



Aaron Nelson, AICP Director of Planning and Zoning
Lisa Sankey, Planner
Breanna Siegler, Office Manager

www.westfargond.gov

West Fargo Planning & Zoning Commission Agenda
Tuesday, February 11th, 2025 - 5:30 p.m.

- A. Call to Order
- B. Approval of Order of Agenda
- C. Approval of Minutes- January 14th, 2025
- D. Regular Agenda
 - 1. Public Hearing- A24-32 Hope Lutheran Addition, a request for subdivision and zoning change from A: Agricultural to R-1A: Single Family Dwellings in the S ½ of Section 31, T139N, R49W- Sankey ***(continued from the December 10, 2024 meeting)***
 - 2. Public Hearing- A25-2 Maple Ridge at the Preserve 4th Addition, a request for a variance to reduce the required minimum building control line of the CO-SR: Sheyenne River Corridor Overlay District at 3110 Sheyenne River Way (Lot 9, Block 1 Maple Ridge at the Preserve 4th Addition)- Sankey
 - 3. Approval of updates to the Commission Bylaws
- E. Non-Agenda Items
- F. Adjourn from Regular Agenda



www.westfargond.gov

West Fargo Planning & Zoning Commission Meeting Minutes
Tuesday, January 14th 2025 - 5:30 p.m.

Members Present: Joe Kolb, Mike Thorstad, Dave Gust, Matt Kopp

Members Absent: Eric Dodds, Kathi Schwan

Others Present: Aaron Nelson, Lisa Sankey, Katie Schmidt, Breanna Siegler

Minutes Submitted by: Breanna Siegler, Office Manager

The meeting was called to order by Chair Kolb at 5:30pm. Chair Kolb asked for approval of the order of the agenda. Commissioner Gust motioned to approve; Commissioner Thorstad seconded. No opposition. Motion passed.

Commissioner Kopp moved and Commissioner Thorstad seconded the motion to approve the meeting minutes from December 10, 2024. No opposition. Motion passed.

Chair Kolb opened the floor for the election of Commission Chair and Vice-Chair and gave notice that his second term expires in a few months. Commissioner Thorstad motioned to keep Chair Kolb and Vice-Chair Dodds in their prospective positions until their term limits apply. Commissioner Kopp seconded the motion. No opposition. Motion passed.

The applicant for A24-32 Hope Lutheran Addition, a request for subdivision and zoning change from A: Agricultural to R-1A: Single Family Dwellings in the S ½ of Section 31, T139N, R49W has requested continuation of this item until the February 11, 2025 Planning & Zoning Commission meeting. Chair Kolb motioned to approve the continuation.

Chair Kolb opened a Public Hearing for A25-1 Shadow Creek 4th Addition, a request for a variance to reduce the required minimum building control line of the CO-SR: Sheyenne River Corridor Overlay District at 49 35th Ave E (Lot 5, Block 1 Shadow Creek 4th Addition). Chair Kolb asked for public comment. One public comment was brought forth regarding the future presence of trees on the property if this application were to be approved. While a landscaping plan is not required for a variance application, a representative of the applicant stated that there is no intention of removing trees. Chair Kolb closed the public hearing. Discussion held. Commissioner Gust motioned to approve the application with the recommendation listed. Commissioner Thorstad seconded. No opposition. Motion passed.



Chair Kolb opened the floor for Director Nelson to describe the recommendation of HKGi as the chosen contractor for the Growth Area Master Plan. Five proposals were submitted, a selection committee was asked to review the proposals, and then HKGi was chosen as the preferred contractor by the selection committee. Discussion held. Commissioner Gust moved to recommend HKGi as the contractor for the Growth Area Master Plan. Commissioner Kopp seconded. No opposition. Recommendation passed.

Chair Kolb opened the floor to review and approve the 2025 Planning & Zoning Commission meeting dates. Commissioner Gust moved to approve the dates and Commissioner Thorstad seconded. No Opposition. Dates approved.

Chair Kolb opened the floor for non-agenda items. None were brought forth.

Chair Kolb asked for a motion to adjourn from the regular agenda. Commissioner Kopp moved to adjourn. Commissioner Gust seconded. No opposition. Motion passed. Chair Kolb adjourned from the regular agenda at 6:04pm.

Chair Kolb opened the discussion agenda. Director Nelson brought forth the commission bylaws for review. Some of the items included in the review were: clarifying the role of ex-officio members of the commission, modifying the name of the document, reduction of quorum when there are multiple vacancies on the commission, and removing references in section ten about the work program. Chair Kolb confirmed with the City Attorney that reducing the quorum wouldn't be violating any state laws. City Attorney Schmidt confirmed that quorum is considered half or more of the board, but it can be less in certain circumstances.

Director Nelson brought the first draft of short-term rental ordinance to attention. Staff and departments have met once to figure out what they want from an ordinance. The next step will be reconvening multi-departmental group to start reviewing. Director Nelson is asking for PZ Commission feedback because land use will play a part in an ordinance. The City Commission directed staff to create this ordinance. Commissioner Gust agrees with starting this discussion. Chair Kolb thinks it should be regulated through current ordinances.

Chair Kolb adjourned from discussion agenda at 6:23pm.

CITY OF WEST FARGO PLANNING & COMMUNITY DEVELOPMENT

STAFF REPORT

A24-32 SUBDIVISION/REZONING	
Hope Lutheran Addition	
S½ of Section 31, T139N, R49W, City of West Fargo, North Dakota	
Applicant: Judy Aafedt, Hope Lutheran Church & Brian Pattengale, Houston Engineering Owner: 52 nd Ave Partners LLC	Staff Contact: Lisa Sankey
Planning & Zoning Commission Public Hearing:	12-10-24 – Continued; 2-11-25
Public Hearing & 1 st Reading:	
2 nd Reading & Final Plat Approval	

PURPOSE:

Plat and zone land for a religious institution.

STATEMENTS OF FACT:

Land Use Classification:	G-2: Sub-Urban – Growth Sector
Existing Land Use:	Vacant
Current Zoning District(s):	A: Agricultural
Zoning Overlay District(s):	None
Proposed Zoning District(s):	R-1A: Single Family Dwellings
Proposed Lot size(s) or range:	536,044 square feet (12.30 Acres)
Total area size:	12.30 Acres
Adjacent Zoning Districts:	North & West - R-1A: Single Family Dwellings; East – A: Agricultural; South – PUD: Planned Unit Development
Adjacent/Proposed street(s):	9 th Street W (collector); 6 th Street W (Local)
Adjacent Bike/Pedestrian Facilities:	Sidewalks and multi-use path along 9 th Street W; Multi-use path located along the east side of The Wilds development
Available Parks/Trail Facilities:	Park within the Wilds development within ½ mile accessible by multi-use path and sidewalks
Land Dedication Requirements:	Dedication required.

DISCUSSION AND OBSERVATIONS:

- The applicant has submitted an application for subdivision and zoning change from A (Agricultural) to R-1A (Single Family Residential) to accommodate a proposed church facility. Religious institutions are a permitted use within the R-1A: Single Family zoning district.
- The Preliminary Plat includes one lot for a future church site.
- The plat contains a 30-foot trail easement along the south side of the development which provides an opportunity for a future shared use path connection between 9th St W and the unplatted land to the east of the subject property, if needed upon future development of the area to the east. Being the future trail would be a midway public connection to the Park trail system, it was determined by public works, that maintenance would be the City's responsibility.
- The plat also includes a 30-foot utility easement overlapping the trail easement which provides utility connectivity between 9th St W and the unplatted land to the east. The owner may opt to

STAFF REPORT

privately install public utilities or request installation of public utilities within the easement area for the purpose of better accommodating their private utility connections. Determination will be forthcoming as to whether public utilities will be installed within 30' easement and if they would be part of a public improvement project. This information will be incorporated into the subdivision agreement prior to final plat approval.

- As part of the subdivision process, public dedication of 10% of the property being platted is a requirement. A letter from the Park District in terms of their preference for cash-in-lieu for land has yet to be received as the West Fargo Park District will not be meeting on this until Wednesday, February 12, 2025. Public dedication requirements will be detailed within a public dedication agreement to accompany the final plat.
- No additional right-of-way is necessary to accommodate the proposed plat.
- Access control is shown on the plat along 9th Street with openings to line up with the streets to the west. Driveway access from 9th St W into the development will line up with 51st Avenue West and Mulberry Lane to the west along 9th Street West.
- A southbound left turn lane from 9th St W at the intersection of Mulberry Ln is needed to accommodate turning movements into the site during peak traffic periods. Installation of the left turn lane into the development would be a requirement prior to issuance of a certificate of occupancy. These details will be incorporated into the subdivision Development Agreement prior to consideration of final plat approval.
- The northeast corner of the plat sits in proximity to 6th St W, where the applicant has indicated their intent to secure an access easement to connect a driveway to 6th St W at this location, as shown on their draft site plan.
- Wetland Delineation/Determination will need to be submitted prior to final plat approval.
- The applicant held an informational/neighborhood meeting on January 23, 2025 in which the applicant shared an updated site plan and renderings. While many attendees expressed support for the project, some attendees expressed concern regarding traffic through the neighborhood, among other questions relating to such things as drainage and maintenance of the property.
- To date, staff has received several comments from the public. Comments are summarized in the Notices section (below) and written comments are attached to this staff report.
- A potential increase in neighborhood traffic associated with the proposed church seems to be the primary concern raised. In staff's opinion, most traffic will access the church via 9th St W, which is a collector roadway with capacity capable of handling anticipated traffic. Additionally, most activity for a church typically occurs on Sundays and Wednesday evenings, during off-peak hours. While most churches in the City are located in or adjacent to residential neighborhoods, staff is unaware of any existing traffic issues.
- Regarding other concerns raised regarding the church and location, staff notes that religious institutions, such as churches, are permitted by-right within single-family zoning districts. The proposed rezoning to R-1A is the same zoning district as adjacent properties to the west and north of the subject property and is consistent with the residential nature of the surrounding neighborhood. While the applicant has provided a draft site plan to illustrate the proposed development, site plan review and approval is outside of the purview of the subdivision and rezoning approval process.

STAFF REPORT

NOTICES:

Sent to:	Property owners within 150' and applicable agencies and departments
----------	---

Comments Received:

- Several property owners to the south asked for trees and plantings along the south side of the church parking lot for screening between the lot and the Ranch at the Wilds development.
- Other comments received were regarding increased traffic into the neighborhood, as well as the size of the structure within a residential district.
- A comment was also received concerning churches being tax exempt.

CONSISTENCY WITH COMPREHENSIVE PLAN AND OTHER APPLICABLE CITY PLANS AND ORDINANCES:

- Overall, the proposed development is consistent with City plans and ordinances.
- The proposed rezoning to R-1A is consistent with existing zoning of abutting property and the residential nature of the area.
- The proposed subdivision complies with applicable subdivision standards and accommodates opportunity for future trail and public utility connectivity for adjacent undeveloped areas via establishment of easements.
- Parks and Recreation Big Ideas discusses addressing incomplete gaps and the need to provide a continuous and seamless network of trails/paths for residents' enjoyment and transportation needs. A connection from existing facilities to the north and a future multiuse path would facilitate this connection, as would the east/west connection along the south side of the development as shown on the area plan.
- Under Connectivity in the section of Urban is Back, West Fargo 2.0 discusses how in typical communities, "connectivity" means that all streets should be connected to other streets, maximizing the number of routes to and from a destination. By avoiding dead ends and cul-de-sacs and creating an interconnected street network, drivers, cyclists, pedestrians, and emergency services can choose from a number of different options. Greater connectivity allows for traffic to disperse, minimizing congestion by providing multiple ways to get from point A to point B. West Fargo's development patterns in the last couple of decades have reduced the number of interconnected streets, increasing traffic on the few major roads in and out of neighborhoods.

RECOMMENDATIONS:

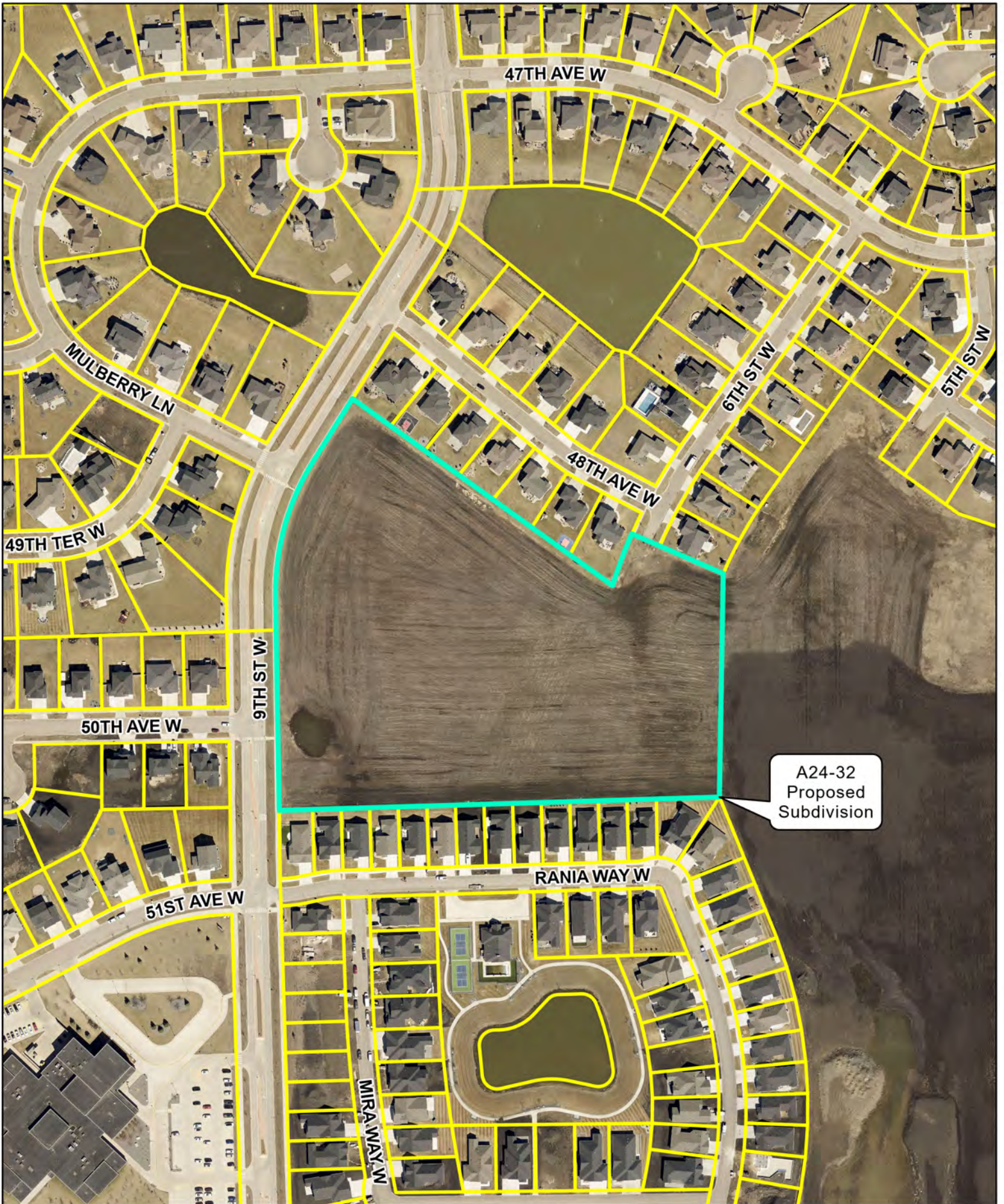
It is recommended that the City approve the proposed subdivision and rezoning application on the basis that it is consistent with City plans and ordinances with recommended conditions of approval as follows:

1. The applicant continues to work with staff as to the details of the public land dedication and that a signed Public Dedication Agreement and a signed Subdivision Development Agreement are submitted prior to final plat approval, outlining such details.

STAFF REPORT

Attachments

1. Aerial map
2. Zoning map
3. Preliminary plat
4. Proposed site plan
5. Area Plan
6. Property owner comments



A24-32
Proposed
Subdivision

Features

 Agenda Zone  Lots





West Fargo Zoning

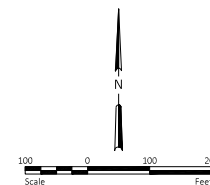
A: Agricultural	LI: Light Industrial	R-1SM: Mixed One and Two Family Dwelling
C: Light Commercial	M: Heavy Industrial	R-2: Limited Multiple Dwelling
C-OP: Commercial Office Park	P: Public	R-3: Multiple Dwelling
DMU: Downtown Mixed Use	PUD: Planned Unit Development	R-4: Mobile Home
EMU: Entertainment Mixed Use	R-L1A: Large Lot Single Family Dwelling	R-5: Manufactured Home Subdivision
HC: Heavy Commercial	R-1A: Single Family Dwelling	R-1E: Rural Estate
	R-1: One and Two Family Dwelling	R-R: Rural Residential



0 150 300
US Feet

HOPE LUTHERAN ADDITION

BEING A PLAT OF A PORTION OF THE SOUTH HALF
OF SECTION 31, T. 139 N., R. 49 W.
TO THE CITY OF WEST FARGO,
CASS COUNTY, NORTH DAKOTA

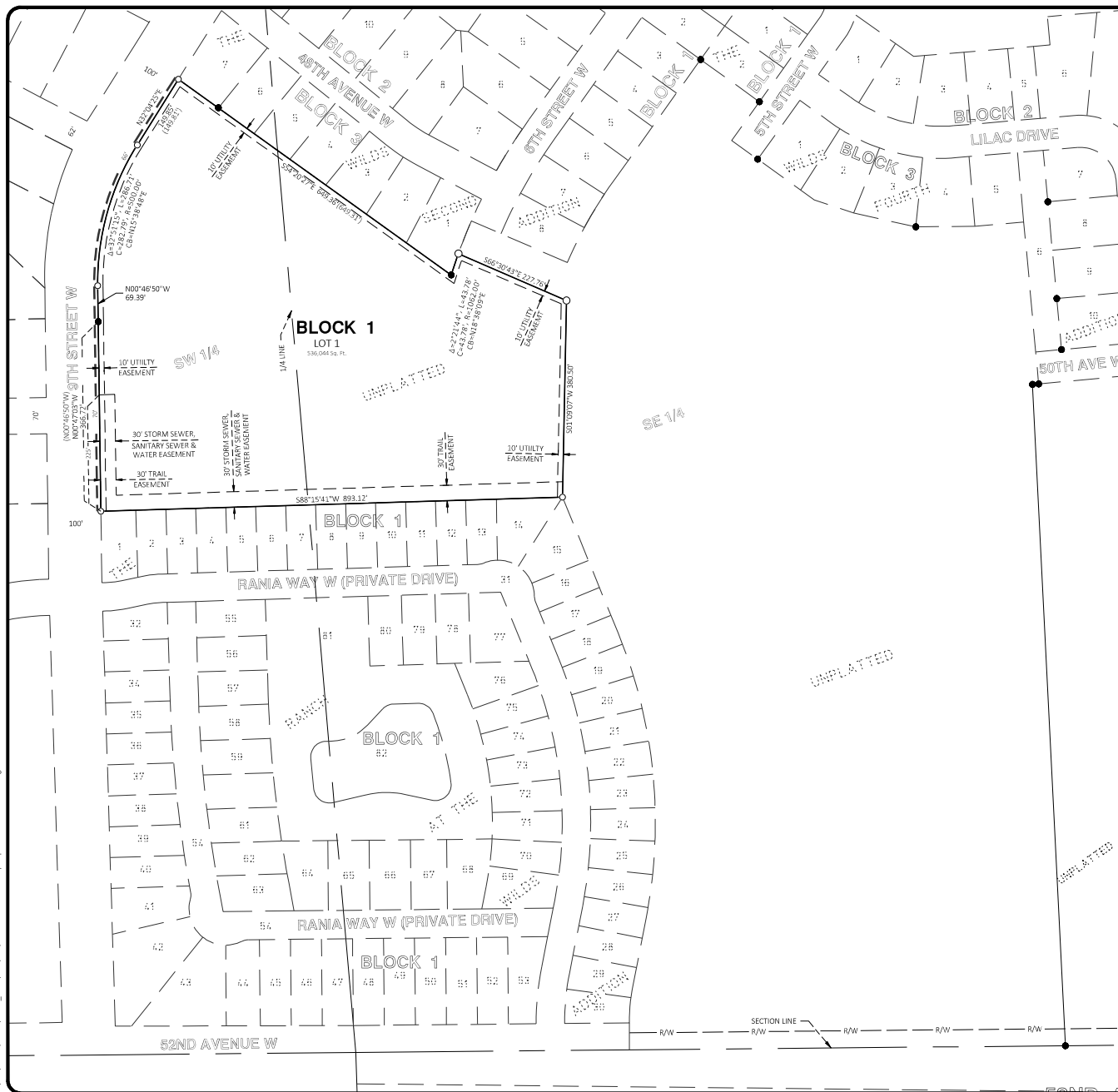


LEGEND

IRON MONUMENT FOUND	○
1/2" I.D. PIPE SET	●
MEASURED BEARING	N00°00'00"E
PLAT BEARING	(N00°00'00"E)
MEASURED DISTANCE	100.00'
PLAT DISTANCE	(100.00')
PLAT BOUNDARY	---
EXISTING LOT LINE	---
NEW EASEMENT	---
EXISTING EASEMENT	---
ACCESS CONTROL	---

BEARINGS SHOWN ARE BASED ON THE
WEST FARGO COORDINATE SYSTEM.

H:\BOL\12298\12298_0002\CAD\BOL\12298_0002 Preliminary Hope Lutheran Addition.dwg



PRELIMINARY PLAT



Sheet 1 of 2
Project No. 12298-0002

HOPE LUTHERAN ADDITION

BEING A PLAT OF A PORTION OF THE SOUTH HALF
OF SECTION 31, T. 139 N., R. 49 W.
TO THE CITY OF WEST FARGO,
CASS COUNTY, NORTH DAKOTA

OWNERS' CERTIFICATE AND DEDICATION

KNOWALL PERSONS BY THESE PRESENTS: That 52nd Ave Partners LLC, a Delaware limited liability company, is the owner and proprietor of that part of the South Half of Section 31, Township 139 North, Range 49 West of the Fifth Principal Meridian, City of West Fargo, Cass County, North Dakota, described as follows:

Beginning at the northeast corner of Lot 14, Block 1, The Ranch at the Wilds Addition, on file at the Cass County Recorder's Office; thence South 88°15'41" West, along the northerly line of Block 1, said The Ranch at the Wilds Addition, for a distance of 893.12 feet to the northwest corner of Lot 1, Block 1, said The Ranch at the Wilds Addition; thence North 00°47'03" West, along the easterly line of 9th Street West, for a distance of 366.72 feet; thence North 00°46'50" West, along the easterly line of 9th Street West, for a distance of 68.39 feet to a point of tangential curve to the right, radius 500.00 feet; thence northeasterly, along said curve and along the easterly line of 9th Street West, for a distance of 286.71 feet, central angle 32°51'15", chord bearing North 15°38'48" East; thence North 32°04'25" East, along the easterly line of 9th Street West, for a distance of 149.85 feet to the southwest corner of Lot 7, Block 3, The Wilds Second Addition, on file at said Recorder's Office; thence South 54°20'27" East, along the southerly line of Block 3, said The Wilds Second Addition, for a distance of 649.36 feet to the southeast corner of Lot 1, Block 3, said The Wilds Second Addition, said corner lying on a nontangential curve, concave to the East, radius of 1,062.00 feet; thence northerly, along said curve and along the easterly line of Lot 1, Block 3, said The Wilds Second Addition, for a distance of 43.76 feet, central angle 02°21'44", chord bearing North 18°38'09" East; thence South 66°30'43" East for a distance of 227.76 feet; thence South 01°09'07" West for a distance of 380.50 feet to the Point of Beginning.

Said tract contains 536,044 square feet, more or less.

And that said party has caused the same to be surveyed and platted as HOPE LUTHERAN ADDITION to the City of West Fargo, Cass County, North Dakota; does hereby dedicate to the City of West Fargo the storm sewer, sanitary sewer, water, and trail easements as shown on this plat; and does hereby dedicate to the public, for public use, the utility easements and the access control easement as shown on this plat.

OWNER:

52nd Ave Partners LLC, a Delaware limited liability company

Signature: _____

Printed Name: _____

Title: _____

State of _____)
County of _____) ss

On this _____ day of _____, 2025, before me, a notary public in and for said

County and State, personally appeared _____

_____ of 52nd Ave Partners LLC, a Delaware limited liability company, known to me to be the person who is described in and who executed the within instrument and acknowledged to me that he executed the same on behalf of said limited liability company.

Notary Public: _____

SURVEYOR'S CERTIFICATE AND ACKNOWLEDGEMENT:

I, Curtis A. Skarphol, Professional Land Surveyor under the laws of the State of North Dakota, do hereby certify that I am the Professional Land Surveyor who prepared and made the attached plat of HOPE LUTHERAN ADDITION to the City of West Fargo; that said plat is a true and correct representation of the survey thereof; that all distances are correctly shown on said plat; and that the monuments for the guidance of future surveys have been located or placed in the ground as shown.

Dated this _____ day of _____, 20____.

Curtis A. Skarphol
Professional Land Surveyor No. 4723

State of North Dakota)
County of Cass) ss

On this _____ day of _____, 20____, before me personally appeared Curtis A. Skarphol, Professional Land Surveyor, known to me to be the person who is described in and who executed the within instrument and acknowledged to me that he executed the same as his free act and deed.

Notary Public: _____

CITY ENGINEER'S APPROVAL:

Approved by the West Fargo City Engineer this _____ day of _____, 20____.

Daniel R. Hanson, City Engineer

State of North Dakota)
County of Cass) ss

On this _____ day of _____, 20____, before me personally appeared Daniel R. Hanson, West Fargo City Engineer, known to me to be the person who is described in and who executed the within instrument and acknowledged to me that he executed the same as City Engineer.

Notary Public: _____

WEST FARGO PLANNING COMMISSION APPROVAL:

Approved by the City of West Fargo Planning Commission this _____ day of _____, 20____.

Joseph F. Kolb, Chairman
West Fargo Planning Commission

State of North Dakota)
County of Cass) ss

On this _____ day of _____, 20____, before me personally appeared Joseph F. Kolb, Chairman, West Fargo Planning Commission, known to me to be the person who is described in and who executed the within instrument and acknowledged to me that he executed the same on behalf of the West Fargo Planning Commission.

Notary Public: _____

WEST FARGO CITY ATTORNEY APPROVAL:

I hereby certify that proper evidence of title has been examined by me and I approve the Plat as to form and execution this _____ day of _____, 20____.

Katie J. Schmidt, City Attorney

State of North Dakota)
County of Cass) ss

On this _____ day of _____, 20____, before me personally appeared Katie J. Schmidt, West Fargo City Attorney, known to me to be the person who is described in and who executed the within instrument and acknowledged to me that she executed the same as West Fargo City Attorney.

Notary Public: _____

WEST FARGO CITY COMMISSION APPROVAL:

Approved by the West Fargo City Commission this _____ day of _____, 20____.

Bernie L. Dardis
President of the West Fargo City Commission

Dustin T. Scott
City Auditor

State of North Dakota)
County of Cass) ss

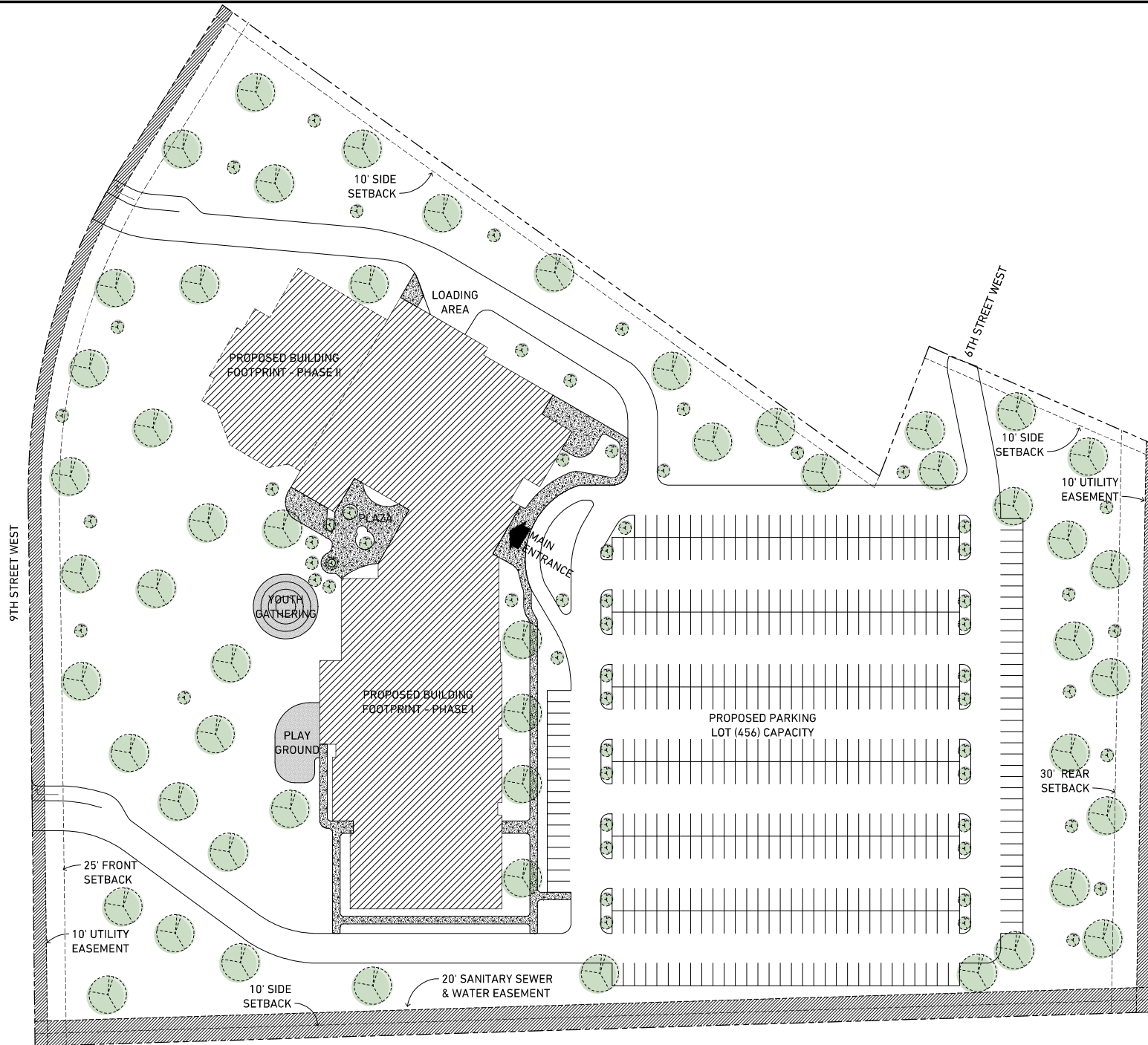
On this _____ day of _____, 20____, before me personally appeared Bernie L. Dardis, President of the West Fargo City Commission; and Dustin T. Scott, City Auditor, City of West Fargo, known to me to be the persons who are described in and who executed the within instrument and acknowledged to me that they executed the same on behalf of the City of West Fargo.

Notary Public: _____



Sheet 2 of 2
Project No. 12298-0002

PRELIMINARY PLAT



1 SITE CONCEPT
SCALE: 1" = 30'-0"



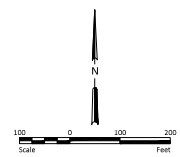
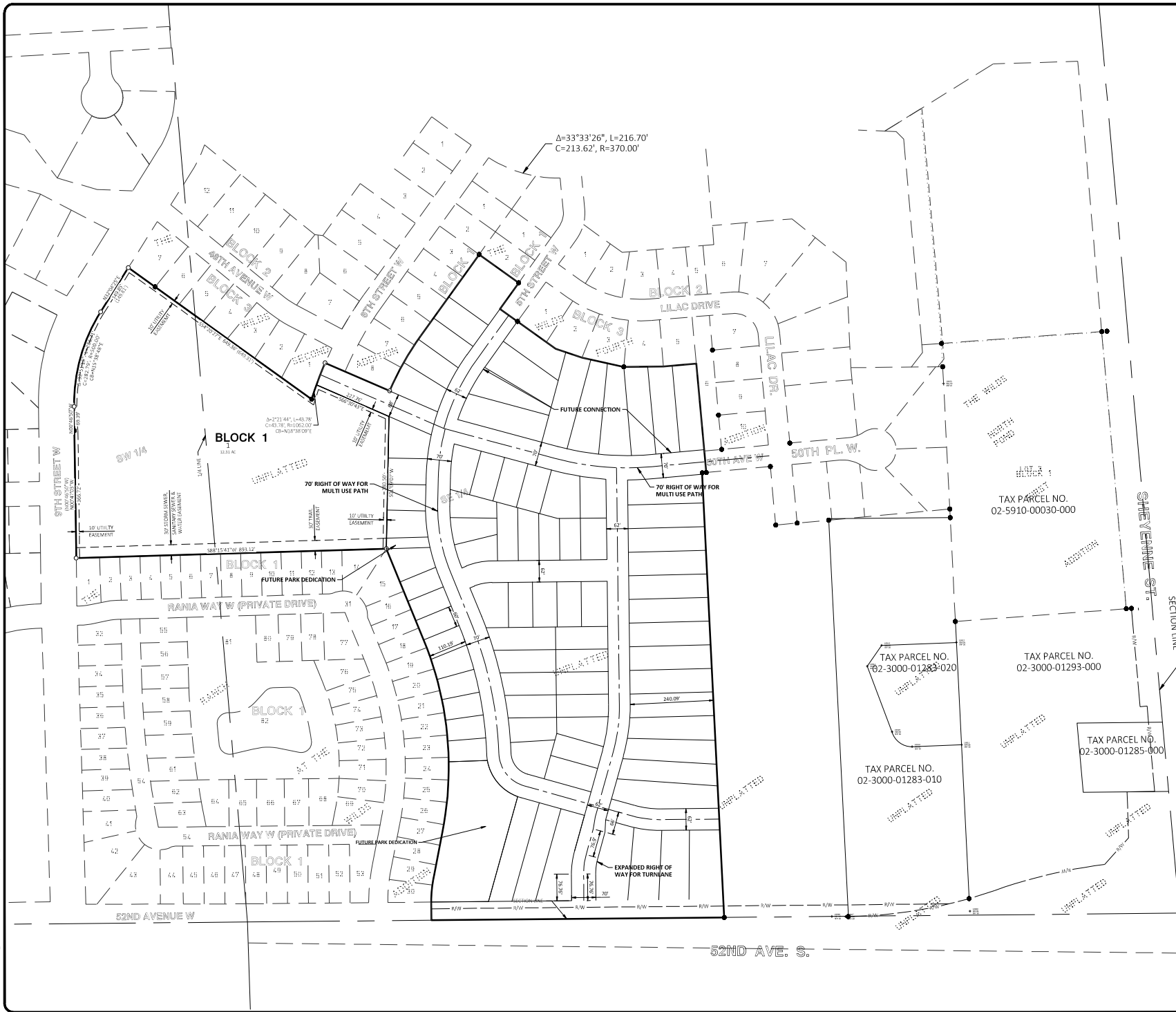
LOT COVERAGE

551,536 SF LOT
260,590 SF COVERAGE

47.2% COVERAGE
52.8 % GREEN SPACE

**HOPE LUTHERAN
CHURCH - WEST FARGO**

H:\JUN12\2298\12298\12298_12298_000\CAD\DWG\Area Plan Concept.dwg - 12/22/2024 4:29 PM (jparagah)



FUTURE LAND USE PLAN
ASSUMES AREA TO BE R1-A
ZONING.

MINIMUM LOT AREA = 6,000 S.F.
MINIMUM LOT WIDTH = 60'

HOPE LUTHERAN ADDITION
WESTLAKE, TX
AREA PLAN



Drawn By
BTP

Checked By
BTP

Date
12-18-24

Scale
As Shown

Project No.
12298-0002

SHEET
1

PRELIMINARY
NOT FOR CONSTRUCTION

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Hope Church build
Date: Thursday, December 5, 2024 9:20:25 AM

We are very excited to have Hope Church build on the lot to the north of our property. But I would encourage you to ask them to plant trees bordering our fence and along the south side of their parking lot. The design drawing shows a lot of trees on the other sides but not between their parking lot and our Ranch at the Wilds fence line. The original drawing that the church shared showed a row of trees and plantings but this new version does not.

Please share this concern with them.

Thank you,
Claudia Wolsky
806 Rania Way
West Fargo
Sent from my iPhone

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Planned unit development located at S1/2 of section 31, T139N R49W
Date: Friday, December 6, 2024 11:17:03 AM

Hello Lisa,

Unfortunately I am unable to attend the December 10th Planning and Zoning commission meeting. However, I would like to voice my concerns with this proposal. I live at 4767 6th Street W. in West Fargo. My first concern is the excessive influx of traffic that would be caused by this plan. Seeing the plan to have 6th street go directly into the church parking lot will cause an excessive amount of traffic on a small side street that is not capable of handling that amount of traffic. I am also concerned with the cost that will occur for us within the neighborhood. Studies have shown that a church being built within a neighborhood typically causes an increase in taxes. In addition, there is a school just down the street roughly a block to a block and a half away on 9th Street. Even the road in 9th Street does not seem suitable for the amount of traffic the church will receive. This will most likely cause further congestion and traffic issues with no possible solution in the future as the road would not be able to be expanded or changed. Overall, I do not see this plan as being an overall benefit to my family or our neighborhood.

Sincerely,

Chris Teeman

From: [REDACTED]
To: [Lisa A. Sankey](mailto:Lisa.A.Sankey@westfargond.gov)
Subject: Re: Planned unit development located at S1/2 of section 31, T139N R49W
Date: Friday, December 6, 2024 11:42:55 AM

Thank you for the response. I was wondering do you happen to know why or what caused the change from the previous rezoning notice we were given roughly 2 years ago? The previous notice had the church going in off of 52nd and to the East of the Ranch development.

On Fri, Dec 6, 2024 at 11:20 AM Lisa A. Sankey <Lisa.Sankey@westfargond.gov> wrote:

Thank you. I'll include your comments in the record and forward on to the Commissioners. Staff is awaiting additional information from the applicant --- updates to the plat and previously approved area plan showing future right of way connections for streets and multi-use trail connections , park dedication, drainage plan – so this item will be continued until the January 14th meeting. Being we advertised for a public hearing for Tuesday night, we'll open up the hearing for comments and continue it until next month.



Lisa Sankey

Planner, City of West Fargo

2515 6th Street East

West Fargo, ND 58078

(701) 515-5376

Visit our website at:

westfargond.gov

From: christopher teeman [REDACTED]
Sent: Friday, December 6, 2024 11:17 AM
To: Lisa A. Sankey <Lisa.Sankey@westfargond.gov>
Subject: Planned unit development located at S1/2 of section 31, T139N R49W

From: [Lisa A. Sankey](#)
To: [Breanna Siegler](#)
Cc: [Aaron M. Nelson](#)
Subject: FW: Hope Lutheran Addition Meeting Continued
Date: Wednesday, February 5, 2025 8:22:12 AM

Breanna,

Could you please save this as a pdf (Hope Lutheran comments folder under commission meetings). And print a copy for the physical folder. Thank you. I'll forward this to the applicants. Lisa

Lisa Sankey
Planner, City of West Fargo

2515 6th Street East
West Fargo, ND 58078
(701) 515-5376
Visit our website at:
westfargond.gov

From: christopher teeman [REDACTED]
Sent: Tuesday, February 4, 2025 8:28 PM
To: Lisa A. Sankey <Lisa.Sankey@westfargond.gov>
Subject: Re: Hope Lutheran Addition Meeting Continued

Hello,

Thank you so much for the update. I am unsure if I will be able to attend so I am sending this email to voice my thoughts.

I want to start by saying that I am strongly opposed to the church being built in the proposed location. A church of this size, will bring in an excessive amount of traffic to our residential roads that are not designed or capable of handling that amount of traffic. The quality of the roads within this neighborhood are poor with heaving and dips already and the excess traffic will only add additional wear and tear. The flow of traffic with the exits and entrances as they are currently proposed appear to be very inefficient and would funnel traffic directly into the neighborhood via the 6th street access directly into the parking lot. When we moved in one of the selling points was that the future development was planned and would be residential keeping the streets quiet. A church of this size would also bring with it additional risk and safety concerns.

An additional question I had and was unsure of the answer based on the plans I saw from the church. Does the current plan meet the ordinance requirement that states there must be at least 30% green space? Assuming I am interrupting that ordinance correctly. I was not sure with the massive structure and parking lot if it met that requirement.

Thank you.

On Thu, Jan 9, 2025 at 10:03 AM Lisa A. Sankey <Lisa.Sankey@westfargond.gov> wrote:

FYI, the Hope Lutheran Addition Plat and Rezoning will be continued until the February 11th Planning and Zoning Commission meeting as we're awaiting additional information from them. Lisa

Lisa Sankey

Planner, City of West Fargo

2515 6th Street East
West Fargo, ND 58078
(701) 515-5376

Visit our website at:
westfargond.gov

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Request for rezoning
Date: Tuesday, December 10, 2024 3:43:11 PM

Lisa,

We are unable to attend the scheduled meeting today at 5:30pm to discuss the rezoning on the area that will be designated as a church (Hope Lutheran West).

We appreciate the ability to respond via email with a response.

We are good with the zoning request, and in fact are members of Hope Lutheran church south.

We reside at 800 Rania Way W- backing on the proposed parking lot.

It appears from the drawing that the parking lot comes to the fence area of the Ranch of the Wilds behind our home. There is a row of approximately 32 car spaces with no tree barrier to the south.

We would request a tree buffer/barrier between the parking lot and the homes to the south.

The homes to the west of ours on Rania Way W have a tree barrier. There are a number of homes near ours (including ours) that have no tree barrier.

Both the north wind and privacy are concerns.

Thank you,

Russ and Mary Kuzel

800 Rania Way W

The Ranch at the Wilds

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Re: Proposed planned unit development- Hope Lutheran church
Date: Tuesday, December 10, 2024 4:43:22 PM

My apologies 6th st did get a notification.

> On Dec 10, 2024, at 4:37 PM, Kayla H [REDACTED] > wrote:

>

> Good Afternoon Lisa,

> I am delayed on this as I thought I'd be able to be at the meeting tonight but I am no longer to make it. I live in the wilds in West Fargo and was notified about Hope Lutheran church wanting to build in our backyard.

>

> I just have a few questions for this proposal. Is there a reason why 52nd Ave is not a further consideration in this? This is going to bring a significant amount of traffic to quieter residential roads. I am also wondering why the home owners on 6th st weren't alerted as their road will now be an outlet per this proposal. These are quiet roads with many children running/biking/scootering etc.

>

> Can there be a consideration to not have 6th st be an outlet?

>

> Thank you,

> Kayla Bates

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: FW: Hope Lutheran | West Campus - West Fargo
Date: Thursday, December 12, 2024 2:54:16 PM

Lisa,

I live at 1039 Mulberry lane in West Fargo. I sent the below email to Paul at Hope Lutheran. I don't believe the church gave ingress/egress to their proposed site much consideration. An entrance/road from 52nd (to the east of the Ranch) would seem to make some logical sense rather than routing all that traffic through the residential areas.

Dave

From: David Perkins
Sent: Friday, October 11, 2024 8:58 AM
To: [REDACTED] >
Subject: West Campus - West Fargo

Hi Paul,

Good morning. I recently received the mailing on the new, West Campus Hope project. I live right across the street on Mulberry and 9th. There are two things that stuck out to me is the lack of ingress/egress to the site and overall safety of those living in the neighborhood. I realize there are 3 access points, but combined, it would likely be wholly inadequate with a significant congregation attendance. Both 9th and 6th Steets are two lane traffic, with a large pedestrian presence (especially on 6th and those cross streets), with traffic routed through streets that aren't capable of handling significant traffic. Hope's situation on the 25th street location has four access points but on roads designed to handle that larger load (and traffic still gets backed up); at least the pedestrian issue is somewhat mitigated at the 25th Street site due to it's larger commercial street (4 lanes on 25th) presence and far fewer homes for the congregation to navigate through to attend church services.

The traffic could be alleviated by adding a 4th access point (or removing one of the 9th

street access points as this is rather redundant) from 52nd/running north/south.

I'm assuming there would be no outside services from a noise standpoint but also wanted to confirm that this too would be a problem moving the church closer to more residential housing. Prairie Heights had a similar issue before the city had them stop outside services.

I do agree this new site lays out better, but without proper access to the new facility, the new site is substantially inferior and a potential concern would be lower attendance than estimated as people likely pick a different location/church. We would plan to vote against this design for these reasons.

Thanks,
Dave

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Re: Hope Lutheran | West Campus - West Fargo
Date: Thursday, January 30, 2025 8:07:49 PM

Lisa,

Has the city, Hope or any involved party involved in this site conducted any kind of traffic study on what this church would bring into the area at their peak operating times?

That proposed north entrance is literally one lane total (not two lanes, one in each direction) in the winter, between snow and cars parked on it. I don't even live on that street and I'm worried about the safety of those on that street with this many vehicles.

That would put most of the stress on 9th which seems inadequate for 400 +/- cars (assuming the stalls in their diagram is what is to be built).

Get [Outlook for iOS](#)

From: Lisa A. Sankey <Lisa.Sankey@westfargond.gov>
Sent: Friday, December 13, 2024 8:35:37 AM
To: David Perkins [REDACTED]
Subject: RE: Hope Lutheran | West Campus - West Fargo

EXTERNAL

Your comments will be entered into the record and forwarded on to the applicants. The reason I believe they are no longer looking at 52nd Avenue W is because the original property owner – Westport – sold a parcel to Hope Lutheran along the east side of Ranch of the Wilds and all the remaining property to the major property owner to the east who does not intend to develop any time soon. They're proposing a land swap to allow for the church development.

Staff is awaiting additional information from the applicant --- updates to the plat and to the previously approved area plan showing future right of way connections for streets and multi-use trail connections, park dedication, drainage plan – so this item will be continued until the January 14th meeting. Being we advertised for a public hearing for Tuesday night, we opened the hearing for comments and continued it until next month.



Lisa Sankey
Planner, City of West Fargo

2515 6th Street East
West Fargo, ND 58078
(701) 515-5376
Visit our website at:
westfargond.gov

From: David Perkins [REDACTED] >
Sent: Thursday, December 12, 2024 2:54 PM
To: Lisa A. Sankey <Lisa.Sankey@westfargond.gov>
Subject: FW: Hope Lutheran | West Campus - West Fargo

Lisa,

I live at 1039 Mulberry lane in West Fargo. I sent the below email to Paul at Hope Lutheran. I don't believe the church gave ingress/egress to their proposed site much consideration. An entrance/road from 52nd (to the east of the Ranch) would seem to make some logical sense rather than routing all that traffic through the residential areas.

Dave

From: David Perkins
Sent: Friday, October 11, 2024 8:58 AM
To: [REDACTED]
Subject: West Campus - West Fargo

Hi Paul,

Good morning. I recently received the mailing on the new, West Campus Hope project. I live right across the street on Mulberry and 9th. There are two things that stuck out to me is the lack of ingress/egress to the site and overall safety of those living in the neighborhood. I realize there are 3 access points, but combined, it would likely be wholly inadequate with a significant congregation attendance. Both 9th and 6th Steets are two lane traffic, with a large pedestrian presence (especially on 6th and those cross

streets), with traffic routed through streets that aren't capable of handling significant traffic. Hope's situation on the 25th street location has four access points but on roads designed to handle that larger load (and traffic still gets backed up); at least the pedestrian issue is somewhat mitigated at the 25th Street site due to it's larger commercial street (4 lanes on 25th) presence and far fewer homes for the congregation to navigate through to attend church services.

The traffic could be alleviated by adding a 4th access point (or removing one of the 9th street access points as this is rather redundant) from 52nd/running north/south.

I'm assuming there would be no outside services from a noise standpoint but also wanted to confirm that this too would be a problem moving the church closer to more residential housing. Prairie Heights had a similar issue before the city had them stop outside services.

I do agree this new site lays out better, but without proper access to the new facility, the new site is substantially inferior and a potential concern would be lower attendance than estimated as people likely pick a different location/church. We would plan to vote against this design for these reasons.

Thanks,
Dave

From: [David Perkins](#)
To: [Lisa A. Sankey](#)
Subject: RE: Hope Lutheran | West Campus - West Fargo
Date: Friday, January 31, 2025 9:09:49 AM
Attachments: [image002.png](#)
[image004.png](#)

Thanks Lisa.

I'm not aware of any church in the Fargo Moorhead area located 100% in a residential neighborhood. Can you share what church lots they reviewed?

Also I put this simple table together to demonstrate the size of this project;

<u>Site</u>	<u>Acres</u>	<u>Parking Stalls</u>	<u>Points of egress</u>
Proposed Hope Campus	12.66	456	3
Eide Bailly Fargo HQ	10.35	325	5
Prairie Heights	15.22	410	4
Triumph (Sheyenne)	7.359	218	2
Hope South Campus	11.25	339 (S)	4
		200 (N)	

From: [REDACTED]
To: [Lisa A. Sankey](#); [REDACTED]
Cc: [REDACTED]
Subject: New church
Date: Friday, December 13, 2024 6:08:00 PM

Hello Lisa,

This email is in response to Russ and Mary Kuzel's comments. We live across the street from the Kuzel's at 801 Rania Way. Our concerns mimic theirs. We are concerned about the north/northwest wind that whips into the front and side of our house. We deal with major snow drifts but currently the field provides some protection for us. Our other concern is having the parking lot so close to our neighborhood and fence. We all need to protect our resale values and my fear is a close parking lot will hinder the values, not to mention impede our view. We also need to consider the increased traffic on 9th street which seems to be the main entrance. During the construction of the round-about on 52nd street the traffic on 9th was almost unbearable. Liberty elementary school is across from us and many kids walk home to and from school. I know the traffic to the church will primarily be Sundays and Wednesdays but this is also something to take into consideration.

My hopes for the land was to be for larger, single family homes which would have green space (yards) that would back up to our neighborhood. If the land, however, must be lotted for a church, a tree line would be requested along with moving the parking lot farther to the north.

Thank you and please reach out with any questions.

Patrick & Rhonda Grenyo

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Proposed PUD - Rezoning off of 9th St W.
Date: Monday, December 23, 2024 8:31:11 AM
Attachments: [image001.png](#)

Good Morning Lisa,

I am writing in response to the notice regarding the rezoning proposal for the church development off of 9th Street in West Fargo. My residence is at 4742 6th St W, which is the road that the current development has platted as an egress street from the church parking lot.

I do oppose the rezoning and struggle with the fact that this is even being considered by the City of West Fargo. This situation seems very forced, putting a large commercial building in the middle of a neighborhood that does not have the infrastructure to support it. This neighborhood has a master plan, that supported additional single-family housing within the subject matter area. While I understand that things may change in direction, this proposal seems to change that original development plan to an extreme measure, and this plan is what many residents were expecting when they purchased a home within the neighborhood, and this neighborhood is still relatively new. A church of this size, with over 400 parking spaces just does not make sense. I would expect a building like this to be directly located off a main thoroughfare, such as Sheyenne St, 52nd Ave, etc.

With the amount of increased traffic, this undermines the safety of children within the area. I assimilate this planned project as no different than putting up a high traffic shopping area within a residential area.

I'm sure the church is getting a "deal" with this land, and I can support the mission of the church, but this seems very erratic and illogical.

Thank you for taking my comments.



Ryan Downs



From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Hope Luther Church West
Date: Wednesday, January 15, 2025 11:40:32 AM

Hi Lisa

Our name is
Greg & Cindy Thrall
830 Rania Way W
West Fargo, ND 58078

Email address
[REDACTED]

We do not support this new proposal of the parking lot for the church!!

The back of our house is on the fence south side of the church property (our home is on the other side of the fence)

As tax payers and citizens of the Ranch in the Wilds and City of West Fargo ,this is ridiculous proposal.

How would anyone from the planning and zoning would even consider such a ridiculous idea.

Our home, master bedroom would be about 25' from the fence, we do not want to staring at parked cars out our bedroom window, and or our patio we could see vehicles, noise pollution. Who will repair the fence when a vehicle hits the fence (Plastic) what about snow piling up, extra runoff and water puddling, mosquitoes & fly's heaven.

What about our value of our home, if we ever sell our home this would be a deterrent for new owners. What guarantee will we have if we sell and get a fair return on our investment!

We need a buffer zone with grass and trees!

Sent from my iPhone

Thanks, Greg



Contact Us - Planning & Zoning

Website: westfargond.gov | Phone: (701) 515-5000

Question / Comment *

I purchased a home in the Wilds, subdivision, The Ranch, this past July. I was aware of the "chance" I was taking when I made the decision to purchase my 836 Rania Way W residence. However, as a former Fargo homeowner, I appreciated the way West Fargo developed its neighborhoods. I was pleased to see Hope Lutheran was to be our neighbor and was supportive of the original plan as first presented to us. However, the redrawn map is concerning when you see the area next to The Ranch development has the row of trees as a buffer next to the fence being replaced with another row of parking. I encourage you to be respectful of our property and reinstate the row of trees as originally presented. Thank you for your consideration of this request.

Claudia Anderson

First Name *

Claudia B

Last Name *

Anderson

Phone Number

[REDACTED]

Email Address *

[REDACTED]

☐ Receive an email copy of this form.

From: [REDACTED]
To: [Lisa A. Sankey](#)
Subject: Concerning change in zoning for Hope Lutheran church
Date: Tuesday, January 28, 2025 3:25:39 PM

I own a home in the Ranch at the Wilds directly south of this parcel of land . I have no objection to the zoning change and the church being built, but would like to see a grassy area and trees planted in the south setback area and along 9th St. West at a minimum and preferably on all four sides of the parcel. Thanks for considering the interests of the homeowners abutting this land!

Donovan Jundt
736 Rania Way W.
West Fargo, ND

STAFF REPORT

A25-2 Request for Variance	
Maple Ridge at the Preserve 4 th Addition	
3110 Sheyenne River Way (Lot 9, Block 1 Maple Ridge at the Preserve 4th Addition)	
Owner/Applicant: Marc & Annie Knutson	Staff Contact: Lisa Sankey
Planning & Zoning Commission Public Hearing:	02-11-2025
Board of Adjustment:	

PURPOSE:

Reduction of the building control line of the CO-SR (Sheyenne River Corridor Overlay) zoning district standards for construction of swimming pool.

STATEMENTS OF FACT:

Land Use Classification:	G-4A Core Retrofit Growth Sector
Existing Land Use:	Single Family Dwelling
Current Zoning District:	PUD: Planned Unit Development
Zoning Overlay District(s):	CO-SR: Sheyenne River Corridor Overlay
Proposed Lot size(s) or range:	34,500 square feet (.79 acres)
Adjacent Zoning Districts:	North, South, and West – PUD: Planned Unit Development; East – R-1A: Single Family Dwellings
Adjacent street(s):	Sheyenne River Way (Local); 32 nd Ave E (Arterial)
Adjacent Bike/Pedestrian Facilities:	Multi-Use Path along 32 nd Ave E
Available Parks/Trail Facilities:	Maple Ridge Park within ½ mile.

DISCUSSION AND OBSERVATIONS:

- The applicant is proposing to construct an inground swimming pool on the west side of their lot.
- A preliminary site plan was submitted with the application showing the location of the structure.
- The applicant is requesting a variance for a reduction of the building control line of the CO-SR: Sheyenne River Corridor Overlay.
- The property is located within the CO-SR (Sheyenne River Corridor Overlay) zoning district, which establishes a building control line that restricts structures, parking lots, fill and other development that may cause increased riverbank destabilization within 100 feet of the “established riverbank as determined by the City Engineer.”
- The applicant proposes encroaching into the 100-foot building control line area along the west side, approximately 60 feet from the established riverbank along the north edge of the pool deck and about 75-80 feet at the south end of the pool. The existing home lies entirely outside the current building control line; however, the proposed swimming pool is within the existing control line
- As provided for in Section 4-431-C.3 of the zoning regulations, the City Commission may reduce the required building control line where it can be demonstrated through a soils analysis that soils are stable within the building control area. Requests for reduction of the building control area are handled via the variance approval process.

STAFF REPORT

- In accordance with the provisions of §4-431-C.3, the applicant has employed a geotechnical firm to provide a soils analysis in respect to the proposed structure. The soils analysis concludes that the swimming pool will not be impacted by soil instability caused by the riverbank.
- SE Cass Water Resource District had some concerns over the following verbiage from the report:
 - Section 1.0 states, "...our scope does not include performing an assessment of slow moving creep-type stability failure" and Section 7.0 states, "As such, future reoccurring maintenance may be necessary to reduce the risk of potential for "stepped" sloughing back towards the property over time."
 - This geotechnical report did not look at geomorphology to determine or assess the likelihood of bank erosion and shallow failures putting the pool at risk.
- The soils analysis has been reviewed by the City Engineer, who has no concerns regarding soil stability based on the findings of the soil analysis. The Engineering Department had commented that the analysis of the existing long term, normal or low pool scenarios of the immediate bank appeared to have factors of safety of less than 1, indicating stability at this location is poor. The phenomenon of slow moving creep-type stability failure is not uncommon along the Sheyenne River in West Fargo. How this may affect the proposed structure over time and propagate into more pronounced failures that could put the integrity of the pool at risk is difficult to estimate.
- The engineering department indicated that the ordinance states multiple conditions should be met as follows. This depends on some interpretation:
 - "Where it can be demonstrated through a soil analysis that soils are stable within the building control area" – the analysis demonstrates that soils are stable outside of the area of the immediate bank.
 - "demonstrate that the soils can accommodate the type of structure, parking lot, or other use without sustaining future damage" – the analysis demonstrates that bank failures of a shear plane type that would jeopardize the proposed structure exceed traditional factors of safety.
- The City Engineer has no concerns regarding soil stability based on the findings of the soil analysis. A copy of the analysis is attached for reference.

NOTICES:

Sent to: Property Owners within 150' and Applicable agencies and departments

- SE Cass Water Resource District provided comments regarding the report, which are discussed above and have been reviewed by City Engineering staff.

CONSISTENCY WITH COMPREHENSIVE PLAN AND OTHER APPLICABLE CITY PLANS AND ORDINANCES:

- The variance is not consistent with the City's standard building control line of 100 feet from the riverbank; however, City ordinance does allow a reduction of the building control area of up to 50 feet upon demonstration that soils are sufficiently stable. The proposal is otherwise consistent with the city's comprehensive plan and other applicable city plans.

RECOMMENDATIONS:

It is recommended that the City approve the reduction of the building control line by up to 40 feet, as described in the American Engineering Testing report of Geotechnical Exploration and Stability Assessment, dated January 2, 2025, with the condition that the owner sign a waiver & release of liability

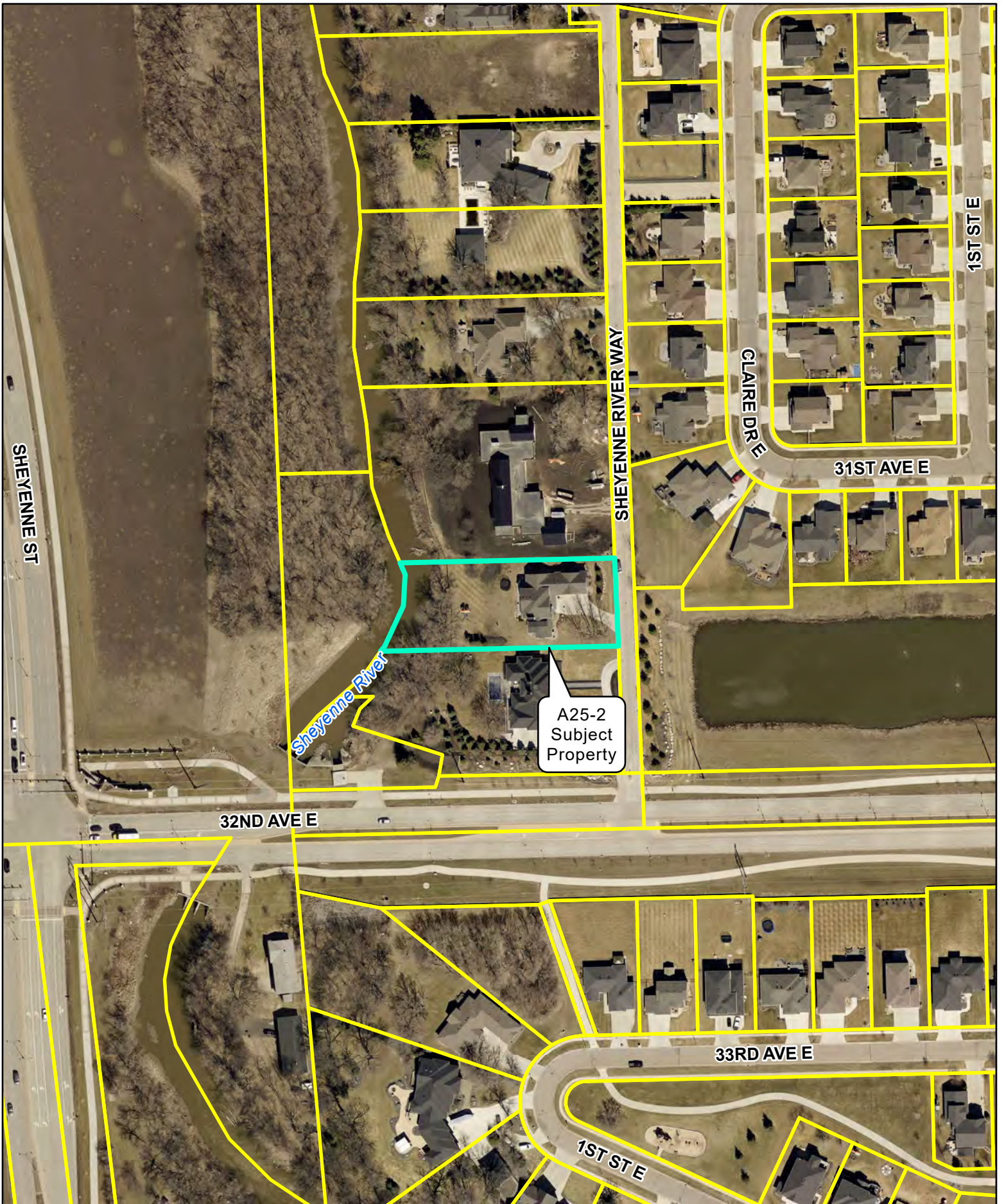
STAFF REPORT

document acknowledging the variance and waiving the City's liability, on the basis of the following findings:

1. §4-431-C.3 states that where it can be demonstrated through a soils analysis that soils are stable within the building control area, the City Commission may consider reduction of the required minimum setback by variance.
2. In accordance with §4-431-C.3, the applicant has provided a soils analysis which demonstrates the soils are sufficiently stable to support the house that encroaches into the required 100' building control area, which has been reviewed and found to be satisfactory by the City Engineer.
3. The reasons set forth in the application justify the approval of the reduction of the building control line, and it is the minimum variance necessary to accommodate the proposed structure.

Attachments

1. Aerial map
2. Zoning map
3. Geotechnical Opinion
4. Landscaping/Site Plan

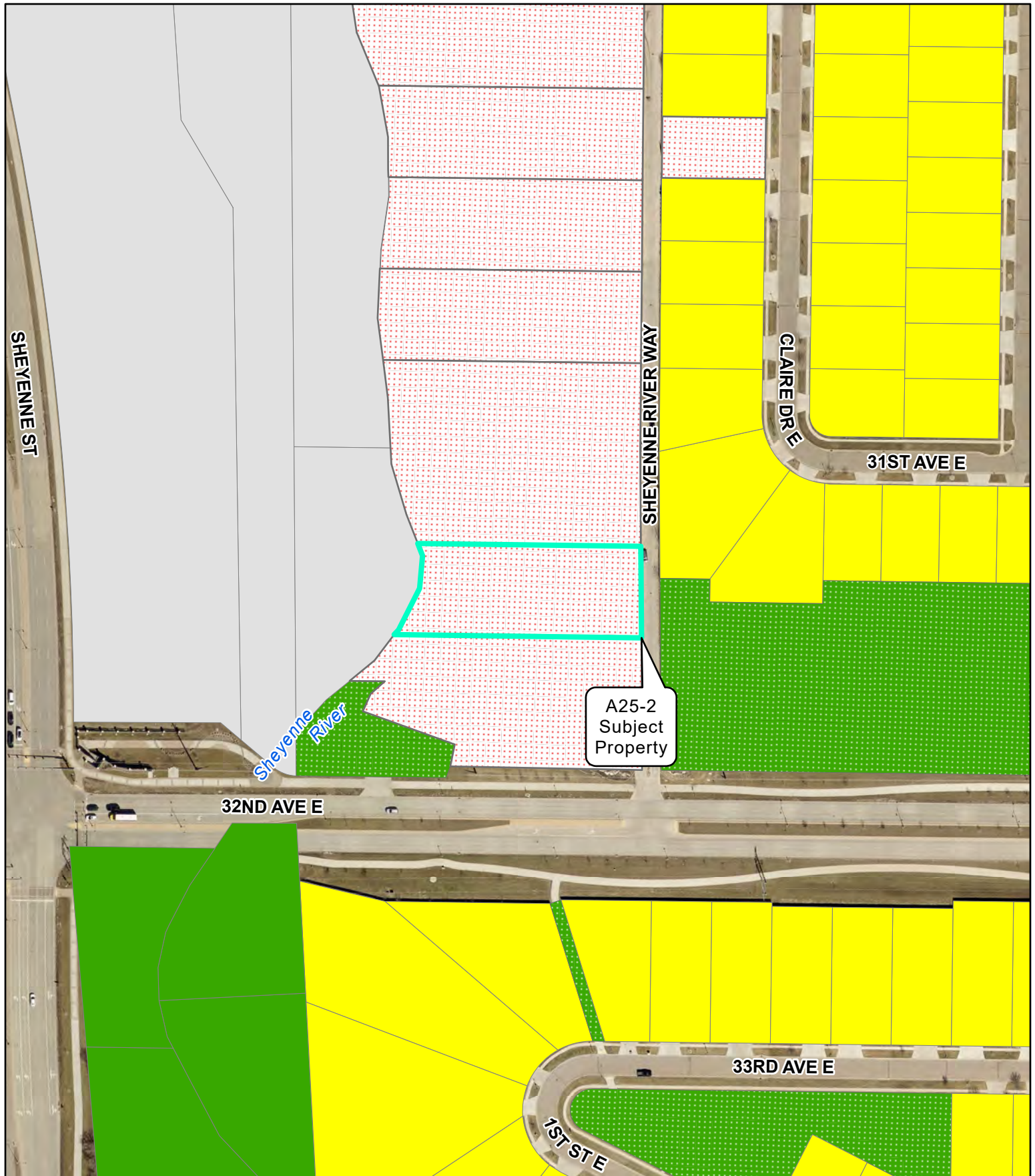


Features

Agenda Zone Lots

0 100 200
US Feet





West Fargo Zoning

A: Agricultural

C: Light Commercial

C-OP: Commercial Office Park

DMU: Downtown Mixed Use

EMU: Entertainment Mixed Use

HC: Heavy Commercial

LI: Light Industrial

M: Heavy Industrial

P: Public

PUD: Planned Unit Development

R-L1A: Large Lot Single Family Dwelling

R-1A: Single Family Dwelling

R-1: One and Two Family Dwelling

R-1SM: Mixed One and Two Family Dwelling

R-2: Limited Multiple Dwelling

R-3: Multiple Dwelling

R-4: Mobile Home

R-5: Manufactured Home Subdivision

R-1E: Rural Estate

R-R: Rural Residential



0 100 200
US Feet



REPORT OF GEOTECHNICAL EXPLORATION AND STABILITY ASSESSMENT

Marc Knutson Pool
West Fargo, North Dakota

AET Project No.
P-0036952

Date:
January 2, 2025

Prepared for:
Marc Knutson

Geotechnical • Materials
Forensic • Environmental
Building Technology
Petrography/Chemistry

American Engineering Testing
3095 42nd Street North
Fargo, ND 58102
TeamAET.com • 701.232.1822



January 2, 2025

Marc Knutson
3110 Sheyenne River Way
West Fargo, ND 58078

RE: Marc Knutson Pool - Stability Assessment
West Fargo, North Dakota
AET Report No. P-0036952

Mr. Knutson:

American Engineering Testing, Inc. (AET) is pleased to present the results of our subsurface exploration program and stability assessments for the proposed swimming pool project at your 3110 Sheyenne River Way residence West Fargo, North Dakota. These services were performed according to our proposal to you dated September 5, 2024.

Please contact us at (701) 232-1822 if you have any questions about the report. We can also be contacted for arranging construction observation and testing services during the earthwork phase.

Sincerely,
American Engineering Testing, Inc.

A handwritten signature in black ink, appearing to read 'Josh Holmes', is positioned above the printed name.

Josh Holmes, PE
Senior Engineer
jholmes@teamaet.com

Jon C Howell, MS PE
Principal Engineer
jhowell@teamAET.com

SIGNATURE PAGE

Prepared for:

Marc Knutson
3110 Sheyenne River Way
West Fargo, ND 58078

Attn: Mr. Marc Knutson

Prepared by:

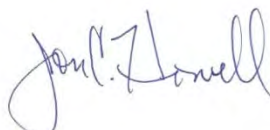
American Engineering Testing, Inc.
3095 42nd Street North
Fargo, North Dakota 58102
(701) 232-1822/www.TeamAET.com

Authored by:



Josh Holmes, PE
Senior Engineer

Reviewed by:



Jon C Howell, MS PE
Principal Engineer



Josh Holmes, P.E.
Date: 1/2/2025

TABLE OF CONTENTS

	<u>Page</u>
TRANSMITTAL LETTER	i
SIGNATURE PAGE	ii
TABLE OF CONTENTS	iii
1.0 INTRODUCTION	1
2.0 SCOPE OF SERVICES	1
3.0 PROJECT INFORMATION	1
4.0 SUBSURFACE EXPLORATION AND TESTING	2
4.1 Field Exploration Program	2
4.2 Laboratory Testing	2
5.0 SITE CONDITIONS	2
5.1 Surface Observations	2
5.2 Subsurface Soils/Geology	2
5.3 Groundwater	3
6.0 STABILITY FINDINGS	3
6.1 EXISTING SHEYENNE RIVER EMBANKMENT	4
6.2 PROPOSED SWIMMING POOL	5
7.0 STABILITY REVIEW	6
8.0 TEST STANDARDS	6
9.0 LIMITATIONS	7
APPENDIX A – Geotechnical Field Exploration and Testing	
Boring Log Notes	
Unified Soil Classification System	
Figure 1 - Boring Locations	
Subsurface Boring Logs	
Laboratory Test Results	
Stability Analysis Results:	
Figures 2 A-F – Existing Sheyenne River Embankment	
Figures 3 A-F – Post Construction of Swimming Pool	
APPENDIX B – Geotechnical Report Limitations and Guidelines for Use	

1.0 INTRODUCTION

The following stated information in this report represents our understanding of the proposed construction. This information is an integral part of our engineering review. It is important that you contact us if there are changes from that described so that we can evaluate whether modifications to our recommendations are appropriate.

We understand the proposed project will include construction of a new swimming pool on the west side of the existing residence located at 3110 Sheyenne River Way in West Fargo, North Dakota. To assist planning and design, you have authorized American Engineering Testing, Inc. (AET) to conduct a subsurface exploration program at the site, conduct soil laboratory testing, and perform stability assessments of the existing Sheyenne River embankment and proposed swimming pool. Our scope is to perform limit equilibrium stability analysis of the proposed slope configuration, our scope does not include performing an assessment of slow-moving creep-type stability failure.

2.0 SCOPE OF SERVICES

AET's services were performed according to our proposal to you dated September 5, 2024, which you authorized on September 23, 2024. The authorized scope consists of the following.

- Two (2) standard penetration test (SPT) borings to a maximum depth of 50 feet
- Soil laboratory testing
- Geotechnical engineering review based on the data and preparation of this report
- Stability assessments

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

3.0 PROJECT INFORMATION

Construction of the 36' x 20' swimming pool with surrounding pool deck (56' x 26') is proposed within the Sheyenne River "set back" zone. Preliminary drawings indicate the west edge of the proposed pool deck will be established approximately 38 feet from the west edge of the existing concrete patio for the house. This relates to the west edge of the pool deck being constructed approximately 60 feet from the crest of the Sheyenne River. We assume an 8 foot pool depth with the deck established at approximate elevation 908.0 feet. LiDAR indicates the riverbank crest at approximately 906.0 feet and the toe near 899.0 feet. Additionally, we assumed the base of a Sheyenne River channel at 895.0 feet near the centerline of the river.

4.0 SUBSURFACE EXPLORATION AND TESTING

4.1 Field Exploration Program

The subsurface exploration program conducted for the project consisted of two (2) standard penetration test borings. Number of borings, boring depths, and boring locations were determined by AET and the client. The logs of the borings and details of the methods used appear in Appendix A. The logs contain information concerning soil layering, soil classification, geologic origins, and moisture condition. A density description or consistency is also noted for the natural soils, which is based on the standard penetration resistance (N-value).

The boring locations are shown on Figure 1 in Appendix A. AET located the approximate location of the borings using GPS. Surface elevations were estimated using publicly available LiDAR data from the Red River Basin.

4.2 Laboratory Testing

The laboratory test program included moisture-density, unconfined compressive strength, Atterberg limits, consolidated-undrained triaxial, unconsolidated-undrained triaxial, and direct shear testing of native clay soils. The test results appear in Appendix A on the individual boring logs adjacent to the samples upon which they were performed, or on the data sheets following the logs.

5.0 SITE CONDITIONS

5.1 Surface Observations

The property for the proposed pool is currently grass covered backyard to the existing house. Other than placement of fill associated with construction of the house, we assume this site has not been previously developed and does not include demolition material from prior occupancy or from other off-site locations. Surface drainage appears to flow west towards the Sheyenne River. The elevation change between borings is approximately 1 foot.

5.2 Subsurface Soils/Geology

The overall subsurface soil profile at the borings consists of approximately ½ to 4 feet of topsoil overlying fill and possible fill clay extending approximately 8.5 to 9 feet below grade, underlain by firm to soft Glacial Lake Agassiz (GLA) soils that extend to termination depth of the borings (maximum 50 feet). The GLA soils are comprised of fat clay having variable color, moisture content, and unit weight. Additional comments on the evaluation of recovered soil samples are presented within the report appendices.

5.3 Groundwater

While we did not encounter measurable groundwater during or at completion of drilling operations, select soil samples recovered during our exploration program were moist. The moisture content of lens soils and host clays can vary annually and per recent precipitation events. Such soils and other regional dependent conditions may produce groundwater entry of project excavations. We direct your attention to other report sections and appendices concerning groundwater issues and subsurface drainage.

6.0 STABILITY FINDINGS

The U.S. Army Corps of Engineers (USACE) has completed extensive geotechnical exploration of regional soils for construction of the existing Sheyenne River Diversion and of the proposed Fargo Flood Diversion. We have referred to a database of soil strength parameters from publicly-available USACE reports and used them in conjunction with our recent site borings and laboratory tests in our assignment of shear strength parameters of soil strata for creation of stability models at your parcel.

Our work relative to this report is based on limited site exploration and laboratory testing of recovered soil samples. We augmented such information with public domain LiDAR survey of the Red River of the North drainage.

As a basis for our stability review, we performed analyses on both the existing and proposed geometry for cross-sections extending perpendicular from Sheyenne River for proposed swimming pool. We developed an assumed model of the slope geometry and various soil strata, using a two dimensional “limit equilibrium” software evaluation of proposed construction [SLOPE/W® 2021 as developed by GEOSLOPE].

We evaluated both short-term conditions using unconsolidated, undrained (UU) shear strength parameters, as well as long-term conditions using consolidated, drained (CD) shear strength parameters under “permanent pool” and “low pool” conditions. Analysis stability models were created using Sheyenne River water surface elevations of 903 feet and 896.5 feet to evaluate “normal pool” and “low pool” conditions, respectively. The “low pool” water elevation of the river was variable depending on weather patterns but was assumed to be approximately 1.5 feet higher than bottom of river. This condition was evaluated as a “rapid drawdown” condition resulting from drought or post flood conditions. Please note that we assumed a relatively shallow channel depth for the below water section of the Sheyenne River that is not provided on the LiDAR survey.

This method is generally consistent with USACE stability analysis protocol. Table 1 presents AET's findings relative to overall site stability analysis of the existing embankment profile and upon completion of proposed building construction. Graphically, SLOPE/W defines the critical location of theoretical shear failure and associated factor of safety at each section presented within the appendices.

Table 1: Summary of Embankment Stability Analysis Factors of Safety ¹

<i>Section</i>	<i>Existing Figures 2A-F</i>	<i>Proposed Pool Figures 3A-F</i>	<i>USACE Acceptance Criteria ¹</i>
Sheyenne River Embankment			
Short Term (UU, Normal Pool)	3.6	3.6	Min. 1.30
Short Term (UU, Low Pool)	2.5	2.5	Min. 1.30
Long Term (CD, Normal Pool)	0.8	0.7	Min. 1.40
Long Term (CD, Low Pool)	0.8	0.7	Min. 1.40
Long Term (CD, Normal Pool)- [Excluded]	1.4*	1.4*	Min. 1.40
Long Term (CD, Low Pool) - [Excluded]	1.4*	1.4 *	Min. 1.40

1. Required factor of safety for deep-seated global stability. Table 6-1b, U.S. Army Corps Engineering Manual "Design and Construction of Levees" [EM 1110-2-1913, 30 April 2000], pg. 6-5.

* - Appended Figures 2E-F and 3E-F indicate probably failure plain for a 1.4 factor of safety occurs away from the proposed pool location and is not changed due to construction of the pool.

6.1 EXISTING SHEYENNE RIVER EMBANKMENT

6.1.1 SHORT-TERM ANALYSIS (UU SOIL STRENGTH)

Our findings of the existing embankment indicate theoretical factors of safety with respect to stability that exceeds the minimum value of 1.3 as recommended by the USACE [reference appended Figures 2A and 2B].

6.1.2 LONG-TERM ANALYSIS (CD SOIL STRENGTH)

Our findings of the long-term stability of the existing river embankment slope geometry indicate theoretical factors of safety with respect to stability under “normal pool” and “low pool” conditions that is less than the minimum value of 1.4 as recommended by the USACE [reference appended Figures 2C-D]. Figures indicate the lateral extent of theoretical soil shear interface predicted by the CD analyses. Such figures indicate a factor of safety that is less than 1.0 with a most probable shear surfaces occurring near or below the crest of the river embankment. Such surfaces are generally limited to a depth equal to or less than 5 to 10 feet below ground surface with soil movement downward and towards the center of the river.

Long term failure of Glacial Lake Agassiz (GLA) formation soils generally fail as a progressive “stair stepped” profile. Local sloughing of steep embankments begin with removal of soils from which further removal of soil becomes necessary to maintain drainage. This soil removal, in turn, further unloads the underlying soil stratum from which reduced shear resistance and further inward movement of embankment / formation of secondary shear surfaces occurs. Such erosive process generally continues until the ground profile approaches equilibrium profile.

We have applied an “exclusion zone” to the stability model to restrict failure near the crest of the embankment to better represent the factor of safety after the “stair stepped” failures have occurred. Such analysis can be used to model the probable shear surface with a 1.4 factor of safety [reference appended Figures 2E-F].

6.2 PROPOSED SWIMMING POOL

6.2.1 SHORT-TERM ANALYSIS (UU SOIL STRENGTH)

Our findings of the proposed slope geometry, as previously detailed, indicate a theoretical factor of safety with respect to stability which greatly exceeds the minimum value of 1.3 as recommended by the USACE [reference appended Figures 3A and 3B for respective depth and lateral extent of soil shear interface predicted by the UU analysis].

6.2.2 LONG-TERM ANALYSIS (CD SOIL STRENGTH)

Similar to the existing conditions, our findings of the long-term stability of the river embankment geometry post pool construction indicate theoretical factors of safety with respect to stability under “normal pool” and “low pool” conditions that is less than the minimum value of 1.4 as recommended by the USACE [reference appended Figures 3C-D]. Figures indicate the lateral extent of theoretical soil shear interface predicted by the CD analyses. As previously mentioned, such figures indicate a factor of safety that is less than 1.0 with a most probable shear surfaces occurring near or below the crest of the river embankment. Such surfaces are generally limited to a depth equal to or less than 5 to 10 feet below ground surface with soil movement downward and towards the center of the river.

Similar to the existing conditions, we have applied an “exclusion zone” to the stability model to restrict failure near the crest of the embankment to better represent the factor of safety after the “stair stepped” failures have occurred. The “low pool” analysis indicates a probable shear surface approximately 20 feet from the pool deck with a 1.4 factor of safety [reference appended [Figures 2E-F]. The “normal pool” analysis indicates a probable shear surface approximately 40 feet from the pool deck with a 1.4 factor of safety.

7.0 STABILITY REVIEW

It is our opinion that pool construction, as proposed, will have a minimal impact on the stability of the existing embankment. Models indicate the proposed failure surfaces post construction will occur in similar location as the existing condition. Likewise, the proposed construction has minimal reduction in factor of safety. This applies to the shallow slough failure near the crest of the embankment in addition to the “excluded” failure.

The analysis model indicates failure near the embankment crest. We utilized conservative soil strengths that may underpredict the safety factor of the existing embankment. However, the presence of past scarping near the toe of the river embankment indicates a factor of safety less than 1.0 may be accurate. As such, future reoccurring maintenance may be necessary to reduce the risk of potential for “stepped” sloughing back towards the property over time.

8.0 TEST STANDARDS

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

9.0 LIMITATIONS

Within the limitations of scope, budget, and schedule, we have endeavored to provide our services according to generally accepted geotechnical engineering practices at this time and location. Other than this, no warranty, express or implied, is intended.

Important information regarding risk management and proper use of this report is given in Appendix B entitled “Geotechnical Report Limitations and Guidelines for Use.”

Appendix A

Geotechnical Field Exploration and Testing

Boring Log Notes

Unified Soil Classification System

Figure 1 – Boring Locations

Subsurface Boring Logs

Laboratory Test Results

Stability Analysis Results:

Figures 2 A-F – Existing Sheyenne River Embankment

Figures 3 A-F – Post Construction of Swimming Pool

Appendix A
Geotechnical Field Exploration and Testing
Report No. P-0036952

A.1 FIELD EXPLORATION

The subsurface conditions at the site were explored by drilling and sampling eight (8) standard penetration test borings. The locations of the borings appear on Figure 1, preceding the Subsurface Boring Logs in this appendix.

A.2 SAMPLING METHODS

A.2.1 Split-Spoon Samples (SS) - Calibrated to N₆₀ Values

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

In the past, standard penetration N-value tests were performed using a rope and cathead for the lift and drop system. The energy transferred to the split-spoon sampler was typically limited to about 60% of its potential energy due to the friction inherent in this system. This converted energy then provides what is known as an N₆₀ blow count.

Most drill rigs today incorporate an automatic hammer lift and drop system, which has higher energy efficiency and subsequently results in lower N-values than the traditional N₆₀ values. We use a Pile Driving Analyzer (PDA) and an instrumented rod to measure the actual energy generated by the automatic hammer system. The drill rig (AET rig number 103) we used for this project has a measured energy transfer ratio of 65%. The N-values reported on the boring logs and the corresponding relative densities and consistencies are from the field blow counts and have not been adjusted to N₆₀ values.

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

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

A.2.3 Sampling Limitations

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

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

A.3 CLASSIFICATION METHODS

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

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

Appendix A
Geotechnical Field Exploration and Testing
Report No. P-0036952

A.4 WATER LEVEL MEASUREMENTS

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

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

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

A.5 LABORATORY TEST METHODS

A.5.1 Water Content Tests

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

A.5.2 Atterberg Limits Tests

Conducted per AET Procedure 01-LAB-030, which is performed in general accordance with ASTM: D4318 and AASHTO: T89, T90.

A.5.3 Sieve Analysis of Soils (thru #200 Sieve)

Conducted per AET Procedure 01-LAB-040, which is performed in general conformance with ASTM: D6913, Method A.

A.5.4 Unconfined Compressive Strength of Cohesive Soil

Conducted per AET Procedure 01-LAB-080, which is performed in general accordance with ASTM: D2166 and AASHTO: T208.

A.6 TEST STANDARD LIMITATIONS

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

A.7 SAMPLE STORAGE

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

DRILLING AND SAMPLING SYMBOLS

Symbol	Definition
B,H,N:	Size of flush-joint casing
CA:	Crew Assistant (initials)
CAS:	Pipe casing, number indicates nominal diameter in inches
CC:	Crew Chief (initials)
COT:	Clean-out tube
DC:	Drive casing; number indicates diameter in inches
DM:	Drilling mud or bentonite slurry
DR:	Driller (initials)
DS:	Disturbed sample from auger flights
FA:	Flight auger; number indicates outside diameter in inches
HA:	Hand auger; number indicates outside diameter
HSA:	Hollow stem auger; number indicates inside diameter in inches
LG:	Field logger (initials)
MC:	Column used to describe moisture condition of samples and for the ground water level symbols
N (BPF):	Standard penetration resistance (N-value) in blows per foot (see notes)
NQ:	NQ wireline core barrel
PQ:	PQ wireline core barrel
RD:	Rotary drilling with fluid and roller or drag bit
REC:	In split-spoon (see notes) and thin-walled tube sampling, the recovered length (in inches) of sample. In rock coring, the length of core recovered (expressed as percent of the total core run). Zero indicates no sample recovered.
REV:	Revert drilling fluid
SS:	Standard split-spoon sampler (steel; 1d" is inside diameter; 2" outside diameter); unless indicated otherwise
SU	Spin-up sample from hollow stem auger
TW:	Thin-walled tube; number indicates inside diameter in inches
WASH:	Sample of material obtained by screening returning rotary drilling fluid or by which has collected inside the borehole after falling through drilling fluid
WH:	Sampler advanced by static weight of drill rod and 140-pound hammer
WR:	Sampler advanced by static weight of drill rod
94mm:	94 millimeter wireline core barrel
▼:	Water level directly measured in boring
▽:	Estimated water level based solely on sample appearance

TEST SYMBOLS

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

STANDARD PENETRATION TEST NOTES

The standard penetration test consists of driving the sampler with a 140 pound hammer and counting the number of blows applied in each of three 6" increments of penetration. If the sampler is driven less than 18" (usually in highly resistant material), permitted in ASTM:D1586, the blows for each complete 6" increment and for each partial increment is on the boring log. For partial increments, the number of blows is shown to the nearest 0.1' below the slash.

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

UNIFIED SOIL CLASSIFICATION SYSTEM

ASTM Designations: D 2487, D2488

AMERICAN
ENGINEERING
TESTING, INC.



Criteria for Assigning Group Symbols and Group Names Using Laboratory Tests ^A				Soil Classification		Notes ^ABased on the material passing the 3-in (75-mm) sieve. ^BIf field sample contained cobbles or boulders, or both, add “with cobbles or boulders, or both” to group name. ^CGravels with 5 to 12% fines require dual symbols: GW-GM well-graded gravel with silt GW-GC well-graded gravel with clay GP-GM poorly graded gravel with silt GP-GC poorly graded gravel with clay ^DSands with 5 to 12% fines require dual symbols: SW-SM well-graded sand with silt SW-SC well-graded sand with clay SP-SM poorly graded sand with silt SP-SC poorly graded sand with clay
				Group Symbol	Group Name ^B	
Coarse-Grained Soils More than 50% retained on No. 200 sieve	Gravels More than 50% coarse fraction retained on No. 4 sieve	Clean Gravels Less than 5% fines ^C	Cu≥4 and 1≤Cc≤3 ^E	GW	Well graded gravel ^F	
			Cu<4 and/or 1>Cc>3 ^E	GP	Poorly graded gravel ^F	
		Gravels with Fines more than 12% fines ^C	Fines classify as ML or MH	GM	Silty gravel ^{F,G,H}	
			Fines classify as CL or CH	GC	Clayey gravel ^{F,G,H}	
	Sands 50% or more of coarse fraction passes No. 4 sieve	Clean Sands Less than 5% fines ^D	Cu≥6 and 1≤Cc≤3 ^E	SW	Well-graded sand ^I	
			Cu<6 and/or 1>Cc>3 ^E	SP	Poorly-graded sand ^I	
		Sands with Fines more than 12% fines ^D	Fines classify as ML or MH	SM	Silty sand ^{G,H,I}	
			Fines classify as CL or CH	SC	Clayey sand ^{G,H,I}	
Fine-Grained Soils 50% or more passes the No. 200 sieve (see Plasticity Chart below)	Silts and Clays Liquid limit less than 50	inorganic	PI>7 and plots on or above “A” line ^J	CL	Lean clay ^{K,L,M}	
			PI<4 or plots below “A” line ^J	ML	Silt ^{K,L,M}	
		organic	Liquid limit—oven dried <0.75 Liquid limit – not dried	OL	Organic clay ^{K,L,M,N} Organic silt ^{K,L,M,O}	
		inorganic	PI plots on or above “A” line	CH	Fat clay ^{K,L,M}	
	Silts and Clays Liquid limit 50 or more		PI plots below “A” line	MH	Elastic silt ^{K,L,M}	
		organic	Liquid limit—oven dried <0.75 Liquid limit – not dried	OH	Organic clay ^{K,L,M,P} Organic silt ^{K,L,M,Q}	
		Highly organic soil		PT	Peat ^R	

SIEVE ANALYSIS

For classification of fine-grained soils and fine-grained fraction of coarse-grained soils.

Equation of “A”-line
Horizontal at PI = 4 to LL = 25.5, then PI = 0.73 (LL-20)

Equation of “U”-line
Vertical at LL = 16 to PI = 7, then PI = 0.9 (LL-8)

Plasticity Chart

Notes

^ABased on the material passing the 3-in (75-mm) sieve.

^BIf field sample contained cobbles or boulders, or both, add "with cobbles or boulders, or both" to group name.

^CGravels with 5 to 12% fines require dual symbols:

GW-GM well-graded gravel with silt
GW-GC well-graded gravel with clay
GP-GM poorly graded gravel with silt
GP-GC poorly graded gravel with clay

^DSands with 5 to 12% fines require dual symbols:

SW-SM well-graded sand with silt
SW-SC well-graded sand with clay
SP-SM poorly graded sand with silt
SP-SC poorly graded sand with clay

$$C_u = D_{60} / D_{10}, \quad C_c = \frac{(D_{30})^2}{D_{10} \times D_{60}}$$

^FIf soil contains $\geq 15\%$ sand, add "with sand" to group name.

^GIf fines classify as CL-ML, use dual symbol GC-GM, or SC-SM.

^HIf fines are organic, add "with organic fines" to group name.

^IIf soil contains $\geq 15\%$ gravel, add "with gravel" to group name.

^JIf Atterberg limits plot is hatched area, soil is a CL-ML silty clay.

^KIf soil contains 15 to 29% plus No. 200 add "with sand" or "with gravel", whichever is predominant.

^LIf soil contains $\geq 30\%$ plus No. 200, predominantly sand, add "sandy" to group name.

^MIf soil contains $\geq 30\%$ plus No. 200, predominantly gravel, add "gravelly" to group name.

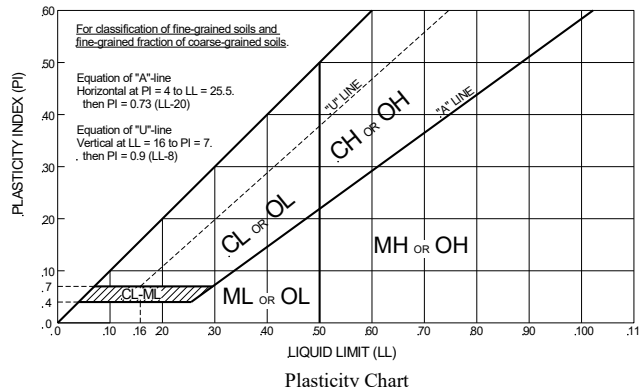
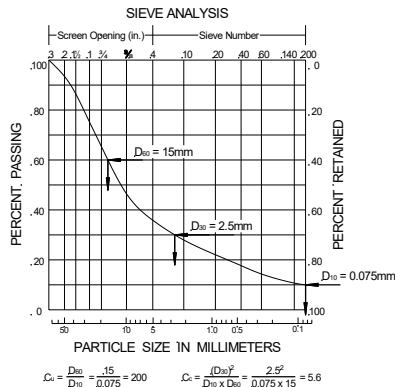
^NPI ≥ 4 and plots on or above "A" line.

^OPI < 4 or plots below "A" line.

^PPI plots on or above "A" line.

^QPI plots below "A" line.

^RFiber Content description shown below.



ADDITIONAL TERMINOLOGY NOTES USED BY AET FOR SOIL IDENTIFICATION AND DESCRIPTION

Grain Size		Gravel Percentages		Consistency of Plastic Soils		Relative Density of Non-Plastic Soils	
Term	Particle Size	Term	Percent	Term	N-Value, BPF	Term	N-Value, BPF
Boulders	Over 12"	A Little Gravel	3% - 14%	Very Soft	less than 2	Very Loose	0 - 4
Cobbles	3" to 12"	With Gravel	15% - 29%	Soft	2 - 4	Loose	5 - 10
Gravel	#4 sieve to 3"	Gravelly	30% - 50%	Firm	5 - 8	Medium Dense	11 - 30
Sand	#200 to #4 sieve			Stiff	9 - 15	Dense	31 - 50
Fines (silt & clay)	Pass #200 sieve			Very Stiff	16 - 30	Very Dense	Greater than 50
				Hard	Greater than 30		
Moisture/Frost Condition		Layering Notes		Peat Description		Organic Description (if no lab tests)	
(MC Column)							
D (Dry):	Absence of moisture, dusty, dry to touch.	Laminations:	Layers less than 1/2" thick of differing material or color.	Term	Fiber Content (Visual Estimate)	Soils are described as <i>organic</i> , if soil is not peat and is judged to have sufficient organic fines content to influence the Liquid Limit properties. <i>Slightly organic</i> used for borderline cases.	
M (Moist):	Damp, although free water not visible. Soil may still have a high water content (over "optimum").					Root Inclusions	
W (Wet/ Waterbearing):	Free water visible, intended to describe non-plastic soils. Waterbearing usually relates to sands and sand with silt.	Lenses:	Pockets or layers greater than 1/2" thick of differing material or color.	Fibric Peat:	Greater than 67%	With roots:	Judged to have sufficient quantity of roots to influence the soil properties.
F (Frozen):	Soil frozen			Hemic Peat:	33 - 67%	Trace roots:	Small roots present, but not judged to be in sufficient quantity to significantly affect soil properties.
				Sapric Peat:	Less than 33%		

Marc Knutson Pool

Project #P-0036952
West Fargo, North Dakota

Legend

- Soil Boring
- Temporary Benchmark

B-02

TBM

B-01

Google Earth

100 ft



Shayenne River Way

Shayenne River



SUBSURFACE BORING LOG

AET JOB NO: **P-0036952** LOG OF BORING NO. **B-01 (p. 1 of 1)**

PROJECT: **Marc Knutson Pool; West Fargo, North Dakota**

SURFACE ELEVATION: **906.8** LATITUDE: **46.83434** LONGITUDE: **-96.90331**

DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							qp	WC	DEN	%-#200	qu
1	ORGANIC CLAY, black (OH) Topsoil	TOPSOIL		M	AS						
2											
3			11	M	SS	12					
4	FAT CLAY, with wood, black to brown (CH)	FILL									
5	Fill		7	M	SS	8					
6											
7											
8				M	TW						
9	FAT CLAY, brown to gray, firm to soft (CH)	FINE ALLUVIUM									
10			7	M	SS	12	1.7	30	102		
11											
12			7	M	SS	18	1.8	33	92		
13											
14											
15			11	M	SS	18	3.5	29	97		
16											
17				M	TW			53	72		
18											
19			8	M	SS	18	1.5				
20											
21											
22											
23											
24											
25	FAT CLAY, dark gray, firm (CH)		5	M	SS	18	1.3	48	76		
26											
27											
28											
29											
30			5	M	SS	18	1.1	55	72		
31	END OF BORING - 31'										

DEPTH: DRILLING METHOD		WATER LEVEL MEASUREMENTS							NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
0-29½'	3.25" HSA	9/27/24	--	31.0	29.5	--	--	None	
BORING COMPLETED: 9/27/24									
DR: BH LG: MJ Rig: 103									

AET CORP W-LAT-LONG MARC KNUTSON POOL - P-0036952.GPJ AET+CPT+WELL GDT 10/21/24



SUBSURFACE BORING LOG

AET JOB NO: P-0036952		LOG OF BORING NO. B-02 (p. 1 of 2)									
PROJECT: Marc Knutson Pool; West Fargo, North Dakota											
SURFACE ELEVATION: 905.6		LATITUDE: 46.83441		LONGITUDE: -96.90350							
DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS				
							qp	WC	DEN	%-#200	qu
1	ORGANIC CLAY, black (OH) Topsoil	TOPSOIL FILL		M	AS						
2	FAT CLAY, trace organics, dark brown to black, firm (CH) Fill										
3			6	M	SS	9		35			
4											
5			5	M	SS	6		28	95		
6	FAT CLAY, dark brown, firm to soft (CH)										
7	Possible Fill										
8			2	M	SS	3		34			
9											
10	FAT CLAY, dark brown, moist, soft, lenses of sand (CH)	FINE ALLUVIUM	3	M	SS	18	0.3	33	98		
11											
12											
13				M	TW						
14	SITLY FAT CLAY, brown to gray, firm, laminations of silt (CH)										
15			5	M	SS	14	1.0	28	105		
16											
17	FAT CLAY, dark brown, firm, laminations of silt (CH)		6	M	SS	18	1.7	32	91		
18											
19											
20	FAT CLAY, dark gray to brown, stiff to soft, mottled (CH)		9	M	SS	18	2.9	36	87		
21											
22											
23											
24											
25			5	M	SS	18	1.4	54	70		
26											
27											
28											
29											
30											
31				M	TW						
32											
33											

DEPTH: 0-39½'		DRILLING METHOD: 3.25" HSA		WATER LEVEL MEASUREMENTS					NOTE: REFER TO THE ATTACHED SHEETS FOR AN EXPLANATION OF TERMINOLOGY ON THIS LOG
		DATE	TIME	SAMPLED DEPTH	CASING DEPTH	CAVE-IN DEPTH	DRILLING FLUID LEVEL	WATER LEVEL	
		9/27/24	--	51.0	49.5	--	--	None	
BORING COMPLETED: 9/27/24									
DR: BH LG: MJ Rig: 103									

AET CORP W-LAT-LONG MARC KNUTSON POOL - P-0036952.GPJ AET-CPT+WELL.GDT 10/21/24



SUBSURFACE BORING LOG

AET JOB NO: P-0036952		LOG OF BORING NO. B-02 (p. 2 of 2)										
PROJECT: Marc Knutson Pool; West Fargo, North Dakota												
LATITUDE: 46.83441		LONGITUDE: -96.90350										
DEPTH IN FEET	MATERIAL DESCRIPTION	GEOLOGY	N	MC	SAMPLE TYPE	REC IN.	FIELD & LABORATORY TESTS					
							qp	WC	DEN	%-#200	qu	
35	FAT CLAY, dark gray to brown, stiff to soft, mottled (CH) <i>(continued)</i>		3	M		SS	18	0.8	66	62		
36												
37												
38												
39												
40												
41												
42												
43												
44												
45			3	M		SS	18	0.7	55	69		
46												
47												
48												
49												
50												
51	END OF BORING - 51'		3	M		SS	18	0.6	60	66		

AET_CORP W-LAT-LONG MARC KNUTSON POOL - P-0036952.GPJ AET+CPT+WELL.GDT 10/21/24

Direct Shear Test

ASTM D3080

Job No.: **15494**

Project/Client: **Marc Knutson Pool / American Engineering Testing, Inc.**

Boring No.: **SB-1**

Sample No. **4**

Depth: **7**

Location:

Sample Type: **TWT**

Soil Type: **Fat Clay with pockets of Silt and Organic Material (CH)**

Test Date: **11/8/2024**

Date Reported: **11/12/2024**

Shear Rate

0.0001 (in/min)

Remarks: Specimens trimmed to given sizes; Inundated after applying normal load. Consolidated and sheared to given displacements at constant rate of 0.0001 inches/minute.

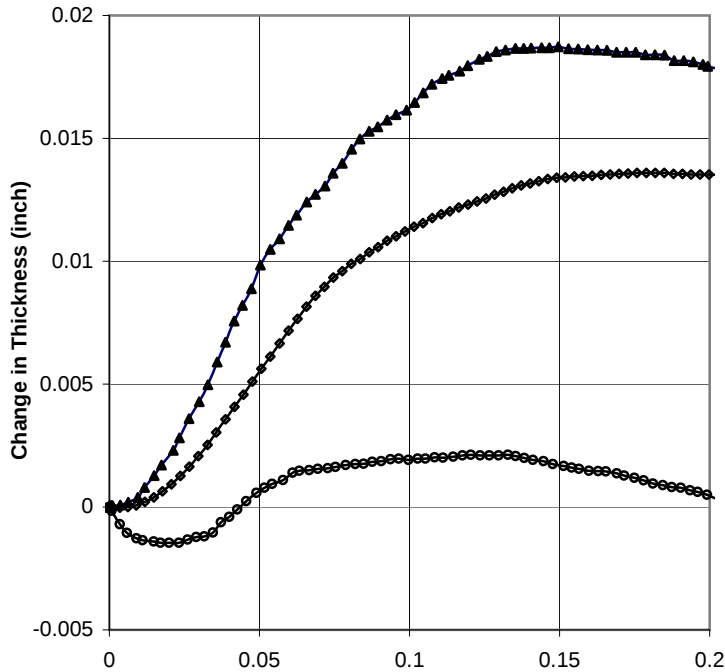
Liquid Limit:

Plastic Limit:

Plasticity Index:

(*) = Assumed Specific Gravity

Specific Gravity (*): **2.74**

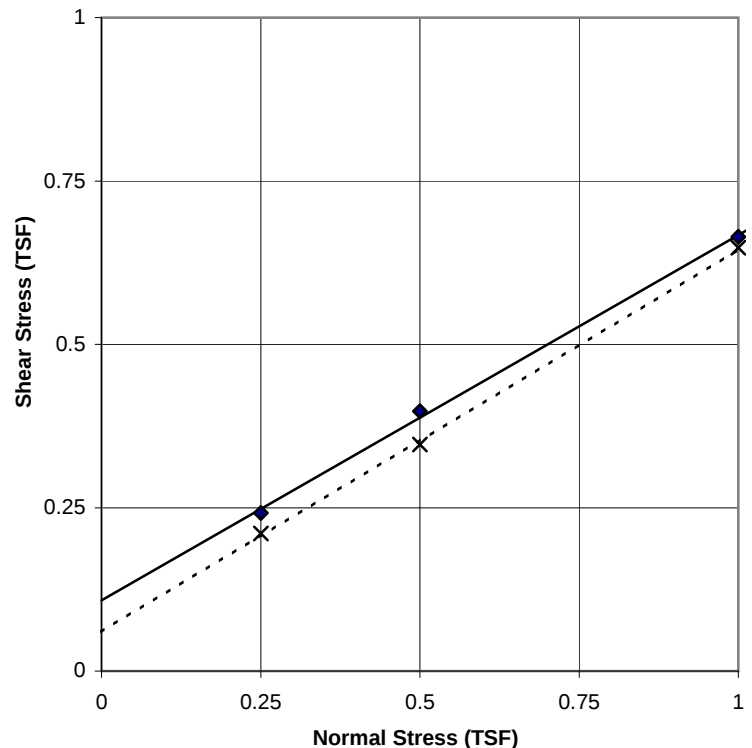
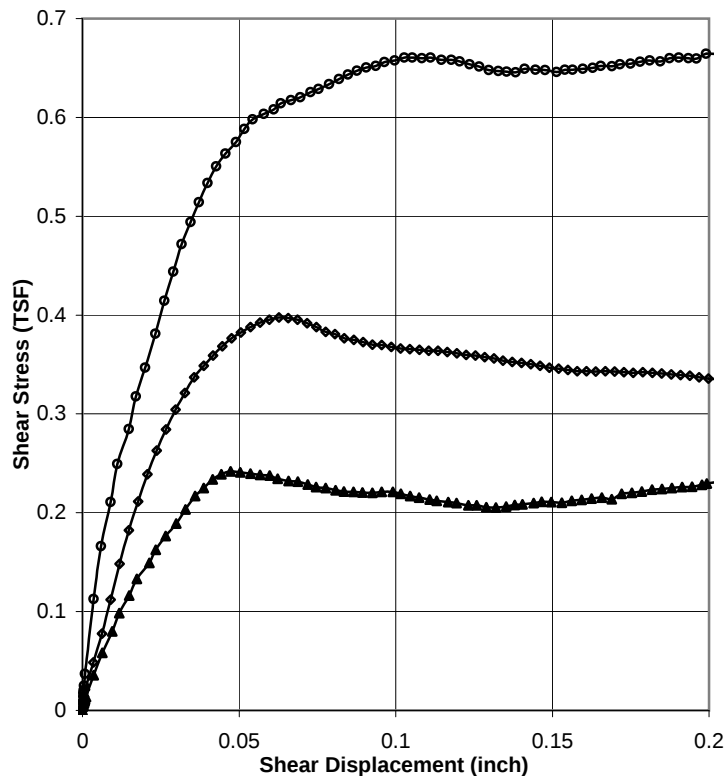


Failure Criterion:

Max Stress	A	B	C	D
Initial	▲	◇	○	X
Diameter (In.)	2.50	2.50	2.50	
Thickness (In.)	0.97	0.97	0.97	
Water Content (%)	28.1	28.0	28.3	
Dry Density (pcf)	92.6	92.5	92.7	
Before Shear				
Thickness (In.)	0.97	0.96	0.95	
Water Content (%)	30.8	30.3	29.8	
Dry Density (pcf)	92.7	93.4	94.1	
Normal Stress	0.25	0.50	1.00	
Shear Stress	0.24	0.40	0.66	

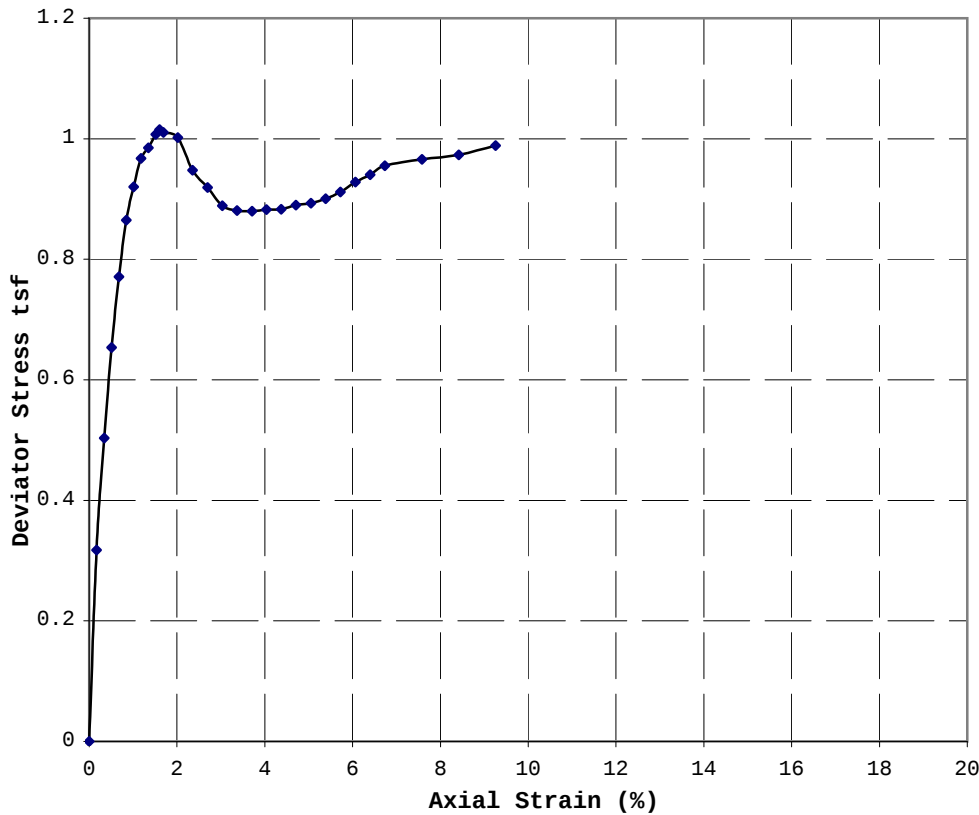
"These tests are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design."

Peak Conditions		At Given Shear Disp. Of: 0.15	
Friction Angle:	$\phi = 29.2$ deg.	Friction Angle:	$\phi = 30.3$ deg.
Apparent Cohesion	0.108 TSF	Apparent Cohesion	0.060 TSF

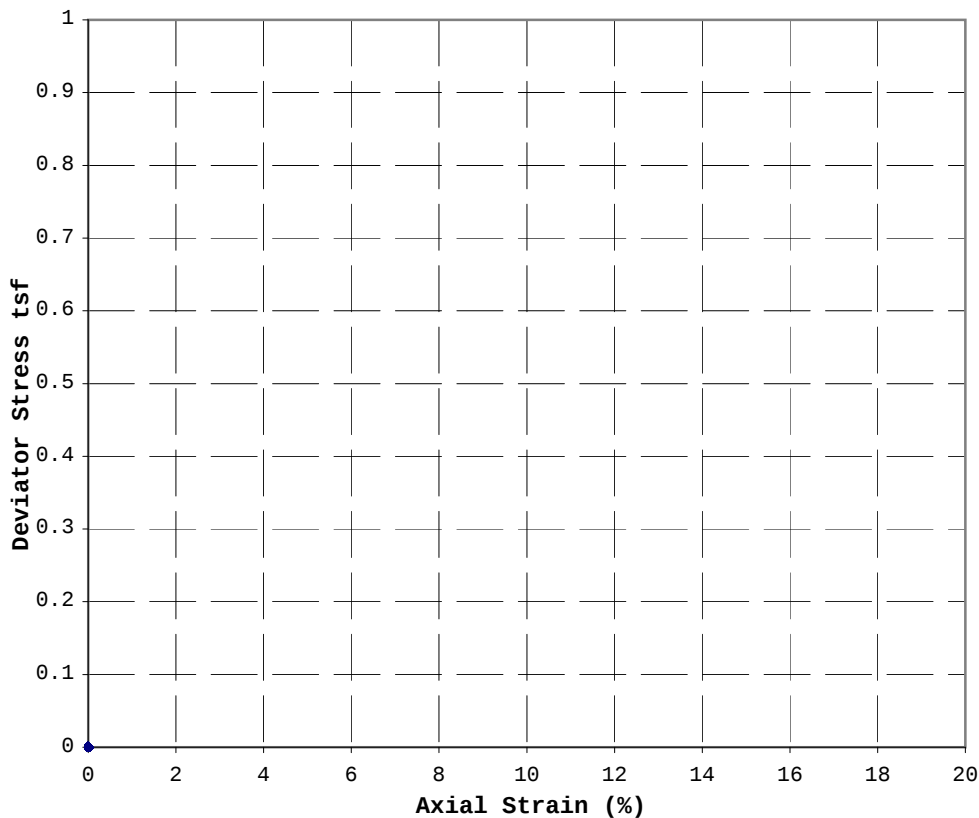


Triaxial U-U Stress/Strain Curves (ASTM:D2850)

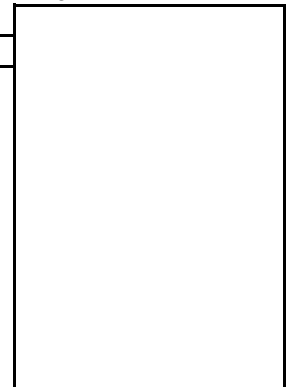
Project: Marc Knutson Pool Job: 15494
 Client: American Engineering Testing, Inc. Date: 11/18/24
 Remarks: Specimens trimmed to given sizes; Allowed to adjust under applied confining pressures for about 10 minutes.



Boring: SB-1 Depth: 17
 Sample #: 8
 Soil Type: Fat Clay (CH)
 Strain Rate (in/min): 0.055
 Sample Type: 3T
 Dia. (in): 2.87 Ht. (in): 5.94
 Height to Diameter Ratio: 2.07
 Max Deviator Stress: 1.02 tsf
 Strain at Failure (%): 1.6
 Confining Pressure: 1.0 tsf
 W.C. (%): 38.2
 Yd (pcf): 82.8



Boring: Depth:
 Sample #:
 Soil Type:
 Strain Rate (in/min):
 Sample Type:
 Dia. (in): Ht. (in):
 Height to Diameter Ratio:
 Max Deviator Stress: tsf
 Strain at Failure (%):
 Confining Pressure: tsf
 W.C. (%):
 Yd (pcf):



TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/18/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

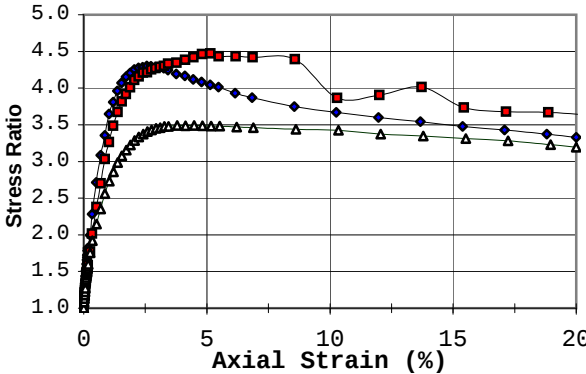
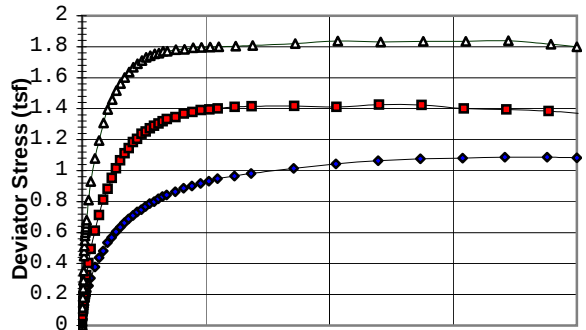
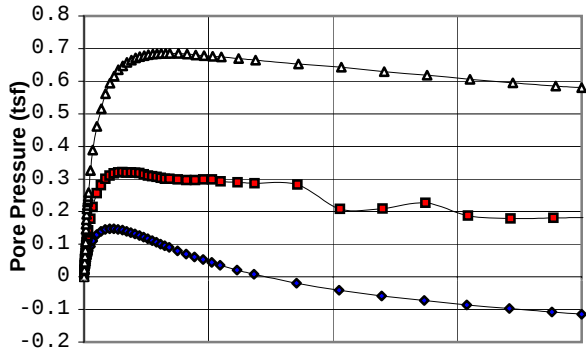
Boring #: SB-2

Sample #: 6

Type: 3T

Depth (ft): 12

Soil Type: Lean Clay (CL)



+

X

Failure Criterion:

Max. Stress Ratio

Angle of internal friction, $\phi' = 30.7^\circ$

Apparent Cohesion, $c' = 0.11$ (tsf)

Test Date: 11/7/24

Test Type: CU w/pp

Strain Rate (in/min): 0.00073

Strain Rate (%/min): 0.025

Liquid Limit:

Plastic Limit:

Plasticity Index:

Spec. Gravity (Assumed): 2.72

Initial Conditions

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

A	B	C	D	E
1.44	1.44	1.44		
2.93	2.93	2.93		
27.4	27.5	26.5		
95.1	94.4	95.7		
0.79	0.80	0.78		

After Consolidation

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

Back Pressure (tsf)

Minor Principal Stress (tsf)

Max. Deviator Stress (tsf)

Ultimate Deviator Stress (tsf)

Deviator Stress at Failure (tsf)

Max. Pore Pressure Buildup (tsf)

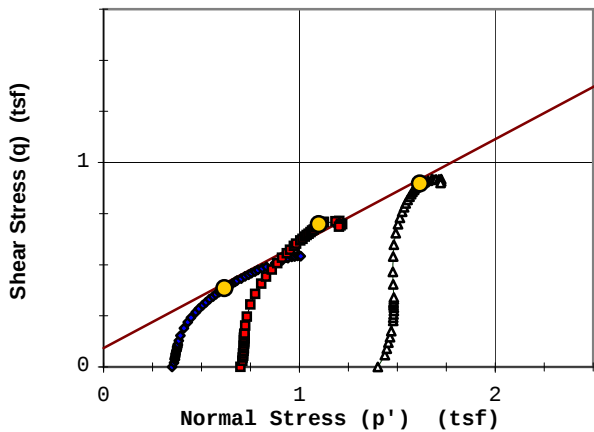
Pore Pressure Parameter "B"

Pct. Axial Strain at Failure

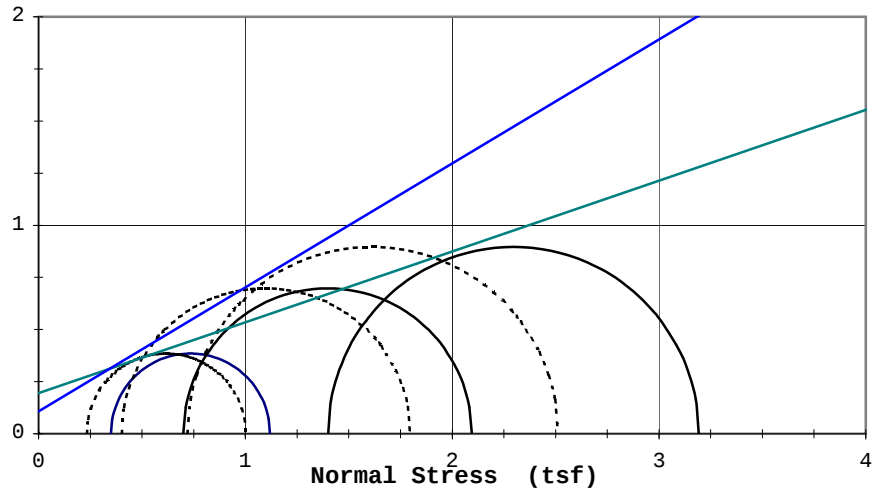
A	B	C	D	E
1.43	1.43	1.42		
2.93	2.92	2.90		
28.0	27.9	26.5		
96.4	96.6	98.7		
0.76	0.76	0.72		
4.0	4.0	4.4		
0.35	0.70	1.40		
1.09	1.43	1.84		
1.08	1.37	1.80		
0.77	1.40	1.79		
0.15	0.32	0.69		
0.95	0.95	0.95		
2.6	5.1	4.5		

"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared. A correction for membrane stiffness was applied to the deviator stress.



Rupture Envelope at Failure
 $\alpha = 27.1^\circ$ $a = 0.1$ (tsf)



Effective ϕ' : 30.7° $c' = 0.11$ (tsf)
 Total ϕ : 18.8° $c = 0.20$ (tsf)

TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/18/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

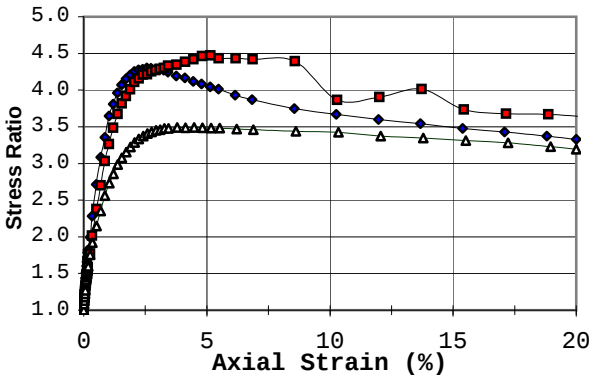
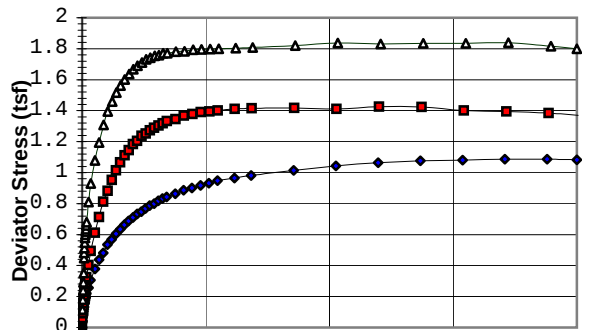
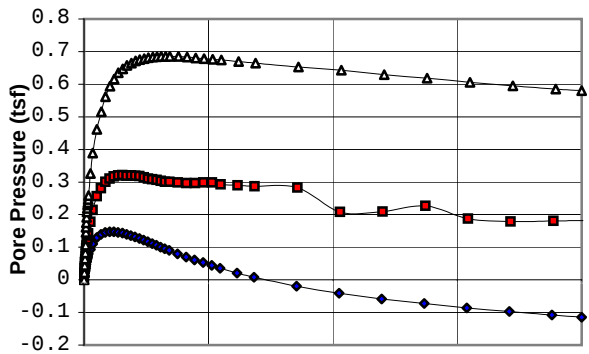
Boring #: SB-2

Sample #: 6

Type: 3T

Depth (ft): 12

Soil Type: Lean Clay (CL)



+

X

Failure Criterion: Max. Deviator Stress

Angle of internal friction, $\phi' = 29.4^\circ$

Apparent Cohesion, $c' = 0.10$ (tsf)

Test Date: 11/7/24

Test Type: CU w/pp

Strain Rate (in/min): 0.00073

Strain Rate (%/min): 0.025

Liquid Limit:

Plastic Limit:

Plasticity Index:

Spec. Gravity (Assumed): 2.72

Initial Conditions

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

A	B	C	D	E
1.44	1.44	1.44		
2.93	2.93	2.93		
27.4	27.5	26.5		
95.1	94.4	95.7		
0.79	0.80	0.78		

After Consolidation

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

1.43	1.43	1.42		
2.93	2.92	2.90		
28.0	27.9	26.5		
96.4	96.6	98.7		
0.76	0.76	0.72		

Back Pressure (tsf)

Minor Principal Stress (tsf)

Max. Deviator Stress (tsf)

Ultimate Deviator Stress (tsf)

Deviator Stress at Failure (tsf)

Max. Pore Pressure Buildup (tsf)

Pore Pressure Parameter "B"

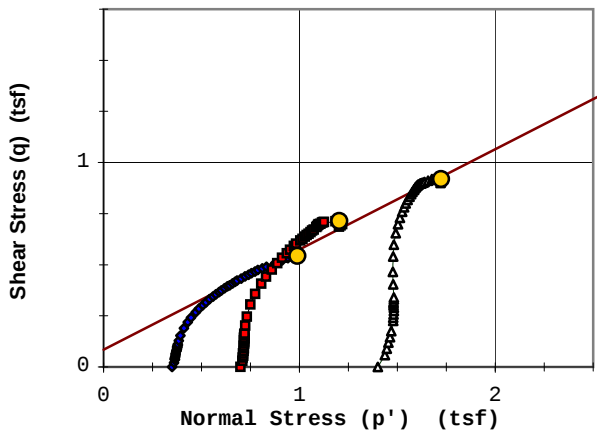
Pct. Axial Strain at Failure

4.0	4.0	4.4		
0.35	0.70	1.40		
1.09	1.43	1.84		
1.08	1.37	1.80		
1.09	1.43	1.84		
0.15	0.32	0.69		
0.95	0.95	0.95		
17.1	12.0	17.2		

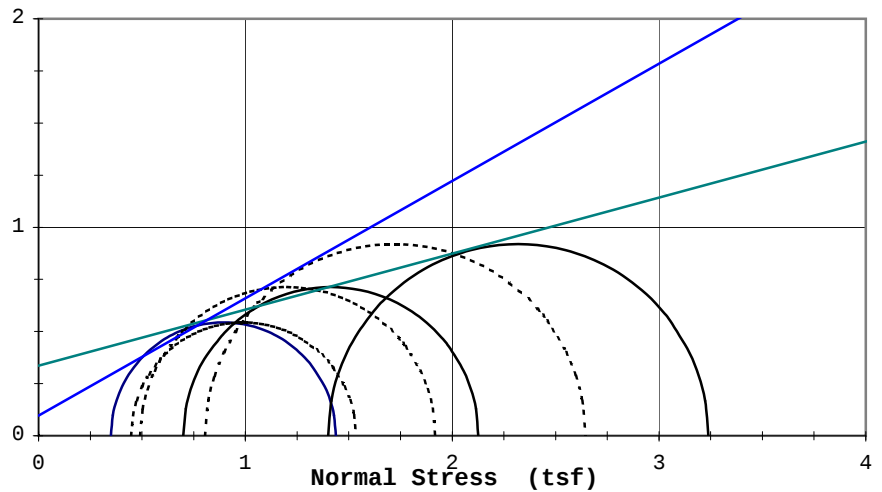
"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared.

A correction for membrane stiffness was applied to the deviator stress.



Rupture Envelope at Failure
 $\alpha = 26.1^\circ$ $a = 0.1$ (tsf)



Effective ϕ' : 29.4° $c' = 0.10$ (tsf)
Total ϕ : 15.0° $c = 0.34$ (tsf)

TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/18/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

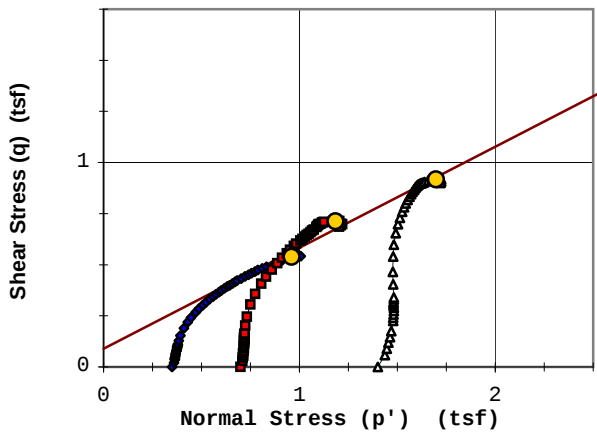
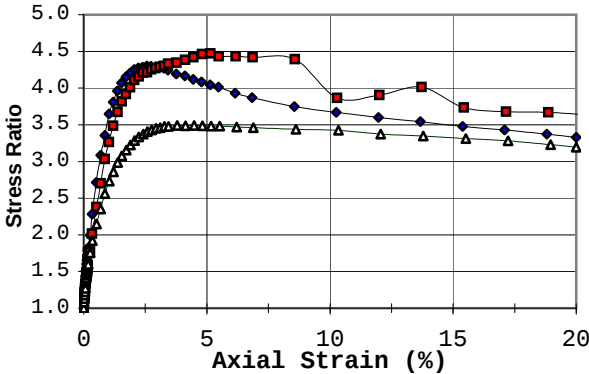
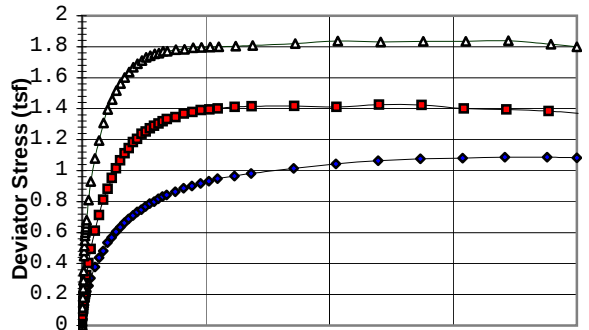
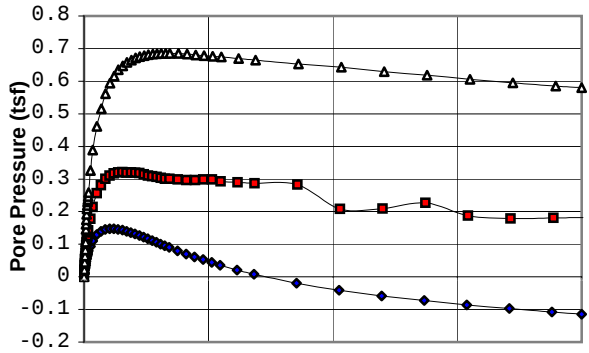
Boring #: SB-2

Sample #: 6

Type: 3T

Depth (ft): 12

Soil Type: Lean Clay (CL)



Rupture Envelope at Failure
 $\alpha = 26.3^\circ$ $a = 0.1$ (tsf)



+

X

Failure Criterion:

Given Strain of: 15%

Angle of internal friction, $\phi' = 29.6^\circ$

Apparent Cohesion, $c' = 0.10$ (tsf)

Test Date: 11/7/24

Test Type: CU w/pp

Strain Rate (in/min): 0.00073

Strain Rate (%/min): 0.025

Liquid Limit:

Plastic Limit:

Plasticity Index:

Spec. Gravity (Assumed): 2.72

Initial Conditions

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

A B C D E

1.44 1.44 1.44

2.93 2.93 2.93

27.4 27.5 26.5

95.1 94.4 95.7

0.79 0.80 0.78

After Consolidation

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

1.43 1.43 1.42

2.93 2.92 2.90

28.0 27.9 26.5

96.4 96.6 98.7

0.76 0.76 0.72

Back Pressure (tsf)

Minor Principal Stress (tsf)

Max. Deviator Stress (tsf)

Ultimate Deviator Stress (tsf)

Deviator Stress at Failure (tsf)

Max. Pore Pressure Buildup (tsf)

Pore Pressure Parameter "B"

Pct. Axial Strain at Failure

4.0 4.0 4.4

0.35 0.70 1.40

1.09 1.43 1.84

1.08 1.37 1.80

1.08 1.42 1.83

0.15 0.32 0.69

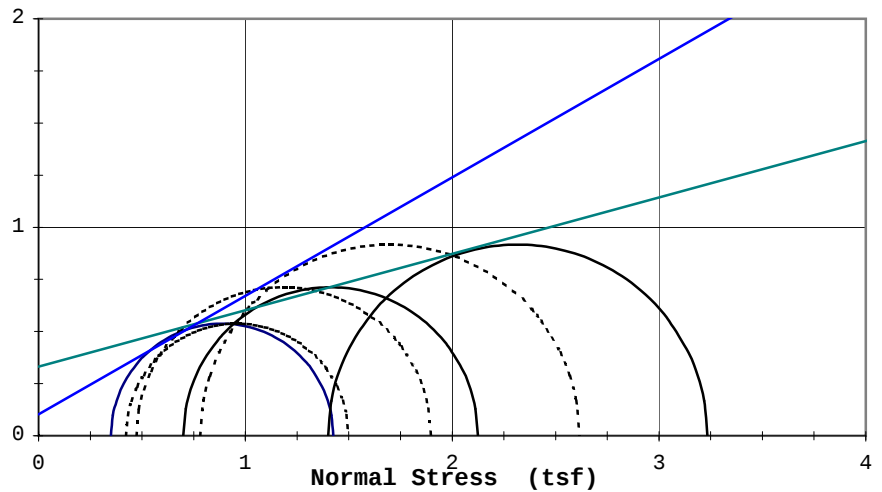
0.95 0.95 0.95

15.0 15.0 15.0

"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared.

A correction for membrane stiffness was applied to the deviator stress.



Effective ϕ' : 29.6° $c' = 0.10$ (tsf)
 Total ϕ : 15.1° $c = 0.33$ (tsf)

Triaxial Data

Job: 15494

Boring:

SB-2

Sample:

6

Depth:

12

Date:

11/18/24

.35 tsf			.7 tsf			1.4 tsf			Sample 4			Sample 5		
Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
0.01	0.04	0.01	0.01	0.06	0.02	0.01	0.12	0.02						
0.02	0.07	0.02	0.02	0.09	0.03	0.02	0.18	0.04						
0.03	0.08	0.03	0.03	0.11	0.04	0.03	0.24	0.06						
0.04	0.09	0.03	0.04	0.13	0.05	0.05	0.29	0.08						
0.06	0.10	0.04	0.05	0.16	0.06	0.06	0.35	0.11						
0.07	0.12	0.04	0.07	0.18	0.07	0.07	0.45	0.15						
0.08	0.13	0.05	0.08	0.21	0.09	0.08	0.48	0.16						
0.09	0.15	0.05	0.09	0.23	0.10	0.09	0.51	0.18						
0.10	0.16	0.06	0.10	0.25	0.11	0.10	0.55	0.19						
0.12	0.17	0.06	0.11	0.26	0.11	0.12	0.58	0.21						
0.13	0.19	0.07	0.12	0.28	0.12	0.13	0.60	0.22						
0.14	0.19	0.07	0.14	0.28	0.12	0.14	0.62	0.23						
0.15	0.20	0.07	0.15	0.31	0.14	0.15	0.63	0.24						
0.16	0.21	0.08	0.16	0.32	0.14	0.16	0.66	0.25						
0.17	0.22	0.08	0.17	0.33	0.14	0.18	0.68	0.26						
0.26	0.26	0.09	0.26	0.40	0.18	0.26	0.81	0.33						
0.34	0.31	0.11	0.34	0.49	0.21	0.35	0.93	0.39						
0.51	0.38	0.13	0.51	0.61	0.26	0.52	1.08	0.46						
0.68	0.44	0.14	0.69	0.71	0.28	0.69	1.20	0.52						
0.85	0.48	0.15	0.86	0.81	0.30	0.86	1.31	0.56						
1.03	0.54	0.15	1.03	0.88	0.31	1.04	1.40	0.59						
1.20	0.57	0.15	1.20	0.95	0.32	1.21	1.46	0.62						
1.37	0.60	0.15	1.37	1.02	0.32	1.38	1.52	0.64						
1.54	0.63	0.14	1.54	1.07	0.32	1.55	1.56	0.65						
1.71	0.66	0.14	1.72	1.11	0.32	1.72	1.60	0.66						
1.88	0.69	0.14	1.89	1.14	0.32	1.90	1.64	0.66						
2.05	0.71	0.13	2.06	1.18	0.32	2.07	1.67	0.67						
2.22	0.73	0.13	2.23	1.20	0.32	2.24	1.69	0.68						
2.39	0.75	0.12	2.40	1.24	0.31	2.41	1.71	0.68						
2.56	0.77	0.12	2.57	1.25	0.31	2.59	1.73	0.68						
2.73	0.79	0.11	2.74	1.27	0.31	2.76	1.74	0.68						
2.91	0.80	0.11	2.92	1.29	0.31	2.93	1.75	0.68						
3.08	0.82	0.10	3.09	1.30	0.30	3.10	1.76	0.68						
3.25	0.83	0.10	3.26	1.32	0.30	3.27	1.77	0.68						
3.42	0.84	0.09	3.43	1.33	0.30	3.45	1.77	0.69						
3.76	0.86	0.08	3.77	1.34	0.30	3.80	1.78	0.68						
4.10	0.89	0.07	4.12	1.37	0.30	4.14	1.78	0.68						
4.44	0.90	0.06	4.46	1.38	0.30	4.48	1.79	0.68						
4.79	0.92	0.05	4.80	1.39	0.30	4.83	1.80	0.68						
5.13	0.93	0.04	5.15	1.40	0.30	5.17	1.80	0.68						
5.47	0.95	0.04	5.49	1.40	0.29	5.52	1.80	0.67						
6.15	0.96	0.02	6.17	1.41	0.29	6.21	1.80	0.67						
6.84	0.98	0.01	6.86	1.42	0.29	6.89	1.81	0.66						
8.54	1.01	-0.02	8.58	1.42	0.28	8.62	1.82	0.65						
10.25	1.04	-0.04	10.29	1.41	0.21	10.34	1.84	0.64						
11.96	1.06	-0.06	12.01	1.43	0.21	12.06	1.83	0.63						
13.67	1.08	-0.07	13.72	1.42	0.23	13.79	1.83	0.62						
15.38	1.08	-0.09	15.44	1.40	0.19	15.51	1.84	0.61						
17.09	1.09	-0.10	17.15	1.40	0.18	17.23	1.84	0.59						
18.80	1.09	-0.11	18.87	1.38	0.18	18.96	1.82	0.58						
20.00	1.08	-0.11	20.06	1.37	0.18	20.00	1.80	0.58						

TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/19/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

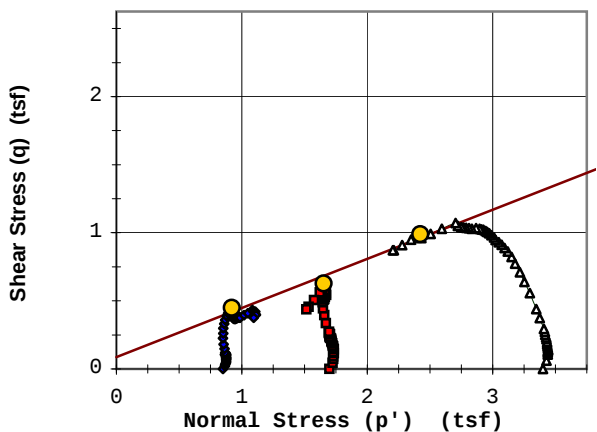
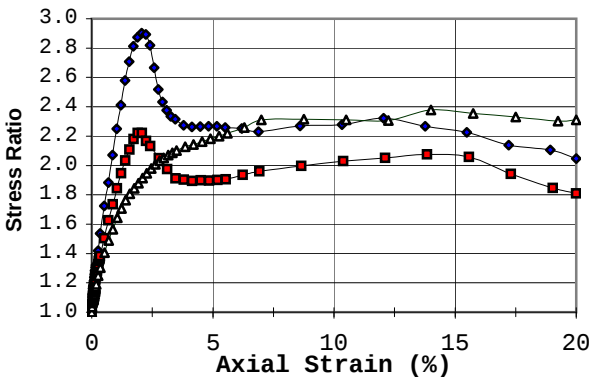
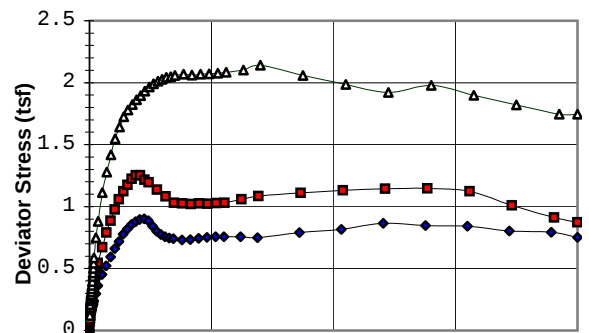
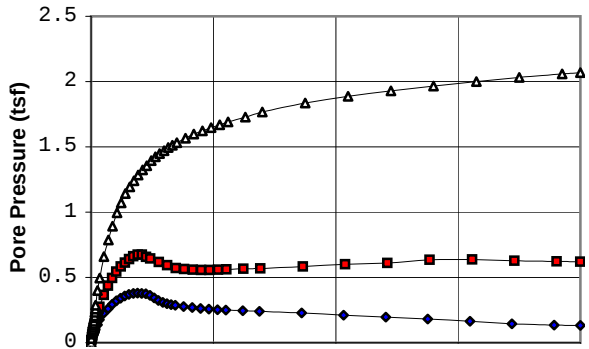
Boring #: SB-2

Sample #: 11

Type: 3T

Depth (ft): 30

Soil Type: Fat Clay (CH)



Rupture Envelope at Failure
 $\alpha = 19.8^\circ$ $a = 0.1$ (tsf)



+

X

Failure Criterion:

Max. Stress Ratio

Angle of internal friction, $\phi' = 21.1^\circ$

Apparent Cohesion, $c' = 0.09$ (tsf)

Test Date: 11/8/24

Test Type: CU w/pp

Strain Rate (in/min): 0.000465

Strain Rate (%/min): 0.016

Liquid Limit:

Plastic Limit:

Plasticity Index:

Spec. Gravity: 2.75

Initial Conditions

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

	A	B	C	D	E
Diameter (in)	1.44	1.44	1.44		
Height (in)	2.91	2.91	2.92		
Water Content (%)	48.5	50.2	42.3		
Dry Density (pcf)	73.3	72.0	78.6		
Void Ratio	1.34	1.39	1.18		

After Consolidation

Diameter (in)

Height (in)

Water Content (%)

Dry Density (pcf)

Void Ratio

	A	B	C	D	E
Diameter (in)	1.47	1.44	1.43		
Height (in)	2.91	2.89	2.86		
Water Content (%)	52.8	49.8	40.7		
Dry Density (pcf)	70.0	72.5	81.0		
Void Ratio	1.45	1.37	1.12		

Back Pressure (tsf)

Minor Principal Stress (tsf)

Max. Deviator Stress (tsf)

Ultimate Deviator Stress (tsf)

Deviator Stress at Failure (tsf)

Max. Pore Pressure Buildup (tsf)

Pore Pressure Parameter "B"

Pct. Axial Strain at Failure

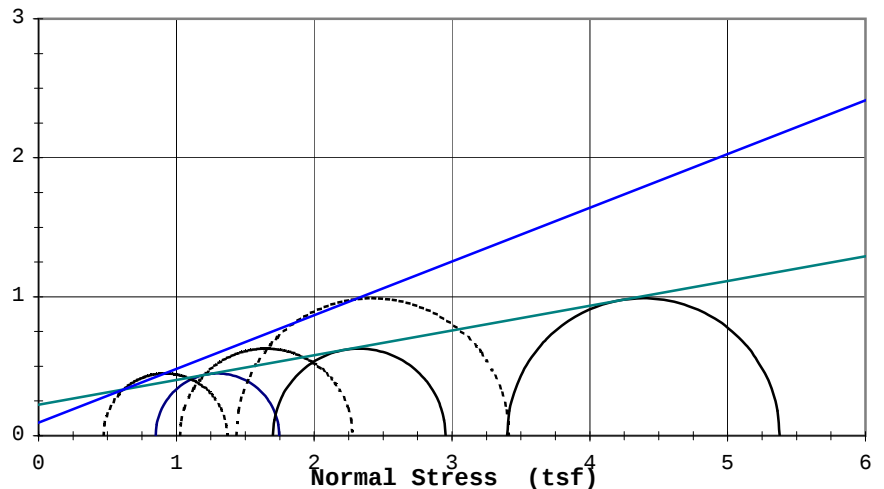
	A	B	C	D	E
Back Pressure (tsf)	4.0	6.6	4.0		
Minor Principal Stress (tsf)	0.85	1.70	3.40		
Max. Deviator Stress (tsf)	0.90	1.25	2.14		
Ultimate Deviator Stress (tsf)	0.75	0.87	1.74		
Deviator Stress at Failure (tsf)	0.90	1.25	1.98		
Max. Pore Pressure Buildup (tsf)	0.38	0.67	2.07		
Pore Pressure Parameter "B"	0.95	0.95	0.95		
Pct. Axial Strain at Failure	2.1	1.9	14.0		

"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared.

A correction for membrane stiffness was applied to the deviator stress.

Specimen C: Appeared to be less cohesive than the other specimens.



Effective ϕ' : 21.1° $c' = 0.09$ (tsf)
 Total ϕ : 10.1° $c = 0.22$ (tsf)

TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/19/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

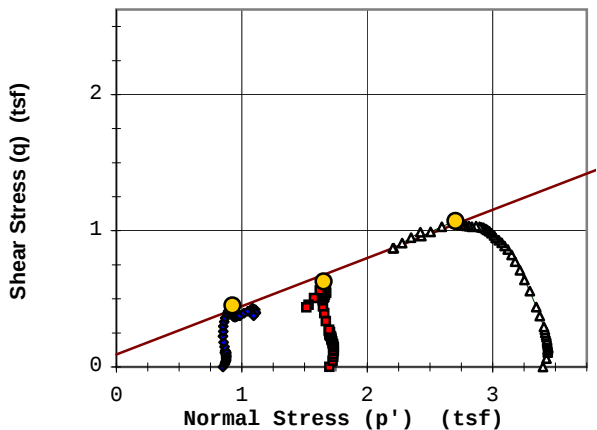
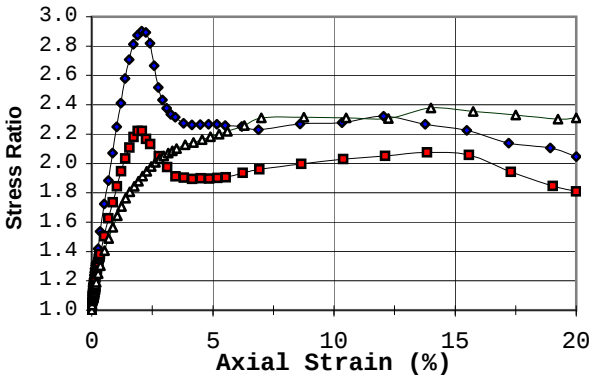
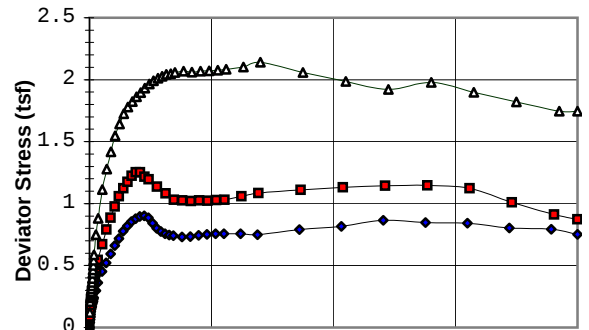
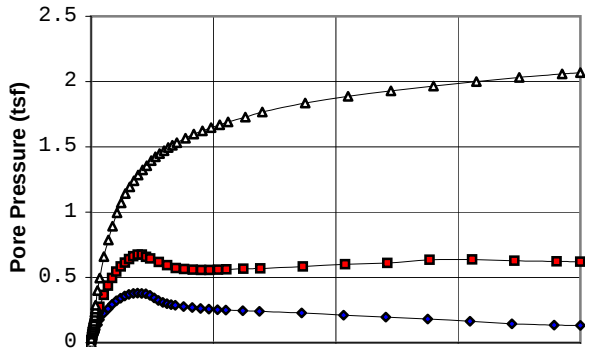
Boring #: SB-2

Sample #: 11

Type: 3T

Depth (ft): 30

Soil Type: Fat Clay (CH)



Rupture Envelope at Failure
 $\alpha = 19.5^\circ$ $a = 0.1$ (tsf)



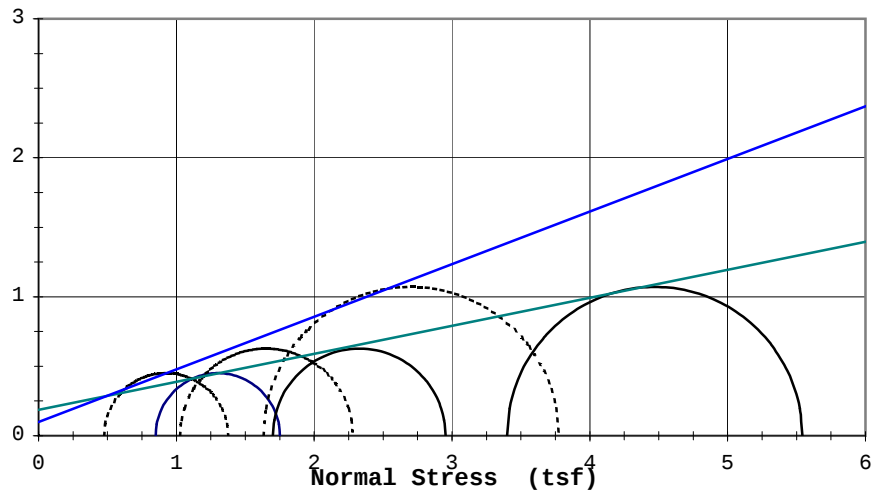
+

X

Failure Criterion:		Max. Deviator Stress				
Angle of internal friction, ϕ' =		20.7 °				
Apparent Cohesion, c' =		0.10 (tsf)				
Test Date:	11/8/24	Liquid Limit:				
Test Type:	CU w/pp	Plastic Limit:				
Strain Rate (in/min):	0.000465	Plasticity Index:				
Strain Rate (%/min):	0.016	Spec. Gravity : 2.75				
Initial Conditions		A	B	C	D	E
Diameter (in)		1.44	1.44	1.44		
Height (in)		2.91	2.91	2.92		
Water Content (%)		48.5	50.2	42.3		
Dry Density (pcf)		73.3	72.0	78.6		
Void Ratio		1.34	1.39	1.18		
After Consolidation						
Diameter (in)		1.47	1.44	1.43		
Height (in)		2.91	2.89	2.86		
Water Content (%)		52.8	49.8	40.7		
Dry Density (pcf)		70.0	72.5	81.0		
Void Ratio		1.45	1.37	1.12		
Back Pressure (tsf)		4.0	6.6	4.0		
Minor Principal Stress (tsf)		0.85	1.70	3.40		
Max. Deviator Stress (tsf)		0.90	1.25	2.14		
Ultimate Deviator Stress (tsf)		0.75	0.87	1.74		
Deviator Stress at Failure (tsf)		0.90	1.25	2.14		
Max. Pore Pressure Buildup (tsf)		0.38	0.67	2.07		
Pore Pressure Parameter "B"		0.95	0.95	0.95		
Pct. Axial Strain at Failure		2.2	2.1	7.0		

"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared.
 A correction for membrane stiffness was applied to the deviator stress.
 Specimen C: Appeared to be less cohesive than the other specimens.



Effective ϕ' : 20.7° $c' = 0.10$ (tsf)
 Total ϕ : 11.4° $c = 0.19$ (tsf)

TRIAXIAL TEST ASTM: D 4767

Job No. 15494

Date: 11/19/24

Project: Marc Knutson Pool / American Engineering Testing, Inc.

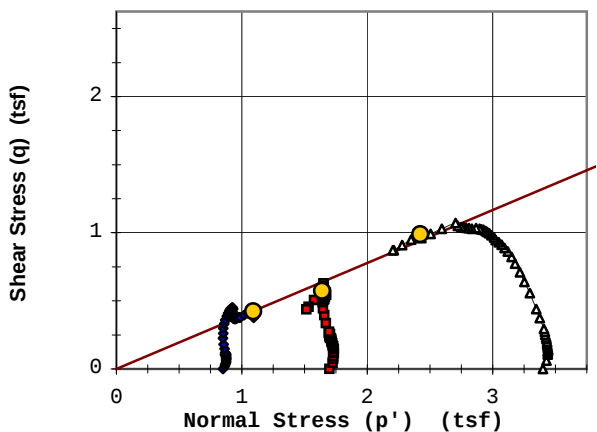
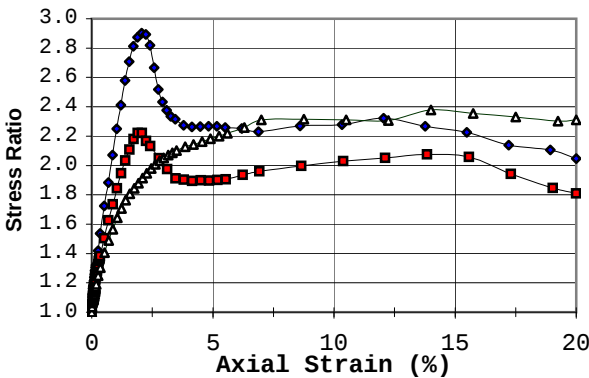
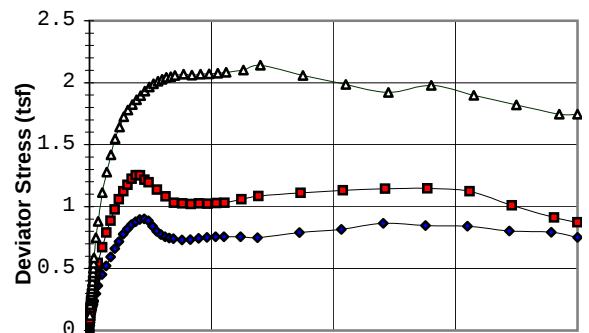
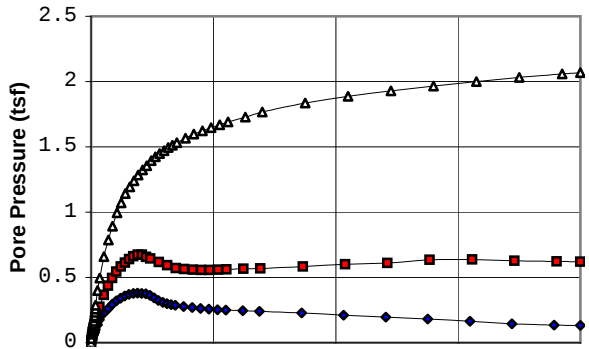
Boring #: SB-2

Sample #: 11

Type: 3T

Depth (ft): 30

Soil Type: Fat Clay (CH)



Rupture Envelope at Failure
 $\alpha = 21.3^\circ$ $a = 0.0$ (tsf)



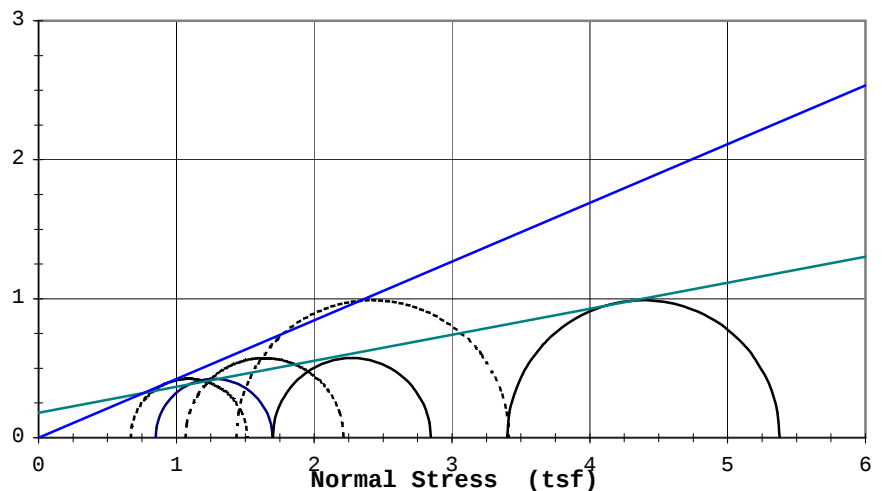
+

X

Failure Criterion:		Given Strain of: 15%				
Angle of internal friction, $\phi' =$		22.9°				
Apparent Cohesion, $c' =$		0.00 (tsf)				
Test Date: 11/8/24		Liquid Limit:				
Test Type: CU w/pp		Plastic Limit:				
Strain Rate (in/min): 0.000465		Plasticity Index:				
Strain Rate (%/min): 0.016		Spec. Gravity: 2.75				
Initial Conditions		A	B	C	D	E
Diameter (in)		1.44	1.44	1.44		
Height (in)		2.91	2.91	2.92		
Water Content (%)		48.5	50.2	42.3		
Dry Density (pcf)		73.3	72.0	78.6		
Void Ratio		1.34	1.39	1.18		
After Consolidation						
Diameter (in)		1.47	1.44	1.43		
Height (in)		2.91	2.89	2.86		
Water Content (%)		52.8	49.8	40.7		
Dry Density (pcf)		70.0	72.5	81.0		
Void Ratio		1.45	1.37	1.12		
Back Pressure (tsf)		4.0	6.6	4.0		
Minor Principal Stress (tsf)		0.85	1.70	3.40		
Max. Deviator Stress (tsf)		0.90	1.25	2.14		
Ultimate Deviator Stress (tsf)		0.75	0.87	1.74		
Deviator Stress at Failure (tsf)		0.85	1.15	1.98		
Max. Pore Pressure Buildup (tsf)		0.38	0.67	2.07		
Pore Pressure Parameter "B"		0.95	0.95	0.95		
Pct. Axial Strain at Failure		15.0	15.0	15.0		

"These test results are for informational purposes only and must be reviewed by a qualified professional engineer to verify that the test parameters shown are appropriate for any particular design"

Remarks: Specimens trimmed to given conditions; Saturated, backpressured until "B" response was 0.95 to 1.00; Consolidated; All Drainage valves closed and immediately sheared.
 A correction for membrane stiffness was applied to the deviator stress.
 Specimen C: Appeared to be less cohesive than the other specimens.



Effective ϕ' : 22.9° $c' = 0.00$ (tsf)
 Total ϕ : 10.6° $c = 0.18$ (tsf)

Triaxial Data

Job: 15494

Boring:

SB-2

Sample:

11

Depth:

30

Date:

11/19/24

.85 tsf			1.7 tsf			3.4 tsf			Sample 4			Sample 5		
Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)	Strain (%)	Deviator Stress (tsf)	Pore Pressure (tsf)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00						
0.01	0.04	0.01	0.02	0.09	0.02	0.01	0.12	0.03						
0.02	0.07	0.01	0.03	0.14	0.04	0.03	0.21	0.07						
0.03	0.08	0.02	0.05	0.18	0.06	0.04	0.24	0.08						
0.04	0.10	0.03	0.07	0.23	0.08	0.05	0.26	0.09						
0.06	0.13	0.04	0.09	0.25	0.09	0.06	0.27	0.09						
0.07	0.15	0.05	0.10	0.29	0.11	0.07	0.29	0.10						
0.08	0.16	0.06	0.12	0.30	0.12	0.08	0.31	0.12						
0.09	0.17	0.06	0.14	0.33	0.13	0.10	0.34	0.13						
0.10	0.19	0.07	0.16	0.34	0.15	0.11	0.36	0.15						
0.12	0.20	0.07	0.17	0.38	0.17	0.12	0.40	0.16						
0.13	0.20	0.08	0.19	0.40	0.18	0.13	0.44	0.19						
0.14	0.22	0.08	0.21	0.41	0.19	0.14	0.46	0.21						
0.15	0.21	0.09	0.22	0.43	0.20	0.15	0.50	0.23						
0.16	0.23	0.10	0.24	0.45	0.21	0.16	0.54	0.26						
0.17	0.24	0.10	0.26	0.46	0.22	0.18	0.59	0.29						
0.26	0.30	0.14	0.28	0.48	0.24	0.27	0.75	0.40						
0.34	0.36	0.18	0.29	0.51	0.25	0.35	0.88	0.49						
0.52	0.45	0.23	0.31	0.52	0.26	0.53	1.11	0.66						
0.69	0.52	0.26	0.33	0.52	0.27	0.70	1.28	0.79						
0.86	0.59	0.29	0.35	0.54	0.28	0.88	1.42	0.89						
1.03	0.66	0.32	0.52	0.67	0.37	1.05	1.55	1.00						
1.20	0.72	0.34	0.69	0.79	0.44	1.23	1.64	1.07						
1.38	0.78	0.36	0.87	0.89	0.50	1.40	1.72	1.14						
1.55	0.82	0.37	1.04	0.98	0.54	1.58	1.78	1.19						
1.72	0.86	0.38	1.21	1.06	0.58	1.75	1.82	1.24						
1.89	0.88	0.38	1.38	1.12	0.61	1.93	1.86	1.28						
2.06	0.90	0.38	1.56	1.17	0.64	2.10	1.90	1.32						
2.24	0.90	0.37	1.73	1.23	0.66	2.27	1.93	1.36						
2.41	0.89	0.36	1.90	1.25	0.67	2.45	1.97	1.39						
2.58	0.84	0.34	2.08	1.25	0.67	2.63	1.99	1.42						
2.75	0.80	0.32	2.25	1.22	0.66	2.80	2.01	1.45						
2.93	0.78	0.31	2.42	1.19	0.64	2.98	2.03	1.47						
3.10	0.76	0.30	2.77	1.14	0.62	3.15	2.04	1.49						
3.27	0.75	0.29	3.12	1.08	0.59	3.33	2.05	1.51						
3.44	0.74	0.29	3.46	1.03	0.57	3.50	2.06	1.53						
3.79	0.73	0.28	3.81	1.03	0.56	3.85	2.07	1.57						
4.13	0.73	0.27	4.15	1.02	0.56	4.20	2.06	1.60						
4.47	0.74	0.26	4.50	1.03	0.56	4.55	2.07	1.62						
4.82	0.75	0.26	4.85	1.02	0.56	4.90	2.07	1.65						
5.16	0.76	0.25	5.19	1.03	0.56	5.25	2.08	1.67						
5.51	0.76	0.25	5.54	1.03	0.56	5.60	2.08	1.69						
6.19	0.76	0.24	6.23	1.06	0.57	6.30	2.10	1.73						
6.88	0.75	0.24	6.92	1.08	0.57	7.00	2.14	1.77						
8.60	0.79	0.23	8.65	1.11	0.58	8.75	2.06	1.84						
10.32	0.82	0.21	10.38	1.13	0.60	10.50	1.98	1.89						
12.04	0.86	0.20	12.11	1.15	0.61	12.25	1.92	1.93						
13.77	0.85	0.18	13.84	1.15	0.63	14.00	1.98	1.96						
15.49	0.84	0.16	15.58	1.12	0.64	15.75	1.90	2.00						
17.21	0.80	0.14	17.31	1.01	0.63	17.50	1.82	2.03						
18.93	0.79	0.13	19.04	0.91	0.62	19.25	1.74	2.06						
20.00	0.75	0.13	20.00	0.87	0.62	20.00	1.74	2.07						

Figure 2A

Title: Marc Knutson Pool Name: Existing - Short Term (UU) - Normal Pool Analysis Type: Morgenstern-Price Date: 12/19/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
	Lower Brenna - UU	102.5	500	0
	Sherack - UU	111	350	0
	Topsoil	110	100	10
	Upper Brenna - UU	106	600	0

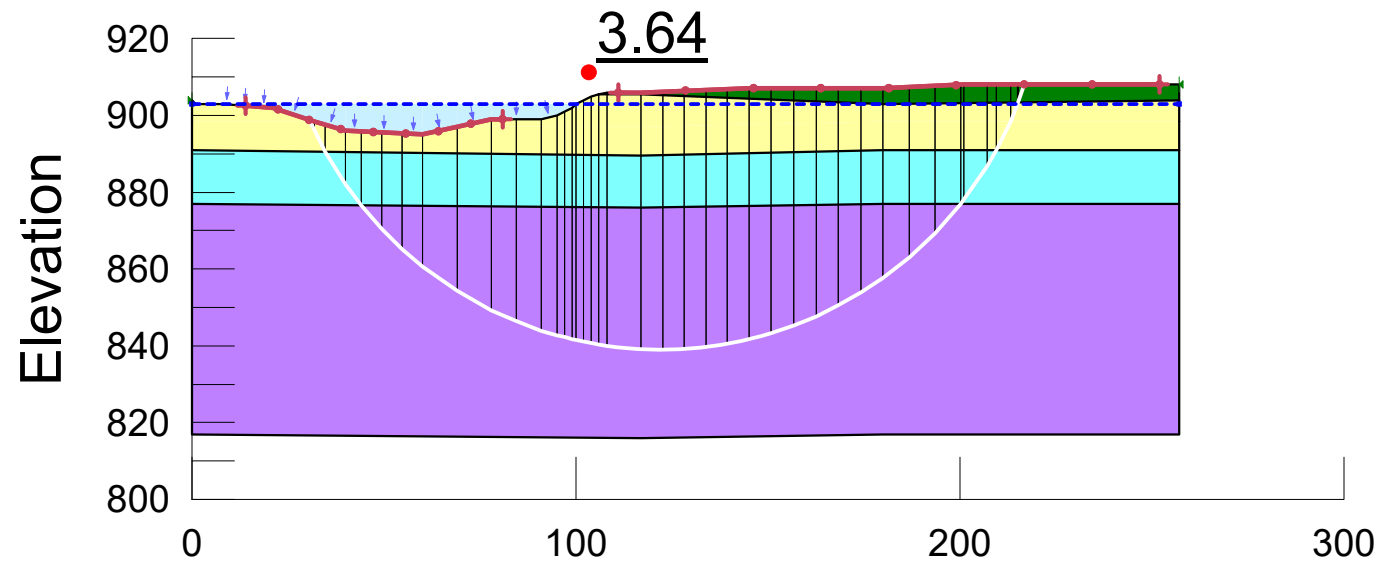


Figure 2B

Title: Marc Knutson Pool Name: Existing - Short Term (UU) - Low Pool Analysis Type: Morgenstern-Price Date: 12/19/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Lower Brenna - UU	102.5	500	0
■	Sherack - UU	111	350	0
■	Topsoil	110	100	10
■	Upper Brenna - UU	106	600	0

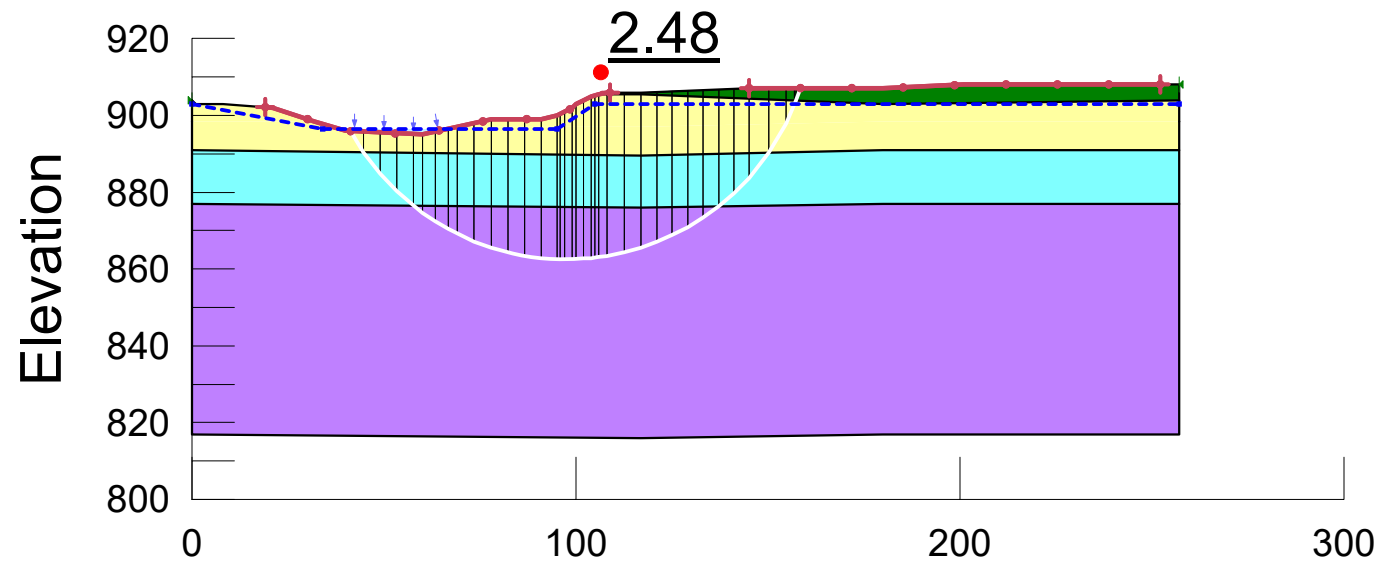


Figure 2C

Title: Marc Knutson Pool Name: Existing - Long Term (CD) - Normal Pool Analysis Type: Morgenstern-Price Date: 12/19/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5

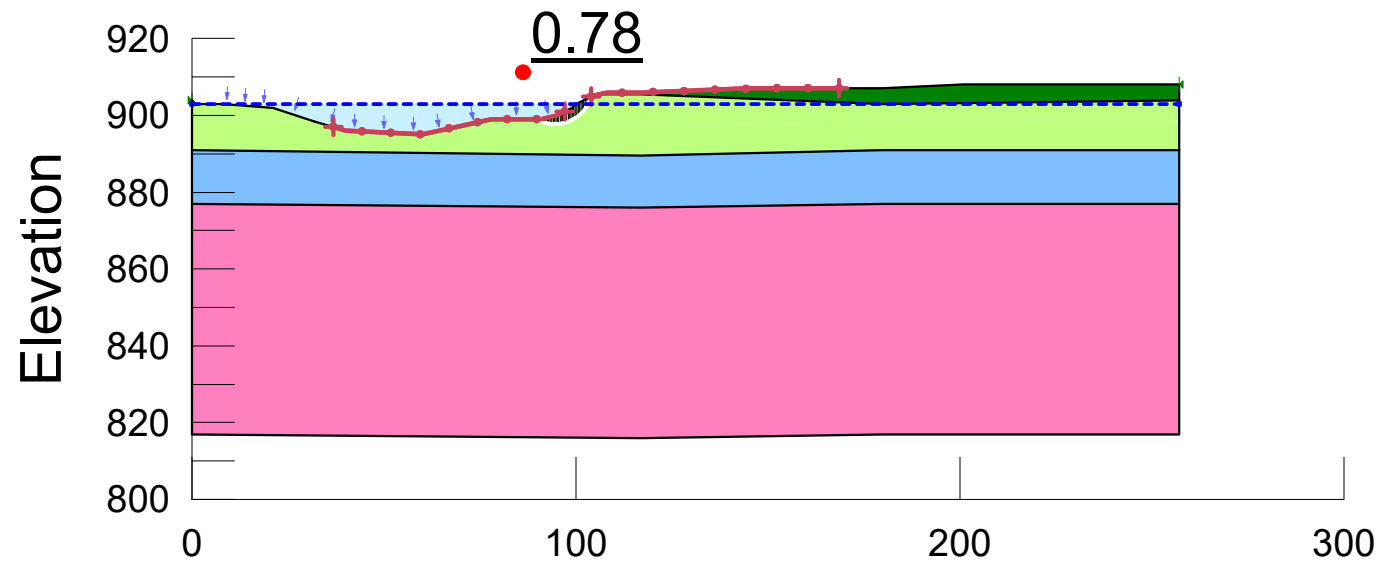


Figure 2D

Title: Marc Knutson Pool Name: Existing - Long Term (CD) - Low Pool Analysis Type: Morgenstern-Price Date: 12/19/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5

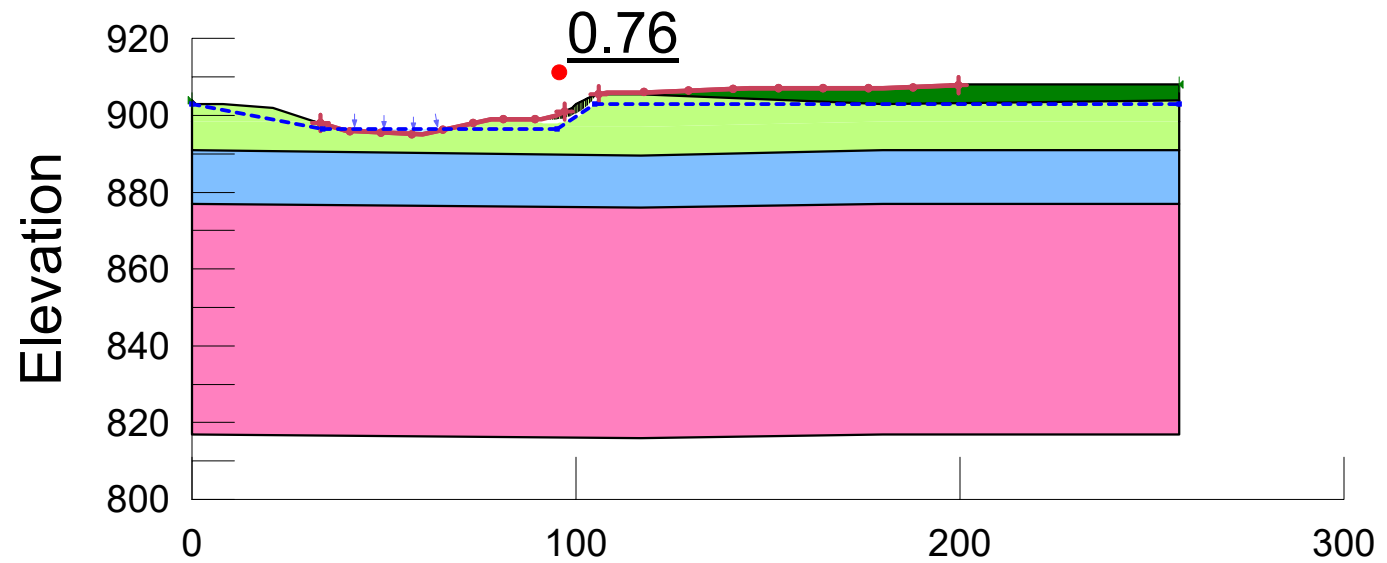


Figure 2E

Title: Marc Knutson Pool Name: Existing - Long Term (CD) - Normal Pool [Excluded] Analysis Type: Morgenstern-Price Date: 12/20/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5

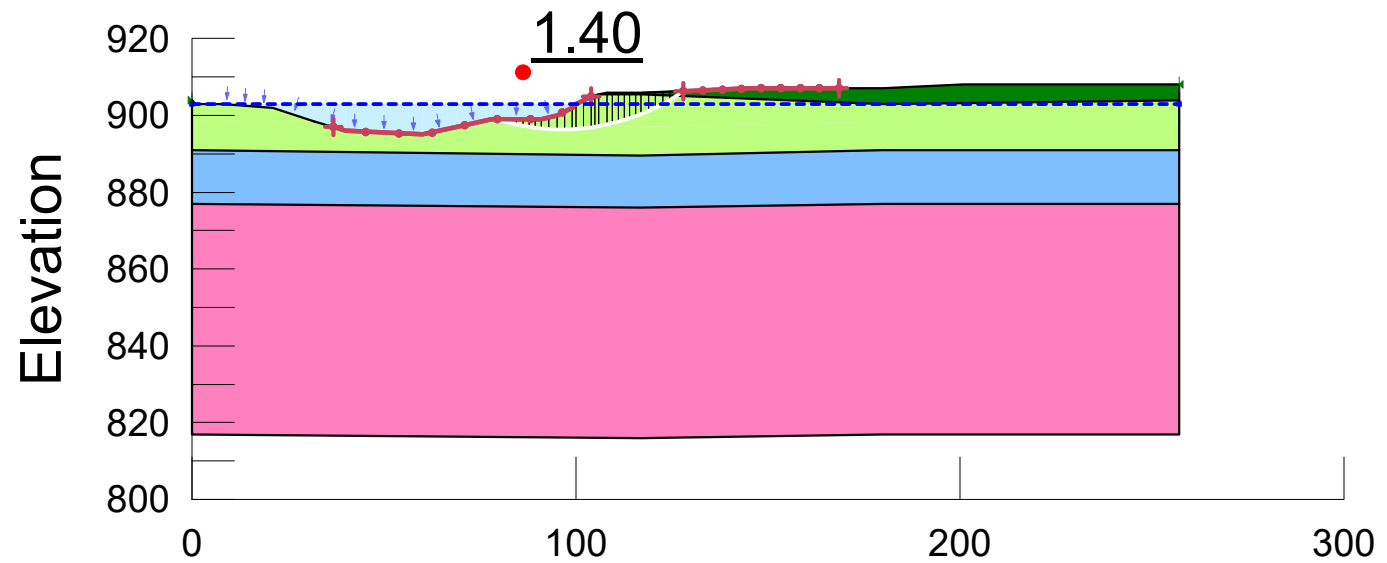


Figure 2F

Title: Marc Knutson Pool Name: Existing - Long Term (CD) - Low Pool [Excluded] Analysis Type: Morgenstern-Price Date: 12/19/2024				
Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5

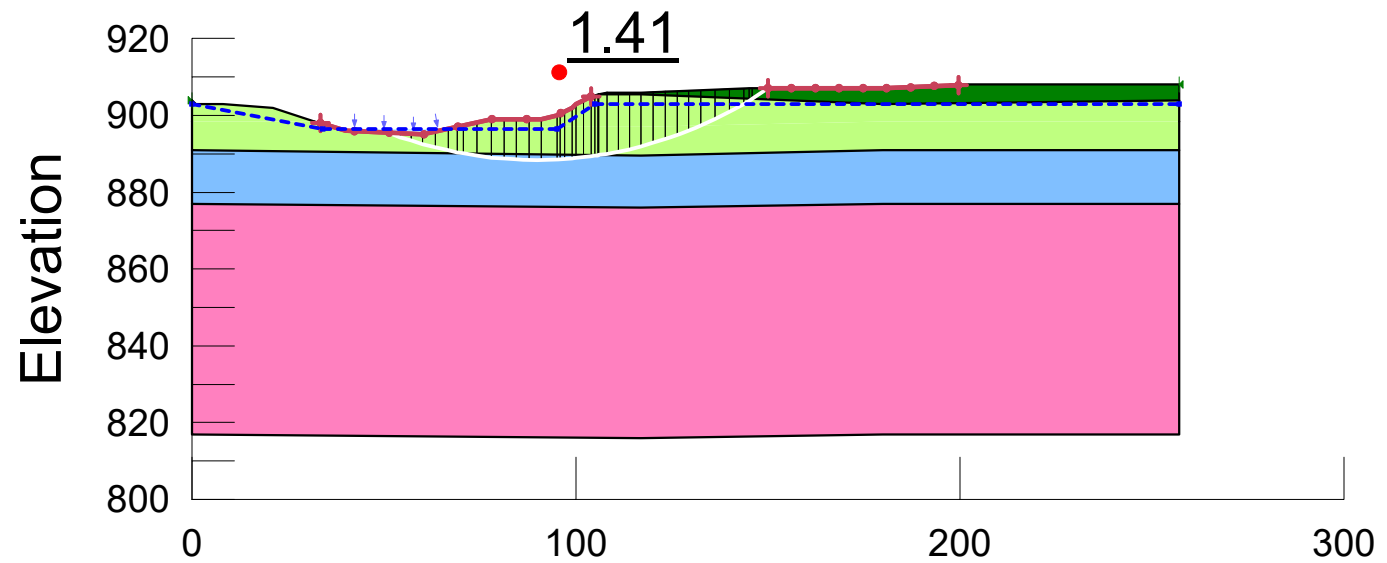


Figure 3A

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Concrete	145		
■	Lower Brenna - UU	102.5	500	0
■	Sherack - UU	111	350	0
■	Topsoil	110	100	10
■	Upper Brenna - UU	106	600	0
■	Water	62.4	0	0

Title: Marc Knutson Pool
 Name: Proposed Pool - Short Term (UU) - Normal Pool
 Analysis Type: Morgenstern-Price
 Date: 12/19/2024

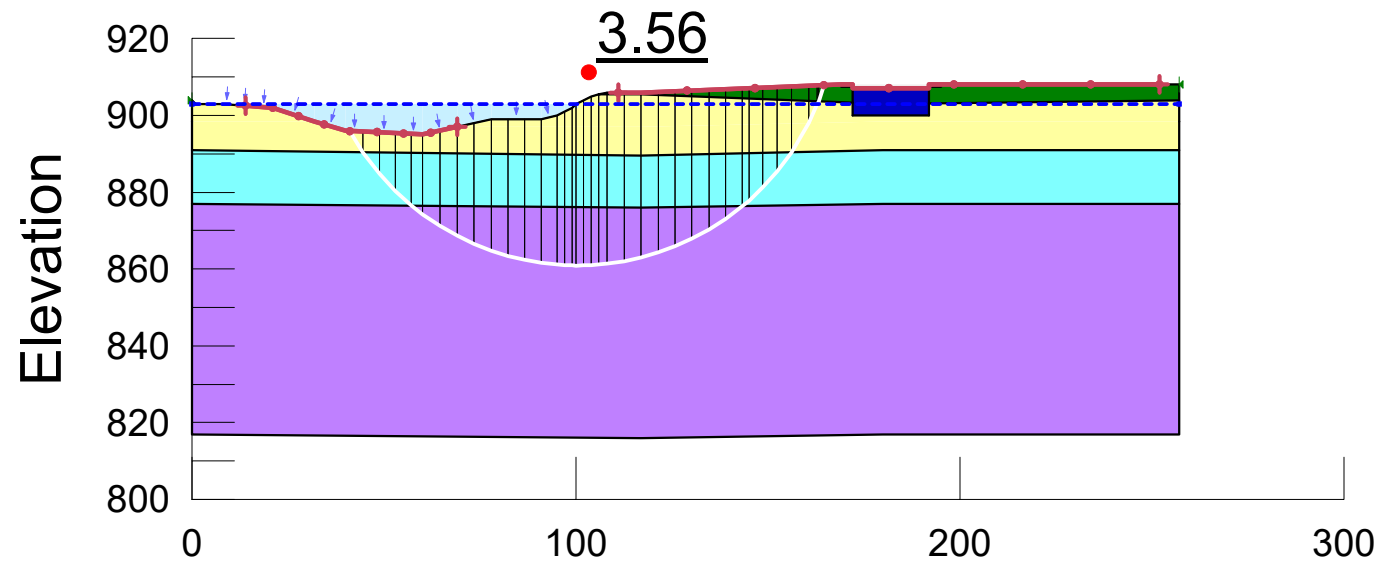


Figure 3B

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Concrete	145		
■	Lower Brenna - UU	102.5	500	0
■	Sherack - UU	111	350	0
■	Topsoil	110	100	10
■	Upper Brenna - UU	106	600	0
■	Water	62.4	0	0

Title: Marc Knutson Pool
Name: Proposed Pool - Short Term (UU) - Low Pool
Analysis Type: Morgenstern-Price
Date: 12/19/2024

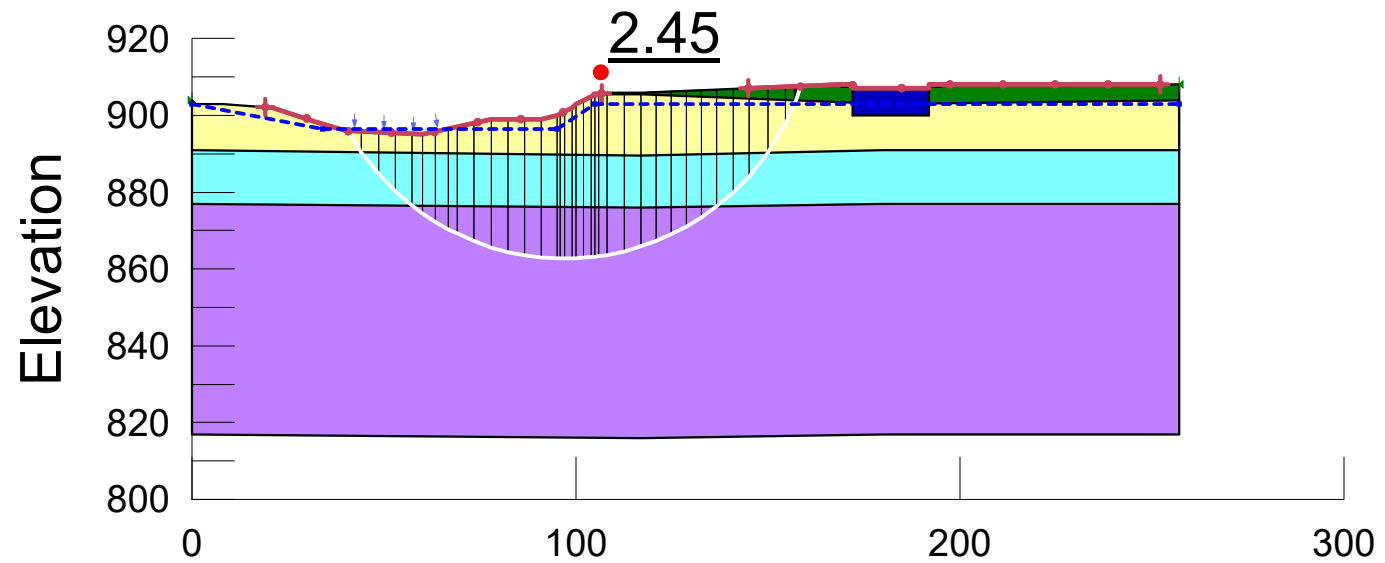


Figure 3C

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Concrete	145		
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5
■	Water	62.4	0	0

Title: Marc Knutson Pool
Name: Proposed Pool - Long Term (CD) - Normal Pool
Analysis Type: Morgenstern-Price
Date: 12/19/2024

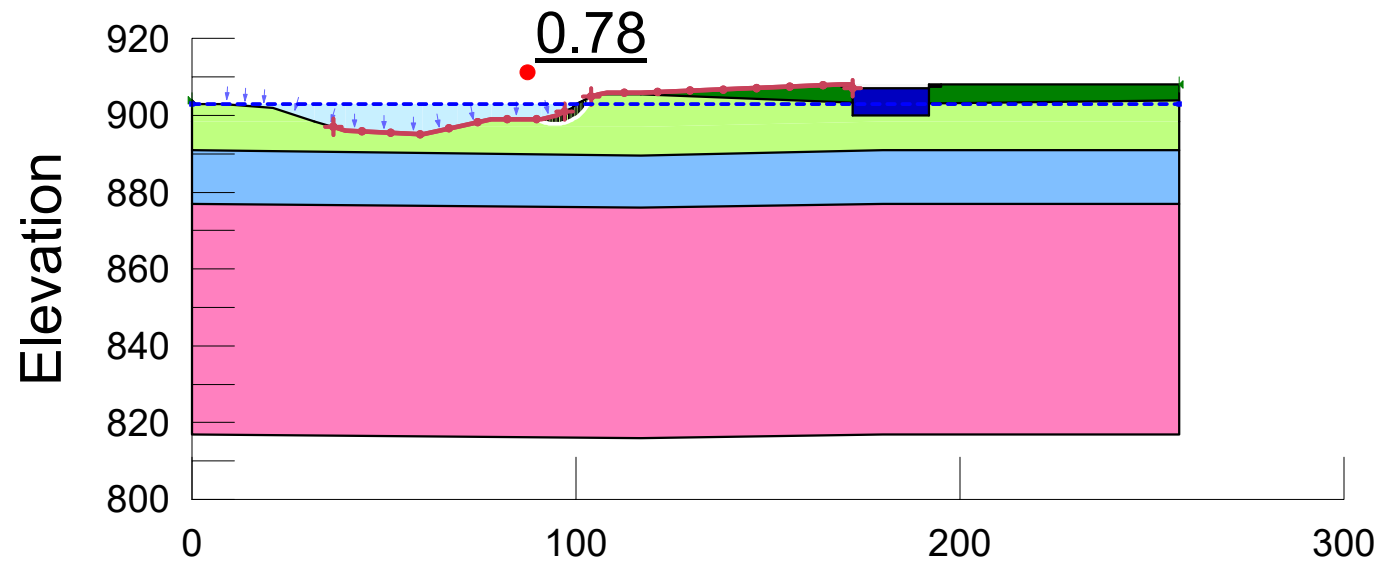


Figure 3D

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
Concrete	Concrete	145		
Lower Brenna - CD	Lower Brenna - CD	102.5	0	14.5
Sherack - CD	Sherack - CD	111	0	17
Topsoil	Topsoil	110	100	10
Upper Brenna - CD	Upper Brenna - CD	106	0	17.5
Water	Water	62.4	0	0

Title: Marc Knutson Pool
 Name: Proposed Pool - Long Term (CD) - Low Pool
 Analysis Type: Morgenstern-Price
 Date: 12/19/2024

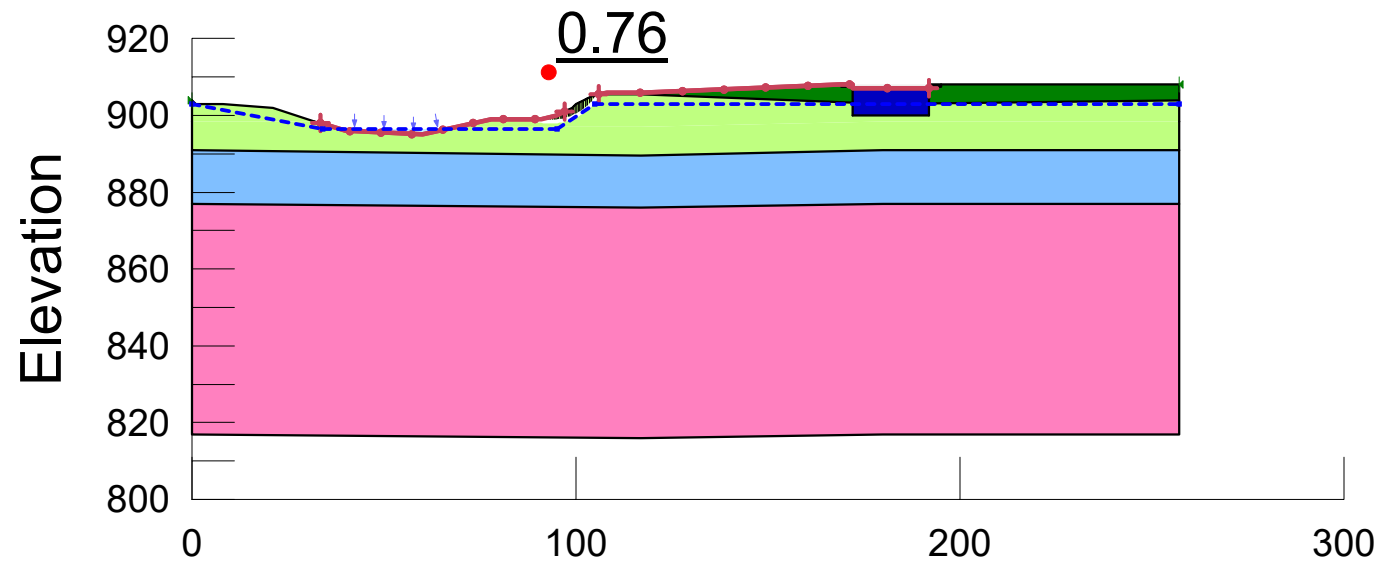


Figure 3E

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
■	Concrete	145		
■	Lower Brenna - CD	102.5	0	14.5
■	Sherack - CD	111	0	17
■	Topsoil	110	100	10
■	Upper Brenna - CD	106	0	17.5
■	Water	62.4	0	0

Title: Marc Knutson Pool

Name: Proposed Pool - Long Term (CD) - Normal Pool [Excluded]

Analysis Type: Morgenstern-Price

Date: 12/20/2024

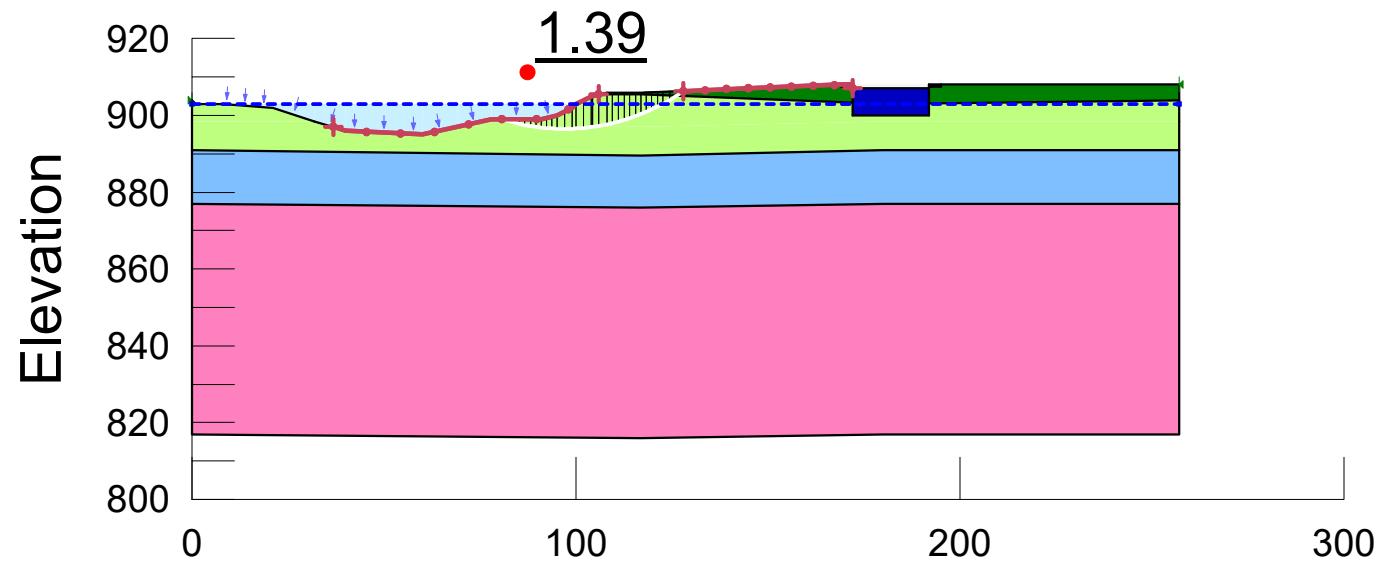
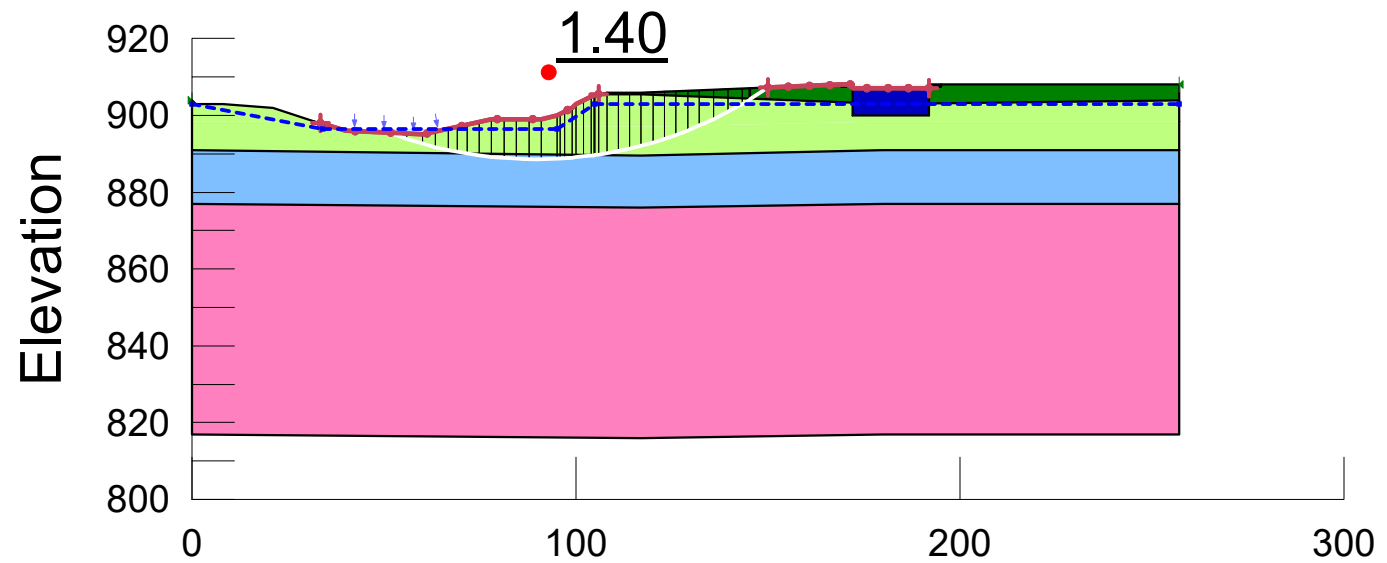


Figure 3F

Color	Name	Unit Weight (pcf)	Effective Cohesion (psf)	Effective Friction Angle (°)
Concrete	Concrete	145		
Lower Brenna - CD	Lower Brenna - CD	102.5	0	14.5
Sherack - CD	Sherack - CD	111	0	17
Topsoil	Topsoil	110	100	10
Upper Brenna - CD	Upper Brenna - CD	106	0	17.5
Water	Water	62.4	0	0

Title: Marc Knutson Pool
 Name: Proposed Pool - Long Term (CD) - Low Pool [Excluded]
 Analysis Type: Morgenstern-Price
 Date: 12/19/2024



Appendix B

Geotechnical Report Limitations and Guidelines for Use

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. P-0036952

B.1 REFERENCE

This appendix provides information to help you manage your risks relating to subsurface problems which are caused by construction delays, cost overruns, claims, and disputes. This information was developed and provided by GBA¹, of which, we are a member firm.

B.2 RISK MANAGEMENT INFORMATION

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

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

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

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

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

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

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

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

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

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

B.2.3 Read the Full Report

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. P-0036952

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

B.2.4 You Need to Inform Your Geotechnical Engineer About Change

Your geotechnical engineer considered unique, project-specific factors when developing the scope of study behind this report and developing the confirmation-dependent recommendations the report conveys. Typical changes that could erode the reliability of this report include those that affect:

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

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

B.2.5 Most of the “Findings” Related in This Report Are Professional Opinions

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

B.2.6 This Report's Recommendations Are Confirmation-Dependent

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

B.2.7 This Report Could Be Misinterpreted

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

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

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

B.2.8 Give Constructors a Complete Report and Guidance

Some owners and design professionals mistakenly believe they can shift unanticipated-subsurface-conditions liability to constructors by limiting the information they provide for bid preparation. To help prevent the costly, contentious problems this practice has caused, include the complete geotechnical engineering report, along with any attachments or appendices, with your contract documents, but be certain to note conspicuously that you've included the material for information purposes only. To avoid misunderstanding, you may also want to note that “informational purposes” means constructors have no right to rely on the interpretations, opinions, conclusions, or recommendations in the report. Be certain that constructors know they may learn about specific project requirements, including options selected

Appendix B

Geotechnical Report Limitations and Guidelines for Use

Report No. P-0036952

from the report, only from the design drawings and specifications. Remind constructors that they may perform their own studies if they want to, and be sure to allow enough time to permit them to do so. Only then might you be in a position to give constructors the information available to you, while requiring them to at least share some of the financial responsibilities stemming from unanticipated conditions. Conducting prebid and preconstruction conferences can also be valuable in this respect.

B.2.9 Read Responsibility Provisions Closely

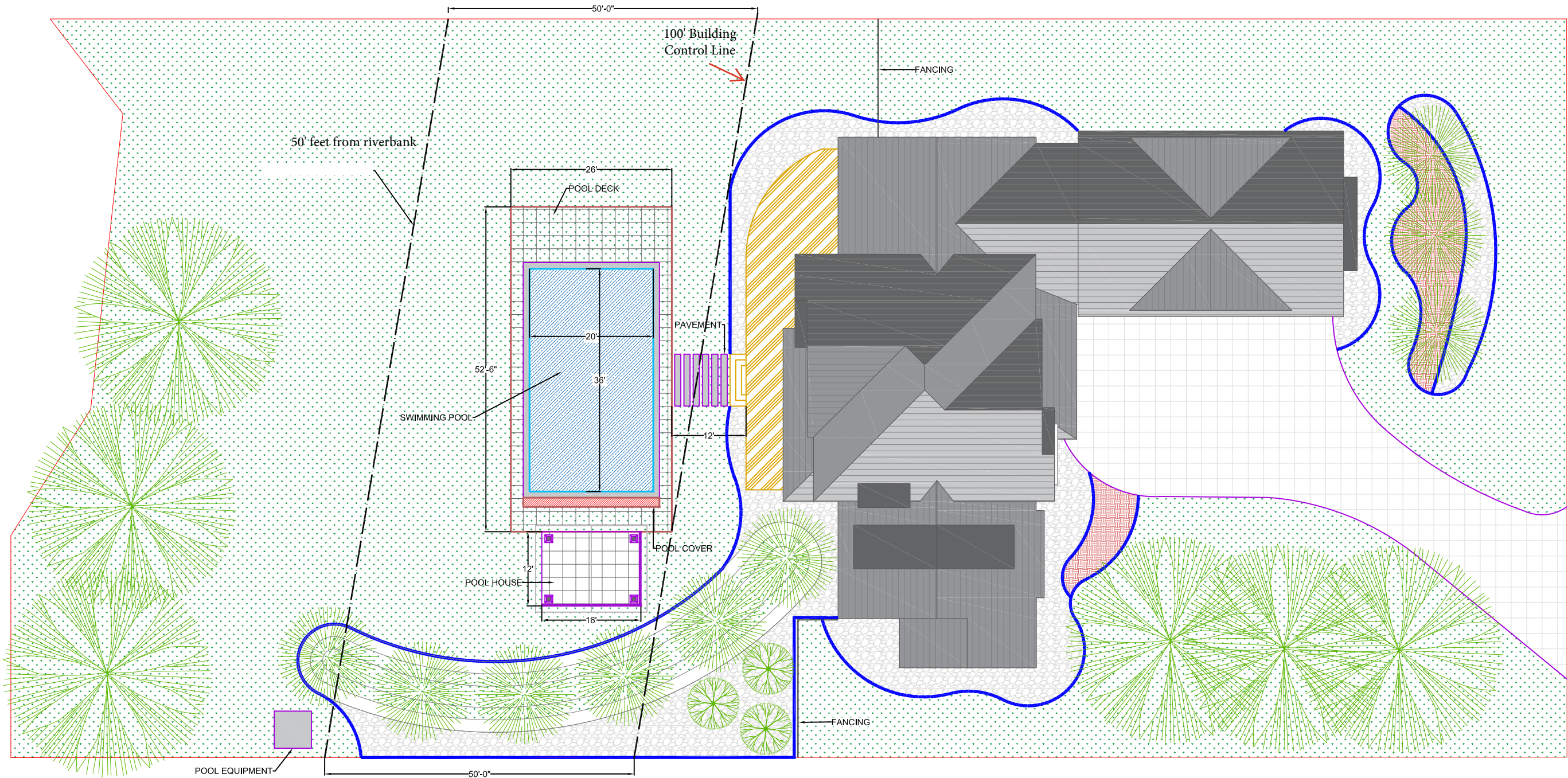
Some client representatives, design professionals, and constructors do not realize that geotechnical engineering is far less exact than other engineering disciplines. This happens in part because soil and rock on project sites are typically heterogeneous and not manufactured materials with well-defined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

B.2.10 Geoenvironmental Concerns Are Not Covered

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

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

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



SHEYENNE RIVER WAY

MARC & ANNIE KNUTSON


SCALE: TBD

MARC & ANNIE RESIDENCE
LANDSCAPE DESIGN


3110 Sheyenne River Way
West Fargo, ND

Turf Tamers LLC
Landscaping
4200 24th Ave N
Fargo, North Dakota 58102
Phone: 701.356.2990
www.turftamersfargo.com

Turf
Tamers
LAWN CARE & LANDSCAPING

This document is by Turf Tamers LLC and contains privileged and confidential information intended for use by Turf Tamers LLC personnel only. Any disclosure or distribution of this document or information contained herein, without prior written consent of Turf Tamers LLC, is prohibited.

PROJECT: marc & Annie Residence
CAD FILE:
DRAWN: Ashfur Rahman
CHECKED:
ISSUED:
REVISIONS: ...
...

SHEET TITLE
LANDSCAPE DESIGN

SHEET NUMBER:
L-01.1

MEMORANDUM

TO: West Fargo Planning & Zoning Commission
FROM: Aaron Nelson, Planning Director *AN*
MEETING DATE: February 11, 2025
SUBJECT: Updates to Planning & Zoning Commission Bylaws & Rules of Conduct

In follow-up to discussion held at the January 14, 2025 meeting of the Planning & Zoning Commission, the attached updates to the Planning & Zoning Commission "Rules of Conduct" (bylaws) are submitted to the Planning & Zoning Commission for consideration of approval.

The updated draft of the bylaws includes the following proposed changes:

- Addition of the word "Bylaws" to the title of the document and uniformity of terminology throughout the document.
- Allow members to serve more than two terms in situations in which there are no other applicants willing to serve.
- References added to acknowledge and clarify membership and the role of ex-officio members of the Planning & Zoning Commission, as established by City ordinance.
- Reduce the required quorum from four to three members during such times that there are two or more vacancies on the Commission.
- Clarify the nature and intent of maintaining an annual Work Program. (Although previously referenced, this was not historically done.)

These proposed updates will be presented for consideration at the February 14 Planning & Zoning Commission meeting. The Planning & Zoning Commission may choose to adopt the edits as written, adopt with additional changes, reject the edits, or provide additional direction to staff. As noted within the existing bylaws, amendments can be made through a majority vote of the Planning & Zoning Commission.

BYLAWS & RULES OF CONDUCT

WEST FARGO PLANNING AND ZONING COMMISSION

ARTICLE 1. GENERAL BACKGROUND

1.1. Function

The Planning and Zoning Commission (hereafter referred to as the Board) serves the Planning Department and City Commission as an advisor and representative of citizen interests on matters involving future planning, zoning, subdivisions, and municipal development. The Board decisions on such matters relate to the impact that the decision has on the Comprehensive Plan and whether such a decision furthers community-wide health, safety, and welfare.

1.2. General Duties

The duties of the Board shall include, but not be limited to:

1. Recommending to the City Commission programs for community improvement;
2. Preparing land use, housing, recreation, financial, public facility, redevelopment, and transportation plans;
3. Implementing the elements of the Comprehensive Plan through decisions on Zoning and Subdivision Applications.
4. Promoting the interest in and understanding of the Comprehensive Plan;
5. Advise the City Commission on all matters relating to Community Planning and Development.
6. Advising the Planning Department on work programs and tasks.
7. Provide a forum for citizen comments relating to community development.

1.3. Relationship to Planning Department

The City Planning Department serves as Staff to the Board. All development applications are received and processed through the Planning Department who subsequently provides recommendations to the Board.

The Board carries out its duties and provides guidance to the City Commission based on an annual work program. City Staff implements that work program through guidance by the Board.

It is recommended that each Board member use the Planning Department as an information resource. Individual site visits are also encouraged for all development applications.

ARTICLE 2. GENERAL STATUTES AND ORDINANCES GOVERNING ACTION

2.1 Applicable State and Local Laws.

To the extent that they remain in force and effect, or as they are amended, the Board and its members shall be governed by the following State Statutes, Local Ordinances and Plans including the following:

- a. N.D.C.C. 40-47 (City Zoning)
- b. N.D.C.C. 40-48 (Master Plans and Planning Commission)
- c. N.D.C.C. 40-50.1 (Platting)
- d. N.D.C.C. 40-51.2 (Annexation)
- e. N.D.C.C. 40-58 (Urban Renewal Law)
- f. N.D.C.C. 44-04 (Public Records and Meetings)
- g. Chapter 4-04 (Municipal Code - Subdivision Regulations)
- h. Chapter 4-100 - 4-500 (Municipal Code - Zoning Ordinance)
- i. The Bylaws & Rules of Conduct set herein
- j. West Fargo Comprehensive Plan
- k. Any other laws or ordinances as they may apply

2.2. Familiarity with State Statutes, Local Ordinances and Plans.

Upon taking office, all members of the Board shall become familiar with the applicable State laws, Local Ordinances, and Plans under Section 2.1. Members will be responsible for maintaining a knowledge of these items, with any amendments, which govern the conduct of the Board's affairs.

2.3 Bylaws & Rules of Conduct Available to Public

As part of the public record, an official copy of the Bylaws & Rules of Conduct shall be maintained at the City Planning Department. This copy shall be made available during the course of all Board meetings.

2.4 Amendments

An amendment to any provision in these Bylaws & Rules of Conduct can be made through a majority vote of the Board members provided such amendment is not contrary to State law or to other ordinances. Any amendment must be incorporated into the official copy of these rules.

ARTICLE 3. MEMBERS

3.1 Appointment, Terms, and Compensation

The Board shall consist of eight (8) members, who shall be appointed in accordance with Chapter 4-01 of the City Ordinances. The Mayor, with approval of the City Commission, shall appoint all municipal representatives to the Board. Extraterritorial representatives shall be appointed by the Board of County Commissioners.

Member terms shall be five years. No member shall serve more than two full terms unless no other applicants are available. In such cases, a member may serve additional terms if approved by the City Commission for municipal members or the Board of County Commissioners for extraterritorial members.

Compensation may be set in an amount as determined by the City Commission.

In addition to the eight appointed members, the President of the Board of City Commissioners, the City Engineer, and the City Attorney shall act as ex-officio members of the Board, in accordance with Section 4-0102 of the City Ordinances. Ex-officio members are non-voting members and do not count for purposes of attendance and quorum. However, ex-officio members may participate in presentation and discussion during Board meetings, as necessary.

3.2 Causes for Removal from Board

A Board member may be removed by the City Commission for misconduct and in particular for:

- a. Failure to attend 75% of the yearly meetings.
- b. Failure to disclose conflict of interest which otherwise would have disqualified a vote on a decision which affected a member personally or monetarily.
- c. Failure to maintain reasonable familiarity with State and Local Laws, Community Plans, and rules affecting the Board, or failure to be guided thereby, as required in Section 2.1.

3.3 Resignations and Removals

When members propose to resign, written notice shall, if feasible, be given to the Chair or Vice-chair two months prior to the date of resignation.

To remove a member, written notice of removal will be presented to that member from the City Commission.

Due to vacation of office by death or illness, the Chair shall notify the body responsible for appointment informing them of the need to fill the vacant seat.

ARTICLE 4. OFFICERS

4.1 Election of Chair and Vice-chair.

A Chair and Vice-chair shall be elected annually at the first regularly scheduled meeting of the year by a majority vote of the Board. There will be no limit as to the number of terms a Chair or Vice-chair may serve.

4.2 Succession of Vice-chair to Office of Chair

If the Chair resigns or becomes no longer a member of the Board, the Vice-chair shall succeed that person for the remainder of the term. An election to select a new Vice-chair shall be made by majority vote at the next regularly scheduled meeting in order to fill the unexpired term.

4.3 Presiding at Meetings

If present and able, the Chair shall preside at all meetings and hearings. If the Chair is absent or unable to preside, the Vice-chair shall preside. If both are absent or unable to preside, the remaining members shall appoint a temporary Chair from the remaining membership.

In accordance with these and other applicable rules, the presiding officer shall maintain order and decide on all points of procedure.

4.4 Managerial Powers

The Chair shall direct the official business of the Board, supervise the Staff and Board work load, request needed assistance, and exercise general disciplinary power. The Chair may also appoint subcommittees when determined necessary.

4.5 Agendas, Notices, and Recording

The Planning Department shall be responsible for the preparation of Agendas, Staff reports, and publishing of Public Hearing Notices.

A member of City Staff shall maintain minutes of each meeting. The Minutes of the Board shall be kept in a Minute Book within the Planning Department and be a part of the public record.

ARTICLE 5. CONDUCT OF BOARD MEMBERS AND STAFF

5.1 Representation of Applicants

No member of the Board, or its Staff, may represent applicants on matters on which the Board is to make determinations.

5.2 Conflict of Interest

No member of the Board, the Staff, or any agency serving the Board, shall participate in any case which he or she has personal or financial interest in the property or action concerned, or will be directly affected by the decision, or has or believes that there is any other Conflict of Interest as defined by North Dakota State Law.

5.3 Notification of Conflict of Interest

As soon as any member of the Board, Staff, or Agency serving the Board, become aware of any potential Conflict of Interest in any case, notification shall be given to the Chair. When the Chair finds that conflict clearly or reasonably exists, the Chair will disqualify that person from acting or participating in the case at hand. The secretary shall note in the Minute Book that the Chair excused that person from acting due to Conflict of Interest.

5.4 Disqualification on Grounds of Influence Other Than at Public Hearings

A member may disqualify his or her vote whenever any applicant, or their agent, has sought to influence the vote of the member prior to full Board review. If disqualification does not occur, the member shall make it known to the Board that private discussion with the applicant or agent has taken place prior to the meeting and detail the contents of that discussion.

ARTICLE 6. MEETINGS, HEARINGS, GENERALLY

6.1 Regular Meetings

Regular meetings of the Board shall be held at 5:30 P.M. at the West Fargo City Hall on the second and sometimes the fourth Tuesday's of each month; provided that such meetings may be held at any other convenient place if directed by the Chair upon findings of necessity.

6.2 Special Meetings

Special meetings may be held at the call of the Chair. All public notices shall be issued in the same manner as for regular meetings.

6.3 Cancellation

If no business is scheduled, or if it is apparent that a quorum will not be available, any meeting may be cancelled by the Chair by giving notice to all Board members, Press, and Media Representatives.

6.4 Quorum

No Board action on any item can be taken without a quorum present.

- a. Standard Quorum: A standard quorum of the Board will consist of four members.
- b. Reduced Quorum in the Event of Vacancies: If there are two (2) or more vacancies on the Board, the quorum shall be reduced to three (3) members until such time as the number of vacancies is fewer than two (2). For the purposes of this provision, a "vacancy" shall be defined as an unfilled seat due to resignation, removal, death, term expiration, or any other circumstance causing a member's departure from the Board.

6.5 Public Meetings of the Board; Other Activities of the Board

All meetings of the Board involving hearing of evidence and making Board decisions shall be open to the public with formal notice as required by State Law.

Meetings of the conduct of other business, such as trips for the collection of evidence, will not require formal public notice, but shall be scheduled during the course of a regular or special meeting. No formal action on any application can be taken during these type of meetings.

6.6 Executive Sessions

Meeting of all or part of the members to discuss the merits of an application shall not be conducted unless such meeting is open to the public and proper legal notices given as required by law.

ARTICLE 7. PROCEDURES AT PUBLIC HEARINGS

7.1 Any person may appear or be represented.

At the hearing, any person may appear or be represented by an authorized agent.

7.2 Order for Presenting Evidence

- a. The Chair describes the nature of the case and the Staff presents Staff Report.
- b. The applicant and their agent(s) outline(s) the reasons for the request and presents supporting evidence.
- c. Public Hearing is opened by the Chair.
- d. Public comments are presented after each person states their name and address for the record.
- e. All proponents of the application, other than the applicant, present evidence for support.
- f. All opponents of the application present reasons of opposition.
- g. Following all comments, the Chair closes the Public Hearing.

- h. Board members deliberate and question appropriate persons.
- i. Board takes action of the application providing the basis for their decision.

7.3 Conduct during Public Hearing

During the hearing, comments shall proceed without interruption and be enforced by the Chair. All arguments and evidence should be presented to the Chair.

The Board, Chair, or Staff may direct any questions to the applicant or any person in the audience to bring out pertinent facts during the course of the hearing. The Board may also call for pertinent facts from the Staff or make appropriate comments about the case.

The Chair is responsible for maintaining Public Hearing decorum.

ARTICLE 8. FINDINGS AND DECISIONS

8.1 Timing

The Chair may elect, or the Board approve on motion to:

- a. Proceed immediately to a decision on the item before the Board, or
- b. Defer the decision until later in the same meeting, or
- c. Defer the decision until a specified special or regular meeting of the Board as long as it is within time limit guidelines set for the application by City Ordinance.

8.2 Form and Procedure

All decisions of the Board shall be made at a public meeting by motion made and seconded and by general vote. A roll call vote may be requested by any Board member or by any member of the audience.

The motion shall specify the proposed action, any attached conditions, and the findings of fact which caused the proposed action.

8.3 Notification of Decisions

All decisions of the Board are subject to final approval by, or appeal to, the City Commission. The City Commission is to be notified by the Planning Department of all decisions made by the Board.

The applicant shall also be notified in writing by the Planning Department of the decision. This notification shall include the decision, Board findings of fact, and timing for any further review by either the Board or the City Commission.

ARTICLE 9. RECORDS

9.1 Public Records

All actions of the Board shall be recorded and/or documented and maintained for open public access by the Planning Department as governed by North Dakota State Law.

9.2 Contents of Records

Records of all Zoning and Subdivision cases shall be maintained by the Planning Department. Decisions on each case shall clearly show the supporting reasoning for the decisions, its relationship to the Comprehensive Plan, and the procedure followed in reaching the decision.

ARTICLE 10. WORK PROGRAM

10.1 Establishment of Work Program

City staff shall be responsible for developing and maintaining a Planning and Zoning Work Program for the purpose of guiding Board discussions and priorities for the coming year. The Work Program is intended to identify and outline key issues and projects that are anticipated to require the attention and guidance of the Board.

The Work Program is a guiding document and does not override decisions made by the City Commission, City Administration, or Planning Department. The Board's role is to provide guidance and input, to identify potential areas of need and/or community concern, and to help prioritize Work Plan items.

10.2 Annual Review of Work Program

The Board shall review and discuss the Work Program at least once a year to ensure it remains relevant and reflective of community's planning needs. Adjustments may be made as needed to respond to new priorities, projects, or community concern.

Updated and Reviewed by Planning and Zoning Commission on February 11, 2025.

BYLAWS & RULES OF CONDUCT

WEST FARGO PLANNING AND ZONING COMMISSION

ARTICLE 1. GENERAL BACKGROUND

1.1. Function

The Planning and Zoning Commission (hereafter referred to as the Board) serves the Planning Department and City Commission as an advisor and representative of citizen interests on matters involving future planning, zoning, subdivisions, and municipal development. The Board decisions on such matters relate to the impact that the decision has on the Comprehensive Plan and whether such a decision furthers community-wide health, safety, and welfare.

1.2. General Duties

The duties of the Board shall include, but not be limited to:

1. Recommending to the City Commission programs for community improvement;
2. Preparing land use, housing, recreation, financial, public facility, redevelopment, and transportation plans;
3. Implementing the elements of the Comprehensive Plan through decisions on Zoning and Subdivision Applications.
4. Promoting the interest in and understanding of the Comprehensive Plan;
5. Advise the City Commission on all matters relating to Community Planning and Development.
6. Advising the Planning Department on work programs and tasks.
7. Provide a forum for citizen comments relating to community development.

1.3. Relationship to Planning Department

The City Planning Department serves as Staff to the Board. All development applications are received and processed through the Planning Department who subsequently provides recommendations to the Board.

The Board carries out its duties and provides guidance to the City Commission based on an adopted-yearlyannual work program. City Staff implements that work program through guidance by the Board.

It is recommended that each Board member use the Planning Department as an information resource. Individual site visits are also encouraged for all development applications.

ARTICLE 2. GENERAL STATUTES AND ORDINANCES GOVERNING ACTION

2.1 Applicable State and Local Laws.

To the extent that they remain in force and effect, or as they are amended, the Board and its members shall be governed by the following State Statutes, Local Ordinances and Plans including the following:

- a. N.D.C.C. 40-47 (City Zoning)
- b. N.D.C.C. 40-48 (Master Plans and Planning Commission)
- c. N.D.C.C. 40-50.1 (Platting)
- d. N.D.C.C. 40-51.2 (Annexation)
- e. N.D.C.C. 40-58 (Urban Renewal Law)
- f. N.D.C.C. 44-04 (Public Records and Meetings)
- g. Chapter 4-04 (Municipal Code - Subdivision Regulations)
- h. Chapter 4-100 - 4-500 (Municipal Code - Zoning Ordinance)
- i. The Bylaws & Articles Rules of Conduct set herein
- j. West Fargo Comprehensive Plan
- k. Any other laws or ordinances as they may apply

2.2. Familiarity with State Statutes, Local Ordinances and Plans.

Upon taking office, all members of the Board shall become familiar with the applicable State laws, Local Ordinances, and Plans under Section 2.1. Members will be responsible for maintaining a knowledge of these items, with any amendments, which govern the conduct of the Board's affairs.

2.3 Bylaws & Rules of Conduct Available to Public

As part of the public record, an official copy of the Bylaws & Rules of ~~e~~C Conduct shall be maintained at the City Planning Department. This copy shall be made available during the course of all Board meetings.

2.4 Amendments

An amendment to any provision in these Bylaws & Rules~~Articles~~ of Conduct can be made through a majority vote of the Board members provided such amendment is not contrary to State law or to other ordinances. Any amendment must be incorporated into the official copy of these rules.

ARTICLE 3. MEMBERS

3.1 Appointment, Terms, and Compensation

The Board shall consist of eight (8) members, who shall be appointed in accordance with Chapter 4-01 of the City Ordinances. The Mayor, with approval of the City Commission, shall appoint all municipal representatives to the Board. Extraterritorial representatives shall be appointed by the Board of County Commissioners.

Member terms shall be five years. No member shall serve more than two full terms unless no other applicants are available. In such cases, a member may serve additional terms if approved by the City Commission for municipal members or the Board of County Commissioners for extraterritorial members.

Compensation may be set in an amount as determined by the City Commission.

In addition to the eight appointed members, the President of the Board of City Commissioners, the City Engineer, and the City Attorney shall act as ex-officio members of the Board, in accordance with Section 4-0102 of the City Ordinances. Ex-officio members are non-voting members and do not count for purposes of attendance and quorum. However, ex-officio members may participate in presentation and discussion during Board meetings, as necessary.

3.2 Causes for Removal from Board

A Board member may be removed by the City Commission for misconduct and in particular for:

- a. Failure to attend 75% of the yearly meetings.
- b. Failure to disclose conflict of interest which otherwise would have disqualified a vote on a decision which affected a member personally or monetarily.
- c. Failure to maintain reasonable familiarity with State and Local Laws, Community Plans, and rules affecting the Board, or failure to be guided thereby, as required in Section 2.1.

3.3 Resignations and Removals

When members propose to resign, written notice shall, if feasible, be given to the Chair or Vice-chair two months prior to the date of resignation.

To remove a member, written notice of removal will be presented to that member from the City Commission.

Due to vacation of office by death or illness, the Chair shall notify the body responsible for appointment informing them of the need to fill the vacant seat.

ARTICLE 4. OFFICERS

4.1 Election of Chair and Vice-chair.

A Chair and Vice-chair shall be elected annually at the first regularly scheduled meeting of the year by a majority vote of the Board. There will be no limit as to the number of terms a Chair or Vice-chair may serve.

4.2 Succession of Vice-chair to Office of Chair

If the Chair resigns or becomes no longer a member of the Board, the Vice-chair shall succeed that person for the remainder of the term. An election to select a new Vice-chair shall be made by majority vote at the next regularly scheduled meeting in order to fill the unexpired term.

4.3 Presiding at Meetings

If present and able, the Chair shall preside at all meetings and hearings. If the Chair is absent or unable to preside, the Vice-chair shall preside. If both are absent or unable to preside, the remaining members shall appoint a temporary Chair from the remaining membership.

In accordance with these and other applicable rules, the presiding officer shall maintain order and decide on all points of procedure.

4.4 Managerial Powers

The Chair shall direct the official business of the Board, supervise the Staff and Board work load, request needed assistance, and exercise general disciplinary power. The Chair may also appoint subcommittees when determined necessary.

4.5 Agendas, Notices, and Recording

The Planning Department shall be responsible for the preparation of Agendas, Staff reports, and publishing of Public Hearing Notices.

A member of City Staff shall maintain minutes of each meeting. The Minutes of the Board shall be kept in a Minute Book within the Planning Department and be a part of the public record.

ARTICLE 5. CONDUCT OF BOARD MEMBERS AND STAFF

5.1 Representation of Applicants

No member of the Board, or its Staff, may represent applicants on matters on which the Board is to make determinations.

5.2 Conflict of Interest

No member of the Board, the Staff, or any agency serving the Board, shall participate in any case which he or she has personal or financial interest in the property or action concerned, or will be directly affected by the decision, or has or believes that there is any other Conflict of Interest as defined by North Dakota State Law.

5.3 Notification of Conflict of Interest

As soon as any member of the Board, Staff, or Agency serving the Board, become aware of any potential Conflict of Interest in any case, notification shall be given to the Chair. When the Chair finds that conflict clearly or reasonably exists, the Chair will disqualify that person from acting or participating in the case at hand. The secretary shall note in the Minute Book that the Chair excused that person from acting due to Conflict of Interest.

5.4 Disqualification on Grounds of Influence Other Than at Public Hearings

A member may disqualify his or her vote whenever any applicant, or their agent, has sought to influence the vote of the member prior to full Board review. If disqualification does not occur, the member shall make it known to the Board that private discussion with the applicant or agent has taken place prior to the meeting and detail the contents of that discussion.

ARTICLE 6. MEETINGS, HEARINGS, GENERALLY

6.1 Regular Meetings

Regular meetings of the Board shall be held at 5:30 P.M. at the West Fargo City Hall on the second and sometimes the fourth Tuesday's of each month; provided that such meetings may be held at any other convenient place if directed by the Chair upon findings of necessity.

6.2 Special Meetings

Special meetings may be held at the call of the Chair. All public notices shall be issued in the same manner as for regular meetings.

6.3 Cancellation

If no business is scheduled, or if it is apparent that a quorum will not be available, any meeting may be cancelled by the Chair by giving notice to all Board members, Press, and Media Representatives.

6.4 Quorum

No Board action on any item can be taken without a quorum present.

a. Standard Quorum: A standard quorum of the Board will consist of four members. ~~No Board action on any item can be taken without a quorum present.~~

~~a.b.~~ Reduced Quorum in the Event of Vacancies: If there are two (2) or more vacancies on the Board, the quorum shall be reduced to three (3) members until such time as the number of vacancies is fewer than two (2). For the purposes of this provision, a "vacancy" shall be defined as an unfilled seat due to resignation, removal, death, term expiration, or any other circumstance causing a member's departure from the Board.

6.5 Public Meetings of the Board; Other Activities of the Board

All meetings of the Board involving hearing of evidence and making Board decisions shall be open to the public with formal notice as required by State Law.

Meetings of the conduct of other business, such as trips for the collection of evidence, will not require formal public notice, but shall be scheduled during the course of a regular or special meeting. No formal action on any application can be taken during these type of meetings.

6.6 Executive Sessions

Meeting of all or part of the members to discuss the merits of an application shall not be conducted unless such meeting is open to the public and proper legal notices given as required by law.

ARTICLE 7. PROCEDURES AT PUBLIC HEARINGS

7.1 Any person may appear or be represented.

At the hearing, any person may appear or be represented by an authorized agent.

7.2 Order for Presenting Evidence

- a. The Chair describes the nature of the case and the Staff presents Staff Report.
- b. The applicant and their agent(s) outline(s) the reasons for the request and presents supporting evidence.
- c. Public Hearing is opened by the Chair.
- d. Public comments are presented after each person states their name and address for the record.
- e. All proponents of the application, other than the applicant, present evidence for support.
- f. All opponents of the application present reasons of opposition.
- g. Following all comments, the Chair closes the Public Hearing.

- h. Board members deliberate and question appropriate persons.
- i. Board takes action of the application providing the basis for their decision.

7.3 Conduct during Public Hearing

During the hearing, comments shall proceed without interruption and be enforced by the Chair. All arguments and evidence should be presented to the Chair.

The Board, Chair, or Staff may direct any questions to the applicant or any person in the audience to bring out pertinent facts during the course of the hearing. The Board may also call for pertinent facts from the Staff or make appropriate comments about the case.

The Chair is responsible for maintaining Public Hearing decorum.

ARTICLE 8. FINDINGS AND DECISIONS

8.1 Timing

The Chair may elect, or the Board approve on motion to:

- a. Proceed immediately to a decision on the item before the Board, or
- b. Defer the decision until later in the same meeting, or
- c. Defer the decision until a specified special or regular meeting of the Board as long as it is within time limit guidelines set for the application by City Ordinance.

8.2 Form and Procedure

All decisions of the Board shall be made at a public meeting by motion made and seconded and by general vote. A roll call vote may be requested by any Board member or by any member of the audience.

The motion shall specify the proposed action, any attached conditions, and the findings of fact which caused the proposed action.

8.3 Notification of Decisions

All decisions of the Board are ~~advisory and~~ subject to final approval by or appeal to, the City Commission. The City Commission is to be notified by the Planning Department of all decisions made by the Board.

The applicant shall also be notified in writing by the Planning Department of the decision. This notification shall include the decision, Board findings of fact, and timing for any further review by either the Board or the City Commission.

ARTICLE 9. RECORDS

9.1 Public Records

All actions of the Board shall be recorded and/or documented and maintained for open public access by the Planning Department as governed by North Dakota State Law.

9.2 Contents of Records

Records of all Zoning and Subdivision cases shall be maintained by the Planning Department. Decisions on each case shall clearly show the supporting reasoning for the decisions, its relationship to the Comprehensive Plan, and the procedure followed in reaching the decision.

ARTICLE 10. WORK PROGRAM

10.1 Establishment of Work Program~~Yearly Priorities~~

~~The Board shall be responsible for developing and adopting a Planning and Zoning Work Program for each year. This program shall be adopted by the first meeting of each year and set out the anticipated priority for each work element. All work programs must be in conformity to the Comprehensive Plan and any other applicable Laws and Ordinances. City staff shall be responsible for developing and maintaining a~~
Planning and Zoning Work Program for the purpose of guiding Board discussions and priorities for the coming year. The Work Program is intended to identify and outline key issues and projects that are anticipated to require the attention and guidance of the Board.

The Work Program is a guiding document and does not override decisions made by the City Commission, City Administration, or Planning Department. The Board's role is to provide guidance and input, to identify potential areas of need and/or community concern, and to help prioritize Work Plan items.

10.2 Annual Review of Work Program

The Board shall review and discuss the Work Program at least once a year to ensure it remains relevant and reflective of community's planning needs. Adjustments may be made as needed to respond to new priorities, projects, or community concern.

Updated and Reviewed by Planning and Zoning Commission on February 11, 2025. ~~April 9, 2018.~~