MANKATO PLANNING COMMISSION
Regular Meeting September 23, 2026 - 6:00 p.m.
Intergovernmental Center
Council Chambers
****
Any person speaking to the Commission shall give to the Secretary of the Commission the NAME and HOME ADDRESS of such person prior to speaking.
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1. **CALL TO ORDER**

2. **APPROVAL OF AGENDA**

3. **APPROVAL OF MINUTES**

   1. **August 26, 2026 Draft Planning Commission meeting minutes**

4. **OLD BUSINESS**

   1. CY36-26 tabled at August 26, 2026 PC meeting

      Request of Bolton and Menk, on behalf of Kody Schendel of New Hope Board and Lodge and KD2 Properties, LLC, for an amended conditional use permit to allow a building addition and an operational expansion; and for a variance to decrease the rear yard from 66' to 11.2' in the R-3, Limited Multiple Family Dwelling District. The variance is being requested in order to allow for a building addition. The property is described as Lots 6, 7, 8 and the westerly half of Lot 9, Block 16 of Mankato City, Blue Earth County (1429 3rd Avenue).

      The anticipated date of City Council action is October 13, 2026.

5. **NEW BUSINESS**

   1. CY42-26

Request of Jones Haugh & Smith, with permission of the property owner, Scott Brown, for a final plat review of Metcon Addition, and a conditional use permit to allow a wetland replacement on the subject site. The subject property is described as That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County.

The anticipated date of City Council action is October 13, 2026.

2. CY43-26

Request of RJC Rental Properties LLC for a conditional use permit to allow the operation of an Intensive Outpatient Treatment Clinic in the R-3, Limited Multiple dwelling zoning district. The subject properties are described as Lots 3, 4, and 5, Block 25, Mankato City subdivision (1618, 1620 and 1622 3rd Avenue).

The anticipated date of City Council action is October 13, 2026.

3. CY44-26

Request of the Planning Agency to review Mankato Development District No. 51 Plan ("Plan") to determine conformity of said plan to the General Development Plan for Development or Redevelopment of the Municipality as a whole. The subject properties are described as Lots 5 through 12, Block 1, Quarry View Addition subdivision.

4. CY45-26

Request of the Planning Agency to amend Chapter 10 of Mankato City Code related to permitted and conditional uses in the R-3, Limited Multiple-Family Dwelling District and the R-4, Multiple Family Dwelling District.

The anticipated date of City Council action is October 26, 2026.

5. CY46-26

Request of the Planning Agency to amend Chapter 10 of Mankato City Code in the M-1, Light Industrial District related to cannabis.

The anticipated date of City Council action is October 13, 2026.

6. **MISCELLANEOUS**

7. **ADJOURNMENT**

Planning Commission Regular Meeting **3. 1.**

Meeting Date: 09/23/2026

Title

August 26, 2026 Draft Planning Commission meeting minutes

Attachments

Draft Planning Commission minutes 8-26-26

MINUTES

Mankato Planning Commission
August 26, 2026 - 6:00 p.m.
IGC - Council Chambers

1. CALL TO ORDER

Chair Zehnder called the meeting to order at 6:00 p.m.

Commissioner's Present: Chair Zehnder, Ms. Surdy, Mr. Laven, Mr. Wilke, Ms. Bigham, Mr. Filipovitch.

Staff Present: Mark Konz-Director of Community Development, Travis Johnson-Permit Technician, Molly Westman-Planning Coordinator, Bennett Hanson-Planner, Ean Pringnitz-Economic Development Specialist.

2. APPROVAL OF AGENDA

Mr. Wilke made a motion to approve the agenda. Mr. Filipovitch seconded the motion. The motion carried unanimously.

3. APPROVAL OF MINUTES

Mr. Wilke made a motion to approve the minutes from July 22nd, 2026. Ms. Bigham seconded the motion. The motion carried unanimously.

1. July 2026 - Planning Commission Minutes

4. OLD BUSINESS

5. NEW BUSINESS

1. CY35-26

Request of ISG, on behalf of the property owner, Rolls Royce Solutions America, Inc., for a conditional use permit to allow the installation of one, 2,000-gallon HVO/diesel above-ground tank in P-I, Planned Industrial, zoning district. The subject property is described as Lots 1-3 and all of Lots 6-8, Block 1, and the east 200' of Lots 4 and 5, Lundin Industrial Park, and the southerly 62' of Lots 3 and 4, Block 2, Summit Industrial Park (304 Lundin).

Mr. Pringnitz reports that staff respectfully submits the following findings of fact for the Conditional Use Permit:

1. The applicant aims to amend the existing conditional use permit to allow for modifications to the sizing of above-ground storage tanks. All applicable elements of the original conditional use permit shall remain as is.
2. The proposed amended above-ground tanks, when implemented with the recommendations and in conformance with the Mankato City Code, is in keeping with the comprehensive planning policies of the City. The underlying land use plan identifies this parcel as "Light Industrial".
3. To the extent known, the development conforms with all other applicable regulations of the district, and other applicable ordinances.
4. The applicant has identified the three following aboveground storage tanks that will be constructed or remain onsite: 1) a new 2,000-gallon diesel / HVO tank, 2) an existing 200-gallon diesel tank, relocated on site, and 3) an existing 1,000-lb LP tank to remain as is.

Mr. Pringnitz reports that staff recommends approval of the amended conditional use permit to allow for modifications to the purposed exterior fluid/fuel storage tanks with the following conditions:

1. All applicable conditions of approval associated with the original Conditional Use Permit shall remain active and in-place.
2. Any proposed future modifications to the volume and quantity of the outdoor aboveground storage tanks shall be reviewed for compliance and approval as a new CUP or as an amendment to the existing Conditional Use Permit.
3. Applicants shall coordinate with all appropriate regulatory agencies, including the Minnesota Pollution Control Agency (MPCA) to ensure compliance with all applicable state standards and permit requirements associated with installation and utilization of a 2000-gallon aboveground HVO/Diesel tank.

Randy Potter, ISG. Mr. Potter was present at the meeting representing Rolls-Royce and was available to answer any questions the Commission members may have.

Ms. Surdy questioned what new information had been discovered that resulted in the need for the 2,000-gallon split tank.

Mr. Potter explained that, as Rolls-Royce has gone through its future planning, the company has determined that it needs to produce more generators. This will require testing to be conducted more frequently, which is the reason for the requested increase in fuel storage capacity.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Mr. Filipovitch made a motion to approve CY35-26. Ms. Bigham seconded the motion and passed unanimously.

The anticipated date of City Council action will be September 14th, 2026.

2. CY36-26

Request of Bolton and Menk, on behalf of Kody Schendel of New Hope Board and Lodge and KD2 Properties, LLC, for a conditional use permit to construct and operate a 16-unit congregate micro-apartment addition; and for a variance to decrease the rear yard from 66' to 11.2' in the R-3, Limited Multiple Family Dwelling District. The variance is being requested in order to allow for an approximately 47' X 67' building addition. The property is described as Lots 6, 7, 8 and the westerly half of Lot 9, Block 16 of Mankato City, Blue Earth County (1429 3rd Avenue).

Mr. Konz reported that this item had been modified since the meeting packet was published. He further explained that they had received a letter from the applicant requesting an extension to September 23, 2026, for Planning Commission review and October 13, 2026, for City Council review. He explained that the extension would allow the applicant to make modifications to the plan to better align with Mankato City Code requirements and the previously approved CUP for the property.

Mr. Konz further explained that, from a city staff perspective, staff would support tabling the item and bringing it back for consideration in the future. However, he noted that if the item is tabled at the request of the applicant, the Planning Commission would need to provide direction to extend the 60-day rule beyond the current timeframe to satisfy the requirements of Section 15.99.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Mr. Filipovitch made a motion to table CY36-26 with the recommendation that the 60-day requirement be extended at the request of the applicant. Mr. Wilke seconded the motion. The motion passed unanimously.

3. CY37-26

Request of Southwest Minnesota Housing Partnership for an amendment for Phase 2 to the previously approved planned unit development, PUD, to allow for the usage of Scheid Hall and to allow for parking lot and related infrastructure improvements at the property. The subject property is described as Outlot B, School Sisters of Notre Dame Subdivision, according to the plat thereof on file at the County Recorder's Office, Blue Earth County, Minnesota, to be described as Lot 1, Block 1, Good Counsel Hill subdivision (170 Good Counsel Drive, BE County PID's R010905379005, R010908201007).

Ms. Mitchell reports that staff submits the following findings:

1. The planned unit development satisfies the intent of the City's ordinance, when approved with the recommended conditions, and does not jeopardize public health, safety or welfare.
2. The planned unit development conforms to an approved development plan for Phase 2, which includes utilization of the existing buildings, the existing parking areas, and additional parking.
3. All land shown on the approved development plan as open area will be held by the applicant.
4. Phase 2 is not proposed to impact common open spaces. Future phasing that proposed impacts will be required to submit updated plans for review and approval.
5. The public benefits provided in conjunction with the Planned Unit Development are:
    1. Preservation and enhancement of desirable site characteristics and open space. Phase 2 site plans do not impact any of the current open spaces. Future phases will be reviewed separately.
    2. A pattern of development which preserves natural vegetation, topographic and geologic features. Phase 2 does impact natural vegetation, topography, and geologic features. The new parking lots will be located on the northern and western sides of the property. The applicant will be required to restore as much of the natural vegetation and provide the needed screening and tree counts.
    3. Preservation and enhancement of historic and natural resources that significantly contribute to the character of the city. Phase 2 of the proposal preserves structures and a campus that may provide historical significance and no physical building improvements are planned with the project.
    4. Use of design, landscape, or architectural features to create a pleasing environment or other special development features. Phase 2 does make changes to the current exterior features at the site and will be required to install landscaping according to Mankato City Code Chapter

10.

5. Provision of a variety of housing types in accordance with the city's housing goals. Phase 2 of the plan does provide a variety of housing types.
6. Elimination of blighted structures or incompatible uses through redevelopment or rehabilitation. Phase 2 provides an adaptive reuse of a currently vacant space.
7. Business and commercial development to enhance the local economy and strengthen the tax base. Phase 2 does include business and commercial development. Office uses are included to allow for a mixed approach to re-use that is similar to the historic use of the property. Event and assembly spaces are included in this phase of the development.
8. The efficient use of land results in more economic networks of utilities, streets, schools, public grounds, buildings, and other facilities. Phase 2 utilizes existing utilities, streets, schools, public grounds, and other facilities.

Ms. Mitchell reports that staff recommends approval of the amendment to PUD #2 with the following conditions:

1. The applicant shall fulfill the terms of the development agreement for stormwater, drainage, utility, and traffic requirements.
2. The applicant shall continue to work with City Engineering/Construction Services to meet requirements set forth.
3. The applicant shall continue to meet the requirements set forth by PUD #1 approval.
4. The applicant shall not encroach into the bluff setback with any construction activity.
5. Applicant shall be aware that parking requirements shall be met at all times regardless of event occupancy.
6. As future phases are planned and submitted that include campus site improvements, building additions or uses associated with the Institutional Overlay District, a request for an update to the IO campus master plan shall be requested and obtained prior to implementation of any improvements.
7. Prior to occupancy of the structure, the applicant shall obtain a certificate of occupancy from the City of Mankato Building Official for each of the spaces.
8. All parking stalls shall be striped in accordance with the Mankato City Code prior to occupancy.
9. A rental license will be required for the residential units.

Mr. Laven questioned whether what he referred to as the “stormwater bunker” was intended to be designed to accommodate the current parking phase or whether it was intended to accommodate future phases as well.

Ms. Mitchell stated that the tank located beneath the parking lot being constructed as part of this project would serve that portion of the parking lot. She explained that her understanding was that future tanks would be used to accommodate any additional impervious surfaces associated with future phases.

Ms. Surdy referenced a feedback letter that mentioned reducing parking but noted that the staff report did not mention any reduction in parking. She questioned whether there was any confusion regarding this matter.

Mr. Konz indicated that city staff had a conversation with the individuals who submitted the letter, which provided a better understanding of what was being proposed. He explained that the change involves bringing the parking into compliance with Mankato City Code. He referenced a previous meeting item and the requirement for leased parking stalls off-site. He noted that the applicant would still have the opportunity to lease those stalls, but doing so is not a requirement of City Code and would instead serve as an additional option if needed. He concluded by stating that the individuals who originally submitted the letter were comfortable with the proposed changes.

Breanne Kennedy, representing Southwest Minnesota Housing Partnership. Ms. Kennedy was present at the Planning Commission meeting to answer any questions from Commission members and to provide a presentation and update on the overall project.

Ms. Kennedy stated that preparations, including building permit plans, are underway for Phase 1 of Good Counsel Hill. She also stated that GC Meadows is underway, with the hope that residents will begin moving in during the winter or spring of 2027. She further highlighted the requests included in this item and outlined the intended next steps for the project.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Ms. Surdy made a motion to approve CY37-26. The motion was seconded by Mr. Laven and passed unanimously.

The anticipated date of City Council action will be September 14th, 2026.

4. CY38-26

Request of Spirits at Rest for a conditional use permit to allow a licensed residential substance use disorder treatment facility in the B-3, Highway Commercial, zoning district. The subject property is described as Lot 1, Block 3, Wolfe Addition No. 2 (80 Power Drive; BE County PID R010903378003).

Mr. Hanson reports that staff respectfully submit the following findings of fact for the requested Conditional Use Permit:

1. Medical Clinics are considered a conditional use in the B-3 District.
2. The request is in keeping with the comprehensive planning policies of the City as the underlying land use plan identifies the subject property as "Commercial", and uses similar in character to this use are identified in the commercial zoning districts as permitted and conditional uses.
3. The proposal does not interfere with or diminish the use of property in the immediate vicinity.
4. The proposal does not cause undue traffic congestion. No changes are proposed to the public street system. The applicant has attested that no significant change with respect to trip generation, site operations and overall traffic impact to the area shall occur with the proposed reuse of the subject property.
5. There are no known historical or architectural resources on the site.
6. There are no known natural or environmental features on the site.
7. It will not cause a negative cumulative effect and effect on the City as a whole.
8. The proposal will not jeopardize the public's health, safety, or general welfare.
9. To the extent known, the development, when considered with the recommended conditions, conforms with all other applicable regulations of the district, and other applicable ordinances.
10. The applicant has confirmed their awareness that this proposal is a change to the Common Plan of Development previously approved by the City.

Mr. Hanson reports that staff recommends approval of the Conditional Use Permit with the following conditions:

1. At the time of building permit, a photometric plan shall be submitted along with fixture cut sheets that conform with Mankato City Code Chapter 10.
2. At the time of building permit, an updated landscaping plan shall be submitted that depicts landscaping of the interior parking lot islands and screening requirements. Plan shall conform with Mankato City Code Chapter 10.
3. Any proposed mechanical equipment shall not be visible from the adjacent street frontage and be screened according to Mankato City Code Chapter 10.
4. Applicant shall coordinate with City of Mankato Public Safety to ensure sufficient fire coverage and

public safety access to all required portions of the subject property.

5. Approval of this modification does not eliminate the parcel from future coordination or alteration of the proposed storage basin with an adjacent parcel. The City shall not be responsible for this coordination and will enforce stormwater compliance for future development of the adjacent site.
6. The applicant shall be subject to SAC & WAC fees based on the City of Mankato assessment policy and fee schedule.
7. Any future expansion of services or structures on the Subject Property shall be subject to review and approval of the City of Mankato in accordance with all applicable Mankato City Code standards.
8. A fence permit shall be obtained prior to installation of any fencing on the subject property.
9. The applicant shall obtain a sign permit for any desired site signage prior to fabrication and installation.
10. No outside storage shall be permitted on the subject property unless fully enclosed/screened.
11. All refuse containers shall be fully enclosed in conformance with Mankato City Code Chapter 10.
12. Loading and unloading shall not interfere with the operation of adjacent uses.

Mr. Laven questioned the notification process, specifically whether notices sent by the City of Mankato to property owners located within 450 feet of the proposed project are sent at least 10 days prior to the Planning Commission meeting.

Mr. Konz indicated that the City of Mankato is required to publish notices within 10 days of a meeting. He further added that typically they are sent out 2–3 weeks prior to the planning commission meeting.

Mr. Laven stated that residents within the 450-foot notification radius may have first learned about the project approximately 14 to 21 days prior to the Planning Commission meeting. He questioned the recommendation for the applicant to hold a neighborhood meeting and expressed concern regarding the short timeframe between the neighborhood meeting organized by the applicant and the Planning Commission meeting.

Mr. Konz added that the City of Mankato advises holding a neighborhood meeting; however, it is not required. He further explained that, generally, the city would recommend holding the meeting closer to the time when the notices are sent out.

Mr. Laven indicated that it was his understanding that neighborhood notifications are typically sent several weeks in advance. He suggested that if the City of Mankato could do more to encourage applicants to hold neighborhood meetings sooner, it would be beneficial to all parties involved.

Chair Zehnder questioned whether city staff had determined that the proposed use would be classified as a medical clinic and, therefore, would be an allowed use within the zoning district.

Mr. Konz indicated that the proposed use would be similar to what the Planning Commission approved earlier this summer for the Motel 6 conversion, which would provide services to residents staying at that facility. He explained that the Planning Commission recommended approval of that item based on a similar type of use, and the City Council subsequently approved the item.

Mr. Konz added that, from a code perspective, the City Council adopted updates to the B-3 zoning district last year to allow residential uses within the district. Therefore, between the medical clinic classification and the allowance of residential uses in the B-3 zoning district, city staff determined that the proposed use complies with the zoning requirements.

Joe Richter, Factor Property Management, and Jeremy Gerres, Founder/CEO of Spirits at Rest.
Mr. Richter indicated that he has been working with Mr. Gerres for the past year and a half and thanked city staff for their assistance as they explored various properties. He then introduced Mr. Gerres.

Mr. Gerres thanked the Planning Commission for hearing their proposal and indicated that he brought his Clinical Director and Director of Operations to answer any questions commission members may have.

Mr. Laven questioned why the Monday prior to the Planning Commission meeting was selected as the date for the neighborhood meeting rather than holding the meeting at an earlier date that would allow time for adjustments to be made if concerns were raised. He further questioned whether anything discussed at the neighborhood meeting on Monday would require the applicant to modify its proposal in any way.

Mr. Gerres stated that he was not aware of the concerns regarding the timing of the neighborhood meeting. He added that he did not fully understand the public hearing process and noted that he had been working with Max DeMars and Mr. Richter, relying on them to provide insight and guidance throughout the process. He also noted that they had rented the space for the meeting and Monday worked best for everyone to be present.

Mr. Richter stated that city staff had advised them to hold a community meeting and suggested a notification radius that would go beyond the minimum required for the city. He noted that this was what they did. He explained that they looked at their calendars and considered summer vacations and holidays when determining the most convenient time to make the meeting happen. He further noted that the community meeting was not something that was required but was necessary as part of the process. He stated that this portion of the process was related to the conditional use permit and that the next step would be to visit the City Council on September 14, 2026, where public comment could continue.

Mr. Laven questioned what feedback they had received at the public open house regarding the project and whether any modifications to the proposal would be made based on that feedback.

Mr. Richter indicated that the concerns they heard at the public open house would be similar to what they would hear at this Planning Commission meeting. He stated that the primary concern was the location and why it was chosen for the proposed facility. He explained that, throughout their process, they had looked at several different properties and, for several different reasons, determined that this location was the best option for establishing the facility in Mankato. He concluded by stating that they would not be making any changes to their application.

Mr. Wilke questioned how the individuals who would be served at the facility would find their way to the facility and asked if they could provide information regarding a typical treatment plan or timeline for these individuals.

Mr. Gerres asked that Carl White come forward to speak regarding the treatment aspect of the proposed facility. Mr. Gerres explained that many of their clients are already connected with Blue Earth County, whether they were previously incarcerated, had gotten into trouble, or had reached out to the county directly.

Mr. Gerres explained that the residential component of the proposed facility would be the beginning of the process to help individuals heal, enter recovery, and work toward returning to the community. He stated that this is one service that is currently missing from the area. He noted that most of their clients would come directly from Blue Earth County and would have already been working with county staff and completed assessments before being referred to their facility. Once referred, the individual would be reviewed by their staff to determine whether they could accept the client into the program.

Mr. Gerres added that he also conducts interventions and noted that he has been sober for 24 years. He explained that there is a detailed process that individuals must go through before they can enter the facility.

Mr. White stated that he is a Licensed Independent Clinical Social Worker (LICSW) and a Licensed Independent Clinical Director (LICD). He noted that he owns his own practice in Le Roy, Minnesota, as well as Spirits at Rest. He stated that he has worked in mental health and addiction counseling for several years with various agencies.

Mr. White stated that the screening process involves evaluating six dimensions, including medical needs,

mental health, physical health, readiness for change, housing, and other related issues. He noted that treatment clients come from a variety of backgrounds and may be referred from clinics or detox facilities. He explained that some individuals may be experiencing homelessness, while others may be high-functioning adults.

Mr. White explained that their focus is on understanding each individual and determining where they are within the stages of change. He noted that the stages of change are taught as part of addiction treatment and begin with determining whether the individual is aware that they have an addiction. He explained that they use motivational interviews to help determine whether the individual recognizes that a problem exists. The next stage is contemplation, which involves determining whether the individual is willing to address the issue and whether they know how to begin doing so. The next stage is action, during which they work with the individual to progress through the stages of change and reach the level where they can begin making changes.

Mr. White stated that they also utilize cognitive behavioral therapy, which focuses on the relationship between thoughts, feelings, and behaviors and is used to help change an individual's thought processes. He added that if an individual has cognitive distortions or other cognitive issues that prevent them from functioning at that level, they may instead utilize behavior activation. He explained that behavior activation focuses on identifying the behaviors that contributed to the individual's addiction or other issues and determining whether those behaviors can be modified. He noted that changing the individual's behavior can eventually lead to changes in their thought processes. He stated that they use these different approaches to determine where each individual needs to begin treatment.

Mr. White added that, as a mental health therapist, he works with the counselors and oversees the licensed staff. He explained that the staff will screen clients to determine whether an individual's needs are beyond the facility's level of care. He noted that they will evaluate whether the individual is there because of criminal issues, addiction issues, or a combination of both. He explained that criminal matters are addressed through jail or prison, while their facility focuses on addressing the individual's addiction. He noted that these issues can sometimes overlap and stated that they will not work with individuals who have a history of criminal behavior or individuals who are at a higher risk of reoffending.

Mr. White stated that he would personally review each case to ensure that the individual meets the facility's admission criteria. He explained that if an individual's health or treatment needs are beyond what the facility can address, the individual would not be accepted. He concluded by stating that treatment plans would be developed for each individual and that staff would provide education and treatment while working with the Minnesota Department of Human Services (DHS) to ensure that the program meets applicable requirements.

Mr. White acknowledged that he could not guarantee that there would never be issues but stated that he would do everything possible to ensure the safety of individuals and the surrounding Mankato community.

Ms. Surdy questioned whether they utilize the LOCUS method.

Mr. White indicated that they do utilize the LOCUS method.

Mr. Wilke thanked the applicants for the extensive narrative included with the application. He wanted to confirm a section related to the safety standards, which referenced continuous professional staffing, controlled building access, alarmed exterior doors and windows, overnight client checks, medication protocols, and written emergency procedures. He asked for clarification regarding the statement that client movement off-site would be strictly managed and coordinated by staff as part of each structured treatment plan.

Mr. White stated that this was correct and explained that if clients had a medical appointment, staff would transport them to the appointment using company vehicles. He also explained that the exterior doors would be alarmed when opened. If a client were to leave through a door without staff being aware, the

client would be discharged from the program. He added that staff would speak with the individual regarding the incident and that the admission process would need to be completed again before the individual could be considered for admission.

Mr. Wilke further questioned whether, based on Mr. White's prior remarks, clients would be unable to leave the facility and walk around the neighborhood for purposes such as getting fresh air.

Mr. White stated that clients would not be permitted to leave the facility on their own and that allowing clients to leave the facility would not be consistent with how they operate their facility. He further explained that clients are in the program for a limited amount of time and noted that this is not a 13-month program, but rather a 30-, 60-, or 90-day program. He stated that, following completion of the program, clients would then step down to an outpatient treatment program.

Mr. Gerres added that the three wings within the facility would have doors that could only be freely opened if the fire alarms were activated. He explained that the main entry doors to the building would also be controlled, and anyone wishing to leave the building would need to speak with staff before doing so.

Ms. Surdy stated that providing additional information about the LOCUS and how it measures and determines an individual's appropriate level of care would help community members feel more comfortable with the proposed facility. She questioned whether the facility would primarily serve individuals at Level 3 and below.

Mr. White indicated that the facility would serve individuals below Level 3. He explained that, when considering individuals with sex offender charges, anyone classified as a Level 3 would not meet the criteria for admission to the facility. He stated that he understood the concerns surrounding this issue and added that the stigma associated with an individual committing an offense at or having previously been at the facility presents too great of a risk.

Ms. Surdy stated that she believes community members may not understand how the LOCUS levels are determined and that providing additional education on the process could be helpful.

Mr. White stated that he was not present at the meeting held on Monday and felt that he could have provided the type of information Ms. Surdy was referring to. He further stated that he believes security is the main issue and explained that they want to maintain a positive public image.

Mr. White further stated that the safety and security of his staff is his number one priority. He explained that having an individual who is a high-risk sex offender at the facility would not be appropriate for the other staff members and would present a safety and security concern.

Ms. Bigham asked whether smoking cigarettes would be allowed at the facility.

Mr. White stated that smoking would be allowed in the back of the facility. He explained that he has worked for other addiction agencies where cigarettes were not allowed and that they found many individuals would either sneak cigarettes into the facility or vape. He stated that, at this facility, smoking would be allowed in a designated area on the back portion of the fenced-in patio.

Mr. White explained that the fence was included in the design to help protect the privacy of the clients and maintain HIPAA requirements. He stated that a designated smoking area would be provided for clients within the fenced area. He noted that, based on his experience, treatment facilities must prioritize the addictions they are addressing. He explained that their primary focus would be on alcohol, methamphetamine, fentanyl, and cocaine rather than nicotine. He added that clients would be responsible for providing their own money to purchase cigarettes.

Mr. Gerres added that security cameras would be installed throughout the facility, except for areas where clients are housed. He also stated that a 24-hour security team would be present in addition to facility staff.

Chair Zehnder opened the public hearing for comment.

John Woodrow Pfeffer, 704 Mulligan Street. Mr. Pfeffer stated that he was present at the meeting this evening because he lives in a neighborhood that was not made aware that the proposed facility was being considered until Monday. He noted that he was unable to obtain all the information at the neighborhood meeting because all the proposed facility staff were not available and felt as though there was a rush to judgment because of this.

Mr. Pfeffer indicated that there were many others in the neighborhood who were unable to attend the meeting on Monday and were also unaware that the proposed facility would be located in the area. He added that he believes this type of work needs to be done in the community and noted that he has been sober for 12 years. He stated that there are three full-time daycare facilities, two parks, and the Pickle Barn, which has a summer club for children who walk down to the park and may pass the proposed adult treatment facility.

Mr. Pfeffer indicated that he felt the Planning Commission should ask additional questions, including whether a traffic impact study had been completed. He noted that these questions were asked at the Monday meeting but were not answered. He further stated that the applicant was unaware of the fire station located on Augusta Drive and indicated that, if this information had not been considered or provided, he did not believe the Planning Commission was receiving the full picture. He also stated that he did not believe the neighborhood had been properly notified.

Mr. Pfeffer referenced previous statements made by Mr. White and Mr. Gerres and indicated that he felt their statements regarding safety were conflicting. He noted that, on one hand, they stated that they could not guarantee that nothing would ever happen, while on the other hand, they used statements such as "absolutely" when discussing what would or would not happen at the facility.

Mr. Pfeffer questioned why, if the proposed facility is considered a medical facility, clients would be transported off-site for medical services. He stated that he understood that they have a mental health license but believed that the license was being used to establish the facility. He questioned if they were truly a medical facility, why they would need to transport clients to another facility for medical services.

Mr. Pfeffer referenced his time in the Army and indicated that he helps disabled veterans and conducts a support group every Tuesday and Thursday at Hy-Vee. He stated that he loves his community, graduated from Mankato West, and wants to continue to serve his community. However, he stated that he feels the proposed facility is not serving anyone other than the bottom line.

Mr. Pfeffer further stated that they had asked the applicants why the Blue Earth County Justice Center was not considered as a potential location. He indicated that the response he received was that it would be too expensive because they would be piggybacking off someone else's electrical and septic systems and that it would cost millions of dollars to install new equipment. He stated that he felt the neighborhood was being left to suffer because of the lack of available funds and that his children's bus route would now pass by a treatment center.

Mr. Pfeffer indicated that there is a plethora of real estate throughout the community and stated that he felt the applicants were choosing the most convenient location in order to cut costs and achieve the largest margins. He referenced the familiarity of the neighborhood and stated that he felt the proposed facility would be detrimental to the neighborhood.

Mr. Pfeffer added that he understands there is a problem in the community but stated that he believes there should be a way to provide treatment without exposing children to individuals struggling with drug addiction. He concluded by thanking the Planning Commission for listening to his comments.

Joseph Prestia, 608 Fieldcrest Drive. Mr. Prestia stated that he was present at the Planning Commission

meeting along with his wife and other members of the neighborhood. He indicated that they received the letter approximately seven days ago and were originally made aware of the potential project through a Facebook post. He stated that they attended the meeting held by the applicant on the Monday prior to the Planning Commission meeting but noted that there were many unanswered questions. He added that he told Mr. Gerres that he agreed with the mission of the proposed facility but disagreed with its location. He noted that he has two young daughters and lives approximately a quarter mile from the proposed facility.

Mr. Prestia noted that one of the initial concerns he and his wife had was traffic congestion. He stated that, with 44 beds being proposed at the facility, he believed the project would result in significantly more traffic on Power Drive, Fieldcrest Drive, and Augusta Drive.

Mr. Prestia stated that another concern centered around the security measures that were discussed. He noted that they were told the staff responsible for security would be unarmed and would be unable to physically stop an individual from leaving the facility.

Mr. Prestia also expressed frustration with the notification letter they received, stating that some of the information provided was incorrect. He specifically referenced the email address provided for questions and stated that the email address was inaccurate and did not lead to anyone who could provide additional information.

Mr. Prestia stated that another concern was related to the qualifications of the staff who could be hired at the facility. He noted that they were told staff members could be hired who had only two years of sobriety experience and indicated that he did not agree with that requirement.

Mr. Prestia referenced his own experiences as a child and stated that he had been exposed to individuals struggling with drug and alcohol addiction. He indicated that, based on those experiences, he understands the impact that addiction can have on individuals and families.

Mr. Prestia stated that he did not believe the proposed facility would be conducive to the neighborhood. He indicated that he believes the facility could be beneficial to the Mankato community but stated that he does not believe it should be located as close to the Trail Creek neighborhood.

Hunter Wanderscheid, 724 Dogleg Street. Mr. Wanderscheid indicated that he wanted to piggyback off the comments made by the two previous speakers. He stated that one of his biggest concerns was related to the proposed site and why it was considered appropriate for the facility. He questioned what objective analysis had been performed to determine that a 44-bed, continuously staffed residential treatment facility would be compatible with the nearby residential neighborhoods. He indicated that there were other locations throughout Mankato that he felt would be more appropriate, specifically referencing the area near the Blue Earth County Justice Center.

Mr. Wanderscheid stated that, if the applicant's main concern was financial, his own concerns were more centered around the neighborhood, his family, and whether placing a residential treatment facility at this location was a good idea. He noted that the applicant's outreach to 166 businesses and households included an incorrect email address, which provided those individuals with no way to reach out with questions. He stated that this issue was never acknowledged at the Planning Commission meeting and indicated that he felt the situation was "shady" and that he did not agree with it.

Mr. Wanderscheid continued by referencing Mr. White's previous comments and his work in Rochester, Minnesota, specifically noting the Oakridge treatment facility. He stated that, from 2017 through 2023, there were more than 500 calls involving local law enforcement and 378 ambulance calls associated with that facility. He added that clients at that facility were able to leave the property on foot and referenced overdoses and other serious incidents. He also stated that the facility was shut down due to health hazards. Mr. Wanderscheid indicated that he did not want to see similar circumstances occur in his community. He further stated that, now that Rochester has fewer treatment facilities, he was concerned that individuals would be brought to Mankato.

Mr. Wanderscheid referenced the neighborhood meeting held on Monday and indicated that residents were told that if someone had court-ordered treatment for something such as DUI, the Mankato Police Department would simply drop the individual off at the proposed facility. He stated that he wanted to ensure that the information and concerns discussed at the Monday meeting were passed along to the Planning Commission.

Mr. Wanderscheid questioned who would be eligible for admission to the facility and expressed concern regarding the risks associated with the screening process. He stated that the neighborhood would want to know whether individuals with violent criminal histories, sexual offenses, weapons offenses, active warrants, probation or parole status, recent violent behavior, or other factors that could affect public safety would be eligible for admission. He indicated that he believes the public and the immediate surrounding area should be notified of these considerations.

Mr. Wanderscheid stated that the applicant had not adequately addressed what would happen when a resident leaves the treatment facility. He indicated that, at the Monday meeting, the applicant stated that residents would not be able to leave without their belongings. Mr. Wanderscheid expressed concern that if an angry individual struggling with drug addiction wanted to leave the facility, the individual may not care about retrieving their belongings and could simply walk out of the facility. He stated that, rather than going onto the road, the individual could enter the surrounding neighborhood to hide, and he emphasized that this was his neighborhood and that he would not want such an individual there.

Mr. Wanderscheid stated that the applicant indicated that, in such a situation, staff would call local law enforcement and that security would be present at the facility. However, he compared this to the St. Peter treatment hospital and stated that he believed security at the facility would not be able to do much in that type of situation.

Mr. Wanderscheid added that he would like to know what impact the proposed facility would have on the police, fire, ambulance, and crisis response systems. He stated that he did not believe the City of Mankato was fully aware of the potential demands the facility could place on these services or the additional stress it could create. He noted that the average response time for a 911 emergency medical services call is approximately eight minutes and stated that he did not want to see that response time increase.

Mr. Wanderscheid questioned what protections would be provided to the neighborhood in the event of disturbances. He referenced the proposed six-foot fence and stated that he did not believe the fence was tall enough, noting that it could potentially be jumped or run through.

Mr. Wanderscheid questioned what effect the proposed facility would have on property use and property values. He questioned whether property values would be diminished by having a facility of this type in the neighborhood and stated that he did not believe the proposed facility would be beneficial to surrounding property values.

Mr. Wanderscheid also questioned whether the zoning comparison being used for the proposed facility was appropriate. He questioned whether the facility was truly a medical facility and stated that he did not believe the proposed facility would be providing medical treatment. He concluded by stating that he believed the proposed facility would place additional stress on the Mankato community.

With no one wishing to speak, the public hearing was closed.

Chair Zehnder questioned whether the traffic memo included with the application correctly indicated that the project was not anticipated to generate a sufficient number of trips to warrant a more detailed traffic study.

Mr. Konz stated that this was correct. He added that a traffic study was performed and was reviewed by City of Mankato staff, and it was determined that the additional study was not required.

Ms. Surdy stated that the Planning Commission had considered a similar proposal a few months ago involving a treatment facility for substance use. She stated that the concerns expressed by the neighborhood regarding safety were understandable but added that everyone had also acknowledged the known need for a facility of this type. She noted that Mankato currently does not have a treatment facility for substance use and stated that there would likely not be a location where everyone would want such a facility to be located, making the situation somewhat of a "not in my backyard" scenario. She noted that there are other warehouse-type uses in the area and that the proposed facility would not be located directly within a residential neighborhood.

Ms. Surdy noted that she is a mental health provider herself and indicated that the level of care assessment performed before clients begin services is extensive. She stated that, if the applicant follows that process, they should not be accepting clients who require a higher level of care than the facility can provide. She added that the proposed facility would have 24-hour staffing and security.

Ms. Surdy acknowledged that the proposed location would not be ideal for everyone but stated that placing a treatment facility in an isolated location could limit access for individuals seeking treatment. She noted, however, that it would also not be appropriate to locate a facility of this type next to uses such as a school. She emphasized the number of considerations that go into a project such as this.

Ms. Surdy stated that the individuals who spoke during the meeting were being heard and acknowledged their concerns. However, she indicated that the situation presented a difficult choice in trying to determine an appropriate location for a facility that is needed in the community. She referenced the recent overdose incident in downtown Mankato as an example of the need for substance-use treatment services.

Ms. Surdy stated that she believes a treatment facility is needed in Mankato and that having a facility located within Mankato may ultimately be more beneficial to the community.

Chair Zehnder questioned whether the applicants could explain which individuals would not be eligible to receive services at the proposed facility based on their criminal history.

Mr. Gerres stated that he would have Mr. White address the question from Chair Zehnder but wanted to first address the medical aspect of the proposed facility. He indicated that the state requires the facility to be zoned for medical use and requires registered nurses to be on site in the event of health concerns related to drug withdrawal. He added that the facility is not a hospital, jail, or prison. He explained that they are not taking individuals directly from the street and admitting them into the facility but rather have an extensive process in place for accepting individuals into the program.

Mr. Gerres further stated that they are a licensed medical facility, which allows them to have registered nursing staff available to assist with medications and similar medical needs. He explained that when an individual's medical needs require a higher level of care, the individual would be transported to a hospital.

Mr. White stated that he did not work for Oakridge, as had been referenced previously during the public comment portion of the meeting. He noted that, in his opinion, the clinical director at that facility did not perform their job properly and stated that he takes his responsibilities seriously and has worked at other similar facilities.

Mr. White explained that, when determining which individuals they will accept into the facility, they consider the individual's necessity of need and whether they are appropriate for the level of care that will be provided. He added that if an individual has previously been incarcerated, they would look at the circumstances surrounding the incarceration, including whether the charges were related to drug or alcohol use, such as a fourth DUI, and whether substance use issues contributed to the individual's criminal behavior. He noted that an individual may have a weapons charge in addition to substance-related charges, but stated that they would not automatically eliminate an individual from consideration for that reason.

Mr. White stated that they are primarily concerned with individuals who exhibit what he described as antisocial behavior. He explained that they consider an individual's psychopathology, including whether the individual exhibits characteristics that he described as psychopathic or sociopathic. He stated that individuals with these characteristics are not the type of clients they would accept into the facility. He added that they would accept individuals who exhibit narcissistic behavior because they can use behavior modification techniques to work with those individuals.

Mr. White further stated that they also evaluate individuals using a biopsychosocial-spiritual approach, which he described as a holistic approach to treatment. He explained that they are focused on achieving positive outcomes and determining whether an individual will be effective in the proposed treatment setting. He stated that they want to determine whether they can help an individual achieve and maintain sobriety and emphasized that they want their clients to have positive outcomes.

Mr. White also referred to individuals with sexual offense charges and explained that there are multiple circumstances that can contribute to such charges. He stated that individuals who have committed offenses against younger individuals would not be accepted into their facility. However, he provided an example of an individual who was 19 years old and had a 15-year-old girlfriend, where the individual was subsequently charged with a sexual offense. He stated that an individual in that type of situation could potentially be accepted because, in his assessment, that would not constitute a predatory offender. He acknowledged that the individual would still have a sexual offense charge but stated that the individual would not be considered a predatory type of offender under the criteria they use when evaluating potential clients.

Chair Zehnder sought clarification on whether clients would be in the open areas or if they would be expected to use the designated smoking area enclosed by the privacy fence.

Mr. Gerres stated that anyone being admitted to the facility would enter through a specific door located off the cul-de-sac in the parking lot. He explained that, once an individual is brought into the facility, there would be a designated room where staff would meet with the individual and conduct an assessment to ensure that they meet all the criteria required for admission to the facility.

Mr. Gerres stated that, assuming the individual meets the admission criteria, they would then be permitted to enter the facility. He explained that if an individual arrives at the facility but is determined not to be eligible for admission, staff will meet with the individual and work to determine where they could be taken instead. He noted that they have worked with other similar facilities in the immediate area and stated that, if an individual could not be admitted to their facility, staff would provide transportation to another appropriate facility.

Mr. White added that if an individual is asked to leave the facility, staff would make an effort to transport the individual to an appropriate location, whether that be a homeless shelter, a family member's residence, or another appropriate location. He stated that if a client were to leave the facility without authorization and did not want staff to contact law enforcement, the individual would leave, and the facility could only do so much.

Mr. White also referenced his experience with Teen Challenge, which he noted is located within a residential area in Rochester. He stated that, to his knowledge, clients at that facility have never entered the homes in the surrounding neighborhood. He added that, if a client were to leave the facility, he believed the individual would be more likely to go to the nearest drug dealer, liquor store, or similar location.

Mr. White stated that, in his experience, he has never seen a situation where clients have entered or broken into someone's home. He acknowledged that he was sure it had happened at some point but stated that he was not aware of any specific examples from his experience.

Mr. Gerres added that they currently house 25 individuals in Montgomery, Minnesota, and stated that they have had instances where clients used substances, left the facility without permission, or obtained alcohol.

He explained that each time this occurred, they approached the client and informed them that they could no longer remain at the facility. He stated that he had never experienced an altercation because of asking a client to leave.

Mr. Gerres added that clients are usually willing to accept a ride rather than leave on their own. He noted that the transportation component is critical in helping clients feel safer and supported if they are asked to leave the facility.

Ms. Surdy indicated that there are ethical obligations for licensed providers to avoid client abandonment and stated that it is generally common practice to provide referrals or transportation services when an individual is leaving any type of treatment facility. She added that another meeting with the neighborhood may be beneficial so that this type of information could be discussed in greater detail. Ms. Surdy noted that when a client enters a facility such as this and requires a higher level of care, they are not simply discharged on the streets.

Mr. Gerres shared that when he went through treatment, he was homeless and had to rely on a bicycle for transportation. He stated that he was not provided with many of the options that they want to offer through this proposed facility. He indicated that his approach has always been to support individuals and stated that they would not abandon clients but would instead make every effort to help them as much as possible.

Mr. White stated that he would be happy to answer any questions that residents may have and acknowledged that all the concerns raised were valid. He added that he does not know why prisons are located where they are but expressed hope that the proposed facility would be successful and that they could continue addressing the concerns raised by the community.

Mr. Gerres stated that the other properties they considered, particularly the property near the Blue Earth County Justice Center, were not located within the City limits. He explained that, because those properties were outside the city, they would not have been able to establish a facility of this type at those locations.

Mr. Filipovitch stated that, as he considered the issue, the first question was whether this was something the community needed, to which he indicated that the answer was yes. The second question was whether everything possible had been done to minimize the risks associated with this type of activity. He indicated that the applicant had stated that they had considered everything they could think of to address potential risks and would continue to do whatever else they could to minimize risks.

Mr. Filipovitch stated that the third question was where the facility should be located. He indicated that he sympathized with the concerns regarding the neighborhood and the presence of children but questioned whose children the facility should be located next to. He added that the proposed location is zoned for business use and is not currently zoned residential.

Mr. Filipovitch further stated that efforts have been made to minimize the risks to residential areas and questioned again where a facility of this type should be located if not at this proposed site. He indicated that the proposed facility is in a business zoning district, meets the applicable City Code requirements, and meets the other requirements that have been identified. He concluded by stating that he could not find a reason to vote against the proposal.

Ms. Surdy asked whether an additional recommendation could be added to the proposal, recommending that the applicant hold another neighborhood meeting to address the concerns raised by residents.

Mr. Konz stated that the Planning Commission could make as many modifications to the recommendations provided by city staff as it deemed appropriate and that any additional recommendations would be forwarded to Mankato City Council. He added that, if the recommendation needed to be completed prior to the City Council meeting on September 14, 2026, it would require a relatively quick turnaround.

Mr. Gerres stated that they would be willing to hold another neighborhood meeting and would take as

many calls as possible regarding the proposed facility. He requested that residents approach the discussion respectfully and noted that the meeting held on Monday had been difficult due to the level of frustration expressed throughout the meeting.

Ms. Surdy made a motion to approve CY38-26 with the added recommendation that an additional community meeting be held with the neighborhood to address the concerns raised during the meeting, if possible, prior to the City Council meeting. She acknowledged that, if the meeting could not be held prior to the City Council meeting, it would be understandable and recommended that it take place within a 30- to 60-day timeframe before construction begins. Mr. Laven seconded the motion.

Mr. Konz requested clarification regarding the timeframe for the additional community meeting.

Mr. Laven questioned whether the Planning Commission was required to meet a specific deadline of September 14, 2026, or whether the item could be moved to a later City Council meeting in September while still meeting the city's procedural requirements.

Mr. Konz stated that the application was submitted on July 28, 2026, making the 60-day deadline September 28, 2026, which would be the date of the City Council meeting. He recommended extending the 60-day deadline in case additional information was requested, or the item was tabled because of something brought up during the City Council meeting. He stated that extending the 60-day deadline would provide additional time and help ensure compliance with the requirements of Section 15.99, the applicable state standard.

Ms. Surdy clarified that she would add the 60-day rule extension to her original motion to approve.

Chair Zehnder questioned whether the Planning Commission needed to vote separately on adding the recommendations or whether they could vote on the item, including the new recommendations.

Mr. Konz indicated that the Planning Commission should first make a motion regarding the amendment and then make a separate motion regarding approval of the item.

Chair Zehnder clarified that the proposed amendment included a recommendation for an additional neighborhood meeting to occur prior to the City Council hearing, as well as a recommendation to extend the 60-day timeline. The amendment was seconded by Mr. Laven. The amendment to the recommendations passed unanimously.

Mr. Laven stated that his colleagues on the City Council would likely have requested the extension on either September 16 or September 28. He indicated that they were attempting to expedite the process, so the parties could meet, discuss the concerns that had been raised, and work toward finding some collaboration and addressing the concerns in the best way possible. He added that the timing of the events could have been better planned and stated that, had that occurred, they may not have needed to take these additional steps.

Mr. Konz added that, from a city staff perspective, the City Council packet must be distributed at least one week prior to the City Council meeting, which would be September 21st, 2026, for a September 28 meeting. He stated that it would therefore be ideal for the additional neighborhood meeting to occur before September 21. Otherwise, the city would need to wait until October for the City Council meeting in order to provide residents and the applicants with additional time to address some of the concerns, unless it was determined that the City Council preferred to have the item on September 28th agenda.

Mr. Laven stated that the City Council was not committed to a specific date.

Ms. Surdy made a motion to approve CY38-26 with the amended conditions. The motion was seconded by Mr. Laven and passed unanimously.

The anticipated date of City Council action will be September 28th, 2026.

5. CY39-26

Request of Bolton and Menk, on behalf of the property owner, for a preliminary and final plat review of Ironwood Estates No. 2. The subject properties are described as Lot 2, Lot 3 and Lot 4, Block 1, Ironwood Estates (Blue Earth County PID R010930301021 and R010930301024).

Mr. Pringnitz reports that staff respectfully submits the following findings of fact for the requested Preliminary Plat and Final Plat of Ironwood Estates No. 2:

1. General Requirements
    1. The proposed Preliminary & Final Plat is a replat of Ironwood Estates.
    2. The site is designed in conformance with the location and width of streets, the general drainage situation, lot sizes and arrangement.
2. Streets
    1. The applicant purposes no new construction of any public or private streets.
    2. The property served is accessed from Applewood Ct.
3. Easements
    1. The plat provides a continuation of the standard easements required per the Mankato City Code and the continuation of all other underlying easements present.
    2. Existing easements as presented on Ironwood Estates shall not be modified or relocated with this proposal.
    3. An existing 35-foot-wide utility easement and an existing 30-foot-wide “permanent” easement are present on lot 2 block 2 and shall remain in place.
4. Block Standards
    1. The blocks within the subdivision were designed for the intended end use as Low Density Residential.
5. Lot Standards
    1. The lots within the subdivision are intended for Low Density Residential use.
    2. The lot boundaries of Lot 1 & Lot 2 previously had a minor lot split. This plat demonstrates adjusted property lines, allowing lot 1 to be approximately 5,998 square feet larger.
6. Public Sites and Open Spaces
    1. The proposed subdivision was previously platted and is therefore not subject to payment-in-lieu of parkland dedication requirements.
    2. The proposed subdivision does not create or contain any public sites or permanent open space.

Mr. Pringnitz reports that staff recommends approval of the Preliminary and final Plat of Ironwood Estates No. 2 with the following conditions:

1. Conditions and recommendations from the previously approved final plat shall continue to apply.
2. Applicant shall provide a wetland delineation report, prior to affixing signatures to the final plat.

Nate Myhra, Project Manager Bolton & Menk. Mr. Myhra was present at the meeting to answer any questions the Planning Commission members may have.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, the public hearing was closed.

Ms. Surdy made a motion to approve CY39-26. The motion was seconded by Ms. Bigham and passed

unanimously.

The anticipated date of City Council action will be September 14th, 2026.

6. CY40-26

Request of Jones Haugh & Smith, with permission of the property owner, Scott Brown, for a preliminary plat review of Metcon Addition, and for the rezone of the subject property from T, Transition, to B-3, Highway Business and M-1, Light Industrial zoning district. The subject property is described as That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, Blue Earth County, Minnesota (Blue Earth County PIDR430911300021).

Mr. Hanson reports that staff respectfully submits the following findings of fact for the requested Preliminary Plat of Metcon Addition:

1. General Requirements
    1. The site is designed in conformance with the location and width of streets, the general drainage situation, lot sizes and arrangement.
    2. Concept plans for the future site development show the dedication of a public stormwater pond located within Outlot B.
    3. The site provides storm drains and stormwater facilities that outlet into the city's stormwater facilities at the rates and volumes allowed by the MS4 permit.
    4. Three onsite wetlands are shown on the plat. The applicant intends to seek replacement of the existing wetlands.
    5. Drainage study information has been submitted to the City Engineer to verify compliance with the City drainage requirements.
2. Streets
    1. The street right-of-way widths conform to the standards outlined in Chapter 10 of Mankato City Code.
    2. The applicant proposes to construct a new public roadway identified as "Ponderosa Court".
    3. The applicant proposes to dedicate a portion of the subject property as Right-of-Way for the future extension of “Evergreen Drive”.
    4. The applicant proposes to modify the existing condition of the adjacent Adams Street Right-of-Way, by constructing a dedicated right turn lane for Ponderosa Court.
    5. The existing dedicated bike lanes along Adams Street will remain in place.
    6. Only one private access shall be permitted off of Adams St. The applicant intends to construct a singular shared access for lots 2 & 3. All other accesses will be restricted to Ponderosa Ct or the future Evergreen Dr.
3. Easements
    1. The preliminary plat provides the standard drainage & utility easements required in Chapter 10 of the Mankato City Code.
    2. Drainage and utility easements are provided to encompass the full extent of all proposed rear-lot swales to ensure adequate access for drainage conveyance, maintenance, and long-term operation.
4. Block Standards
    1. The blocks within the subdivision were designed for the intended end use as light industrial uses.
    2. At a future date, Outlot A is intended to be platted into four commercial lots.
    3. Outlot B will be dedicated as a public stormwater pond.
5. Lot Standards
    1. The lots are designed in conformance with the standards set forth in Chapter 10.
    2. The lots within the subdivision are intended for light industrial development.

3. The concept plan for the industrial areas demonstrates adequate areas to allow off-street parking, loading areas and such other facilities. Further review and consideration will be required for any site improvements proposed at the subject property.

6. Public Sites and Open Spaces
    1. The subdivision has not designated an area for parkland or public open space in the comprehensive development plan.
    2. The applicant will be required to make a payment-in-lieu of parkland dedication, as the subject parcel has not previously been platted. The amount of this fee will be determined in conformance with Mankato City Code standards and payment will be due prior to affixing signatures to the Final Plat.

Mr. Hanson reports that staff respectfully submits the following findings of fact for the rezoning of the subject property:

1. The subject property was recently annexed into the City of Mankato and therefore bares the assigned zoning designation of T, Transition District.
2. The rezoning from T, Transition, to B-3, Highway Business & M-1, Light Industrial, is consistent with the goals, objectives, and policies of the comprehensive land use plan, as adopted and amended from time to time by the City Council.
3. The proposed rezoning is consistent with the underlying land uses, as the subject property is designated as a mixture of Highway Commercial and Industrial Commercial land uses.
4. The proposed B-3 Highway Business District zoning classification is consistent with adjacent properties in the immediate vicinity and compatible with the overall character of existing development. Adjacent properties are zoned B-3, Highway Business District
5. The proposed M-1 Light Industrial zoning classification is consistent with adjacent properties in the immediate vicinity and compatible with the overall character of existing development. A portion of properties located to the north and west are zoned as M-1, Light Industrial.
6. The proposed rezoning will not interfere with or diminish the use of property in the immediate vicinity.
7. The applicant proposed to extend municipal water, sanitary, and stormwater facilities from the adjacent ROW into the proposed subdivision.
8. There are deferred assessments on file for the subject property (R43.09.11.300.021).

Mr. Hanson reports that staff recommends approval of the Preliminary Plat of Metcon Addition with the following conditions:

1. The applicant shall dedicate, on the final plat, the right of way area for Ponderosa Court, according to the size standards as reviewed and approved by the City's engineer.
2. The applicant shall execute a subdivision agreement with the City, prior to affixing signatures to the final plat, that outlines the terms of the agreement for proposed and future public stormwater, infrastructure, and utility elements.
3. The applicant shall make a payment in lieu of parkland dedication accordance with Mankato City Code. Payment shall be provided prior to, or in conjunction with, affixing signatures on the final plat.
4. In tandem with submittal of the request to review the Final Plat, the applicant shall apply for a Conditional Use Permit to allow for Wetland Replacement. Wetland replacement shall occur at a ratio of 2:1.
5. Applicant shall agree to be a willing petitioner for a full roadway improvement of Evergreen Drive for a connection to Madison Avenue if the CSAH 12/Adams St or Ponderosa Court/Adams St intersection results in operational or safety issues.
6. The applicant shall coordinate with City of Mankato staff to determine addressing for the proposed subdivision.
7. A singular private access shall be permitted off of Adams Street. The subdivision shall be served primarily by access from Ponderosa Court and the future Evergreen Drive.
8. The stormwater pond proposed on Outlot B shall be improved privately and dedicated to the public. .

9. No parking will be permitted along the Ponderosa Court roadway and cul-de-sac. The applicant shall install no-parking signage in coordination with City Staff.
10. Any boulevard trees impacted by the proposed development shall be replaced per Mankato City Code Standards, at a ratio of 2:1.
11. Development of Outlot A shall only be permitted upon replatting of the Outlot into lots & blocks.
12. The existing field entrance and culverts along the north side of Madison Avenue (CSAH 17) shall remain in place for purposes of future pond access for maintenance and cleaning by the City of Mankato.
13. Applicants shall provide a Drainage and Utility Easement encompassing the full extent of all proposed rear-lot swales to ensure adequate access for drainage conveyance, maintenance, and long-term operation.
14. The applicant shall work with Blue Earth County to ensure any necessary approval or permit for the proposed site stormwater discharge has been received prior to work occurring.

Mr. Hanson reports that staff recommends approval of the rezoning of the subject property from T Transition to M-1, Light Industrial and B-3, Highway Business zoning districts.

Mr. Laven questioned why the City of Mankato would not recommend modifying the intersection now rather than waiting until a later date.

Mr. Konz stated that the city was not looking solely at traffic volume, but rather at the performance of the intersection. He explained that much of what has been discussed with other applications is that, when the level of service at an intersection begins to decline, the city would conduct an analysis to determine whether a secondary access or other improvements would be appropriate based on the uses in the area and how the commercial corridor develops. He added that if a high-volume user were to locate in the area, there could be a need for additional improvements or traffic-control measures. However, he stated that the city wants to ensure that any improvements are necessary and appropriate rather than requiring an improvement that may not ultimately be needed.

John Schulte, Jones Haugh & Smith. Mr. Schulte indicated that Jones Haugh & Smith were the engineers and surveyors for the project. He added that representatives from the MetCon ownership group were also present at the meeting to answer any questions from the Planning Commission members.

Chair Zehnder opened the public hearing for comment. With no one wishing to speak, thepublic hearing was closed.

Mr. Wilke made a motion to approve CY40-26. The motion was seconded by Mr. Filipovitch and passed unanimously.

The anticipated date of City Council action will be September 14th, 2026.

7. CY41-26

Request of RJC Rental Properties LLC to rezone the subject parcels from M-1, Light Industrial, to R-3, Limited Multiple Dwelling District. The subject properties are described as Lots 3, 4, and 5, Block 25, Mankato City subdivision (1618, 1620 and 1622 3rd Avenue).

Mr. Pringnitz reports that staff respectfully submits the following findings regarding the request of the rezoning of M-1, Light Industrial, to R-3, Limited Multiple Dwelling District.

1. Given the location of the parcels, the rezoning of the parcels aligns with neighboring city blocks.
2. Proposed use of an Intensive Outpatient Treatment Program facility requires issuance of a Conditional Use Permit.
3. The request does not negatively impact the health, safety and general welfare of the City of Mankato.

4. Utility accounts will change from taxable to non-taxable status with the proposed request.

Mr. Pringnitz reports that staff recommends approval of the request to rezone from the current zoning classification of M-1, Light Industrial, to R-3, Limited Multiple Dwelling District with the following conditions:

1. The proposed future uses of the Subject Properties shall comply with the standards of the R-3, Limited Multiple Dwelling District.
2. The applicant shall submit a request for a Conditional Use Permit prior to seeking to utilize the space for prospective use.
3. Applicant shall evaluate sewer and water service needs for each of the three lots. In the event additional/upgraded services are needed or if any of the properties are being considered to be demolished, the applicant would be encouraged to expedite any service installation/disconnection work in unison with the 3rd Avenue Reconstruction project.
4. The applicant will be required to pay SAC & WAC connection charges based on the City of Mankato assessment policy and fee schedule based on increased development density.

Jim Rotert. Mr. Rotert indicated that he would be purchasing the property and was present at the meeting with his wife, who would be opening the IOP (Intensive Outpatient Program). They explained that they had since applied for the CUP and were not aware whether a neighborhood meeting was required prior to the rezoning or only for the CUP. They apologized for not holding a meeting prior to the current Planning Commission meeting but indicated that they fully intend to hold a neighborhood meeting. They added that they would provide their personal contact information in relation to the meeting. Mr. and Mrs. Rotert stated that they were also present to answer any questions from the Planning Commission members.

Chair Zehnder opened the public hearing for comment.

Leslie Allen Jr. Mr. Allen stated that he has lived in the area since 1995 and questioned whether the proposed use was the same as what the House of Hope previously operated and, if so, why the property would need to be rezoned.

Chair Zehnder explained that the Planning Commission was currently considering only the rezoning request and was not considering the CUP for the proposed use. He added that the previously approved CUP had lapsed, meaning the process would need to start over.

Mr. Konz stated that this was correct. He explained that when a use expires or the property is no longer being used for that purpose, the property owner has one year to return and resume the same use. If that had occurred in this case, the applicant would not have needed to go through the rezoning or CUP process. However, because that did not occur, the applicant is required to go through the necessary steps to allow the proposed use. He explained that the proposed use would not be allowed under the current zoning classification, which is why the property must first be rezoned. He added that the proposed rezoning is consistent with the City of Mankato's land use plan, after which the applicant would return to the Planning Commission for consideration of the CUP.

Jesse Spencer. Mr. Spencer stated that he understood the purpose of the meeting was not to address the CUP but wanted to outline some of his concerns and obtain more information regarding when future meetings will take place. He indicated that there were additional residents in the neighborhood who were unable to attend the meeting. He noted that there are currently five facilities, like the proposed facility, operating in the neighborhood. He stated that these facilities have not created significant issues but wanted to discuss some of the negative externalities experienced by the neighborhood, such as lighting and traffic. He indicated that he would be present at future meetings to discuss these concerns in greater detail.

Mr. Spencer referenced the common “not in my backyard” concern but stated that the concerns being raised were legitimate concerns from residents who live in the neighborhood. He noted that he has peer-reviewed research that he would like to present but felt that it would be more appropriate to do so during consideration of the CUP. He questioned when the CUP would be considered and whether there

would be any additional neighborhood meetings.

Mr. Konz stated that, from the City of Mankato's perspective, the next Planning Commission meeting is scheduled for September 23, 2026, at 6:00 p.m., at which time the item would be back before the Planning Commission. He added that it was his understanding that the applicant would hold a neighborhood meeting outside the formal project review process and stated that he could speak with the applicant to obtain additional information regarding that meeting. He explained that, if the Planning Commission recommends approval at the September meeting, the item would then be forwarded to the Mankato City Council for consideration on October 13, 2026.

Mr. Spencer concluded by requesting that the City of Mankato take a close look at the cumulative impact of these facilities within the neighborhood, including the intensity of the facilities, the individuals being served, and the existing conditions within the neighborhood.

Ryan Gemlo. Mr. Gemlo stated that he is a resident located just south-west of the proposed facility and had lived there since 2014. He noted that he had experienced the neighborhood both while the House of Hope was fully operational, and after it ceased operations, adding that he preferred the latter. He stated that, during the time House of Hope was operating, his children were exposed to what he described as an excessive amount of drug activity. He also referenced the amount of traffic traveling in and out of the alley, noting that the buildings in the area are accessed from the alley to the south and the alley to the north. He explained that the alley on Pine Street has a significant incline and can be difficult to use at times, particularly during the winter, resulting in most of the traffic using the alley on Chestnut Street.

Mr. Gemlo stated that he did not know the full scope of the applicant's plans for the property but questioned which buildings would be demolished. He indicated that, if the access and parking were not adequate for the number of tenants the applicant intended to place in the building, he believed that information was relevant to the rezoning request. He stated that he was not in favor of the rezoning and would rather see the property deteriorate than have another treatment facility operate at the location because of what he believed the implications would be for his children and others in the neighborhood. He added that the impacts would not be limited to the immediate block, stating that he believed drug activity and other issues associated with these types of facilities could extend to the nearby park, which he described as a gathering or hangout area for clients of these types of facilities. He asked the Planning Commission to take these concerns into consideration.

With no one wishing to speak, the public hearing was closed.

Chair Zehnder questioned whether the house located on the north side would be eligible to obtain a rental license and whether the rental use would be outside the proposed rezoning classification.

Mr. Konz stated that if the house were strictly used as a rental property, it would be allowed as a permitted use and would be eligible to operate as a rental property.

Ms. Surdy questioned whether the Planning Commission could receive the definitions and distinctions between the M-1 and R-3 zoning districts for public information.

Mr. Konz explained that M-1 is the Light Industrial District, where you would typically see more industrial-type uses, including distribution and light manufacturing. He explained that R-3 is referred to as the Limited Multi-Family District and is considered a medium-density residential classification. He noted that the ordinance specifically limits the number of units to a maximum of eight units in one building on a lot, with the allowable density based on the size of the lot. He stated that the minimum would be one unit and the maximum would be eight units.

Mr. Konz added that rental properties could be in an M-1 zoning district; however, the city would often recommend rezoning the property to RT (Residential Transition). He explained that obtaining a loan for a residential property can be challenging when the residential property is zoned for industrial use, which is

one reason the RT zoning classification may be more appropriate.

Ms. Bigham made a motion to approve CY41-26. The motion was seconded by Mr. Wilke and passed unanimously.

The anticipated date of City Council action will be September 14th, 2026.

6. MISCELLANEOUS

No miscellaneous items

7. ADJOURNMENT

There being no further business, Mr. Wilke moved to adjourn the meeting. The motion was seconded by Mr. Filipovitch with all in favor. The meeting adjourned at 8:21 pm.

MINUTES APPROVED.

_____

Chair, Mankato Planning Commission

Meeting Date: 09/23/2026

Title

CY36-26 tabled at August 26, 2026 PC meeting

Request of Bolton and Menk, on behalf of Kody Schendel of New Hope Board and Lodge and KD2 Properties, LLC, for an amended conditional use permit to allow a building addition and an operational expansion; and for a variance to decrease the rear yard from 66' to 11.2' in the R-3, Limited Multiple Family Dwelling District. The variance is being requested in order to allow for a building addition. The property is described as Lots 6, 7, 8 and the westerly half of Lot 9, Block 16 of Mankato City, Blue Earth County (1429 3rd Avenue).

The anticipated date of City Council action is October 13, 2026.

Applicant

The applicant is Bolton and Menk, on behalf of the property owner, Kody Schendel.

Request

The applicant is requesting a conditional use permit to construct and operate a 16-unit congregate micro-apartment addition; and for a variance to decrease the rear yard from 66' to 25' in the R-3, Limited Multiple Family Dwelling District.

The variance is being requested in order to allow for an approximately 52.5' X 60' building addition.

Location

The address for the property is 1429 3rd Ave.

Existing Land Use

The property is the location of New Hope Board and Lodge, formally House of Hope.

Zoning

The property is zoned R-3, Limited Multiple Dwelling District.

Environmentally Sensitive Areas

There are no known environmentally sensitive areas on the site.

Public Utilities

The property is currently served by public utilities.

City Code

The City Code pertaining to the R-3, Limited Multiple Dwelling District may be viewed at the following link.

https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTIIREDI_DIV5LIMUDWDI

Site Plan Review Comments

The Site Plan and Traffic Review Committee met on August 11, 2026 and submitted the following comments:

1. The applicants shall evaluate the need for upgraded/additional sewer and water services to the property to support the new building addition as soon as possible. 3rd Avenue is being reconstructed currently; late summer/early fall would be an opportune time to upgrade utilities if needed. *Applicant: Owner to have a plumber review the existing service connection to the building. If required, he will work with City Staff to get the new services installed during the construction of 3rd Avenue. This step will move forward after review and approval of the project.*
2. The applicants will be required to pay SAC & WAC connection charges based on the City of Mankato assessment policy and fee schedule. *Applicant - Noted.*
3. The applicants shall be aware that the building is located within the FlexZone, which requires advanced scheduling for curb-to-curb service. The nearest Route 10 bus stop is approximately 0.75 miles away on foot. *Applicant - Noted.*
4. The applicant shall meet all parking requirements for residents and staffing based on the calculations in Mankato City Code Chapter 10. *Applicant - The current use of the property is congregate housing which requires one-half space per doweling unit. The building currently has 18 rooms with an additional 16 rooms being proposed (total of 34). The required stalls for the current and proposed stalls would be 17 stalls, plus the number of employees on the major shift. The current employees on the major shift are as follows: two staff members plus 2 caterers during dining time. So, in conclusion, the required stalls would be 17 for the units plus 4 for staff totaling 21. Most of the current individuals that live in the building do not have their own vehicle and depend on public transportation. The owner plans to work with the City Staff to coordinate access to public transportation.*
5. Applicant shall license the facility through the State of Minnesota and coordinate all necessary services through Blue Earth County. *Applicant - Noted.*

The Site Plan and Traffic Review Committee met on September 8, 2026 and submitted the following comments:

1. If not already complete, the applicant shall log in to the online portal and make notice fee payments. As a result of the tabling at the request of the applicant, a second set of notices were sent and the invoice fee is reflective of as much. *Applicant – Noted. Payments have been made.*
2. Applicants shall evaluate the need for upgraded/additional sewer and water services to the property to support the new building addition as soon as possible. 3rd Avenue is being reconstructed currently; late summer/early fall would be an opportune time to upgrade utilities if needed. Applicants acknowledged this comment from prior site plan meeting and shall follow up with Construction Services when evaluation of existing sewer and water

services are complete. *Applicant – Noted. Upon approval we will work on reviewing the any needed utility connection.*

3. Applicants will be required to pay SAC & WAC connection charges based on the City of Mankato assessment policy and fee schedule. *Applicant – Noted. We will work with staff to understand the connection fees.*
4. Applicant shall confirm employees and staffing proposed for the site. In the parking analysis 4 staff are referenced. Please confirm the staffing, visitors, and how the food service will be handled. In sum, the total parking needed to serve the site is necessary for a complete evaluation. The previous House of Hope approval indicated that 10 employees were needed for that operation. *Applicant – Staffing will be as follows: 2 onsite staff, 2 onsite food service staff. Visitors will be able to use any open spaces in the parking lot (no overnight parking will be allowed). If no space is available in the parking lot, they will need to park on the public street and follow the city code (no overnight parking will be recommended).*
5. As with the previous approval, it was noted as a condition of approval, "The city may require additional parking if the use exceeds what is required." What is the applicant's parking plan if the parking demand exceeds the supply? *Applicant – Ownership will work with their residents to manage parking needs and also limit parking as needed. Ownership will continue to look for appropriate off-site parking options if the need arises. Again, most residents don't have their own vehicles, and they rely on public transit or other transportation options.*
6. Applicant shall confirm that this is the only business operating at this location (i.e. separate catering services, separate business operational functions, etc.) that are occurring at the subject site. *Applicant – The primary operation at the subject site is the board and lodge. There is an existing commercial kitchen on the premises which is operated by Truffles Catering. Their presence onsite is strictly limited to the following functions: 1. Preparing meals for the residents of the board and lodge during the week. 2. Preparing meals for their partnership with "Meals on Wheels", churches and other local programs on a meal delivery basis. We maintain this separation of operations strictly for safety and compliance. Residents are not permitted in the commercial kitchen. Truffles Catering holds a current state food license, ensuring the kitchen is managed safely by professionals. They do not operate a public-facing restaurant from this location."*
7. The applicant shall update the site plan to confirm that the proposed parking stall size achieves the City of Mankato engineering parking plates. All stalls shall achieve the Code standards. *Applicant – The current plan conforms with City Code. Stall sizes are all 9' x 19'.*
8. Applicant shall provide a copy of the current license for the subject property including the state licensing provision that the proposed expansion will operate under. *Applicant – See attached pdf.* A License has been provided to City Staff.
9. The landscaping shall be reviewed to ensure that it achieves the Code standards. This was also a condition of the original approval. *Applicant – Noted. Final Plans will conform with City Code. Plans to be provide at the time of permitting*.
10. The applicant shall clarify how and who will prepare the meals/food and how they are served to the residents. Will food be delivered, what is the frequency, and is parking accounted for this service? *Applicant – "All resident meals are prepared onsite in the facility's commercial kitchen by Truffles Catering, a state-licensed food service provider. For the safety of our residents, they are not allowed inside the commercial kitchen; all food preparation is handled exclusively by these professionals. Meals are served to residents throughout the week directly from the kitchen, eliminating the need for external food delivery services. Truffles Catering also uses the kitchen to prepare meals for the local Meals on Wheels program. Onsite parking is accounted for to support the catering staff, their supply deliveries, and the Meals on Wheels program logistics.* "
11. All exterior lighting shall conform to Mankato City Code requirements. *Applicant – Noted. Final Plans will conform with the City Code. Plans are to be provided at the time of permitting.*
12. Clarify who the clients at the facility will be. The original condition of approval stated, "Clients from the Department of Corrections that are not classified as chemically dependent shall be limited to only those individuals' serving sentences for property crimes such as theft or damage to property. Individuals convicted of crimes against a person (such as homicide, assault, robbery or sex crimes) shall not be allowed in the facility, unless classified as chemically dependent and participating in the residential treatment program. The Council reserves the right to review the correctional component of the facility in the future. The Council may allow additional classes of supervised release inmates at the facility or further limit the types of supervised release inmates. The decision to expand or limit the correctional component will depend on the impact of the property on the community." *Applicant – "New Hope Board and Lodge strictly complies with the City's mandate prohibiting violent offenders, and these conditions have been an established part of our referral process since 2019. Any Department of Corrections clients are limited solely to non-violent offenses, such as property crimes. To enforce this and ensure community safety, we explicitly deny admission to anyone with the following felony charges: 1. Murder (1st–3rd degree) & Manslaughter (1st–2nd degree) 2. Felony Assault (1st–5th degree) 3. Criminal Sexual Conduct (1st–4th degree) 4. Arson (1st–2nd degree) 5. Drive-by shooting & Unlawful possession of a firearm"*

Review

The applicant is requesting a conditional use permit to allow a building addition and an operational expansion of the current facility; and a variance to decrease the rear yard from 66' to 25' in the R-3, Limited Multiple Family Dwelling District.

Conditional Use Permit:

The current facility located at the site operates as a state licensed Rate 1 Room and Board. There are currently 18 bedrooms that are being rented by individuals seeking recovery housing. The existing facility provides space for private offices, gathering spaces for tenants, shared laundry, a commercial kitchen and dining room. Food services are currently being provided by an onsite catering group.

In 1997, a conditional use permit was granted allowing the House of Hope operations. The original 1997 Planning Commission report and City Council resolution from 1997 are included as attachments.

The property owner requested that the Planning Commission table a review of the items at their August 26, 2026, meeting to make modifications to their request. As requested, the Planning Commission tabled the item and will be reviewing it at their September 23, 2026, meeting.

A newly revised site plan shows a 60' X 52.5', approximately 3,150 square foot, addition located on the southerly side of the existing facility. The August 2026 submission has been modified to now contain 16 new bedrooms, each having their own bathroom. There are eight bedroom units on each floor of the proposed 2-story addition. The proposed new addition also includes a shared kitchen, dining and living room on each floor. This replaces the previous apartment-type units.

The site provides 22 stalls for the existing uses of the building and is based on previous council approval. Parking for the additional units on site shall be provided at 1.5 stalls per unit. Plus one space per staff member. Based on this calculation, an additional 28 stalls shall be provided on site or on an unencumbered lot within 500 feet from the site. Alternatively, the applicant can seek a reasonable accommodation under the Fair Housing Act to allow for parking flexibility.

Variance:

The applicant is requesting a variance to reduce the rear yard setback from 66' to 25'. The Mankato City Code requires a rear yard setback for all principal buildings other than one-and-two family dwellings of 25 percent of lot depth, provided the yard is a minimum of 25 feet or a maximum of 75 feet. The variance is being requested in order to allow for an approximately 60' X 52.5' building addition.

The applicant has modified their August 2026 submission from an initially proposed 11.2' setback, to a proposed 25' rear yard setback.

The applicant provided the following answers to the variance questions:

1. In your opinion, is the variance in harmony with the purposes and intent of the ordinance? *Yes. The intent of the R-3 district and local zoning ordinances is to ensure orderly, safe, and compatible residential development that serves community needs. Granting this variance allows an existing, legally established board and lodge to expand its contiguous footprint with 16 new board and lodge units tailored for past and present residents. Because the site operates with shared central common spaces, and administrative oversight, expanding onsite rather than constructing a separate building preserves land efficiency and keeps the visual scale compatible with the surrounding residential neighborhood.*

2. In your opinion, is the variance consistent with the comprehensive plan? *Yes. The City of Mankato Comprehensive Plan emphasizes diverse housing options, redevelopment of infill properties, and micro-unit/flexible housing models for vulnerable populations. Expanding New Hope Board and Lodge with private capital directly aligns with these goals by expanding stable, substance-free housing, preventing housing instability, and supporting workforce reintegration—all within a designated mixed-density residential corridor.*
3. In your opinion, does the proposal put property use in a reasonable manner? *Yes. The continuous operation of a board and lodge housing is a reasonable and established use of this property. Adding 16 new board and lodge units directly addresses a severe capacity crisis where qualified past and present residents seeking independent recovery living are routinely placed on waitlists. Constructing an attached addition rather than purchasing a separate, detached site is the only operationally viable method to maintain shared staffing, centralized security, common dining, and unified administrative oversight.*
4. In your opinion, are there circumstances unique to the property? *Yes. The primary structure was positioned centrally on the parcel prior to modern expansion needs and modern setback rules, establishing fixed access points, parking alignments, and utility corridors. The physical lot dimensions and fixed position of the existing foundation limit where new construction can attach. Forcing strict adherence to standard yard setbacks shrinks the buildable footprint to a point where an addition becomes structurally infeasible and economically unviable, creating a unique physical hardship tied directly to the property's layout.*
5. In your opinion, will the variance maintain the essential character of the locality? *Yes. The property has functioned seamlessly as a board and lodge in this neighborhood. The architectural design of the proposed additional 16 board and lodge units will mirror the scale, rooflines, and exterior finishes of the existing building and neighboring multi-family structures. Parking lot and landscape buffers will ensure the expansion integrates quietly into the neighborhood without causing off-site parking congestion or altering the streetscape. Furthermore, adjacent neighborhood stakeholders have provided documented support for this proposal.*

The applicant did host a neighborhood meeting per staff's recommendation. The meeting recap is included in the attachments.

Findings

Staff submits the following findings:

1. The property is currently served by public utilities and the applicant will need to pay SAC and WAC fees based on the expansion to the facility.
2. The applicant will need to provide parking based on the additional units and staffing needs. The facility is in proximity to public transit.
3. The property is a state licensed facility.
4. The proposal does not interfere with or diminish the use of property in the immediate vicinity.
5. The proposal does not cause undue traffic congestion.
6. There are no known historical or architectural resources on the site.
7. There are no known natural or environmental features on the site.
8. It will not cause a negative cumulative effect and effect on the City as a whole.
9. The proposal will not jeopardize the public's health, safety, or general welfare.

Recommendation

Staff recommends approval of the conditional use permit with the following recommendations:

1. The applicant shall provide a loading and unloading plan for the onsite catering business. Loading and unloading shall not interfere with the operation of adjacent uses.
2. Parking shall be provided onsite or within 500 feet for the additional units and staffing. Alternatively, the applicant can seek a reasonable accommodation under the Fair Housing Act to allow for parking flexibility.
3. The applicant shall provide a photometric plan and fixture cut sheets for any new lighting that conforms to the Mankato City Code.
4. The applicant shall provide 24-hour staffing at this location.
5. The applicant shall address any safety issues that arise at the facility.
6. Any proposed mechanical equipment shall not be visible from the adjacent street frontage and be screened according to Mankato City Code Chapter 10.
7. No outside storage shall be permitted on the subject property unless fully enclosed/screened.
8. All refuse containers shall be fully enclosed in conformance with Mankato City Code Chapter 10.
9. The property is currently served by public utilities and the applicant will need to pay SAC and WAC fees based on the expansion to the facility. Fees can be calculated based on the information below:
    1. WAC - $602.55xREC (Residential Equivalent Unit)
    2. SAC - $1,924.52xREC (Residential Equivalent Unit)
10. The commercial kitchen shall be used to exclusively supply food for the House of Hope.

Attachments

General Location Map

Aerial Plan

Site Plan

Site Plan - variance

Floor Plans

Exterior rendering

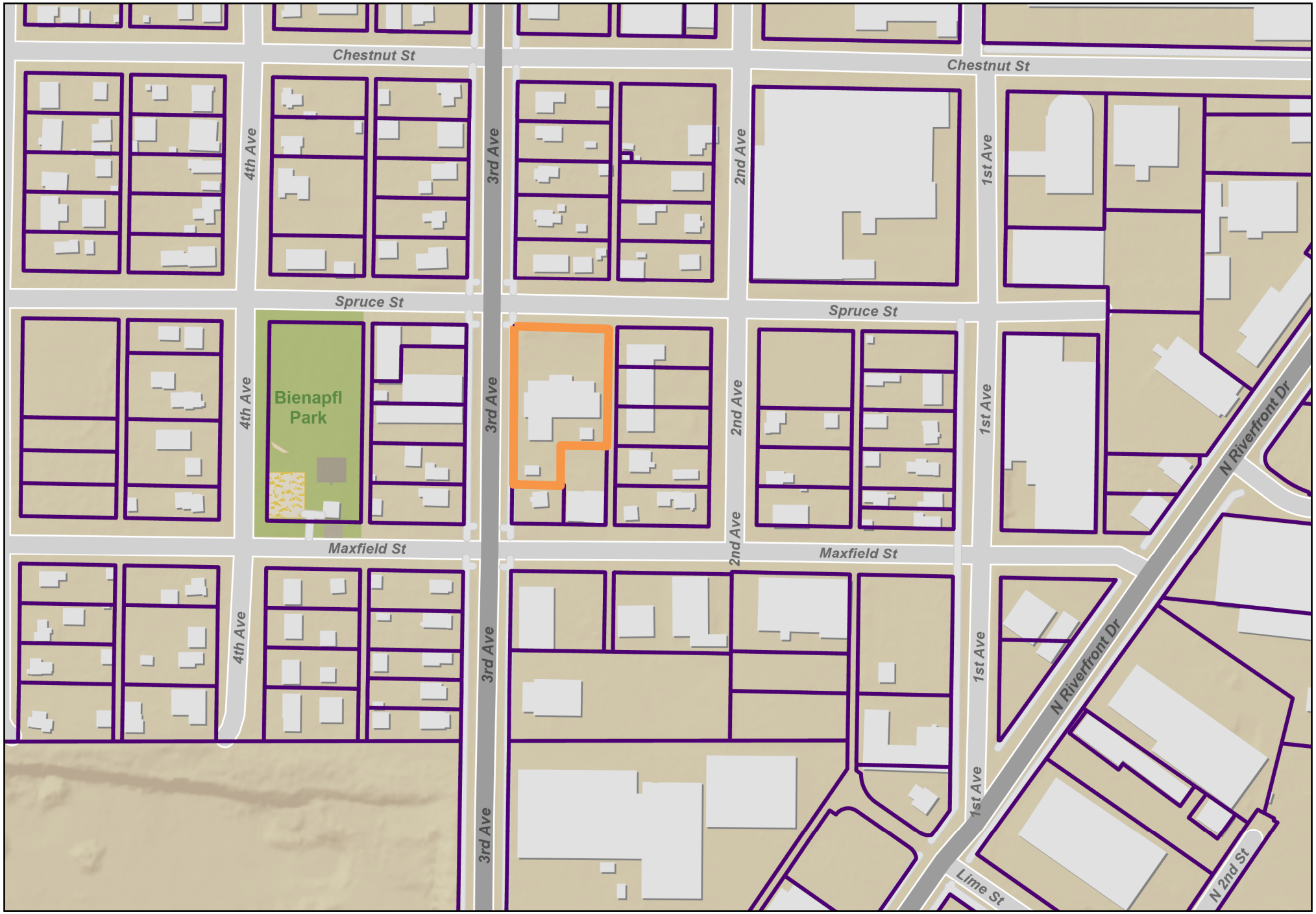
Narrative

Neighborhood Meeting Responses

1997 Planning Commission report

1997 City Council report and details

General Location Map



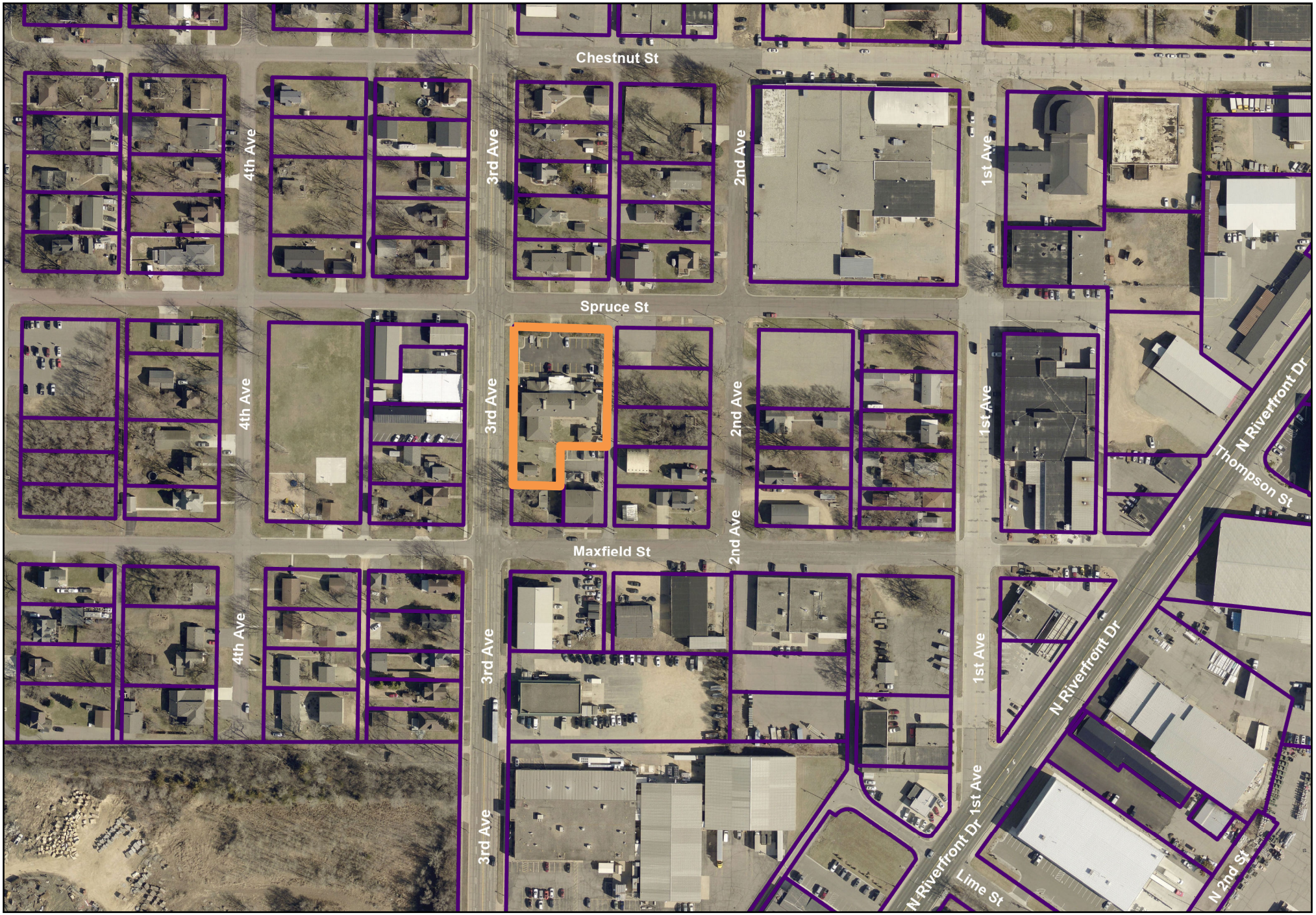
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This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

Produced by: City of Mankato GIS
Published: August 4, 2026

Aerial Map



N W E S

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Produced by: City of Mankato GIS
Published: August 4, 2026

Mankato — Leading the way...



UTILITY & SITE DATA
All Zoning and Setback information was obtained from the City of Mankato Code. For detailed zoning information and specific interpretation of code requirements, contact the City of Mankato.

ZONING:
Property is Zoned R-3, Limited Multiple-Family Dwelling District

SETBACKS:
Front
Main and Accessory Building 25 feet

Side
Main and Accessory Buildings 6 feet

Rear
Main and Accessory Building
25 feet (one- and two-family dwellings)
25% of the lot depth provide is minimum of 25 feet to a max of 75 feet (for all other principal buildings)

Lot Area (minimum) = 10,000 sq.ft. (for the first 4 units)
Lot Width (minimum) = 60 feet
Maximum Ground Coverage = 35% by all structures
Maximum Building Height = 35 feet (principal) and 20 feet (accessory)

SITE DATA

BUILDING INFO:
Existing Building Area = 8,213 sqft
Proposed Building Area = 3,150 sqft
Total Building Area = 11,363 sqft
Ground Coverage by all structures = 31.2%

Existing number of units = 16 bedrooms (board and lodge units)
Proposed number of units = 16 bedrooms (board and lodge units)
Total number of units = 32 bedrooms

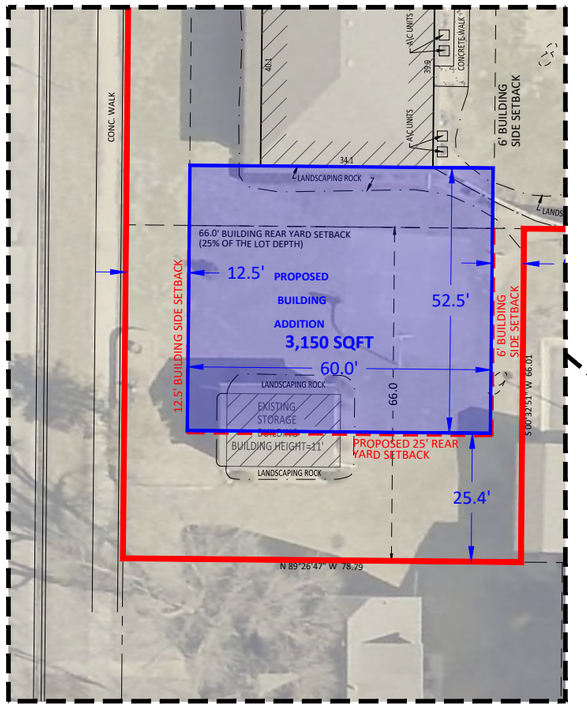
PARKING:
Existing parking stalls = 22
Required parking stalls = 16 (0.5 stalls per bedroom) + 4 stalls for emploees = 22 stalls.

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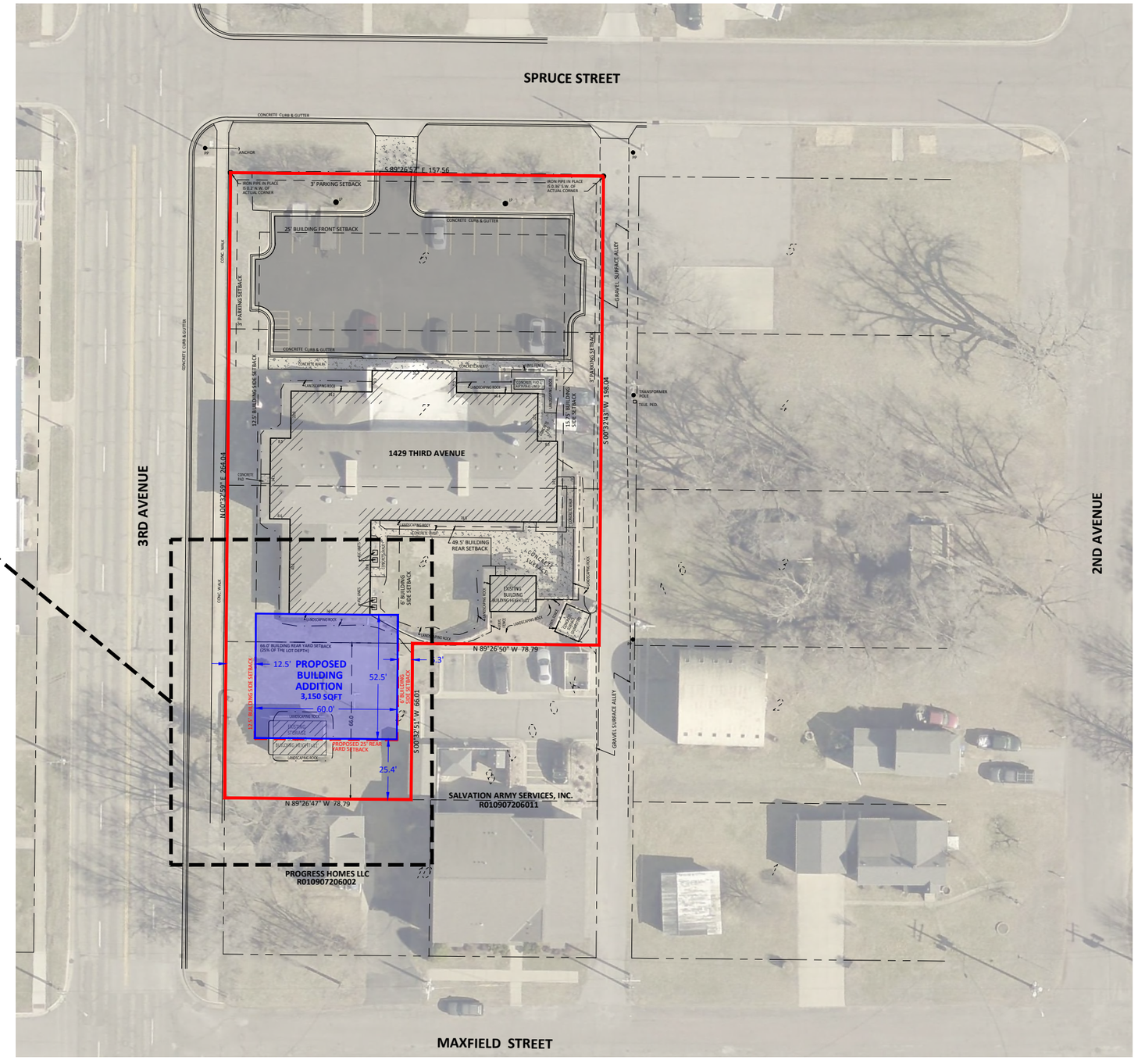
KD2 Properties
Mankato, Minnesota

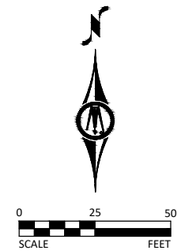
Variance Request Drawing
September, 2026

BOLTON & MENK



VARIANCE REQUEST DETAIL
NOT TO SCALE





UTILITY & SITE DATA
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ZONING:
Property is Zoned R-3, Limited Multiple-Family Dwelling District

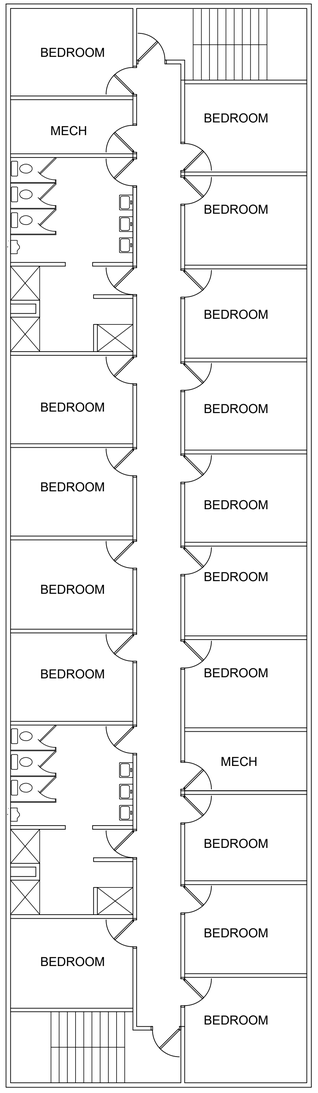
SETBACKS:
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25 feet (one- and two-family dwellings)
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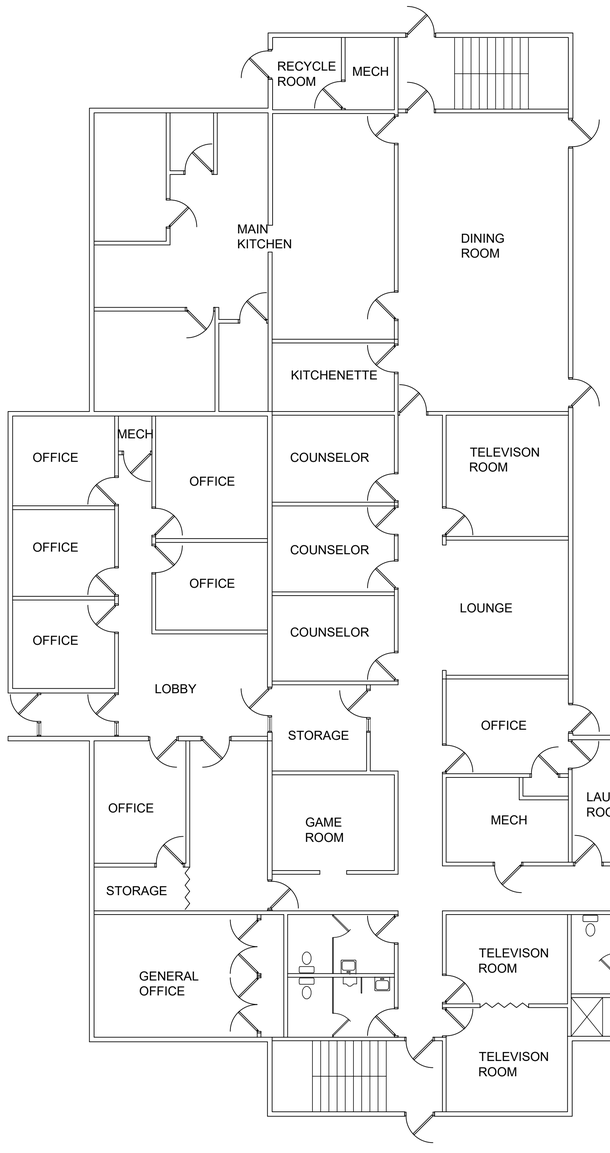
Lot Area (minimum) = 10,000 sq.ft. (for the first 4 units)
Lot Width (minimum) = 60 feet
Maximum Ground Coverage = 35% by all structures
Maximum Building Height = 35 feet (principal) and 20 feet (accessory)

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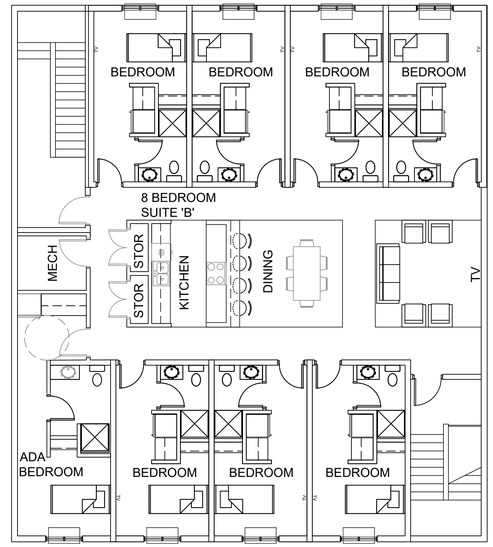
1 EXISTING 2ND LEVEL PLAN

0 4' 8' SCALE: 1/8"=1'-0"



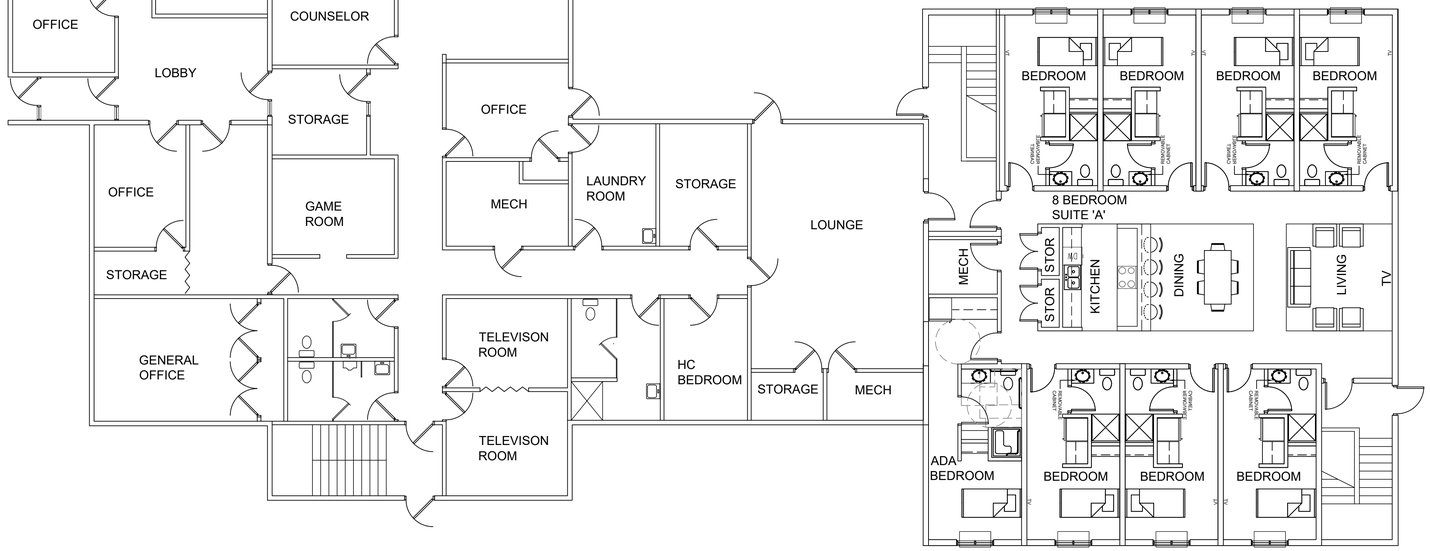
2 EXISTING FIRST LEVEL PLAN

0 4' 8' SCALE: 1/8"=1'-0"



4 PROPOSED 2ND LEVEL PLAN

0 4' 8' SCALE: 1/8"=1'-0"



EXISTING NEW

3 PROPOSED 1ST LEVEL PLAN

0 4' 8' SCALE: 1/8"=1'-0"

NORTH

RDS ARCHITECTS

Bright Pixel Design

PROJECT TITLE:

HOUSE OF HOPE
1618 3RD. AVE.
MANKATO, MN 56001

GENERAL NOTES:

CONTRACTORS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND INDUSTRY BEST PRACTICES FOR ALL PRODUCT INSTALLATIONS.

SHEET NOTES:

(1) NOTE

No.	SUBMISSIONS & REVISIONS	Date

CONCEPT FLOOR PLANS

JOB. NO.: 26.32.5
DATE: 8-31-2026
DRAWN BY: MJB

A1.1



1 PROPOSED EXTERIOR DESIGN

RDS ARCHITECTS

Bright Pixel Design

PROJECT TITLE:

HOUSE OF HOPE
1618 3RD. AVE.
MANKATO, MN 56001

GENERAL NOTES:

CONTRACTORS TO FOLLOW MANUFACTURER'S INSTRUCTIONS AND INDUSTRY BEST PRACTICES FOR ALL PRODUCT INSTALLATIONS.

SHEET NOTES:

1 NOTE

No.	SUBMISSIONS & REVISIONS	Date

CONCEPT RENDERING

JOB. NO.: 26.32.5
DATE: 8-31-2026
DRAWN BY: MJB

A1.0

MANKATO PLANNING COMMISSION & CITY COUNCIL

SUBMITTAL PACKET

Project: Proposed 16-Unit Congregate Micro-Apartment Addition

Subject Property: 1429 Third Ave, Mankato, MN 56001

Applicant: New Hope Board and Lodge LLC / Kody Schendel (KD2 Properties, LLC)

Civil Engineer / Project Lead: Bolton & Menk, Inc. (Nate Myhra)

General Contractor: Alliance Contracting (Jason Weinandt)

TABLE OF CONTENTS

1. Cover Letter & Project Overview
2. City of Mankato Site Plan & Advisory Committee Responses
3. Formal Variance Responses & Hardship Justification
4. Operational, Security, & Staffing Narrative
5. Civil Engineering & Site Plan Narrative

1. COVER LETTER & PROJECT OVERVIEW

TO: City of Mankato Planning Commission & City Council

DATE: July 27, 2026 - Revised September 2, 2026

SUBJECT: Joint Application for Revised Conditional Use Permit (CUP) and Variance Request for 1429 Third Ave

Dear Commissioners and Council Members,

On behalf of New Hope Board and Lodge LLC and KD2 Properties, LLC, we submit this comprehensive application package for a revised Conditional Use Permit (CUP) and variance request to construct an additional 16-unit board and lodge units to our existing facility located at 1429 Third Ave.

This addition is specifically designed as supportive recovery housing for past and present residents of New Hope Board and Lodge who are stepping down into more independent, long-term recovery living while maintaining a connection to a supportive peer community.

Notably, this project is 100% privately financed by the applicant without relying on government grants, public subsidies, or outside investors. It represents a direct, private capital investment into Mankato's supportive housing infrastructure to address a critical local housing gap.

Currently, our facility is experiencing an acute capacity crisis. Due to physical footprint constraints of our existing building, we are routinely forced to turn away individuals who are committed to their recovery. This proposed 16-unit contiguous expansion directly addresses a severe regional shortage of supportive recovery housing in Blue Earth County while preserving the residential character of the neighborhood.

Respectfully submitted,

Kody Schendel

New Hope Board and Lodge LLC / KD2 Property, LLC

PO Box 123, Elysian, MN 56028

2. RESPONSES TO CITY COMMENTS (SITE PLAN & TRAFFIC ADVISORY)

In response to the City of Mankato Site Plan and Traffic Advisory Committee review comments provided on June 15, 2026, the applicant submits the following responses:

- **Water & Sewer Availability Charges (WAC/SAC) & Utilities:**

  The applicant acknowledges and accepts all applicable Water Availability Charges (WAC) and Sewer Availability Charges (SAC) associated with the additional 16-unit board and lodge units. In coordination with our civil design team (Bolton & Menk, Inc.) and ahead of the planned 3rd Avenue reconstruction, the existing water and sewer service lines will be fully inspected to evaluate capacity and structural integrity. Any required utility upgrades or new service connections will be incorporated directly into the civil construction plans to meet City engineering standards.

- **Licensing, Project Scope, & Operation Type:**

  The current facility operates as a licensed Rate 1 Board and Lodge. The proposed addition will provide an additional 16-unit of board and lodge-style living designed specifically to serve past and present New Hope residents. (the new units will be defined as a shared living arrangement where people have a private bedroom and

bedroom, but share common areas.) This model provides an essential transitional bridge, allowing individuals in active recovery to progress into independent micro-units while remaining connected to on-site peer support, shared services, and administrative oversight. Full operational details will be provided as required.

- **Density & Conditional Use Permit (CUP) Requirements:**

  While standard R-3 Limited Multiple Dwelling District zoning permits up to 8 units per building/lot, this proposal requests a revised Conditional Use Permit (CUP) and associated density/setback variance to allow an expansion of 16 new board and lodge units. Expanding the existing contiguous footprint is critical for operational efficiency, centralized intake, shared dining/common spaces, and supervisory oversight under one roof—eliminating the need for duplicate overhead or a secondary remote facility.

- **Financial Viability & Project Execution:**

  The project is entirely privately funded by the developer/owner with zero reliance on public grant cycles, government tax credits, or external private investor approval processes. This ensures immediate project readiness and reliable execution upon municipal approval.

- **Site Performance Elements:**

  The revised site plan prepared by Bolton & Menk addresses all performance standards outlined in City Code. This includes engineered hard-surfacing, dedicated off-street parking calculations for micro-units, code-compliant exterior fixtures (downward-shielded dark-sky lighting), perimeter screening/landscaping buffers adjacent to surrounding properties, and dedicated outdoor amenity space for residents.

- **Security, Staffing, & Neighborhood Compatibility:**

  The facility maintains direct administrative oversight during core operational hours, paired with on-site house management during evenings and weekends, continuous electronic security monitoring, controlled access keypads, and strictly enforced house rules (including zero-tolerance substance policies along with drug/alcohol screening, guest curfews, and mandatory check-ins). Surrounding neighbors have

expressed support during our recent neighborhood informational meeting on July 23, 2026.

3. CITY OF MANKATO VARIANCE QUESTIONNAIRE

We would like to formally request a variance to the rear yard setback. We would like to reduce the rear yard setback from the required 25% of the lot depth to the regular standard of 25 feet.

1. In your opinion, is the variance in harmony with the purposes and intent of the ordinance?

Yes. The intent of the R-3 district and local zoning ordinances is to ensure orderly, safe, and compatible residential development that serves community needs. Granting this variance allows an existing, legally established board and lodge to expand its contiguous footprint with 16 new board and lodge units tailored for past and present residents. Because the site operates with shared central common spaces, and administrative oversight, expanding on-site rather than constructing a separate building preserves land efficiency and keeps the visual scale compatible with the surrounding residential neighborhood.

2. In your opinion, is the variance consistent with the comprehensive plan?

Yes. The City of Mankato Comprehensive Plan emphasizes diverse housing options, redevelopment of infill properties, and micro-unit/flexible housing models for vulnerable populations. Expanding New Hope Board and Lodge with private capital directly aligns with these goals by expanding stable, substance-free housing, preventing housing instability, and supporting workforce reintegration—all within a designated mixed-density residential corridor.

3. In your opinion, does the proposal put property use in a reasonable manner?

Yes. The continuous operation of a board and lodge housing is a reasonable and established use of this property. Adding 16 new board and lodge units directly addresses a

severe capacity crisis where qualified past and present residents seeking independent recovery living are routinely placed on waitlists. Constructing an attached addition rather than purchasing a separate, detached site is the only operationally viable method to maintain shared staffing, centralized security, common dining, and unified administrative oversight.

4. In your opinion, are there circumstances unique to the property?

Yes. The primary structure was positioned centrally on the parcel prior to modern expansion needs and modern setback rules, establishing fixed access points, parking alignments, and utility corridors. The physical lot dimensions and fixed position of the existing foundation limit where new construction can attach. Forcing strict adherence to standard yard setbacks shrinks the buildable footprint to a point where an addition becomes structurally infeasible and economically unviable, creating a unique physical hardship tied directly to the property's layout.

5. In your opinion, will the variance maintain the essential character of the locality?

Yes. The property has functioned seamlessly as a board and lodge in this neighborhood. The architectural design of the proposed additional 16 board and lodge units will mirror the scale, rooflines, and exterior finishes of the existing building and neighboring multi-family structures. Parking lot and landscape buffers will ensure the expansion integrates quietly into the neighborhood without causing off-site parking congestion or altering the streetscape. Furthermore, adjacent neighborhood stakeholders have provided documented support for this proposal.

4. OPERATIONAL, SECURITY, AND STAFFING NARRATIVE

I. Overview & Facility Mission

New Hope Board and Lodge operates at 1429 Third Ave as a licensed Rate 1 Board and Lodge. The facility provides structured, supportive, and substance-free transitional housing for adults ($18+).

The proposed new 16-unit addition consists of additional board and lodge-style units engineered specifically for past and present New Hope residents. This project fills a critical post-treatment and transitional housing gap by offering an affordable, structured step-down environment.

Centralizing this expansion within the existing contiguous structure allows for unified management, shared amenities, and continuous supervisory oversight.

II. Project Financing & Independence

- 100% Private Capital: The construction and ongoing operation of these additional 16 units are fully self-financed by the owner/applicant.
- No Public Burden: The project requires no government grants, public tax subsidies, or outside investors, ensuring long-term operational stability and eliminating bureaucratic delays during construction.

III. Operational Structure & Supervisory Staffing

To ensure safety, accountability, and seamless daily operations, the facility utilizes a structured staffing model across both the primary lodge and the new lodge units:

- On-Site Management & Administrative Oversight: Operational leadership and program management maintain on-site office hours Monday through Friday during core daytime business hours to oversee resident activity, conduct intake assessments, and coordinate support if needed.
- On-Site House Management: Dedicated Resident Managers reside on-site and provide oversight during evening and weekend hours, providing a physical presence and direct point of contact for staff.
- On-Call Emergency Coverage: Program leadership and designated supervisory personnel are available 24 hours a day, 7 days a week via on-call to respond immediately to any operational, physical plant, or resident emergency.

IV. Comprehensive Security Protocols & Access Control

The security framework at 1429 Third Ave combines modern hardware systems with strict house policy enforcement:

- Controlled Building Entry: All exterior entry doors remain locked 24/7. Access is strictly controlled via electronic keypad/fob systems issued only to authorized

residents and staff. Key codes are uniquely assigned and promptly revoked upon program completion.

- Surveillance System: High-definition security cameras monitor primary building perimeter entry/exit points, common hallways, parking areas, and shared spaces. Camera feeds are monitored by staff and archived for review.
- Visitor & Guest Policies: To maintain a safe environment, guest visitation is strictly regulated. All visitors must remain accompanied by a resident in designated common areas. No unapproved overnight guests are permitted under any circumstances.

V. Residence Rules, Accountability, & Substance Policies

The core of our operational strategy is maintaining a structured, peer-supported environment that respects surrounding neighborhood properties:

- Zero-Tolerance Substance Policy: The residence enforces a strict zero-tolerance policy for alcohol, illicit drugs, and unprescribed controlled substances. Regular, unannounced drug and alcohol screenings are conducted as a condition of residency.
- Curfew & House Accountability: All residents adhere to established evening curfews (typically 10:00 PM, with adjustments for documented employment shifts). Random nightly check-ins ensure resident accountability.
- Good Neighbor Policy: Residents agree to a comprehensive Code of Conduct that explicitly prohibits loitering, outdoor smoking outside designated rear screened areas, excessive noise, and disruptive behavior. Compliance is required for continued residency.

VI. Community Liaison & Emergency Contacts

New Hope Board and Lodge is committed to being an open, responsive neighbor within the 3rd Avenue corridor:

- Direct Neighborhood Contact: Facility leadership provides adjacent neighbors and local emergency services (Mankato Public Safety) with direct cell phone contact information for the primary Facility Manager and On-Call Supervisor.
- Incident Escalation: Any neighborhood concerns or inquiries are directed to on-site management for immediate resolution.

5. CIVIL ENGINEERING & SITE PLAN SUPPORTING NARRATIVE

I. Overview & Site Integration

This narrative supports the engineering submission prepared by Bolton & Menk, Inc. for the proposed 16-unit board and lodge expansion to New Hope Board and Lodge at 1429 Third Ave. The proposed expansion is designed to integrate into the existing parcel layout, optimizing land use while fully addressing City of Mankato site performance standards, access efficiency, and utility connectivity.

II. Off-Street Parking & Circulation

- **Parking Capacity & Demand**: Because residents in recovery rely heavily on public transit, micro-mobility, and local employment within walking distance, vehicle ownership among micro-unit residents is significantly lower than standard multi-family developments. We would like the City of Mankato to consider a reduction in the required parking to 0.5 stalls per bedroom plus four employees stalls. (16 existing bedrooms (0.5 stalls per bedroom) + 16 new proposed bedrooms (0.5 stalls per bedroom) + 4 employees = 22 stalls. The site has 22 stalls.)
- **Layout & Traffic Flow**: All parking stalls are configured with standard drive aisles to ensure safe, unimpeded vehicle maneuvering, clear emergency vehicle access, and efficient trash/recycling pickup.
- **Surface & Markings**: Parking surfaces will feature full bituminous asphalt or concrete hard-surfacing, with designated stall striping and accessible stall signage conforming to ADA standards.

III. Exterior Lighting & Photometrics

- **Dark-Sky Compliance**: All proposed exterior light fixtures will be modern, energy-efficient LED luminaires equipped with full-cutoff, downward-shielded housing to eliminate upward light spill and skyglow.
- **Property Line Shielding**: Lighting layout and photometric levels are designed toprovide clear, uniform illumination for resident safety along walkways, entry points, and parking lots while maintaining zero foot-candles of light trespass across adjacent residential property lines.

IV. Utility Evaluation & Services Coordination

- **Water & Sanitary Sewer Connections**: In response to feedback from the City Site Plan and Traffic Advisory Committee, the engineering design evaluates existing water and sanitary sewer service connections. In coordination with the City of Mankato's planned reconstruction of 3rd Avenue, existing utility connections will be inspected for capacity and structural integrity. Any required utility adjustments, resizing, or new taps will be integrated directly into the civil construction plans to prevent future right-of-way disruption.
- **Stormwater Management**: The site plan addresses localized drainage to ensure post-development runoff patterns match or improve upon pre-development conditions, directing surface runoff efficiently to existing municipal storm infrastructure.

V. Landscaping, Screening, & Amenities

- **Perimeter Buffering**: Landscaping buffers and decorative perimeter screening (fencing and native plantings) will be placed along sensitive lot boundaries to provide visual separation and preserve the residential character of the corridor.
- **Outdoor Amenity Space**: Dedicated outdoor green space and a rear patio area are designated for resident use, keeping outdoor gathering areas fenced from direct street view.
- **Refuse & Screening**: Trash and recycling dumpsters will be situated on a concrete pad enclosed by an opaque, architecturally compatible screening fence with latching gates.

1429 3rd Avenue PROJECT: Proposed 16-Unit Congregate Board and Lodge Addition Neighborhood Meeting Recap

1. Overview & Purpose

At the recommendation of the City Council, an informal neighborhood open house meeting was hosted at **1422 2nd Avenue (Wrestling Brotherhood)** to present plans for a proposed **16-unit micro-apartment addition** at the adjacent property (**1429 3rd Avenue**) and engage directly with surrounding property owners.

The goal was to review site plans, discuss the Conditional Use Permit (CUP) request for Congregate Housing expansion, explain day-to-day operations, and address any neighborhood questions prior to formal municipal public hearings.

2. Project Specifications

- **Subject Property:** 1429 3rd Avenue
- **Proposed Structure:** A 2-story, 16-unit addition physically connected to the existing facility.
- **Unit Layout:** Micro-apartments featuring individual private kitchenettes and private full bathrooms.
- **Common Amenities:** Centralized dining room, community lounge, private administrative meeting spaces, and an enclosed rear courtyard.
- **Requested Land Use:** Conditional Use Permit (CUP) for **Congregate Housing** under the existing multi-family zoning designation.
- **Program Model:** "Revive" independent, supportive housing serving individuals who have completed primary treatment/outpatient programming and are transitioning into long-term community independence.

3. Key Discussion Points & Neighborhood Clarifications

A. Parking & Transportation Impact

- **Neighborhood Inquiry:** Questions regarding off-street parking sufficiency and potential overflow onto adjacent streets.
- **Applicant Response:**
    - The requested CUP designation requires 0.5 parking stalls per dwelling unit, which the current site configuration satisfies.
    - Approximately 90% of program participants do not own personal vehicles or hold active driver's licenses.
    - The location is ideal for its proximity to public transit stops, bike routes, and walking access to employment and recovery support resources (e.g., local 5th Ave AA/NA Meetings).

B. Security, Resident Screening & House Rules

- **Neighborhood Inquiry:** Protocols regarding resident selection, safety oversight, and guest policies.
- **Applicant Response:**
    - **Screening:** All candidates undergo mandatory Minnesota state background checks prior to acceptance.
    - **Surveillance:** The facility is equipped with 24/7 video surveillance in all shared internal areas and exterior entry points.
    - **Drug/Alcohol Compliance:** Mandatory, 100% random drug and alcohol urinalysis screening is conducted.
    - **Rules:** Private living quarters carry a strict zero-guest policy. Nightly curfews are enforced. Relapses result in immediate discharge or managed referral with probation agents and outpatient program leads.

C. Operational Clarification

- **Applicant Response:** Clarified that the facility operates as an independent Board & Lodge framework. It is not an inpatient treatment center, medical facility, or emergency shelter. Rent is structured to remain accessible (capped at affordable out-of-pocket rates, ~$650/month for working residents at Revive locations) to foster financial stability and permanent housing transition.

4. Neighborhood Feedback & Summary of Sentiment

- **Track Record Acknowledgment:** Neighboring property owners in attendance (including adjacent commercial and residential neighbors) noted that over the applicants' three years of ownership at 1429 3rd Avenue, the site has been quiet, clean, and well-maintained with no notable police calls or public disturbances.
- **Overall Receptivity:** Attendees expressed support for the ownership's hands-on management approach, local roots, ongoing investment in the neighborhood, and clear communication regarding the addition.

5. Conclusion

The neighborhood meeting achieved its objective of providing complete transparency, clarifying land-use intent, and maintaining open dialogue with adjacent property owners. The applicants remain committed to being accessible contacts for the neighborhood throughout the development process and ongoing operations.

CY 16-97
05/21/97

REZONING AND CONDITIONAL USE PERMIT . . . HALFWAY HOUSE IN AN R-3, LIMITED MULTIPLE DWELLING DISTRICT . . . LOTS 6, 7, 8, AND THE WESTERLY HALF OF LOT 9, BLOCK 16 OF MANKATO CITY . . . HOUSE OF HOPE, INC.

Applicant

The applicant is House of Hope, Inc.

Request

The applicant is requesting a rezoning of the property from M-1, Light Industrial to R-3, Limited Multiple Family Dwelling, and a conditional use permit for a halfway house in the R-3, Limited Multiple Family Dwelling.

Location

The property is described as Lots 6, 7, 8, and the Westerly Half of Lot 9, Block 16 of Mankato City (southeast corner of the intersection of Spruce Street and 3rd Avenue).

Existing Land Use

The property is currently vacant. Surrounding land uses include a variety of commercial and residential uses.

Land Use Plan

The City's Land Use Plan designates this area as Light Industry.

Zoning

The site is zoned M-1, Light Industrial.

Floodplain

The site is not located in a floodplain.

Environmentally Sensitive Areas

The site is not located in an environmentally sensitive area.

Public Utilities

Public utilities are available to the property.

Parking

The required parking for the development is one space per every four beds. There will be a total of twenty-five beds within the facility. The development will have 10 employees on a major shift. One parking stall is required for every three employees. The depicted parking on the plan should be adequate.

Site Plan Review Committee

The Site Plan Review Committee reviewed the proposal on May 21, 1997, and made the following comments:

1. The building is sprinkled.
2. A revised landscaping plan shall be submitted which depicts more plantings around the building.
3. The petitioning on improvements of Spruce Street from 2nd Avenue to 3rd Avenue and the alley from Spruce Street to Maxfield Street shall be done.
4. A signage plan shall be submitted.
5. A drainage plan shall be submitted.
6. All parking shall meet City standards.

Review

House of Hope, Inc. is requesting a rezoning of the property from M-1, Light Industrial to R-3, Limited Multiple Dwelling, and a conditional use permit to allow a halfway house in the R-3, Limited Multiple Dwelling District. House of Hope, Inc. is proposing to move its facilities from Fulton Street to the proposed location. They have expressed an interest to do so because they have outgrown their current facilities and also wish to expand the use of the facility. Currently, House of Hope, Inc. is a halfway house for those who have drug or alcohol problems. They also wish to house work release and intensive supervised release inmates from the Department of Corrections.

It is staff's believe that the proposed use would be a buffer between commercial and residential uses. Neighboring properties are zoned R-1, One-Family Dwelling District and R-3, Multiple Family Dwelling District. In addition, the parcel has remained vacant for a considerable amount of time; therefore, staff would recommend rezoning the property.

The building on the site is approximately a 10,000 square foot building which will be sprinkled. The development meets the maximum allowable lot coverage including future expansions and storage areas. There will be 14 two-bedroom units and one handicap unit. There will be a total of seven offices for staff and approximately ten employees on a major shift. The site is providing the necessary amount of parking stalls, and a building for storage purposes. Landscaping is being shown with a variety of plantings. Staff recommends that the proposed landscaping be revised in order to implement additional plantings around the building. The necessary walkways and open space areas are being shown.

With the project, the City is requiring that improvements be made to Spruce Street and the abutting alley, and that the applicant petition for such improvements which include curb and gutter for Spruce Street and the hardsufacing of the alley. With the addition of impervious surfacing and drainage from the building, staff is requesting that a drainage plan be submitted for the site.

The current site plan is in need of setback alterations that have to be made and a revised site plan must be submitted before the item is forwarded to the City Council for their review. Staff feels that there is sufficient room on the property to meet the necessary setback requirements.

Recommendation

Staff recommends approval of the rezoning.

Staff recommends approval of the conditional use permit with the following conditions:

1. A landscaping plan shall be submitted to the Planning & Zoning Administrator for review and approval. Once the landscaping plan has been approved, it shall be implemented and maintained.

2. Signage shall comply with Section 10.87 of the City Code.

3. A lighting plan shall be submitted to the Planning & Zoning Administrator for review and approval. The lighting plan shall depict lighting away from neighboring properties.

4. All trash and recyclable material containers shall be located in enclosures which shall be constructed with materials which are similar and complementary to the materials found on the main buildings.

5. A drainage plan shall be submitted to the City Engineer for review and approval.

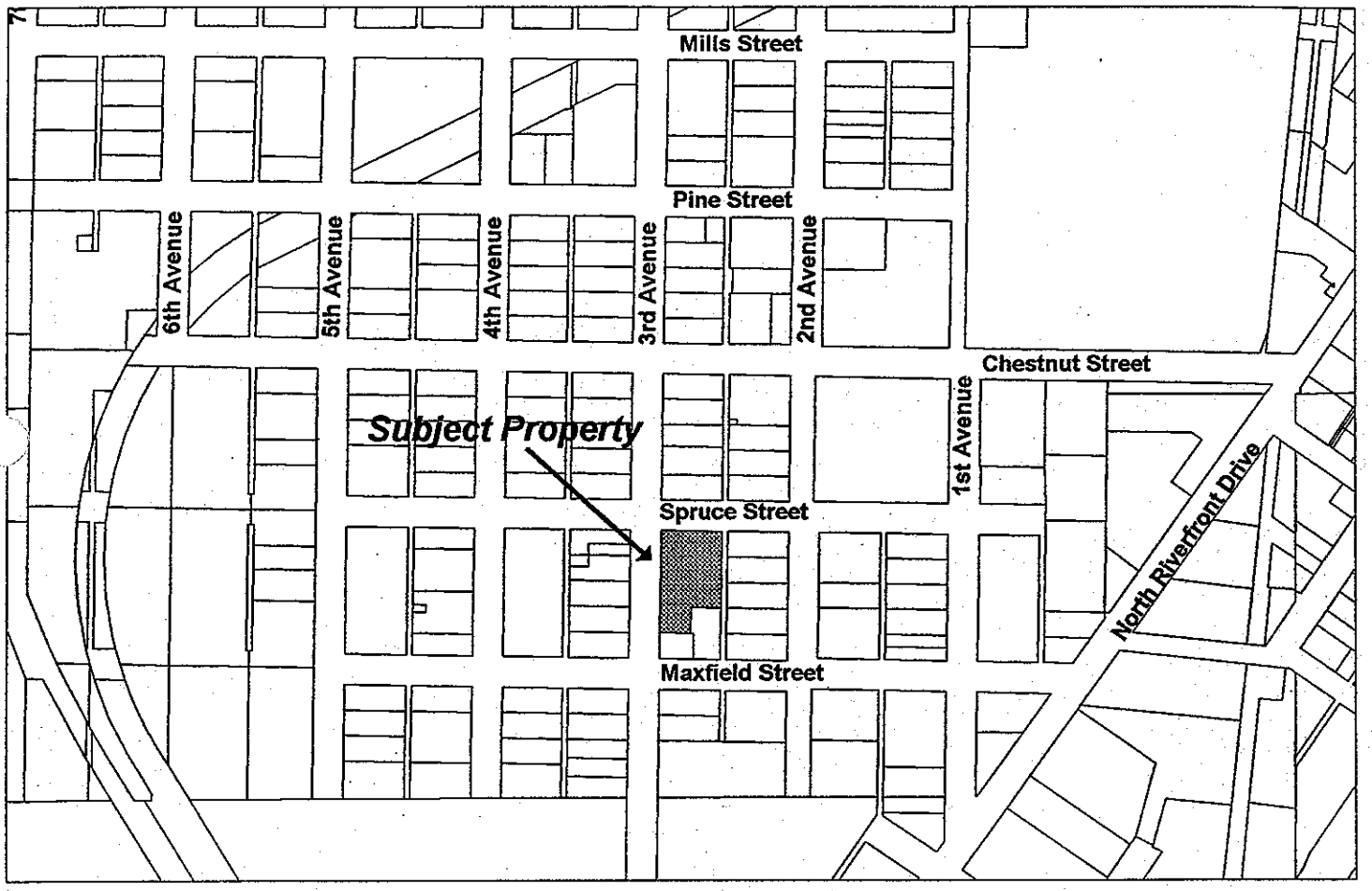
6. The improvement of Spruce Street from 3rd Avenue to 2nd Avenue and the alley adjacent to the property from Spruce Street to Maxfield Street shall be petitioned.

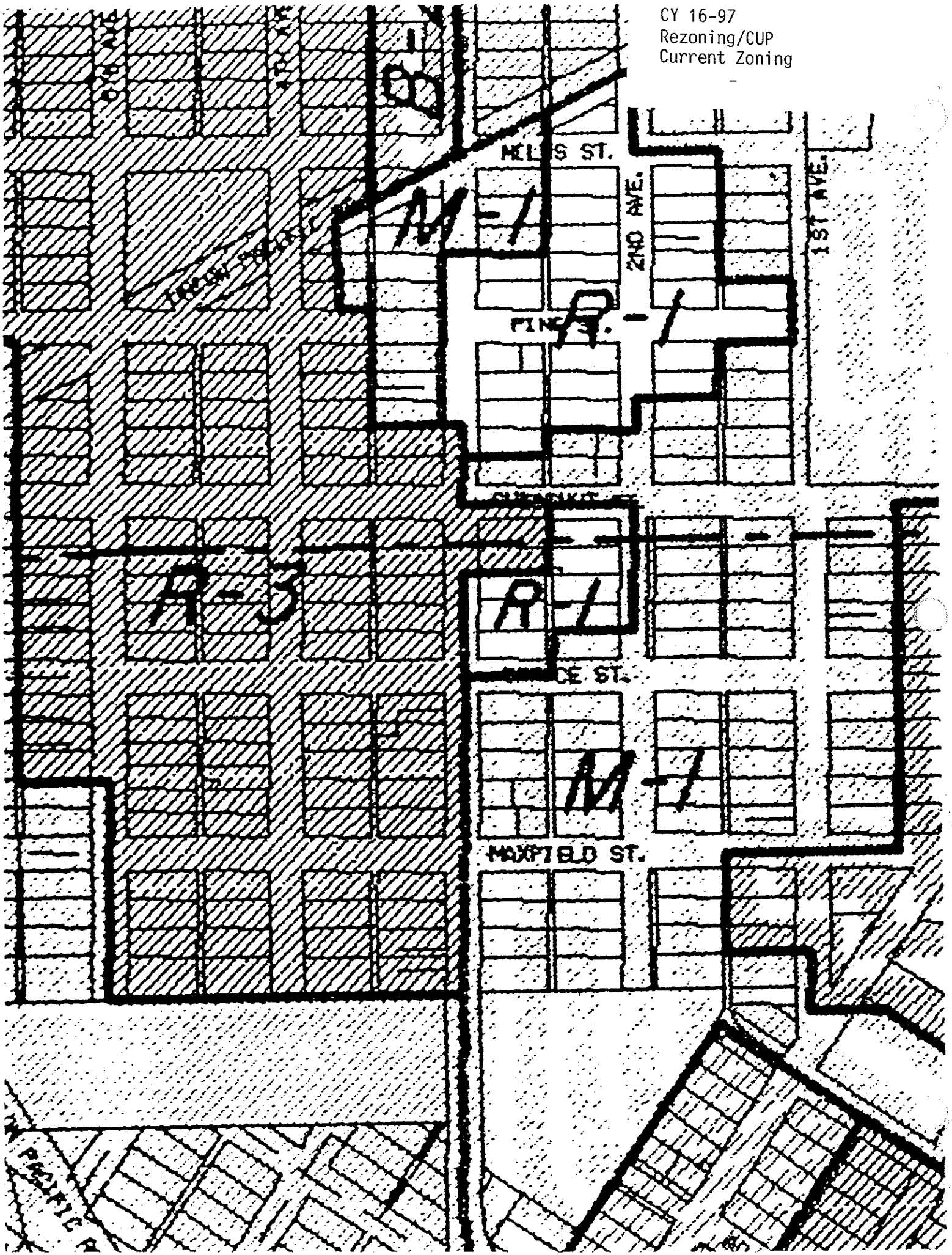
7. Parking for the development shall meet City standards. The City may require additional parking if the use exceeds what is required.

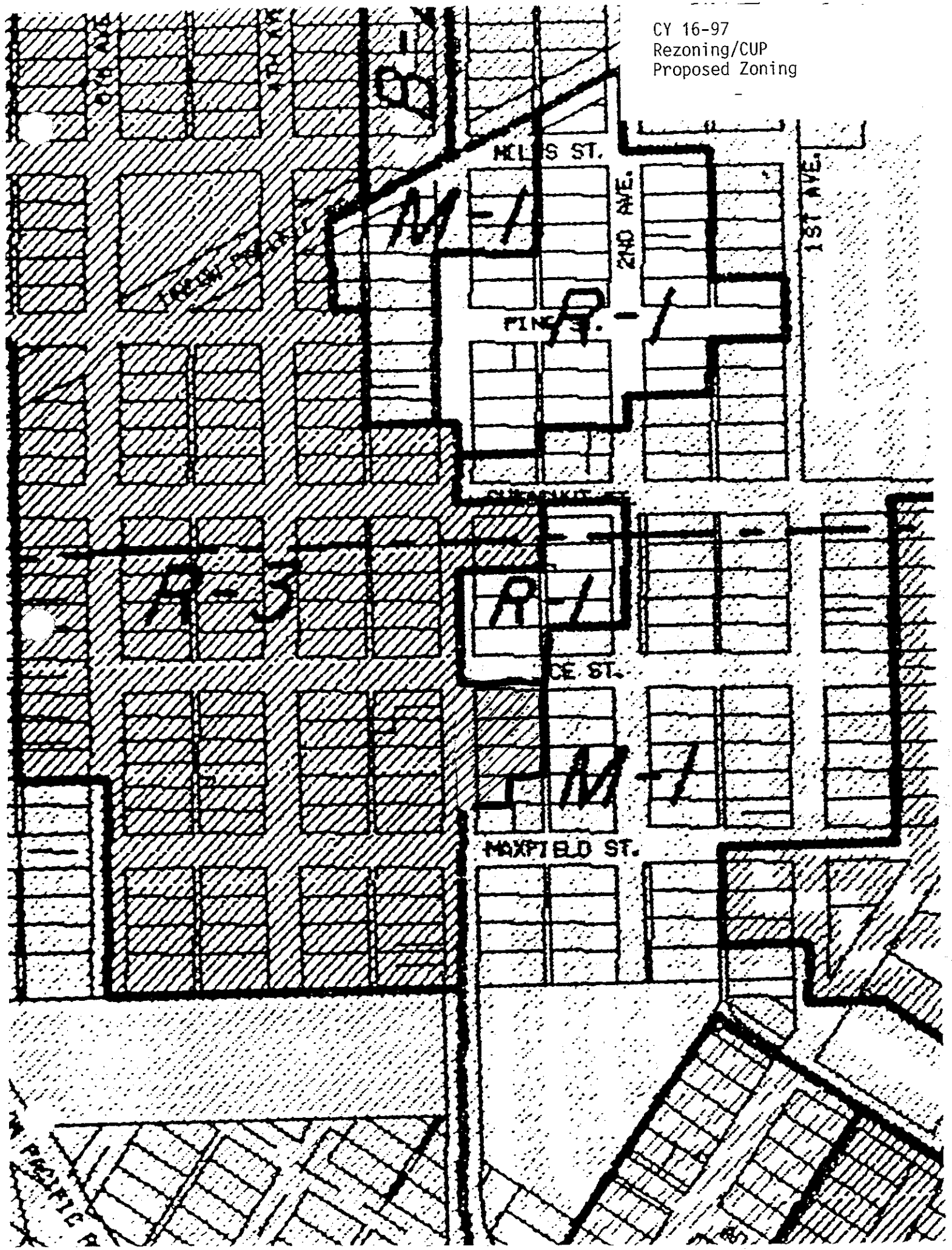
Attachments

1. General Location Map
2. Current Zoning
3. Proposed Zoning
4. Site Plan
6. Larry Norland Letter

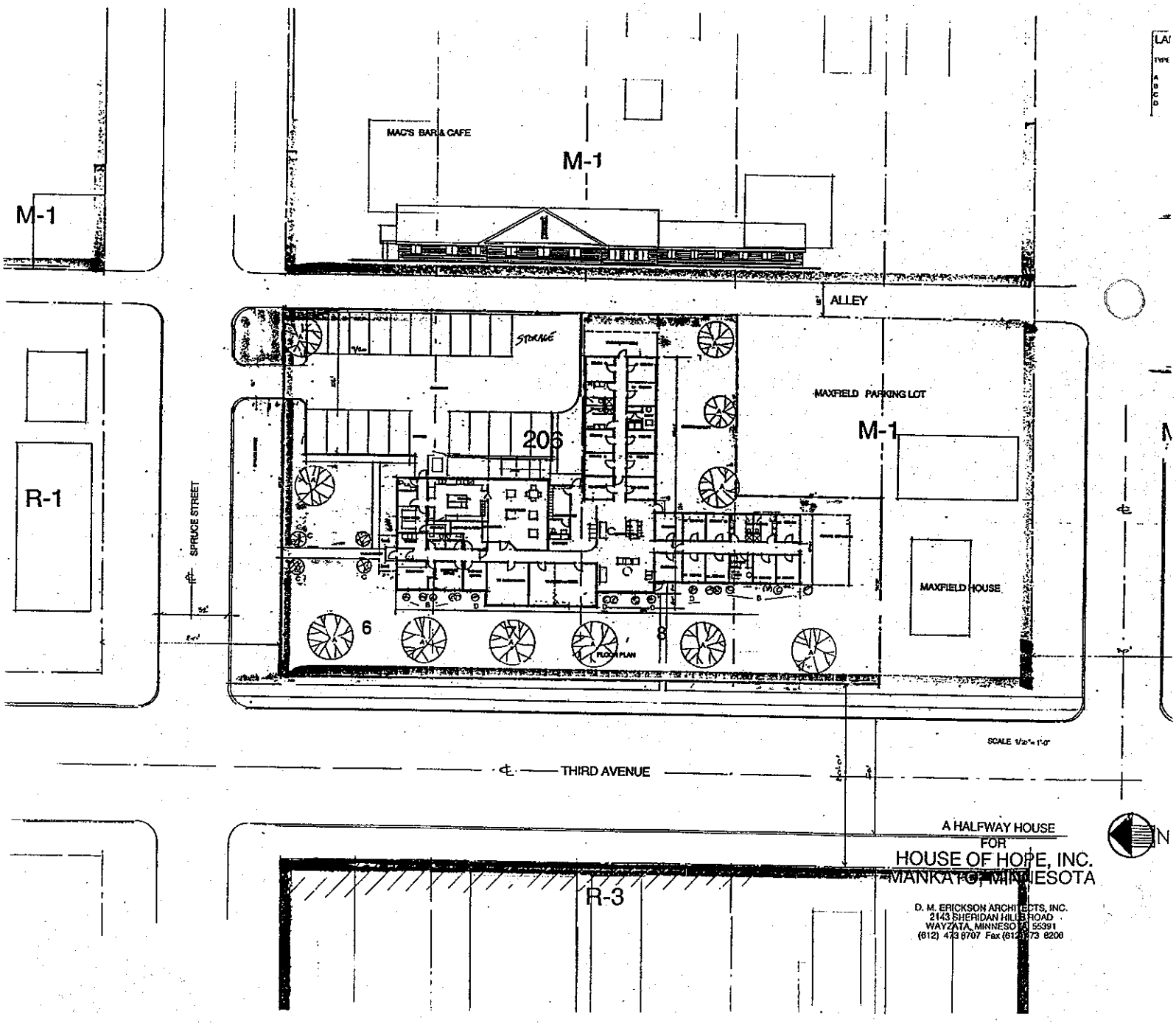
CY 16-97
Rezoning/CUP
General Location Map




CY 16-97
Rezoning/CUP
Current Zoning
M-1
2ND AVE.
1ST AVE.
R-3
R-1
M-1
MAXFIELD ST.


CY 16-97
Rezoning/CUP
Proposed Zoning
M-1
2ND AVE.
1ST AVE.
R-1
R-3
M-1
MAXFIELD ST.

CY 16-97
Rezoning/CUP
Site Plan _



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REQUEST, PROJECT DESCRIPTION AND JUSTIFICATION

HOUSE OF HOPE, INC.
119/121 Fulton Street
Mankato, MN 56001

CY 16-97
Rezoning/CUP
Larry Norland Letter

A Brief Background and History

House of Hope began in 1971 as a halfway house for recovering alcoholic men mainly from the Mankato area. Early records show there was also a contract with the State of Minnesota, Department of Corrections, to accept referrals from them.

My tenure as Director began in June, 1982. The typical resident at that time was a 32 to 42 year old male. The older men were the "typical" alcoholic with alcohol being their only choice. The younger residents typically used alcohol and some other drug or drugs, with marijuana being the usual drug other than alcohol. With alcohol being the least expensive, and legal, that was most common and is also currently. The last few years we have been seeing more cocaine, crack cocaine, and LSD in addition to the alcohol and marijuana. The average age of residents is now more mid-twenties.

Due to fluctuating funding, consistent referrals from counties has become more and more unpredictable in the last few years. Just before I started as Director in 1982, my successor had secured a contract with the VA Medical Center in St. Cloud. During the 15 years I have been with HOH we experimented with a small halfway house in some rental property for chemically dependent women. We closed it after 2 years because of lack of funding and few referrals. During the last 10 years we expanded the VA referrals by adding the VA Medical Center in Tomah, Wisconsin. For a few years we had a contract with the Federal Bureau of Prisons and accepted referrals from them for approximately four years. About seven years ago I negotiated a contract with the State of Minnesota, Department of Corrections. In the last 5 years that contract is what has kept HOH in operation. The county funding and the VA referrals are not consistent enough to count on solely to operate the HOH. In 1988 we purchased our second house at 121 Fulton and expanded from 10 beds to 17 beds. Still, at times, there is a need for more bed space - at least 24 to 26.

Over the years we have had to be adaptable, flexible, creative, and willing to diversify in order to stay in existence. The Board of Directors and I, as well as the rest of the staff, believe in the halfway house concept and mission. Because of our beliefs we have persevered, overcome difficulties and obstacles and kept a viable program in operation.

Clients

We accept referrals from:

1. Any county in Minnesota
2. Any other state if funding is available
3. The VA Medical Centers in St. Cloud, MN and Tomah, WI (temporarily inactive)
4. The State of Minnesota, Department of Corrections
5. Vinland Treatment Center, Loretto, MN (which specializes in the brain-injured patient)

Our current conditional use permit with the City of Mankato limits us to accepting only residents who have alcohol or drug problems. On occasion we have requests for residents who don't necessarily have a chemical problem but need a structured environment. In our request I will ask for a conditional use permit that won't limit us to just the chemically dependent resident. If we get approval for the new site and building I would also attempt to secure a contract with the Federal Bureau of Prisons again and reactivate the VA Contract from St. Cloud and Tomah.

With the Department of Corrections, there are two types of clients we work with: work release inmates and intensive supervised release inmates. The work release inmates have served the majority of their sentences in a State Correctional Facility such as Faribault or Stillwater. If they qualify for work release they are released to a facility such as House of Hope to finish out their sentence, a period of 3 to 8 months, in order to secure a job and a place to live. They are still considered inmates and are under the jurisdiction of the Department of Corrections. They have to follow strict guidelines and rules or they could be returned to the State Institution they came from to finish out their sentences. Typical offenses include various degrees of felonious burglaries, assaults, forgeries and drug violations, The intensive supervised inmates are both different and similar. Their crimes are usually more serious and their stays in the halfway house are of shorter duration- anywhere from 1 to 3 months. They also have to secure employment and a place to live, however they have been discharged from a State Correctional facility and have ended their sentences. They remain on probation, however, with a State Correctional Probation Officer and are under close supervision. Sometimes they are also put on electronic monitoring while they are a resident. Typical offenses include the same as work releasees but may include aggravated assaults (a weapon was used or the victim was injured), vehicular homicides, certain degrees of criminal sexual conduct and/or terroristic threats. To clarify the criminal sexual conduct charges, HOH screens these very carefully.

All referrals are carefully considered and examined individually, including the criminal sexual conduct cases. If a prospective client is considered a "sexual predator" they are declined admission. However, if the sexual misconduct charges were inter-familial, happened on only one or two occasions, and the perpetrator was intoxicated or high during the offense, we may admit the person. This type of client would also have participated in some form of treatment successfully while incarcerated to be considered for admission. We also may accept a resident that has had a sexual relationship with someone not of legal age as long as the ages of the victim and perpetrator are similar and the relationship was consensual. HOH staff take very seriously the responsibility of accepting only those residents that pose little, low or no risk to the staff, fellow residents and citizens of the community.

CONCLUSION

The House of Hope Board of Directors and Staff believe we have evolved into a program that is no longer suitable for our location or the two houses out of which we operate. We believe we have found a more suitable location on Third Avenue and feel it is time to build a facility that is designed with the space we need for our mission, program and operation.

A RESOLUTION OF THE CITY COUNCIL APPROVING A CONDITIONAL USE PERMIT UNDER THE MANKATO ZONING ORDINANCE

WHEREAS, House of Hope Inc., purchaser of the following described real estate located in Mankato, Minnesota, to-wit:

Lots 6, 7, 8, and the Westerly Half of Lot 9, Block 16 of Mankato City;

has applied for a conditional use permit to allow a halfway house in a R-3, Limited Multiple Family Dwelling District; and

WHEREAS, the Planning Commission of the City, on the 28th, of May, 1997, following proper notice, held a public hearing regarding the request, and following said public hearing, adopted a recommendation that the request for a conditional use permit be approved; and

WHEREAS, the minutes of such public hearing and recommendation of the Commission have been presented to the City Council; and

WHEREAS, based upon the Planning Agency report, minutes and recommendation, the City Council hereby finds that:

1. The establishment of the proposed use will not impede nor be incompatible with the goals of the City Land Use Plan.

2. The use of the site for the proposed activity will not be injurious to the use and enjoyment of adjacent property.

NOW, THEREFORE, BE IT RESOLVED by the Mankato City Council, that the request for a conditional use permit to allow a halfway house, is approved, subject to the following conditions:

1. A landscaping plan shall be submitted to the Planning & Zoning Administrator for review and approval. Once the landscaping plan has been approved, it shall be implemented and maintained.

2. All trash and recyclable material containers shall be located within a trash enclosure which shall be constructed with materials which are similar and complementary to the materials found on the main buildings.

3. An exterior lighting plan shall be submitted to the Planning & Zoning Administrator for review and approval. The lighting plan shall depict lighting away from neighboring properties.

4. Signage shall comply with Section 10.87 of the City Code.

5. A drainage plan shall be submitted to the City Engineer for review and approval.

6. A signed petition for the improvement of Spruce Street from 3rd Avenue to 2nd Avenue and the alley adjacent to the property from Spruce Street to Maxfield Street shall be submitted to the City Engineer.

7. Off Street parking for the development shall meet City Standards. The City may require additional parking if the use exceeds what is required.

8. Clients from the Department of Corrections that are not classified as chemically dependant, shall be limited to only those individuals serving sentences for property crimes, such as theft or damage to property. Individuals convicted of crimes against a person (such as homicide, assault, robbery, or sex crimes) shall not be allowed in the facility, unless classified as chemically dependant and participating in the residential treatment program.

   The Council reserves the right to review the correctional component of the facility in the future. The Council may allow additional classes of supervised release inmates at the facility or further limit the types of supervised release inmates. The decision to expand or limit the correctional component will depend on the impact of the program on the community.

This resolution shall become effective immediately upon its passage and without publication.

Passed this 23rd day of June, 1997.

Stan T. Smith
Mayor

Attest: Janelle L. Galentt
Acting City Clerk

CITY OF MANKATO

CITY COUNCIL AGENDA RECOMMENDATION

TO: Patrick Hentges, City Manager DATE: June 16, 1997

FROM: Paul Vogel, Planning & Zoning Administrator

SUBJECT: Rezoning & Conditional Use Permit - House of Hope, CY 16-97

Agenda Recommendation:

The following actions were recommended by the Planning Commission at their May 28, 1997, meeting:

1. Adoption of an ordinance rezoning Lots 6, 7, 8, and the Westerly Half of Lot 9, Block 16, Mankato City, from a M-1, Light Industrial District, to a R-3, Limited Multiple-Family Dwelling District.

2. Adoption of a resolution granting a conditional use permit to allow a halfway house in the R-3, Limited Multiple-Family Dwelling District, with the following seven conditions:

a. A landscaping plan shall be submitted to the Planning & Zoning Administrator for review and approval. Once the landscaping plan has been approved, it shall be implemented and maintained.

b. Signage shall comply with Section 10.87 of the City Code.

c. An exterior lighting plan shall be submitted to the Planning & Zoning Administrator for review and approval. The lighting plan shall depict lighting directed away from neighboring properties.

d. All trash and recyclable material containers shall be located in enclosures which shall be constructed with materials which are similar and complementary to the materials found on the main buildings.

e. A drainage plan shall be submitted to the City Engineer for review and approval.

f. A signed petition for the improvement of Spruce Street from 3rd Avenue to 2nd Avenue and the alley adjacent to the property from Spruce Street to Maxfield Street shall be submitted to the City Engineer.

g. Off-street parking for the development shall satisfy zoning standards. The City may require additional parking if the demand exceeds the standards.

Background/Summary:

House of Hope, Inc., is requesting a rezoning of the subject property from M-1, Light Industrial, to R-3, Limited Multiple Dwelling, and a conditional use permit to allow a halfway house in the R-3, Limited Multiple Dwelling District. The subject property is located at the southeast corner of Spruce Street and Third Avenue, and is currently vacant.

House of Hope, Inc., is proposing to move its facilities from Fulton Street to the proposed location because they are seeking to serve a greater number of clients and expand their service to include conditional release inmates from the Department of Corrections. The current facilities on Fulton Street serve a maximum of 17 individuals, all chemically dependant men. The new facility will serve up to 29 individuals and will have 10 employees. The new facility will house a mix of work and intensive supervised release inmates with and without chemical dependancy problems. This changes the House of Hope operation in Mankato by adding a purely correctional component to the facility. The existing House of Hope does house supervised release inmates, but only if the inmates are being treated for chemical dependancy problems.

Since the number of individuals in the proposed facility exceeds 16 persons and the use is partially classified as a correctional facility, the use is not a protected state licensed residential facility. State Statute requires that residential treatment facilities, licensed by the Department of Human Services, must be allowed in cities if the use serves 16 or fewer adults. Residential treatment programs for chemically dependant individuals are licensed by the Department of Human Services and must be allowed if they serve 16 or fewer individuals. However, the proposed facility will serve more than 16 persons and the correctional component is not licensed by the Department of Human Services. The correctional component will be licensed by the Department of Corrections.

The proposed building is approximately 10,000 square feet and will be sprinkled. The development meets the maximum allowable lot coverage including future expansions and storage areas. There will be 14 two-bedroom units and one disability unit. There will be a total of seven offices for staff and approximately ten employees on a major shift. The site is providing the necessary number of parking stalls. A small accessory building is also provided for storing maintenance supplies. Landscaping is being shown with a variety of plantings. Staff recommends that the proposed landscaping be revised in order to implement additional plantings around the building. The necessary walkways and open space areas are also shown.

With the project, the City is requiring that improvements be made to Spruce Street and the abutting alley. The improvement to Spruce Street involves total reconstruction from Third Avenue to Second Avenue and the installation of storm sewer. The improvement to the alley will involve regrading and hardsurfacing. These projects were not included in the Capital Improvements Plan, but are being triggered because the drainage in the area is insufficient and the proposed development would exacerbate the drainage problems.

A revised site plan has been submitted and is included with this report.

Background/Summary: (continued)

At the Planning Commission meeting, staff stated their opinion that the proposed use would be appropriate as a buffer between existing commercial/industrial and residential uses. Neighboring properties are zoned R-1, One-Family Dwelling District, R-3, Multiple Family Dwelling District, and M-1, Light Industrial District. As the property is currently zoned, such uses as a concrete mixing plant, building yards, and contractor's yards would be permitted.

Several neighbors testified at the Planning Commission meeting and stated their objections to the proposed use. The most common concern was that the proposed use may be detrimental to the neighborhood and may be incompatible with Mac's Bar, which is located across the alley. A copy of the hearing minutes is attached.

Alternatives:

In addition to the recommended action from the Planning Commission, the following alternatives exist:

1. Deny the request. Denial must be based on findings that the rezoning or proposed use are not appropriate for the property, would have detrimental effects on other uses in the vicinity, and would be contrary to the goals of the Land Use Plan.

2. Approve the request subject to the recommended conditions, and limit the use to a residential treatment program for chemically dependant men. Inmates from the department of corrections could still be housed in the facility, but only if classified as chemically dependant. This would be the same type of use that is currently located in the facilities on Fulton Street.

3. Approve the request subject to the recommended conditions, and limit the type of correctional client, that is not classified as chemically dependant, to those individuals serving sentences for property crimes, such as theft or damage. Individuals convicted of crimes against a person (such as homicide, assault, robbery, or sex crimes) would not be allowed in the facility, unless they were classified as chemically dependant.

   Under this option, the Council may also reserve the right to review the correctional component of the facility in the future. At that time, the Council may allow additional classes of supervised release inmates at the facility or further limit the types of supervised release inmates. The decision to expand or limit the correctional component would depend on the impact of the program on the community.

Fiscal/Budget Impact:

There are no fiscal or budgetary impacts associated with this request.

Attachments

cc: Jan Schmitt, Acting City Clerk

Old Business - CY 51-96 (Cont'd)

MOTION. Mr. Knapp moved to approve the amendment to the final plat. The motion was seconded by Mr. Sundborg, and carried unanimously.

Council Agenda Date: Pending completion of Subdividers Agreement.

CY 11-97 Vacation of Future Interest for Right-of-Way Purposes . . . Portion of South Riverfront Drive . . . Honeymead Products Company

Mr. Vogel stated that staff recommended that this item be tabled until the June meeting because a proposal has not yet been finalized.

MOTION. Mr. Sundborg moved to approve tabling of the vacation. The motion was seconded by Mr. Knapp, and carried unanimously.

5. **NEW BUSINESS.**

CY 16-97 Rezoning and Conditional Use Permit . . . Lots 6, 7, 8, and the Westerly Half of Lot 9, Block 16 of Mankato City . . . House of Hope, Inc.

Mr. Potter presented the staff report. He stated that the applicant is proposing to move its facilities from Fulton Street to the proposed location because they have outgrown their current facilities and also wish to expand the use of the facility. Currently, House of Hope, Inc. is a halfway house for those who have drug or alcohol problems; however, they also wish to house work release and intensive supervised release inmates from the Department of Corrections. Staff felt that the proposed use would be a buffer between commercial and residential uses. Staff recommended that the proposed landscaping be revised in order to implement additional plantings around the building. Mr. Potter noted that with the project the City is requiring that improvements be made to Spruce Street and the abutting alley, and that the applicant petition for such improvements which include curb and gutter for Spruce Street and the hardsurfacing of the alley. He pointed out that there is sufficient room on the property to meet the necessary setback requirements. Staff recommended approval the rezoning. Staff also recommended approval of the conditional use permit with seven conditions.

Chair Farnham asked about the State requirements. Mr. Vogel responded that House of Hope, Inc. is required to be licensed.

New Business - CY 16-97 (Cont'd)

Mr. Sundborg inquired as to why additional parking would be needed (condition #7). Mr. Potter replied that the parking is adequate, since not many of the residents drive. However, if demand is greater than zoning requirements the condition would enable the City to require additional parking.

Mr. Oakey questioned the reconstruction of Spruce Street. Mr. Potter stated that certain property owners, about thirty-five percent (35%), would need to sign a petition to allow this reconstruction.

Mr. Oakey reviewed the zoning in the area. Mr. Vogel noted that the use would be allowed as a conditional use as long as the area is rezoned.

Mr. Knapp wondered what qualified as an M-1, Light Industrial District. Mr. Vogel reported on what was allowed in the M-1, Light Industrial District.

Larry Norland, 716 Lake Street, North Mankato, applicant, presented a brief history of where House of Hope, Inc. stands today. He explained that they have the option of taking in more residents; therefore, they would like to expand the facility. He was available to answer any questions.

Mr. Sundborg wondered if most of the residents were from the Mankato area. Mr. Norland responded yes, unless they had petitioned otherwise. Mr. Norland indicated that most get sent to the County of commitment; however, some end up relocating to the Mankato area after they have been through the program.

Mr. Knapp asked what the house rules were. Mr. Norland stated that there are rules. The goal of the program is to phase the residents into their roles of society as they leave the facility.

Mr. Bernhagen wondered about the number of resident requests. Mr. Norland pointed out that on occasion he gets several referrals and requests, in any case he has the right to refuse any or all of them.

Mr. Knapp questioned the idea of a bar being located across the alley. Mr. Norland felt that the bar would be considered a testing ground and that all recovering alcoholics will have the temptation no matter where a bar is located.

New Business - CY 16-97 (Cont'd)

Mr. Norland stated that the first requirement is that the residents find a job, if they are able to work. He specified that either they are working or we do not have them, especially those who are from corrections. He stressed that correction's people have to be accountable every four hours.

Mr. Oakey inquired as to financing and if there were a lot of refusals. Mr. Norland stated that he does turn people down. He mentioned that the funding for the program has not always been there, so they had to adapt as they went along. He indicated that House of Hope, Inc. was a private nonprofit company.

Mr. Oakey was concerned about visitors parking. Mr. Norland stated that there was a time limit on visiting; thus, he did not feel there would be a problem. Mr. Norland noted that only five of the residents out of seventeen on Fulton Street currently have cars.

Mr. Harder commented that he knew the residents would be on the honor system, but he was concerned with the fact that there is a bar and a park close by. He asked Mr. Norland what they looked for when picking a site.

Mr. Norland stated that their goal was to get everything under one roof, even though that has not been possible.

Mr. Harder wondered how the neighbors that lived near their current location felt abut the facility. Mr. Norland stated that the neighbors have asked the residents on several occasions to help mow their lawns, shovel snow, and do other miscellaneous things. Mr. Norland stated that they have not had any problems.

Chair Farnham commented that there are many halfway houses and group homes in the Lincoln Park area, generally people can hardly tell that they are there.

Mr. Sundborg was concerned with the expanding on the types of people the home takes in. He asked if there were any other homes in town that currently take in people from corrections.

Mr. Norland clarified that House of Hope, Inc. is primarily for residents with alcohol or drug problems. He stated that they were the only facility in Mankato that he knew of that worked with the Department of Corrections.

New Business - CY 16-97 (Cont'd)

Mr. Bernhagen asked what criteria was used to turn down clients. Mr. Norland stated that they do not get sex offenders or those that are showing signs of rebellious behavior; thus, everyone is screened.

Mr. Oakey asked about the success rate of the residents. Mr. Norland felt that at least eighty percent (80%) of the residents make it through the program and back into society.

Mr. Oakey wondered what staff's responsibilities were. Mr. Norland explained his staff's responsibilities and indicated that they were all professionals. Mr. Norland also pointed out that they have used other services in the Mankato area if they are needed.

Ken Devney, 204 Clover Lane, stated that he owns a house across the alley from the proposed site and that he is concerned about the resale of the house if the zoning is changed. Mr. Vogel noted that Mr. Devney's property would not be affected in the rezoning because it does not abut the subject property.

Kay Dauffenbach, 1503 3rd Avenue, was opposed to the construction of the facility. She commented that she lives alone and so do several others in the neighborhood. She also expressed a concern about children in the area.

Gary McNab, RR1 Box 309, Madison Lake, stated that he was very open minded and believed that everyone deserves a second chance. He addressed several questions, such as: What is the top of the scale on the severeness of a crime? Are residents specifically from our County/State and do they have to meet special requirements? He felt that even though the facility is not considered a "babysitter" they better be able to keep things controlled. He indicated that most of his customers were not in favor of the idea and said that they would not stop at his establishment if this facility is approved. Mr. McNab stated that he has talked to several of the neighbors and they are all concerned. He inquired as to what the tax structure was going to be. Mr. McNab commented on the drainage in the proposed area and wondered what the costs would be for curb and gutter, etc. He asked the Commission to consider if they would feel comfortable having this facility in their neighborhood.

Chair Farnham commented on how she would feel if this facility was in her neighborhood. She stated that she currently lives in an area where similar facilities are located. She felt that most of the people in the area do not even know the facility is there.

New Business - CY 16-97 (Cont'd)

Mr. Knapp thought that his neighborhood was similar, since several homes in his neighborhood are located next to a home that deals with the handicapped. He stated that they have been good neighbors and have lived in the area a long time.

Mr. McNab felt that this would not be a good site since he was in the bar business and some of the people in this particular facility will have alcohol backgrounds. He felt that handicap people would be different neighbors than those who had alcohol or drug related problems. He stated that he has talked with the neighbors and everyone is against the idea of this facility in the neighborhood.

Mr. Norland noted that being the residents were monitored he does not feel that the facility would bother a bar. He indicated that all people would like this type of facility located in another county; nonetheless, if a property is a rental property you cannot control who resides in it. Mr. Norland did indicate that he has taken in a murderer that stabbed his brother while he was under the influence. He stressed that several people do not even know the facility exists because they keep a low profile their property is very well maintained.

Mr. Oakey asked if the facility paid taxes. Mr. Norland stated no because it was a nonprofit organization.

Mr. Norland stated that the Department of Corrections tries to place people close to where they are from, yet in some cases because of a close circle of friends the person may have to go to another area.

Mr. Knapp wondered how many times since 1972 the police have been at the facility on a nuisance call. Mr. Norland replied, never that he is aware of.

Mr. Knapp asked about the exterior of the building.

Don Erickson, St. Paul, applicant's architect, commented that the facility would be a one-story building with a gable roof. He stated that each room would have two occupants. He noted that the interior was classified as type five one-hour and it will be sprinklered. He felt that the type of function will serve well for the purpose.

Mr. Knapp questioned signage. Mr. Norland stated that there wouldn't be any signage, except for the address.

New Business - CY 16-97 (Cont'd)

Tami Melvin, 1715 2nd Avenue, stated that she has kids and lives two blocks from where they plan on building. She was concerned about the bar being to close to the facility. She felt that residents would watch people enter and exit the bar and wondered how it would help people to correct themselves. She stated that it was hard to believe such a building would be constructed this close to a bar.

MOTION. Mr. Bernhagen moved to approve the rezoning. Mr. Knapp seconded the motion, which carried 6 to 1, with Mr. Sundborg voting against.

Ms. Wessman asked Mr. Norland what would happen if someone would revert to using alcohol or drugs. Mr. Norland responded that it depends on their participation in the program.

Mr. Sundborg inquired as to whether the applicant would construct this building if it was only for alcohol and drug corrections. Mr. Norland stated no, but they will be limiting the number of requests.

Mr. Sundborg wondered if there were problems finding facilities such as this one. Mr. Norland replied yes.

Mr. Sundborg commented that history has proven that House of Hope, Inc. can handle the alcohol and drug related residents, but he was concerned about residents that would come from the Department of Corrections. Mr. Sundborg asked if there was a need for this type of facility in Mankato. Mr. Norland felt that there was not a great need, although it would help the program even though most of the people will still have alcohol and drug related problems.

Mr. Knapp asked Mr. Norland if he would be willing to address the neighbor's concerns. Mr. Norland stated yes, he would be glad to.

Mr. Oakey inquired as to what percentage of the residents are currently from the Department of Corrections. Mr. Norland stated eighty percent (80%). He indicated that anything they cannot handle they refer out, but staff is on duty at all times.

Ms. Wessman wondered if any residents had been charged with an offense while they were in the facility. Mr. Norland stated that there haven't been any crimes against another person that he is aware of.

Mr. Harder questioned that if the facility can continue to operate as they are, why are they diversifying. Mr. Norland indicated that the facility can continue to operate as they are, but they are cramped for space. Mr. Norland stated that

New Business - CY 16-97 (Cont'd)

they are complying with the law even though there is very little space now; however, the offices are shared and they do not have a decent group room. Mr. Norland felt that more room was needed to help the facility operate properly.

Ms. Wessman commented that the facility currently takes Department of Corrections people that have alcohol and drug related crimes.

Mr. Oakey asked if those that were turned away found help. Mr. Norland indicated that he does not follow up after the point of rejection.

Mr. Harder wondered if those people who currently live in areas with this type of housing would be comfortable with this facility in their neighborhood.

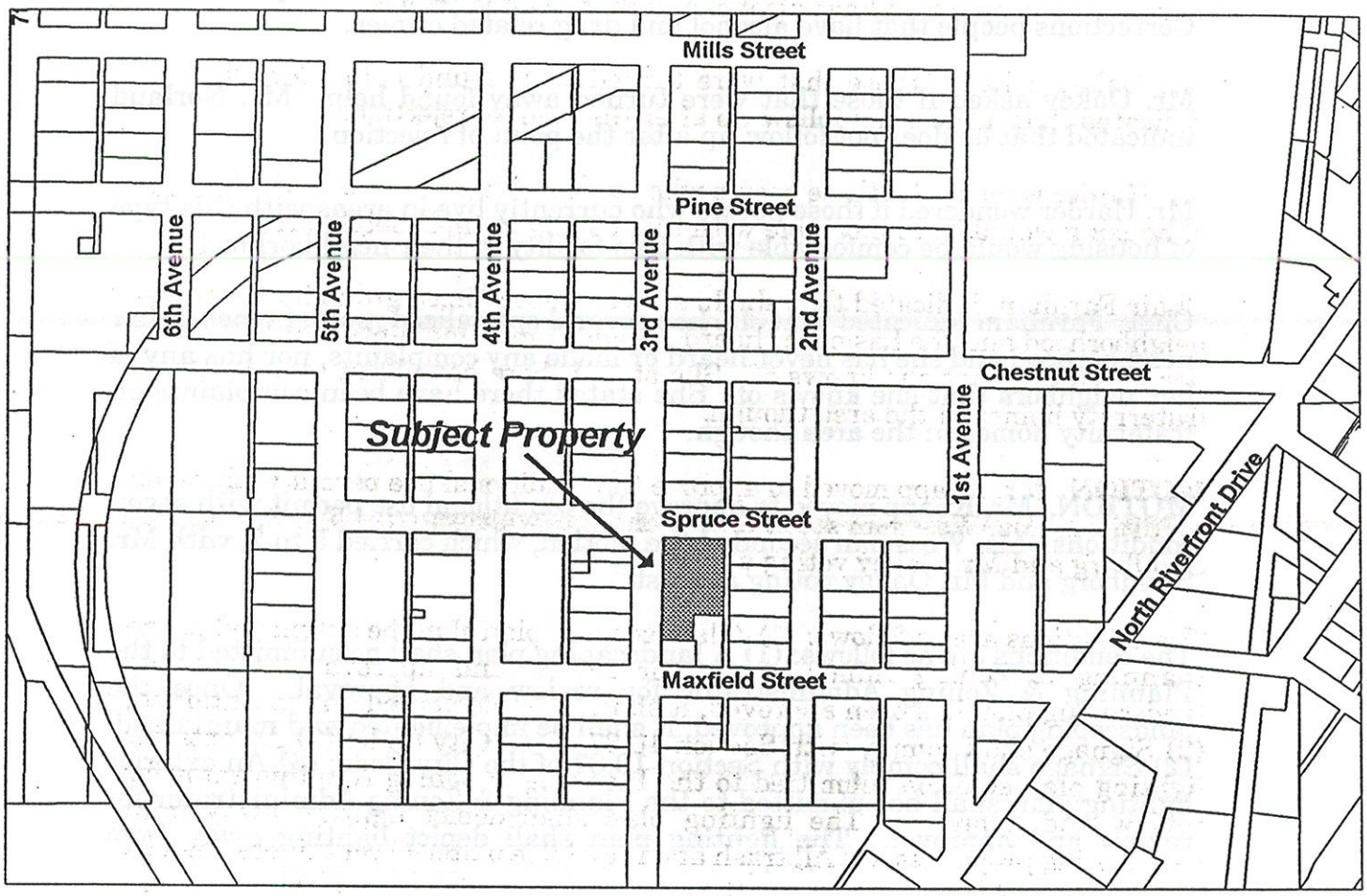
Chair Farnham indicated that she has several specialized group homes in her neighborhood and she has never heard or made any complaints, nor has any of her neighbors that she knows of. She stated there have been complaints on fraternity homes in the area though.

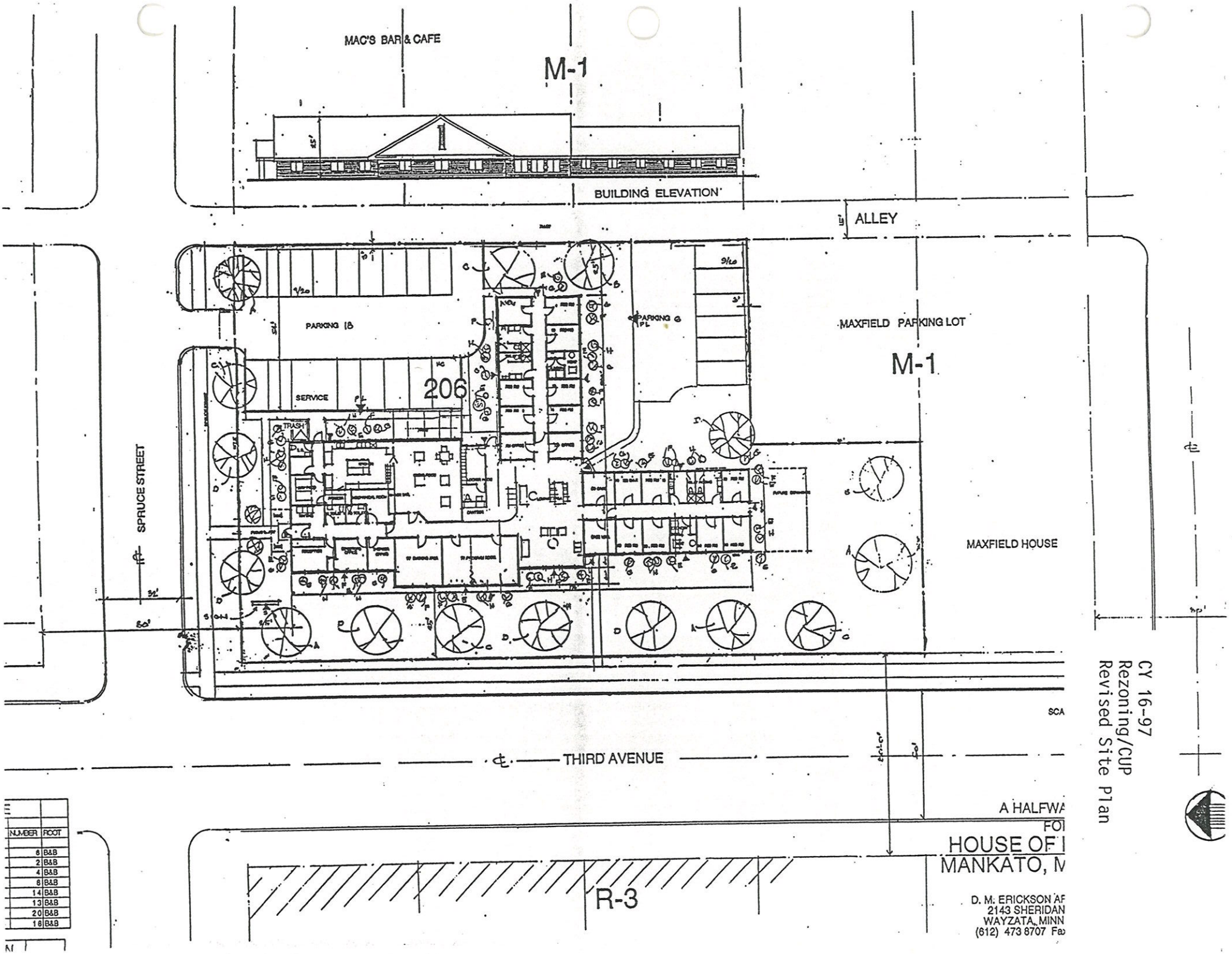
MOTION. Mr. Knapp moved to approve the conditional use permit with seven conditions. Ms. Wessman seconded the motion, which carried 5 to 2, with Mr. Sundborg and Mr. Oakey voting against.

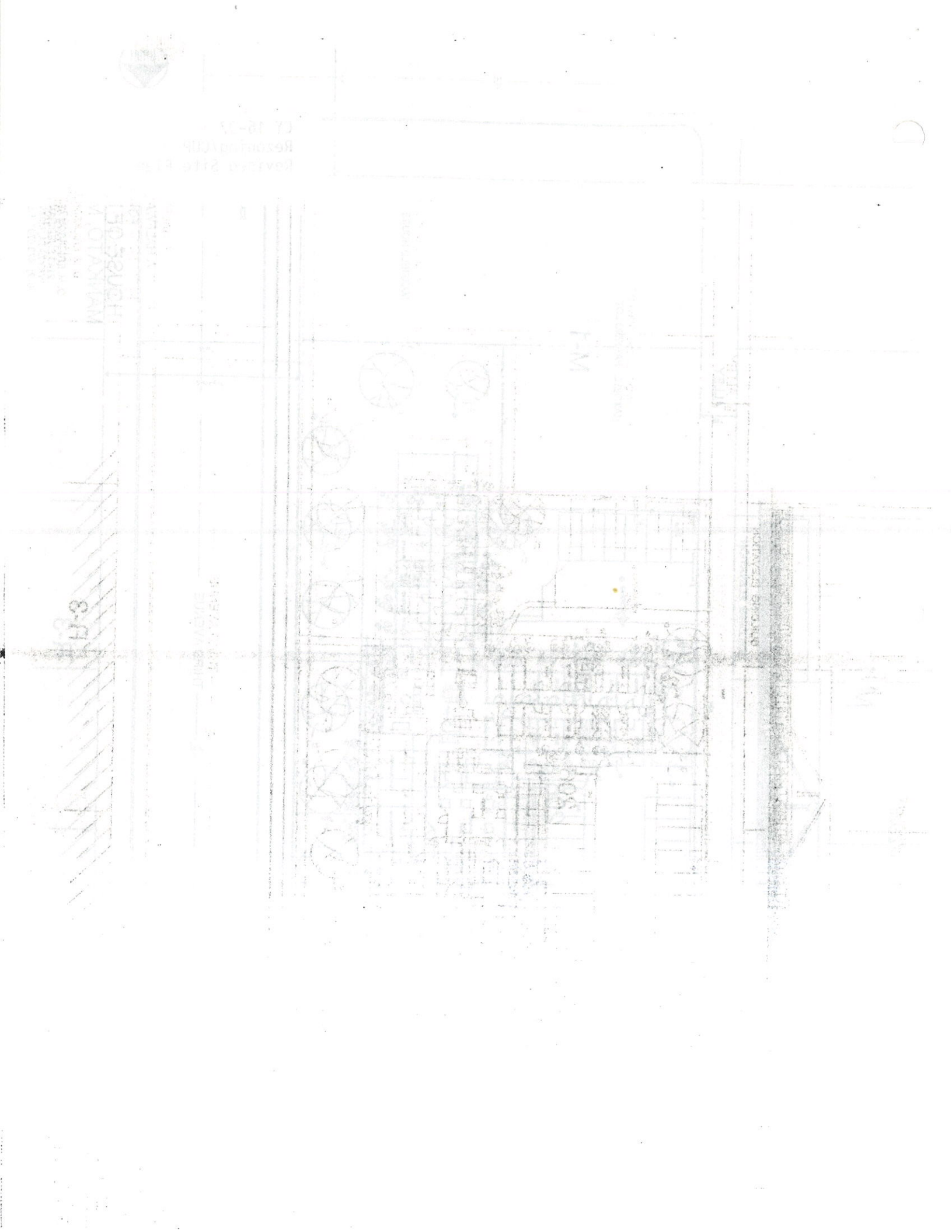
The conditions are as follows: **(1)** A landscaping plan shall be submitted to the Planning & Zoning Administrator for review and approval. Once the landscaping plan has been approved, it shall be implemented and maintained; **(2)** Signage shall comply with Section 10.87 of the City Code; **(3)** An exterior lighting plan shall be submitted to the Planning & Zoning Administrator for review and approval. The lighting plan shall depict lighting away from neighboring properties; **(4)** All trash and recyclable material containers shall be located in enclosures which shall be constructed with materials which are similar and complementary to the materials found on the main buildings; **(5)** A drainage plan shall be submitted to the City Engineer for review and approval; **(6)** A signed petition for the improvement of Spruce Street from 3rd Avenue to 2nd Avenue and the alley adjacent to the property from Spruce Street to Maxfield Street shall be submitted to the City Engineer; and **(7)** Off-street parking for the development shall satisfy zoning standards. The City may require additional parking if the demand exceeds the standards.

Council Agenda Date: June 23, 1997

CY 16-97
Rezoning/CUP
General Location Map




MAC'S BAR & CAFE
M-1
BUILDING ELEVATION
ALLEY
PARKING 18
PARKING 6
MAXFIELD PARKING LOT
M-1
206
SERVICE
TRASH
SPRUCE STREET
MAXFIELD HOUSE
THIRD AVENUE
R-3
NUMBER
ROOT
6 B&B
2 B&B
4 B&B
8 B&B
14 B&B
13 B&B
20 B&B
16 B&B
HOUSE OF
MANKATO, M
D. M. ERICKSON AF
2143 SHERIDAN
WAYZATA, MINN
(612) 473 8707 Fa
CY 16-97
Rezoning/CUP
Revised Site Plan



House of Hope, Inc.

Box 291
Mankato, MN 56002
(507) 625-4373
Fax (507) 625-4536

REQUEST, PROJECT DESCRIPTION AND JUSTIFICATION

A Brief Background and History

House of Hope began in 1971 as a halfway house for recovering alcoholic men mainly from the Mankato area. Early records show there was also a contract with the State of Minnesota, Department of Corrections.

My tenure as Director began in June, 1982. The typical resident at that time was a 32 to 42 year old male. The older men were the "typical" alcoholic with alcohol being their drug of choice. The younger residents typically used alcohol and some other drug or drugs, with marijuana being the usual drug other than alcohol. The last few years we have been seeing more cocaine, crack cocaine, and LSD in addition to the alcohol and marijuana. The average age of residents is now more mid-twenties.

Due to fluctuating funding in the last few years, referrals from counties have become more and more unpredictable. Just before I started as Director in 1982, my successor had secured a contract with the VA Medical Center in St. Cloud. During the 15 years I have been with HOH we experimented with a small halfway house in some rental property for chemically dependent women. We closed it after 2 years because of lack of funding and few referrals. During the last 10 years we expanded the VA referrals by adding the VA Medical Center in Tomah, Wisconsin. For a few years we had a contract with the Federal Bureau of Prisons and accepted referrals from them for approximately four years. About seven years ago I negotiated a contract with the State of Minnesota, Department of Corrections. In the last 5 years that contract is what has kept HOH in operation. The county funding and the VA referrals are not consistent enough to count on solely to operate the HOH. In 1988 we purchased our second house at 121 Fulton and expanded from 10 beds to 17 beds. Still, at times, there is a need for more bed space -anywhere from 24 and up.

Over the years we have had to be adaptable, flexible, creative, and willing to diversify in order to stay in existence. The Board of Directors and I, as well as the rest of the staff, believe in the halfway house concept and mission. Because of our beliefs we have persevered, overcome difficulties and obstacles and kept a viable program in operation.

Clients

We accept referrals from:

1. Any county in Minnesota
2. Any other state if funding is available
3. The VA Medical Centers in St. Cloud, MN and Tomah, WI (temporarily inactive)
4. The State of Minnesota, Department of Corrections
5. Vinland Treatment Center, Loretto, MN (which specializes in the brain-injured patient)

Our current conditional use permit with the City of Mankato limits us to accept only residents who have alcohol or drug problems. On occasion we have requests for residents who don't necessarily have a chemical problem but need a structured environment. In our request I will ask for a conditional use permit that won't limit us to just the chemically dependent resident. If we get approval for the new site and building I would also attempt to secure a contract with the Federal Bureau of Prisons again and reactivate the VA Contract from St. Cloud and Tomah.

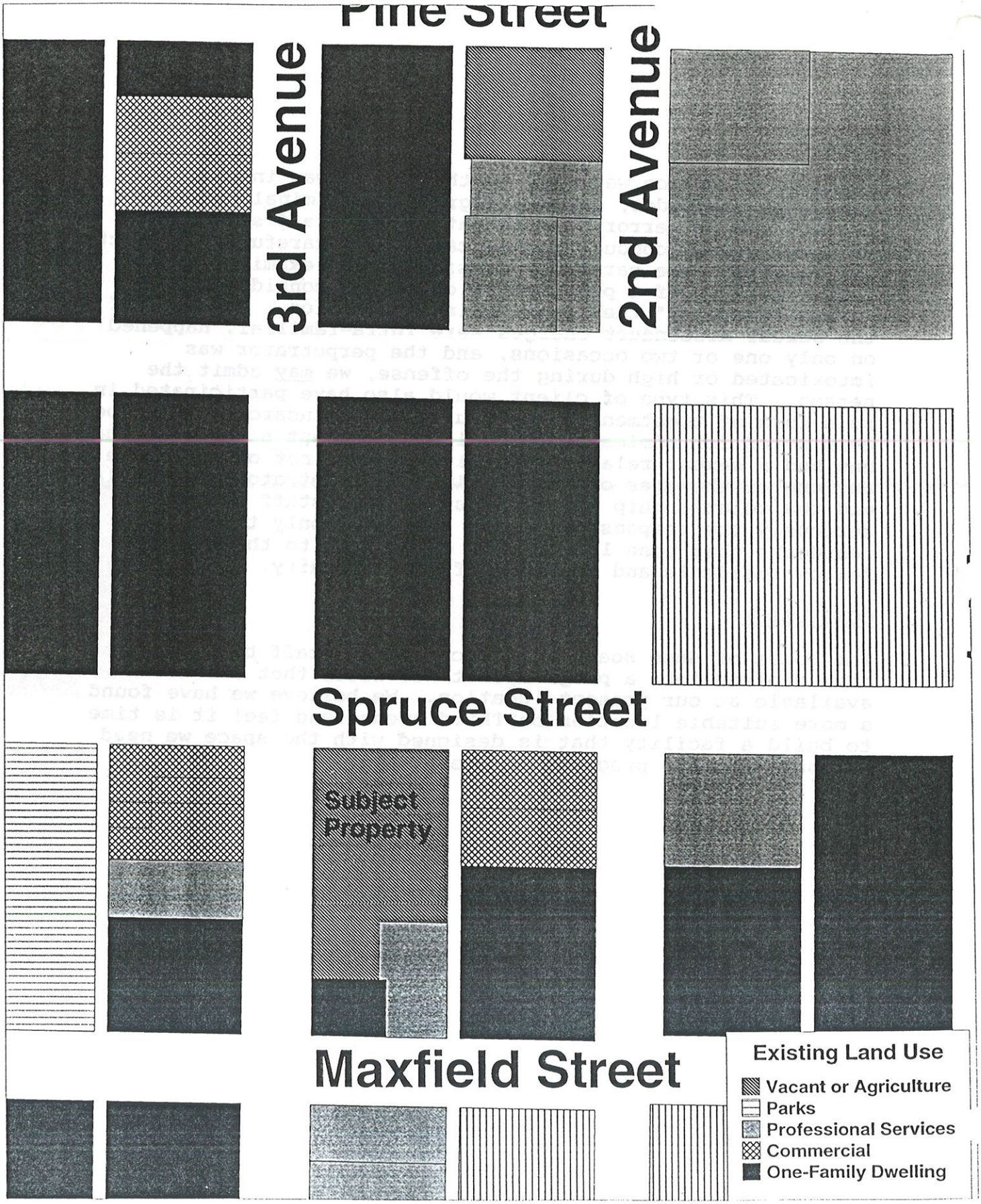
With the Department of Corrections, there are two types of clients we accept: work release inmates and intensive supervised release inmates. The work release inmates have served the majority of their sentences in a State Correctional Facility such as Faribault or Stillwater. If they qualify for work release they are released to a facility such as House of Hope to finish out their sentence, a period of 3 to 8 months. This gives them time to secure a job and a place to live. They are still considered inmates and are under the jurisdiction of the Department of Corrections. They have to follow strict rules or they could be returned to the State Institution they came from to finish out their sentences. Typical offenses include various degrees of felonious burglaries, assaults, forgeries and drug violations. The intensive supervised inmates are both different and similar. Their crimes are usually more serious and their stays in the halfway house are of shorter duration- anywhere from 1 to 3 months. They also have to secure employment and a place to live; however they have been discharged from a State Correctional facility and have ended their sentences. They remain on probation with a State Correctional Probation Officer and are under close supervision. Sometimes they are also put on electronic monitoring while they are a resident. Typical offenses include the same as work releasees but may include aggravated

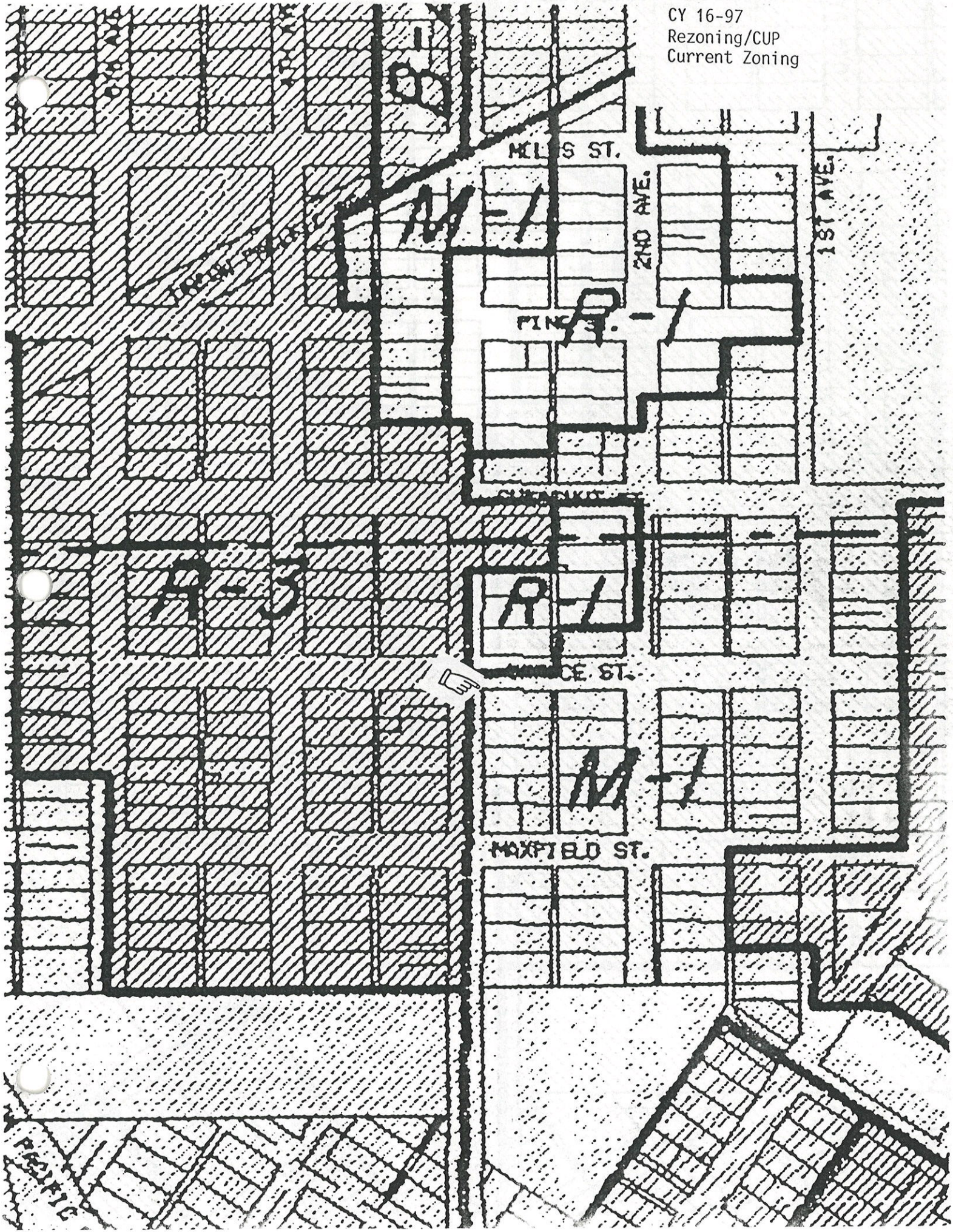
assaults (a weapon was used or the victim was injured), vehicular homicides, certain degrees of criminal sexual conduct and/or terroristic threats. HOH Staff screens the criminal sexual conduct charge cases very carefully, in fact, all referrals are carefully considered and examined individually. If a prospective client is considered a "sexual predator" they are declined admission. However, if the sexual misconduct charges were intra-familial, happened on only one or two occasions, and the perpetrator was intoxicated or high during the offense, we may admit the person. This type of client would also have participated in some form of treatment successfully while incarcerated to be considered for admission. We also may accept a resident that has had a sexual relationship with someone not of legal age as long as the ages of the victim and perpetrator are similar and the relationship was consensual. HOH staff take very seriously the responsibility of accepting only those residents that pose little, low or no risk to the staff, fellow residents and citizens of the community.

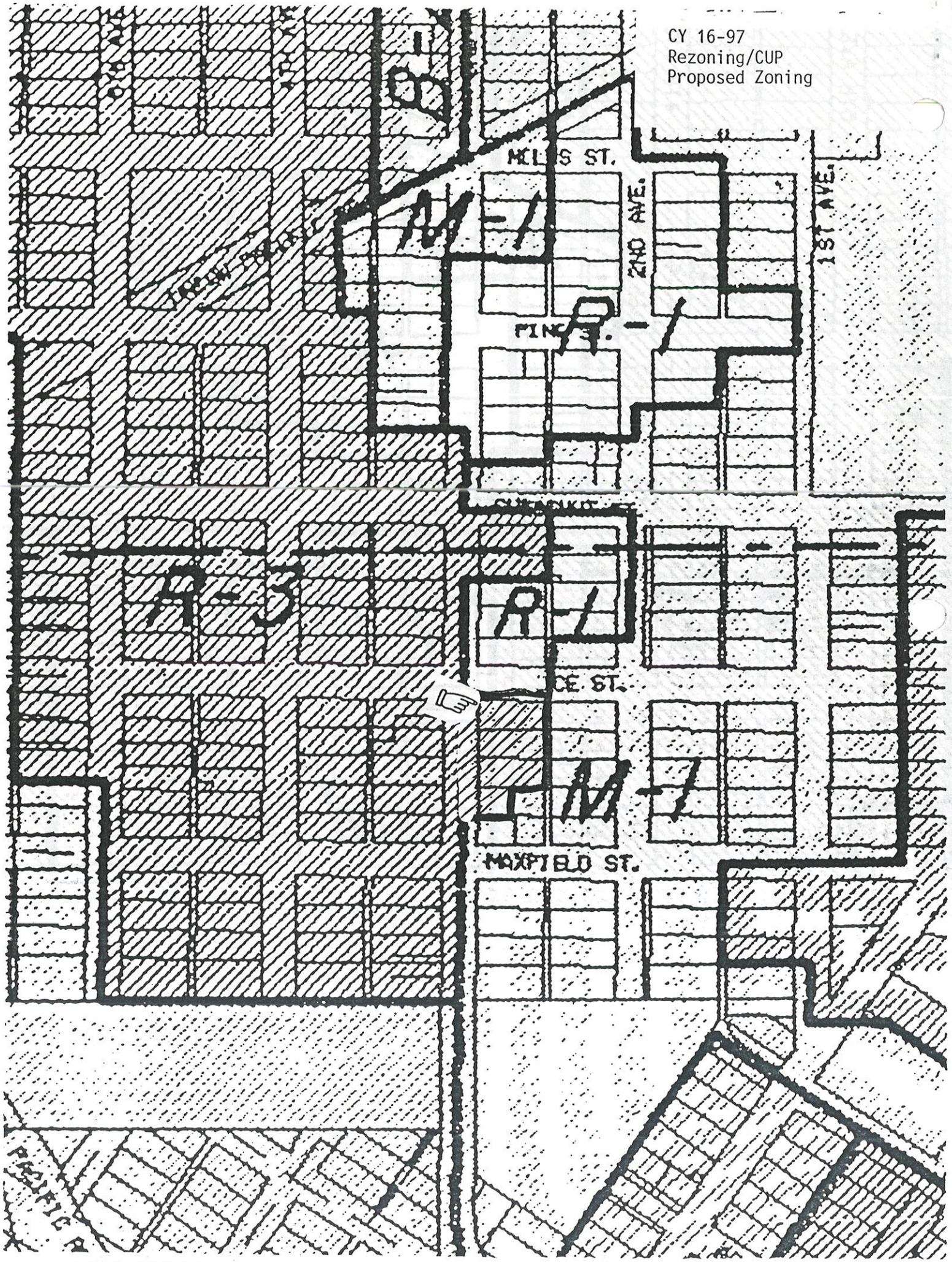
CONCLUSION

The House of Hope Board of Directors and Staff believe we have evolved into a program that has needs that are not available at our present location. We believe we have found a more suitable location on Third Avenue and feel it is time to build a facility that is designed with the space we need for our mission, program and operation.

CY 16-97
Rezoning/CUP
Existing Land Use




CY 16-97
Rezoning/CUP
Current Zoning
MILLS ST.
2ND AVE.
1ST AVE.
M-1
R-1
R-3
M-1
MAXFIELD ST.
PACIFIC


CY 16-97
Rezoning/CUP
Proposed Zoning
M-1
2ND AVE.
1ST AVE.
R-1
R-3
R-1
M-1
MAXFIELD ST.

Meeting Date: 09/23/2026

Title

CY42-26

Request of Jones Haugh & Smith, with permission of the property owner, Scott Brown, for a final plat review of Metcon Addition, and a conditional use permit to allow a wetland replacement on the subject site. The subject property is described as That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County.

The anticipated date of City Council action is October 13, 2026.

Applicant

The applicant is Jones Haugh & Smith, with permission of the property owner, Scott Brown.

Request

The applicant is seeking a Final Plat review of Metcon Addition, and a Conditional Use Permit to allow for wetland replacement on the subject site.

Location

The subject property is located at Blue Earth County PID R430911300021 and is legally described as: That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, described as: commencing at the southwesterly corner of Parcel D of Blue Earth County Highway Right of Way Plat No. 27, on file and of record with the Blue Earth County Recorder; thence South 52 degrees 36 minutes 53 seconds East, (Minnesota County Coordinate System - Blue Earth County Zone - HARN NAD83 - 1996), along the southerly line of said Parcel D, 196.59 feet to the point of curvature of a circular curve to the left; thence southeasterly, along said southerly line, along a 500.00 foot radius curve, central angle = 01 degrees 42 minutes 19 seconds, an arc distance of 14.88 feet; thence South 00 degrees 22 minutes 32 seconds East, not radially to said curve, 763.46 feet to the point of beginning, said point being on a circular curve which center of radius bears South 28 degrees 10 minutes 32 seconds West; thence northwesterly, along a 283.15 foot radius curve, central angle = 28 degrees 33 minutes 27 seconds, an arc distance of 141.13 feet to the point of tangency of said curve; thence South 89 degrees 37 minutes 06 seconds West, along the tangent of said curve, 371.30 feet to the point of curvature of a circular curve to the right; thence northwesterly, along a 320.00 foot radius curve, central angle = 56 degrees 19 minutes 18 seconds, an arc distance of 314.56 feet to the point of tangency of said curve; thence North 34 degrees 03 minutes 36 seconds West, along the tangent of said curve, 25.30 feet; thence North 10 degrees 56 minutes 24 seconds East, 70.71 feet to a point on the southeasterly line of Parcel C of said Blue Earth County Highway Right of Way Plat No. 27; thence South 55 degrees 56 minutes 24 seconds West, along said southeasterly line and along the southeasterly line of Parcel B of said Blue Earth County Highway Right of Way Plat No. 27, 192.96 feet to the point of curvature of a circular curve to the left; thence southwesterly, along said southeasterly line, along a 971.35 foot radius curve, central angle = 49 degrees 57 minutes 56 seconds, an arc distance of 847.08 feet to the most northerly corner of Parcel K1 of Blue Earth County Highway Right of Way Plat No. 30, on file and of record with the Blue Earth County Recorder; thence South 44 degrees 41 minutes 23 seconds East, not radially to said curve, along the northerly line of said Parcel K1; a distance of 118.21 feet; thence South 89 degrees 27 minutes 10 seconds East, along said northerly line, 376.49 feet; thence North 89 degrees 37 minutes 28 seconds East, along said northerly line, 366.29 feet to the northeasterly corner of said Parcel K1; thence North 00 degrees 18 minutes 44 seconds West, 245.61 feet; thence North 89 degrees 37 minutes 06 seconds East, 366.00 feet; thence South 00 degrees 18 minutes 44 seconds East, 245.65 feet to the northwest corner of Parcel K2 of said Blue Earth County Highway Right of Way Plat No. 30; thence North 89 degrees 37 minutes 28 seconds East, along the north line of said Parcel K2, a distance of 33.00 feet; thence North 00 degrees 18 minutes 44 seconds West, 585.65 feet; thence North 89 degrees 37 minutes 06 seconds East, 135.35 feet; thence North 00 degrees 22 minutes 32 seconds West, 45.55 feet to the point of beginning; Excepting therefrom all of Freyberg Addition, Blue Earth County, Minnesota.

Existing Land Use

The subject property is currently an undeveloped agricultural field.

Zoning

Following the recent annexation into the City of Mankato, the subject property was zoned to T- Transition District.

The Mankato City Council approved a request to rezone the subject property to M-1, Light Industrial District and B-3, Highway Business District at their September 14, 2026, meeting.

Other Board or Commission

The Preliminary Plat of Metcon Addition and Rezoning of the Subject Property to a mix of M-1, Light Industrial and B-3, Highway Business Districts was reviewed by the Planning Commission at their August 26th, 2026, meeting and recommended for approval. The City Council adopted an ordinance rezoning the subject property at their September 14, 2026, meeting.

The Technical Evaluation Panel (TEP) reviewed the wetland replacement plan for Metcon Addition at their September 16, 2026, meeting. The TEP provided a series of comments to the applicant and requested that updates be made by the applicant. The applicant provided an updated version of the wetland replacement plan to the TEP on September 18, 2026. Any future TEP recommended alterations to the plan shall be directed to the applicant.

Environmentally Sensitive Areas

Environmentally Sensitive Areas, Wetlands: Three wetland basins are present on the subject property. The preliminary plat represented the locations of these wetlands. Two wetlands are present within the proposed Block 1 and one wetland is located within Ponderosa Court & Outlot A. Due to the location of these wetlands, the applicant would be unable to construct the proposed subdivision as intended. It is the applicant's intent to remove these wetlands and purchase wetland replacement credits from a wetland bank.

The applicant has provided wetland application documentation for removal of said wetlands. Until such time as all required documentation has been provided and the TEP has completed their review of the proposal, the wetlands delineated onsite shall not be permitted to be impacted by the applicant.

Public Utilities

The applicant proposes to extend utilities to the subdivision via existing services located within Adams Street. The utility plan provided shows that Ponderosa Court shall act as the primary utility corridor into the subdivision.

The applicant proposed to construct an onsite stormwater pond within the subdivision.

City Code

Mankato City Code Chapter 10, Article XII, provides Design Standards for subdivisions that the subject property will be subject to at the time of platting: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTXIISUDEREPL_DIV3DEST

The Mankato City Code related to B-3, Highway Business District zoning criteria, can be found in Chapter 10, Article V, Division 8, as linked here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTVCODI_DIV8HIBUDI

Mankato City Code Chapter 10. Article VII. Division 3. Provides standards for the M-1 Light Industrial District. Linked Here: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=CH10LAUSDE_ARTVIIINDI_DIV3LIINDI

Mankato City Code section 10.82, Subd.11 provides wetland standards: https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=CH10LAUSZO_PTIXSTGEAP_S10.82SPPRAPSPPECOUS

Minnesota Rule Chapter 8420, Wetland Conservations, provides regulatory guidance on wetland evaluations: https://www.revisor.mn.gov/rules/8420/

Site Plan Review Comments

The Site Plan and Traffic Committee reviewed the request at their September 8, 2026, meeting and the following comments were provided. The applicant subsequently replied, as shown in the italics:

a. If not already complete, the applicant shall log in to the online portal and make notice fee payments. *Applicant: "Acknowledged."*
b. The applicant shall make a payment in lieu of parkland dedication accordance with Mankato City Code. Payment in lieu of parkland dedication for Outlot A shall occur at the time of platting of the Outlot into lots & blocks. Payment shall be provided prior to, or in conjunction with, affixing signatures on the final plat. *Applicant: "Acknowledged."*
c. The applicant shall execute a subdivision agreement with the City, prior to affixing signatures to the final plat, that outlines the terms of the agreement for proposed and future public stormwater, infrastructure, and utility elements. *Applicant: "Acknowledged."*
d. The stormwater pond proposed on Outlot B shall be improved privately and dedicated to the public. This shall be defined within the subdivision agreement. *Applicant: "Acknowledged."*
e. The applicant shall coordinate with Kurt Klinder, of the City of Mankato, to determine addressing for the proposed subdivision. *Applicant: "Acknowledged."*
f. The applicant shall work with Blue Earth County to ensure any necessary approval or permit for the proposed site stormwater discharge has been received prior to work occurring. *Applicant: "Acknowledged."*
g. Applicants shall formally replace wetlands prior to submitting for a building permit or starting any work in the subject development area. *Applicant: "Acknowledged."*
h. The applicant shall review and confirm scale of Final Plat. Final Plat scale verified as correct on attached updated version.
i. The wider D&U Easement to the east of the basin (Outlot B) is dimensioned as 3600.00' on the Preliminary Plat. Please correct. *Applicant: "Dimension updated."*
j. Emergency Overflow Elevation listed as 1015.5 in plans, but 1015 in drainage report memorandum. Please correct. Applicant: *"Elevation corrected within attached Drainage Memo version."*
k. Please provide assumed impervious coverage of each lot (i.e., 80%) as context to the drainage report. This will streamline acceptance of regional basin to satisfy treatment requirements in future building permits to develop these lots. *Applicant: "The entire development was assumed to be 72% Impervious as Urban Industrial (72% Impervious per HydroCAD). This includes all rights of way and Outlots. Accounting for the hard surfaces within Ponderosa Court, removing the stormwater pond Outlot, and redistributing the design hard surface areas across the lots would result in an available impervious surface coverage of 90% for the lots."*
l. A Development Agreement will be required to be executed between the City and Developer. The agreement shall address any proposed public improvements or private improvements within the Public Way. *Applicant: "Acknowledged."*
m. Until such time as the Wetland Credits have been purchased, the wetland areas shall remain fully represented as delineated boundaries on the Final Plat. Applicant shall provide an updated Final Plat depicting the specified boundaries. *Applicant: "Updated Final Plat showing the delineated boundaries attached."*
n. The existing field approach off of CSAH 17 was constructed for agricultural access. With the change in land use, we anticipate an occasional need to access the pond for maintenance. This access is to be only used for pond or other maintenance related activities with the change in use of the parcel. Any other types of use will result in the removal of the access. No construction or other traffic shall use the access or park in the County ROW. *Applicant: "Acknowledged."*
o. An engineer's estimate for the public improvements is necessary for the subdividers agreement. This should be provided no later than Thursday, September 10 if the applicant desires to have the subdividers agreement included in the upcoming review cycle. *Applicant: "Engineer's Estimate previously emailed to Molly Westman on September 10th."*
p. The City of Mankato TEP, Technical Evaluation Panel, will review the wetland portion of the request at their meeting on Wednesday, September 16 during a meeting starting at 1:00pm. *Applicant: "Acknowledged."*

Review

The applicant, Jones Haugh & Smith, with permission of the property owner, Scott Brown, is requesting a Final Plat review of Metcon Addition, and a Conditional Use Permit to allow for replacement of three wetlands located within the subject site.

Final Plat:
The applicant has submitted a request for a Final plat review of the Metcon Addition. The plat creates a new public cul-de-sac, identified as “Ponderosa Court”, a new retention pond within Outlot B, and depicts a potential future extension of Evergreen Drive.

The proposed Final Plat contains two Outlots and a Block. Block 1 contains three new lots. Lot 1 is proposed to contain 1.64 acres. Lot 2 is proposed to contain 2.41 acres. Lot 3 is proposed to contain 2.00 acres of area.

On the western side of the newly created Ponderosa Court is Outlot A, which the applicant proposes to zone for Highway Commercial use. As an Outlot, Outlot A will require future subdivision prior to development occurring. Outlot B is proposed to encompass the south-west corner of the subdivision and will serve as the location of a public stormwater pond. A development agreement will be drafted to outline the intended development conditions of the stormwater pond. The agreement shall also ensure that once the required stormwater improvements have been completed, Outlot B will be dedicated to the City for use as a public stormwater pond.

Access to Lots 1 and 2 will be via a connection to the newly proposed Ponderosa Court. Conceptually, a second access to Lot 2 will be via a connection to Adams Street. The proposed second access would be shared with Lot 3. Access is restricted to County State Aid Highway 12 and County State Aid Highway 17/Madison Avenue.

In addition to Ponderosa Court, the applicant is proposing to install a dedicated turn lane on Adams Street to serve Ponderosa Court. The right-of-way will also include a continuation of the existing dedicated bike lane. The applicant has provided a sidewalk network along the full duration of Ponderosa Court.

Evergreen Drive is being platted on the eastern side of the subdivision. This access will not be constructed at this time but will provide access to the subdivision if the level of County State Aid Highway 12/Adams Street access is reduced. A condition has been included, which states that the applicant shall be a willing petitioner for full roadway improvement of Evergreen Drive, particularly if the CSAH 12/Adams Street or Ponderosa Court/Adams Street intersection results in operational or safety issues. The proposed ROW width of Evergreen Drive shall be sixty-six feet (66').

Each lot proposed contains standard utility and drainage easements as well as expanded drainage and utility easements to serve stormwater swales located on the lots. Easements have also been proposed along the boundaries of Outlot A.

The applicant rezoned these three lots for light industrial uses. The applicant states that Met-Con is planning to construct an office and shop on Lot 2.

Payment In Lieu of Parkland Dedication:
The subdivision has not designated an area for a playground or park in the comprehensive development plan. The owner or subdivider, in lieu of property dedication, shall provide a payment in lieu of parkland dedication fee in the specified amount determined by an analysis based on the City's Section 10–2193 Standards. In accordance with these standards, the Blue Earth County assessor is evaluating the value of the subject property to determine the appropriate payment amount. Payment will be due in conjunction with or prior to affixing signatures to the final plat of the subject property.

As the proposed subdivision depicts one block and two Outlots, only the block shall be subject to the parkland dedication standards at this time. At the time that Outlot A is platted for development, it shall be subject to the parkland dedication standards and the fee shall then be paid prior to recording of the plat.

Wetland Replacement:
Three wetland basins are present on the subject property. Two wetlands are present within the proposed Block 1 and one wetland is located within Ponderosa Court & Outlot A. Due to the location of these wetlands, the applicant would be unable to construct the proposed subdivision as intended without permanently impacting these wetlands. It is the applicant's intent to remove these wetlands and purchase wetland replacement credits from a wetland bank.

The applicant intends to seek replacement of all three wetlands located within the subject property, as each wetland would be permanently impacted by the proposed development. The three wetlands, identified as Seasonal Flood Basins within a farm field, total approximately 18,792 Sq. Ft. or 0.4314 acres in total area:

- Basin 1 is approximately 6,262 Sq. Ft. in area and is located in the path of the proposed Ponderosa Ct roadway.
- Basin 2 is approximately 2,811 Sq. Ft. in area and is located in the proposed Lot 1 site.
- Basin 3 is approximately 9,719 Sq. Ft. in area and is located along the boundary of the proposed Lots 2 & 3.

The applicant is requesting sequencing flexibility to allow for impacts to the wetlands in order to construct the development as proposed. It is the applicant's intention to replace the impacted wetlands by purchasing wetland bank credits. In total, 0.4314 acres will be impacted and 0.8628 (*a rate of 2:1*) acres of wetland credits will be purchased. The SWC wetland credits will be purchased from a Wetland Bank located within Blue Earth County, specifically the Wetland Bank Account #1804, an account owned by " *Guentzel Family Farms*", which is located within the same major watershed (#28), and in the same Bank Service Area (#9).

The Technical Evaluation Panel (TEP) reviewed the wetland replacement plan for Metcon Addition at their September 16, 2026, meeting. The TEP provided a series of comments to the applicant and requested that updates be made by the applicant. An updated report has been received by the TEP.

Findings

Staff respectfully submits the following findings of fact for the requested Final Plat of Metcon Addition:

1. General Requirements
    1. The site is designed in conformance with the location and width of streets, the general drainage situation, lot sizes and arrangement.
    2. Concept plans for the future site development show the dedication of a public stormwater pond located within Outlot B.
    3. The site provides storm drains and stormwater facilities that outlet into the city's stormwater facilities at the rates and volumes allowed by the MS4 permit.
    4. Three onsite wetlands are shown on the plat. The applicant has requested replacement of these existing wetlands.
    5. Drainage study information has been submitted to the City Engineer to verify compliance with the City drainage requirements.
2. Streets
    1. The street right-of-way widths conform to the standards outlined in Chapter 10 of Mankato City Code.
    2. The applicant proposes to construct a new public roadway identified as "Ponderosa Court".
    3. The applicant proposes to dedicate a portion of the subject property as Right-of-Way for the future extension of “Evergreen Drive”.
    4. The applicant proposes to modify the existing condition of the adjacent Adams Street Right-of-Way, by constructing a dedicated right turn lane for Ponderosa Court.

5. The existing dedicated bike lanes along Adams Street will remain in place.
6. Only one private access shall be permitted off of Adams St. The applicant intends to construct a singular shared access for lots 2 & 3. All other accesses will be restricted to Ponderosa Ct or the future Evergreen Dr.
7. Outstanding Deferred Assessments are present on the Subject Property.

3. Easements
    1. The preliminary plat provides the standard drainage & utility easements required in Chapter 10 of the Mankato City Code.
    2. Drainage and utility easements are provided to encompass the full extent of all proposed rear-lot swales to ensure adequate access for drainage conveyance, maintenance, and long-term operation.
4. Block Standards
    1. The blocks within the subdivision were designed for the intended end use as light industrial uses.
    2. At a future date, Outlot A is intended to be platted into four commercial lots.
    3. Outlot B will be dedicated as a public stormwater pond.
5. Lot Standards
    1. The lots are designed in conformance with the standards set forth in Chapter 10.
    2. The lots within the subdivision are intended for light industrial development.
    3. The concept plan for the industrial areas demonstrates adequate areas to allow off-street parking, loading areas and such other facilities. Further review and consideration will be required for any site improvements proposed at the subject property.
6. Public Sites and Open Spaces
    1. The subdivision has not designated an area for parkland or public open space in the comprehensive development plan.
    2. The applicant will be required to make a payment-in-lieu of parkland dedication, as the subject parcel has not previously been platted. The amount of this fee will be determined in conformance with Mankato City Code standards and payment will be due prior to or in conjunction with affixing signatures to the Final Plat.
    3. At this time, payment in lieu of parkland dedication shall not include the proposed Outlot A. Payment in lieu of parkland dedication shall be required prior to affixing signatures to any final plat which defines Outlot A into Lots & Blocks.

Staff respectfully submits the following findings of fact for the requested Wetland Replacement:

1. The Technical Evaluation Panel (TEP) recommended approval of the wetland replacement plan following the finalization of updates requested at their September 16, 2026, meeting.
2. The applicant proposed to permanently impact 0.4314 acres of wetland area.
3. Wetland sequencing and replacement plan decisions under Minnesota Rules, Parts 8420.0520 through 8420.0550, are considered as Conditional Uses per Mankato City Code Section 10-1500.
4. The proposed replacement site is in the same major watershed and in the same bank service area.
5. The request does not interfere with or diminish the use of property in the immediate vicinity. The wetlands being removed from the subject development are predominantly classified as seasonal wetlands and the removal of the wetlands from the subject development is not anticipated to interfere with the use of the property in the immediate vicinity.
6. The new development will be adequately served by public facilities and services, which is the applicant's stated reasoning for replacement of the wetlands.
7. The new development is not anticipated to cause undue traffic congestion, and the removal of the wetlands is necessary in order to construct the necessary street network to serve the proposed development and for reasonable use of the proposed industrial lots.
8. The wetland replacement will not cause a negative cumulative effect, when considered in conjunction with the cumulative effect of various special uses of all types on the immediate neighborhood, and the effect of the proposed type of conditional use upon the City as a whole.
9. There are no known significant historical and architectural resources associated with the wetland replacement.
10. The wetland replacement request complies with Minnesota Rule 8420.
11. The request is in keeping with the comprehensive planning policies of the City.
12. The proposed wetland replacement will not jeopardize the public's health, safety, or general welfare.
13. To the extent known, the development, when considered with the recommended conditions, conforms with all other applicable regulations of the district, and other applicable ordinances.

Recommendation

Based on conformance with the conditions of the Preliminary Plat, Staff recommends approval of the Final Plat.

Staff recommends approval of the Conditional Use Permit to allow Wetland Replacement for 0.4314 acres of wetland impacts with the following conditions:

1. Wetland replacement shall occur at a ratio of 2:1.
2. No wetland impacts shall occur until documentation of the official bank purchase has occurred and has been provided to City Staff in its complete state.
3. Applicant shall make any additional requested alterations to the Wetland Replacement Application and return an updated copy to the TEP for review.

Attachments

General Location Map

Aerial

Preliminary Plat & Site Plan

Final Plat

Wetland Application

Grading Plan

Utility Plan

Traffic Study

Drainage Memo

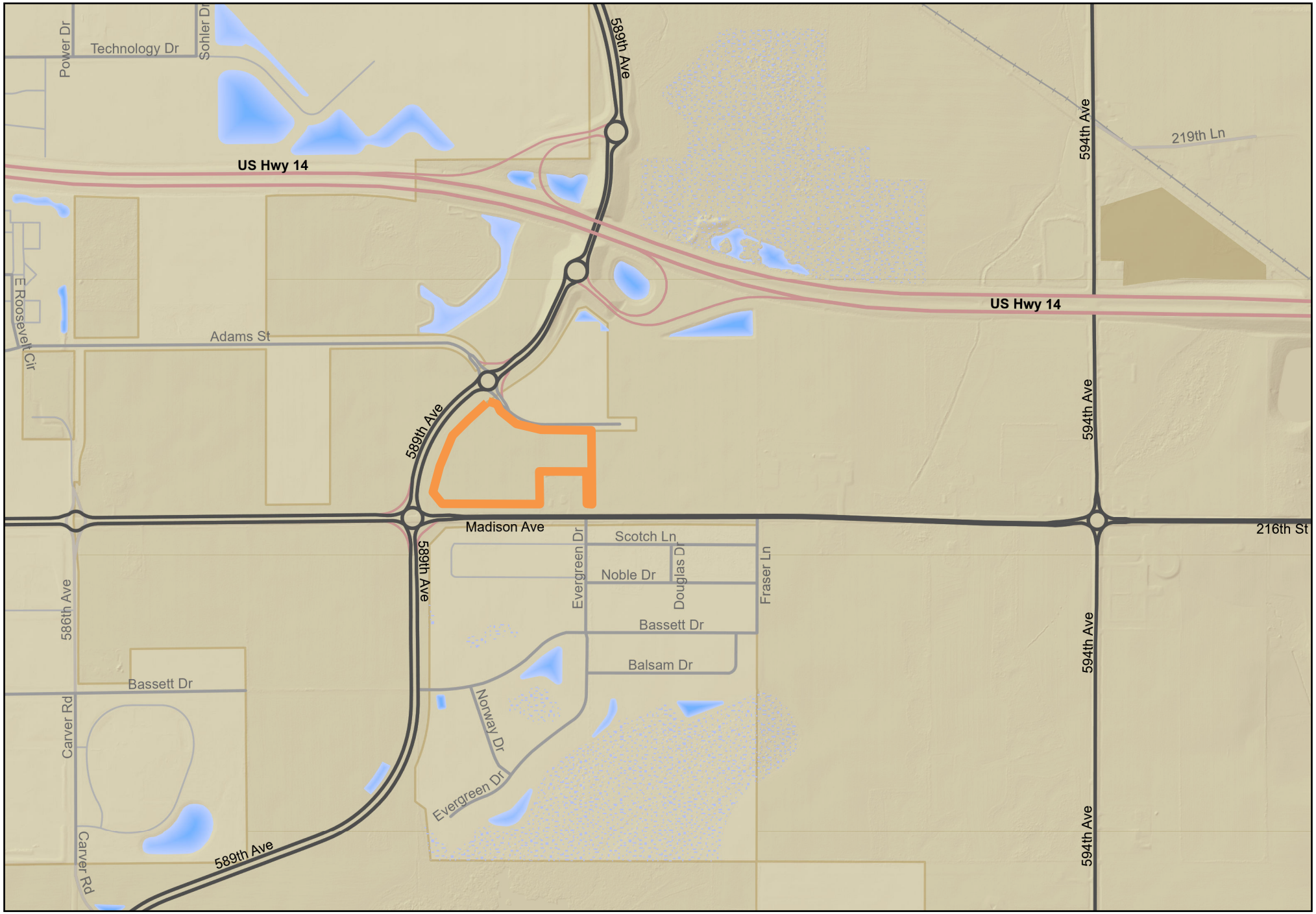
Draft Geotechnical Evaluation

Title Commitment

TEP Comments

Public Improvements - Estimates

General Location Map



N
W E
S

0 0.3 0.6 1 mi

This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation.

Produced by: City of Mankato GIS
Published: August 4, 2026

City of Mankato — Leading the way...

Aerial Map



N W E S

0 0.3 0.6 1 mi

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Produced by: City of Mankato GIS
Published: August 4, 2026

City of Mankato — Leading the way...

METCON ADDITION

EXISTING LEGAL DESCRIPTION:

That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, described as: Commencing at the southwesterly corner of Parcel D of Blue Earth County Highway Right of Way Plat No.27, on file and of record with the Blue Earth County Recorder; thence South 52 degrees 36 minutes 53 seconds East, (Minnesota County Coordinate System – Blue Earth County Zone – HARN NAD83 – 1996), along the southerly line of said Parcel D, 196.59 feet to the point of curvature of a circular curve to the left; thence southeasterly, along said southerly line, along a 500.00 foot radius curve, central angle = 01degrees 42 minutes 19 seconds, an arc distance of 14.88 feet; thence South 00 degrees 22 minutes 32 seconds East, not radially to said curve, 763.46 feet to the point of beginning, said point being on a circular curve which center of radius bears South 28 degrees 10 minutes 32 seconds West; thence northwesterly, along a 283.15 foot radius curve, central angle = 28 degrees 33 minutes 27 seconds, an arc distance of 141.13 feet to the point of tangency of said curve; thence South 89 degrees 37 minutes 06 seconds West, along the tangent of said curve, 371.30 feet to the point of curvature of a circular curve to the right; thence northwesterly, along a 320.00 foot radius curve, central angle = 56 degrees 19 minutes 18 seconds, an arc distance of 314.56 feet to the point of tangency of said curve; thence North 34 degrees 03 minutes 36 seconds West, along the tangent of said curve, 25.30 feet; thence North 10 degrees 56 minutes 24 seconds East, 70.71 feet to a point on the southeasterly line of Parcel C of said Blue Earth County Highway Right of Way Plat No. 27; thence South 55 degrees 56 minutes 24 seconds West, along said southeasterly line and along the southeasterly line of Parcel B of said Blue Earth County Highway Right of Way Plat No. 27, 192.96 feet to the point of curvature of a circular curve to the left; thence southwesterly, along said southeasterly line, along a 971.35 foot radius curve, central angle = 49 degrees 57 minutes 56 seconds, an arc distance of 847.08 feet to the most northerly corner of Parcel K1 of Blue Earth County Highway Right of Way Plat No. 30, on file and of record with the Blue Earth County Recorder; thence South 44 degrees 41 minutes 23 seconds East, not radially to said curve, along the northerly line of said Parcel K1; a distance of 118.21 feet; thence South 89 degrees 27 minutes 10 seconds East, along said northerly line, 376.49 feet; thence North 89 degrees 37 minutes 28 seconds East, along said northerly line, 366.29 feet to the northeasterly corner of said Parcel K1; thence North 00 degrees 18 minutes 44 seconds West, 245.61 feet; thence North 89 degrees 37 minutes 06 seconds East, 366.00 feet; thence South 00 degrees 18 minutes 44 seconds East, 245.65 feet to the northwest corner of Parcel K2 of said Blue Earth County Highway Right of Way Plat No. 30; thence North 89 degrees 37 minutes 28 seconds East, along the north line of said Parcel K2, a distance of 33.00 feet; thence North 00 degrees 18 minutes 44 seconds West, 585.65 feet; thence North 89 degrees 37 minutes 06 seconds East, 135.35 feet; thence North 00 degrees 22 minutes 32 seconds West, 45.55 feet to the point of beginning.
Excepting therefrom all of Freyberg Addition, Blue Earth County, Minnesota.

OWNERS / DEVELOPERS:

METCON
15760 Acorn Trail
Faribault, MN 55021
(597)-332-2266

AREA TABLE:

Lot 1 Block 1 = 1.64 acres
Lot 2 Block 1 = 2.41 acres
Lot 3 Block 1 = 2.00 acres
Outlot A = 4.12 acres
Outlot B = 2.49 acres

Lots are assumed 90% Impervious

PONDEROSA COURT = 1.14 acres
EVERGREEN DR = 0.67 acres

Total = 14.47 acres

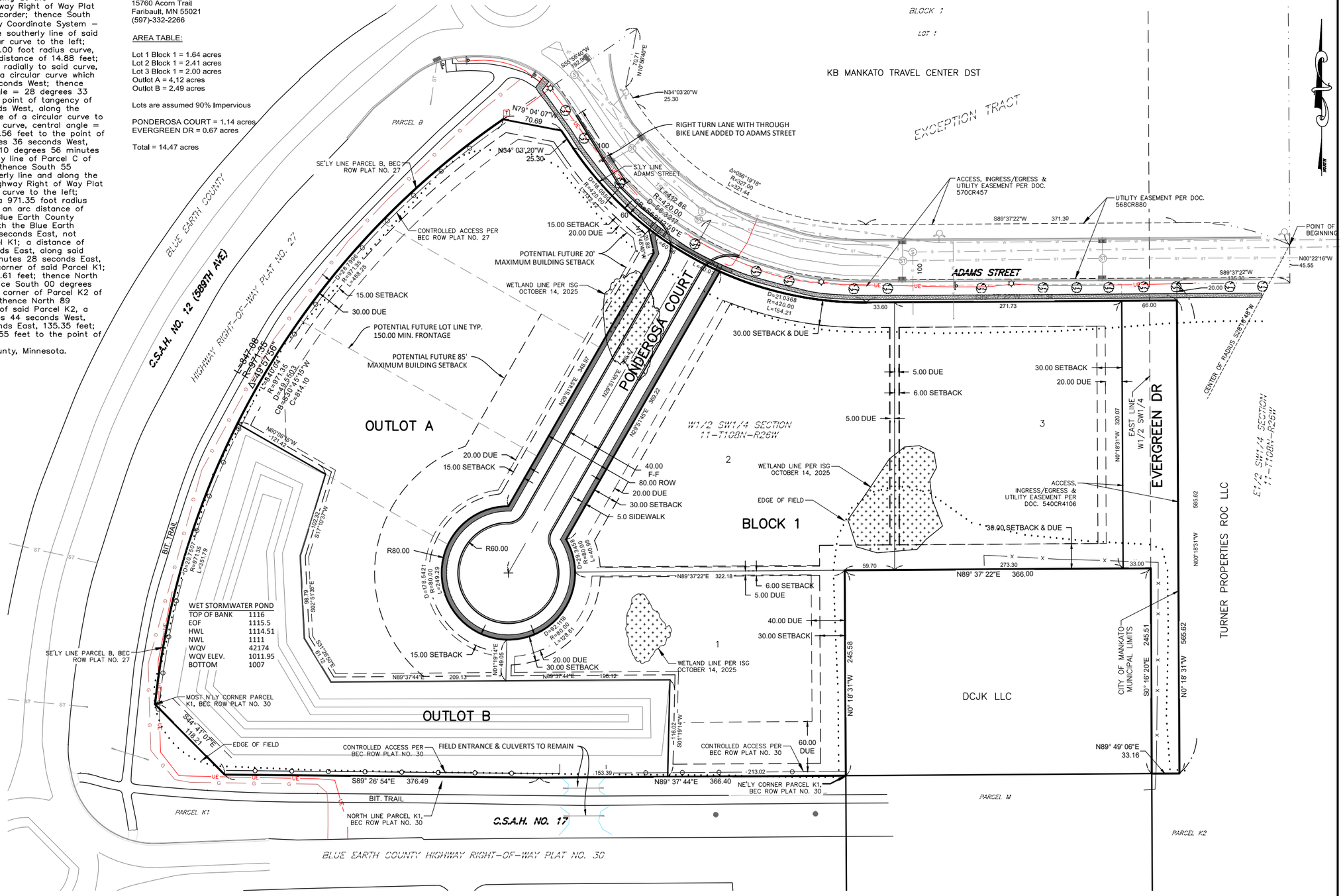
LEGEND

DUE	= Drainage & Utility Easement
W	= Water Main
S	= Sanitary Sewer
ST	= Storm Sewer
G	= Gas Main
UT	= Underground Telephone
OT	= Overhead Telephone
FO	= Fiber-Optics
UE	= Underground Electric
OE	= Overhead Electric
UTV	= Underground TV
JLM	= Judicial Landmark
X	= Chain Link Fence
	= Control Access
	= Sign
	= Stop Sign
	= Light Pole
	= Flood Lights
	= Power Pole
	= Guy Anchor
	= Fire hydrant
	= Water Main Valve
	= Culvert
	= Catch Basin & Catch Basin Numbers
	= Manholes & Manhole Numbers
1272	= Elevation Contour Line
1271.23	= Spot Elevation
RM1270.89	= Rim Elevation
FL1262.34	= FlowLine Elevation
	= Deciduous Tree
	= Coniferous Tree
	= Bush

ZONING NOTES:
Outlot A to be Zoned B-3 Highway Business Commercial Gateway Overlay
Setbacks:
Front: 15' Impervious Surface or Structure
Structure Min. 15' and 20' Max Corner Lot
Structure Min. 15' and 85' Interior Lot
Rear: 3' Impervious Surface or Structure
Side: 6' Impervious Surface or Structure
Maximum Height: None

Lots 1-3 Block 1 to be Zoned M-1 Light Industrial
Setbacks:
Front: 15' Impervious Surface, 30' Structure
Rear: None
Side: 6' Impervious Surface or 15' Building
Transitional to Residential: 30'
Maximum Height: None

FLOOD ZONE:
The surveyed property shown on this survey map is in Flood Zone X, according to Flood Insurance Rate Map Community Panel No. 27013C0116F, published by the Federal Emergency Management Agency, effective date February 22, 2024



60 0 60
HORIZ. SCALE FEET
DRAWINGS ON 11x17 SHEETS ARE HALF SCALE

REV.	BY	DATE	REVISION DESCRIPTION
1	JHS5	9/9/26	CORRECT EASEMENT DIMENSION ANNOTATION EAST OF OUTLOT B

JONES HAUGH SMITH
Engineers + Surveyors
415 West North Street Owatonna, MN 507-451-4598

DESIGNED: JHS5
DRAWN: JHS5
CHECKED: BJJ
Date: 8/13/26
DWG: 25-1234PP

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.
John H. Schulte V
License No. 44639 Date: 8/13/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
SITE PLAN

SHEET 1 OF 3

OFFICIAL PLAT

METCON ADDITION

SW'ERLY CORNER PARCEL D
BLUE EARTCH COUNTY RIGHT OF WAY PLAT NO. 27
POINT OF COMMENCEMENT

PARCEL D BLUE EARTH COUNTY
COUNTY RIGHT OF WAY PLAT NO. 27

S52°36'53"E
196.59

L=14.88
R=500.00
Δ=01°42'19"

WESTERLY CORNER
FREYBERG ADDITION

S55°58'24"W
192.96

70.72
N10°09'24"E

N34°03'36"W
25.30

FREYBERG ADDITION
BLOCK 1
LOT 1

PARCEL B

N79°04'24"W
70.69

SE'LY LINE PARCEL B, BEC
ROW PLAT NO. 27

N34°03'36"W
25.30

S'LY LINE
ADAMS STREET

Δ=18°03'34"
R=420.00
L=132.42

Δ=56°19'18"
R=327.00
L=321.44

EXCEPTION TRACT

EASTERLY CORNER
FREYBERG ADDITION

S89°37'06"W 371.30

Δ=28°14'02"
R=283.15
L=139.53

POINT OF
BEGINNING

UTILITY EASEMENT PER DOC.
568CR880

ACCESS, INGRESS/EGRESS
& UTILITY EASEMENT PER
DOC. 570CR457

100

ADAMS STREET

N00°27'03"W
45.55

S89°37'50"W
135.35

20.03

N89°37'06"E 371.35

CONTROLLED ACCESS PER
BEC ROW PLAT NO. 27

BLUE EARTH COUNTY
HIGHWAY RIGHT-OF-WAY PLAT NO. 27

C.S.A.H. NO. 12 (589TH AVE)

N11°48'56"W
29.96

Δ=56°19'18"
R=420.00
L=412.86

Δ=13°09'31"
R=420.00
L=100.12

Δ=21°02'13"
R=420.00
L=154.21

L=847.08
R=971.35
Δ=49°57'56"

L=840.01
R=971.35
Δ=49°33'01"

N28°51'29"E 348.97

N28°51'29"E 369.22

PONDEROSA COURT

W1/2 SW1/4 SECTION
11-T108N-R26W

OUTLOT A

2

3

EAST LINE
W1/2 SW1/4

EVERGREEN DR

N00°01'58"W 320.00

CENTER OF RADIUS S28°10'48"W

E1/2 SW1/4 SECTION
11-T108N-R26W

N60°08'31"W
121.42

Δ=20°14'03"
R=971.35
L=351.79

102.32
S17°10'21"W

98.79
S02°51'51"E

S31°27'28"E
61.72

Δ=178°32'31"
R=80.00
L=249.29

Δ=29°20'45"
R=80.00
L=40.98

Δ=91°00'42"
R=80.00
L=126.61

BLOCK 1

N89°36'48"E 322.18

30 DUE

N89°37'06"E 366.00

ACCESS,
INGRESS/EGRESS &
UTILITY EASEMENT PER
DOC. 540CR4106

565.62

N00°18'44"W

245.61

40 DUE

1

DCJK LLC

245.65

S00°18'44"E

SE'LY LINE PARCEL B, BEC
ROW PLAT NO. 27

N01°16'58"E
49.05

N89°37'28"E 199.12

N89°37'28"E 196.12

MOST N'LY CORNER PARCEL
K1, BEC ROW PLAT NO. 30

OUTLOT B

118.21
S44°41'23"E

S01°16'58"W
119.62

50 DUE

CONTROLLED ACCESS PER
BEC ROW PLAT NO. 30

CONTROLLED ACCESS PER
BEC ROW PLAT NO. 30

S89°27'10"E 376.49

N89°37'28"E 366.40

N89°37'28"E
33.00

PARCEL K1

PARCEL M

PARCEL K2

NORTH LINE PARCEL K1,
BEC ROW PLAT NO. 30

C.S.A.H. NO. 17

NE'LY CORNER PARCEL K1,
BEC ROW PLAT NO. 30

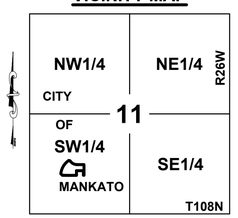
BLUE EARTH COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 30

SCALE: 1" = 40'

0 40 20 80

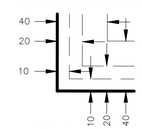
SCALE IN FEET

VICINITY MAP



LEGEND

Drainage and Utility easements (DUE) are shown thus unless otherwise noted:



= 5/8 inch x 16 inch iron monument (capped LS 52646)-Placed

= Iron monument - Found

= Addition Corner

= Delineated Wetland per Notice of Decision dated 10/17/2025

BASIS OF BEARING SYSTEM

All bearings are based upon the north line of Lot 4, Block 5, ERBLANG'S ADDITION, bearing South 89°58'05" East

JONES, HAUGH & SMITH
PROFESSIONAL ENGINEERS & LAND SURVEYORS

OFFICIAL PLAT

METCON ADDITION

CERTIFICATE OF DEDICATION

KNOW ALL PERSONS BY THESE PRESENTS: That McDonough Farms LLC, a Minnesota Limited Liablity Company, fee owner of the following described property:

That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, described as: Commencing at the southwesterly corner of Parcel D of Blue Earth County Highway Right of Way Plat No. 27, on file and of record with the Blue Earth County Recorder; thence South 52 degrees 36 minutes 53 seconds East, (Minnesota County Coordinate System - Blue Earth County Zone - HARN NAD83 - 1996), along the southerly line of said Parcel D, 196.59 feet to the point of curvature of a circular curve to the left; thence southeasterly, along said southerly line, along a 500.00 foot radius curve, central angle = 01 degrees 42 minutes 19 seconds, an arc distance of 14.88 feet; thence South 00 degrees 22 minutes 32 seconds East, not radially to said curve, 763.46 feet to the point of beginning, said point being on a circular curve which center of radius bears South 28 degrees 10 minutes 32 seconds West; thence northwesterly, along a 283.15 foot radius curve, central angle = 28 degrees 33 minutes 27 seconds, an arc distance of 141.13 feet to the point of tangency of said curve; thence South 89 degrees 37 minutes 06 seconds West, along the tangent of said curve, 371.30 feet to the point of curvature of a circular curve to the right; thence northwesterly, along a 320.00 foot radius curve, central angle = 56 degrees 19 minutes 18 seconds, an arc distance of 314.56 feet to the point of tangency of said curve; thence North 34 degrees 03 minutes 36 seconds West, along the tangent of said curve, 25.30 feet; thence North 10 degrees 56 minutes 24 seconds East, 70.71 feet to a point on the southeasterly line of Parcel C of said Blue Earth County Highway Right of Way Plat No. 27; thence South 55 degrees 56 minutes 24 seconds West, along said southeasterly line and along the southeasterly line of Parcel B of said Blue Earth County Highway Right of Way Plat No. 27, 192.96 feet to the point of curvature of a circular curve to the left; thence southwesterly, along said southeasterly line, along a 971.35 foot radius curve, central angle = 49 degrees 57 minutes 56 seconds, an arc distance of 847.08 feet to the most northerly corner of Parcel K1 of Blue Earth County Highway Right of Way Plat No. 30, on file and of record with the Blue Earth County Recorder; thence South 44 degrees 41 minutes 23 seconds East, not radially to said curve, along the northerly line of said Parcel K1; a distance of 118.21 feet; thence South 89 degrees 27 minutes 10 seconds East, along said northerly line, 376.49 feet; thence North 89 degrees 37 minutes 28 seconds East, along said northerly line, 366.29 feet to the northeasterly corner of said Parcel K1; thence North 00 degrees 18 minutes 44 seconds West, 245.61 feet; thence North 89 degrees 37 minutes 06 seconds East, 366.00 feet; thence South 00 degrees 18 minutes 44 seconds East, 245.65 feet to the northwest corner of Parcel K2 of said Blue Earth County Highway Right of Way Plat No. 30; thence North 89 degrees 37 minutes 28 seconds East, along the north line of said Parcel K2, a distance of 33.00 feet; thence North 00 degrees 18 minutes 44 seconds West, 585.65 feet; thence North 89 degrees 37 minutes 06 seconds East, 135.35 feet; thence North 00 degrees 22 minutes 32 seconds West, 45.55 feet to the point of beginning. Excepting therefrom all of Freyberg Addition, Blue Earth County, Minnesota.

Has caused the same to be surveyed and platted as METCON ADDITION and does hereby dedicate to the public for public use the public way(s) and/or the drainage and utility easement(s) as created by this plat.

In witness whereof said McDonough Farms LLC, a Minnesota limited liability company, has caused these presents to be signed by

its proper officer this _____ day of _____, 20_____.

_____
Randy McDonough, Manager

STATE OF MINNESOTA
COUNTY OF _____

The forgoing Instrument was acknowledged before me on this _____ day of _____, 20____ by Randy McDonough, Manager of McDonough Farms LLC, a Minnesota limited liability company.

_____ _____ Notary Public,_____ County, Minnesota
(Notary Signature)

_____ _____ My Commission expires _____
(Notary Printed Name)

SURVEYOR'S CERTIFICATE

I Scott A. Tuchtenhagen do hereby certify that this plat was prepared by me or under my direct supervision; that I am a duly Licensed Land Surveyor in the State of Minnesota; that this plat is a correct representation of the boundary survey; that all mathematical data and labels are correctly designated on this plat; that all monuments depicted on this plat have been, or will be correctly set within one year; that all water boundaries and wetlands, as defined in Minnesota Statutes, Section 505.021, Subd. 11, as of the date of this certificate are shown and labeled on this plat; and all public ways are shown and labeled on this plat.

Dated _____ day of _____, 20____.

_____
Licensed Land Surveyor
Minnesota Licensed No. 52646

STATE OF MINNESOTA
COUNTY OF _____

This Instrument was acknowledged before me on _____ day of _____, 20____ by Scott A. Tuchtenhagen, a Licensed Land Surveyor, Minnesota License No. 52646

_____ _____ Notary Public,_____ County, Minnesota
(Notary Signature)

_____ _____ My Commission expires _____
(Notary Printed Name)

TITLE OPINION

I , _____, licensed attorney, State of Minnesota, do hereby certify that the owner(s), as indicated hereon represents all ownership interests in the land encompassed by this plat.

_____

MANKATO PLANNING COMMISSION

Be it known that on this the _____ day of _____ , _____ , the Planning Commission of City of Mankato, Minnesota did duly review this plat of METCON ADDITION.

_____ _____
Chair Person Secretary

CITY COUNCIL, CITY OF MANKATO, MINNESOTA

This plat of METCON ADDITION was approved and accepted by the City Council of the City of Makato, Minnesota at a regular meeting thereof held this _____ day of _____, _____, and said plat is in compliance with the provisions of Minnesota Statutes, Section 505.03, Subd. 2.

_____ _____
Chair Person County Administrator

TAXPAYER SERVICES, BLUE EARTH COUNTY, MINNESOTA

I hereby certify that there are no delinquent taxes and/or delinquent special assessments, that the current taxes have been paid and that the transfer has been entered on the land described herein on the _____ day of _____ ,_____.

_____
Blue Earth County Property and Public Services Director

COUNTY RECORDER, BLUE EARTH COUNTY, MINNESOTA

I hereby certify that this instrument was filed in my office for record on this, the _____ day of _____ , _____, at ____ o'clock ___.M., and that it was duly recorded on _____ of Plats, as Document Number _____.

_____
Blue Earth County, County Recorder

JONES, HAUGH & SMITH
PROFESSIONAL ENGINEERS & LAND SURVEYORS

Joint Application Form for Activities Affecting Water Resources in Minnesota

This joint application form is the accepted means for initiating review of proposals that may affect a water resource (wetland, tributary, lake, etc.) in the State of Minnesota under state and federal regulatory programs. Applicants for Minnesota Department of Natural Resources (DNR) Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. Applicants can use the information entered into MPARS to substitute for completing parts of this joint application form (see the paragraph on MPARS at the end of the joint application form instructions for additional information). This form is only applicable to the water resource aspects of proposed projects under state and federal regulatory programs; other local applications and approvals may be required. Depending on the nature of the project and the location and type of water resources impacted, multiple authorizations may be required as different regulatory programs have different types of jurisdiction over different types of resources.

Regulatory Review Structure

Federal

The St. Paul District of the U.S. Army Corps of Engineers (Corps) is the federal agency that regulates discharges of dredged or fill material into waters of the United States (wetlands, tributaries, lakes, etc.) under Section 404 of the Clean Water Act (CWA) and regulates work in navigable waters under Section 10 of the Rivers and Harbors Act. Applications are assigned to Corps project managers who are responsible for implementing the Corps regulatory program within a particular geographic area.

State

There are three state regulatory programs that regulate activities affecting water resources. The Wetland Conservation Act (WCA) regulates most activities affecting wetlands. It is administered by local government units (LGUs) which can be counties, townships, cities, watershed districts, watershed management organizations or state agencies (on state-owned land). The Minnesota DNR Division of Ecological and Water Resources issues permits for work in specially-designated public waters via the Public Waters Work Permit Program (DNR Public Waters Permits). The Minnesota Pollution Control Agency (MPCA) under Section 401 of the Clean Water Act certifies that discharges of dredged or fill material authorized by a federal permit or license comply with state water quality standards. One or more of these regulatory programs may be applicable to any one project.

Required Information

Prior to submitting an application, applicants are **strongly encouraged** to seek input from the Corps Project Manager and LGU staff to identify regulatory issues and required application materials for their proposed project. Project proponents can request a pre-application consultation with the Corps and LGU to discuss their proposed project by providing the information required in Sections 1 through 5 of this joint application form to facilitate a meaningful discussion about their project. Many LGUs provide a venue (such as regularly scheduled technical evaluation panel meetings) for potential applicants to discuss their projects with multiple agencies prior to submitting an application. Contact information is provided below.

The following bullets outline the information generally required for several common types of determinations/authorizations.

- For delineation approvals and/or jurisdictional determinations, submit Parts 1, 2 and 5, and Attachment A.
- For activities involving CWA/WCA exemptions, WCA no-loss determinations, and activities not requiring mitigation, submit Parts 1 through 5, and Attachment B.
- For activities requiring compensatory mitigation/replacement plan, submit Parts 1 thru 5, and Attachments C and D.
- For local road authority activities that qualify for the state's local road wetland replacement program, submit Parts 1 through 5, and Attachments C, D (if applicable), and E to both the Corps and the LGU.

Submission Instructions

Send the completed joint application form and all required attachments to:

U.S Army Corps of Engineers. Applications may be sent directly to the appropriate Corps Office. For a current listing of areas of responsibilities and contact information, visit the St. Paul District's website at: http://www.mvp.usace.army.mil/Missions/Regulatory.aspx and select "Minnesota" from the contact Information box. Alternatively, applications may be sent directly to the St. Paul District Headquarters and the Corps will forward them to the appropriate field office.

Section 401 Water Quality Certification: Applicants do not need to submit the joint application form to the MPCA unless specifically requested. The MPCA will request a copy of the completed joint application form directly from an applicant when they determine an individual 401 water quality certification is required for a proposed project.

Wetland Conservation Act Local Government Unit: Send to the appropriate Local Government Unit. If necessary, contact your county Soil and Water Conservation District (SWCD) office or visit the Board of Water and Soil Resources (BWSR) web site (www.bwsr.state.mn.us) to determine the appropriate LGU.

DNR Public Waters Permitting: In 2014 the DNR will begin using the Minnesota DNR Permitting and Reporting System (MPARS) for submission of Public Waters permit applications (https://webapps11.dnr.state.mn.us/mpars/public/authentication/login). Applicants for Public Waters permits **MUST** use the MPARS online permitting system for submitting applications to the DNR. To avoid duplication and to streamline the application process among the various resource agencies, applicants can use the information entered into MPARS to substitute for completing parts of this joint application form. The MPARS print/save function will provide the applicant with a copy of the Public Waters permit application which, at a minimum, will satisfy Parts one and two of this joint application. For certain types of activities, the MPARS application may also provide all of the necessary information required under Parts three and four of the joint application. However, it is the responsibility of the Applicant to make sure that the joint application contains all of the required information, including identification of all aquatic resources impacted by the project (see Part four of the joint application). After confirming that the MPARS application contains all of the required information in Parts one and two the Applicant may attach a copy to the joint application and fill in any missing information in the remainder of the joint application.

PART ONE: Applicant Information

If applicant is an entity (company, government entity, partnership, etc.), an authorized contact person must be identified. If the applicant is using an agent (consultant, lawyer, or other third party) and has authorized them to act on their behalf, the agent's contact information must also be provided.

Applicant/Landowner Name: Randy McDonough, McDonough Farms, LLC.
Mailing Address: 15760 Acorn Trail, Faribault, MN 55021
Phone: 507, 332-2266
E-mail Address: scott.brown@met-con.com

Authorized Contact (do not complete if same as above): John Schulte, PE, Jones Haugh & Smith, Inc.
Mailing Address: 415 West North Street, Owatonna, MN 55060
Phone: 507, 451-4598
E-mail Address: john5@jhseng.com

Agent Name: Robert Merila, Aquatic EcoSolutions, Inc.
Mailing Address: PO Box 497, Nevis, MN 56467
Phone: 877, 346-3474
E-mail Address: robertmerila@arvig.net

PART TWO: Site Location Information

County: Blue Earth **City/Township: Mankato**
Parcel ID and/or Address: R430911300021
Legal Description (Section, Township, Range): Sec 11, T 108 N, R 26 W
Lat/Long (decimal degrees): 44.16908 / 93.92710
Attach a map showing the location of the site in relation to local streets, roads, highways.
Approximate size of site (acres) or if a linear project, length (feet): Approximately 17 acres

If you know that your proposal will require an individual Permit from the U.S. Army Corps of Engineers, you must provide the names and addresses of all property owners adjacent to the project site. This information may be provided by attaching a list to your application or by using block 25 of the Application for Department of the Army permit which can be obtained at:

http://www.mvp.usace.army.mil/Portals/57/docs/regulatory/RegulatoryDocs/engform_4345_2012oct.pdf

PART THREE: General Project/Site Information

If this application is related to a delineation approval, exemption determination, jurisdictional determination, or other correspondence submitted ***prior to*** this application then describe that here and provide the Corps of Engineers project number.

Describe the project that is being proposed, the project purpose and need, and schedule for implementation and completion. The project description must fully describe the nature and scope of the proposed activity including a description of all project elements that effect aquatic resources (wetland, lake, tributary, etc.) and must also include plans and cross section or profile drawings showing the location, character, and dimensions of all proposed activities and aquatic resource impacts.

The Met-Con Addition project is a Commercial/Industrial subdivision with large lots in the eastern developing fringe of Mankato immediately south of an exit from Trunk Highway 14 at the location of a popular truck stop. This is a premier location for Commercial/Industrial buildings to be built because of the quick access to a well-used divided highway that reduces heavy

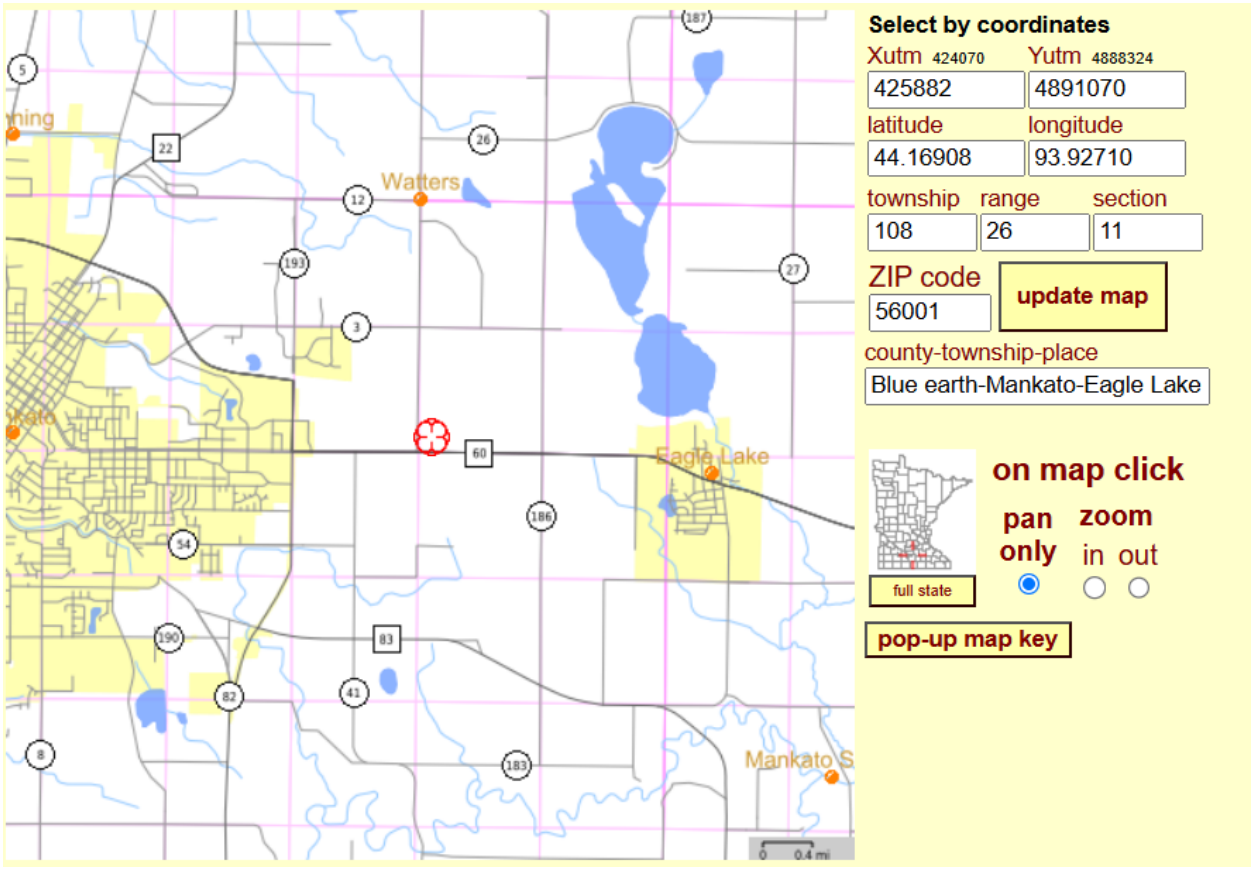
truck travel on City roads and increases the number of businesses in Mankato. It has been determined that development within Blue Earth County is encouraged to be done within City limits instead of outside cities, so this property is being annexed into the City of Mankato with the goal of maximizing it for Commercial/Industrial development. By maximizing the number of Commercial/Industrial lots that are built on this property, it will reduce the demand for other properties to be annexed into the City of Mankato and will reduce overall suburban sprawl along with reducing heavy truck travel on City roadways.

The lots are large because Commercial/Industrial buildings are sprawling by nature, and because large trucks need room to maneuver into and out of the loading/unloading docks. This former agricultural field with three degraded farmed wetlands is the ideal location to add these large lots to the City of Mankato.

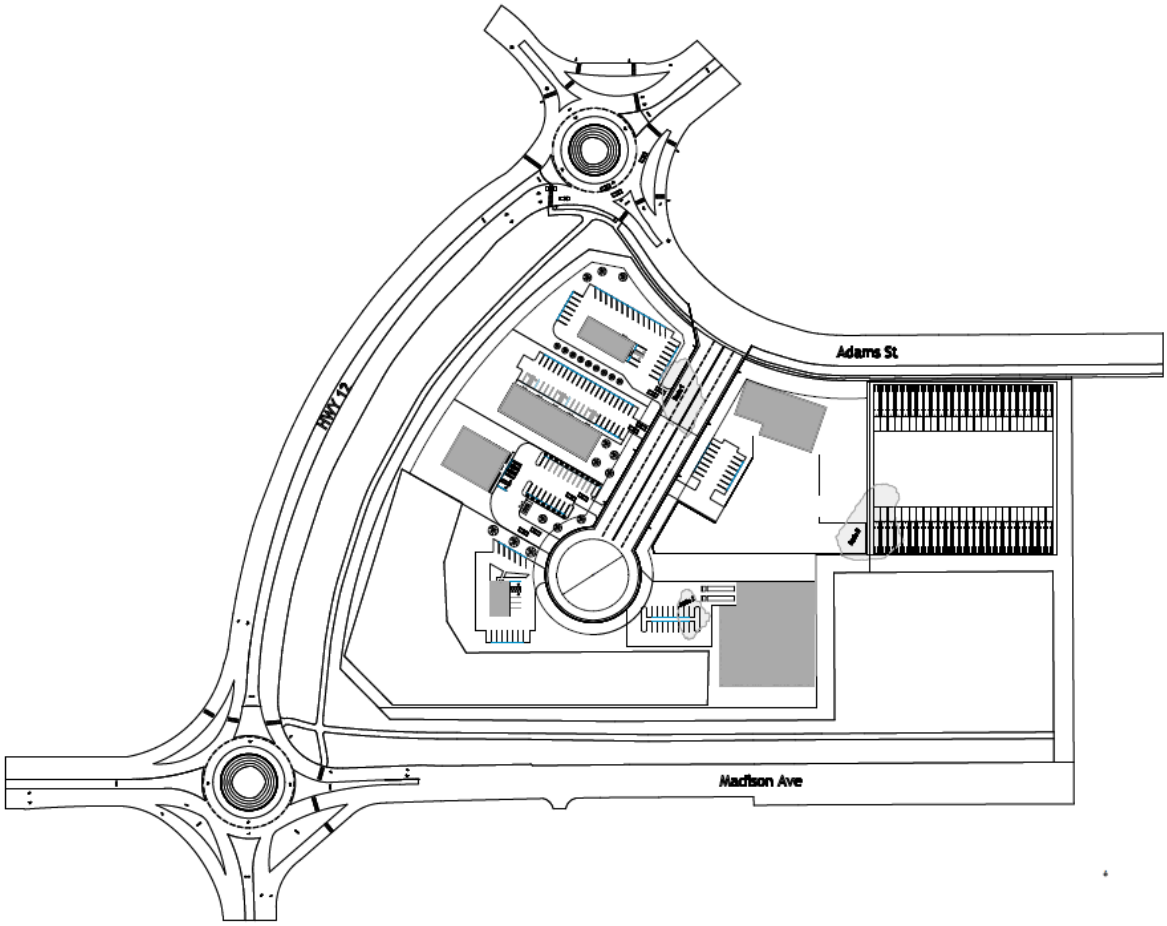
As required by engineering specifications, this subdivision has a properly sized stormwater management pond that will collect hard-surface runoff and hold it on-site for the proper length of time and will treat it before that water either percolates into the ground or runs off beyond the perimeter of this subdivision to flow down-slope. This stormwater ponding area takes up a sizable portion of this subdivision in order to provide this water management.

By using this property on the western fringe of Mankato next to the highway access and adjacent to a truck stop, large truck traffic on City roadways will be reduced. If this Commercial/Industrial subdivision were located along the southern developing fringe of Mankato, the large trucks would have to drive through the busy roadways in Mankato and would degrade the roads faster than if they did not have to travel on them. Truck traffic slowdowns on City roadways would also be eliminated by having this subdivision right next to on-off ramps to a main highway.

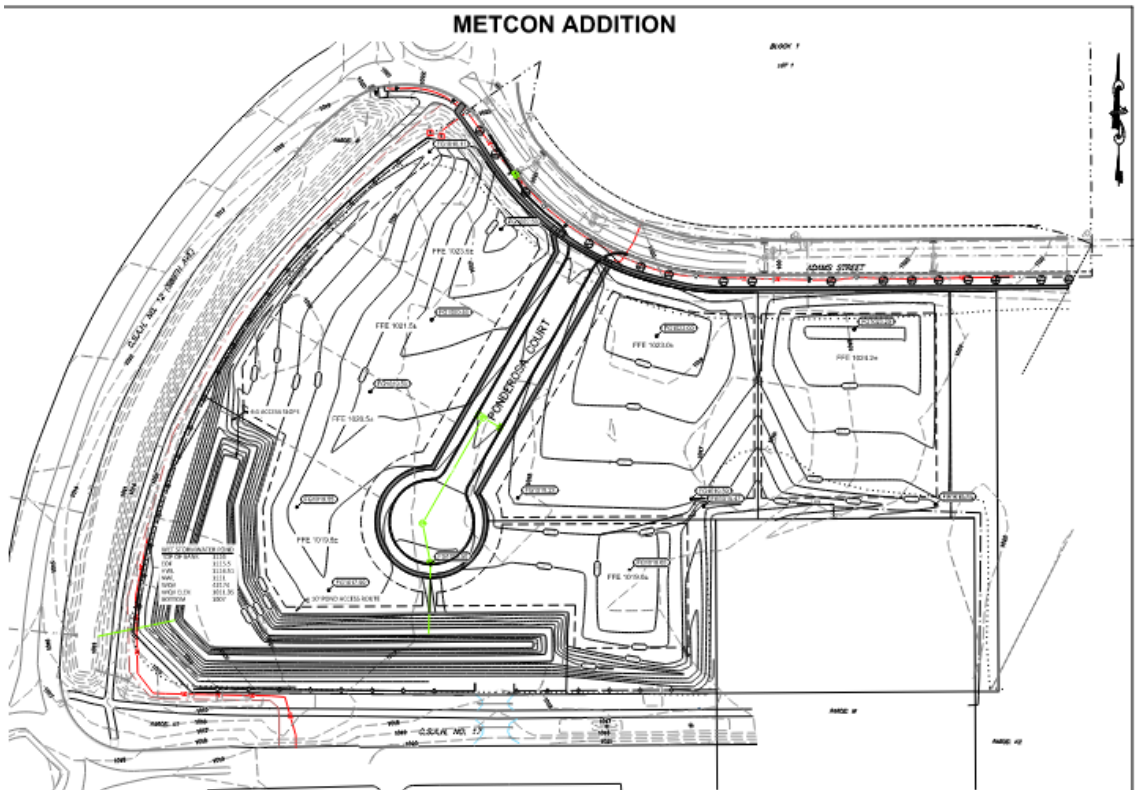
Site Location



Preliminary Site Design with Anticipated Land Useage



Topography



PART FOUR: Aquatic Resource Impact[1] Summary

If your proposed project involves a direct or indirect impact to an aquatic resource (wetland, lake, tributary, etc.) identify each impact in the table below. Include all anticipated impacts, including those expected to be temporary. Attach an overhead view map, aerial photo, and/or drawing showing all of the aquatic resources in the project area and the location(s) of the proposed impacts. Label each aquatic resource on the map with a reference number or letter and identify the impacts in the following table.

Aquatic Resource ID (as noted on overhead view)	**Aquatic Resource Type** (wetland, lake, tributary etc.)	**Type of Impact** (fill, excavate, drain, or remove vegetation)	**Duration of Impact** Permanent (P) or Temporary (T)[1]	**Size of Impact**[2]	**Overall Size of Aquatic Resource** [3]	**Existing Plant Community Type(s)** in Impact Area[4]	**County, Major Watershed #, and Bank Service Area #** of Impact Area[5]
Basin 1	Farmed Wetland	Fill	P	6,262 sf	N/A	Seas Fld Basin	Blue Earth
Basin 2	Farmed Wetland	Fill	P	2,811 sf	N/A	Seas Fld Basin	28, 9
Basin 3	Farmed Wetland	Fill	P	9.719 sf	N/A	Seas Fld Basin/ Frsh Wet Mdw	
				18,792 sf			
				0.4314 acre			

[1]If impacts are temporary; enter the duration of the impacts in days next to the "T". For example, a project with a temporary access fill that would be removed after 220 days would be entered "T (220)".
[2]Impacts less than 0.01 acre should be reported in square feet. Impacts 0.01 acre or greater should be reported as acres and rounded to the nearest 0.01 acre. Tributary impacts must be reported in linear feet of impact and an area of impact by indicating first the linear feet of impact along the flowline of the stream followed by the area impact in parentheses). For example, a project that impacts 50 feet of a stream that is 6 feet wide would be reported as 50 ft (300 square feet).
[3]This is generally only applicable if you are applying for a de minimis exemption under MN Rules 8420.0420 Subp. 8, otherwise enter "N/A".
[4]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.
[5]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

If any of the above identified impacts have already occurred, identify which impacts they are and the circumstances associated with each:

PART FIVE: Applicant Signature

☐ Check here if you are requesting a pre-application consultation with the Corps and LGU based on the information you have provided. Regulatory entities will not initiate a formal application review if this box is checked.

By signature below, I attest that the information in this application is complete and accurate. I further attest that I possess the authority to undertake the work described herein.

Signature: Barry McDonough 7/28/26

I hereby authorize Robert Merila to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

[1] The term "impact" as used in this joint application form is a generic term used for disclosure purposes to identify activities that may require approval from one or more regulatory agencies. For purposes of this form it is not meant to indicate whether or not those activities may require mitigation/replacement.

I hereby authorize Robert Merila to act on my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this application.

Attachment A
Request for Delineation Review, Wetland Type Determination, or Jurisdictional Determination

By submission of the enclosed wetland delineation report, I am requesting that the U.S. Army Corps of Engineers, St. Paul District (Corps) and/or the Wetland Conservation Act Local Government Unit (LGU) provide me with the following (check all that apply):

☐ **Wetland Type Confirmation**

☐ **Delineation Concurrence**. Concurrence with a delineation is a written notification from the Corps and a decision from the LGU concurring, not concurring, or commenting on the boundaries of the aquatic resources delineated on the property. Delineation concurrences are generally valid for five years unless site conditions change. Under this request alone, the Corps will not address the jurisdictional status of the aquatic resources on the property, only the boundaries of the resources within the review area (including wetlands, tributaries, lakes, etc.).

☐ **Preliminary Jurisdictional Determination**. A preliminary jurisdictional determination (PJD) is a non-binding written indication from the Corps that waters, including wetlands, identified on a parcel may be waters of the United States. For purposes of computation of impacts and compensatory mitigation requirements, a permit decision made on the basis of a PJD will treat all waters and wetlands in the review area as if they are jurisdictional waters of the U.S. PJDs are advisory in nature and may not be appealed.

☒ **Approved Jurisdictional Determination**. An approved jurisdictional determination (AJD) is an official Corps determination that jurisdictional waters of the United States are either present or absent on the property. AJDs can generally be relied upon by the affected party for five years. An AJD may be appealed through the Corps administrative appeal process.

In order for the Corps and LGU to process your request, the wetland delineation must be prepared in accordance with the 1987 Corps of Engineers Wetland Delineation Manual, any approved Regional Supplements to the 1987 Manual, and the *Guidelines for Submitting Wetland Delineations in Minnesota* (2013).
http://www.mvp.usace.army.mil/Missions/Regulatory/DelineationJDGuidance.aspx

Attachment B
Supporting Information for Applications Involving Exemptions, No Loss Determinations, and Activities Not Requiring Mitigation

Complete this part ***if*** you maintain that the identified aquatic resource impacts in Part Four do not require wetland replacement/compensatory mitigation OR ***if*** you are seeking verification that the proposed water resource impacts are either exempt from replacement or are not under CWA/WCA jurisdiction.

Identify the specific exemption or no-loss provision for which you believe your project or site qualifies:

Provide a detailed explanation of how your project or site qualifies for the above. Be specific and provide and refer to attachments and exhibits that support your contention. Applicants should refer to rules (e.g. WCA rules), guidance documents (e.g. BWSR guidance, Corps guidance letters/public notices), and permit conditions (e.g. Corps General Permit conditions) to determine the necessary information to support the application. Applicants are strongly encouraged to contact the WCA LGU and Corps Project Manager prior to submitting an application if they are unsure of what type of information to provide:

Attachment C
Avoidance and Minimization

Project Purpose, Need, and Requirements. Clearly state the purpose of your project and need for your project. Also include a description of any specific requirements of the project as they relate to project location, project footprint, water management, and any other applicable requirements. Attach an overhead plan sheet showing all relevant features of the project (buildings, roads, etc.), aquatic resource features (impact areas noted) and construction details (grading plans, storm water management plans, etc.), referencing these as necessary:

The Met-Con Addition project is a Commercial/Industrial subdivision with large lots in the eastern developing fringe of Mankato immediately south of an exit from Trunk Highway 14 at the location of a popular truck stop. This is a premier location for Commercial/Industrial buildings to be built because of the quick access to a well-used divided highway that reduces heavy truck travel on City roads and increases the number of businesses in Mankato. It has been determined that development within Blue Earth County is encouraged to be done within City limits instead of outside cities, so this property is being annexed into the City of Mankato with the goal of maximizing it for Commercial/Industrial development. By maximizing the number of Commercial/Industrial lots that are built on this property, it will reduce the demand for other properties to be annexed into the City of Mankato and will reduce overall suburban sprawl along with reducing heavy truck travel on City roadways.

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As required by engineering specifications, this subdivision has a properly sized stormwater management pond that will collect hard-surface runoff and hold it on-site for the proper length of time and will treat it before that water either percolates into the ground or runs off beyond the perimeter of this subdivision to flow down-slope. This stormwater ponding area takes up a sizable portion of this subdivision in order to provide this water management.

Purpose and Need

By using this property on the western fringe of Mankato next to the highway access and adjacent to a truck stop, large truck traffic on City roadways will be reduced. If this Commercial/Industrial subdivision were located along the southern developing fringe of Mankato, the large trucks would have to drive through the busy roadways in Mankato and would degrade the roads faster than if they did not have to travel on them. Truck traffic slowdowns on City roadways would also be eliminated by having this subdivision right next to on-off ramps to a main highway. The proposed subdivision is zoned as zoned by the City of Mankato as Commercial (Fast Food, Mixed Use Strip Mall, Auto Parts, Coffee Shop, etc.) west of the proposed Ponderosa Court and Industrial west of Ponderosa Ct.

Access to the proposed subdivision is provided via a new proposed roadway – Ponderosa Court. A traffic study was performed by SSTS LLC dated 6/3/26 that determined that access can only be provided from Adams Street at the proposed Ponderosa Court as shown with one private driveway as also shown.

Ponderosa Ct. needs to be short and straight enough that emergency vehicles such as large fire trucks or ambulances will visibly see the end of it in case they mistakenly turn into this roadway while driving quickly to an emergency situation. If Ponderosa Ct. was curved or any longer, it would create a dangerous situation because there is no way to drive straight ahead with the stormwater ponding area at the far end of the dead-end roadway. It is for this reason that Ponderosa Ct. needs to be straight and as short as possible to still accommodate access to the property.

Alternatively, Ponderosa Ct. could enter from Evergreen Drive along the east side of the property, but due to its length would be required to loop back to Adams Street at the same location as proposed above. In addition, an ambulance that mistakenly drives into a long curvy dead end road might think that it is a short cut across to avoid CSAH 12 turnabouts, but would lose valuable time to reach a heart attack victim because of the time it takes to realize the mistake and turn around. Again, this makes the long alignment from Evergreen Dr. a non-feasible option.

The proposed alternative of the shorter and straighter Ponderosa Ct. allows fire trucks and ambulances to see the far end of the dead end and avoid the dangerous scenarios described above.

To accommodate health, safety, and welfare, the City of Mankato concurred that the shorter version of Ponderosa Ct. was preferred and allowed split zoning of the property to have Commercial on the west side (fronting on CSAH 12) and Industrial to the east of Ponderosa Ct. (to be less visible from CSAH 12). This allows the future businesses to have direct frontage on a busy roadway to market their goods and services and keeps the industrial land use away from busy roadways.

The MetCon property is an Industrial land use, so it cannot be constructed west of Ponderosa Ct. in the Commercial zoned area.

Metcon Property

The current Trump administration has provided incentives for manufacturers to build manufacturing facilities within the United States by allowing rapid expensing in 2026, which has motivated many manufacturers including Hyundai auto maker to drastically increase production within the United States thus increasing the need for the construction of commercial buildings to manufacture parts in the supply chain. Manufacturing facility construction has increased drastically in 2026, and is anticipated to increase in future years. MetCon builds commercial buildings such as manufacturing facilities, so they are preparing for this anticipated increase in commercial building within Southern Minnesota, which has a desirable potential workforce to draw from.

As an industrial property, the entire site would need to be utilized to justify the development costs. If not fully developable, further there would need to be more land annexed to the east, and more wetlands would need to be impacted (the property immediately to the west has wetlands on it). By fully utilizing this property and replacing Basin 3 with Wetland Bank Credits at a 2:1 replacement ratio from a Wetland Bank within Blue Earth County, the wetland functions and values within the county are in a way envisioned by the Wetland Conservation Act of 1991: to concentrate development within urban areas and create wetland bank sites within rural areas near the urban centers. This part of the City of Mankato is zoned Industrial in order to encourage Industrial development here instead of having large semi tractor and trailer trucks drive around the roundabouts and through the City streets clogging traffic and increasing the wear on City streets.

The MetCon site is planned to be constructed on Industrial Lot 2 and has the purpose of being an industrial office space with an area for outdoor storage of heavy equipment such as backhoe excavators, front-end loaders, highlift machines, and the lowboy semi tractor and trailers to haul them in and out of this area. MetCon does construction of industrial sized buildings and needs to house this equipment at this location so that it reduces the travel on roadways from its Faribault location when working on sites in south central Minnesota.

Industrial Lot 1 does not have an imminent building project but is foreseen as Light Industrial or Distribution with a warehouse style building, loading docks, and parking area. The odd shape of Lot 1 is driven by the adjacent stormwater treatment area and with similar truck demands as Lot 3, tractor trailer movements and parking areas.

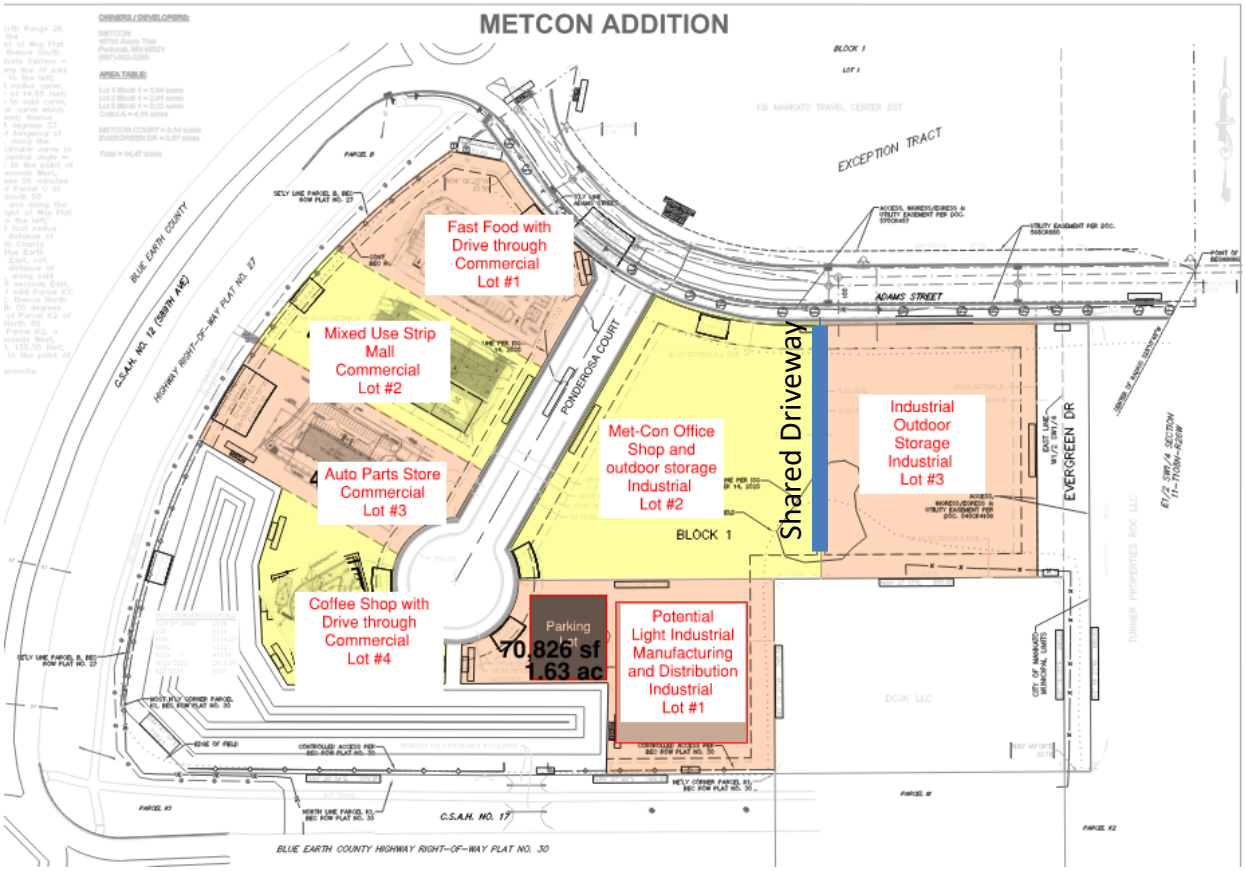
The buyer of this lot zoned as Industrial will almost certainly require the 125 foot wide turning area for semi tractor and trailers for docking into the facility to bring raw materials for industrial use and to haul out product if a manufacturer purchases this site. If a distributor purchases this site, the semi tractors and trailers will bring in bulk volumes of product and sell lesser volumes of product. Both potential buyers would need to have the semi tractor and trailer maneuvering flat space for loading and off-loading of large trucks. The demand for manufacturing and distribution of American made parts and supply chains has been increasing in 2026 and is anticipated to increase in future years. This property is in line with that anticipated demand. Basin 2 cannot be avoided because any configuration of this lot would require a large flat pavement area to accommodate the large trucks that would come and go from this Industrial zoned property. If this Industrial zoned property were not built here, more land would need to be annexed to the west and there are more wetlands that would need to be impacted. Replacement of Basin 2 at a 2:1 replacement ratio from a Wetland Bank in Blue Earth County provides an increase of wetland functions and values within the county.

Industrial Lot 3 is in the eastern part of the property, farthest away from CSAH 12 to have the most amount of distance screening from the busy roadway.

Industrial Lot 3 is intended to be constructed by Metcon as an outdoor hard surfaced trailer storage area. This property needs to have a 125 foot wide area between parking spaces to accommodate the turning radius of the semi tractor and trailers for parking and maneuvering.

Metcon intends the use for this property is to provide short-term outdoor storage of outdoor semi tractors and trailers waiting for off-loading and / or waiting for picking up a load to haul to the next location. There is a Walmart Distribution Center located in the Mankato area that services the region, which would need this type of a short term storage location.

There are other large businesses in south-central Minnesota that utilize over-the-road trucking for obtaining raw materials and hauling their products across the state and the country. Trunk Highway 14 is a main trucking artery heading east toward Rochester and eastern states, and Mankato is a major Minnesota River crossing for loads heading to and from the northwestern states and avoiding the Twin Cities Metro Area traffic slowdowns. For this reason, this outdoor storage location would be appealing for semi tractor and trailer haulers to utilize as a carry-over location, especially with the walking distance proximity of the travel center across the road to the north that has a restaurant and more amenities than a typical truck stop, built for the purpose of being a destination location for truckers. The short term outdoor storage would provide a benefit to the travel center and also to the truckers who are driving the large trucks.



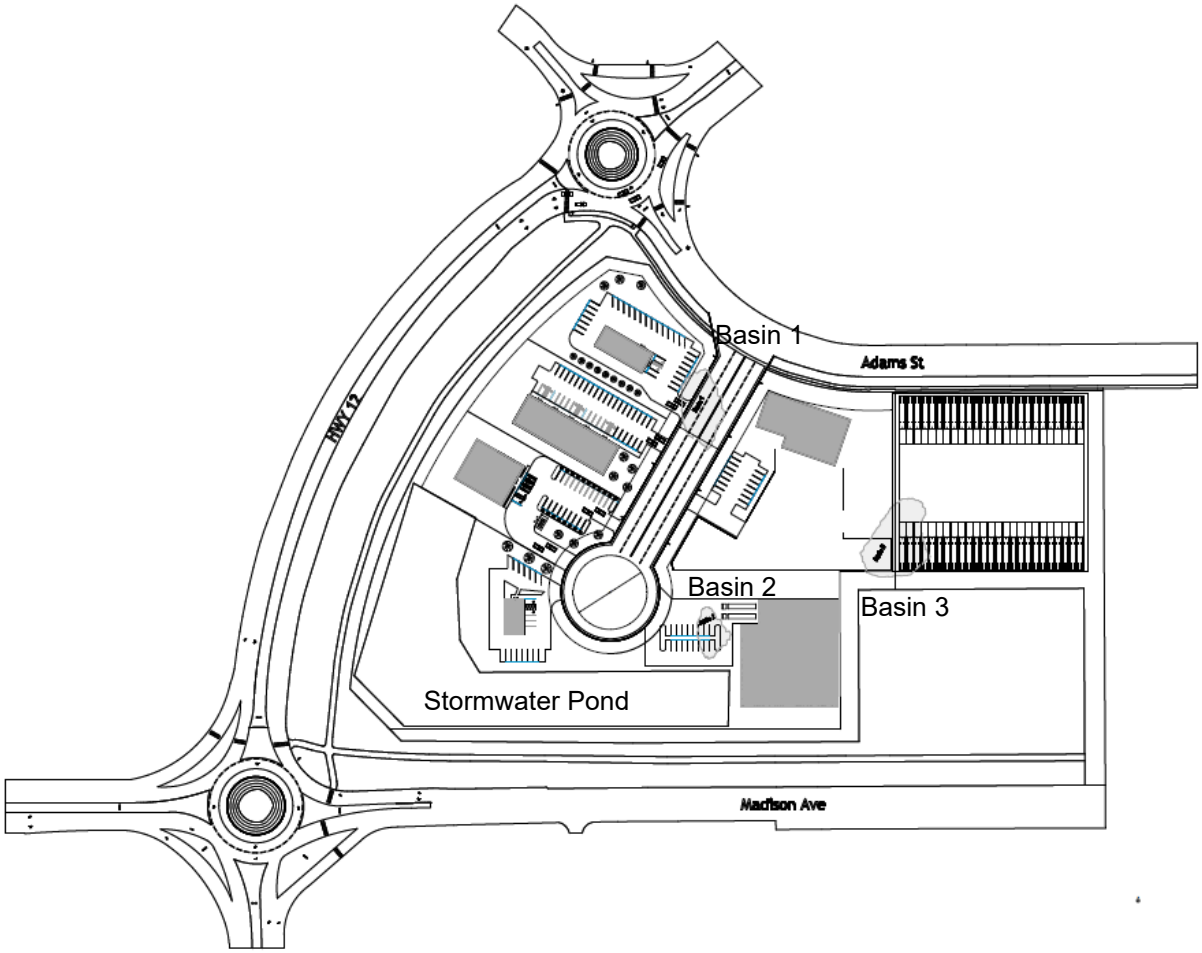
Conceptual Plan of Metcon Addition

Commercial Lots West of Ponderosa Ct.

Within the Preferred Alternative, there are four Commercial zoned lots to the west of Ponderosa Ct. with frontage on CSAH 12 but accessed from Ponderosa Ct. The frontage allows for good marking of products and services, and the access from Adams Street allows for good access for customers. The quick access to Trunk Highway 14 will allow the businesses to pull business from travelers on the divided highway because of the quick and easy on-off access to Fast Food, Auto Parts, a Strip Mall, and/or a Coffee Shop. Because of this desirable access, businesses would see the value in placement of their business at this location and would provide goods and services to not just Mankato but also to the high volume of travelers that pass through the trunk highway corridor.

In addition, these businesses would provide goods and services to truckers and travelers who pull off of the trunk highway to refuel at the travel center immediately to the north, specifically within walking distance of truckers who are taking their daily breaks and parking in the truck stop or the potential use of Industrial Lot 3. If these businesses were not built here, it would be more difficult for the truckers to utilize these types of businesses that are not within walking distance of this area.

Preliminary Site Design



Avoidance. Both the CWA and the WCA require that impacts to aquatic resources be avoided if practicable alternatives exist. Clearly describe all on-site measures considered to avoid impacts to aquatic resources and discuss at least two project alternatives that avoid all impacts to aquatic resources on the site. These alternatives may include alternative site plans, alternate sites, and/or not doing the project. Alternatives should be feasible and prudent (see MN Rules 8420.0520 Subp. 2 C). Applicants are encouraged to attach drawings and plans to support their analysis:

The **No Build Alternative** is the first avoidance alternative. In this alternative, this Commercial/Industrial subdivision would not be built at this location at this time. This is not a viable alternative because there is a strong demand for increasing the business capacity in the Mankato area to provide jobs for people, to increase Minnesota-made products, and to increase the logistical stability in this region.

If this property is not utilized for Commercial/Industrial lots, the businesses that would have built here would build elsewhere and either impact more raw land outside of the City limits where infrastructure is not as readily available, or would build at other locations in a developing fringe area where truck traffic on City roads would increase. The additional truck traffic on City roads would speed up breakdown of those roadways and also increase drive times unnecessarily.

Because of these factors, the no-build alternative is not a viable alternative.

The No Wetland Impact Alternative

In the No wetland Impact Alternative, Ponderosa Court would come into the property at Evergreen. This is because this roadway cannot come into the property from the south or the west (off of CSAH 17 and 12 respectively) because both County Roads are existing and were platted by Blue Earth County. The County has restricted the access locations via those Right of Way plats. This means that access into the property can only come in through Adams Street or from Evergreen.

Ponderosa Ct. cannot enter the property to the west of Basin 1 because the engineering requirements need enough distance from the intersection with CSAH 12 for safety in making the right turn into Ponderosa Ct. Furthermore, Ponderosa Court must line up with the entry driveway on the north side of Adams St. per engineering requirement. Ponderosa Ct. cannot be moved eastward away from the curve because the requirement that streets must be at least 300 feet away from each other and the straight part of Adams St. is less than 300 feet from the platted Evergreen Dr.

The No Wetland Impact Alternative with Ponderosa Court connecting at Evergreen is not feasible as if Ponderosa Court connects at Evergreen, it would be required to connect back to Adams Street at the location above to avoid an overlength dead end street. This connection still impacts Wetland 1 and is thus not a not a feasible alternative.

Dead end streets should be as short and as straight as possible so that emergency vehicles such as large fire trucks and ambulances can see that it is not a through street if they are forced to bypass traffic or an accident on a main roadway. The Preferred Alternative of Ponderosa Court fits this criteria and the No Wetland Impact Alternative does not.

An additional reason why the No Wetland Impact Alternative is not feasible is because the site needs to be mass-graded for the large Commercial and Industrial businesses that will use the sites in this property that is zoned as Commercial and Industrial. The Commercial buildings need to be placed on flat ground with large driveways and parking lots such that mass grading has to be done for them to be built. The Industrial lots need to be mass graded to a flat contour because of the need for semi tractor and trailer vehicles to have at least 125 feet of flat space to turn and maneuver into parking and/or docking places. It would be extremely difficult for these sites to be fully utilized unless they are mass graded to the elevations that allow for proper use of the properties.

Furthermore, because of the extensive roof tops and hard surface roadways, sidewalks, and parking areas, most of the rainfall runoff within the immediate watershed would be directed to the stormwater ponding area that is at a lower elevation than the existing wetlands, so Basin 1, Basin 2, and Basin 3 would be starved of their hydrology and therefore would be impacted even if a chain link fence were placed around them to keep vehicles from backing into them in the back ends of parking lots, or within parking lots. Wetlands technically avoided but without much of an adjacent upland would seriously degrade over time. This is precisely why the Wetland Conservation Act of 1991 started with a provision for the purchase of wetland bank credits for replacement of wetland functions and values in a place where larger wetland complexes could be restored/created instead of requiring on-site replacement of unavoidable wetland impacts that was the case prior to circa 1995. The replacement ratio is 2:1 in Blue Earth County, so there will be a net gain of both wetland acreage and wetland quality through the purchase of wetland bank credits within Blue Earth County in the Preferred Alternative.

Also, generally, the City of Mankato has run out of room and needs to expand through the annexation of land from the perimeter townships. By not maximizing the buildable density of Commercial and Industrial properties being annexed and developed, the demand for Commercial and Industrial lots will require that even more land be annexed into the City. The property immediately to the east of this location has wetlands that would need to be impacted in order to build more Commercial and Industrial lots as this part of the City is zoned Commercial and Industrial. If lots were placed farther to the south, there would be more wear and tear on the City roadways and the traffic would become more clogged, especially when semi tractor and trailers have to navigate the turnabouts and the stoplights within the city.

Based on these things, the No Wetland Impact alternative is not a feasible alternative.

In the Preferred Alternative, the Ponderosa Ct. roadway alignment allows for the best use of this property for the maximum amount of commercial or industrial businesses to utilize the lots in the best way based on the shape of the property and the need for hard-surface runoff retention and treatment. The wetland impacts to Basin 1 cannot be avoided because the ultimate purpose of this property is to provide the maximum number of Commercial/Industrial lots to reduce the need to annex more land into the city in the future.

Basin 2 is located right in the middle of the entrance to one of the properties, so it would be impossible to grade for a Commercial/Industrial building entrance and avoid this wetland.

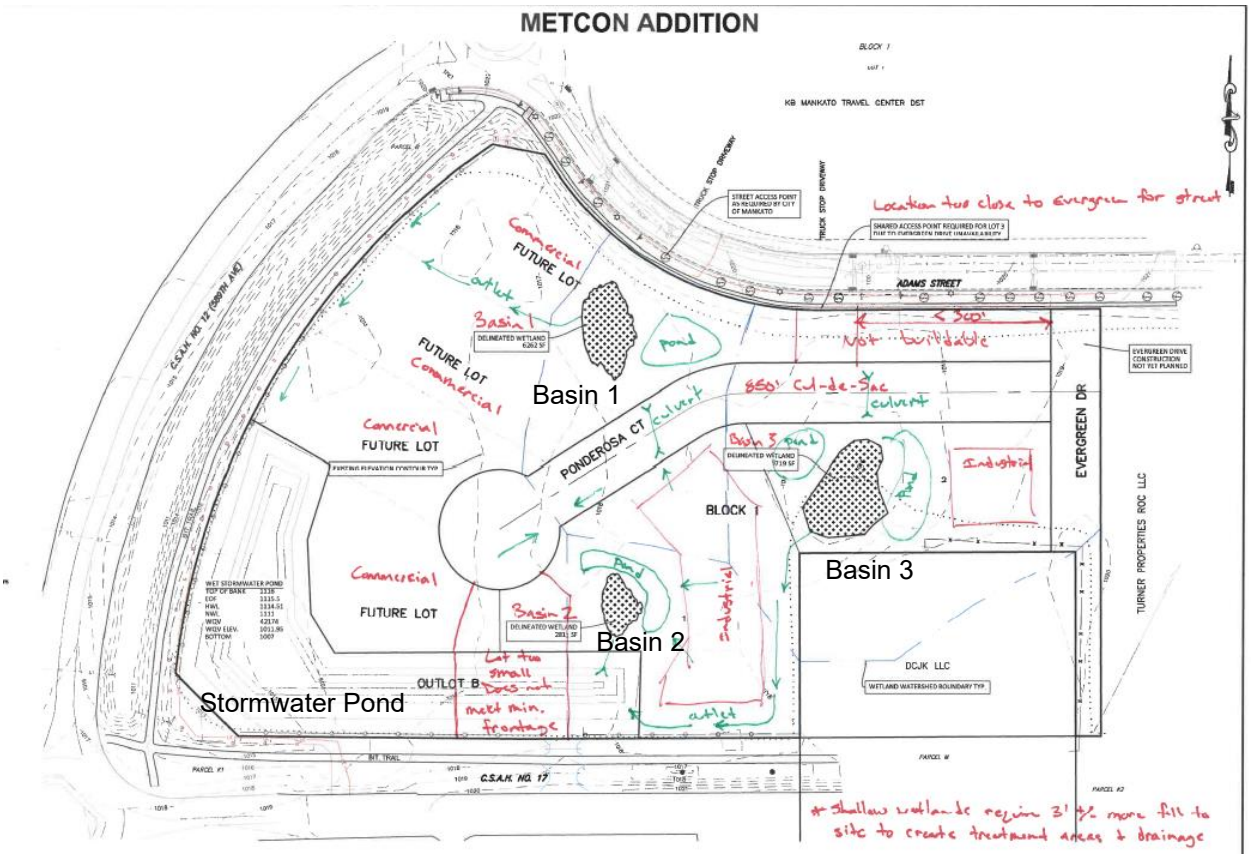
Basin 3 is located on the property line between two ideal-sized Commercial/Industrial lots where surface water flow is planned to be directed within the property to flow down to the stormwater ponding area for retention/treatment; if this wetland had to be avoided, one or both of these lots would be un-buildable for the intended Commercial/Industrial use. In addition, hard-

surface runoff would flow off the property to the south and potentially flood out the neighboring property, which is not a desirable situation.

Single family subdivisions have much smaller lot sizes that would allow for the avoidance of wetlands within a subdivision. Commercial/Industrial areas require large expanses of flat ground for the square or rectangular buildings needed for commercial and industrial use along with the requirement of trucking loading/unloading docks to drop off raw components and load finished products.

Based on these factors, it is not practicable to build around and avoid impacts to the farmed wetlands that are present on the property.

Sketch of the No Wetland Impact Alternative



Minimization. Both the CWA and the WCA require that all unavoidable impacts to aquatic resources be minimized to the greatest extent practicable. Discuss all features of the proposed project that have been modified to minimize the impacts to water resources (see MN Rules 8420.0520 Subp. 4):

As described above, the design criteria for this property to be annexed into the City of Mankato is to provide the greatest number of Commercial/Industrial units within this property so that it reduces the need to annex more land for Commercial/industrial land use. The location of this property being very close to both the entry/exit of a major divided highway and also a truck stop makes this a prime location for Commercial/Industrial land use where large trucks are anticipated to be entering and exiting. By utilizing this land to the greatest extent possible, there would be reduced wear-and-tear on the roadways from reduced truck traffic; with increased truck traffic, roadways would need to be rebuilt sooner and that rebuilding effort would increase the risk of sediment events to adjacent wetlands, so concentrating Commercial/Industrial development here would reduce ecological impacts in the future.

Basin 1 (6,262 square feet) is right on the roadway that needs to be in the middle of the property so that the commercial buildings could be built to the west and the Industrial properties can be built to the east. The roadway location cannot be farther west because it would be too close to CSAH12 and it cannot be farther to the east because it must line up with the entry roadway across to the north (and needs to be at least 300 feet away from platted Evergreen Dr.) Some direct construction impacts to Basin 1 could be avoided, but due to the stormwater treatment requirements of its upstream

watershed, the basin's water source would be removed.

Basin 2 (2,811 square feet) is in the middle of the parking/loading area for Industrial Lot 1 south of the MetCon lot. Because this lot is within the Industrial zoning, it is expected to have semi tractor and trailer use, which requires 125 feet of open space for turning around and backing into parking spaces or loading docks. Basin 2 is directly underneath where this maneuvering activity would be located. The stormwater ponding area needs to be in the southwestern portion of the property to satisfy the stormwater retention and treatment requirements, and this is the best place on the property to place it.

Sizing and location of the subdivision's stormwater pond and surface swales to said pond restrict the buildable area of this lot such that it would be unbuildable as an industrial lot without impact to Basin 2. If this basin were left alone, it would lose its source of surface water because the surface water is being directed to the stormwater pond immediately to the southwest and the functions and values of this basin would not exist even if it were avoided. Therefore, it is better for this basin to be replaced at a 2:1 replacement ratio through the purchase of wetland bank credits from within Blue Earth County.

Basin 3 (9,719 square feet) is in the middle of the surface water drainage swale that is necessary to prevent flooding onto the adjoining property and divert the surface stormwater into the stormwater retention and treatment pond in the SW portion of the property. If this is avoided, the water from the hard surface rooftops and roadways on the eastern lot would flood into the adjoining property and there would not be proper flow to the stormwater pond that is designed to retain and treat the stormwater from the hard surface on the property. Additionally, it will be impossible to avoid subsurface flows from the wetland to the directly the adjacent swale, even if direct impacts are avoided. These subsurface flows will destroy the wetland in the long term.

Access to Adams Avenue NW for Lot 3 (the eastern lot) will also be required at the location shown along the Lot 2/Lot 3 shared lot line, adding even greater surface water treatment requirements before those waters could enter Basin 3.

The current design includes a swale that goes from Adams Avenue NW southward then westward to the stormwater ponding area, collecting untreated stormwater from Lots 1, 2, and 3. If this wetland was left on the landscape, stormwater basins would be required ringing the upstream portions of the basin. Due to the very flat nature of the site, these basins would require the import of multiple feet of fill onto the sites to provide "dry" storage above the elevation of the wetlands. The building pads would likewise be raised to maintain positive drainage to the ringing treatment systems resulting in match slopes within the sites to the proposed roadways greater than allowed by city standards.

Additionally subsurface water flows will be impacted by the nearby required drainage swale on the south line of Lots 2 and 3 which could have detrimental effects to Basin 3.

The current plan is to grade the area of Basin 3 into a surface flowageway down to the stormwater pond and replace this wetland with the purchase of wetland bank credits in Blue Earth County at a 2:1 ratio.

Total unavoidable wetland impacts are 18,792 square feet or 0.4314 acre

Off-Site Alternatives. An off-site alternatives analysis is not required for all permit applications. If you know that your proposal will require an individual permit (standard permit or letter of permission) from the U.S. Army Corps of Engineers, you may be required to provide an off-site alternatives analysis. The alternatives analysis is not required for a complete application but must be provided during the review process in order for the Corps to complete the evaluation of your application and reach a final decision. Applicants with questions about when an off-site alternatives analysis is required should contact their Corps Project Manager.

This property is an agricultural field that is annexed into the City of Mankato for the purpose of being used for Commercial/Industrial use. As such, this has been identified as the next most logical annexation of land for the City in order to satisfy the demand for more Commercial/Industrial lots that are needed in south-central Minnesota. By concentrating and maximizing the usage of these large lots on a property such as this, it reduces the demand for expansion and annexation of other properties around the developing fringe of the City of Mankato. This is the best location for this large-lot Commercial/Industrial subdivision with a truck stop directly adjacent to this property. These factors are not found elsewhere in the area and therefore there are no off-site alternatives.

Attachment D
Replacement/Compensatory Mitigation

Complete this part ***if*** your application involves wetland replacement/compensatory mitigation not associated with the local road wetland replacement program. Applicants should consult Corps mitigation guidelines and WCA rules for requirements.

Replacement/Compensatory Mitigation via Wetland Banking. Complete this section if you are proposing to use credits from an existing wetland bank (with an account number in the State wetland banking system) for all or part of your replacement/compensatory mitigation requirements.

Wetland Bank Account #	County	Major Watershed #	Bank Service Area #	Credit Type (if applicable)	Number of Credits
1804	Blue Earth	28	9	SWC	0.8628

Applicants should attach documentation indicating that they have contacted the wetland bank account owner and reached at least a tentative agreement to utilize the identified credits for the project. This documentation could be a signed purchase agreement, signed application for withdrawal of credits or some other correspondence indicating an agreement between the applicant and the bank owner. *However, applicants are advised not to enter into a binding agreement to purchase credits until the mitigation plan is approved by the Corps and LGU.*

Project-Specific Replacement/Permittee Responsible Mitigation. Complete this section if you are proposing to pursue actions (restoration, creation, preservation, etc.) to generate wetland replacement/compensatory mitigation credits for this proposed project.

WCA Action Eligible for Credit[1]	Corps Mitigation Compensation Technique[2]	Acres	Credit % Requested	Credits Anticipated[3]	County	Major Watershed #	Bank Service Area #

[1]Refer to the name and subpart number in MN Rule 8420.0526.
[2]Refer to the technique listed in *St. Paul District Policy for Wetland Compensatory Mitigation in Minnesota*.
[3]If WCA and Corps crediting differs, then enter both numbers and distinguish which is Corps and which is WCA.

Explain how each proposed action or technique will be completed (e.g. wetland hydrology will be restored by breaking the tile……) and how the proposal meets the crediting criteria associated with it. Applicants should refer to the Corps mitigation policy language, WCA rule language, and all associated Corps and WCA guidance related to the action or technique:

Attach a site location map, soils map, recent aerial photograph, and any other maps to show the location and other relevant features of each wetland replacement/mitigation site. Discuss in detail existing vegetation, existing landscape features, land use (on and surrounding the site), existing soils, drainage systems (if present), and water sources and movement. Include a topographic map showing key features related to hydrology and water flow (inlets, outlets, ditches, pumps, etc.):

Attach a map of the existing aquatic resources, associated delineation report, and any documentation of regulatory review or approval. Discuss as necessary:

For actions involving construction activities, attach construction plans and specifications with all relevant details. Discuss and provide documentation of a hydrologic and hydraulic analysis of the site to define existing conditions, predict project outcomes, identify specific project performance standards and avoid adverse offsite impacts. Plans and specifications should be prepared by a licensed engineer following standard engineering practices. Discuss anticipated construction sequence and timing:

For projects involving vegetation restoration, provide a vegetation establishment plan that includes information on site preparation, seed mixes and plant materials, seeding/planting plan (attach seeding/planting zone map), planting/seeding methods, vegetation maintenance, and an anticipated schedule of activities:

For projects involving construction or vegetation restoration, identify and discuss goals and specific outcomes that can be determined for credit allocation. Provide a proposed credit allocation table tied to outcomes:

Provide a five-year monitoring plan to address project outcomes and credit allocation:

Discuss and provide evidence of ownership or rights to conduct wetland replacement/mitigation on each site:

Quantify all proposed wetland credits and compare to wetland impacts to identify a proposed wetland replacement ratio. Discuss how this replacement ratio is consistent with Corps and WCA requirements:

By signature below, the applicant attests to the following (only required if application involves project-specific/permittee responsible replacement):

- All proposed replacement wetlands were not:
  - Previously restored or created under a prior approved replacement plan or permit
  - Drained or filled under an exemption during the previous 10 years
  - Restored with financial assistance from public conservation programs
  - Restored using private funds, other than landowner funds, unless the funds are paid back with interest to the individual or organization that funded the restoration and the individual or organization notifies the local government unit in writing that the restored wetland may be considered for replacement.
- The wetland will be replaced before or concurrent with the actual draining or filling of a wetland.
- An irrevocable bank letter of credit, performance bond, or other acceptable security will be provided to guarantee successful completion of the wetland replacement.
- Within 30 days of either receiving approval of this application or beginning work on the project, I will record the Declaration of Restrictions and Covenants on the deed for the property on which the replacement wetland(s) will be located and submit proof of such recording to the LGU and the Corps.

Applicant or Representative: Title:

Signature: Randy McDonough 7/28/26 Date:

Attachment E
Local Road Replacement Program Qualification

Complete this part ***if*** you are a local road authority (county highway department, city transportation department, etc.) seeking verification that your project (or a portion of your project) qualifies for the MN Local Government Road Wetland Replacement Program (LGRWRP). If portions of your project are not eligible for the LGRWRP, then Attachment D should be completed and attached to your application.

Discuss how your project is a repair, rehabilitation, reconstruction, or replacement of a currently serviceable road to meet state/federal design or safety standards/requirements. Applicants should identify the specific road deficiencies and how the project will rectify them. Attach supporting documents and information as applicable:

Provide a map, plan, and/or aerial photograph accurately depicting wetland boundaries within the project area. Attach associated delineation/determination report or otherwise explain the method(s) used to identify and delineate wetlands. Also attach and discuss any type of review or approval of wetland boundaries or other aspects of the project by a member or members of the local Technical Evaluation Panel (TEP) or Corps of Engineers:

In the table below, identify only the wetland impacts from Part 4 that the road authority has determined should qualify for the LGRWRP.

Wetland Impact ID (as noted on overhead view)	**Type of Impact** (fill, excavate, drain)	**Size of Impact** (square feet or acres to 0.01)	**Existing Plant Community Type(s)** in Impact Area[1]	**County, Major Watershed #, and Bank Service Area #** of Impact[2]

[1]Use *Wetland Plants and Plant Community Types of Minnesota and Wisconsin* 3rd Ed. as modified in MN Rules 8420.0405 Subp. 2.

[2]Refer to Major Watershed and Bank Service Area maps in MN Rules 8420.0522 Subp. 7.

Discuss the feasibility of providing onsite compensatory mitigation/replacement for important site-specific wetland functions:

Please note that under the MN Wetland Conservation Act, projects with less than 10,000 square feet of wetland impact are allowed to commence prior to submission of this notification so long as the notification is submitted within 30 days of the impact. The Clean Water Act has no such provision and requires that permits be obtained prior to any regulated discharges into water of the United States. To avoid potential unauthorized activities, road authorities must, at a minimum, provide a complete application to the Corps and receive a permit prior to commencing work.

By signature below, the road authority attests that they have followed the process in MN Rules 8420.0544 and have determined that the wetland impacts identified in Attachment D are eligible for the MN Local Government Road Wetland Replacement Program.

Road Authority Representative: Title:

Signature: _____ Date:

Technical Evaluation Panel Concurrence: Project Name and/or Number: **Metcon Addition**

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

TEP member: Representing:

Concur with road authority's determination of qualification for the local road wetland replacement program? ☐ Yes ☐ No

Signature: _____ Date:

Upon approval and signature by the TEP, application must be sent to: **Wetland Bank Administration**
Minnesota Board of Water & Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155

Special Considerations Metcon Addition

Subp. 2. **Endangered and threatened species.**

The property is almost entirely an agricultural field that has been annually tilled for decades. The likelihood of any endangered or threatened species present is very low. This property has a busy truck stop immediately to the north, and urban land use to the west and south. There is a limited access divided highway immediately north of the truck stop, so there would be no travel corridor from the north and it is mostly agricultural fields to the east. With all of the activity and minimal travel at this location, travelling wildlife use would be very low. Since this land has been in row crop farming for decades, the likelihood of any unique plants at this location would be very unlikely.

Subp. 3. **Rare natural communities.**

Being an agricultural field, the plant community has been row crop agricultural that is regularly tilled when the crops are harvested for decades. It is unlikely that there would be a rare natural community on the property.

Subp. 4. **Special fish and wildlife resources.**

A. fish passage and spawning areas;

There are no areas on the property that have fish.

B. colonial water bird nesting colonies;

The property is mostly farmland without trees. The likelihood for colonial bird nesting is low.

C. migratory waterfowl concentration areas;

The likelihood for waterfowl concentration is low because this farm field is relatively small compared to the fields that are typically used by waterfowl. Also, this property is being annexed into the City of Mankato with development around it. The stormwater ponding area will increase waterfowl habitat as compared to the farmed wetlands that are proposed to be impacted for the project; the stormwater pond would not be row cropped the way that the farmed wetlands are row cropped, so there would be a net gain for waterfowl habitat.

D. deer wintering areas; and

The property is a row cropped agricultural field that is being annexed into the City of Mankato. There is development north, east, and south of this property, so it is unlikely that deer would winter here.

E. wildlife travel corridors.

With City development to the north, east, and south and a divided highway, there are no wildlife travel corridors.

Subp. 5. **Archaeological, historic, or cultural resource sites.**

This property has been a row crop agricultural field for decades, so if there were any cultural resources previously, they would have been destroyed long ago.

Subp. 6. **Groundwater sensitivity.**

This property is relatively flat and it is unlikely that there is much interaction with groundwater due to the tight nature of the soils commonly found in this area. The wetlands proposed to be impacted were mild depressions within agricultural fields and were unlikely to recharge groundwater. The stormwater pond that is planned to be constructed on the property is designed to have vegetation growing in it to allow the breakdown constituents of hard surface runoff before it flows downstream or percolates into groundwater.

Subp. 7. **Sensitive surface waters.**

There are no trout waters or outstanding resource value waters adjacent to this property.

Subp. 8. **Education or research use.**

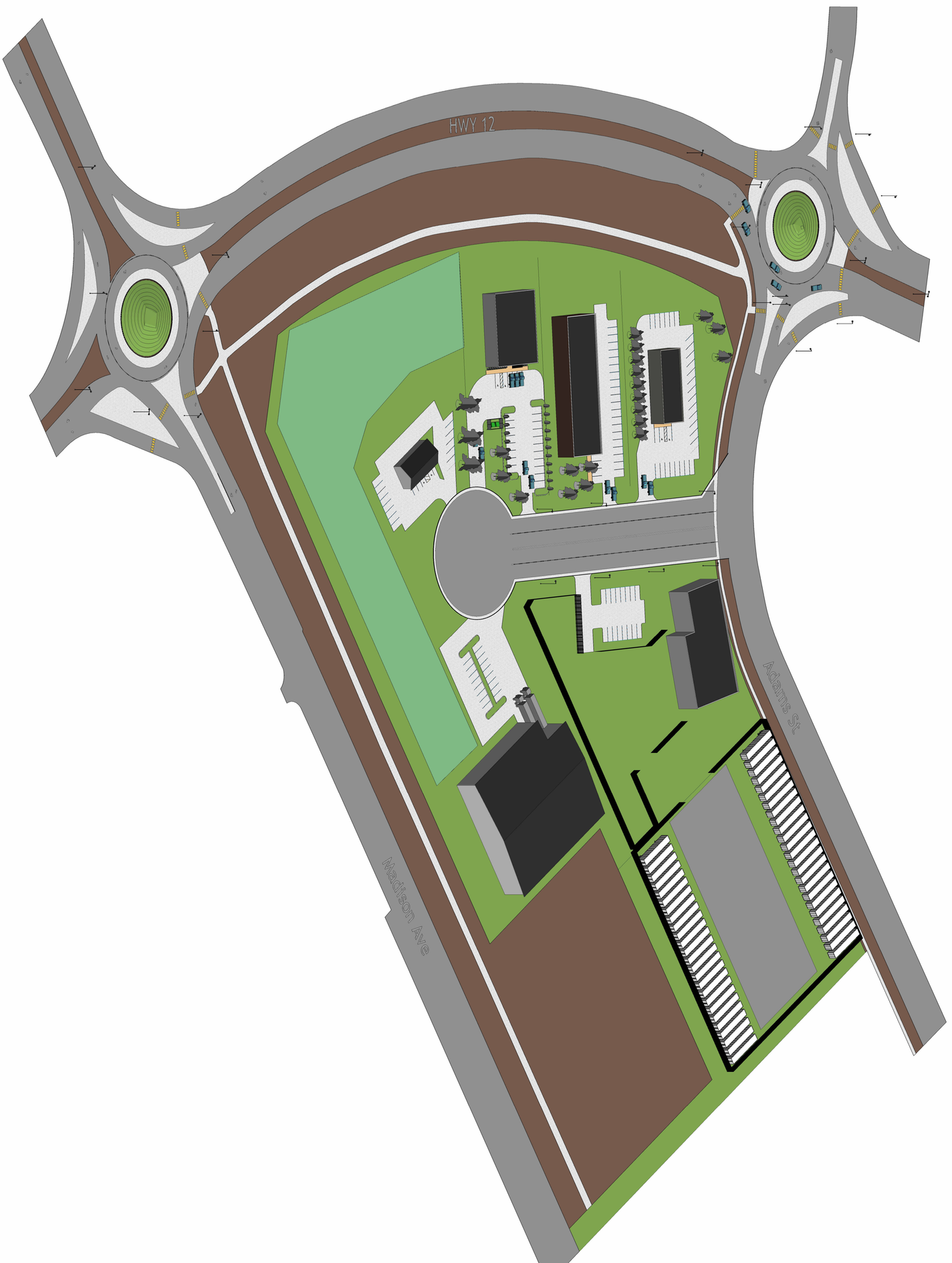
There are no known wetlands used for educational or research purposes on the property.

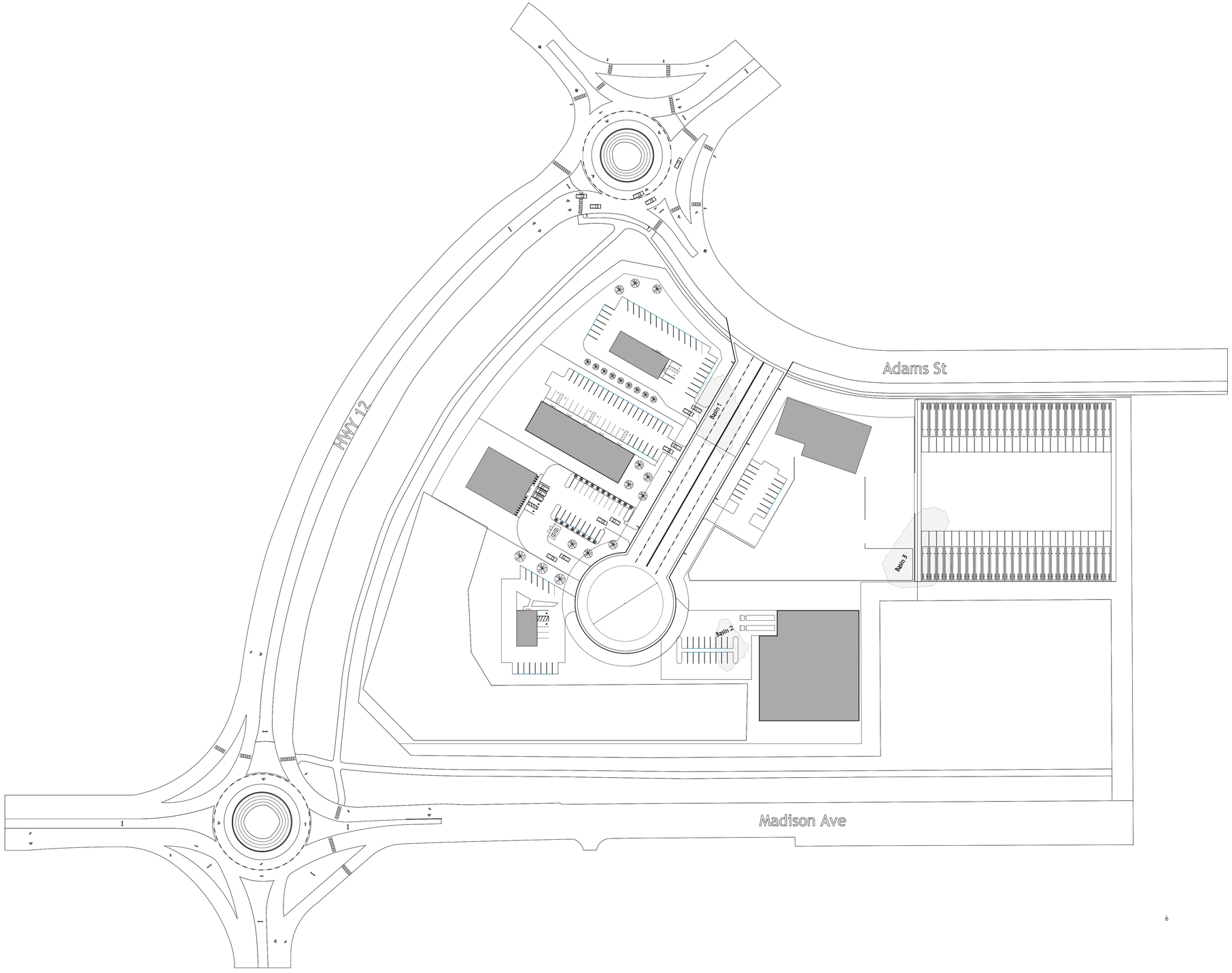
Subp. 9. **Waste disposal sites.**

The property appears to be an agricultural field that was used for growing crops that would be used for food. As such, the likelihood for hazardous wastes is low.

Subp. 10. **Consistency with other plans.**

This proposed Commercial/Industrial large lot subdivision of land is consistent with the zoning and comprehensive plans of the City of Mankato as shown by the annexation of this land into the City. The engineered stormwater pond that is designed to retain water to allow suspended colloidal solids to precipitate out and the vegetation designed to break down chemicals in solution is consistent with local/watershed management plans.


HWY 12
Adams St
Madison Ave


HWY 12
Adams St
Madison Ave
Basin 1
Basin 2
Basin 3

METCON ADDITION

EXISTING LEGAL DESCRIPTION:

That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, described as: Commencing at the southwesterly corner of Parcel D of Blue Earth County Highway Right of Way Plat No.27, on file and of record with the Blue Earth County Recorder; thence South 52 degrees 36 minutes 53 seconds East, (Minnesota County Coordinate System – Blue Earth County Zone – HARN NAD83 – 1996), along the southerly line of said Parcel D, 196.59 feet to the point of curvature of a circular curve to the left; thence southeasterly, along said southerly line, along a 500.00 foot radius curve, central angle = 01degrees 42 minutes 19 seconds, an arc distance of 14.88 feet; thence South 00 degrees 22 minutes 32 seconds East, not radially to said curve, 763.46 feet to the point of beginning, said point being on a circular curve which center of radius bears South 28 degrees 10 minutes 32 seconds West; thence northwesterly, along a 283.15 foot radius curve, central angle = 28 degrees 33 minutes 27 seconds, an arc distance of 141.13 feet to the point of tangency of said curve; thence South 89 degrees 37 minutes 06 seconds West, along the tangent of said curve, 371.30 feet to the point of curvature of a circular curve to the right; thence northwesterly, along a 320.00 foot radius curve, central angle = 56 degrees 19 minutes 18 seconds, an arc distance of 314.56 feet to the point of tangency of said curve; thence North 34 degrees 03 minutes 36 seconds West, along the tangent of said curve, 25.30 feet; thence North 10 degrees 56 minutes 24 seconds East, 70.71 feet to a point on the southeasterly line of Parcel C of said Blue Earth County Highway Right of Way Plat No. 27; thence South 55 degrees 56 minutes 24 seconds West, along said southeasterly line and along the southeasterly line of Parcel B of said Blue Earth County Highway Right of Way Plat No. 27, 192.96 feet to the point of curvature of a circular curve to the left; thence southwesterly, along said southeasterly line, along a 971.35 foot radius curve, central angle = 49 degrees 57 minutes 56 seconds, an arc distance of 847.08 feet to the most northerly corner of Parcel K1 of Blue Earth County Highway Right of Way Plat No. 30, on file and of record with the Blue Earth County Recorder; thence South 44 degrees 41 minutes 23 seconds East, not radially to said curve, along the northerly line of said Parcel K1; a distance of 118.21 feet; thence South 89 degrees 27 minutes 10 seconds East, along said northerly line, 376.49 feet; thence North 89 degrees 37 minutes 28 seconds East, along said northerly line, 366.29 feet to the northeasterly corner of said Parcel K1; thence North 00 degrees 18 minutes 44 seconds West, 245.61 feet; thence North 89 degrees 37 minutes 06 seconds East, 366.00 feet; thence South 00 degrees 18 minutes 44 seconds East, 245.65 feet to the northwest corner of Parcel K2 of said Blue Earth County Highway Right of Way Plat No. 30; thence North 89 degrees 37 minutes 28 seconds East, along the north line of said Parcel K2, a distance of 33.00 feet; thence North 00 degrees 18 minutes 44 seconds West, 585.65 feet; thence North 89 degrees 37 minutes 06 seconds East, 135.35 feet; thence North 00 degrees 22 minutes 32 seconds West, 45.55 feet to the point of beginning.
Excepting therefrom all of Freyberg Addition, Blue Earth County, Minnesota.

OWNERS / DEVELOPERS:

METCON
15780 Acorn Trail
Faribault, MN 55021
(597)-332-2266

AREA TABLE:

Lot 1 Block 1 = 1.84 acres
Lot 2 Block 1 = 2.41 acres
Lot 3 Block 1 = 2.00 acres
Outlot A = 4.11 acres

METCON COURT = 3.84 acres
EVERGREEN DR = 0.67 acres

Total = 14.47 acres

LEGEND

- W = Water Main
- S = Sanitary Sewer
- ST = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
- UE = Underground Electric
- OE = Overhead Electric
- UTV = Underground TV
- JUM = Judicial Landmark
- X = Chain Link Fence
- = Control Access
- = Sign
- = Stop Sign
- = Light Pole
- = Flood Lights
- = Power Pole
- = Guy Anchor
- = Fire hydrant
- = Water Main Valve
- = Culvert
- = Catch Basin & Catch Basin Numbers
- = Manholes & Manhole Numbers
- 1272 = Elevation Contour Line
- 1271.23 = Spot Elevation
- RM1270.89 = Rim Elevation
- FL1262.34 = FlowLine Elevation
- = Deciduous Tree
- = Coniferous Tree
- = Bush

ZONING NOTES:

Outlot A to be Zoned B-3 Highway Business
Setbacks:
Front: 15' Impervious Surface or Structure
Rear: 3' Impervious Surface or Structure
Side: 6' Impervious Surface or Structure
Maximum Height: None

Lots 1-3 Block 1 to be Zoned M-1 Light Industrial
Setbacks:
Front: 15' Impervious Surface, 30' Structure
Rear: None
Side: 6' Impervious Surface or 15' Building
Transitional to Residential: 30'
Maximum Height: None

FLOOD ZONE:

The surveyed property shown on this survey map is in Flood Zone X, according to Flood Insurance Rate Map Community Panel No. 27013C0116F, published by the Federal Emergency Management Agency, effective date February 22, 2024

Fast Food with Drive through Commercial Lot #1

Mixed Use Strip Mall Commercial Lot #2

Auto Parts Store Commercial Lot #3

Coffee Shop with Drive through Commercial Lot #4

Met-Con Office Shop and outdoor storage Industrial Lot #2

Industrial Outdoor Storage Industrial Lot #3

Parking Lot

70,826 sf
1.63 ac

Potential Light Industrial Manufacturing and Distribution Industrial Lot #1

BLOCK 1
LOT 1
KB MANKATO TRAVEL CENTER DST
EXCEPTION TRACT
PARCEL B
BLUE EARTH COUNTY
C.S.A.H. NO. 12 (589TH AVE)
HIGHWAY RIGHT-OF-WAY PLAT NO. 27
SE'LY LINE PARCEL B, BEC ROW PLAT NO. 27
S'LY LINE ADAMS STREET
ADAMS STREET
ACCESS, INGRESS/EGRESS & UTILITY EASEMENT PER DOC. 570CR457
UTILITY EASEMENT PER DOC. 568CR880
POINT OF BEGINNING
METCON COURT
EVERGREEN DR
EAST LINE W1/2 SW1/4
CENTER OF RADIUS S26°10'45"W
E1/2 SW1/4 SECTION 11-T108N-R26W
ACCESS, INGRESS/EGRESS & UTILITY EASEMENT PER DOC. 540CR4106
30.00 SETBACK & DUE
5.00 DUE
6.00 DUE
WET STORMWATER POND
TOP OF BANK 1116
EOF 1115
HWL 1114.67
NWL 1111
WQV 42174
WQV ELEV. 1011.95
BOTTOM 1007
MOST N'LY CORNER PARCEL K1, BEC ROW PLAT NO. 30
EDGE OF FIELD
CONTROLLED ACCESS PER BEC ROW PLAT NO. 30
REMOVE FIELD ENTRANCE & CULVERT
N89° 26' 54"E 376.40
N89° 37' 44"E 366.40
NE'LY CORNER PARCEL K1, BEC ROW PLAT NO. 30
NORTH LINE PARCEL K1, BEC ROW PLAT NO. 30
PARCEL K1
PARCEL M
PARCEL K2
C.S.A.H. NO. 17
BLUE EARTH COUNTY HIGHWAY RIGHT-OF-WAY PLAT NO. 30
N89° 37' 22"E 366.00
N89° 49' 06"E 33.16
CITY OF MANKATO MUNICIPAL LIMITS
DCJK LLC
TURNER PROPERTIES ROC LLC

60 0 60
HORIZ. SCALE FEET
DRAWINGS ON 11x17 SHEETS ARE HALF SCALE

REV.	BY	DATE	REVISION DESCRIPTION

JONES HAUGH SMITH
Engineers + Surveyors
415 West North Street Owatonna, MN 507-451-4598

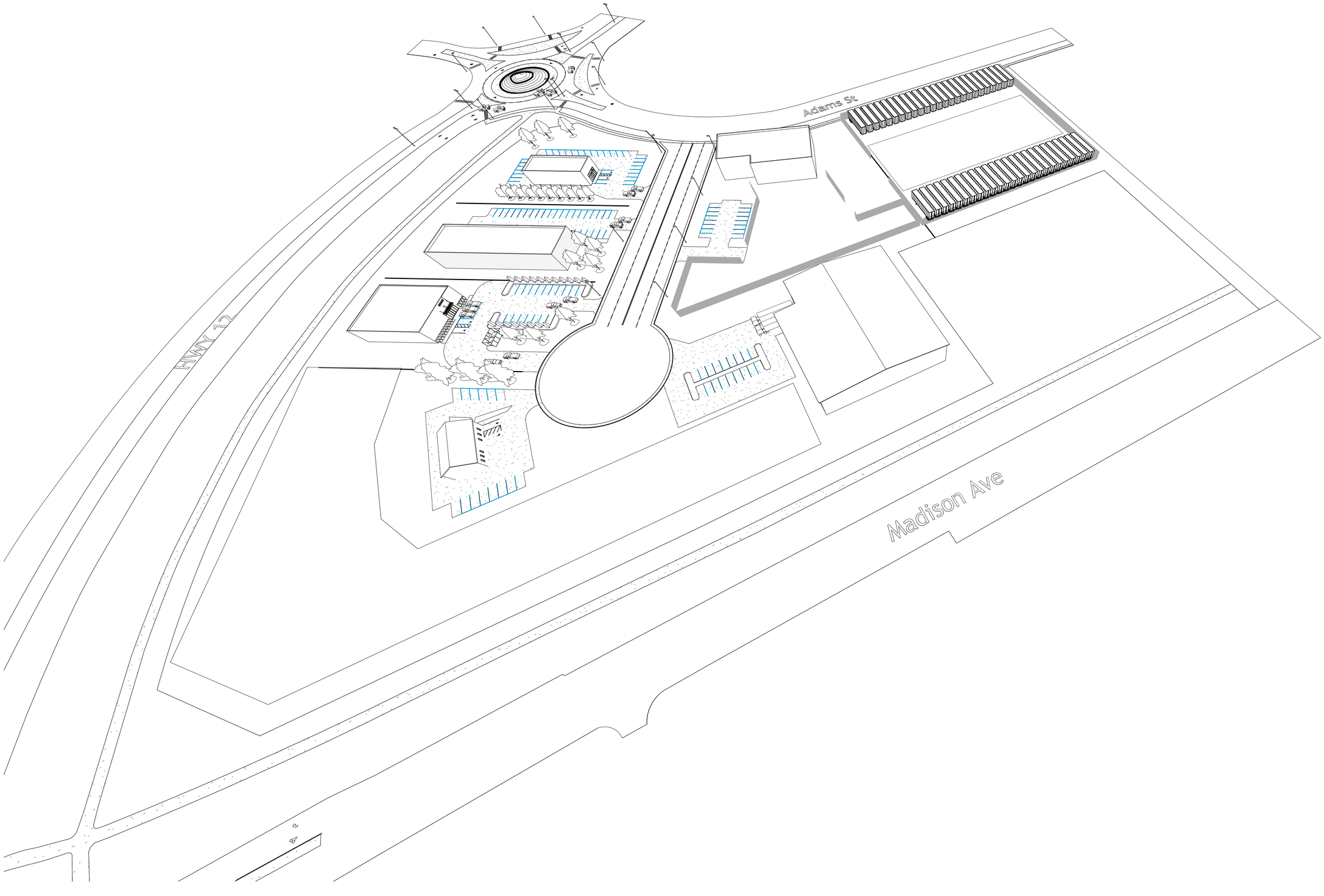
DESIGNED: JHS5
DRAWN: JHS5
CHECKED: BJJ
Date: 6/16/26
DWG: 25-1234PP

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.

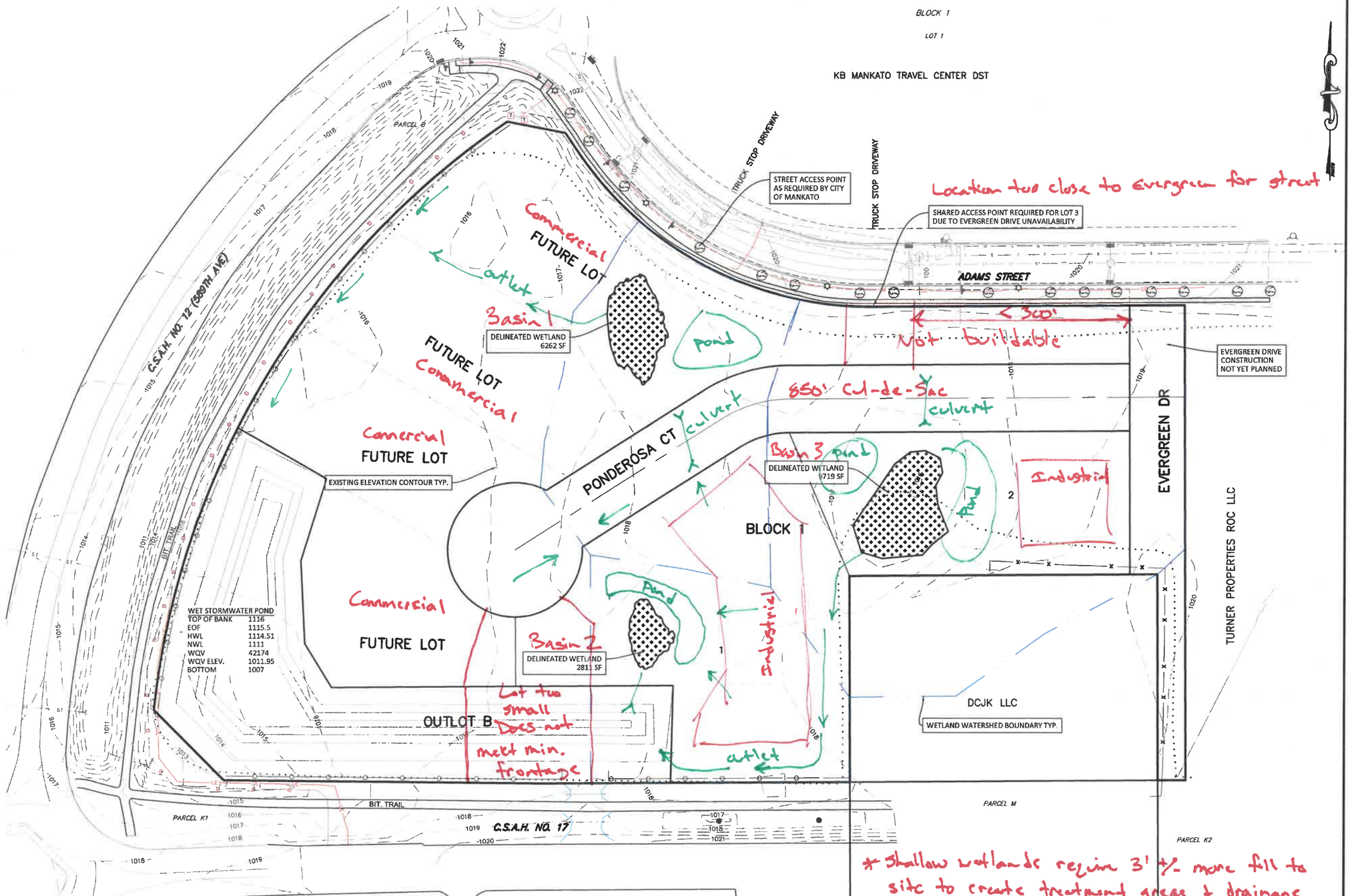
John H. Schulte V
License No. 44639 Date: 6/16/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
SITE PLAN

SHEET 1 OF 2


Adams St
HWY 12
Madison Ave

METCON ADDITION



LEGEND

- W = Water Main
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- OT = Overhead Telephone
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- UE = Underground Electric
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-		-	

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John H. Schulte V
License No. 44639 Date: 8/13/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
NO WETLAND IMPACTS PLAN

SHEET 1 OF 1

PURCHASE AGREEMENT
FOR
WETLAND BANKING CREDITS

THIS AGREEMENT is made this 27th day of July, 2026 between Jonathan Guentzel, Guentzel Family Farms (Seller) and Randy McDonough, McDonough Farms, LLC (Buyer).

1. Seller agrees to sell to Buyer, and Buyer agrees to buy from Seller, the wetland banking credits (Credits) from Wetland Bank 1804 listed below:

Credits to be Sold

Credit Subgroup	Credit Type SWC or AGC	Wetland Type/Plant Community Type	Cost per Credit	Credit Amounts
C	SWC	SWC	$50,000.00	0.8628

Per Credit Withdrawal Fee by BSA*					
	SWC	AGC		SWC	AGC
BSA 1	$520	$270	BSA 6	$1,083	$586
BSA 2	$371	$191	BSA 7	$1,992	$1,060
BSA 3	$725	$389	BSA 8	$2,577	$1,348
BSA 4	$1,412	$724	BSA 9	$2,628	$1,332
BSA 5	$685	$367	BSA 10	$3,099	$1,580

Enter the Withdrawal Fee for the BSA of the account:	Total Cost:	$43,140.00	Total Credits:	0.8628
	Withdrawal Fee x total credits = fee			
$2,628/credit	**Withdrawal Fee:**		$2,267.44	
Easement Stewardship Fee:	*Easement Stewardship fee x total credits = fee*			
$302	**Stewardship Fee:**		$260.57	
	Total Fees:		$2,528.01	
	Grand Total:		**$45,668.01**	

*AGC is for Ag bank credits and SWC is for standard bank credits.

2. Seller represents and warrants as follows:
   a) The Credits are deposited in an account in the Minnesota Wetland Bank administered by the Minnesota Board of Water and Soil Resources (BWSR) pursuant to Minn. Rules Chapter 8420.0700-.0760.
   b) Seller owns the Credits and has the right to sell the Credits to Buyer.
3. Buyer will pay Seller a total of $ 43,140.00 for the Credits, as follows:
   a) $ 0 as earnest money, to be paid when this Agreement is signed; and
   b) The balance of $ 43,140.00 to be paid on the Closing Date listed below.

4. [☒] Buyer, [☐] Seller agrees to pay to a withdrawal fee of $ 2,223.44 to the State of Minnesota based on the per credit fee of $ 2,628 for Bank Service Area 9 and a stewardship fee of $ 260.57 based on the per credit fee of $ 302 . At the Closing Date, [☒] Buyer, [☐] Seller will execute a check made out for this amount ($ 2,484.01) payable to the Board of Water and Soil Resources.

5. The closing of the purchase and sale shall occur **on or before** December 31, 2026 (Closing Date) at 4:30 pm. The **Closing Date and location may be changed by written consent of both parties**. Upon payment of the balance of the purchase price, Seller will sign a fully executed Transaction Form to Withdraw Credits provided by BWSR, provide a copy of the Transaction Form to Withdraw Credits to the Buyer and forward the same to the BWSR along with the check for the withdrawal fee and stewardship fee.

6. Buyer has applied or will apply to City of Mankato (Local Government Unit (LGU) or other regulatory authority) for approval of a replacement plan utilizing the Credits as the means of replacing impacted wetlands. If the LGU has not approved the Buyer's application for a replacement plan utilizing the Credits by the Closing Date, and no postponement of the Closing Date has been agreed to by Buyer and Seller in writing, then either Buyer or Seller may cancel this Agreement by giving written notice to the other. In this case, Seller shall return Buyer's earnest money, and neither Buyer nor Seller shall have any further obligations under this Agreement. If the LGU has approved the replacement plan and the Seller is ready to proceed with the sale on the Closing Date, but Buyer fails to proceed, then the Seller may retain the earnest money as liquidated damages. **Buyer and Seller agree that the Purchase Agreement is contingent upon final approval by reviewing agencies (including adjustments to the acreage numbers) and project approval by the City of Mankato.**

7/27/26
(Signature of Seller) (Date)

7/27/26
(Signature of Buyer) (Date)

Transaction Form to Withdraw Credits

BOARD OF WATER AND SOIL RESOURCES

Minnesota Wetland Bank Program

If the layout of this form looks incorrect, click on *View*, *Edit Document,* then save it to your computer.

1. Credit User		*This space for BWSR use only.*
Name: Randy McDonough	**Organization: McDonough Farms, LLC**	
15760 Acorn Trail, Faribault, MN 55021	**Email:** scott.brown@met-con.com	
Phone: 507-332-2266	**LGU File #:**	
Consultant: Rob Merila, Aquatic EcoSolutions, Inc. # 612-799-3238		

2. Wetland Impact Information

To be completed for the project impacting wetlands and with which this withdrawal is intended to replace.

Project Name: Metcon Addition	**Impact Size (acres): 0.4314**
Impact County: Blue Earth	**Impact Wetland type: Fresh (Wet) Meadow**
Impact Major Watershed/BSA: 28 / 9	**Replacement Ratio: 2:1**

Sec/Twp/Range: Sec 11 T 108 N, R 26 W

*Projects with multiple locations should use the most central location in relation to the project as a whole.

Are Federally authorized credits required for this impact? Yes No

Corps Regulatory File Number: MVP-

Comments:

3. Credits to be Withdrawn To be completed by the seller of the credits (account holder)

Account Information

Account: 1804 **County: Blue Earth** **Bank Service Area: 8**

Credit Subgroup	Wetland Type/Plant Community Type	Federally Approved?	Cost per Credit	Credit Amounts
C	SWC	Y		0.8628

Per Credit Withdrawal Fee by BSA

BSA 1	$520	BSA 6	$1,083
BSA 2	$371	BSA 7	$1,992
BSA 3	$725	BSA 8	$2,577
BSA 4	$1,412	BSA 9	$2,628
BSA 5	$685	BSA 10	$3,099

Enter the Withdrawal Fee for the BSA of the account: **$2,628**

Easement Stewardship Fee: **$302**

Total Credits:	0.8628
(Withdrawal Fee x total credits)	
Withdrawal Fee:	$2,267.44
(Easement Stewardship fee x total credits)	
Stewardship Fee:	$260.57
Total Fees:	$2,528.01

Please make checks payable to the Minnesota Board of Water and Soil Resources. BWSR does not accept cash.

BWSR fee policy: http://www.bwsr.state.mn.us/wetlands/wetlandbanking/fee_and_sales_data/Wetland_Banking_Fee_Policy_Effective_June1_2017.pdf

Disclaimer: All transactions in the Wetland Bank system are public information

Project Name: Metcon Addition

Confirmation email will be emailed to the user, seller, and regulatory representative when the transaction is complete. If anyone else should be notified please indicated their emails below:

_____ _____

4. Regulatory Authorization

By signing below, the identified agency and authorized representative hereby certifies that they have: a) verified that the subject wetland credits are deposited in the account of the owner/seller, **b)** approved a wetland replacement plan or similar agreement under their jurisdiction, and **c)** approve the proposed use of the wetland bank credit described above.

WCA LGU/Agency:

LGU Representative:

Email Address:

_____ _____

Signature Date

For NRCS, DNR, etc. as applicable

Agency Name and Location:

Representative:

Email Address:

_____ _____

Signature Date

5. Credit User Signature

By signing below the proposed credit user attests that he/she owns or has purchased the credits identified in this form and has received approval from the regulatory authority(ies).

_____ _____

Signature Date

6. Account Holder Signature

By signing below I, the seller and holder of the aforementioned account in the State of Minnesota Wetland Mitigation Bank, certify that:

1) The credits described in this transaction form have been sold to the credit user or will be used for my own project;
2) I have received payment in full from the buyer (if applicable);
3) The credits described in this transaction form have not been sold or used in any way to mitigate wetland losses other than for the project and location identified in the wetland impact information block on the previous page;
4) The credits described in this application should be withdrawn from my account; and
5) I will not have a negative balance of credits after the subject credits are debited from my account.

Name/Representative:

Email Address:

_____ _____

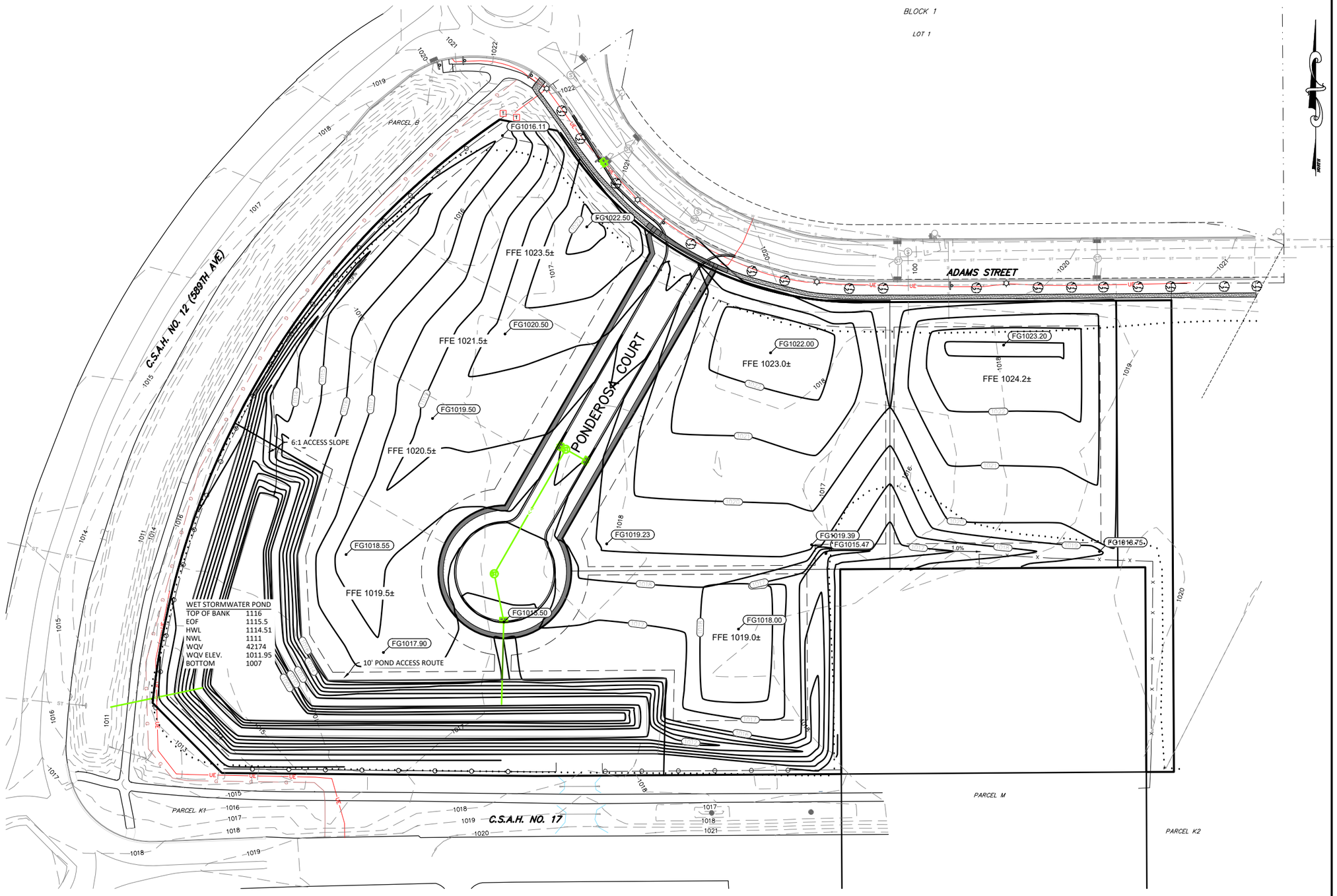
Signature Date

Send complete forms and fee payments to:

Wetland Bank Administration
Minnesota Board of Water and Soil Resources
520 Lafayette Road North
Saint Paul, MN 55155

Disclaimer: All transactions in the Wetland Bank system are public information

METCON ADDITION



LEGEND

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- = Coniferous Tree
- = Bush

NOTE: CONTOUR SHOWN ARE FOR MASS GRADING AND INCLUDE A 1' HOLD-DOWN AT BUILDING PADS

60 0 60
HORIZ. SCALE FEET

DRAWINGS ON 11x17 SHEETS ARE HALF SCALE

REV.	BY	DATE	REVISION DESCRIPTION
-	-	-	-

JONES HAUGH SMITH
Engineers + Surveyors
415 West North Street Owatonna, MN 507-451-4598

DESIGNED: JHS5
DRAWN: JHS5
CHECKED: BJJ
Date: 8/13/26
DWG: 25-1234PP

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.

John H. Schulte V
License No. 44639 Date: 8/13/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
GRADING PLAN

SHEET 2 OF 2

METCON ADDITION

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C.S.A.H. NO. 12 (589TH AVE)

PARCEL B

12" RCP FL12.9

RM1022.14 FL996.14

TNFH 1023.64

12" RCP

RM1020.84 FL1017.24

RM1020.27 FL996.27

RM1020.48 FL1017.33

MOVE CB & LP

WET TAP CONNECT TO EX WMN CONST. 11.25" BEND

15" RCP

12" WMN

24" SAN

RM1018.90 FL996.70

TNFH 1021.50

TNFH 1023.66

16" RCP

RM1020.28 FL1016.55

20.00 DUE

RM20.2 FL03.4

18" RCP

ADAMS STREET

8" WATER MAIN

8" PVC SANITARY SEWER @ 2.3%

RM1018.99 FL1015.89

8" PVC SANITARY SEWER @ 0.40%

RM1020.16 FL1015.66

RM20.0 FL98.13

40' 8" SANITARY SEWER STUB @ 0.40%

RM17.9 FL00.0

30.00 DUE

CONNECT TO EX SAN SEWER STUB RM19.0 FL97.0

RM1018.39 FL1016.24

UTILIZE EX 6" WATER MAIN STUB FOR SERVICE TO LOT 3

5.00 DUE

20.00 DUE

PONDEROSA COURT

8" PVC SANITARY SEWER @ 0.40%

8" WATER MAIN

OUTLOT A

BLOCK 1

LOT 1

EVERGREEN DR

20.00 DUE

GR18.2 FL14.2

12" ROP STS

RM17.1 FL05.1

RM17.1 FL13.1

GR15.5 FL11.5

20.00 DUE

20.00

WET STORMWATER POND

TOP OF BANK	1116
EOF	1115.5
HWL	1114.51
NWL	1111
WQV	42174
WQV ELEV.	1011.95
BOTTOM	1007

FL09.6

18" RCP

FL10.0

FL10.5

FL11.0

FL11.0

OUTLOT B

BIT. TRAIL

PARCEL K1

C.S.A.H. NO. 17

PARCEL M

PARCEL K2

30.00 DUE

1

2

3

60 0 60
HORIZ. SCALE FEET

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REV.	BY	DATE	REVISION DESCRIPTION
-	-	-	-

JONES HAUGH SMITH
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John H. Schulte V
License No. 44639 Date: 8/13/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
UTILITY PLAN

SHEET 2 OF 3

Met-Con Development Traffic Study

Mankato, MN
June 3, 2026

Prepared For:	**Prepared By:**
Met-Con Companies	SSTS, LLC

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

K. Schmidt

Katie A Schmidt, P.E.

Date: 06/03/2026 Lic. No.: 47147

SSTS LLC

Table of Contents

1 Introduction 1
1.1 Proposed Access 1
1.2 Study Purpose 1
2 Existing Conditions 1
2.1 Study Area 1
2.2 Traffic Volumes 2
2.3 Crash History 2
3 No-Build Traffic Conditions 3
3.1 Background Traffic Growth 3
3.2 Future Roadway Projects 3
4 Build Traffic Conditions 4
4.1 Site-Generated Traffic 4
4.2 Access Driveway Geometrics 4
4.3 Trip Distribution and Assignment 4
4.4 Build Traffic Volumes 4
5 Traffic Operational Analysis 5
5.1 Operational Analysis Methodology 5
5.2 Operational Analysis Results 5
5.2.1 Existing Conditions Overview 7
5.2.2 2030 No-Build Conditions Overview 7
5.2.3 2030 Build Conditions Overview 7
5.2.4 2030 Build Conditions with Adams St Traffic Growth 7
6 Turn Lane review 7
7 Multi-Modal Traffic Review 8
8 Summary & Recommendations 8

List of Tables

Table 1. Intersection Crash Data 3
Table 2. Trip Generation 4
Table 3. Level of Service Grading Criteria 5
Table 4. Traffic Operational Results - AM Peak Hour 6
Table 5. Traffic Operational Results - PM Peak Hour 6

List of Figures

Figure 1. Conceptual Site Plan 10
Figure 2. Existing Traffic Volumes 11
Figure 3. 2030 No-Build Traffic Volumes 12
Figure 4. Trip Distribution and Assignment 13
Figure 5. 2030 Build Traffic Volumes 14

1 INTRODUCTION

The Met-Con Mankato development, referred to as the "Proposed Project" in this study, is planned in Mankato, Blue Earth County, Minnesota. 16.61 acres are planned to be developed into retail and industrial uses. One outlot is designated for Met-Con Companies office and shop. At this time, tenants have not yet been secured for the remaining outlots and likely land uses are assumed. The Proposed Project is located south of Adams St and the TA Travel Center and Truck Stop, east of CSAH 12 (589th Ave) and north of CSAH 17 (Madison Ave).

1.1 Proposed Access

Main full access serving the west side of the site is proposed on Adams St at the westerly TA Travel Center Driveway (Driveway 1) through construction of a southern leg. This existing driveway/proposed access is spaced approximately 280 feet from the CSAH 12/Adams St roundabout. A second full access serving the eastern 20,000 SF industrial building outlot is proposed on Adams St at the TA Travel Center Driveway 2. The Proposed Project's location, layout, likely land uses and access are illustrated in Figure 1.

1.2 Study Purpose

The purpose of this study is to evaluate the impact of traffic generated by the Proposed Project on the operations and safety of the adjacent roadway network and access locations. This study reviews existing conditions and year 2030 conditions without the Proposed Project (termed No-Build conditions) and with the Proposed Project (termed Build conditions). Intersection and access operations and queuing are detailed. Queueing on Adams St between the CSAH 12/Adams St roundabout and Driveway 1/Access 1 is reviewed. Recommendations are provided for roadway and safety improvements to manage site-generated traffic and projected background traffic growth.

2 EXISTING CONDITIONS

2.1 Study Area

Input from the City of Mankato helped define the following existing study area intersections.

1. CSAH 12 (589th Ave) & CSAH 17 (Madison Ave) - Roundabout
2. CSAH 12 (589th Ave) & Adams St - Roundabout
3. CSAH 12 (589th Ave) & US Highway 14/MN Highway 60 Eastbound Ramps - Roundabout
4. CSAH 12 (589th Ave) & US Highway 14/MN Highway 60 Westbound Ramps - Roundabout
5. Adams St & Travel Center Driveway 1 - Side-Street Stop-Control
6. Adams St & Travel Center Driveway 2 - Side-Street Stop-Control
7. Adams St & Travel Center Driveway 3 - Side-Street Stop-Control
8. Adams St & Travel Center Driveway 4 - Side-Street Stop-Control

The study area roadway traffic characteristics are noted below.

CSAH 12 (589th Ave)

Jurisdiction:	Blue Earth County
Functional Class:	Major Collector north of CSAH 17, Minor Arterial south of CSAH 17
Parking:	No parking
Speed:	45 MPH
ADT:	5,781 vehicles/day (Year 2024)
Bike:	Off-street shared path on east side
Pedestrian:	Off-street shared path on east side
Transit:	None

CSAH 17 (Madison Ave)

Jurisdiction:	Blue Earth County
Functional Class:	Minor Collector
Typical Section:	4-lane divided west of CSAH 12, 3-lane w/center left turn lane east of CSAH 12
Parking:	No parking
Speed:	55 MPH
ADT:	4,887 vehicles/day (Year 2024)
Bike:	Off-street shared path on north side
Pedestrian:	Off-street shared path on north side
Transit:	None

Adams St

Jurisdiction:	Municipal, City of Mankato
Functional Class:	Minor Collector west of CSAH 12, Local east of CSAH 12
Typical Section:	3-lane w/center left turn lane
Parking:	No parking
Speed:	30 MPH
ADT:	Not available
Bike:	On-street bike lanes both sides
Pedestrian:	Off-street shared path on north side, sidewalk on south side
Transit:	None

2.2 Traffic Volumes

Turning movement counts for both AM and PM peak periods, including trucks as well as pedestrians and bicycles, were collected at study area intersections on Tuesday, April 7, 2026. The study area's morning peak hour is from 7:15 AM to 8:15 AM, while the evening peak hour is from 4:00 PM to 5:00 PM. Figure 2 illustrates the existing peak hour traffic volumes at study area intersections. Detailed count data is available in the Appendix.

2.3 Crash History

A review of intersection crash records was conducted to evaluate the safety of the study area intersection and to determine if the addition of future traffic growth could exacerbate existing safety issues. Historical crash data was obtained from MnDOT's Crash Mapping Analysis Tool (MnCMAT2). The most recent 5 years of data (2021 to 2025) was considered for the CSAH 12/CSAH 17 roundabout and the CSAH 12/Hwy 14 Ramps roundabouts. Due to the construction of the CSAH 12/Adams St roundabout and the TA travel center, the most recent 3 years of data (2023 to 2025) was considered for the Adams St intersections. The crash analysis considered two factors:

- **Crash Rate** - Crashes are a function of exposure. Roadways with higher traffic volumes experience more crashes than similar roadways with lower volumes and a crash rate is considered to normalize the locations and accurately assess safety. Intersection crash rates are defined by the number of crashes occurring per million entering vehicles (MEV).
- **Critical Crash Rate** - Critical crash rate comparison identifies locations that have a crash rate higher than similar facilities by a statistically significant amount. The critical crash rate is calculated by adjusting the system-wide average crash rate based on the amount of exposure and a statistical constant indicating the level of confidence (95^{th} % confidence interval). At locations where the actual crash rate exceeds the critical crash rate (critical index >1.0), it is likely that the crashes are a result of deficiencies in the intersection design or other existing factors and further study is recommended.

Table 1 summarizes the crash data for the study area intersections and provides a comparison of crash rates to critical crash rates through the critical index. All study area intersections have a crash rate under the critical crash rate (critical index <1.0), indicating existing conditions are not currently contributing to an overall safety problem. It is noted the one crash on Adams St at TA Driveway 3 involved two trucks parked on Adams St with one truck backing up into the other truck.

Table 1. Intersection Crash Data

Intersection	Control	Years of Data	Crash Details		Entering ADT	Intersection Crash Rates (CR)			
			Total	F&A*		CR	MnDOT Ave. CR**	Critical CR	Critical Index
CSAH 12 (589th Ave) & CSAH 17 (Madison Ave)	RAB	5	13	0	9,528	0.75	0.986	1.63	0.46
CSAH 12 (589th Ave) & Adams St	RAB	3	4	0	6,000	0.61	0.986	2.06	0.30
CSAH 12 (589th Ave)& Hwy 14 EB Ramps	RAB	5	4	0	6,522	0.34	0.986	1.77	0.19
CSAH 12 (589th Ave) & Hwy 14 WB Ramps	RAB	5	3	0	5,805	0.28	0.986	1.82	0.16
Adams St & TA Driveway 1	Side Street Stop	3	0	0	680	0.00	0.151	1.98	0.00
Adams St & TA Driveway 2	Side Street Stop	3	0	0	380	0.00	0.151	2.90	0.00
Adams St & TA Driveway 3	Side Street Stop	3	1	0	330	2.77	0.151	3.20	0.86
Adams St & TA Driveway 4	Side Street Stop	3	0	0	130	0.00	0.151	6.32	0.00

* Fatal and "A" type serious injury crashes.

** System-wide average crash rates from MnDOT's Intersection Green Sheets

3 NO-BUILD TRAFFIC CONDITIONS

To assess how the Proposed Project affects the study area, traffic conditions for year 2030 without the project (the No-Build scenario) are used as a baseline. These are then compared to scenarios where the project is included (the Build scenario). Background traffic growth, planned developments and future roadway projects are considered to develop the No-Build scenarios.

3.1 Background Traffic Growth

A background traffic growth rate for study area roadways was developed by reviewing forecast 2050 daily traffic volumes from the ***Mankato/North Mankato Area Planning Organization (MAPO) 2050 Metropolitan Transportation Plan***[1]. A 1.5% annual growth rate was established and used to project existing 2026 traffic volumes forward to anticipated 2030 levels. Figure 3 shows the estimated 2030 No-Build traffic volumes.

3.2 Future Roadway Projects

The ***MAPO 2050 Metropolitan Transportation Plan*** identifies the future extension of Adams Rd from the cul-de-sac east of the TA Truck Stop to CSAH 17 (Madison Ave) in the 2031-2035 timeline. This roadway project will be dependent on development of the parcels to the east of the Proposed Project. Adams St is designated for a functional class change from a local street to a minor collector with the extension. This extension is not fully modeled in this traffic study, but a sensitivity analysis is provided in Section 5 reviewing access operations with increased through traffic on Adams St.

[1] ***MAPO 2050 Metropolitan Transportation Plan***, November 2025, Link .

4 BUILD TRAFFIC CONDITIONS

4.1 Site-Generated Traffic

The Proposed Project includes a 10,016 SF building designated for Met-Con Companies office and shop. There are no secured tenants for the remaining outlots and likely land uses are assumed. Retail land uses including a fast food restaurant, auto parts store and strip retail are assumed on the west side of the site due to higher visibility and easy accessibility, and industrial uses are assumed on the east side of the site (see Figure 1). The fast food restaurant and strip retail uses are high traffic generators, offering a cautious basis for analysis.

The volume of vehicle site generated trips has been estimated for the weekday AM and PM peak hours and on a daily basis using the data and methodology described in the Institute of Transportation Engineers' (ITE) ***Trip Generation Manual (TGM)*** [2]. Shared trips and pass-by trips for the retail uses were considered in the trip generation estimate. Shared trips account for the complementary nature of the land uses (i.e., visiting both strip retail and the fast food restaurant during the same trip). Pass-by trips are trips that are attracted to the site from existing traffic already passing on adjacent roadways. Table 2 summarizes the trip generation estimate.

Table 2. Trip Generation

Land Use	ITE Land Use Code	Size	Trips Generated:				
			AM Peak		PM Peak		Weekday ADT
			Enter	Exit	Enter	Exit	
Met-Con Office (Specialty Trade Contractor)	180	10,016 s.f.	12	4	6	13	98
Fast Food - w/Drive Thru	934	2,500 s.f.	42	41	41	38	1,120
Automobile Parts Sales	843	8,500 s.f.	12	10	20	21	464
Strip Retail Plaza (<40k)	822	17,000 s.f.	37	30	53	53	926
Industrial	130	20,000 s.f.	3	1	1	3	54
Industrial	130	20,000 s.f.	3	1	1	3	54
Totals - Gross			109	87	122	131	2,716
			196		253		
Shared Trips[1]			9	8	11	11	251
			17		22		
Pass-By Trips[2]			17	17	23	23	1,130
			34		46		
Totals - Net			**83**	**62**	**88**	**97**	**1,335**
			145		**185**		

[1] 10% shared trips between the retail uses was assumed.

[2] 50% of pass-by trips from Hwy14/60, 40% from CSAH 12 and 10% from Adams St.

4.2 Access Driveway Geometrics

Both access driveways are planned for full-movement, side-street stop-controlled with single entry and exit lanes. Adams St will retain its current layout: one eastbound shared through/right turn lane and westbound left turns from the center left turn lane. This setup was used for operational analysis. Section 6 provides more discussion on the need for an eastbound right turn lane on Adams St at Driveway 1/Access 1.

4.3 Trip Distribution and Assignment

Site-generated traffic was distributed to the study area network according to current volume patterns and expected site traffic origins and destinations. Figure 4 illustrates the distribution percentages and how site-generated traffic flows in and out of the study area network and access intersections.

4.4 Build Traffic Volumes

When combined, the site-generated traffic volumes and No-Build scenario traffic volumes result in the 2030 Build scenario traffic volumes shown in Figure 5.

[2] ***Trip Generation Manual (TGM)***, Institute of Transportation Engineers (ITE), 12th Edition

5 TRAFFIC OPERATIONAL ANALYSIS

5.1 Operational Analysis Methodology

Intersection performance is measured by driver delay and vehicle queues, which depend on capacity relative to traffic volume. Industry standards for evaluating capacity and resulting driver delay are detailed in the ***Highway Capacity Manual*** [3]. Driver delay is represented as a Level of Service (LOS) grade with "A" as the best conditions and "F" as the worst. Table 3 summarizes the LOS and delay criteria for unsignalized/roundabout and signalized intersections. Typically, LOS "D" represents the threshold for acceptable overall intersection operations, and LOS "E" represents the acceptable individual movement threshold operating during a peak hour. For side-street stop-controlled movements on high volume mainline roads, it is common for side-streets to operate at LOS "D" or "E".

Table 3. Level of Service Grading Criteria

LOS	A	B	C	D	E	F
Unsignalized/Roundabout Intersection Delay	0-10 seconds	>10-15 seconds	>15-25 seconds	>25-35 seconds	>35-50 seconds	>50 seconds
Signalized Intersection Delay	0-10 seconds	>10-20 seconds	>20-35 seconds	>35-55 seconds	>50-80 seconds	>80 seconds
Description	*Free-flow operation*	*Unimpeded operation*	*Stable operation*	*Less stable & more delay*	*Unstable & high delay*	*Congested & back-ups*

The operational analyses also considers vehicle queuing. An intersection can operate with acceptable LOS, but if queues extend back to block entrances to turn lanes or access driveways, unsafe operating conditions could result. 95th % queue lengths are considered in this study. The 95th % queue length refers to the length of vehicle queue that has a five-percent probability of occurring during an analysis hour.

The Synchro/SimTraffic software package (12th Edition) was used to evaluate the side-street stop-controlled intersections on Adams St and reported operations are from Synchro's HCM 7 reports. For side-street stop-controlled intersections, the worst opposing left or side-street movement delay is reported rather than the overall intersection delay. Overall intersection delay for side-street stop-controlled intersections can misrepresent operations, since most mainline free-flowing vehicles experience no delay. Rodel software was used to evaluate roundabout-controlled intersections. Existing truck percentages and peak hour factors were used in the analysis.

5.2 Operational Analysis Results

The results of the operational analysis for Existing, 2030 No-Build and 2030 Build conditions are summarized for the AM and PM peak hour. Table 4 summarizes the AM peak hour and Table 5 summarizes the PM peak hour. Proposed access driveway intersections are shaded light blue and critical movement operations and queues are noted. Westbound queues on Adams St at the CSAH 12/Adams St roundabout are noted to ensure they do not extend more than 280' to Driveway 1/Access 1. Detailed operational analysis tables are included in the Appendix.

[3] ***Highway Capacity Manual (HCM)***, Transportation Research Board, 7th Edition

Table 4. Traffic Operational Results - AM Peak Hour

Intersection	Control	MOE	Existing	2030 No-Build	2030 Build
CSAH 12 & CSAH 17 (Madison Ave)	Roundabout	*Overall LOS*	A-5.0	A-5.2	A-5.2
		Worst LOS	A-8.3 (WBLT)	A-8.7 (WBLT)	A-8.7 (WBLT)
		Queuing Notes	*None*	*None*	*None*
CSAH 12 & Adams St	Roundabout	*Overall LOS*	A-3.3	A-3.3	A-4.1
		Worst LOS	A-6.8 (WBLT)	A-7.0 (WBLT)	A-8.9 (WBLT)
		Queuing Notes	2' WBLT, 2' WBR	2' WBLT, 3' WBR	5' WBLT, 8' WBR
CSAH 12 & Hwy 14 EB Ramps	Roundabout	*Overall LOS*	A-5.0	A-5.0	A-5.5
		Worst LOS	A-8.4 (NBT)	A-8.7 (NBT)	A-9.1 (NBT)
		Queuing Notes	None	None	None
CSAH 12 & Hwy 14 WB Ramps	Roundabout	*Overall LOS*	A-4.3	A-4.4	A-4.7
		Worst LOS	A-6.2 (SBT)	A-6.4 (SBT)	A-6.7 (NBLT)
		Queuing Notes	None	None	None
Adams St & TA Driveway 1/ Proposed Access	Side-Street Stop	*NBLTR LOS/Q*			B-10.3 / 8'
		WBL LOS/Q			A-0.0 / 0'
		SBLTR LOS/Q	A-8.6 / 2'	A-8.6 / 2'	A-8.7 / 2'
		EBL LOS/Q	A-7.3 / 0'	A-7.3 / 0'	A-8.7 / 0'
Adams St & TA Driveway 2/ Proposed Access	Side-Street Stop	*NBLTR LOS/Q*			A-0.0 / 0'
		WBL LOS/Q			A-0.0 / 0'
		SBLTR LOS/Q	A-8.5 / 0'	A-8.5 / 0'	A-8.5 / 0'
		EBL LOS/Q	A-7.3 / 0'	A-7.3 / 0'	A-7.3 / 0'
Adams St & TA Driveway 3	Side-Street Stop	*Worst LOS*	A-9.3 (SBLTR)	A-9.4 (SBLTR)	A-9.4 (SBLTR)
		Queuing Notes	None	None	None
Adams St & TA Driveway 4	Side-Street Stop	*Worst LOS*	A-9.3 (SBLTR)	A-9.3 (SBLTR)	A-9.3 (SBLTR)
		Queuing Notes	None	None	None

Table 5. Traffic Operational Results - PM Peak Hour

Intersection	Control	MOE	Existing	2030 No-Build	2030 Build
CSAH 12 & CSAH 17 (Madison Ave)	Roundabout	*Overall LOS*	A-4.9	A-5.1	A-5.1
		Worst LOS	A-7.1 (SBLT)	A-7.3 (SBLT)	A-7.4 (SBLT)
		Queuing Notes	None	None	None
CSAH 12 & Adams St	Roundabout	*Overall LOS*	A-3.5	A-3.6	A-4.4
		Worst LOS	A-6.3 (WBLT)	A-6.4 (WBLT)	A-9.0 (WBLT)
		Queuing Notes	1' WBLT, 2' WBR	1' WBLT, 2' WBR	6' WBLT, 11' WBR
CSAH 12 & Hwy 14 EB Ramps	Roundabout	*Overall LOS*	A-4.8	A-5.0	A-5.4
		Worst LOS	A-7.1 (NBT)	A-7.3 (NBT)	A-8.0 (NBT)
		Queuing Notes	None	None	None
CSAH 12 & Hwy 14 WB Ramps	Roundabout	*Overall LOS*	A-4.7	A-4.9	A-5.0
		Worst LOS	A-8.0 (SBT)	A-8.3 (SBT)	A-8.6 (SBT)
		Queuing Notes	None	None	None
Adams St & TA Driveway 1/ Proposed Access	Side-Street Stop	*NBLTR LOS/Q*			B-10.6 / 12'
		WBL LOS/Q			A-0.0 / 0'
		SBLTR LOS/Q	A-8.5 / 2'	A-8.5 / 2'	A-8.6 / 2'
		EBL LOS/Q	A-7.3 / 0'	A-7.3 / 0'	A-8.6 / 0'
Adams St & TA Driveway 2/ Proposed Access	Side-Street Stop	*NBLTR LOS/Q*			A-0.0 / 0'
		WBL LOS/Q			A-0.0 / 0'
		SBLTR LOS/Q	A-8.4 / 0'	A-8.4 / 0'	A-8.4 / 0'
		EBL LOS/Q	A-7.2 / 0'	A-7.2 / 0'	A-7.2 / 0'
Adams St & TA Driveway 3	Side-Street Stop	*Worst LOS*	A-9.3 (SBLTR)	A-9.3 (SBLTR)	A-9.3 (SBLTR)
		Queuing Notes	None	None	None
Adams St & TA Driveway 4	Side-Street Stop	*Worst LOS*	A-9.3 (SBLTR)	A-9.3 (SBLTR)	A-9.3 (SBLTR)
		Queuing Notes	None	None	None

5.2.1 Existing Conditions Overview

All study area intersections operate acceptably for Existing Conditions. Overall intersection LOS is A and no individual lane group operates below LOS A. Queuing is acceptable and accommodated by existing geometry for all intersections. The westbound queues on Adams St at the CSAH 12/Adams St roundabout are very short and range from 1’ to 2’ and there are no back-up concerns related to the 280’ spacing to Driveway 1. There are no recommendations to improve Existing Conditions.

5.2.2 2030 No-Build Conditions Overview

All intersections operate acceptably for 2030 No-Build Conditions. Overall intersection LOS is A and no individual lane group operates below LOS A. Queuing is acceptable and accommodated by existing geometry for all intersections. The westbound queues on Adams St at the CSAH 12/Adams St roundabout are very short and range from 1’ to 3’ and there are no back-up concerns related to the 280’ spacing to Driveway 1. There are no recommendations to improve 2030 No-Build Conditions.

5.2.3 2030 Build Conditions Overview

All intersections operate acceptably for 2030 Build Conditions with the Proposed Project. Overall intersection LOS is A and no individual lane group operates below LOS B. Queuing is acceptable and accommodated by existing/proposed geometry for all intersections. The westbound queues on Adams St at the CSAH 12/Adams St roundabout are very short and range from 5’ to 11’ and there are no back-up concerns related to the 280’ spacing to Driveway 1/Proposed Access 1.

The Adams St/Driveway 1/Access 1 intersection operates acceptably. The single lane northbound approach experiences LOS B with a 12’ queue in the PM peak hour.

The Adams St/Driveway 2/Access 2 intersection operates acceptably. The single lane northbound approach experiences LOS A with no queueing in both peak hours.

There are no recommended development related mitigation measures to improve 2030 Build Conditions based on traffic operations.

5.2.4 2030 Build Conditions with Adams St Traffic Growth

A sensitivity analysis was conducted at the Adams St/Driveway 1/Proposed Access 1 intersection to evaluate the threshold for additional traffic growth beyond the Proposed Project on Adams St before operational performance becomes unacceptable (defined as reaching the LOS D/E boundary for the northbound left movement and/or roundabout queues extending to the driveway). The results indicate that through traffic on Adams St can accommodate an increase of 500-600 vehicles (depending on vehicle type) during peak hours before operations degrade. Notably, the northbound left turn operations reach failure prior to roundabout queue lengths extending to the driveway. Unacceptable operations could also occur if there is a statistically significant crash increase at the Adams St/Access 1 intersection.

If operations or safety at Access 1 deteriorate to unacceptable levels, the recommended mitigation would be to restrict Access 1 to right-in/right-out only movements by extending the median on Adams St. The Developer would agree to this restriction only if Adams St is extended to CSAH 17.

6 TURN LANE REVIEW

The need for an eastbound right turn lane at the Adams St/Driveway 1/Access 1 intersection was evaluated as part of the Proposed Project. 2030 Build traffic volumes show that there will be 96 eastbound right turns during the morning peak hour, 109 during the evening peak hour with steady retail traffic turning right all day. Although through traffic heading east is light, most vehicles are semi-trailer trucks headed to the truck stop. Operational analyses indicate LOS and queuing are adequate with a shared through/right turn lane. However, considering the high percentage of trucks and speed differential, safety concerns arise. Research indicates that providing

dedicated turn lanes on mainline roads at intersections with side streets controlled by stop signs helps reduce crashes. Given the relatively low cost to construct (available ROW and 13' boulevard), notable safety advantages, and retail tenant marketability, constructing an eastbound right turn lane on Adams St at Driveway 1/Access 1 is recommended. The right turn lane should be constructed with the initial phase of the site due to mobilization costs and to safely accommodate construction traffic as the outlots develop.

7 MULTI-MODAL TRAFFIC REVIEW

As noted in the Existing Conditions summary, the study area includes existing shared-use paths, sidewalks, and on-street bicycle facilities. It is recommended a sidewalk be constructed along the Access 1 roadway and connected to the existing sidewalk on Adams St. This sidewalk should remain continuous regardless of outlot development phasing. Connections to the existing shared-use paths along CSAH 12 and CSAH 17 should be considered during detailed site plan reviews for the outlots.

8 SUMMARY & RECOMMENDATIONS

The previous analysis assessed traffic impacts for the 16.61-acre Met-Con Mankato retail and industrial development. The traffic and safety review indicates:

- ★ The development includes a 10,016 SF building designated for Met-Con Companies' office and shop. There are no secured tenants for the remaining outlots and likely land uses were assumed. Retail land uses including a fast food restaurant, auto parts store and strip retail are assumed on west side of the site for higher visibility and easy accessibility and industrial uses are assumed on the east side of the site. The fast food restaurant and strip retail uses are high traffic generators, offering a cautious basis for analysis.
- ★ The project is estimated to generate 145 new trips (83 entering and 62 exiting) during the morning traffic peak hour, 185 new trips (88 entering and 97 exiting) during the evening traffic peak hour and 1,335 new daily trips to the study area. The retail component of the site includes pass-by trips, which are trips that are attracted to the site from existing traffic already passing on adjacent roadways.
- ★ Two full movement access driveways are proposed on Adams St. Main full access serving the west side of the site is proposed at the westerly TA Travel Center Driveway (Driveway 1) through construction of a southern leg. This access is spaced approximately 280 feet from the CSAH 12/Adams St roundabout. A second full access for an industrial outlot is proposed on Adams St at the TA Travel Center Driveway 2.
- ★ Traffic operations analysis were conducted for existing conditions, year 2030 conditions without the project (No-Build conditions) and year 2030 conditions with the project (Build conditions).
- ★ Traffic operations for Existing and 2030 No-Build conditions without the project are acceptable and there are no improvement recommendations.
- ★ 2030 Build conditions with the project are acceptable. Westbound queues on Adams St at the CSAH 12/Adams St roundabout are very short and there are no back-up concerns related to the 280' spacing to Driveway 1/Proposed Access 1.
- ★ A sensitivity analysis shows Adams St can accommodate an increase of up to 500-600 vehicles during peak hours (depending on vehicle type) before the Adams St/Driveway 1/Access 1 intersection operates unacceptably. Unacceptable operations could also occur if there is a statistically significant crash increase at the Adams St/Access 1 intersection.
- ★ If operations or safety at Access 1 deteriorate to unacceptable levels, the recommended mitigation would be to restrict Access 1 to right-in/right-out only movements by extending the median on Adams St. The Developer would agree to this restriction only if Adams St is extended to CSAH 17.

- ★ Construction of an eastbound right turn lane on Adams St at Driveway 1/Access 1 is recommended with the initial phase of the site. The right turn lane is cost-effective to construct due to available right-of-way and boulevard space, offers significant safety benefits, and enhances the marketability of retail tenants.
- ★ It is recommended a sidewalk be constructed along the Access 1 roadway and connected to the existing sidewalk on Adams St. This sidewalk should remain continuous regardless of outlot development phasing. Connections to the existing shared-use paths along CSAH 12 and CSAH 17 should be considered during detailed site plan reviews for the outlots.
- ★ It is recommended the City requires a traffic study for the development of the parcels located east of the project, as well as for the future extension of Adams Street to CSAH 17. While traffic patterns on Adams Street are expected to change, high level reviews suggest that traffic operations will remain within acceptable ranges.

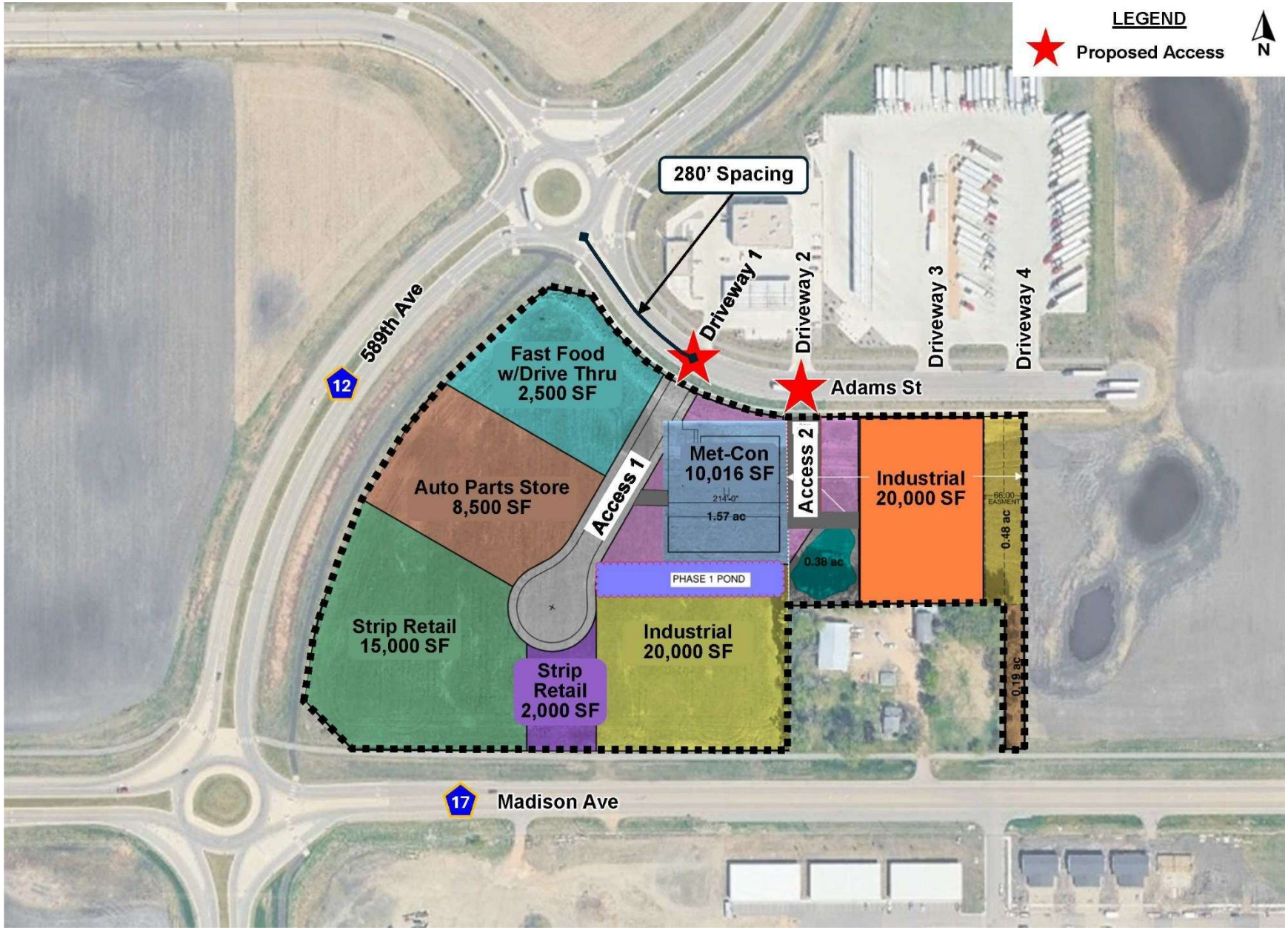


Figure 1. Conceptual Site Plan

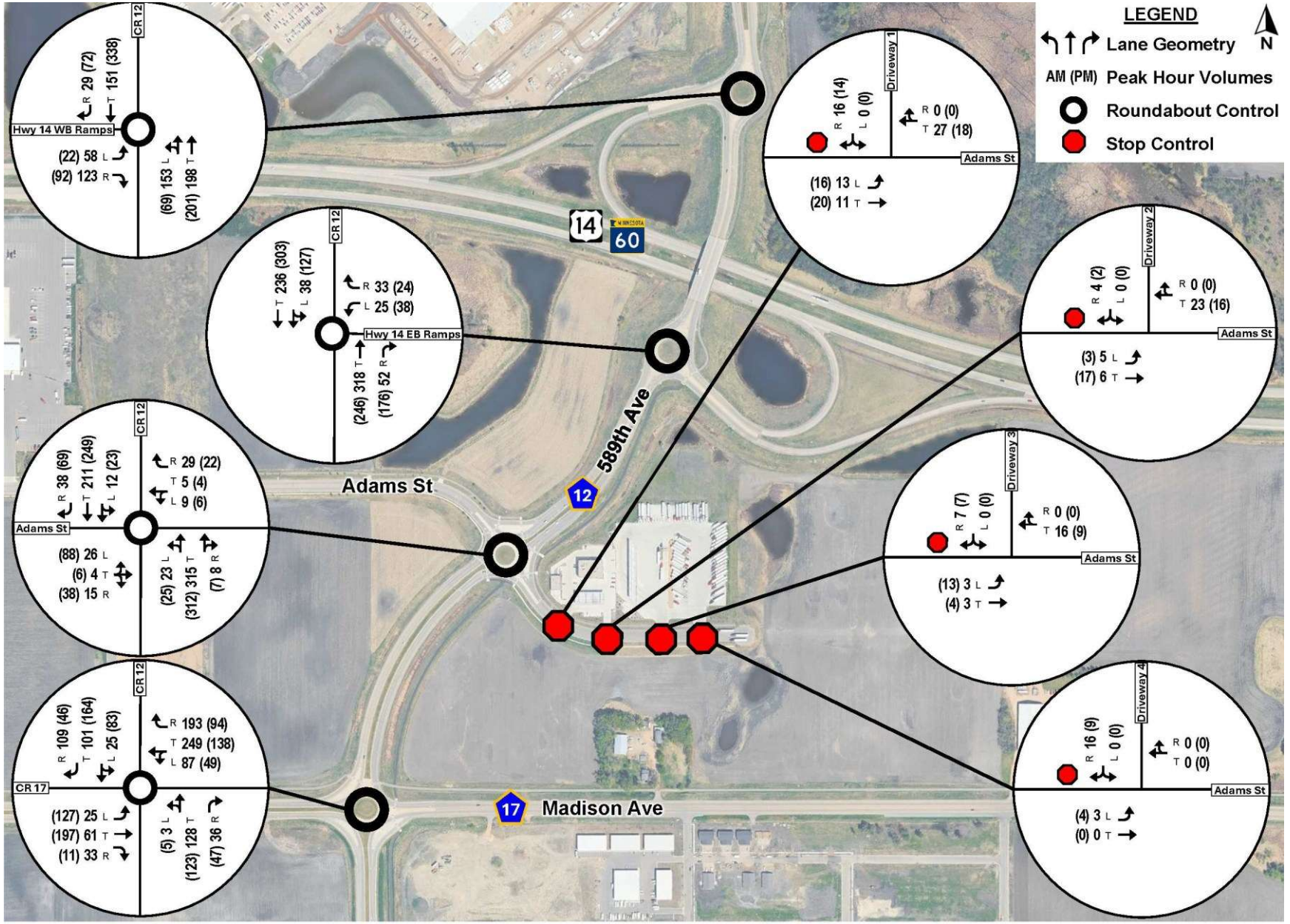


Figure 2. Existing Traffic Volumes

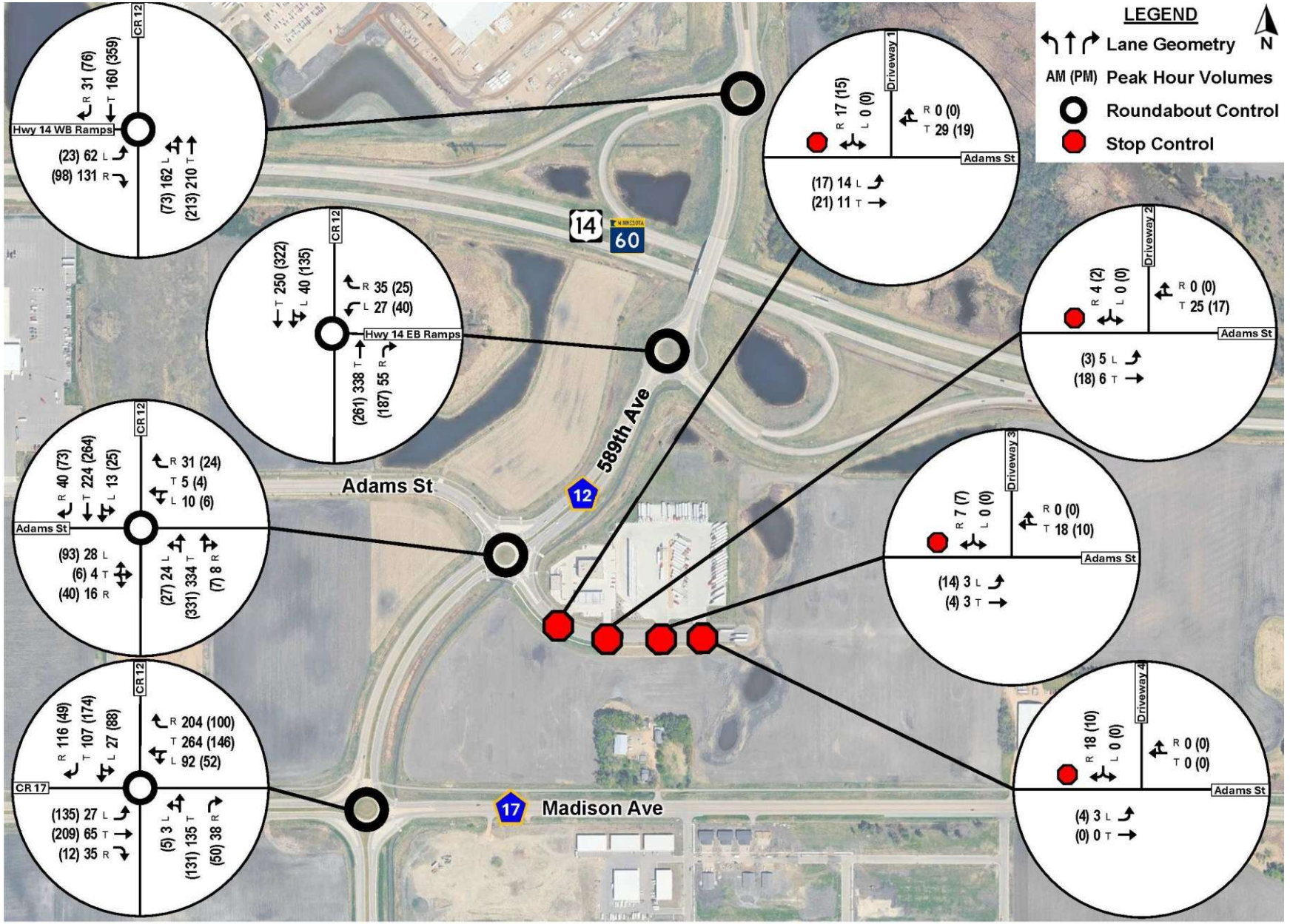


Figure 3. 2030 No-Build Traffic Volumes

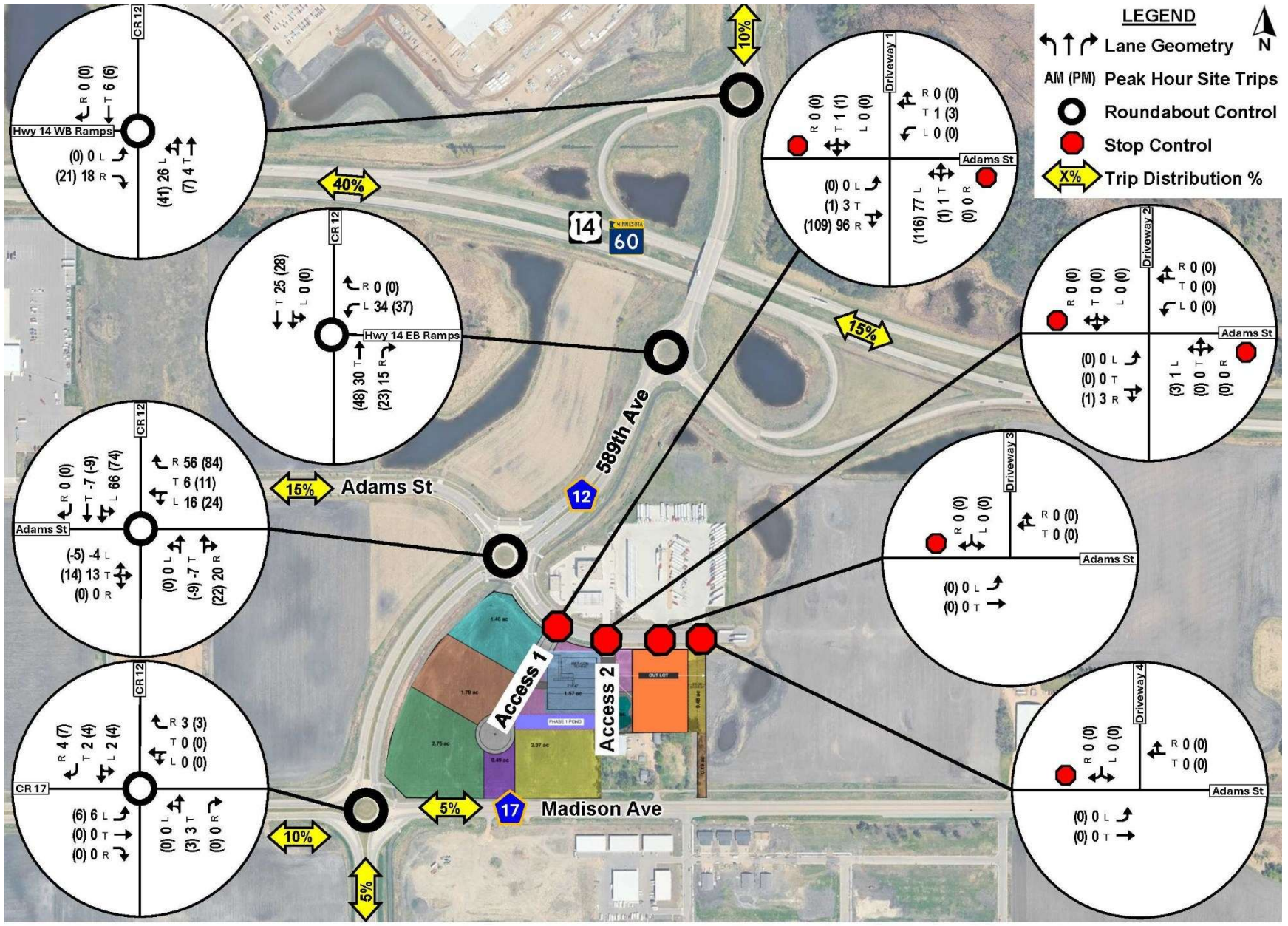


Figure 4. Trip Distribution and Assignment

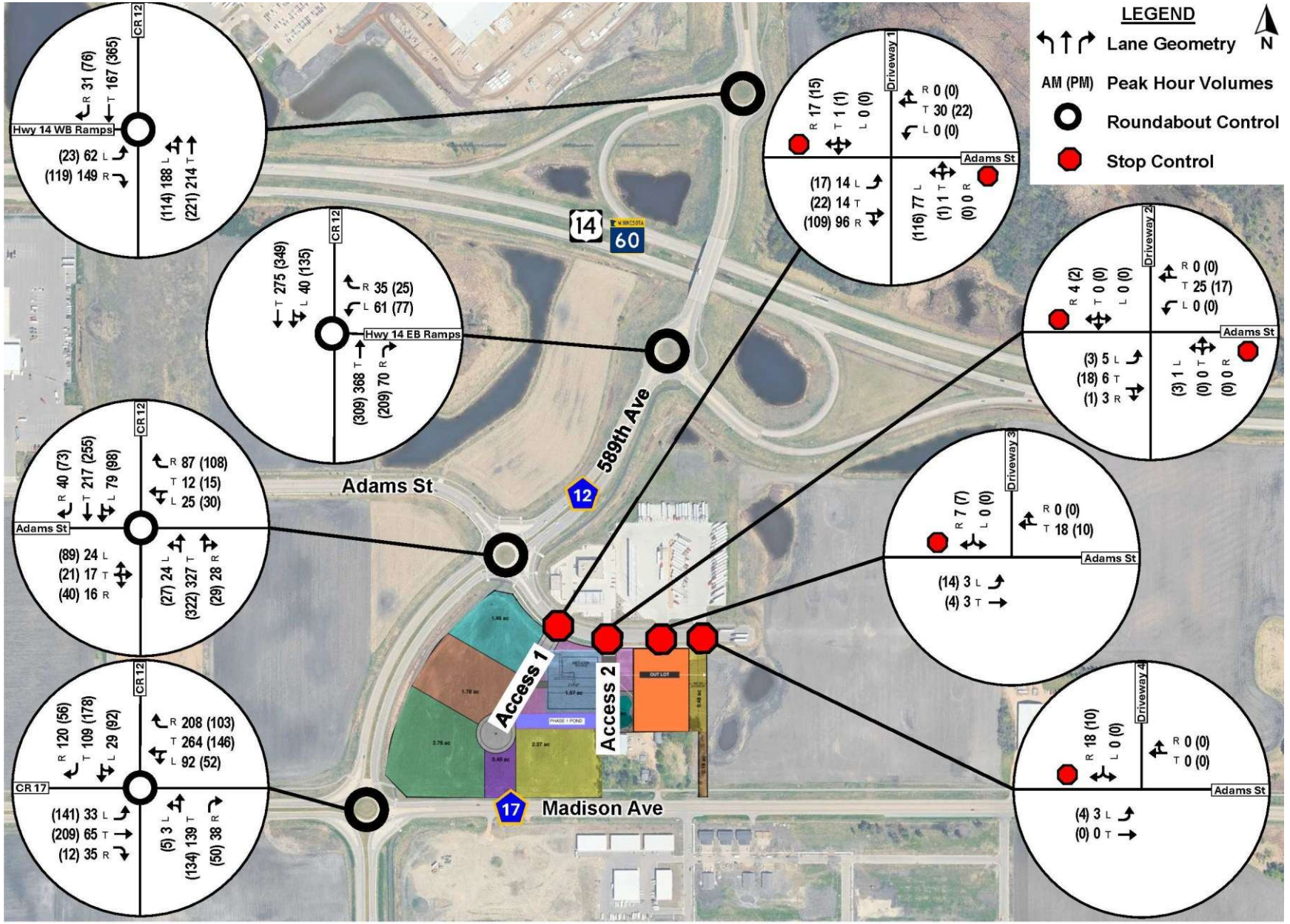


Figure 5. 2030 Build Traffic Volumes

Appendix A - Detailed Operational Analysis Tables

Table A- 1. AM Peak Hour Operations

Intersection	Lane Group	Bay	Existing			2030 No-Build			2030 Build		
			LOS	Delay	95th % Q	LOS	Delay	95th % Q	LOS	Delay	95th % Q
CSAH 12 & CSAH 17 (Madison Ave) (Roundabout)	NBLT		A	5.4	10	A	5.5	10	A	5.6	11
	NBR		A	4.0	2	A	4.1	2	A	4.1	2
	WBLT		A	8.3	36	A	8.7	40	A	8.7	40
	WBR	220'	A	6.5	16	A	6.7	17	A	6.8	18
	SBLT		A	6.2	11	A	6.4	12	A	6.5	12
	SBR		A	0.9	0	A	0.9	0	A	1.0	0
	EBLT		A	3.3	4	A	3.4	5	A	3.6	5
	EBR		A	0.3	0	A	0.3	0	A	0.3	0
	Overall		**A**	**5.0**		**A**	**5.2**		**A**	**5.2**	
CSAH 12 & Adams St (Roundabout)	NBLTR		A	4.1	13	A	4.2	14	A	4.5	16
	WBLT		A	6.8	2	A	7.0	2	A	8.9	5
	WBR	220'	A	5.5	2	A	5.6	3	A	7.1	8
	SBLT		A	3.2	8	A	3.3	8	A	4.3	14
	SBR		A	4.0	2	A	4.0	2	A	4.1	2
	EBLTR		A	4.5	3	A	4.6	3	A	4.9	4
	Overall		**A**	**3.3**		**A**	**3.3**		**A**	**4.1**	
CSAH 12 & Hwy 14 EB Ramps (Roundabout)	NBT		A	8.4	31	A	8.7	35	A	9.1	40
	NBR		A	4.5	3	A	4.6	4	A	4.8	5
	WBL		A	5.4	2	A	5.6	2	A	6.3	6
	WBR	230'	A	0.3	0	A	0.3	0	A	0.4	0
	SBLT		A	3.6	11	A	3.7	11	A	3.9	13
	Overall		**A**	**5.0**		**A**	**5.0**		**A**	**5.5**	
CSAH 12 & Hwy 14 WB Ramps (Roundabout)	NBLT		A	6.1	28	A	6.2	30	A	6.7	36
	SBT		A	6.2	13	A	6.4	14	A	6.6	16
	SBR		A	4.2	2	A	4.3	2	A	4.4	2
	EBL		A	5.3	5	A	5.4	6	A	5.7	6
	EBR	220'	A	1.1	0	A	1.1	0	A	1.3	0
	Overall		**A**	**4.3**		**A**	**4.4**		**A**	**4.7**	
Adams St & TA Driveway 1/Proposed Access (Side-Street Stop)	NBLTR		NA			NA			B	10.3	8
	WBL	50'							A	0	0
	SBLTR		A	8.6	2	A	8.6	2	A	8.7	2
	EBL	100'	A	7.3	0	A	7.3	0	A	7.3	0
	Worst Mvmnt.		**A**	**8.6**		**A**	**8.6**		**B**	**10.3**	
Adams St & TA Driveway 2/Proposed Access (Side-Street Stop)	NBLTR		NA			NA			A	8.9	0
	WBL	50'							A	0.0	0
	SBLTR		A	8.5	0	A	8.5	0	A	8.5	0
	EBL	50'	A	7.3	0	A	7.3	0	A	7.3	0
	Worst Mvmnt.		**A**	**8.5**		**A**	**8.5**		**A**	**8.9**	
Adams St & TA Driveway 3 (Side-Street Stop)	SBLTR		A	9.3	0	A	9.4	0	A	9.4	0
	EBL	50'	A	8.2	0	A	8.2	0	A	8.2	0
	Worst Mvmnt.		**A**	**9.3**		**A**	**9.4**		**A**	**9.4**	
Adams St & TA Driveway 4 (Side-Street Stop)	SBLTR		A	9.3	2	A	9.3	2	A	9.3	2
	EBL	50'	A	8.1	0	A	8.1	0	A	8.1	0
	Worst Mvmnt.		**A**	**9.3**		**A**	**9.3**		**A**	**9.3**	

Table A- 2. PM Peak Hour Operations

Intersection	Lane Group	Bay	Existing			2030 NB			2030 Build		
			LOS	Delay	95th % Q	LOS	Delay	95th % Q	LOS	Delay	95th % Q
CSAH 12 & CSAH 17 (Madison Ave) (Roundabout)	NBLT		A	5.8	10	A	6.0	10	A	6.0	11
	NBR		A	4.5	3	A	4.6	3	A	4.6	3
	WBLT		A	6.5	15	A	6.8	16	A	6.8	16
	WBR	220'	A	5.1	7	A	5.2	7	A	5.3	7
	SBLT		A	7.1	20	A	7.3	22	A	7.4	23
	SBR		A	0.4	0	A	0.4	0	A	0.4	0
	EBLT		A	5.5	20	A	5.7	22	A	5.8	23
	EBR		A	0.1	0	A	0.1	0	A	0.1	0
	Overall		**A**	**4.9**		**A**	**5.1**		**A**	**5.1**	
CSAH 12 & Adams St (Roundabout)	NBLTR		A	4.0	14	A	4.2	15	A	4.4	17
	WBLT		A	6.3	1	A	6.4	1	A	9.0	6
	WBR	220'	A	4.9	2	A	5.0	2	A	7.1	11
	SBLT		A	3.6	11	A	3.7	11	A	4.9	19
	SBR		A	4.5	5	A	4.5	5	A	4.6	5
	EBLTR		A	5.4	10	A	5.6	10	A	6.0	12
	Overall		**A**	**3.5**		**A**	**3.6**		**A**	**4.4**	
CSAH 12 & Hwy 14 EB Ramps (Roundabout)	NBT		A	7.1	24	A	7.3	27	A	8.0	35
	NBR		A	6.2	15	A	6.4	17	A	6.7	19
	WBL		A	5.5	4	A	5.6	4	A	6.6	8
	WBR	230'	A	0.3	0	A	0.3	0	A	0.3	0
	SBLT		A	5.2	26	A	5.3	29	A	5.4	31
	Overall		**A**	**4.8**		**A**	**5.0**		**A**	**5.4**	
CSAH 12 & Hwy 14 WB Ramps (Roundabout)	NBLT		A	4.1	14	A	4.2	15	A	4.9	21
	SBT		A	8.0	37	A	8.3	41	A	8.6	45
	SBR		A	4.5	5	A	4.6	6	A	4.7	6
	EBL		A	5.8	2	A	6.0	3	A	6.1	3
	EBR	220'	A	0.8	0	A	0.9	0	A	1.0	0
	Overall		**A**	**4.7**		**A**	**4.9**		**A**	**5.0**	
Adams St & TA Driveway 1 (Side-Street Stop)	NBLTR		NA			NA			B	10.6	12
	WBL	50'							A	0	0
	SBLTR		A	8.5	2	A	8.5	2	A	8.6	2
	EBL	100'	A	7.3	0	A	7.3	0	A	7.3	0
	Worst Mvmnt.		**A**	**8.5**		**A**	**8.5**		**B**	**10.6**	
Adams St & TA Driveway 2 (Side-Street Stop)	NBLTR		NA			NA			A	8.9	0
	WBL	50'							A	0.0	0
	SBLTR		A	8.4	0	A	8.4	0	A	8.4	0
	EBL	50'	A	7.2	0	A	7.2	0	A	7.2	0
	Worst Mvmnt.		**A**	**8.4**		**A**	**8.4**		**A**	**8.9**	
Adams St & TA Driveway 3 (Side-Street Stop)	SBLTR		A	9.3	0	A	9.3	0	A	9.3	0
	EBL	50'	A	8.2	0	A	8.2	0	A	8.2	0
	Worst Mvmnt.		**A**	**9.3**		**A**	**9.3**		**A**	**9.3**	
Adams St & TA Driveway 4 (Side-Street Stop)	SBLTR		A	9.3	0	A	9.3	0	A	9.3	0
	EBL	50'	A	8.1	0	A	8.1	0	A	8.1	0
	Worst Mvmnt.		**A**	**9.3**		**A**	**9.3**		**A**	**9.3**	

JONES HAUGH SMITH
Engineers + Surveyors

PRINCIPALS
Steven J. Thompson, P.L.S.
Brian J. Johnson, P.E.
Steven J. Penkava, P.E.
John H. Schulte V, P.E.
Scott A. Tuchtenhagen, P.L.S.

Established 1945

Drainage Memorandum
Preliminary Plat
Metcon Addition
Mankato
Prepared by: John H. Schulte V, PE

August 13, 2026

Introduction

Metcon intends to construct a new commercial / industrial subdivision off Adam Avenue Mankato. The project will include a new cul-de-sac from Adams Avenue, a right turn lane on Adams Avenue, sanitary sewer and water main extensions, and a wet stormwater treatment basin.

Basis of Design

The modeling that follows in this report was performed utilizing HydroCAD software. Pipes were sized utilizing State Plumbing Code and/or Rational Method Design and Manning's Equation. Rainfall was modeling with Atlas 14 Rainfall events.

Onsite soils per the Web Soil Survey and on-site borings show Hydric Type C/D clay soils. Infiltration as a method of stormwater treatment is therefore unavailable. Filtration was considered as an alternate method of treatment but a wet stormwater pond was selected to eliminate the costs of importing filtration viable materials as none exist on site, and to reduce the footprint required of the treatment basin. A filtration system would have required a higher outflow elevation to make room for the filtration materials, reducing the dry s
torage elevations available and thus increasing the overall basin footprint.

Existing Conditions

The site is bounded by Adams Avenue on the north, agricultural ground and a farm site to the east, CSAH 12 on the west and Madison Avenue to the south. The existing site is undeveloped and is maintained as agricultural row crop.

General surface water flows through the site east to west, with three wetlands scattered across the site. The site in general is very flat, with the three very shallow wetland basins providing almost no surface water storage. The eventual site discharge point is a centerline culvert under CSAH 12 near Madison Avenue discharging east to west.

Required Treatment

This site is greater than 1 acre and is thus required to provide stormwater treatment per the NPDES Construction Stormwater Permit with its associated 1" infiltration goal; a 1.1" Water Quality Volume requirement, and discharge rates controlled to not exceed existing conditions.

Below is a table of the requirements:

Platted Area:	14.47 acres
Proposed Impervious Surface:	10.56 acres
1" Infiltration Goal:	10.56 acres x 1" = 38333 cf
1.1" Water Quality Volume:	10.56 acres x 1.1" = 42166 cf
Basin Watershed Area:	15.03 acres
Wet Pond Wet Storage Volume:	15.03 acres x 1800 cf / acre = 27054 cf

Discussion of Proposed Improvements

The development of this site initially includes construction of Ponderosa Court and its associated roadway and utility infrastructure, the addition of a turn lane to Adams Avenue, and construction of the subdivision's wet stormwater pond. Future development will include the full buildout of the site's commercial and industrial lots. Right of Way for Evergreen Drive is being dedicated with this project, but there are currently no plans to construct that roadway.

Conveyance of stormwater flows to the wet stormwater pond is achieved via swales on the southeast and west sides of the development, while storm sewer will be constructed within Ponderosa Court.

Discussion of Proposed Stormwater Treatment

The wet stormwater pond is designed to treat the entire subdivision and a small portion of the farm site to the southeast that drains into the site. The area of Evergreen Drive is considered industrial development for the purposes of this design since there are currently no plans to construct it as a roadway.

The wet stormwater pond is designed to provide at least 1800 cf of wet volume per acre drained, to provide a Water Quality Volume of at least 1.1" of volume over the new impervious surface areas that discharges no faster than 5.66 cfs per acre of Water Quality Volume, and to not discharge faster than existing conditions to CSAH 12. Since infiltration is not viable at this site, that goal is not met. A summary of the requirements and design is below:

	Required	Designed
Wet Volume	27054 cf	113212 cf
1.1" Water Quality Volume	42166 cf	46520 cf
Water Quality Volume Rate	6.91 cfs	3.30 cfs
2-year Discharge Rate	9.68 cfs	6.73 cfs
10-year Discharge Rate	23.98 cfs	11.06 cfs
100-year Discharge Rate	47.27 cfs	16.14 cfs

Other Pertinent Pond Data:

Pond Bottom Elevation	1007
Normal Water Level Elevation	1011
Water Quality Volume Elevation	1011.85
High Water Level	1014.51
Emergency Overflow Elevation	1015.5
Top of Bank Elevation	1016
Minimum FFE Draining to Basin	1016.75

Summary

In summary, the site's proposed wet stormwater pond provides the required treatment and attenuation that reduces flows leaving the site to less than existing.

Certification

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.



John H. Schulte V Date: 8/13/26

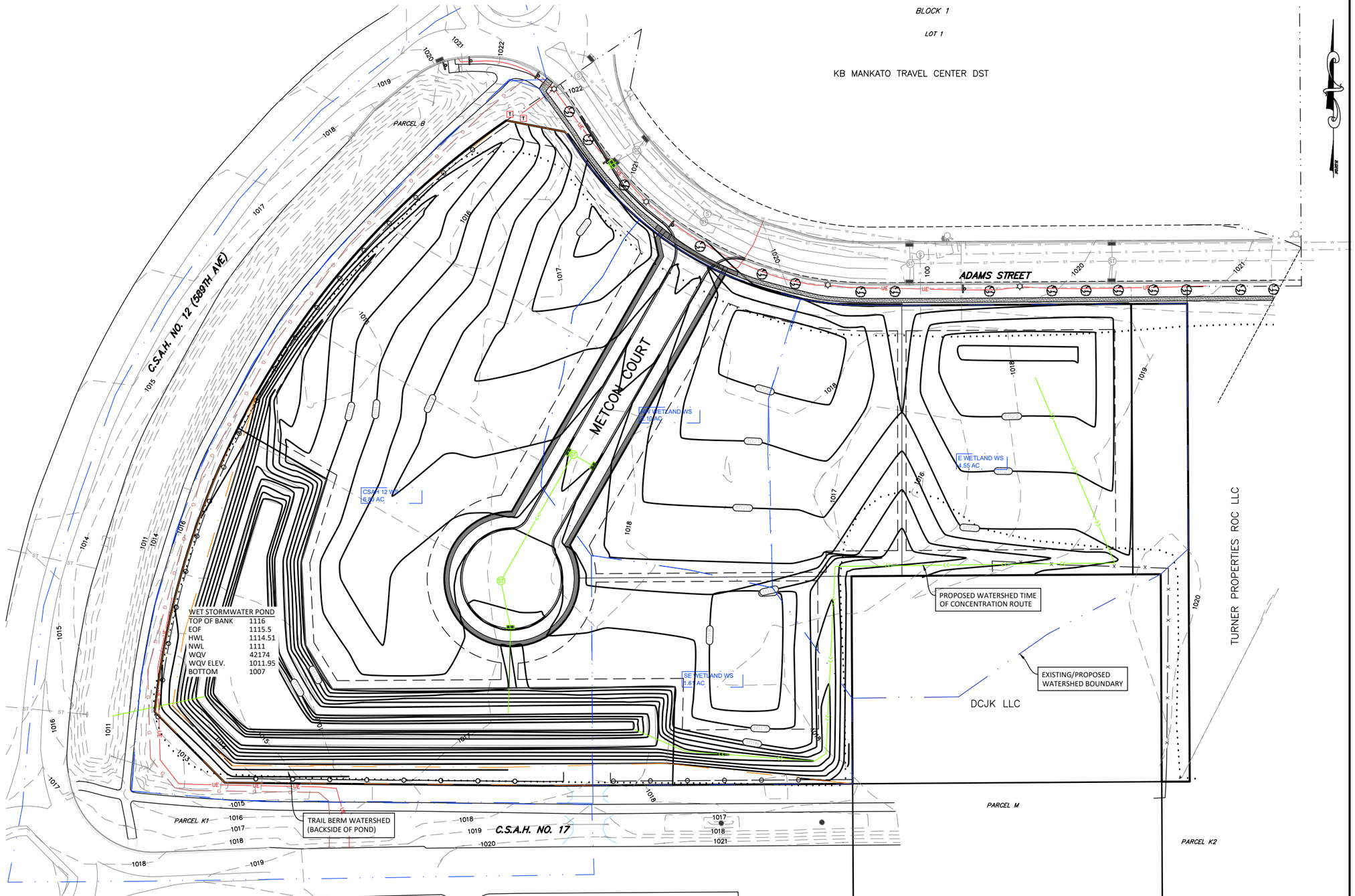
License No. 44639

Attachments:

Watershed Map
Calculations
Web Soil Survey
HydroCAD Model
Geotechnical Report

WATERSHED MAP

METCON ADDITION



LEGEND

- W = Water Main
- S = Sanitary Sewer
- ST = Storm Sewer
- G = Gas Main
- UT = Underground Telephone
- OT = Overhead Telephone
- FO = Fiber-Optics
- UE = Underground Electric
- OE = Overhead Electric
- UTV = Underground TV
- JLM = Judicial Landmark
- X = Chain Link Fence
- = Control Access
- = Sign
- = Stop Sign
- = Light Pole
- = Flood Lights
- = Power Pole
- = Guy Anchor
- = Fire hydrant
- = Water Main Valve
- = Culvert
- = Catch Basin & Catch Basin Numbers
- = Manholes & Manhole Numbers
- 1272 = Elevation Contour Line
- 1271.23 = Spot Elevation
- RM1270.89 = Rim Elevation
- FL1262.34 = FlowLine Elevation
- = Deciduous Tree
- = Coniferous Tree
- = Bush

60 0 60
HORIZ. SCALE FEET

DRAWINGS ON 11x17 SHEETS ARE HALF SCALE

REV.	BY	DATE	REVISION DESCRIPTION
-	-	-	-

JONES HAUGH SMITH
Engineers + Surveyors
415 West North Street Owatonna, MN 507-451-4598

DESIGNED: JHS5
DRAWN: JHS5
CHECKED: BJJ
Date: 7/28/26
DWG: 25-1234PP

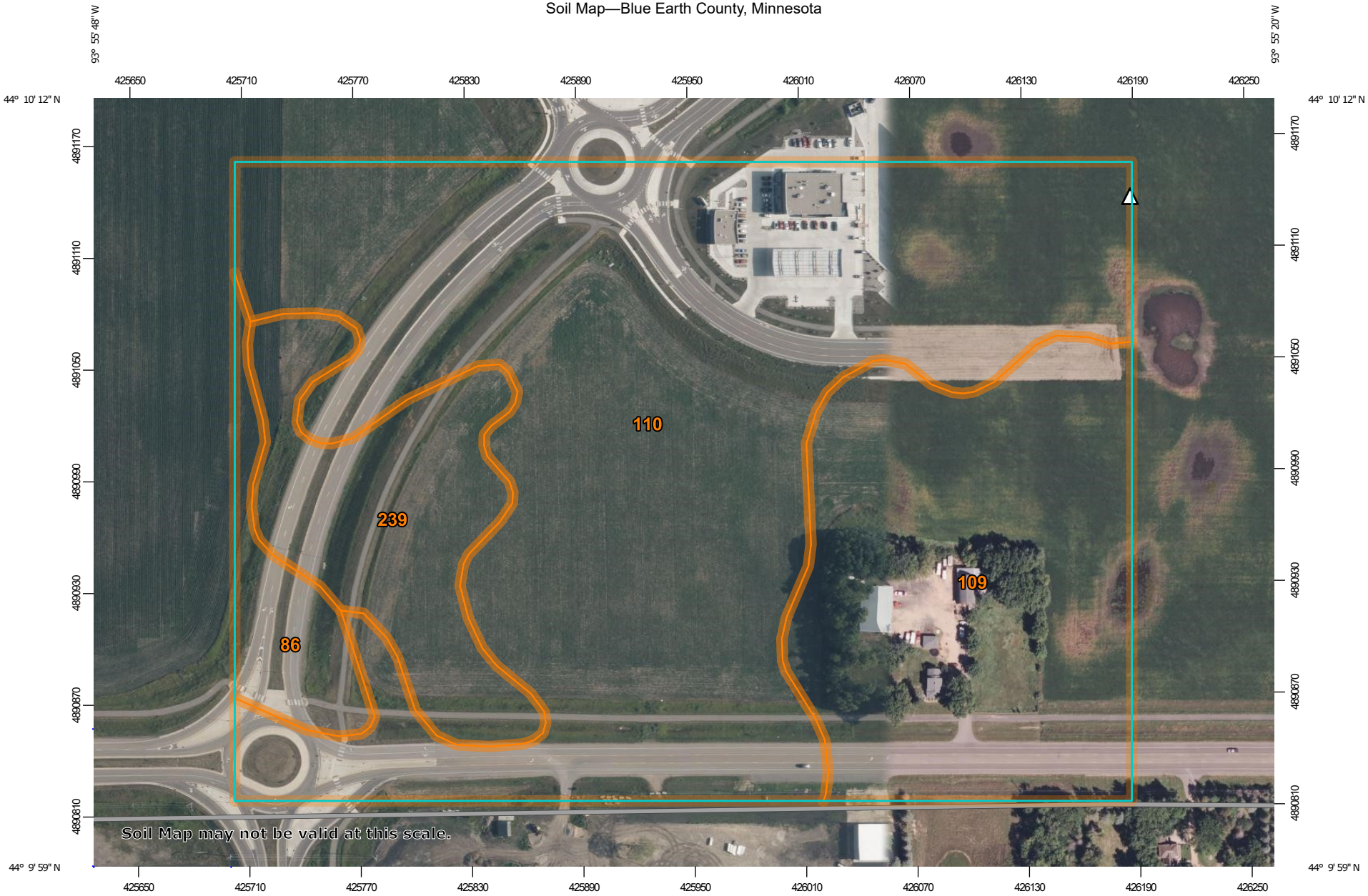
I hereby certify that this plan, specification, or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the State of Minnesota.

John H. Schulte V
License No. 44639 Date: 7/28/26

PRELIMINARY PLAT
METCON ADDITION
PART OF SW1/4 SECTION 11-T108N-R26W
WATERSHEDS MAP

SHEET 1 OF 1

WEB SOIL SURVEY



Map Scale: 1:2,910 if printed on A landscape (11" x 8.5") sheet.

N

Meters: 0 40 80 160 240

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 15N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:12,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Blue Earth County, Minnesota
Survey Area Data: Version 23, Sep 9, 2025

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jul 30, 2020—Aug 8, 2023

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
86	Canisteo clay loam, 0 to 2 percent slopes	1.7	4.1%
109	Cordova clay loam, 0 to 2 percent slopes	10.2	24.7%
110	Marna silty clay loam, 0 to 2 percent slopes	24.6	59.7%
239	Le Sueur loam, 1 to 3 percent slopes	4.7	11.5%
Totals for Area of Interest		**41.2**	**100.0%**

CALCULATIONS

Stage-Area-Storage for Pond 23P: Metcon Addn Pond

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
1,011.00	47,057	0
1,011.01	47,129	471
1,011.02	47,201	943
1,011.03	47,273	1,415
1,011.04	47,345	1,888
1,011.05	47,417	2,362
1,011.06	47,489	2,836
1,011.07	47,561	3,312
1,011.08	47,633	3,788
1,011.09	47,705	4,264
1,011.10	47,777	4,742
1,011.11	47,849	5,220
1,011.12	47,921	5,699
1,011.13	47,993	6,178
1,011.14	48,065	6,659
1,011.15	48,137	7,140
1,011.16	48,209	7,621
1,011.17	48,281	8,104
1,011.18	48,353	8,587
1,011.19	48,425	9,071
1,011.20	48,497	9,555
1,011.21	48,569	10,041
1,011.22	48,641	10,527
1,011.23	48,712	11,013
1,011.24	48,784	11,501
1,011.25	48,856	11,989
1,011.26	48,928	12,478
1,011.27	49,000	12,968
1,011.28	49,072	13,458
1,011.29	49,144	13,949
1,011.30	49,216	14,441
1,011.31	49,288	14,934
1,011.32	49,360	15,427
1,011.33	49,432	15,921
1,011.34	49,504	16,415
1,011.35	49,576	16,911
1,011.36	49,648	17,407
1,011.37	49,720	17,904
1,011.38	49,792	18,401
1,011.39	49,864	18,900
1,011.40	49,936	19,399
1,011.41	50,008	19,898
1,011.42	50,080	20,399
1,011.43	50,152	20,900
1,011.44	50,224	21,402
1,011.45	50,296	21,904
1,011.46	50,368	22,408
1,011.47	50,440	22,912
1,011.48	50,512	23,417
1,011.49	50,584	23,922
1,011.50	50,656	24,428
1,011.51	50,728	24,935

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
1,011.52	50,800	25,443
1,011.53	50,872	25,951
1,011.54	50,944	26,460
1,011.55	51,016	26,970
1,011.56	51,088	27,481
1,011.57	51,160	27,992
1,011.58	51,232	28,504
1,011.59	51,304	29,016
1,011.60	51,376	29,530
1,011.61	51,448	30,044
1,011.62	51,520	30,559
1,011.63	51,592	31,074
1,011.64	51,664	31,591
1,011.65	51,736	32,108
1,011.66	51,808	32,625
1,011.67	51,880	33,144
1,011.68	51,952	33,663
1,011.69	52,023	34,183
1,011.70	52,095	34,703
1,011.71	52,167	35,225
1,011.72	52,239	35,747
1,011.73	52,311	36,269
1,011.74	52,383	36,793
1,011.75	52,455	37,317
1,011.76	52,527	37,842
1,011.77	52,599	38,368
1,011.78	52,671	38,894
1,011.79	52,743	39,421
1,011.80	52,815	39,949
1,011.81	52,887	40,477
1,011.82	52,959	41,007
1,011.83	53,031	41,537
1,011.84	53,103	42,067
1,011.85	53,175	42,599
1,011.86	53,247	43,131
1,011.87	53,319	43,664
1,011.88	53,391	44,197
1,011.89	53,463	44,731
1,011.90	53,535	45,266
1,011.91	53,607	45,802
1,011.92	53,679	46,339
1,011.93	53,751	46,876
1,011.94	53,823	47,414
1,011.95	53,895	47,952
1,011.96	53,967	48,491
1,011.97	54,039	49,031
1,011.98	54,111	49,572
1,011.99	54,183	50,114
1,012.00	54,255	50,656
1,012.01	54,327	51,199
1,012.02	54,399	51,742
1,012.03	54,471	52,287

Req'd WQ

$\frac{53247}{43560} \times 5.66 =$

6.91 cfs

Hydrograph for Pond 23P: Metcon Addn Pond (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
10.20	3.28	21,447	1,011.44	0.98
10.25	3.32	21,862	1,011.45	1.01
10.30	3.36	22,277	1,011.46	1.05
10.35	3.39	22,691	1,011.47	1.09
10.40	3.42	23,106	1,011.47	1.12
10.45	3.45	23,519	1,011.48	1.16
10.50	3.49	23,932	1,011.49	1.20
10.55	3.64	24,355	1,011.50	1.23
10.60	4.21	24,835	1,011.51	1.28
10.65	4.87	25,417	1,011.52	1.34
10.70	5.41	26,096	1,011.53	1.40
10.75	5.84	26,850	1,011.55	1.47
10.80	6.26	27,666	1,011.56	1.55
10.85	6.65	28,541	1,011.58	1.64
10.90	7.06	29,471	1,011.60	1.73
10.95	7.45	30,456	1,011.62	1.84
11.00	7.86	31,493	1,011.64	1.95
11.05	8.25	32,581	1,011.66	2.07
11.10	8.67	33,721	1,011.68	2.19
11.15	9.08	34,912	1,011.70	2.33
11.20	9.51	36,153	1,011.73	2.47
11.25	9.92	37,443	1,011.75	2.62
11.30	10.35	38,781	1,011.78	2.78
11.35	10.77	40,167	1,011.80	2.95
11.40	11.21	41,599	1,011.83	3.12
11.45	11.63	43,076	1,011.86	3.30
11.50	12.07	44,597	1,011.89	3.49
11.55	12.83	46,192	1,011.92	3.69
11.60	14.89	48,001	1,011.95	3.92
11.65	17.45	50,180	1,011.99	4.20
11.70	20.48	52,808	1,012.04	4.54
11.75	23.73	55,935	1,012.10	4.94
11.80	28.24	59,681	1,012.16	5.41
11.85	33.33	64,199	1,012.25	5.96
11.90	40.07	69,676	1,012.34	6.58
11.95	49.14	76,463	1,012.46	7.22
12.00	66.76	85,531	1,012.62	7.92
12.05	89.43	98,079	1,012.83	8.84
12.10	123.37	115,547	1,013.11	9.87
12.15	**146.53**	137,968	1,013.47	10.90
12.20	121.52	160,051	1,013.80	11.79
12.25	83.00	176,281	1,014.04	12.39
12.30	59.48	186,841	1,014.19	12.75
12.35	45.97	194,015	1,014.29	12.99
12.40	37.07	199,135	1,014.37	13.16
12.45	30.78	202,862	1,014.42	13.28
12.50	25.98	205,573	1,014.46	13.36
12.55	22.20	207,498	1,014.48	13.42
12.60	18.75	208,763	1,014.50	13.46
12.65	15.96	209,462	1,014.51	13.48
12.70	14.42	209,768	1,014.51	13.49
12.75	13.57	**209,858**	**1,014.51**	**13.50**

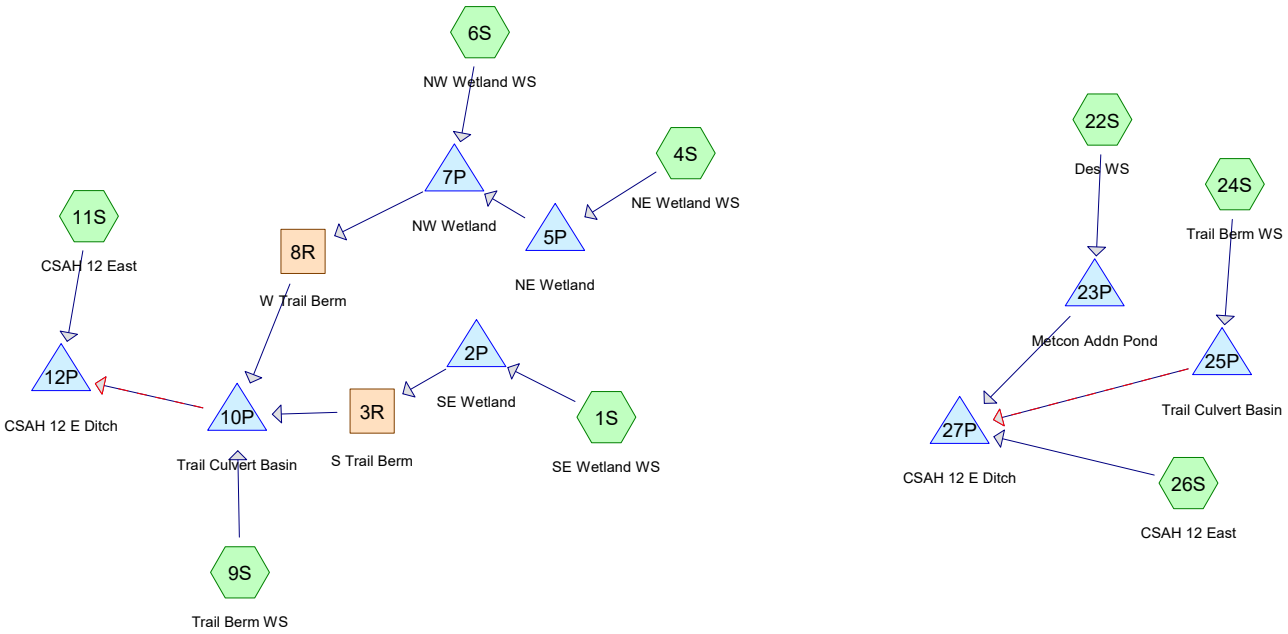
vs 6.91 cfs ✓

Hydrograph for Pond 3P: (new Pond) (continued)

Time (hours)	Inflow (cfs)	Storage (cubic-feet)	Elevation (feet)	Primary (cfs)
10.20	0.73	3,521	1,011.08	0.04
10.25	0.75	3,647	1,011.09	0.04
10.30	0.76	3,775	1,011.09	0.04
10.35	0.77	3,906	1,011.09	0.04
10.40	0.79	4,038	1,011.10	0.05
10.45	0.80	4,173	1,011.10	0.05
10.50	0.82	4,309	1,011.10	0.05
10.55	0.86	4,450	1,011.11	0.06
10.60	1.00	4,607	1,011.11	0.06
10.65	1.17	4,790	1,011.11	0.07
10.70	1.31	5,001	1,011.12	0.08
10.75	1.43	5,234	1,011.12	0.08
10.80	1.55	5,486	1,011.13	0.09
10.85	1.67	5,759	1,011.14	0.10
10.90	1.79	6,051	1,011.14	0.11
10.95	1.91	6,364	1,011.15	0.12
11.00	2.04	6,696	1,011.16	0.13
11.05	2.16	7,048	1,011.17	0.15
11.10	2.30	7,421	1,011.18	0.17
11.15	2.43	7,816	1,011.19	0.18
11.20	2.57	8,232	1,011.20	0.20
11.25	2.71	8,669	1,011.21	0.22
11.30	2.86	9,129	1,011.22	0.25
11.35	3.01	9,611	1,011.23	0.28
11.40	3.17	10,115	1,011.24	0.30
11.45	3.32	10,641	1,011.25	0.33
11.50	3.48	11,190	1,011.26	0.37
11.55	3.74	11,770	1,011.28	0.40
11.60	4.39	12,425	1,011.29	0.45
11.65	5.20	13,203	1,011.31	0.50
11.70	6.18	14,131	1,011.33	0.57
11.75	7.26	15,231	1,011.36	0.65
11.80	8.77	16,546	1,011.39	0.76
11.85	10.50	18,130	1,011.42	0.90
11.90	12.84	20,052	1,011.46	1.08
11.95	16.02	22,433	1,011.52	1.33
12.00	22.22	25,604	1,011.59	1.68
12.05	30.40	29,991	1,011.68	2.20
12.10	42.91	36,120	1,011.81	3.01
12.15	**51.89**	44,012	1,011.98	4.11
12.20	43.52	51,760	1,012.14	5.21
12.25	29.97	57,367	1,012.25	5.98
12.30	21.63	60,894	1,012.32	6.43
12.35	16.82	63,172	1,012.36	6.70
12.40	13.62	64,690	1,012.39	6.87
12.45	11.35	65,690	1,012.41	6.98
12.50	9.60	66,314	1,012.42	7.04
12.55	8.22	66,648	1,012.43	7.07
12.60	6.95	**66,739**	**1,012.43**	**7.08**
12.65	5.92	66,624	1,012.43	7.07
12.70	5.36	66,369	1,012.43	7.04
12.75	5.04	66,040	1,012.42	7.01

✓ vs 6.2

HYDROCAD MODEL



Subcat Reach Pond Link

Routing Diagram for 25-1243
Prepared by Jones Haugh & Smith Inc, Printed 8/13/2026
HydroCAD® 10.20-9a s/n 03815 © 2026 HydroCAD Software Solutions LLC

Summary for Subcatchment 1S: SE Wetland WS

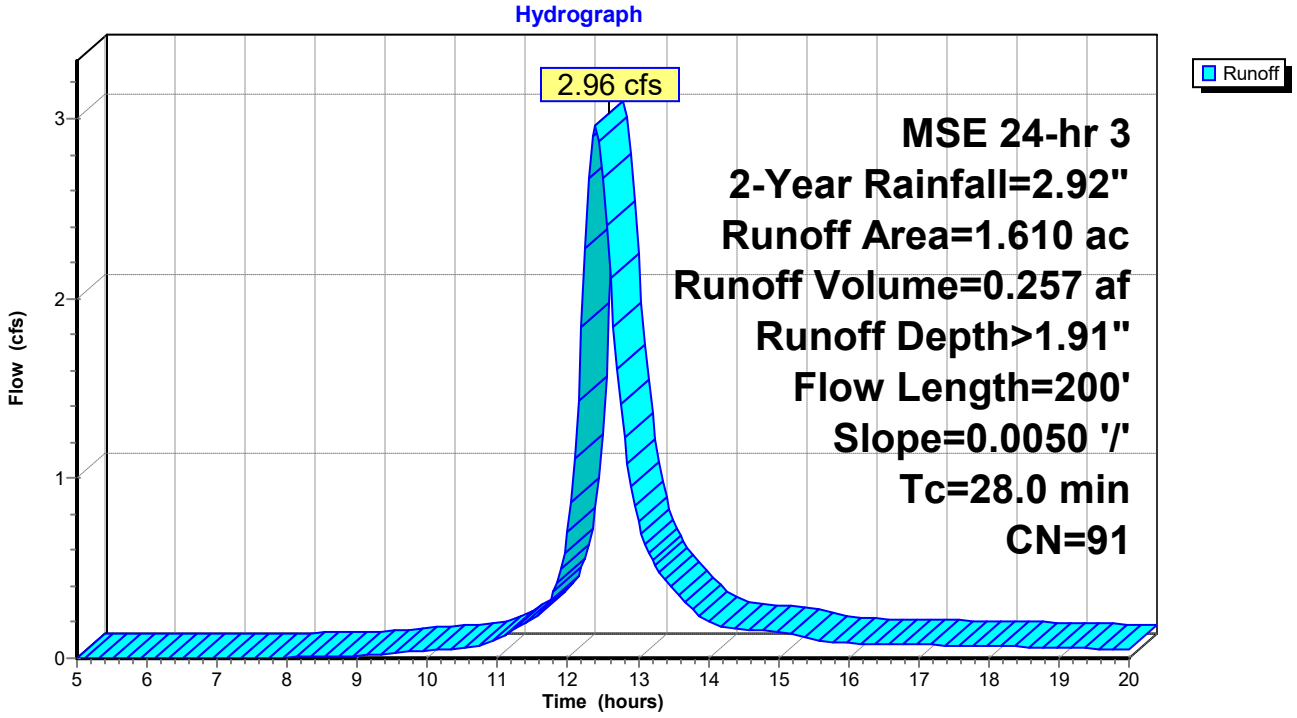
Runoff = 2.96 cfs @ 12.40 hrs, Volume= 0.257 af, Depth> 1.91"
Routed to Pond 2P : SE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
1.610	91	Row crops, straight row, Poor, HSG D
1.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"

Subcatchment 1S: SE Wetland WS



Summary for Subcatchment 4S: NE Wetland WS

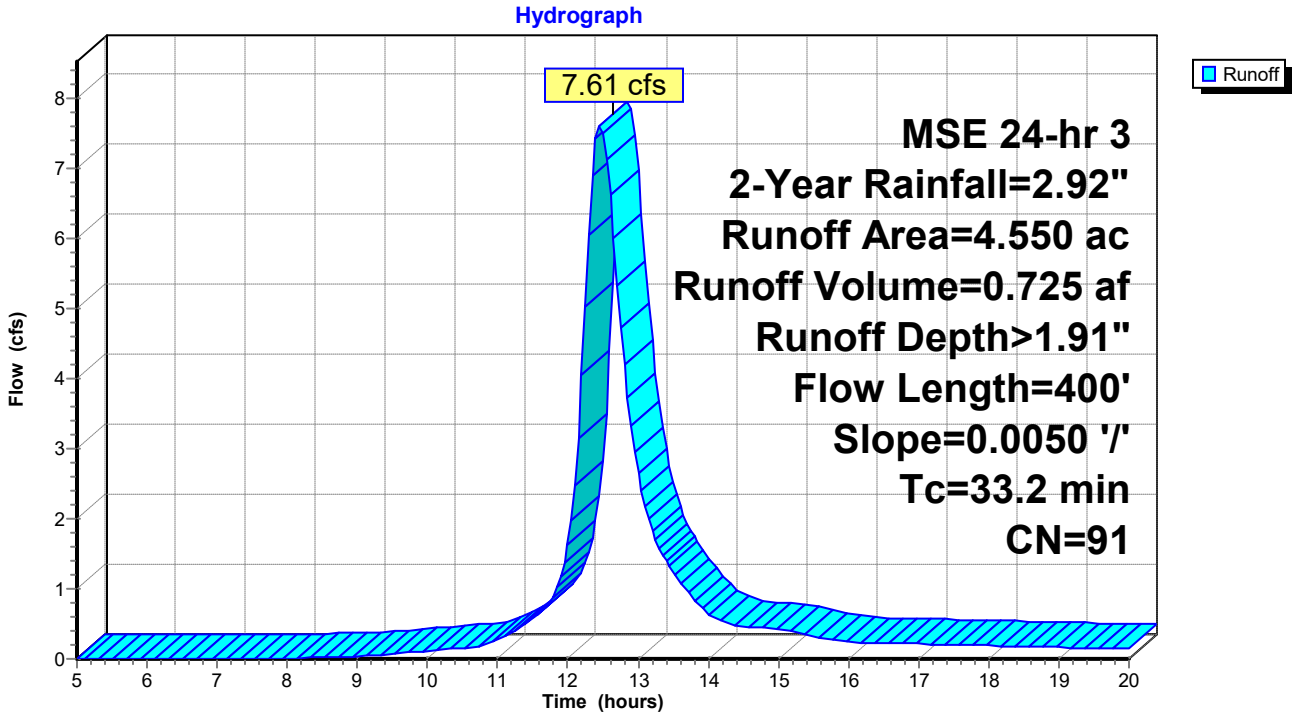
Runoff = 7.61 cfs @ 12.46 hrs, Volume= 0.725 af, Depth> 1.91"
Routed to Pond 5P : NE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
4.190	91	Row crops, straight row, Poor, HSG D
0.360	86	Farmsteads, HSG D
4.550	91	Weighted Average
4.550		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
5.2	200	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
33.2	400	Total			

Subcatchment 4S: NE Wetland WS



Summary for Subcatchment 6S: NW Wetland WS

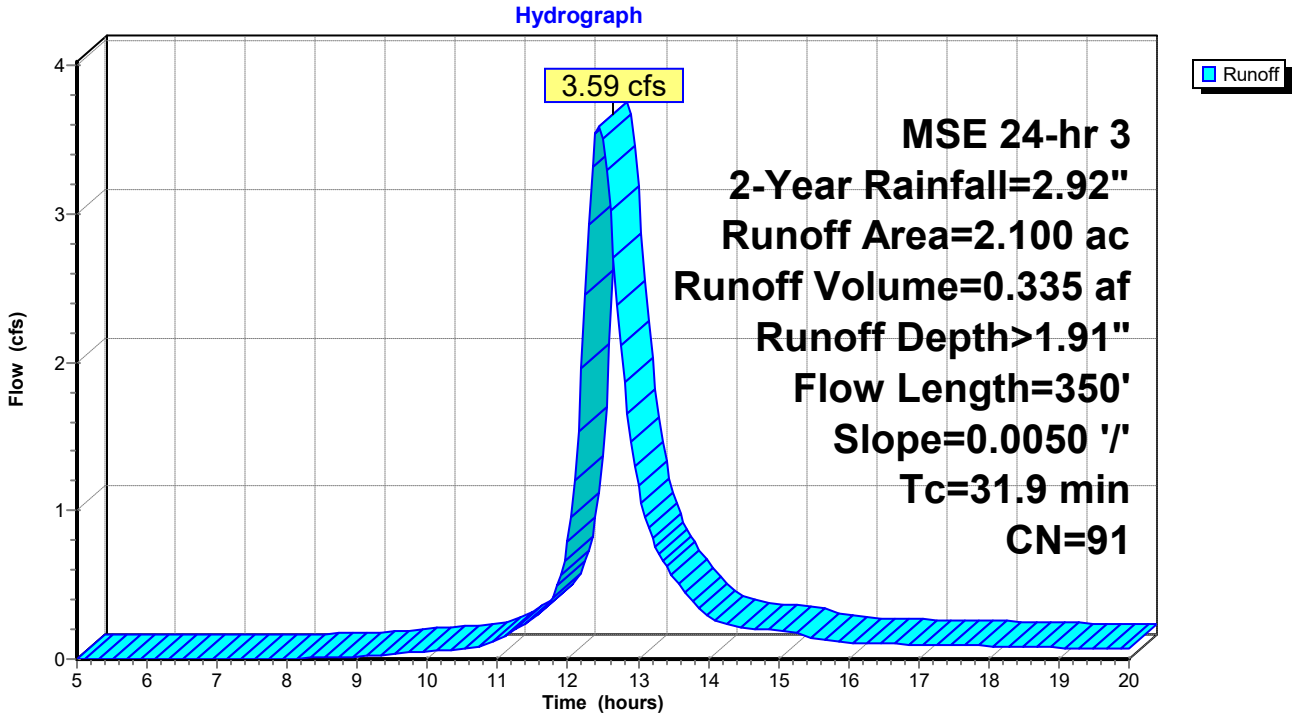
Runoff = 3.59 cfs @ 12.44 hrs, Volume= 0.335 af, Depth> 1.91"
Routed to Pond 7P : NW Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
2.100	91	Row crops, straight row, Poor, HSG D
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
3.9	150	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.9	350	Total			

Subcatchment 6S: NW Wetland WS



Summary for Subcatchment 9S: Trail Berm WS

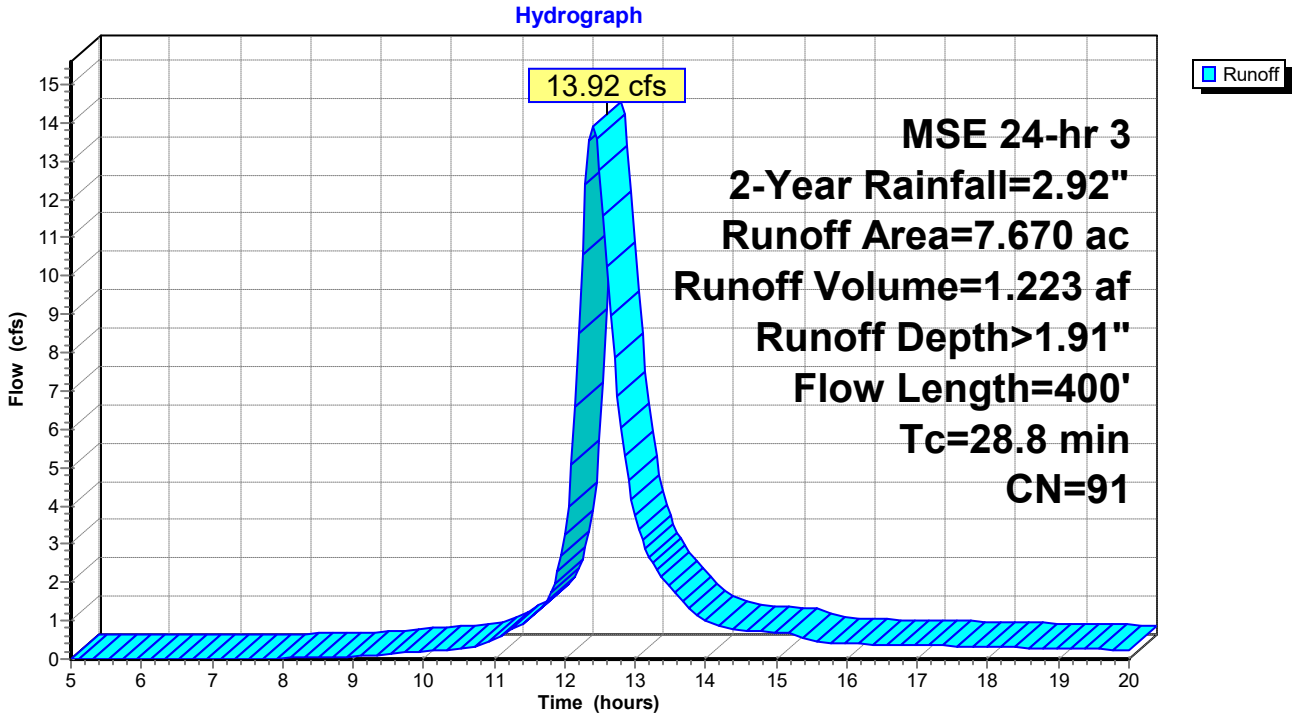
Runoff = 13.92 cfs @ 12.40 hrs, Volume= 1.223 af, Depth> 1.91"
Routed to Pond 10P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
7.670	91	Row crops, straight row, Poor, HSG D
7.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	200	0.0050	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 4.40"
16.6	200	0.0005	0.20		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
28.8	400	Total			

Subcatchment 9S: Trail Berm WS



Summary for Subcatchment 11S: CSAH 12 East

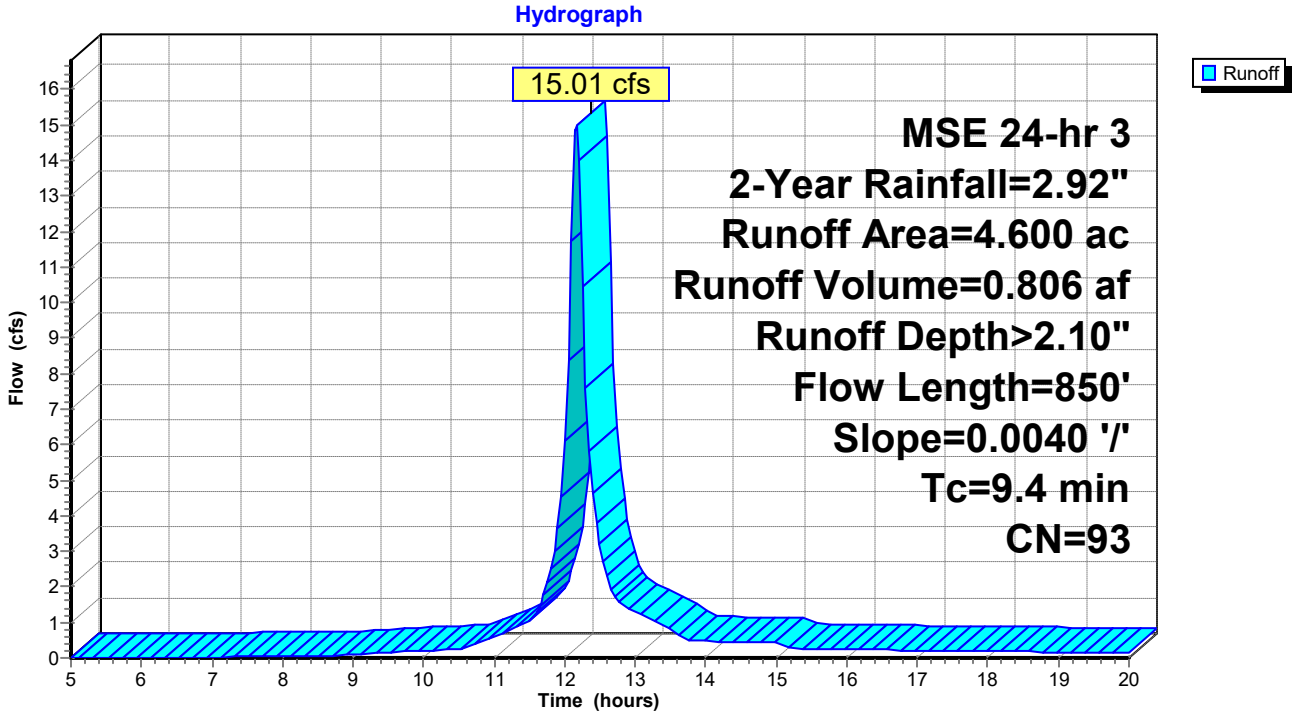
Runoff = 15.01 cfs @ 12.16 hrs, Volume= 0.806 af, Depth> 2.10"
Routed to Pond 12P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 11S: CSAH 12 East



Summary for Subcatchment 22S: Des WS

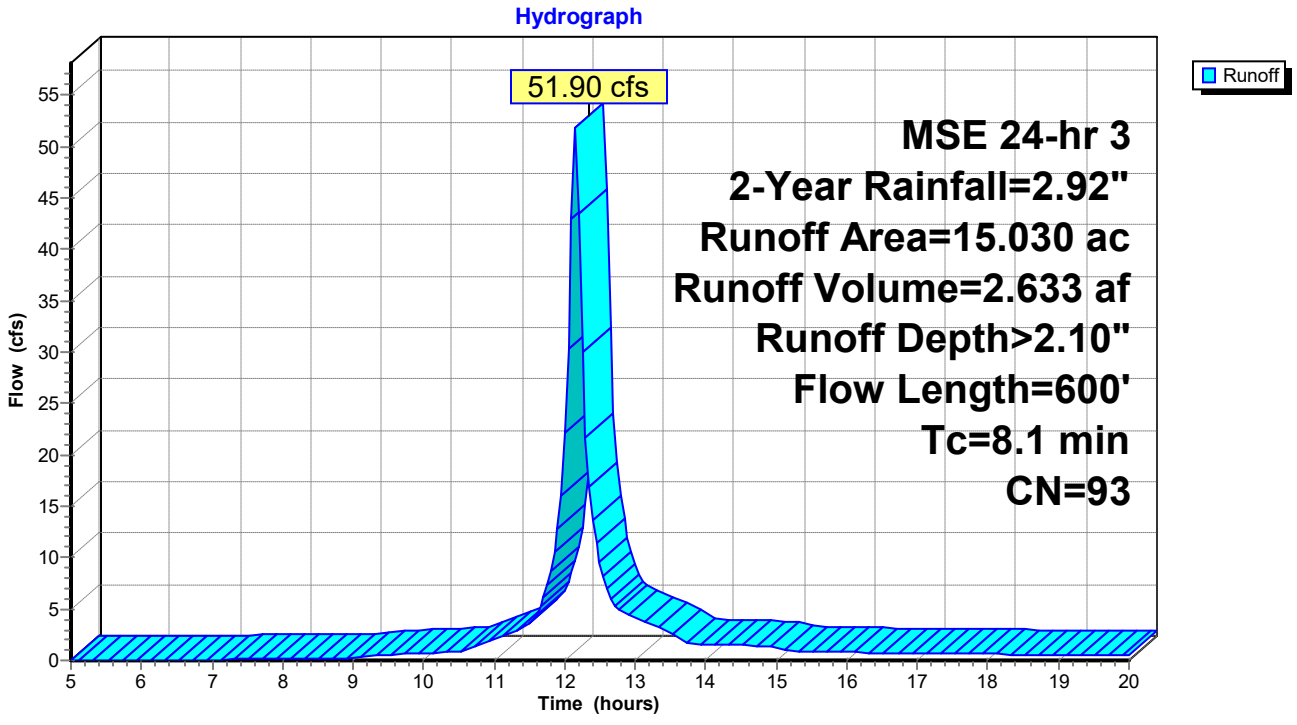
Runoff = 51.90 cfs @ 12.15 hrs, Volume= 2.633 af, Depth> 2.10"
Routed to Pond 23P : Metcon Addn Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
14.670	93	Urban industrial, 72% imp, HSG D
0.360	86	Farmsteads, HSG D
15.030	93	Weighted Average
4.468		29.72% Pervious Area
10.562		70.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	200	0.0200	1.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.40"
6.3	400	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.1	600	Total			

Subcatchment 22S: Des WS



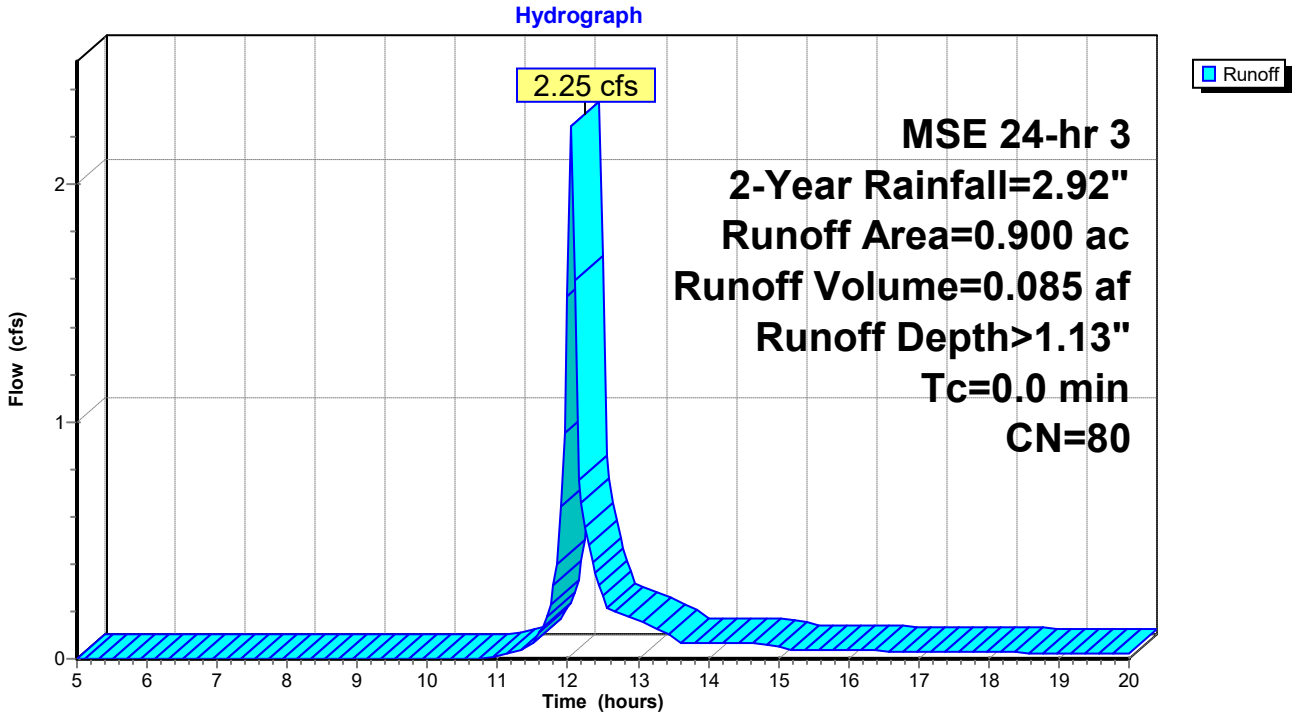
Summary for Subcatchment 24S: Trail Berm WS

Runoff = 2.25 cfs @ 12.05 hrs, Volume= 0.085 af, Depth> 1.13"
Routed to Pond 25P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.900		100.00% Pervious Area

Subcatchment 24S: Trail Berm WS



Summary for Subcatchment 26S: CSAH 12 East

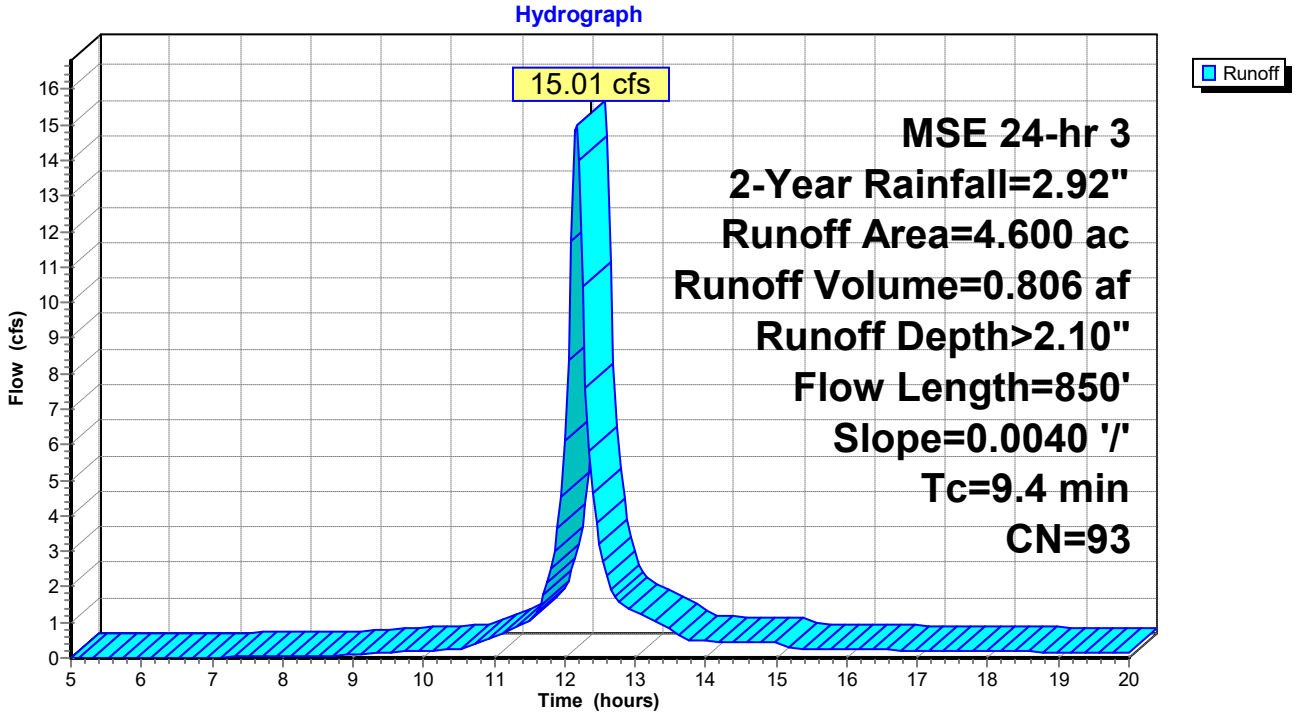
Runoff = 15.01 cfs @ 12.16 hrs, Volume= 0.806 af, Depth> 2.10"
Routed to Pond 27P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 2-Year Rainfall=2.92"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 26S: CSAH 12 East



Summary for Reach 3R: S Trail Berm

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min
Routed to Pond 10P : Trail Culvert Basin

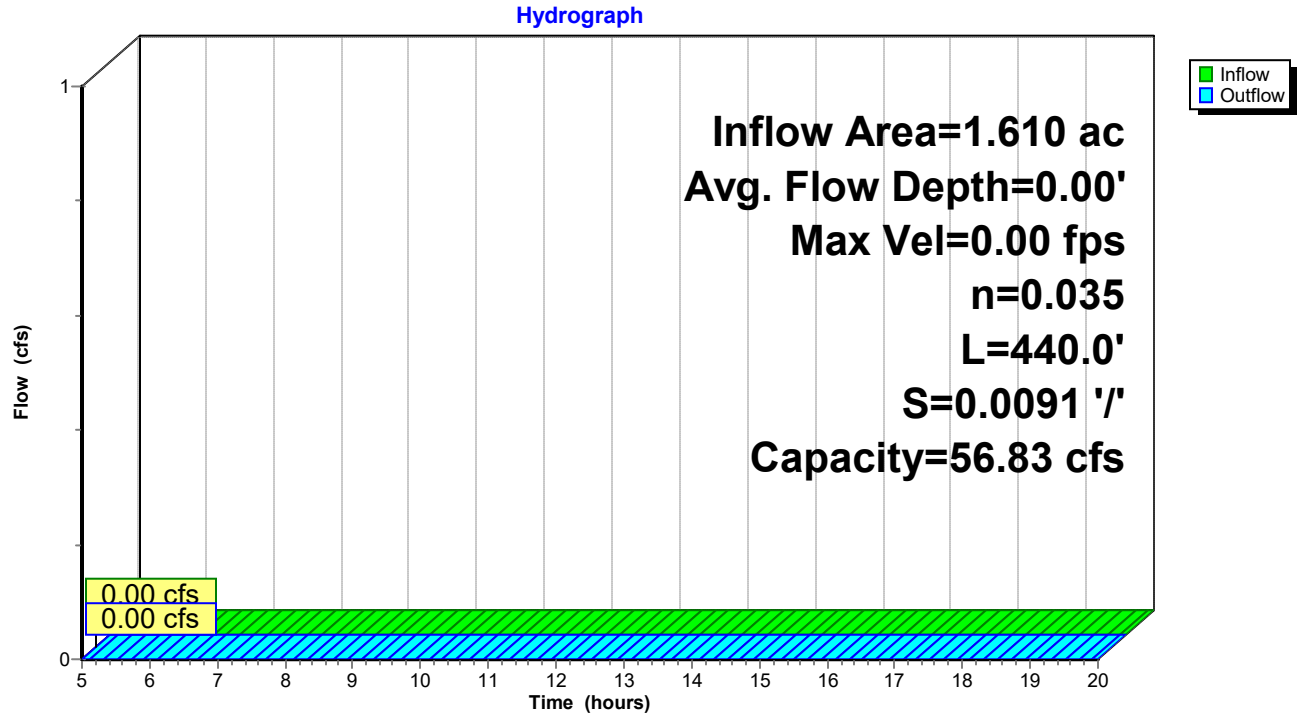
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.00 fps, Min. Travel Time= 0.0 min
Avg. Velocity = 0.00 fps, Avg. Travel Time= 0.0 min

Peak Storage= 0 cf @ 5.00 hrs
Average Depth at Peak Storage= 0.00'
Bank-Full Depth= 1.00' Flow Area= 18.0 sf, Capacity= 56.83 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 26.00'
Length= 440.0' Slope= 0.0091 '/'
Inlet Invert= 1,016.00', Outlet Invert= 1,012.00'



‡



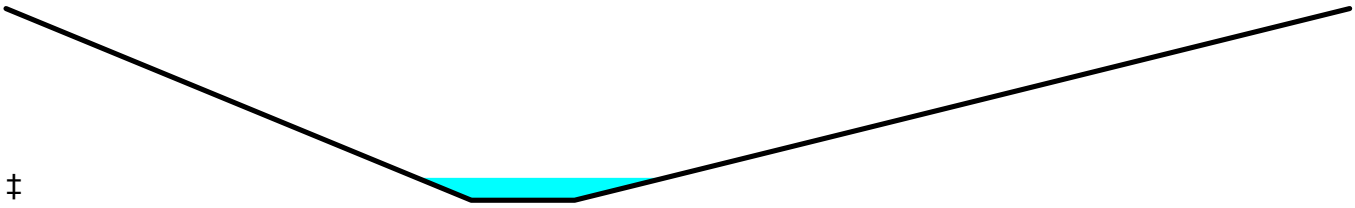
Summary for Reach 8R: W Trail Berm

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 0.55" for 2-Year event
Inflow = 3.48 cfs @ 12.51 hrs, Volume= 0.303 af
Outflow = 3.11 cfs @ 12.80 hrs, Volume= 0.299 af, Atten= 11%, Lag= 17.5 min
Routed to Pond 10P : Trail Culvert Basin

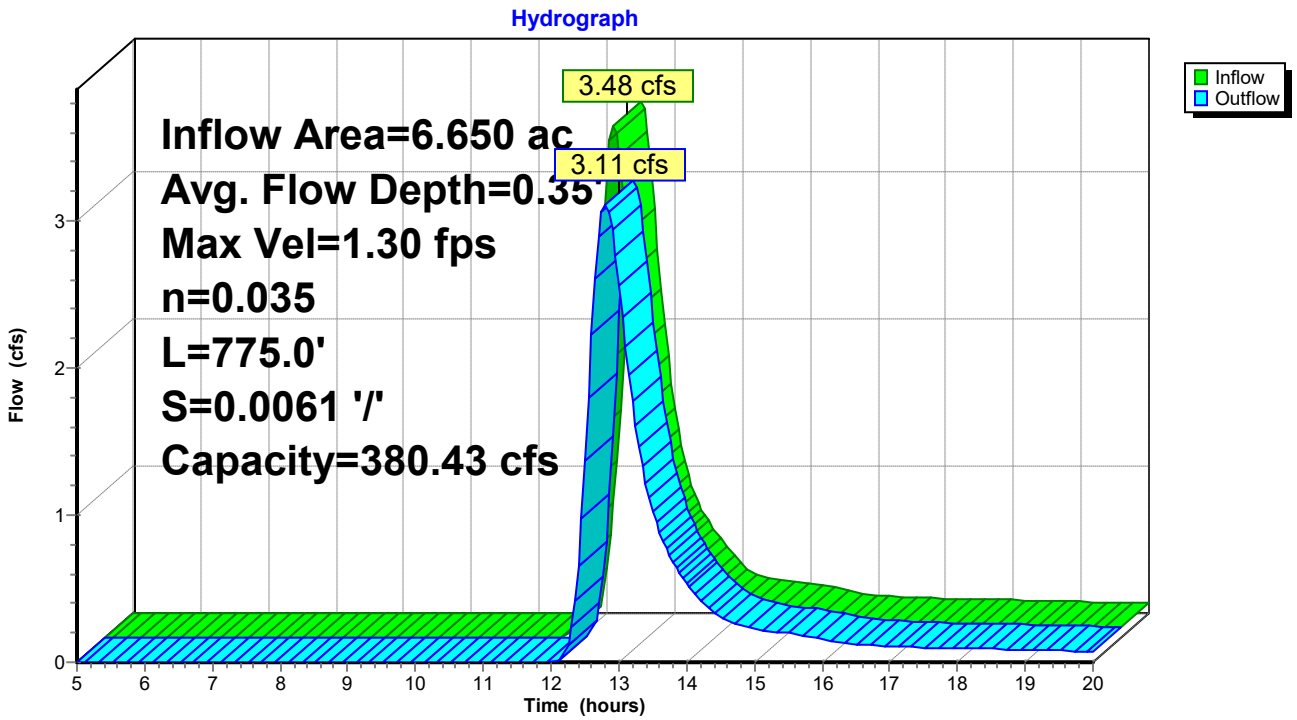
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.30 fps, Min. Travel Time= 9.9 min
Avg. Velocity = 0.60 fps, Avg. Travel Time= 21.4 min

Peak Storage= 1,855 cf @ 12.63 hrs
Average Depth at Peak Storage= 0.35' , Surface Width= 9.62'
Bank-Full Depth= 3.00' Flow Area= 84.0 sf, Capacity= 380.43 cfs

4.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 52.00'
Length= 775.0' Slope= 0.0061 '/'
Inlet Invert= 1,016.70', Outlet Invert= 1,012.00'



‡



Summary for Pond 2P: SE Wetland

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth > 1.91" for 2-Year event
Inflow = 2.96 cfs @ 12.40 hrs, Volume= 0.257 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach 3R : S Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.78' @ 20.00 hrs Surf.Area= 41,990 sf Storage= 11,182 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

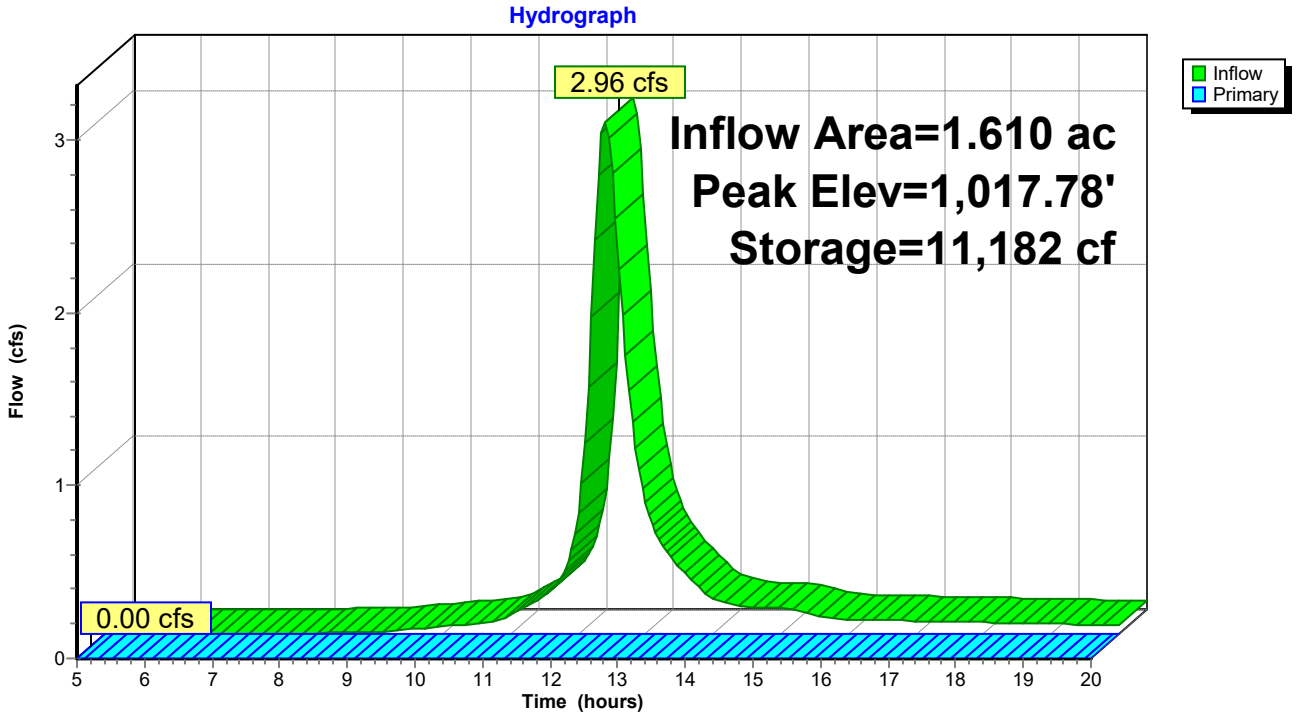
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.25'	22,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.25	0	0	0
1,018.00	59,130	22,174	22,174

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.90'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,017.25' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 2P: SE Wetland



Summary for Pond 5P: NE Wetland

Inflow Area = 4.550 ac, 0.00% Impervious, Inflow Depth > 1.91" for 2-Year event
Inflow = 7.61 cfs @ 12.46 hrs, Volume= 0.725 af
Outflow = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 100%, Lag= 0.0 min
Primary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Pond 7P : NW Wetland

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.48' @ 20.00 hrs Surf.Area= 51,399 sf Storage= 31,557 cf

Plug-Flow detention time= (not calculated: initial storage exceeds outflow)
Center-of-Mass det. time= (not calculated: no outflow)

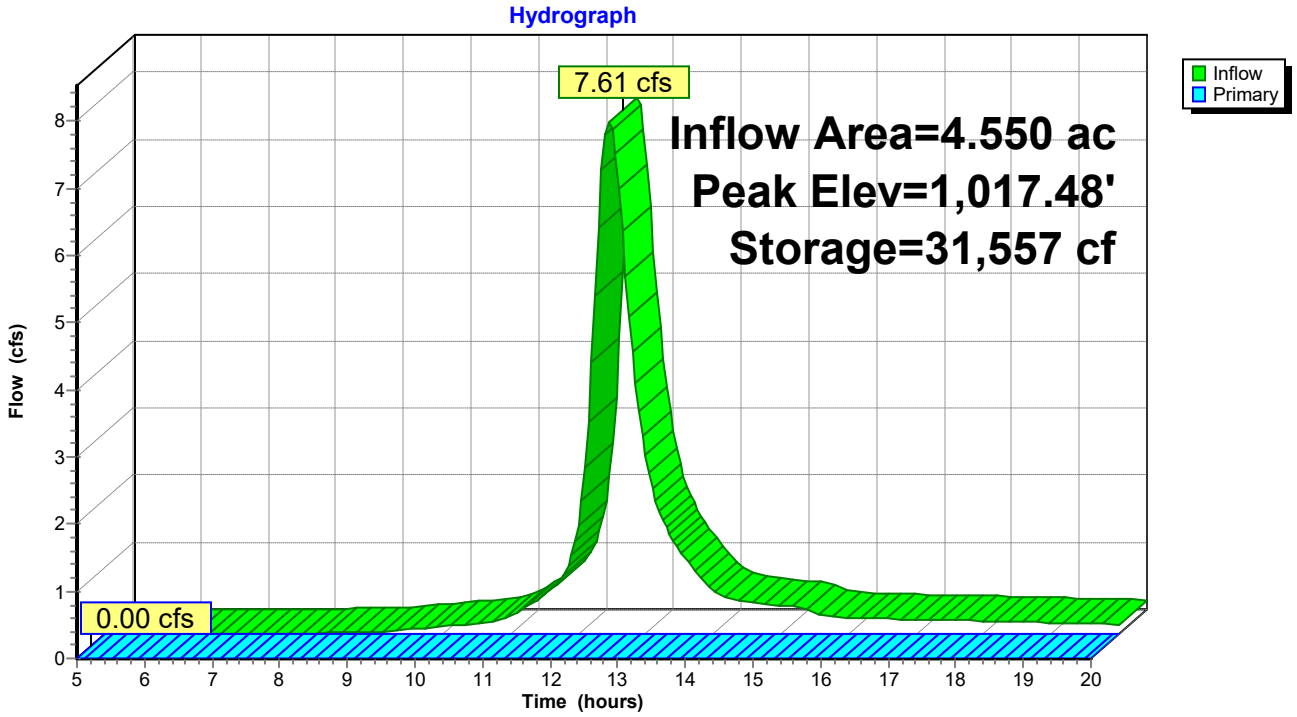
Volume	Invert	Avail.Storage	Storage Description
#1	1,016.00'	65,093 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,016.00	0	0	0
1,017.00	25,742	12,871	12,871
1,018.00	78,702	52,222	65,093

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.56'	**75.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,016.00' (Free Discharge)
1=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 5P: NE Wetland



Summary for Pond 7P: NW Wetland

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 0.60" for 2-Year event
Inflow = 3.59 cfs @ 12.44 hrs, Volume= 0.335 af
Outflow = 3.48 cfs @ 12.51 hrs, Volume= 0.303 af, Atten= 3%, Lag= 3.9 min
Primary = 3.48 cfs @ 12.51 hrs, Volume= 0.303 af
Routed to Reach 8R : W Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.23' @ 12.51 hrs Surf.Area= 20,885 sf Storage= 2,362 cf

Plug-Flow detention time= 45.5 min calculated for 0.302 af (90% of inflow)
Center-of-Mass det. time= 18.3 min (808.8 - 790.5)

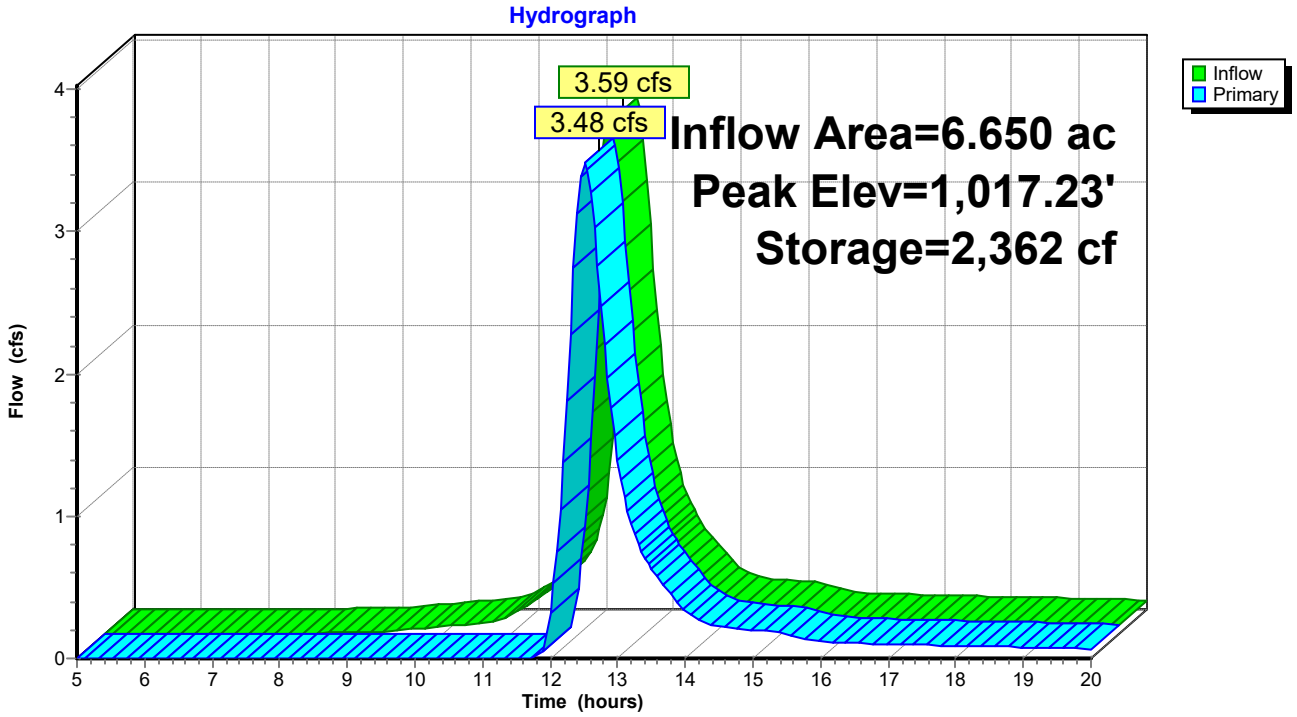
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.00'	46,162 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.00	0	0	0
1,018.00	92,324	46,162	46,162

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.17'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=3.46 cfs @ 12.51 hrs HW=1,017.23' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 3.46 cfs @ 0.58 fps)

Pond 7P: NW Wetland



Summary for Pond 10P: Trail Culvert Basin

Inflow Area = 15.930 ac, 0.00% Impervious, Inflow Depth > 1.15" for 2-Year event
Inflow = 14.64 cfs @ 12.43 hrs, Volume= 1.522 af
Outflow = 9.68 cfs @ 12.77 hrs, Volume= 1.520 af, Atten= 34%, Lag= 20.9 min
Primary = 4.03 cfs @ 12.77 hrs, Volume= 1.323 af
Routed to Pond 12P : CSAH 12 E Ditch
Secondary = 5.65 cfs @ 12.77 hrs, Volume= 0.197 af
Routed to Pond 12P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,014.61' @ 12.77 hrs Surf.Area= 23,929 sf Storage= 18,489 cf

Plug-Flow detention time= 34.2 min calculated for 1.520 af (100% of inflow)
Center-of-Mass det. time= 33.7 min (829.6 - 795.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	29,601 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

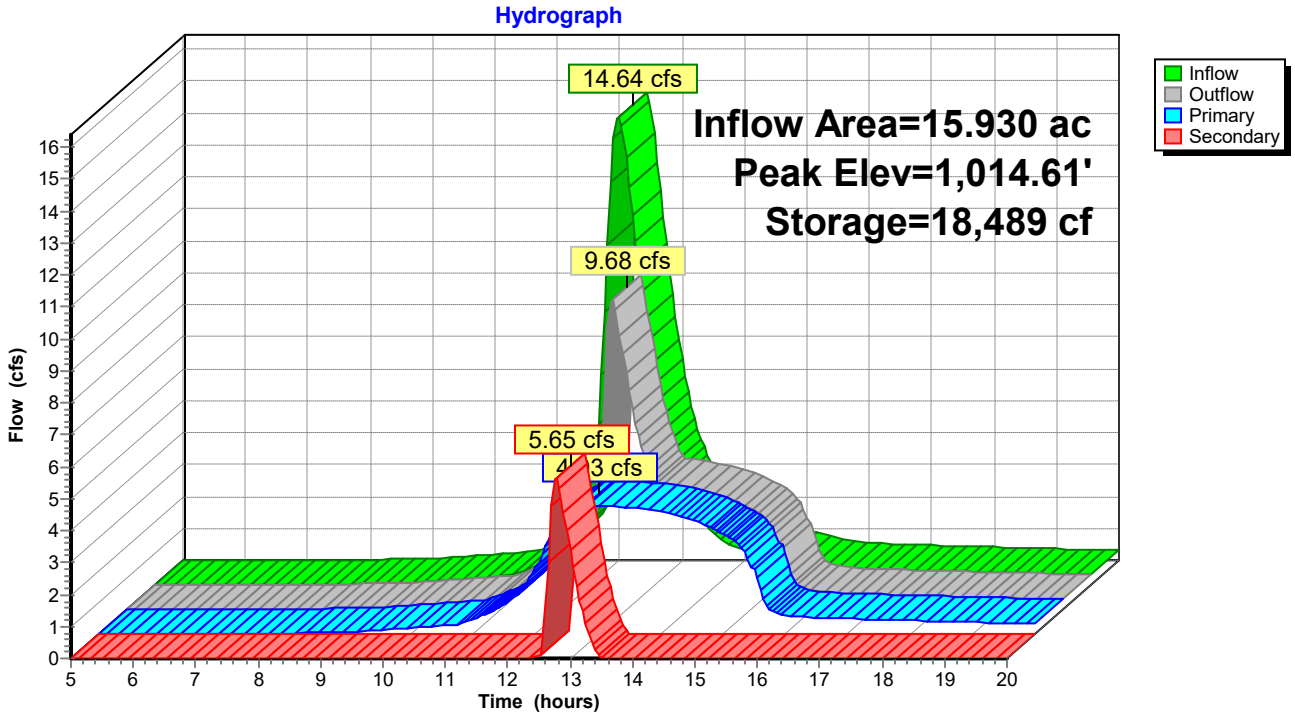
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	11,053	6,408	7,907
1,015.00	32,336	21,695	29,601

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=4.03 cfs @ 12.77 hrs HW=1,014.60' (Free Discharge)
1=Culvert (Barrel Controls 4.03 cfs @ 5.13 fps)

Secondary OutFlow Max=5.47 cfs @ 12.77 hrs HW=1,014.60' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 5.47 cfs @ 0.87 fps)

Pond 10P: Trail Culvert Basin



Summary for Pond 12P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 11.20% Impervious, Inflow Depth > 1.36" for 2-Year event
Inflow = 17.83 cfs @ 12.17 hrs, Volume= 2.326 af
Outflow = 8.60 cfs @ 13.01 hrs, Volume= 2.312 af, Atten= 52%, Lag= 50.6 min
Primary = 8.60 cfs @ 13.01 hrs, Volume= 2.312 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,011.42' @ 13.01 hrs Surf.Area= 21,148 sf Storage= 16,510 cf

Plug-Flow detention time= 27.1 min calculated for 2.304 af (99% of inflow)
Center-of-Mass det. time= 24.8 min (832.3 - 807.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

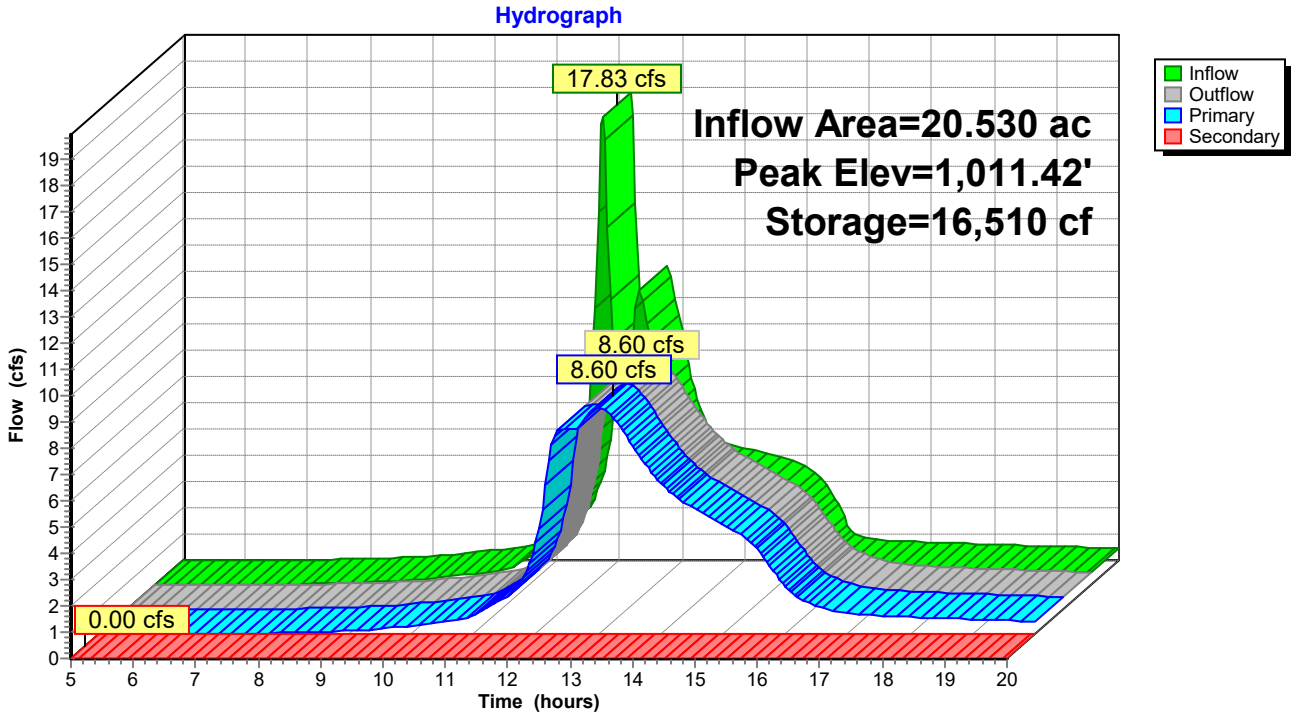
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
#1	Primary	1,010.00'	**28.0" W x 18.0" H, R=14.7"/40.7" Pipe Arch Culvert** L= 148.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,010.00' / 1,009.60' S= 0.0027 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 2.76 sf
#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.60 cfs @ 13.01 hrs HW=1,011.42' (Free Discharge)
1=Culvert (Barrel Controls 8.60 cfs @ 3.93 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,010.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 12P: CSAH 12 E Ditch



Summary for Pond 23P: Metcon Addn Pond

Inflow Area = 15.030 ac, 70.28% Impervious, Inflow Depth > 2.10" for 2-Year event
Inflow = 51.90 cfs @ 12.15 hrs, Volume= 2.633 af
Outflow = 6.45 cfs @ 12.62 hrs, Volume= 2.118 af, Atten= 88%, Lag= 28.4 min
Primary = 6.45 cfs @ 12.62 hrs, Volume= 2.118 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,012.32' @ 12.62 hrs Surf.Area= 56,574 sf Storage= 68,509 cf

Plug-Flow detention time= 164.7 min calculated for 2.118 af (80% of inflow)
Center-of-Mass det. time= 121.1 min (885.7 - 764.6)

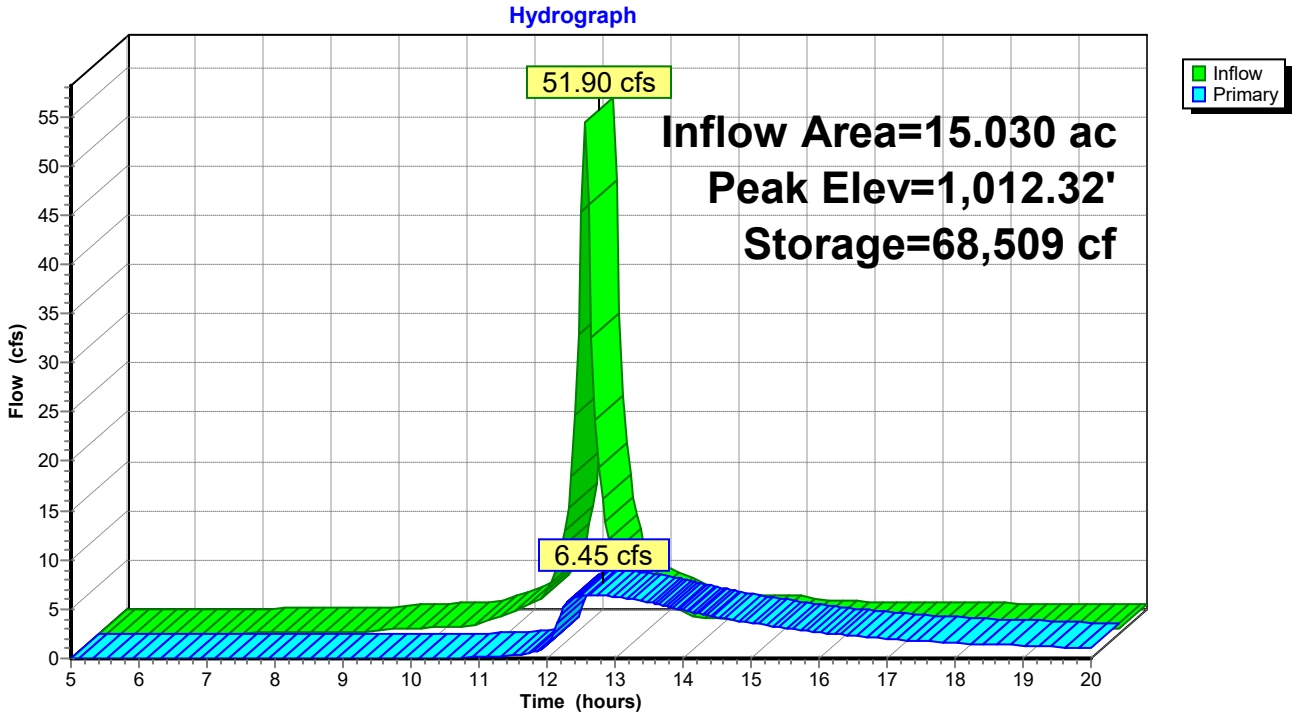
Volume	Invert	Avail.Storage	Storage Description
#1	1,011.00'	325,258 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.00	47,057	0	0
1,016.00	83,046	325,258	325,258

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.00'	**18.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.00' / 1,010.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Device 1	1,008.00'	**18.0" Round Culvert** L= 30.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,008.00' / 1,008.00' S= 0.0000 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf

Primary OutFlow Max=6.45 cfs @ 12.62 hrs HW=1,012.32' (Free Discharge)
↑**1=Culvert** (Inlet Controls 6.45 cfs @ 3.91 fps)
↑**2=Culvert** (Passes 6.45 cfs of 9.78 cfs potential flow)

Pond 23P: Metcon Addn Pond



Summary for Pond 25P: Trail Culvert Basin

Inflow Area = 0.900 ac, 0.00% Impervious, Inflow Depth > 1.13" for 2-Year event
Inflow = 2.25 cfs @ 12.05 hrs, Volume= 0.085 af
Outflow = 1.54 cfs @ 12.11 hrs, Volume= 0.085 af, Atten= 32%, Lag= 3.3 min
Primary = 1.54 cfs @ 12.11 hrs, Volume= 0.085 af
Routed to Pond 27P : CSAH 12 E Ditch
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,012.26' @ 12.11 hrs Surf.Area= 993 sf Storage= 476 cf

Plug-Flow detention time= 4.5 min calculated for 0.085 af (100% of inflow)
Center-of-Mass det. time= 3.9 min (792.4 - 788.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	12,717 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

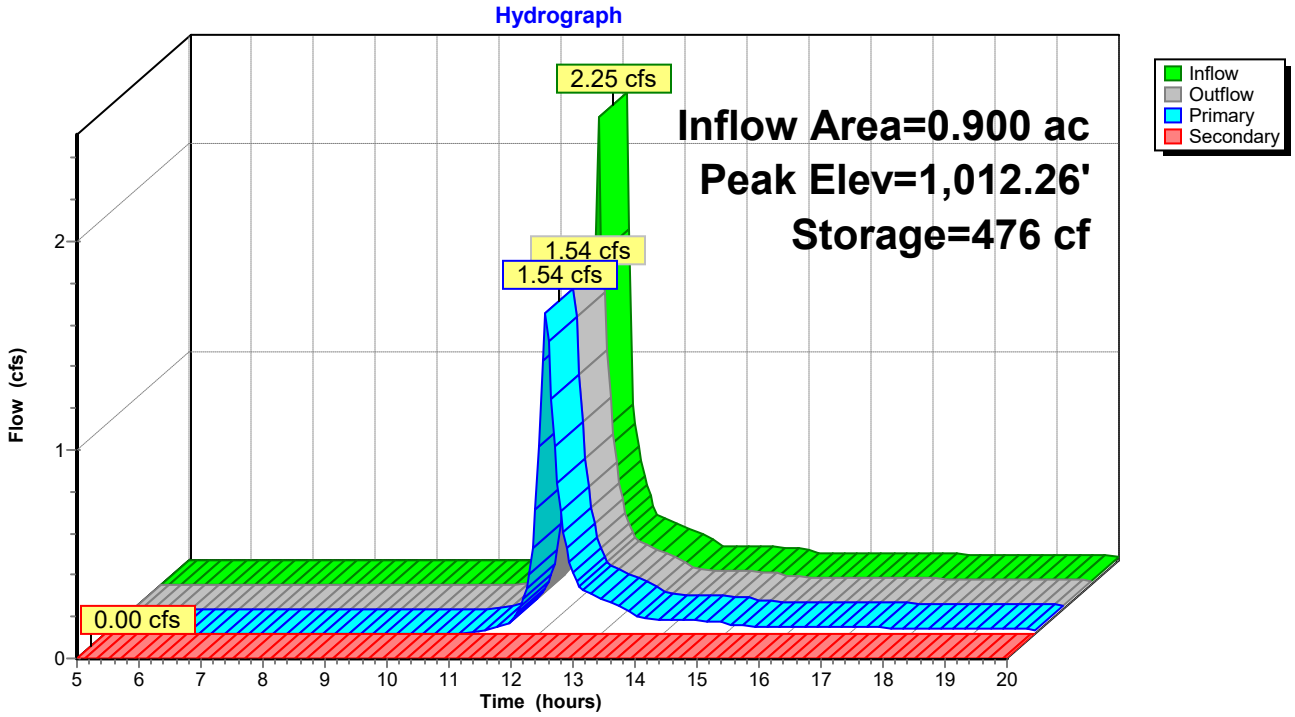
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	5,033	3,398	4,897
1,015.00	10,608	7,821	12,717

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=1.52 cfs @ 12.11 hrs HW=1,012.25' (Free Discharge)
1=Culvert (Barrel Controls 1.52 cfs @ 2.54 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,011.30' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 25P: Trail Culvert Basin



Summary for Pond 27P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 62.65% Impervious, Inflow Depth > 1.76" for 2-Year event
Inflow = 20.20 cfs @ 12.17 hrs, Volume= 3.009 af
Outflow = 8.94 cfs @ 12.61 hrs, Volume= 2.970 af, Atten= 56%, Lag= 26.1 min
Primary = 8.94 cfs @ 12.61 hrs, Volume= 2.970 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,011.46' @ 12.61 hrs Surf.Area= 21,602 sf Storage= 17,509 cf

Plug-Flow detention time= 27.3 min calculated for 2.970 af (99% of inflow)
Center-of-Mass det. time= 22.9 min (873.8 - 850.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

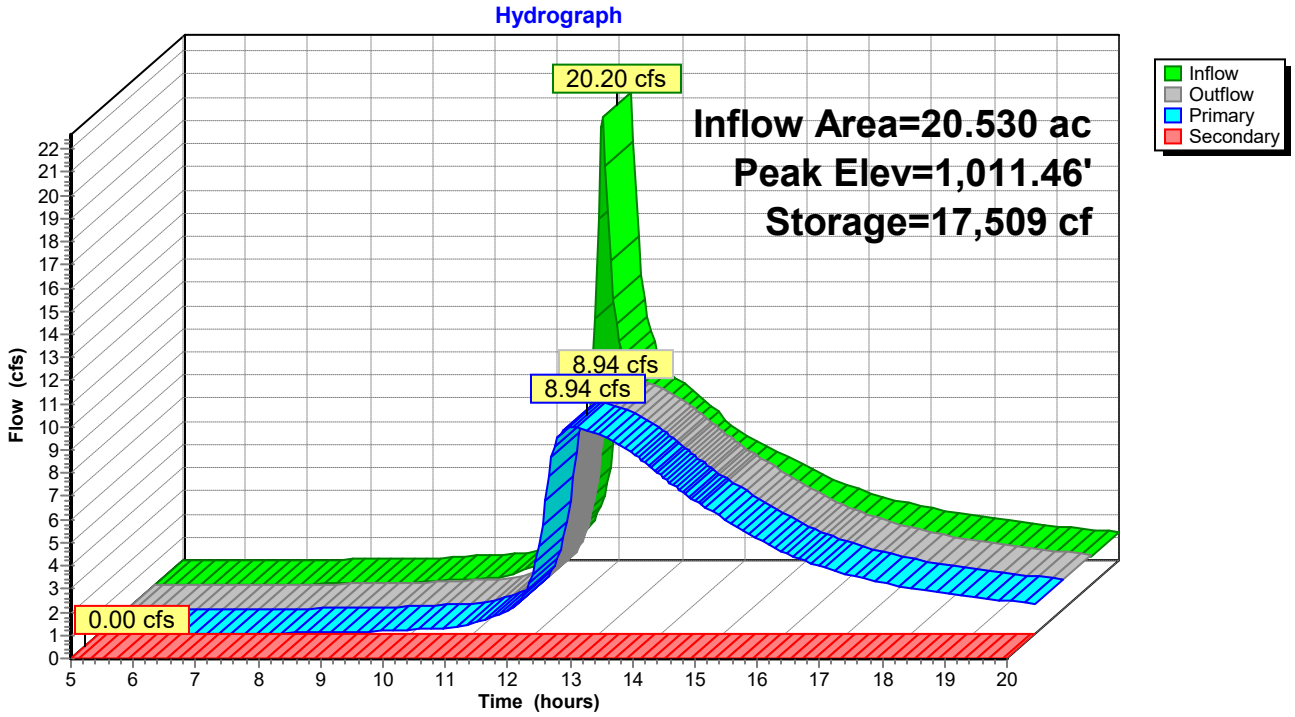
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
#1	Primary	1,010.00'	**28.0" W x 18.0" H, R=14.7"/40.7" Pipe Arch Culvert** L= 148.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,010.00' / 1,009.60' S= 0.0027 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 2.76 sf
#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=8.94 cfs @ 12.61 hrs HW=1,011.46' (Free Discharge)
1=Culvert (Barrel Controls 8.94 cfs @ 3.97 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,010.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 27P: CSAH 12 E Ditch



Summary for Subcatchment 1S: SE Wetland WS

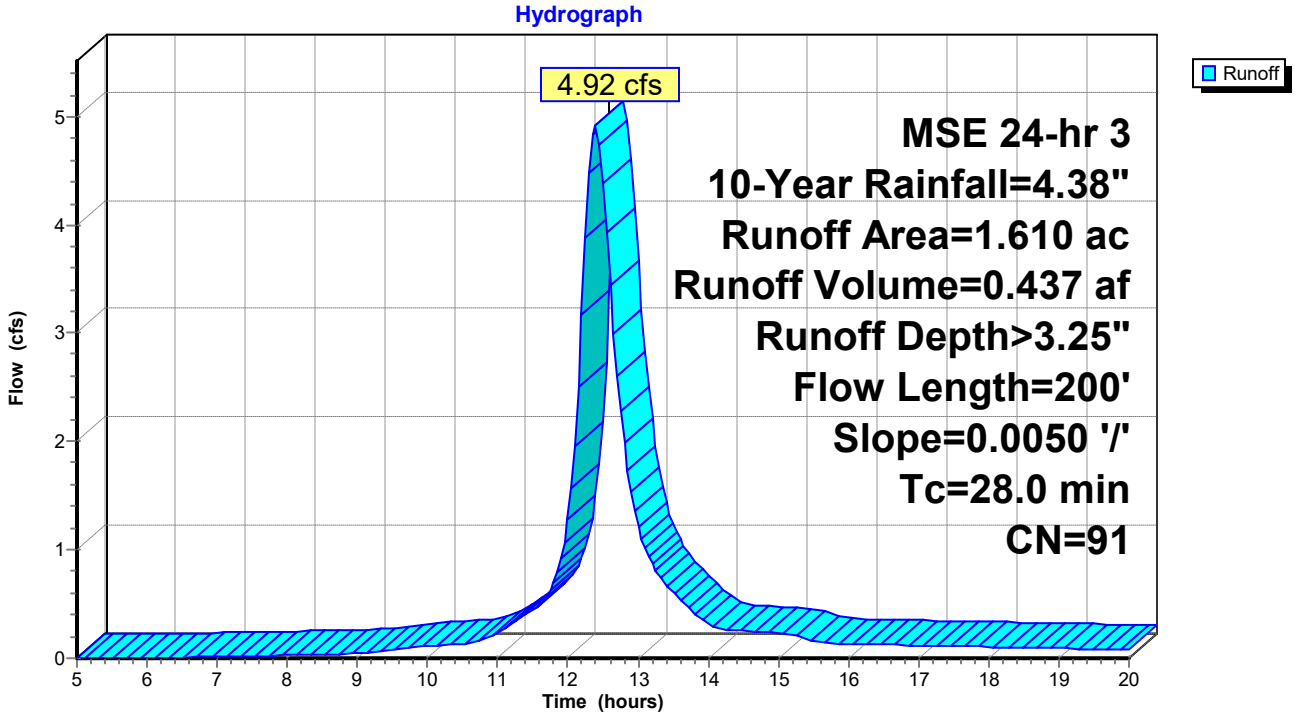
Runoff = 4.92 cfs @ 12.39 hrs, Volume= 0.437 af, Depth> 3.25"
Routed to Pond 2P : SE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
1.610	91	Row crops, straight row, Poor, HSG D
1.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"

Subcatchment 1S: SE Wetland WS



Summary for Subcatchment 4S: NE Wetland WS

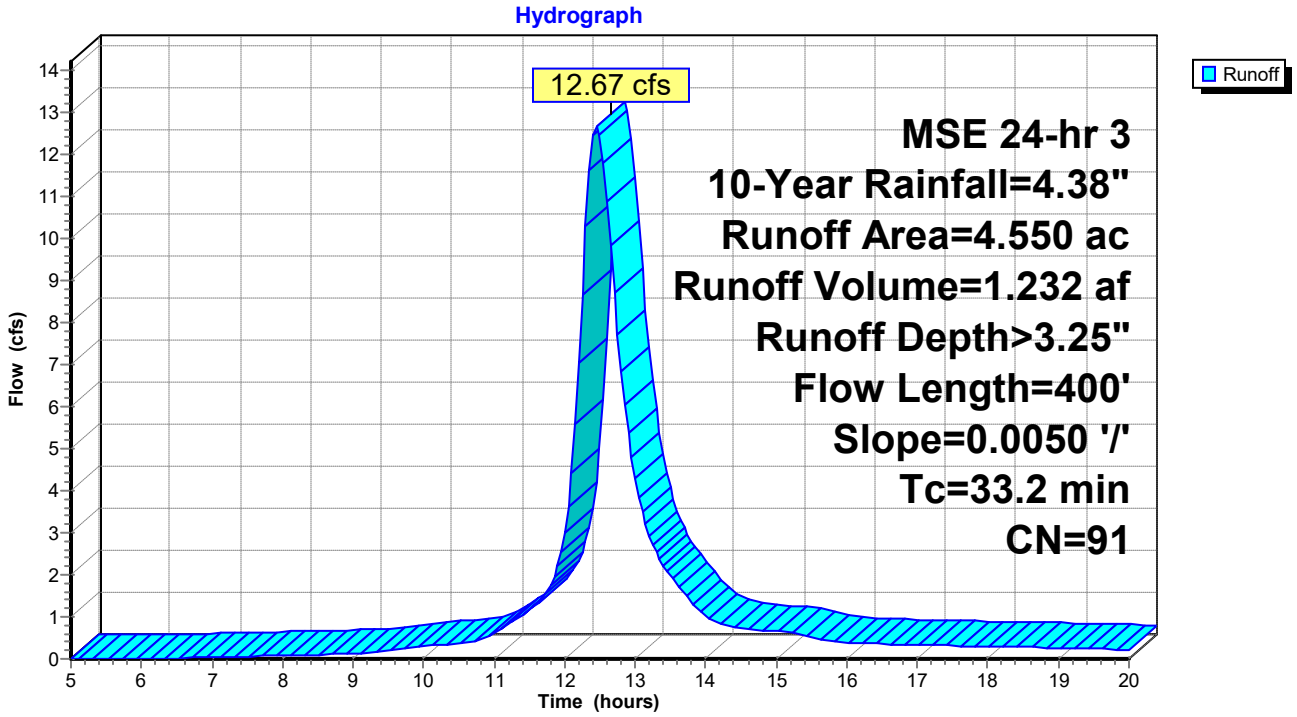
Runoff = 12.67 cfs @ 12.45 hrs, Volume= 1.232 af, Depth> 3.25"
Routed to Pond 5P : NE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
4.190	91	Row crops, straight row, Poor, HSG D
0.360	86	Farmsteads, HSG D
4.550	91	Weighted Average
4.550		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
5.2	200	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
33.2	400	Total			

Subcatchment 4S: NE Wetland WS



Summary for Subcatchment 6S: NW Wetland WS

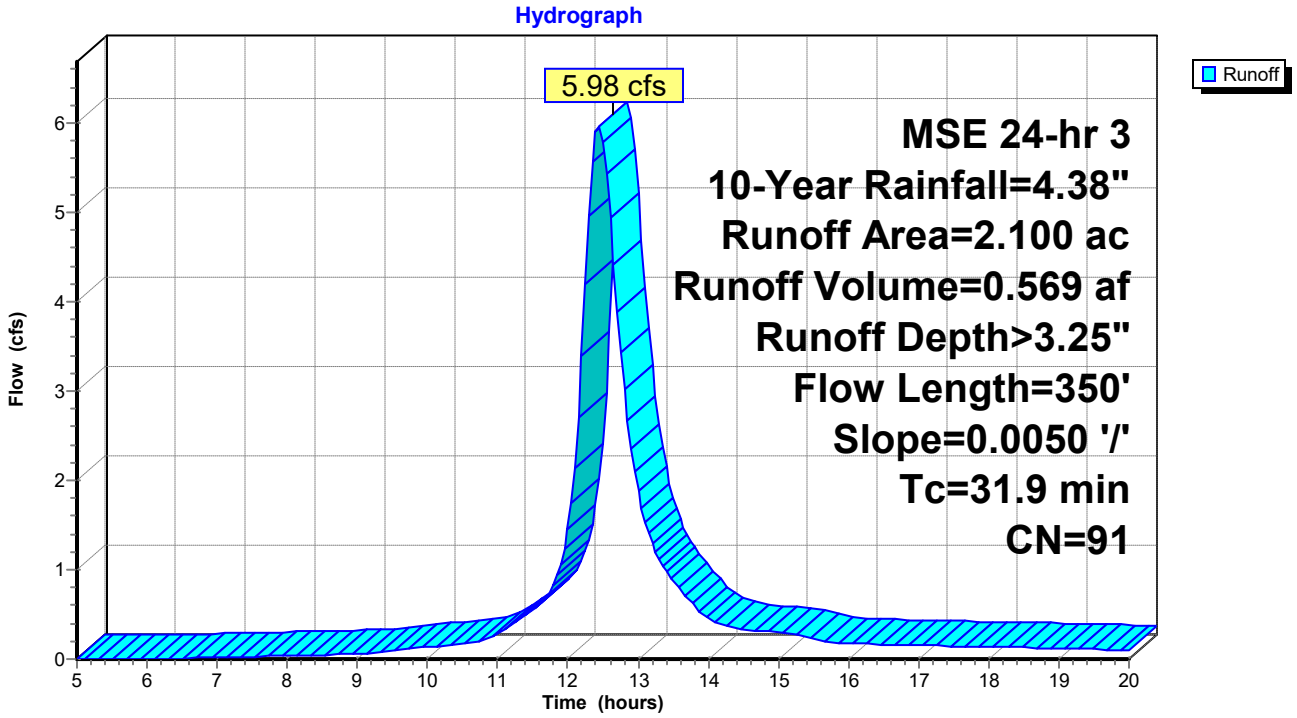
Runoff = 5.98 cfs @ 12.44 hrs, Volume= 0.569 af, Depth> 3.25"
Routed to Pond 7P : NW Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
2.100	91	Row crops, straight row, Poor, HSG D
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
3.9	150	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.9	350	Total			

Subcatchment 6S: NW Wetland WS



Summary for Subcatchment 9S: Trail Berm WS

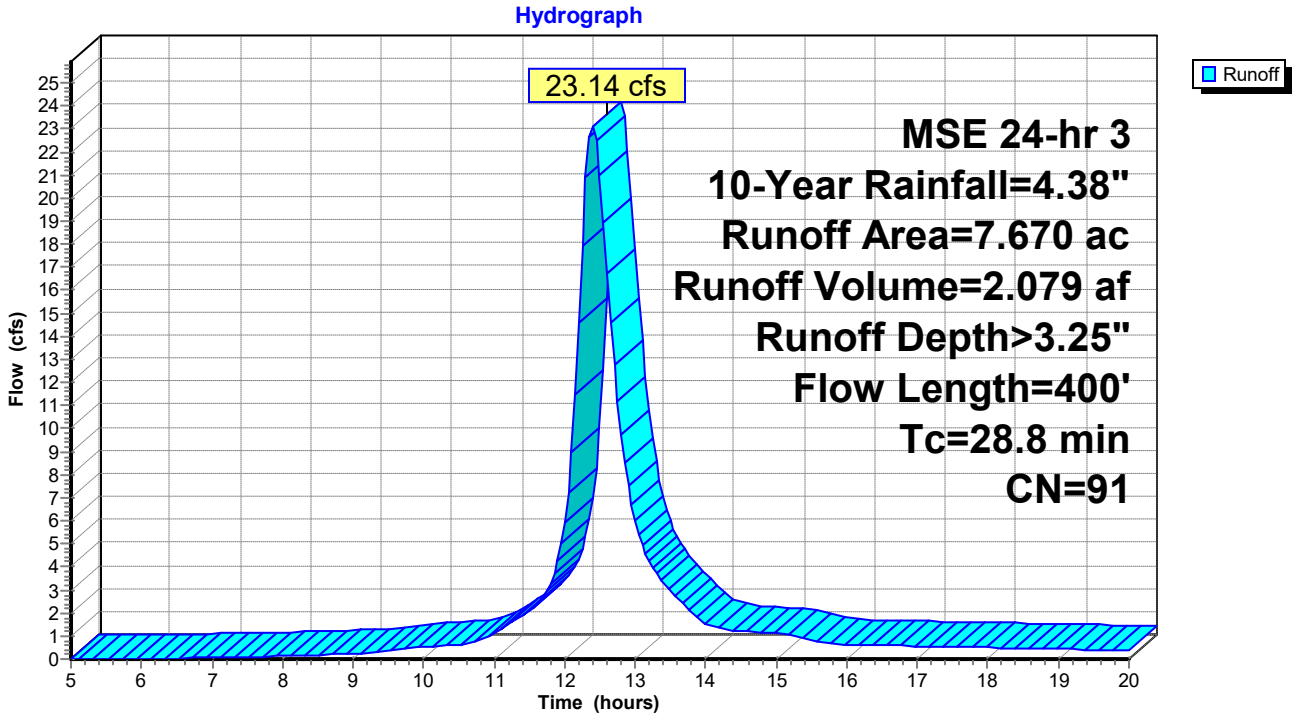
Runoff = 23.14 cfs @ 12.40 hrs, Volume= 2.079 af, Depth> 3.25"
Routed to Pond 10P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
7.670	91	Row crops, straight row, Poor, HSG D
7.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	200	0.0050	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 4.40"
16.6	200	0.0005	0.20		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
28.8	400	Total			

Subcatchment 9S: Trail Berm WS



Summary for Subcatchment 11S: CSAH 12 East

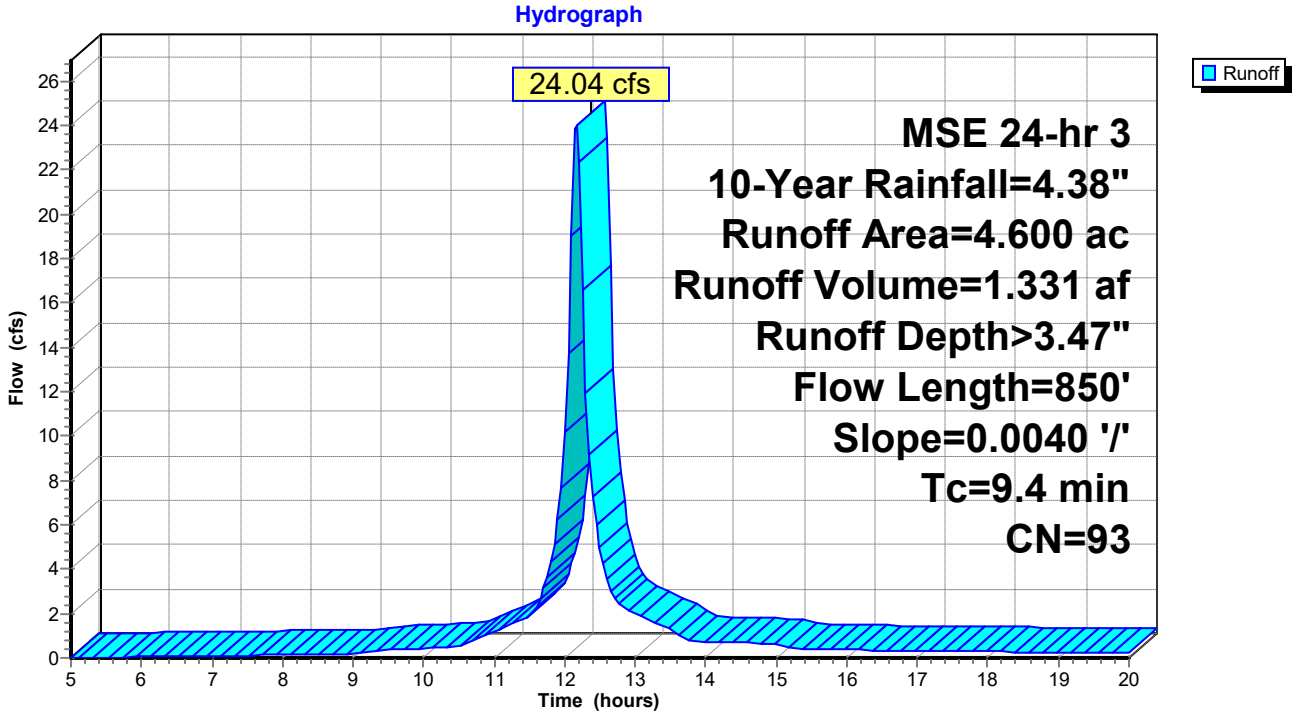
Runoff = 24.04 cfs @ 12.16 hrs, Volume= 1.331 af, Depth> 3.47"
Routed to Pond 12P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 11S: CSAH 12 East



Summary for Subcatchment 22S: Des WS

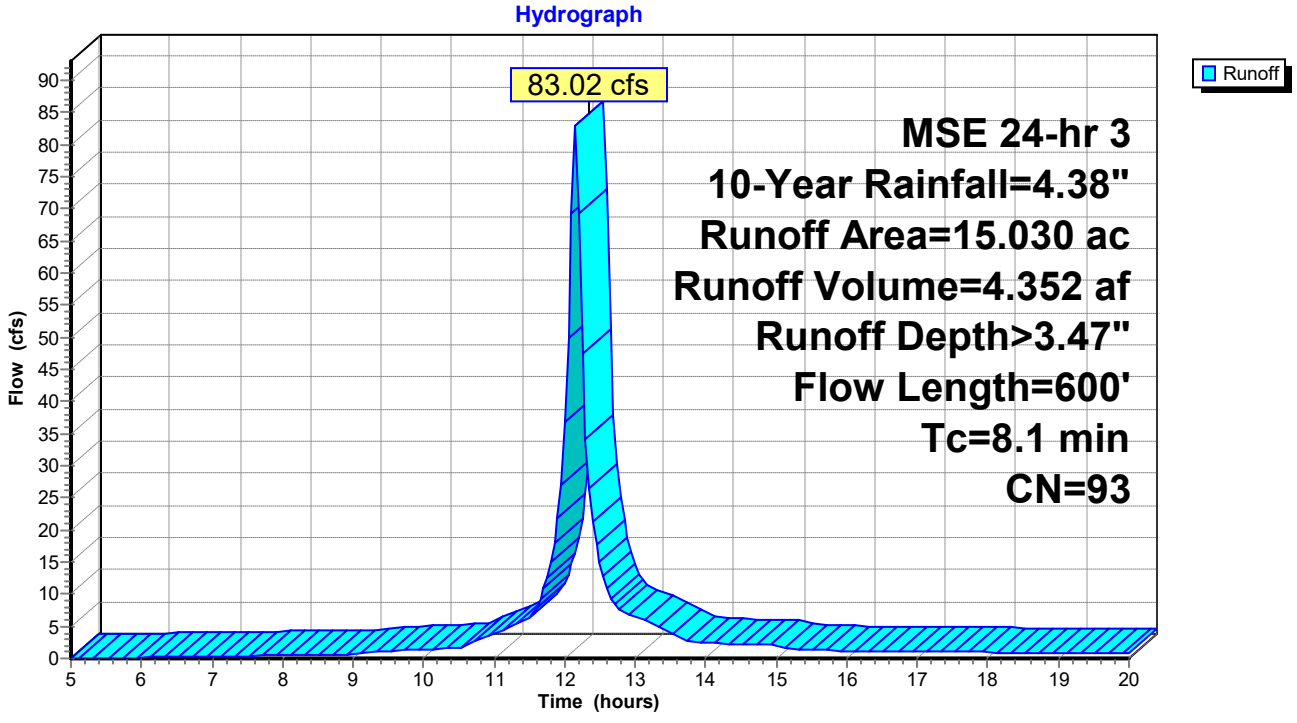
Runoff = 83.02 cfs @ 12.15 hrs, Volume= 4.352 af, Depth> 3.47"
Routed to Pond 23P : Metcon Addn Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
14.670	93	Urban industrial, 72% imp, HSG D
0.360	86	Farmsteads, HSG D
15.030	93	Weighted Average
4.468		29.72% Pervious Area
10.562		70.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	200	0.0200	1.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.40"
6.3	400	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.1	600	Total			

Subcatchment 22S: Des WS



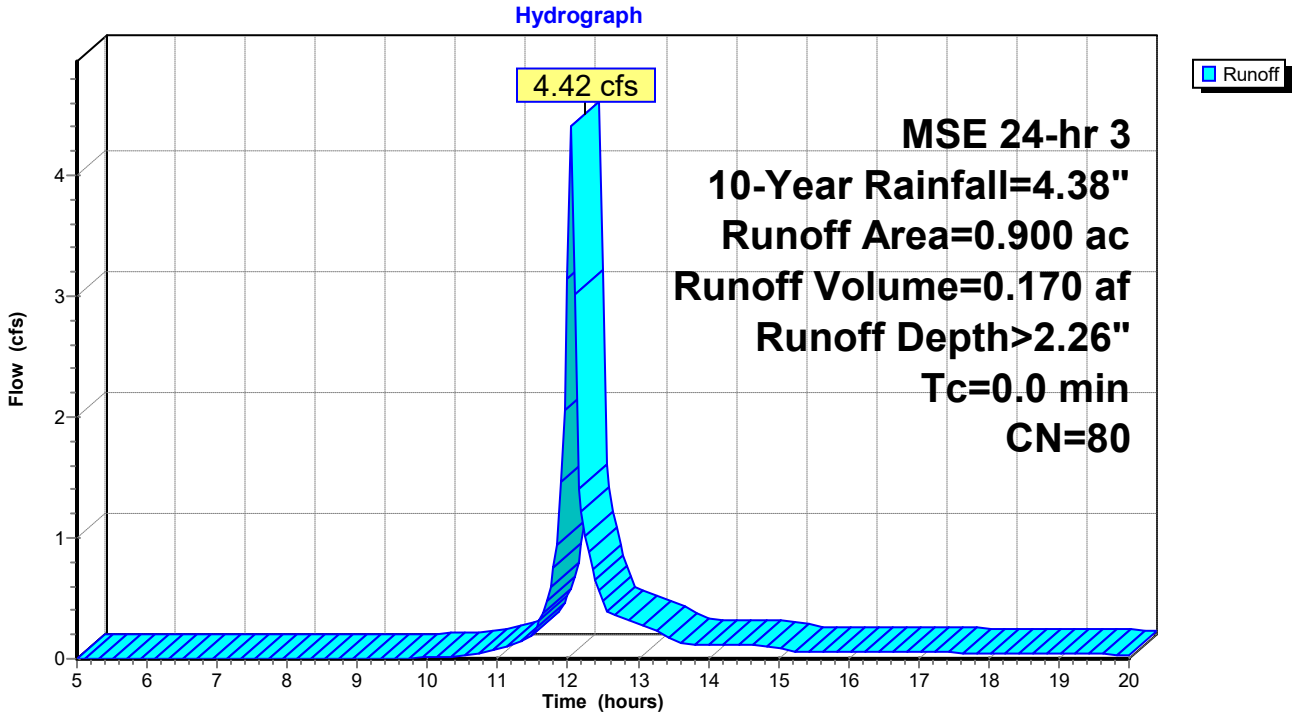
Summary for Subcatchment 24S: Trail Berm WS

Runoff = 4.42 cfs @ 12.05 hrs, Volume= 0.170 af, Depth> 2.26"
Routed to Pond 25P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.900		100.00% Pervious Area

Subcatchment 24S: Trail Berm WS



Summary for Subcatchment 26S: CSAH 12 East

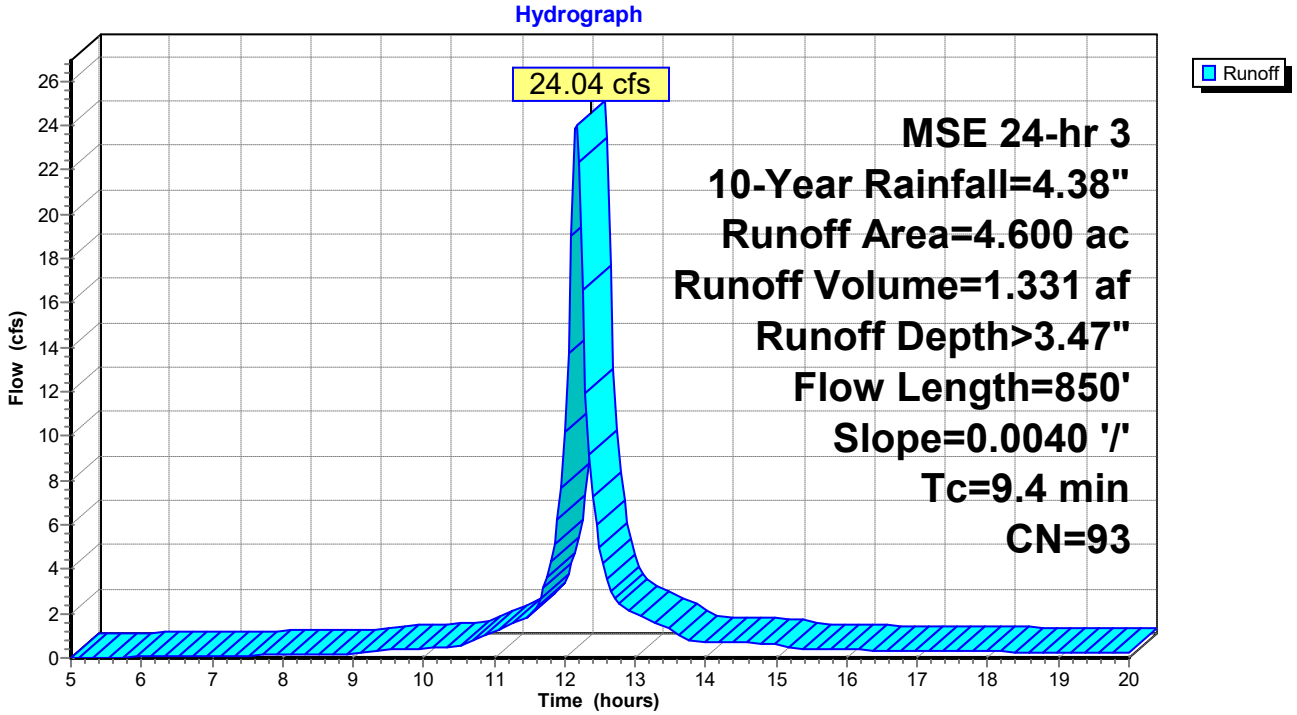
Runoff = 24.04 cfs @ 12.16 hrs, Volume= 1.331 af, Depth> 3.47"
Routed to Pond 27P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 10-Year Rainfall=4.38"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 26S: CSAH 12 East



Summary for Reach 3R: S Trail Berm

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth > 0.37" for 10-Year event
Inflow = 0.15 cfs @ 15.57 hrs, Volume= 0.049 af
Outflow = 0.15 cfs @ 16.20 hrs, Volume= 0.044 af, Atten= 4%, Lag= 37.9 min
Routed to Pond 10P : Trail Culvert Basin

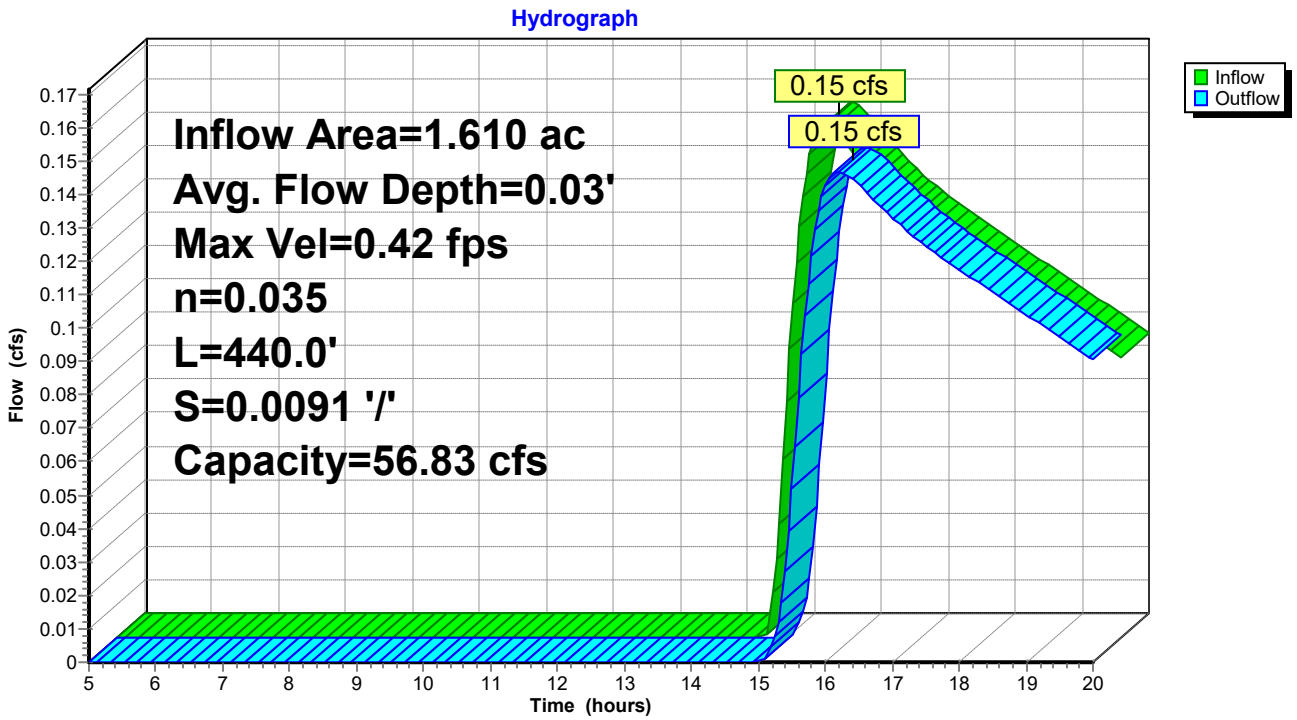
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 0.42 fps, Min. Travel Time= 17.4 min
Avg. Velocity = 0.37 fps, Avg. Travel Time= 20.0 min

Peak Storage= 153 cf @ 15.91 hrs
Average Depth at Peak Storage= 0.03' , Surface Width= 10.54'
Bank-Full Depth= 1.00' Flow Area= 18.0 sf, Capacity= 56.83 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 26.00'
Length= 440.0' Slope= 0.0091 '/'
Inlet Invert= 1,016.00', Outlet Invert= 1,012.00'



‡



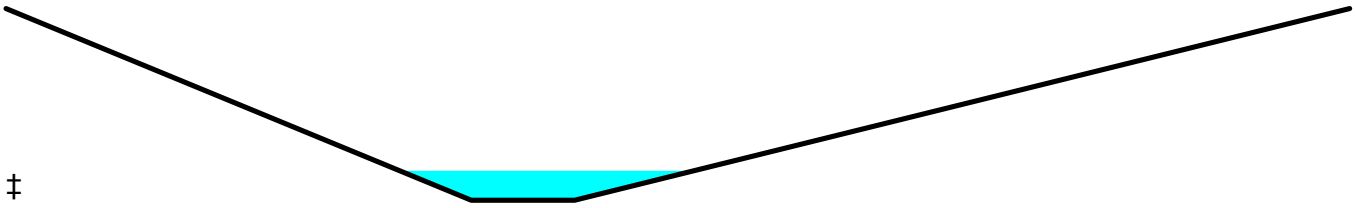
Summary for Reach 8R: W Trail Berm

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 1.69" for 10-Year event
Inflow = 5.82 cfs @ 12.50 hrs, Volume= 0.937 af
Outflow = 5.36 cfs @ 12.75 hrs, Volume= 0.923 af, Atten= 8%, Lag= 14.9 min
Routed to Pond 10P : Trail Culvert Basin

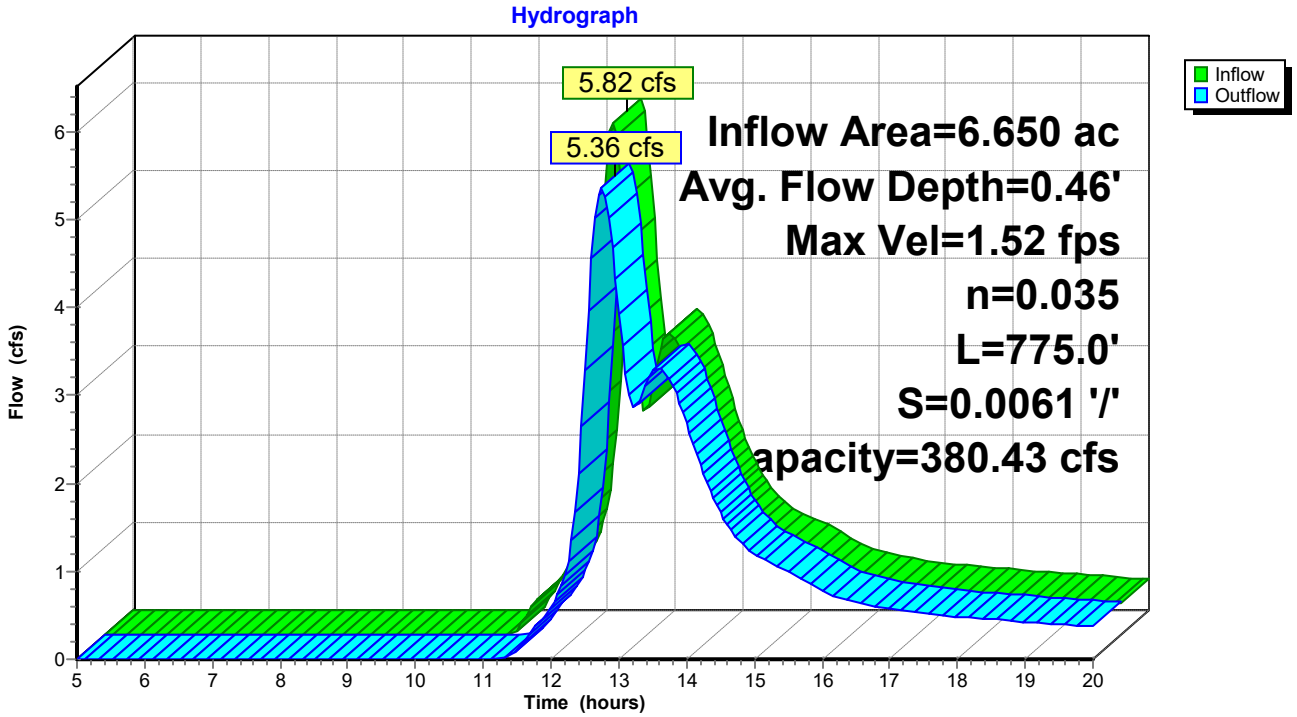
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.52 fps, Min. Travel Time= 8.5 min
Avg. Velocity = 0.91 fps, Avg. Travel Time= 14.2 min

Peak Storage= 2,749 cf @ 12.60 hrs
Average Depth at Peak Storage= 0.46' , Surface Width= 11.38'
Bank-Full Depth= 3.00' Flow Area= 84.0 sf, Capacity= 380.43 cfs

4.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 52.00'
Length= 775.0' Slope= 0.0061 '/'
Inlet Invert= 1,016.70', Outlet Invert= 1,012.00'



‡



Summary for Pond 2P: SE Wetland

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth > 3.25" for 10-Year event
Inflow = 4.92 cfs @ 12.39 hrs, Volume= 0.437 af
Outflow = 0.15 cfs @ 15.57 hrs, Volume= 0.049 af, Atten= 97%, Lag= 191.0 min
Primary = 0.15 cfs @ 15.57 hrs, Volume= 0.049 af
Routed to Reach 3R : S Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.91' @ 15.57 hrs Surf.Area= 51,771 sf Storage= 16,998 cf

Plug-Flow detention time= 397.6 min calculated for 0.049 af (11% of inflow)
Center-of-Mass det. time= 257.7 min (1,035.9 - 778.2)

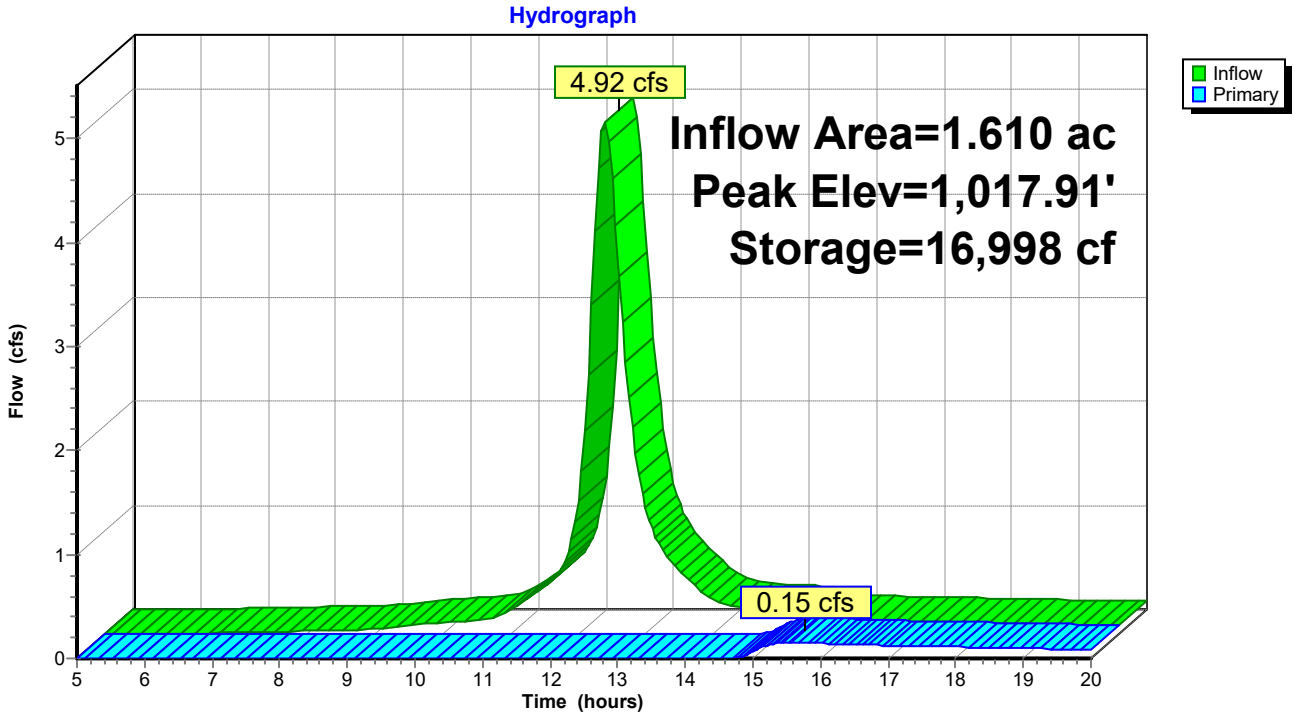
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.25'	22,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.25	0	0	0
1,018.00	59,130	22,174	22,174

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.90'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.14 cfs @ 15.57 hrs HW=1,017.91' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 0.14 cfs @ 0.20 fps)

Pond 2P: SE Wetland



Summary for Pond 5P: NE Wetland

Inflow Area = 4.550 ac, 0.00% Impervious, Inflow Depth > 3.25" for 10-Year event
Inflow = 12.67 cfs @ 12.45 hrs, Volume= 1.232 af
Outflow = 2.36 cfs @ 13.36 hrs, Volume= 0.404 af, Atten= 81%, Lag= 54.3 min
Primary = 2.36 cfs @ 13.36 hrs, Volume= 0.404 af
Routed to Pond 7P : NW Wetland

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.61' @ 13.36 hrs Surf.Area= 58,140 sf Storage= 38,528 cf

Plug-Flow detention time= 204.5 min calculated for 0.404 af (33% of inflow)
Center-of-Mass det. time= 123.8 min (906.3 - 782.5)

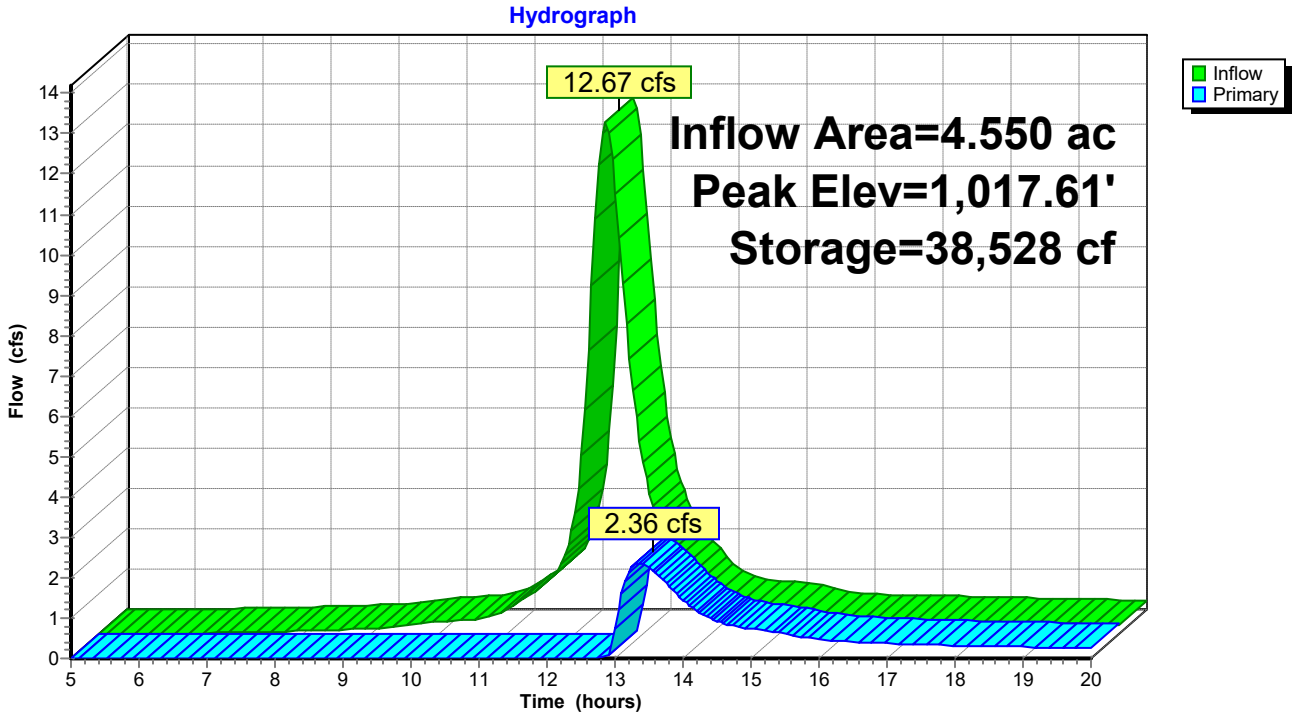
Volume	Invert	Avail.Storage	Storage Description
#1	1,016.00'	65,093 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,016.00	0	0	0
1,017.00	25,742	12,871	12,871
1,018.00	78,702	52,222	65,093

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.56'	**75.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=2.32 cfs @ 13.36 hrs HW=1,017.61' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 2.32 cfs @ 0.56 fps)

Pond 5P: NE Wetland



Summary for Pond 7P: NW Wetland

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 1.75" for 10-Year event
Inflow = 5.98 cfs @ 12.44 hrs, Volume= 0.972 af
Outflow = 5.82 cfs @ 12.50 hrs, Volume= 0.937 af, Atten= 3%, Lag= 3.5 min
Primary = 5.82 cfs @ 12.50 hrs, Volume= 0.937 af
Routed to Reach 8R : W Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.25' @ 12.50 hrs Surf.Area= 22,937 sf Storage= 2,849 cf

Plug-Flow detention time= 24.4 min calculated for 0.937 af (96% of inflow)
Center-of-Mass det. time= 12.3 min (845.5 - 833.2)

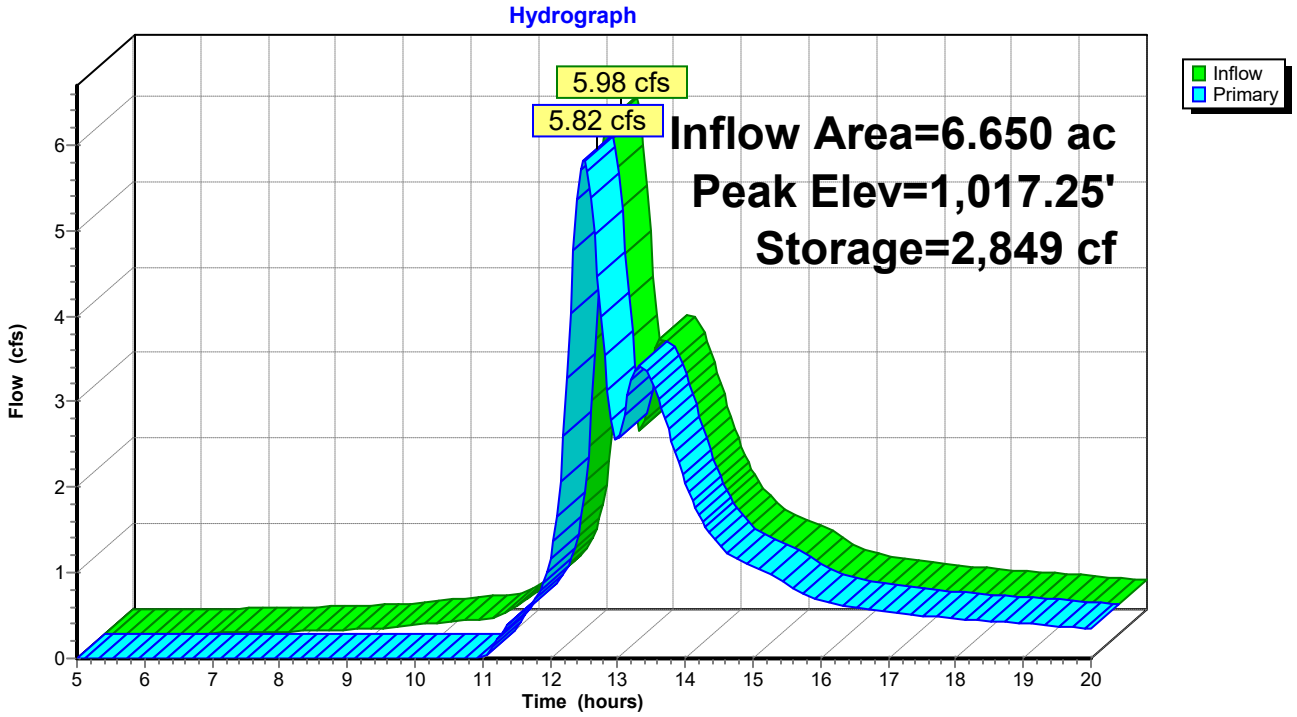
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.00'	46,162 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.00	0	0	0
1,018.00	92,324	46,162	46,162

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.17'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=5.81 cfs @ 12.50 hrs HW=1,017.25' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 5.81 cfs @ 0.69 fps)

Pond 7P: NW Wetland



Summary for Pond 10P: Trail Culvert Basin

Inflow Area = 15.930 ac, 0.00% Impervious, Inflow Depth > 2.30" for 10-Year event
Inflow = 25.33 cfs @ 12.42 hrs, Volume= 3.047 af
Outflow = 23.98 cfs @ 12.52 hrs, Volume= 3.042 af, Atten= 5%, Lag= 6.2 min
Primary = 4.12 cfs @ 12.52 hrs, Volume= 2.057 af
Routed to Pond 12P : CSAH 12 E Ditch
Secondary = 19.87 cfs @ 12.52 hrs, Volume= 0.985 af
Routed to Pond 12P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,014.72' @ 12.52 hrs Surf.Area= 26,395 sf Storage= 21,404 cf

Plug-Flow detention time= 29.3 min calculated for 3.032 af (99% of inflow)
Center-of-Mass det. time= 28.6 min (836.3 - 807.7)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	29,601 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

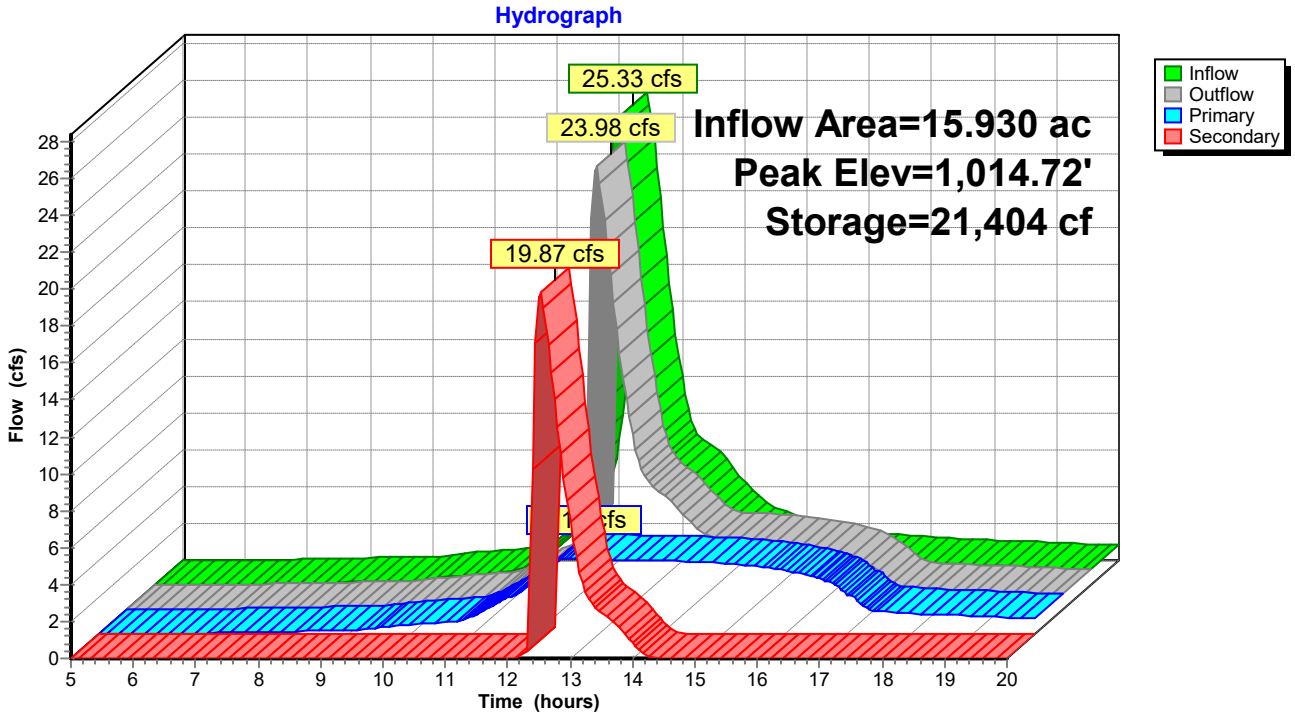
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	11,053	6,408	7,907
1,015.00	32,336	21,695	29,601

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=4.12 cfs @ 12.52 hrs HW=1,014.72' (Free Discharge)
1=Culvert (Barrel Controls 4.12 cfs @ 5.24 fps)

Secondary OutFlow Max=19.43 cfs @ 12.52 hrs HW=1,014.72' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 19.43 cfs @ 1.24 fps)

Pond 10P: Trail Culvert Basin



Summary for Pond 12P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 11.20% Impervious, Inflow Depth > 2.56" for 10-Year event
Inflow = 28.72 cfs @ 12.51 hrs, Volume= 4.373 af
Outflow = 13.68 cfs @ 12.99 hrs, Volume= 4.340 af, Atten= 52%, Lag= 29.0 min
Primary = 13.68 cfs @ 12.99 hrs, Volume= 4.340 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,012.49' @ 12.99 hrs Surf.Area= 31,981 sf Storage= 44,780 cf

Plug-Flow detention time= 36.8 min calculated for 4.340 af (99% of inflow)
Center-of-Mass det. time= 34.0 min (846.1 - 812.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

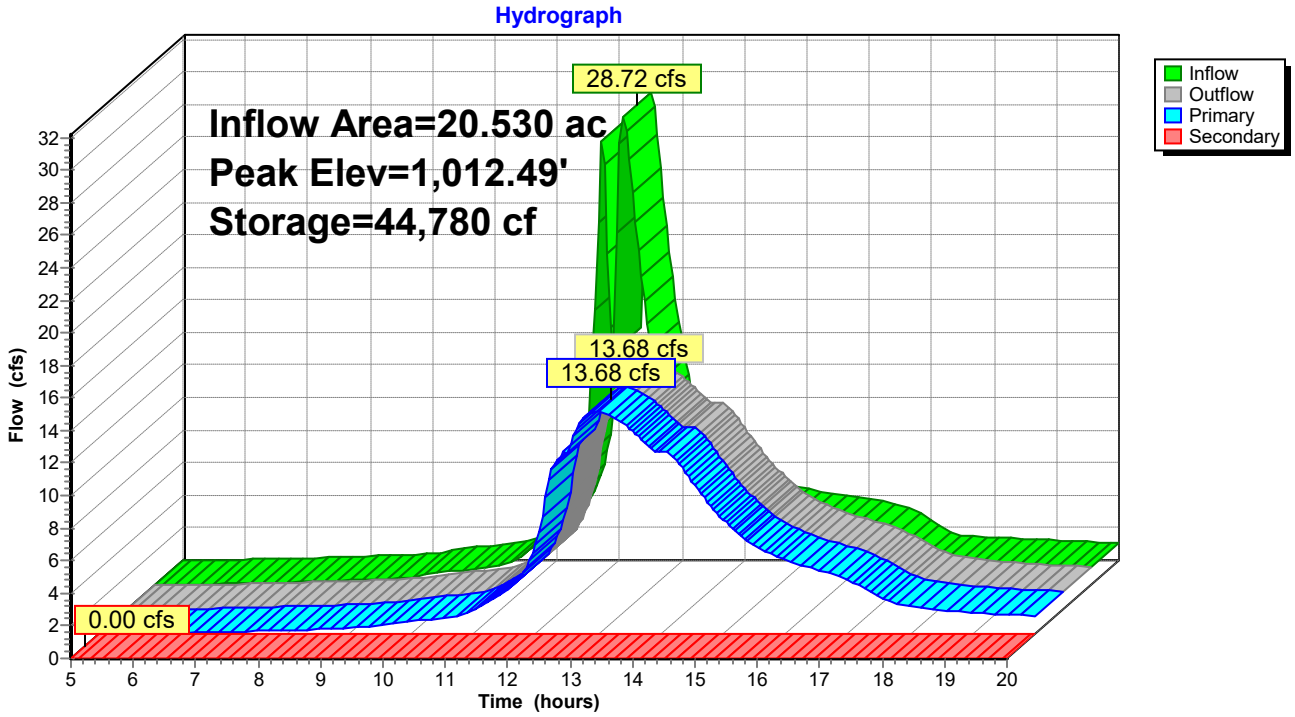
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
#1	Primary	1,010.00'	**28.0" W x 18.0" H, R=14.7"/40.7" Pipe Arch Culvert** L= 148.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,010.00' / 1,009.60' S= 0.0027 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 2.76 sf
#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=13.67 cfs @ 12.99 hrs HW=1,012.48' (Free Discharge)
1=Culvert (Barrel Controls 13.67 cfs @ 4.96 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,010.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 12P: CSAH 12 E Ditch



Summary for Pond 23P: Metcon Addn Pond

Inflow Area = 15.030 ac, 70.28% Impervious, Inflow Depth > 3.47" for 10-Year event
Inflow = 83.02 cfs @ 12.15 hrs, Volume= 4.352 af
Outflow = 9.75 cfs @ 12.64 hrs, Volume= 3.697 af, Atten= 88%, Lag= 29.2 min
Primary = 9.75 cfs @ 12.64 hrs, Volume= 3.697 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,013.07' @ 12.64 hrs Surf.Area= 61,990 sf Storage= 113,121 cf

Plug-Flow detention time= 165.0 min calculated for 3.685 af (85% of inflow)
Center-of-Mass det. time= 127.4 min (883.2 - 755.8)

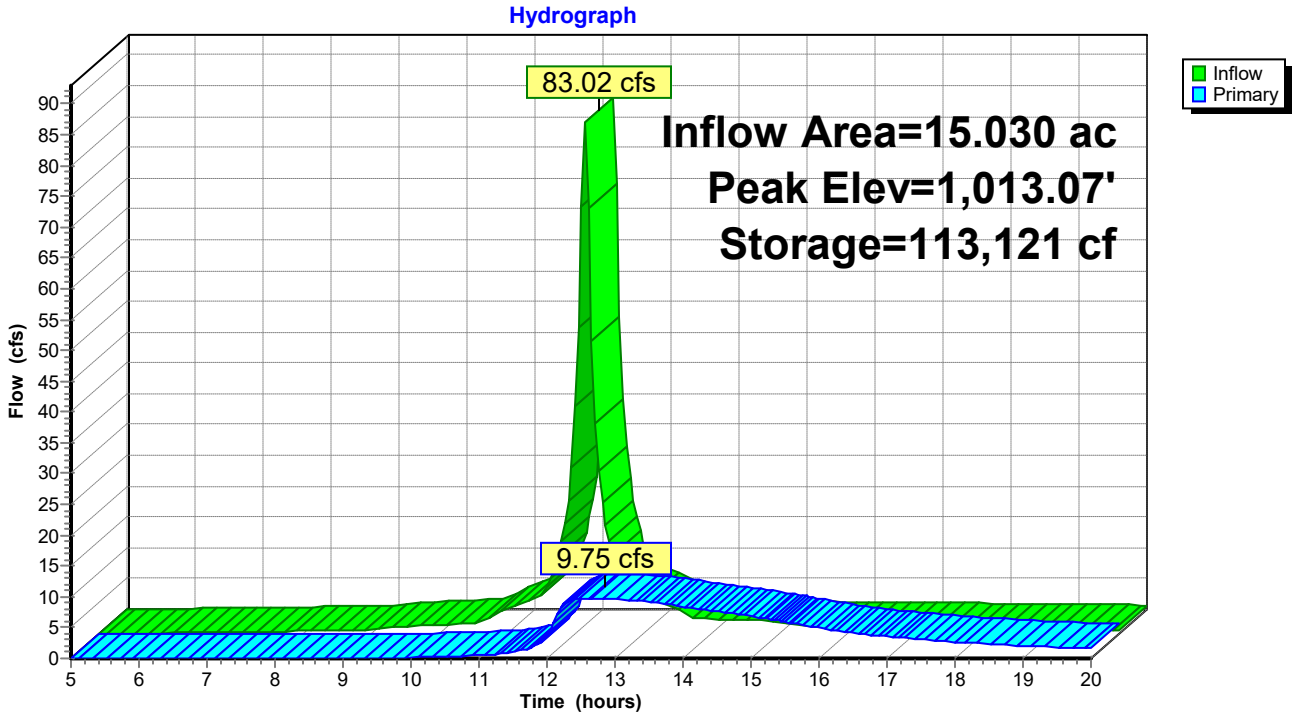
Volume	Invert	Avail.Storage	Storage Description
#1	1,011.00'	325,258 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.00	47,057	0	0
1,016.00	83,046	325,258	325,258

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.00'	**18.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.00' / 1,010.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Device 1	1,008.00'	**18.0" Round Culvert** L= 30.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,008.00' / 1,008.00' S= 0.0000 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf

Primary OutFlow Max=9.75 cfs @ 12.64 hrs HW=1,013.07' (Free Discharge)
↑**1=Culvert** (Barrel Controls 9.75 cfs @ 5.52 fps)
↑**2=Culvert** (Passes 9.75 cfs of 12.25 cfs potential flow)

Pond 23P: Metcon Addn Pond



Summary for Pond 25P: Trail Culvert Basin

Inflow Area = 0.900 ac, 0.00% Impervious, Inflow Depth > 2.26" for 10-Year event
Inflow = 4.42 cfs @ 12.05 hrs, Volume= 0.170 af
Outflow = 2.29 cfs @ 12.12 hrs, Volume= 0.170 af, Atten= 48%, Lag= 4.5 min
Primary = 2.29 cfs @ 12.12 hrs, Volume= 0.170 af
Routed to Pond 27P : CSAH 12 E Ditch
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,012.84' @ 12.12 hrs Surf.Area= 1,600 sf Storage= 1,235 cf

Plug-Flow detention time= 5.5 min calculated for 0.169 af (100% of inflow)
Center-of-Mass det. time= 5.0 min (782.0 - 777.0)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	12,717 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

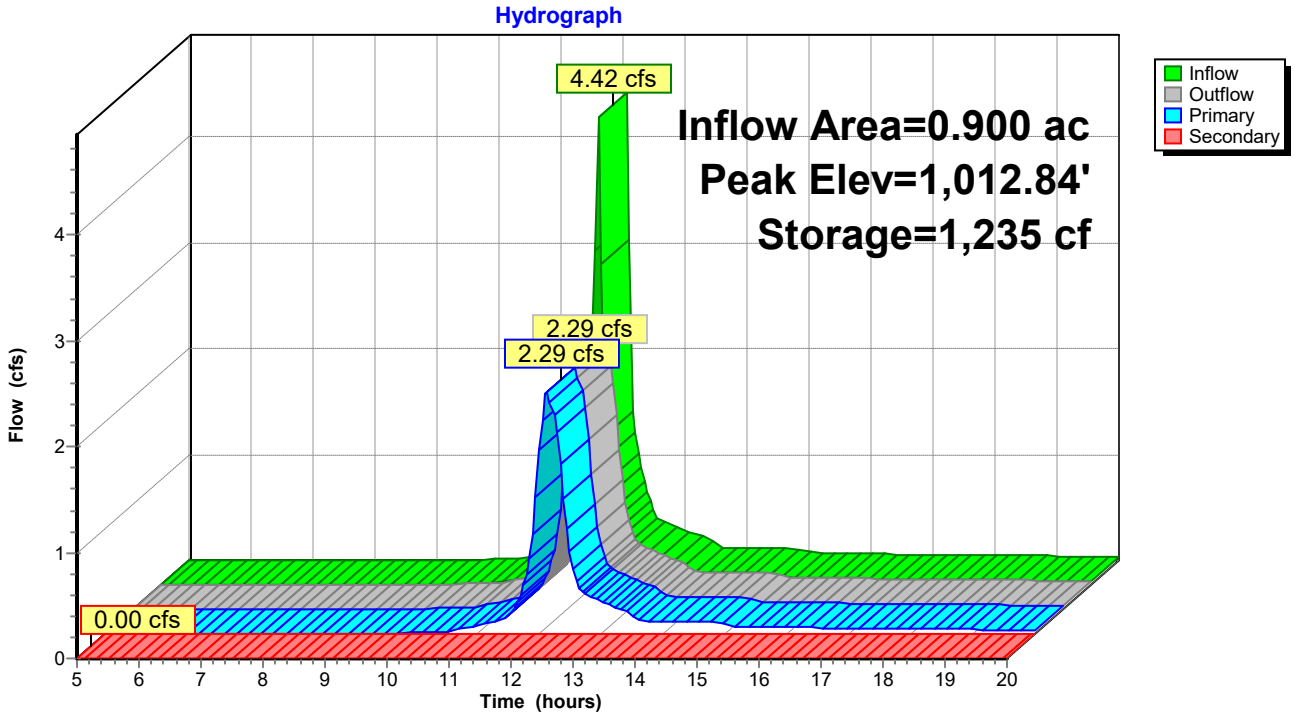
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	5,033	3,398	4,897
1,015.00	10,608	7,821	12,717

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=2.26 cfs @ 12.12 hrs HW=1,012.82' (Free Discharge)
1=Culvert (Barrel Controls 2.26 cfs @ 2.88 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,011.30' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 25P: Trail Culvert Basin



Summary for Pond 27P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 62.65% Impervious, Inflow Depth > 3.04" for 10-Year event
Inflow = 33.76 cfs @ 12.17 hrs, Volume= 5.198 af
Outflow = 12.04 cfs @ 12.95 hrs, Volume= 5.134 af, Atten= 64%, Lag= 47.0 min
Primary = 12.04 cfs @ 12.95 hrs, Volume= 5.134 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,012.17' @ 12.95 hrs Surf.Area= 28,677 sf Storage= 35,343 cf

Plug-Flow detention time= 36.6 min calculated for 5.134 af (99% of inflow)
Center-of-Mass det. time= 32.3 min (879.9 - 847.5)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

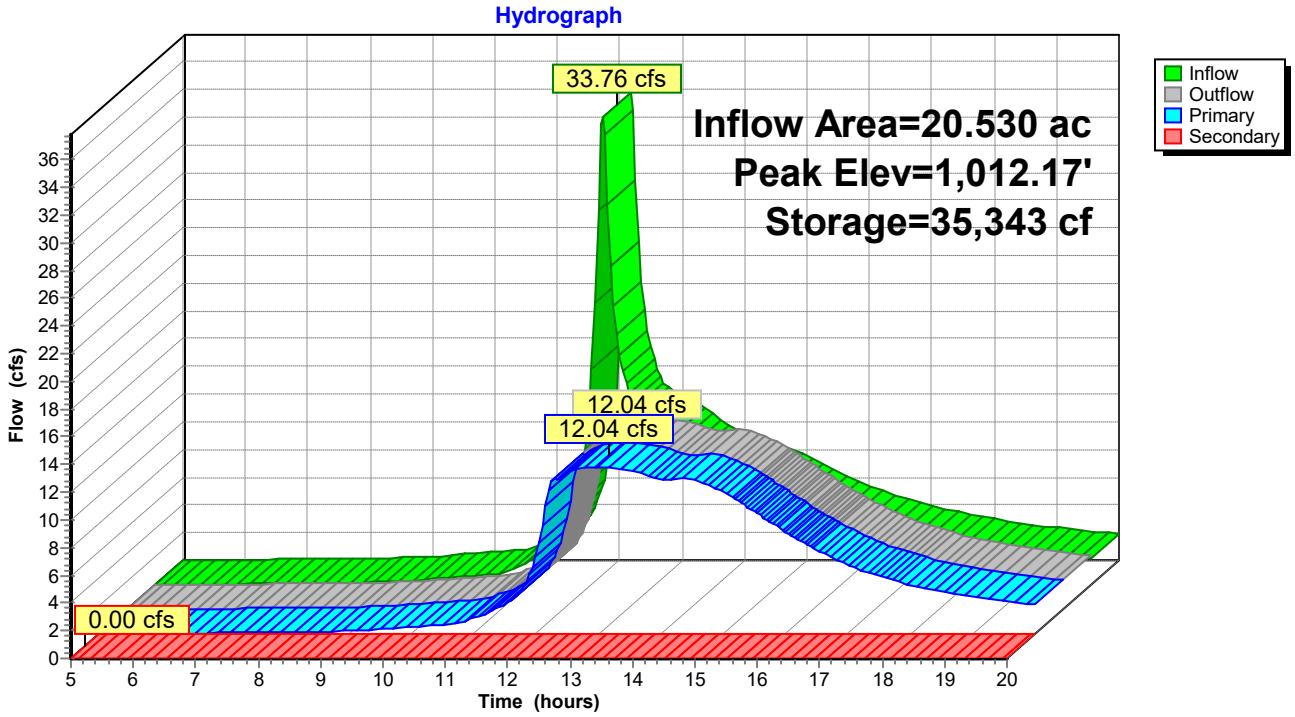
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
#1	Primary	1,010.00'	**28.0" W x 18.0" H, R=14.7"/40.7" Pipe Arch Culvert** L= 148.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,010.00' / 1,009.60' S= 0.0027 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 2.76 sf
#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=12.04 cfs @ 12.95 hrs HW=1,012.17' (Free Discharge)
1=Culvert (Barrel Controls 12.04 cfs @ 4.36 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,010.00' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 27P: CSAH 12 E Ditch



Summary for Subcatchment 1S: SE Wetland WS

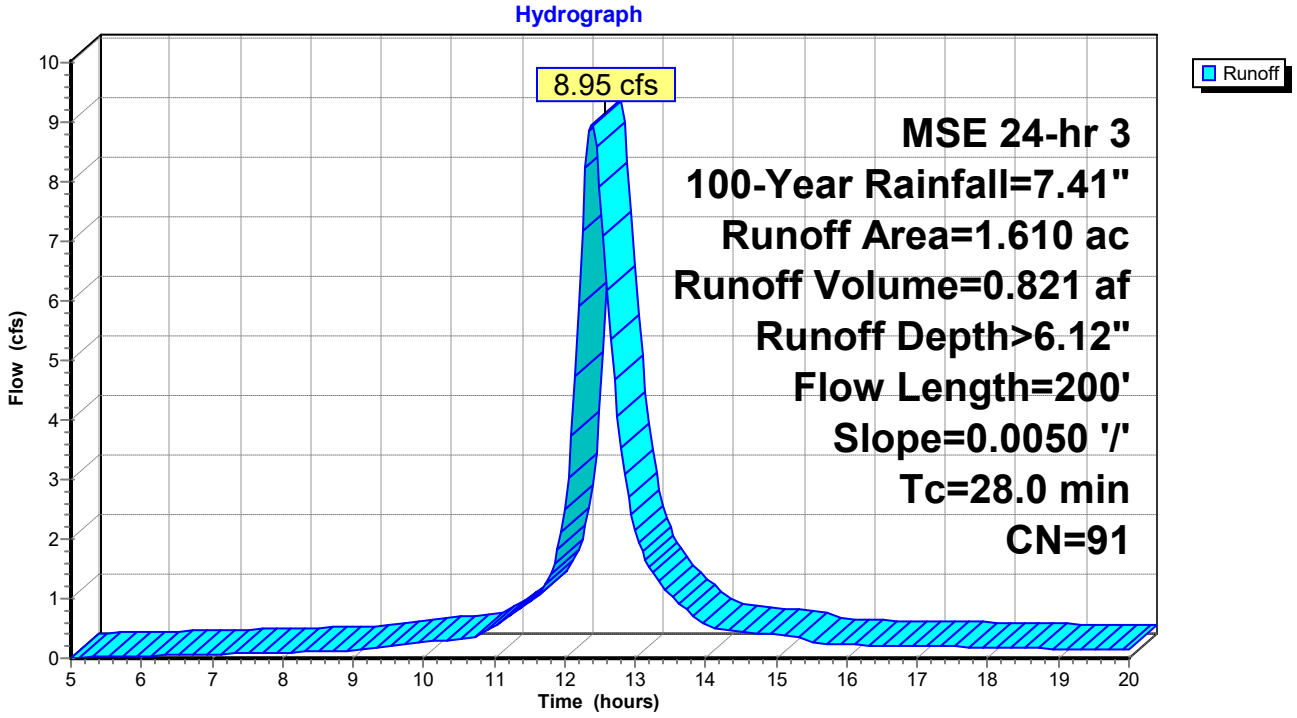
Runoff = 8.95 cfs @ 12.39 hrs, Volume= 0.821 af, Depth> 6.12"
Routed to Pond 2P : SE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
1.610	91	Row crops, straight row, Poor, HSG D
1.610		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"

Subcatchment 1S: SE Wetland WS



Summary for Subcatchment 4S: NE Wetland WS

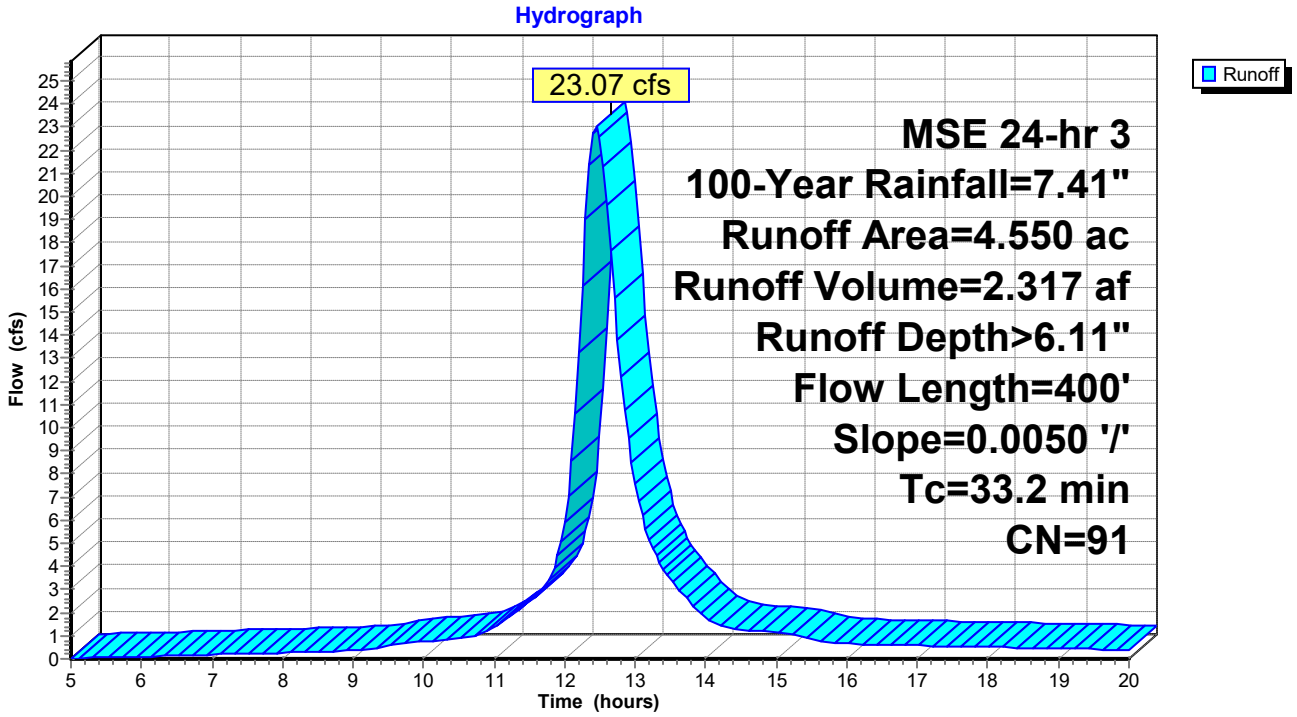
Runoff = 23.07 cfs @ 12.45 hrs, Volume= 2.317 af, Depth> 6.11"
Routed to Pond 5P : NE Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
4.190	91	Row crops, straight row, Poor, HSG D
0.360	86	Farmsteads, HSG D
4.550	91	Weighted Average
4.550		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
5.2	200	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
33.2	400	Total			

Subcatchment 4S: NE Wetland WS



Summary for Subcatchment 6S: NW Wetland WS

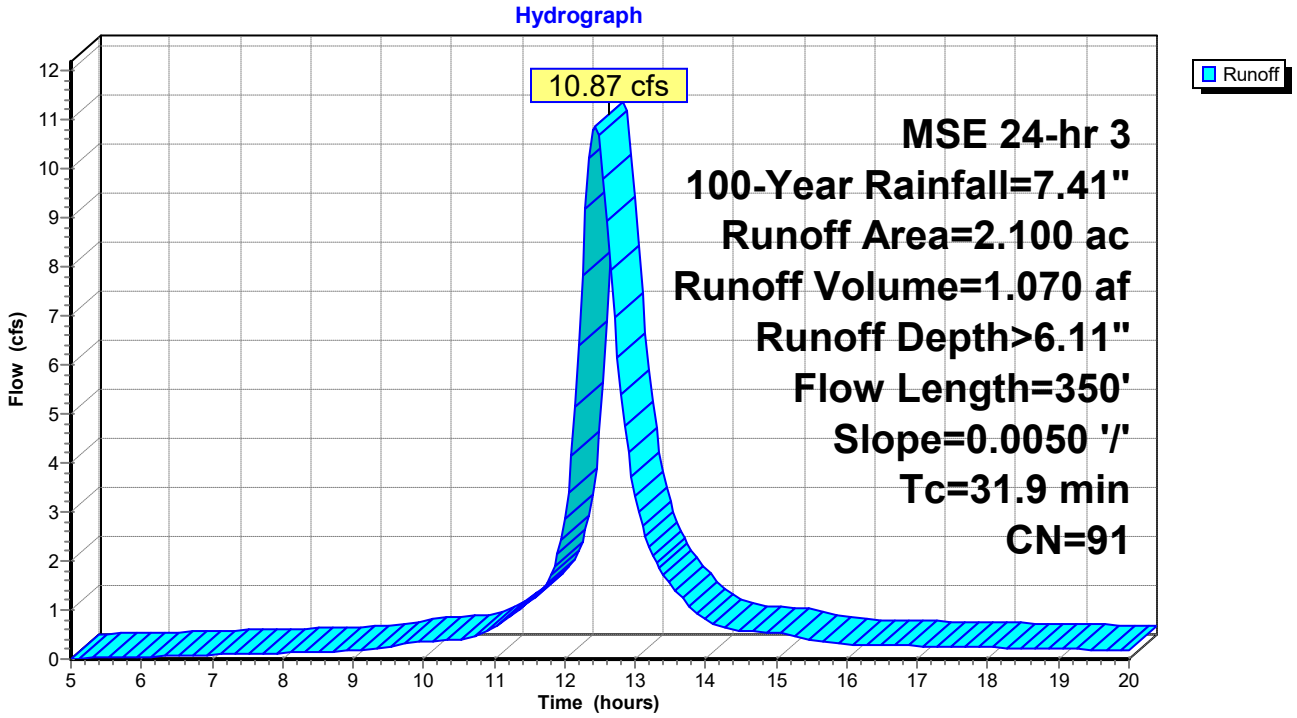
Runoff = 10.87 cfs @ 12.43 hrs, Volume= 1.070 af, Depth> 6.11"
Routed to Pond 7P : NW Wetland

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
2.100	91	Row crops, straight row, Poor, HSG D
2.100		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
28.0	200	0.0050	0.12		**Sheet Flow,** Cultivated: Residue>20% n= 0.170 P2= 4.40"
3.9	150	0.0050	0.64		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
31.9	350	Total			

Subcatchment 6S: NW Wetland WS



Summary for Subcatchment 9S: Trail Berm WS

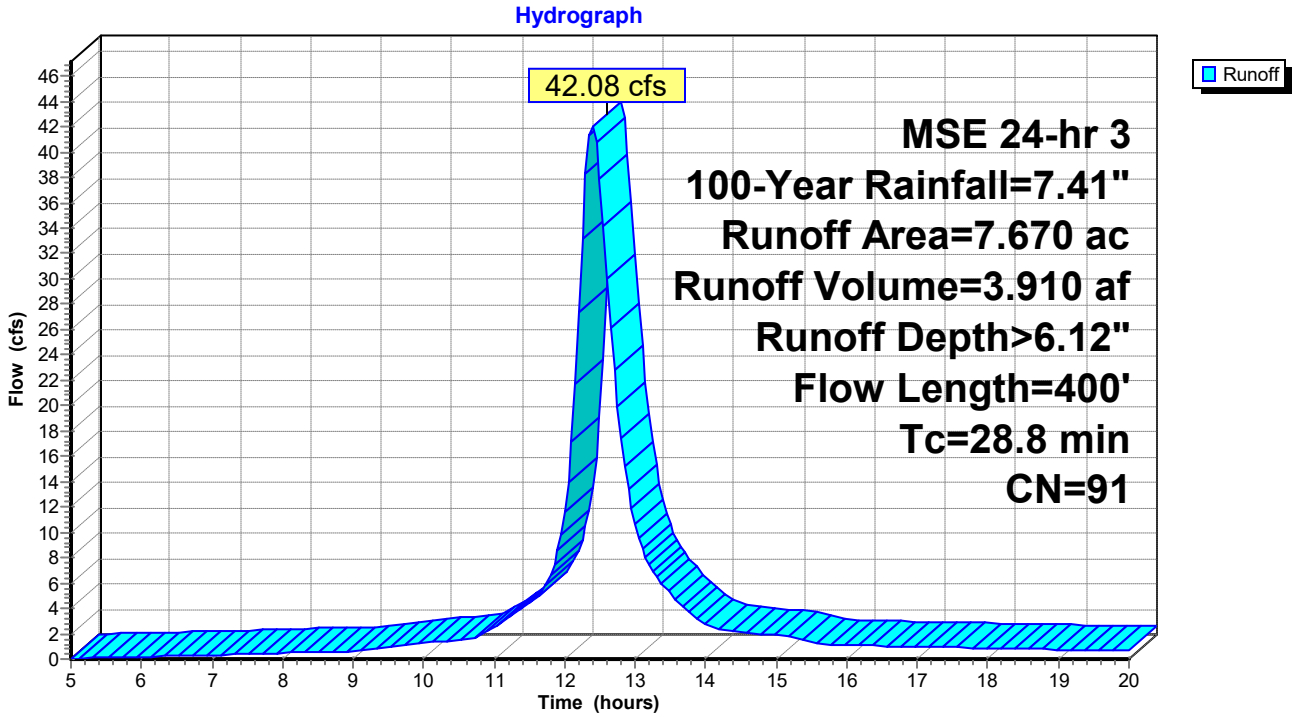
Runoff = 42.08 cfs @ 12.39 hrs, Volume= 3.910 af, Depth> 6.12"
Routed to Pond 10P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
7.670	91	Row crops, straight row, Poor, HSG D
7.670		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.2	200	0.0050	0.27		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 4.40"
16.6	200	0.0005	0.20		**Shallow Concentrated Flow,** Cultivated Straight Rows Kv= 9.0 fps
28.8	400	Total			

Subcatchment 9S: Trail Berm WS



Summary for Subcatchment 11S: CSAH 12 East

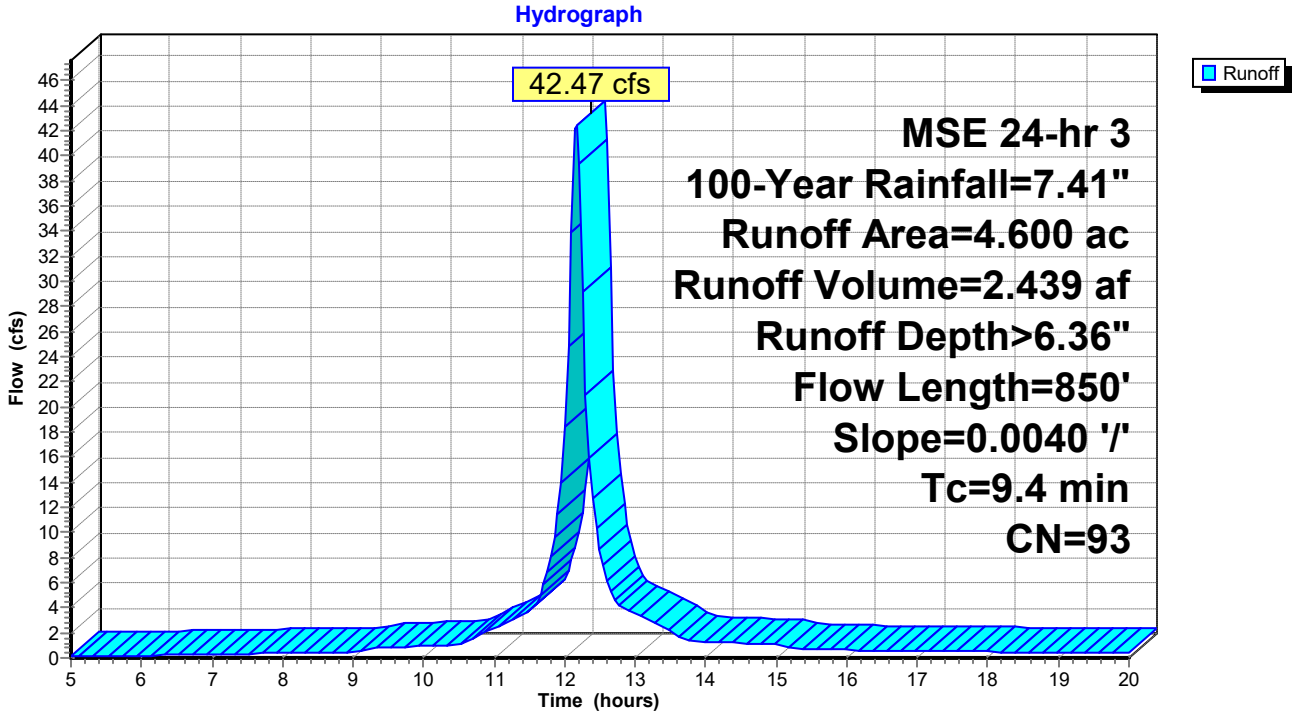
Runoff = 42.47 cfs @ 12.16 hrs, Volume= 2.439 af, Depth> 6.36"
Routed to Pond 12P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 11S: CSAH 12 East



Summary for Subcatchment 22S: Des WS

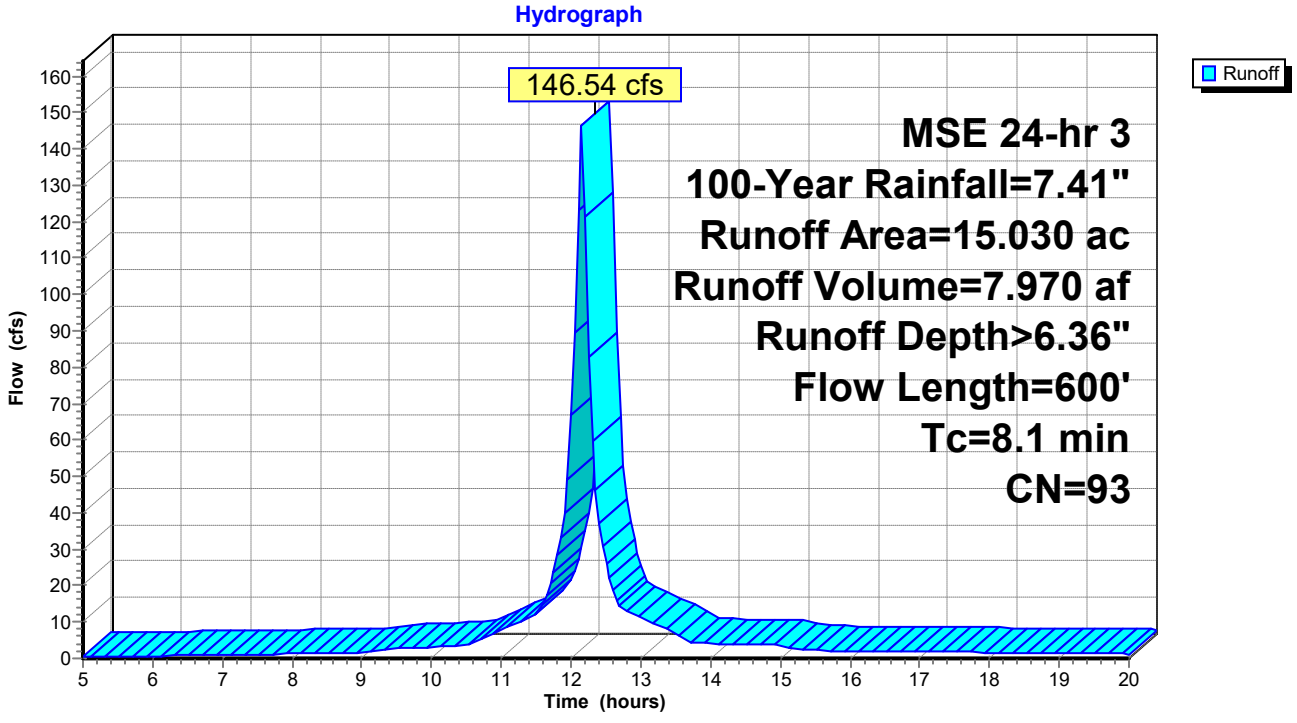
Runoff = 146.54 cfs @ 12.15 hrs, Volume= 7.970 af, Depth> 6.36"
Routed to Pond 23P : Metcon Addn Pond

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
14.670	93	Urban industrial, 72% imp, HSG D
0.360	86	Farmsteads, HSG D
15.030	93	Weighted Average
4.468		29.72% Pervious Area
10.562		70.28% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
1.8	200	0.0200	1.85		**Sheet Flow,** Smooth surfaces n= 0.011 P2= 4.40"
6.3	400	0.0050	1.06		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
8.1	600	Total			

Subcatchment 22S: Des WS



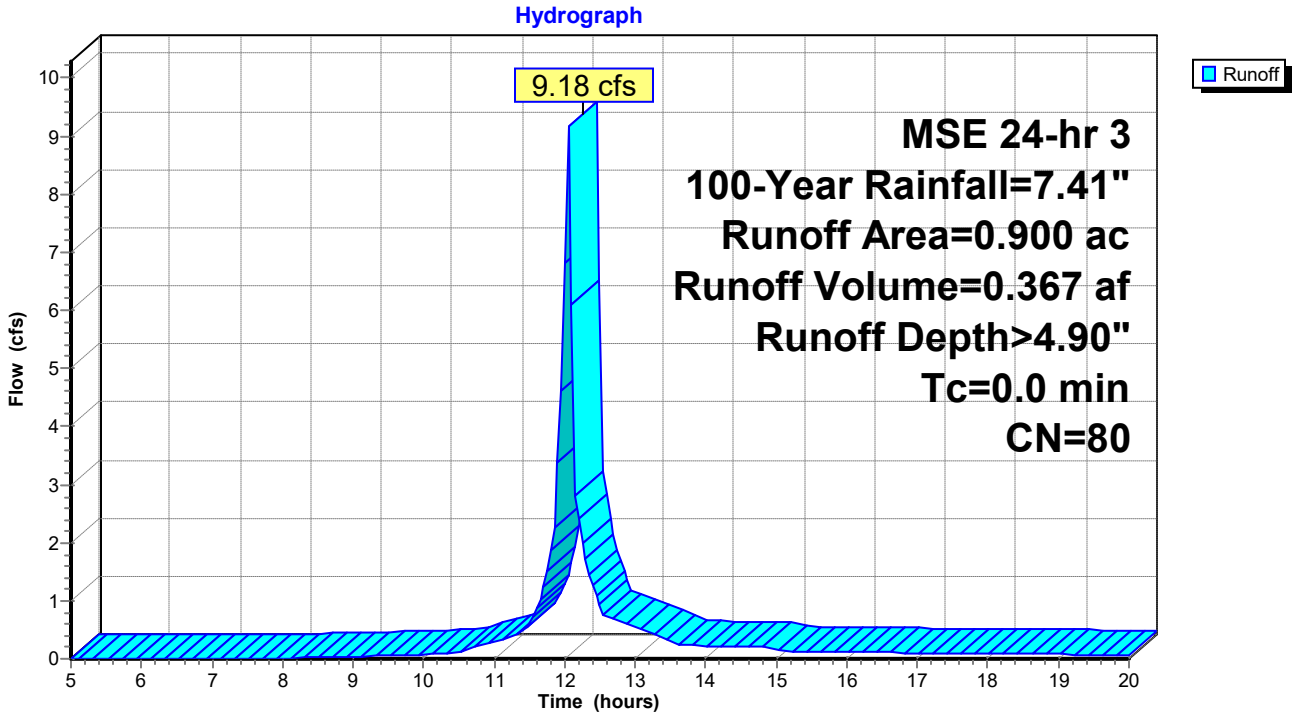
Summary for Subcatchment 24S: Trail Berm WS

Runoff = 9.18 cfs @ 12.05 hrs, Volume= 0.367 af, Depth> 4.90"
Routed to Pond 25P : Trail Culvert Basin

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
0.900	80	>75% Grass cover, Good, HSG D
0.900		100.00% Pervious Area

Subcatchment 24S: Trail Berm WS



Summary for Subcatchment 26S: CSAH 12 East

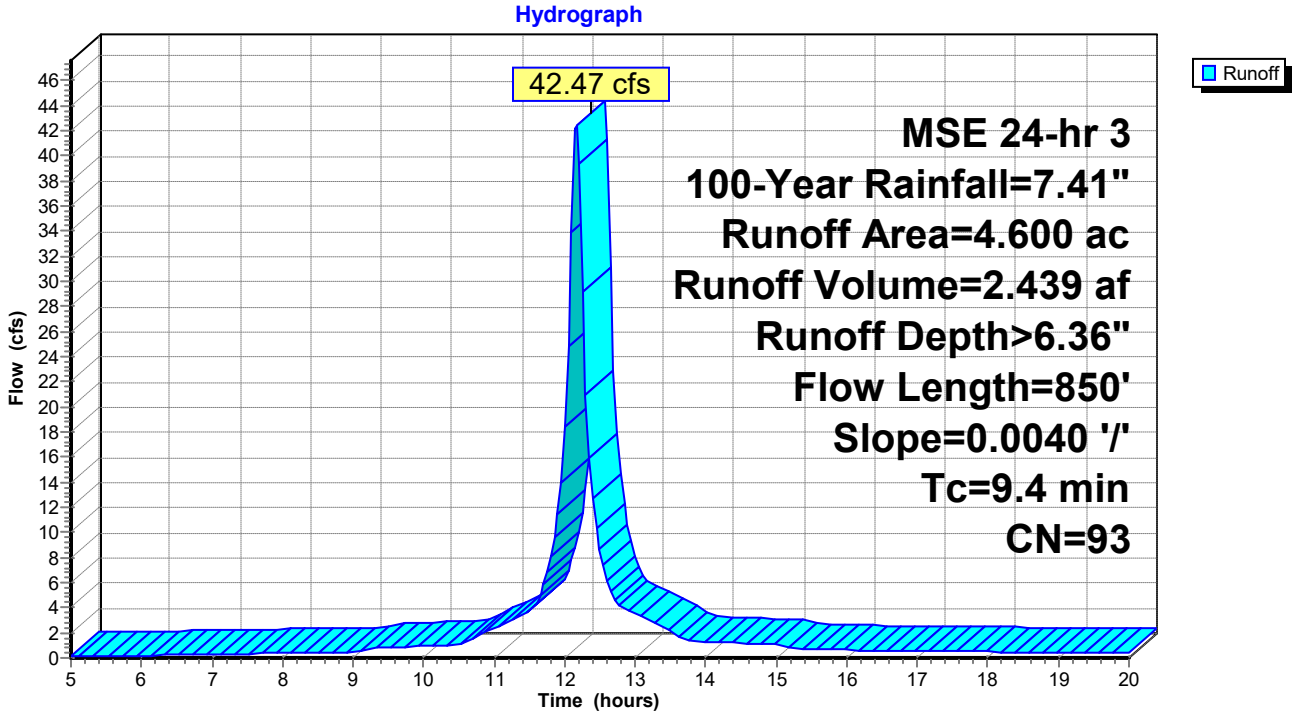
Runoff = 42.47 cfs @ 12.16 hrs, Volume= 2.439 af, Depth> 6.36"
Routed to Pond 27P : CSAH 12 E Ditch

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
MSE 24-hr 3 100-Year Rainfall=7.41"

Area (ac)	CN	Description
4.600	93	Paved roads w/open ditches, 50% imp, HSG D
2.300		50.00% Pervious Area
2.300		50.00% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
3.5	200	0.0040	0.95		**Shallow Concentrated Flow,** Grassed Waterway Kv= 15.0 fps
2.4	450	0.0040	3.12	100.00	**Trap/Vee/Rect Channel Flow,** Bot.W=7.00' D=2.00' Z= 6.0 & 3.0 '/' Top.W=25.00' n= 0.035 Earth, dense weeds
9.4	850	Total			

Subcatchment 26S: CSAH 12 East



Summary for Reach 3R: S Trail Berm

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth > 3.21" for 100-Year event
Inflow = 4.54 cfs @ 12.71 hrs, Volume= 0.431 af
Outflow = 4.32 cfs @ 12.88 hrs, Volume= 0.426 af, Atten= 5%, Lag= 9.9 min
Routed to Pond 10P : Trail Culvert Basin

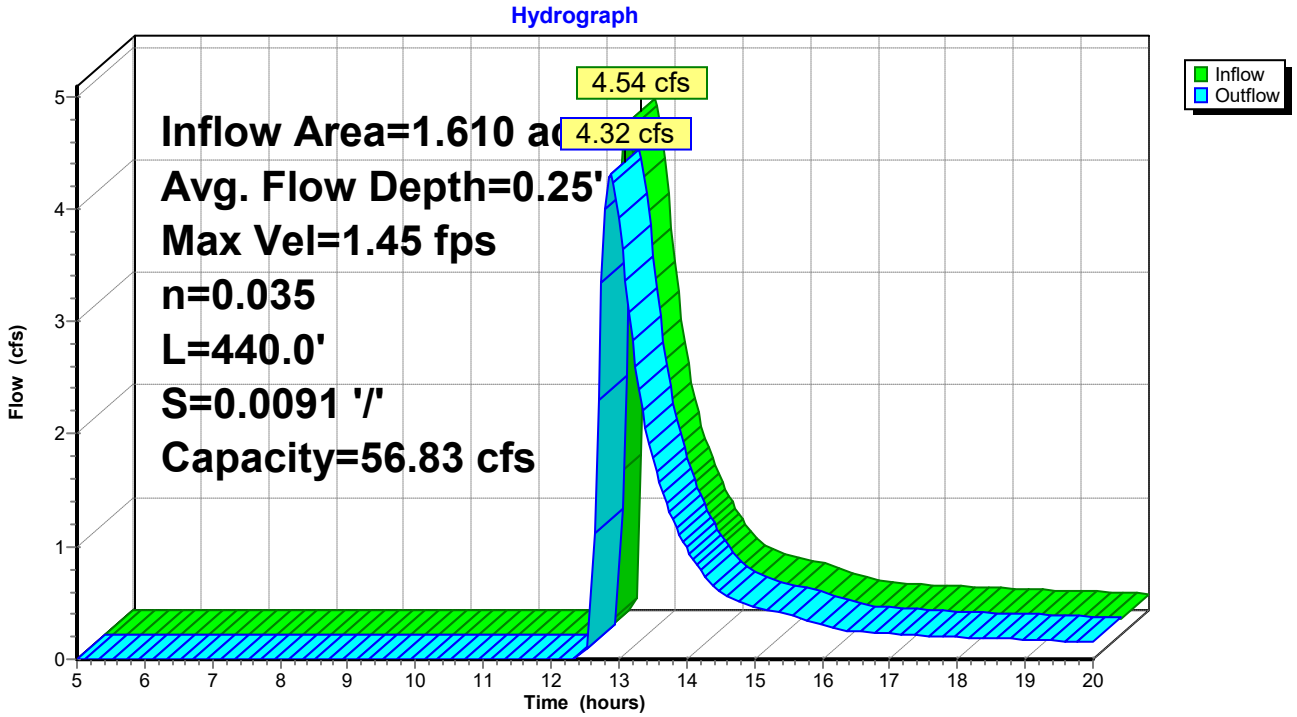
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 1.45 fps, Min. Travel Time= 5.1 min
Avg. Velocity = 0.65 fps, Avg. Travel Time= 11.4 min

Peak Storage= 1,319 cf @ 12.79 hrs
Average Depth at Peak Storage= 0.25' , Surface Width= 14.00'
Bank-Full Depth= 1.00' Flow Area= 18.0 sf, Capacity= 56.83 cfs

10.00' x 1.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 26.00'
Length= 440.0' Slope= 0.0091 '/'
Inlet Invert= 1,016.00', Outlet Invert= 1,012.00'



‡



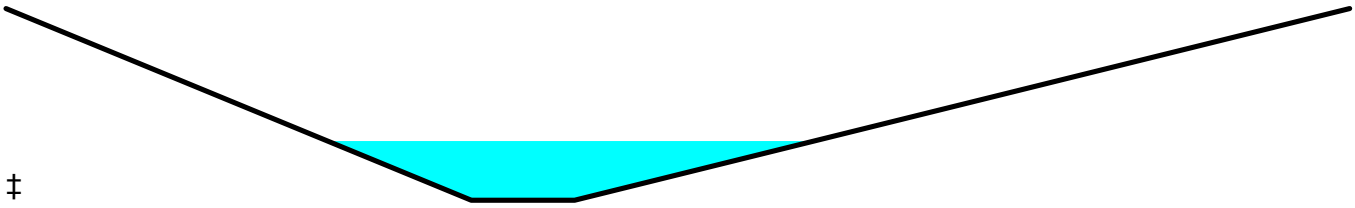
Summary for Reach 8R: W Trail Berm

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 4.53" for 100-Year event
Inflow = 24.95 cfs @ 12.67 hrs, Volume= 2.513 af
Outflow = 23.66 cfs @ 12.85 hrs, Volume= 2.494 af, Atten= 5%, Lag= 10.8 min
Routed to Pond 10P : Trail Culvert Basin

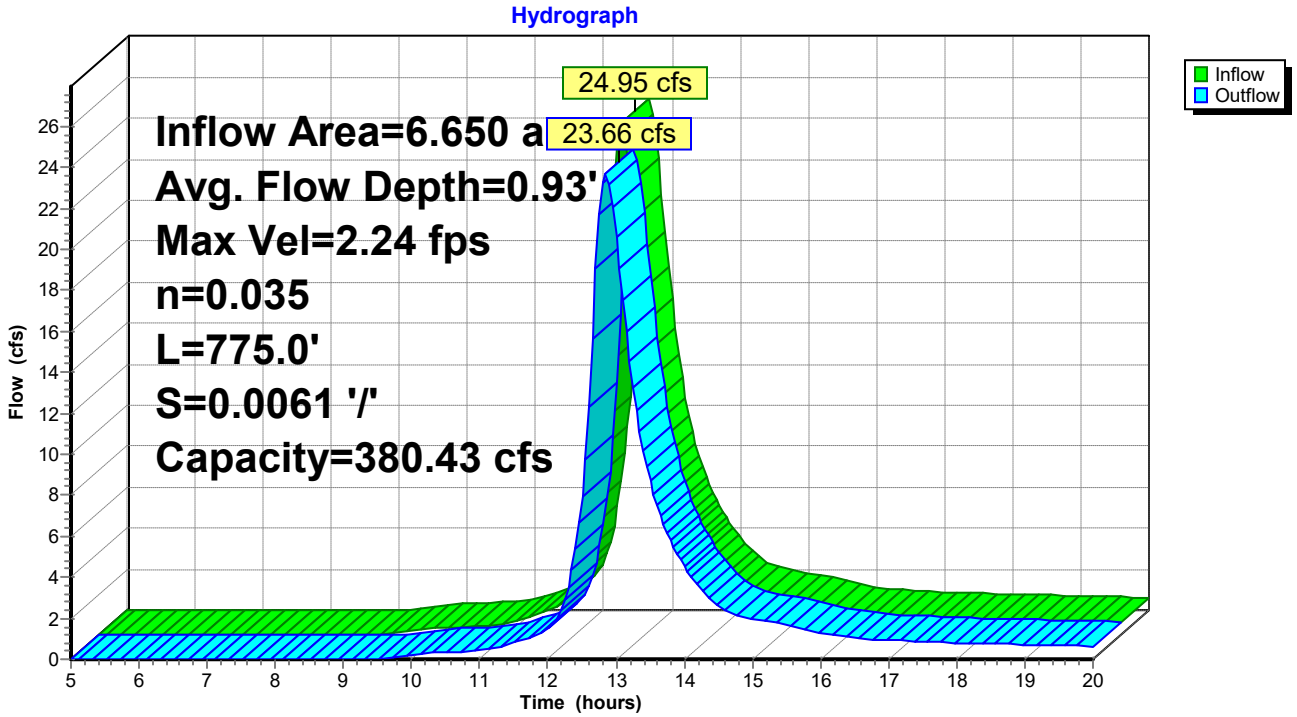
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Max. Velocity= 2.24 fps, Min. Travel Time= 5.8 min
Avg. Velocity = 1.04 fps, Avg. Travel Time= 12.5 min

Peak Storage= 8,194 cf @ 12.75 hrs
Average Depth at Peak Storage= 0.93' , Surface Width= 18.82'
Bank-Full Depth= 3.00' Flow Area= 84.0 sf, Capacity= 380.43 cfs

4.00' x 3.00' deep channel, n= 0.035 Earth, dense weeds
Side Slope Z-value= 6.0 10.0 '/' Top Width= 52.00'
Length= 775.0' Slope= 0.0061 '/'
Inlet Invert= 1,016.70', Outlet Invert= 1,012.00'



‡



Summary for Pond 2P: SE Wetland

Inflow Area = 1.610 ac, 0.00% Impervious, Inflow Depth > 6.12" for 100-Year event
Inflow = 8.95 cfs @ 12.39 hrs, Volume= 0.821 af
Outflow = 4.54 cfs @ 12.71 hrs, Volume= 0.431 af, Atten= 49%, Lag= 19.7 min
Primary = 4.54 cfs @ 12.71 hrs, Volume= 0.431 af
Routed to Reach 3R : S Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.97' @ 12.71 hrs Surf.Area= 56,519 sf Storage= 20,259 cf

Plug-Flow detention time= 142.0 min calculated for 0.429 af (52% of inflow)
Center-of-Mass det. time= 77.1 min (844.6 - 767.5)

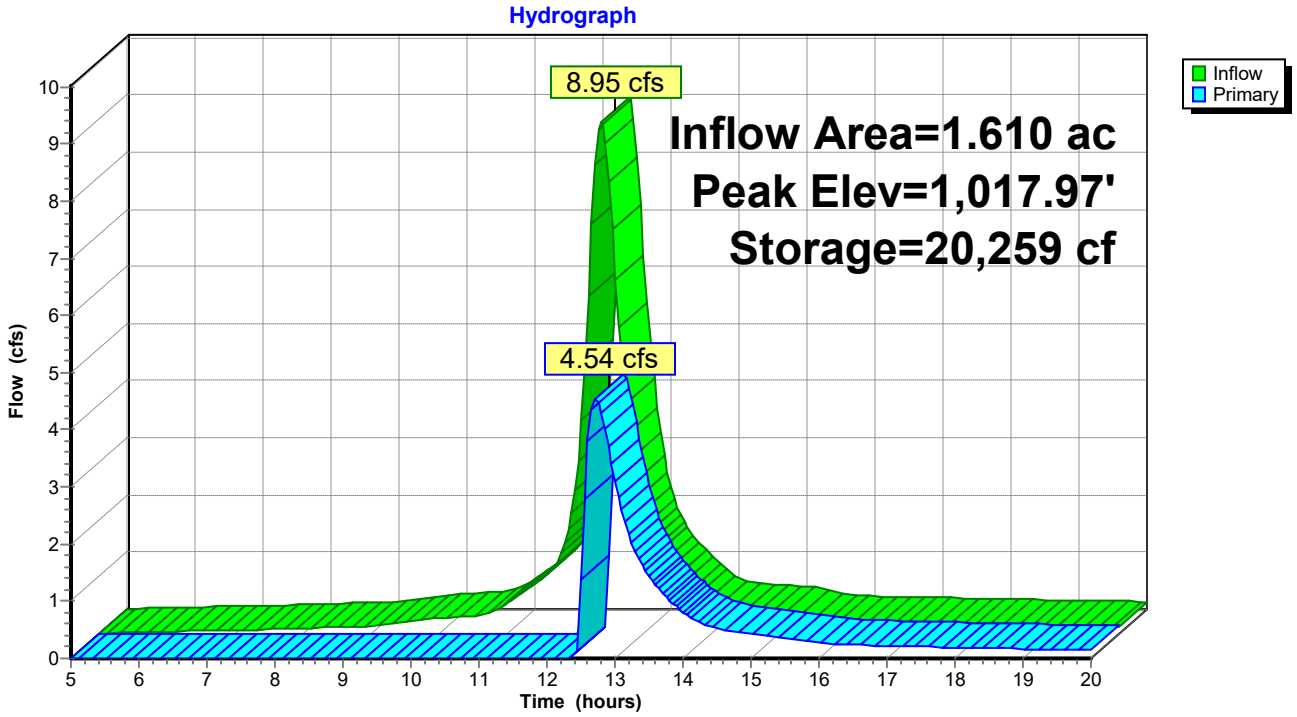
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.25'	22,174 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.25	0	0	0
1,018.00	59,130	22,174	22,174

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.90'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=4.51 cfs @ 12.71 hrs HW=1,017.97' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 4.51 cfs @ 0.63 fps)

Pond 2P: SE Wetland



Summary for Pond 5P: NE Wetland

Inflow Area = 4.550 ac, 0.00% Impervious, Inflow Depth > 6.11" for 100-Year event
Inflow = 23.07 cfs @ 12.45 hrs, Volume= 2.317 af
Outflow = 17.30 cfs @ 12.66 hrs, Volume= 1.480 af, Atten= 25%, Lag= 13.1 min
Primary = 17.30 cfs @ 12.66 hrs, Volume= 1.480 af
Routed to Pond 7P : NW Wetland

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.74' @ 12.66 hrs Surf.Area= 65,030 sf Storage= 46,541 cf

Plug-Flow detention time= 116.2 min calculated for 1.480 af (64% of inflow)
Center-of-Mass det. time= 59.8 min (831.5 - 771.7)

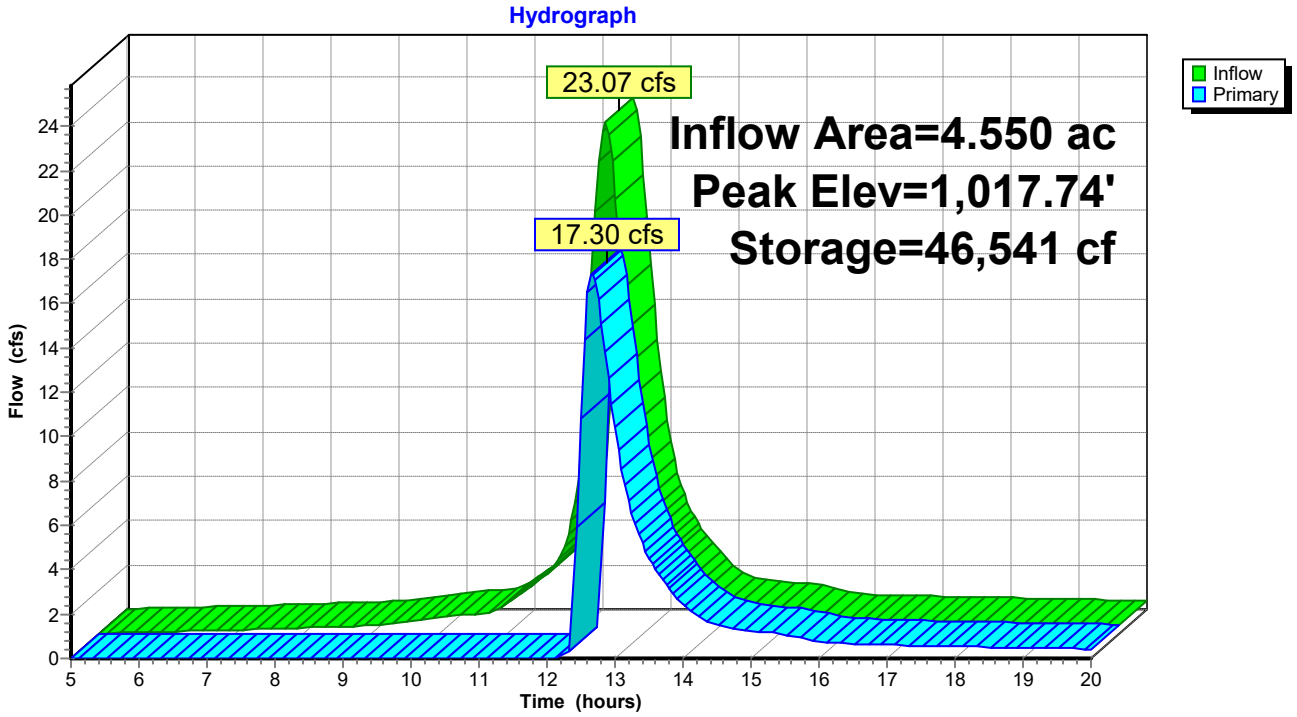
Volume	Invert	Avail.Storage	Storage Description
#1	1,016.00'	65,093 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,016.00	0	0	0
1,017.00	25,742	12,871	12,871
1,018.00	78,702	52,222	65,093

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.56'	**75.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=17.19 cfs @ 12.66 hrs HW=1,017.74' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 17.19 cfs @ 1.02 fps)

Pond 5P: NE Wetland



Summary for Pond 7P: NW Wetland

Inflow Area = 6.650 ac, 0.00% Impervious, Inflow Depth > 4.60" for 100-Year event
Inflow = 25.51 cfs @ 12.62 hrs, Volume= 2.550 af
Outflow = 24.95 cfs @ 12.67 hrs, Volume= 2.513 af, Atten= 2%, Lag= 3.1 min
Primary = 24.95 cfs @ 12.67 hrs, Volume= 2.513 af
Routed to Reach 8R : W Trail Berm

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,017.37' @ 12.67 hrs Surf.Area= 33,765 sf Storage= 6,174 cf

Plug-Flow detention time= 13.2 min calculated for 2.504 af (98% of inflow)
Center-of-Mass det. time= 7.7 min (813.7 - 806.0)

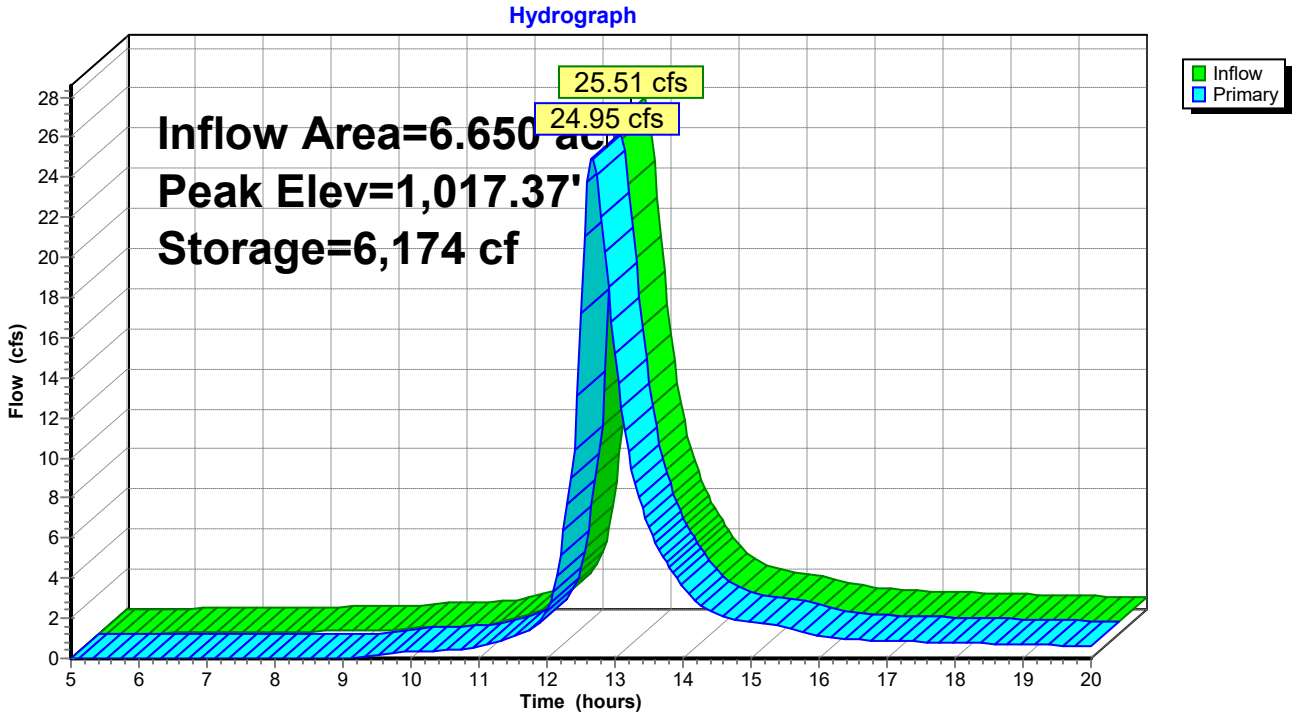
Volume	Invert	Avail.Storage	Storage Description
#1	1,017.00'	46,162 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,017.00	0	0	0
1,018.00	92,324	46,162	46,162

Device	Routing	Invert	Outlet Devices
#1	Primary	1,017.17'	**100.0' long + 100.0 '/' SideZ x 10.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 Coef. (English) 2.49 2.56 2.70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=24.78 cfs @ 12.67 hrs HW=1,017.36' (Free Discharge)
1=Broad-Crested Rectangular Weir (Weir Controls 24.78 cfs @ 1.06 fps)

Pond 7P: NW Wetland



Summary for Pond 10P: Trail Culvert Basin

Inflow Area = 15.930 ac, 0.00% Impervious, Inflow Depth > 5.14" for 100-Year event
Inflow = 47.66 cfs @ 12.42 hrs, Volume= 6.830 af
Outflow = 47.27 cfs @ 12.46 hrs, Volume= 6.820 af, Atten= 1%, Lag= 2.2 min
Primary = 4.20 cfs @ 12.46 hrs, Volume= 2.869 af
Routed to Pond 12P : CSAH 12 E Ditch
Secondary = 43.07 cfs @ 12.46 hrs, Volume= 3.951 af
Routed to Pond 12P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,014.84' @ 12.46 hrs Surf.Area= 28,827 sf Storage= 24,559 cf

Plug-Flow detention time= 20.8 min calculated for 6.820 af (100% of inflow)
Center-of-Mass det. time= 20.2 min (814.5 - 794.4)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	29,601 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

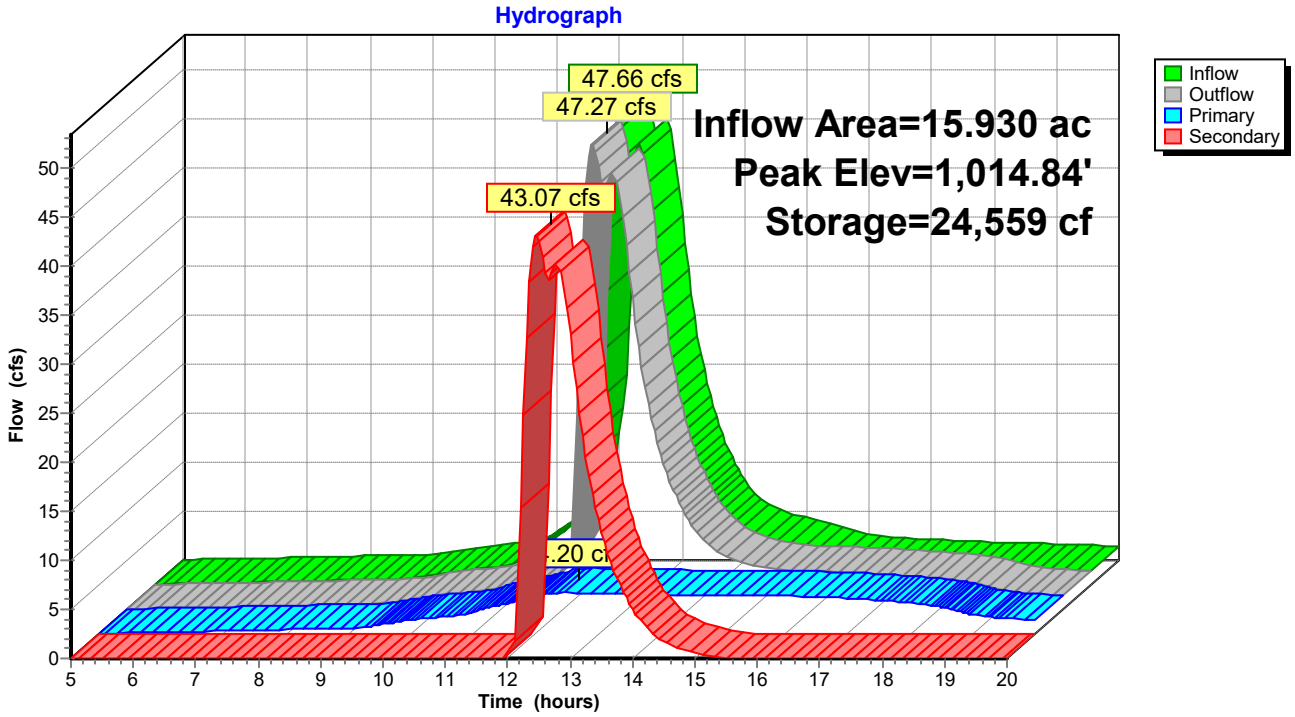
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	11,053	6,408	7,907
1,015.00	32,336	21,695	29,601

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=4.20 cfs @ 12.46 hrs HW=1,014.83' (Free Discharge)
1=Culvert (Barrel Controls 4.20 cfs @ 5.35 fps)

Secondary OutFlow Max=42.81 cfs @ 12.46 hrs HW=1,014.83' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 42.81 cfs @ 1.53 fps)

Pond 10P: Trail Culvert Basin



Summary for Pond 12P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 11.20% Impervious, Inflow Depth > 5.41" for 100-Year event
Inflow = 58.81 cfs @ 12.38 hrs, Volume= 9.258 af
Outflow = 39.07 cfs @ 13.03 hrs, Volume= 9.195 af, Atten= 34%, Lag= 38.7 min
Primary = 21.06 cfs @ 13.03 hrs, Volume= 8.092 af
Secondary = 18.01 cfs @ 13.03 hrs, Volume= 1.103 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,014.39' @ 13.03 hrs Surf.Area= 48,961 sf Storage= 117,112 cf

Plug-Flow detention time= 51.3 min calculated for 9.195 af (99% of inflow)
Center-of-Mass det. time= 48.6 min (845.5 - 796.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

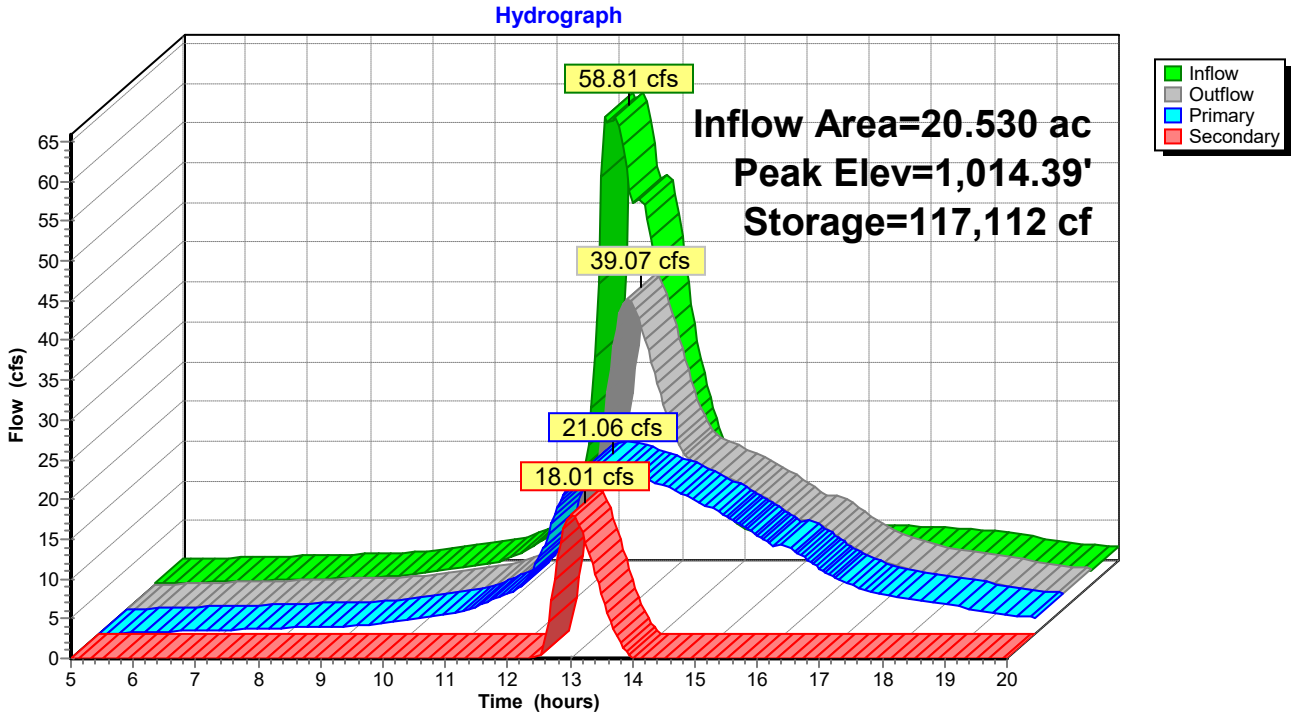
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
#1	Primary	1,010.00'	**28.0" W x 18.0" H, R=14.7"/40.7" Pipe Arch Culvert** L= 148.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,010.00' / 1,009.60' S= 0.0027 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 2.76 sf
#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=21.06 cfs @ 13.03 hrs HW=1,014.38' (Free Discharge)
1=Culvert (Barrel Controls 21.06 cfs @ 7.63 fps)

Secondary OutFlow Max=17.94 cfs @ 13.03 hrs HW=1,014.38' (Free Discharge)
2=Broad-Crested Rectangular Weir (Weir Controls 17.94 cfs @ 2.62 fps)

Pond 12P: CSAH 12 E Ditch



Summary for Pond 23P: Metcon Addn Pond

Inflow Area = 15.030 ac, 70.28% Impervious, Inflow Depth > 6.36" for 100-Year event
Inflow = 146.54 cfs @ 12.15 hrs, Volume= 7.970 af
Outflow = 13.50 cfs @ 12.76 hrs, Volume= 6.895 af, Atten= 91%, Lag= 36.6 min
Primary = 13.50 cfs @ 12.76 hrs, Volume= 6.895 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,014.51' @ 12.76 hrs Surf.Area= 72,356 sf Storage= 209,859 cf

Plug-Flow detention time= 189.9 min calculated for 6.894 af (87% of inflow)
Center-of-Mass det. time= 153.5 min (900.0 - 746.5)

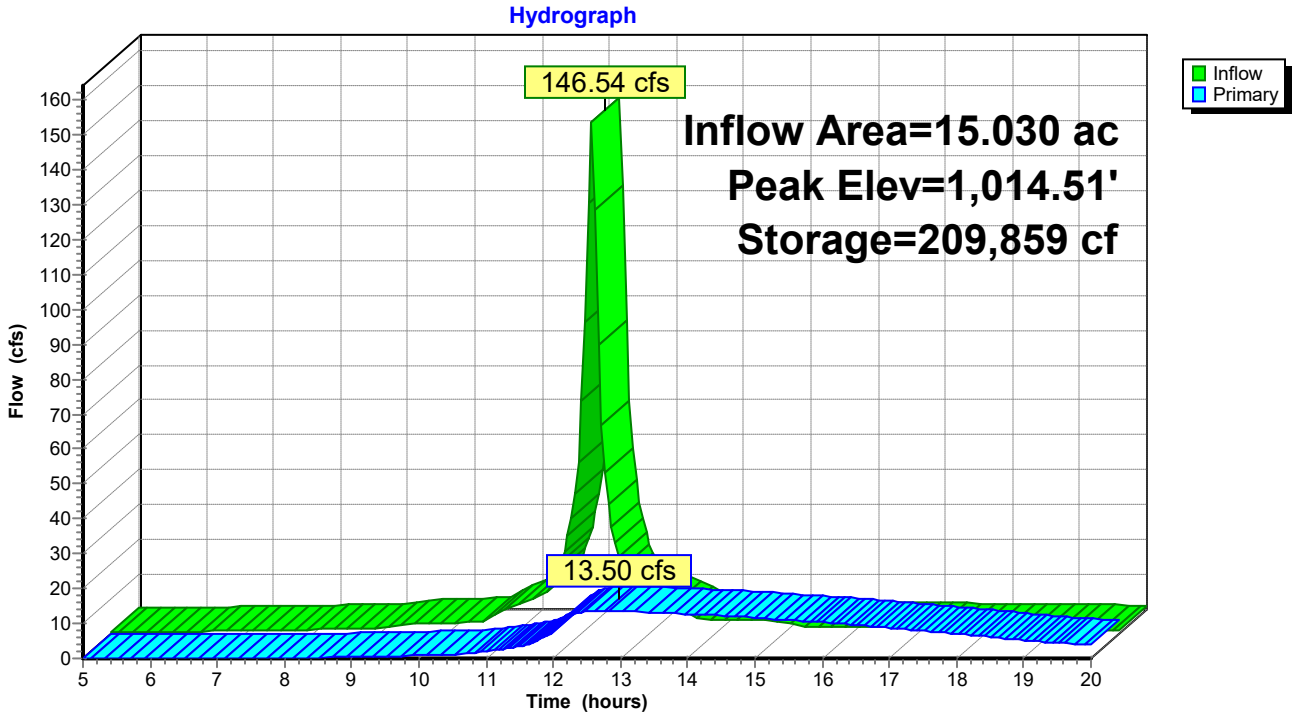
Volume	Invert	Avail.Storage	Storage Description
#1	1,011.00'	325,258 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.00	47,057	0	0
1,016.00	83,046	325,258	325,258

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.00'	**18.0" Round Culvert** L= 100.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.00' / 1,010.00' S= 0.0100 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf
#2	Device 1	1,008.00'	**18.0" Round Culvert** L= 30.0' RCP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,008.00' / 1,008.00' S= 0.0000 '/' Cc= 0.900 n= 0.013 Concrete pipe, bends & connections, Flow Area= 1.77 sf

Primary OutFlow Max=13.50 cfs @ 12.76 hrs HW=1,014.51' (Free Discharge)
↑**1=Culvert** (Barrel Controls 13.50 cfs @ 7.64 fps)
↑**2=Culvert** (Passes 13.50 cfs of 15.95 cfs potential flow)

Pond 23P: Metcon Addn Pond



Summary for Pond 25P: Trail Culvert Basin

Inflow Area = 0.900 ac, 0.00% Impervious, Inflow Depth > 4.90" for 100-Year event
Inflow = 9.18 cfs @ 12.05 hrs, Volume= 0.367 af
Outflow = 3.28 cfs @ 12.16 hrs, Volume= 0.367 af, Atten= 64%, Lag= 6.6 min
Primary = 3.28 cfs @ 12.16 hrs, Volume= 0.367 af
Routed to Pond 27P : CSAH 12 E Ditch
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Pond 27P : CSAH 12 E Ditch

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,013.72' @ 12.16 hrs Surf.Area= 4,123 sf Storage= 3,623 cf

Plug-Flow detention time= 9.0 min calculated for 0.367 af (100% of inflow)
Center-of-Mass det. time= 8.6 min (772.7 - 764.1)

Volume	Invert	Avail.Storage	Storage Description
#1	1,011.30'	12,717 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

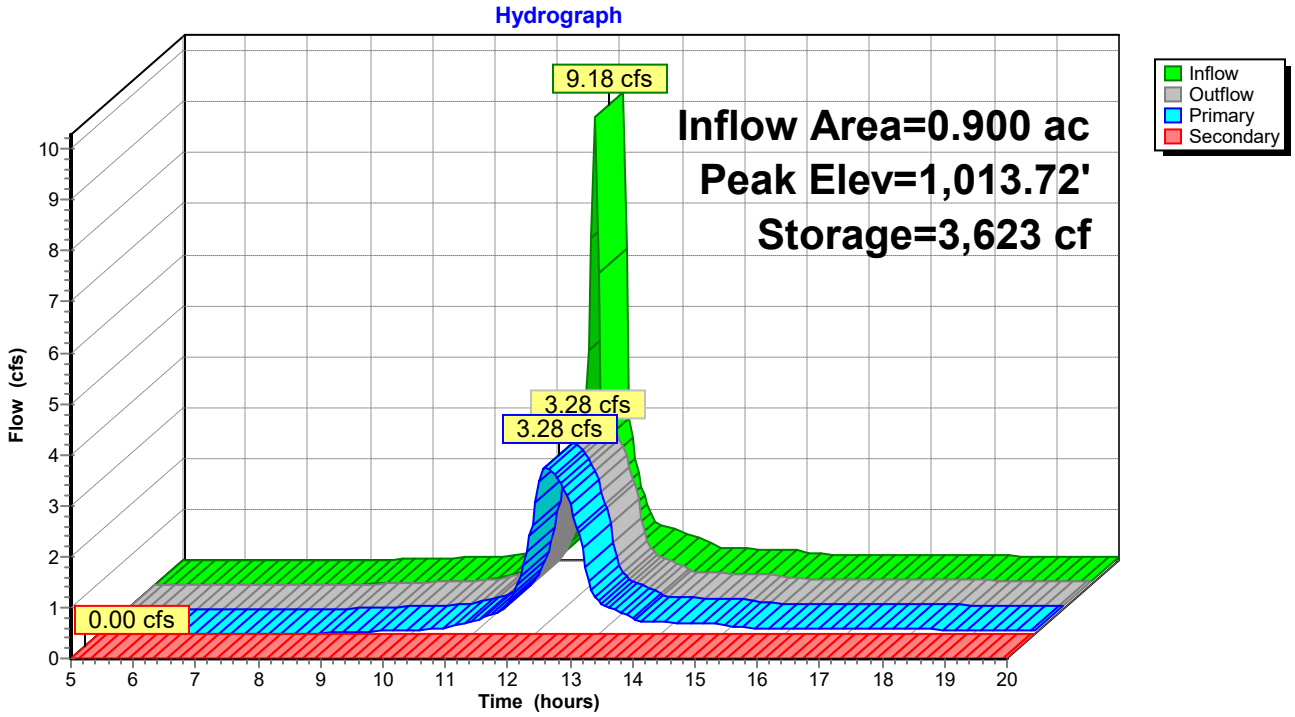
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,011.30	0	0	0
1,013.00	1,763	1,499	1,499
1,014.00	5,033	3,398	4,897
1,015.00	10,608	7,821	12,717

Device	Routing	Invert	Outlet Devices
#1	Primary	1,011.30'	**12.0" Round Culvert** L= 42.0' CMP, end-section conforming to fill, Ke= 0.500 Inlet / Outlet Invert= 1,011.30' / 1,011.00' S= 0.0071 '/' Cc= 0.900 n= 0.025 Corrugated metal, Flow Area= 0.79 sf
#2	Secondary	1,014.50'	**50.0' long + 100.0 '/' SideZ x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=3.27 cfs @ 12.16 hrs HW=1,013.72' (Free Discharge)
1=Culvert (Barrel Controls 3.27 cfs @ 4.16 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,011.30' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 25P: Trail Culvert Basin



Summary for Pond 27P: CSAH 12 E Ditch

Inflow Area = 20.530 ac, 62.65% Impervious, Inflow Depth > 5.67" for 100-Year event
Inflow = 56.91 cfs @ 12.17 hrs, Volume= 9.700 af
Outflow = 17.07 cfs @ 13.14 hrs, Volume= 9.497 af, Atten= 70%, Lag= 58.6 min
Primary = 17.07 cfs @ 13.14 hrs, Volume= 9.497 af
Secondary = 0.00 cfs @ 5.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 1,013.26' @ 13.14 hrs Surf.Area= 37,588 sf Storage= 72,305 cf

Plug-Flow detention time= 53.4 min calculated for 9.465 af (98% of inflow)
Center-of-Mass det. time= 46.3 min (903.1 - 856.9)

Volume	Invert	Avail.Storage	Storage Description
#1	1,010.00'	152,598 cf	**Custom Stage Data (Prismatic)** Listed below (Recalc)

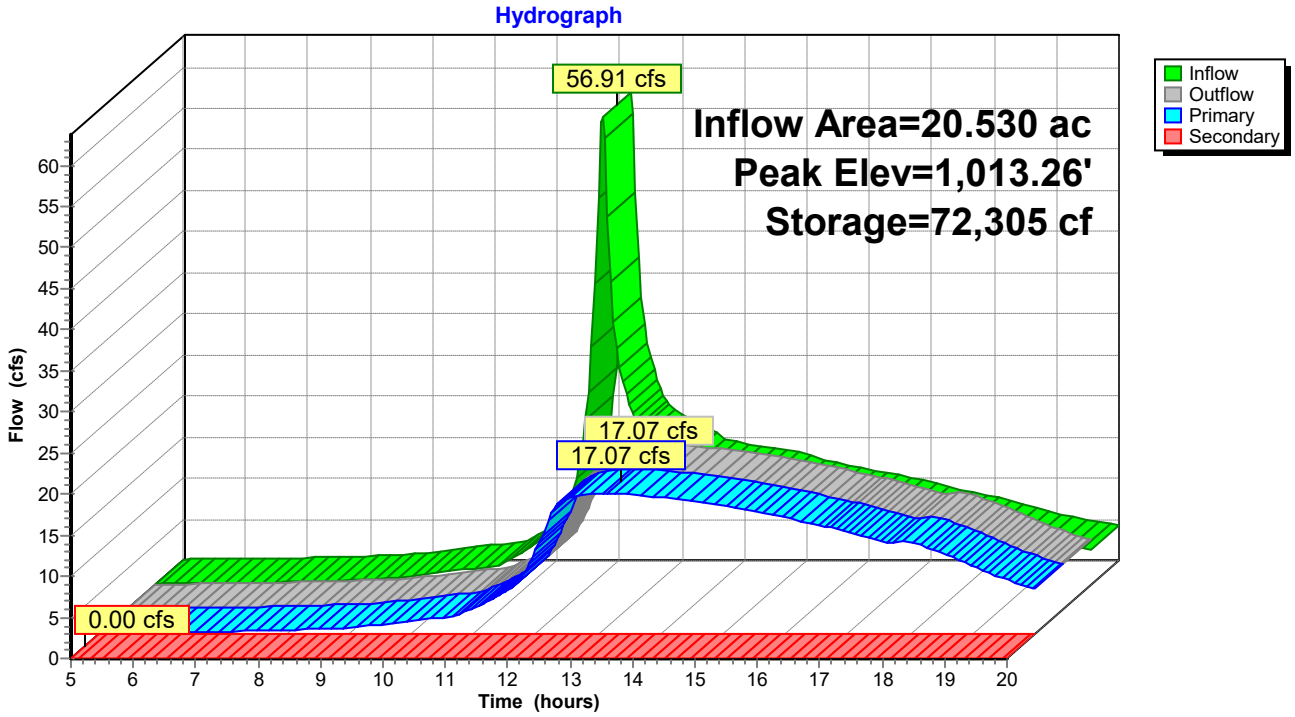
Elevation (feet)	Surf.Area (sq-ft)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)
1,010.00	0	0	0
1,011.00	17,095	8,548	8,548
1,012.00	26,827	21,961	30,509
1,013.00	37,445	32,136	62,645
1,014.00	38,000	37,723	100,367
1,015.00	66,462	52,231	152,598

Device	Routing	Invert	Outlet Devices
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#2	Secondary	1,013.70'	**10.0' long x 0.5' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 Coef. (English) 2.80 2.92 3.08 3.30 3.32

Primary OutFlow Max=17.07 cfs @ 13.14 hrs HW=1,013.26' (Free Discharge)
1=Culvert (Barrel Controls 17.07 cfs @ 6.19 fps)

Secondary OutFlow Max=0.00 cfs @ 5.00 hrs HW=1,010.02' (Free Discharge)
2=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

Pond 27P: CSAH 12 E Ditch



GEOTECHNICAL REPORT

Geotechnical Evaluation Report

Met-Con Mankato Office and Site Development

East of County Highway 12 between Adams Street and Madison Avenue
Mankato, Minnesota

Prepared for

Met-Con Companies, Inc.

Professional Certification:
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.

Philip E. Bailey, PE
Associate Director, Senior Engineer
License Number: 47539
February 3, 2026

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Braun Intertec Corporation

Project B2508847

February 3, 2026 Project B2508847

Scott Brown
Met-Con Companies, Inc.
PO Box 427
15760 Acorn Trail
Faribault, MN 55021

Re: Geotechnical Evaluation
Met-Con Mankato Office and Site Development
East of County Highway 12 between Adams Street and Madison Avenue
Mankato, Minnesota

Dear Mr. Brown:

We are pleased to present this geotechnical evaluation report for the Met-Con Mankato Office and Site Development project at the above referenced site.

Thank you for making Braun Intertec Corporation (Braun Intertec) your geotechnical consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date, please contact Philip Bailey at 507.995.2788 or pbailey@braunintertec.com.

Sincerely,
Braun Intertec Corporation

Philip E. Bailey, PE
Associate Director, Senior Engineer

Brandon K. Wright, PE
Senior Manager, Senior Engineer

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Table of Contents

1.0 Introduction 1
- 1.1 Project Description 1
- 1.2 Site Conditions and History 3
- 1.3 Purpose 4
- 1.4 Background Information and Reference Documents 4
- 1.5 Scope of Services 5

2.0 Results 5
- 2.1 Geologic Overview 5
- 2.2 Boring Results 6
- 2.3 Groundwater 6
- 2.4 Laboratory Test Results 7

3.0 Recommendations 8
- 3.1 Design and Construction Discussion 8
  - 3.1.1 Building Subgrade Preparation 8
  - 3.1.2 Reuse of On-Site Soils 8
  - 3.1.3 Groundwater 9
  - 3.1.4 Construction Disturbance 9
  - 3.1.5 Frost Heave Mitigation 9
  - 3.1.6 Pavement 9
- 3.2 Site Grading and Subgrade Preparation 10
  - 3.2.1 Building Subgrade Excavations 10
  - 3.2.2 Excavation Oversizing 11
  - 3.2.3 Excavated Slopes 11
  - 3.2.4 Excavation Dewatering 12
  - 3.2.5 Pavement and Exterior Slab Subgrade Preparation 12
  - 3.2.6 Pavement Subgrade Proofroll 13
  - 3.2.7 Engineered Fill Materials and Compaction 13
  - 3.2.8 Special Inspections of Soils 15
- 3.3 Spread Footings 15
- 3.4 Interior Slabs 16
  - 3.4.1 Subgrade Modulus 16
  - 3.4.2 Moisture Vapor Protection 16
- 3.5 Frost Protection 17
  - 3.5.1 General 17
  - 3.5.2 Frost Heave Mitigation 17
- 3.6 Pavements and Exterior Slabs 18
  - 3.6.1 Design Sections 18
  - 3.6.2 Concrete Pavements 19
  - 3.6.3 Bituminous Pavement Materials 19
  - 3.6.4 Subgrade Drainage 19

DRAFT

Table of Contents (Continued)

3.6.5 Performance and Maintenance 19
3.7 Utilities 20
3.7.1 Subgrade Stabilization 20
3.7.2 Corrosion Potential 20
3.8 Equipment Support 20

4.0 Procedures 21
4.1 Penetration Test Borings 21
4.2 Exploration Logs 21
4.2.1 Log of Boring Sheets 21
4.2.2 Geologic Origins 21
4.3 Material Classification and Testing 22
4.3.1 Visual and Manual Classification 22
4.3.2 Laboratory Testing 22
4.4 Groundwater Measurements 22

5.0 Qualifications 22
5.1 Variations in Subsurface Conditions 22
5.1.1 Material Strata 22
5.1.2 Groundwater Levels 22
5.2 Continuity of Professional Responsibility 23
5.2.1 Plan Review 23
5.2.2 Construction Observations and Testing 23
5.3 Use of Report 23
5.4 Standard of Care 23

Appendix

Soil Boring Location Sketch
Fence Diagram
Log of Boring Sheets ST-1 to ST-24
Descriptive Terminology of Soil

List of Tables

Table 1-1. Building Description 1
Table 1-2. Site Aspects and Grading Description 1
Table 2-1. Subsurface Profile Summary 6
Table 2-3. Groundwater Summary 7
Table 3-1. Building Excavation Depths 10
Table 3-2. Engineered Fill Materials* 13
Table 3-3. Compaction Recommendations Summary 14
Table 3-4. Recommended Spread Footing Design Parameters 16
Table 3-6. Recommended Bituminous and Concrete Pavement Sections 19

DRAFT

Table of Contents (Continued)

List of Figures

Figure 1-1. Site Development Area 2
Figure 1-2. Site Layout 3
Figure 1-3. Aerial Photograph of the Site in 2025 4
Figure 3-1. Generalized Illustration of Oversizing 11
Figure 3-2. Frost Protection Geometry Illustration 18

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1.0 Introduction

1.1 Project Description

This geotechnical evaluation report addresses the proposed design and construction of the proposed office building and site grading, located in the southeast quadrant of the intersection of County State Aid Highway 12 and Adams Street in Mankato, Minnesota. The project will include the construction of a single-story office building with multiple rental units within a 1.9-acre parcel (Lot 6). The proposed office building will be steel framed with sheet-metal and stone siding. Civil improvements will include concrete pavement, a gravel surfaced storage yard, detention pond, and a patio.

In addition to the development of Lot 6, we also understand Met-Con has purchased an additional five adjoining lots and intends to develop them in the future. We assume similar single-story, slab-on-grade, steel-framed, office- or warehouse-type buildings will be constructed on the five adjoining lots.

Table 1-1 and Table 1-2 summarize the provided and assumed project details used to prepare this report.

Table 1-1. Building Description

Aspect	Descriptions
Below grade levels	None (Provided)
Above grade levels	1 (Provided)
Lowest level floor elevation (feet)	1018 (Assumed)
Column loads (kips)	150 (Assumed)
Wall loads (kips/foot)	8 (Assumed)
Nature of construction	Single-story, slab-on-grade, steel-framed, office- or warehouse-type buildings (Provided)
Cuts or fills for buildings	1 to 3 feet of fill (Assumed)
Tolerable building settlements	1 inch total, ½ inch differential (Assumed)

Table 1-2. Site Aspects and Grading Description

Aspect	Descriptions
Pavement type(s)	Bituminous or concrete for parking and drive areas and aggregate surfacing for yard storage
Assumed pavement loads	Light-duty: 50,000 ESALs* for car parking
	Medium-duty: 100,000 ESALs* for main drive areas
Grade changes	Up to 3 feet of fill in pavement areas (Assumed)

*Equivalent 18,000-lb single axle loads based on 20-year design for bituminous and 35-year design for concrete.

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Figure 1-1below shows an illustration of the proposed development area.



Figure 1-1. Site Development Area
Figure provided by Met-Con Companies, Inc. not dated.

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Figure 1-2 below shows an illustration of the proposed site layout within Lot 6.



Figure 1-2. Site Layout
Figure provided by Met-Con Companies, Inc. dated June 26, 2025.

1.2 Site Conditions and History

Currently, the site exists as undeveloped agricultural fields. The project area is bounded by Adams Street on the north, County State Aid Highway (CSAH 12) on the west, Madison Avenue on the South and an existing farm and agricultural fields on the east.

Current grades range from about 1012 to 1018 feet with site slopes generally downward to the southeast.

Historically, the development area has remained as agricultural land. As shown in Figure 1-3 below, you will note the current site conditions.

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Figure 1-3. Aerial Photograph of the Site in 2025
Figure obtained from Google Earth™ dated May 5, 2025.

1.3 Purpose

The purpose of our geotechnical evaluation is to characterize subsurface geologic conditions at selected exploration locations, evaluate their impact on the project, and provide geotechnical recommendations for the design and construction of the proposed office building, pavements, and site development of Lots 1 to 5.

1.4 Background Information and Reference Documents

We reviewed the following information:

- Topographic data obtained from MnTOPO.
- Site Layout Plan prepared by Met-Con Companies, Inc. dated June 26, 2025.
- Surficial Geology Map of Blue Earth County, prepared by the University of Minnesota, Minnesota Geological Survey. The map is denoted as Atlas C-26, Part A, Plate 3, dated 2012.
- Google Earth aerial imagery with dates ranging from April 27, 1991 to May 5, 2025.
- Communications with Mr. Scott Brown of Met-Con Companies, Inc. regarding the proposed development.

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In addition to the provided sources, we have used several publicly available sources of information.

We have described our understanding of the proposed construction and site to the extent others reported it to us. Depending on the extent of available information, we may have made assumptions based on our experience with similar projects. If we have not correctly recorded or interpreted the project details, the project team should notify us. New or changed information could require additional evaluation, analyses, and/or recommendations.

1.5 Scope of Services

We performed our scope of services for the project in accordance with our Proposal Mr. Scott Brown of Met-Con Companies, Inc., dated and authorized on September 30, 2025. The following list describes the geotechnical tasks completed in accordance with our authorized scope of services.

- Reviewing the background information and reference documents previously cited.
- Staking and clearing the exploration location of underground utilities. We selected and we staked the new exploration locations. We acquired the surface elevations and locations with GPS technology. The Soil Boring Location Sketch included in the Appendix shows the approximate locations of the borings.
- Performing 24 standard penetration test (SPT) borings, denoted as ST-1 to ST-24, to nominal depths of 5 to 20 feet below grade across the site.
- Performing laboratory testing on select samples to aid in soil classification and engineering analysis.
- Perform engineering analysis including settlement and bearing capacity for spread footing foundations and pavement analysis for pavement design.
- Preparing this report containing a boring location sketch, logs of soil borings, a summary of the soils encountered, results of laboratory tests, and recommendations for structure and pavement subgrade preparation and the design of foundations, floor slabs, exterior slabs, utilities, stormwater improvements, and pavements.

2.0 Results

2.1 Geologic Overview

We based the geologic origins used in this report on the soil types, in-situ and laboratory testing, and available common knowledge of the geological history of the site. Because of the complex depositional history, geologic origins can be difficult to ascertain. We did not perform a detailed investigation of the geologic history for the site.

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2.2 Boring Results

Table 2-1 provides a summary of the soil boring results, in the general order we encountered the strata. Please refer to the Log of Boring sheets in the Appendix for additional details. The Descriptive Terminology sheets in the Appendix include definitions of abbreviations used in the table below.

Table 2-1. Subsurface Profile Summary

Strata	Soil Type -ASTM Classification	Range of Penetration Resistances	Commentary and Details
Topsoil	OL, CL, SM, SC	--	▪ Thicknesses at boring locations varied from 1 to 3 1/2 feet. ▪ Slightly organic to organic. ▪ Dark brown to black. ▪ Moisture condition generally moist to wet.
Glaciolacustrine	CL, SC, ML, OL	3 to 9 blows per foot (BPF)	▪ Primarily lean clay with varying sand contents but also silt and organic clay. ▪ Encountered to depths of about 4 to 11 feet. ▪ Locally slightly organic to organic. ▪ General penetration resistance of 3 to 6 BPF indicating the cohesionless silts and sands were very loose to loose in relative density and the cohesive clays were soft to stiff in consistency. ▪ Brown, gray, dark gray and black in color. ▪ Moisture condition generally moist.
Glacial deposits	SP-SC	5 to 9 BPF	▪ Primarily till composed of lean clay with varying sand contents but also outwash composed of sand with silt. ▪ Possible cobbles and boulders. ▪ Variable amounts of gravel and may contain cobbles and boulders. ▪ Locally slightly organic. ▪ General penetration resistance of 3 to 7 BPF, indicating the glacial soils were generally soft to medium in consistency and loose in relative density. ▪ Moisture condition generally moist to wet.
	CL, SC	3 to 16 BPF	

2.3 Groundwater

Table 2-3 summarizes the depths where we observed groundwater; the attached Log of Boring sheets in the Appendix also include this information and additional details. We did not observe groundwater while performing the remainder of our borings. Groundwater may take days or longer to reach equilibrium in the boreholes and we immediately backfilled the boreholes, in accordance with our scope of work. Given the coloration of soils and experience with projects in the area, we anticipate that perched groundwater will likely be encountered at depths of 4 to 8 feet. In addition, glacial till (composed of sandy lean clay) frequently

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contains isolated pockets and seams of water-bearing sands and gravels. These water-bearing layers are generally limited to extent but can produce a sudden influx of water when encountered during drilling operations or in excavations. If the project team identifies a need for more accurate determination of groundwater depth, we can install piezometers. Project planning should anticipate seasonal and annual fluctuations of groundwater.

Table 2-2. Groundwater Summary

Locations	Surface Elevation	Measured or Estimated Depth to Groundwater (ft)	Corresponding Groundwater Elevation (ft)
ST-2	1015.4	10	1005 1/2
ST-3	1016.2	10	1006 1/2
ST-4	1014.5	10	1004 1/2
ST-5	1017.1	12	1005 1/2
ST-15	1016.4	7 1/2	1009
ST-20	1016.9	10	1007

2.4 Laboratory Test Results

The boring logs show the results of laboratory testing we performed, next to the tested sample depth. The Appendix contains the results of these tests. The laboratory tests were completed in accordance with the current standards as specified by the American Society for Testing and Materials (ASTM).

The moisture content tests (ASTM D 2216) performed on select soil samples indicated a moisture content of 17 to 40 percent moisture by weight. The tests on the select soil samples indicate that the clay-laden soils are near to well above their estimated optimum moisture contents.

Sieve analysis tests (ASTM D 422) performed on select soil samples indicated 11 to 41 percent particles, by weight, passing the #200 sieve.

Liquid limits determined for the select soil samples ranged from 38 to 48; plastic limits ranged from 13 to 21. These results indicate that the select soil samples are classified as lean clay (CL) or silt.

We performed organic content tests (ASTM D2974) on selected samples to determine the reusability of the material for structure support and pavement design. The organic content of the selected material tested ranged from 4 to 6 percent, indicating the samples tested were slightly organic to organic.

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3.0 Recommendations

3.1 Design and Construction Discussion

Based on the results of our exploration, field and laboratory tests and our understanding of the proposed project, it is our opinion that the site is suitable for the proposed project, with the following geotechnical design and construction considerations.

3.1.1 Building Subgrade Preparation

All borings encountered topsoil at the surface that was between about 1 to 3 1/2 feet in thickness that is unsuitable for use as subgrade material as well as structural fill and will need to be removed from all building and pavement areas.

Portions of the glacial clays and clayey sands present throughout the site are soft, slightly organic to organic, and are considered compressible. If these soils are left in place below the proposed building footprints, there is an elevated risk of post-construction settlement, and the soils cannot be directly relied upon to support the proposed building foundations. Therefore, we recommend removing soft clays with penetration test values less 4 BPF during mass grading and soft clays with penetration test values less than 5 below foundations and replacing them with compacted granular structural fill as described in Table 3-2. Additionally, to allow for fill-induced consolidation to occur prior to placement of foundations, we recommend grade raises be completed prior to foundation construction.

3.1.2 Reuse of On-Site Soils

The majority of the on-site glacial clay soils tested were several percentage points to well above their estimated optimum moisture content, particularly in the upper 5 to 10 feet of the soil profile. Should these soils be selected for use as engineered fill, they will likely need to be moisture conditioned (dried) to achieve compaction. In our opinion, these materials are suitable for reuse if the contractor performs scarifying of these materials and are placed in the locations shown in Table 3-2. To reduce settlement and facilitate construction, we do not recommend the onsite clayey soils be re-used as structural fill directly below foundations. Additionally, the silt and organic soils present on the site will be highly moisture sensitive, difficult to compact and provide limited support, thus we do not recommend reusing them outside of green spaces. Granular material used as soil correction backfill will need to be imported. Soils with more than 2-percent organic content should not be considered suitable for reuse as structural fill.

To achieve the proper moisture content within the on-site soils, the soils should be dried during the summer months. If the contractor performs site grading in the spring or fall, on-site drying of these soils may not prove feasible and require importing drier soils. If project constraints do not allow the time, or ideal weather conditions, the overly wet soil may need to be replaced with suitable material. We recommend discussing the reuse of these materials and required import quantities with potential contractors at the bidding stages of the project.

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3.1.3 Groundwater

Perched water conditions will likely be present during construction. It is possible to encounter sand pockets and seams within the glacial clays and excavations may experience a sudden influx of groundwater. Temporary dewatering measures such as sumps pits should be anticipated during construction in clay areas as well as potential reconnection of disturbed field tile around the construction limits. Where clay soils are encountered in excavation bottoms, we recommend including provisions for placement of 4 to 6 inches of crushed aggregate in foundation excavations to provide a construction platform and a medium for removal of any accumulating water during construction.

3.1.4 Construction Disturbance

The contractor should note the on-site, clayey soils are highly susceptible to disturbance, due to repeated construction traffic. Disturbance of these soils may cause areas that were previously prepared, or that were suitable for pavement or structure support, to become unstable and require moisture conditioning and compaction. Subcutting and replacing the disturbed material with crushed, coarse gravel, free of fines is also an alternative. The contractor should use means and methods to limit disturbance of the soils.

If significant rainfall is anticipated during construction, the site should be graded to intercept surface water flow into the area and drain water from the area to an appropriate collection point. After grading, the soil surface should be compacted with a smooth drum roller to attempt to lower infiltration. After the rain, construction traffic should be limited until the surface has dried somewhat, to prevent traffic from mixing water that has accumulated at the surface into lower portions of the soil.

3.1.5 Frost Heave Mitigation

The soils encountered on the site are generally susceptible to frost heave. If heaving of exterior slabs and sidewalks is unacceptable, consideration should also be given to incorporating a granular subbase into these sections. A granular subbase enhances subgrade drainage, reduces the potential for subgrades to become saturated and heave upon freezing, and reduces the effects of subgrade strength loss upon thawing.

3.1.6 Pavement

In preparation of pavement subgrades, the project team should anticipate removal of topsoils within 3 feet of the pavements and some areas of unstable clayey or silty soils. If required, the contractor should perform scarification, drying and recompaction, as outlined in Section 3.2.7. Depending on the time of year and weather conditions, scarification, drying, and recompaction efforts may require multiple iterations to stabilize pavement subgrades.

To improve long-term pavement performance, the project team should consider a pavement design that incorporates non-frost-susceptible sand in paved areas. Incorporation of the sand into the pavement section will reduce the impact of the frost heave and subsequent thaw-weakening of the soils beneath the pavement. The sand will also provide better drainage throughout the year. Sand will not only increase the life of the pavement but will likely reduce reconstruction cost at the end of the pavement life. If the pavement design incorporates a sand subgrade, it could then decrease the aggregate base thickness.

DRAFT

3.2 Site Grading and Subgrade Preparation

3.2.1 Building Subgrade Excavations

We recommend removing unsuitable materials from below the proposed buildings and their oversize areas. We define unsuitable materials as topsoil, existing fill, frozen materials, slightly organic to organic soils, existing utilities, draintile, vegetation, and soft/loose soils with penetration test values less than 4 BPF. Table 3-1 shows the anticipated excavation depths and bottom elevations for each of the borings.

Table 3-1. Building Excavation Depths

Location	Approximate Surface Elevation (ft)	Anticipated Excavation Depth (ft)**	Anticipated Bottom Elevation* (ft)
ST-1	1017.0	2	1015
ST-2	1015.4	7	1008
ST-3	1016.2	7	1009
ST-4	1014.5	5	1009 1/2
ST-5	1017.1	7	1010
ST-11	1014	7	1007
ST-12	1015.4	1	1014 1/2
ST-14	1016.5	1	1015 1/2
ST-15	1016.4	6	1010
ST-17	1013.4	1 1/2	1011 1/2
ST-18	1014.9	4	1010 1/2
ST-20	1016.9	10	1006 1/2
ST-21	1017.6	2	1015 1/2
ST-23	1015.4	1 1/2	1014
ST-24	1015.1	1	1014

*Rounded down to the nearest 1/2-foot.
**In addition to removals depths noted above, we recommend removing any soft to medium soils with penetration test values less than 6 BPF within 1/2 of a column width below column pads and a full footing width below continuous foundations and replacing them with select structural fill.

Excavation depths will vary between the borings. Portions of the excavations may also extend deeper than indicated by the borings. A geotechnical representative should observe the excavations to make the necessary field judgments regarding the suitability of the exposed soils.

The contractor should use equipment and techniques to minimize soil disturbance. If soils become disturbed or are wet, we recommend excavation and replacement.

DRAFT

3.2.2 Excavation Oversizing

When removing unsuitable materials below structures or pavements, we recommend the excavation extend outward and downward at a slope of 1H:1V (horizontal:vertical) or flatter. See Figure 3-1 for an illustration of excavation oversizing.

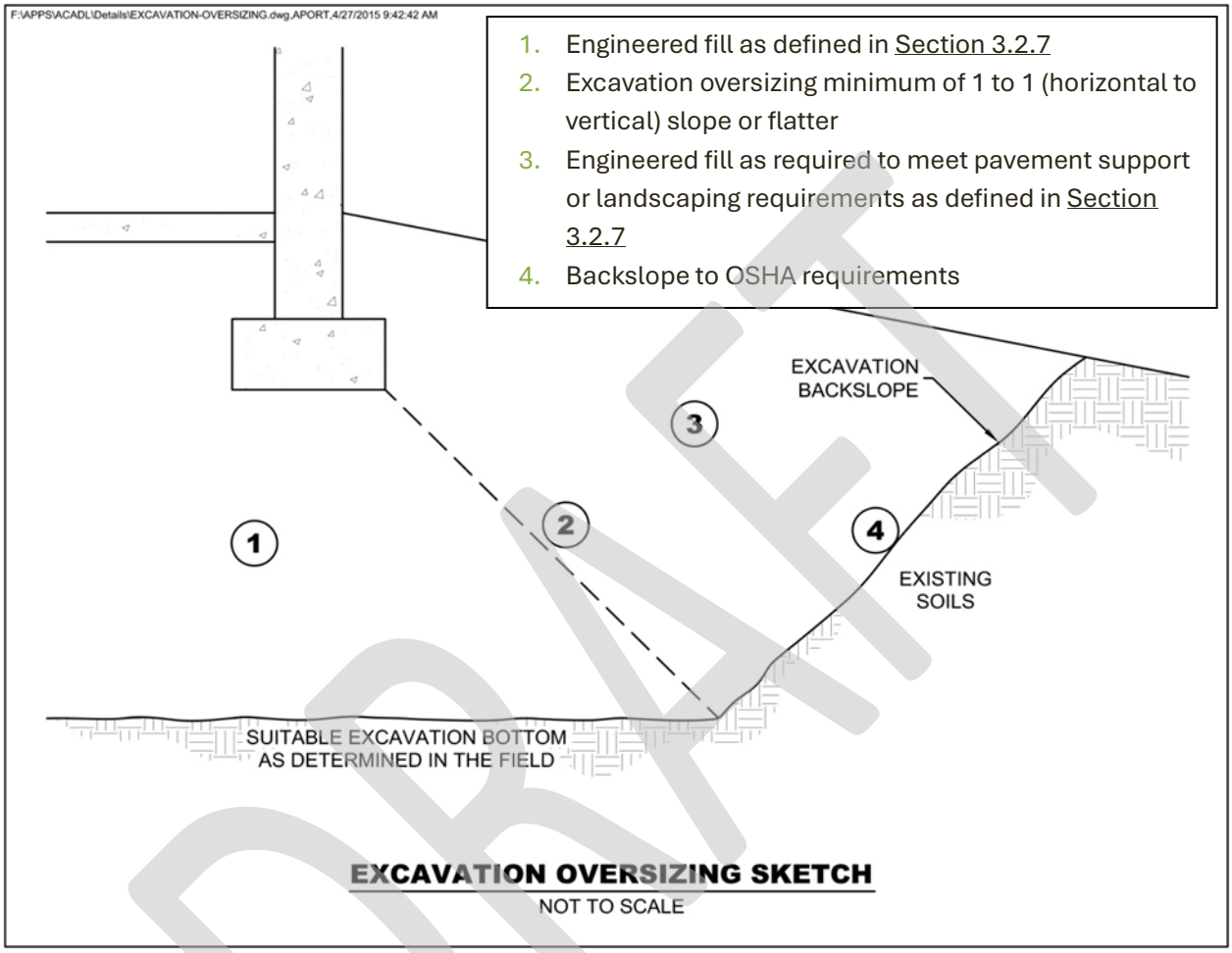


Figure 3-1. Generalized Illustration of Oversizing

3.2.3 Excavated Slopes

Based on the borings, we anticipate on-site soils in excavations will consist of soft to medium glacial clays and loose glacial sands and silts. These soils are typically considered Type C Soil under OSHA (Occupational Safety and Health Administration) guidelines. OSHA guidelines indicate unsupported excavations in Type C soils should have a gradient no steeper than 1 1/2H:1V. Slopes constructed in this manner may still exhibit surface sloughing. OSHA requires an engineer to evaluate slopes or excavations over 20 feet in depth.

An OSHA-approved qualified person should review the soil classification in the field. Excavations must comply with the requirements of OSHA 29 CFR, Part 1926, Subpart P, “Excavations and Trenches.” This

DRAFT

document states that excavation safety is the responsibility of the contractor. The project specifications should reference these OSHA requirements.

3.2.4 Excavation Dewatering

We recommend removing surface of water or groundwater from the excavations. Project planning should include temporary sumps and pumps for excavations in low-permeability soils, such as clays.

3.2.5 Pavement and Exterior Slab Subgrade Preparation

We recommend the following steps for pavement and exterior slab subgrade preparation, understanding the site will have a grade change of 3 feet or less. Note that project planning may require additional subcuts to limit frost heave.

1. Strip unsuitable soils consisting of topsoil, organic soils, vegetation, existing fill, and pavements from the area, within 3 feet of the pavement subgrade.
2. Subcut to allow for placement of the pavement and exterior slab section.
3. Have a geotechnical representative observe the excavated subgrade to evaluate if additional subgrade improvements are necessary.
4. Slope subgrade soils to areas of sand or drain tile to allow the removal of accumulating water.
5. Scarify, moisture condition and surface compact the subgrade with at least three passes of a large roller with a minimum drum diameter of 3 1/2 feet. It should be noted that multiple iterations of moisture conditioning may be required based on the high moisture content of the soils tested.
6. If overly soft or wet soils are encountered after the required removals that do not allow for placement of engineered fill, or if weather conditions do not allow for adequate drying and recompaction of engineered fill, we recommend performing subgrade stabilization that consists of either:
    a. Subexcavating below the existing subgrade soils to allow for placement of a minimum of 24 inches of clean, sand subbase to bridge the softer soils.
    b. Place geogrid reinforcement (Tensar NX750 or equivalent) on the surface of the clay subgrade in correction areas and place a thicker section of aggregate base. It should be noted that where stabilization is necessary, it may be necessary in localized areas to place a second layer of geogrid reinforcement approximately 6 to 8 inches below the top of aggregate base. We recommend initially constructing a test strip to evaluate the need for a second layer of geogrid.

       Ultimately, the method and thickness of stabilization will have to be based on test sections placed within the pavement areas and will be dependent on what is needed to meet the requirements of a proofroll.

DRAFT

7. Place pavement engineered fill to grade and compact in accordance with Section 3.2.7 to bottom of pavement and exterior slab section. See Section 3.5 for additional considerations related to frost heave.
8. Proofroll the pavement or exterior slab subgrade as described in Section 3.2.6.

To improve long-term pavement performance, we recommend incorporating 12 to 18 inches of sand subbase engineered fill in paved areas, in addition to the recommendations above, as a sand subbase. Note, we recommend sloping subgrade soils to promote drainage and removal of accumulated water.

3.2.6 Pavement Subgrade Proofroll

After preparing the subgrade as described above and prior to the placement of the aggregate base, we recommend proofrolling the subgrade soils with a fully loaded tandem-axle truck. We also recommend having a geotechnical representative observe the proofroll. Areas that fail the proofroll likely indicate soft or weak areas that will require additional soil correction work to support pavements.

The contractor should correct areas that display excessive yielding or rutting during the proofroll, as determined by the geotechnical representative. Possible options for subgrade correction include moisture conditioning and recompaction, subcutting and replacement with soil or crushed aggregate, chemical stabilization, and/or geotextiles. We recommend performing a second proofroll after the aggregate base material is in place, and prior to placing bituminous or concrete pavement.

3.2.7 Engineered Fill Materials and Compaction

Table 3-2 below contains our recommendations for engineered fill materials.

Table 3-2. Engineered Fill Materials*

Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
▪ Mass grading ▪ Below interior slabs	Structural fill	SP, SP-SM, SM, SC, CL (excluding ML)	100% passing 2-inch sieve	< 2% Organic Content (OC) Liquid Limit (LL) < 50%
Non-frost-susceptible	▪ Free draining ▪ Non-frost-susceptible fill	GP, GW, SP, SW	100% passing 1-inch sieve < 50% passing #40 sieve < 5% passing #200 sieve	< 2% OC
▪ Soil Corrections below foundations ▪ Deep Structural Fill (>10 feet of fill)	▪ Deep sand fill ▪ Select structural fill	SP, SP-SM	100% passing 1-inch sieve < 12% passing #200 sieve	< 2% OC
Pavements	Pavement fill	SP, SP-SM, SM, SC, CL (excluding ML)	100% passing 3-inch sieve	< 3% OC PI < 20%

DRAFT

Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
Below landscaped surfaces, where subsidence is not a concern	Non-structural fill	Any Soil Type	100% passing 6-inch sieve	< 10% OC

* More select soils comprised of coarse sands with < 5% passing #200 sieve may be needed to accommodate work occurring in periods of wet or freezing weather.

If there is a need for deeper soil correction work or if there is a need for large grade raises that will require more than 10 feet of compacted fill below the lowest floor grades, we recommend placing sand fill (less than 12 percent passing the #200 sieve) as structural fill at depths deeper than 10 feet. If only clay fill is used to fill building pads where more than 10 feet of fill is needed, a construction delay of at least 3 to 12 months may be needed, depending on the final depths of clay fill used. As an alternative, on lots where deep fills are needed, deep sand fill could be used to initially fill the excavations below these house pads. The deep sand fill should be placed in thin compacted lifts, up to an elevation of 10 feet or less from the finished lowest floor grades. On-site clay fill can then be used to complete construction of the building pads. If the alternative method of filling the building pads partially with deep sand fill is used, a construction delay would not be needed. Any sand fill needed for deeper fill will need to be imported to the site.

We recommend spreading engineered fill in loose lifts of approximately 8 to 10 inches thick. We recommend compacting engineered fill in accordance with the criteria presented below in Table 3-3. The project documents should specify relative compaction of engineered fill, based on the structure located above the engineered fill, and vertical proximity to that structure.

Table 3-3. Compaction Recommendations Summary

Reference	Relative Compaction, percent (ASTM D698 – Standard Proctor) (ASTM D1557 – Modified Proctor)	Moisture Content Variance from Optimum, percentage points	
		< 12% Passing #200 Sieve (typically SP, SP-SM)	> 12% Passing #200 Sieve (typically CL, SC, SM)
Below foundations and oversizing zones and mass grading	98	±3	-1 to +3
Below interior slabs	5	±3	-1 to +3
Within 3 feet of pavement subgrade	100	±3	-2 to +1
More than 3 feet below pavement subgrade	95	±3	-1 to +3
Below landscaped surfaces	90	±6	±5

Increase compaction requirement to meet compaction required for structure supported by this engineered fill.

DRAFT

The project documents should not allow the contractor to use frozen material as engineered fill or to place engineered fill on frozen material. Frost should not penetrate under foundations during construction.

We recommend performing density tests in engineered fill to evaluate if the contractors are effectively compacting the soil and meeting project requirements.

3.2.8 Special Inspections of Soils

We recommend including the site grading and placement of engineered fill within the building pad under the requirements of Special Inspections, as provided in Chapter 17 of the International Building Code, which is part of the Minnesota State Building Code . Special Inspection requires observation of soil conditions below engineered fill or footings, evaluations to determine if excavations extend to the anticipated soils, and if engineered fill materials meet requirements for engineered fill and compaction condition of engineered fill. A licensed geotechnical engineer should direct the Special Inspections of site grading and engineered fill placement. The purpose of these Special Inspections is to evaluate whether the work is in accordance with the approved geotechnical report for the project. Special Inspections should include evaluation of the subgrade, observing preparation of the subgrade (surface compaction or dewatering, excavation oversizing, placement procedures, and materials used for engineered fill, etc.) and compaction testing of the engineered fill.

3.3 Spread Footings

We assume the foundation subgrade will consist of native soils with penetration test values of at least 6 BPF or compacted engineered fill soils. We recommend including an allowance for subcutting soft, wet soils below the footings due to groundwater and replacing with at least 4 to 6 inches of clear, crushed gravel free of fines.

DRAFT

Table 3-4 below contains our recommended parameters for foundation design. Given the limited information available for development of Lots 1 through 5, these recommendations should be considered preliminary, and we recommend additional exploration and evaluation be performed once further development information is available.

Table 3-4. Recommended Spread Footing Design Parameters

Item	Description
Maximum net allowable bearing pressure (psf)	1,500 (for Lot 6 based on subgrade improvement recommended here within)
Minimum factor of safety for bearing capacity failure	3.0
Minimum embedment below final exterior grade for heated structures (inches)	42
Minimum embedment below final exterior grade for unheated structures or for footings not protected from freezing temperatures during construction (inches)	60
Total estimated settlement (inches)	1*
Differential settlement (inches)	Typically, about 2/3 of total settlement**

* If the site is raised more than 3 feet, a time delay is recommended to allow the soft soils time to consolidate.

** Actual differential settlement amounts will depend on final loads and foundation layout. We can evaluate differential settlement based on final foundation plans and loadings.

3.4 Interior Slabs

3.4.1 Subgrade Modulus

The anticipated floor subgrade is engineered clay fill. We recommend using a modulus of subgrade reaction, k, of 100 pounds per square inch per inch of deflection (pci) to design the slabs. If the slab design requires placing 6 inches of compacted crushed aggregate base immediately below the slab, the slab design may increase the k-value by 50 pci. We recommend that the aggregate base materials be free of bituminous. In addition to improving the modulus of subgrade reaction, an aggregate base facilitates construction activities and is less weather sensitive.

3.4.2 Moisture Vapor Protection

Excess transmission of water vapor could cause floor dampness, certain types of floor bonding agents to separate, or mold to form under floor coverings. If project planning includes using floor coverings or coatings, we recommend placing a vapor retarder or vapor barrier immediately beneath the slab. We also recommend consulting with floor covering manufacturers regarding the appropriate type, use and installation of the vapor retarder or barrier to preserve warranty assurances.

DRAFT

3.5 Frost Protection

3.5.1 General

Clayey and silty soils will underlie exterior slabs, as well as pavements. We consider clayey and silty soils to be moderately to highly frost susceptible. Soils of this type can retain moisture and heave upon freezing. In general, this characteristic is not an issue unless these soils become saturated, due to surface runoff or infiltration, or are excessively wet in-situ. Once frozen, unfavorable amounts of general and isolated heaving of the soils and the surface structures supported on them could develop. This type of heaving could affect design drainage patterns and the performance of exterior slabs and pavements, as well as any isolated exterior footings and piers.

Note that general runoff and infiltration from precipitation are not the only sources of water that can saturate subgrade soils and contribute to frost heave. Roof drainage and irrigation of landscaped areas in close proximity to exterior slabs, pavements, and isolated footings and piers, contribute as well.

3.5.2 Frost Heave Mitigation

To address most of the heave related issues, we recommend setting general site grades and grades for exterior surface features to direct surface drainage away from buildings, across large, paved areas and away from walkways. Such grading will limit the potential for saturation of the subgrade and subsequent heaving. General grades should also have enough “slope” to tolerate potential larger areas of heave, which may not fully settle after thawing.

Even small amounts of frost-related differential movement at walkway joints or cracks can create tripping hazards. Project planning can explore several subgrade improvement options to address this condition.

One of the more conservative subgrade improvement options to mitigate potential heave is removing any frost-susceptible soils present below the exterior slab areas down to a minimum depth of 4 feet below subgrade elevations. We recommend filling the resulting excavation with non-frost-susceptible fill. We recommend providing drainage at the base of the subcut, as well as gradual transitions from this subcut (3H:1V or flatter gradient). We also recommend sloping the bottom of the excavation toward one or more collection points to remove any water entering the engineered fill. This approach will not be effective in controlling frost heave without removing the water.

An important geometric aspect of the excavation and replacement approach described above is sloping the banks of the excavations to create a more gradual transition between the unexcavated soils considered frost susceptible and the engineered fill in the excavated area, which is not frost susceptible. The slope allows attenuation of differential movement that may occur along the excavation boundary. We recommend slopes that are 3H:1V, or flatter, along transitions between frost-susceptible and non-frost-susceptible soils.

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Figure 3-2 shows an illustration summarizing some of the recommendations.

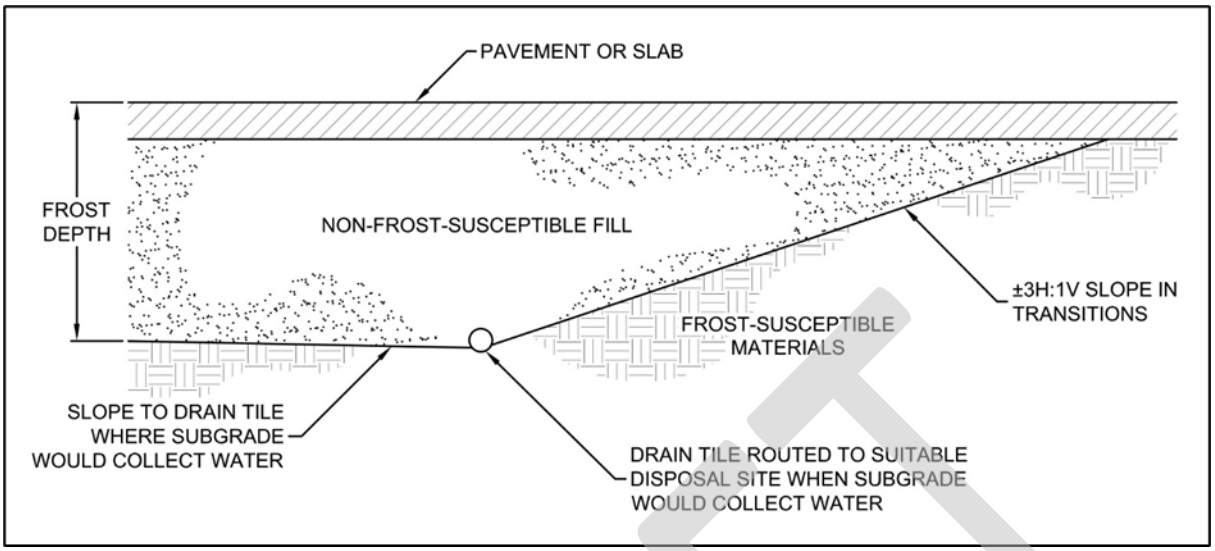


Figure 3-2. Frost Protection Geometry Illustration

Another option is to limit frost heave in critical areas, such as doorways and entrances, via frost-depth footings or localized excavations with sloped transitions between frost-susceptible and non-frost-susceptible soils, as described above.

Over the life of slabs and pavements, cracks will develop, and joints will open up, which will expose the subgrade and allow water to enter from the surface and either saturate or perch atop the subgrade soils. This water intrusion increases the potential for frost heave or moisture-related distress near the crack or joint. Therefore, we recommend implementing a detailed maintenance program to seal and/or fill any cracks and joints. The maintenance program should give special attention to areas where dissimilar materials abut one another, where construction joints occur and where shrinkage cracks develop.

3.6 Pavements and Exterior Slabs

3.6.1 Design Sections

Our scope of services for this project did not include laboratory tests on subgrade soils to determine an R-value for pavement design. Based on our experience with similar clayey soils anticipated at the pavement subgrade elevation, we recommend pavement design assume an R-value of 10. Note the contractor may need to perform limited removal of unsuitable or less suitable soils or mechanical or chemical stabilization to achieve this value. Table 3-6 provides recommended pavement sections, based on the soils support and traffic loads.

We based the concrete pavement designs on a modulus of subgrade reaction (k) of 75 pci.

DRAFT

Table 3-5. Recommended Bituminous and Concrete Pavement Sections

Use	Light Duty Bituminous	Medium Duty Bituminous	Light Duty Concrete	Medium Duty Concrete
Minimum asphalt thickness (inches)	3 ½	4	---	---
Minimum concrete thickness (inches)	---	---	5	6
Minimum aggregate base thickness (inches)	6	8	4	4
Minimum granular subbase	12	18	12	18

3.6.2 Concrete Pavements

We assumed the concrete pavement sections in Table 3-6 will have edge support. We recommend placing an aggregate base below the pavement to provide a suitable subgrade for concrete placement, reduce faulting and help dissipate loads. Appropriate mix designs, panel sizing, jointing, doweling and edge reinforcement are critical to performance of rigid pavements. We recommend you contact your civil engineer to determine the final design or consult with us for guidance on these items.

3.6.3 Bituminous Pavement Materials

Appropriate mix designs are critical to the performance of flexible pavements. We can provide recommendations for pavement material selection during final pavement design.

3.6.4 Subgrade Drainage

We recommend installing perforated drainpipes throughout pavement areas at low points, around catch basins, and behind curb in landscaped areas. We also recommend installing drainpipes along pavement and exterior slab edges where exterior grades promote drainage toward those edge areas. The contractor should place drainpipes in small trenches, extended at least 8 inches below the granular subbase layer, or below the aggregate base material where no subbase is present.

3.6.5 Performance and Maintenance

We based the above pavement designs on a 20-year performance life for bituminous and a 35-year life for concrete. This is the amount of time before we anticipate the pavement will require reconstruction. This performance assumes routine maintenance, such as seal coating and crack sealing. The actual pavement life will vary depending on variations in weather, traffic conditions, and maintenance.

It is common to place the non-wear course of bituminous and then delay placement of wear course. For this situation, we recommend evaluating if the reduced pavement section will have sufficient structure to support construction traffic.

DRAFT

Many conditions affect the overall performance of the exterior slabs and pavements. Some of these conditions include the environment, loading conditions and the level of ongoing maintenance. With regard to bituminous pavements in particular, it is common to have thermal cracking develop within the first few years of placement and continue throughout the life of the pavement. We recommend developing a regular maintenance plan for filling cracks in exterior slabs and pavements to lessen the potential impacts for cold weather distress due to frost heave or warm weather distress due to wetting and softening of the subgrade.

3.7 Utilities

3.7.1 Subgrade Stabilization

Earthwork activities associated with utility installations located inside the building area should adhere to the recommendations in Section 3.2.

For exterior utilities, we anticipate the soils at typical invert elevations will be suitable for utility support. However, if construction encounters unfavorable conditions such as soft clay, organic soils or perched water at invert grades, the unsuitable soils may require some additional subcutting and replacement with sand or crushed rock to prepare a proper subgrade for pipe support. Project design and construction should not place utilities within the 1H:1V oversizing of foundations.

3.7.2 Corrosion Potential

Based on our experience, the soils encountered in the borings are moderately corrosive to metallic conduits, but only marginally corrosive to concrete. We recommend specifying non-corrosive materials or providing corrosion protection, unless project planning chooses to perform additional tests to demonstrate the soils are not corrosive.

3.8 Equipment Support

The recommendations included in the report may not be applicable to equipment used for the construction and maintenance of this project. We recommend evaluating subgrade conditions in areas of shoring, scaffolding, cranes, pumps, lifts, and other construction equipment prior to mobilization to determine if the exposed materials are suitable for equipment support or require some form of subgrade improvement. We also recommend project planning consider the effect that loads applied by such equipment may have on structures they bear on or surcharge – including pavements, buried utilities, below-grade walls, etc. We can assist you in this evaluation.

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4.0 Procedures

4.1 Penetration Test Borings

We drilled the penetration test borings with a flotation tire-mounted core and auger drill equipped with hollow-stem auger. We performed the borings in general accordance with ASTM D6151 taking penetration test samples at 2 1/2- or 5-foot intervals in general accordance with ASTM D1586. The boring logs show the actual sample intervals and corresponding depths.

We sealed penetration test boreholes meeting the Minnesota Department of Health (MDH) Environmental Borehole criteria with an MDH-approved grout. We will forward a sealing record (or sealing records) for those boreholes to the MDH Well Management Section.

4.2 Exploration Logs

4.2.1 Log of Boring Sheets

The Appendix includes Log of Boring sheets for our penetration test borings. The logs identify and describe the penetrated geologic materials and present the results of penetration resistance performed. The logs also present the results of laboratory tests performed on penetration test samples, and groundwater measurements. The Appendix also includes a Fence Diagram intended to provide a summarized cross-sectional view of the soil profile across the site.

We inferred strata boundaries from changes in the penetration test samples and the auger cuttings. Because we did not perform continuous sampling, the strata boundary depths are only approximate. The boundary depths likely vary away from the boring locations, and the boundaries themselves may occur as gradual rather than abrupt transitions.

4.2.2 Geologic Origins

We assigned geologic origins to the materials shown on the logs and referenced within this report, based on: (1) a review of the background information and reference documents cited above, (2) visual classification of the various geologic material samples retrieved during the course of our subsurface exploration, (3) penetration resistance testing performed for the project, (4) laboratory test results, and (5) available common knowledge of the geologic processes and environments that have impacted the site and surrounding area in the past .

DRAFT

4.3 Material Classification and Testing

4.3.1 Visual and Manual Classification

We visually and manually classified the geologic materials encountered based on ASTM D2488. When we performed laboratory classification tests, we used the results to classify the geologic materials in accordance with ASTM D2487. The Appendix includes a chart explaining the classification system we used.

4.3.2 Laboratory Testing

The exploration logs in the Appendix note most of the results of the laboratory tests performed on geologic material samples. We performed the tests in general accordance with ASTM procedures.

4.4 Groundwater Measurements

The drillers checked for groundwater while advancing the penetration test borings, and again after auger withdrawal. We then filled the boreholes, as noted on the boring logs.

5.0 Qualifications

5.1 Variations in Subsurface Conditions

5.1.1 Material Strata

We developed our evaluation, analyses, and recommendations from a limited amount of site and subsurface information. It is not standard engineering practice to retrieve material samples from exploration locations continuously with depth. Therefore, we must infer strata boundaries and thicknesses to some extent. Strata boundaries may also be gradual transitions, and project planning should expect the strata to vary in depth, elevation, and thickness, away from the exploration locations.

Variations in subsurface conditions present between exploration locations may not be revealed until performing additional exploration work or starting construction. If future activity for this project reveals any such variations, you should notify us so that we may reevaluate our recommendations. Such variations could increase construction costs, and we recommend including a contingency to accommodate them.

5.1.2 Groundwater Levels

We made groundwater measurements under the conditions reported herein and shown on the exploration logs and interpreted in the text of this report. Note that the observation periods were relatively short, and project planning can expect groundwater levels to fluctuate in response to rainfall, flooding, irrigation, seasonal freezing and thawing, surface drainage modifications, and other seasonal and annual factors.

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5.2 Continuity of Professional Responsibility

5.2.1 Plan Review

We based this report on a limited amount of information, and we made a number of assumptions to help us develop our recommendations. We should be retained to review the geotechnical aspects of the designs and specifications. This review will allow us to evaluate whether we anticipated the design correctly, if any design changes affect the validity of our recommendations, and if the design and specifications correctly interpret and implement our recommendations.

5.2.2 Construction Observations and Testing

We recommend retaining us to perform the required observations and testing during construction as part of the ongoing geotechnical evaluation. This will allow us to correlate the subsurface conditions exposed during construction with those encountered by the borings and provide professional continuity from the design phase to the construction phase. If we do not perform observations and testing during construction, it becomes the responsibility of others to validate the assumption made during the preparation of this report and to accept the construction-related geotechnical engineer-of-record responsibilities.

5.3 Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

5.4 Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

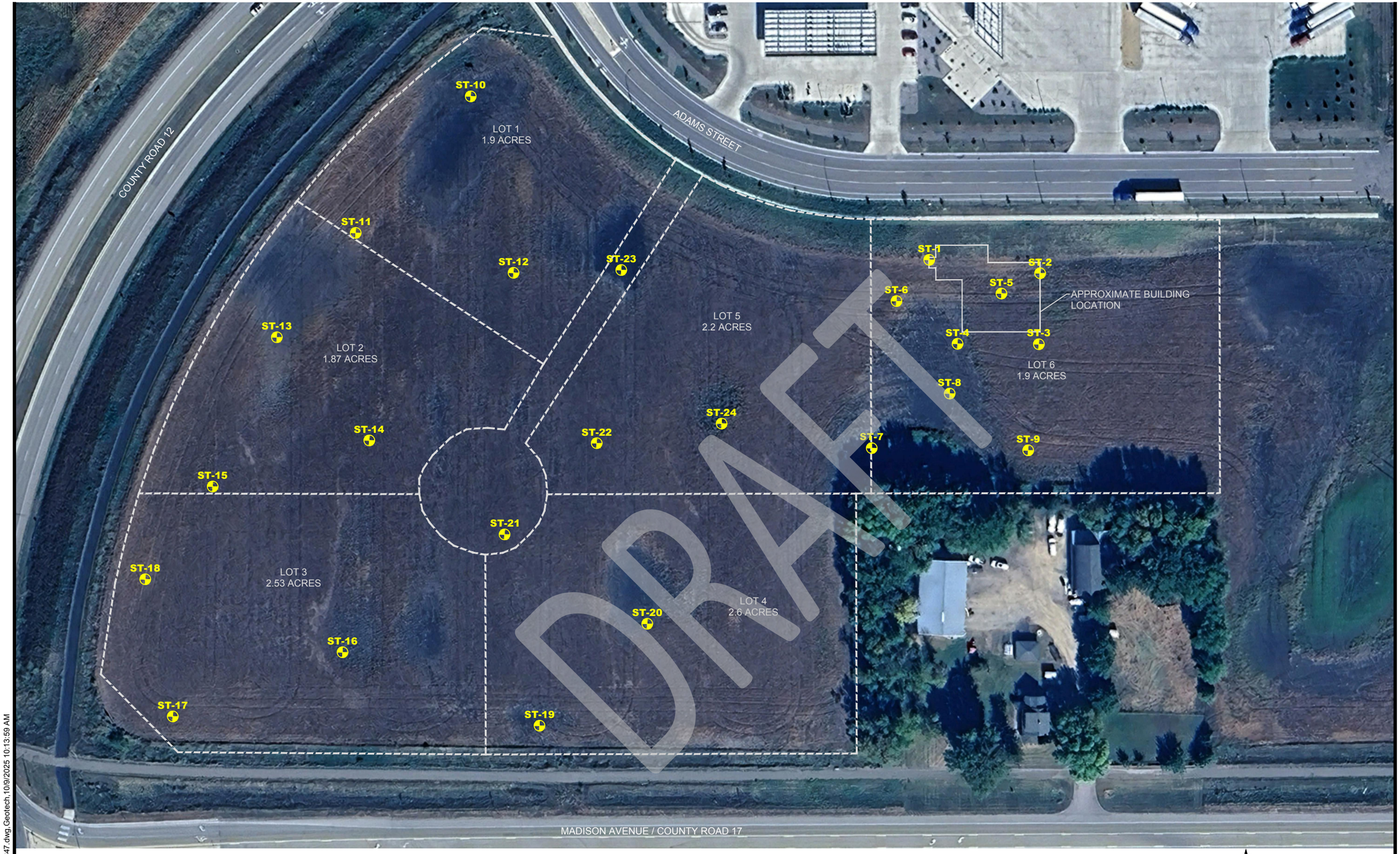
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Appendix

Soil Boring Location Sketch
Fence Diagram
Log of Boring Sheets ST-1 to ST-24
Descriptive Terminology of Soil

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BRAUN
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DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

N

50' 0 100'

SCALE: 1"=100'

BRAUN INTERTEC
The science you build on
2120 Howard Drive W, Suite B
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Drawing Information

Project No:	B2508847
Drawing No:	B2508847
Drawn By:	MMH
Date Drawn:	10/9/25
Checked By:	IB
Last Modified:	10/9/25

Project Information

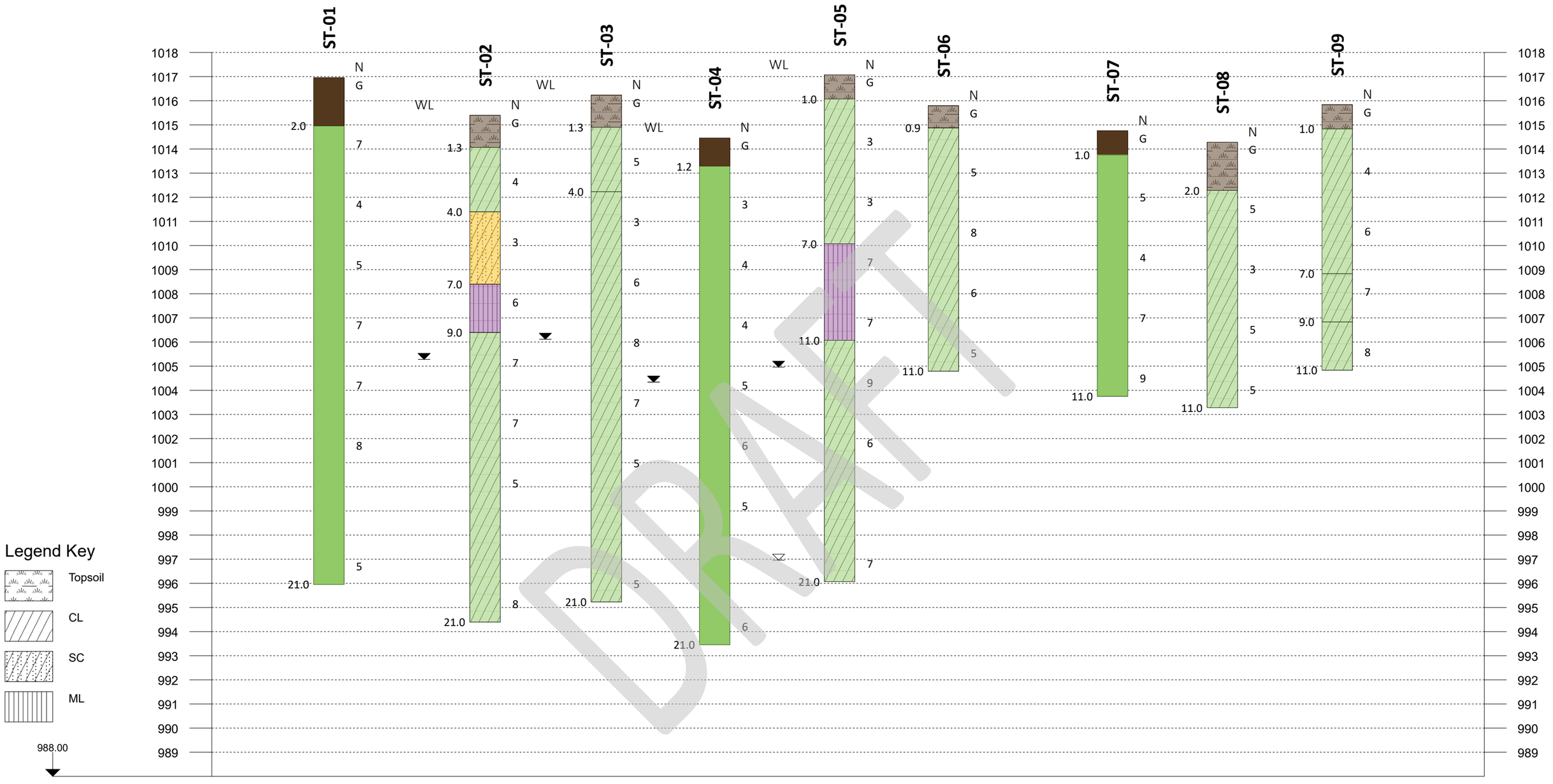
Met-Con Mankato Office and Site Development

East of County Highway 12 Between Adams Street and Madison Avenue

Mankato, Minnesota

Soil Boring Location Sketch

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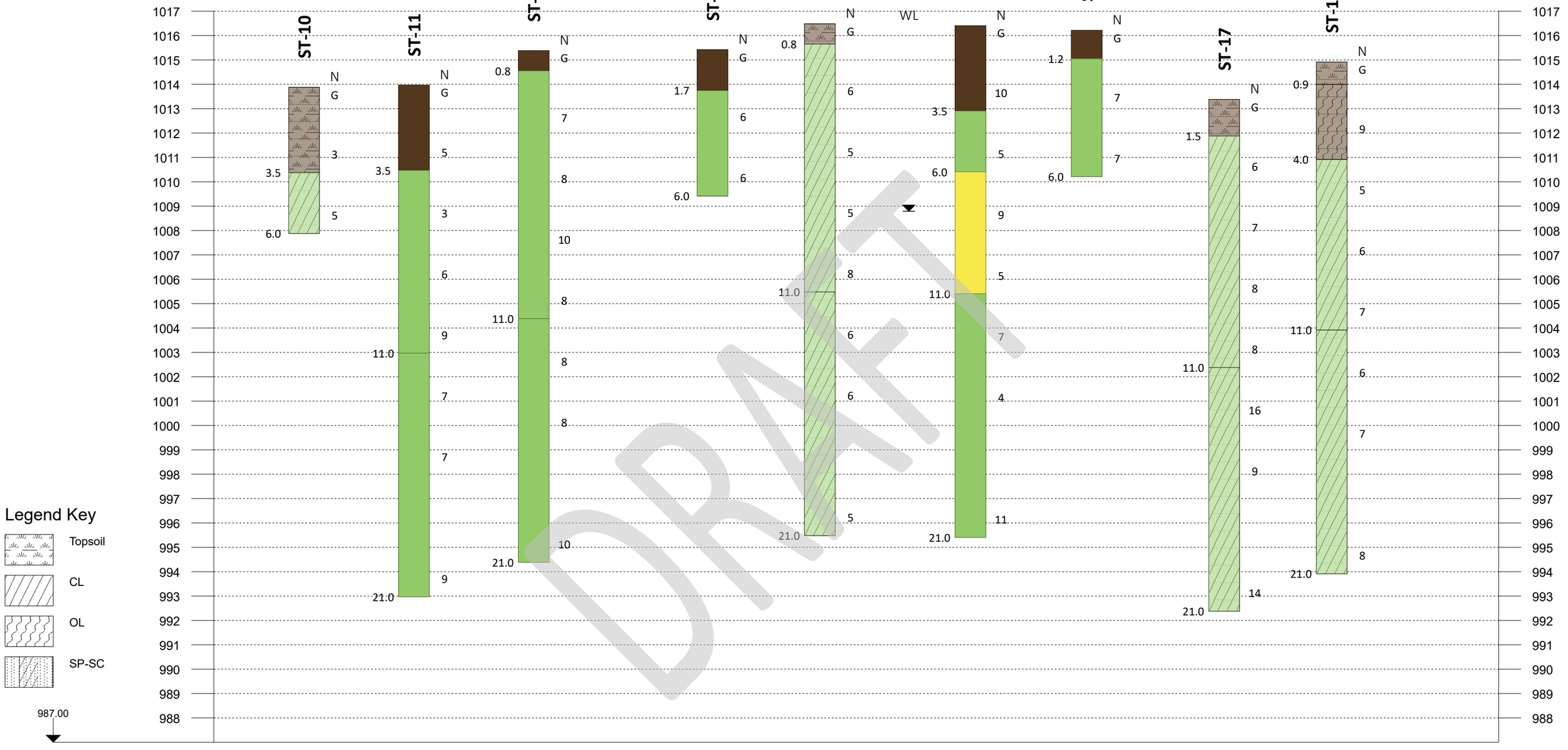
ST-01 to ST-09

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

BRAUN INTERTEC
the science you build on

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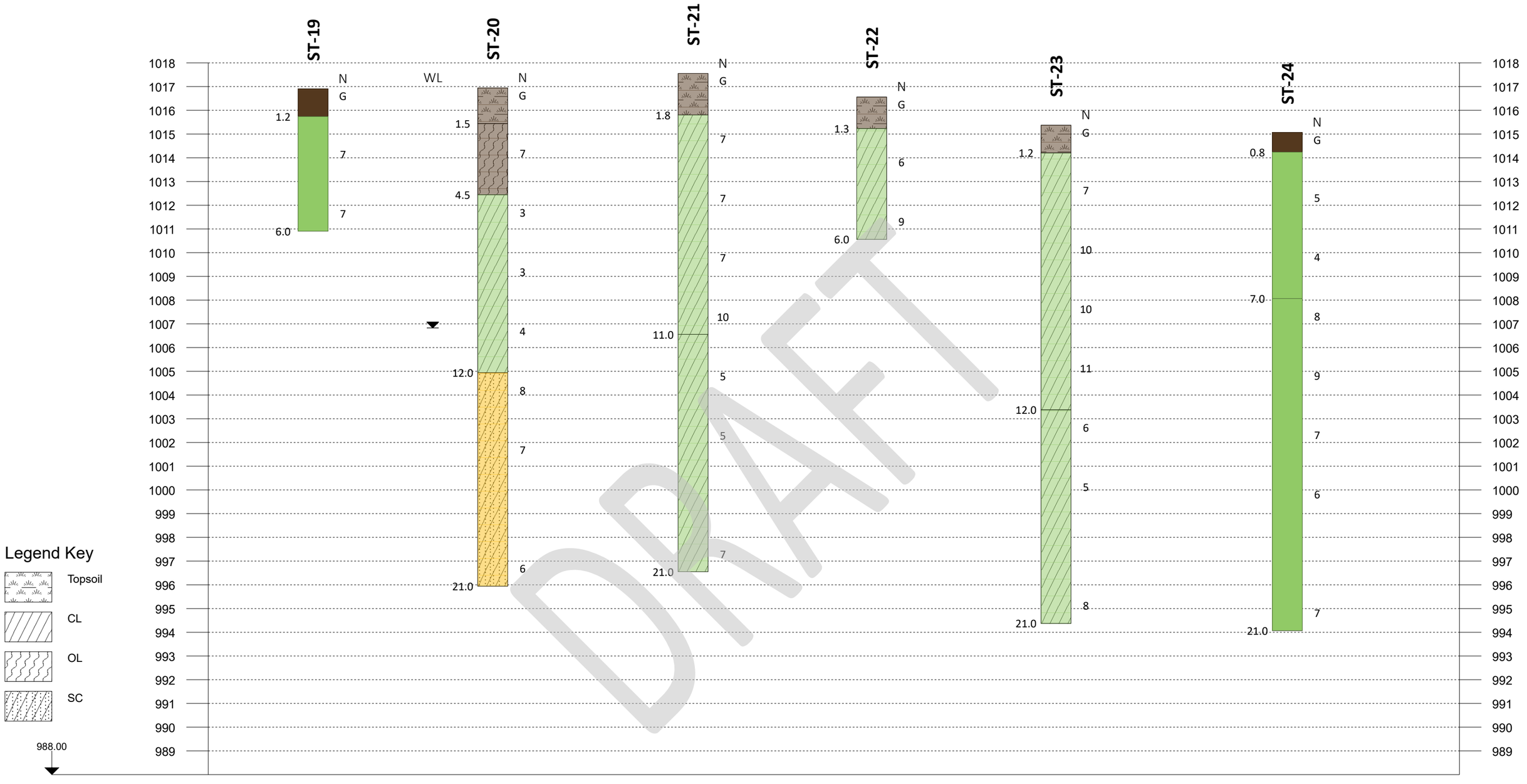
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ST-10 to ST-18

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

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ST-19 to ST-24

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-01**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217080.3 EASTING: 589641.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1017.0 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
1015.0							
2.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, soft to medium (GLACIAL TILL)		2-3-4 (7) 8"		27	
			5	1-2-2 (4) 10"			
				1-2-3 (5) 8"		27	
			10	1-2-5 (7) 12"			
				1-3-4 (7) 10"			
			15	2-3-5 (8) 14"		24	
			20	1-2-3 (5) 16"			
996.0							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling. Water not observed immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-02**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217065.8 EASTING: 589761.1
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.1		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.3		LEAN CLAY (CL), light gray, moist, soft (GLACIAL LAKE)		1-2-2 (4) 6"		27	
1011.4							
4.0		CLAYEY SAND (SC), trace Gravel, gray, moist, soft (GLACIAL LAKE)	5	1-1-2 (3) 10"			
1008.4							
7.0		SANDY SILT (ML), brown, moist, loose (GLACIAL LAKE)		2-3-3 (6) 10"		28	LL=38, PL=25, PI=13
1006.4							
9.0	▼	SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium (GLACIAL TILL)	10	1-3-4 (7) 12"		36	
				2-3-4 (7) 0"			No recovery
			15	1-1-4 (5) 0"			No recovery
			20	3-4-4 (8) 16"			
994.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water observed at 10.0 feet while drilling. Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-03**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216989.3 EASTING: 589759.7
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1016.2 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.9		SILTY SAND (SM), slightly organic, black, moist (TOPSOIL)					
1.3		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to gray, moist, soft to medium (GLACIAL LAKE)		1-2-3 (5) 6"		30	OC=5%
1012.2							
4.0		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, soft to medium (GLACIAL TILL)	5	1-1-2 (3) 10"		26	
				1-2-4 (6) 12"			
	▼		10	2-4-4 (8) 0"			No recovery
				2-2-5 (7) 14"			
			15	1-2-3 (5) 0"			No recovery
			20	1-2-3 (5) 0"			No recovery
995.2							
21.0		END OF BORING					Water observed at 10.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-04**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216989.8 EASTING: 589672.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow
START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1014.5 ft RIG: 8505 METHOD: 3 1/4" HSA
SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.3		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, soft to medium (GLACIAL TILL)		1-1-2 (3) 0"			No recovery
			5	1-2-2 (4) 12"		23	
				1-1-3 (4) 10"		26	
	▼	*Wet and dark gray at 10 feet*	10	1-2-3 (5) 3"		27	
				2-3-3 (6) 0"			No recovery
			15	1-2-3 (5) 4"			
			20	1-2-4 (6) 6"			
993.5							
21.0		END OF BORING					Water observed at 10.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-05**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217043.9 EASTING: 589719.3
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1017.1 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1016.1		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
1.0		LEAN CLAY (CL), trace Sand, light gray to brown, moist, soft (GLACIAL LAKE)		1-1-2 (3) 6"		30	LL=38, PL=21, PI=17
			5	1-1-2 (3) 3"		28	
1010.1							
7.0		SANDY SILT (ML), brown, moist, loose (GLACIAL LAKE)		2-3-4 (7) 12"		40	LL=45, PL=27, PI=18
			10	1-3-4 (7) 8"		40	
1006.1							
11.0	▼	SANDY LEAN CLAY (CL), gray, moist, medium to stiff (GLACIAL TILL)		2-4-5 (9) 12"		23	
		Silt seams and sand seams present	15	2-2-4 (6) 3"			
	▽		20	3-3-4 (7) 0"			No recovery
996.1							
21.0		END OF BORING					Water observed at 20.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 12.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-06**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217035.8 EASTING: 589606.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.9		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
0.9		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, medium (GLACIAL TILL)		2-2-3 (5) 6"		24	
			5	1-3-5 (8) 12"		25	
		Sand seam from 7 to 8 feet		1-2-4 (6) 6"		27	
			10	1-2-3 (5) 12"			
1004.8							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-07**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216877.4 EASTING: 589579.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1014.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.8		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, soft to stiff (GLACIAL TILL)		2-2-3 (5) 6"			
			5	1-1-3 (4) 8"		28	
				1-3-4 (7) 10"			
			10	1-3-6 (9) 12"			
1003.8							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling.
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-08**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216936.0 EASTING: 589663.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1014.3 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1012.3		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
2.0		SANDY LEAN CLAY (CL), trace Gravel, black to gray, moist, soft to medium (GLACIAL TILL)		1-2-3 (5) 2"			
			5	1-1-2 (3) 8"		17	
				1-2-3 (5) 12"			
			10	1-2-3 (5) 12"			
1003.3							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-09**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216874.9 EASTING: 589748.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.8		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, gray to brown, moist, soft to medium (GLACIAL TILL)		1-2-2 (4) 6"		26	
			5	1-3-3 (6) 10"		28	
1008.8							
7.0		LEAN CLAY (CL), trace Sand, brown, moist, medium (GLACIAL TILL)		2-3-4 (7) 14"		38	LL=48, PL=27, PI=21
1006.8							
9.0		SANDY LEAN CLAY (CL), with Gravel, brown, moist, medium (GLACIAL TILL)	10	1-3-5 (8) 12"		19	
1004.8							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-10**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217256.5 EASTING: 589147.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1013.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
				1-1-2 (3) 4"		22	
1010.4							
3.5		SANDY LEAN CLAY (CL), with Gravel, dark gray to brown, moist, medium (GLACIAL TILL)					
			5	1-2-3 (5) 8"		31	
1007.9							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-11**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217109.3 EASTING: 589023.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1014.0 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
		SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)					
				2-2-3 (5) 4"		25	OC=6%
1010.5							
3.5		SANDY LEAN CLAY (CL), trace Gravel, gray to brown, moist, soft to stiff (GLACIAL TILL)					
			5	1-1-2 (3) 10"		26	
				1-2-4 (6) 12"		25	
			10	2-3-6 (9) 14"			
1003.0							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium to stiff (GLACIAL TILL)					
				2-3-4 (7) 14"		22	
			15	2-3-4 (7) 16"			
			20	1-4-5 (9) 16"			
993.0							
21.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-12**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217066.3 EASTING: 589193.4
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.6		SANDY ORGANIC CLAY (OL), black, moist to dry (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 0"			No recovery
			5	2-3-5 (8) 10"		20	
				1-4-6 (10) 12"			
			10	2-3-5 (8) 10"			
1004.4							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium to stiff (GLACIAL TILL)		1-4-4 (8) 14"		23	
			15	1-3-5 (8) 10"			
			20	3-4-6 (10) 16"			
994.4							
21.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-13**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216996.8 EASTING: 588938.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.7		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.7		SANDY LEAN CLAY (CL), trace Gravel, dark gray to brown, moist, medium (GLACIAL TILL)		2-3-3 (6) 3"		25	
			5	2-2-4 (6) 2"			
1009.4							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-14**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216885.6 EASTING: 589037.8
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1016.5 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.7		SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		2-2-4 (6) 6"		24	
			5	1-1-4 (5) 10"		22	
		Brown at 7 feet		1-2-3 (5) 12"		24	
			10	1-3-5 (8) 10"			
1005.5							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-1-5 (6) 14"		23	
			15	2-2-4 (6) 18"			
			20	1-1-4 (5) 14"			
995.5							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-15**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216836.0 EASTING: 588869.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1016.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1012.9		SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)		5-5-5 (10) 0"			No recovery
3.5 1010.4		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to gray, moist, medium (GLACIAL LAKE)	5	2-2-3 (5) 5"		24	OC=4%
6.0	▼	POORLY GRADED SAND with CLAY (SP-SC), fine to coarse-grained, trace Gravel, brown, moist to wet, loose (GLACIAL OUTWASH)		1-3-6 (9) 8"		22	P200=11%
1005.4			10	1-2-3 (5) 6"		23	
11.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, soft to stiff (GLACIAL TILL)		1-2-5 (7) 12"			
			15	1-2-2 (4) 10"		27	
995.4			20	2-4-7 (11) 14"			
21.0		END OF BORING Boring then backfilled with bentonite grout					Water observed at 7.5 feet while drilling. Water observed at 7.5 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-16**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216657.4 EASTING: 589009.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.2 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.0		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to brown, moist, medium (GLACIAL TILL)		3-3-4 (7) 0"			No recovery
			5	3-3-4 (7) 2"			
1010.2 6.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling.
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-17**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216588.1 EASTING: 588826.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1013.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1011.9		SILTY SAND (SM), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.5		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)		2-2-4 (6) 8"		23	
			5	1-3-4 (7) 10"		22	
				1-4-4 (8) 10"			
			10	1-4-4 (8) 14"			
1002.4							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, stiff to very stiff (GLACIAL TILL)		7-7-9 (16) 0"			No recovery
			15	3-4-5 (9) 10"		23	
			20	2-6-8 (14) 12"			
992.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-18**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216736.0 EASTING: 588796.3
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/08/25
SURFACE ELEVATION: 1014.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.0		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
0.9		SANDY ORGANIC CLAY (OL), trace Gravel, black, moist, stiff (GLACIAL LAKE)		3-4-5 (9) 6"		22	OC=6%
1010.9							
4.0		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)	5	1-2-3 (5) 8"		30	
		Silt seams		2-2-4 (6) 10"		30	
			10	1-2-5 (7) 14"			
1003.9							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		2-2-4 (6) 14"			
			15	1-3-4 (7) 14"			
			20	2-3-5 (8) 12"		25	
993.9							
21.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-19**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216578.2 EASTING: 589221.4
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.7		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)		3-3-4 (7) 6"		23	
			5	1-3-4 (7) 10"		25	
1010.9							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-20**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216688.0 EASTING: 589337.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.4		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.5		ORGANIC CLAY (OL), trace Gravel, black to gray, moist, soft to medium (GLACIAL LAKE)		2-3-4 (7) 4"		22	
1012.4							
4.5		SANDY LEAN CLAY (CL), with Gravel, slightly organic, brown, moist, soft (GLACIAL TILL)	5	1-1-2 (3) 8"		28	OC=2%
				1-1-2 (3) 10"			
	▼		10	1-2-2 (4) 10"		27	
1004.9							
12.0		CLAYEY SAND (SC), medium-grained, brown to gray, moist to wet, loose (GLACIAL TILL)		1-3-5 (8) 12"			
			15	1-3-4 (7) 8"		29	P200=41%
			20	2-3-3 (6) 12"			
995.9							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water observed at 10.0 feet while drilling. Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-21**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216784.3 EASTING: 589183.8
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1017.6 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.8		SILTY SAND (SM), fine to medium-grained, slightly organic, black, dry to moist (TOPSOIL)					
1.8		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 8"		22	
			5	1-3-4 (7) 10"			
				1-2-5 (7) 10"			
			10	1-3-7 (10) 12"		22	
1006.6							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-2-3 (5) 14"		23	
			15	2-2-3 (5) 12"			
			20	2-4-3 (7) 14"			
996.6							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-22**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216882.6 EASTING: 589283.1
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.6 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.3		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		1-2-4 (6) 6"		23	
			5	3-4-5 (9) 10"			
1010.6							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-23**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217069.3 EASTING: 589309.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.2		CLAYEY SAND (SC), trace Gravel, organic, black, moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		1-2-5 (7) 10"		23	
			5	2-4-6 (10) 12"			
				3-4-6 (10) 10"			
			10	4-4-7 (11) 10"			
1003.4							
12.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-3-3 (6) 16"		24	
			15	1-2-3 (5) 12"			
			20	1-3-5 (8) 12"			
994.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-24**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216903.7 EASTING: 589417.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.1 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, light gray, moist, soft to medium (GLACIAL LAKE)		1-2-3 (5) 4"			
			5	1-1-3 (4) 12"		29	
1008.1							
7.0		SANDY LEAN CLAY (CL), trace Gravel, dark brown to dark gray, moist, medium to stiff (GLACIAL TILL)		2-3-5 (8) 10"			
			10	2-3-6 (9) 6"			
				1-2-5 (7) 14"			
			15	2-2-4 (6) 12"			
			20	2-3-4 (7) 14"			
994.1							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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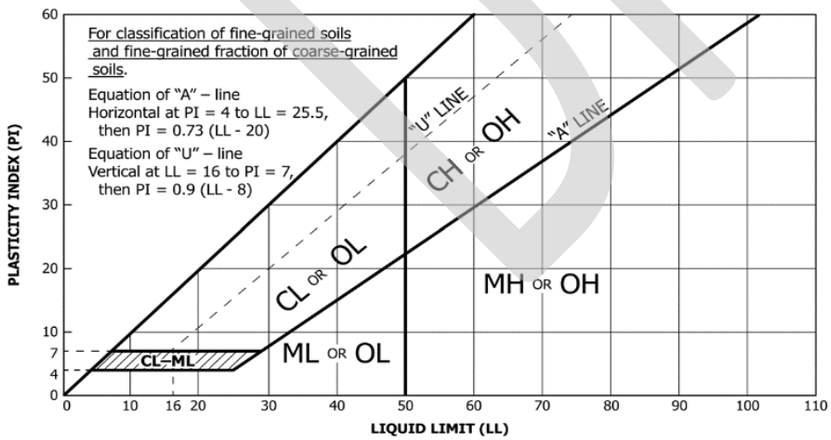
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the science you build on

Descriptive Terminology of Soil

Based on Standards ASTM D2487/2488
(Unified Soil Classification System)

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

A. Based on the material passing the 3-inch (75-mm) sieve.
B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
C. Gravels with 5 to 12% fines require dual symbols:
   GW-GM well-graded gravel with silt
   GW-GC well-graded gravel with clay
   GP-GM poorly graded gravel with silt
   GP-GC poorly graded gravel with clay
D. $C_u = D_{60} / D_{10}$ $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
E. If soil contains ≥ 15% sand, add "with sand" to group name.
F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
G. If fines are organic, add "with organic fines" to group name.
H. Sands with 5 to 12% fines require dual symbols:
   SW-SM well-graded sand with silt
   SW-SC well-graded sand with clay
   SP-SM poorly graded sand with silt
   SP-SC poorly graded sand with clay
I. If soil contains ≥ 15% gravel, add "with gravel" to group name.
J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
L. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
M. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.
N. PI ≥ 4 and plots on or above "A" line.
O. PI < 4 or plots below "A" line.
P. PI plots on or above "A" line.
Q. PI plots below "A" line.



Laboratory Tests

DD	Dry density, pcf	**q_p**	Pocket penetrometer strength, tsf
WD	Wet density, pcf	**q_U**	Unconfined compression test, tsf
P200	% Passing #200 sieve	**LL**	Liquid limit
MC	Moisture content, %	**PL**	Plastic limit
OC	Organic content, %	**PI**	Plasticity index

Particle Size Identification

Boulders..... over 12"
Cobbles..... 3" to 12"
Gravel
  Coarse..... 3/4" to 3" (19.00 mm to 75.00 mm)
  Fine..... No. 4 to 3/4" (4.75 mm to 19.00 mm)
Sand
  Coarse..... No. 10 to No. 4 (2.00 mm to 4.75 mm)
  Medium..... No. 40 to No. 10 (0.425 mm to 2.00 mm)
  Fine..... No. 200 to No. 40 (0.075 mm to 0.425 mm)
Silt..... No. 200 (0.075 mm) to .005 mm
Clay..... < .005 mm

Relative Proportions[L,M]

trace..... 0 to 5%
little..... 6 to 14%
with..... ≥ 15%

Inclusion Thicknesses

lens..... 0 to 1/8"
seam..... 1/8" to 1"
layer..... over 1"

Apparent Relative Density of Cohesionless Soils

Very loose ..... 0 to 4 BPF
Loose ..... 5 to 10 BPF
Medium dense..... 11 to 30 BPF
Dense..... 31 to 50 BPF
Very dense..... over 50 BPF

Consistency of Cohesive Soils	Blows Per Foot	Approximate Unconfined Compressive Strength
Very soft	0 to 1 BPF	< 0.25 tsf
Soft	2 to 4 BPF	0.25 to 0.5 tsf
Medium	5 to 8 BPF	0.5 to 1 tsf
Stiff	9 to 15 BPF	1 to 2 tsf
Very Stiff	16 to 30 BPF	2 to 4 tsf
Hard	over 30 BPF	> 4 tsf

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp but no visible water.
Wet: Visible free water, usually soil is below water table.

Drilling Notes:

Blows/N-value: Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

Partial Penetration: If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

Recovery: Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

WOH: Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WOR: Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

Water Level: Indicates the water level measured by the drillers either while drilling (▽), at the end of drilling (▼), or at some time after drilling (▽).

Sample Symbols

Standard Penetration Test
Modified California (MC)
Auger
Grab Sample
Rock Core
Thinwall (TW)/Shelby Tube (SH)
Texas Cone Penetrometer
Dynamic Cone Penetrometer

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5/2021

Geotechnical Evaluation Report

Met-Con Mankato Office and Site Development

East of County Highway 12 between Adams Street and Madison Avenue
Mankato, Minnesota

Prepared for

Met-Con Companies, Inc.

Professional Certification:
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.

Philip E. Bailey, PE
Associate Director, Senior Engineer
License Number: 47539
February 3, 2026

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Braun Intertec Corporation

Project B2508847

February 3, 2026

Project B2508847

Scott Brown
Met-Con Companies, Inc.
PO Box 427
15760 Acorn Trail
Faribault, MN 55021

Re: Geotechnical Evaluation
Met-Con Mankato Office and Site Development
East of County Highway 12 between Adams Street and Madison Avenue
Mankato, Minnesota

Dear Mr. Brown:

We are pleased to present this geotechnical evaluation report for the Met-Con Mankato Office and Site Development project at the above referenced site.

Thank you for making Braun Intertec Corporation (Braun Intertec) your geotechnical consultant for this project. If you have questions about this report, or if there are other services that we can provide in support of our work to date, please contact Philip Bailey at 507.995.2788 or pbailey@braunintertec.com.

Sincerely,
Braun Intertec Corporation

Philip E. Bailey, PE
Associate Director, Senior Engineer

Brandon K. Wright, PE
Senior Manager, Senior Engineer

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Table of Contents

1.0 Introduction 1
- 1.1 Project Description 1
- 1.2 Site Conditions and History 3
- 1.3 Purpose 4
- 1.4 Background Information and Reference Documents 4
- 1.5 Scope of Services 5

2.0 Results 5
- 2.1 Geologic Overview 5
- 2.2 Boring Results 6
- 2.3 Groundwater 6
- 2.4 Laboratory Test Results 7

3.0 Recommendations 8
- 3.1 Design and Construction Discussion 8
  - 3.1.1 Building Subgrade Preparation 8
  - 3.1.2 Reuse of On-Site Soils 8
  - 3.1.3 Groundwater 9
  - 3.1.4 Construction Disturbance 9
  - 3.1.5 Frost Heave Mitigation 9
  - 3.1.6 Pavement 9
- 3.2 Site Grading and Subgrade Preparation 10
  - 3.2.1 Building Subgrade Excavations 10
  - 3.2.2 Excavation Oversizing 11
  - 3.2.3 Excavated Slopes 11
  - 3.2.4 Excavation Dewatering 12
  - 3.2.5 Pavement and Exterior Slab Subgrade Preparation 12
  - 3.2.6 Pavement Subgrade Proofroll 13
  - 3.2.7 Engineered Fill Materials and Compaction 13
  - 3.2.8 Special Inspections of Soils 15
- 3.3 Spread Footings 15
- 3.4 Interior Slabs 16
  - 3.4.1 Subgrade Modulus 16
  - 3.4.2 Moisture Vapor Protection 16
- 3.5 Frost Protection 17
  - 3.5.1 General 17
  - 3.5.2 Frost Heave Mitigation 17
- 3.6 Pavements and Exterior Slabs 18
  - 3.6.1 Design Sections 18
  - 3.6.2 Concrete Pavements 19
  - 3.6.3 Bituminous Pavement Materials 19
  - 3.6.4 Subgrade Drainage 19

DRAFT

Table of Contents (Continued)

3.6.5 Performance and Maintenance 19
3.7 Utilities 20
3.7.1 Subgrade Stabilization 20
3.7.2 Corrosion Potential 20
3.8 Equipment Support 20

4.0 Procedures 21
4.1 Penetration Test Borings 21
4.2 Exploration Logs 21
4.2.1 Log of Boring Sheets 21
4.2.2 Geologic Origins 21
4.3 Material Classification and Testing 22
4.3.1 Visual and Manual Classification 22
4.3.2 Laboratory Testing 22
4.4 Groundwater Measurements 22

5.0 Qualifications 22
5.1 Variations in Subsurface Conditions 22
5.1.1 Material Strata 22
5.1.2 Groundwater Levels 22
5.2 Continuity of Professional Responsibility 23
5.2.1 Plan Review 23
5.2.2 Construction Observations and Testing 23
5.3 Use of Report 23
5.4 Standard of Care 23

Appendix

Soil Boring Location Sketch
Fence Diagram
Log of Boring Sheets ST-1 to ST-24
Descriptive Terminology of Soil

List of Tables

Table 1-1. Building Description 1
Table 1-2. Site Aspects and Grading Description 1
Table 2-1. Subsurface Profile Summary 6
Table 2-3. Groundwater Summary 7
Table 3-1. Building Excavation Depths 10
Table 3-2. Engineered Fill Materials* 13
Table 3-3. Compaction Recommendations Summary 14
Table 3-4. Recommended Spread Footing Design Parameters 16
Table 3-6. Recommended Bituminous and Concrete Pavement Sections 19

DRAFT

Table of Contents (Continued)

List of Figures

Figure 1-1. Site Development Area 2
Figure 1-2. Site Layout 3
Figure 1-3. Aerial Photograph of the Site in 2025 4
Figure 3-1. Generalized Illustration of Oversizing 11
Figure 3-2. Frost Protection Geometry Illustration 18

DRAFT

1.0 Introduction

1.1 Project Description

This geotechnical evaluation report addresses the proposed design and construction of the proposed office building and site grading, located in the southeast quadrant of the intersection of County State Aid Highway 12 and Adams Street in Mankato, Minnesota. The project will include the construction of a single-story office building with multiple rental units within a 1.9-acre parcel (Lot 6). The proposed office building will be steel framed with sheet-metal and stone siding. Civil improvements will include concrete pavement, a gravel surfaced storage yard, detention pond, and a patio.

In addition to the development of Lot 6, we also understand Met-Con has purchased an additional five adjoining lots and intends to develop them in the future. We assume similar single-story, slab-on-grade, steel-framed, office- or warehouse-type buildings will be constructed on the five adjoining lots.

Table 1-1 and Table 1-2 summarize the provided and assumed project details used to prepare this report.

Table 1-1. Building Description

Aspect	Descriptions
Below grade levels	None (Provided)
Above grade levels	1 (Provided)
Lowest level floor elevation (feet)	1018 (Assumed)
Column loads (kips)	150 (Assumed)
Wall loads (kips/foot)	8 (Assumed)
Nature of construction	Single-story, slab-on-grade, steel-framed, office- or warehouse-type buildings (Provided)
Cuts or fills for buildings	1 to 3 feet of fill (Assumed)
Tolerable building settlements	1 inch total, ½ inch differential (Assumed)

Table 1-2. Site Aspects and Grading Description

Aspect	Descriptions
Pavement type(s)	Bituminous or concrete for parking and drive areas and aggregate surfacing for yard storage
Assumed pavement loads	Light-duty: 50,000 ESALs* for car parking
	Medium-duty: 100,000 ESALs* for main drive areas
Grade changes	Up to 3 feet of fill in pavement areas (Assumed)

*Equivalent 18,000-lb single axle loads based on 20-year design for bituminous and 35-year design for concrete.

DRAFT

Figure 1-1below shows an illustration of the proposed development area.



Figure 1-1. Site Development Area
Figure provided by Met-Con Companies, Inc. not dated.

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Figure 1-2 below shows an illustration of the proposed site layout within Lot 6.



Figure 1-2. Site Layout
Figure provided by Met-Con Companies, Inc. dated June 26, 2025.

1.2 Site Conditions and History

Currently, the site exists as undeveloped agricultural fields. The project area is bounded by Adams Street on the north, County State Aid Highway (CSAH 12) on the west, Madison Avenue on the South and an existing farm and agricultural fields on the east.

Current grades range from about 1012 to 1018 feet with site slopes generally downward to the southeast.

Historically, the development area has remained as agricultural land. As shown in Figure 1-3 below, you will note the current site conditions.

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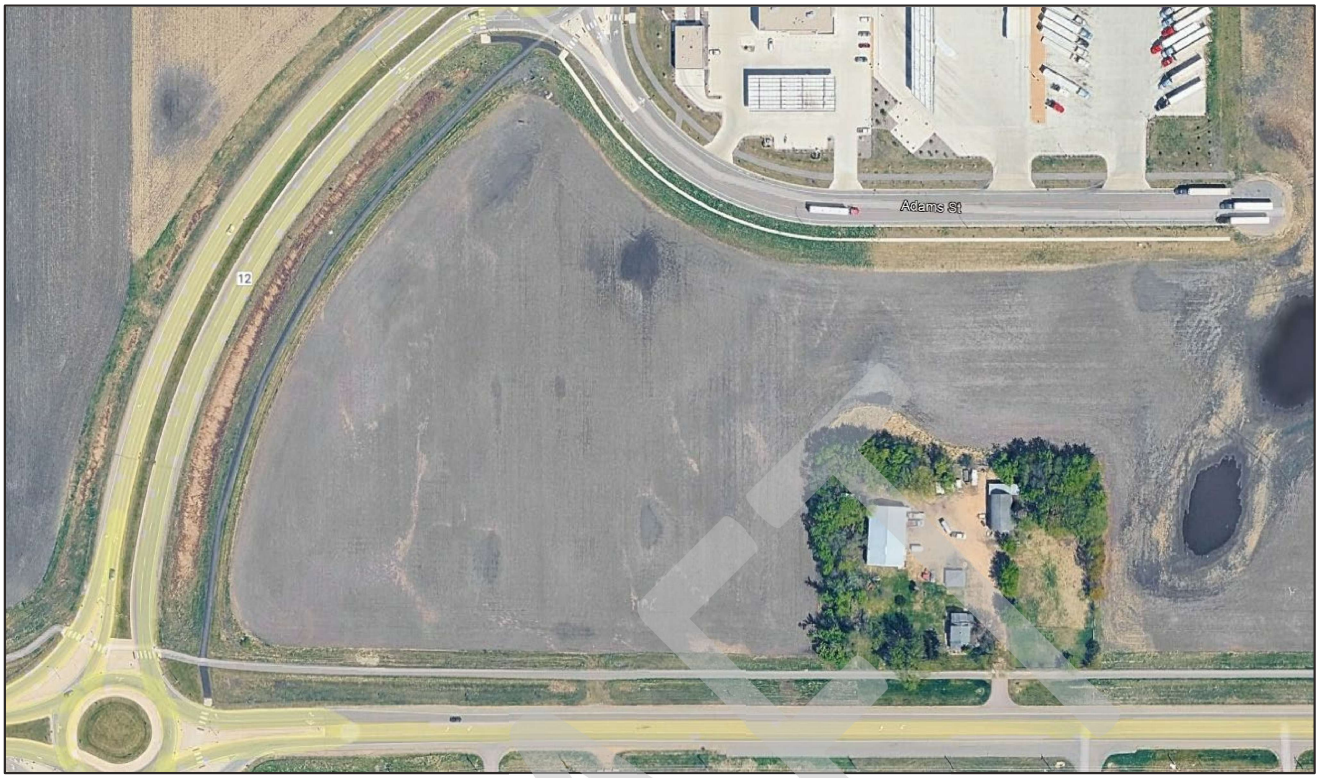


Figure 1-3. Aerial Photograph of the Site in 2025
Figure obtained from Google Earth™ dated May 5, 2025.

1.3 Purpose

The purpose of our geotechnical evaluation is to characterize subsurface geologic conditions at selected exploration locations, evaluate their impact on the project, and provide geotechnical recommendations for the design and construction of the proposed office building, pavements, and site development of Lots 1 to 5.

1.4 Background Information and Reference Documents

We reviewed the following information:

- Topographic data obtained from MnTOPO.
- Site Layout Plan prepared by Met-Con Companies, Inc. dated June 26, 2025.
- Surficial Geology Map of Blue Earth County, prepared by the University of Minnesota, Minnesota Geological Survey. The map is denoted as Atlas C-26, Part A, Plate 3, dated 2012.
- Google Earth aerial imagery with dates ranging from April 27, 1991 to May 5, 2025.
- Communications with Mr. Scott Brown of Met-Con Companies, Inc. regarding the proposed development.

DRAFT

In addition to the provided sources, we have used several publicly available sources of information.

We have described our understanding of the proposed construction and site to the extent others reported it to us. Depending on the extent of available information, we may have made assumptions based on our experience with similar projects. If we have not correctly recorded or interpreted the project details, the project team should notify us. New or changed information could require additional evaluation, analyses, and/or recommendations.

1.5 Scope of Services

We performed our scope of services for the project in accordance with our Proposal Mr. Scott Brown of Met-Con Companies, Inc., dated and authorized on September 30, 2025. The following list describes the geotechnical tasks completed in accordance with our authorized scope of services.

- Reviewing the background information and reference documents previously cited.
- Staking and clearing the exploration location of underground utilities. We selected and we staked the new exploration locations. We acquired the surface elevations and locations with GPS technology. The Soil Boring Location Sketch included in the Appendix shows the approximate locations of the borings.
- Performing 24 standard penetration test (SPT) borings, denoted as ST-1 to ST-24, to nominal depths of 5 to 20 feet below grade across the site.
- Performing laboratory testing on select samples to aid in soil classification and engineering analysis.
- Perform engineering analysis including settlement and bearing capacity for spread footing foundations and pavement analysis for pavement design.
- Preparing this report containing a boring location sketch, logs of soil borings, a summary of the soils encountered, results of laboratory tests, and recommendations for structure and pavement subgrade preparation and the design of foundations, floor slabs, exterior slabs, utilities, stormwater improvements, and pavements.

2.0 Results

2.1 Geologic Overview

We based the geologic origins used in this report on the soil types, in-situ and laboratory testing, and available common knowledge of the geological history of the site. Because of the complex depositional history, geologic origins can be difficult to ascertain. We did not perform a detailed investigation of the geologic history for the site.

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2.2 Boring Results

Table 2-1 provides a summary of the soil boring results, in the general order we encountered the strata. Please refer to the Log of Boring sheets in the Appendix for additional details. The Descriptive Terminology sheets in the Appendix include definitions of abbreviations used in the table below.

Table 2-1. Subsurface Profile Summary

Strata	Soil Type -ASTM Classification	Range of Penetration Resistances	Commentary and Details
Topsoil	OL, CL, SM, SC	--	▪ Thicknesses at boring locations varied from 1 to 3 1/2 feet. ▪ Slightly organic to organic. ▪ Dark brown to black. ▪ Moisture condition generally moist to wet.
Glaciolacustrine	CL, SC, ML, OL	3 to 9 blows per foot (BPF)	▪ Primarily lean clay with varying sand contents but also silt and organic clay. ▪ Encountered to depths of about 4 to 11 feet. ▪ Locally slightly organic to organic. ▪ General penetration resistance of 3 to 6 BPF indicating the cohesionless silts and sands were very loose to loose in relative density and the cohesive clays were soft to stiff in consistency. ▪ Brown, gray, dark gray and black in color. ▪ Moisture condition generally moist.
Glacial deposits	SP-SC	5 to 9 BPF	▪ Primarily till composed of lean clay with varying sand contents but also outwash composed of sand with silt. ▪ Possible cobbles and boulders. ▪ Variable amounts of gravel and may contain cobbles and boulders. ▪ Locally slightly organic. ▪ General penetration resistance of 3 to 7 BPF, indicating the glacial soils were generally soft to medium in consistency and loose in relative density. ▪ Moisture condition generally moist to wet.
	CL, SC	3 to 16 BPF	

2.3 Groundwater

Table 2-3 summarizes the depths where we observed groundwater; the attached Log of Boring sheets in the Appendix also include this information and additional details. We did not observe groundwater while performing the remainder of our borings. Groundwater may take days or longer to reach equilibrium in the boreholes and we immediately backfilled the boreholes, in accordance with our scope of work. Given the coloration of soils and experience with projects in the area, we anticipate that perched groundwater will likely be encountered at depths of 4 to 8 feet. In addition, glacial till (composed of sandy lean clay) frequently

contains isolated pockets and seams of water-bearing sands and gravels. These water-bearing layers are generally limited to extent but can produce a sudden influx of water when encountered during drilling operations or in excavations. If the project team identifies a need for more accurate determination of groundwater depth, we can install piezometers. Project planning should anticipate seasonal and annual fluctuations of groundwater.

Table 2-2. Groundwater Summary

Locations	Surface Elevation	Measured or Estimated Depth to Groundwater (ft)	Corresponding Groundwater Elevation (ft)
ST-2	1015.4	10	1005 1/2
ST-3	1016.2	10	1006 1/2
ST-4	1014.5	10	1004 1/2
ST-5	1017.1	12	1005 1/2
ST-15	1016.4	7 1/2	1009
ST-20	1016.9	10	1007

2.4 Laboratory Test Results

The boring logs show the results of laboratory testing we performed, next to the tested sample depth. The Appendix contains the results of these tests. The laboratory tests were completed in accordance with the current standards as specified by the American Society for Testing and Materials (ASTM).

The moisture content tests (ASTM D 2216) performed on select soil samples indicated a moisture content of 17 to 40 percent moisture by weight. The tests on the select soil samples indicate that the clay-laden soils are near to well above their estimated optimum moisture contents.

Sieve analysis tests (ASTM D 422) performed on select soil samples indicated 11 to 41 percent particles, by weight, passing the #200 sieve.

Liquid limits determined for the select soil samples ranged from 38 to 48; plastic limits ranged from 13 to 21. These results indicate that the select soil samples are classified as lean clay (CL) or silt.

We performed organic content tests (ASTM D2974) on selected samples to determine the reusability of the material for structure support and pavement design. The organic content of the selected material tested ranged from 4 to 6 percent, indicating the samples tested were slightly organic to organic.

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3.0 Recommendations

3.1 Design and Construction Discussion

Based on the results of our exploration, field and laboratory tests and our understanding of the proposed project, it is our opinion that the site is suitable for the proposed project, with the following geotechnical design and construction considerations.

3.1.1 Building Subgrade Preparation

All borings encountered topsoil at the surface that was between about 1 to 3 1/2 feet in thickness that is unsuitable for use as subgrade material as well as structural fill and will need to be removed from all building and pavement areas.

Portions of the glacial clays and clayey sands present throughout the site are soft, slightly organic to organic, and are considered compressible. If these soils are left in place below the proposed building footprints, there is an elevated risk of post-construction settlement, and the soils cannot be directly relied upon to support the proposed building foundations. Therefore, we recommend removing soft clays with penetration test values less 4 BPF during mass grading and soft clays with penetration test values less than 5 below foundations and replacing them with compacted granular structural fill as described in Table 3-2. Additionally, to allow for fill-induced consolidation to occur prior to placement of foundations, we recommend grade raises be completed prior to foundation construction.

3.1.2 Reuse of On-Site Soils

The majority of the on-site glacial clay soils tested were several percentage points to well above their estimated optimum moisture content, particularly in the upper 5 to 10 feet of the soil profile. Should these soils be selected for use as engineered fill, they will likely need to be moisture conditioned (dried) to achieve compaction. In our opinion, these materials are suitable for reuse if the contractor performs scarifying of these materials and are placed in the locations shown in Table 3-2. To reduce settlement and facilitate construction, we do not recommend the onsite clayey soils be re-used as structural fill directly below foundations. Additionally, the silt and organic soils present on the site will be highly moisture sensitive, difficult to compact and provide limited support, thus we do not recommend reusing them outside of green spaces. Granular material used as soil correction backfill will need to be imported. Soils with more than 2-percent organic content should not be considered suitable for reuse as structural fill.

To achieve the proper moisture content within the on-site soils, the soils should be dried during the summer months. If the contractor performs site grading in the spring or fall, on-site drying of these soils may not prove feasible and require importing drier soils. If project constraints do not allow the time, or ideal weather conditions, the overly wet soil may need to be replaced with suitable material. We recommend discussing the reuse of these materials and required import quantities with potential contractors at the bidding stages of the project.

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3.1.3 Groundwater

Perched water conditions will likely be present during construction. It is possible to encounter sand pockets and seams within the glacial clays and excavations may experience a sudden influx of groundwater. Temporary dewatering measures such as sumps pits should be anticipated during construction in clay areas as well as potential reconnection of disturbed field tile around the construction limits. Where clay soils are encountered in excavation bottoms, we recommend including provisions for placement of 4 to 6 inches of crushed aggregate in foundation excavations to provide a construction platform and a medium for removal of any accumulating water during construction.

3.1.4 Construction Disturbance

The contractor should note the on-site, clayey soils are highly susceptible to disturbance, due to repeated construction traffic. Disturbance of these soils may cause areas that were previously prepared, or that were suitable for pavement or structure support, to become unstable and require moisture conditioning and compaction. Subcutting and replacing the disturbed material with crushed, coarse gravel, free of fines is also an alternative. The contractor should use means and methods to limit disturbance of the soils.

If significant rainfall is anticipated during construction, the site should be graded to intercept surface water flow into the area and drain water from the area to an appropriate collection point. After grading, the soil surface should be compacted with a smooth drum roller to attempt to lower infiltration. After the rain, construction traffic should be limited until the surface has dried somewhat, to prevent traffic from mixing water that has accumulated at the surface into lower portions of the soil.

3.1.5 Frost Heave Mitigation

The soils encountered on the site are generally susceptible to frost heave. If heaving of exterior slabs and sidewalks is unacceptable, consideration should also be given to incorporating a granular subbase into these sections. A granular subbase enhances subgrade drainage, reduces the potential for subgrades to become saturated and heave upon freezing, and reduces the effects of subgrade strength loss upon thawing.

3.1.6 Pavement

In preparation of pavement subgrades, the project team should anticipate removal of topsoils within 3 feet of the pavements and some areas of unstable clayey or silty soils. If required, the contractor should perform scarification, drying and recompaction, as outlined in Section 3.2.7. Depending on the time of year and weather conditions, scarification, drying, and recompaction efforts may require multiple iterations to stabilize pavement subgrades.

To improve long-term pavement performance, the project team should consider a pavement design that incorporates non-frost-susceptible sand in paved areas. Incorporation of the sand into the pavement section will reduce the impact of the frost heave and subsequent thaw-weakening of the soils beneath the pavement. The sand will also provide better drainage throughout the year. Sand will not only increase the life of the pavement but will likely reduce reconstruction cost at the end of the pavement life. If the pavement design incorporates a sand subgrade, it could then decrease the aggregate base thickness.

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3.2 Site Grading and Subgrade Preparation

3.2.1 Building Subgrade Excavations

We recommend removing unsuitable materials from below the proposed buildings and their oversize areas. We define unsuitable materials as topsoil, existing fill, frozen materials, slightly organic to organic soils, existing utilities, draintile, vegetation, and soft/loose soils with penetration test values less than 4 BPF. Table 3-1 shows the anticipated excavation depths and bottom elevations for each of the borings.

Table 3-1. Building Excavation Depths

Location	Approximate Surface Elevation (ft)	Anticipated Excavation Depth (ft)**	Anticipated Bottom Elevation* (ft)
ST-1	1017.0	2	1015
ST-2	1015.4	7	1008
ST-3	1016.2	7	1009
ST-4	1014.5	5	1009 1/2
ST-5	1017.1	7	1010
ST-11	1014	7	1007
ST-12	1015.4	1	1014 1/2
ST-14	1016.5	1	1015 1/2
ST-15	1016.4	6	1010
ST-17	1013.4	1 1/2	1011 1/2
ST-18	1014.9	4	1010 1/2
ST-20	1016.9	10	1006 1/2
ST-21	1017.6	2	1015 1/2
ST-23	1015.4	1 1/2	1014
ST-24	1015.1	1	1014

*Rounded down to the nearest 1/2-foot.
**In addition to removals depths noted above, we recommend removing any soft to medium soils with penetration test values less than 6 BPF within 1/2 of a column width below column pads and a full footing width below continuous foundations and replacing them with select structural fill.

Excavation depths will vary between the borings. Portions of the excavations may also extend deeper than indicated by the borings. A geotechnical representative should observe the excavations to make the necessary field judgments regarding the suitability of the exposed soils.

The contractor should use equipment and techniques to minimize soil disturbance. If soils become disturbed or are wet, we recommend excavation and replacement.

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3.2.2 Excavation Oversizing

When removing unsuitable materials below structures or pavements, we recommend the excavation extend outward and downward at a slope of 1H:1V (horizontal:vertical) or flatter. See Figure 3-1 for an illustration of excavation oversizing.

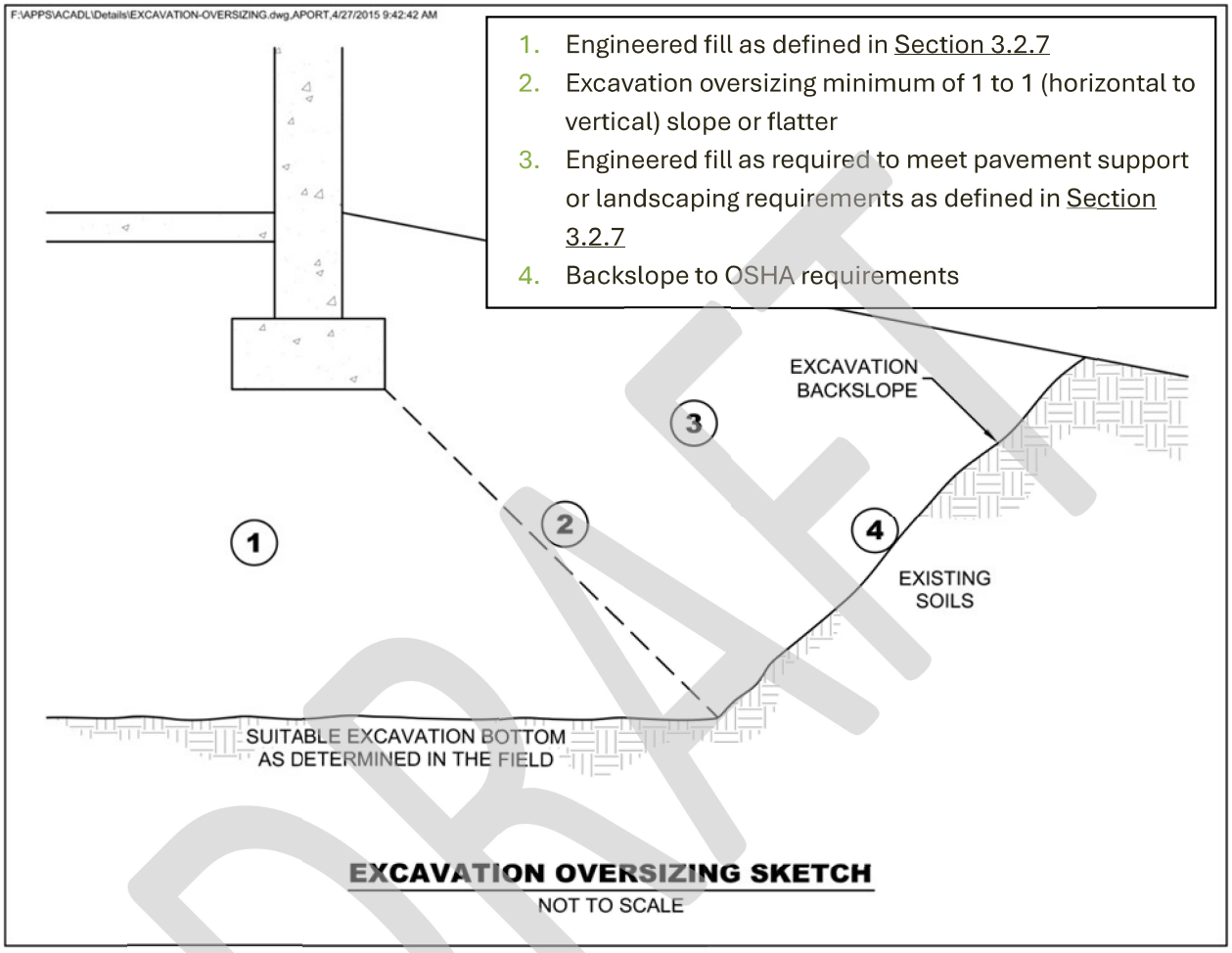


Figure 3-1. Generalized Illustration of Oversizing

3.2.3 Excavated Slopes

Based on the borings, we anticipate on-site soils in excavations will consist of soft to medium glacial clays and loose glacial sands and silts. These soils are typically considered Type C Soil under OSHA (Occupational Safety and Health Administration) guidelines. OSHA guidelines indicate unsupported excavations in Type C soils should have a gradient no steeper than 1 1/2H:1V. Slopes constructed in this manner may still exhibit surface sloughing. OSHA requires an engineer to evaluate slopes or excavations over 20 feet in depth.

An OSHA-approved qualified person should review the soil classification in the field. Excavations must comply with the requirements of OSHA 29 CFR, Part 1926, Subpart P, “Excavations and Trenches.” This

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document states that excavation safety is the responsibility of the contractor. The project specifications should reference these OSHA requirements.

3.2.4 Excavation Dewatering

We recommend removing surface of water or groundwater from the excavations. Project planning should include temporary sumps and pumps for excavations in low-permeability soils, such as clays.

3.2.5 Pavement and Exterior Slab Subgrade Preparation

We recommend the following steps for pavement and exterior *slab subgrade* preparation, understanding the site will have a grade change of 3 feet or less. Note that project planning may require additional subcuts to limit frost heave.

1. Strip unsuitable soils consisting of topsoil, organic soils, vegetation, existing fill, and pavements from the area, within 3 feet of the pavement subgrade.
2. Subcut to allow for placement of the pavement and exterior slab section.
3. Have a geotechnical representative observe the excavated subgrade to evaluate if additional subgrade improvements are necessary.
4. Slope subgrade soils to areas of sand or drain tile to allow the removal of accumulating water.
5. Scarify, moisture condition and surface compact the subgrade with at least three passes of a large roller with a minimum drum diameter of 3 1/2 feet. It should be noted that multiple iterations of moisture conditioning may be required based on the high moisture content of the soils tested.
6. If overly soft or wet soils are encountered after the required removals that do not allow for placement of engineered fill, or if weather conditions do not allow for adequate drying and recompaction of engineered fill, we recommend performing subgrade stabilization that consists of either:
    a. Subexcavating below the existing subgrade soils to allow for placement of a minimum of 24 inches of clean, sand subbase to bridge the softer soils.
    b. Place geogrid reinforcement (Tensar NX750 or equivalent) on the surface of the clay subgrade in correction areas and place a thicker section of aggregate base. It should be noted that where stabilization is necessary, it may be necessary in localized areas to place a second layer of geogrid reinforcement approximately 6 to 8 inches below the top of aggregate base. We recommend initially constructing a test strip to evaluate the need for a second layer of geogrid.

       Ultimately, the method and thickness of stabilization will have to be based on test sections placed within the pavement areas and will be dependent on what is needed to meet the requirements of a proofroll.

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7. Place pavement engineered fill to grade and compact in accordance with Section 3.2.7 to bottom of pavement and exterior slab section. See Section 3.5 for additional considerations related to frost heave.

8. Proofroll the pavement or exterior slab subgrade as described in Section 3.2.6.

To improve long-term pavement performance, we recommend incorporating 12 to 18 inches of sand subbase engineered fill in paved areas, in addition to the recommendations above, as a sand subbase. Note, we recommend sloping subgrade soils to promote drainage and removal of accumulated water.

3.2.6 Pavement Subgrade Proofroll

After preparing the subgrade as described above and prior to the placement of the aggregate base, we recommend proofrolling the subgrade soils with a fully loaded tandem-axle truck. We also recommend having a geotechnical representative observe the proofroll. Areas that fail the proofroll likely indicate soft or weak areas that will require additional soil correction work to support pavements.

The contractor should correct areas that display excessive yielding or rutting during the proofroll, as determined by the geotechnical representative. Possible options for subgrade correction include moisture conditioning and recompaction, subcutting and replacement with soil or crushed aggregate, chemical stabilization, and/or geotextiles. We recommend performing a second proofroll after the aggregate base material is in place, and prior to placing bituminous or concrete pavement.

3.2.7 Engineered Fill Materials and Compaction

Table 3-2 below contains our recommendations for engineered fill materials.

Table 3-2. Engineered Fill Materials*

Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
▪ Mass grading ▪ Below interior slabs	Structural fill	SP, SP-SM, SM, SC, CL (excluding ML)	100% passing 2-inch sieve	< 2% Organic Content (OC) Liquid Limit (LL) < 50%
Non-frost-susceptible	▪ Free draining ▪ Non-frost-susceptible fill	GP, GW, SP, SW	100% passing 1-inch sieve < 50% passing #40 sieve < 5% passing #200 sieve	< 2% OC
▪ Soil Corrections below foundations ▪ Deep Structural Fill (>10 feet of fill)	▪ Deep sand fill ▪ Select structural fill	SP, SP-SM	100% passing 1-inch sieve < 12% passing #200 sieve	< 2% OC
Pavements	Pavement fill	SP, SP-SM, SM, SC, CL (excluding ML)	100% passing 3-inch sieve	< 3% OC PI < 20%

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Locations To Be Used	Engineered Fill Classification	Possible Soil Type Descriptions	Gradation	Additional Requirements
Below landscaped surfaces, where subsidence is not a concern	Non-structural fill	Any Soil Type	100% passing 6-inch sieve	< 10% OC

* More select soils comprised of coarse sands with < 5% passing #200 sieve may be needed to accommodate work occurring in periods of wet or freezing weather.

If there is a need for deeper soil correction work or if there is a need for large grade raises that will require more than 10 feet of compacted fill below the lowest floor grades, we recommend placing sand fill (less than 12 percent passing the #200 sieve) as structural fill at depths deeper than 10 feet. If only clay fill is used to fill building pads where more than 10 feet of fill is needed, a construction delay of at least 3 to 12 months may be needed, depending on the final depths of clay fill used. As an alternative, on lots where deep fills are needed, deep sand fill could be used to initially fill the excavations below these house pads. The deep sand fill should be placed in thin compacted lifts, up to an elevation of 10 feet or less from the finished lowest floor grades. On-site clay fill can then be used to complete construction of the building pads. If the alternative method of filling the building pads partially with deep sand fill is used, a construction delay would not be needed. Any sand fill needed for deeper fill will need to be imported to the site.

We recommend spreading engineered fill in loose lifts of approximately 8 to 10 inches thick. We recommend compacting engineered fill in accordance with the criteria presented below in Table 3-3. The project documents should specify relative compaction of engineered fill, based on the structure located above the engineered fill, and vertical proximity to that structure.

Table 3-3. Compaction Recommendations Summary

Reference	Relative Compaction, percent (ASTM D698 – Standard Proctor) (ASTM D1557 – Modified Proctor)	Moisture Content Variance from Optimum, percentage points	
		< 12% Passing #200 Sieve (typically SP, SP-SM)	> 12% Passing #200 Sieve (typically CL, SC, SM)
Below foundations and oversizing zones and mass grading	98	±3	-1 to +3
Below interior slabs	5	±3	-1 to +3
Within 3 feet of pavement subgrade	100	±3	-2 to +1
More than 3 feet below pavement subgrade	95	±3	-1 to +3
Below landscaped surfaces	90	±6	±5

Increase compaction requirement to meet compaction required for structure supported by this engineered fill.

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The project documents should not allow the contractor to use frozen material as engineered fill or to place engineered fill on frozen material. Frost should not penetrate under foundations during construction.

We recommend performing density tests in engineered fill to evaluate if the contractors are effectively compacting the soil and meeting project requirements.

3.2.8 Special Inspections of Soils

We recommend including the site grading and placement of engineered fill within the building pad under the requirements of Special Inspections, as provided in Chapter 17 of the International Building Code, which is part of the Minnesota State Building Code . Special Inspection requires observation of soil conditions below engineered fill or footings, evaluations to determine if excavations extend to the anticipated soils, and if engineered fill materials meet requirements for engineered fill and compaction condition of engineered fill. A licensed geotechnical engineer should direct the Special Inspections of site grading and engineered fill placement. The purpose of these Special Inspections is to evaluate whether the work is in accordance with the approved geotechnical report for the project. Special Inspections should include evaluation of the subgrade, observing preparation of the subgrade (surface compaction or dewatering, excavation oversizing, placement procedures, and materials used for engineered fill, etc.) and compaction testing of the engineered fill.

3.3 Spread Footings

We assume the foundation subgrade will consist of native soils with penetration test values of at least 6 BPF or compacted engineered fill soils. We recommend including an allowance for subcutting soft, wet soils below the footings due to groundwater and replacing with at least 4 to 6 inches of clear, crushed gravel free of fines.

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Table 3-4 below contains our recommended parameters for foundation design. Given the limited information available for development of Lots 1 through 5, these recommendations should be considered preliminary, and we recommend additional exploration and evaluation be performed once further development information is available.

Table 3-4. Recommended Spread Footing Design Parameters

Item	Description
Maximum net allowable bearing pressure (psf)	1,500 (for Lot 6 based on subgrade improvement recommended here within)
Minimum factor of safety for bearing capacity failure	3.0
Minimum embedment below final exterior grade for heated structures (inches)	42
Minimum embedment below final exterior grade for unheated structures or for footings not protected from freezing temperatures during construction (inches)	60
Total estimated settlement (inches)	1*
Differential settlement (inches)	Typically, about 2/3 of total settlement**

* If the site is raised more than 3 feet, a time delay is recommended to allow the soft soils time to consolidate.
** Actual differential settlement amounts will depend on final loads and foundation layout. We can evaluate differential settlement based on final foundation plans and loadings.

3.4 Interior Slabs

3.4.1 Subgrade Modulus

The anticipated floor subgrade is engineered clay fill. We recommend using a modulus of subgrade reaction, k, of 100 pounds per square inch per inch of deflection (pci) to design the slabs. If the slab design requires placing 6 inches of compacted crushed aggregate base immediately below the slab, the slab design may increase the k-value by 50 pci. We recommend that the aggregate base materials be free of bituminous. In addition to improving the modulus of subgrade reaction, an aggregate base facilitates construction activities and is less weather sensitive.

3.4.2 Moisture Vapor Protection

Excess transmission of water vapor could cause floor dampness, certain types of floor bonding agents to separate, or mold to form under floor coverings. If project planning includes using floor coverings or coatings, we recommend placing a vapor retarder or vapor barrier immediately beneath the slab. We also recommend consulting with floor covering manufacturers regarding the appropriate type, use and installation of the vapor retarder or barrier to preserve warranty assurances.

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3.5 Frost Protection

3.5.1 General

Clayey and silty soils will underlie exterior slabs, as well as pavements. We consider clayey and silty soils to be moderately to highly frost susceptible. Soils of this type can retain moisture and heave upon freezing. In general, this characteristic is not an issue unless these soils become saturated, due to surface runoff or infiltration, or are excessively wet in-situ. Once frozen, unfavorable amounts of general and isolated heaving of the soils and the surface structures supported on them could develop. This type of heaving could affect design drainage patterns and the performance of exterior slabs and pavements, as well as any isolated exterior footings and piers.

Note that general runoff and infiltration from precipitation are not the only sources of water that can saturate subgrade soils and contribute to frost heave. Roof drainage and irrigation of landscaped areas in close proximity to exterior slabs, pavements, and isolated footings and piers, contribute as well.

3.5.2 Frost Heave Mitigation

To address most of the heave related issues, we recommend setting general site grades and grades for exterior surface features to direct surface drainage away from buildings, across large, paved areas and away from walkways. Such grading will limit the potential for saturation of the subgrade and subsequent heaving. General grades should also have enough “slope” to tolerate potential larger areas of heave, which may not fully settle after thawing.

Even small amounts of frost-related differential movement at walkway joints or cracks can create tripping hazards. Project planning can explore several subgrade improvement options to address this condition.

One of the more conservative subgrade improvement options to mitigate potential heave is removing any frost-susceptible soils present below the exterior slab areas down to a minimum depth of 4 feet below subgrade elevations. We recommend filling the resulting excavation with non-frost-susceptible fill. We recommend providing drainage at the base of the subcut, as well as gradual transitions from this subcut (3H:1V or flatter gradient). We also recommend sloping the bottom of the excavation toward one or more collection points to remove any water entering the engineered fill. This approach will not be effective in controlling frost heave without removing the water.

An important geometric aspect of the excavation and replacement approach described above is sloping the banks of the excavations to create a more gradual transition between the unexcavated soils considered frost susceptible and the engineered fill in the excavated area, which is not frost susceptible. The slope allows attenuation of differential movement that may occur along the excavation boundary. We recommend slopes that are 3H:1V, or flatter, along transitions between frost-susceptible and non-frost-susceptible soils.

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Figure 3-2 shows an illustration summarizing some of the recommendations.

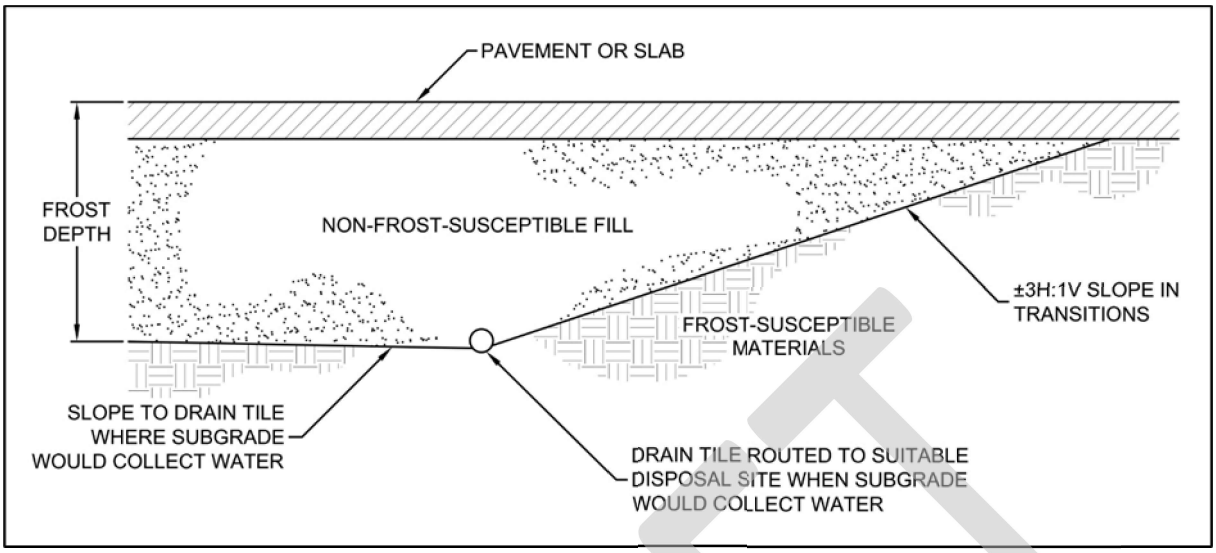


Figure 3-2. Frost Protection Geometry Illustration

Another option is to limit frost heave in critical areas, such as doorways and entrances, via frost-depth footings or localized excavations with sloped transitions between frost-susceptible and non-frost-susceptible soils, as described above.

Over the life of slabs and pavements, cracks will develop, and joints will open up, which will expose the subgrade and allow water to enter from the surface and either saturate or perch atop the subgrade soils. This water intrusion increases the potential for frost heave or moisture-related distress near the crack or joint. Therefore, we recommend implementing a detailed maintenance program to seal and/or fill any cracks and joints. The maintenance program should give special attention to areas where dissimilar materials abut one another, where construction joints occur and where shrinkage cracks develop.

3.6 Pavements and Exterior Slabs

3.6.1 Design Sections

Our scope of services for this project did not include laboratory tests on subgrade soils to determine an R-value for pavement design. Based on our experience with similar clayey soils anticipated at the pavement subgrade elevation, we recommend pavement design assume an R-value of 10. Note the contractor may need to perform limited removal of unsuitable or less suitable soils or mechanical or chemical stabilization to achieve this value. Table 3-6 provides recommended pavement sections, based on the soils support and traffic loads.

We based the concrete pavement designs on a modulus of subgrade reaction (k) of 75 pci.

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Table 3-5. Recommended Bituminous and Concrete Pavement Sections

Use	Light Duty Bituminous	Medium Duty Bituminous	Light Duty Concrete	Medium Duty Concrete
Minimum asphalt thickness (inches)	3 ½	4	---	---
Minimum concrete thickness (inches)	---	---	5	6
Minimum aggregate base thickness (inches)	6	8	4	4
Minimum granular subbase	12	18	12	18

3.6.2 Concrete Pavements

We assumed the concrete pavement sections in Table 3-6 will have edge support. We recommend placing an aggregate base below the pavement to provide a suitable subgrade for concrete placement, reduce faulting and help dissipate loads. Appropriate mix designs, panel sizing, jointing, doweling and edge reinforcement are critical to performance of rigid pavements. We recommend you contact your civil engineer to determine the final design or consult with us for guidance on these items.

3.6.3 Bituminous Pavement Materials

Appropriate mix designs are critical to the performance of flexible pavements. We can provide recommendations for pavement material selection during final pavement design.

3.6.4 Subgrade Drainage

We recommend installing perforated drainpipes throughout pavement areas at low points, around catch basins, and behind curb in landscaped areas. We also recommend installing drainpipes along pavement and exterior slab edges where exterior grades promote drainage toward those edge areas. The contractor should place drainpipes in small trenches, extended at least 8 inches below the granular subbase layer, or below the aggregate base material where no subbase is present.

3.6.5 Performance and Maintenance

We based the above pavement designs on a 20-year performance life for bituminous and a 35-year life for concrete. This is the amount of time before we anticipate the pavement will require reconstruction. This performance assumes routine maintenance, such as seal coating and crack sealing. The actual pavement life will vary depending on variations in weather, traffic conditions, and maintenance.

It is common to place the non-wear course of bituminous and then delay placement of wear course. For this situation, we recommend evaluating if the reduced pavement section will have sufficient structure to support construction traffic.

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Many conditions affect the overall performance of the exterior slabs and pavements. Some of these conditions include the environment, loading conditions and the level of ongoing maintenance. With regard to bituminous pavements in particular, it is common to have thermal cracking develop within the first few years of placement and continue throughout the life of the pavement. We recommend developing a regular maintenance plan for filling cracks in exterior slabs and pavements to lessen the potential impacts for cold weather distress due to frost heave or warm weather distress due to wetting and softening of the subgrade.

3.7 Utilities

3.7.1 Subgrade Stabilization

Earthwork activities associated with utility installations located inside the building area should adhere to the recommendations in Section 3.2.

For exterior utilities, we anticipate the soils at typical invert elevations will be suitable for utility support. However, if construction encounters unfavorable conditions such as soft clay, organic soils or perched water at invert grades, the unsuitable soils may require some additional subcutting and replacement with sand or crushed rock to prepare a proper subgrade for pipe support. Project design and construction should not place utilities within the 1H:1V oversizing of foundations.

3.7.2 Corrosion Potential

Based on our experience, the soils encountered in the borings are moderately corrosive to metallic conduits, but only marginally corrosive to concrete. We recommend specifying non-corrosive materials or providing corrosion protection, unless project planning chooses to perform additional tests to demonstrate the soils are not corrosive.

3.8 Equipment Support

The recommendations included in the report may not be applicable to equipment used for the construction and maintenance of this project. We recommend evaluating subgrade conditions in areas of shoring, scaffolding, cranes, pumps, lifts, and other construction equipment prior to mobilization to determine if the exposed materials are suitable for equipment support or require some form of subgrade improvement. We also recommend project planning consider the effect that loads applied by such equipment may have on structures they bear on or surcharge – including pavements, buried utilities, below-grade walls, etc. We can assist you in this evaluation.

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4.0 Procedures

4.1 Penetration Test Borings

We drilled the penetration test borings with a flotation tire-mounted core and auger drill equipped with hollow-stem auger. We performed the borings in general accordance with ASTM D6151 taking penetration test samples at 2 1/2- or 5-foot intervals in general accordance with ASTM D1586. The boring logs show the actual sample intervals and corresponding depths.

We sealed penetration test boreholes meeting the Minnesota Department of Health (MDH) Environmental Borehole criteria with an MDH-approved grout. We will forward a sealing record (or sealing records) for those boreholes to the MDH Well Management Section.

4.2 Exploration Logs

4.2.1 Log of Boring Sheets

The Appendix includes Log of Boring sheets for our penetration test borings. The logs identify and describe the penetrated geologic materials and present the results of penetration resistance performed. The logs also present the results of laboratory tests performed on penetration test samples, and groundwater measurements. The Appendix also includes a Fence Diagram intended to provide a summarized cross-sectional view of the soil profile across the site.

We inferred strata boundaries from changes in the penetration test samples and the auger cuttings. Because we did not perform continuous sampling, the strata boundary depths are only approximate. The boundary depths likely vary away from the boring locations, and the boundaries themselves may occur as gradual rather than abrupt transitions.

4.2.2 Geologic Origins

We assigned geologic origins to the materials shown on the logs and referenced within this report, based on: (1) a review of the background information and reference documents cited above, (2) visual classification of the various geologic material samples retrieved during the course of our subsurface exploration, (3) penetration resistance testing performed for the project, (4) laboratory test results, and (5) available common knowledge of the geologic processes and environments that have impacted the site and surrounding area in the past .

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4.3 Material Classification and Testing

4.3.1 Visual and Manual Classification

We visually and manually classified the geologic materials encountered based on ASTM D2488. When we performed laboratory classification tests, we used the results to classify the geologic materials in accordance with ASTM D2487. The Appendix includes a chart explaining the classification system we used.

4.3.2 Laboratory Testing

The exploration logs in the Appendix note most of the results of the laboratory tests performed on geologic material samples. We performed the tests in general accordance with ASTM procedures.

4.4 Groundwater Measurements

The drillers checked for groundwater while advancing the penetration test borings, and again after auger withdrawal. We then filled the boreholes, as noted on the boring logs.

5.0 Qualifications

5.1 Variations in Subsurface Conditions

5.1.1 Material Strata

We developed our evaluation, analyses, and recommendations from a limited amount of site and subsurface information. It is not standard engineering practice to retrieve material samples from exploration locations continuously with depth. Therefore, we must infer strata boundaries and thicknesses to some extent. Strata boundaries may also be gradual transitions, and project planning should expect the strata to vary in depth, elevation, and thickness, away from the exploration locations.

Variations in subsurface conditions present between exploration locations may not be revealed until performing additional exploration work or starting construction. If future activity for this project reveals any such variations, you should notify us so that we may reevaluate our recommendations. Such variations could increase construction costs, and we recommend including a contingency to accommodate them.

5.1.2 Groundwater Levels

We made groundwater measurements under the conditions reported herein and shown on the exploration logs and interpreted in the text of this report. Note that the observation periods were relatively short, and project planning can expect groundwater levels to fluctuate in response to rainfall, flooding, irrigation, seasonal freezing and thawing, surface drainage modifications, and other seasonal and annual factors.

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5.2 Continuity of Professional Responsibility

5.2.1 Plan Review

We based this report on a limited amount of information, and we made a number of assumptions to help us develop our recommendations. We should be retained to review the geotechnical aspects of the designs and specifications. This review will allow us to evaluate whether we anticipated the design correctly, if any design changes affect the validity of our recommendations, and if the design and specifications correctly interpret and implement our recommendations.

5.2.2 Construction Observations and Testing

We recommend retaining us to perform the required observations and testing during construction as part of the ongoing geotechnical evaluation. This will allow us to correlate the subsurface conditions exposed during construction with those encountered by the borings and provide professional continuity from the design phase to the construction phase. If we do not perform observations and testing during construction, it becomes the responsibility of others to validate the assumption made during the preparation of this report and to accept the construction-related geotechnical engineer-of-record responsibilities.

5.3 Use of Report

This report is for the exclusive use of the addressed parties. Without written approval, we assume no responsibility to other parties regarding this report. Our evaluation, analyses and recommendations may not be appropriate for other parties or projects.

5.4 Standard of Care

In performing its services, Braun Intertec used that degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession currently practicing in the same locality. No warranty, express or implied, is made.

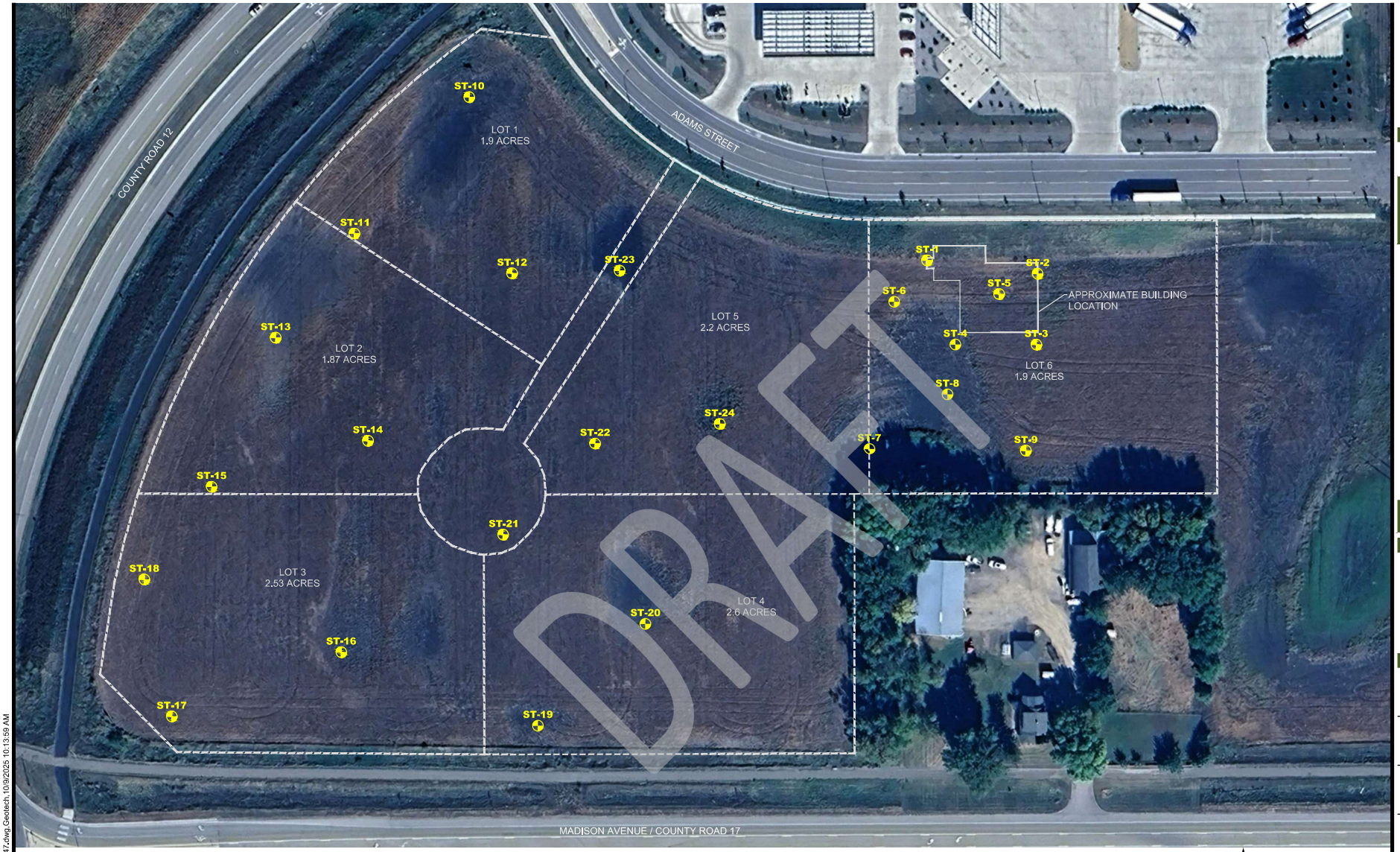
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Appendix

Soil Boring Location Sketch
Fence Diagram
Log of Boring Sheets ST-1 to ST-24
Descriptive Terminology of Soil

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DENOTES APPROXIMATE LOCATION OF STANDARD PENETRATION TEST BORING

50' 0 100'

SCALE: 1"=100'

BRAUN INTERTEC
the science you build on
2120 Howard Drive W, Suite B
North Mankato, MN 56003
507.594.3000
brauninertec.com

Drawing Information

Project No:	B2508847
Drawing No:	B2508847
Drawn By:	MMH
Date Drawn:	10/9/25
Checked By:	IB
Last Modified:	10/9/25

Project Information

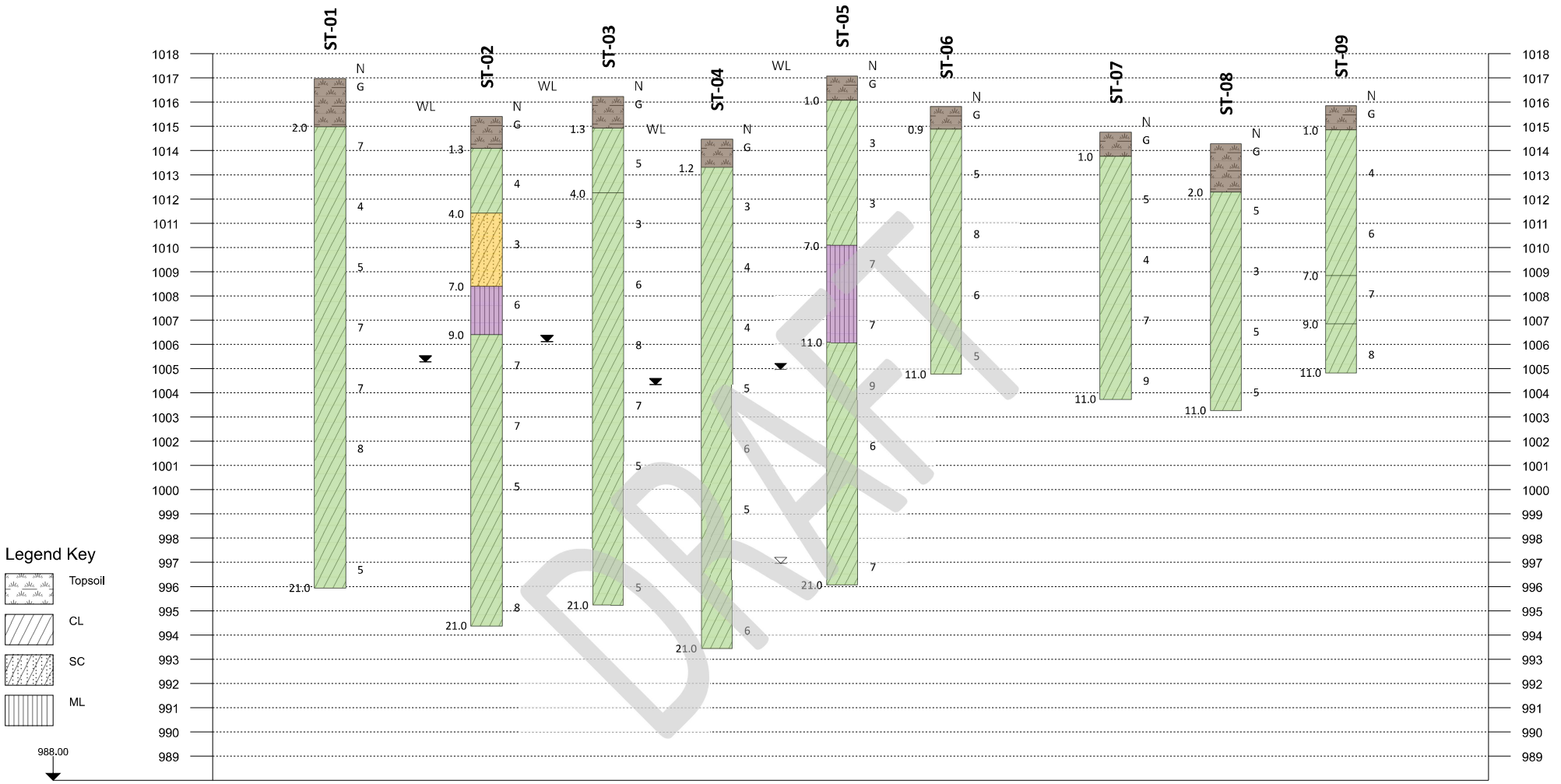
Met-Con Mankato Office and Site Development

East of County Highway 12 Between Adams Street and Madison Avenue

Mankato, Minnesota

Soil Boring Location Sketch

F:\2025\B2508847\CAD\B2508847.dwg,Geotech,10/9/2025 10:13:59 AM



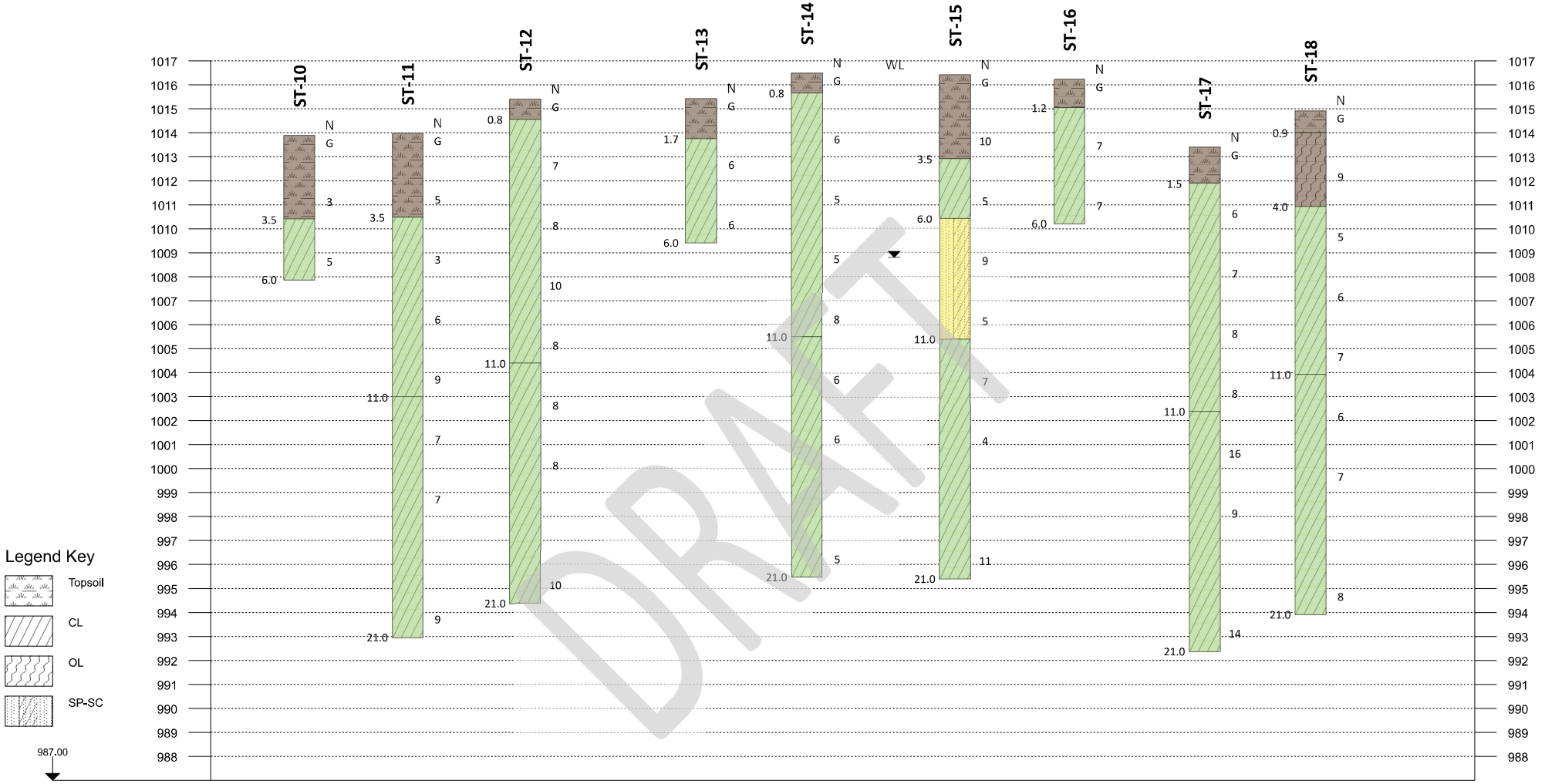
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ST-01 to ST-09

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

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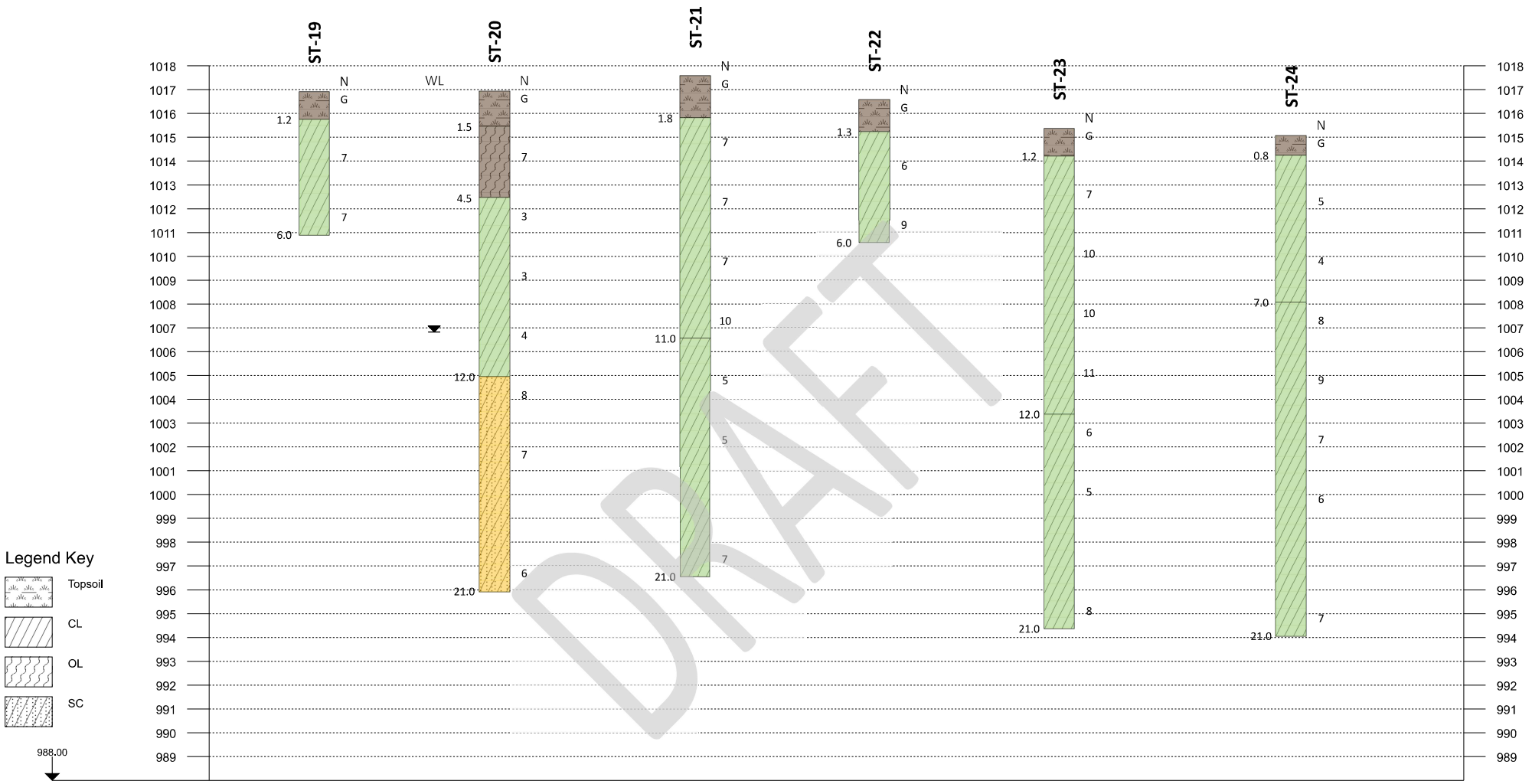


ST-10 to ST-18

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

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ST-19 to ST-24

Fence Diagram
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

Project ID:	B2508847
Vert. Scale:	1"= 4'
Hor. Scale:	NTS
Date:	02/03/2026

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-01**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217080.3 EASTING: 589641.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1017.0 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.0		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
2.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, soft to medium (GLACIAL TILL)		2-3-4 (7) 8"		27	
			5	1-2-2 (4) 10"			
				1-2-3 (5) 8"		27	
			10	1-2-5 (7) 12"			
				1-3-4 (7) 10"			
			15	2-3-5 (8) 14"		24	
			20	1-2-3 (5) 16"			
996.0							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling. Water not observed immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-02**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217065.8 EASTING: 589761.1
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.1		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.3		LEAN CLAY (CL), light gray, moist, soft (GLACIAL LAKE)		1-2-2 (4) 6"		27	
1011.4							
4.0		CLAYEY SAND (SC), trace Gravel, gray, moist, soft (GLACIAL LAKE)	5	1-1-2 (3) 10"			
1008.4							
7.0		SANDY SILT (ML), brown, moist, loose (GLACIAL LAKE)		2-3-3 (6) 10"		28	LL=38, PL=25, PI=13
1006.4							
9.0	▼	SANDY LEAN CLAY (CL), trace Gravel, gray, moist, medium (GLACIAL TILL)	10	1-3-4 (7) 12"		36	
				2-3-4 (7) 0"			No recovery
			15	1-1-4 (5) 0"			No recovery
			20	3-4-4 (8) 16"			
994.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water observed at 10.0 feet while drilling. Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-03**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216989.3 EASTING: 589759.7
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1016.2 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.9		SILTY SAND (SM), slightly organic, black, moist (TOPSOIL)					
1.3		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to gray, moist, soft to medium (GLACIAL LAKE)		1-2-3 (5) 6"		30	OC=5%
1012.2							
4.0		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, soft to medium (GLACIAL TILL)	5	1-1-2 (3) 10"		26	
				1-2-4 (6) 12"			
	▼		10	2-4-4 (8) 0"			No recovery
				2-2-5 (7) 14"			
			15	1-2-3 (5) 0"			No recovery
			20	1-2-3 (5) 0"			No recovery
995.2							
21.0		END OF BORING					Water observed at 10.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING:	**ST-04**		
LOCATION: Captured with RTK GPS.			
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)			
NORTHING: 216989.8		EASTING:	589672.0
DRILLER: E. Rislov	LOGGED BY: I. Breitlow	START DATE: 10/06/25	END DATE: 10/06/25
SURFACE ELEVATION: 1014.5 ft	RIG: 8505	METHOD: 3 1/4" HSA	SURFACING: Farm Field	WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.3		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, soft to medium (GLACIAL TILL)		1-1-2 (3) 0"			No recovery
			5	1-2-2 (4) 12"		23	
				1-1-3 (4) 10"		26	
	▼	*Wet and dark gray at 10 feet*	10	1-2-3 (5) 3"		27	
				2-3-3 (6) 0"			No recovery
			15	1-2-3 (5) 4"			
			20	1-2-4 (6) 6"			
993.5							
21.0		END OF BORING					Water observed at 10.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-05**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217043.9 EASTING: 589719.3
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1017.1 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1016.1		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
1.0		LEAN CLAY (CL), trace Sand, light gray to brown, moist, soft (GLACIAL LAKE)		1-1-2 (3) 6"		30	LL=38, PL=21, PI=17
			5	1-1-2 (3) 3"		28	
1010.1							
7.0		SANDY SILT (ML), brown, moist, loose (GLACIAL LAKE)		2-3-4 (7) 12"		40	LL=45, PL=27, PI=18
			10	1-3-4 (7) 8"		40	
1006.1							
11.0	▼	SANDY LEAN CLAY (CL), gray, moist, medium to stiff (GLACIAL TILL)		2-4-5 (9) 12"		23	
		Silt seams and sand seams present	15	2-2-4 (6) 3"			
	▽		20	3-3-4 (7) 0"			No recovery
996.1							
21.0		END OF BORING					Water observed at 20.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 12.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-06**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217035.8 EASTING: 589606.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.9		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
0.9		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, medium (GLACIAL TILL)		2-2-3 (5) 6"		24	
			5	1-3-5 (8) 12"		25	
		Sand seam from 7 to 8 feet		1-2-4 (6) 6"		27	
			10	1-2-3 (5) 12"			
1004.8							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-07**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216877.4 EASTING: 589579.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1014.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.8		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, soft to stiff (GLACIAL TILL)		2-2-3 (5) 6"			
			5	1-1-3 (4) 8"		28	
				1-3-4 (7) 10"			
			10	1-3-6 (9) 12"			
1003.8							
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling.
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-08**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216936.0 EASTING: 589663.5
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1014.3 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1012.3		CLAYEY SAND (SC), fine to medium-grained, slightly organic, black, moist (TOPSOIL)					
2.0		SANDY LEAN CLAY (CL), trace Gravel, black to gray, moist, soft to medium (GLACIAL TILL)		1-2-3 (5) 2"			
				1-1-2 (3) 8"		17	
			5	1-2-3 (5) 12"			
				1-2-3 (5) 12"			
1003.3			10				
11.0		END OF BORING Boring then backfilled with auger cuttings					Water not observed while drilling.
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-09**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216874.9 EASTING: 589748.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/06/25 END DATE: 10/06/25
SURFACE ELEVATION: 1015.8 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.8		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.0		SANDY LEAN CLAY (CL), trace Gravel, gray to brown, moist, soft to medium (GLACIAL TILL)		1-2-2 (4) 6"		26	
			5	1-3-3 (6) 10"		28	
1008.8							
7.0		LEAN CLAY (CL), trace Sand, brown, moist, medium (GLACIAL TILL)		2-3-4 (7) 14"		38	LL=48, PL=27, PI=21
1006.8							
9.0		SANDY LEAN CLAY (CL), with Gravel, brown, moist, medium (GLACIAL TILL)	10	1-3-5 (8) 12"		19	
1004.8							
11.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING:	**ST-10**
LOCATION: Captured with RTK GPS.	
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)	
NORTHING: 217256.5	EASTING: 589147.2
DRILLER: E. Rislov / LOGGED BY: I. Breitlow	START DATE: 10/08/25 / END DATE: 10/08/25
SURFACE ELEVATION: 1013.9 ft / RIG: 8505 / METHOD: 3 1/4" HSA	SURFACING: Farm Field / WEATHER: Clear, 50°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1010.4		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)		1-1-2 (3) 4"		22	
3.5 1007.9		SANDY LEAN CLAY (CL), with Gravel, dark gray to brown, moist, medium (GLACIAL TILL)	5	1-2-3 (5) 8"		31	
6.0		END OF BORING Boring then backfilled with auger cuttings	10 15 20				Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-11**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217109.3 EASTING: 589023.2
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1014.0 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1010.5		SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)		2-2-3 (5) 4"		25	OC=6%
3.5		SANDY LEAN CLAY (CL), trace Gravel, gray to brown, moist, soft to stiff (GLACIAL TILL)	5	1-1-2 (3) 10"		26	
				1-2-4 (6) 12"		25	
1003.0			10	2-3-6 (9) 14"			
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 14"		22	
			15	2-3-4 (7) 16"			
993.0			20	1-4-5 (9) 16"			
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-12**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217066.3 EASTING: 589193.4
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.6		SANDY ORGANIC CLAY (OL), black, moist to dry (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, brown to gray, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 0"			No recovery
			5	2-3-5 (8) 10"		20	
				1-4-6 (10) 12"			
			10	2-3-5 (8) 10"			
1004.4							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium to stiff (GLACIAL TILL)		1-4-4 (8) 14"		23	
			15	1-3-5 (8) 10"			
			20	3-4-6 (10) 16"			
994.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING:	**ST-13**
LOCATION: Captured with RTK GPS.	
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)	
NORTHING: 216996.8	EASTING: 588938.2
DRILLER: E. Rislov / LOGGED BY: I. Breitlow	START DATE: 10/08/25 / END DATE: 10/08/25
SURFACE ELEVATION: 1015.4 ft / RIG: 8505 / METHOD: 3 1/4" HSA	SURFACING: Farm Field / WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1013.7		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.7		SANDY LEAN CLAY (CL), trace Gravel, dark gray to brown, moist, medium (GLACIAL TILL)		2-3-3 (6) 3"		25	
			5	2-2-4 (6) 2"			
1009.4							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-14**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216885.6 EASTING: 589037.8
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1016.5 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 50°s

Elev./ Depth ft	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.7	SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)					
0.8	SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		2-2-4 (6) 6"		24	
		5	1-1-4 (5) 10"		22	
	Brown at 7 feet		1-2-3 (5) 12"		24	
		10	1-3-5 (8) 10"			
1005.5						
11.0	SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-1-5 (6) 14"		23	
		15	2-2-4 (6) 18"			
		20	1-1-4 (5) 14"			
995.5						
21.0	END OF BORING					Water not observed while drilling.
	Boring then backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-15**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216836.0 EASTING: 588869.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1016.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1012.9		SANDY ORGANIC CLAY (OL), trace Gravel, black, dry to moist (TOPSOIL)		5-5-5 (10) 0"			No recovery
3.5 1010.4		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to gray, moist, medium (GLACIAL LAKE)	5	2-2-3 (5) 5"		24	OC=4%
6.0 1005.4	▼	POORLY GRADED SAND with CLAY (SP-SC), fine to coarse-grained, trace Gravel, brown, moist to wet, loose (GLACIAL OUTWASH)		1-3-6 (9) 8"		22	P200=11%
			10	1-2-3 (5) 6"		23	
11.0		SANDY LEAN CLAY (CL), trace Gravel, gray, moist, soft to stiff (GLACIAL TILL)		1-2-5 (7) 12"			
			15	1-2-2 (4) 10"		27	
995.4			20	2-4-7 (11) 14"			
21.0		END OF BORING Boring then backfilled with bentonite grout					Water observed at 7.5 feet while drilling. Water observed at 7.5 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-16**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216657.4 EASTING: 589009.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.2 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.0		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black to brown, moist, medium (GLACIAL TILL)		3-3-4 (7) 0"			No recovery
			5	3-3-4 (7) 2"			
1010.2							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-17**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216588.1 EASTING: 588826.0
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1013.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1011.9		SILTY SAND (SM), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.5		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)		2-2-4 (6) 8"		23	
			5	1-3-4 (7) 10"		22	
				1-4-4 (8) 10"			
			10	1-4-4 (8) 14"			
1002.4							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, stiff to very stiff (GLACIAL TILL)		7-7-9 (16) 0"			No recovery
			15	3-4-5 (9) 10"		23	
			20	2-6-8 (14) 12"			
992.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-18**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216736.0 EASTING: 588796.3
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/08/25
SURFACE ELEVATION: 1014.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.0		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
0.9		SANDY ORGANIC CLAY (OL), trace Gravel, black, moist, stiff (GLACIAL LAKE)		3-4-5 (9) 6"		22	OC=6%
1010.9							
4.0		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)	5	1-2-3 (5) 8"		30	
		Silt seams		2-2-4 (6) 10"		30	
			10	1-2-5 (7) 14"			
1003.9							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		2-2-4 (6) 14"			
			15	1-3-4 (7) 14"			
			20	2-3-5 (8) 12"		25	
993.9							
21.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with bentonite grout					

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING:	**ST-19**
LOCATION: Captured with RTK GPS.	
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)	
NORTHING: 216578.2	EASTING: 589221.4
DRILLER: E. Rislov / LOGGED BY: I. Breitlow	START DATE: 10/08/25 / END DATE: 10/08/25
SURFACE ELEVATION: 1016.9 ft / RIG: 8505 / METHOD: 3 1/4" HSA	SURFACING: Farm Field / WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.7		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium (GLACIAL TILL)		3-3-4 (7) 6"		23	
			5	1-3-4 (7) 10"		25	
1010.9							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-20**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216688.0 EASTING: 589337.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.9 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.4		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, dry to moist (TOPSOIL)					
1.5		ORGANIC CLAY (OL), trace Gravel, black to gray, moist, soft to medium (GLACIAL LAKE)		2-3-4 (7) 4"		22	
1012.4							
4.5		SANDY LEAN CLAY (CL), with Gravel, slightly organic, brown, moist, soft (GLACIAL TILL)	5	1-1-2 (3) 8"		28	OC=2%
				1-1-2 (3) 10"			
	▼		10	1-2-2 (4) 10"		27	
1004.9							
12.0		CLAYEY SAND (SC), medium-grained, brown to gray, moist to wet, loose (GLACIAL TILL)		1-3-5 (8) 12"			
			15	1-3-4 (7) 8"		29	P200=41%
			20	2-3-3 (6) 12"			
995.9							
21.0		END OF BORING					Water observed at 10.0 feet while drilling.
		Boring then backfilled with bentonite grout					Water observed at 10.0 feet immediately after withdrawal of auger.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-21**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216784.3 EASTING: 589183.8
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1017.6 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.8		SILTY SAND (SM), fine to medium-grained, slightly organic, black, dry to moist (TOPSOIL)					
1.8		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		2-3-4 (7) 8"		22	
			5	1-3-4 (7) 10"			
				1-2-5 (7) 10"			
			10	1-3-7 (10) 12"		22	
1006.6							
11.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-2-3 (5) 14"		23	
			15	2-2-3 (5) 12"			
			20	2-4-3 (7) 14"			
996.6							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

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LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-22**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216882.6 EASTING: 589283.1
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/08/25 END DATE: 10/08/25
SURFACE ELEVATION: 1016.6 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1015.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
1.3		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		1-2-4 (6) 6"		23	
			5	3-4-5 (9) 10"			
1010.6							
6.0		END OF BORING					Water not observed while drilling.
		Boring then backfilled with auger cuttings					
			10				
			15				
			20				

DRAFT

LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-23**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 217069.3 EASTING: 589309.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.4 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.2		CLAYEY SAND (SC), trace Gravel, organic, black, moist (TOPSOIL)					
1.2		SANDY LEAN CLAY (CL), trace Gravel, light gray to brown, moist, medium to stiff (GLACIAL TILL)		1-2-5 (7) 10"		23	
			5	2-4-6 (10) 12"			
				3-4-6 (10) 10"			
			10	4-4-7 (11) 10"			
1003.4							
12.0		SANDY LEAN CLAY (CL), trace Gravel, dark gray, moist, medium (GLACIAL TILL)		1-3-3 (6) 16"		24	
			15	1-2-3 (5) 12"			
			20	1-3-5 (8) 12"			
994.4							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

DRAFT

LOG OF BORING

See Descriptive Terminology sheet for explanation of abbreviations

Project Number B2508847
Geotechnical Evaluation
Met-Con Mankato Office and Site Development
E of Cty Hwy 12 between Adams St and Madison Ave
Mankato, Minnesota

BORING: **ST-24**
LOCATION: Captured with RTK GPS.
DATUM: NAD 1983 HARN Adj MN Blue Earth (US Feet)
NORTHING: 216903.7 EASTING: 589417.6
DRILLER: E. Rislov LOGGED BY: I. Breitlow START DATE: 10/07/25 END DATE: 10/07/25
SURFACE ELEVATION: 1015.1 ft RIG: 8505 METHOD: 3 1/4" HSA SURFACING: Farm Field WEATHER: Clear, 60°s

Elev./ Depth ft	Water Level	Description of Materials (Soil-ASTM D2488 or 2487; Rock-USACE EM 1110-1-2908)	Sample	Blows (N-Value) Recovery	q_p tsf	MC %	Tests or Remarks
1014.2		SANDY LEAN CLAY (CL), trace Gravel, slightly organic, black, moist (TOPSOIL)					
0.8		SANDY LEAN CLAY (CL), trace Gravel, light gray, moist, soft to medium (GLACIAL LAKE)		1-2-3 (5) 4"			
			5	1-1-3 (4) 12"		29	
1008.1							
7.0		SANDY LEAN CLAY (CL), trace Gravel, dark brown to dark gray, moist, medium to stiff (GLACIAL TILL)		2-3-5 (8) 10"			
			10	2-3-6 (9) 6"			
				1-2-5 (7) 14"			
			15	2-2-4 (6) 12"			
			20	2-3-4 (7) 14"			
994.1							
21.0		END OF BORING Boring then backfilled with bentonite grout					Water not observed while drilling.

DRAFT

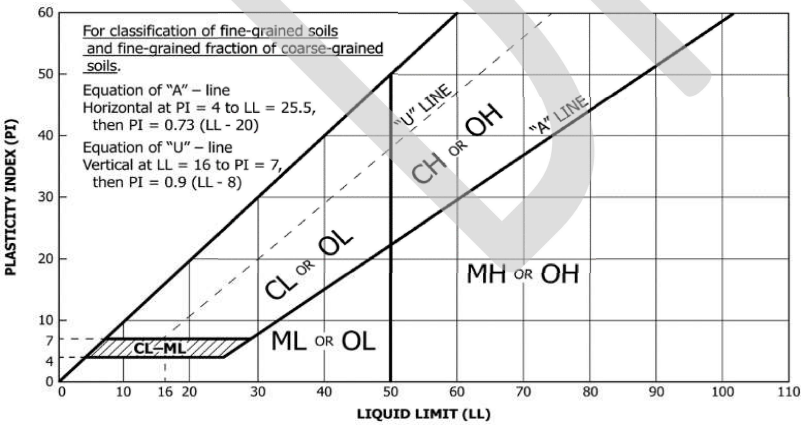
BRAUN INTERTEC
the science you build on

Descriptive Terminology of Soil

Based on Standards ASTM D2487/2488
(Unified Soil Classification System)

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

A. Based on the material passing the 3-inch (75-mm) sieve.
B. If field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.
C. Gravels with 5 to 12% fines require dual symbols:
GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay
D. $C_u = D_{60} / D_{10}$ $C_c = (D_{30})^2 / (D_{10} \times D_{60})$
E. If soil contains ≥ 15% sand, add "with sand" to group name.
F. If fines classify as CL-ML, use dual symbol GC-GM or SC-SM.
G. If fines are organic, add "with organic fines" to group name.
H. Sands with 5 to 12% fines require dual symbols:
SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay
I. If soil contains ≥ 15% gravel, add "with gravel" to group name.
J. If Atterberg limits plot in hatched area, soil is CL-ML, silty clay.
K. If soil contains 15 to < 30% plus No. 200, add "with sand" or "with gravel", whichever is predominant.
L. If soil contains ≥ 30% plus No. 200, predominantly sand, add "sandy" to group name.
M. If soil contains ≥ 30% plus No. 200 predominantly gravel, add "gravelly" to group name.
N. PI ≥ 4 and plots on or above "A" line.
O. PI < 4 or plots below "A" line.
P. PI plots on or above "A" line.
Q. PI plots below "A" line.



Laboratory Tests

DD	Dry density, pcf	**q_p**	Pocket penetrometer strength, tsf
WD	Wet density, pcf	**q_U**	Unconfined compression test, tsf
P200	% Passing #200 sieve	**LL**	Liquid limit
MC	Moisture content, %	**PL**	Plastic limit
OC	Organic content, %	**PI**	Plasticity index

Particle Size Identification

Boulders..... over 12"
Cobbles..... 3" to 12"
Gravel
Coarse..... 3/4" to 3" (19.00 mm to 75.00 mm)
Fine..... No. 4 to 3/4" (4.75 mm to 19.00 mm)
Sand
Coarse..... No. 10 to No. 4 (2.00 mm to 4.75 mm)
Medium..... No. 40 to No. 10 (0.425 mm to 2.00 mm)
Fine..... No. 200 to No. 40 (0.075 mm to 0.425 mm)
Silt..... No. 200 (0.075 mm) to .005 mm
Clay..... < .005 mm

Relative Proportions[L, M]

trace..... 0 to 5%
little..... 6 to 14%
with..... ≥ 15%

Inclusion Thicknesses

lens..... 0 to 1/8"
seam..... 1/8" to 1"
layer..... over 1"

Apparent Relative Density of Cohesionless Soils

Very loose ..... 0 to 4 BPF
Loose ..... 5 to 10 BPF
Medium dense..... 11 to 30 BPF
Dense..... 31 to 50 BPF
Very dense..... over 50 BPF

Consistency of Cohesive Soils	Blows Per Foot	Approximate Unconfined Compressive Strength
Very soft	0 to 1 BPF	< 0.25 tsf
Soft	2 to 4 BPF	0.25 to 0.5 tsf
Medium	5 to 8 BPF	0.5 to 1 tsf
Stiff	9 to 15 BPF	1 to 2 tsf
Very Stiff	16 to 30 BPF	2 to 4 tsf
Hard	over 30 BPF	> 4 tsf

Moisture Content:

Dry: Absence of moisture, dusty, dry to the touch.
Moist: Damp but no visible water.
Wet: Visible free water, usually soil is below water table.

Drilling Notes:

Blows/N-value: Blows indicate the driving resistance recorded for each 6-inch interval. The reported N-value is the blows per foot recorded by summing the second and third interval in accordance with the Standard Penetration Test, ASTM D1586.

Partial Penetration: If the sampler could not be driven through a full 6-inch interval, the number of blows for that partial penetration is shown as #/x" (i.e. 50/2"). The N-value is reported as "REF" indicating refusal.

Recovery: Indicates the inches of sample recovered from the sampled interval. For a standard penetration test, full recovery is 18", and is 24" for a thinwall/shelby tube sample.

WOH: Indicates the sampler penetrated soil under weight of hammer and rods alone; driving not required.

WOR: Indicates the sampler penetrated soil under weight of rods alone; hammer weight and driving not required.

Water Level: Indicates the water level measured by the drillers either while drilling ( ), at the end of drilling ( ), or at some time after drilling ( ).

Sample Symbols

Standard Penetration Test
Modified California (MC)
Auger
Grab Sample
Rock Core
Thinwall (TW)/Shelby Tube (SH)
Texas Cone Penetrometer
Dynamic Cone Penetrometer

DRAFT

Transaction Identification Data, for which the Company assumes no liability as set forth in Commitment Condition 5.e.:

Issuing Agent: Ryan L. Blumhoefer
Issuing Office: Blumhoefer, Yahnke, and Lancaster, LLP, 220 Division St. S., Northfield, MN 55057
Issuing Office's ALTA® Registry ID: 1051009
Loan ID Number:
Issuing Office's File No.: 23657
Property Address: XXXX Adams Street, Mankato, MN 56001
Revision Number: 1

SCHEDULE A
COMMITMENT

1. Commitment Date: October 14, 2025 at 8:00 a.m.

2. Policy to be issued:

   (a) 2021 ALTA® Owner's Policy
   Proposed Insured: McDonough Farms, LLC, a Minnesota limited liability company
   Proposed Amount of Insurance: $1,625,000.00 (Optional)
   The estate or interest to be insured: Fee Simple

   (b) 2021 ALTA® Loan Policy
   Proposed Insured:
   Proposed Amount of Insurance:

3. The estate or interest in the Land described or referred to in this Commitment is fee simple.

4. Title to the estate or interest in the Land is at the Commitment date vested in:

   BT Development, LLC, a Minnesota limited liability company

5. The Land is described as follows:

   See attached Exhibit A

Informational purposes only - Abstract Property

Please contact Sandy at 507-645-9541 to schedule this closing. The closing will take place at Blumhoefer, Yahnke, and Lancaster, LLP, 220 S. Division Street, Northfield MN

Old Republic National Title Insurance Company

Authorized Signature

SCHEDULE B-I
COMMITMENT

REQUIREMENTTS

All of the following requirements must be met:

1. The Proposed Insured must notify the Company in writing of the name of any party not referred to in this Commitment who will obtain an interest in the Land or who will make a loan on the Land. The Company may then make additional Requirements or Exceptions.

2. Pay the agreed amount for the estate or interest to be insured.

3. Pay the premiums, fees and charges for the Policy to the Company.

4. Documents satisfactory to the Company that convey the Title or create the Mortgage to be insured, or both, must be properly authorized, executed, delivered and recorded in the Public Records.

5. Photo identification will be required from all parties required to sign documents at closing.

6. "Gap" coverage will only be provided to insureds who close with Old Republic National Title Insurance Company or one of its policy-issuing agents. Old Republic National Title Insurance Company will provide insurance coverage, subject to the terms of the title insurance policy, for any documents recorded with the County Recorder or Registrar of Titles for the period of time between the effective date of the title insurance commitment and the date of recording of the closing documents provided the closing occurs with Old Republic National Title Insurance Company or one of its policy-issuing agents.

7. Obtain and record a Warranty Deed from BT Development, LLC, a Minnesota limited liability company, to McDonough Farms, LLC, a Minnesota limited liability company.

8. Obtain and retain a Resolution from the board of governors or members of BT Development, LLC authorizing the sale of this property and appointing someone to sign the documents. This Resolution will not be recorded.

9. Obtain and retain a Resolution from the board of governors or members of McDonough Farms, LLC authorizing the purchase of this property and appointing someone to sign the documents. This Resolution will not be recorded.

10. Obtain and record release or satisfaction of mortgage to the following:

Dated:	November 30, 2021
Recorded:	December 2, 2021
Document No.	595CR438
Amount:	$735,000.00
Mortgagor:	BT Development, LLC, a Minnesota limited liability company
Mortgagee:	Community Bank Mankato

NOTE: This mortgage secures a line of credit. Written authorization to close this account must be obtained.

11. Provide this examiner with a signed sworn construction statement prior to closing.

    In the event the McDonough Farms, LLC obtains a mortgage to purchase the subject property, then subsequent to recording the mortgage, an inspection by this office must occur to verify no visible signs of improvements have been made to the property. Obtain priority pictures.

    If this office is to do disbursements on the loan, obtain a Commercial Disbursing Agreement between parties.

    If this office is to make disbursements on the loan, we must have a sworn construction statement with matching lien waivers at each draw.

    After construction is complete, a plat drawing may be required on this property.

12. If there is a well on the property, a well certificate must be provided or in the alternative the conveyance documents must contain one of the following statements: The seller certifies that the seller does not know of any wells on the described real property or I am familiar with the property described in this instrument and I certify that the status and number of wells on the described real property have not changed since the last previously filed well disclosure statement.

13. Bare land – no plat drawing has been ordered.

14. Affidavit of Mortgagor or Affidavit of Buyer is required on all transactions. On sale transactions, a Seller's Affidavit is required.

15. If the property is subject to any private assessments for association dues or otherwise, we must be provided a current statement showing all sums are paid or the amount of any outstanding charges.

16. This examiner will order a final utilities bill for property to be paid at closing.

17. e-CRV information must be provided for each deed of conveyance to be recorded.

18. This Commitment is for the exclusive use of Blumhoefer, Yahnke, and Lancaster, LLP in closing the transaction described herein. Anyone else closing off this Commitment shall be liable to the Company for all loss and damage, including payment of all charges and fees incurred related to the preparation of this Commitment.

19. **NOTICE: We require funds be wired to our account in advance of closing.**

20. **NOTICE: BLUMHOEFER, YAHNKE, AND LANCASTER, LLP IS NOT RESPONSIBLE FOR PROVIDING THE BORROWER WITH A CLOSING DISCLOSURE PRIOR TO CLOSING.**

Chain of Title:

The current fee owner obtained title by a Warranty Deed dated November 30, 2021 and recorded December 2, 2021 as Doc. No. 595CR437.

Schedule B-II
COMMITMENT

EXCEPTIONS FROM COVERAGE

Some historical land records contain Discriminatory Covenants that are illegal and unenforceable by law. This Commitment and the Policy treat any Discriminatory Covenant in a document referenced in Schedule B as if each Discriminatory Covenant is redacted, repudiated, removed, and not republished or recirculated. Only the remaining provisions of the document will be excepted from coverage.

The Policy will not insure against loss or damage resulting from the terms and provisions of any lease or easement identified in Schedule A, and will include the following Exceptions unless cleared to the satisfaction of the Company:

1. Any defect, lien, encumbrance, adverse claim, or other matter that appears for the first time in the Public Records or is created, attaches, or is disclosed between the Commitment Date and the date on which all of the Schedule B, Part I – Requirements are met.

2. Any encroachment, encumbrance, violation, variation, or adverse circumstance affecting the Title that would be disclosed by an accurate and complete land survey of the Land. The term "encroachment" includes encroachments of existing improvements located on the Land onto adjoining land, and encroachments onto the Land of existing improvements located on adjoining land.

3. Rights and claims of parties in possession.

4. Any lien or right to lien for services, labor or materials heretofore or hereafter furnished, imposed by law and not shown by the public records.

5. Easements or claims of easements not shown by the public records.

6. No coverage is provided for municipal code compliance matters and fees including, but not limited to, utilities, water or sewer service, or fees for trees, weeds, grass, and snow or garbage removal, police boarding, vacant building registration and zoning.

7. Taxes and Assessments:

   NOTE: Taxes due and payable in 2024 and all prior years are paid in full. 2025 taxes are as follows and are one-half paid:

   PID No. R43.09.11.300.021 $4,878.00

NOTE: The first half taxes are due on or before May 15th; the second half taxes are due on or before October 15th or November 15th for certain agricultural properties.

NOTE: We find the following special assessments on the property:

Adams Street Extension Phase 3 – Deferred Assessment	$222,385.99
Adams Street Extension – Deferred Assessment	$104,528.15

8. Highway Easement, dated August 15, 1936, recorded October 30, 1936 in Book 138 of Deeds, Page 449.

9. Highway Easement, dated July 31, 1936, recorded September 11, 1936 as Document No. 160208.

10. Blue Earth County Highway Right of Way Plat No. 22, dated May 23, 2008, recorded July 9, 2008 as Document No. 486CR081.

11. Blue Earth County Highway Right of Way Plat No. 27, dated April 5, 2011, recorded May 27, 2011 as Document No. 509CR874

12. Access control limitations set forth in that certain Warranty Deed, dated February 28, 2011, recorded May 27, 2011 as Document No. 509CR882.

13. Blue Earth County Highway Right of Way Plat No. 30, dated May 29, 2013, recorded May 31, 2013 as Document No. 526CR966.

14. Access control limitations set forth in that certain Warranty Deed, dated April 3, 2013, recorded June 18, 2013 as Document No. 527CR364.

15. Easement for access, ingress, egress and utility purposes set forth in that certain Warranty Deed dated March 1, 2019 and recorded March 4, 2019 as Document No. 570CR457.

NOTE: The following is not a part of Schedule B, and is shown for information only. This will not be included on the final loan policy.

PLEASE BE ADVISED THAT THE FOLLOWING INFORMATION IS REQUIRED AT CLOSING:

a. Seller's tax identification number or social security number.
b. Seller's full address after the closing.
c. Picture identification will be required from all parties required to sign documents at closing.
d. If any of the sellers will not be in attendance at closing, this examiner must be provided with a phone number of where that seller may be reached.

EXHIBIT "A"

That part of the Southwest Quarter of Section 11, Township 108 North Range 26 West, Blue Earth County, Minnesota, described as:

Commencing at the southwesterly corner of Parcel D of Blue Earth County Highway Right Of Way Plat No. 27, on file and of record with the Blue Earth County Recorder; thence South 52 degrees 36 minutes 53 seconds East, (Minnesota County Coordinate System - Blue Earth County Zone - HARN NAD83 - 1996), along the southerly line of said Parcel D, 196.59 feet to the point of curvature of a circular curve to the left; thence southeasterly, along said southerly line, along a 500.00 foot radius curve, central angle = 01 degrees 42 minutes 19 seconds, an arc distance of 14.88 feet; thence South 00 degrees 22 minutes 32 seconds East, not radially to said curve, 763.46 feet to the point of beginning, said point being on a circular curve which center of radius bears South 28 degrees 10 minutes 32 seconds West; thence northwesterly, along a 283.15 foot radius curve, central angle = 28 degrees 33 minutes 27 seconds, an arc distance of 141.13 feet to the point of tangency of said curve; thence South 89 degrees 37 minutes 06 seconds West, along the tangent of said curve, 371.30 feet to the point of curvature of a circular curve to the right; thence northwesterly, along a 320.00 foot radius curve, central angle = 56 degrees 19 minutes 18 seconds, an arc distance of 314.56 feet to the point of tangency of said curve; thence North 34 degrees 03 minutes 36 seconds West, along the tangent of said curve, 25.30 feet; thence North 10 degrees 56 minutes 24 seconds East, 70.71 feet to a point on the southeasterly line of Parcel C of said Blue Earth County Highway Right Of Way Plat No. 27; thence South 55 degrees 56 minutes 24 seconds West, along said southeasterly line and along the southeasterly line of Parcel B of said Blue Earth County Highway Right Of Way Plat No. 27, a distance of 192.96 feet to the point of curvature of a circular curve to the left; thence southwesterly, along said southeasterly line, along a 971.35 foot radius curve, central angle = 49 degrees 57 minutes 56 seconds, an arc distance of 847.08 feet to the most northerly corner of Parcel K1 of Blue Earth County Highway Right Of Way Plat No. 30, on file and of record with the Blue Earth County Recorder; thence South 44 degrees 41 minutes 23 seconds East, not radially to said curve, along the northerly line of said Parcel K1, a distance of 118.21 feet; thence South 89 degrees 27 minutes 10 seconds East, along said northerly line, 376.49 feet; thence North 89 degrees 37 minutes 28 seconds East, along said northerly line, 366.29 feet to the northeasterly corner of said Parcel K1; thence North 00 degrees 18 minutes 44 seconds West, 245.61 feet; thence North 89 degrees 37 minutes 06 seconds East, 366.00 feet; thence South 00 degrees 18 minutes 44 seconds East, 245.65 feet to the northwest corner of Parcel K2 of said Blue Earth County Highway Right Of Way Plat No. 30; thence North 89 degrees 37 minutes 28 seconds East, along the north line of said Parcel K2, a distance of 33.00 feet; thence North 00 degrees 18 minutes 44 seconds West, 585.65 feet; thence North 89 degrees 37 minutes 06 seconds East, 135.35 feet; thence North 00 degrees 22 minutes 32 seconds West, 45.55 feet to the point of beginning.

EXCEPTING THEREFROM all of Freyberg Addition, Blue Earth County, Minnesota

Hanson, Bennett

From: Westman, Molly
Sent: Wednesday, September 16, 2026 4:47 PM
To: 'John 5'; 'robertmerila@arvig.net'
Cc: Alyssa Core; Jake Fritz; Bienfang, Cory; Erynn Jenzen; Hanson, Bennett; Konz, Mark
Subject: September 16, 2026 TEP meeting follow-up

Follow Up Flag: Follow up
Flag Status: Flagged

Hi.
Thanks for attending the TEP meeting today to discuss the proposed replacement plan for the Met-Con subdivision.

Below are comments provided by the TEP that require attention in the information presented:

- Update alternatives analysis to remove that the City engineering prohibited development/distances/preferences for the use of Evergreen Drive.
- Update the lots/maps/diagrams/etc. referenced to be in line with the actual legal descriptions of the subject lots. The entire body the report should be updated to accurately reflect correct lot locations, and the orange and yellow site map should be updated to accurately reflect legal descriptions.
- Update report to have the correct street naming conventions (Met-Con Court versus Ponderosa Court)
- Update the submission to state the intended user is known for Lot 3 (the trailer usage lot)/the area where Wetland 3 is located.

Generally, the text should match the diagrams for a cohesive submission.

If we receive this information as discussed, it can be re-reviewed by the TEP on Thursday/Friday for inclusion with the planning commission packet to be published Friday.

Warm regards,
Molly

Molly Westman
Planning Coordinator
City of Mankato
10 Civic Center Plaza
P.O. Box 3368
Mankato, MN 56002-3368
Office: (507) 387-8571
Fax: (507) 388-7530

Preliminary Opinion of Probable Construction Costs

Metcon Addition Public Improvements
Mankato, Minnesota
Prepared 9/23/26

JONES HAUGH SMITH
Engineers • Surveyors

SPEC.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
SCHEDULE ONE: SITE & MISCELLANEOUS CONSTRUCTION					
2021.501	MOBILIZATION	LS	1	$50,000.00	$50,000.00
2101.501	REMOVE BOULEVARD TREES	EA	3	$1,300.00	$3,900.00
	BOULEVARD TREES	EA	31	$1,150.00	$35,650.00
2104.503	SAWCUT & REMOVE BITUMINOUS OR CONCRETE PVT, CURB, SDWK	SF	2630	$3.00	$7,890.00
2104.503	REMOVE EDGE DRAIN	LF	269	$5.00	$1,345.00
2104.501	REMOVE STRIPING	LS	1	$3,000.00	$3,000.00
2511.507	RANDOM RIPRAP, CLASS 3	TON	56	$98.00	$5,488.00
2563.601	TRAFFIC CONTROL	LS	1	$8,250.00	$8,250.00
2573.501	EROSION CONTROL SUPERVISOR	LS	1	$4,400.00	$4,400.00
2573.502	8" BIO-ROLL	LF	1585	$4.00	$6,340.00
	ROCK CHECK DAM	EA	3	$160.00	$480.00
2573.503	STORM DRAIN INLET PROTECTION	EA	10	$120.00	$1,200.00
2573.504	SEDIMENT TRAP EXCAVATION (FINAL POND CLEANOUT)	HR	16	$450.00	$7,200.00
2573.602	TEMPORARY ROCK CONSTRUCTION ENTRANCE	EA	1	$2,300.00	$2,300.00
2574.505	SOIL PREPARATION	ACRE	2.3	$3,800.00	$8,740.00
2575.504	RAPID STABLIZATION METHOD 4	SY	8425	$2.40	$20,220.00
2575.504	MINERAL SOD, TYPE C, INLCUDES MAINTENANCE (BOULEVARDS)	SY	1961	$19.00	$37,259.00
2575.501	TURF ESTABLISHMENT	ACRE	2.3	$1,700.00	$3,910.00
	STRIPING & SIGNAGE	LS	1	$7,200.00	$7,200.00
	STREET LIGHTING	LS	1	$6,850.00	$6,850.00
				Subtotal	**$221,622.00**
SCHEDULE 2: STREET CONSTRUCTION (PONDEROSA CT)					
2105.507	COMMON EXCAVATION (EV) (P) (2)	CY	1592	$15.00	$23,880.00
2105.507	COMMON BORROW (CV) (P)	CY	1667	$20.00	$33,340.00
2105.507	SUBGRADE EXCAVATION (EV)	CY	275	$17.00	$4,675.00
2105.507	16" SELECT GRANULAR BORROW	TON	2994	$18.00	$53,892.00
2106.507	STABILIZING AGGREGATE, CL 5	TON	120	$31.00	$3,720.00
2211.501	8" AGGREGATE BASE, CLASS 5	TON	1497	$24.00	$35,928.00
2350.503	TYPE SP 3 BITUMINOUS NON WEAR COURSE 2.5" THICK	TON	1579	$102.00	$161,058.00
2350.503	TYPE SP 3 BITUMINOUS WEAR COURSE 2.0" THICK	TON	333	$102.00	$33,966.00
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	145	$3.00	$435.00
2521.518	4" CONCRETE WALK (3) (4) (9)	SF	6030	$12.00	$72,360.00
2531.501	CONCRETE CURB & GUTTER, DESIGN B618	LF	1170	$33.00	$38,610.00
				Subtotal	**$461,864.00**
SCHEDULE 3: STREET CONSTRUCTION (ADAMS STREET RIGHT TURN LANE)					
2105.504	GEOGRID	SY	380	$3.00	$1,140.00
2105.507	COMMON EXCAVATION (EV) (P) (2)	CY	360	$15.00	$5,400.00
2105.507	SUBGRADE EXCAVATION (EV)	CY	5	$18.00	$90.00
2105.507	12" SELECT GRANULAR BORROW	TON	91	$28.00	$2,548.00
2106.507	STABILIZING AGGREGATE, CL 5	TON	10	$32.00	$320.00
2211.501	12" AGGREGATE BASE, CLASS 5	TON	91	$24.00	$2,184.00

SPEC.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
2350.503	TYPE SP 3 BITUMINOUS NON WEAR COURSE 2.0" THICK	TON	16	$102.00	$1,632.00
2350.503	TYPE SP 3 BITUMINOUS WEAR COURSE 4.0" THICK	TON	32	$102.00	$3,264.00
2357.502	BITUMINOUS MATERIAL FOR TACK COAT	GAL	14	$3.00	$42.00
2531.501	CONCRETE CURB & GUTTER, DESIGN B618	LF	160	$33.00	$5,280.00
				Subtotal	**$21,900.00**
SCHEDULE 4: SANITARY SEWER CONSTRUCTION (7) (8)					
2502.602	CONNECT TO EXISTING SANITARY SEWER	EA	1	$1,900.00	$1,900.00
2503.503	GRANUALAR PIPE FOUNDATION ROCK	TON	30	$38.00	$1,140.00
2503.511	8" PVC PIPE SEWER SDR 26	LF	755	$53.00	$40,015.00
2503.511	6" SERVICE	EA	7	$3,200.00	$22,400.00
2506.503	CONSTRUCT DRAINAGE STRUCTURE, DES. 48-4007C	VF	90.96	$325.00	$29,562.00
2506.516	SANITARY CASTING ASSEMBLY	EA	5	$1,400.00	$7,000.00
				Subtotal	**$102,017.00**
SCHEDULE 5: STORM SEWER CONSTRUCTION (7)					
2503.503	CONNECT TO EX STORM SEWER (INCL EDGE DRAIN)	EA	4	$2,200.00	$8,800.00
2503.503	GRANUALAR PIPE FOUNDATION ROCK	TON	5	$38.00	$190.00
2503.511	4" HDPE PIPE STORM SEWER (EDGE DRAIN)	LF	1330	$20.00	$26,600.00
2503.541	12" RCP PIPE SEWER, CLASS 5	LF	397	$62.00	$24,614.00
2503.541	18" RCP PIPE SEWER, CLASS 3	LF	104	$72.00	$7,488.00
2503.502	12" RC PIPE APRON	EA	1	$3,000.00	$3,000.00
2503.502	18" RC PIPE APRON	EA	2	$4,000.00	$8,000.00
2506.502	CONSTRUCT DRAINAGE STRUCTURE, TYPE SD-1	VF	16.74	$300.00	$5,022.00
2506.502	CONSTRUCT DRAINAGE STRUCTURE, TYPE 4020-48	VF	13.08	$350.00	$4,578.00
2506.502	STORMWATER POND OUTLET STRUCTURE - 60"	LS	1	$6,000.00	$6,000.00
2506.516	STORM CASTING ASSEMBLY	EA	7	$1,350.00	$9,450.00
				Subtotal	**$103,742.00**
SCHEDULE 6: WATERMAIN CONSTRUCTION					
2503.502	WET TAP CONNECT TO EXISTING WATER MAIN	EA	1	$5,800.00	$5,800.00
2503.502	8" M.J. GATE VALVE & BOX	EA	2	$2,500.00	$5,000.00
2503.502	6" M.J. GATE VALVE & BOX	EA	6	$1,900.00	$11,400.00
2503.502	8"x6" WATER MAIN TEE	EA	6	$475.00	$2,850.00
2503.502	HYDRANT	EA	1	$7,400.00	$7,400.00
2503.502	45 DEG. M.J. BEND	EA	2	$400.00	$800.00
2503.502	8"x6" REDUCER	EA	1	$350.00	$350.00
2503.503	8" PVC DR 14 WATER MAIN WITH TRACER WIRE	LF	580	$58.00	$33,640.00
2503.503	6" PVC DR 14 HYDRANT LEAD	LF	6	$158.00	$948.00
2503.511	6" PVC WATER SERVICE WITH GATE VALVE	EA	6	$2,600.00	$15,600.00
				Subtotal	**$83,788.00**
				Grand Total	**$994,933.00**

SPEC.	ITEM	UNIT	ESTIMATED QUANTITY	UNIT PRICE	AMOUNT
	NOTES				
(1)	NOT USED				
(2)	STREET SUBGRADE EXCAVATION				
(3)	INCLUDES 6" AGGREGATE BASE				
(4)	INCLUDES PED. RAMPS				
(5)	NOT USED				
(6)	NOT USED				
(7)	TRACER WIRE REQUIRED ON ALL PIPE				
(8)	SEWER MAIN TELEVISING REQUIRED (INCIDENTAL)				
(9)	JOINT SEALANTS & EXPANSION JOINTS INCIDENTAL				

BASIS OF ESTIMATE	
SELECT GRANULAR BACKFILL	1.8 TONS/CY (CV)
AGGREGATE BASE	1.8 TONS/CY (CV)
RIP RAP	PER TABLE AND/OR 2 TONS/CY
BITUMINOUS PAVING	110#/SY/IN THICKNESS
BITUMINOUS TACK COAT	.05 GALLONS / SY

Meeting Date: 09/23/2026

Title

CY43-26

Request of RJC Rental Properties LLC for a conditional use permit to allow the operation of an Intensive Outpatient Treatment Clinic in the R-3, Limited Multiple dwelling zoning district. The subject properties are described as Lots 3, 4, and 5, Block 25, Mankato City subdivision (1618, 1620 and 1622 3rd Avenue).

The anticipated date of City Council action is October 13, 2026.

Applicant

The applicant is RJC Rental Properties, LLC.

Request

The applicant is seeking a conditional use permit to allow the operation of an Intensive Outpatient Treatment clinic in the R-3, Limited Multiple dwelling zoning district.

Location

The subject building is located at 1618 3rd Avenue, and properties located at 1614 and 1620 are also shown on the current site plan that shows parking at the property.

Existing Land Use

The subject property is currently vacant. The applicant indicated that the House of Hope occupied the facility last in approximately 2020 for similar purposes.

Zoning

To bring the property into compliance with the City's Land Use Plan, the property was rezoned to R-3, Limited Multiple dwelling, zoning district on September 14, 2026.

Environmentally Sensitive Areas

There are no known environmentally sensitive areas on the site.

Public Utilities

The site is currently served by public utilities.

City Code

The City of Mankato Code regarding the R-3, Limited Multiple Dwelling District, can be found at this link:
https://library.municode.com/mn/mankato/codes/code_of_ordinances?nodeId=PTIICOOR_CH10LAUSDE_ARTIIREDI_DIV5LIMUDWDI

Site Plan Review Comments

The Site Plan and Traffic Advisory Committee reviewed the item during their September 8, 2026, meeting and provided the following comments. The applicant's subsequent responses are included in italics.

1. If not already complete, the applicant shall log in to the online portal and make notice fee payments. *Applicant acknowledged payment requirement.*
2. Applicants will be required to pay SAC & WAC connection charges based on the City of Mankato assessment policy and fee schedule. *Applicant response: We are aware of the SAC & WAC connection charges. We have a plan with the current owner to manage the payment for these charges.*
3. 1620 3rd Avenue has been noted to be demolished at some point. At that time, the applicant shall be aware that the City of Mankato would require the property owner to disconnect sewer and water services to the City mains in 3rd Avenue. With that in mind, conducting the disconnection work before the 3rd Avenue Reconstruction project is finished would be more feasible for the property owner and is preferred by the City of Mankato. *Applicant response: At this time, we are holding off on demolition of the property. We are adding updated sewer lines for potential future use.*
4. General note: if the noted “storage” areas shown on the floor plan are further developed and used for office, or other, purposes in the future, those will need to be included in the parking calculation and will thus increase the parking demand. *Applicant response: We understand the requirements for adding parking for future use with any program expansion.*
5. The traffic data shall be undertaken by a registered traffic engineer. Please see the example as was previously provided Here. *Applicant response: Regarding the traffic data, I spoke with MnDot and was provided that the AADT count for Chestnut Rd is currently 592 as of 2025. This is a decrease in numbers since 2018 when the count was 720. . At this time, I would like to add that only approximately 3 other homes share the alleyway that I would be utilizing. I also expect most program attendees will walk or bike to the office.*
6. Please confirm – will there be any exterior improvements associated with this project. *Applicant response: The property has been well maintained and we will not be making any improvements at this time.*
7. Please confirm – will there be any interior improvements associated with this project. *Applicant response: The property has been well maintained and we will not be making any improvements at this time.*
8. Parking standards from code state that clinics require, “One space per each 250 sq. ft. of floor area, plus one space per staff member.” 4 maximum staff are noted in the submission. The floor area shown on the site plan is 3,105 and the area on the floor plan is 1,848. For purposes of parking, the usable floor is: Floor area, livable or usable, means the sum of the gross horizontal area of all floors of a building as measured from the interior faces of the interior walls, excluding the areas of unoccupied cellars, accessory garages, porches, attics, basements, stairways, bathrooms, and utility and heating rooms.
    1. Confirm the usable floor area (which should include the breakroom) as per the code definition. *Applicant response: I am waiting for the updated floor plan. I will send this to you as soon as possible.*

Assuming a usable floor area of approximately 2000 square feet (this shall be confirmed), plus the employees, 12 parking stalls are required. 8 stalls are shown on this property. The property at 1614 3rd Avenue received a reasonable accommodation on July 9, 2026 whereby 6 parking stalls are required for that property. Therefore, those stalls are not available for use in conjunction with this property. Four stalls are shown on the 1620 3rd Avenue property for a total of 12 parking stalls provided. Note — this will impact the ability to utilize 1620 if there are parking requirements for that use.

2. Please confirm the proposed future use of the 1620 structure, and whether parking will be needed for a future use.
3. Access to these stalls appears to requires traversing across adjacent parcels. How will this be handled?
4. If the floor area assumption is low, then additional parking will be needed and a site plan showing this will be required.

Applicant response: Our only intended use for the property at 1620 is as parking for the services provided at 1618. As the IOP continues to expand we would then develop the 1620 property into additional parking at that time. Regarding traversing across the parking lot, 1618 and 1620 will merge into one parking area for the IOP services.

Review

The applicant, RJC Rental Properties, LLC, has applied for a conditional use permit to allow an Intensive Outpatient Treatment, IOP, clinic in the R-3, Limited Multiple Family Dwelling district. The property is addressed at 1618 3rd Avenue and was recently rezoned to R-3, Limited Multiple Family Dwelling, zoning district to match the City's underlying Land Use Plan.

Proposal

According to the applicant's narrative, the proposed use will occupy the premise previously used by the House of Hope. The applicant has indicated that the House of Hope moved their operations in approximately 2020, and the applicant desires to resume operations that are similar under the business name "*Golden Anchor Treatment Services*". The request seeks to operate an Intensive Outpatient Treatment (IOP) program. This use will provide structured, evidence-based treatment services for adults experiencing substance use and co-occuring mental health disorders. The applicant describes that the program is designed to help individuals achieve and maintain recovery while continuing to live independently within the community.

The proposed IOP clinic desires to provide licensed health services that are outpatient in nature and do not require overnight stays or residential occupancy. Participants attend pre-scheduled treatment sessions several days per week. The proposed services offered at this location include the following:

- Individual counseling
- Group therapy (Tue, Wed, Thurs - 8a.m - 12p.m. or Mon 1pm - 4pm)
- Family education and counseling
- Substance use disorder assessments
- Mental Health support and care coordination
- Relapse prevention planning
- Recovery education and life skills development
- Case management and referrals to community resources

The applicant's narrative states that the facility will be licensed by the Minnesota Department of Human Services under Minnesota statute 245G. The applicant has further clarified that this is a similar license to what was previously in place for the House of Hope. A recommended condition of approval is included herein regarding the licensing of the subject premises.

The hours of operation are weekdays, Monday through Friday, from 8:00 a.m. to 8:00 p.m. No weekend hours are proposed at this location. A recommended condition of approval is included herein that provides recommended expectations on hours of operation for the clinical use.

Four licensed alcohol and drug counselors, licensed mental health professionals, clinical supervisors and administrative personnel will be working at the facility during operating hours. The applicant indicates that a maximum of four employees will be employed at the premises.

All clients will have pre-scheduled appointments, and will depart immediately following their service. The anticipated maximum attendance at any given time is 16 clients, and the applicant intends to stagger appointment times to reduce parking demand and vehicle traffic. A recommended condition is included herein regarding the maximum capacity.

All clinic services offered at the location will be held entirely indoors, within the subject premises.

The clinic will not be distributing any medication at the location, including methadone and suboxone.

Zoning and Code standard

The primary structure involved with the request is located at 1618 3rd Avenue. 1614 3rd Avenue is included with the request as it is utilized to access the parking stalls on the subject property. 1620 3rd Avenue is also included with the request as the subject property is utilized for parking purposes. All the subject properties are zoned R-3, Limited Multiple Dwelling District. The Mankato City Code outlines that within the R-3 zoning district, "*Hospitals and medical clinics*" are considered conditional uses. Other conditional uses as applicable to the R-3 zoning district include bed and breakfast residences, campgrounds within public parks, cemeteries, crematories and mausoleums, child daycare facilities, churches, congregate housing, golf and country clubs, government institutions, municipal buildings, museums and libraries, nursing homes and similar institutions, and other residential, institutional, or government services uses determined by the planning agency to be of the same general character as the permitted and conditions uses and found not to be determinantal to existing uses and the general public health, safety and welfare, parking lots meeting certain conditions, public housing units, and public utilities and essential services conforming to the Code.

The Code provided definition of a clinic is, "*a place used for the diagnosis and treatment of sick, ailing, infirm, injured persons, and those persons who are in need of medical attention. Overnight care facilities are not provided at the clinic."* The definition of hospital in the Code is, "*an institution providing health services for human in-patients and medical or surgical care for the sick or injured. The term "hospital" includes related facilities such as laboratories, outpatient departments, training facilities, central service facilities, staff offices, and overnight accommodations for patients."* The proposed use, an Intensive Outpatient Treatment clinic, fits within the definition as provided by the Mankato City Code for a clinic.

Site Plan

A site plan has been provided, and no site improvements are proposed.

The site plan identifies 15, 9' X 20' existing parking stalls, and bicycle parking. Ten parking stalls are shown on the lot of the building where the IOP will operate at 1618 3rd Avenue, and access to the stalls will require traversing over the property to the south at 1614 3rd Avenue. Five parking stalls are shown on the property at 1620 3rd Avenue, which the applicant represents is currently vacant. The required vehicle parking for a clinic is one space per 250 square feet of floor area, plus one space per staff member. The plans show 2,100 square feet of office space, and 5 employees and, thus, 14 parking stalls are required. A recommended condition of approval is included herein that the parking standards shall be achieved, and that staff be limited to available parking or additional

code-compliant parking be added to achieve the required for the clinic use. A recommendation condition of approval includes that, prior to occupancy, all parking stalls be striped in accordance with the City of Mankato parking standards. Additionally, a recommended condition of approval includes that all properties must remain under the same ownership for access purposes, or a legally recorded easement will be necessary for the shared access routes. Further, a recommended condition includes that the future use of the existing building located at 1620 3rd Avenue, where 5 parking stalls are being provided for this use, will be limited to available parking.

All lighting on the subject property will be required to conform to the Mankato City Code, and a recommended condition is included here to this end.

If signage is desired by the applicant, they will be required to obtain a sign permit prior to fabrication and installation and a condition to this end is included herein.

The applicant will be required to comply with the Mankato City Code regarding their refuse storage containers, and a recommended condition is included to address as much. All garbage and recycling bins will be required to meet the Mankato City Code, which requires a gated opaque fence or wall of sufficient height to completely screen the containers from view by all adjoining property and streets. Alternately, the refuse bins may be stored indoors.

Traffic
The applicant has provided traffic data showing the following data:

- AM peak hour trip generation is 20 trips (20 IN 0 OUT)
- PM peak hour trip generation is 20 trips (20 IN OR 20 OUT).
- Daily trip generation is estimated at 40 trips (20 IN 20 OUT) assuming all clients and staff arrive in separate vehicles.

The City's traffic engineer had reviewed the data and finds that the addition of these trips is not anticipated to be of concern for either County State Aid Highway 5 (3rd Avenue), a four-lane county highway, or Pine Street/Chestnut Street — both local roadways with side street stop control, the peak hour trips are very low and existing roadways have sufficient capacity.

The site is served by a pedestrian sidewalk located along 3rd Avenue. The nearest bus stop is located east of Franklin Elementary School, a distance of approximately 2/3 of a mile, and from the stop, pedestrian sidewalks are provided to the site. While there is no fixed bus route in this area, the business is located in the Kato Flex zone service area. The City of Mankato Transit has indicated that because the business is located within the Kato Flex Zone, clients who reside in the City's service area will be allowed to utilize Kato Flex to access services at this Kato Flex Zone business. This means that curb-to-curb service, in keeping with the Kato Flex standards, will be provided for clients going to this location.

While heavy truck traffic is not anticipated based on the submitted information and the proposed use, a recommended condition is included herein that requires the applicant to prepare a plan for review and approval of staff prior to occupancy that contemplates onsite loading related to pick up/drop off of clients and queuing and site deliveries. The plans should address general site deliveries, and should provide a plan for pick-up/drop-off of clients. Stacking and queuing that blocks existing parking stalls or the alley will be prohibited.

Floor plans
No interior changes are proposed related to the floor plans. The one-story building, which does not have a basement, shows approximately 2,100 square feet of livable/usable area. Eight office spaces are shown on the floor plans, along with an activity area, restrooms, a mechanical area, and storage areas. If future occupancy of the storage areas is for anything other than storage, additional review and approval by way of an amended conditional use permit will be required.

Noise
The applicant has indicated that all operations will occur indoors, at this subject premises. A recommended condition of approval is included herein in this regard.

Neighborhood Meeting
The applicant held a neighborhood meeting on September 9, 2026, at 6:00 p.m. A summary of the neighborhood meeting is included in the attachments. A recommended condition of approval is included herein that, in order to promptly address potential neighbor questions that arise in the future, that a complaint hotline/local access contact phone number be provided for use by the neighborhood. This recommendation outlines that the number should be provided prior to the granting of occupancy of the space and that the contact should be local, and should be able to respond in the event that questions or concerns arise, including off-hours.

Findings

Staff respectfully submits the following findings of fact.

1. The use, a medical clinic, is one of the conditional uses listed in R-3, Limited Multiple Dwelling District.
2. The request is in keeping with the comprehensive planning policies of the city as identified uses and policies associated with each use are outlined.
3. The proposed use, when considered with the recommended conditions, does not interfere with or diminish the use of property in the immediate vicinity.
4. The property is currently served by public facilities and services.
5. The proposed use does not cause undue traffic congestion.
6. There are no known historical or architectural resources associated with the site.
7. There are no impacts on natural or environmental features.
8. The proposal will not cause a negative cumulative effect, when considered in conjunction with the cumulative effect of various special uses of all types on the immediate neighborhood, and the effect of the proposed type of conditional use upon the city as a whole. The existing street network, pedestrian corridors, access to transit facilities, in conjunction with the proposed conditions of approval outlined herein, are elements to minimize effects on the immediate neighborhood.
9. The proposal complies with all other applicable regulations of the district in which it is located and other applicable ordinances.
10. The proposal will not jeopardize the public's health, safety, or general welfare, and conditions of approval are outlined here to address operational issues that may present themselves with the proposed use.

Recommendation

Staff recommends approval of the conditional use permit to allow the operation of an Intensive Outpatient Treatment Program, IOP, treatment clinic at 1618 3rd Avenue with the following conditions:

1. This approval is based on the exhibits, narratives and reports received from the applicant on the parcels addressed as 1618, 1614 and 1620 3rd Avenue. The facility shall be operated according to the Approved Plans as follows:
    a. Site Plan — Sheet A0, 1618, 1620, 1622 3rd Avenue, dated September 14, 2026.
    b. Floor Plan — Sheet A1, 1618 3rd Avenue, dated September 14, 2026.
    c. Conditional Use Permit Narrative, 3 pages, provided September 1, 2026, signed by Christina Rotert, LSW.
    d. Traffic and Parking Impact Data Sheet, dated and signed on September 1, 2026, by Christina Rotert.
2. Any modifications to the Approved Plans must be reviewed and approved in writing by the City Council by way of an amended conditional use permit. If the Approved Plans differ from the written terms and conditions as stated in this Conditional Use Permit, whichever is more restrictive would apply.
3. This approval is for only the uses, including the staffing and client capacities, shown in the Approved Plans. Any future expansions, modifications, or the like, to the Approved Plans, will require an amendment to the conditional use permit.
4. The properties at 1614, 1618 and 1620 3rd Avenue must remain under the same ownership for access and parking purposes, or a legally recorded easement will be necessary prior to property separation for the shared access routes and parking spaces.
5. The future use of the existing building located at 1620 3rd Avenue, where 5 parking stalls are being provided for this use, will be subject to available parking.
6. All refuse and recyclable material containers shall meet Mankato City Code standards. If a dumpster enclosure is desired, a construction permit shall be obtained prior to installation.
7. The use shall be operated in its entirety within a completely enclosed structure, including all group activities. Exterior operations are prohibited.
8. All exterior lights shall meet the Mankato City Code. Fixtures shall be full-cut, fully shielded style. Prior to installation, fixture cut sheets and a photometric plan shall be provided for any new lighting installation for review and approval per City Code requirements.
9. Prior to the fabrication, installation or modification of any signage, a sign permit shall be obtained.
10. Staffing at the clinic shall be limited to available parking.
11. Prior to occupancy, the parking lot shall be striped in accordance with the City of Mankato standard parking plates.
12. All appointments shall be pre-scheduled, drop-in clients are prohibited.
13. Staff shall be onsite during clinic operations.
14. Activities associated with the Intensive Outpatient Treatment Program clinic will be limited to the hours of Monday through Friday from 8:00 a.m. to 8:00 p.m.
15. Clinic operations will be limited to a maximum of 16 clients at any given time, and the total occupants/visitors will be limited to the available, onsite parking.
16. Group sessions shall be staggered accordingly to avoid traffic conflicts during transition periods.
17. A plan shall be submitted for review and approval of staff prior to occupancy of the facility, that contemplates onsite loading related to pick-up/drop off of clients, queuing, and site deliveries. The plans should address general site deliveries, and should provide a plan for pick-up/drop-off of clients.
18. In-patient or residential components related to the proposed use are not allowed with this approval.
19. A complaint hotline/local emergency contact phone number shall be provided prior to occupancy. The emergency contact should be local, and should be able to respond in the event that questions or concerns arise, including off-hours.
20. The facility shall be and remain licensed by the State of Minnesota through Minnesota Statute 245G. If licensing ceases or operations change, additional review and consideration of the conditional use permit will be required. A copy of the State-issued license shall be provided to the City prior to occupancy.

Attachments

General Location Map

Aerial

Site Plan

Floor Plan

Narrative

Traffic Information From Applicant

Additional Information

Summary of Neighborhood Meeting

General Location Map



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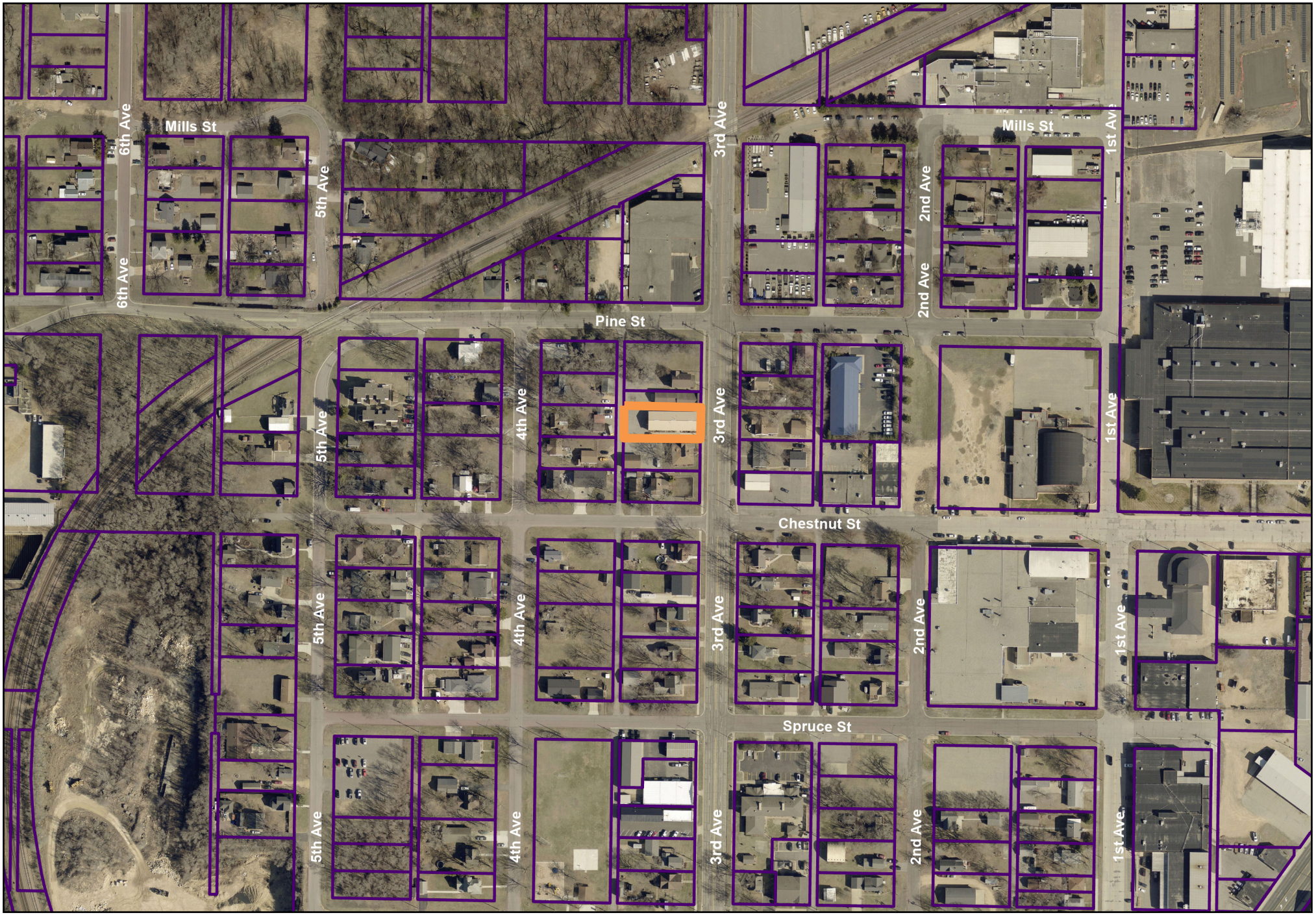
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Produced by: City of Mankato
Published: August 28, 2026

Mankato
Leading the way...

Aerial Map

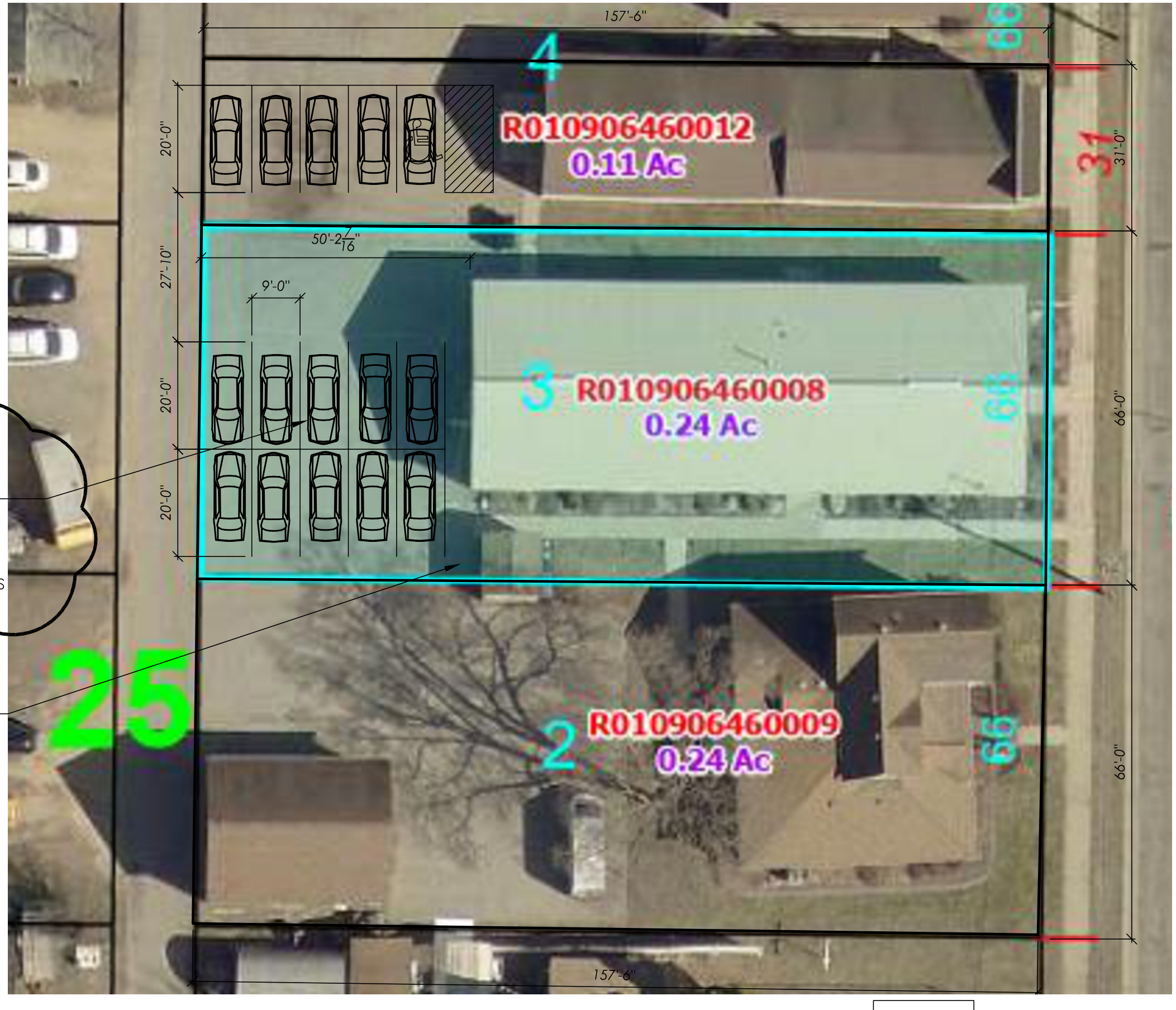


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1 A0 SITE PLAN

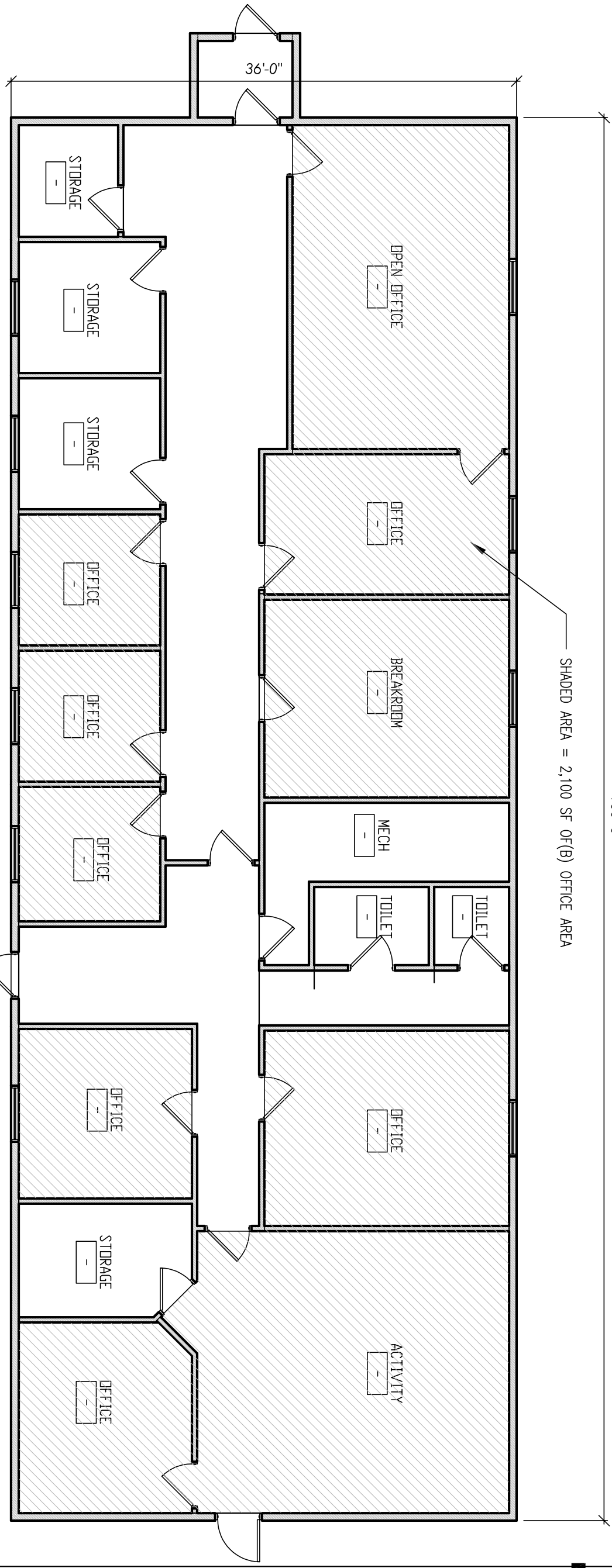
SCALE 1" = 20'-0"

DESIGN CONSULTANT

SITE PLAN
1618,1620,1622 3RD AVENUE
1" = 20'-0"

DATE 09/14/2026

SHEET NO. A0



1 / A1 FLOOR PLAN

SCALE 1/8" = 1'-0"

DESIGN CONSULTANT

FLOOR PLAN
1618 3RD AVENUE

DATE 09/14/2026

SHEET NO. A1

Conditional Use Permit Narrative

Intensive Outpatient Treatment Program

Applicant: Golden Anchor Treatment Services
Property Address: 1618 3rd Ave.

Purpose of Request

This application requests approval of a Conditional Use Permit to operate an **Intensive Outpatient Treatment (IOP) Program** at the above-referenced property. The proposed use will provide structured, evidence-based treatment services for adults experiencing substance use and co-occurring mental health disorders. The program is designed to help individuals achieve and maintain recovery while continuing to live independently within the community.

Program Description

The Intensive Outpatient Treatment Program is a licensed behavioral health service that provides comprehensive outpatient treatment without requiring overnight stays or residential occupancy. Participants attend scheduled treatment sessions several days per week and return to their homes following each session.

Services offered include:

- Individual counseling
- Group therapy (Tues, Wed, Thurs - 8am-12pm or Mon - 1pm-4pm)
- Family education and counseling
- Substance use disorder assessments
- Mental health support and care coordination
- Relapse prevention planning
- Recovery education and life skills development
- Case management and referrals to community resources

The program operates in compliance with all applicable state licensing requirements and professional standards for behavioral health services. An application is pending with MN Dept of Human Services for a 245G program. Per the requirements of the license, a final walk through must be completed of the property to receive approval to open.

Hours of Operation

The proposed hours of operation are:

- Monday through Friday: 8am-8pm
- Saturday: Closed
- Sunday: Closed

Appointments and group sessions will be scheduled throughout the day to minimize traffic congestion and ensure efficient use of the facility.

Staffing

The facility will be staffed by qualified professionals, including licensed alcohol and drug counselors, licensed mental health professionals, clinical supervisors, and administrative personnel. Staffing levels will be appropriate to meet client needs while maintaining a safe and therapeutic environment. Golden Anchor will have 3-4 staff members with an average of 3 staff at the onsite throughout business hours.

Client Population & Attendance

The IOP program serves individuals age 18 and older within all demographic backgrounds.

Clients arrive at scheduled times for counseling or group sessions and depart immediately following completion of services. Participants are not housed at the facility, and no overnight accommodations are provided.

The anticipated daily attendance is approximately 16 clients, with staggered appointment times to reduce parking demand and vehicle traffic.

Parking and Traffic

The property provides adequate on-site parking to accommodate staff and clients. Appointment scheduling will be staggered to avoid peak traffic periods and minimize vehicle congestion.

Traffic generated by the proposed use is expected to be comparable to or less than other professional office or medical clinic uses permitted within the zoning district.

Safety and Security

Maintaining a safe, respectful, and professional environment is a priority. Policies and procedures include:

- Staff supervision during all operating hours
- Controlled building access
- Confidential client records maintained in compliance with HIPAA regulations
- Emergency response procedures
- Coordination with local emergency services when necessary
- Zero tolerance for violence, illegal activity, or substance use on the premises

Compatibility with Surrounding Area

The proposed Intensive Outpatient Treatment Program is consistent with the surrounding neighborhood as there are other sober homes, treatment providers, recovery community buildings and the like within the blocks surrounding the property.

Because the program functions similarly to a medical or professional office, it is not expected to negatively affect neighboring properties or surrounding land uses.

Community Benefit

The proposed facility addresses a significant community need by expanding access to behavioral health and substance use disorder treatment services. Providing local access to outpatient treatment helps individuals receive care close to home while maintaining employment, family responsibilities, and community connections.

Research consistently demonstrates that outpatient treatment reduces emergency department utilization, decreases criminal justice involvement, supports long-term recovery, and improves overall public health outcomes. Expanding these services benefits not only program participants but also families, employers, healthcare providers, and the broader community.

Findings

The proposed use meets the intent of the Conditional Use Permit standards because it:

- Is consistent with the goals and policies of the City's Comprehensive Plan.
- Is compatible with surrounding land uses.
- Will not create excessive traffic, noise, or parking impacts.
- Will not adversely affect the health, safety, or welfare of neighboring properties.
- Provides valuable community service by increasing access to behavioral health and substance use disorder treatment.
- Will operate in compliance with all applicable local, state, and federal regulations.

Conclusion

The proposed Intensive Outpatient Treatment Program represents a needed healthcare service that promotes recovery, public safety, and community well-being. The use is compatible with surrounding development, generates minimal impacts, and satisfies the standards for approval of a Conditional Use Permit.

For these reasons, the applicant respectfully requests approval of this Conditional Use Permit.

Sincerely,

Christina Rotert, LSW

TRAFFIC AND PARKING IMPACT DATA SHEET

Program: Golden Anchor Treatment Services
Program Type: Outpatient Substance Use Disorder Treatment Program
Property Address: 1618 3rd Ave. Mankato
Prepared for: City Planning / Conditional Use Permit Review
Date: 9/1/26

1. Program Overview

Golden Anchor will provide scheduled outpatient treatment services. The program will serve approximately 32 clients, divided between high-intensity and low-intensity programming.

Program	Clients	Schedule	Treatment Hours
High-Intensity	16	Tuesday, Wednesday & Thursday	8:00 AM–12:00 PM
Low-Intensity	16	Monday	12:00 PM–4:00 PM
Total Clients	**32**	—	—
Staff	**4**	During program operations	—

The high-intensity and low-intensity groups are scheduled on separate days and therefore do not overlap.

2. Weekly Client Visits

High-Intensity Program

16 clients × 3 days per week = **48 client visits per week**

Low-Intensity Program

16 clients × 1 day per week = **16 client visits per week**

Total

64 client visits per week

Although the program generates approximately 64 client visits per week, these visits represent approximately **32 unique clients** attending services at different frequencies.

3. Daily Attendance and Hours

Day	Program	Hours	Clients	Staff	Maximum Persons On-Site
Monday	Low-Intensity	12:00–4:00 PM	16	4	**20**
Tuesday	High-Intensity	8:00 AM–12:00 PM	16	4	**20**
Wednesday	High-Intensity	8:00 AM–12:00 PM	16	4	**20**
Thursday	High-Intensity	8:00 AM–12:00 PM	16	4	**20**
Friday	No scheduled group	—	0	—	—

Maximum anticipated treatment occupancy: 20 individuals at one time.

4. Anticipated Arrival and Departure Periods

Because treatment services are scheduled, client traffic will primarily occur immediately before and after each treatment session.

Monday – Low-Intensity Program

- Primary arrival period: approximately **11:30 AM–12:00 PM**
- Treatment: **12:00 PM–4:00 PM**
- Primary departure period: approximately **4:00–4:30 PM**

Tuesday–Thursday – High-Intensity Program

- Primary arrival period: approximately **7:30–8:00 AM**
- Treatment: **8:00 AM–12:00 PM**
- Primary departure period: approximately **12:00–12:30 PM**

Client traffic is therefore concentrated into predictable arrival and departure periods rather than occurring continuously throughout the day.

5. Conservative Vehicle Trip Estimate

For traffic-planning purposes, a conservative estimate assumes that all 16 clients and all 4 staff members arrive in separate vehicles.

Under this maximum-case assumption, a treatment day could generate:

- 16 client arrivals
- 16 client departures
- 4 staff arrivals
- 4 staff departures
- **Maximum: 40 one-way vehicle trips per treatment day**

Over four scheduled treatment days, the conservative estimate would be approximately **160 one-way vehicle trips per week** if every client and staff member drove independently each day.

Actual traffic is anticipated to be lower because some clients may utilize public transportation, ride-share services, medical or community transportation, family/support transportation, carpooling, walking, or biking.

6. Parking and Traffic Management

The program's structured schedule allows Golden Anchor to manage parking and traffic demand. High-intensity and low-intensity services occur on separate days, eliminating traffic overlap between the two treatment groups.

A maximum of approximately **16 clients and 4 staff members** will typically be present during scheduled treatment programming.

Golden Anchor will manage scheduling and transportation needs to minimize congestion, maintain appropriate parking availability, and reduce impacts on neighboring properties and the surrounding roadway system.

7. Traffic Impact Summary

Golden Anchor's proposed treatment schedule creates a predictable and limited traffic pattern. Approximately **16 clients will attend the facility at one time**, with approximately **4 staff members** present.

High-intensity services will operate **Tuesday through Thursday from 8:00 AM to 12:00 PM**, while low-intensity services will operate **Monday from 12:00 PM to 4:00 PM**. Because these programs operate on separate days, there will be no overlap between the two client groups.

The program anticipates approximately **64 client visits per week**. Traffic will primarily occur during short, predictable periods immediately before and after scheduled treatment sessions.

This scheduling model allows Golden Anchor to actively manage client volume, parking demand, and traffic flow while minimizing the program's impact on surrounding properties.

Prepared By: __Christina Rotert_____

Title: ___CEO_____

Signature: ___Christina Rotert_____

Date: ___9/1/26_____

Conditional Use Permit - additional information

Landscape - The current landscape is up to date with no changes being requested at this time.

Lighting - All lighting is provided by the building and paid for by the tenant of the building. City lighting is located on 3rd Ave as required by the City compliances.

Refuse- all refuse containers will be stored in an area designated and out of sight of the main roadways. If changes are required a permit will be completed at that time.

Signage - A permit will be submitted when the approval for the Conditional Use and rezone have been received.

Summary of Neighborhood Meeting provided by Applicant

The meeting was held on 9/9 at 6 p.m. Only two community members/neighbors attended. General questions related to the population served, type of service being provided, safety protocols, hours of operation, and overall changes in substance use trends based on currently used illegal substances.

The following answers were provided to these questions:

What is the population being served? The population served will be adults (18+) with a substance use diagnosis.

What services will be provided? Services will include a high-intensity program (three days a week) and a low-intensity program (one day per week). Along with community partnerships for peer recovery support and mental health services.

How will crisis situations be handled? Staff trained in de-escalation and experienced with the target population will handle safety. Staff and the owner will handle most situations, but some may require Law Enforcement for further safety matters.

Hours of operation? Hours of operation will be from 8 a.m. to 8 p.m.

What illegal substances will you support? Golden Anchor will support all substances - thc, alcohol, illegal substances, and misuse of prescribed medications. I also informed them about the changes in use over the years and how staff will be trained and will have knowledge related to these ongoing changes.

Meeting Date: 09/23/2026

Title

CY44-26

Request of the Planning Agency to review Mankato Development District No. 51 Plan ("Plan") to determine conformity of said plan to the General Development Plan for Development or Redevelopment of the Municipality as a whole. The subject properties are described as Lots 5 through 12, Block 1, Quarry View Addition subdivision.

Applicant

The Planning Agency is the applicant.

Request

The applicant is requesting to review Mankato Development District No. 51 Plan ("Plan") to determine conformity of said plan to the General Development Plan for Development or Redevelopment of the Municipality as a whole. The Plan is proposed in conjunction with the redevelopment of property located in Quarry View subdivision. Planning Commission review of the Plan is a prerequisite requirement for the City to approve the use of tax increment financing assistance to aid development of the project.

Location

The subject property is part of the Quarry View subdivision, and is legally described as Lots 5 through 12, Block 1, Quarry View Addition.

Existing Land Use

The property consists of vacant, platted lots.

Zoning

The subject properties are zoned R-3, Limited Multiple Dwelling District.

Other Board or Commission

The subject property in question was recently reviewed for multiple Planning & Zoning Approval Items:

Vacation of a portion of Lind Street included within the proposed preliminary plat area was reviewed and recommended for approval by the Planning Commission at their February 25, 2026, meeting. The City Council approved this request at their March 23, 2026, meeting.

Review of a Preliminary Plat of the subject property, known as Quarry View Addition, was reviewed and recommended for approval by the Planning Commission at their March, 25, 2026, meeting. The City Council approved this request at their April 11, 2026, meeting.

The City Council approved the final plat of Quarry View Addition at their May 11, 2026, meeting.

Environmentally Sensitive Areas

The site contains environmentally sensitive bluff areas (area exceeding 17.6% slope).

Public Utilities

Public utilities will be available to the subject property following completion of the Germania Park Phase 5 Capital Improvement Program (CIP) projects.

Review

On May 11, 2026, the City Council approved the final plat for Quarry View subdivision, located in the Germania Park neighborhood. With those approvals, this subdivision was determined to be consistent with the City's planning and zoning regulations.

The City has received a proposal for the creation of a Development District for the further development of Lots 5-12 within the subdivision for the creation of owner-occupied housing.

The City of Mankato has received a request from the developer to consider financial assistance in the form of tax increment financing to offset the development costs. However, in order to establish a tax increment district, a Development District must be established that contains the possible forms of assistance or other statutory tools the city can use to aid in development, in conformance with the land use plan. The Development District is subject to Planning Commission review, not the tax increment district.

The Development District Act, Minnesota Statutes, sections 469.124 to 469.133, requires that areas proposed for development district designation must be found to be located in areas of the community that are "already built up". For the following reasons, the proposed Development District qualifies:

1. The vicinity of the Development District is urban. Existing land uses in the vicinity include industrial and residential properties. Zoning in the vicinity corresponds to the land use pattern.
2. City sanitary sewer, storm sewer, and water lines are available throughout the Development District and surrounding vicinity.
3. The vicinity of the Development District includes existing City streets and roadways.
4. The City's comprehensive plan has designated the Development District as an area for medium-density residential.

Minnesota Statutes, section 469.126, subdivision 2, in part, authorizes a municipality to accomplish the following activities: "Within these districts the municipality may adopt a development program consistent with which the municipality may acquire, construct, reconstruct, improve, alter, extend, operate, maintain or promote developments aimed at improving the physical facilities, quality of life and quality of transportation. The municipality may acquire land or easements through negotiation or through powers of eminent domain."

Activities associated with the establishment of the Development District and implementation intend to serve public purposes by facilitating attainable owner-occupied housing, supporting necessary site and infrastructure improvements, encouraging private investment, and increasing taxable market value within the City. The Development Program is intended to provide a coordinated framework for public actions and financing needed to facilitate development that is not reasonably expected to proceed in the same manner within the reasonably foreseeable future without public involvement.

The City intends, to the extent permitted by law, to accomplish the following objectives through implementation of the Development Program:

- Facilitate the orderly development of the Quarry View property for attainable, owner-occupied housing.
- Support land acquisition, entitlement, horizontal development, site preparation, public improvements, utility improvements, and related activities necessary to deliver finished residential lots.
- Encourage private investment and participation by third-party homebuilders by reducing the cost of delivering affordability-restricted residential lots to an economically supportable level.
- Increase the taxable value of property within the Development District and expand the tax base following expiration or decertification of the TIF District.
- Promote development consistent with the City's comprehensive plan, zoning, subdivision regulations, housing policies, and other applicable land-use controls.
- Provide a framework for the use of tax increment financing and other legally available sources to pay or reimburse eligible public development costs.

Findings

Staff submits the following findings:

1. The proposed development district conforms to the goals for residential areas in the Land Use Plan.
2. The proposed development district conforms to the locational criteria as listed in the Land Use Plan.

Recommendation

Staff recommends approval of Development District No. 51 and recommends adoption of said resolution.

Attachments

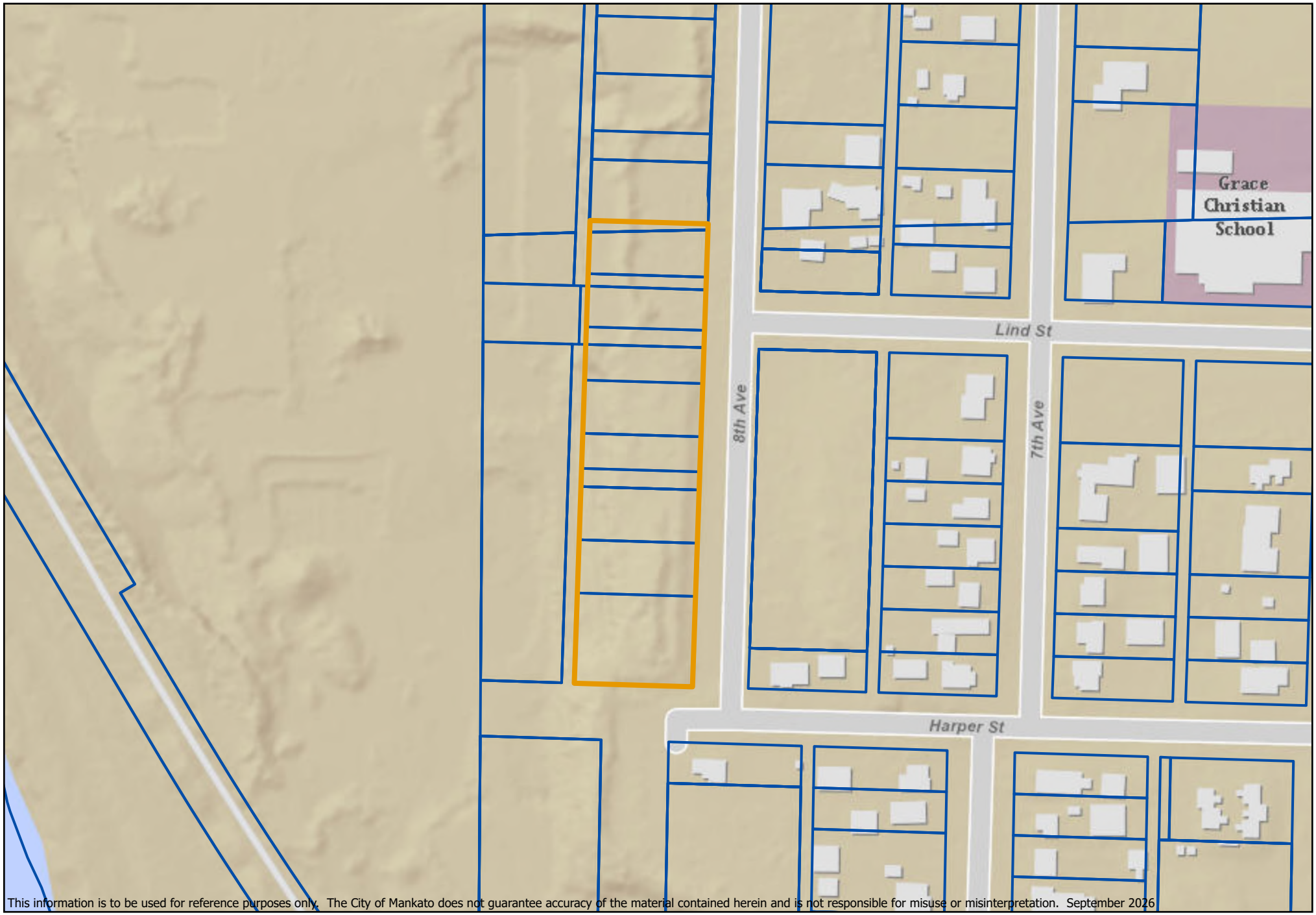
General Location Map

Aerial Plan

Development District Plan

Resolution approving Development District

General Location Map



This information is to be used for reference purposes only. The City of Mankato does not guarantee accuracy of the material contained herein and is not responsible for misuse or misinterpretation. September 2026

N W E S

0 100 200 400 Feet

Aerial Map



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N W E S

0 100 200 400 Feet

City of Mankato

September 9, 2026	Version: Draft V2	Intended Distribution: September 11th

Development Program for

City of Mankato, Minnesota

Development District No. 51
(Quarry View Housing Project)
Coterminous with Tax Increment Financing (Housing) District No. 51-1

PREPARED BY
Baker Tilly Municipal Advisors, LLC
225 6th Street South
Suite 1100
Minneapolis, MN 55402

Public Hearing Held: October 13, 2026

Table of Contents

Section 1 Development Program for Development District No. 51
Section 1A Establishment and Overview
Section 1B Statutory Authority
Section 1C Statement of Need and Public Purpose
Section 1D Statement of Objectives
Section 1E Boundaries of Development District / Project Area
Section 1F Development Activities
Section 1G Payment of Public Development Costs
Section 1H Environmental Controls and Land Use Regulations
Section 1I Property Acquisition and Reuse
Section 1J Administration of Development District
Section 1K Amendments to Development Program
Exhibit I Map of Development District No. 51 / Project Area and Coterminous TIF District
Exhibit II Boundary / Legal Description of Development District No. 51 / Project Area

Section 1

Development Program for Development District No. 51

Section 1A

Establishment and Overview

The City of Mankato proposes to establish Development District No. 51 and adopt this Development Program in conjunction with the establishment of Tax Increment Financing (Housing) District No. 51-1 (Quarry View Housing Project). The Development District will serve as the "Project Area" for purposes of the TIF Act. The Development District and TIF District are coterminous and consist of Lots 5 through 12, Block 1, Quarry View Addition, as depicted in Exhibit I. The coterminous boundary is limited to the eight project lots shown on the supplied plat / boundary exhibit and does not include the remaining lots shown on that exhibit.

This Development Program describes the City's public-purpose objectives, authorized development activities, and administrative framework for the Development District. A separate Tax Increment Financing Plan for Tax Increment Financing (Housing) District No. 51-1 is proposed to be adopted in conjunction with this Development Program. The TIF District is proposed to be established within, and coterminous with, Development District No. 51.

Section 1B

Statutory Authority

The City proposes to establish Development District No. 51 and adopt this Development Program pursuant to Minnesota Statutes, Sections 469.124 through 469.134, as amended (the "Development District Act").

The City is also authorized under Minnesota Statutes, Sections 469.174 through 469.1794, as amended (the "TIF Act"), to establish tax increment financing districts within a project area and to use tax increment to finance eligible public costs. The TIF District and the separate TIF Plan proposed to be adopted in conjunction with this Development Program are established under the TIF Act.

Section 1C

Statement of Need and Public Purpose

The City finds that establishment of the Development District and implementation of this Development Program are intended to serve public purposes by facilitating attainable owner-occupied housing, supporting necessary site and infrastructure improvements, encouraging private investment, and increasing taxable market value within the City. The Development Program is intended to provide a coordinated framework for public actions and financing needed to facilitate development that is not reasonably expected to proceed in the same manner within the reasonably foreseeable future without public involvement.

Section 1D

Statement of Objectives

The City intends, to the extent permitted by law, to accomplish the following objectives through implementation of the Development Program:

- Facilitate the orderly development of the Quarry View property for attainable, owner-occupied housing.
- Support land acquisition, entitlement, horizontal development, site preparation, public improvements, utility improvements, and related activities necessary to deliver finished residential lots.
- Encourage private investment and participation by third-party homebuilders by reducing the cost of delivering affordability-restricted residential lots to an economically supportable level.

- Increase the taxable value of property within the Development District and expand the tax base following expiration or decertification of the TIF District.
- Promote development consistent with the City's comprehensive plan, zoning, subdivision regulations, housing policies, and other applicable land-use controls.
- Provide a framework for the use of tax increment financing and other legally available sources to pay or reimburse eligible public development costs.
-

Section 1E

Boundaries of Development District / Project Area

The boundaries of Development District No. 51 are coterminous with the boundaries of Tax Increment Financing (Housing) District No. 51-1. The Development District / Project Area consists of Lots 5 through 12, Block 1, Quarry View Addition, as shown in Exhibit I. The proposed district area is formed Blue Earth County parcels identified in Section F.

Section 1F

Development Activities

The City may perform or cause to be performed, to the extent permitted by law and as necessary to achieve the objectives of the Development Program, development activities within the Development District, including the following:

- Planning, studies, entitlement coordination, and administration of the Development Program.
- Acquisition or disposition of property or interests in property, if authorized and determined necessary by the City.
- Site preparation, grading, pad preparation, public improvements, streets, utilities, and other infrastructure supporting the Project.
- Execution and administration of development agreements, affordability covenants, assessment agreements, or other agreements related to the Project.
- Establishment and administration of tax increment financing districts within the Development District, including the issuance of pay-as-you-go notes, interfund loans, bonds, or other obligations permitted by law.
- Payment or reimbursement of eligible Public Development Costs from tax increment or other legally available revenues.

Section 1G

Payment of Public Development Costs

Public Development Costs associated with the Development District will be described in the applicable tax increment financing plan and related development agreements. The City currently anticipates that eligible costs associated with the Quarry View Project will be financed primarily through tax increment generated by TIF District No. 51-1 on a pay-as-you-go basis, subject to the limitations described in the TIF Plan. The City reserves the right to use other legally available sources, including special assessments, utility revenues, grants, loans, or other funds, where authorized and appropriate.

Section 1H

Environmental Controls and Land Use Regulations

All City actions, public improvements, and private development undertaken pursuant to this Development Program will be carried out in a manner consistent with applicable environmental requirements, zoning and subdivision ordinances, the City's comprehensive plan, and other applicable land-use regulations.

Section 1I

Property Acquisition and Reuse

The City may acquire, hold, convey, or otherwise assist with property within the Development District to the extent permitted by law and consistent with the objectives of the Development Program. The current Project materials indicate that the Applicant is responsible for land acquisition and holding. The City does not anticipate acquiring property in connection with the Project.

Section 1J

Administration of Development District

Pursuant to Minnesota Statutes, Section 469.131, the City Council designates the Economic Development Authority to administer the ongoing activities of the Development District.

Section 1K

Amendments to Development Program

The City reserves the right to amend the Development Program and the boundaries of Development District No. 51 as permitted by applicable law. Any amendment requiring notice, hearing, findings, or other approval procedures will be undertaken in accordance with the Development District Act and other applicable law.

Exhibit I

MAP OF COTERMINOUS DEVELOPMENT DISTRICT NO. 51 / PROJECT AREA (LOTS 5 THROUGH 12, BLOCK 1, QUARRY VIEW ADDITION - QUARRY VIEW HOUSING PROJECT)



Proposed coterminous Development District / Project Area and TIF District: Lots 5 through 12, Block 1, Quarry View Addition.

Exhibit II

BOUNDARY / LEGAL DESCRIPTION OF COTERMINOUS DEVELOPMENT DISTRICT AND TIF DISTRICT

The Development District / Project Area and Tax Increment Financing (Housing) District No. 51-1 are coterminous and consist of Lots 5 through 12, Block 1, Quarry View Addition, as depicted in Exhibit I. The area encompassed by the Development District shall also include the entirety of all street or utility right-of-ways located upon or adjacent to the property described above. These lots are current Blue Earth County Parcel IDs R010906334005, R010906334006, R010906334007, R010906334008, R010906334009, R010906334010, R010906334011, and R010906334012, to be legally described as Lots 5-12, Block 1, Quarry View Addition.

RESOLUTION OF THE PLANNING COMMISSION FINDING
DEVELOPMENT DISTRICT NO. 51 PLAN
CONFORMS TO THE CITY PLANS FOR DEVELOPMENT
OF THE LOCALITY AS A WHOLE

WHEREAS, the Development District No. 51 Plan has been submitted to the City of Mankato Planning Commission pursuant to Minnesota Statutes Chapter 469; and

WHEREAS, the Planning Commission has reviewed said plan to determine conformity of said plan to the general plan for the development or redevelopment of the municipality as a whole; and

WHEREAS, the Planning Commission is in agreement with the Development District No. 51 Plan dated September 9, 2026.

NOW THEREFORE, BE IT RESOLVED by the City of Mankato Planning Commission that the Development District No. 51 Plan conforms to the general plan for the development of the municipality as a whole and the Commission forwards the plan to the City Council.

Adopted by the Planning Commission of the City of Mankato this 23rd day of September 2026.

_____
Chairperson

Meeting Date: 09/23/2026

Title

CY45-26

Request of the Planning Agency to amend Chapter 10 of Mankato City Code related to permitted and conditional uses in the R-3, Limited Multiple-Family Dwelling District and the R-4, Multiple Family Dwelling District.

The anticipated date of City Council action is October 26, 2026.

Applicant

The applicant is the Planning Agency.

Request

The request is seeking to update the Zoning Code pertaining to public housing references in R-3 and R-4 zoning districts.

Review

The current R-3, Limited Multiple Dwelling District, and the R-4, Multiple-Family Dwelling District, codes outline that *"Public housing units, including multiple-family dwelling units"* may be considered by way of a conditional use permit.

Conditional use permits are meant to address land-use impacts unique to a use, such as traffic, noise, hours of operation, etc., not the funding source or tenant income of housing. Treating publicly-funded or income-restricted housing differently than market-rate housing of the same type/scale is a distinction based on who lives there, not on any land-use impact.

Singling out "public housing" for discretionary review (when comparable private multifamily housing is permitted by-right or subject only to site plan review) can raise fair housing and disparate-impact concerns, since it functions as a de facto barrier to affordable housing siting.

Extra hearings, timeline delay, NIMBY-driven appeals, and unpredictability for developers/housing authorities, all of which raise costs and discourage production, without providing meaningful land-use protections beyond what standard review can achieve.

As proposed, "public housing units" would be removed as a conditional use permit from City Code Section 10-166 and Section 10-202 and instead, the housing units will be classified under whatever the applicable review process is for comparable housing types (e.g., the same permitted-use category as multifamily/apartment housing).

Attachments

R-3 District Proposed Code Update

DIVISION 5. R-3 LIMITED MULTIPLE DWELLING DISTRICT

Sec. 10-164. Purpose.

The R-3 district is intended to provide for medium-density residential development. The redevelopment or infill development within existing established neighborhoods shall ensure that buildings are compatible in mass and scale with those of buildings adjacent to the proposed development and maintain the traditional scale of buildings as seen along the street.

(Code 2015, § 10.15(1); Ord. of 12-9-2013)

Sec. 10-165. Permitted uses.

Except as specifically limited herein, the following uses are permitted in the R-3 district:

(1) Dwellings, multiple-family, not to exceed eight units in one building or on one lot.

(2) Dwellings, one-family and two-family.

(3) Gardens, provided no retail sales.

(4) Home occupations, as regulated in article X, division 2, of this chapter.

(5) Parks, playgrounds, tennis courts, and swimming pools.

(6) Schools, public and private elementary, middle, and secondary.

(Code 2015, § 10.15(2))

Sec. 10-166. Conditional uses.

Except as specifically limited herein, the following uses may be allowed in the R-3 district, subject to the regulations for conditional uses set forth in article XI, division 3, of this chapter:

(1) Bed and breakfast residences, as regulated in article X, division 2, of this chapter.

(2) Campgrounds within public parks.

(3) Cemeteries, crematories, and mausoleums.

(4) Child day care facilities, when not operated as a home occupation, and as regulated in article X, division 2, of this chapter.

(5) Churches or places of religious worship, parish houses, rectories, and convents.

(6) Congregate housing.

(7) Golf courses, country clubs, and private recreational uses, all noncommercial.

(8) Government institutions, municipal buildings, museums, and libraries.

(9) Hospitals and medical clinics.

(10) Nursing homes and similar institutions.

(11) Other residential, institutional, or government service uses determined by the planning agency to be of the same general character as the permitted and conditional uses above and found not to be detrimental to existing uses and the general public health, safety, and welfare.

(12) Parking lots providing required off-street parking for a use permitted in a residential zoning district, provided the parking lot is within 500 feet of the main building of the use.

~~(13) Public housing units, including multifamily dwelling units.~~

(14) Public utilities and essential service utility facilities and structures, as regulated in article X, division 2, of this chapter.

(Code 2015, § 10.15(3))

DIVISION 6. R-4 MULTIPLE-FAMILY DWELLING DISTRICT

Sec. 10-200. Purpose.

The R-4 district is intended to provide for high-density residential development.

(Code 2015, § 10.16(1))

Sec. 10-201. Permitted uses.

Except as specifically limited herein, the following uses are permitted in the R-4 district:

(1) Dwellings, one-family (attached or detached), two-family, and multiple-family.

(2) Gardens, provided no retail sales.

(3) Home occupations, as regulated in article X, division 2, of this chapter.

(4) Parks, playgrounds, tennis courts, and swimming pools.

(5) Schools, public and private elementary, middle, and secondary.

(Code 2015, § 10.16(2))

Sec. 10-202. Conditional uses.

Except as specifically limited herein, the following uses may be allowed in the R-4 district, subject to the regulations for conditional uses set forth in article XI, division 3, of this chapter:

(1) Bed and breakfast residences, as regulated in article X, division 2, of this chapter.

(2) Campgrounds within public parks.

(3) Cemeteries, crematories, and mausoleums.

(4) Child day care facilities, when not operated as a home occupation, and as regulated in article X, division 2, of this chapter.

(5) Congregate housing.

(6) Fraternities and sororities.

(7) Golf and country clubs.

(8) Government institutions, municipal buildings, museums, and libraries.

(9) Grouped housing projects.

(10) Hospitals and medical clinics.

(11) Manufactured and manufactured home parks, as regulated in article IV, division 2, of this chapter.

(12) Nursing homes and similar institutions.

(13) Other residential, institutional, or government service uses determined by the planning agency to be of the same general character as the permitted and conditional uses above and found not to be detrimental to the existing uses and the general public health, safety and welfare.

(14) Parking lots providing off-street parking for a use permitted in a residential zoning district, provided the parking lot is within 500 feet of the main building of the use.

~~(15) Public housing units, including multiple-family dwelling units.~~

(16) Public utilities and essential service utility facilities and structures, as regulated in article X, division 2, of this chapter.

(17) Schools, public and private elementary, middle, and secondary.

(Code 2015, § 10.16(3))

Planning Commission Regular Meeting **5. 5.**

Meeting Date: 09/23/2026

Title

CY46-26

Request of the Planning Agency to amend Chapter 10 of Mankato City Code in the M-1, Light Industrial District related to cannabis.

The anticipated date of City Council action is October 13, 2026.

Applicant

The Planning Agency is the applicant.

Request

The request is to update the City Code pertaining to permitted cannabis uses in the industrial zoning districts.

Review

On November 25, 2024, the City of Mankato City Council adopted zoning standards to determine which zoning districts cannabis-related businesses are allowed to operate. With implementation of the ordinance, minor clarifications and updates are necessary for accurate implementation.

As proposed, this amendment clarifies the intent of the 2024 adoption. Specifically, manufacturing, processing, testing, and transportation are proposed to be included as permitted use in the M-1, Light Industrial, and the M-2, Heavy Industrial, zoning districts.

The proposed amended language is included.

Attachments

Proposed Ordinance Update

DIVISION 3. M-1 LIGHT INDUSTRIAL DISTRICT

Sec. 10-1000. Purpose.

The M-1 district is intended to provide sites for light manufacturing and light industrial uses under controls that minimize any adverse effects on property in neighboring residential, business or commercial districts.

(Code 2015, § 10.63(1))

Sec. 10-1001. Permitted uses.

Except as specifically limited herein, the following uses are permitted in the M-1 district:

(1) Uses listed as permitted uses in the PI district, except professional service offices.

(2) Adult uses, per article X, division 3, of this chapter.

(3) Automobile, airplane, and farm implement assembly.

(4) Building materials yards and contractors' yards.

(5) Cleaning and dyeing plants.

(6) Concrete mixing and concrete products manufacturing.

(7) Essential service utility structures and facilities.

(8) Light manufacturing industries consisting of the processing, treatment, and packaging of goods and foodstuffs, except alcohol or alcoholic beverages.

(9) Lower-potency hemp edibles manufacturing.

(10) Mezzobusiness and microbusiness; provided mezzobusiness and microbusiness retail conforms to subsection 6-378(k).

(11) Outside storage of material and equipment, per the restrictions of article X, division 2, of this chapter.

(12) Railroad lines and spurs, passenger and freight deposits.

(13) Recyclable material collection (temporary or permanent).

(14) Storage elevators.

(15) Wholesale gasoline and oil storage.

(16) Indoor firing ranges, per the restrictions of article X, division 2, of this chapter.

(17) Manufacturing, processing, testing, and transportation of cannabis

(Code 2015, § 10.63(2); Ord. of 10-13-1997; Ord. of 4-14-2008; Ord. No. O-2024-1125-9, 11-25-2024)

Sec. 10-1002. Conditional uses.

Except as specifically limited herein, the following uses may be allowed in the M-1 district:

(1) Uses listed as conditional uses in the PI district.

(2) Electricity generating facilities, when not determined to be objectionable due to noise, odor, or vibration.

(3) Professional service offices with a floor area greater than 10,000 square feet.

(4) Other wholesale, light manufacturing, construction, or service uses similar in character to those listed above.

(Code 2015, § 10.63(3); Ord. of 4-14-2008)