



City of Mora
Kanabec County, Minnesota
Meeting Agenda
Planning Commission

Mora City Hall
101 Lake Street S
Mora, MN 55051

Monday, March 8, 2021

5:30 PM

Mora City Hall

City of Mora Code of Ordinances, Chapter 32: The role of the Planning Commission is to serve the City Council in an advisory capacity on matters relating to citizen requests for action, zoning changes and review, Comprehensive Plan reviews, capital improvement reviews, and other actions as deemed necessary to carry out the functions of a pro-active Planning Commission.

1. Call to Order

2. Roll Call: Carmen Finn, Chad Gramentz, Jake Mathison, Todd Sjoberg and Sara Treiber.

3. Adopt Agenda *(No item of business shall be considered unless it appears on the agenda for the meeting. Board members may add items to the agenda prior to adoption of the agenda.)*

4. Approval of Minutes

a. February 8, 2021 Meeting

5. Public Hearings

a. Public hearing to consider a Conditional Use Permit to allow a School and school related facilities to be located in the R-1 Single Family Residential District. The subject site is located at 200 9th Street E. The applicant is ICS and the property owner is Mora Public School District.

6. Open Forum

7. New Business

a. Determination of Proposed Use in the B-2 General Business District.

8. Old Business

None

9. Reports *(In addition to the items listed below, each board and staff member will be given the opportunity to share information.)*

a. Floodplain Management Ordinance Update

b. Comprehensive Plan Update

10. Adjournment

The next regular meeting is scheduled for Monday, April 12, 2021 at 5:30 PM.

Photo: Planning Commission members will take individual photos immediately following the meeting.

**City of Mora, MN
PLANNING COMMISSION
Meeting Minutes**

February 8, 2021

Present: Carmen Finn, Chad Gramentz, Jake Mathison, Todd Sjoberg and Sara Treiber
Absent: None
Staff Present: Community Development Director Beth Thorp and City Administrator Lindy Crawford
Special Guest: Former Planning Commissioner Mike Johnson

1. Call to Order. Chair Sjoberg called the meeting to order at 5:30 pm.
2. Roll Call.
 - Finn – Present
 - Gramentz – Present
 - Mathison – Present
 - Sjoberg – Present
 - Treiber – Present
3. Adopt Agenda. Motion by Mathison, second by Gramentz to adopt the February 8, 2021 agenda as presented. All present voted aye, motion carried.
4. Approval of Minutes. Motion by Gramentz, second by Finn to approve the January 11, 2021 meeting minutes as presented. All present voted aye, motion carried.
5. Public Hearings.
 - a. Public Hearing to Consider a Text Amendment to City of Mora Code of Ordinances Title XV Land Usage, Chapter 152 Floodplain Management. Thorp summarized the Planning Commission's efforts to review and update the Floodplain Management Ordinance, commenting that the project began in February 2019. Thorp explained that much of the commission's discussions and efforts were focused on the proposed establishment of the Flood Prone District, including the development of recommendations for new construction in flood prone areas, informing impacted property owners of the proposed district and recommendations, and responding to inquiries and concerns from impacted property owners. Thorp stated that the Minnesota Department of Natural Resources (DNR) offered conditional approval of the draft ordinance and proposed City of Mora Flood Prone Map in April 2020, and then again reviewed the documents and confirmed conditional approval in January 2021 in preparation for the public hearing. Thorp stated that one change had been made to the draft ordinance and proposed map in recent months, explaining that a clarification was added to both documents stating that the flood prone designation applied only to those areas shown on the map as being flood prone rather than the designation applying to the whole property (unless the whole property was designated on the map as being flood prone). Thorp stated that the public hearing notice appeared in the newspaper, the city's website and Facebook, and she only spoke with one property owner since the notice was posted. Thorp explained that property owner Leslie Nichols, 419 McLean Street, did not agree with AE2S' modeling, suggesting that it was outdated, but acknowledged that she had only resided at the McLean Street property for approximately two years and had not yet experienced a 100-year rain event. Thorp added that Nichols intended to make

improvements to her property so that she could pursue a map amendment. Thorp stated that staff was recommending approval of the draft ordinance and proposed map as presented. Sjoberg commented that he had reviewed the draft ordinance and believed it was clear and understandable and he supported the final product. Mathison complimented staff on efforts to update the ordinance. Sjoberg opened the public hearing at 5:36 pm. Mike Johnson, 747 Sunset Lane, thanked Chad Gramentz – in his capacity as Public Works Director for Kanabec County – for his department’s assistance in preparing the proposed City of Mora Flood Prone Areas Map, explaining that the maps were high quality. Thorp echoed Johnson’s comments, sharing that Kanabec County GIS Technician Ryan Carda was extremely helpful, responsive, and generous in his efforts to assist the city. With no further comments from the audience, Sjoberg closed the public hearing at 5:37 pm. Motion by Treiber, second by Gramentz to adopt Resolution No. PC2021-201, a resolution recommending approval of a Text Amendment to City of Mora Code of Ordinances, Title XV Land Usage, Chapter 152 Floodplain Management, as presented. All present voted aye, motion carried.

6. Open Forum. No members of the public were present for open forum.
7. New Business. None
8. Old Business. None
9. Reports.
 - a. ISD 332 Request for Conditional Use Permit. Thorp shared that the school district had submitted a request for Conditional Use Permit for the new high school and a public hearing would be scheduled for March 8th. Sjoberg asked if the applicant intended to provide a presentation at the March 8th public hearing; Thorp responded that the applicant and applicant’s representative would attend the meeting but she was unsure if a formal presentation would be provided. Thorp recommended that the March 8th meeting be scheduled as an in-person meeting and that the public be encouraged to provide testimony in written form to help prevent the spread of COVID-19. Treiber commented that this request would likely generate a significant amount of interest from the public.
 - b. Planning Magazine Article “Here Comes the Neighborhood”. Thorp shared a magazine article about emerging changes in residential districts and off-street parking regulations nationwide, explaining that some communities are eliminating residential districts that only permit single family homes and some communities are eliminating or severely reducing off-street parking requirements. Thorp commented that these were issues that the commission may wish to think about as it moves closer to a zoning code review. Sjoberg commented that Mora needed more housing and something needed to be done to keep residents.
 - c. Project Updates. Sjoberg inquired about new projects; Thorp responded that she continued to speak with a few individuals interested in various Forest Avenue E. commercial properties.
10. Adjournment. Motion by Mathison, second by Gramentz to adjourn. All present voted aye, motion carried and the meeting was adjourned at 5:44 pm.

Todd Sjoberg
Chair

ATTEST: _____
Beth Thorp
Community Development Director



MEMORANDUM

TO: Planning Commission
 FROM: Beth Thorp, Community Development Director
 SUBJECT: Public hearing to consider a request for a Conditional Use Permit to allow a *School* and related school facilities to be located in the R-1 Single Family Residential District
 DATE: March 8, 2021

SUMMARY

The Planning Commission will conduct a public hearing to consider a Conditional Use Permit to allow a *School* and school related facilities to be located in the R-1 Single Family Residential District. The subject site is located at 200 9th Street E. The applicant is ICS and the property owner is Mora Public School District (ISD 332).

SITE & APPLICATION INFORMATION

Applicant:	ICS
Property Owner:	Mora Public School District (ISD 332)
Location:	200 9 th Street East
Current Zoning:	R-1 Single Family Residential District
Adjacent Zoning:	North: Arthur Township South: R-1 Single Family Residential District East: R-1 Single Family Residential District West: R-1 Single Family Residential District
Comp. Plan Designation:	Public / Semi-Public / Institutional
Date Application Received:	January 20, 2021
Date Application Complete:	February 1, 2021
Extended Review Period:	June 1, 2021

DISCUSSION

ICS and ISD 332 have submitted a request for a Conditional Use Permit to allow a *School* and school related facilities to be located in the R-1 Single Family Residential District. The attached site plan shows a high school facility with a 135,994 square foot footprint (169,072 square feet overall) as well as off-street parking facilities for staff and students, athletic facilities including a track / football field, practice fields and ball fields, and stormwater management ponds.

City and utility staff, the City Engineer, the County Engineer / Public Works Director, and MnDOT have all reviewed the preliminary civil plans submitted for this project and the following is a summary of items for consideration:

- **Construction Materials.** The applicant has provided illustrations of exterior materials proposed for the high school facility, which include precast concrete, metal panels (two colors), and brick (see attached). Although this is a new facility, it will be connected to the existing Welia Health Wellness Center and Mora Elementary facilities and it's important to evaluate the overall appearance and

cohesiveness. The proposed precast concrete panels appear to be the same product used for the Wellness Center, and the proposed brick and metal panels mirror and complement materials used for Mora Elementary (although the colors appear to vary slightly between the facilities). **Staff has no concerns about the proposed construction materials.**

- **Landscaping.** The Zoning Code requires that all exposed ground areas on a lot or parcel surrounding a principal or accessory structure that are not devoted to drives, sidewalks, or parking lots be covered with a minimum of four inches of topsoil and be covered with sod, seed, or other landscaping materials as approved by the city. Non-residential uses, such as this project, may be subject to additional landscaping as determined by the Planning Commission and City Council.

The applicant has stated that a basic landscaping approach is currently planned with an option for ISD 332 to add a more enhanced landscaping package at a later date. The basic landscaping approach includes topsoil, seed, and a variety of native trees and shrubs planted throughout the site with emphasis around major traffic areas and the main entrance. A landscaping plan has not been provided; however, the applicant informed staff that one is currently being prepared. **Being that the subject site is located in a well-established residential area and landscaping can play a major role in aesthetics and buffering, staff recommends that the landscaping plan be submitted to the Planning Commission for review prior to the request for Conditional Use Permit being forwarded to the City Council for final consideration.** However, the applicant's basic landscaping approach does meet the R-1 District's minimum requirements and the Planning Commission can recommend approval of this plan without reviewing a formal landscaping plan, if desired.

- **Off-Street Parking.**
 - **Number of Off-Street Parking Spaces.** In reference to this particular project, the Zoning Code provides varying off-street parking requirements for the existing elementary school, the existing wellness center, the proposed high school, and the proposed athletic fields. Further, Conditional Use Permits granted in the past for the elementary school and wellness center provide specific off-street parking requirements that must be maintained unless otherwise authorized through this Conditional Use Permit process.
 - **Mora Elementary** was allowed by a Conditional Use Permit granted in April 2016 (when the former Fairview Elementary relocated to the subject site). Off-street parking requirements for elementary schools are based on the number of classrooms. In 2016 it was determined that the elementary school was required to have a minimum of 96 off-street parking spaces; and, the approved plans show a total of 196 spaces provided. There are currently no proposed changes to off-street parking at Mora Elementary. **Off-street parking requirements for the elementary school exceed the minimum requirement.**
 - **Welia Health Wellness Center** was allowed by a Conditional Use Permit granted in April 2017. Off-street parking requirements were established by the Planning Commission and City Council in 2017 being that the Zoning Code doesn't provide a clear formula for this particular use. The wellness center was required to have a minimum of 40 off-street parking spaces; and, the approved plans show a total of 40 spaces provided. The civil plans for the high school project show that the existing parking area for the wellness center will be removed and relocated with a total of 34 new off-street parking spaces provided. **Because the 2017 Conditional Use Permit requires 40 off-street parking spaces for this particular use, the parking area dedicated for the wellness center must**

be expanded to provide the required number of parking spaces. The Planning Commission and City Council do have the authority to reduce the number of required spaces from 40 to 34 if it's specifically added as a condition of approval; however, staff recommends that the off-street parking requirement remain at 40 spaces. (Note: A reduction wouldn't require a Variance as the number of off-street parking spaces was determined by the Planning Commission and City Council.)

- Off-street parking requirements for the **high school** are based on the number of staff members present on the largest shift and the student population. Mora Public Schools Superintendent Dan Voce stated that there are currently 125 staff members at the high school and 775 students (grades 7 – 12), which requires a total of 280 off-street parking spaces (125 spaces for staff and 155 spaces for students). **The civil plans show that 338 spaces are proposed which exceeds the minimum requirement.**
- The Zoning Code also includes off-street parking requirements for “play fields” (aka **athletic fields**) such as the track / football field and ball fields. More specifically, the Zoning Code requires 40 off-street parking spaces for each play field. The civil plans show two ball fields located on the north side of the project along with 52 off-street parking spaces, as well as one track / football field with 78 adjacent off-street parking spaces. There are three play fields in total which requires a total of 120 off-street parking spaces, and 130 off-street parking spaces are proposed in total. While not all proposed parking is located immediately adjacent to the play field it may serve (i.e. the ball fields require 80 spaces and 52 are proposed immediately adjacent to the fields) and the parking adjacent to the track / football field is also identified as being for staff and ALC students, **it's staff's opinion that the aggregate number and location of off-street parking spaces satisfies the requirement.**
- **Size of Off-Street Parking Spaces and Drive Aisles.** The Zoning Code requires that off-street parking spaces be a minimum of 9' x 19' and drive aisles be a minimum of 26' wide. The civil plans show that all new off-street parking spaces will be 9' x 18' and the drive aisles located within the parking areas will be 24' wide. In taking a closer look at the existing parking areas for Mora Elementary and Welia Health Wellness Center, it was discovered that all existing parking spaces are 9' x 18' with 24' wide drive aisles. While there are no known issues relating to the slightly smaller parking spaces and drive aisles, the city cannot approve the reduced sizes through the Conditional Use Permit process. Instead, **the applicant must either amend the civil plans for the high school project to reflect minimum sizes required per the Zoning Code or request a Variance to the Zoning Code requirements.** A Variance request would be a separate review and approval process from the Conditional Use Permit. Staff has incorporated a proposed condition of approval that would require the applicant to either comply with the minimum size requirements or request and be granted a Variance for reduced sizes. If requesting a Variance the applicant would need to demonstrate that the request meets all three factors of the “practical difficulties” test described by Minnesota statute.
- **Accessible Off-Street Parking Spaces.** The Building Official has commented that the proposed parking must comply with the Minnesota 2020 Accessibility Code. Accessible parking spaces shall be provided in compliance with Table 1106.1, except as required by Sections 1106.2-1106.4. Per Accessibility Code Section 1106.5, for every six or fraction of six accessible parking spaces at least one shall be a van-accessible parking space.

- **Bus Traffic.** The applicant has reported that bus traffic and flow will remain the same as it has been in the recent past, utilizing the existing bus parking area. **Staff has no concerns about bus traffic.**
- **Traffic.** The applicant provided a traffic study dated January 19, 2021 for the proposed project (attached). Because the subject site abuts a county-owned road and the project impacts Highway 65, the traffic study was reviewed by the County Engineer / Public Works Director and MnDOT in addition to city staff and the City Engineer.
 - The City Engineer and County Engineer / Public Works Director have provided several comments pertaining to traffic (see attached).
 - MnDOT's Development Review Committee has reviewed and discussed the project at length and, while there are no immediate improvements required at the intersection of Highway 65 and 9th Street, **MnDOT believes that the increase in traffic at this intersection may warrant safety improvements.** MnDOT would like to be involved in discussions with the city, the Sheriff's Office, and ISD 332 when considering possible safety improvements. Possible safety improvements suggested by MnDOT include: increased and updated intersection lighting; removing the existing bypass lane on Highway 65 at 9th Street and using that space for a north-bound left turn lane; or, installing a roundabout. Staff will continue this discussion with MnDOT and other stake holders.
 - The city was provided with what appears to be a *preliminary* traffic study. **A final traffic plan should be submitted.**
 - The study was based on traffic counts collected within a single day during a pandemic on an early release day. The City Administrator is concerned that this was not an optimal time to complete a traffic study and that the duration of the study was too short.
 - The vehicle storage area from the drop off lane in front of the high school to the 9th Street entrance is 1,000 feet, with estimated vehicle storage needs being 1,050 – 1,250 feet. Not providing sufficient storage area may lead to stacking on 9th Street, which is concerning. To address this issue, **staff recommends that ISD 332 install internal signage directing drivers to use the parking lot if the drop off lane is full.** If stacking on 9th Street becomes an issue despite the signage, ISD 332 would need to consider adjusting traffic flow internally to alleviate this issue.
 - The study recommends the installation of a continuous 2-way center turn lane on 9th Street. This would require restriping of 9th Street and it would utilize the entire roadway surface of 9th Street. **If a center turn lane is installed staff recommends that ISD 332 be responsible for all expenses related to restriping 9th Street.**
 - A new crosswalk is recommended at the intersection of 9th Street and Village Green Place, in addition to the crosswalk at the intersection of 9th Street and Village Green Lane. The proposed crosswalk would create a direct access from 9th Street to the main entrance of the high school. **If a new crosswalk is installed staff recommends that the new crosswalk be installed in the same manner – the same signage, pavement markings, and pedestrian activated flasher – as the existing crosswalk and at ISD 332's expense.**

- The County Engineer / Public Works Director recommends that **the pedestrian crossing at 7th Street be analyzed for adequacy with increased traffic.**
 - The County Engineer / Public Works Director recommends that the city consider the safety benefits of a right turn lane at 7th Street, improved shoulders on Grove Street N., and the extension of 9th Street to Grove Street N, with the suggestion that **expanding the scope of the traffic study would be beneficial to this discussion.**
 - The city's Public Works Director also expressed concern about Grove Street N., explaining that it's a narrow road and **improved shoulders or a turn lane should be considered.**
- **City-Owned Multi-Use Trail and Proposed Grove Street N. Access Road.** The City Engineer has pointed out in his comments (see attached) that the existing city-owned multi-use trail located from Grove Street N. to Highway 65, shown between the proposed ball fields and track / football field, is located within an existing public roadway easement. The applicant is proposing to relocate the trail in conjunction with the proposed construction of the access road. The proposed private access road is also believed to be located in the public roadway easement. Because the civil plans do not show the public roadway easement, staff has requested a survey from the applicant to verify the exact location of the easement and the locations of the existing trail and proposed access road in relation to the easement.

If the city-owned multi-use trail is relocated, this will need to be coordinated with the city and, if the trail is to be located outside of the existing public roadway easement, ISD 332 will need to provide a new easement to the city for the trail. Further, if the trail is relocated, the city and ISD 332 will need to update the existing maintenance agreement to address the new improvements. The trail system is a vital asset to the community and must be protected.

The City Engineer has commented that the private access road, in its proposed location, will require that the existing public roadway easement be adjusted.

Staff recommends that resolving these issues be included as conditions of approval and that the issues be resolved prior to the request for Conditional Use Permit being forwarded to the City Council for final consideration.

- **Drainage.** The applicant has not yet provided a final drainage study or drainage plan for the subject site. **Staff recommends that a final drainage plan be submitted for review and approval by the City Engineer and County Engineer / Public Works Director prior to the request for Conditional Use Permit being forwarded to the City Council for final consideration.**
- **Utilities.**
 - It appears that there may be some impacts to the buried electric lines along the north side of 9th Street at the location of the proposed stormwater management ponds, and the lines will either need to be moved toward the street or lowered underground. The City Engineer believes that the electric lines are located within a utility easement behind the 9th Street right-of-way. **The applicant will need to coordinate any utility changes with the City Administrator / Public Utilities General Manager.**

- The new high school will require the replacement of the existing sanitary sewer connection to the city main in 9th Street. **The City Engineer has provided several recommended conditions of approval for this work (see attached).** These same conditions would apply if there is a new or replaced water service connection in 9th Street.
- **Fire.** The city's Fire Chief has reviewed the civil plans and provided the following comments / recommended conditions of approval:
 - **Place at least one Knox Box at the main entry of the high school.** The Knox Rapid Access Solutions system will provide the Fire Department with one master key for the entire facility for immediate access in case of emergency.
 - **The number and placement of fire hydrants is sufficient** for this project.
 - **Place "No Parking Fire Lane" signs along the designated fire lane(s).** The number and placement of signs should be coordinated with the Fire Chief.
 - **All fire lanes must be a minimum of 20' wide.**
 - There does not appear to be adequate access for the fire department along the west side of the proposed high school facility (between the track and the high school). **The Fire Chief recommends that the applicant provide a fire lane, or other acceptable option, to serve the west side of the high school.**
- **Signs.** The subject site, being a non-residential use located in a residential zoning district, is currently at or near maximum allowable signage capacity. With the proposed addition of another facility, the school district is exploring options for additional signage. Staff has advised that the only two options available include a request for Variance or Text Amendment. A Variance, if approved, would be specific to the subject site, whereas a Text Amendment, if approved, would likely apply to all non-residential uses in the R-1 Single Family Residential District or various residential districts. This issue will be further discussed and considered by the Planning Commission in the future, but is not a discussion item related to the current request for Conditional Use Permit.

In addition to a public hearing notice appearing in the February 25, 2021 issue of the Kanabec County Times, public hearing notices were mailed to all property owners within 350' of the subject site. Staff received comments from one individual – John Ahlgren – prior to the public hearing. Ahlgren, who owns property within 350' of the subject site at 2113 Pine Ridge Road S., offered verbal support for the project.

Note: Representatives of the applicant and property owner will be present at the March 8th meeting to provide information about the project and answer questions from the Planning Commission. The applicant intends to provide a PowerPoint presentation.

OPTIONS

1. Continue the public hearing to April 12, 2021 in order to complete a thorough review of the project and to allow more members of the public to provide testimony.
 - a. This option will allow the applicant time to submit additional information prior to the Planning Commission making a recommendation on the request, with a clear timeline for submittals.

- b. This option will allow for additional public comment if not all members of the public are able to address the Planning Commission on March 8, 2021 due to space limitations.
2. Table the request until the applicant has provided sufficient information in order to complete a thorough review of the project.
 - a. This option will allow the applicant time to submit additional information prior to the Planning Commission making a recommendation on the request, but with no specific deadline for submittals.
 - b. This option will allow for additional public comment if not all members of the public are able to address the Planning Commission on March 8, 2021 due to space limitations, although informing the public of the exact meeting date will be challenging.
3. Motion to recommend approval of the request.
 - a. Provide staff with direction for the preparation of a resolution, including desired conditions of approval.
 - b. The request, along with the Planning Commission's recommendation, will be presented to the City Council for final consideration.
4. Motion to recommend denial of the request.
 - a. Provide staff with direction for the preparation of a resolution, including providing specific reasons for the recommendation of denial for the written record.
 - b. The request, along with the Planning Commission's recommendation, will be presented to the City Council for final consideration.

STAFF RECOMMENDATION

Because staff has recommended that additional information be provided to the Planning Commission for review, staff recommends that the Planning Commission either continue the public hearing to April 12, 2021 or table the request until the applicant has provided all necessary information (option 1 or 2).

If the Planning Commission wishes to take immediate action on the request (option 3 or 4), provide staff with direction for the preparation of a resolution.

ATTACHMENTS

Site Plan

Illustrations of Exterior Construction Materials

Preliminary Civil Plans dated received January 22, 2021 (select sheets)

Sheet Number C-3.0 Existing & Removals

Sheet Number C-4.0 Site Key Plan

Sheet Number C-5.0 Site Plan Area A

Sheet Number C-5.1 Site Plan Area B

Sheet Number C-5.2 Site Plan Area C

Sheet Number C-5.3 Site Plan Area D

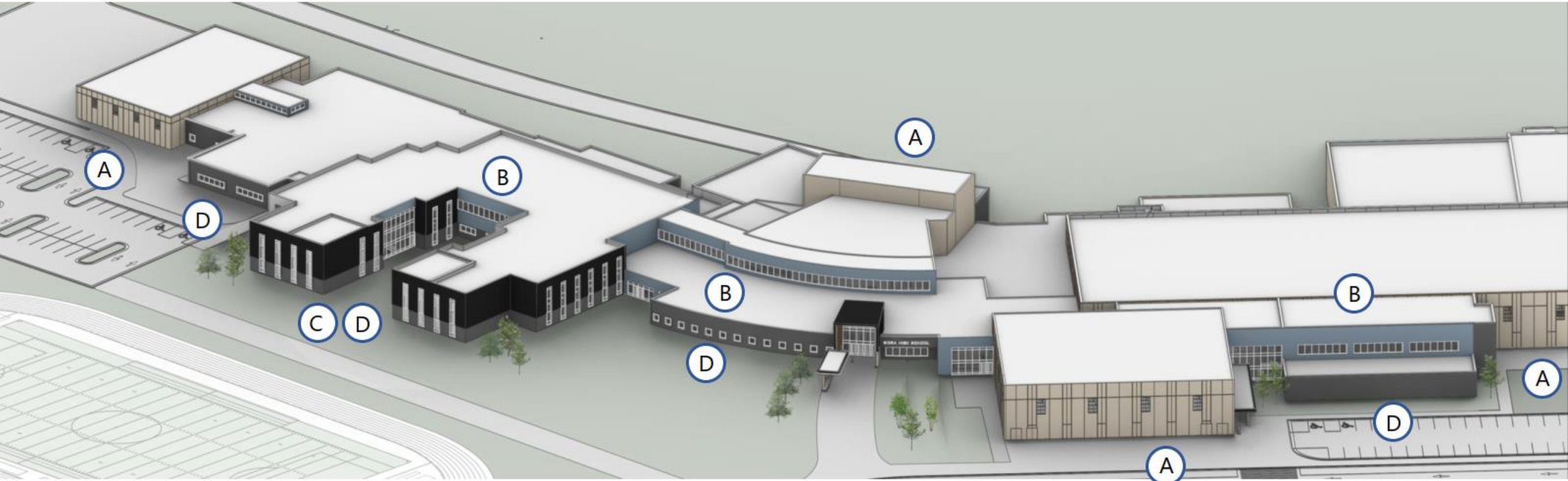
Traffic Study dated January 19, 2021

City Engineer's comments dated February 19, 2021

County Engineer / Public Works Director's comments dated February 26, 2021

EXTERIORS:

MATERIAL PALETTE

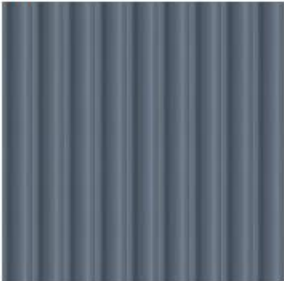


A



Existing Precast

B



Blue Metal Panel

C



Black Metal Panel

D



Charcoal Velour Brick

Metal Panel is a utilitarian material that agrees with the practical, strong Northern identity. Dark grey for contrast and the blue for accent.

Precast Concrete volumes ground the building and anchors both ends of the New High School.

Charcoal Brick creates a strong presence, firmly grounding the building while staying lighter than the metal panel

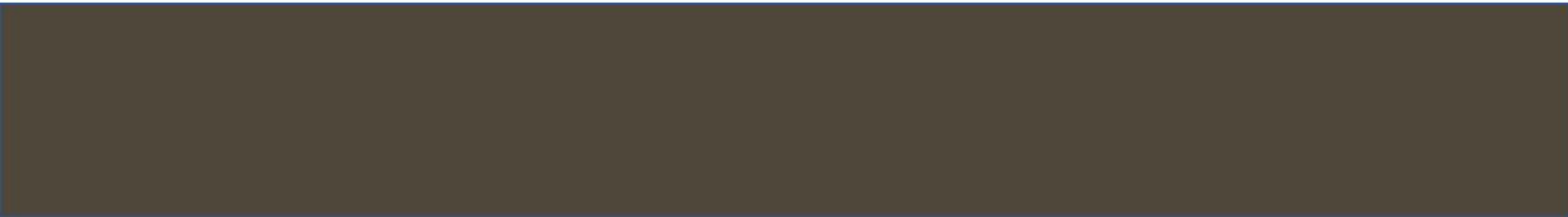
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MAIN ENTRY



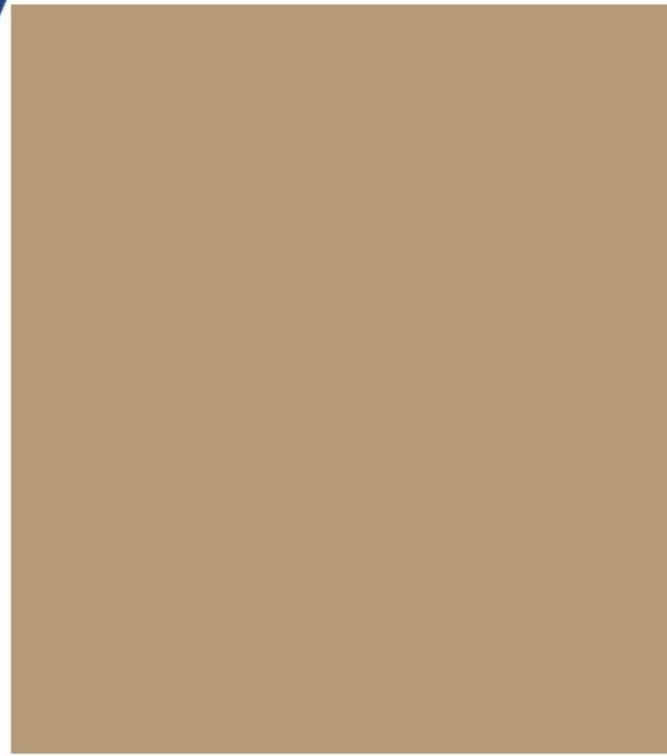
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CLASSROOM WINGS



EXTERIORS:

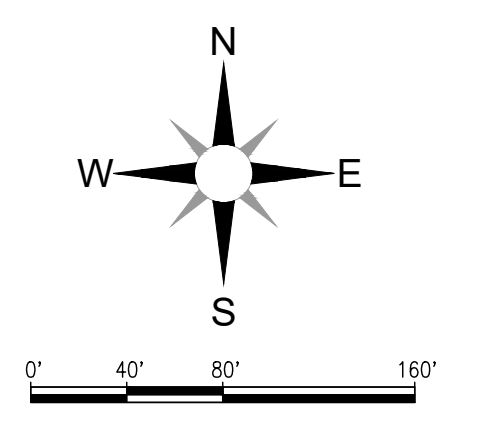
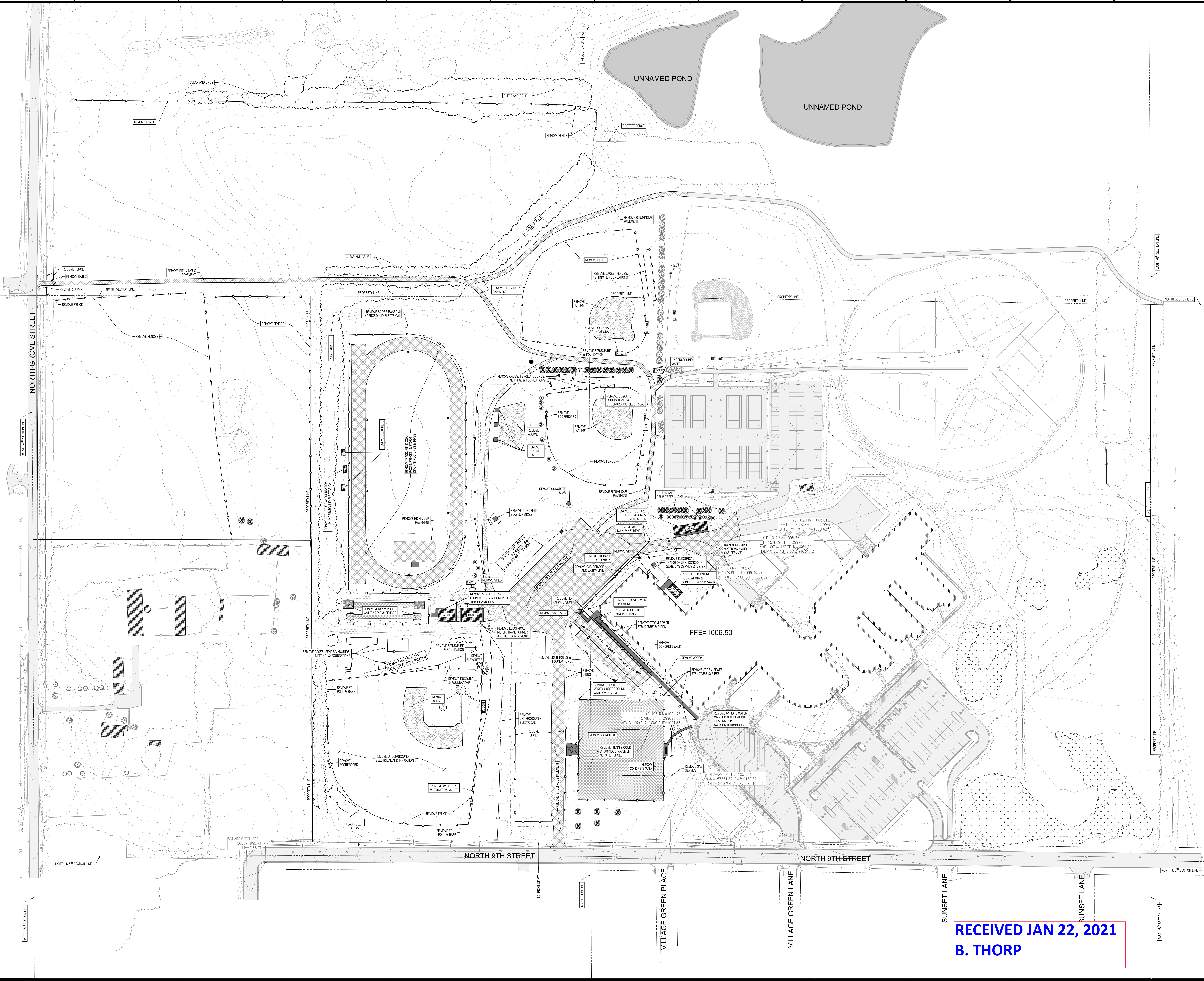
WELIA ENTRY



EXTERIORS:

BUS ENTRY





MARK	DATE	REVISION

DD SET -
NOT FOR CONSTRUCTION

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

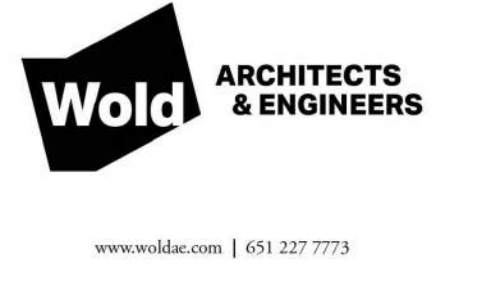
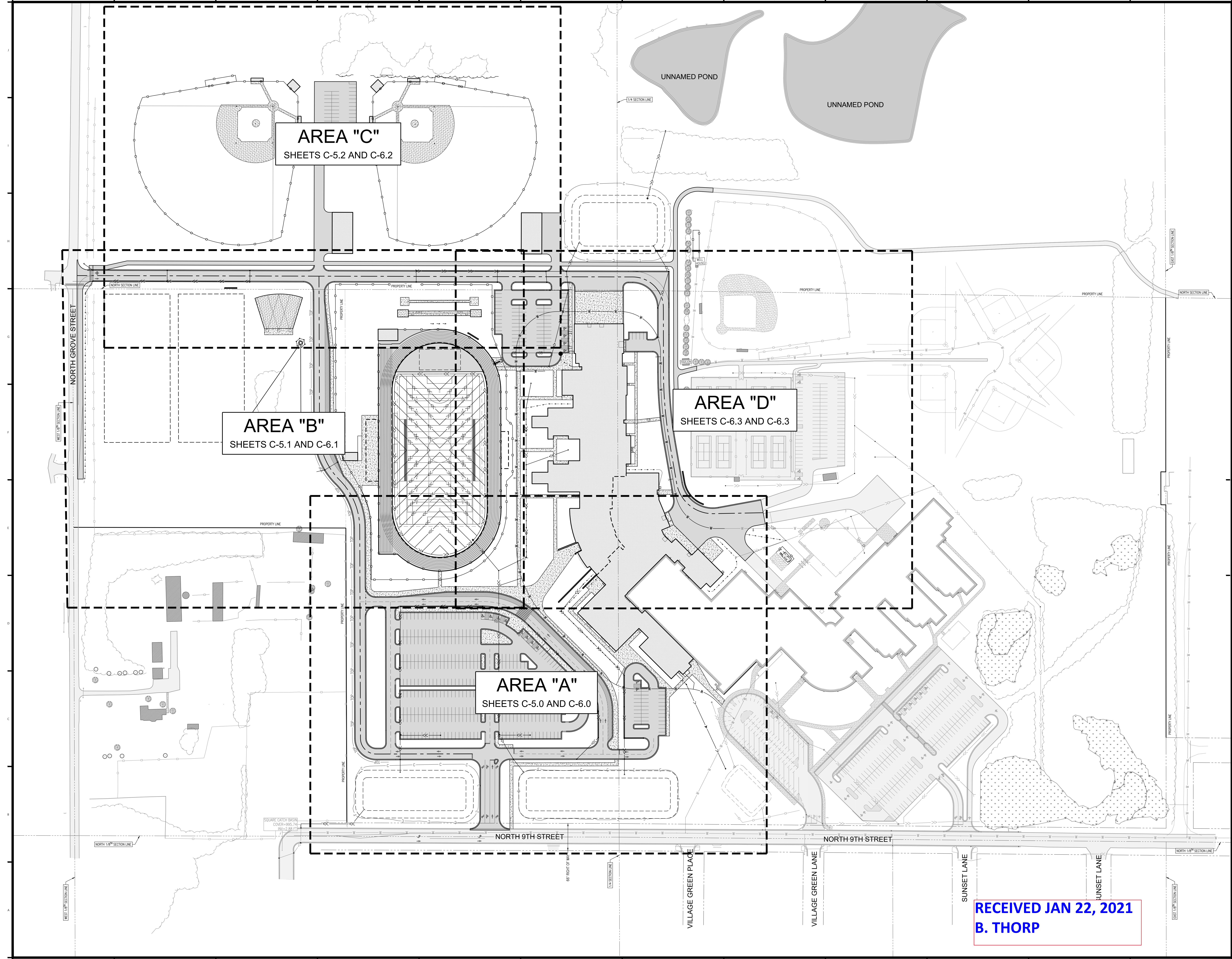
Signature:
Printed Name: David G. Boff P.E.
Date: XX/XX/XXXX Reg. No.: 40926

Project Information:
Project No.: 20-261
Drawn By: TTP/DO
Checked By: DGB
Date: 01/15/2021

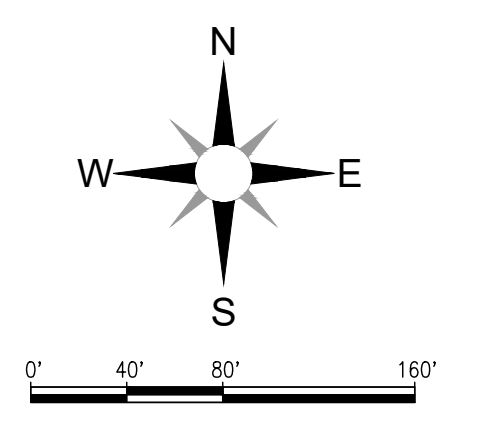
Sheet Title:
EXISTING & REMOVALS

Sheet Number:
C-3.0

RECEIVED JAN 22, 2021
B. THORP



Project Name:
Mora Public Schools ISD #332 New 7-12 High School




Project Location:
Mora, MN

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MARK	DATE	REVISION

DD SET - NOT FOR CONSTRUCTION

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

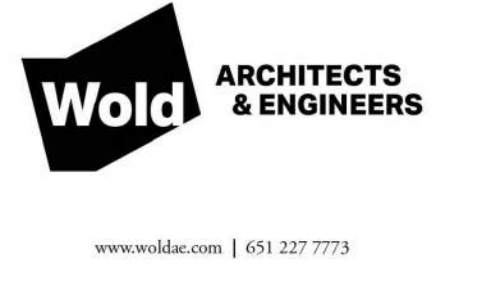
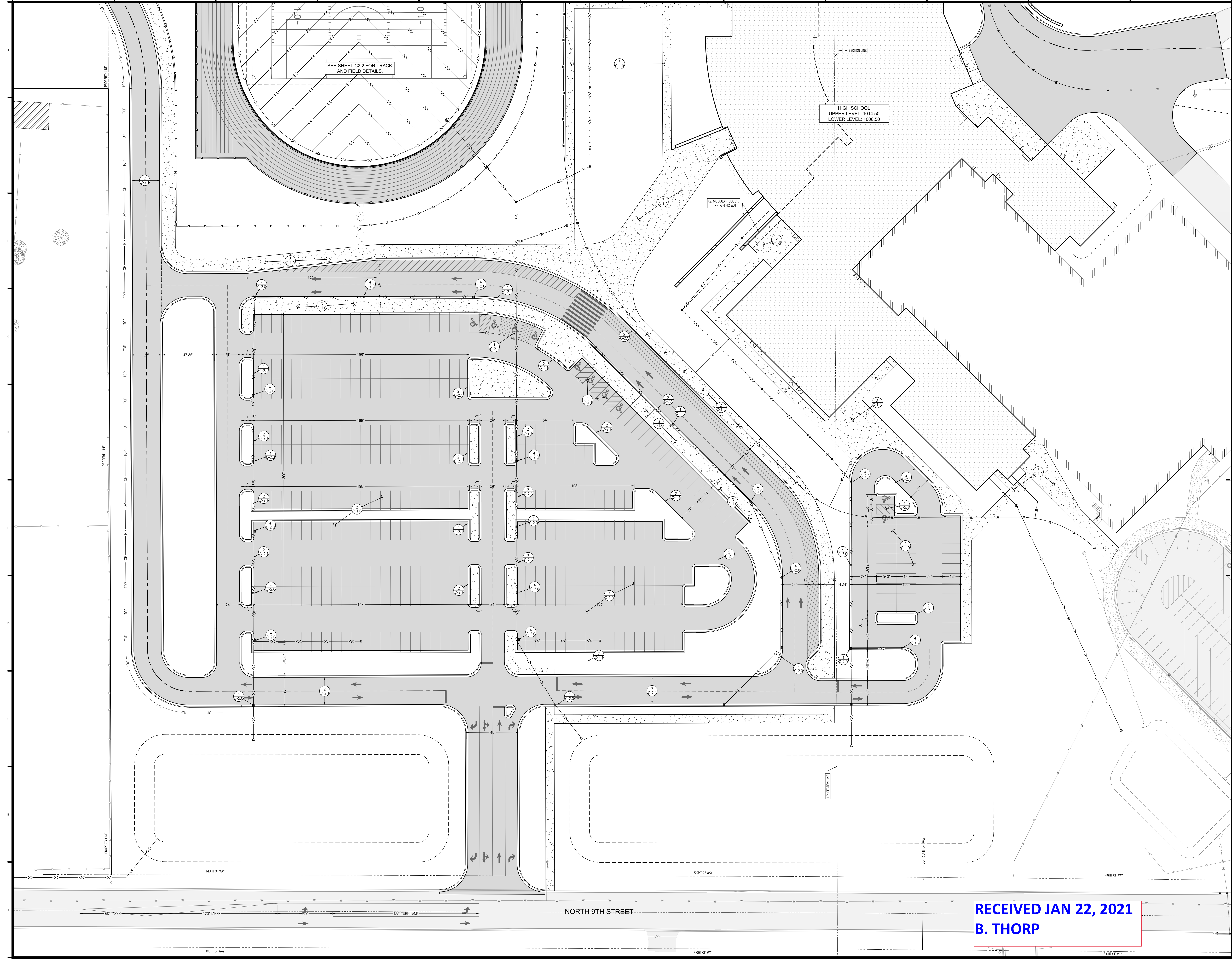
Signature: 
 Printed Name: David G. Bolf P.E.
 Date: XX/XX/XXXX Reg. No.: 40926

Project Information:
 Project No.: 20-261
 Drawn By: TTP/JDO
 Checked By: DGB
 Date: 01/15/2021

Sheet Title:
 SITE KEY PLAN

Sheet Number:
C-4.0

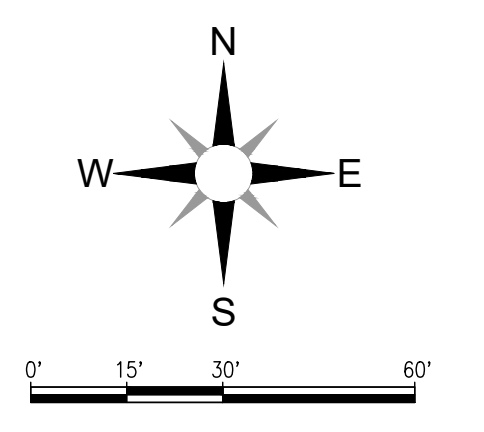
RECEIVED JAN 22, 2021
B. THORP



Project Name:



Mora
Public Schools
ISD #332
New 7-12
High School




Project Location:
Mora, MN

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MARK	DATE	REVISION

DD SET -
NOT FOR CONSTRUCTION

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

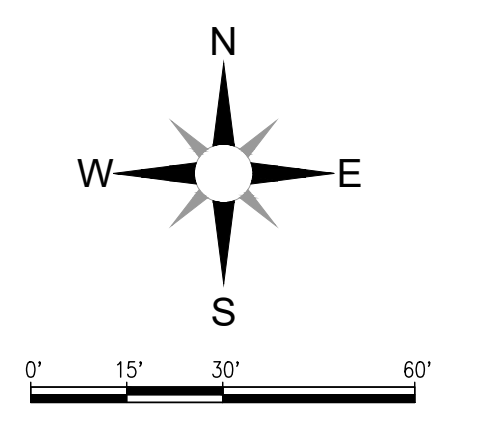
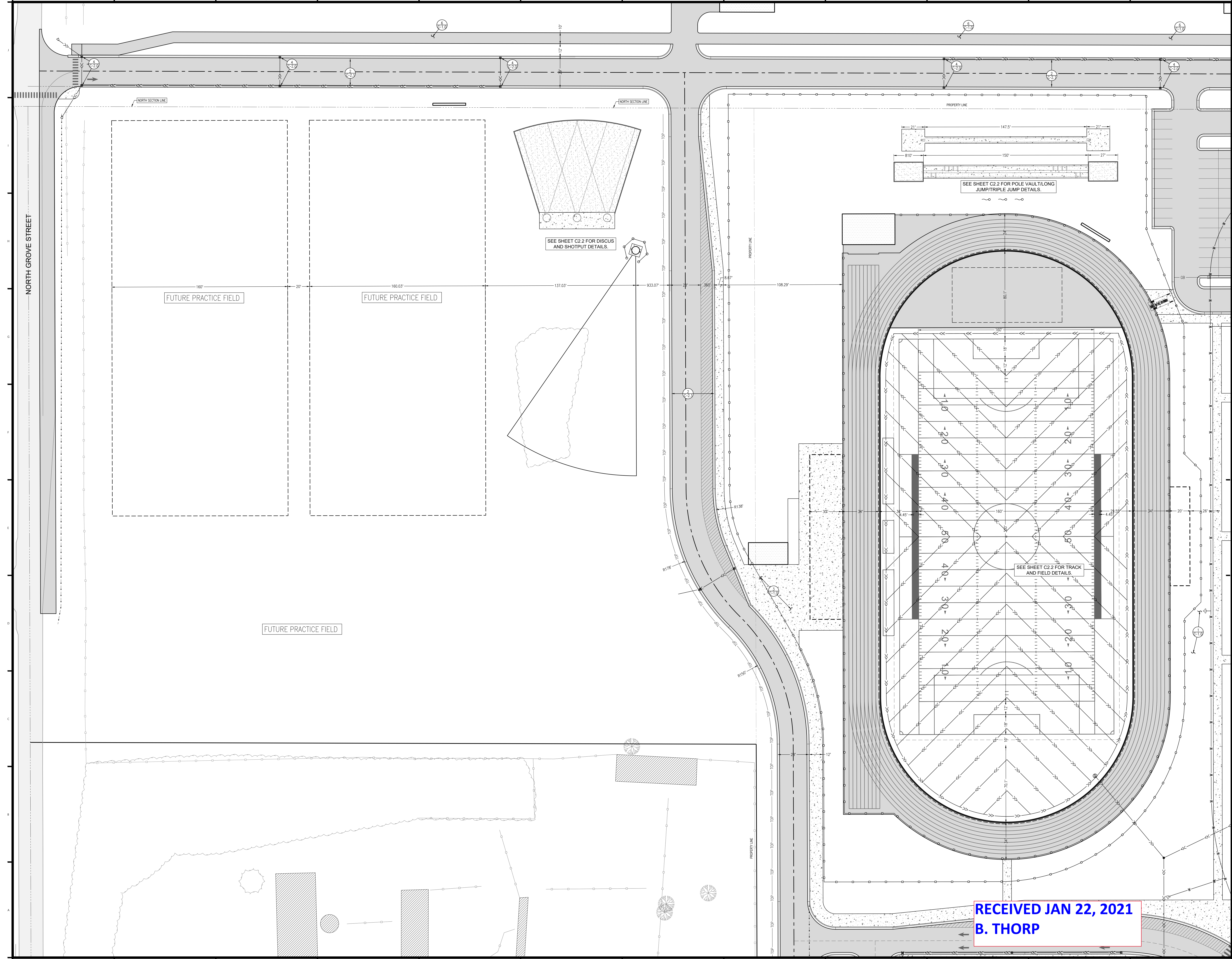
Signature: 
Printed Name: David G. Boff P.E.
Date: XX/XX/XXXX Reg. No.: 40926

Project Information:
Project No.: 20-261
Drawn By: TTP/JDO
Checked By: DGB
Date: 01/15/2021

Sheet Title:
SITE PLAN AREA A

Sheet Number:
C-5.0

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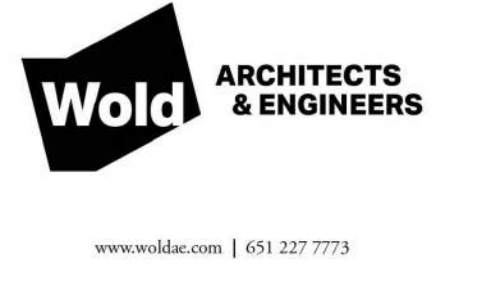
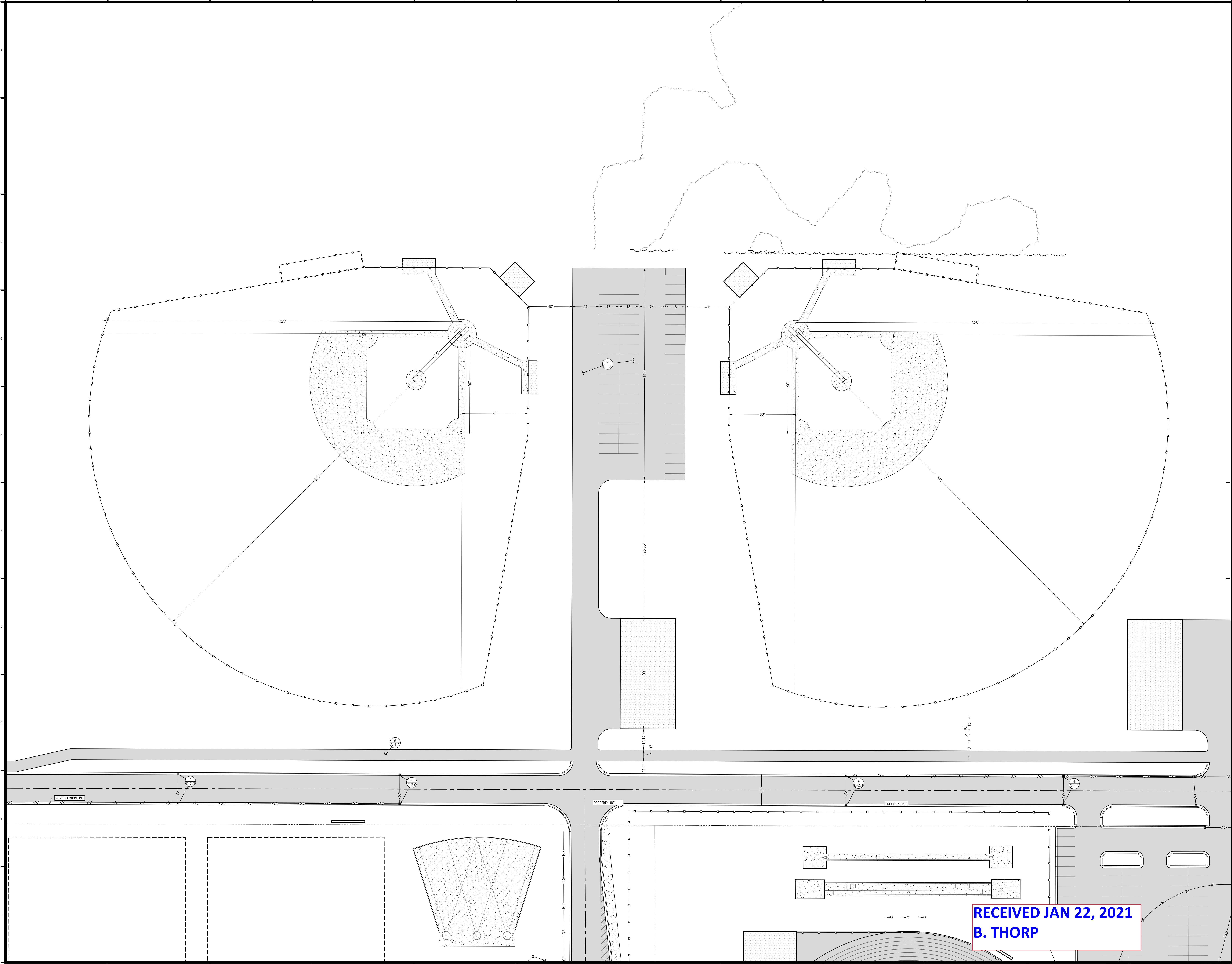
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Printed Name: David G. Boff P.E.
Date: XX/XX/XXXX Reg. No.: 40926

Project Information:
Project No.: 20-261
Drawn By: TTP/DO
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Date: 01/15/2021

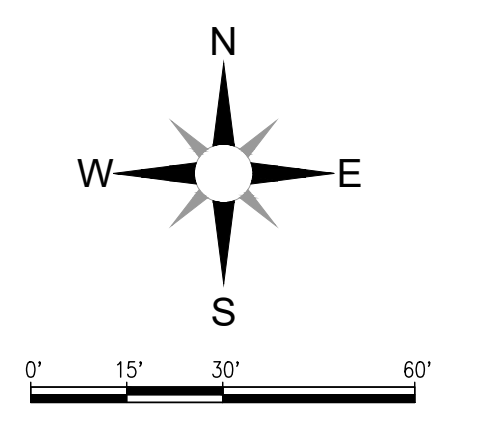
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Project Name:
Mora Public Schools ISD #332 New 7-12 High School



Project Location:
Mora, MN

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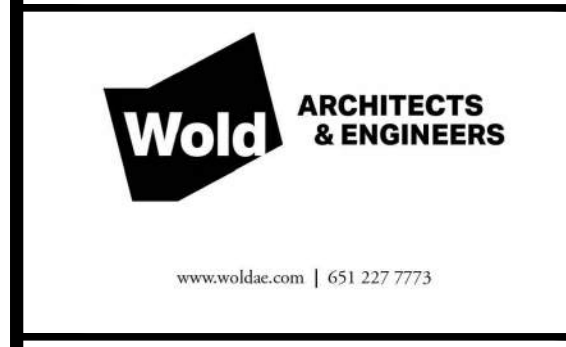
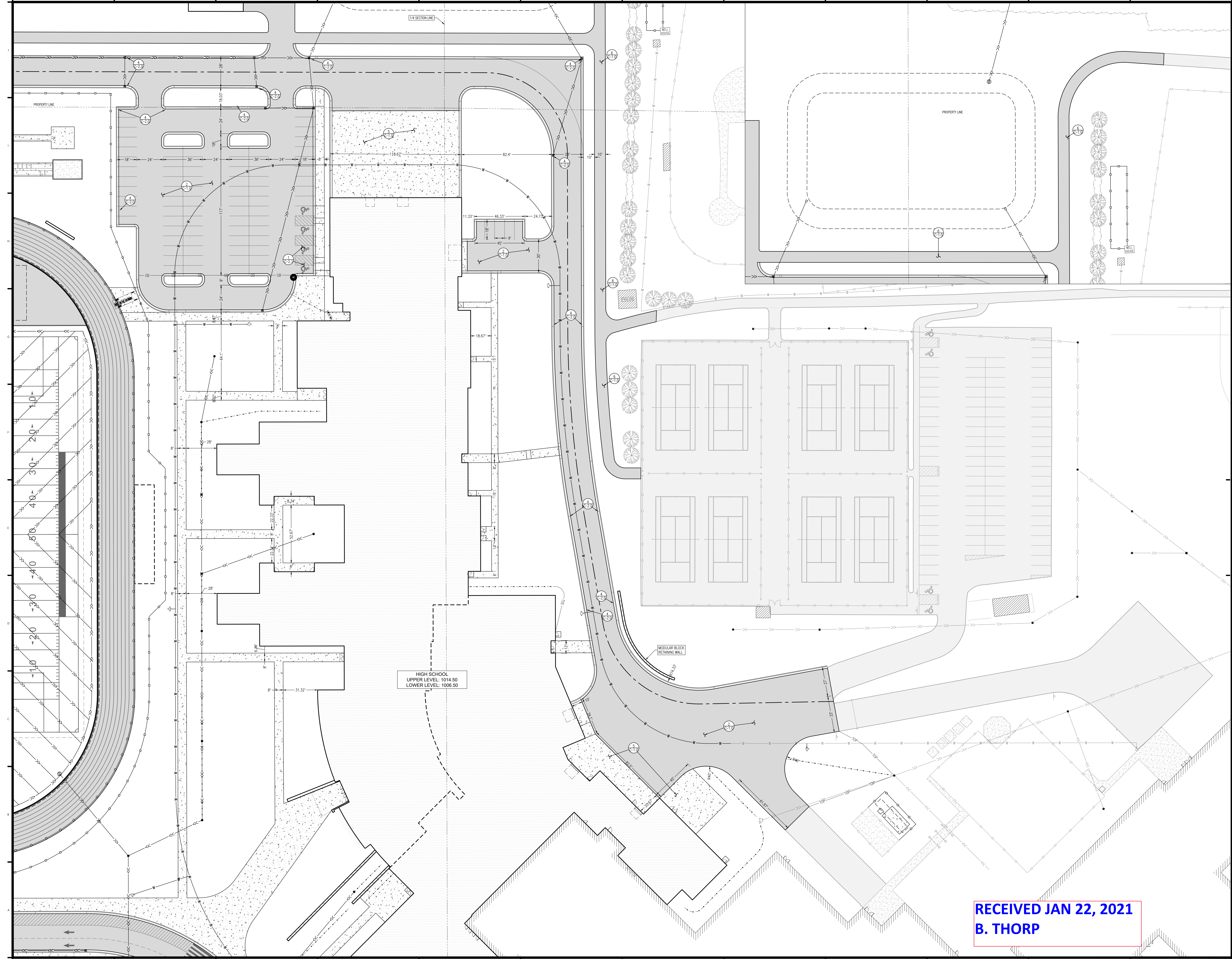
Signature:
 Printed Name: David G. Bolf P.E.
 Date: XX/XX/XXXX Reg. No.: 40926

Project Information:
 Project No.: 20-261
 Drawn By: TTP/JDO
 Checked By: DGB
 Date: 01/15/2021

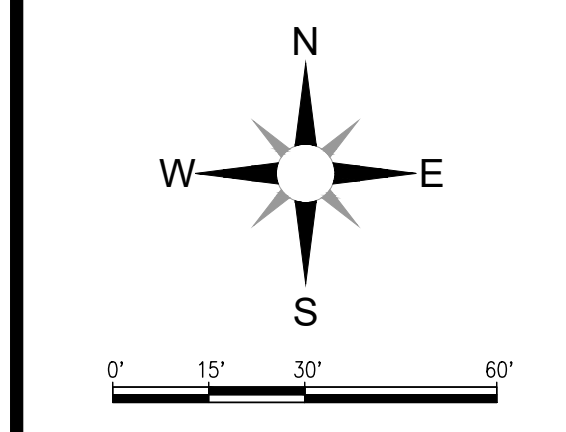
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 SITE PLAN AREA C

Sheet Number:
C-5.2

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Project Name:
Mora Public Schools
ISD #332
New 7-12
High School




Project Location:
Mora, MN

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Signature: 
 Printed Name: David G. Boff P.E.
 Date: XX/XX/XXXX, Reg. No.: 40926

Project Information:
 Project No.: 20-261
 Drawn By: TTP/DO
 Checked By: DGB
 Date: 01/15/2021

Sheet Title:
 SITE PLAN AREA D

Sheet Number:
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DRAFT MEMORANDUM

TO: Chris Ziemer, Project Manager
ICS Consulting

FROM: Mike Kotila, PE (MN)
Leo Johnson, EIT

DATE: January 19, 2021

RE: Mora High School Traffic Study
SEH No. ICSCO 157520

INTRODUCTION

This technical memorandum provides study findings related to the planned new high school expansion adjacent to the existing Trailview Elementary School in the City of Mora. The new high school, planned for opening in the fall of 2023, will serve grades 7-12 with a projected future enrollment of 800. The existing elementary school serves grades kindergarten through 6 with an enrollment of 771 students. In addition, the existing site accommodates a pre-kindergarten enrollment of 90 students as well as a community wellness facility.

This study examines traffic operations at study area intersections for existing land uses in the study area plus future land uses that include the high school and additional residential land uses that are assumed to be developed within the study area.

The study area is bounded by Grove Street (Kanabec County Road 70) on the west, State Highway 65 on the east. 9th Street serves as an eastbound/westbound collector roadway through the study area and primary access roadway for both school sites. The intersection of Grove Street and Pine Ridge Road is the northern boundary of the study area and 7th Street intersections with Grove Street and Wood Street form the southern boundary of the study area.

Figure 1 shows the study area, locations of the planned high school, the existing elementary school, areas of assumed residential development, and the study intersections and associated intersection numbers that correlate to the map.



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Study Area
 Mora High School Traffic Study
 Mora, Minnesota

Figure
1

EXISTING CONDITIONS

The proposed high school is planned for construction in the space currently occupied by baseball fields on the elementary school campus. 9th Street provides access to both the elementary school and the proposed high school along the south side of the project site. 9th Street is a 2-lane roadway with eastbound left turn lanes at the existing accesses to the elementary school and on its eastbound approach to Highway 65. 9th Street operates with a posted speed limit of 35-mph and a school speed zone reducing to a 20-mph limit when children are present.

Highway 65 is a 2-lane highway with a speed limit of 55-mph. Wood Street and 7th Street are 2-lane city streets with statutory speed limits of 30 mph. Grove Street is a 2-lane county road (Kanabec CR 70) that operates at 30-mph within the developed area of the city but increases to a statutory 55-mph limit north of 7th Street.

Trails are in place along the south side of 9th Street, the east side of Wood Street and the north side of 7th Street. A marked school crosswalk and pedestrian activated warning flasher system is in place to serve students crossing 9th Street at its intersection with Village Green Lane. The crossing is staffed by an adult crossing guard to assist students.

Existing intersection traffic control at all study intersections is a stop sign on the minor street (or driveway) approaches.



Looking westerly along 9th Street at the Sunset Lane intersection and entrance to the elementary school. The trail and the eastbound left turn lane to the school are apparent. The pedestrian crossing at Village Green Lane is visible in the distance.

EXISTING TRAFFIC COUNTS

On October 6th, 2020 traffic cameras were used to collect video data at eight intersections in the study area. From the videos, traffic movements were counted for passenger vehicles, heavy vehicles, buses, pedestrians, and bicycles at each intersection.

Traffic video was recorded at the following locations that serve existing school traffic movements:

- #1 - Grove Street at Pine Ridge Road
- #2 - Grove Street at 7th Street
- #3 - Wood Street at 7th Street
- #4 - 9th Street at Existing Bus Only Driveway
- #5 - 9th Street at Village Green Place
- #6 - 9th Street at Village Green Lane
- #7 - 9th Street at Sunset Lane West
- #13 - Highway 65 at 9th Street

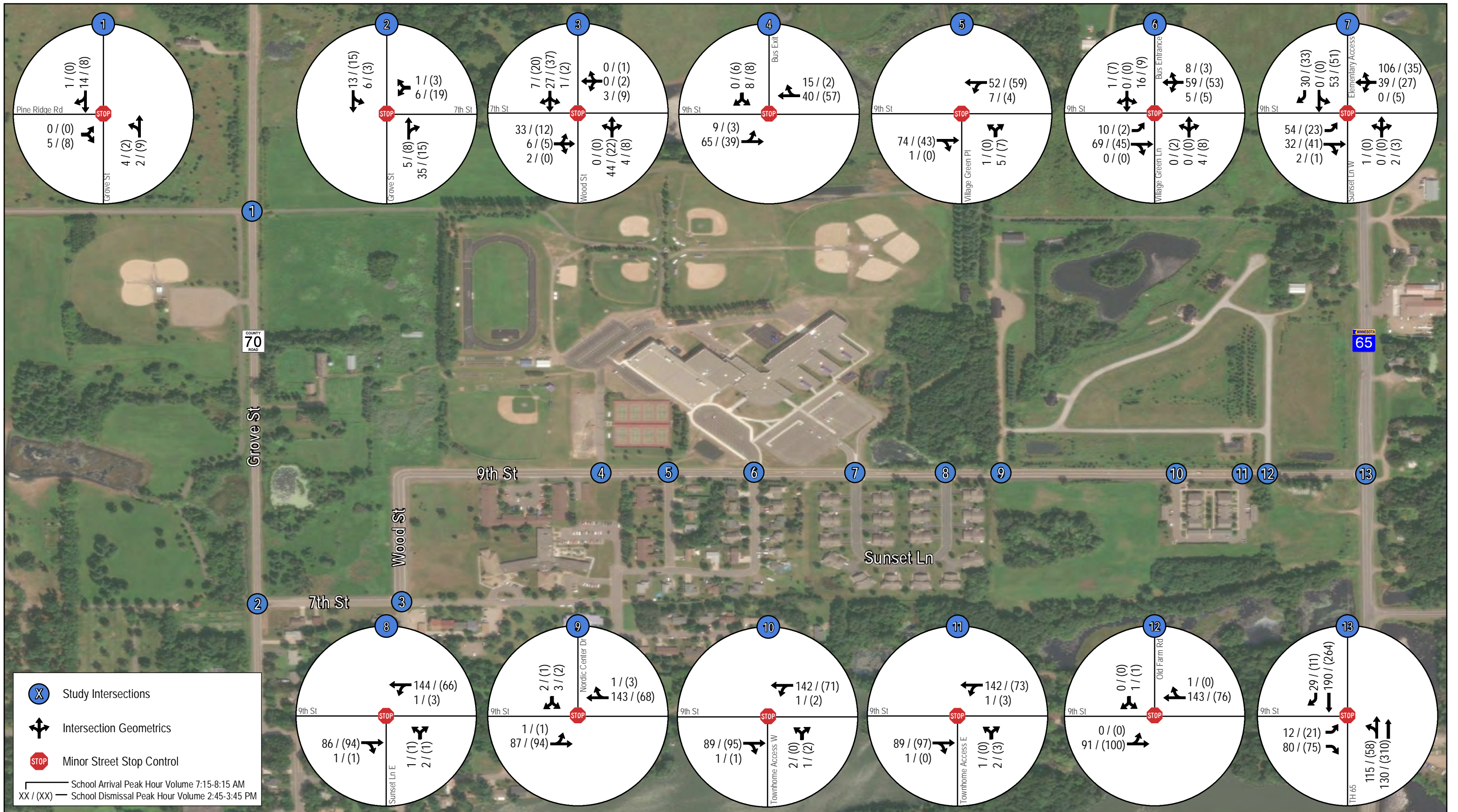
Traffic counts were performed from the video during the morning peak period (7-9 am) and afternoon peak period (1-6 pm). The elementary school was in session on the day the video was collected however the programmed dismissal time was earlier than normal. The peak traffic hours were found to be 7:15-8:15 am which overlaps school arrival. In the afternoon, classes dismissed at 2 pm, followed by an optional after-school program which lasted until 3:15 pm. This resulted in a dismissal traffic to be spread over a longer period and the peak hour of traffic to be from 2:45-3:45 pm. The 2020 existing turning movement counts are included as attachments to this memorandum.

Observations of the elementary school entrance intersection during peak periods indicate that parent pick-up and drop off queues do not exceed on-site storage capacity and do not back out to the street intersection.

Figure 2 shows the existing intersection lane configurations and existing traffic demands for the AM School Arrival peak hour and PM School Dismissal peak hour for each study intersection. Existing traffic volumes for study intersections #8, #9, #10, #11, and #12 have been estimated based upon trip generation rates for the land uses served by each intersecting street.

Figure 3 shows the peak hour traffic volumes in 2023 with additional trips due to residential growth but without the high school.

Figure 4 depicts the proposed site plan for the high school.



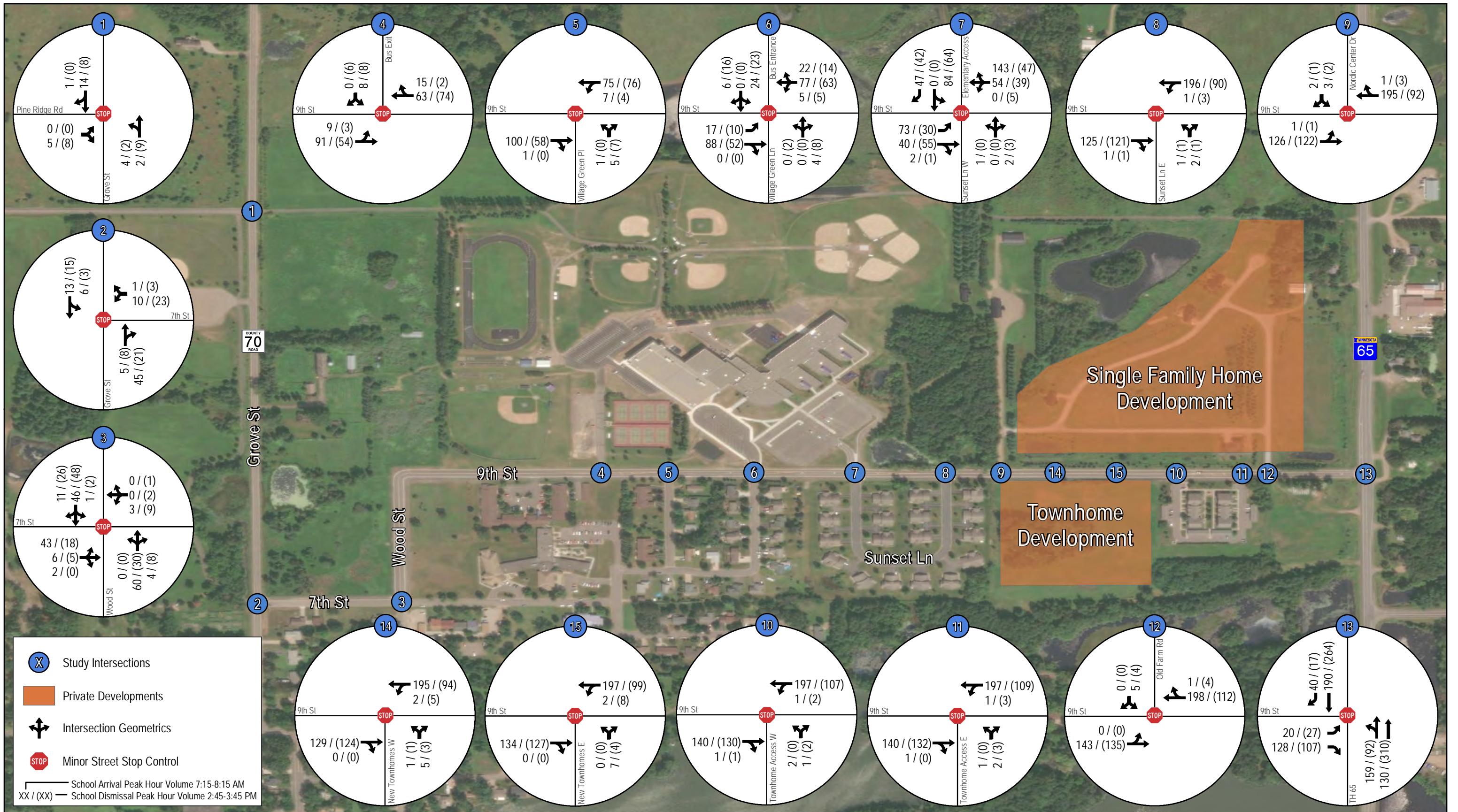
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Existing Peak Hour Traffic Volumes

Mora High School Traffic Study
Mora, Minnesota

Figure 2



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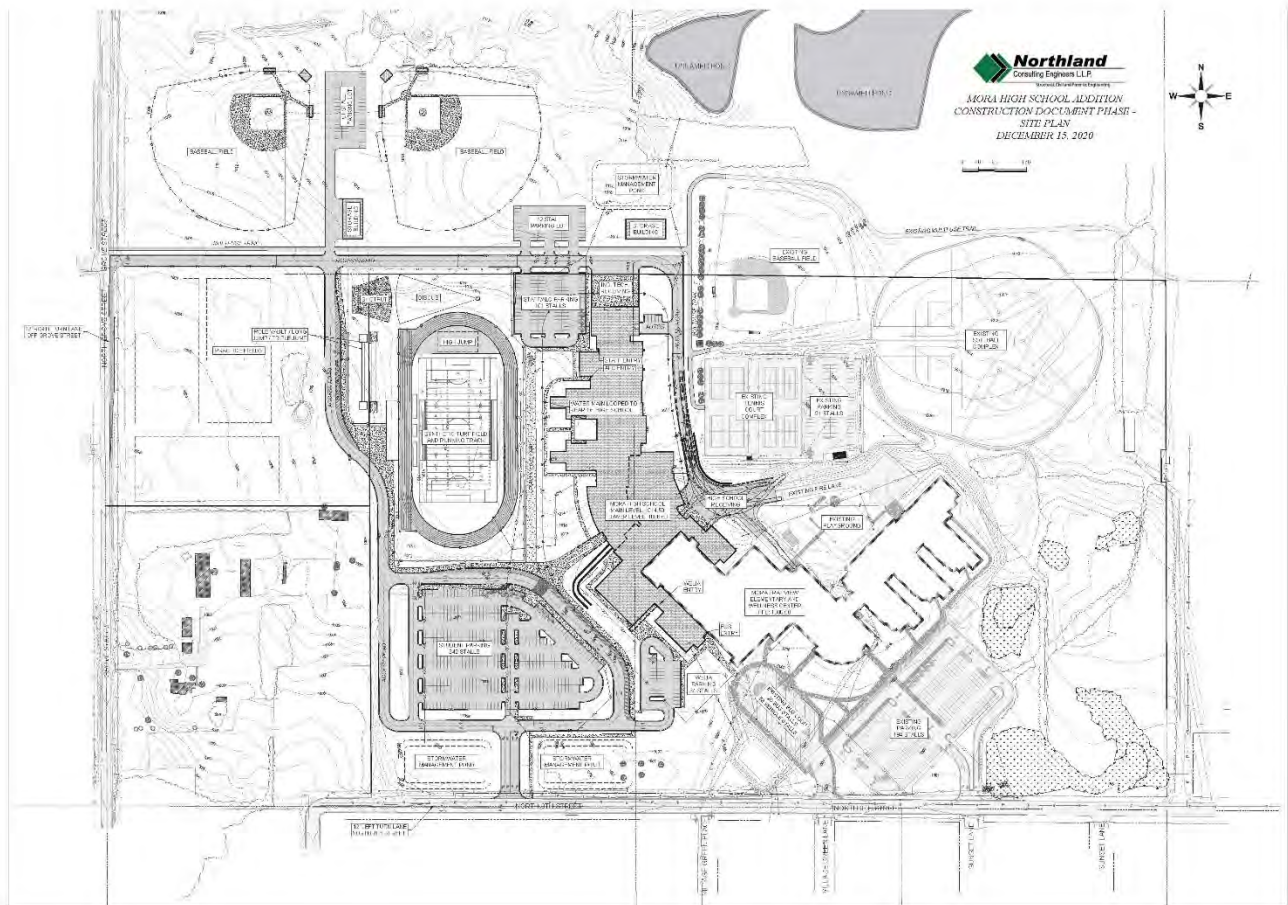
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2023 No Build Peak Hour Traffic Volumes

Mora High School Traffic Study
Mora, Minnesota

Figure 3

Figure 4 – Proposed High School Site Plan



TRAFFIC VOLUME ASSUMPTIONS / COVID-19 Adjustments

Based on review of pre-pandemic traffic volumes it has been found that COVID-19 has contributed to an average reduction of approximately 15% in regional traffic demand. Volumes at the local level are dependent upon on-site specific conditions. Therefore, for the purposes of this study, traffic volumes on Highway 65 were increased to account for the effect of the pandemic. Traffic volumes turning to and from 9th Street were not adjusted because the elementary school was providing in-person learning and was operating close to normally. The Welia community wellness center was closed due to COVID-19, therefore, estimated trips to and from Welia were added to the analysis scenarios for future conditions. No adjustments were made to estimated traffic volumes generated by existing or future single-family homes.

TRIP GENERATION AND DISTRIBUTION

The proposed high school is projected to have an enrollment of 800 students in 2023. To be conservative, enrollment at the elementary school was assumed to grow by a similar proportion as the high school to 822 students. The private townhome development was assumed to be 16 duplexes for a total of 32 dwelling units and is assumed to be completed in 2023. Additionally, seven single-family homes were assumed to be constructed on the north side of 9th Street through 2023.

Table 1 shows the projected growth of the Elementary School and the sizes of the expected new developments.

**Table 1 – Assumed Development Sizes
 for Trip Generation Estimates**

Land Use	Size	Units
Elementary School Growth	51	Students
High School	800	Students
Recreational Community Center	50	KSF
Multifamily Housing (Low-rise)	32	Units
Single Family Housing	7	Units

Trip generation estimates for the High School, Welia community wellness center, townhome development, and single-family home development were performed based upon the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition.

Table 2 shows the trip generation rates (i.e. the number of 1-way vehicle trips generated per student (or unit) and proportion of trips entering and exiting the site from the new Elementary School and from the increased enrollment at the Middle School.

Table 2 – Trip Generation Rates and Distributions

Land Use	ITE Code	Units	AM/School Arrival			PM/School Dismissal		
			Rate	Enter	Exit	Rate	Enter	Exit
Elementary School	520	Students	0.67	0.54	0.46	0.34	0.45	0.55
High School	530	Students	0.55	0.68	0.32	0.33	0.32	0.68
Multifamily Housing (Low-rise)	220	Units	0.46	0.23	0.77	0.56	0.63	0.37
Single Family Housing	210	Units	0.74	0.25	0.75	0.99	0.63	0.37
Welia Community Center	Volumes estimated based on proportions of daily rates							

Trip Generation Assumptions

The AM peak hour of adjacent traffic and the school arrival peak hour occur at approximately the same. The school dismissal peak occurs prior to the PM peak hour for other traffic. The multi-family housing and single family homes will have the highest trip generation during the normal AM and PM peak hours, so using the PM peak hour in place of the school dismissal peak hour (which is not available) is conservative.

For the Welia community wellness center the total expected daily trips was calculated; then, using ITE's 24-hour distribution of trips for the recreational community center land use, the school arrival hour and school dismissal hour trip generation percentages of daily traffic numbers were found. This gave entering and exiting trip generation. A 50% reduction was applied to account for internal trip for parents or staff that use the center before or after school, and to account for the use of the wellness center's facilities by students during physical education.

No reduction in trips was assumed for parent trips that may pick-up or drop off students for both schools at the same location (conservative assumption). The elementary school and high school share a bus lot and students from both schools will ride the same buses.

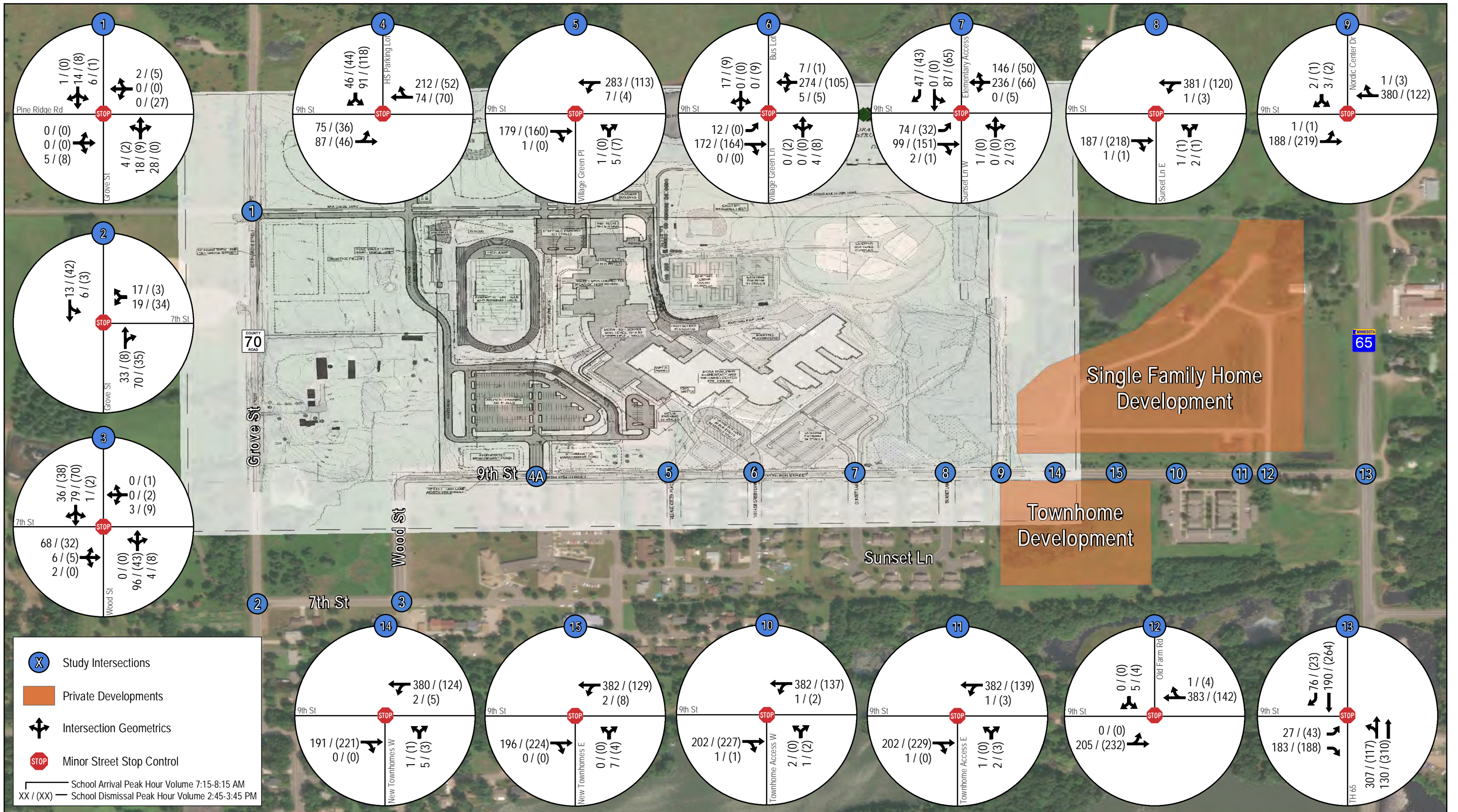
Table 3 shows the AM/school arrival, and PM/school dismissal peak hour trips generated by both the proposed high school, small increase at the elementary school and growth from nearby residential land uses.

Table 3 – Trip Generation

Land Use	School Arrival Peak Hour			School Dismissal Peak Hour		
	Enter	Exit	Total	Enter	Exit	Total
Elementary School growth	18	15	33	8	9	17
High School	299	141	440	84	180	264
Recreational Community Center	21	13	34	19	23	42
Multifamily Housing (Low-rise)	4	13	17	13	7	20
Single Family Housing	1	4	5	4	3	7
Total	325	171	496	120	213	333

Trips generated by the new high school were directionally distributed based on the existing traffic distribution patterns to and from the existing elementary school. The generated and distributed trips were then added to the existing trips to determine the 2023 Build Volumes, shown in **Figure 5**.

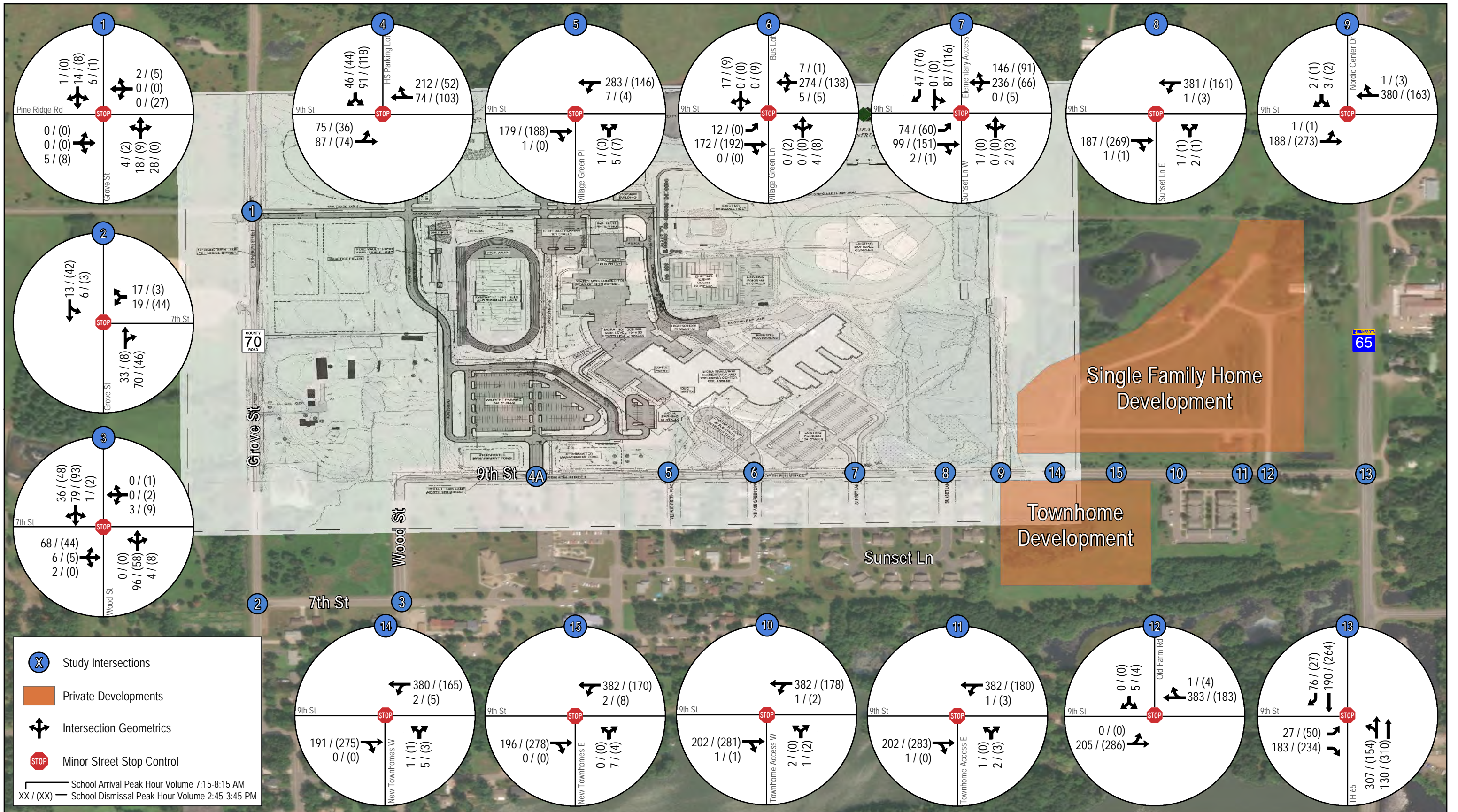
Figure 6 depicts peak hour traffic volumes for 2023 Build conditions for a Sensitivity Test. Traffic volume adjustments (additions) have been made to the baseline volumes to better represent what maximum traffic demand conditions with all programmed activities on site operating at normal schedule and capacity. This was done as a sensitivity test to identify if any findings would change with higher traffic volumes



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2023 Build Peak Hour Traffic Volumes
 Mora High School Traffic Study
 Mora, Minnesota

Figure 5



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2023 Build Peak Hour Traffic Volumes, Sensitivity Test
 Mora High School Traffic Study
 Mora, Minnesota

Figure 6

OPERATIONAL ANALYSIS

Traffic operations analyses were conducted to determine if improvements to the existing roadway network will be needed when the proposed high school is opened in 2023 based on delay, level of service (LOS), and anticipated traffic queue lengths. The new high school parking lot access to 9th St modeled with two southbound lanes of approach as shown in the site plan. Similarly, the bus driveway and the elementary school were modeled consistently with the site plan and 2 lanes of approach.

The traffic analysis was performed using Synchro/SimTraffic software (version 11). The results reported are based on an average of 10 runs in SimTraffic. Detailed SimTraffic operations tables are attached.

Intersection LOS, as defined in the 2010 Highway Capacity Manual, is a qualitative performance measure that represents quality of service indicating how well an intersection is operating. Intersection performance is ranked from LOS A through LOS F. The LOS results are based on average delay per vehicle, which corresponds to the delay threshold values shown in **Table 4**.

Table 4 – Level of Service Criteria for Signalized and Unsignalized Intersections

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

LOS A indicates the best traffic operation and LOS F indicates an intersection where demand exceeds capacity. For this study, LOS D or better is considered acceptable for each intersection movement; and, LOS C or better is considered acceptable for each approach and each intersection as a whole.

2023 NO BUILD OPERATIONS

Based on analysis results for the 2023 No Build scenario with the existing intersection control and lane configurations, all of the study intersections are expected to operate acceptably with each movement operating at LOS B or better and with each approach and intersection operating at LOS A. Under these conditions, there will likely be some longer queues and delays during the highest 5-10 minute peak of school traffic, however, these delays and maximum queue lengths are expected to be manageable within the existing site and local street system and each overall intersection will operate acceptably. **Table 6** shows the 2023 No Build Operations during the School Arrival, and School Dismissal peak hours.

2023 BUILD OPERATIONS

Based on analysis results for the 2023 Build scenario with the existing intersection control and lane configurations, all the study intersections are expected to operate acceptably with each movement operating at LOS C or better and with each approach and intersection operating at LOS A. As with the 2023 No Build scenario, there will likely be some longer queues and delays during the highest 5-10 minute peak of school traffic, however, these delays and maximum queue lengths are expected to be manageable within the existing and planned site and local street system and each overall intersection will operate acceptably. **Table 7** shows the 2023 Build Operations during the AM, School Dismissal, and PM peak hours.

Some traffic movements that if not well served, or experience long delays, could cause issues for other on-site or on-street operations. A few notable movements of interest include:

- The eastbound left turn from 9th Street to northbound Highway 65 and 9th St operates at LOS C in the school arrival hour with an average delay of 15.9 seconds (maximum queue = 54 ft); This delay will be experienced by a relatively low number of vehicles. If longer delays occur, drivers destined for northbound Highway 65 leaving the school sites may choose to utilize northbound Grove Avenue to 220th Street to access Highway 65.
- The southbound left turn movement out of the elementary school parking lot will experience greater delays than it does under existing conditions because of the addition of high school traffic on 9th Street. Also, if the southbound left experiences long delays or queuing, it could disrupt the efficiency of student loading in front of the school. Operational results show that the am arrival peak hour operates at LOS A with an average delay of 8.9 seconds and a maximum queue of 73 feet. So, based on modeling, this is not anticipated to become a problem for other on-site operations.
- The location of the high school driveway on 9th Street should be located such that it is sufficiently separated from the 90 degree turn of Wood Street onto 9th Street to allow buses to turn the corner and continue in the through lane without conflicting with vehicles waiting to turn left from 9th Street into the high school parking lot. The high school parking lot should be served by an eastbound left turn lane with a minimum of 120 feet of storage length.

This study was performed during pandemic conditions. The Mora School District's COVID-19 operational plan in October 2020 included a 1-hour early dismissal for the elementary school at 2 pm. Free childcare was provided for 1st responders after school until 3:15 PM, with possible paid childcare for other parents. This is different than normal operations when all students get released at 3 pm and created a dual peak hour in the afternoon. To estimate the normal school dismissal hour, a sensitivity test was performed assuming the 2 pm traffic was increased to represent what would be the normal 3 pm demands. The 2 pm peak hour volumes had 70% of the 3pm peak hour traffic into and out of the school added to it via trip generation.

Add sensitivity results discussion here, Table 8 has results

Table 5 – 2020 Existing Operations

Intersection	Approach	School Arrival / AM Peak Hour		School Dismissal / PM Peak Hour	
		Approach Delay/LOS	Intersection Delay/LOS	Approach Delay/LOS	Intersection Delay/LOS
Grove St at Pine Ridge Rd	NB	1 / A	0.8 / A	0.6 / A	1.0 / A
	SB	0.0 / A		0.0 / A	
	EB	2.5 / A		2.6 / A	
	WB	0.0 / A		0.0 / A	
Grove St at 7th St	NB	0.2 / A	0.7 / A	0.2 / A	1.7 / A
	SB	0.6 / A		0.4 / A	
	EB	0.0 / A		0.0 / A	
	WB	4.0 / A		4.5 / A	
Wood St at 7th St	NB	6.4 / A	4.2 / A	5.5 / A	4.0 / A
	SB	4.9 / A		4.7 / A	
	EB	1.5 / A		1.2 / A	
	WB	1.3 / A		1.3 / A	
9th St at New Parking Access	NB	0.0 / A	0.5 / A	0.0 / A	0.6 / A
	SB	4.6 / A		3.7 / A	
	EB	0.3 / A		0.2 / A	
	WB	0.2 / A		0.1 / A	
9th St at Village Green Pl	NB	3.2 / A	0.4 / A	2.7 / A	0.4 / A
	SB	0.0 / A		0.0 / A	
	EB	0.2 / A		0.2 / A	
	WB	0.4 / A		0.4 / A	
9th St at Village Green Ln	NB	3.0 / A	1.1 / A	2.8 / A	1.0 / A
	SB	5.9 / A		4.1 / A	
	EB	0.4 / A		0.2 / A	
	WB	0.6 / A		0.4 / A	
9th St at Sunset Ln W	NB	2.8 / A	2.1 / A	2.5 / A	2.0 / A
	SB	5.1 / A		4.2 / A	
	EB	1.7 / A		0.9 / A	
	WB	0.6 / A		0.3 / A	
Hwy 65 at 9th St	NB	0.8 / A	1.2 / A	0.4 / A	1.0 / A
	SB	0.6 / A		0.6 / A	
	EB	3.4 / A		3.7 / A	
	WB	0.0 / A		0.0 / A	

Note: Minor street stop control intersection Level of Service (LOS) is typically defined as the worst approach LOS. The overall intersection delay and LOS is shown. Delay and LOS by movement is available in the attachments.

Table 6 – 2023 No Build Operations

Intersection	Approach	School Arrival / AM Peak Hour		School Dismissal / PM Peak Hour	
		Approach Delay/LOS	Intersection Delay/LOS	Approach Delay/LOS	Intersection Delay/LOS
Grove St at Pine Ridge Rd	NB	1.1 / A	0.7 / A	0.4 / A	0.9 / A
	SB	0.0 / A		0.0 / A	
	EB	2.5 / A		2.3 / A	
	WB	0.0 / A		0.0 / A	
Grove St at 7th St	NB	0.2 / A	0.8 / A	0.1 / A	1.5 / A
	SB	0.6 / A		0.6 / A	
	EB	0.0 / A		0.0 / A	
	WB	4.8 / A		3.7 / A	
Wood St at 7th St	NB	6.8 / A	4.6 / A	5.9 / A	4.2 / A
	SB	5.0 / A		4.8 / A	
	EB	1.6 / A		1.4 / A	
	WB	1.6 / A		1.4 / A	
9th St at New Parking Access	NB	0.0 / A	0.4 / A	0.0 / A	0.5 / A
	SB	5.6 / A		3.7 / A	
	EB	0.3 / A		0.2 / A	
	WB	0.2 / A		0.1 / A	
9th St at Village Green Pl	NB	3.4 / A	0.4 / A	2.6 / A	0.4 / A
	SB	0.0 / A		0.0 / A	
	EB	0.2 / A		0.2 / A	
	WB	0.4 / A		0.4 / A	
9th St at Village Green Ln	NB	2.7 / A	1.4 / A	2.9 / A	1.5 / A
	SB	6.3 / A		4.5 / A	
	EB	0.5 / A		0.4 / A	
	WB	0.7 / A		0.5 / A	
9th St at Sunset Ln W	NB	2.6 / A	2.4 / A	3.1 / A	2.1 / A
	SB	5.8 / A		4.6 / A	
	EB	1.9 / A		1.1 / A	
	WB	0.7 / A		0.5 / A	
Hwy 65 at 9th St	NB	1.1 / A	1.7 / A	0.6 / A	1.3 / A
	SB	0.8 / A		0.8 / A	
	EB	4.1 / A		4.2 / A	
	WB	0.0 / A		0.0 / A	

Note: Minor street stop control intersection Level of Service (LOS) is typically defined as the worst approach LOS. The overall intersection delay and LOS is shown. Delay and LOS by movement is available in the attachments.

Table 7 – 2023 Build Operations

Intersection	Approach	School Arrival / AM Peak Hour		School Dismissal / PM Peak Hour	
		Approach Delay/LOS	Intersection Delay/LOS	Approach Delay/LOS	Intersection Delay/LOS
Grove St at Pine Ridge Rd	NB	0.7 / A	0.8 / A	0.5 / A	2.8 / A
	SB	0.5 / A		0.3 / A	
	EB	2.5 / A		2.9 / A	
	WB	2.4 / A		4.2 / A	
Grove St at 7th St	NB	0.4 / A	1.3 / A	0.2 / A	1.6 / A
	SB	0.8 / A		0.7 / A	
	EB	0.0 / A		0.0 / A	
	WB	4.0 / A		4.1 / A	
Wood St at 7th St	NB	7.2 / A	5.2 / A	6.3 / A	4.5 / A
	SB	5.7 / A		5.0 / A	
	EB	1.8 / A		1.4 / A	
	WB	2.3 / A		1.5 / A	
9th St at New High School Parking Lot Access	NB	0.0 / A	2.2 / A	0.0 / A	2.9 / A
	SB	5.6 / A		5.8 / A	
	EB	1.1 / A		0.9 / A	
	WB	1.2 / A		0.5 / A	
9th St at Village Green Pl	NB	3.2 / A	0.4 / A	2.8 / A	0.5 / A
	SB	0.0 / A		0.0 / A	
	EB	0.5 / A		0.6 / A	
	WB	0.3 / A		0.2 / A	
9th St at Village Green Ln	NB	2.6 / A	0.7 / A	4.1 / A	0.6 / A
	SB	3.8 / A		4.8 / A	
	EB	0.3 / A		0.1 / A	
	WB	0.8 / A		0.5 / A	
9th St at Sunset Ln W	NB	5.0 / A	2.4 / A	3.5 / A	1.9 / A
	SB	6.9 / A		5.2 / A	
	EB	1.6 / A		0.7 / A	
	WB	1.2 / A		0.6 / A	
Hwy 65 at 9th St	NB	3.1 / A	2.9 / A	1.2 / A	2.3 / A
	SB	1.0 / A		1.1 / A	
	EB	5.0 / A		5.5 / A	
	WB	0.0 / A		0.0 / A	

Note: Minor street stop control intersection Level of Service (LOS) is typically defined as the worst approach LOS. The overall intersection delay and LOS is shown. Delay and LOS by movement is available in the attachments.

Table 8 – 2023 Build Sensitivity Test Operations

Intersection	Approach	School Arrival / AM Peak Hour		School Dismissal / PM Peak Hour	
		Approach Delay/LOS	Intersection Delay/LOS	Approach Delay/LOS	Intersection Delay/LOS
Grove St at Pine Ridge Rd	NB	0.7 / A	0.8 / A	0.5 / A	2.7 / A
	SB	0.5 / A		0.2 / A	
	EB	2.5 / A		2.6 / A	
	WB	2.4 / A		4.2 / A	
Grove St at 7th St	NB	0.4 / A	1.3 / A	0.2 / A	1.6 / A
	SB	0.8 / A		0.6 / A	
	EB	0.0 / A		0.0 / A	
	WB	4.0 / A		4.0 / A	
Wood St at 7th St	NB	7.2 / A	5.2 / A	6.8 / A	5.1 / A
	SB	5.7 / A		5.8 / A	
	EB	1.8 / A		1.7 / A	
	WB	2.3 / A		1.3 / A	
9th St at New Parking Access	NB	0.0 / A	2.2 / A	0.0 / A	2.9 / A
	SB	5.6 / A		6.5 / A	
	EB	1.1 / A		0.9 / A	
	WB	1.2 / A		0.6 / A	
9th St at Village Green Pl	NB	3.2 / A	0.4 / A	3.0 / A	0.5 / A
	SB	0.0 / A		0.0 / A	
	EB	0.5 / A		0.6 / A	
	WB	0.3 / A		0.2 / A	
9th St at Village Green Ln	NB	2.6 / A	0.7 / A	4.5 / A	0.6 / A
	SB	3.8 / A		5.1 / A	
	EB	0.3 / A		0.1 / A	
	WB	0.8 / A		0.5 / A	
9th St at Sunset Ln W	NB	5.0 / A	2.4 / A	3.7 / A	3.0 / A
	SB	6.9 / A		7.0 / A	
	EB	1.6 / A		1.0 / A	
	WB	1.2 / A		0.8 / A	
Hwy 65 at 9th St	NB	3.1 / A	2.9 / A	1.7 / A	3.3 / A
	SB	1.0 / A		1.5 / A	
	EB	5.0 / A		7.5 / A	
	WB	0.0 / A		0.0 / A	

Note: Minor street stop control intersection Level of Service (LOS) is typically defined as the worst approach LOS. The overall intersection delay and LOS is shown. Delay and LOS by movement is available in the attachments.

FINDINGS AND CONCLUSIONS

Traffic demands anticipated to be generated by the proposed new Mora High School have been estimated in its year of opening, 2023. In addition, several adjustments were made to existing traffic volumes to estimate traffic demands that would be in place without the influence of the current COVID-19 pandemic. For instance, in the build scenarios, traffic demands on Highway 65 were increased to represent pre-pandemic levels, and on the school site, traffic demands for the hour of dismissal for the elementary school were re-aligned with that of the high school. The build condition also assumes normal operation of the wellness center and restoration of the Pre-K program to normal levels. Further, this study assumes that residential development will continue in the 9th Street corridor adding traffic demands through the study intersections. The following findings are evident from this evaluation:

9th Street – Left Turn Lanes

- Each of the intersections to the school site from 9th Street is recommended to have an eastbound left turn lane. It would be advantageous to restripe all of 9th Street to include a continuous 2-way center left turn lane to also provide safety benefit to traffic turning left from westbound 9th Street to neighborhood streets. The continuous turn lane would provide the opportunity for left turning traffic in either direction to decelerate and wait for an opposing gap in traffic to complete their left turn maneuver without blocking the through lane.

Trailview Elementary School – Parking Lot Driveway on 9th Street

- Entering Traffic
 - Should be served by an eastbound left turn lane
 - Parent pick-up and drop-off queues are expected to be manageable on site and are not expected to interfere with operation of 9th Street.
 - Given the low speed conditions on 9th Street (normally 35 mph; reduced to 25 mph when children are present) the need for a right turn lane is not anticipated.
- Exiting Traffic
 - The existing driveway configuration with a southbound through-left and exclusive right turn lanes should be perpetuated.
 - Exiting traffic will experience increased delay compared to existing conditions due to increase in high school traffic through the intersection along 9th Street; however, delays will be at an acceptable level of service.
 - Parent queues are not expected to interfere with loading zone operation near the school door.

School Bus Driveway

- Entering traffic
 - Should be served by an eastbound left turn lane.
 - Right turns can be made from the westbound through lane.
- Exiting Traffic
 - The existing driveway configuration with a southbound through-left and an exclusive right turn lane should be perpetuated.
 - Exiting traffic will experience an increase in delay compared to existing conditions due to the increase in high school traffic through the intersection along 9th Street; however, delays will be at an acceptable level of service.

High School Driveway

- Entering Traffic
 - Should be served by an eastbound left turn lane
 - The site plan provides approximately 1000 feet of vehicle storage length from the front of the drop off lane to the entrance from 9th Street. Based upon observed arrival and departures rates from other schools the range of storage needed is estimated to be from 1050 - 1250 feet. To optimize

the use of the waiting lane during peaks, staff may need to instruct parents to pull to the front of the parking lane beyond the entrance door to maximize space for other drivers entering the site. If the lane is full, drivers entering from 9th Street will have the option of using the second entrance lane to access the parking lot rather than wait in a long pick-up / drop-off queue. Instructional signage should be considered to direct drivers to use the parking lot if the drop off lane is full.

- Given the low-speed conditions on 9th Street (normally 35 mph; reduced to 20 mph when children are present) a right turn lane is not needed based on speed differentials. Further, if the drop off lane is effectively managed at the front end, and drivers are instructed to use the parking lot when the drop off lane is full, the need for a right turn lane on 9th Street is not anticipated for the purpose of storing waiting vehicles.
- Exiting Traffic
 - The driveway configuration shown in the site plan with a southbound through-left and an exclusive right turn lane will serve demands.
 - Exiting traffic delays will be at an acceptable level of service.
 - Parent queues are not expected to interfere with loading zone operation near the school door.

9th Street Intersections with Local Residential Streets

- There will be increased school traffic on 9th Street, but no delay or level of service issues are expected on local street approaches to 9th Street. As previously described, there would be a safety benefit for local street traffic if a continuous two-way left turn lane were installed with the school project.

9th Street at Highway 65

- Traffic movements from Highway 65 to 9th Street
 - Southbound right turns from Highway 65 to 9th Street can occur from an existing right turn lane. This movement will have the right of way over other conflicting movements and will operate efficiently without delay or queueing issues.
 - Northbound left turns from Highway 65 to 9th Street will occur from the northbound through lane. There is a northbound left turn bypass lane that allows through traffic to avoid vehicles waiting for a gap to complete their maneuver. During peak periods, a left turn queue is expected to form, but based on modeling, the maximum queue would be about 100 feet in length which does not exceed the length of the bypass lane.
 - Highway 65 is a high-speed corridor (55 mph). Speed differentials between turning traffic and through traffic can be a significant contributor to vehicular conflict and crashes. Therefore, operating and safety conditions on Highway 65 should be monitored.
 - Possible improvements to mitigate safety issues related to speed differentials on Highway 65 could include:
 - A school speed zone to require a lower operating speed when school related traffic is present.
 - Speed reduction warning systems (flashers) to inform drivers of lower speed limit and of potential conflicts.
 - Dynamic Speed Display signs to provide real time feedback to drivers entering the school speed zone.
 - Possible geometric improvements on Highway 65 An exclusive northbound left turn lane: this would require widening on Highway 65 further to the south than the existing bypass lane currently extends. Changes would extend to the proximity of the next intersection on Highway 65 with Industrial Boulevard, which could lead to a larger and more complex project to implement.
- Traffic movements from 9th Street to Highway 65
 - After leaving the school site approximately 60% of all school traffic will be destined for southbound Highway 65. Eastbound right turns from 9th will operate efficiently and experience minimal delay.

- After leaving the school site about 10% of all school traffic will be destined for northbound Highway 65 making a left turn from 9th Street. Left turns will need to yield to all other conflicting traffic movements so there will be some delay and queuing issues that occur during daily peak periods. In the school arrival peak period, modeling indicates average delays will be at LOS C in the am and pm peaks with maximum queues of about 85 feet which will not exceed the length of the existing left turn lane. If actual delays are longer, drivers may begin to choose alternative routes; in this case drivers may choose to leave the school site on northbound Grove Street and access Highway 65 from 220th Avenue.

Grove Street at Pine Ridge Road South

- This intersection will serve access to the staff parking lot, loading docks and north athletic fields. During daily arrival and dismissal peak periods, only a small portion of traffic that arrives and departs during peak periods will utilize this intersection.
- County Road 70 is a high-speed rural roadway. A northbound right turn lane is recommended to reduce vehicular conflicts and lessen the negative effect of speed differentials.

Wood Street – Maple Avenue to 7th Street

- Traffic volumes on Wood Street south of 7th Street are expected to increase due to high school traffic. Currently school related trips on Wood Street are estimated to be about 70 in the am peak hour which is the highest hour of the day. This is estimated to increase to about 175 in the am peak hour with high school traffic included.

Grove Street Maple Avenue to 7th Street

- Traffic volumes on Grove Street south of 7th Street are expected to increase due to high school traffic. Currently school related trips on Grove Street are estimated to be about 40 in the am peak hour which is the highest hour of the day. This is estimated to increase to about 90 in the am peak hour with high school traffic included.

Attachments:

2020 Existing Turning Movement Counts
SimTraffic Results Tables

Location: Grove St at Pine Ridge Rd
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	Grove St				N/A				Grove St				Pine Ridge Rd				Int. Total	
	Southbound				Westbound				Northbound				Eastbound					
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds		
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
7:00	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	
7:15	0	6	1	0	0	0	0	0	0	3	0	0	0	0	0	0	10	
7:30	0	4	0	0	0	0	0	0	0	1	0	0	0	0	1	0	6	
7:45	0	4	0	0	0	0	0	0	0	0	2	0	0	0	4	0	10	
8:00	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	
8:15	0	1	0	0	0	0	0	0	0	0	5	0	0	0	1	0	7	
8:30	0	2	1	0	0	0	0	0	0	1	2	0	1	0	1	0	7	
8:45	0	2	0	0	0	0	0	0	0	4	0	0	0	0	2	0	8	
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
13:00	0	0	0	1	0	0	0	0	0	1	2	0	2	0	0	2	5	
13:15	0	3	1	0	0	0	0	0	0	0	1	0	0	0	1	0	6	
13:30	0	0	0	0	0	0	0	0	0	1	3	0	0	1	0	0	5	
13:45	0	2	0	0	0	0	0	0	0	2	1	0	0	0	4	0	9	
14:00	0	0	0	0	0	0	0	0	0	0	6	0	1	0	0	3	9	
14:15	0	4	0	0	0	0	0	0	0	0	0	0	1	0	1	0	5	
14:30	0	2	0	0	0	0	0	0	0	0	2	0	2	0	0	0	4	
14:45	0	0	0	0	0	0	0	0	0	1	3	0	0	0	0	0	4	
15:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2	0	4	
15:15	0	3	0	1	0	0	0	0	0	0	0	0	3	0	0	0	3	
15:30	0	1	1	1	0	0	0	0	0	1	2	0	12	0	0	1	6	
15:45	0	5	0	0	0	0	0	0	0	1	3	0	4	0	0	1	10	
16:00	0	1	0	0	0	0	0	0	0	3	3	0	1	0	0	1	8	
16:15	0	3	0	0	0	0	0	0	0	2	1	1	10	1	0	1	9	
16:30	0	2	0	0	0	0	0	1	0	3	0	0	0	0	0	0	5	
16:45	0	0	0	0	0	0	0	0	0	3	6	0	0	0	4	0	13	
17:00	0	2	0	0	0	0	0	0	0	0	2	0	3	0	0	1	5	
17:15	0	4	0	0	0	0	0	0	0	1	1	0	0	0	0	3	9	
17:30	0	2	0	0	0	0	0	0	0	2	2	0	3	1	0	0	7	
17:45	0	2	1	0	0	0	0	0	0	1	4	0	0	0	0	1	9	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Total	0	57	5	3	0	0	0	1	0	33	51	1	44	3	0	37	0	187
Cars+	0	56	4	1	0	0	0	0	0	27	48	0	38	2	0	31	0	168
Trucks	0	1	1	2	0	0	0	1	0	6	3	1	6	1	0	6	0	19
% Trucks	0.0	1.8	20.0	66.7	0.0	0.0	0.0	100.0	0.0	18.2	5.9	100.0	13.6	33.3	0.0	16.2	0.0	10.2
		3.2				0.0					11.8				17.5			

Location: Grove St at 7th St
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	Grove St				7th St				Grove St				N/A				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	2	3	0	0	4	0	0	0	0	0	0	6	0	0	0	0	15
7:15	1	3	0	0	0	0	0	0	0	0	3	10	0	0	0	0	17
7:30	3	4	0	0	1	0	0	0	0	0	1	11	0	0	0	0	20
7:45	2	6	0	0	3	0	1	0	0	0	1	10	0	0	0	0	23
8:00	0	0	0	0	2	0	0	0	0	0	0	4	0	0	0	0	6
8:15	0	2	0	0	1	0	1	0	0	0	4	3	0	0	0	0	11
8:30	1	2	0	2	1	0	1	0	0	0	2	1	0	0	0	0	8
8:45	0	4	0	1	0	0	2	0	0	0	2	1	1	0	0	0	9
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	2	0	0	0	0	1	0	0	0	4	1	0	0	0	0	8
13:15	0	4	0	1	0	0	1	0	0	0	0	1	0	0	0	0	6
13:30	0	0	0	0	3	0	0	0	0	0	4	1	0	0	0	0	8
13:45	0	5	0	0	4	0	1	0	0	0	2	7	0	0	0	0	19
14:00	2	4	0	0	5	0	0	1	0	0	6	2	1	0	0	0	19
14:15	1	3	0	0	3	0	0	0	0	0	0	6	0	0	0	0	13
14:30	0	3	0	0	7	0	2	0	0	0	0	0	0	0	0	0	12
14:45	0	0	0	0	1	0	0	0	0	0	4	5	0	0	0	0	10
15:00	2	2	0	1	12	0	1	0	0	0	2	5	0	0	0	0	24
15:15	0	3	0	0	10	0	1	0	0	0	0	10	0	0	0	0	24
15:30	1	2	0	0	3	0	0	0	0	0	4	5	0	0	0	0	15
15:45	1	6	0	1	6	0	1	0	0	0	3	4	1	0	0	0	21
16:00	1	1	0	0	9	0	1	0	0	0	6	2	0	0	0	0	20
16:15	0	5	0	0	6	0	1	0	0	0	2	4	0	0	0	0	18
16:30	0	1	0	0	9	0	0	1	0	0	3	1	0	0	0	0	14
16:45	0	3	0	1	6	0	1	2	0	0	8	5	2	0	0	0	23
17:00	2	3	0	1	5	0	2	0	0	0	1	3	0	0	0	0	16
17:15	1	6	0	0	3	0	1	0	0	0	1	3	1	0	0	0	15
17:30	0	2	0	1	8	0	2	0	0	0	2	6	0	0	0	0	20
17:45	1	2	0	0	1	0	2	0	0	0	3	1	0	0	0	0	10
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	21	81	0	9	113	0	23	4	0	0	68	118	6	0	0	0	424
Cars+	18	76	0	7	106	0	20	3	0	0	63	114	4	0	0	0	397
Trucks	3	5	0	2	7	0	3	1	0	0	5	4	2	0	0	0	27
% Trucks	14.3	6.2	0.0	22.2	6.2	0.0	13.0	25.0	0.0	0.0	7.4	3.4	33.3	0.0	0.0	0.0	6.4
	7.8				7.4				4.8				0.0				

Location: Wood St at 7th St
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	Wood St				7th St				Wood St				7th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	1	0	0	1	3	0	2	0	5	0	0	6	1	1	0	18
7:15	1	2	0	0	1	0	0	0	0	5	1	0	8	2	2	0	22
7:30	0	4	1	0	0	0	0	0	0	12	0	0	11	2	0	0	30
7:45	0	14	4	0	1	0	0	3	0	13	2	0	10	2	0	0	46
8:00	0	7	2	0	1	0	0	0	0	14	1	0	4	0	0	0	29
8:15	0	3	1	0	2	0	0	1	1	3	1	1	0	2	1	0	14
8:30	0	4	2	1	0	0	0	0	0	2	2	0	1	0	1	2	12
8:45	0	4	0	0	1	0	0	0	2	3	3	0	1	0	0	0	14
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	2	1	0	4	0	0	0	0	5	4	0	1	0	0	0	17
13:15	1	4	0	1	0	0	0	20	1	5	0	0	1	0	0	0	12
13:30	1	4	1	0	0	0	0	0	2	21	0	0	2	0	0	0	31
13:45	0	16	5	0	1	0	0	0	0	7	3	0	4	2	0	0	38
14:00	1	9	5	1	2	0	0	5	0	5	0	0	3	1	0	0	26
14:15	1	3	2	0	4	1	1	4	0	7	4	0	5	2	0	0	30
14:30	0	9	8	0	2	1	0	1	0	3	1	1	0	0	0	0	24
14:45	0	6	2	0	1	1	0	0	0	6	1	1	4	1	0	0	22
15:00	0	10	9	0	1	1	0	0	1	25	3	1	6	0	1	1	57
15:15	1	9	8	0	3	3	0	2	0	13	2	0	9	1	0	0	49
15:30	0	6	2	0	3	1	0	0	1	12	6	0	6	0	0	0	37
15:45	0	2	4	1	0	1	0	16	2	4	2	1	4	1	0	0	20
16:00	0	4	6	0	1	1	0	2	1	4	2	1	2	0	1	0	22
16:15	0	7	5	0	3	1	0	7	1	4	3	1	1	1	2	0	28
16:30	1	8	8	2	1	1	1	8	0	6	2	1	1	0	0	2	29
16:45	0	9	6	1	0	0	1	1	1	4	5	1	4	1	0	5	31
17:00	0	8	6	0	1	0	0	0	1	6	3	1	1	2	1	0	29
17:15	1	1	2	0	4	0	0	0	2	9	4	0	3	1	0	0	27
17:30	0	7	7	1	4	1	0	2	2	6	7	0	4	1	0	0	39
17:45	0	2	0	0	2	1	0	1	2	2	1	0	1	0	1	0	12
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	8	165	97	8	44	17	3	75	20	211	63	10	103	23	11	10	765
Cars+	7	158	88	7	44	17	3	61	18	176	60	4	97	22	11	8	701
Trucks	1	7	9	1	0	0	0	14	2	35	3	6	6	1	0	2	64
% Trucks	12.5	4.2	9.3	12.5	0.0	0.0	0.0	18.7	10.0	16.6	4.8	60.0	5.8	4.3	0.0	20.0	8.4
	6.3				0.0				13.6				5.1				

Location: 9th St at New Parking Access(Current bus Exit)
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	Parking Access				9th St				N/A				9th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	2	0	0	0	0	0	1	0	0	0	0	0	4	7	0	1	14
7:15	1	0	0	0	0	3	4	0	0	0	0	0	2	10	0	0	20
7:30	0	0	0	0	0	9	7	0	0	0	0	0	4	16	0	0	36
7:45	4	0	0	0	0	20	4	0	0	0	0	0	1	22	0	0	51
8:00	3	0	0	0	0	8	0	0	0	0	0	0	2	17	0	0	30
8:15	1	0	0	0	0	4	0	0	0	0	0	0	0	5	0	0	10
8:30	1	0	1	0	0	5	0	0	0	0	0	0	0	1	0	0	8
8:45	0	0	2	0	0	3	1	0	0	0	0	0	0	6	0	1	12
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	3	0	0	0	0	0	0	1	6	0	0	10
13:15	2	0	0	0	0	6	1	0	0	0	0	0	2	3	0	3	14
13:30	0	0	0	0	0	6	0	0	0	0	0	0	3	15	0	0	24
13:45	2	0	4	0	0	17	2	0	0	0	0	0	1	16	0	0	42
14:00	4	0	1	0	0	17	0	0	0	0	0	0	0	10	0	0	32
14:15	2	0	0	0	0	7	0	0	0	0	0	0	2	9	0	0	20
14:30	0	0	1	0	0	16	0	0	0	0	0	0	0	4	0	3	21
14:45	3	0	2	0	0	5	4	0	0	0	0	0	3	6	0	0	23
15:00	6	0	4	0	0	15	13	0	0	0	0	0	12	19	0	0	69
15:15	12	0	4	1	0	13	9	0	0	0	0	0	17	7	0	1	62
15:30	2	0	1	0	0	7	2	0	0	0	0	0	4	12	0	0	28
15:45	1	0	0	0	0	8	2	0	0	0	0	0	1	8	0	0	20
16:00	2	0	1	0	0	9	3	0	0	0	0	0	1	9	0	0	25
16:15	5	0	5	0	0	7	3	0	0	0	0	0	1	5	0	0	26
16:30	6	0	15	0	0	4	7	0	0	0	0	0	5	4	0	1	41
16:45	9	0	8	0	0	6	7	0	0	0	0	0	9	0	0	0	39
17:00	13	0	10	0	0	5	2	0	0	0	0	0	2	5	0	0	37
17:15	2	0	1	0	0	4	1	0	0	0	0	0	3	7	0	0	18
17:30	9	0	7	0	0	6	5	0	0	0	0	0	4	8	0	0	39
17:45	1	0	3	0	0	0	0	0	0	0	0	0	1	3	0	0	8
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	93	0	70	1	0	213	78	0	0	0	0	0	85	240	0	10	779
Cars+	86	0	66	0	0	201	74	0	0	0	0	0	78	206	0	4	711
Trucks	7	0	4	1	0	12	4	0	0	0	0	0	7	34	0	6	68
% Trucks	7.5	0.0	5.7	100.0	0.0	5.6	5.1	0.0	0.0	0.0	0.0	0.0	8.2	14.2	0.0	60.0	8.7
	6.7				5.5				0.0				12.6				

Location: 9th St at Village Green PI
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	N/A				9th St				Village Green PI				9th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	0	0	0	3	0	0	0	0	0	2	1	0	9	0	0
7:15	0	0	0	0	1	5	0	0	0	0	0	0	0	0	12	0	0
7:30	0	0	0	0	1	16	0	0	1	0	2	0	0	0	18	0	0
7:45	0	0	0	0	4	23	0	0	0	0	2	3	0	0	25	1	0
8:00	0	0	0	0	1	8	0	0	0	0	1	3	0	0	19	0	0
8:15	0	0	0	0	1	4	0	0	0	0	1	0	0	0	4	0	0
8:30	0	0	0	0	1	6	0	0	0	0	0	0	0	0	4	0	0
8:45	0	0	0	0	0	3	0	0	0	0	0	1	0	0	3	1	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	0	0	0	0	3	0	0	1	0	0	0	0	0	4	1	0
13:15	0	0	0	0	0	6	0	0	0	0	1	0	0	0	6	0	0
13:30	0	0	0	0	1	6	0	0	0	0	1	0	0	0	18	0	0
13:45	0	0	0	0	1	21	0	0	0	0	1	7	0	0	14	0	0
14:00	0	0	0	0	1	16	0	0	0	0	2	7	0	0	14	0	0
14:15	0	0	0	0	2	7	0	0	0	0	1	0	0	0	12	0	0
14:30	0	0	0	0	0	15	0	0	0	0	3	0	0	0	3	0	0
14:45	0	0	0	0	0	9	0	0	1	0	3	0	0	0	10	0	0
15:00	0	0	0	0	1	28	0	0	0	0	4	0	0	0	26	0	0
15:15	0	0	0	0	0	24	0	0	0	0	2	0	0	0	18	1	0
15:30	0	0	0	0	2	6	0	0	0	0	0	0	0	0	14	0	0
15:45	0	0	0	0	1	9	0	0	1	0	4	4	0	0	8	0	0
16:00	0	0	0	0	1	12	0	0	0	0	2	0	0	0	11	0	0
16:15	0	0	0	0	0	10	0	0	0	0	1	0	0	0	10	0	0
16:30	0	0	0	0	0	11	0	0	0	0	1	0	0	0	10	0	0
16:45	0	0	0	0	3	13	0	0	0	0	1	2	0	0	11	0	0
17:00	0	0	0	0	0	7	0	0	1	0	2	1	0	0	16	0	0
17:15	0	0	0	0	1	5	0	0	1	0	1	0	0	0	10	0	0
17:30	0	0	0	0	0	9	0	0	0	0	0	1	0	0	16	0	0
17:45	0	0	0	0	2	1	0	0	0	0	1	0	0	0	4	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	25	286	0	0	6	0	39	30	0	0	329	4	0
Cars+	0	0	0	0	23	271	0	0	5	0	37	24	0	0	288	4	0
Trucks	0	0	0	0	2	15	0	0	1	0	2	6	0	0	41	0	0
% Trucks	0.0	0.0	0.0	0.0	8.0	5.2	0.0	0.0	16.7	0.0	5.1	20.0	0.0	0.0	12.5	0.0	0.0
	0.0				5.5				6.7				12.3				8.9

Location: 9th St at Village Green Ln
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	School Access				9th St				Village Green Pl				9th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	3	0	0	0	0	3	2	0	0	0	0	1	1	1	10	0	0
7:15	2	0	0	0	1	6	2	0	0	0	0	1	0	0	12	0	0
7:30	1	0	0	0	0	18	2	3	0	0	0	2	0	4	16	0	0
7:45	12	0	1	0	1	26	4	7	0	0	0	1	6	4	24	0	0
8:00	1	0	0	0	3	9	0	1	0	0	0	0	4	2	17	0	0
8:15	0	0	1	0	0	3	0	0	0	0	0	0	0	0	5	0	0
8:30	0	0	0	0	1	6	0	0	1	0	0	1	0	0	4	0	0
8:45	1	0	0	0	0	3	1	0	0	0	0	0	1	0	3	0	0
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1	0	0	0	3	3	1	0	0	0	3	0	0	0	5	0	0
13:15	0	1	0	0	1	6	0	0	0	0	0	0	0	0	6	0	0
13:30	0	0	0	0	1	8	0	1	0	0	0	1	0	14	8	0	0
13:45	0	0	0	0	0	21	0	15	2	0	0	1	8	0	12	0	0
14:00	8	0	6	0	1	9	0	6	0	0	0	3	7	0	16	0	1
14:15	0	0	1	0	1	10	2	0	0	0	0	3	0	2	11	0	0
14:30	1	0	0	0	3	13	1	0	0	0	0	1	0	0	6	0	0
14:45	3	0	4	0	4	6	6	0	0	0	0	3	0	4	10	0	0
15:00	12	1	13	0	2	15	8	0	1	1	6	0	0	14	15	0	0
15:15	4	0	1	0	3	22	6	0	0	0	0	3	0	1	16	2	0
15:30	1	0	3	0	1	7	3	0	0	0	0	3	0	4	9	1	0
15:45	2	0	0	0	2	8	1	2	0	0	0	2	2	2	11	0	2
16:00	3	0	3	0	2	9	2	0	0	0	0	1	1	1	11	0	1
16:15	1	0	1	0	1	11	0	0	0	0	0	3	0	0	9	1	0
16:30	1	0	0	0	1	9	1	0	0	0	0	2	0	1	11	0	0
16:45	0	0	0	0	2	14	2	0	0	0	0	1	5	0	11	0	0
17:00	0	0	0	1	1	7	2	1	0	0	0	4	1	1	14	3	1
17:15	13	0	4	0	1	4	5	0	0	0	0	2	0	8	3	0	0
17:30	11	1	3	0	1	4	5	0	0	1	0	1	2	4	11	1	1
17:45	2	0	0	0	1	3	0	0	0	0	0	1	0	0	5	0	0
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	83	3	41	1	38	263	56	36	4	2	50	38	67	291	8	6	906
Cars+	56	3	31	1	37	257	50	33	2	2	48	32	36	279	8	4	809
Trucks	27	0	10	0	1	6	6	3	2	0	2	6	31	12	0	2	97
% Trucks	32.5	0.0	24.4	0.0	2.6	2.3	10.7	8.3	50.0	0.0	4.0	15.8	46.3	4.1	0.0	33.3	10.7
	29.1				3.6				7.1				11.7				

Location: 9th St at Sunset Ln
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	Elementary Access				9th St				Sunset Ln				9th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	0	0	0	0	5	16	0	0	0	0	0	4	10	0	0	35
7:15	0	0	0	0	0	9	24	0	0	0	1	0	9	4	1	0	48
7:30	3	0	2	0	0	18	26	0	0	0	0	0	12	3	0	0	64
7:45	36	0	21	0	0	9	46	0	0	0	0	0	21	19	0	0	152
8:00	14	0	7	0	0	3	10	0	1	0	1	0	12	6	1	0	55
8:15	14	0	3	0	0	1	7	0	0	0	0	3	2	3	1	0	31
8:30	9	0	2	0	0	3	5	0	1	0	1	0	0	4	0	0	25
8:45	4	0	1	0	0	4	2	0	0	0	0	0	1	1	1	0	14
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	1	0	0	0	0	7	5	0	0	0	0	0	2	5	1	0	21
13:15	8	0	1	0	0	5	6	0	1	0	0	0	2	5	0	0	28
13:30	2	0	2	0	2	6	13	0	1	0	0	0	2	2	1	0	31
13:45	28	0	13	0	2	6	14	0	0	0	1	1	11	7	0	0	82
14:00	9	0	7	0	2	4	7	0	0	0	1	1	5	20	0	0	55
14:15	4	0	2	0	0	9	11	0	0	0	1	0	5	8	1	0	41
14:30	10	0	11	0	1	8	3	0	0	0	0	0	2	6	0	0	41
14:45	4	0	3	0	0	13	2	0	0	0	0	0	2	12	0	0	36
15:00	12	0	3	0	1	21	1	0	0	0	1	0	1	30	1	0	71
15:15	20	0	8	0	1	22	1	0	1	0	0	0	2	21	0	0	76
15:30	11	0	5	0	0	5	2	0	0	0	0	0	2	11	3	0	39
15:45	4	0	2	0	1	9	0	1	1	0	1	0	0	12	1	0	31
16:00	7	0	5	0	0	7	1	0	0	0	1	0	0	13	3	0	37
16:15	7	0	4	0	0	6	0	0	0	0	0	0	0	12	0	0	29
16:30	2	0	3	0	2	10	1	0	0	0	0	1	0	13	0	0	31
16:45	2	1	1	0	0	15	0	0	1	0	0	2	1	12	0	0	33
17:00	1	0	0	0	0	10	1	1	0	0	0	1	0	19	0	0	31
17:15	0	0	0	0	1	10	0	0	0	0	1	0	0	16	1	0	29
17:30	0	0	0	0	0	11	0	0	0	0	0	1	0	23	0	0	34
17:45	0	0	0	0	0	3	0	0	1	0	0	2	0	7	0	0	11
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	212	1	106	0	13	239	204	2	8	0	10	12	98	304	16	0	1211
Cars+	208	1	106	0	13	227	203	2	8	0	10	10	96	268	16	0	1156
Trucks	4	0	0	0	0	12	1	0	0	0	0	2	2	36	0	0	55
% Trucks	1.9	0.0	0.0	0.0	0.0	5.0	0.5	0.0	0.0	0.0	0.0	16.7	2.0	11.8	0.0	0.0	4.5
	1.3				2.9				0.0				9.1				

Location: Hwy 65 at 9th St
 Count Date: 10/6/2020
 Counted By: LJJ



TURNING MOVEMENT COUNT DATA

All Vehicles

Start Time	TH 65				N/A				TH 65				9th St				Int. Total
	Southbound				Westbound				Northbound				Eastbound				
	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	Left	Thru	Right	Peds	
6:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7:00	0	34	3	0	0	0	0	0	19	24	0	0	2	0	11	0	93
7:15	0	31	7	0	0	0	0	0	30	29	0	0	0	0	5	0	102
7:30	0	49	7	0	0	0	0	0	35	23	0	0	0	0	8	0	122
7:45	0	47	14	0	0	0	0	0	37	24	0	0	9	0	44	0	175
8:00	0	35	1	0	0	0	0	0	13	35	0	0	3	0	23	0	110
8:15	0	52	2	0	0	0	0	0	5	34	0	0	1	0	16	0	110
8:30	0	45	7	0	0	0	0	0	3	27	0	0	4	0	13	0	99
8:45	0	51	0	0	0	0	0	0	4	37	0	0	0	0	7	0	99
9:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
9:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
11:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
12:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
13:00	0	46	3	0	0	0	0	0	9	44	0	0	2	0	5	0	109
13:15	0	42	2	0	0	0	0	0	8	45	0	0	2	0	13	0	112
13:30	0	44	7	0	0	0	0	0	15	49	0	0	0	0	8	0	123
13:45	0	60	2	0	0	0	0	0	21	37	0	0	5	0	26	0	151
14:00	0	50	1	0	0	0	0	0	13	37	0	0	7	0	30	0	138
14:15	0	38	4	0	0	0	0	0	19	57	0	0	2	0	10	0	130
14:30	0	56	4	0	0	0	0	0	5	46	0	0	7	0	9	0	127
14:45	0	58	5	0	0	0	0	0	13	62	0	0	2	0	12	0	152
15:00	0	57	3	0	0	0	0	0	22	73	0	0	5	0	41	0	201
15:15	0	52	4	0	0	0	0	0	18	49	0	0	5	0	37	0	165
15:30	0	58	0	0	0	0	0	0	13	79	0	0	0	0	26	0	176
15:45	0	56	1	0	0	0	0	0	8	52	0	0	4	0	14	0	135
16:00	0	43	3	0	0	0	0	0	9	65	0	0	3	0	17	1	140
16:15	0	45	2	0	0	0	0	0	9	63	0	0	4	0	18	0	141
16:30	0	47	1	0	0	0	0	0	12	80	0	0	2	0	16	0	158
16:45	0	44	1	0	0	0	0	0	16	52	0	0	2	0	12	0	127
17:00	0	46	2	0	0	0	0	0	10	64	0	0	2	0	18	0	142
17:15	0	49	3	0	0	0	0	0	10	55	0	0	6	0	15	0	138
17:30	0	31	2	0	0	0	0	0	9	50	0	0	7	0	16	0	115
17:45	0	29	2	0	0	0	0	0	2	42	0	0	4	0	2	0	81
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	1295	93	0	0	0	0	0	387	1334	0	0	90	0	472	1	3671
Cars+	0	1214	90	0	0	0	0	0	377	1262	0	0	81	0	437	1	3461
Trucks	0	81	3	0	0	0	0	0	10	72	0	0	9	0	35	0	210
% Trucks	0.0	6.3	3.2	0.0	0.0	0.0	0.0	0.0	2.6	5.4	0.0	0.0	10.0	0.0	7.4	0.0	5.7
		6.1				0.0				4.8				7.8			

Table C3

Mora High School Traffic Study

2023 Build Conditions (High School and Elementary School Hours: 8:00AM - 3:00PM)

School Arrival (7:15 AM) / School Dismissal (2:45 PM)

Intersection	Approach	Demand Volumes				Delay (s/veh)						LOS By Approach		LOS By Intersection		Vehicle Queuing Information (feet)																			
		L	T	R	Total	L	LOS	T	LOS	R	LOS	Delay (S/Veh)	LOS	Delay (S/Veh)	LOS	Left Turn Lane			Through Lane (s)				Right Turn Lane												
																	Storage (feet) ³	Avg. Queue (feet) ¹	Max Queue (feet) ¹	% Block Thru ⁽²⁾ <--->	% Block Left ⁽²⁾ <---	Link Length (feet)	Avg. Queue (feet) ¹	Max Queue (feet) ¹	% Block Right ⁽²⁾ >---	% Block Thru ⁽²⁾ <---	Storage (feet) ³	Avg. Queue (feet) ¹	Max Queue (feet) ¹						
School Arrival Peak Hour	Grove St at Pine Ridge Rd	NB	4	18	28	50	3.2	A	0.9	A	0.4	A	0.7	A	0.8	A						1966									20				
		SB	6	14	1	21	1.7	A	0.0	A	0.0	A	0.5	A										568								20			
		EB			5	5						2.5	A	2.5			A								587	20							42		
		WB			2	2						2.4	A	2.4			A								339	20							30		
	Grove St at 7th St	NB			33	70	103				0.7	A	0.3	A	0.4	A	1.3	A					1966	20											
		SB	6	13		19	2.7	A	0.2	A																									
		EB												0.0	A																				
		WB	19		17	36	4.7	A			3.3	A	4.0	A											471	31	73								
	Wood St at 7th St	NB			96	4	100				7.4	A	3.0	A	7.2	A	5.2	A					800	38	74										
		SB	1	79	36	116	0.0	A	7.0	A	2.7	A	5.7	A											604	44	81								
		EB	68	6	2	76	2.0	A	0.5	A	0.2	A	1.8	A											471	20	25								
		WB	3			3	2.3	A					2.3	A											493		20								
	9th St at New Parking Access	NB												0.0	A	2.2	A																		
		SB	91		46	137	7.1	A			2.9	A	5.6	A					520	36	77									260	25	54			
		EB	75	87		162	2.2	A	0.2	A			1.1	A					120	20	48														
		WB		74	212	286				2.2	A	0.8	A	1.2	A																				
	9th St at Village Green Pl	NB	1		5	6	4.7	A			3.0	A	3.2	A	0.4	A						449	20	50											
		SB											0.0	A																					
		EB		179	1	180				0.5	A	0.7	A	0.5			A																		
	9th St at Village Green Ln	WB	7	283		290	2.1	A	0.3	A			0.3	A										240	20	20									
		NB			4	4					2.6	A	2.6	A	0.7	A							462	20	30										
		SB			17	17					3.8	A	3.8	A											242	26	80								
		EB	12	172		184	3.0	A	0.1	A			0.3	A					180	20	58														
	WB	5	274	7	286	2.2	A	0.8	A	0.5	A	0.8	A												310	20	20								
	9th St at Sunset Ln W	NB	1		2	3	6.5	A			4.2	A	5.0	A	2.4	A																			
		SB	87		47	134	8.9	A			3.5	A	6.9	A																					
		EB	74	99	2	175	3.6	A	0.2	A	0.0	A	1.6	A					180	20	49									230	26	50			
		WB		236	146	382				1.6	A	0.5	A	1.2			A										259	20	20						
Hwy 65 at 9th St	NB	307	130		437	4.0	A	1.1	A			3.1	A	2.9	A																				
	SB		190	76	266				1.3	A	0.2	A	1.0			A													260	20	22				
	EB	27		183	210	15.9	C	0.6	A	3.4	A	5.0	A					250	20	54								130	33	84					
	WB											0.0	A																						
School Dismissal	Grove St at Pine Ridge Rd	NB	2	9		11	1.6	A	0.2	A			0.5	A	2.8	A																			
		SB	1	8		9	1.5	A	0.1	A			0.3	A																					
		EB			8	8					2.9	A	2.9	A											587	20	70								
		WB	27		5	32	4.4	A			2.9	A	4.2	A												495	20	38							
	Grove St at 7th St	NB		8	35	43				0.4	A	0.1	A	0.2	A	1.6	A							1966											
		SB	3	42		45	3.0	A	0.6	A			0.7	A																					
		EB												0.0	A																				
		WB	34		3	37	4.7	A	0.3	A	2.4	A	4.1	A												471	24	56							
	Wood St at 7th St	NB		43	8	51				7.0	A	2.6	A	6.3	A	4.5	A							800	27	60									
		SB	2	70	38	110	3.8	A	6.3	A	2.6	A	5.0	A											604	35	71								
		EB	32	5		37	1.9	A	0.2	A			1.4	A												471		20							
		WB	9	2	1	12	1.9	A	0.2	A	0.0	A	1.5	A												493		20							
	9th St at New Parking Access	NB											0.0	A	2.9	A																			
		SB	118		44	162	6.8	A			3.0	A	5.8	A					520	39	89									260	23	57			
		EB	36		46	82	1.8	A	0.2	A			0.9	A					120	20	30														
		WB		70	52	122				0.7	A	0.2	A	0.5			A																		
	9th St at Village Green Pl	NB			7	7					2.8	A	2.8	A	0.5	A							449	20	41										
		SB											0.0	A																					
		EB		160		160				0.6	A		0.6	A																					
	9th St at Village Green Ln	WB	4	113		117	1.9	A	0.2	A			0.2	A										240		20									
		NB	2		8	10	8.7	A			3.3	A	4.1	A	0.6	A								462	20	57									
		SB	9		9	18	7.1	A			3.2	A	4.8	A												242	21	91							
		EB		164		164				0.1	A		0.1	A																					
	WB	5	105	1	111	1.8	A	0.4	A	0.1	A	0.5	A												310		20								
	9th St at Sunset Ln W	NB			3	3					3.5	A	3.5	A	1.9	A																			
		SB	65		43	108	6.7	A			2.7	A	5.2	A																					
		EB	32	151	1	184	2.0	A	0.4	A	0.0	A	0.7	A					180	20	31								230	23	58				
		WB	5	66	50	121	2.3	A	0.7	A	0.2	A	0.6	A																					
Hwy 65 at 9th St	NB	117	310		427	2.5	A	0.7	A			1.2	A	2.3	A																				
	SB		264	23	287				1.2	A	0.0	A	1.1			A			160	22	63														
	EB	43		188	231	11.2	B	1.1	A	4.8	A	5.5	A					250	21	60									130	41	99				
	WB											0.0	A																						

NOTES:

NOTES 1. If the reported queue is greater than zero (0), but less than 20 ft, a minimum of 20 ft is reported.

2. Block Percentage is proportion of analysis time (1 hour) the storage lane or through lane is blocked or blocking.

3. Multiple storage lanes of different length are averaged together to show the "Effective Storage Length" per lane.



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MEMORANDUM

TO: Beth Thorp, Community Development Director

FROM: Greg Anderson, PE - City Engineer (Lic. MN)

DATE: February 19, 2021

RE: Mora Public School District – CUP application for new high school
SEH No. MORA0 145879 14.00

Per your request we have reviewed the Conditional Use Permit (CUP) application submitted by the school district for their new high school to be located off 9th Street. The plans that accompanied the application were prepared by Northland Consulting engineers and received on February 5th. Also included in our review is the Mora High School Traffic Study prepared by SEH and dated January 19, 2021. Our comments are as follows:

TRAFFIC

1. It appears a new crosswalk on 9th Street is intended or should be planned on the east side of the new high school parking lot entrance. The school plans show a new sidewalk from the main entrance doors of the new high school, along the new parking lot/access road, out to 9th Street. This new sidewalk will encourage pedestrian traffic to cross 9th Street at this location for access to the high school rather than use the marked and signed crosswalk at Village Green & 9th Street. A new crosswalk should have the same signage, pavement markings and pedestrian activated flasher as the current crosswalk at 9th Street & Village Green Lane.
2. The traffic study recommends expanding the center left turn lane pavement markings on 9th Street to assist with traffic peaks during school hours. I agree with their suggestion of expanding the center left turn lanes on 9th Street. My question would be who performs and pays the cost of this work?
3. The traffic study results based on the models for when the high school is built found all studied intersections to still be operating at acceptable traffic levels. The only potential areas of concern may be the new high school entrance off 9th Street and the 9th Street at TH 65 intersection.
 - a. High School entrance – The site plan provides approximately 1,000 feet of vehicle storage from the drop off lane in front of the high school doors to the entrance at 9th Street. This is on the low end of what's typically seen for schools this size. If arrival/departure traffic does start to stack on to 9th Street, the school has options to adjust traffic flow internally to alleviate this. If traffic does start to stack on 9th Street, the City should require the school to adjust their internal traffic movements.
 - b. 9th Street & TH 65 - Left turning movements from 9th Street to TH 65 and vice versa will operate at a level of service C, which is acceptable. The City should monitor traffic at this intersection and any accidents while continuing the discussion with MnDOT about future geometric or speed improvements on TH 65.

Engineers | Architects | Planners | Scientists

Short Elliott Hendrickson Inc., 3535 Vadnais Center Drive, St. Paul, MN 55110-3507

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4. The existing city bike trail along the north side of the school athletic fields from Grove Street to TH 65 resides in an existing roadway easement. Will/does the school need to adjust that easement for their new entrance road off Grove Street and the relocation of the bike trail? If the school builds a private road in a public roadway easement, the easement will need to be adjusted. Similarly, if the new bike trail on the north side of the new school road is outside the current easement, a new easement should be recorded to cover the relocated bike trail.
5. Similar to the easement for the bike trail/new school road, the maintenance agreement between the City of Mora and the school district for the bike trail should also be updated to cover the new improvements.

DRAINAGE

1. The final drainage plan and drainage study have yet to be received for our review and approval.
2. We have had ongoing discussions about stormwater on and from the site with Northland Consulting Engineers and I believe we are on the same page as to what the overall intent for drainage on and off the site should entail. The City should include drainage plan review & approval in either their CUP or building permit approvals to ensure this step is completed.

UTILITIES

1. The new high school will require replacement of the existing sanitary sewer connection to the City main in 9th Street. They plan to reinstall the existing pipe at a lower elevation into the existing sanitary manhole in the intersection of 9th Street and Village Green Place. That connection should include the following:
 - a. A watertight, boot type connection in the existing manhole for the revised connection.
 - b. City of Mora public works staff should witness and approve the connection to the existing manhole and backfilling of the sewer trench in the ROW of 9th Street.
 - c. The bituminous patch in 9th Street for the sewer line replacement should be replaced at a 1.5:1 slope based on the depth of the trench.
 - d. The sewer trench shall be backfilled in lifts not greater than 1-foot and the school shall provide a material testing firm to verify compaction meets or exceeds 100% in the top 3-feet of the trench and 95% below 3-feet depth for the sewer trench in 9th Street.
2. I am not aware of a new or replaced water service connection in 9th Street, but if there is one, the above conditions apply with respect to city inspection, bituminous patching, and trench backfilling densities.
3. Has the fire chief reviewed the hydrant locations on the new water line around the high school?

ah/GFA



KANABEC COUNTY PUBLIC WORKS DEPARTMENT

Chad T. Gramentz, PE, Public Works Director

903 Forest Avenue East, Mora, MN 55051

320-679-6300

February 26, 2021

Beth Thorp
Community Development Director
City of Mora

Re: Mora Public School District CUP

Dear Ms. Thorp,

I have received a preliminary site plan for the proposed Mora high school and associated site improvements. My review consists of the proposed projects impacts to N. Grove St. My comments are as follows:

1. The site plan is preliminary in nature and could not be thoroughly reviewed as would be necessary for approval. A final site plan signed by a professional engineer should be submitted.
2. No drainage information was submitted for review. A complete drainage plan signed by a professional engineer should be submitted.
3. A preliminary traffic study was submitted to me by the project team. This study should be finalized and signed by a professional engineer. The study recommends a turn lane at the Pine Ridge entrance. I recommend the planning commission consider the safety benefits of a right turn lane at 7th St., improved shoulders on Grove St., and the extension of 9th St. to Grove St. An expanded scope of the traffic study analysis may be beneficial to help with these decisions.
4. The pedestrian crossing at 7th St. should be analyzed for adequacy with the increased traffic count.

I recommend the following conditions at a minimum:

1. County Engineer approval of site plans, and
2. County Engineer approval of drainage plan.

I will forward my comments on additional review as I receive updated submittals.

Sincerely,

Chad T. Gramentz, PE
Kanabec County Engineer

B-1 CENTRAL BUSINESS DISTRICT

§ 150.130 B-1 CENTRAL BUSINESS DISTRICT.

The B-1 Central Business District is to provide a pedestrian oriented, compact center for retail sales, personal services, and professional offices by grouping compatible businesses and discouraging highway oriented and other land uses that do not mutually support and complement each other.

(A) No building permits shall be issued until a complete drainage system has been reviewed by the city. If deemed appropriate, the City Building Official may require approval of the drainage system by the City Engineer.

(B) All principal structures must have a basement or approved solid footing wall around the perimeter of the structure or a footing around the perimeter of the structure designed by a state licensed engineer and approved by the local building official.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.131 PERMITTED USES.

Within the B-1 Central Business District no structures or land shall be used except for one (1) or more of the following uses.

(A) *Parks, parking lots, etc.* Public parks, parking lots, and walkways.

(B) *Retail sales, services, and businesses.* The following retail sales, services, and businesses:

- (1) Antique or gift shop;
- (2) Appliance store;
- (3) Art and school supplies;
- (4) Auto accessory store;
- (5) Bakery goods sales and baking of goods for retail sale on premises;
- (6) Banks, loan companies;
- (7) Barber shop;
- (8) Bars and taverns;
- (9) Beauty shop;
- (10) Bicycle sales and repair;
- (11) Books, office supplies and stationary store;
- (12) Candy, ice cream, popcorn, nuts, frozen desserts and soft drinks, but not of the drive-in type;
- (13) Camera and photo supplies and studio and film processing;
- (14) Carpet and rugs and floor covering;
- (15) Commercial recreation such as bowling alleys, billiard halls, etc.;
- (16) Delicatessen;
- (17) Drug store;
- (18) Dry cleaning pick-up stations and laundry pick-up stations including pressing;

- (19) Dry goods store;
- (20) Essential service structures;
- (21) Electrical and gas appliance store including incidental repair and assembly but no fabrication or manufacturing;
- (22) Fraternal organizations and civic clubs;
- (23) Frozen food store including locker plant;
- (24) Furniture store including upholstery when conducted as a secondary use;
- (25) Grocery store;
- (26) Offices, administrative, executive, professional, governmental, medical, research;
- (27) Florist shop;
- (28) Printing shops and newspaper offices;
- (29) Plumbing and heating - showrooms and shops (no outside storage);
- (30) Restaurant;
- (31) Shoe store and repair;
- (32) Sporting goods;
- (33) Tailor shop;
- (34) Theater, not of the drive-in type;
- (35) Toy store;
- (36) Variety store;
- (37) Wearing apparel;
- (38) Pawn shops and second hand shops;
- (39) Pet shop or pet grooming, provided no animals are maintained or displayed outside of the building;
- (40) Body art establishments;
- (41) Fitness centers; and
- (42) Public and semi-public buildings. Including, but not limited to, city/town halls, county courthouses and related functions, fire and police stations, post offices and libraries.

(C) *Uses not listed.* Other residential and commercial uses determined by the Planning Commission and City Council to be of the same general character as identified permitted and conditional uses and found not to be detrimental to the general public's health, safety, and welfare. The use will be placed in the permitted or conditional use category based upon its compatibility to those uses listed.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.132 CONDITIONAL USES.

Within the B-1 Central Business District no structure or land shall be used for the following uses except by conditional use permit:

- (A) Permanent outdoor sales.
- (B) Auto service or repair.
- (C) Auto sales. Auto sales, when conducted within a building.
- (D) Farm equipment sales. Farm machinery sales and service.
- (E) Multi-family residential structures and residential units that are above, attached or part of the main structure and are clearly secondary in nature to the main use.
- (F) Funeral homes and mortuaries.
- (G) Veterinary clinics.
- (H) Kennels. Any lot or premises or portion thereof on which four (4) or more dogs and/or cats over six (6) months old are owned, bred, boarded or offered for sale. This shall not include pet shops, veterinary clinics or other such uses regulated herein.
- (I) Any permitted use in the B-2 district not mentioned as a permitted use in the B-1 district.
- (J) Single-family residence. Provided this apply only to parcels which abut upon an R-1, R-3 or R-4 district.
- (K) Halfway house for chemically dependent.
- (L) Outdoor furnaces and boilers, provided the following conditions are met:
 - (1) The applicant shall submit a site plan, drawn to scale, showing the location of the proposed outdoor furnace or boiler in relation to existing structures and property lines as well as proposed screening or enclosure.
 - (2) Outdoor furnaces and boilers shall only be allowed on lots five (5) acres in size or greater. If the lot is divided in the future, so as to be less than five (5) acres, the outdoor furnace shall be removed.
 - (3) Outdoor furnaces and boilers shall be set back a minimum of fifty (50) feet from all property lines when abutting a residential district. When the property does not abut a residential district, the furnace shall comply with minimum setback requirements of the zoning district it is within.
 - (4) No burning materials shall be stored within five (5) feet of the principal structure and materials shall be stored in an orderly fashion.
 - (5) The outdoor furnace or boiler must be enclosed in a structure or screened with fencing and/or other materials as approved by the City Council.
 - (6) When the outdoor furnace or boiler is enclosed in a structure, the structure shall generally match the exterior of the principal structure.
 - (7) When the outdoor furnace or boiler is enclosed in a structure, the structure shall not count against the allowable square footage for future accessory structures, as long as it strictly serves as an enclosure for the furnace or boiler and the structure does not exceed one hundred (100) square feet in size.
 - (8) If the outdoor furnace or boiler is to be replaced, it shall meet the city and/or state requirements in place at that time.
 - (9) The outdoor furnace or boiler shall be UL Listed, or certified per the State Building Code, and the applicant shall follow all manufacturer specifications.

(10) If the outdoor furnace or boiler is taken out of service for a period of one (1) year or more, the permit shall become null and void and the unit and enclosure shall be removed from the property.

(M) Bed and breakfast inn, provided the following are adhered to:

(1) Off-street parking shall be provided in accordance with the parking requirements of § 150.500. A minimum of one (1) off-street parking space per guest room shall be provided in addition to the parking requirements for the zoning district in which the facility is located. Off-street parking is to be screened from the surrounding residences.

(2) Signs shall be in accordance with the sign requirements in § 150.213 and meet the requirements for the zoning district that the business is located within. (Identifying signs to be not more than four (4) square feet in total, located on the building and consistent with the character of the building).

(3) A maximum of five (5) units may be established in a structure.

(4) A bed and breakfast establishment shall show proof of inspection or proof of proper operating licenses by the state and/or country.

(5) All guest rooms shall be contained within the principal structure.

(6) Dining and other facilities shall not be open to the public, but shall be used exclusively by the residents and registered guests.

(7) The maximum stay for guests shall be fourteen (14) days within a thirty (30) day period.

(8) The inn shall comply with all applicable laws, rules, and regulations governing its existence and operation, including, but not limited to, the State Building Code, the State Fire Code, and the State Health Code.

(9) A conditional use permit shall be terminated upon occurrence for the following:

(a) Non-compliance with the provisions of these provisions.

(b) Transfer of ownership of said property from the owner/operator.

(c) The creation of a condition which adversely affects the health, safety, or general welfare of the city or its residents.

(10) The owner or operator shall reside on the property or submit a management plan for approval as part of the conditional use permit.

(N) Churches and other places of worship.

(O) Government buildings. Including, but not limited to, city/town/county/state garages, city/town/county/state utility structures and operations, and jails/correctional facilities.

(P) Health care facilities. Including hospitals, clinics, nursing homes and other similar health care facilities.

(Q) Schools and related functions.

(R) Shopping center. Any contiguous group of two (2) or more retail stores or service establishments, comprising ten thousand (10,000) or more square feet of floor area which provides off-street parking utilized in common by patrons.

(S) Recreational centers.

(T) Land reclamation. See § 150.015.

(U) Mining. See § 150.016.

(V) Gas stations.

(Ord. 395, passed 7-6-2010; Am. Ord. 453, passed 10-17-2017) Penalty, see § 150.999

§ 150.133 INTERIM USES.

Interim uses are those other uses which in the opinion of the Planning Commission are appropriate only on an interim basis, and pursuant to § 150.037.

(Ord. 395, passed 7-6-2010)

§ 150.134 ACCESSORY USES.

The following uses shall be permitted accessory uses:

(A) *Incidental uses.* Any incidental repair or processing necessary to conduct a permitted principal use, however, such accessory use shall not occupy more than fifty percent (50%) of the floor area not more than fifty percent (50%) of the gross man hours required to conduct the permitted principal use.

(B) *Adult use - accessory.*

(1) Adult use accessory shall:

(a) Comprise no more than five percent (5%) of the floor space of the establishment in which it is located.

(b) Comprise no more than ten percent (10%) of the gross receipts of the entire business operation.

(c) Not include any activity except the sale or rental of merchandise.

(d) Not include activities classified as obscene as defined by M.S. § 617.241.

(e) Be prohibited in any location used to dispense or consume alcoholic beverages.

(2) Adult use accessory shall be restricted from and prohibit access to minors by the physical separation of such items from areas of general public access. Business owners shall make reasonable precaution to limit access to minors by:

(a) *Movie rentals.* Display areas shall be restricted from general view and shall be situated in such fashion as to prohibit access and visibility to minors, the access of which is in clear view and under the control of the persons responsible for the operation.

(b) *Magazines.* Publications classified or qualifying as adult uses shall not be accessible to minors and shall be covered with a wrapper or other means to prevent display of any material other than the publication title.

(c) *Other use.* Adult uses accessory not specifically cited in (a) and (b) above shall comply with the intent of this section and only be allowed as a conditional use.

(3) Adult use accessory shall be prohibited from both internal and external advertising and signing of adult materials and products.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.135 PROHIBITED USES.

Residential dwelling(s) as a principal use.

(Ord. 395, passed 7-6-2010)

§ 150.136 AREA, HEIGHT, LOT WIDTH AND YARD REQUIREMENTS.

(A) *Area, frontage, and yard requirements.* The following requirements shall be the minimum permitted in this district:

<i>Area (sq. ft.)</i>	<i>Frontage (ft.)</i>	<i>Height (ft.)</i>	<i>Front Yard Setback (ft.)</i>	<i>Side Yard Setback (ft.)</i>	<i>Rear Yard Setback (ft.)</i>
None specified	None specified	None specified	0	0	0 except it shall be 20 when abutting an R district

(B) No building permits shall be issued until a complete drainage system has been reviewed by the city. If deemed appropriate, the City Building Official may require approval of the drainage system by the City Engineer.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.137 SPECIAL REQUIREMENTS FOR PROPERTIES ABUTTING RESIDENTIAL DISTRICTS.

(A) In addition to the above minimum requirements the owner or developer of property abutting a residential district shall prepare a Site Plan showing the ultimate proposed development. The Site Plan drawn to scale shall, at a minimum, show landscaping, buildings and structures, vehicular and pedestrian access and enough of the surrounding area to indicate the relationship of the proposed development to the adjacent residential uses. The purpose of the Site Plan is to allow an evaluation of how residential uses adjacent to the subject property will be impacted by the proposed development or use. The nature of impacts to be considered shall include appearance, noise, odor, light and fire, traffic, and other hazards.

(B) The Site Plan shall be submitted to the Planning Commission for their review and comment. The Planning Commission shall make a recommendation to the City Council and the City Council upon receiving and reviewing the Planning Commission's recommendation, shall make a decision, whether or not, to approve the Site Plan as a basis for development of the subject property. The issuance of a building permit or permits concerning development on the subject property shall be contingent on an approved Site Plan filed with the city.

(Ord. 395, passed 7-6-2010)

§ 150.138 APPEARANCE.

Construction of accessory buildings over one hundred forty-four (144) square feet and additions to structures on a lot shall match and generally be constructed of, or exceed, the same exterior materials as the structure being added to.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

B-2 GENERAL BUSINESS DISTRICT

§ 150.145 B-2 GENERAL BUSINESS DISTRICT.

The B-2 General Business District is intended to provide a district for commercial activities that are highway or automobile oriented and for quasi-industrial and wholesale enterprises that do not need an industrial setting and have considerable customer contact.

(A) No building permits shall be issued until a complete drainage system has been reviewed by the city. If deemed appropriate, the City Building Official may require approval of the drainage system by the City Engineer.

(B) All principal structures must have a basement or approved solid wall around the perimeter of the structure or a footing around the perimeter of the structure designed by a state licensed engineer and approved by the local building official.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.146 PERMITTED USES.

(A) Within the B-2 General Business District no structure or land shall be used except for one (1) or more of the following uses.

- (1) Auto repair or service;
- (2) Auto sales;
- (3) Armory, exhibition hall, auction hall and stadium;
- (4) Bars and taverns;
- (5) Boat and marine sales;
- (6) Bowling alleys, billiard and pool rooms, and skating rinks, provided the structure in which the use is conducted shall not be located less than fifty (50) feet from an R district boundary line;
- (7) Bakery;
- (8) Bus terminals and taxi stands;
- (9) Business or trade school;
- (10) Building material yard provided it is conducted within a building or within a fence of such construction as to prevent view from the public right-of-way;
- (11) Cabinet and carpentry shops, electrical service, heating, **plumbing**, upholstery and air conditioning service shops;
- (12) Commercial greenhouses;
- (13) Day care facility;
- (14) Essential service structures;
- (15) Farm machinery sales and supplies;
- (16) Feed store;
- (17) Fraternal organizations and civic clubs;
- (18) Garden supply store;

(19) Grocery store;

(20) Laundry and dry cleaning;

(21) Motels, motor hotels, and hotels provided the site shall contain not less than four hundred (400) square feet of lot area per unit;

(22) Public and semi-public buildings: Including but not limited to city/town halls, county courthouses and related functions, fire and police stations, post offices, libraries, and schools and related functions.

(23) Printing shops and newspaper offices;

(24) Restaurant;

(25) Stone and monument sales;

(26) Television and radio stations;

(27) Tire and battery sales but not including battery rebuilding or tire recapping;

(28) Warehousing except the storage of inflammable fluids;

(29) Wholesale offices and showrooms;

(30) Any permitted use in the B-1 district not mentioned as a permitted use in the B-2 district; and

(31) Gas stations.

(B) *Uses not listed.* Other residential and commercial uses determined by the Planning Commission and City Council to be of the same general character as identified permitted and conditional uses and found not to be detrimental to the general public's health, safety, and welfare. The use shall be placed in the permitted or conditional use category based upon its compatibility to those uses listed.

(Ord. 395, passed 7-6-2010; Am. Ord. 453, passed 10-17-2017) Penalty, see § 150.999

§ 150.147 CONDITIONAL USE.

Within any B-2 General Business District no structure or land shall be used for the following uses except by conditional use permit:

(A) Open sales lot. Open sales or rental lots. (Other than auto or boat. See § 150.146)

(B) Kennels. Any lot or premises or portion thereof on which four (4) or more dogs and/or cats over six (6) months old are owned, bred, boarded or offered for sale. This shall not include pet shops, veterinary clinics or other such uses regulated herein.

(C) Veterinary clinics. Veterinary clinic or animal hospital.

(D) Amusements. Miniature golf course, driving ranges, archery ranges, go-cart track, trampoline centers and boat landing facilities.

(E) Shopping center. Any contiguous group of two (2) or more retail stores or service establishments, comprising ten thousand (10,000) or more square feet of floor area which provides off-street parking utilized in common by patrons.

(F) Drive-ins. Drive-in restaurant subject to the following requirements:

(1) The entire area shall have a drainage system approved by the City Engineer.

(2) The entire area other than that occupied by structures or planting shall be surfaced with a material which will control dust and drainage.

(3) A box curb at least six (6) inches above grade shall separate the public walk from the lot except at approved entrances or exits.

(4) A fence of acceptable design not over six (6) feet in height or less than four (4) feet which is at least fifty percent (50%) closed, shall be constructed along the property in a R district and such fence shall be adequately maintained. The fence shall not be required within the required front yard.

(5) The lighting shall be accomplished in such a way as to have no direct source of light visible from the public right-of-way or adjacent land in residential use.

(G) Car wash. Automated car wash facilities.

(H) Commercial campgrounds.

(I) Night clubs and dance halls.

(J) Funeral homes and mortuaries.

(K) Multi-family residential structures and residential units that are above, attached or part of the main structure and are clearly secondary in nature to the main use.

(L) Service stations.

(M) Storage building. One (1) storage building per principal structure shall be permitted and the maximum floor area shall not exceed one hundred forty-four (144) square feet.

(N) Bed and breakfast inn, provided the following are adhered to:

(1) Off-street parking shall be provided in accordance with the parking requirements of § 150.500. A minimum of one (1) off-street parking space per guest room shall be provided in addition to the parking requirements for the zoning district in which the facility is located. Off-street parking is to be screened from the surrounding residences.

(2) Signs shall be in accordance with the sign requirements in § 150.213 and meet the requirements for the zoning district that the business is located within. (Identifying signs to be not more than four (4) square feet in total, located on the building and consistent with the character of the building).

(3) A maximum of five (5) units may be established in a structure.

(4) A bed and breakfast establishment shall show proof of inspection or proof of proper operating licenses by the state and/or country.

(5) All guest rooms shall be contained within the principal structure.

(6) Dining and other facilities shall not be open to the public, but shall be used exclusively by the residents and registered guests.

(7) The maximum stay for guests shall be fourteen (14) days within a thirty (30) day period.

(8) The inn shall comply with all applicable laws, rules, and regulations governing its existence and operation, including, but not limited to, the State Building Code, the State Fire Code, and the State Health Code.

(9) A conditional use permit shall be terminated upon occurrence for the following:

(a) Non-compliance with the provisions of these provisions.

(b) Transfer of ownership of said property from the owner/operator.

(c) The creation of a condition which adversely affects the health, safety, or general welfare of the city or its residents.

(10) The owner or operator shall reside on the property or submit a management plan for approval as part of the conditional use permit.

(O) Recreational centers.

(P) Self-service storage facility. The storage facility cannot result in an adverse impact on adjacent properties by reason of parking demand, traffic generation, lighting, outdoor activities, fire hazard, safety hazard, visual blight, incompatibility to the surrounding neighborhood, or any other adverse impact as determined by the City Council.

(1) No on-site sales shall be conducted, other than the rental of storage spaces.

(2) All storage shall be fully enclosed within the storage structure.

(3) No containers of flammable or hazardous materials other than normal household quantities shall be stored on-site. Quantities shall be stored per local code requirements. Exception: Quantities over the normal household amounts can be stored if stored per local code and reported and registered with the local fire department.

(Q) Outdoor furnaces and boilers, provided the following conditions are met:

(1) The applicant shall submit a site plan, drawn to scale, showing the location of the proposed outdoor furnace or boiler in relation to existing structures and property lines as well as proposed screening or enclosure.

(2) Outdoor furnaces and boilers shall only be allowed on lots five (5) acres in size or greater. If the lot is divided in the future, so as to be less than five (5) acres, the outdoor furnace shall be removed.

(3) Outdoor furnaces and boilers shall be set back a minimum of fifty (50) feet from all property lines when abutting a residential district. When the property does not abut a residential district, the furnace shall comply with minimum setback requirements of the zoning district it is within.

(4) No burning materials shall be stored within five (5) feet of the principal structure and materials shall be stored in an orderly fashion.

(5) The outdoor furnace or boiler must be enclosed in a structure or screened with fencing and/or other materials as approved by the City Council.

(6) When the outdoor furnace or boiler is enclosed in a structure, the structure shall generally match the exterior of the principal structure.

(7) When the outdoor furnace or boiler is enclosed in a structure, the structure shall not count against the allowable square footage for future accessory structures, as long as it strictly serves as an enclosure for the furnace or boiler and the structure does not exceed one hundred (100) square feet in size.

(8) If the outdoor furnace or boiler is to be replaced, it shall meet the city and/or state requirements in place at that time.

(9) The outdoor furnace or boiler shall be UL Listed, or certified per the State Building Code, and the applicant shall follow all manufacturer specifications.

(10) If the outdoor furnace or boiler is taken out of service for a period of one (1) year or more, the permit shall become null and void and the unit and enclosure shall be removed from the property.

(R) Recycling facility. Recycling facilities are subject to the following minimum requirements:

(1) All operations shall be conducted within a building or an enclosed area.

(2) Facilities shall comply with all Pollution Control Agency (PCA) regulations.

(3) Facilities taking household hazardous waste materials must be licensed by the Minnesota Pollution Control Agency (MPCA).

(4) An MPCA approved recording system shall be maintained indicating the type and quantity of recyclables passing through the facility.

(5) A sign, subject to city approval, shall be posted on premises indicating the facility name, schedule of days and hours of operation and prices for use.

(6) The recycling facility shall be so situated, operated and maintained so as to limit interference with and impact on other activities and uses in the area.

(7) The premises, entrances and exits shall be maintained in a clean and orderly manner at all times.

(8) All incoming and outgoing traffic shall be controlled by the property owner in such a manner as to provide safe and orderly ingress and egress.

(9) All unloading of recyclables from contributing vehicles shall be conducted in such a manner as to eliminate odor and litter outside of the facility.

(S) Churches and other places of worship.

(T) Land reclamation. See § 150.015.

(U) Mining. See § 150.016.

(V) Health care facilities. Including hospitals, clinics, nursing homes and other similar health care facilities.

(W) Residential facilities as defined by § 150.002.

(X) Welding and fabrication.

(Ord. 395, passed 7-6-2010; Am. Ord. 422, passed 5-20-2014; Am. Ord. 435, passed 6-16-2015) Penalty, see § 150.999

§ 150.148 INTERIM USES.

Those other uses which in the opinion of the Planning Commission are appropriate only on an interim basis, and pursuant to § 150.037.

(Ord. 395, passed 7-6-2010)

§ 150.149 ACCESSORY USES.

Within any B-2 General Business District, the following uses shall be permitted accessory uses:

(A) *Incidental uses.* Any incidental repair or processing necessary to conduct a permitted principal use, however, such accessory use shall not occupy more than fifty percent (50%) of the floor area nor require more than fifty percent (50%) of the gross man hours required to conduct the permitted use.

(B) *Adult use - accessory.*

(1) Adult use accessory shall:

(a) Comprise no more than five percent (5%) of the floor space of the establishment in which it is located.

(b) Comprise no more than ten percent (10%) of the gross receipts of the entire business operation.

(c) Not include any activity except the sale or rental of merchandise.

(d) Not include activities classified as obscene as defined by M.S. § 617.241.

(e) Be prohibited in any location used to dispense or consume alcoholic beverages.

(2) Adult use accessory shall be restricted from and prohibit access to minors by the physical separation of such items from areas of general public access. Business owners shall make reasonable precaution to limit access to minors by:

(a) Movie rentals. Display areas shall be restricted from general view and shall be situated in such fashion as to prohibit access and visibility to minors, the access of which is in clear view and under the control of the persons responsible for the operation.

(b) Magazines. Publications classified or qualifying as adult uses shall not be accessible to minors and shall be covered with a wrapper or other means to prevent display of any material other than the publication title.

(c) Other use. Adult uses accessory not specifically cited in (a) and (b) above shall comply with the intent of this section and only be allowed as a conditional use.

(3) Adult use accessory shall be prohibited from both internal and external advertising and signing of adult materials and products.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.150 PROHIBITED USES.

Residential dwelling(s) as a principal use.

(Ord. 395, passed 7-6-2010)

§ 150.151 AREA, HEIGHT, LOT WIDTH AND YARD REQUIREMENTS.

(A) Area, frontage, and yard requirements. The following requirements shall be the minimum permitted in this district:

<i>Area (sq. ft.)</i>	<i>Frontage (sq. ft.)</i>	<i>Height (ft.)</i>	<i>Front Yard Setback (ft.)</i>	<i>Side Yard Setback (ft.)</i>	<i>Rear Yard Setback (ft.)</i>
Principal structures:					
9,000	75	30 or 3 stories, whichever is lesser	20	Same as the R district when abutting an R district	0 except it shall be 20 when abutting an R district

Accessory structures:					
		15			

(B) No building permits shall be issued until a complete drainage system has been reviewed by the city. If deemed appropriate, the City Building Official may require approval of the drainage system by the City Engineer.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.152 SPECIAL REQUIREMENTS FOR PROPERTIES ABUTTING RESIDENTIAL DISTRICTS.

(A) In addition to the above minimum requirements, the owner or developer of property abutting a residential district shall prepare a Site Plan showing the ultimate proposed development. The Site Plan drawn to scale shall, at a minimum, show landscaping, buildings and structures, vehicular and pedestrian access and enough of the surrounding area to indicate the relationship of the proposed development to the adjacent residential uses. The purpose of the Site Plan is to allow an evaluation of how residential uses adjacent to the subject property will be impacted by the proposed development or use. The nature of impacts to be considered shall include appearance, noise, odor, light and fire, traffic, and other hazards.

(B) The Site Plan shall be submitted to the Planning Commission for their review and comment. The Planning Commission shall make a recommendation to the City Council and the City Council upon receiving and reviewing the Planning Commission’s recommendation, shall make a decision whether or not to approve the Site Plan as a basis for development of the subject property. The issuance of a building permit or permits concerning development on the subject property shall be contingent on an approved Site Plan filed with the city.

(Ord. 395, passed 7-6-2010)

§ 150.153 APPEARANCE.

Construction of accessory buildings over one hundred forty-four (144) square feet and additions to structures on a lot shall match and generally be constructed of, or exceed, the same exterior materials as the structure being added to.

(Ord. 395, passed 7-6-2010) Penalty, see § 150.999

§ 150.154 DESIGN STANDARDS.

(A) In addition to all other minimum requirements, the owner or developer of property within the B-2 District shall be required to construct all new buildings in the following manner.

(1) Exterior surfaces of all walls abutting a street or residential district shall be brick, rock face brick, cementitious siding, stone, decorative concrete block, glass, log, cedar, architectural metal siding, stucco, synthetic stucco, or cast in place and/or precast panels.

(2) Under no circumstances shall sheet plywood, sheet metal, corrugated metal, or unfinished concrete block be deemed acceptable as exterior wall material on walls abutting a street or on walls abutting a residential district.

(3) Other materials may be allowed upon site plan approval by the City Council.

(B) These requirements shall not apply to building additions, unless the addition is fifty percent (50%) or greater in floor area than the existing building. In such case, all new and existing exterior surfaces of walls abutting a street or residential district shall meet the requirements of § 150.152.

(C) These requirements shall not apply to residential structures located in the B-2 District, unless the structures are used for non-residential purposes.

(Ord. 395, passed 7-6-2010)