximum day demand are projected to increase to 710,000 gpd and 1,657,000 gpd, respectively. This exceeds the South System's treatment capacity of 1,440,000 gpd but is less than the South System's supply capacity of 2,160,000 gpd. Therefore, the South System has enough supply capacity for the development, however a portion of the water supplied to the system during periods of peak demand will not be treated for iron and manganese.

The City is actively pursuing completion of a new water treatment plant that will likely have a capacity between 1,000 and 1,500 gpm, with an option for future expansion as needed. It is possible that the new plant is online and operational prior to mid-2024. Once the new plant is operational, the South system will have treatment capacity as well as supply capacity.

2. The wastewater generated from the proposed development is conveyed ultimately by a 12-inch gravity sewer main to the City's lift station No. 6. Lift station No. 6 then pumps wastewater through forcemains ranging in size from 10-inch to 14-inch. The forcemain empties into Metropolitan Council's sanitary sewer system in the Lake Minnetonka Regional Park. An estimate of the average and peak hourly wastewater flows calculated for the proposed development

The City's system located downstream of the proposed development has sufficient capacity to convey the projected flows.

The developer shall ensure all sanitary sewer related permits have been approved as extensions, additions, or other modifications to the sanitary sewer collection system may require a Sanitary Sewer Modification Permit from the Minnesota Pollution Control Agency before construction can begin. In addition, any project that will increase sanitary sewer flow

and it is located within the seven-county metropolitan area must be reviewed by the MCES to ensure that the project is consistent with the MCES-approved comprehensive plan for the City of Minnetrista.

3. Water and sanitary sewer shall be constructed in accordance with the City of Minnetrista General Specifications and Standard Detail Plates (<https://evogov.s3.us-west-2.amazonaws.com/29/media/363300.pdf>), and in accordance with the latest edition of CEAM.

Stormwater Management

1. Storm sewer, stormwater ponds, and best management practices (BMPs) shall be constructed in accordance with the City of Minnetrista's General Specifications and Standard Detail Plates (2022), Surface Water Management Plan (2018), and Design Requirements (2009).
2. The original concept design incorporated underground storage for stormwater. The Applicant shall note the following if underground storage is utilized.
 - a. Pretreatment is required.
 - b. Maintenance access is required at each end.
 - c. The pavement section above the systems shall be rated for maintenance truck loads.
3. A meeting was held on June 27th between the developer's engineer, the City, and Minnehaha Creek Watershed District regarding another possible stormwater design option, which includes modifications to the existing retention facilities. Below are comments and recommendations based on that meeting and the accompanying documents submitted by the developer's engineer (Concept Stormwater Management Plan Memo, dated June 2022, Master Site Plan dated May 27th, 2022):
 - a. Verify the impervious area in proposed subcatchment O3. It appears that this includes the part of Kings Point Drive that drains to the existing sediment basin (existing node 3B, proposed node 3P). It appears this should be at least 0.6 acres of impervious area and was included as part of the impervious in existing subcatchment node 3BBID.
 - b. Proposed subcatchment 9S should include the parts of Kings Point Drive and TH 7 that drain to the existing infiltration basin via the storm sewer. It appears this is approximately 2 acres, the majority of which is impervious. It appears that the southern part of the offsite area east of Kings Point Drive (existing node 100A, proposed node 103P) is drained through this storm sewer as well and should be routed to 2P. Ensure that 2P is sized appropriately for the entire drainage area.
 - c. On future submittals, please include the rate control analysis by discharge point.
 - d. We do not recommend 12% slope on the culverts between 4P and 1P. The maximum allowable velocity into a pond is 8 fps. For pipes with slopes above 8%, tie all joints.
 - e. It appears that device #3 for Pond 2P is the 48" grate of the OCS. This should be modeled as a horizontal grate rather than vertical.
 - f. Verify the time of concentration for proposed node 5S. 51 minutes appears too long. At a minimum, it should not be longer than the existing conditions time of concentration for 4AA.
 - g. We recommend a minimum time of concentration of 7 minutes (existing node 100AA, proposed node O4).

Mr. Nickolas Olson
July 12, 2022
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It is recommended that Public Works review the proposed concept plan and provide any relevant comments. Please reach out with any questions regarding this review.

Sincerely,
WSB

A handwritten signature in black ink that reads "Adam Gadbois". The signature is fluid and cursive, with the first name "Adam" and last name "Gadbois" clearly legible.

Adam Gadbois, P.E.
(612) 214-2081
agadbois@wsbeng.com

cc: Alyson Fauske, City Engineer

Attachment: MUSA Water Supply Analysis Table

Table 1 - Water Supply (existing) and Demands (existing and projected) - 6/21/2022 Update for Mackenthun's Proposal

Land Use	Density* (units/acre)	Area Demand (gpd/acre)	Historical 2016-2020				Current 2022				Final Platted				Proposed			
			South MUSA (units)	South MUSA (acres)	South MUSA Avg. Day Demand (MGD)	South MUSA Max Day Demand (MGD)	South MUSA (units)	South MUSA (acres)	South MUSA Avg. Day Demand (MGD)	South MUSA Max Day Demand (MGD)	South MUSA (units)	South MUSA (acres)	South MUSA Avg. Day Demand (MGD)	South MUSA Max Day Demand (MGD)	South MUSA (units)	South MUSA (acres)	South MUSA Avg. Day Demand (MGD)	South MUSA Max Day Demand (MGD)
Residential Low	2.5	870	854	587	0.297	0.892	854	587	0.297	0.892	854	587	0.297	0.892	854	587	0.297	0.892
Residential Medium	9	3,132	69	40	0.024	0.072	69	40	0.024	0.072	69	40	0.024	0.072	69	40	0.024	0.072
Residential High	20	6,960	0	0	0.000	0.000	0	0	0.000	0.000	0	0	0.000	0.000	0	0	0.000	0.000
Mixed Residential (Woodland Cove)	3.66	1,274	195**	75	0.068	0.204	616***	236	0.214	0.423****	887	340	0.309	0.565****	1,103*****	423	0.384	0.678****
Mixed Residential (Mackenthun's Grocery)		*****	N/A	0	0.000	0.000	N/A	0	0.000	0.000	N/A	0	0.000	0.000	N/A	12	0.005	0.016
Retail-Commercial		1,000	N/A	0	0.000	0.000	N/A	0	0.000	0.000	N/A	0	0.000	0.000	N/A	0	0.000	0.000
Total Estimated Demand			1,118		0.389	1.167	1,539		0.536	1.387	1,810		0.630	1.528	2,026		0.710	1.657
2016-2020 Historical Demand					0.369	1.162												
Existing Treatment Capacity						1.440				1.440				1.440				1.440
Existing Supply Capacity (with Well 3)						2.160				2.160				2.160				2.160

*Planned density of new development (does not apply to existing served and unserved)

**Approximate number of units in Woodland Cove exerting demand on the water system from 2016-2020.

***Approximate number of units completed or under construction in Woodland Cove in 2022.

****Stormwater reuse for irrigation installed with Woodland Cove 3rd Addition and following additions, which reduces max day water use. Therefore, max day peaking factor reduced from 3 to 1.5 for these additions.

*****Mackenthun's projected water demand based on historical water use at Waconia Mackenthun's from June 2021 to May 2022.

*****Woodland Cove total unit count based on 1,071 prelim plat units plus 32 units in excess of prelim plat per May 2022 Concept Plan.