VILLAGE OF NEW GLARUS PLAN COMMISSION MEETING AGENDA Village Hall Community Room 319 2nd St.

3/15/2023

REGULAR MEETING

- 1. Call to Order
- 2. Approval of Agenda
- 3. Approval of Minutes –January 25, 2023
- 4. Consideration/Discussion: New Glarus Brewing Company Warehouse Addition Site Plan, 2400 WI-69
- 5. Set next meeting date for Wednesday, April 20
- 6. Adjournment

Roger Truttmann, Chair Village Plan Commission

6:30 PM

POSTED:

N.G. Village Hall 3/10/23 N.G. Post Office 3/10/23 Bank of New Glarus 3/10/23

Kelsey A. Jenson, Clerk

PURSUANT TO APPLICABLE LAW, NOTICE IS HEREBY GIVEN THAT A QUORUM OR A MAJORITY OF THE NEW GLARUS VILLAGE BOARD TRUSTEES MAY ATTEND THIS MEETING. INFORMATION PRESENTED AT THIS MEETING MAY HELP FORM THE RATIONALE BEHIND FUTURE ACTIONS THAT MAY BE TAKEN BY THE NEW GLARUS VILLAGE BOARD.

PERSONS REQUIRING ADDITIONAL SERVICES TO PARTICIPATE IN A PUBLIC MEETING MAY CONTACT THE VILLAGE CLERK FOR ASSISTANCE AT 527-2510

VILLAGE OF NEW GLARUS
PLAN COMMISSION, SPECIAL MEETING MINUTES

Village Hall Community Room 319 2nd Street January 25, 2023 6:30 PM

REGULAR MEETING CALL TO ORDER: Chair Roger Truttman, called regular meeting to order at 6:30 p.m.

PRESENT: Roger Truttman, Bekah Stauffacher, Chuck Phillipson, Mike Marty, Beth Alderman, Tara Wilde & Suzi Janowiak

ALSO PRESENT: Interim Administrator Karl Frantz, Deputy Clerk: Deanna Young, Joe Cockroft, Pat Rank & Kyle Henderson (Strand), Deb & Bill Saunders, Sue Kempfer, Jennifer Thayer, Ron Roesslein, Ben Kahl, TM, Shelly Johnson Anthony Edge, & Travis Zimmerman

<u>APPROVAL OF MINUTES:</u> from 11.17.22, motioned by Mike Marty, seconded by Beckah Stauffacher Motioned carried unanimously 7-0.

<u>APPROVAL OF AGENDA</u>: Motioned by Tara Wilde, seconded by Michael Bell. Motioned carried unanimously 7-0.

CONSIDERATION/DISCUSSION:

Certified Survey Map, 506 12th Ave. Shepard of the Hills Church. After discussion Chuck Phillipson second by Bekah Stauffacher move to approve the CSM. Motion carried 7-0

CONSIDERATION/DISCUSSION:

New Primary School Site Plan - After discussion and presentation by representatives of the School district the revised site plan showing the Windlach access option motion by Mike Marty second by Chuck Philipson to approve the plan contingent on compliance with the Village Engineer comments in his letter in the packet. Motion carried unanimously

Set next meeting date for Wednesday February 15

<u>Adjourn</u>: Being no further business, Tar Wilde motioned to adjourn the meeting, seconded by Mike Marty , adjourned at approximately 8:00 p.m.

Karl Frantz
Interim Administrator

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VILLAGE OF NEW GLARUS APPLICATION FOR SITE PLAN APPROVAL

SUBMITTAL DATE: 2/16/2023

NEW GLARUS BREWING COMPANY APPLICANT NAME: ADDRESS: 2400 WI-69, NEW GLARUS, WI 53574 TELEPHONE: 608-527-5850 SITE ADDRESS: 2400 WI-69, NEW GLARUS, WI 53574 DESCRIPTION OF SITE BY LOT, BLOCK AND RECORDED SUBDIVISION OR BY METES & BOUNDS: LOT 1 CSM 5337, VOL 26 PG 44 AS LOCATED IN DOCUMENT NUMBER 600373. TYPE OF STRUCTURE: Current: **BREWERY** Proposed: BREWERY WAREHOUSE ADDITION PROPOSED OPERATION OR USE OF THE STRUCTURE OR SITE: WAREHOUSE FOR BREWERY AND NUMBER OF EMPLOYEES: PRESENT ZONING OF SITE: 1-1 INDUSTRIAL DISTRICT NOTICE TO APPLICANT:

ATTACH A DRAWING SHOWING ALL OF THE INFORMATION REQUIRED FOR A BUILDING/ZONING PERMIT AND EXISTING AND PROPOSED LANDSCAPING.

ACTUAL COSTS BILLED FOR VILLAGE CONSULTANTS WILL BE THE RESPONSIBILITY OF THE APPLICANT.

APPEALS. DENIALS OF BUILDING PERMITS CONTINGENT UPON SITE PLAN APPROVAL MAY BE APPEALED TO THE ZONING BOARD OF APPEALS BY FILING A NOTICE OF APPEAL WITH THE VILLAGE CLERKTREASURER WITHIN 10 DAYS OF THE DENIAL.

Applicant Signature

Owner Signature if different

Municipal Ordinance § 118-2(C); § 305-94 Rev. 5/2012

		2-25	3 -23	Mital or
PRESENTED TO BUILD	ING INSPECT	OR: A A	43	
REFERRED TO PLAN C	OMMISSION:	2-23.	23	
PLAN COMMISSION RE				

DETERMINATION:	APPROVE	DENY	DATE:	 :
		Village Plan Co	mmission C	hairman
REFERRED TO VILLAG	E BOARD:			
DETERMINATION: DATE:	REVERSE	AFFIRM		ALTERED
IF ALTERED, HOW ALT	ERED:			
		Village Presider	nt	

GENERAL INFORMATION CONSTRUCTION SITE EROSION CONTROL PERMIT APPLICATION

Send Application to:		Official Use Only
Village of New Glarus	1	Date Received:
319 Second Street		Fee Received:
New Glarus, WI 53574		Reviewer:
,		
Instructions: Please type or print. Read all instructions	s before completir	ng application.
Name of Project:		
NEW GLARUS BREWING COMPANY - 1	WAREHOUSE ADDITI	ON
Applicant/Entity Receiving Permit:		
1		
Name of Applicant: NEW GLARUS BREWING COMPANY		
Contact-First Name: KATHERINE	Last Name: MAY	
Address: 2400 WI-69		
City:NEW GLARUS	State: WI	ZIP: 53574
Telephone: 608-527-5850		·
Fax:		
Property Owner:		
Name: NEW GLARUS BREWING COMPANY		
Address: 2400 WI-69		
City: NEW GLARUS	State:Wl	ZIP: 53574°
Telephone: 608-527-5850		
Fax:		
Engineer (Where Applicable):		
Name of Firm:FEHR GRAHAM		
Contact: JESSE DUFF, PE		
Address: 1107 16TH AVE		
City: MONROE	State: WI	ZIP: 53566
Telephone:608-329-6400	Juici,	
Fax:		
1 MAI	191	

VILLAGE OF NEW GLARUS CONSTRUCTION SITE EROSION CONTROL PLAN APPLICATION CHECKLIST

(SITES<ONE ACRE)

Project Name: NEW GLARUS BREWING COMPANY	' - WAREHOUSE ADDITION
Permit #:	
Date:	====

Please check the appropriate box: I=Included; N/A=Non-Applicable (If N/A is checked, an explanation must be entered)

PLAN REQUIREMENT		N/A	EXPLANATION//LOCATION IN PLAN
A. Submittal Requirements			
1. Permit Application Form	Х		
B. Site Drawing			
1. North Arrow	Х		ALL SHEETS
2. Delineation of Proposed Land Disturbance Area	Х		EROSION CONTROL PLAN
3. Existing/Proposed Site Information	Х		EXISTING CONDITIONS/SITE LAYOUT PLAN
a. Building, roads, access drives	Х		SITE LAYOUT PLAN
b. Property lines	X		SITE LAYOUT PLAN
c. Drainage Ways	Х		GRADING PLAN
d. Water bodies		Х	NO WATER BODIES WITHIN DISTURBANCE
e. Trees	х		TREELINE SHOWN ON ALL SHEETS
f. Culverts	Х		UTILITIES PLAN
g. Other structures within 50 feet of prop. Disturbance	Х		SURVEY EXTENDS 50 FEET BEYOND DISTURBANCE
h. Direction/Grade of slopes before/after distrubance	Х		GRADING PLAN
F. Narrative			
1. Description of site and nature of construction activity	Х		STORMWATER MEMO
2. Construction start and end dates	Х		STORMWATER MEMO
Description and locatioan of all temporary control practices	х		EROSION CONTROL PLAN

VILLAGE OF NEW GLARUS

CONSTRUCTION SITE EROSION CONTROL PERMIT NO.

Date of Applic				-
	2400 WI-69, NEW GLARUS, WI	53574		2 9
Plat Name	G014 5007 #400 F440	101001755 1115 00111/51	TANKARE 2000E	- :
Certified Surve	7	AS LOCATED IN DOCUMEN	1 NUMBER 600373.	· .
Lots No. (s)				
Permit Condit				
(a)			mmencing any land disturbing constru	ction activity.
(b)	Permittee shall notify the Village A	· · · · · · · · · · · · · · · · · · ·		
(c)	•	0	istrator prior to any modification pursu	iant to S.08(2)
	of the erosion and sediment contro	ol ordinance.		
(d)	Permittee shall install all practice	es as identified in the approved	d erosion and sediment control plan	1.
(e)	Permittee shall maintain all road do the erosion and sediment control p		inage systems, BMPs and other facilitie	es identified in
(f)			urfaces and drainage ways resulting fr	om land
, ,			sion control log. Remove accumulated	
	downstream culverts, storm sewer		non control to B. Hemore accumulates	
(g)		-	n rain of 0.5 inches or more which r	esults in runoff
(3)	· · · · · · · · · · · · · · · · · · ·		k, make needed repairs and docume	
			inspection, the name of the person	
	inspection, and a description of			J
(h)			the purpose of inspecting compliance v	with the erosion
	and sediment control plan or for pe	erforming any work necessary to	bring the site into compliance with the	control plan.
	Permittee shall keep a copy of the			
	1 17			
APPLICANT	Owner			
MUST FILL	(1	olease print or type full r	name)	
IN BOXED	Address_	2400 WI-69		
AREA		NEW GLARUS, WI 53574	V	
	Signature	or Owner or Authorized	Renresentative	
	o.gu.u.			
Area of Land D	isturbance (Square Feet) 68	3,850		
, and or Lama B	.oran banco (oquare recer			
SPECIAL CONDIT	TIONS:			
		2 11 2		
CONDITIONAL A	PPROVAL:			
	Administra	tive Authority	Title	Date

Permits issued under this section shall be valid for a period of 180 days, or the length of the building permit or other construction authorizations, whichever is longer, from the date of issuance. The Village Administrator may extend the period one or more times for up to an additional 180 days. The Village Administrator may require additional BMPs as a condition of the extension if they are necessary to meet the requirements of this ordinance.

CHECKLIST FOR SITE PLAN APPROVAL APPLICATION

Completed site plan approval application must be submitted to Village Clerk's Office, along with fee and other requirements outlined by checklist. **Applications must be received 21 days prior to the Plan Commission meeting in order to be placed on the Plan Commission agenda.** The Plan Commission meets the 3rd Thursday of each month.

The application will be placed on agenda only after the completed form, fee and supporting documentation have been filed with the Village Clerk's Office. The application shall be reviewed by the Building Inspector who shall forward his review and findings to the Plan Commission. The Plan Commission will make recommendation to the Village Board who will make the final determination on the application.

Required Items:

- X 1. Completed site plan approval application.
- X 2. Scale drawing showing all the information required for a building/zoning permit and existing and proposed landscaping (see attached municipal code for requirements). *Provide 15 copies.*
- X 3. Completed Site Review Application Guideline
- X 4. Fee of \$100.00 (Resolution R10-24) NOTE: Actual costs billed for village consultants will be the responsibility of the applicant.

Rev. 1/2016

Strand Associates, Inc.®



910 West Wingra Drive Madison, WI 53715 (P) 608.251.4843 www.strand.com

March 9, 2023

Ms. Lauren Freeman, Village Administrator Village of New Glarus 319 Second Street New Glarus, WI 53574

Re: New Glarus Brewery Site Review Letter

Village of New Glarus, Wisconsin (Village)

Dear Lauren,

Strand Associates, Inc.® (Strand) received the following information on March 2, 2023, for the above-referenced project:

- 1. New Glarus Brewing Co., Warehouse Addition 2023 Drawings, dated February 21, 2023, consisting of 18 sheets.
- 2. Stormwater Management Memorandum dated February 17, 2023, by Fehr Graham consisting of 44 pages.
- 3. Site Plan Memorandum by Katherine May consisting of 1 page.
- 4. Certified Survey Map No. 5337, dated June 9, 2020, by Julius W. Smith consisting of 5 pages.

The following are Strand's review comments based on the information provided.

General

- 1. The total land disturbance for the project is approximately 68,850 square feet (sq ft) and an increase of approximately 7,990 sq ft of impervious area. Given that the land disturbance for the project exceeds 43,560 sq ft (1 acre), the applicant is required to submit applications for a Wisconsin Department of Natural Resources (WDNR) stormwater management permit and a Village stormwater and construction site erosion control permit. The Village permit applications were not included in the materials submitted.
- 2. The applicant has provided an update to the previously approved stormwater management plan that demonstrates that existing stormwater management facilities at the site provide the required 80 percent total suspended solids loading reduction and will also reduce peak runoff flows from the site for all storm events up to and including a 100-year design storm event. Based on review of this updated stormwater management plan, it appears to be acceptable.
- 3. The stormwater utility account for this parcel should have its Equivalent Runoff Unit (ERU) total increased by 2.7 ERUs because of the increase of impervious area.
- 4. Obtain all appropriate State and Village permits for the project.

Ms. Lauren Freeman, Village Administrator Village of New Glarus Page 2 March 9, 2023

Based on the information received and reviewed, we recommend approval contingent on the items noted previously.

Please call 608-251-4843 if you have any questions.

Sincerely,

STRAND ASSOCIATES, INC.®

Patrick J. Rank, P.E.

New Glarus Brewing Co- Warehouse 2023 Addition Village of New Glarus, Site Plan Approval Memo Contact: Katherine May KMay@NewGlarusBrewing.Com 406/599-6855

Dear Village Committee,

We are excited to share our design for a warehouse expansion at our Hilltop facility. This addition will be situated on the south end of our facility, by our existing Shipping and Receiving Entrance. It is roughly 28,000 SQF on what is currently an open gravel space.

The purpose of this warehouse is to house our empty beer Can supply. Currently when Cans are produced for us, they are stored off-site outside of the Village. This adds to cost and traffic flow as brewery employee and trucks are needed to shuttle cans from storage facilities to us when needed.

The demand for Canned beer in the market is growing significantly. Cans are a more sustainable material versus glass Bottles. They are less energy consuming to produce, lighter, and more compact, and therefore less fuel and traffic for shipping. They are also easier to recycle. We continue these sustainable steps in the design of the building by increasing the structural bearing load of the roof to hold future Solar Panels.

This addition will not increase traffic. Current warehouse staff will work in the space as they will be freed from their current need to make pick-ups from out of town warehouses. The warehouse is not open to the public and is accessed from the shipping only entrance. Finally, the 2 dock door additions are due to the taller height of stacked cans. Existing overhead dock doors are shorter than stacked Can industry standards. This increase in height is also why the new warehouse is a few feet higher than the existing warehouse. The new height remains within municipal zoning requirements. There will be no change to shipping and receiving hours. They will remain Monday through Friday 7am to 4pm. The only exterior lighting will be those required for emergency egress mounted over exit doors.

Since there is no increase in parking needs, our parking lot design will stay the same with 170 paved parking spaces and seasonal overflow parking in the East lots. This addition will be abutted to our existing facility with its rich landscape design of garden follies, limestone rock walls, indigenous plants and decorative paved stones. You can see some of our existing Hilltop landscape on drawing A120.

The warehouse design and materials will match what is utilized on the existing warehouses and production space. Walls will be metal insulated panels sitting on concrete curbs. The roof will be standing seam insulated metal panels. There will be vinyl picture windows and hollow metal doors. Along the perimeter of the building will be washed stone landscape edging.

Thank you for your time and continued support. I welcome any further conversations about our facility and our growth. Looking forward to visiting with you during your March 15th meeting. Our hope is this design is approved at that time with construction to start this spring.

Thank you,

Katherine May
AIA, NCARB
Wisconsin Architect License A-12133

NEW GLARUS BREWING CO WAREHOUSE ADDITION 2023

VILLAGE SUBMITAL

DRAWING LIST:

ARCHITECTURAL

COVER DRAWING FLOOR PLAN ROOF PLAN CD01 A101 BUILDING ELEVATIONS
BUILDING ELEVATIONS
EXISTING LANDSCAPE CONDITIONS A111 A112 A120

CIVIL

TITLE SHEET STANDARD LEGEND

GENERAL NOTES GENERAL NOTES

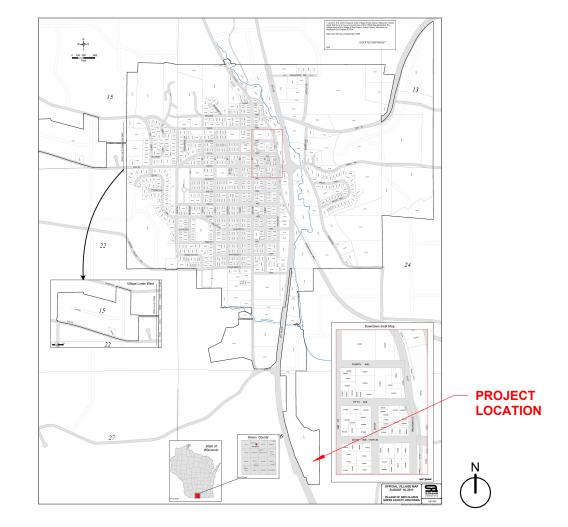
CD01

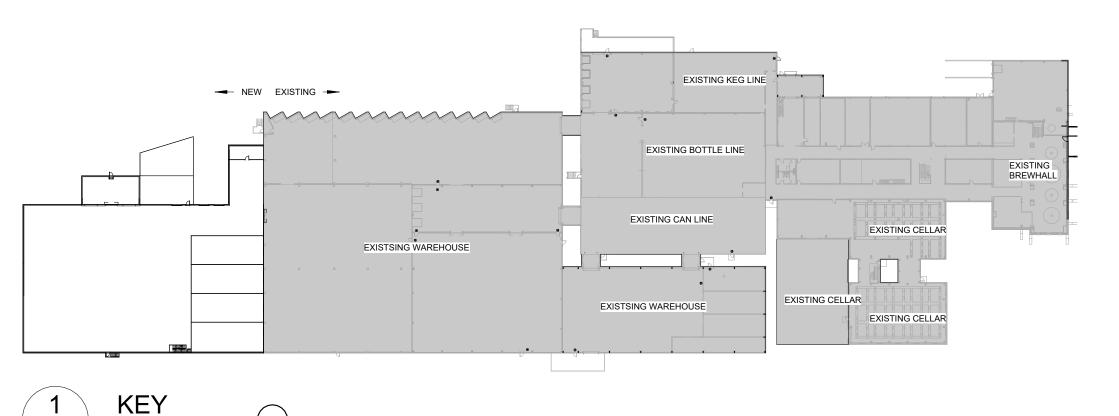
1" = 80'-0"

EXISTING CONDITIONS AND REMOVAL PLAN SITE LAYOUT PLAN GRADING PLAN UTILITIES PLAN

EROSION CONTROL PLAN

DETAILS DETAILS DETAILS







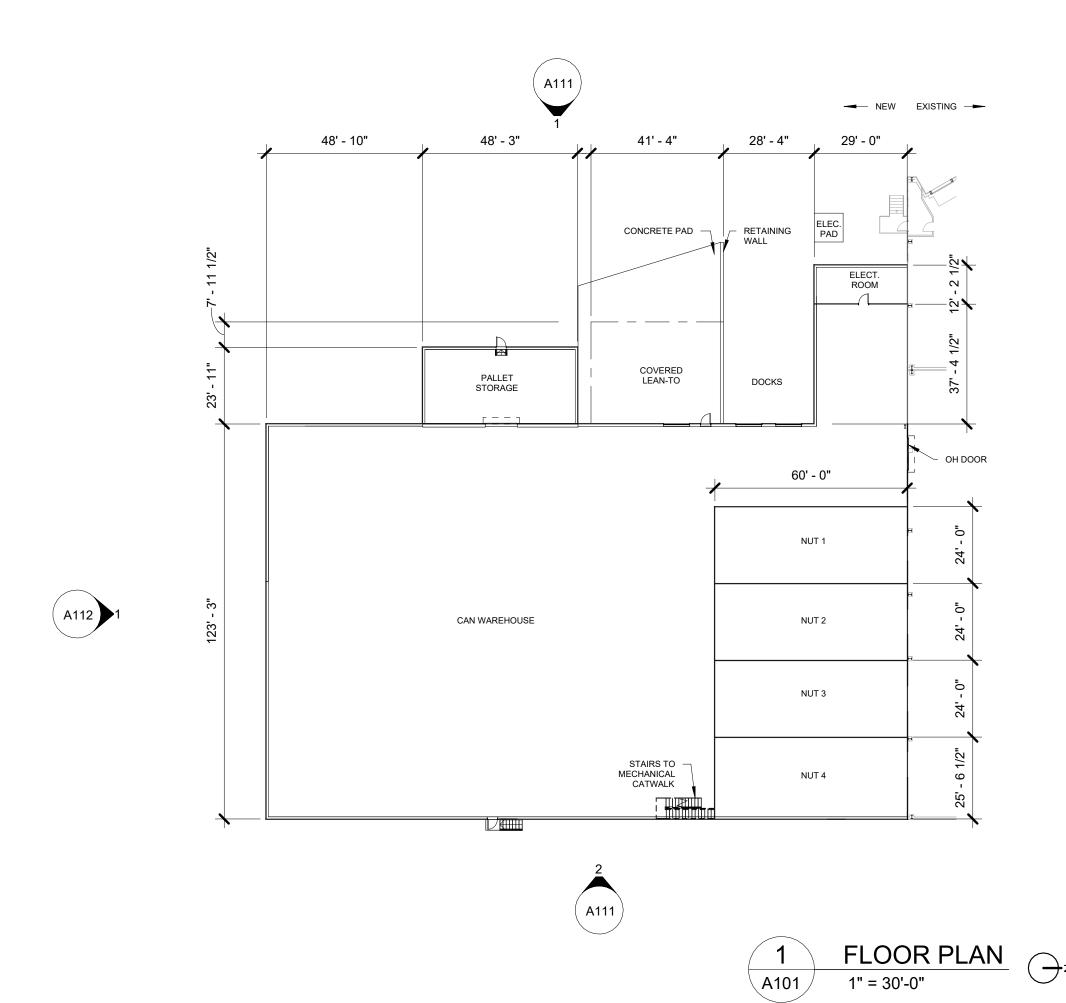
New Glarus, WI | 53574

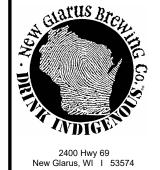
WAREHOUSE **ADDITION 2023**

> NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

COVER DRAWING



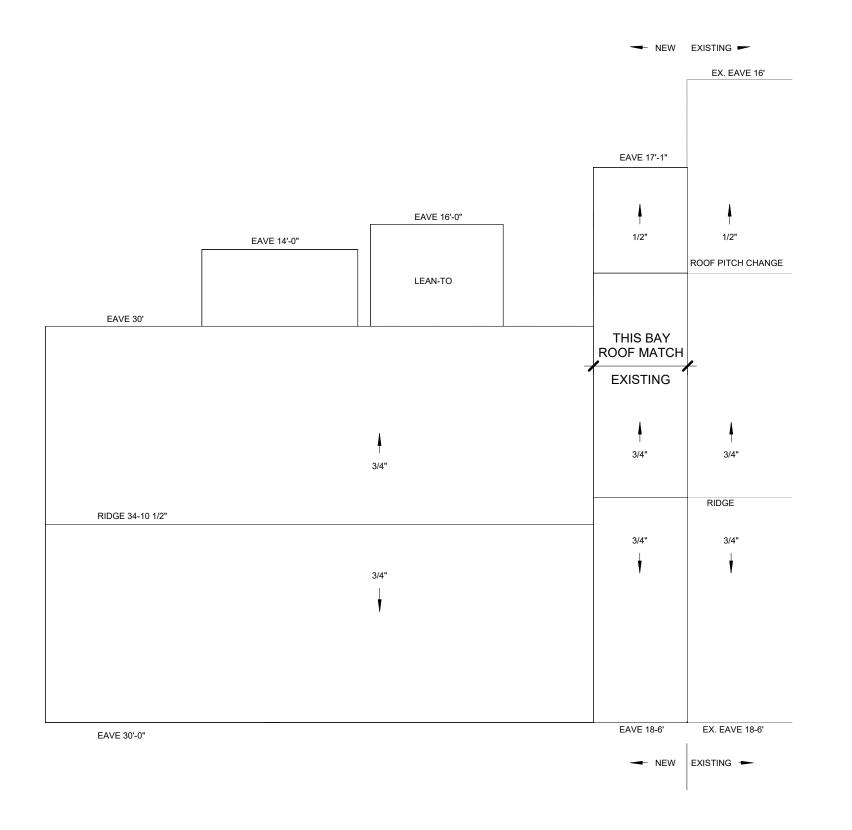


WAREHOUSE ADDITION 2023

NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

FLOOR PLAN







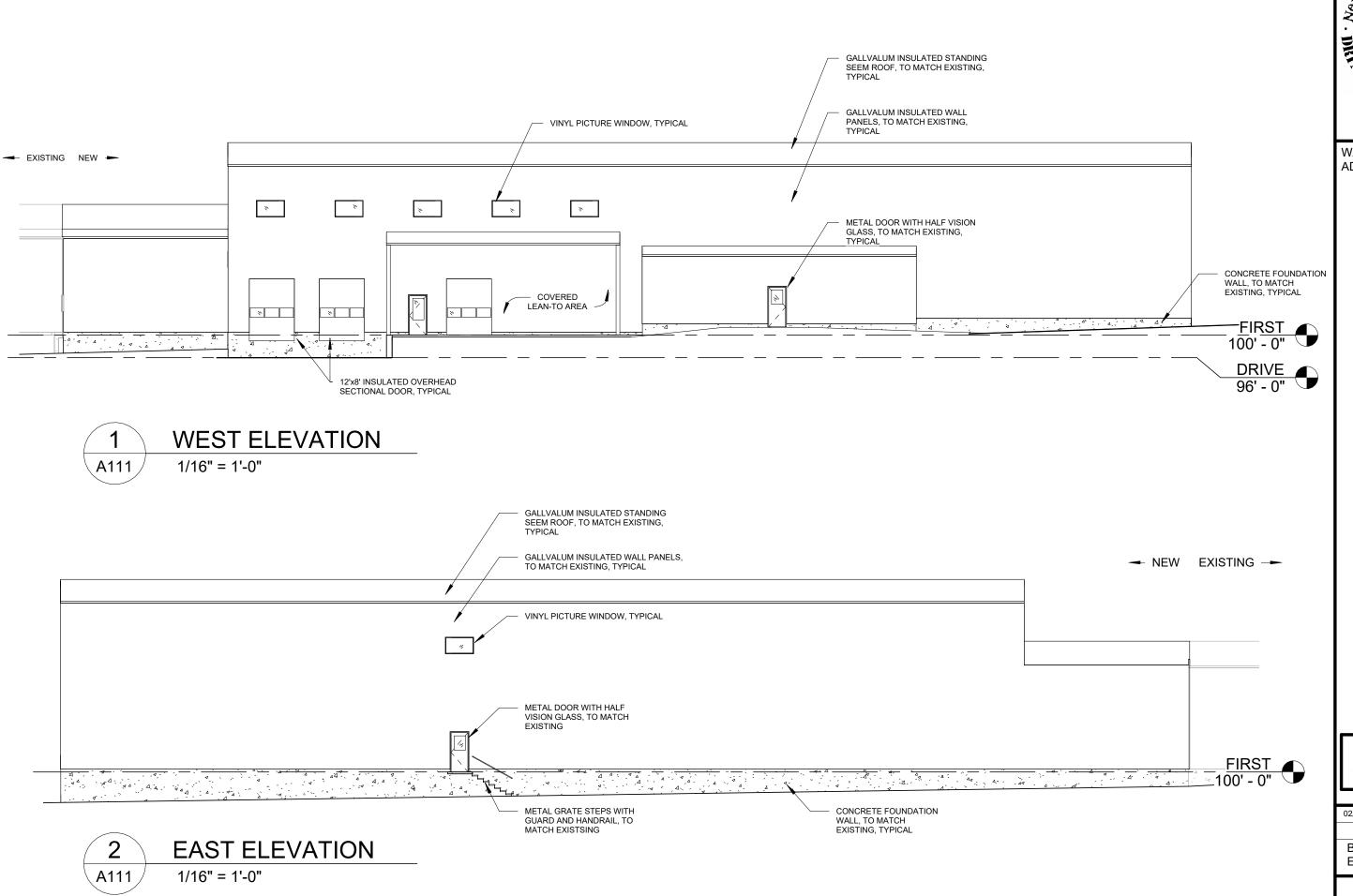


WAREHOUSE **ADDITION 2023**

> NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

ROOF PLAN





2400 Hwy 69 New Glarus, WI I 53574

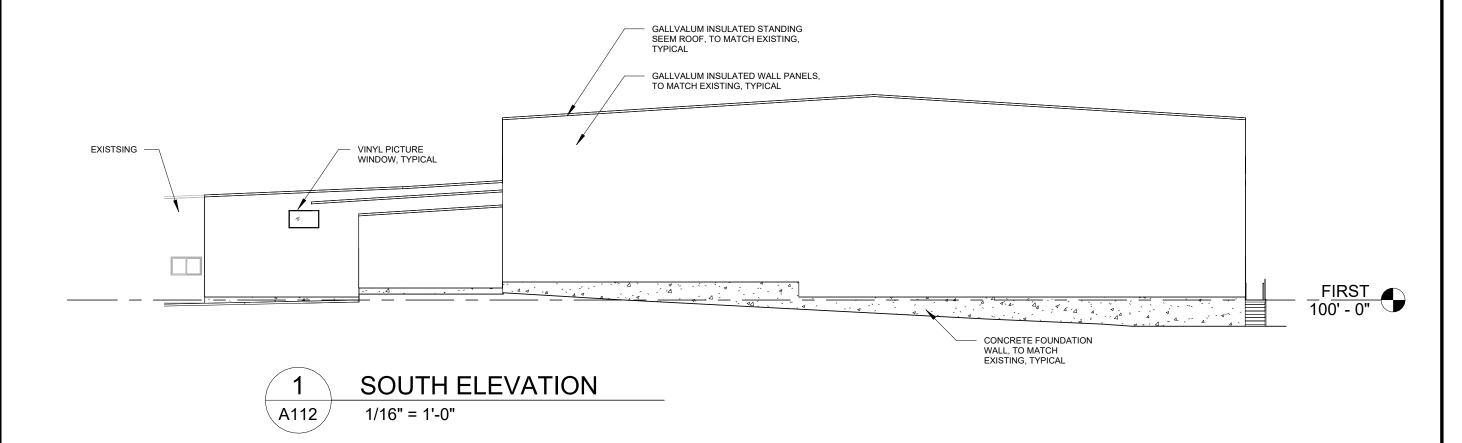
WAREHOUSE ADDITION 2023

NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

BUILDING ELEVATIONS

WAREHOUSE ADDITION 2023



NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

BUILDING ELEVATION











WAREHOUSE ADDITION 2023

NOT FOR CONSTRUCTION

02/21/23 VILLAGE SUBMITAL

EXISTING CONDITIONS

INDEX OF SHEETS

HIDEK OF CHEETO
SHEET TITLE
TITLE SHEET
STANDARD LEGEND
GENERAL NOTES
GENERAL NOTES
EXISTING CONDITIONS AND REMOVAL PLAN
SITE LAYOUT PLAN
GRADING PLAN
UTILITIES PLAN
EROSION CONTROL PLAN
DETAILS
DETAILS
DETAILS

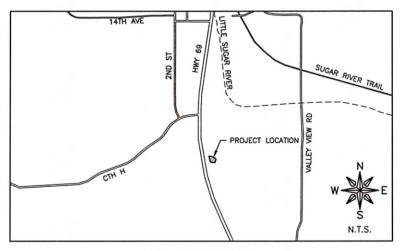
NEW GLARUS BREWING CO. WAREHOUSE ADDITION

FOR

NEW GLARUS BREWING CO. NEW GLARUS, WI

PROPOSED SITE PLANS

GREEN COUNTY FEBRUARY 2023



LOCATION MAP

CONTOURS AND ELEVATIONS DEPICTED HEREON ARE BASED UPON THE NAVDAR DATUM.



ILLINOIS

IOWA

WISCONSIN





REVIEW SET

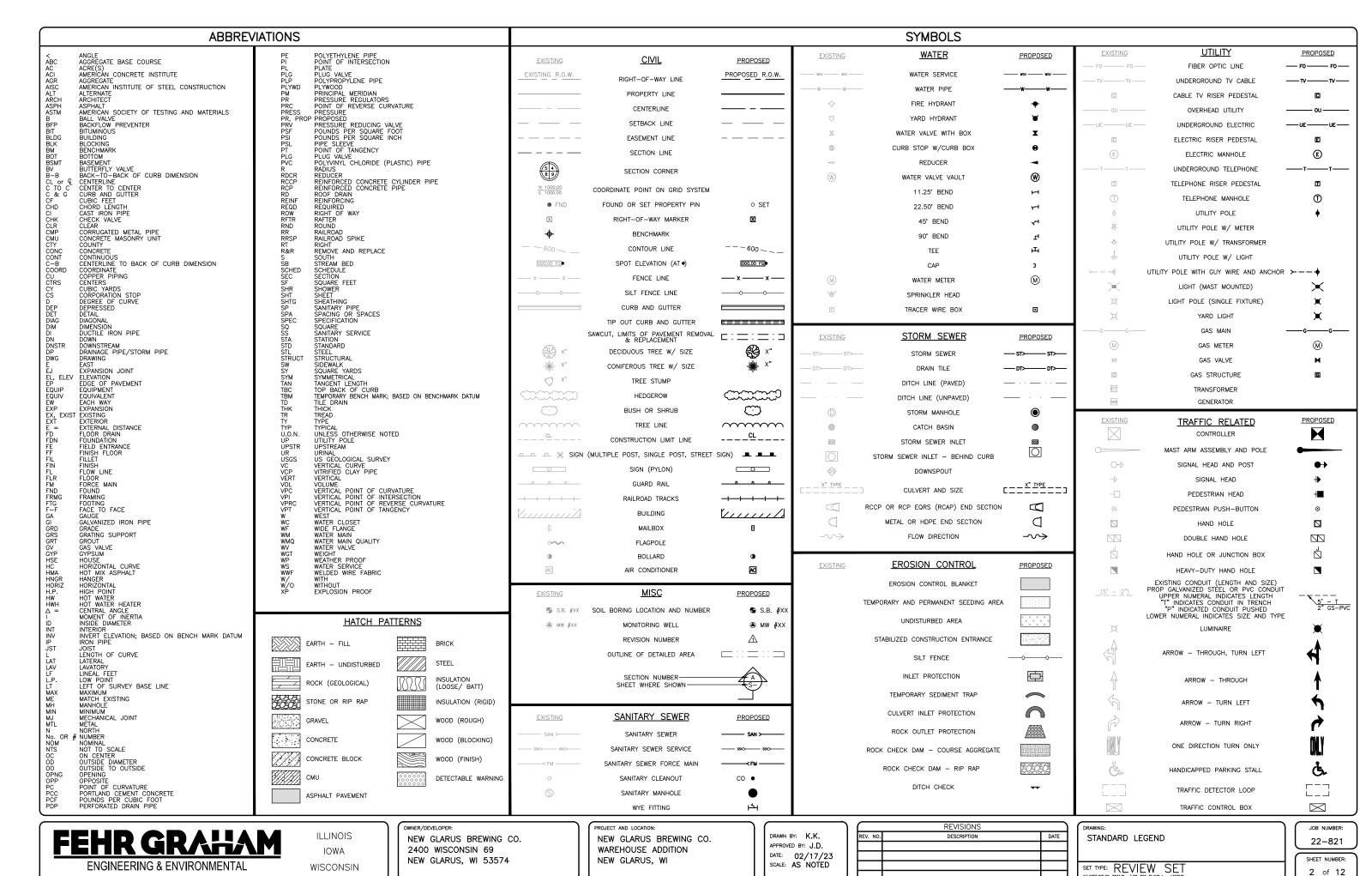
ORIGINAL	SET FOR PROJECT: 22-821	DATE CREATED:	02/17/23
_	REVIS	SIONS	
REV. NO.	DESCR	RIPTION	DATE
-			
			-

LITHITIES

UIILI	IILO
UTILITY TYPE	COMMON NAME
WATER & SEWER	NEW GLARUS UTILITIES
ELECTRIC	ALLIANT ENERGY
TELEPHONE	TDS TELECOM
GAS	WE ENERGIES
CABLE	CHARTER

(CONTRACTOR TO BE RESPONSIBLE FOR ANY ADJUSTMENTS TO BE MADE.)





GENERAL NOTES

- 1. THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MUNICIPAL CODE, VILLAGE OF NEW GLARUS, WISCONSIN, CURRENT EDITION, THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, SPECIAL PROVISIONS AND THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION. SIGN CONSTRUCTION AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON LUNFORM TRAFFIC CONTROL DEVICES". CURRENT EDITION.
- IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "ENGINEER", WHICH SHALL MEAN FEHR GRAHAM OR THEIR DULY AUTHORIZED AGENT. IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "OWNER", WHICH SHALL MEAN NEW GLARUS BREWING COMPANY, OR THEIR DULY AWARDED AGENT.
- 3. AS PART OF THE BIDDING PROCEDURE, THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES FOR PAY ITEMS, AS PRESENTED IN THESE PLAN DOCUMENTS, ARE SUBSTANTIALLY CORRECT. IF DISCREPANCIES ARE DETECTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE DISCREPANCY PRIOR TO THE BID DATE.
- 4. QUANTITIES SHOWN ARE ESTIMATES FOR INFORMATION ONLY. PAYMENT WILL BE BASED ON ACTUAL QUANTITIES MEASURED IN THE FIELD OR ON PAYMENT LIMIT DETAILS.
- 5. THE CONTRACTOR SHALL BE PAID FOR MATERIALS AND EQUIPMENT SUCCESSFULLY INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS MEASURED OR VERIFIED IN PLACE BY THE ENGINEER OR HIS AGENT.
- 6. IN CASE OF CONFLICT BETWEEN THE ABOVE MENTIONED SPECIFICATIONS, THE ENGINEER SHALL DETERMINE WHICH OF THE SPECIFICATIONS SHALL GOVERN. THE ENGINEER'S DECISION SHALL BE FINAL AND NO ADDITIONAL COMPENSATION SHALL BE AWARDED UNLESS APPROVED BY THE ENGINEER.
- 7. THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE OWNER. IMPROVEMENT REPRESENTATIONS AS SHOWN ON THESE PLANS ARE AS ACCURATE AS POSSIBLE FROM THE INFORMATION AVAILABLE. HOWEVER, SOME FIELD REVISIONS MAY BE REQUIRED TO ACCOMMODATE UNFORESERN CIRCUMSTANCES THE ENGINEER SHALL BE ADVISED OF ANY NECESSARY REVISIONS WITH SUFFICIENT LEAD TIME ALLOWED TO PROPERLY CONSIDER AND ACT UPON SAID REQUESTS. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED IN CONSTRUCTING THOSE IMPROVEMENTS AS DETAILED IN THIS ENGINEERING PLAN.
- 8. THE ENGINEER SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE OR REJECT THE WORKMANSHIP AND/OR MATERIALS WHICH GO TO MAKE UP IMPROVEMENTS AS DETAILED IN THESE PLANS AND SPECIFICATIONS.
- 9. GENERAL SAFETY PROVISION: TO PROVIDE DRIVERS WITH SAFE TRAVEL CONDITIONS DURING THE CONSTRUCTION PROJECT, AND TO PROVIDE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES, THE RULES, REGULATIONS, AND CONDITIONS STATED BELOW WILL PREVAIL FOR THE DURATION OF THIS CONTRACT. ANY EMPLOYEE OF THE CONTRACTOR OR HIS SUBCONTRACTORS WHO REFUSES TO COMPLY WITH THESE GENERAL SAFETY PROVISIONS SHALL BE REMOVED FROM THE JOB SITE IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS. THE CONTRACTOR AND ANY SUBCONTRACTORS RETAINED BY HIM SHALL COMPLY WITH THE STATE AND FEDERAL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA), JULY 1, 1987 AS IT RELATES TO CONTRACTOR'S OPERATIONS.
- 10. THE CONTRACTOR SHALL COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THE CONTRACTOR WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.
- 11. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS NOT THE REDUCED SIZE PLANS.
- 12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DRAINAGE FLOWS AT ALL TIMES DURING THE PERFORMANCE OF THE WORK. METHODS USED BY THE CONTRACTOR SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. COST OF MAINTAINING DRAINAGE FLOWS SHALL BE INCIDENTAL TO THE CONTRACT.
- 13. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED OR DISTURBED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS, MONUMENTS AND RIGHT-OF-WAY PINS UNTIL THE OWNER, AND AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS. REPLACEMENT OF MONUMENTS WILL BE DETERMINED BY THE ENGINEER.
- 14. THE CONTRACTOR SHALL REMOVE, STORE, AND RELOCATE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING SIGNAGE IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS, AND CONSIDER THIS AS INCIDENTAL TO THE CONTRACT.
- 15. OUTSIDE THE EXISTING RIGHT-OF-WAY, THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING SIGNS OUTSIDE THE RIGHT-OF-WAY. ANY SIGNS REMOVED FOR CONSTRUCTION PURPOSES SHALL BE CAREFULLY REMOVED AND RE-ERECTED BY THE CONTRACTOR AT A LOCATION NEAREST TO THE ORIGINAL LOCATION, OR AT A LOCATION DETERMINED BY THE ENGINEER IN THE FIELD. REMOVAL AND RE-ERECTED SIGNS AND ANY DAMAGE DONE TO EXISTING SIGNS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 16. ALL ITEMS SHALL INCLUDE ALL THE NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. MATERIALS AND LABOR NOT SPECIFICALLY IDENTIFIED SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 17. AT THE END OF EACH DAY, THE CONTRACTOR SHALL SECURE THE CONSTRUCTION WORK ZONE FROM POTENTIAL INTRUDERS.
- 18. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.
- 19. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF ANY ERRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES AND GRADES, AND SHALL NOT PROCEED WITH THE WORK UNTIL ALL LINES AND GRADES WHICH ARE BELIEVED TO BE IN ERROR HAVE BEEN VERIFIED OR CORRECTED BY THE ENGINEER OR HIS REPRESENTATIVE.
- 20. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SPECIFICATIONS.
- 21. ALL ITEMS TO BE REMOVED AND NOT DEFINED AS A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 22. ALL EXCESS EARTH EXCAVATION, EXCESS MATERIALS, OR OTHER REMOVED ITEMS SHALL BE HAULED OFF-SITE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE APPROVED BY THE OWNER.
- 23. ROADWAY AND DRAINAGE EXCAVATION WORK SHALL BE IN ACCORDANCE WITH SECTION 205 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL OBSTRUCTIONS, TREES, DEBRIS AND BRUSH AS DESIGNATED BY THE OWNER AND AS INDICATED ON THE PLANS. ALL MATERIALS SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DURING CONSTRUCTION, CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO THE EXISTING TREES AND LANDSCAPING. ONLY THOSE ITEMS DESIGNATED BY THE OWNER SHALL BE REMOVED.
- 24. ALL ROADWAY REMOVAL ITEMS SHALL CONFORM TO SECTION 204 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. ALL JOINTS BETWEEN THE PORTION REMOVED AND THAT LEFT IN PLACE SHALL BE SAWED TO SUCH A DEPTH THAT A CLEAN, NEAT EDGE WILL RESULT WITH NO SPALLING TO THE REMAINING PORTION. THE COST OF SAWING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ADDITIONAL SAWING OR RE-SAWING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER WITH NO ADDITIONAL COMPENSATION BEING ALLOWED. THE COST OF SAWCUTTING THE EXISTING PAVEMENT SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

GENERAL NOTES

- 25. WHEN ARTIFICIAL LIGHTING IS UTILIZED DURING NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, AS WELL AS ADJOINING RESIDENTIAL AREAS.
- 26. THE CONTRACTOR IS REQUIRED TO STAY WITHIN THE NOTED PROPERTY BOUNDARIES RIGHT-OF-WAY AND EASEMENTS AS SHOWN IN THE PLANS. ANY ADDITIONAL EASEMENTS SHALL BE SECURED BY THE CONTRACTOR AT NO EXTRA COST.
- 27. ANY AREAS DAMAGED OR DISTURBED DURING THE PROJECT AS A DIRECT OR INDIRECT RESULT OF CONTRACTOR OPERATIONS, SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION. THE COST OF SAID RESTORATION OR REPAIR SHALL BE BORNE TOTALLY BY THE CONTRACTOR, WITH NO EXTRA COMPENSATION BEING AWARDED UNDER THIS CONTRACT. THE RESPONSIBILITY FOR THE REPAIR OR REPLACEMENT OF ANY UTILITY, STRUCTURE, LANDSCAPING, ETC., DAMAGED OR DESTROYED BY THE CONTRACTOR DURING MOBILIZATION OR CONSTRUCTION SHALL BE BORNE SOLELY BY THE CONTRACTOR, WITH NO EXPENSE BEING CHARGED TO THE ENGINEER OR OWNER. PRIOR TO ACCEPTANCE OF THIS REPAIR OR REPLACEMENT, THE CONTRACTOR SHALL PRESENT THE OWNER WITH A "SIGNOFF LETTER", SIGNED BY A RESPONSIBLE OFFICIAL OF THE OWNER OF THE DAMAGED UTILITY STATING THAT THE REPAIR OR REPLACEMENT IS ACCEPTABLE.

CONSTRUCTION STAKING

- 1. CONSTRUCTION STAKING SERVICES WILL BE PROVIDED BY FEHR GRAHAM. STAKE POINTS WILL BE STAKED ONE TIME WHEN REQUESTED BY THE CONTRACTOR. THE SAME STAKE POINTS REQUESTED BY THE CONTRACTOR A SECOND TIME WILL BE PAID FOR BY THE CONTRACTOR.

 BUILDING CORNERS
 - PAVING GRADE
 - STORM SEWER

EROSION CONTROL NOTES

- 1. UNLESS OTHERWISE SPECIFIED, ALL EROSION AND SEDIMENT CONTROL MEASURES AND THEIR MAINTENANCE, CLEARING AND REMOVAL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- THIS WORK SHALL CONFORM TO THE APPLICABLE STANDARDS FROM THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES,
 THE WISCONSIN STORM WATER MANUAL, THE WISCONSIN DEPARTMENT TRANSPORTATION'S STANDARD SPECIFICATIONS FOR
 HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, THE PROJECT SPECIFICATIONS, AND THE APPROPRIATE
 DETAILS.
- 3. A WATER RESOURCES APPLICATION FOR PROJECT PERMITS (WRAPP) WILL BE COMPLETED AND SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES BY THE OWNER PRIOR TO CONSTRUCTION.
- THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS AND WILL BE AVAILABLE FOR REVIEW DURING THE BIDDING PROCESS.
- 5. A COPY OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL MAINTAIN ONE COPY OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN AT THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS FROM THE DATE OF PROJECT INITIATION TO THE DATE OF FINAL STABILIZATION.
- 6. THE CONTRACTOR SHALL LEGIBLY MARK ANY CHANGES OR REVISIONS IMPLEMENTED TO THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. AT COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL DELIVER THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN (INCLUDING ALL REVISIONS, RECORDS, AND INSPECTION REPORTS) TO THE OWNER.
- THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR RESPONSIBLE FOR SEDIMENT AND EROSION CONTROL MEASURES OR CONSTRUCTION ACTIVITIES THAT DISTURB SITE SOIL WILL BE REQUIRED TO CERTIFY THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN BEFORE A NOTICE TO PROCEED IS ISSUED.
- 8. A COPY OF THE CONSTRUCTION SITE STORM WATER RUNOFF GENERAL WPDES PERMIT MUST BE AVAILABLE FOR PUBLIC VIEWING AT THE CONSTRUCTION SITE BY THE GENERAL CONTRACTOR.
- THE CONTRACTOR SHALL IMPLEMENT THE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THESE EROSION
 CONTROL PLANS AND IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN BEFORE CONSTRUCTION BEGINS.
- 10. THE CONTROLS SHALL BE INSTALLED AS DETAILED AND WHERE INDICATED ON THE EROSION CONTROL PLAN SHEETS AND AS DIRECTED BY THE INSPECTOR.
- 11. SITE ACTIVITIES SHOULD ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE PRACTICABLE
- 12. EXCEPT AS PROVIDED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN, DISTURBED PORTIONS OF THE SITE SHALL BE STABILIZED (TEMPORARILY OR PERMANENTLY SEEDED, MULCHED, SODDED OR PAVED) AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS TEMPORARILY OR PERMANENTLY CRASED.
- 13. UNTIL SUCH TIME AS THE PROJECT SITE REACHES FINAL STABILIZATION AND A NOTICE OF TERMINATION IS FILED BY THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST, REPAIR, OR REPLACE, ALL VEGETATION, EROSION CONTROLS, SEDIMENT CONTROLS, AND ANY OTHER PROTECTIVE MEASURES AS REQUIRED IN ORDER TO MAINTAIN THEIR INTENDED FUNCTION IN A GOOD AND EFFECTIVE OPERATING CONDITION.
- 14. EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER EXPECTED DURING THE CONSTRUCTION PROCESS THAT MAY BE COMBINED WITH STORM WATER DISCHARGES ARE IDENTIFIED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. THESE DISCHARGES SHALL BE DIRECTED AWAY FROM UNPROTECTED, BARE, OR OTHERWISE UNSTABILIZED SOIL, AND APPOPRIATE POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED SO THAT THESE DISCHARGES DO NOT CAUSE EROSION OR DEGRADE THE QUALITY OF RUNOFF FROM THE CONSTRUCTION SITE.
- 15. REGULAR INSPECTIONS WILL BE MADE AS REQUIRED UNDER THE GENERAL WPDES PERMIT NO. WI-S067831-04 AND SPECIFIED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. A QUALIFIED INSPECTOR WILL BE PROVIDED BY THE OWNER. BASED ON THE RESULTS OF THE INSPECTIONS, POLLUTION PREVENTION MEASURES SHALL BE REVISED AS APPROPRIATE AS SOON AS PRACTICABLE AFTER EACH INSPECTION. SUCH REVISIONS SHALL BE IMPLEMENTED WITHIN 7 CALENDAR DAYS FOLLOWING EACH INSPECTION.
- 16. THE INSPECTOR SHALL HAVE AUTHORIZATION TO DETERMINE THE ADEQUACY OF THE CONTRACTOR'S EROSION CONTROL EFFORTS. THE OWNER OR THE INSPECTOR SHALL HAVE FULL AUTHORITY OVER THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR TO CAUSE POLLUTANT CONTROL MEASURES TO BE REPAIRED, MODIFIED, MAINTAINED, SUPPLEMENTED, OR WHATEVER ELSE IS NECESSARY IN ORDER TO ACHIEVE EFFECTIVE POLLUTANT CONTROL OR TO SUSPEND OR LIMIT THE CONTRACTORS OPERATIONS PENDING ADEQUATE PERFORMANCE.
- 17. PERIMETER EROSION BARRIER TO BE CONSTRUCTED OF SILT FENCE UNLESS NOTED OTHERWISE.
- 18. INLET PROTECTION SHALL BE A TYPE A, B, C OR D, OR APPROVED EQUAL.
- 19. EROSION CONTROL BLANKET SHALL BE OF NORTH AMERICAN GREEN DS75 OR APPROVED EQUAL
- 20. A TEMPORARY CONCRETE WASHOUT FACILITY SHALL BE CONSTRUCTED AT A LOCATION APPROVED BY THE ENGINEER WASHOUT FACILITY SHALL BE UTILIZED FOR ALL APPLICABLE OPERATIONS.

EROSION CONTROL NOTES

- 21. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED, TO THE DIMENSIONS AS SHOWN, AT APPROVED LOCATIONS FOR THIS PROJECT. ALL CONSTRUCTION TRAFFIC MUST UTILIZE THE STABILIZED CONSTRUCTION ENTRANCES WHEN EXITING THE SITE. ALL COST FOR EROSION CONTROL AND RESTORATION WORK ASSOCIATED WITH THE APPROVED STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 22. TEMPORARY EROSION CONTROL MEASURES INCLUDE TEMPORARY DITCH CHECKS, PERIMETER EROSION BARRIER, INLET AND PIPE PROTECTION, TEMPORARY SEEDING, AND ANY OTHER TEMPORARY EROSION CONTROL MEASURE NEEDED TO LIMIT THE AMOUNT OF SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION.
- 23. AT THE COMPLETION OF THE PROJECT, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED FROM THE SITE, AND BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR MUST STABILIZE ANY AREA DISTURBED BY THE REMOVAL OF EROSION CONTROL ITEMS.
- 24. CONTRACTOR SHALL CLEAN ANY DEBRIS TRACKED OFFSITE DAILY.

SEEDING OF DISTURBED AREAS

- 1. THE FINAL TOP 6" INCHES OF SOIL IN ANY DISTURBANCE AREA MUST BE A COHESIVE SOIL CAPABLE OF SUPPORTING VEGETATION.
- 2. FERTILIZER HAVING AN ANALYSIS OF 16-6-6 SHALL BE APPLIED AT A RATE OF 7 LBS/1000 SF TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SOWING THE SEED.
- 3. THE CONTRACTOR SHALL SEED AND STABILIZE ALL DISTURBED AREAS ADJACENT TO IMPROVEMENTS WITH SEEDING, WISDOT SEED MIXTURE NO. 10 AND NAG DS75 EROSION CONTROL BLANKET OR APPROVED EQUAL IN ACCORDANCE WITH WISDOT.
- 4. <u>GUARANTEE</u>: ALL SEEDED AREAS SHALL BE MAINTAINED AND MOWED FOR AT LEAST 30 DAYS AFTER GERMINATION. SCATTERED BARE SPOTS NO LARGER THAN TWO SQUARE FOOT WILL BE ALLOWED UP TO A MAXIMUM OF 5% OF ANY SEEDED AREA INCLUDING 30-DAY MAINTRIANCE. MOWING AND WATERING AS NECESSARY.
- 5. THIS WORK SHALL CONFORM TO THE APPLICABLE STANDARDS FROM THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES, THE WISCONSIN STORM WATER MANUAL, THE WISCONSIN DEPARTMENT TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, THE PROJECT SPECIFICATIONS, AND THE APPROPRIATE DETAILS.
- 6. RESTORATION THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION OF THE IMPROVEMENTS AND RELATED APPURTENANCES OR AS PART OF ANY OF THEIR ACTIVITIES TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION.

ZONING DISTRICT: I-1 INDUSTRIAL DISTRICT LAND USE: BREWERY/WAREHOUSE

FEHR GRAHAM

ENGINEERING & ENVIRONMENTAL

ILLINOIS IOWA

WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 ROJECT AND LOCATION:

NEW GLARUS BREWING CO. WAREHOUSE ADDITION NEW GLARUS, WI DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

	REVISIONS	
REV. NO.	DESCRIPTION	DATE

GENERAL NOTES

SET TYPE: REVIEW SET

22-821

SHEET NUMBER:

3 of 12

STORM SEWER

- 1. STORM SEWERS THAT CROSS OVER ANY PROPOSED WATER MAIN SHALL BE CONSTRUCTED WITH RUBBER GASKETED JOINTS (ASTM C443).
- 2. ALL EXISTING MANHOLE CONNECTIONS MUST BE CORE-DRILLED, UNLESS A PRE-CORED HOLE, SUITABLY LOCATED, EXISTS IN THE MANHOLE.
- 3. THE LENGTH OF FLARED END SECTIONS IS NOT INCLUDED IN THE INDICATED PIPE LENGTH. HOWEVER, THE ENTIRE LENGTH OF THE FLARED END SECTION IS TAKEN INTO ACCOUNT FOR THE INDICATED SLOPE AND INVERT GRADES.
- 4. STORM SEWERS MATERIALS AND INSTALLATION SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS FOR REINFORCED CONCRETE PIPE STORM SEWERS. THIS WORK SHALL INCLUDE SEWER PIPE, PIPE BEDDING, TRENCH BACKFILL, MAKING CONNECTIONS TO EXISTING STRUCTURES, PATCHING EXISTING STRUCTURES AT NEW CONNECTIONS, STOPPERS AND PLUGS, AND ANY OTHER INCIDENTAL COSTS. ALL WORK SHALL CONFORM TO DETAILS INCLUDED IN THE CONTRACT DOCUMENTS, OR TO ORDERED MODIFICATIONS THEREFORE, AND TO APPLICABLE PORTIONS OF SECTIONS 607 AND 608 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. PIPE BEDDING OF 4" WELL GRADED DURABLE GRAVEL, CRUSHED STONE, OR SLAG WILL BE REQUIRED. IN STRUCTURAL LOCATIONS AND ROADWAY PAVEMENT, BEDDING MATERIAL SHALL BE PLACED TO ONE FOOT ABOVE THE TOP OF THE PIPE. TRENCH BACKFILL FROM THIS ELEVATION TO PAVEMENT SUBGRADE WILL BE REQUIRED. COST FOR BACKFILL, BEDDING, AND ALL NECESSARY WORK REQUIRED FOR INSTALLATION SHALL BE INCLUDED WITH THE COST OF THE PIPE.
- 5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STORM SEWER ELEVATIONS THAT PROJECT CONNECTS TO.

MATERIAL AND COMPACTION TESTING

 A GEOTECHNICAL REPRESENTATIVE WILL BE PROVIDED AND PAID FOR BY THE OWNER FOR ANY REQUIRED TESTING. THE CONTRACTOR IS RESPONSIBLE TO FOLLOW AND MEET GUIDELINES SET BY THE GEOTECHNICAL REPRESENTATIVE.

UTILITIES

- 1. UTILITIES SHOWN ON THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND NO GUARANTEE OF THEIR ACCURACY IS MADE OR INFERRED. THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS REPRESENT DATA RECEIVED FROM VARIOUS SOURCES. IT IS NOT GUARANTEED TO BE CORRECT OR ALL—INCLUSIVE. THE CONTRACTOR SHALL CONDUCT HIS OWN INVESTIGATION INTO THE LOCATION, SIZE, DEPTH AND NATURE OF ANY AND ALL EXISTING UTILITIES THAT MAY INTERFERE WITH THE WORK UNDER THIS CONTRACT. ANY EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE SHALL BE FULLY PROTECTED BY THE CONTRACTOR AND ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ANY AND ALL UTILITY COMPANIES REGARDING ADJUSTMENTS NECESSARY. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND CONSIDERED INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND, OVERHEAD, OR SUFFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER OR REPLACED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 2. THE CONTRACTOR MUST VERIFY AND LOCATE ALL EXISTING UTILITIES ON OR ADJACENT TO THE SITE. PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES, CONTACT DIGGERS HOTLINE AT 1-800-242-8511 (OR 811) FOR EXACT FIELD LOCATION OF UTILITIES. DAMAGE, AND THE COST THEREOF, TO ANY AND ALL UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY AND ALL EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE. THE ENGINEER AND SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF THE EXISTING UTILITIES SHOWN HEREON.
- 3. IF THERE ARE ANY UTILITIES WHICH ARE NOT MEMBERS OF THE DIGGERS HOTLINE SYSTEM, THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR DETERMINING THIS AND REQUESTING SAID UTILITIES TO FIELD VERIFY AND MARK PERTINENT LITHIUTY LOCATIONS
- 4. THE UTILITY LOCATIONS, DEPTHS, ETC. SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR WITH ALL AFFECTED UTILITY COMPANIES PRIOR TO INITIATING CONSTRUCTION OPERATIONS; THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR THE ADEQUACY, SUFFICIENCY OR EXACTNESS OF THESE UTILITY REPRESENTATIONS
- 5. THE CONTRACTOR SHALL CONTACT THE NECESSARY UTILITY COMPANIES FOR ANY UTILITY RELOCATIONS. THE CONTRACTOR SHALL PAY FOR ALL COSTS ASSOCIATED WITH RELOCATION OF UTILITIES ON OR ADJACENT TO THE SUBJECT PROPERTY OR WITHIN THE ROAD RIGHT-OF-WAY.
- 6. TRENCH BACKFILL SHALL BE FILL MATERIAL TYPE A, OR TYPE C, IN ACCORDANCE WITH AASHTO 127 GUIDELINES AND THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION. COST SHALL BE INCLUDED IN UNIT PRICE OF PIPE.
- 7. TRENCH BACKFILL SHALL BE USED IN LOCATIONS WHERE THERE IS AN EXISTING OR PROPOSED PERMANENT SURFACE.
- 8. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION OR HAVE THE POTENTIAL FOR CREATING FUTURE PROBLEMS SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT AT AN APPROVED LOCATION OBTAINED BY THE CONTRACTOR, ACCORDING TO THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION, AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 9. ANY AND ALL FIELD TILES AND OR STORM SEWERS DAMAGED OR ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED, REPLACED AND/OR CONNECTED IMMEDIATELY BY THE CONTRACTOR. COST FOR SAID REPAIRS, REPLACEMENT, AND/OR CONNECTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

TRAFFIC CONTROL

- 1. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL TRAFFIC CONTROL ITEMS NECESSARY FOR THE CONSTRUCTION OF ITEMS WITH IN THE ROAD RIGHT-OF-WAY. ALL WORK PERFORMED SHALL HAVE TRAFFIC CONTROL IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- ALL TRAFFIC CONTROL DEVICES USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE REFLECTORIZED PRIOR TO INSTALLATION
 AND CLEANED AS NECESSARY THROUGHOUT THE DURATION OF THE CONTRACT. ALL SIGNS SHALL BE FURNISHED,
 INSTALLED AND MAINTAINED BY THE CONTRACTOR. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 3. TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN CONDITIONS MAY REQUIRE THE ENGINEER TO MODIFY THE LOCATION OF THE TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN 30 MINUTES FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION, IMPROVEMENT OR MODIFICATION OF THE MAINTENANCE OF TRAFFIC CONTROL DEVICES. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF THE ADJACENT TRAVELED LANE SURFACE. COST INCIDENTAL TO THE PROJECT.
- 4. THE CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC AND STAGING OF CONSTRUCTION PLANS FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCING WORK.
- 5. THE CONTRACTOR SHALL PERFORM THE WORK UNDER STAGE CONSTRUCTION IN THE EVENT THAT THE CONTRACTOR WILL NEED TO CLOSE PUBLIC ROADS, CONTRACTOR SHALL SUBMIT PROPOSED DETOUR ROUTE AND ASSOCIATED SIGNAGE TO THE ENGINEER PRIOR TO COMMENCING WORK.
- 6. TRAFFIC CONTROL DEVICES, STREET NAME SIGNS, AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH VILALGE OF NEW GLARUS ORDINANCES AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". LOCATIONS OF SIGNS AND MARKINGS SHALL BE SPECIFED BY THE PLANS AND/OR AS DIRECTED BY THE FINGINER.
- 7. PROVIDE TO THE ENGINEER AND THE OWNER THE NAME AND PHONE NUMBER OF INDIVIDUALS RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL MEASURES DURING CONSTRUCTION. THIS INDIVIDUAL SHALL BE AVAILABLE TO CORRECT TRAFFIC CONTROL PROBLEMS 24 HOURS PER DAY.
- 8. THE CONTRACTOR SHALL NOTIFY THE POST OFFICE, POLICE DEPARTMENT, FIRE DEPARTMENT, 911 DISPATCH CENTER, WISCONSIN DEPARTMENT OF TRANSPORTATION, STATE POLICE, APPROPRIATE SCHOOL DISTRICT AND THE LOCAL AGENCY A MINIMUM OF 5 DAYS PRIOR TO CLOSING ANY PORTION OF THE STREET OR ALLEY.

SUBGRADES, SUBBASES, AND BASE COURSES

- 1. THE CONTRACTOR WILL BE REQUIRED TO SUBSTANTIATE BASE COURSE THICKNESSES AND FINISH PAVEMENT THICKNESSES. THE ENGINEER SHALL INSPECT BASE COURSE COREOUT PRIOR TO PLACING BASE COURSE TO ENSURE REQUIRED BASE COURSE DEPTH IS PRESENT. IN ADDITION, THE ENGINEER AND/OR THE CITY ENGINEER SHALL WITHESS THE PLACEMENT OF BITUMINOUS BINDER AND SURFACE COURSE. CORE DRILLING MAY BE REQUIRED TO DEMONSTRATE THAT BASE COURSE AND PAVEMENT THICKNESSES CONFORM TO THE SPECIFICATIONS. PRIOR TO PLACING BASE COURSE MATERIAL, THE CONTRACTOR SHALL TEST ROLL THE SUBGRADE, IN THE PRESENCE OF THE ENGINEER OR HIS AGENT TO DEMONSTRATE THAT SAID SUBGRADE IS READY FOR BASE. PRIOR TO PLACEMENT OF THE BITUMINOUS SURFACE, THE SAME VERIFICATION PROCEDURE SHALL BE PERFORMED ON THE BASE COURSE MATERIAL. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO PERFORMING ANY OF THE REQUIRED TESTS SO THAT A REPRESENTATIVE MAY BE PRESENT.
- 2. PRIOR TO ANY EMBANKMENT OR ROAD BASE BEING PLACED, SHOULD IT BE DETERMINED BY THE ENGINEER THAT THE SUBGRADE MATERIAL IS UNSUITABLE ON WHICH TO CONSTRUCT THE ROADWAY STRUCTURE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE UNSUITABLE MATERIAL TO THE SATISFACTION OF THE ENGINEER AND REPLACING SAME WITH STABILIZING SUBBASE CONSISTING OF SELECT CRUSHED MATERIAL IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. TO HELP MINIMIZE THE AMOUNT OF SUBBASE MATERIAL INSTALLED FOR GROUND STABILIZATION, ECOTECHNICAL FABRIC MAY BE INSTALLED AS APPROVED BY THE ENGINEER. GEOTEXTILE FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 645 OF THE WISDOT STANDARD SPECIFICATIONS. THE COARSE AGGREGATE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR SELECT CRUSHED MATERIAL. THE EXCAVATION BELOW SUBGRADE AND DISPOSAL OF THE UNSUITABLE MATERIAL SHALL BE CONSIDERED INCIDENTAL TO SELECT CRUSHED MATERIAL. STABILIZING FABRIC SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SOLIARE YARD FOR GFOTEXTILE FABRIC.

EXCAVATION/EARTHWORK

- THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING ITEMS WHICH ARE NOT INDICATED TO BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 2. PRIOR TO STARTING EARTHWORK OR UTILITY TRENCHING, THE CONTRACTOR SHALL STRIP THE SITE OF TOPSOIL TO A DEPTH OF 6" AND TO THE LIMITS APPROVED BY THE ENGINEER. THIS MATERIAL SHALL BE STOCKPILED IN A REMOTE LOCATION OF THE SITE (APPROVED BY THE ENGINEER) UNTIL THE PLAN IMPROVEMENTS ARE COMPLETED AND THE EXCESS MATERIAL SPREAD AS DIRECTED. IT SHALL THEN BE THE RESPONSIBILITY OF THE CONTRACTOR TO SPREAD THIS TOPSOIL MATERIAL IN AREAS OF THE SITE, OVER AREAS WHERE EXCESS EXCAVATED MATERIAL, SAND, GRAVEL HAS BEEN SPREAD OR IN OTHER AREAS AS DESIGNATED BY THE ENGINEER. THE MATERIAL SHALL THEN BE OMPACTED TO A MINIMAL DEPTH OF 6" AND FINE GRADED IN A MANNER ACCEPTABLE TO THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- S. CONSTRUCTION AND DEMOLITION (C&D) MATERIALS ARE TO BE MANAGED ACCORDINGLY PER THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MANAGE THE DIVERSION OF C&D MATERIAL AWAY FARD
- . ROCK REMOVAL TO BE PROVIDED BY MECHANICAL MEANS ONLY, NO BLASTING PERMITTED. ROCK EXCAVATION SHALL BE CONSIDERED WHEN THE PHYSICAL CHARACTERISTICS AND DIFFICULTY OF ROCK REMOVAL BY USE OF HYDRAULIC EXCAVATION IS DETERMINED BY ENGINEER TO NOT BE POSSIBLE. ROCK EXCAVATION TO BE PAID FOR AT THE BID PRICE FOR FXCAVATION.
- ALL EXCAVATIONS FOR STRUCTURES AND PIPE SHALL BE KEPT DEWATERED DURING CONSTRUCTION UNTIL BACKFILL IS IN PLACE. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. (COST INCIDENTAL)
- 6. EXCAVATION COMMON SHALL CONFORM TO SECTION 205 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. THIS WORK SHALL INCLUDE THE EXCAVATION OF ALL MATERIALS TO DESIGN SUBGRADE ELEVATIONS INDICATED IN THE PLANS.
- 7. A SOIL REPORT CAN BE PROVIDED IN AN ELECTRONIC FORMAT TO THE CONTRACTOR UPON REQUEST FROM THE OWNER.
- 8. SHEETING AND SHORING SHALL BE CONSIDERED INCIDENTAL TO CONTRACT IF REQUIRED.
- 9. WHENEVER THE CONTRACTOR WORKS NEAR EXISTING FACILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS DURING TRENCHING OPERATIONS, HE WILL BE REQUIRED TO HAND TRENCH IN THAT AREA IN ORDER NOT TO DAMAGE THESE FACILITIES. PUSH HOLES AND SEARCH HOLES THAT ARE DUG BY THE CONTRACTOR SHALL BE BACKFILLED BY TAMPING THE EXCAVATED MATERIAL BACK IN PLACE TO KEEP SETTLEMENT TO A MINIMUM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 10. EMBANKMENT WORK SHALL CONSIST OF THE CONSTRUCTION OF EMBANKMENTS BY DEPOSITING, PLACING AND COMPACTING EARTH, STONE, GRAVEL OR OTHER MATERIALS OF ACCEPTABLE QUALITY ABOVE THE NATURAL GROUND OR OTHER SURFACE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- 11. IF SUFFICIENT TOPSOIL IS NOT PRESENT, THE CONTRACTOR SHALL SPREAD FURNISHED TOPSOIL SO AS TO MEET THE REQUIREMENTS OF THE CONTRACT. FURNISHED TOPSOIL SHALL ONLY BE USED WITH APPROVAL BY THE ENGINEER. THIS FURNISHED TOPSOIL SHALL BE PAID FOR AS TOPSOIL, DEPTH SPECIFIED.
- 12. IN PROPOSED FILL AREAS FOR PAVEMENT AND EMBANKMENT, TOPSOIL AND TURF SHALL BE SCARIFIED AND REMOVED PRIOR TO CONSTRUCTING THE EMBANKMENT.

FEHR GRAHAM

ENGINEERING & ENVIRONMENTAL

ILLINOIS IOWA WISCONSIN

NEW 2400

WNER/DEVELOPER

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 ROJECT AND LOCATION:

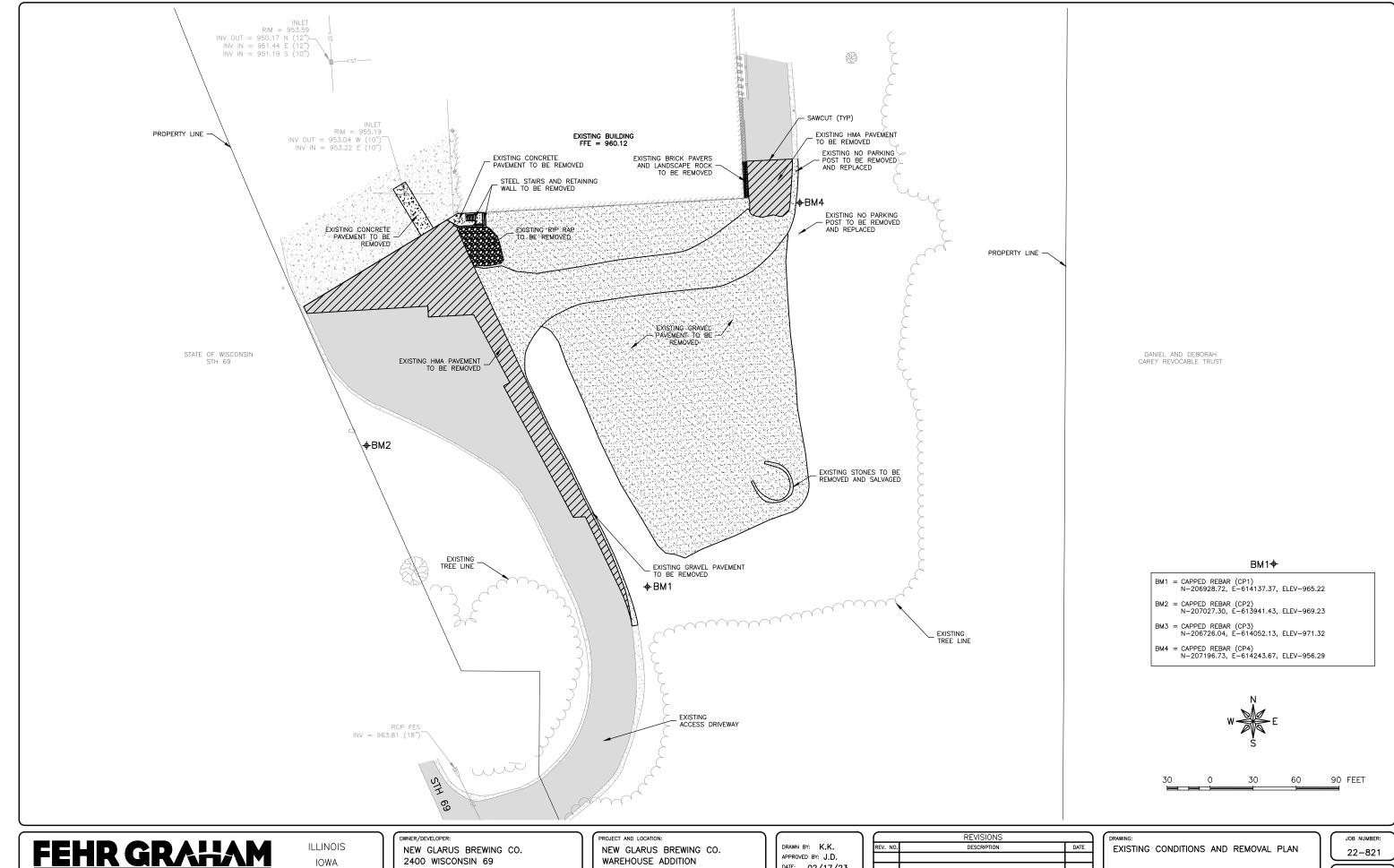
NEW GLARUS BREWING CO. WAREHOUSE ADDITION NEW GLARUS, WI DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

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ENGINEERING & ENVIRONMENTAL

NEW GLARUS, WI 53574

WISCONSIN

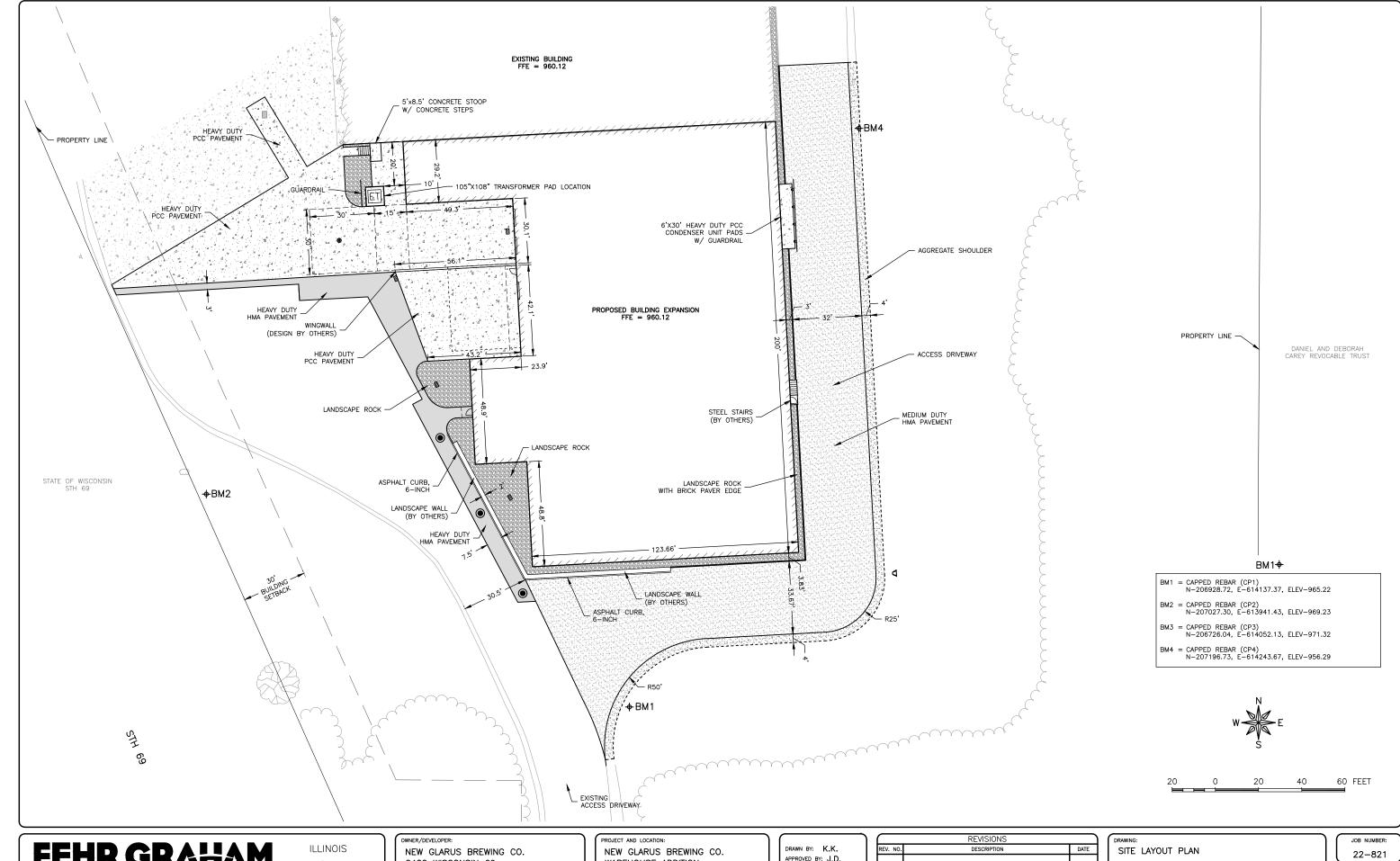
NEW GLARUS, WI

DATE: 02/17/23 SCALE: AS NOTED

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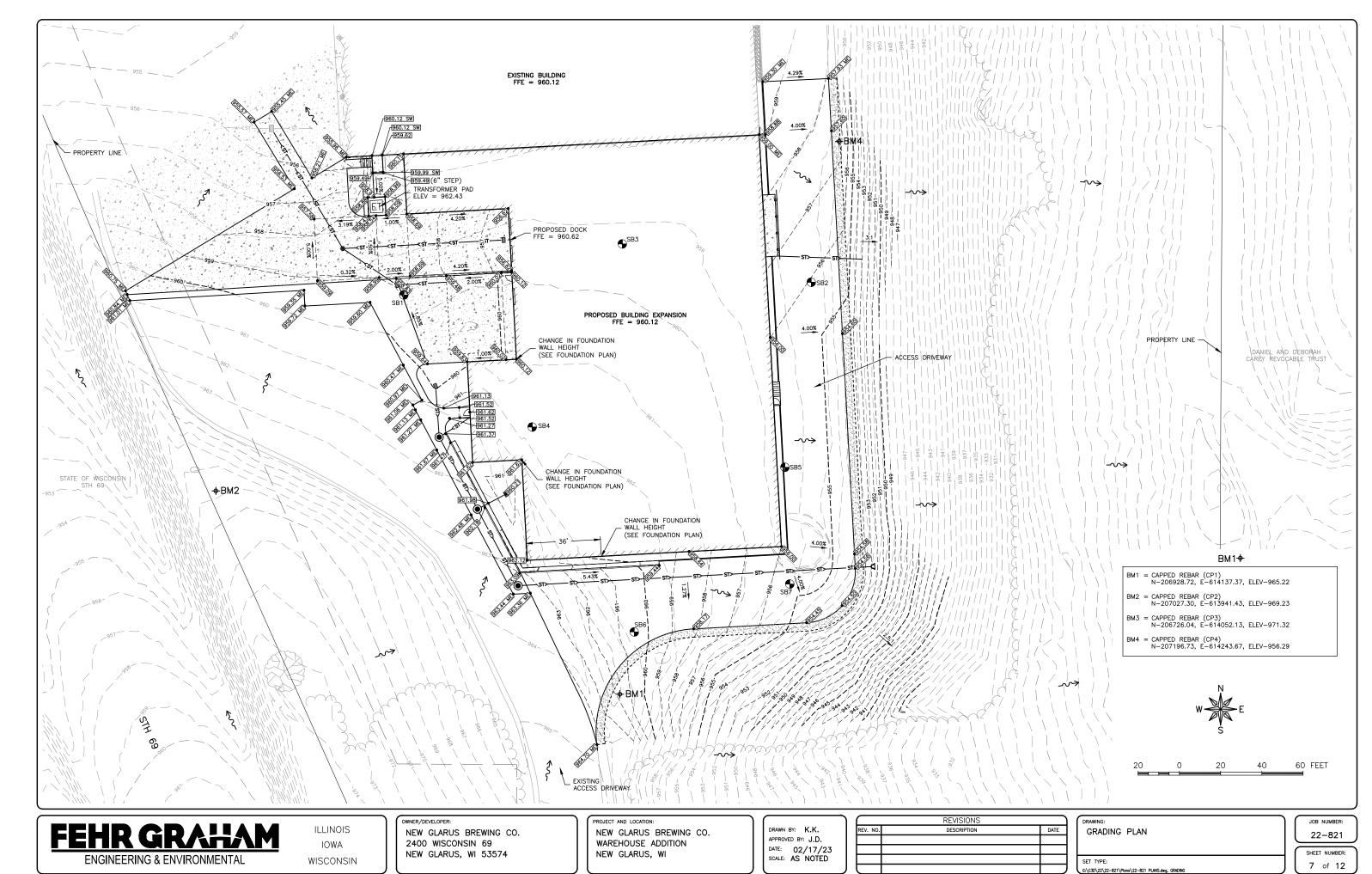
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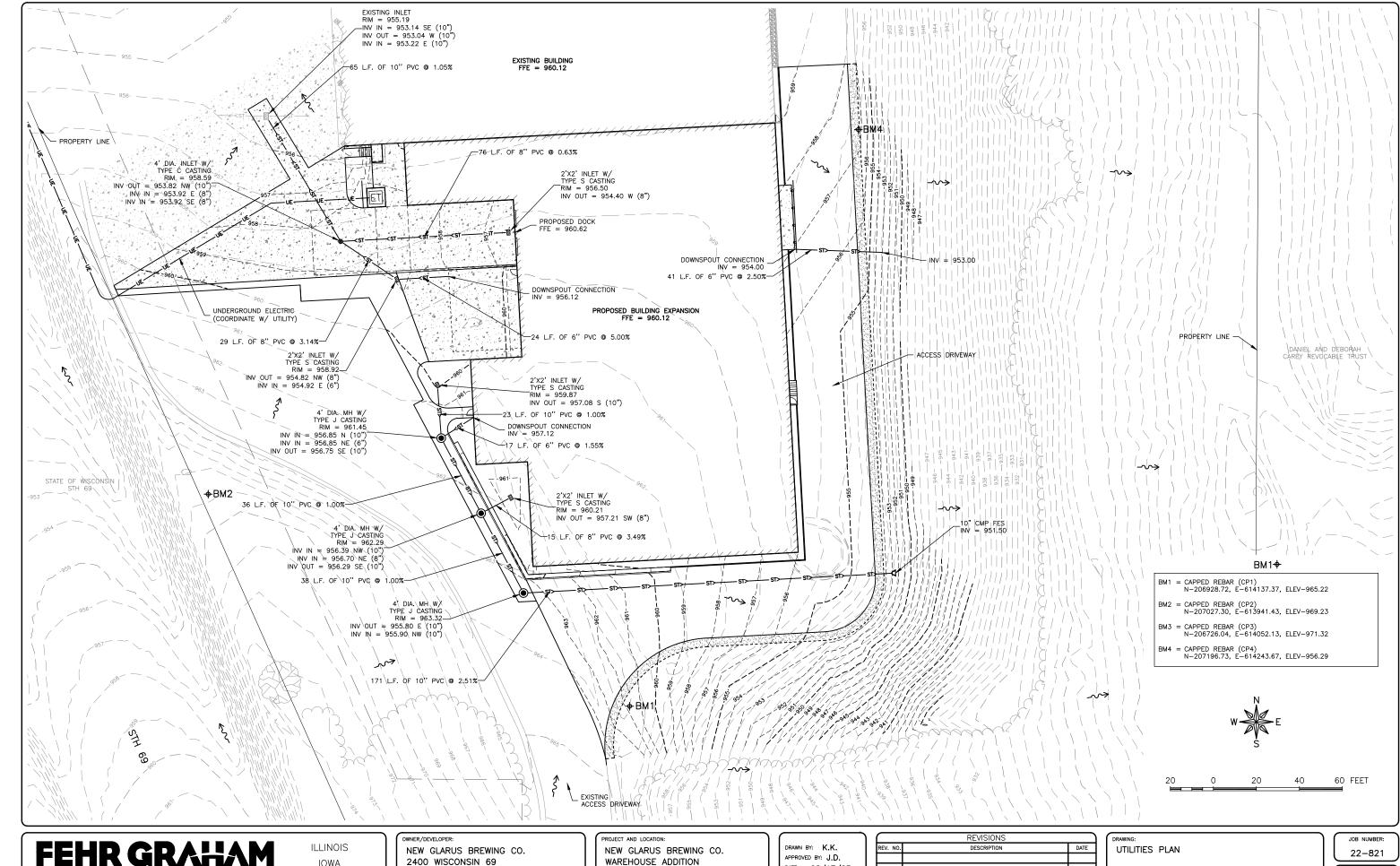
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PLOT DATE: 2/17/23 © 2023 FEHR GRAHAM





ENGINEERING & ENVIRONMENTAL

IOWA

WISCONSIN

NEW GLARUS, WI 53574

WAREHOUSE ADDITION NEW GLARUS, WI

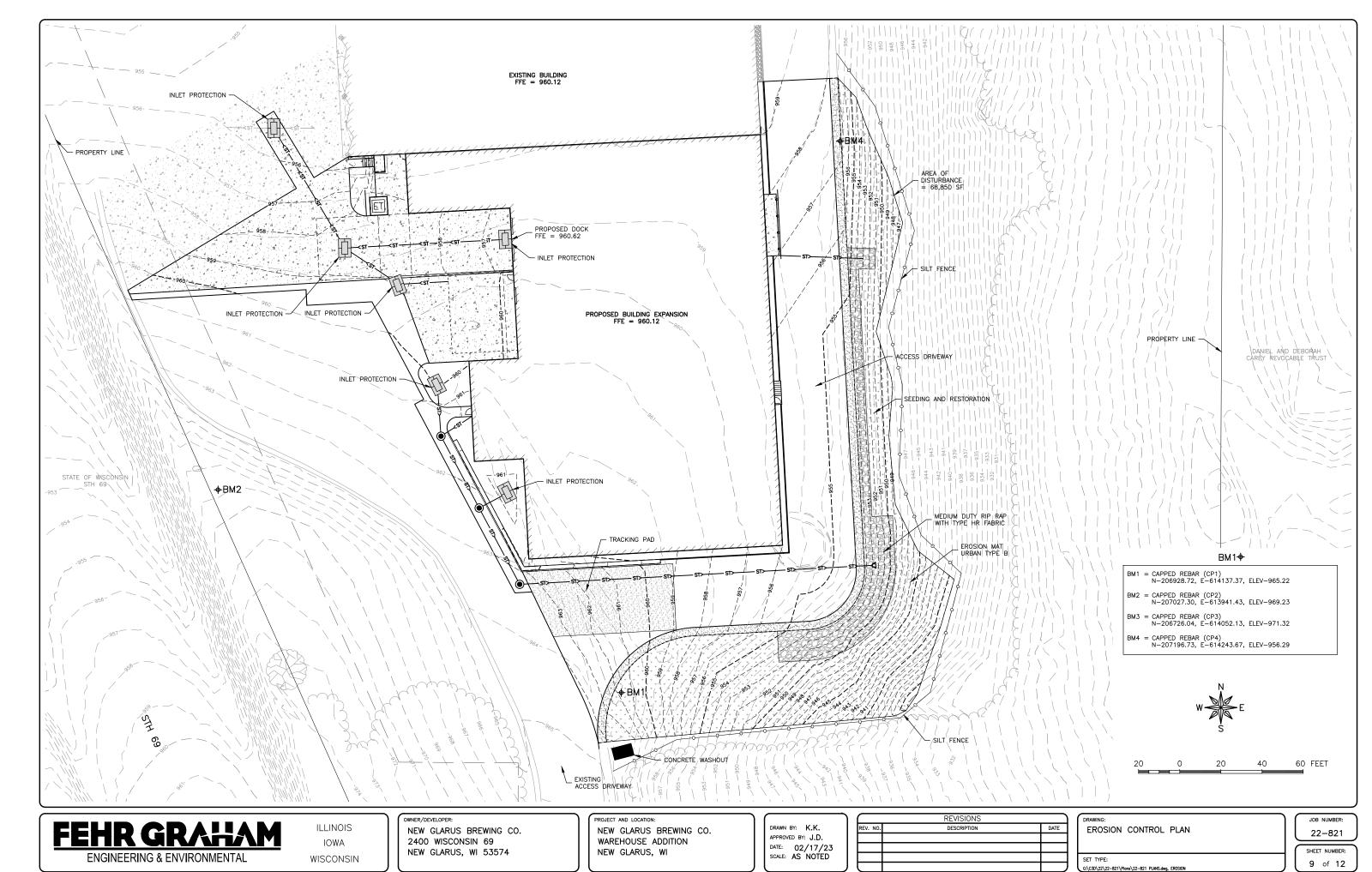
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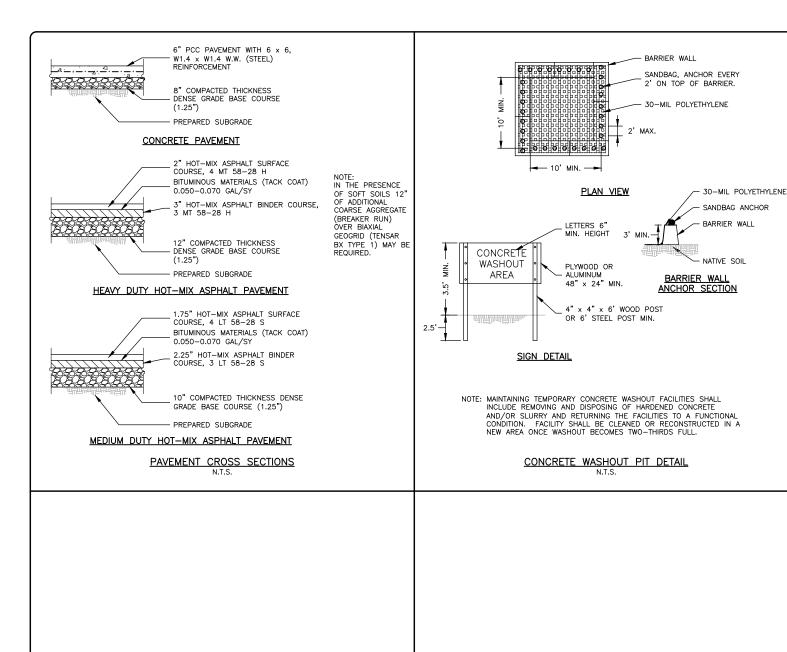
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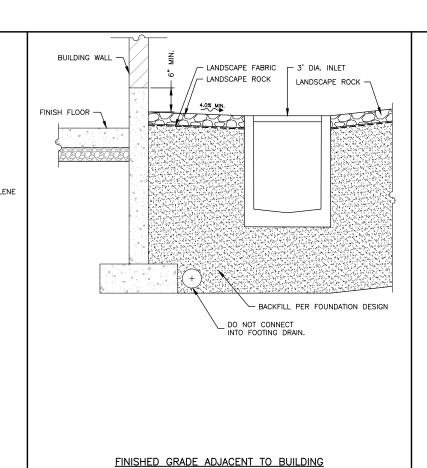
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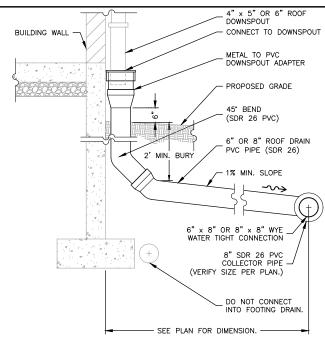
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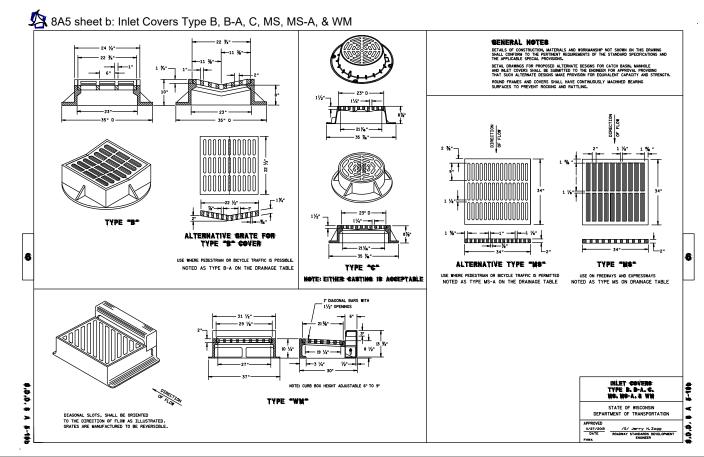


NOTE: ALL CONNECTIONS FROM DOWNSPOUT LATERAL TO COLLECTOR PIPE SHOULD BE MADE WITH A PVC SDR 26 WYE OR TEE CONNECTION.

ALL PIPE OUTLETS MUST HAVE A RODENT GUARD.

ALL 6" OR 8" PVC PIPE, FITTINGS, AND CONNECTIONS SHALL BE CONSIDERED INCIDENTAL TO BUILDING CONSTRUCTION.

DOWNSPOUT COLLECTOR DETAIL N.T.S.





ILLINOIS IOWA

WISCONSIN

DWNER/DEVELOPER:

NEW GLARUS BREWING CO.
2400 WISCONSIN 69

NEW GLARUS, WI 53574

PROJECT AND LOCATION:

NEW GLARUS BREWING CO.

WAREHOUSE ADDITION

NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

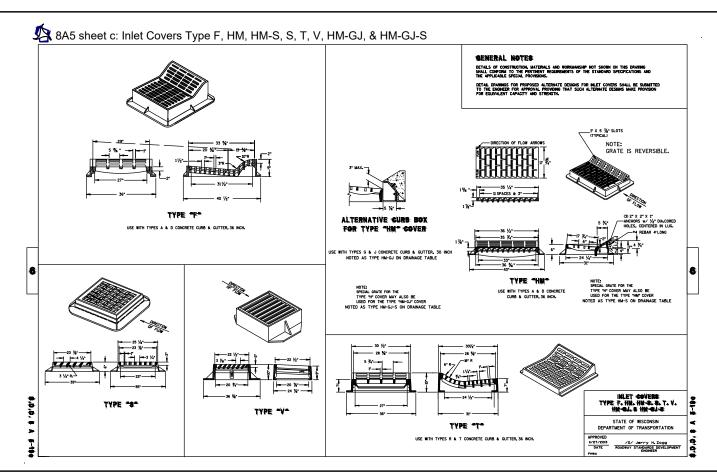
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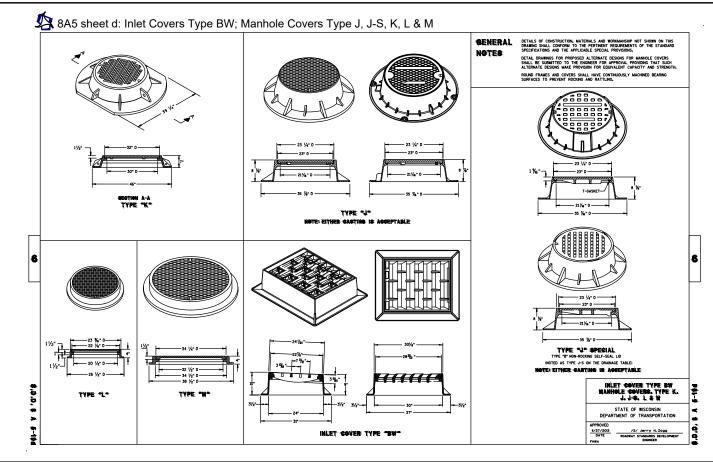
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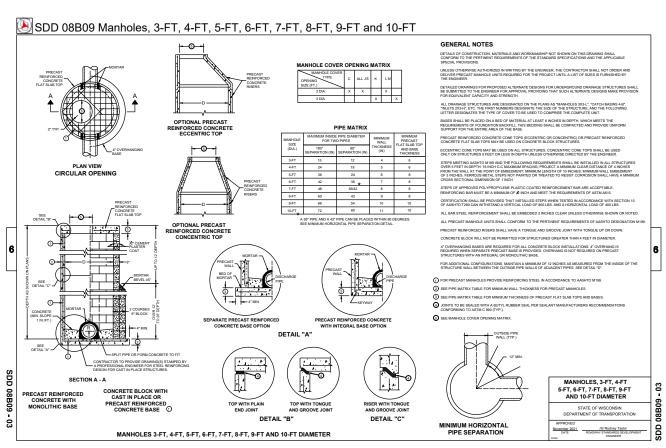
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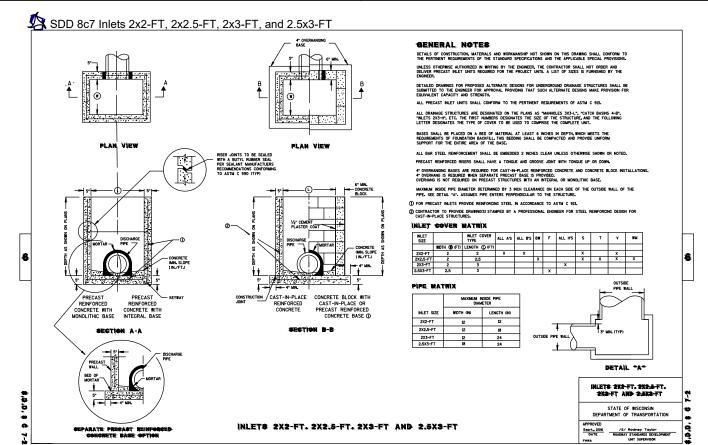
JOB NUMBER: 22-821

SHEET NUMBER: 10 of 12











ILLINOIS IOWA

WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 PROJECT AND LOCATION:

NEW GLARUS BREWING CO.

WAREHOUSE ADDITION

NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

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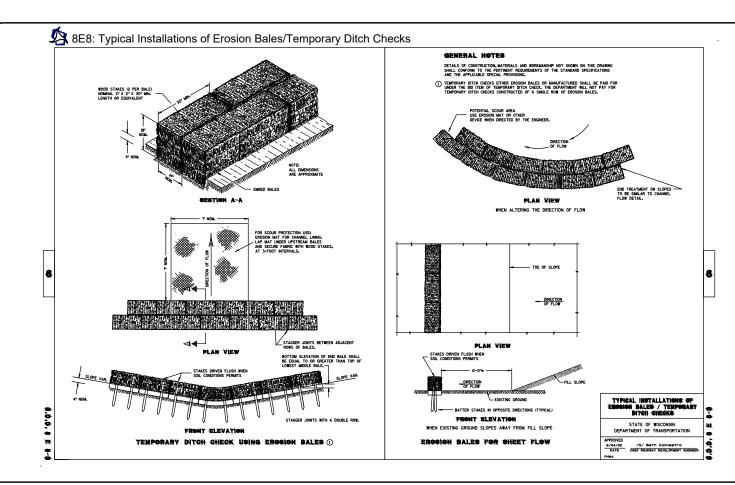
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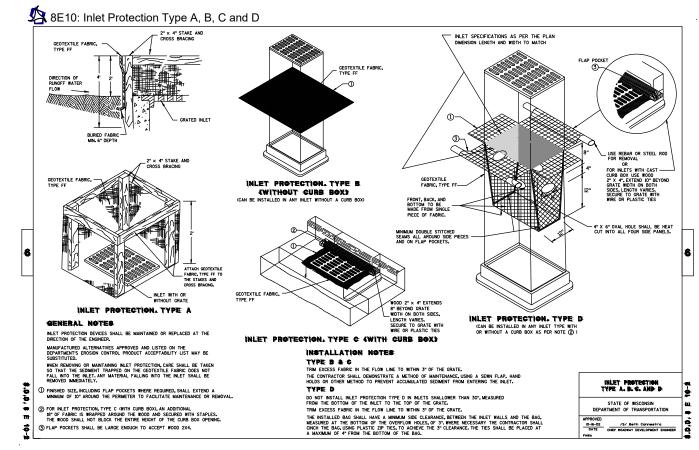
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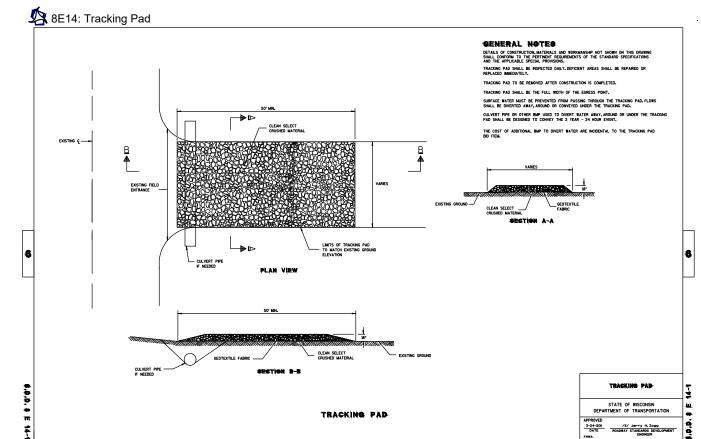
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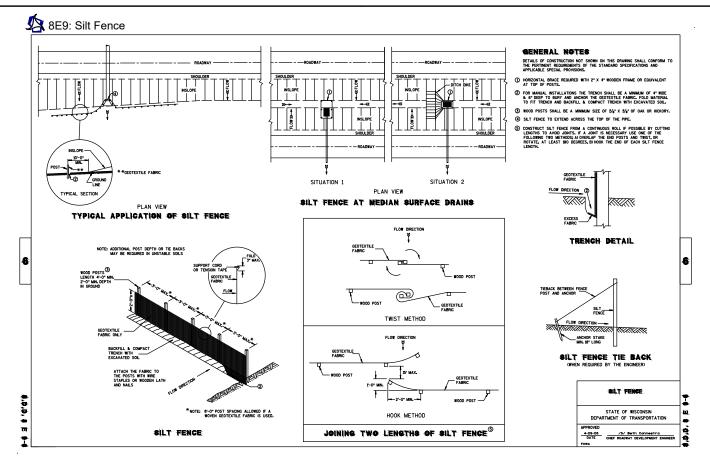
SHEET NUMBER:

11 of 12











ILLINOIS IOWA

WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 NEW GLARUS BREWING CO.
WAREHOUSE ADDITION
NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

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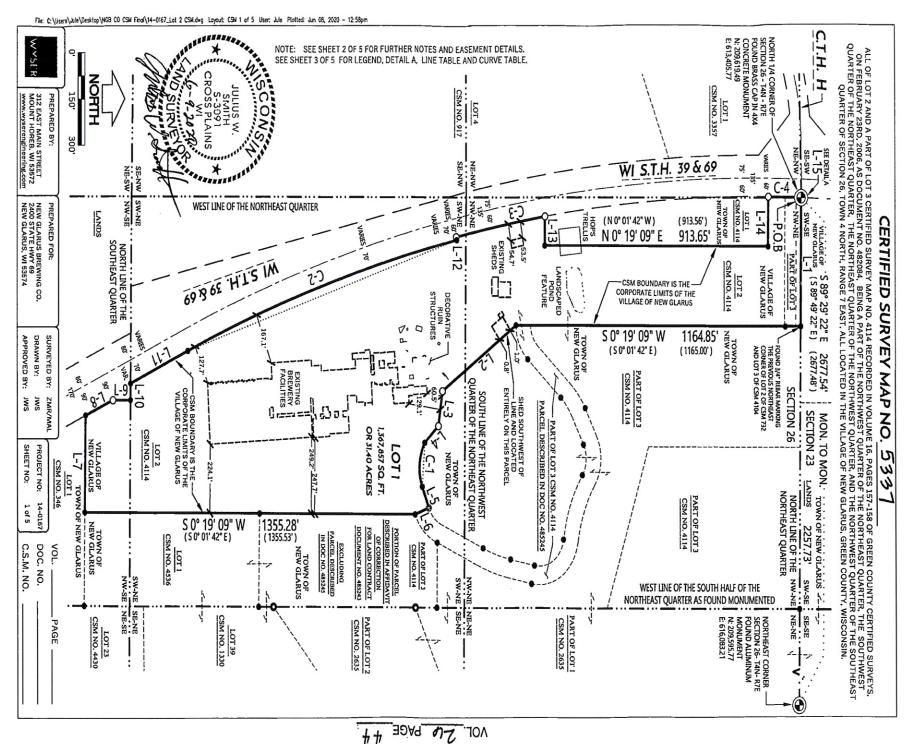
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JOB NUMBER: 22-821
SHEET NUMBER:

12 of 12



St PAGE 45

'TOA

:

(370.09')

(5669.65')

(3° 44' 24")

(N 10° 43' 33" W)

(370.02')

(N 12° 35' 45" W)

N 0° 45' 05" E

N 2° 06' 54" E

(N 1° 46' 53" E)

 \mathbb{G}

369.73

5669.65

3° 44′ 11"

N 10° 23' 25" W

369.66

3 ß

(135.02')

(5669.65')

(1° 21' 52")

(N 1° 05' 57" E)

514.25

5669,65

5° 11' 49"

N 4° 42' 49" E

514.08 135.01 134.94

N 2° 06' 54" E

N 7° 18' 43" E

(514.18')

(5669.65')

(5° 11' 46")

(N 4° 44' 04" E)

(514.00')

(N 2° 08' 11" E)

(N 7° 19' 57" E)

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134.94

5669.65

1° 21' 49"

N 1° 26' 00" E

312 EAST MAIN STREET MOUNT HOREB, WI 53572 www.wyserengineering.com PREPARED BY:

NEW GLARUS BREWING CO. 2400 STATE HWY 69 NEW GLARUS, WI 53574

SURVEYED BY:
DRAWN BY:
APPROVED BY:

ZMR/MAL

PER CERTIFIED SURVEY MAP NO. 4104
PER CERTIFIED SURVEY MAP NO. 3394
PER CERTIFIED SURVEY MAP NO. 4114

PROJECT NO:

14-0167

VOL.

PAGE

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C.S.M. NO DOC. NO.

					г
(***)	22	(***)	C1	CURVE #	
(1160.72')	1161.41'	(147.82')	147.96'	CURVE LENGTH	
(5659.65')	5659.65	(170.00')	170.00	RADIUS	
(5659.65') (11° 45' 02")	11° 45' 27"	(170.00') (49° 49' 08")	49° 52' 03"	DELTA	

(N 86° 18' 00" W)

N85° 58' 05"W

S 69° 05' 53" W

N 61° 02' 04" W

CURVE TABLE CHORD BEARING

CHORD LENGTH

TANGENT IN

TANGENT OUT

N 18° 08' 14" W

1159.37 (143.20') 143.33'

N 24° 00' 57" W

N 12° 15' 30" W

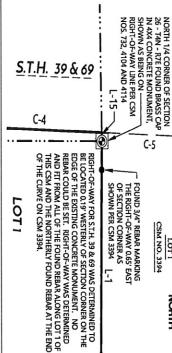
(N 18° 28' 16" W)

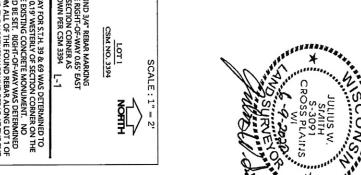
(1158.68')

(N 24° 20' 47" W) N 12° 15' 30" W

(N 12° 35' 45" W)

N 8° 31' 19" W





DETAIL A

* *	
PER C	L-15
ERTIFIED	N 89
PER CERTIFIED SURVEY MAP NO	N 89" 01" 27" E
MAP	۳
δö	la

SCONS

3

BEARING \$ 89° 29' 32" E (\$ 89° 49' 22" E) \$ 33° 22' 20" E \$ 33° 44' 00" E) \$ 38° 45' 30" E) \$ 82° 06' 29" E) \$ N 44° 12' 20' W

(420.00') 369.50'

(369.38') 114.68' (114.28')

LINE TABLE

DISTANCE

419.81

ALL OF LOT 2 AND A PART OF LOT 3 CERTIFIED SURVEY MAP NO. 4114 RECORDED IN VOLUME 16, PAGES 157-158 OF GREEN COUNTY CERTIFIED SURVEYS.
ON FEBRUARY 23RD, 2006, AS DOCUMENT NO. 482084, BEING A PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTHWEST
QUARTER OF THE NORTHEAST QUARTER, THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, AND THE NORTHWEST QUARTER OF THE SOUTHEAST
QUARTER OF SECTION 26, TOWN 4 NORTH, RANGE 7 EAST, ALL LOCATED IN THE VILLAGE OF NEW GLARUS, GREEN COUNTY, WISCONSIN.

CERTIFIED SURVEY MAP NO.

5337

LEGEND

9 0 0

3/4" REBAR SET 2.55 LB/FT MAG NAIL SET

CSM BOUNDARY

3/4" REBAR FOUND SECTION CORNER FOUND

1" IRON PIPE FOUND

EXISTING EASEMENT SECTION/QUARTER LINE CENTERLINE RIGHT-OF-WAY LINE

RECORDED INFORMATION

(161.92	(N 89° 49' 22" W)	(***)
162.13	N 89° 29' 32" W	L-14
(94.93	(S 89° 58' 18" E)	(***)
94.93	S 89° 40' 51" E	L-13
(10.00'	(S 77° 24' 15" W)	(***)
10.00'	S 77° 44′ 30" W	L-12
(259.55	(N 24° 20' 47" W)	(***)
259.22	N 24° 00' 57" W	L-11
(54.68)	(N 89° 57' 31" W)	(***)
54.68	N 89° 37' 52" W	1-10
(72.39	(N 0° 02' 07" W)	(***)
72.39'	N 0° 17' 43" E	L-9
(121.41)	(N 24° 20' 47" W)	(***)
121.61	N 24° 00' 57" W	L-8
(315.59)	(N 89° 35' 47" W)	(***)
315.31	N 89° 18' 46" W	L-7
(60.00')	(N 21° 12′ 34″ W)	(***)
60.00	N 20° 52' 44" W	1 - 6
(73.72	(S 68° 47' 26" W)	(***)
73.66'	S 69° 05' 53" W	L-5
(77.61')	(N 44° 31' 46" W)	(***)
77.66'	N 44° 12' 20" W	L-4

CERTIFIED **SURVEY MAP** Z 5 4

ON FEBI QUARTER OF LOT 2 AND A PART OF LOT 3 CERTIFIED SURVEY MAP NO. 4114 RECORDED IN VOLUME 16, PAGES 157-158 OF GREEN COUNTY CERTIFIED SURVEYS.
4 FEBRUARY 23RD, 2006, AS DOCUMENT NO. 452084, BEING A PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTHWEST
RTER OF THE NORTHEAST QUARTER, THE MORTHEAST QUARTER OF THE NORTHWEST QUARTER, AND THE NORTHWEST QUARTER OF THE SOUTHEAST
QUARTER OF SECTION 26, TOWN 4 NORTH, RANGE 7 EAST, ALL LOCATED IN THE VILLAGE OF NEW GLARUS, GREEN COUNTY, WISCONSIN.

LEGAL DESCRIPTION

ALL OF LOT 2 AND A PART OF LOT 3 CERTIFIED SURVEY MAP NO. 4114 (CSM 4114) RECORDED IN VOLUME 16, PAGES 157-158 OF GREEN COUNTY CERTIFIED SURVEYS, ON FEBRUARY 23RD, 2006, AS DOCUMENT NO. 482084, BEING A PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTHWEST QUARTER OF THE NORTHEAST QUARTER, THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, AND THE NORTHWEST QUARTER OF THE SOUTHEAST QUARTER OF SECTION 26, TOWN 4 NORTH, RANGE 7 EAST, ALL LOCATED IN THE VILLAGE OF NEW GLARUS, GREEN COUNTY, WISCONSIN.

COMMENCING AT THE NORTH QUARTER CORNER OF SAID SECTION 26 ALSO BEING THE POINT OF BEGINNING:

THENCE SOUTH 89 DEGREES 29 MINUTES 22 SECONDS EAST ALONG THE NORTH LINE OF THE NORTHERAST QUARTER OF SAID SECTION 26, ALSO BEING THE NORTH LINE OF AFORESAID LOT 3 OF CSM 4114, A DISTANCE OF 41381 FEET TO A NORTHERLY EXTENSION OF THE MORTHERLY WASTS ESEGMENT OF THE EASTERLY LINE OF AFORESAID LOT 2 OF CSM 4114; THENCE ALONG SAID NORTHERLY EXTENSION NORTHERLY EXTENSION OF THE MORTHERLY MOST SEGMENT OF THE EASTERLY LINE OF AFORESAID LOT 2 OF CSM 4114; THENCE ALONG SAID NORTHERLY EXTENSION AND CONTINUING ALONG LOT 2 SOUTH 40 DEGREES 19 MINUTES 99 SECONDS WEST, 1154.85 FEET; THENCE CONTINUING ALONG SAID LOT 2 SOUTH 40 DEGREES 30 MINUTES 90 SECONDS WEST, 1154.85 FEET ON THE MORTH LINE OF CENTINUING ALONG SAID LOT 2 SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1154.85 FEET ON THE MORTH LINE OF CENTINUING ALONG SAID LOT 2 SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE MORE ALONG SAID LOT 2 SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE MORTH LINE OF CENTINUING ALONG SAID LOT 2 SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE SOUTH 50 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE SOUTH 40 DEGREES 30 MINUTES 30 SECONDS WEST, 1255.25 FEET ON THE MORTH LINE OF CENTINEDS SHAPEL 27TH, 1978, AS DOCUMENT NO. 26883; THENCE LONG THE NORTH LINE OF SECONDS WEST, 1255.25 FEET ON THE WORD CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY OF STH 69 NORTH 20 DEGREES 30 MINUTES 45 SECONDS WEST, 1254 FEET; THENCE CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY OF STH 69 NORTH 20 DEGREES 30 MINUTES 57 SECONDS WEST, 1254 FEET; TO A POINT OF TANGENT CURVE. THENCE CONTINUING ALONG SAID EASTERLY RIGHT-OF-WAY OF STH 69 NORTH 20 DEGREES 30 MINUTES 57 SECONDS WEST, 1254 FEET ON THE MORE ADDITIONAL ADDITI

SAID PARCEL CONTAINS 1,367,857 SQUARE FEET OR 31.40 ACRES MORE OR LESS

SURVEYOR'S CERTIFICATE

I, JULIUS W. SMITH, WISCONSIN PROFESSIONAL LAND SURVEYOR S-3091, DO HEREBY CERTIFY THAT BY DIRECTION OF NEW GLARUS BREWING COMPANY, I HAVE SURVEYED. DIVIDED, AND MAPPED THE LANDS DESCRIBED HEREON AND THAT THE MAP IS A CORRECT REPRESENTATION IN ACCORDANCE WITH THE INFORMATION PROVIDED. I FURTHER CERTIFY THAT THIS CERTIFIED SURVEY MAP IS IN FULL COMPLIANCE WITH CHAPTER 236.34 OF THE WISCONSIN STATUTES AND THE SUBDIVISION REGULATIONS OF THE VILLAGE OF NEW GLARUS AND GREEN COUNTY, WISCONSIN.

W. SMITH, S-3091 ONSIN PROFESSIONAL LAND SURVEYOR



WYSI-K

PREPARED BY:

312 EAST MAIN STREET MOUNT HOREB, WI 53572 www.wyserengineering.com

NEW GLARUS BREWING CO. 2400 STATE HWY 69 NEW GLARUS, WI 53574 PREPARED FOR:

SURVEYED BY: DRAWN BY: APPROVED BY: SMr

SHEET NO: PROJECT NO:

14-0167 4 of 5

DOC. NO. 5 C.S.M. NO.

PAGE

24

PAGE

JULIUS W SIMITH S-3091 S-3091 SURVE VIII

CERTIFIED SURVEY MAP Z

ALL OF LOT 2 AND A PART OF LOT 3 CERTIFIED SURVEY MAP NO. 4114 RECORDED IN VOLUME 16, PAGES 157-158 OF GREEN COUNTY CERTIFIED SURVEYS.
ON FEBRUARY 23RD, 2006, AS DOCUMENT NO. 482084, BEING A PART OF THE NORTHWEST QUARTER OF THE NORTHEAST QUARTER, THE SOUTHWEST
QUARTER OF THE NORTHEAST QUARTER. THE NORTHEAST QUARTER OF THE NORTHWEST QUARTER, AND THE NORTHWEST QUARTER OF THE SOUTHEAST
QUARTER OF SECTION 26, TOWN 4 NORTH, RANGE 7 EAST, ALL LOCATED IN THE VILLAGE OF NEW GLARUS, GREEN COUNTY, WISCONSIN.

OWNER'S CERTIFICATE

NEW GLARUS BREWING COMPANY INC., A CORPORATION DULY ORGANIZED AND EXISTING UNDER AND BY VIRTUE OF THE LAWS OF THE STATE OF WISCONSIN AS OWNER, DOES HEREBY CERTIFY THAT WE CAUSED THE LANDS DESCRIBED HEREON TO BE SURVEYED, DIVIDED, MAPPED AND DEDICATED AS SHOWN. NEW GLARUS BREWING COMPANY INC. DOES ALSO CERTIFY THAT THIS CERTIFIED SURVEY MAP IS REQUIRED BY S. 236.34 TO BE SUBMITTED TO THE VILLAGE OF NEW GLARUS

JULIUS W. STAITH S-300 CROSS PLAINS VII DOCUM	SLERK- VILLAGE OF NEW GLARUS	AUGU VILLAGE OF NEW GLARUS APPROVAL CERTIFICATE NPPROVED FOR RECORDING ON THIS 17th DAY OF 1000CM 2020 BY THE VILLAGE OF NEW GLARUS	NOTARY PUBLIC, STATE OF WISCONSIN NOTARY PUBLIC, STATE OF WISCONSIN NOTARY PUBLIC, STATE OF WISCONSIN	FOREGOING INSTRUMENT, AND TO ME KNOWN TO BE SUCH OF SAID CORPORATION, AND ACKNOWLEDGED THAT THEY EXECUTED THE FORGOING INSTRUMENT AS SUCH OFFICER AS THE DEED	THE ABOVE NAMED Drews Company INC. TO ME KNOWN TO BE THE PERSON WHO EXECUTED THE	STATE OF WISCONSIN) SS DANE COUNTY) SS GY CAN PERSONALLY CAME BEFORE ME THIS 35 DAY OF 515 M. 2020,	FOR APPROVAL. IN WITNESS WHEREOF THE SAID NEW GLARUS BREWING COMPANY INC., HAS CAUSED THESE PRESENTS TO SIGNED BY
OFFICE OF THE REGISTER OF DEEDS STREET COUNTY, WISCONSIN RECEIVED FOR RECORD SUME 24Th 20 20 AT 9:27 O'CLOCK A M AS DOCUMENT# 000373		AUGSBURGER AUGSBURGER	TOTABY PUR MINING	HE DEED	Ċ		PRESENTS TO SIGNED BY

St BOY OY

PREPARED BY:
312 EAST MAIN STREET
MOUNT HOREB, WI 53572
www.wyserengineering.com

NEW GLARUS BREWING CO. 2400 STATE HWY 69 NEW GLARUS, WI 53574 PREPARED FOR:

SURVEYED BY: DRAWN BY: APPROVED BY:

ZMR/MAL

SMr

SHEET NO: PROJECT NO:

14-0167 5 of 5

REGISTER OF DEEDS

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MAPS ON PAGE(S)

-44

F CERTIFIED SURVEY

IN VOL.

26

WYSER



Memo

To: Village of New Glarus

From: Jesse Duff, P.E.

CC: Katherine May, New Glarus Brewing Co.

Date: 02/17/2023

Re: New Glarus Brewing Company Warehouse Addition

The New Glarus Brewing Company is proposing the construction of warehouse addition to support the function of the existing brewery facility. The proposed project will include the addition of approximately 28,550 square foot building with loading dock, and the construction of asphalt drives, storm sewer, and surrounding landscaping. The proposed improvements will replace an existing gravel parking lot and result in approximately 68,850 square feet of disturbance and approximately 24,400 square feet of pavement surface. The majority of the disturbance occurs within the existing paved parking and gravel lot. Proposed development plans can be found in **Exhibit A**. Construction is anticipated to begin April 2023 and be completed by December 2023.

Stormwater runoff generated by the new impervious surface will be conveyed through storm sewer and then overland to two existing wet detention ponds constructed as part of previous improvement projects. A storm water management report was completed by Delta 3 Engineering, Inc dated February 22, 2012, and amended by JSD Professional Services, Inc. dated May 31, 2012.

The intent of this memo is to update the stormwater management report to include all previous improvements and provide details on how these improvements associated with the warehouse expansion will be constructed in accordance with Chapter 260 of the Village of New Glarus ordinances and the Wisconsin Department of Natural Resources requirements.

Stormwater Management Measures

Storm water management for the site has been provided in two wet detention ponds which will provide the required 80% total suspended solids reduction and runoff rate reduction for the campus. A portion of the warehouse addition drains to both the Eastern Stormwater Retention Pond as part of Sub Area P1, and to the Northern Stormwater Retention Pond as part of Sub Area P2. The original watershed areas and associated HydroCAD model have been revised and updated to include previous development as well as the proposed improvements associated with this warehouse addition. The report utilizes pond volumes and outlet structures as established in the JSD Professional Services stormwater management

report. The updated watershed areas are shown in **Exhibit B**. The runoff results are summarized in **Table 1** and HydroCAD output is shown in **Exhibit C**.

Table 1: Existing versus proposed peak runoff rate for 24-hr rainfall events.	1-year	2-year	5-year	10-year	25-year	100-year
Rainfall for each 24-hour storm event (inches)	2.5	3	3.8	4.3	5	6.2
Allowable Pre-Development peak discharge rate (cfs) (Per Delta 3 Report)						
P1	2.41	7.22	18.45	26.96	40.24	65.71
P2	0.79	1.79	4.00	5.63	8.15	12.92
Total combined	3.20	9.01	22.45	32.59	48.39	78.63
Post-Development peak discharge rate (cfs) (JSD Report)						
P1	8.77	16.34	30.88	41.02	56.23	84.27
P2	6.57	9.13	13.47	16.26	20.22	27.11
Proposed Post-Development peak discharge rate (cfs)						
P1	8.77	16.34	30.88	41.02	56.23	84.27
P2	7.90	11.10	16.59	20.12	25.17	33.95
Post-Development release rate (cfs) with detention (JSD Report)						
P1	0.35	0.47	0.64	2.28	7.57	29.88
P2	0.14	0.52	2.62	4.04	5.45	8.75
Total combined	0.49	0.99	3.26	6.32	13.02	38.63
Proposed Post-Development release rate (cfs) with detention						
P1	0.35	0.47	0.64	2.26	7.56	29.59
P2	0.23	1.17	4.06	5.27	6.70	19.25
Total combined	0.58	1.64	4.70	7.53	14.26	48.84
Difference: Proposed Post-Development release rate with detention vs.						
Allowable Pre-Development peak discharge rate (cfs)						
P1	-2.06	-6.75	-17.81	-24.70	-32.68	-36.12
P2	-0.56	-0.62	0.06	-0.36	-1.45	6.33
Total combined	-2.62	-7.37	-17.75	-25.06	-34.13	-29.79

Storm water runoff from the site has been limited to below the allowable predevelopment peak discharge rates as established in the Delta 3 Engineering stormwater report. Total suspended solids reduction is also provided within both the existing stormwater retention ponds. Based upon Stoke's Law of settling velocity and a required particle settling velocity of 1.91x10⁻⁵ fps (80% reduction), the maximum pond discharge rate during the 1-year storm event was established for each basin. The release rate for each respective pond is below these rates and therefore total suspended solids reduction is achieved within the existing ponds. Refer to the Detention Basin Trapping Efficiency worksheet within **Exhibit D**.

Erosion Control Measures

All perimeter erosion control measures will be installed prior to land disturbing activities, including silt fence and a construction entrance. Erosion control measures have been designed to prevent erosion and limit the soil loss rate to a maximum of 5.0 tons per acre annually. See **Exhibit E** for universal soil loss equations. All construction stormwater runoff will be directed towards and managed by the proposed erosion and sedimentation control measures as depicted on the Grading and Erosion Control Plan.



INDEX OF SHEETS

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SHEET TITLE
TITLE SHEET
STANDARD LEGEND
GENERAL NOTES
GENERAL NOTES
EXISTING CONDITIONS AND REMOVAL PLAN
SITE LAYOUT PLAN
GRADING PLAN
UTILITIES PLAN
EROSION CONTROL PLAN
DETAILS
DETAILS
DETAILS

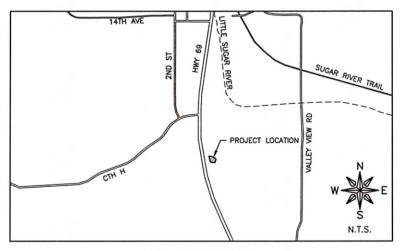
NEW GLARUS BREWING CO. WAREHOUSE ADDITION

FOR

NEW GLARUS BREWING CO. NEW GLARUS, WI

PROPOSED SITE PLANS

GREEN COUNTY FEBRUARY 2023



LOCATION MAP

CONTOURS AND ELEVATIONS DEPICTED HEREON ARE BASED UPON THE NAVDAR DATUM.



ILLINOIS

IOWA

WISCONSIN





REVIEW SET

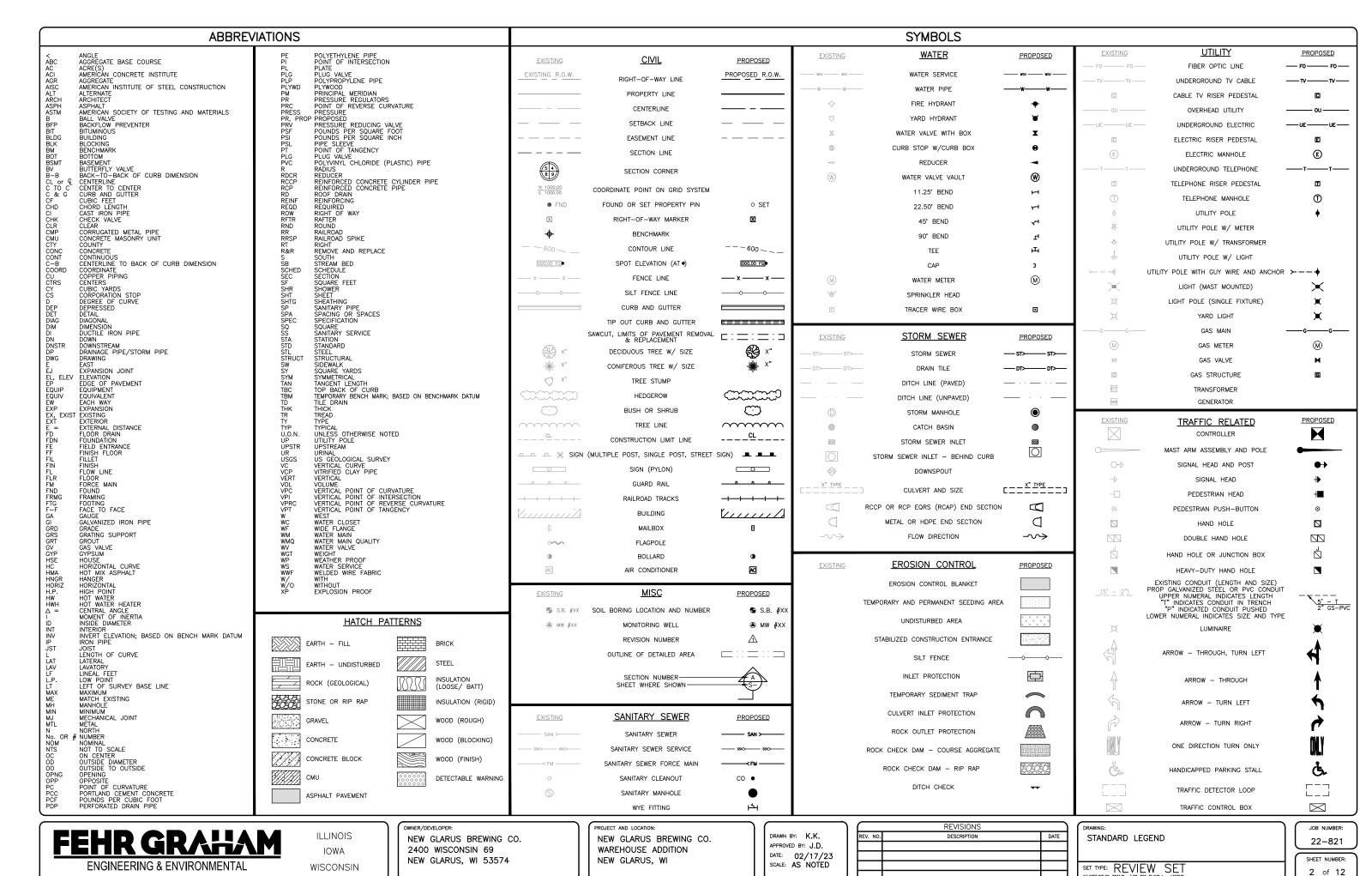
ORIGINAL	SET FOR PROJECT: 22-821	DATE CREATED:	02/17/23
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LITHITIES

UIILI	IILO
UTILITY TYPE	COMMON NAME
WATER & SEWER	NEW GLARUS UTILITIES
ELECTRIC	ALLIANT ENERGY
TELEPHONE	TDS TELECOM
GAS	WE ENERGIES
CABLE	CHARTER

(CONTRACTOR TO BE RESPONSIBLE FOR ANY ADJUSTMENTS TO BE MADE.)





GENERAL NOTES

- THIS PROJECT SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE MUNICIPAL CODE. VILLAGE OF NEW GLARUS, WISCONSIN. CURRENT EDITION, THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, SPECIAL PROVISIONS AND THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION. SIGN CONSTRUCTION AND PAVEMENT MARKINGS SHALL CONFORM TO THE REQUIREMENTS OF THE "MANUAL ON LINIFORM TRAFFIC CONTROL DEVICES" CURRENT EDITION
- 2. IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "ENGINEER". WHICH SHALL MEAN FEHR GRAHAM OR THEIR DULY AUTHORIZED AGENT. IN THESE CONTRACT DOCUMENTS MENTION IS MADE OF THE "OWNER", WHICH SHALL MEAN NEW GLARUS BREWING COMPANY, OR THEIR DULY AWARDED AGENT.
- AS PART OF THE BIDDING PROCEDURE, THE CONTRACTOR SHALL VERIFY THAT THE QUANTITIES FOR PAY ITEMS, AS PRESENTED IN THESE PLAN DOCUMENTS, ARE SUBSTANTIALLY CORRECT. IF DISCREPANCIES ARE DETECTED, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OF THE DISCREPANCY PRIOR TO THE BID DATE.
- 4. QUANTITIES SHOWN ARE ESTIMATES FOR INFORMATION ONLY. PAYMENT WILL BE BASED ON ACTUAL QUANTITIES MEASURED IN THE FIELD OR ON PAYMENT LIMIT DETAILS.
- 5. THE CONTRACTOR SHALL BE PAID FOR MATERIALS AND EQUIPMENT SUCCESSFULLY INSTALLED IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS AS MEASURED OR VERIFIED IN PLACE BY THE ENGINEER OR HIS AGENT.
- 6. IN CASE OF CONFLICT BETWEEN THE ABOVE MENTIONED SPECIFICATIONS, THE ENGINEER SHALL DETERMINE WHICH OF THE SPECIFICATIONS SHALL GOVERN. THE ENGINEER'S DECISION SHALL BE FINAL AND NO ADDITIONAL COMPENSATION SHALL BE AWARDED UNLESS APPROVED BY THE ENGINEER.
- THE PROPOSED IMPROVEMENTS MUST BE CONSTRUCTED IN ACCORDANCE WITH THE ENGINEERING PLANS AS APPROVED BY THE OWNER. IMPROVEMENT REPRESENTATIONS AS SHOWN ON THESE PLANS ARE AS ACCURATE AS POSSIBLE FROM THE INFORMATION AVAILABLE. HOWEVER, SOME FIELD REVISIONS MAY BE REQUIRED TO ACCOMMODATE UNFORESEEN CIRCUMSTANCES — THE ENGINEER SHALL BE ADVISED OF ANY NECESSARY REVISIONS WITH SUFFICIENT LEAD TIME ALLOWED TO PROPERLY CONSIDER AND ACT UPON SAID REQUESTS. PROPER CONSTRUCTION TECHNIQUES MUST BE FOLLOWED IN CONSTRUCTING THOSE IMPROVEMENTS AS DETAILED IN THIS ENGINEERING PLAN.
- 8. THE ENGINEER SHALL HAVE THE AUTHORITY TO INSPECT, APPROVE OR REJECT THE WORKMANSHIP AND/OR MATERIALS WHICH GO TO MAKE UP IMPROVEMENTS AS DETAILED IN THESE PLANS AND SPECIFICATIONS.
- 9. GENERAL SAFETY PROVISION: TO PROVIDE DRIVERS WITH SAFE TRAVEL CONDITIONS DURING THE CONSTRUCTION PROJECT, AND TO PROVIDE SAFE WORKING CONDITIONS FOR ALL EMPLOYEES, THE RULES, REGULATIONS, AND CONDITIONS STATED BELOW WILL PREVAIL FOR THE DURATION OF THIS CONTRACT. ANY EMPLOYEE OF THE CONTRACTOR OR HIS SUBCONTRACTORS WHO REFUSES TO COMPLY WITH THESE GENERAL SAFETY PROVISIONS SHALL BE REMOVED FROM THE JOB SITE IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS. THE CONTRACTOR AND ANY SUBCONTRACTORS RETAINED BY HIM SHALL COMPLY WITH THE STATE AND FEDERAL REQUIREMENTS OF THE OCCUPATIONAL SAFETY AND HEALTH ACT OF 1970 (OSHA), JULY 1, 1987 AS IT RELATES TO CONTRACTOR'S OPERATIONS.
- 10. THE CONTRACTOR SHALL COMPLY WITH ALL STATE REGULATIONS REGARDING AIR, WATER, AND NOISE POLLUTION. THE CONTRACTOR WILL NOT BE ALLOWED TO BUILD FIRES ON THE SITE.
- 11. THE SCALE SHOWN ON THE DRAWINGS APPLIES ONLY TO THE FULL SIZE PLANS NOT THE REDUCED SIZE PLANS
- 12. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN DRAINAGE FLOWS AT ALL TIMES DURING THE PERFORMANCE OF THE WORK. METHODS USED BY THE CONTRACTOR SHALL BE SUBJECT TO THE APPROVAL OF THE ENGINEER. COST OF MAINTAINING DRAINAGE FLOWS SHALL BE INCIDENTAL TO THE CONTRACT.
- 13. WHERE SECTION OR SUBSECTION MONUMENTS ARE ENCOUNTERED, THE ENGINEER SHALL BE NOTIFIED BEFORE SUCH MONUMENTS ARE REMOVED OR DISTURBED. THE CONTRACTOR SHALL PROTECT AND CAREFULLY PRESERVE ALL PROPERTY MARKERS, MONUMENTS AND RIGHT-OF-WAY PINS UNTIL THE OWNER, AND AUTHORIZED SURVEYOR, OR AGENT HAS WITNESSED OR OTHERWISE REFERENCED THEIR LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR HAVING AN AUTHORIZED SURVEYOR RE-ESTABLISH ANY SECTION OR SUBSECTION MONUMENTS DESTROYED BY HIS OPERATIONS. REPLACEMENT OF MONUMENTS WILL BE DETERMINED BY THE ENGINEER.
- 14. THE CONTRACTOR SHALL REMOVE, STORE, AND RELOCATE TO THE SATISFACTION OF THE ENGINEER ALL EXISTING SIGNAGE IN ACCORDANCE WITH STATE AND LOCAL REQUIREMENTS, AND CONSIDER THIS AS INCIDENTAL TO THE CONTRACT.
- 15. OUTSIDE THE EXISTING RIGHT-OF-WAY, THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING SIGNS OUTSIDE THE RIGHT-OF-WAY. ANY SIGNS REMOVED FOR CONSTRUCTION PURPOSES SHALL BE CAREFULLY REMOVED AND RE-ERECTED BY THE CONTRACTOR AT A LOCATION NEAREST TO THE ORIGINAL LOCATION, OR AT A LOCATION DETERMINED BY THE ENGINEER IN THE FIELD. REMOVAL AND RE-ERECTED SIGNS AND ANY DAMAGE DONE TO EXISTING I'HE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED OR REPLACED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 16. ALL ITEMS SHALL INCLUDE ALL THE NECESSARY MATERIALS AND LABOR TO COMPLETE THE ITEM IN PLACE. MATERIALS AND LABOR NOT SPECIFICALLY IDENTIFIED SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 17. AT THE END OF EACH DAY, THE CONTRACTOR SHALL SECURE THE CONSTRUCTION WORK ZONE FROM POTENTIAL INTRUDERS.
- 18. THE CONTRACTOR SHALL FIELD VERIFY THE ELEVATIONS OF THE BENCHMARKS PRIOR TO COMMENCING WORK. THE CONTRACTOR SHALL ALSO FIELD VERIFY LOCATION, ELEVATION AND SIZE OF EXISTING UTILITIES, AND VERIFY PAVEMENT ELEVATIONS WHERE MATCHING INTO EXISTING WORK. THE CONTRACTOR SHALL FIELD VERIFY HORIZONTAL CONTROL BY REFERENCING SHOWN COORDINATES TO KNOWN PROPERTY LINES. NOTIFY ENGINEER OF DISCREPANCIES IN EITHER VERTICAL OR HORIZONTAL CONTROL PRIOR TO PROCEEDING WITH WORK.
- 19. THE CONTRACTOR SHALL CONTACT THE ENGINEER OF ANY FRRORS OR DISCREPANCIES WHICH MAY BE SUSPECTED IN LINES. AND GRADES, AND SHALL NOT PROCEED WITH THE WORK UNTIL ALL LINES AND GRADES WHICH ARE BELIEVED TO BE IN ERROR HAVE BEEN VERIFIED OR CORRECTED BY THE ENGINEER OR HIS REPRESENTATIVE.
- 20. THE ENGINEER AND OWNER ARE NOT RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCE OR PROCEDURES, TIME OF PERFORMANCE, PROGRAMS OR ANY SAFETY PRECAUTIONS USED BY THE CONTRACTOR. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR EXECUTION OF THEIR WORK IN ACCORDANCE WITH THE CONTRACT DOCUMENTS
- 21. ALL ITEMS TO BE REMOVED AND NOT DEFINED AS A PAY ITEM SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 22. ALL EXCESS EARTH EXCAVATION, EXCESS MATERIALS, OR OTHER REMOVED ITEMS SHALL BE HAULED OFF-SITE AT THE CONTRACTOR'S EXPENSE, UNLESS OTHERWISE APPROVED BY THE OWNER.
- 23. ROADWAY AND DRAINAGE EXCAVATION WORK SHALL BE IN ACCORDANCE WITH SECTION 205 OF THE WISCONSIN DEPARTMENT 1. ROADWAY AND DRAINAGE EXCAVATION WORK STALL BE IN ACCORDANCE WITH SECTION 205 OF THE WISCONSIN DEPARTMEN OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTRE CONSTRUCTION, CURRENT EDITION. THE CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL OBSTRUCTIONS, TREES, DEBRIS AND BRUSH AS DESIGNATED BY THE OWNER AND AS INDICATED ON THE PLANS. ALL MATERIALS SHALL BE DISPOSED OF AT THE CONTRACTOR'S EXPENSE. DURING CONSTRUCTION, CARE SHALL BE TAKEN TO MINIMIZE DAMAGE TO THE EXISTING TREES AND LANDSCAPING. ONLY THOSE ITEMS DESIGNATED BY THE OWNER SHALL BE REMOVED.
- 24. ALL ROADWAY REMOVAL ITEMS SHALL CONFORM TO SECTION 204 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. ALL JOINTS BETWEEN THE PORTION REMOVED AND THAT LEFT IN PLACE SHALL BE SAWED TO SUCH A DEPTH THAT A CLEAN, NEAT EDGE WILL RESULT WITH NO SPALLING TO THE REMAINING PORTION. THE COST OF SAWING SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT. ADDITIONAL SAWING OR RE-SAWING MAY BE REQUIRED AS DIRECTED BY THE ENGINEER WITH NO ADDITIONAL COMPENSATION BEING ALLOWED. THE COST OF SAWCUTTING THE EXISTING PAVEMENT SHALL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.

GENERAL NOTES

- 25. WHEN ARTIFICIAL LIGHTING IS UTILIZED DURING NIGHT OPERATIONS, THE CONTRACTOR SHALL EXERCISE UTMOST PRECAUTIONS IN PREVENTING ADVERSE VISIBILITY TO THE MOTORING PUBLIC, AS WELL AS ADJOINING RESIDENTIAL AREAS.
- 26. THE CONTRACTOR IS REQUIRED TO STAY WITHIN THE NOTED PROPERTY BOUNDARIES RIGHT-OF-WAY AND EASEMENTS AS SHOWN IN THE PLANS. ANY ADDITIONAL EASEMENTS SHALL BE SECURED BY THE CONTRACTOR AT NO EXTRA COST
- 27. ANY AREAS DAMAGED OR DISTURBED DURING THE PROJECT AS A DIRECT OR INDIRECT RESULT OF CONTRACTOR OPERATIONS, SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION. THE COST OF SAID RESTORATION OR REPAIR SHALL BE BORNE TOTALLY BY THE CONTRACTOR, WITH NO EXTRA COMPENSATION BEING AWARDED UNDER THIS CONTRACT. THE RESPONSIBILITY FOR THE REPAIR OR REPLACEMENT OF ANY UTILITY, STRUCTURE, LANDSCAPING, ETC., DAMAGED OR DESTROYED BY THE CONTRACTOR DURING MOBILIZATION OR CONSTRUCTION SHALL BE BORNE SOLELY BY THE CONTRACTOR, WITH NO EXPENSE BEING CHARGED TO THE ENGINEER OR OWNER. PRIOR TO ACCEPTANCE OF THIS REPAIR OR REPLACEMENT, THE CONTRACTOR SHALL PRESENT THE OWNER WITH A "SIGNOF LETTER", SIGNED BY A RESPONSIBLE OFFICIAL OF THE OWNER OF THE DAMAGED UTILITY STATING THAT THE REPAIR OR REPLACEMENT

CONSTRUCTION STAKING

- 1. CONSTRUCTION STAKING SERVICES WILL BE PROVIDED BY FEHR GRAHAM. STAKE POINTS WILL BE STAKED ONE TIME WHEN REQUESTED BY THE CONTRACTOR. THE SAME STAKE POINTS REQUESTED BY THE CONTRACTOR A SECOND TIME WILL BE PAID FOR BY THE CONTRACTOR. CONSTRUCTION STAKING INCLUDES:

 BUILDING CORNERS
 - PAVING GRADE
 - STORM SEWER

EROSION CONTROL NOTES

- 1. UNLESS OTHERWISE SPECIFIED, ALL EROSION AND SEDIMENT CONTROL MEASURES AND THEIR MAINTENANCE, CLEARING AND REMOVAL SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- 2. THIS WORK SHALL CONFORM TO THE APPLICABLE STANDARDS FROM THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES, THE WISCONSIN STORM WATER MANUAL, THE WISCONSIN DEPARTMENT TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, THE PROJECT SPECIFICATIONS, AND THE APPROPRIATE
- 3. A WATER RESOURCES APPLICATION FOR PROJECT PERMITS (WRAPP) WILL BE COMPLETED AND SUBMITTED TO THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES BY THE OWNER PRIOR TO CONSTRUCTION.
- 4. THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN SHALL BE CONSIDERED PART OF THE CONTRACT DOCUMENTS AND WILL BE AVAILABLE FOR REVIEW DURING THE BIDDING PROCESS
- 5. A COPY OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN WILL BE PROVIDED TO THE SUCCESSFUL BIDDER. THE CONTRACTOR SHALL MAINTAIN ONE COPY OF THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN AT THE CONSTRUCTION SITE AT ALL TIMES DURING WORKING HOURS FROM THE DATE OF PROJECT INITIATION TO THE DATE
- 6. THE CONTRACTOR SHALL LEGIBLY MARK ANY CHANGES OR REVISIONS IMPLEMENTED TO THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. AT COMPLETION OF THE PROJECT, THE CONTRACTOR SHALL DELIVER THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN (INCLUDING ALL REVISIONS, RECORDS, AND INSPECTION REPORTS) TO THE OWNER
- THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR RESPONSIBLE FOR SEDIMENT AND EROSION CONTROL MEASURES OR CONSTRUCTION ACTIVITIES THAT DISTURB SITE SOIL WILL BE REQUIRED TO CERTIFY THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN BEFORE A NOTICE TO PROCEED IS ISSUED.
- 8. A COPY OF THE CONSTRUCTION SITE STORM WATER RUNOFF GENERAL WPDES PERMIT MUST BE AVAILABLE FOR PUBLIC VIEWING AT THE CONSTRUCTION SITE BY THE GENERAL CONTRACTOR.
- THE CONTRACTOR SHALL IMPLEMENT THE EROSION AND SEDIMENT CONTROL MEASURES AS INDICATED ON THESE EROSION CONTROL PLANS AND IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN BEFORE CONSTRUCTION BEGINS.
- 10. THE CONTROLS SHALL BE INSTALLED AS DETAILED AND WHERE INDICATED ON THE EROSION CONTROL PLAN SHEETS AND AS DIRECTED BY THE INSPECTOR.
- 11. SITE ACTIVITIES SHOULD ENSURE THAT EXISTING VEGETATION IS PRESERVED WHERE PRACTICABLE
- 12. EXCEPT AS PROVIDED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN, DISTURBED PORTIONS OF THE SITE SHALL BE STABILIZED (TEMPORARILY OR PERMANENTLY SEEDED, MULCHED, SODDED OR PAVED) AS SOON AS PRACTICABLE, BUT IN NO CASE MORE THAN 7 CALENDAR DAYS AFTER THE CONSTRUCTION ACTIVITY IN THAT PORTION OF THE SITE HAS
- 13. UNTIL SUCH TIME AS THE PROJECT SITE REACHES FINAL STABILIZATION AND A NOTICE OF TERMINATION IS FILED BY THE OWNER, THE CONTRACTOR SHALL BE RESPONSIBLE TO ADJUST, REPAIR, OR REPLACE, ALL VEGETATION, EROSION CONTROLS, SEDIMENT CONTROLS, AND ANY OTHER PROTECTIVE MEASURES AS REQUIRED IN ORDER TO MAINTAIN THEIR INTENDED FUNCTION IN A GOOD AND EFFECTIVE OPERATING CONDITION
- 14. EXCEPT FOR FLOWS FROM FIRE FIGHTING ACTIVITIES, SOURCES OF NON-STORM WATER EXPECTED DURING THE CONSTRUCTION PROCESS THAT MAY BE COMBINED WITH STORM WATER DISCHARGES ARE IDENTIFIED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. THESE DISCHARGES SHALL BE DIRECTED AWAY FROM UNPROTECTED, BARE, OR OTHERWISE UNSTABILIZED SOIL, AND APPOPRIATE POLLUTION PREVENTION MEASURES SHALL BE IMPLEMENTED SO THAT THESE DISCHARGES DO NOT CAUSE EROSION OR DEGRADE THE QUALITY OF RUNOFF FROM THE CONSTRUCTION SITE.
- 15. REGULAR INSPECTIONS WILL BE MADE AS REQUIRED UNDER THE GENERAL WPDES PERMIT NO. WI-S067831-04 AND SPECIFED IN THE EROSION CONTROL AND STORM WATER MANAGEMENT PLAN. A QUALIFIED INSPECTOR WILL BE PROVIDED BY THE OWNER. BASED ON THE RESULTS OF THE INSPECTIONS, POLLUTION PREVENTION MEASURES SHALL BE REVISED AS APPROPRIATE AS SOON AS PRACTICABLE AFTER EACH INSPECTION. SUCH REVISIONS SHALL BE IMPLEMENTED WITHIN 7 CALENDAR DAYS FOLLOWING EACH INSPECTION.
- 16. THE INSPECTOR SHALL HAVE AUTHORIZATION TO DETERMINE THE ADEQUACY OF THE CONTRACTOR'S EROSION CONTROL EFFORTS. THE OWNER OR THE INSPECTOR SHALL HAVE FULL AUTHORITY OVER THE GENERAL CONTRACTOR AND ANY SUBCONTRACTOR TO CAUSE POLLUTANT CONTROL MEASURES TO BE REPAIRED, MODIFIED, MAINTAINED, SUPPLEMENTED, OR WHATEVER ELSE IS NECESSARY IN ORDER TO ACHIEVE EFFECTIVE POLLUTANT CONTROL OR TO SUSPEND OR LIMIT THE CONTRACTORS OPERATIONS PENDING ADEQUATE PERFORMANCE
- 17. PERIMETER EROSION BARRIER TO BE CONSTRUCTED OF SILT FENCE UNLESS NOTED OTHERWISE.
- 18. INLET PROTECTION SHALL BE A TYPE A, B, C OR D, OR APPROVED EQUAL
- 19. EROSION CONTROL BLANKET SHALL BE OF NORTH AMERICAN GREEN DS75 OR APPROVED EQUAL
- 20. A TEMPORARY CONCRETE WASHOUT FACILITY SHALL BE CONSTRUCTED AT A LOCATION APPROVED BY THE ENGINEER WASHOUT FACILITY SHALL BE UTILIZED FOR ALL APPLICABLE OPERATIONS.

EROSION CONTROL NOTES

- 21. STABILIZED CONSTRUCTION ENTRANCES SHALL BE INSTALLED, TO THE DIMENSIONS AS SHOWN, AT APPROVED LOCATIONS FOR THIS PROJECT. ALL CONSTRUCTION TRAFFIC MUST UTILIZE THE STABILIZED CONSTRUCTION ENTRANCES WHEN EXITING THE SITE. ALL COST FOR EROSION CONTROL AND RESTORATION WORK ASSOCIATED WITH THE APPROVED STABILIZED CONSTRUCTION ENTRANCES SHALL BE CONSIDERED INCIDENTAL TO THE CONTRACT.
- 22. TEMPORARY EROSION CONTROL MEASURES INCLUDE TEMPORARY DITCH CHECKS, PERIMETER EROSION BARRIER, INLET AND PIPE PROTECTION, TEMPORARY SEEDING, AND ANY OTHER TEMPORARY EROSION CONTROL MEASURE NEEDED TO LIMIT THE AMOUNT OF SOIL EROSION AND SEDIMENTATION DURING CONSTRUCTION.
- 23. AT THE COMPLETION OF THE PROJECT, ALL TEMPORARY EROSION CONTROL ITEMS SHALL BE REMOVED FROM THE SITE, AND BECOME THE PROPERTY OF THE CONTRACTOR. CONTRACTOR MUST STABILIZE ANY AREA DISTURBED BY THE REMOVAL OF EROSION CONTROL ITEMS.
- 24. CONTRACTOR SHALL CLEAN ANY DEBRIS TRACKED OFFSITE DAILY.

SEEDING OF DISTURBED AREAS

- 1. THE FINAL TOP 6" INCHES OF SOIL IN ANY DISTURBANCE AREA MUST BE A COHESIVE SOIL CAPABLE OF SUPPORTING
- 2. FERTILIZER HAVING AN ANALYSIS OF 16-6-6 SHALL BE APPLIED AT A RATE OF 7 LBS/1000 SF TO ALL DISTURBED AREAS AND INCORPORATED INTO THE SEEDBED PRIOR TO SOWING THE SEED
- 3. THE CONTRACTOR SHALL SEED AND STABILIZE ALL DISTURBED AREAS ADJACENT TO IMPROVEMENTS WITH SEEDING, WISDOT SEED MIXTURE NO. 10 AND NAG DS75 EROSION CONTROL BLANKET OR APPROVED EQUAL IN ACCORDANCE WITH WISDOT.
- 4. <u>GUARANTEE</u>: ALL SEEDED AREAS SHALL BE MAINTAINED AND MOWED FOR AT LEAST 30 DAYS AFTER GERMINATION. SCATTERED BARE SPOTS NO LARGER THAN TWO SQUARE FOOT WILL BE ALLOWED UP TO A MAXIMUM OF 5% OF ANY SEEDED AREA INCLUDING 30-DAY MAINTENANCE, MOWING AND WATERING AS NECESSARY
- 5. THIS WORK SHALL CONFORM TO THE APPLICABLE STANDARDS FROM THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES, THE WISCONSIN STORM WATER MANUAL, THE WISCONSIN DEPARTMENT TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION, THE PROJECT SPECIFICATIONS, AND THE APPROPRIATE
- 6. RESTORATION THE CONTRACTOR SHALL RESTORE ALL AREAS DISTURBED DURING CONSTRUCTION OF THE IMPROVEMENTS AND RELATED APPURTENANCES OR AS PART OF ANY OF THEIR ACTIVITIES TO A CONDITION EQUAL TO OR BETTER THAN THE ORIGINAL CONDITION.

ZONING DISTRICT: I-1 INDUSTRIAL DISTRICT LAND USE: BREWERY/WAREHOUSE

FEHR GRAHA

ENGINEERING & ENVIRONMENTAL

ILLINOIS

IOWA WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574

ROJECT AND LOCATIO

NEW GLARUS BREWING CO. WAREHOUSE ADDITION NEW GLARUS, WI

DRAWN BY: K.K. APPROVED BY: J.D. DATE: 02/17/23 SCALE: AS NOTED

REVISIONS		
REV. NO.	DESCRIPTION	DATE

GENERAL NOTES SET TYPE: REVIEW SET

22-821 SHEET NUMBER

STORM SEWER

- 1. STORM SEWERS THAT CROSS OVER ANY PROPOSED WATER MAIN SHALL BE CONSTRUCTED WITH RUBBER GASKETED JOINTS (ASTM C443).
- 2. ALL EXISTING MANHOLE CONNECTIONS MUST BE CORE-DRILLED, UNLESS A PRE-CORED HOLE, SUITABLY LOCATED, EXISTS IN THE MANHOLE.
- 3. THE LENGTH OF FLARED END SECTIONS IS NOT INCLUDED IN THE INDICATED PIPE LENGTH. HOWEVER, THE ENTIRE LENGTH OF THE FLARED END SECTION IS TAKEN INTO ACCOUNT FOR THE INDICATED SLOPE AND INVERT GRADES.
- 4. STORM SEWERS MATERIALS AND INSTALLATION SHALL CONFORM TO SECTION 508 OF THE STANDARD SPECIFICATIONS FOR REINFORCED CONCRETE PIPE STORM SEWERS. THIS WORK SHALL INCLUDE SEWER PIPE, PIPE BEDDING, TRENCH BACKFILL, MAKING CONNECTIONS TO EXISTING STRUCTURES, PATCHING EXISTING STRUCTURES AT NEW CONNECTIONS, STOPPERS AND PLUGS, AND ANY OTHER INCIDENTAL COSTS. ALL WORK SHALL CONFORM TO DETAILS INCLUDED IN THE CONTRACT DOCUMENTS, OR TO ORDERED MODIFICATIONS THEREFORE, AND TO APPLICABLE PORTIONS OF SECTIONS 607 AND 608 OF THE STANDARD SPECIFICATIONS AND IN ACCORDANCE WITH THE REQUIREMENTS OF THE OWNER. PIPE BEDDING OF 4" WELL GRADED DURABLE GRAVEL, CRUSHED STONE, OR SLAG WILL BE REQUIRED. IN STRUCTURAL LOCATIONS AND ROADWAY PAVEMENT, BEDDING MATERIAL SHALL BE PLACED TO ONE FOOT ABOVE THE TOP OF THE PIPE. TRENCH BACKFILL FROM THIS ELEVATION TO PAVEMENT SUBGRADE WILL BE REQUIRED. COST FOR BACKFILL, BEDDING, AND ALL NECESSARY WORK REQUIRED FOR INSTALLATION SHALL BE INCLUDED WITH THE COST OF THE PIPE.
- 5. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING STORM SEWER ELEVATIONS THAT PROJECT CONNECTS TO.

MATERIAL AND COMPACTION TESTING

 A GEOTECHNICAL REPRESENTATIVE WILL BE PROVIDED AND PAID FOR BY THE OWNER FOR ANY REQUIRED TESTING. THE CONTRACTOR IS RESPONSIBLE TO FOLLOW AND MEET GUIDELINES SET BY THE GEOTECHNICAL REPRESENTATIVE.

UTILITIES

- 1. UTILITIES SHOWN ON THE PLANS ARE FOR ILLUSTRATIVE PURPOSES ONLY AND NO GUARANTEE OF THEIR ACCURACY IS MADE OR INFERRED. THE LOCATION OF EXISTING UTILITIES AS SHOWN ON THE DRAWINGS REPRESENT DATA RECEIVED FROM VARIOUS SOURCES. IT IS NOT GUARANTEED TO BE CORRECT OR ALL—INCLUSIVE. THE CONTRACTOR SHALL CONDUCT HIS OWN INVESTIGATION INTO THE LOCATION, SIZE, DEPTH AND NATURE OF ANY AND ALL EXISTING UTILITIES THAT MAY INTERFERE WITH THE WORK UNDER THIS CONTRACT. ANY EXISTING UTILITIES THAT ARE TO REMAIN IN SERVICE SHALL BE FULLY PROTECTED BY THE CONTRACTOR AND ANY DAMAGE CAUSED BY THE CONSTRUCTION OPERATIONS SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ANY AND ALL UTILITY COMPANIES REGARDING ADJUSTMENTS NECESSARY. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE AND CONSIDERED INCIDENTAL TO THE PROJECT COST. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL UNDERGROUND, OVERHEAD, OR SUFFACE UTILITIES EVEN THOUGH THEY MAY NOT BE SHOWN ON THE PLANS. ANY UTILITY THAT IS DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED TO THE SATISFACTION OF THE ENGINEER OR THE OWNER OR REPLACED. THIS WORK SHALL BE AT THE CONTRACTOR'S EXPENSE.
- 2. THE CONTRACTOR MUST VERIFY AND LOCATE ALL EXISTING UTILITIES ON OR ADJACENT TO THE SITE. PRIOR TO BEGINNING CONSTRUCTION ACTIVITIES, CONTACT DIGGERS HOTLINE AT 1-800-242-8511 (OR 811) FOR EXACT FIELD LOCATION OF UTILITIES. DAMAGE, AND THE COST THEREOF, TO ANY AND ALL UTILITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR. ANY AND ALL EXISTING UTILITIES SHOWN HEREON ARE APPROXIMATE. THE ENGINEER AND SURVEYOR ASSUMES NO RESPONSIBILITY FOR THE LOCATION OF THE EXISTING UTILITIES SHOWN HEREON.
- 3. IF THERE ARE ANY UTILITIES WHICH ARE NOT MEMBERS OF THE DIGGERS HOTLINE SYSTEM, THE CONTRACTOR SHALL BE SOLELLY RESPONSIBLE FOR DETERMINING THIS AND REQUESTING SAID UTILITIES TO FIELD VERIFY AND MARK PERTINENT LITHITY LOCATIONS
- 4. THE UTILITY LOCATIONS, DEPTHS, ETC. SHOWN ON THESE PLANS ARE APPROXIMATE ONLY, AND SHALL BE VERIFIED BY THE CONTRACTOR WITH ALL AFFECTED UTILITY COMPANIES PRIOR TO INITIATING CONSTRUCTION OPERATIONS; THE ENGINEER AND OWNER ASSUME NO RESPONSIBILITY FOR THE ADEQUACY, SUFFICIENCY OR EXACTNESS OF THESE UTILITY REPRESENTATIONS
- 5. THE CONTRACTOR SHALL CONTACT THE NECESSARY UTILITY COMPANIES FOR ANY UTILITY RELOCATIONS. THE CONTRACTOR SHALL PAY FOR ALL COSTS ASSOCIATED WITH RELOCATION OF UTILITIES ON OR ADJACENT TO THE SUBJECT PROPERTY OR WITHIN THE ROAD RIGHT-OF-WAY.
- 6. TRENCH BACKFILL SHALL BE FILL MATERIAL TYPE A, OR TYPE C, IN ACCORDANCE WITH AASHTO 127 GUIDELINES AND THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION. COST SHALL BE INCLUDED IN UNIT PRICE OF PIPE.
- 7. TRENCH BACKFILL SHALL BE USED IN LOCATIONS WHERE THERE IS AN EXISTING OR PROPOSED PERMANENT SURFACE.
- 8. ABANDONED UNDERGROUND UTILITIES THAT CONFLICT WITH CONSTRUCTION OR HAVE THE POTENTIAL FOR CREATING FUTURE PROBLEMS SHALL BE DISPOSED OF OUTSIDE THE LIMITS OF THE PROJECT AT AN APPROVED LOCATION OBTAINED BY THE CONTRACTOR, ACCORDING TO THE "STANDARD SPECIFICATIONS FOR SEWER AND WATER CONSTRUCTION IN WISCONSIN", CURRENT EDITION, AND AS DIRECTED BY THE ENGINEER. THIS WORK WILL NOT BE PAID FOR SEPARATELY, BUT SHALL BE CONSIDERED INCIDENTAL TO EARTH EXCAVATION AND NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 9. ANY AND ALL FIELD TILES AND OR STORM SEWERS DAMAGED OR ENCOUNTERED DURING THE CONSTRUCTION ACTIVITIES SHALL BE REPAIRED, REPLACED AND/OR CONNECTED IMMEDIATELY BY THE CONTRACTOR. COST FOR SAID REPAIRS, REPLACEMENT, AND/OR CONNECTION SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

TRAFFIC CONTROL

- 1. THE CONTRACTOR SHALL PROVIDE, INSTALL AND MAINTAIN ALL TRAFFIC CONTROL ITEMS NECESSARY FOR THE CONSTRUCTION OF ITEMS WITH IN THE ROAD RIGHT-OF-WAY. ALL WORK PERFORMED SHALL HAVE TRAFFIC CONTROL IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" AND OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- ALL TRAFFIC CONTROL DEVICES USED FOR THE MAINTENANCE OF TRAFFIC SHALL BE REFLECTORIZED PRIOR TO INSTALLATION
 AND CLEANED AS NECESSARY THROUGHOUT THE DURATION OF THE CONTRACT. ALL SIGNS SHALL BE FURNISHED,
 INSTALLED AND MAINTAINED BY THE CONTRACTOR. PAYMENT SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT.
- 3. TRAFFIC CONDITIONS, ACCIDENTS, AND OTHER UNFORESEEN CONDITIONS MAY REQUIRE THE ENGINEER TO MODIFY THE LOCATION OF THE TRAFFIC CONTROL DEVICES. THE CONTRACTOR SHALL MAKE THE NECESSARY ADJUSTMENTS AS DIRECTED BY THE ENGINEER WITHOUT DELAY. THE CONTRACTOR SHALL RESPOND WITHIN 30 MINUTES FROM THE TIME OF NOTIFICATION BY THE ENGINEER TO ANY REQUEST MADE BY THE ENGINEER FOR CORRECTION, IMPROVEMENT OR MODIFICATION OF THE MAINTENANCE OF TRAFFIC CONTROL DEVICES. DURING CONSTRUCTION OPERATIONS, THE CONTRACTOR SHALL TAKE NECESSARY PRECAUTIONS TO PROTECT ADJACENT TRAFFIC LANES OPEN TO TRAFFIC FROM DEBRIS BEING BLOWN OR OTHERWISE REMOVED FROM THE CONSTRUCTION AREAS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR KEEPING DEBRIS OFF THE ADJACENT TRAVELED LANE SURFACE. COST INCIDENTAL TO THE PROJECT.
- 4. THE CONTRACTOR SHALL SUBMIT MAINTENANCE OF TRAFFIC AND STAGING OF CONSTRUCTION PLANS FOR APPROVAL BY THE ENGINEER PRIOR TO COMMENCING WORK.
- 5. THE CONTRACTOR SHALL PERFORM THE WORK UNDER STAGE CONSTRUCTION IN THE EVENT THAT THE CONTRACTOR WILL NEED TO CLOSE PUBLIC ROADS, CONTRACTOR SHALL SUBMIT PROPOSED DETOUR ROUTE AND ASSOCIATED SIGNAGE TO THE ENGINEER PRIOR TO COMMENCING WORK.
- 6. TRAFFIC CONTROL DEVICES, STREET NAME SIGNS, AND PAVEMENT MARKINGS SHALL BE INSTALLED IN ACCORDANCE WITH VILALGE OF NEW GLARUS ORDINANCES AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES". LOCATIONS OF SIGNS AND MARKINGS SHALL BE SPECIFED BY THE PLANS AND/OR AS DIRECTED BY THE FINGINER
- 7. PROVIDE TO THE ENGINEER AND THE OWNER THE NAME AND PHONE NUMBER OF INDIVIDUALS RESPONSIBLE FOR MAINTAINING TRAFFIC CONTROL MEASURES DURING CONSTRUCTION. THIS INDIVIDUAL SHALL BE AVAILABLE TO CORRECT TRAFFIC CONTROL PROBLEMS 24 HOURS PER DAY.
- 8. THE CONTRACTOR SHALL NOTIFY THE POST OFFICE, POLICE DEPARTMENT, FIRE DEPARTMENT, 911 DISPATCH CENTER, WISCONSIN DEPARTMENT OF TRANSPORTATION, STATE POLICE, APPROPRIATE SCHOOL DISTRICT AND THE LOCAL AGENCY A MINIMUM OF 5 DAYS PRIOR TO CLOSING ANY PORTION OF THE STREET OR ALLEY.

SUBGRADES, SUBBASES, AND BASE COURSES

- 1. THE CONTRACTOR WILL BE REQUIRED TO SUBSTANTIATE BASE COURSE THICKNESSES AND FINISH PAVEMENT THICKNESSES. THE ENGINEER SHALL INSPECT BASE COURSE COREOUT PRIOR TO PLACING BASE COURSE TO ENSURE REQUIRED BASE COURSE DEPTH IS PRESENT. IN ADDITION, THE ENGINEER AND/OR THE CITY ENGINEER SHALL WITHESS THE PLACEMENT OF BITUMINOUS BINDER AND SURFACE COURSE. CORE DRILLING MAY BE REQUIRED TO DEMONSTRATE THAT BASE COURSE AND PAVEMENT THICKNESSES CONFORM TO THE SPECIFICATIONS. PRIOR TO PLACING BASE COURSE MATERIAL, THE CONTRACTOR SHALL TEST ROLL THE SUBGRADE, IN THE PRESENCE OF THE ENGINEER OR HIS AGENT TO DEMONSTRATE THAT SAID SUBGRADE IS READY FOR BASE. PRIOR TO PLACEMENT OF THE BITUMINOUS SURFACE, THE SAME VERIFICATION PROCEDURE SHALL BE PERFORMED ON THE BASE COURSE MATERIAL, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 48 HOURS PRIOR TO PERFORMING ANY OF THE REQUIRED TESTS SO THAT A REPRESENTATIVE MAY BE PRESENT.
- 2. PRIOR TO ANY EMBANKMENT OR ROAD BASE BEING PLACED, SHOULD IT BE DETERMINED BY THE ENGINEER THAT THE SUBGRADE MATERIAL IS UNSUITABLE ON WHICH TO CONSTRUCT THE ROADWAY STRUCTURE, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE UNSUITABLE MATERIAL TO THE SATISFACTION OF THE ENGINEER AND REPLACING SAME WITH STABILIZING SUBBASE CONSISTING OF SELECT CRUSHED MATERIAL IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. TO HELP MINIMIZE THE AMOUNT OF SUBBASE MATERIAL INSTALLED FOR GROUND STABILIZATION, ECOTECHNICAL FABRIC MAY BE INSTALLED AS APPROVED BY THE ENGINEER. GEOTEXTILE FABRIC SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 645 OF THE WISDOT STANDARD SPECIFICATIONS. THE COARSE AGGREGATE SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER CUBIC YARD FOR SELECT CRUSHED MATERIAL. THE EXCAVATION BELOW SUBGRADE AND DISPOSAL OF THE UNSUITABLE MATERIAL SHALL BE CONSIDERED INCIDENTAL TO SELECT CRUSHED MATERIAL. STABILIZING FABRIC SHALL BE PAID FOR AT THE CONTRACT UNIT PRICE PER SQUARE YARD FOR GEOTEXTILE FABRIC.

EXCAVATION/EARTHWORK

- THE CONTRACTOR SHALL USE CARE IN GRADING OR EXCAVATION NEAR ANY AND ALL EXISTING ITEMS WHICH ARE NOT INDICATED TO BE REMOVED. ANY DAMAGE DONE TO EXISTING ITEMS BY THE CONTRACTOR'S OPERATIONS SHALL BE REPAIRED AT NO ADDITIONAL EXPENSE TO THE OWNER.
- 2. PRIOR TO STARTING EARTHWORK OR UTILITY TRENCHING, THE CONTRACTOR SHALL STRIP THE SITE OF TOPSOIL TO A DEPTH OF 6" AND TO THE LIMITS APPROVED BY THE ENGINEER. THIS MATERIAL SHALL BE STOCKPILED IN A REMOTE LOCATION OF THE SITE (APPROVED BY THE ENGINEER) UNTIL THE PLAN IMPROVEMENTS ARE COMPLETED AND THE EXCESS MATERIAL SPREAD AS DIRECTED. IT SHALL THEN BE THE RESPONSIBILITY OF THE CONTRACTOR TO SPREAD THIS TOPSOIL MATERIAL IN AREAS OF THE SITE, OVER AREAS WHERE EXCESS EXCAVATED MATERIAL, SAND, GRAVEL HAS BEEN SPREAD OR IN OTHER AREAS AS DESIGNATED BY THE ENGINEER. THE MATERIAL SHALL THEN BE COMPACTED TO A MINIMAL DEPTH OF 6" AND FINE GRADED IN A MANNER ACCEPTABLE TO THE ENGINEER. THIS WORK SHALL BE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- S. CONSTRUCTION AND DEMOLITION (C&D) MATERIALS ARE TO BE MANAGED ACCORDINGLY PER THE WISCONSIN DEPARTMENT OF NATURAL RESOURCES. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MANAGE THE DIVERSION OF C&D MATERIAL AWAY FARD
- . ROCK REMOVAL TO BE PROVIDED BY MECHANICAL MEANS ONLY, NO BLASTING PERMITTED. ROCK EXCAVATION SHALL BE CONSIDERED WHEN THE PHYSICAL CHARACTERISTICS AND DIFFICULTY OF ROCK REMOVAL BY USE OF HYDRAULIC EXCAVATION IS DETERMINED BY ENGINEER TO NOT BE POSSIBLE. ROCK EXCAVATION TO BE PAID FOR AT THE BID PRICE FOR FXCAVATION.
- ALL EXCAVATIONS FOR STRUCTURES AND PIPE SHALL BE KEPT DEWATERED DURING CONSTRUCTION UNTIL BACKFILL IS IN PLACE. DURING DEWATERING OPERATIONS, WATER SHALL BE PUMPED INTO SEDIMENT BASINS OR SILT TRAPS. (COST INCIDENTAL)
- 6. EXCAVATION COMMON SHALL CONFORM TO SECTION 205 OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION. THIS WORK SHALL INCLUDE THE EXCAVATION OF ALL MATERIALS TO DESIGN SUBGRADE ELEVATIONS INDICATED IN THE PLANS.
- 7. A SOIL REPORT CAN BE PROVIDED IN AN ELECTRONIC FORMAT TO THE CONTRACTOR UPON REQUEST FROM THE OWNER.
- 8. SHEETING AND SHORING SHALL BE CONSIDERED INCIDENTAL TO CONTRACT IF REQUIRED.
- 9. WHENEVER THE CONTRACTOR WORKS NEAR EXISTING FACILITIES WITHIN THE LIMITS OF THE IMPROVEMENTS DURING TRENCHING OPERATIONS, HE WILL BE REQUIRED TO HAND TRENCH IN THAT AREA IN ORDER NOT TO DAMAGE THESE FACILITIES. PUSH HOLES AND SEARCH HOLES THAT ARE DUG BY THE CONTRACTOR SHALL BE BACKFILLED BY TAMPING THE EXCAVATED MATERIAL BACK IN PLACE TO KEEP SETTLEMENT TO A MINIMUM. NO ADDITIONAL COMPENSATION WILL BE ALLOWED.
- 10. EMBANKMENT WORK SHALL CONSIST OF THE CONSTRUCTION OF EMBANKMENTS BY DEPOSITING, PLACING AND COMPACTING EARTH, STONE, GRAVEL OR OTHER MATERIALS OF ACCEPTABLE QUALITY ABOVE THE NATURAL GROUND OR OTHER SURFACE IN ACCORDANCE WITH THE WISCONSIN DEPARTMENT OF TRANSPORTATION'S "STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION, CURRENT EDITION.
- 11. IF SUFFICIENT TOPSOIL IS NOT PRESENT, THE CONTRACTOR SHALL SPREAD FURNISHED TOPSOIL SO AS TO MEET THE REQUIREMENTS OF THE CONTRACT. FURNISHED TOPSOIL SHALL ONLY BE USED WITH APPROVAL BY THE ENGINEER. THIS FURNISHED TOPSOIL SHALL BE PAID FOR AS TOPSOIL, DEPTH SPECIFIED.
- 12. IN PROPOSED FILL AREAS FOR PAVEMENT AND EMBANKMENT, TOPSOIL AND TURF SHALL BE SCARIFIED AND REMOVED PRIOR TO CONSTRUCTING THE EMBANKMENT.

FEHR GRAHAM

ENGINEERING & ENVIRONMENTAL

ILLINOIS IOWA

WISCONSIN

OWNER/DEVELOPER:

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 ROJECT AND LOCATION:

NEW GLARUS BREWING CO. WAREHOUSE ADDITION NEW GLARUS, WI DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

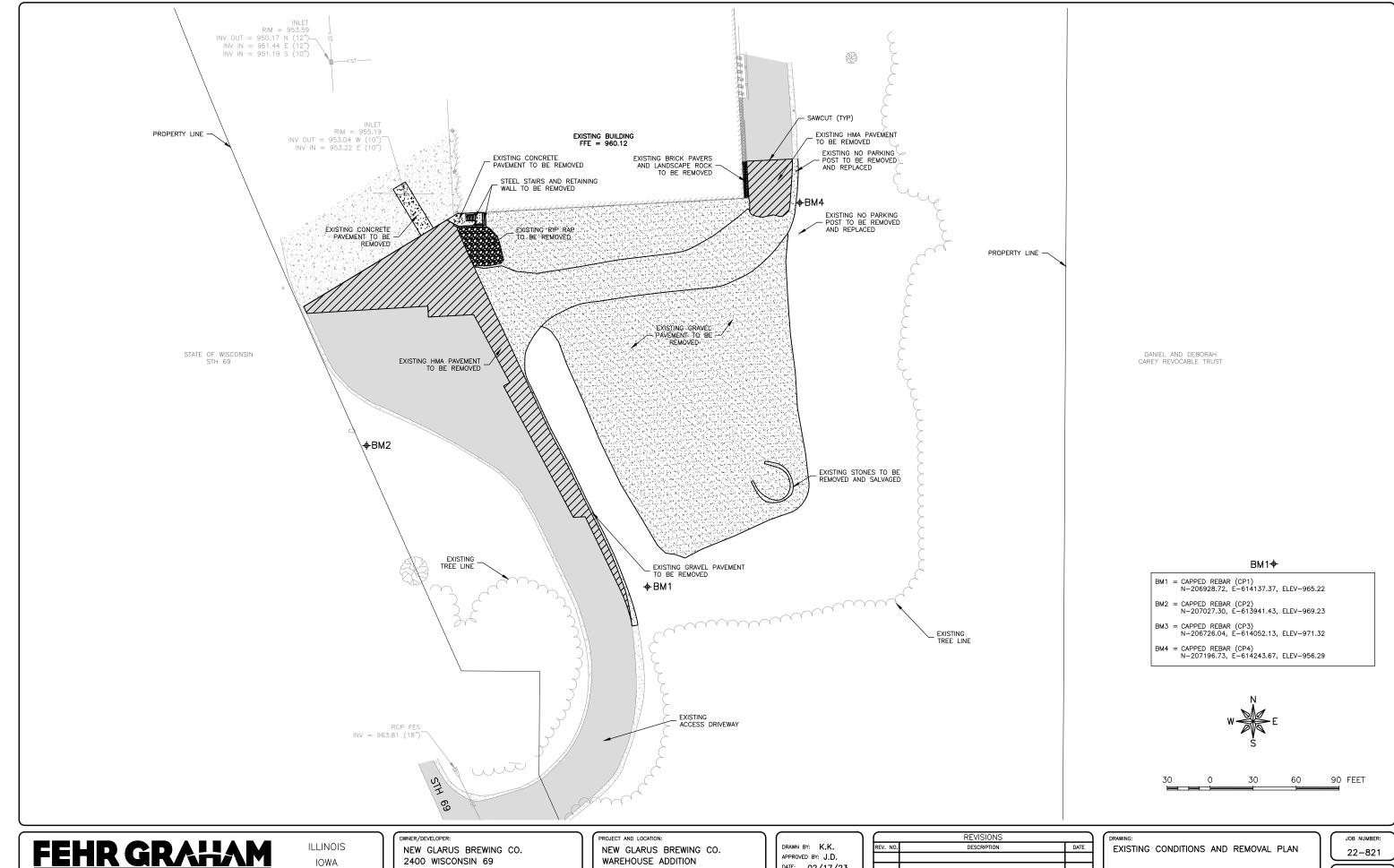
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GENERAL NOTES

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NEW GLARUS, WI 53574

WISCONSIN

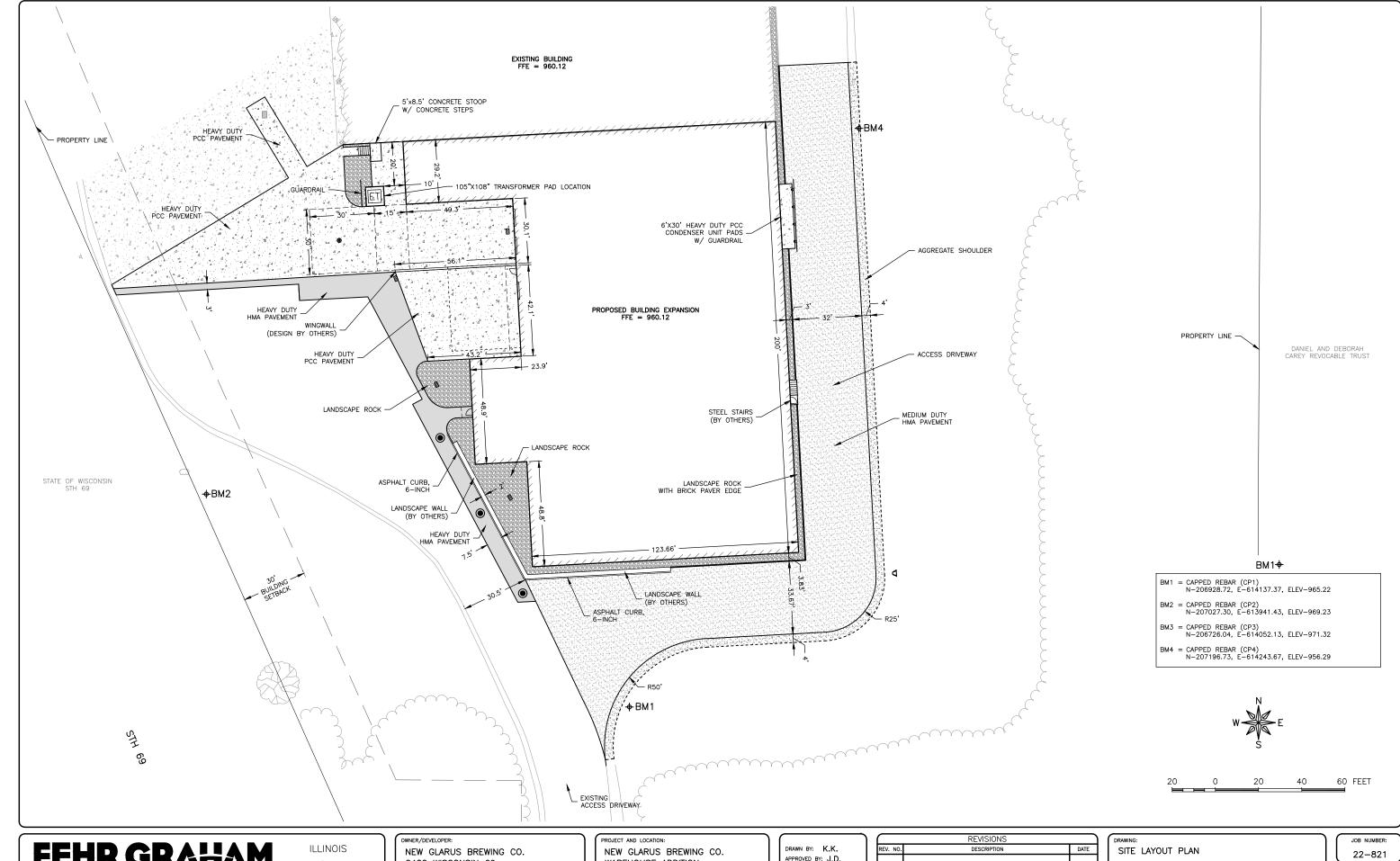
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DATE: 02/17/23 SCALE: AS NOTED

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REV. NO.	DESCRIPTION	DATE

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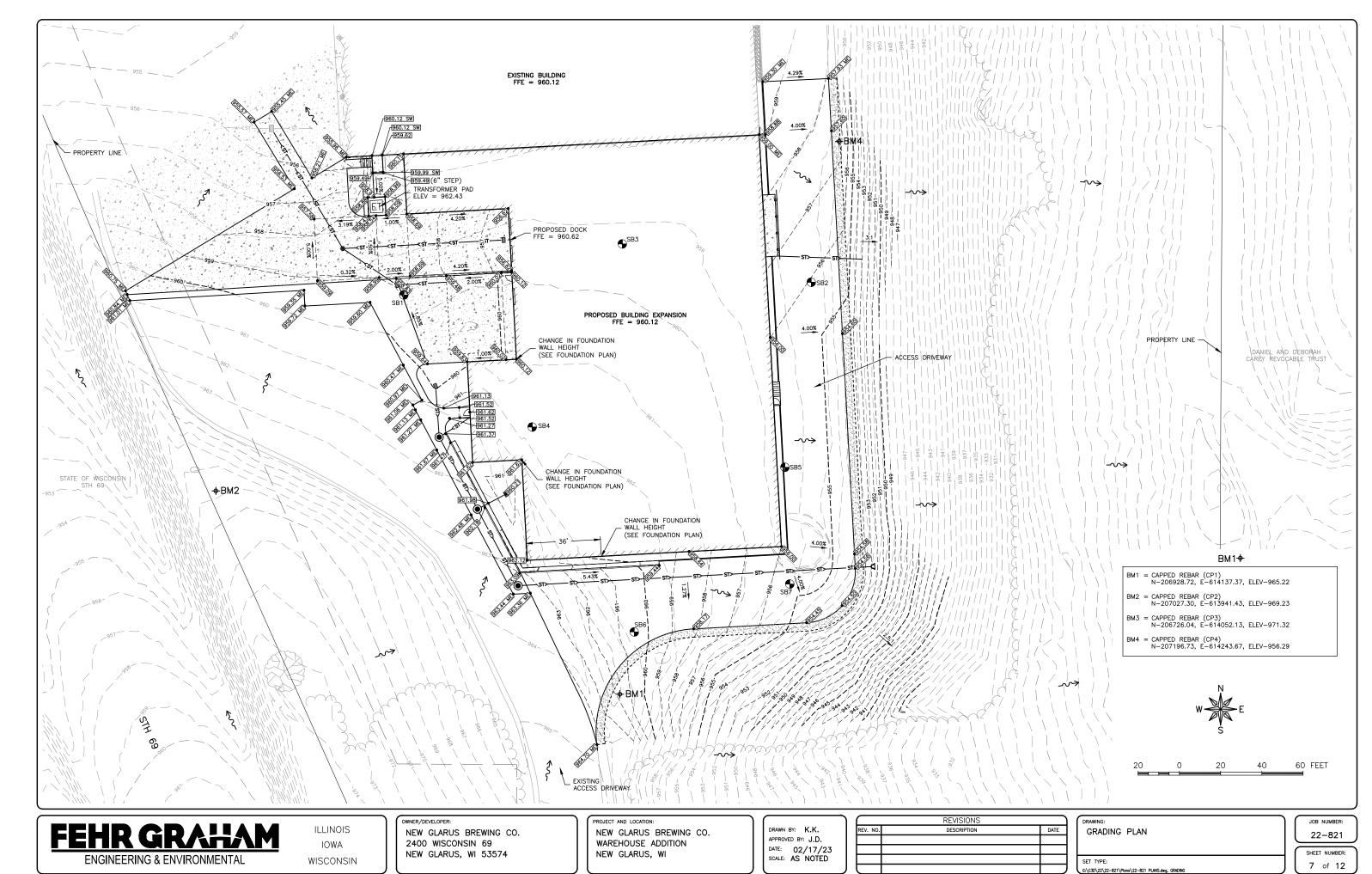
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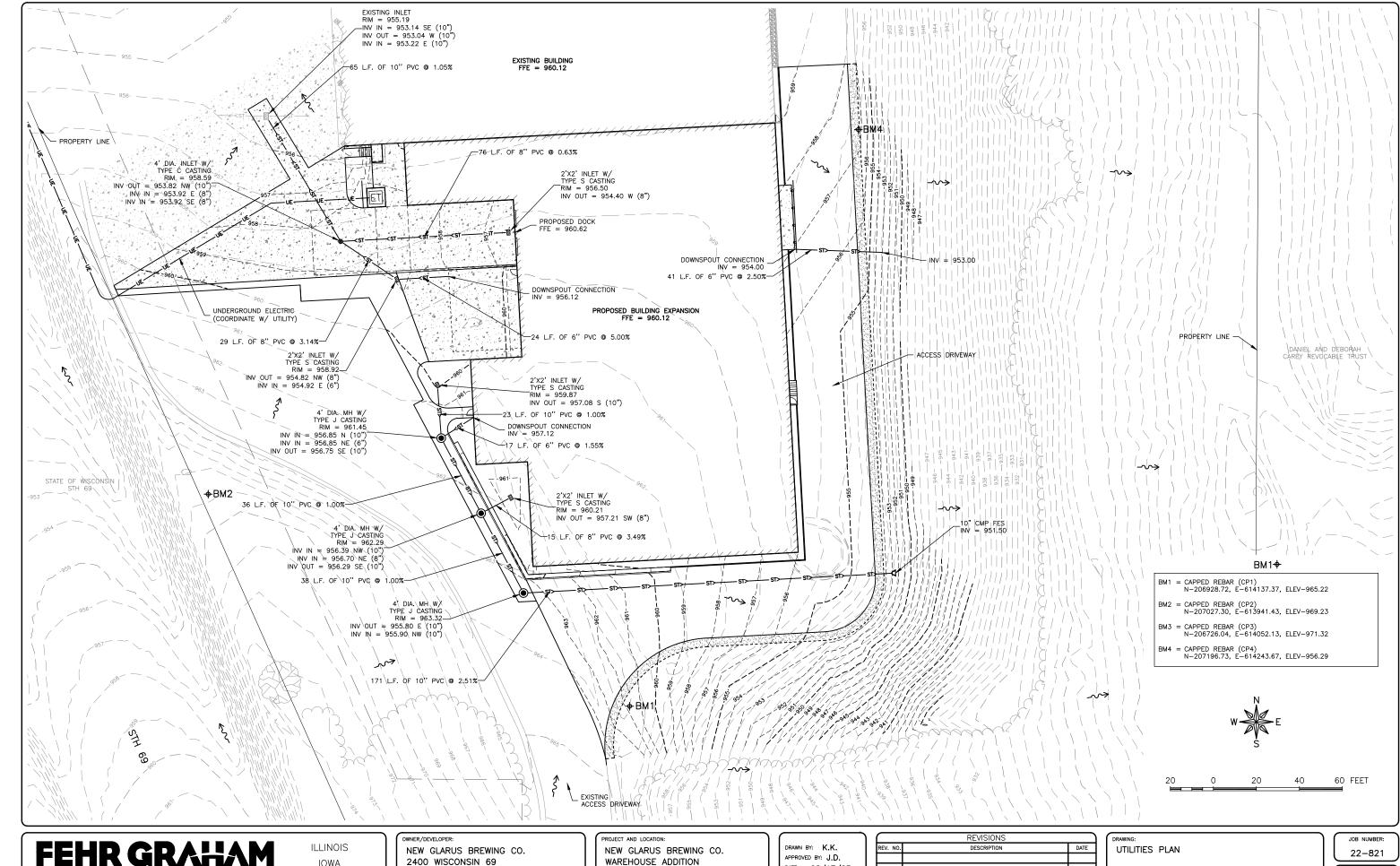
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6 of 12

PLOT DATE: 2/17/23 © 2023 FEHR GRAHAM





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NEW GLARUS, WI 53574

WAREHOUSE ADDITION NEW GLARUS, WI

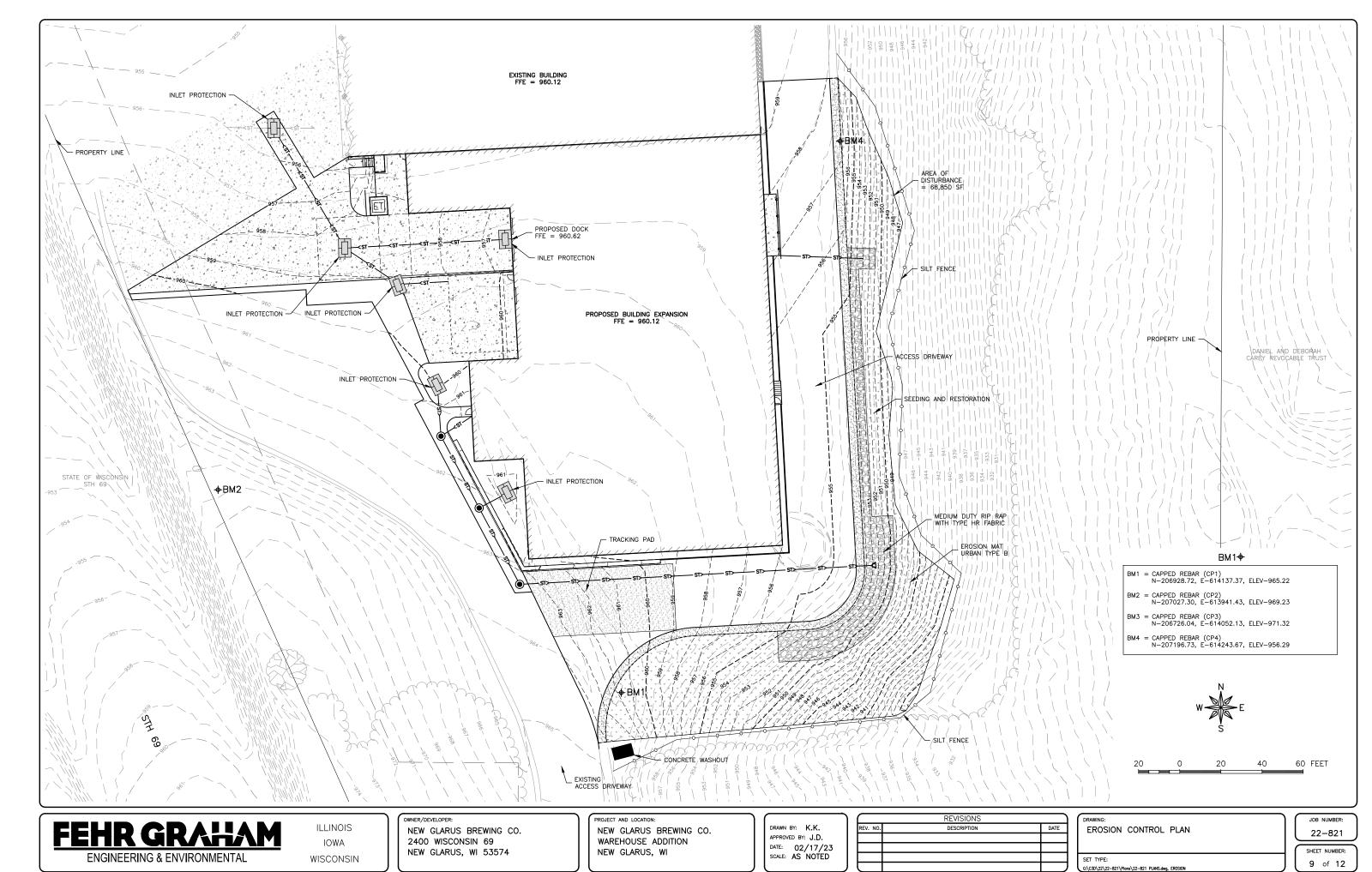
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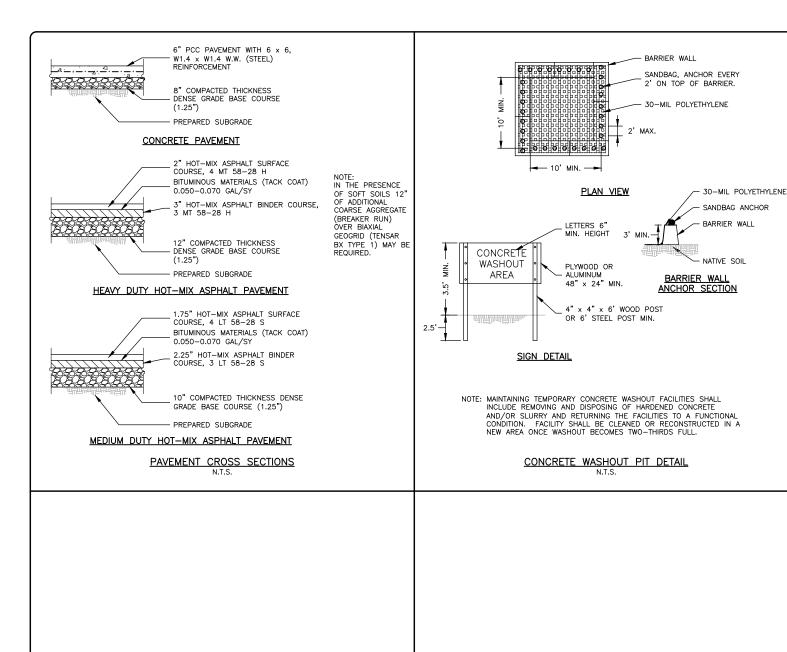
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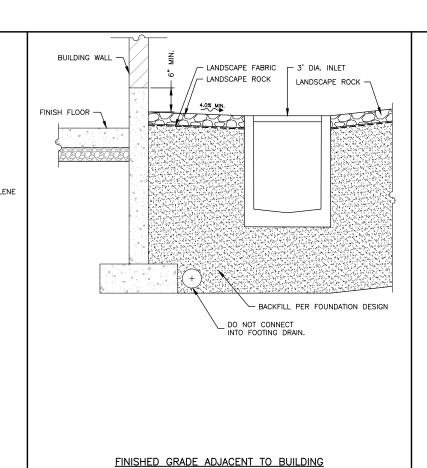
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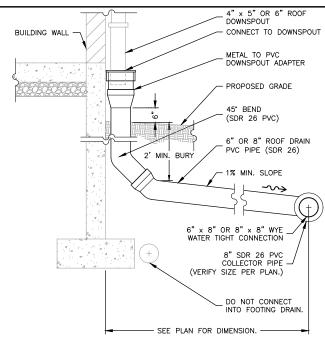
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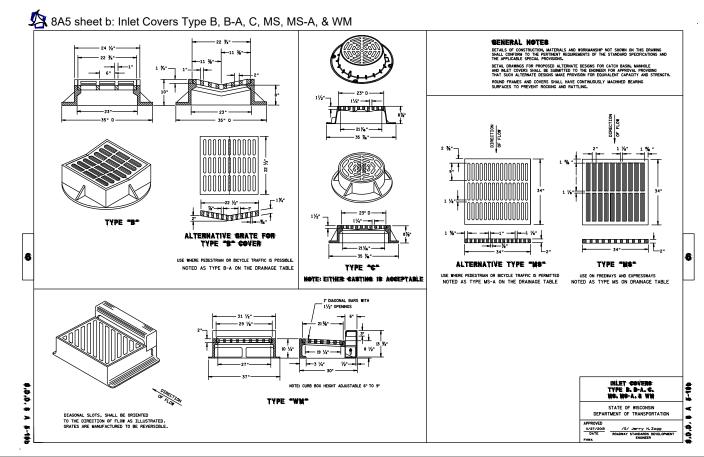


NOTE: ALL CONNECTIONS FROM DOWNSPOUT LATERAL TO COLLECTOR PIPE SHOULD BE MADE WITH A PVC SDR 26 WYE OR TEE CONNECTION.

ALL PIPE OUTLETS MUST HAVE A RODENT GUARD.

ALL 6" OR 8" PVC PIPE, FITTINGS, AND CONNECTIONS SHALL BE CONSIDERED INCIDENTAL TO BUILDING CONSTRUCTION.

DOWNSPOUT COLLECTOR DETAIL N.T.S.





ILLINOIS IOWA

WISCONSIN

DWNER/DEVELOPER:

NEW GLARUS BREWING CO.
2400 WISCONSIN 69

NEW GLARUS, WI 53574

PROJECT AND LOCATION:

NEW GLARUS BREWING CO.

WAREHOUSE ADDITION

NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

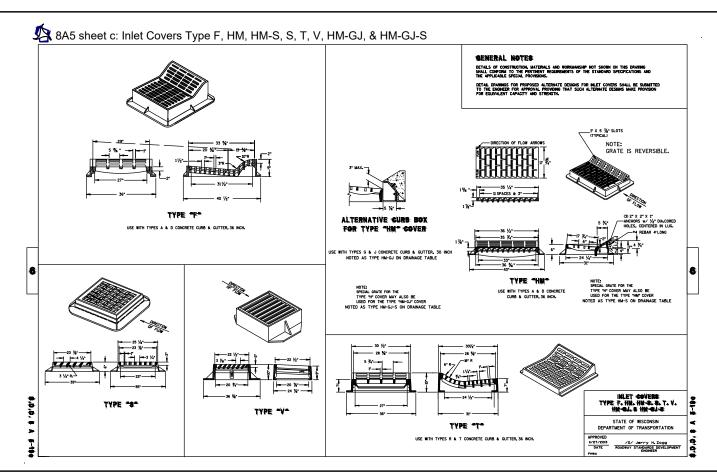
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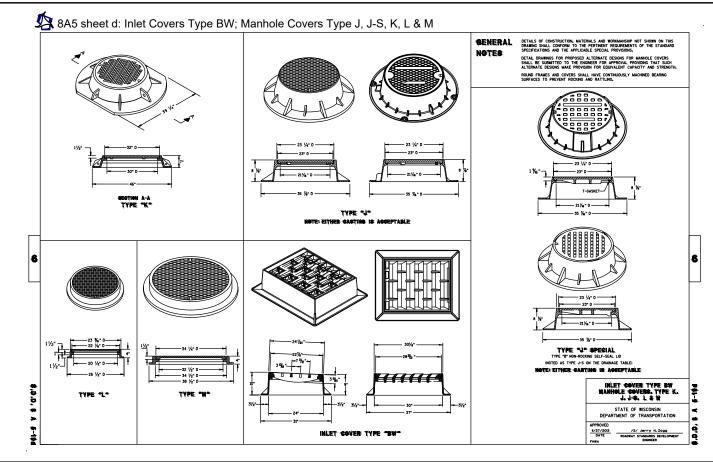
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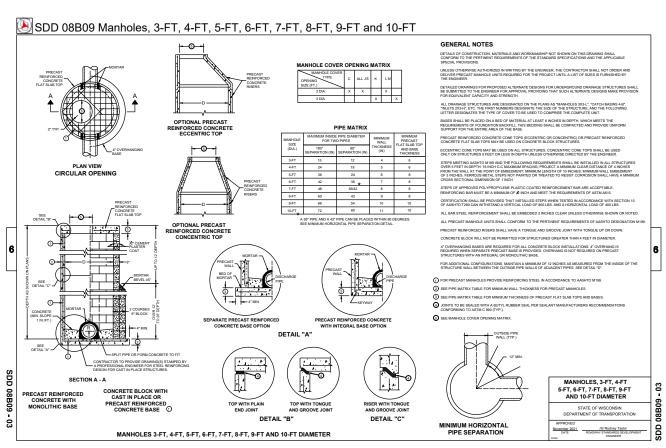
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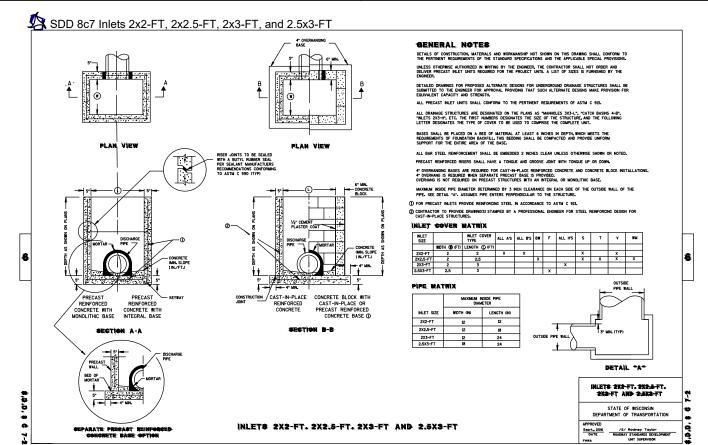
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SHEET NUMBER: 10 of 12











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WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 PROJECT AND LOCATION:

NEW GLARUS BREWING CO.

WAREHOUSE ADDITION

NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

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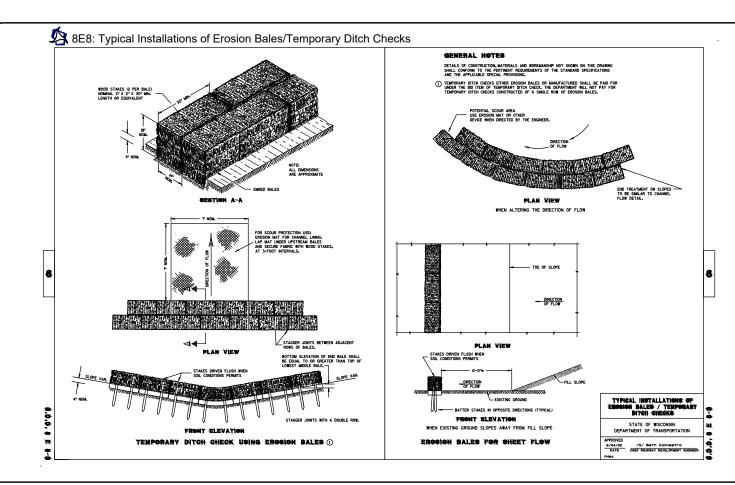
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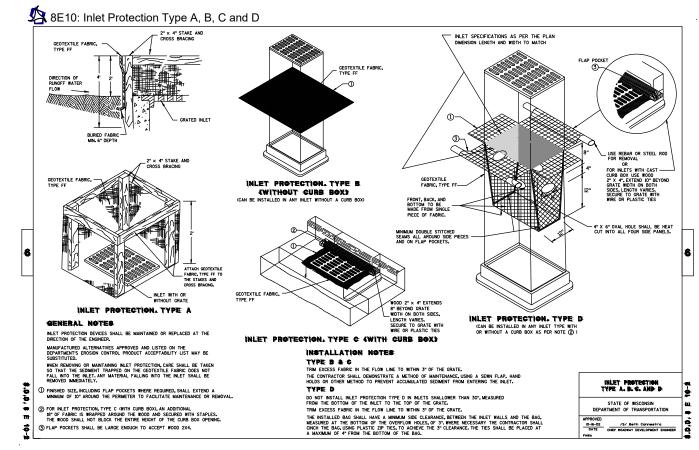
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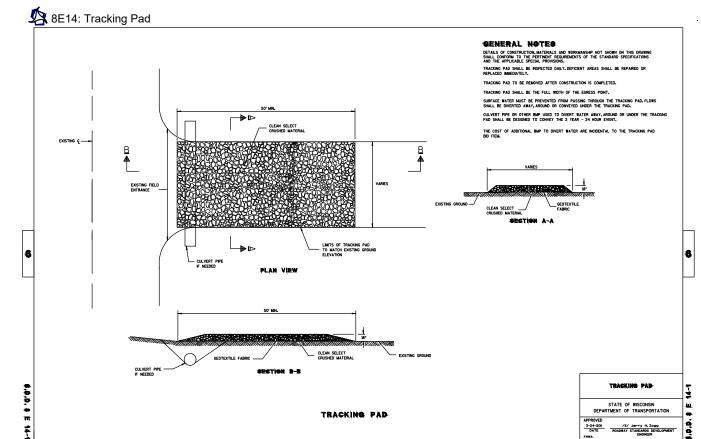
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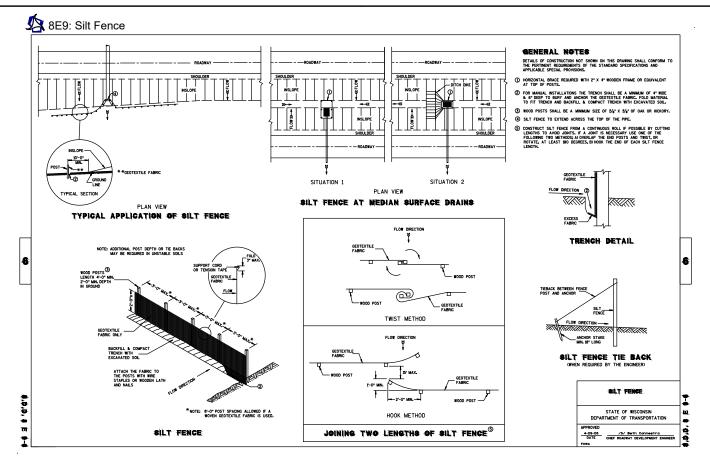
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ILLINOIS IOWA

WISCONSIN

NEW GLARUS BREWING CO. 2400 WISCONSIN 69 NEW GLARUS, WI 53574 NEW GLARUS BREWING CO.
WAREHOUSE ADDITION
NEW GLARUS, WI

DRAWN BY: K.K.
APPROVED BY: J.D.
DATE: 02/17/23
SCALE: AS NOTED

REVISIONS		
REV. NO.	DESCRIPTION	DATE

DRAWING:
DETAILS

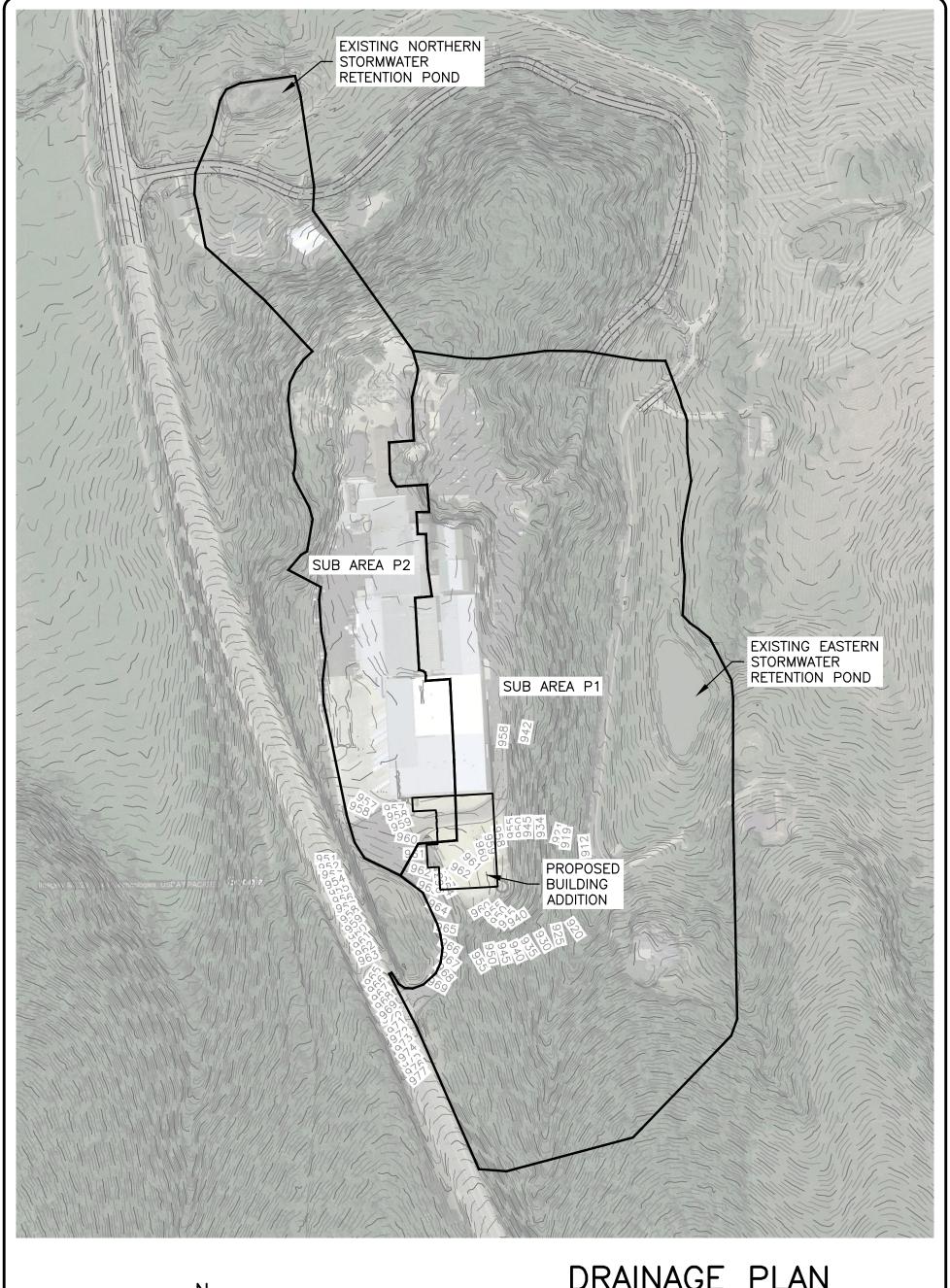
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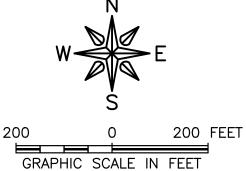
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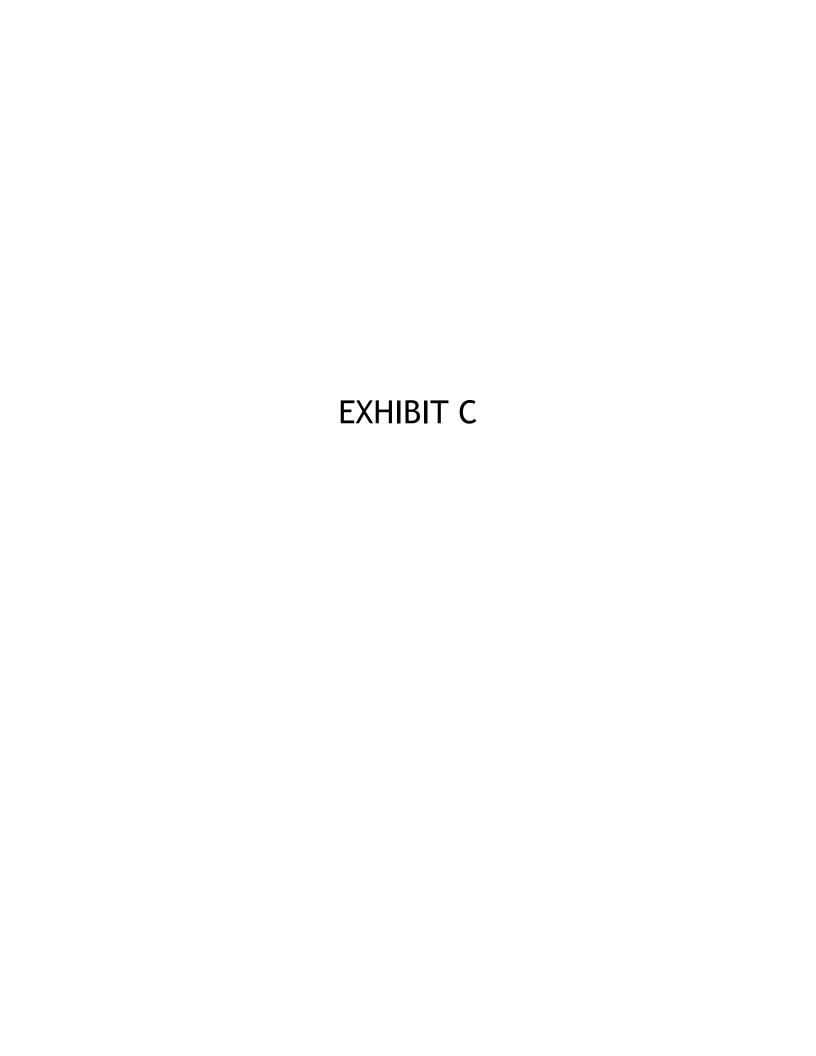
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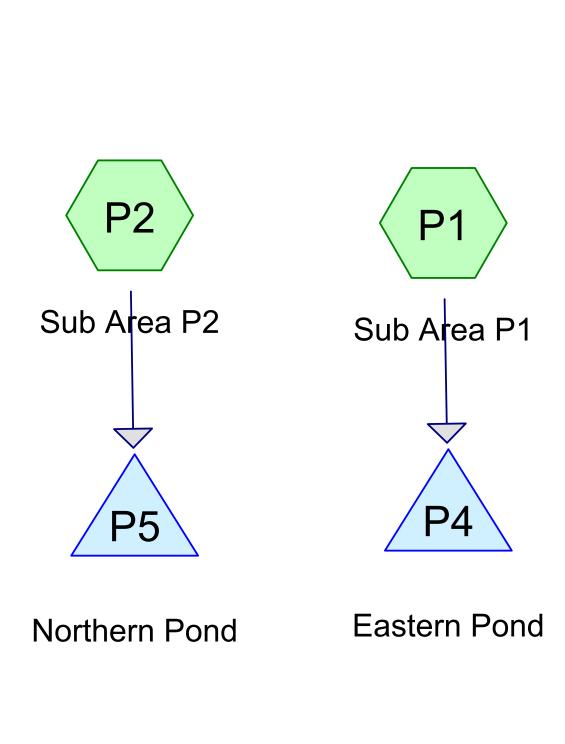
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2/17/23



ILLINOIS IOWA WISCONSIN













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Area Listing (all nodes)

Area	CN	Description
(acres)		(subcatchment-numbers)
2.400	55	Woods (P2)
12.370	55	woods (P1)
0.520	61	Open Space (P2)
0.630	61	Open space (P1)
6.700	69	Cropland (P1, P2)
10.580	98	Impervious (P1, P2)
33.200		TOTAL AREA

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Summary for Subcatchment P1: Sub Area P1

Runoff = 8.77 cfs @ 12.11 hrs, Volume= 0.779 af, Depth= 0.39"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 1-year Rainfall=2.50"

	Area	(ac)	CN	Desc	cription		
*	5.	800	69	Crop	land		
*	12.	370	55	wood	ds		
*	0.	630	61	Oper	n space		
*	5.	300	98	Impe	ervious		
	24.	100	68	Weig	hted Aver	age	
	18.	800		78.0	1% Pervio	us Area	
	5.	300		21.99	9% Imperv	∕ious Area	
	Тс	Length	າ S	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	12.0	300	0.	1500	0.42		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,000	0.	1100	4.97		Shallow Concentrated Flow,
							Grassed Waterway Kv= 15.0 fps
	15.4	1,300) To	otal			

Summary for Subcatchment P2: Sub Area P2

Runoff = 7.90 cfs @ 12.24 hrs, Volume= 0.757 af, Depth= 1.00"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 1-year Rainfall=2.50"

	Area	(ac) (CN Des	cription		
*	0.	900	69 Croi	oland		
*	2.	400	55 Woo			
*	0.	520	61 Ope	n Space		
*	5.	280		ervious		
	9.	100	82 Wei	ghted Aver	age	
	3.	820	41.9	8% Pervio	us Area	
	5.	280	58.0	2% Imperv	∕ious Area	
				-		
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	26.8	298	0.0200	0.19		Sheet Flow,
						Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	550	0.1200	5.58		Shallow Concentrated Flow,
						Unpaved Kv= 16.1 fps
	28.4	848	Total			

Type II 24-hr 1-year Rainfall=2.50" Printed 2/15/2023

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 0.39" for 1-year event

Inflow = 8.77 cfs @ 12.11 hrs, Volume= 0.779 af

Outflow = 0.35 cfs @ 19.84 hrs, Volume= 0.475 af, Atten= 96%, Lag= 463.6 min

Primary = 0.35 cfs @ 19.84 hrs, Volume= 0.475 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 887.86' @ 19.84 hrs Surf.Area= 25,125 sf Storage= 20,160 cf

Plug-Flow detention time= 494.6 min calculated for 0.475 af (61% of inflow)

Center-of-Mass det. time= 351.1 min (1,265.4 - 914.3)

Volume	Invert	Avail.Storage	Storage Description	
#1	887.00'	123,252 cf	Custom Stage Data (Prismatic)Listed below (Recalc)	
Flavotion	Cf	A	- Ctore Ctore	

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
887.00	21,846	0	0
888.00	25,666	23,756	23,756
889.00	30,403	28,035	51,791
890.00	35,942	33,173	84,963
891.00	40,635	38,289	123,252

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
	•		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Čc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			I imited to weir flow at low heads

Primary OutFlow Max=0.35 cfs @ 19.84 hrs HW=887.86' (Free Discharge)

1=Culvert (Passes 0.35 cfs of 20.17 cfs potential flow)

-2=Orifice/Grate (Orifice Controls 0.35 cfs @ 4.00 fps)

-3=Orifice/Grate (Controls 0.00 cfs)

0.00 cfs @

Secondary =

Summary for Pond P5: Northern Pond

0.000 af

Inflow Area =	9.100 ac, 58.02% Impervious, Inflow Description	epth = 1.00" for 1-year event
Inflow =	7.90 cfs @ 12.24 hrs, Volume=	0.757 af
Outflow =	0.23 cfs @ 20.13 hrs, Volume=	0.323 af, Atten= 97%, Lag= 473.4 min
Primary =	0.23 cfs @ 20.13 hrs, Volume=	0.323 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 864.01' @ 20.13 hrs Surf.Area= 13,659 sf Storage= 23,608 cf

1.00 hrs, Volume=

Plug-Flow detention time= 535.3 min calculated for 0.323 af (43% of inflow) Center-of-Mass det. time= 400.3 min (1,266.7 - 866.4)

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Volume	Invert	Avail.Sto	rage Storage D	escription	
#1	862.00'	70,78	39 cf Custom S	Stage Data (Pr	ismatic)Listed below (Recalc)
Elevation	on Surf.	۸roa	Inc.Store	Cum.Store	
fee		sq-ft)	(cubic-feet)	(cubic-feet)	
862.0		1,873	0	0	
863.0		,707	10,790	10,790	
864.0		,707	12,672	23,462	
865.0		,672	14,655	38,117	
867.0		,000	32,672	70,789	
		•	•	,	
Device	Routing	Invert	Outlet Devices		
#1	Primary	858.50'	24.0" Round (Culvert	
			,		onforming to fill, Ke= 0.500
					100 '/' Cc= 0.900
			n= 0.013 Cond		
#2	Device 1	862.00'	2.5" Vert. Orifi		0.600
#3	Device 1	864.08'	Special & Use		0.50 0.75 4.00 4.50 0.00 0.00 4.00
			` ,		0.50 0.75 1.00 1.50 2.00 3.00 4.00
			9.200 10.600	0.000 2.20	00 3.700 4.600 5.300 6.500 7.500
#4	Secondary	865.75') 0' broadth Bi	road-Crested Rectangular Weir
π -	Coolidary	000.70			0.80 1.00 1.20 1.40 1.60
					70 2.69 2.68 2.69 2.67 2.64

Primary OutFlow Max=0.23 cfs @ 20.13 hrs HW=864.01' (Free Discharge)

-1=Culvert (Passes 0.23 cfs of 32.13 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.23 cfs @ 6.65 fps) -3=Special & User-Defined (Controls 0.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=862.00' (Free Discharge) 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Summary for Subcatchment P1: Sub Area P1

Runoff = 16.34 cfs @ 12.10 hrs, Volume= 1.258 af, Depth= 0.63"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 2-year Rainfall=3.00"

	Area	(ac)	CN	Desc	cription		
*	5.	800	69	Crop	land		
*	12.	370	55	WOO	ds		
*	0.	630	61	Ope	n space		
*	5.	300	98	Impe	ervious		
	24.	100	68	Weig	ghted Aver	age	
	18.	800		78.0	1% Pervio	us Area	
	5.	300		21.9	9% Imperv	∕ious Area	
	Тс	Length		Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	12.0	300	0.	1500	0.42		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,000	0.	1100	4.97		Shallow Concentrated Flow,
_							Grassed Waterway Kv= 15.0 fps
	15.4	1,300) To	otal			

Summary for Subcatchment P2: Sub Area P2

Runoff = 11.10 cfs @ 12.23 hrs, Volume= 1.046 af, Depth= 1.38"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 2-year Rainfall=3.00"

	Area	(ac)	CN	Desc	cription		
*	0.	900	69	Crop	land		
*	2.	400	55	Woo	ds		
*	0.	520	61	Oper	n Space		
*	5.	280	98	Impe	ervious		
	9.	100	82	Weig	hted Aver	age	
	3.	820		41.9	8% Pervio	us Area	
	5.	280		58.0	2% Imperv	∕ious Area	
	_			-			-
	Тс	Lengt		Slope	Velocity	Capacity	Description
_	(min)	(fee	<u>t)</u>	(ft/ft)	(ft/sec)	(cfs)	
	26.8	29	8 (0.0200	0.19		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	55	0 (0.1200	5.58		Shallow Concentrated Flow,
_							Unpaved Kv= 16.1 fps
	28.4	84	8	Γotal			

Type II 24-hr 2-year Rainfall=3.00"

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 0.63" for 2-year event

Inflow = 16.34 cfs @ 12.10 hrs, Volume= 1.258 af

Outflow = 0.47 cfs @ 20.20 hrs, Volume= 0.663 af, Atten= 97%, Lag= 485.9 min

Primary = 0.47 cfs @ 20.20 hrs, Volume= 0.663 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 888.44' @ 20.20 hrs Surf.Area= 27,749 sf Storage= 35,500 cf

Plug-Flow detention time= 523.2 min calculated for 0.662 af (53% of inflow)

Center-of-Mass det. time= 372.2 min (1,266.9 - 894.8)

Volume	Invert	Avail.Storage	Storage Description		
#1	887.00'	123,252 cf	Custom Stage Data (Prismatic)Listed below (Recalc)		
Elevation	Surf.A	rea Inc	c.Store Cum.Store		

Elevation	Surf.Area	inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
887.00	21,846	0	0
888.00	25,666	23,756	23,756
889.00	30,403	28,035	51,791
890.00	35,942	33,173	84,963
891.00	40,635	38,289	123,252

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
	-		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.47 cfs @ 20.20 hrs HW=888.44' (Free Discharge)

1=Culvert (Passes 0.47 cfs of 23.63 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.47 cfs @ 5.43 fps)

-3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P5: Northern Pond

Inflow Area	=	9.100 ac, 5	58.02% Imperv	vious, Inflow	Depth =	1.38"	for 2-year event
Inflow =	=	11.10 cfs @	12.23 hrs, Vo	olume=	1.046	af	•

Outflow = 1.17 cfs @ 13.55 hrs, Volume= 0.583 af, Atten= 90%, Lag= 79.1 min

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 864.19' @ 13.55 hrs Surf.Area= 14,031 sf Storage= 26,143 cf

Plug-Flow detention time= 387.4 min calculated for 0.583 af (56% of inflow)

Center-of-Mass det. time= 265.2 min (1,122.2 - 857.0)

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Volume	Invert	Avail.Sto	rage Storage	Description			
#1	862.00'	70,78	39 cf Custom	Stage Data (Pri	ismatic)Listed below (Recalc)		
					•		
Elevation	on Surf. <i>i</i>	4rea	Inc.Store	Cum.Store			
(fee	et) (s	q-ft)	(cubic-feet)	(cubic-feet)			
862.0	0 9	,873	0	0			
863.0	0 11	,707	10,790	10,790			
864.0	0 13	,637	12,672	23,462			
865.0	0 15	,672	14,655	38,117			
867.0	0 17	,000	32,672	70,789			
<u>Device</u>	Routing	Invert	Outlet Devices	3			
#1	Primary	858.50'	24.0" Round	Culvert			
			L= 50.0' RCP, end-section conforming to fill, Ke= 0.500				
			Outlet Invert= 858.00' S= 0.0100 '/' Cc= 0.900				
			n= 0.013 Concrete pipe, straight & clean				
#2	Device 1	862.00'		fice/Grate C= 0	0.600		
#3	Device 1	864.08'	Special & Use				
					0.50 0.75 1.00 1.50 2.00 3.00 4.00		
					00 3.700 4.600 5.300 6.500 7.500		
11.4	0 1	005 751	9.200 10.600				
#4	Secondary	865.75'			road-Crested Rectangular Weir		
					0.80 1.00 1.20 1.40 1.60		
			Coef. (English	ı) 2.49 2.56 2.7	70 2.69 2.68 2.69 2.67 2.64		

Primary OutFlow Max=1.17 cfs @ 13.55 hrs HW=864.19' (Free Discharge)

-1=Culvert (Passes 1.17 cfs of 32.77 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.24 cfs @ 6.96 fps)

3=Special & User-Defined (Custom Controls 0.93 cfs)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=862.00' (Free Discharge) 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Summary for Subcatchment P1: Sub Area P1

Runoff = 30.88 cfs @ 12.09 hrs, Volume= 2.170 af, Depth= 1.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 5-year Rainfall=3.80"

_	Area	(ac)	CN	Desc	cription		
*	5.	800	69	Crop	land		
*	12.	370	55	wood	ds		
*	0.	630	61	Ope	n space		
*	5.	300	98	Impe	ervious		
	24.	100	68	Weig	hted Aver	age	
	18.	800		78.0	1% Pervio	us Area	
	5.	300		21.9	9% Imperv	ious Area	
	Tc	Lengtl	า S	Slope	Velocity	Capacity	Description
_	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	
	12.0	300	0.	1500	0.42		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,000	0.	1100	4.97		Shallow Concentrated Flow,
							Grassed Waterway Kv= 15.0 fps
	15.4	1,300) To	otal			

Summary for Subcatchment P2: Sub Area P2

Runoff = 16.59 cfs @ 12.22 hrs, Volume= 1.542 af, Depth= 2.03"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 5-year Rainfall=3.80"

	Area	(ac) C	N Des	cription		
*	0.	900	39 Cror	oland		
*	2.		55 Woo			
*	0.			n Space		
*	5.			ervious		
_	9.	100 8	32 Wei	ghted Aver	age	
	_	820		8% Pervio		
	5.	280	58.0	2% Imperv	ious Area	
				•		
	Tc	Length	Slope	Velocity	Capacity	Description
	(min)	(feet)	(ft/ft)	(ft/sec)	(cfs)	·
_	26.8	298	0.0200	0.19	` '	Sheet Flow,
	,,,					Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	550	0.1200	5.58		Shallow Concentrated Flow,
						Unpaved Kv= 16.1 fps
_	28.4	848	Total			·

Type II 24-hr 5-year Rainfall=3.80"

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 1.08" for 5-year event

Inflow 30.88 cfs @ 12.09 hrs. Volume= 2.170 af

0.64 cfs @ 23.45 hrs, Volume= Outflow = 0.912 af, Atten= 98%, Lag= 681.5 min

0.64 cfs @ 23.45 hrs, Volume= Primary 0.912 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 889.50' @ 23.45 hrs Surf.Area= 33,152 sf Storage= 67,562 cf

Plug-Flow detention time= 541.3 min calculated for 0.912 af (42% of inflow)

Center-of-Mass det. time= 392.7 min (1,268.3 - 875.5)

Volume	Invert	Avail.Storage	Storage Description
#1	887.00'	123,252 cf	Custom Stage Data (Prismatic)Listed below (Recalc)
Elevation (feet)	Surf.A (se		c.Store Cum.Store ic-feet) (cubic-feet)

Licvation	Carr., troa	1110.01010	Ourn.Otoro
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
887.00	21,846	0	0
888.00	25,666	23,756	23,756
889.00	30,403	28,035	51,791
890.00	35,942	33,173	84,963
891.00	40,635	38,289	123,252

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
			L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=0.64 cfs @ 23.45 hrs HW=889.50' (Free Discharge)

-1=Culvert (Passes 0.64 cfs of 28.28 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.64 cfs @ 7.35 fps)

-3=Orifice/Grate (Controls 0.00 cfs)

Summary for Pond P5: Northern Pond

9.100 ac, 58.02% Impervious, Inflow Depth = 2.03" for 5-year event Inflow Area =

Inflow 16.59 cfs @ 12.22 hrs, Volume= 1 542 af

4.06 cfs @ 12.81 hrs, Volume= Outflow 1.076 af, Atten= 76%, Lag= 34.9 min =

Primary 4.06 cfs @ 12.81 hrs, Volume= 1.076 af Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 864.61' @ 12.81 hrs Surf.Area= 14,874 sf Storage= 32,125 cf

Plug-Flow detention time= 262.9 min calculated for 1.076 af (70% of inflow)

Center-of-Mass det. time= 159.4 min (1,005.2 - 845.8)

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Volume	Invert	Avail.Sto	rage S	Storage D	escription			
#1	862.00'	70,78	39 cf (Custom S	tage Data (Pr	rismatic)Listed below (Recalc)		
Elevation	on Su	rf.Area	Inc.S	tore	Cum.Store			
(fee		(sq-ft)	(cubic-1		(cubic-feet)			
862.0		9,873	`	Ó	0			
863.0	00	11,707	10	790	10,790			
864.0	00	13,637	12	672	23,462			
865.0		15,672	14	655	38,117			
867.0	00	17,000	32	672	70,789			
Device	Routing	Invert	Outlet	Devices				
#1	Primary	858.50'	24.0"	Round C	ulvert			
				L= 50.0' RCP, end-section conforming to fill, Ke= 0.500				
						100 '/' Cc= 0.900		
					rete pipe, strai			
#2	Device 1	862.00'			ce/Grate C=	0.600		
#3	Device 1	864.08'			-Defined			
				,		0.50 0.75 1.00 1.50 2.00 3.00 4.00		
				` '	00 0.800 2.2	00 3.700 4.600 5.300 6.500 7.500		
				10.600				
#4	Secondary	865.75'				road-Crested Rectangular Weir		
				,		0.80 1.00 1.20 1.40 1.60		
			Coef.	(English)	2.49 2.56 2.	70 2.69 2.68 2.69 2.67 2.64		

Primary OutFlow Max=4.06 cfs @ 12.81 hrs HW=864.61' (Free Discharge)

1=Culvert (Passes 4.06 cfs of 34.19 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.26 cfs @ 7.62 fps)

-3=Special & User-Defined (Custom Controls 3.80 cfs)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=862.00' (Free Discharge)
4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Summary for Subcatchment P1: Sub Area P1

Runoff = 41.02 cfs @ 12.09 hrs, Volume= 2.809 af, Depth= 1.40"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 10-year Rainfall=4.30"

	Area	(ac)	CN	Desc	cription		
*	5.	800	69	Crop	land		
*	12.	370	55	wood	ds		
*	0.	630	61	Ope	n space		
*	5.	300	98	Impe	ervious		
	24.	100	68	Weig	hted Aver	age	
	18.	800		78.0	1% Pervio	us Area	
	5.	300		21.9	9% Imperv	∕ious Area	
	Tc	Lengt		Slope	Velocity	Capacity	Description
	(min)	(fee	<u>:)</u>	(ft/ft)	(ft/sec)	(cfs)	
	12.0	30	0 0	.1500	0.42		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,00	0 0	.1100	4.97		Shallow Concentrated Flow,
_							Grassed Waterway Kv= 15.0 fps
	15.4	1,30	0 T	otal			

Summary for Subcatchment P2: Sub Area P2

Runoff = 20.12 cfs @ 12.22 hrs, Volume= 1.867 af, Depth= 2.46"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 10-year Rainfall=4.30"

	Area	(ac)	CN	Desc	cription		
*	0.	900	69	Crop	land		
*	2.	400	55	Woo	ds		
*	0.	520	61	Oper	n Space		
*	5.	280	98	Impe	rvious		
	9.	100	82	Weig	hted Aver	age	
	3.	820		41.9	8% Pervio	us Area	
	5.	280		58.0	2% Imperv	/ious Area	
	Тс	Lengt		Slope	Velocity	Capacity	Description
_	(min)	(fee	t)	(ft/ft)	(ft/sec)	(cfs)	
	26.8	29	8 (0.0200	0.19		Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	55	0 (0.1200	5.58		Shallow Concentrated Flow,
_							Unpaved Kv= 16.1 fps
	28.4	84	8 7	Γotal			

Type II 24-hr 10-year Rainfall=4.30"

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 1.40" for 10-year event

Inflow 41.02 cfs @ 12.09 hrs. Volume= 2.809 af

2.28 cfs @ 14.26 hrs, Volume= Outflow = 1.535 af, Atten= 94%, Lag= 130.5 min

2.28 cfs @ 14.26 hrs, Volume= Primary 1.535 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 889.61' @ 14.26 hrs Surf.Area= 33,809 sf Storage= 71,533 cf

Plug-Flow detention time= 427.0 min calculated for 1.532 af (55% of inflow)

Center-of-Mass det. time= 293.2 min (1,160.5 - 867.2)

Volume	Invert	Avail.Storage	Storage Description
#1	887.00'	123,252 cf	Custom Stage Data (Prismatic)Listed below (Recalc)

Elevation	Surf.Area	inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
887.00	21,846	0	0
888.00	25,666	23,756	23,756
889.00	30,403	28,035	51,791
890.00	35,942	33,173	84,963
891.00	40,635	38,289	123,252

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
	_		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Čc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=2.26 cfs @ 14.26 hrs HW=889.61' (Free Discharge)

-1=Culvert (Passes 2.26 cfs of 28.76 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.66 cfs @ 7.53 fps)

-3=Orifice/Grate (Weir Controls 1.60 cfs @ 1.11 fps)

Summary for Pond P5: Northern Pond

9.100 ac, 58.02% Impervious, Inflow Depth = 2.46" for 10-year event Inflow Area =

Inflow 20.12 cfs @ 12.22 hrs, Volume= 1.867 af

5.28 cfs @ 12.77 hrs, Volume= Outflow 1.400 af, Atten= 74%, Lag= 32.7 min =

Primary = 5.28 cfs @ 12.77 hrs, Volume= 1.400 af Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 864.97' @ 12.77 hrs Surf.Area= 15,615 sf Storage= 37,678 cf

Plug-Flow detention time= 226.1 min calculated for 1.397 af (75% of inflow)

Center-of-Mass det. time= 133.5 min (973.9 - 840.4)

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Invert	Avail.Sto	rage Storage	Description	
862.00'	70,78	39 cf Custom	Stage Data (Pr	rismatic)Listed below (Recalc)
an Sur	f Δrea	Inc Store	Cum Store	
	•	-	~	
	•	•	,	
	•	14,655	38,117	
00 1	17,000	32,672	70,789	
5 .:		0 11 1 5 1		
Routing	Invert	_		
Primary	858.50'			
			,	<i>y</i>
		Outlet Invert= 858.00' S= 0.0100 '/' Cc= 0.900		
Davisa 1	962.00'			
				0.000
Device i	004.00			0.50, 0.75, 1.00, 1.50, 2.00, 2.00, 4.00
		` ,		
				00 0.700 4.000 0.000 0.000 7.000
Secondary	865.75'			road-Crested Rectangular Weir
,				
		Coef. (English) 2.49 2.56 2.	70 2.69 2.68 2.69 2.67 2.64
	862.00' on Sur et) 00 00 00 00 00 Routing	862.00' 70,78 on Surf.Area et) (sq-ft) 00 9,873 00 11,707 00 13,637 00 15,672 00 17,000 Routing Invert Primary 858.50' Device 1 862.00' Device 1 864.08'	862.00' 70,789 cf Custom on Surf.Area Inc.Store et) (sq-ft) (cubic-feet) 00 9,873 0 00 11,707 10,790 00 13,637 12,672 00 15,672 14,655 00 17,000 32,672 Routing Invert Outlet Devices Primary 858.50' 24.0" Round L= 50.0' RCF Outlet Invert= n= 0.013 Con Outlet Invert= n= 0.013 Con Device 1 862.00' 2.5" Vert. Ori Device 1 864.08' Special & Use Loss (feet) 0 Disch. (cfs) 0 9.200 10.600 Secondary 865.75' 25.0' long x Head (feet) 0	862.00' 70,789 cf Custom Stage Data (Property of Surf.Area Inc.Store (cubic-feet) (

Primary OutFlow Max=5.27 cfs @ 12.77 hrs HW=864.97' (Free Discharge)

-1=Culvert (Passes 5.27 cfs of 35.38 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.28 cfs @ 8.15 fps)

3=Special & User-Defined (Custom Controls 5.00 cfs)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=862.00' (Free Discharge) 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs)

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Summary for Subcatchment P1: Sub Area P1

Runoff = 56.23 cfs @ 12.08 hrs, Volume= 3.775 af, Depth= 1.88"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 25-year Rainfall=5.00"

	Area	(ac)	CN E	Description		
*	5.	800	69 C	Cropland		
*	12.	370	55 v	voods		
*	0.	630	61 (open space		
*	5.	300	98 li	mpervious		
	24.	100	68 V	Veighted Ave	erage	
				'8.01% Pervi	ous Area	
	5.	300	2	1.99% Impe	rvious Area	
	Tc	Length			, ,	Description
_	(min)	(feet	(ft	/ft) (ft/sec)	(cfs)	
	12.0	300	0.15	00 0.42) •	Sheet Flow,
						Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,000	0.11	00 4.97	•	Shallow Concentrated Flow,
						Grassed Waterway Kv= 15.0 fps
_						<u> </u>

Summary for Subcatchment P2: Sub Area P2

Runoff = 25.17 cfs @ 12.22 hrs, Volume= 2.335 af, Depth= 3.08"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 25-year Rainfall=5.00"

	Area	(ac)	CN D	escription	1		
*		900		ropland			
*		400		loods			
*		520		pen Spa			
*							
_		280		npervious			
	9.100 82 Weighted Average						
	3.	820	4	1.98% Pe	erviou	us Area	
	5.	280	5	8.02% Im	perv	ious Area	
	٠.			0.0_70	μ		
	Тс	Length	Slop	oe Velo	citv	Capacity	Description
	(min)	(feet)			,	(cfs)	
_	26.8	298	0.020	00 0	.19	, ,	Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	550	0.120	00 5	.58		Shallow Concentrated Flow,
	1.0	000	0.120		.00		Unpaved Kv= 16.1 fps
_	00.4	0.40	T. ()				011pavea 1(v= 10.1 1ps
	28.4	848	Total				

Type II 24-hr 25-year Rainfall=5.00"

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 1.88" for 25-year event

Inflow = 56.23 cfs @ 12.08 hrs, Volume= 3.775 af

Outflow = 7.57 cfs @ 12.69 hrs, Volume= 2.492 af, Atten= 87%, Lag= 36.5 min

Primary = 7.57 cfs @ 12.69 hrs, Volume= 2.492 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 889.80' @ 12.69 hrs Surf.Area= 34,856 sf Storage= 78,020 cf

Plug-Flow detention time= 308.6 min calculated for 2.488 af (66% of inflow)

Center-of-Mass det. time= 192.7 min (1,050.9 - 858.2)

Volume	Invert	Avail.Storage	Storage I	Description	
#1	#1 887.00' 123,252 cf		Custom Stage Data (Prismatic)Listed below (Recalc)		
Elevation	Surf.	Area In	c.Store	Cum.Store	

Elevation	Surr.Area	inc.Store	Cum.Store		
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)		
887.00	21,846	0	0		
888.00	25,666	23,756	23,756		
889.00	30,403	28,035	51,791		
890.00	35,942	33,173	84,963		
891.00	40,635	38,289	123,252		

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
	•		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Čc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			I imited to weir flow at low heads

Primary OutFlow Max=7.56 cfs @ 12.69 hrs HW=889.80' (Free Discharge)

1=Culvert (Passes 7.56 cfs of 29.50 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.68 cfs @ 7.82 fps)

-3=Orifice/Grate (Weir Controls 6.88 cfs @ 1.80 fps)

Summary for Pond P5: Northern Pond

Inflow Area = 9.100 ac, 58.02% Impervious, Inflow Depth = 3.08" for 25-year event

Inflow = 25.17 cfs @ 12.22 hrs, Volume= 2.335 af

Outflow = 6.70 cfs @ 12.75 hrs, Volume= 1.866 af, Atten= 73%, Lag= 32.0 min

Primary = 6.70 cfs @ 12.75 hrs, Volume= 1.866 af Secondary = 0.00 cfs @ 1.00 hrs, Volume= 0.000 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 865.54' @ 12.75 hrs Surf.Area= 16,029 sf Storage= 46,643 cf

Plug-Flow detention time= 198.4 min calculated for 1.866 af (80% of inflow)

Center-of-Mass det. time= 116.0 min (949.9 - 834.0)

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Volume	Invert	Avail.Sto	rage Sto	rage Description			
#1	862.00'	70,78	39 cf Cu s	stom Stage Data (P	Prismatic)Listed below (Recalc)		
Elevation	n Curf	Area	Inc.Stor	re Cum.Store			
			(cubic-fee				
(fee	•	sq-ft)	,				
862.0		9,873		0 0			
863.0		1,707	10,79	•			
864.0		3,637	12,67	•			
865.0	00 15	5,672	14,65	55 38,117			
867.0	00 17	7,000	32,67	72 70,789			
Device	Routing	Invert	Outlet De	evices			
#1	Primary	858.50'	24.0" Ro	ound Culvert			
	•		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500				
			Outlet Invert= 858.00' S= 0.0100 '/' Cc= 0.900				
			n= 0.013 Concrete pipe, straight & clean				
#2	Device 1	862.00'	2.5" Vert. Orifice/Grate C= 0.600				
#3	Device 1	864.08'	Special & User-Defined				
			Loss (feet) 0.00 0.10 0.25 0.50 0.75 1.00 1.50 2.00 3.00 4.00				
					200 3.700 4.600 5.300 6.500 7.500		
			9.200 10				
#4	Secondary	865.75'			Broad-Crested Rectangular Weir		
					0.80 1.00 1.20 1.40 1.60		
					.70 2.69 2.68 2.69 2.67 2.64		
			3001. (LI	ignon, 2.40 2.00 2	2.00 2.00 2.01 2.07		

Primary OutFlow Max=6.70 cfs @ 12.75 hrs HW=865.54' (Free Discharge)

-1=Culvert (Passes 6.70 cfs of 37.17 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.30 cfs @ 8.92 fps)

-3=Special & User-Defined (Custom Controls 6.40 cfs)

Secondary OutFlow Max=0.00 cfs @ 1.00 hrs HW=862.00' 4=Broad-Crested Rectangular Weir (Controls 0.00 cfs) (Free Discharge)

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Summary for Subcatchment P1: Sub Area P1

Runoff = 84.27 cfs @ 12.08 hrs, Volume= 5.574 af, Depth= 2.78"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 100-year Rainfall=6.20"

	Area	(ac)	CN E	Description		
*	5.	800	69 C	Cropland		
*	12.	370	55 v	voods		
*	0.	630	61 (open space		
*	5.	300	98 l	mpervious		
	24.	100	68 V	Veighted Ave	erage	
				'8.01% Pervi	ous Area	
	5.	300	2	1.99% Impe	rvious Area	
	Tc	Length			, ,	Description
_	(min)	(feet	(ft	/ft) (ft/sec)	(cfs)	
	12.0	300	0.15	00 0.42) •	Sheet Flow,
						Cultivated: Residue>20% n= 0.170 P2= 3.00"
	3.4	1,000	0.11	00 4.97	•	Shallow Concentrated Flow,
						Grassed Waterway Kv= 15.0 fps
_						<u> </u>

Summary for Subcatchment P2: Sub Area P2

Runoff = 33.95 cfs @ 12.22 hrs, Volume= 3.163 af, Depth= 4.17"

Runoff by SCS TR-20 method, UH=SCS, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Type II 24-hr 100-year Rainfall=6.20"

	Area	(ac)	CN D	escription	1		
*		900		ropland			
*		400		loods			
*		520		pen Spa			
*							
_		280		npervious			
	9.100 82 Weighted Average						
	3.	820	4	1.98% Pe	erviou	us Area	
	5.	280	5	8.02% Im	perv	ious Area	
	٠.			0.0_70	μ		
	Тс	Length	Slop	oe Velo	citv	Capacity	Description
	(min)	(feet)			,	(cfs)	
_	26.8	298	0.020	00 0	.19	, ,	Sheet Flow,
							Cultivated: Residue>20% n= 0.170 P2= 3.00"
	1.6	550	0.120	00 5	.58		Shallow Concentrated Flow,
	1.0	000	0.120		.00		Unpaved Kv= 16.1 fps
_	00.4	0.40	T. ()				011pavea 1(v= 10.1 1ps
	28.4	848	Total				

Type II 24-hr 100-year Rainfall=6.20"

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Summary for Pond P4: Eastern Pond

Inflow Area = 24.100 ac, 21.99% Impervious, Inflow Depth = 2.78" for 100-year event

Inflow = 84.27 cfs @ 12.08 hrs, Volume= 5.574 af

Outflow = 29.88 cfs @ 12.32 hrs, Volume= 4.280 af, Atten= 65%, Lag= 14.5 min

Primary = 29.88 cfs @ 12.32 hrs, Volume= 4.280 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs

Peak Elev= 890.30' @ 12.32 hrs Surf.Area= 37,327 sf Storage= 95,777 cf

Plug-Flow detention time= 212.6 min calculated for 4.280 af (77% of inflow)

Center-of-Mass det. time= 119.2 min (966.0 - 846.7)

Volume	Invert	Avail.Storage	Storage	Description
#1	887.00' 123,252 cf		Custom	Stage Data (Prismatic)Listed below (Recalc)
Elevation	Surf	· Δrea Ind	Store	Cum Store

Elevation	Surf.Area	Inc.Store	Cum.Store
(feet)	(sq-ft)	(cubic-feet)	(cubic-feet)
887.00	21,846	0	0
888.00	25,666	23,756	23,756
889.00	30,403	28,035	51,791
890.00	35,942	33,173	84,963
891.00	40,635	38,289	123,252

Device	Routing	Invert	Outlet Devices
#1	Primary	885.00'	24.0" Round Culvert
	•		L= 50.0' RCP, end-section conforming to fill, Ke= 0.500
			Outlet Invert= 884.50' S= 0.0100 '/' Cc= 0.900
			n= 0.013 Concrete pipe, straight & clean
#2	Device 1	887.00'	4.0" Vert. Orifice/Grate C= 0.600
#3	Device 1	889.50'	48.0" Horiz. Orifice/Grate C= 0.600
			Limited to weir flow at low heads

Primary OutFlow Max=29.59 cfs @ 12.32 hrs HW=890.29' (Free Discharge)

1=Culvert (Passes 29.59 cfs of 31.33 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.74 cfs @ 8.51 fps)

-3=Orifice/Grate (Weir Controls 28.85 cfs @ 2.91 fps)

Summary for Pond P5: Northern Pond

Inflow Area = 9.100 ac, 58.02% Impervious, Inflow Depth = 4.17" for 100-year event

Inflow = 33.95 cfs @ 12.22 hrs, Volume= 3.163 af

Outflow = 19.61 cfs @ 12.47 hrs, Volume= 2.693 af, Atten= 42%, Lag= 15.4 min

Primary = 7.82 cfs @ 12.47 hrs, Volume= 2.373 af Secondary = 11.79 cfs @ 12.47 hrs, Volume= 0.320 af

Routing by Stor-Ind method, Time Span= 1.00-30.00 hrs, dt= 0.05 hrs Peak Elev= 866.08' @ 12.47 hrs Surf.Area= 16,387 sf Storage= 55,367 cf

Plug-Flow detention time= 161.7 min calculated for 2.688 af (85% of inflow)

Center-of-Mass det. time= 94.9 min (920.2 - 825.3)

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Invert	Avail.Sto	rage Storage	Description	
862.00'	70,78	39 cf Custon	n Stage Data (P	rismatic)Listed below (Recalc)
C.,	.	lin a Ottoma	O Ota	
			_	
			(cubic-teet)	
	,	-	~	
	•	,	,	
	•	,	•	
	•	•	•	
00	17,000	32,672	70,789	
Routing	Invert	Outlet Device	es .	
Primary	858.50'	24.0" Round	l Culvert	
		L= 50.0' RC	P, end-section c	onforming to fill, Ke= 0.500
		Outlet Invert=	: 858.00' S= 0.0	0100 '/' Cc= 0.900
		n= 0.013 Co	ncrete pipe, stra	ight & clean
Device 1	862.00'	2.5" Vert. Or	ifice/Grate C=	0.600
Device 1	864.08'	Special & Us	er-Defined	
		Loss (feet) (0.00 0.10 0.25	0.50 0.75 1.00 1.50 2.00 3.00 4.00
				00 3.700 4.600 5.300 6.500 7.500
		9.200 10.600)	
Secondary	865.75'	25.0' long x	10.0' breadth B	road-Crested Rectangular Weir
		Head (feet) (0.20 0.40 0.60	0.80 1.00 1.20 1.40 1.60
		Coef. (English	n) 2.49 2.56 2.	70 2.69 2.68 2.69 2.67 2.64
	862.00' on Suet) 00 00 00 00 Routing Primary Device 1 Device 1	862.00' 70,78 on Surf.Area et) (sq-ft) 00 9,873 00 11,707 00 13,637 00 15,672 00 17,000 Routing Invert Primary 858.50' Device 1 862.00' Device 1 864.08'	862.00' 70,789 cf Custom on Surf.Area Inc.Store et) (sq-ft) (cubic-feet) 00 9,873 0 00 11,707 10,790 00 13,637 12,672 00 15,672 14,655 00 17,000 32,672 Routing Invert Outlet Device Primary 858.50' 24.0" Round L= 50.0' RC Outlet Invert= n= 0.013 Col Outlet Invert= N= 0.013 Co	862.00' 70,789 cf Custom Stage Data (Ponts) Surf.Area Inc.Store Cum.Store (cubic-feet) (cubic-feet) 00 9,873 0 0 0 00 11,707 10,790 10,790 00 13,637 12,672 23,462 00 15,672 14,655 38,117 00 17,000 32,672 70,789 Routing Invert Outlet Devices Primary 858.50' 24.0" Round Culvert L= 50.0' RCP, end-section of Outlet Invert= 858.00' S= 0.0 n= 0.013 Concrete pipe, strated Loss (feet) 0.00 0.10 0.25 Disch. (cfs) 0.000 0.800 2.2 9.200 10.600 Secondary 865.75' 25.0' long x 10.0' breadth B Head (feet) 0.20 0.40 0.60

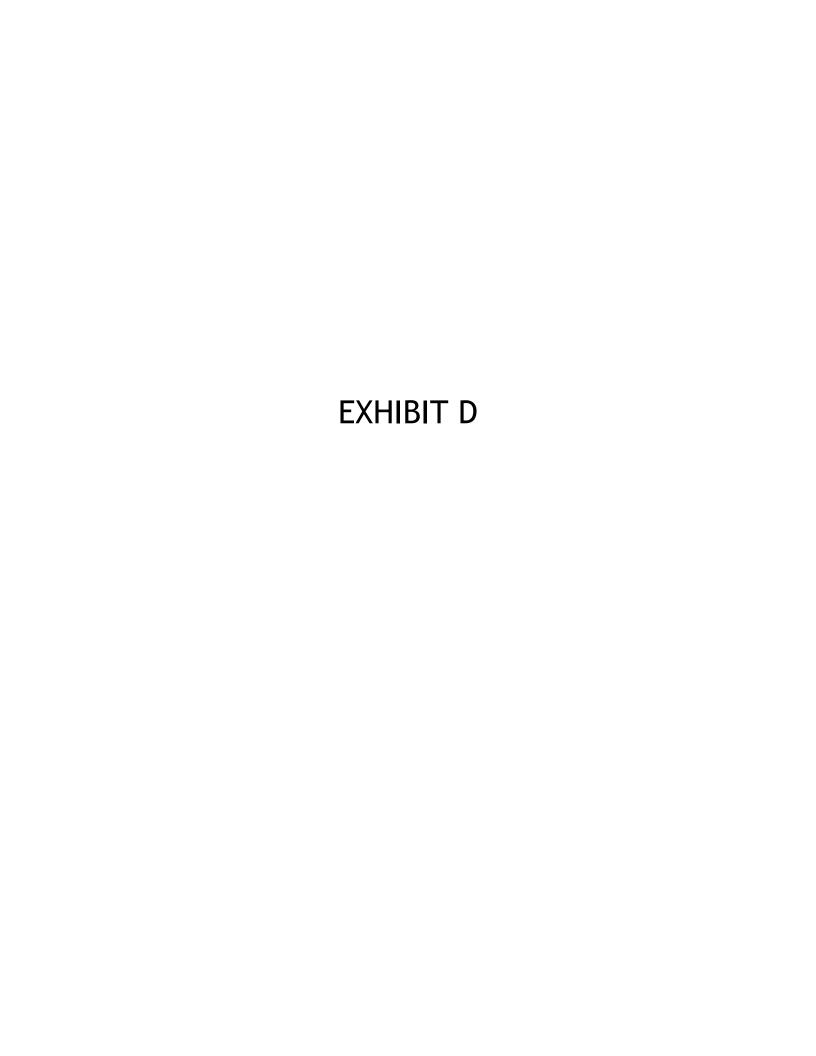
Primary OutFlow Max=7.81 cfs @ 12.47 hrs HW=866.07' (Free Discharge)

-1=Culvert (Passes 7.81 cfs of 38.77 cfs potential flow)

2=Orifice/Grate (Orifice Controls 0.33 cfs @ 9.59 fps)

3=Special & User-Defined (Custom Controls 7.48 cfs)

Secondary OutFlow Max=11.44 cfs @ 12.47 hrs HW=866.07' (Free Discharge)
4=Broad-Crested Rectangular Weir (Weir Controls 11.44 cfs @ 1.43 fps)



North Pond

Stoke's Law

80% trapping efficiency requires 5-micron particle to be detained

Per DNR standard 1001 (Wet Detention Pond), average **velocity** required to trap 5-micron particle **(v)** = **1.91E-05** fps

Peak Depth of detention basin during 1-year storm event (D) = 2.01 ft

Peak Volume of storage of detention basin during 1-year storm event (V) = 23,608 cf

Time required to settle 5-micron particle (T) = $\frac{D}{v}$ = 105,236 sec

Allowable discharge to settle the 5-micron particle (Q_{ALLOW}) = $\frac{V}{T}$ = 0.22 cfs

Detention basin peak outflow during 1-year storm event (QACTUAL) = 0.23 cfs

Q_{ACTUAL} = Q_{ALLOW} Basin provides 80% efficiency for TSS reduction

East Pond

Stoke's Law

80% trapping efficiency requires 5-micron particle to be detained

Per DNR standard 1001 (Wet Detention Pond), average **velocity** required to trap 5-micron particle **(v)** = **1.91E-05** fps

Peak Depth of detention basin during 1-year storm event (D) = 0.86 ft

Peak Volume of storage of detention basin during 1-year storm event (V) = 20,160 cf

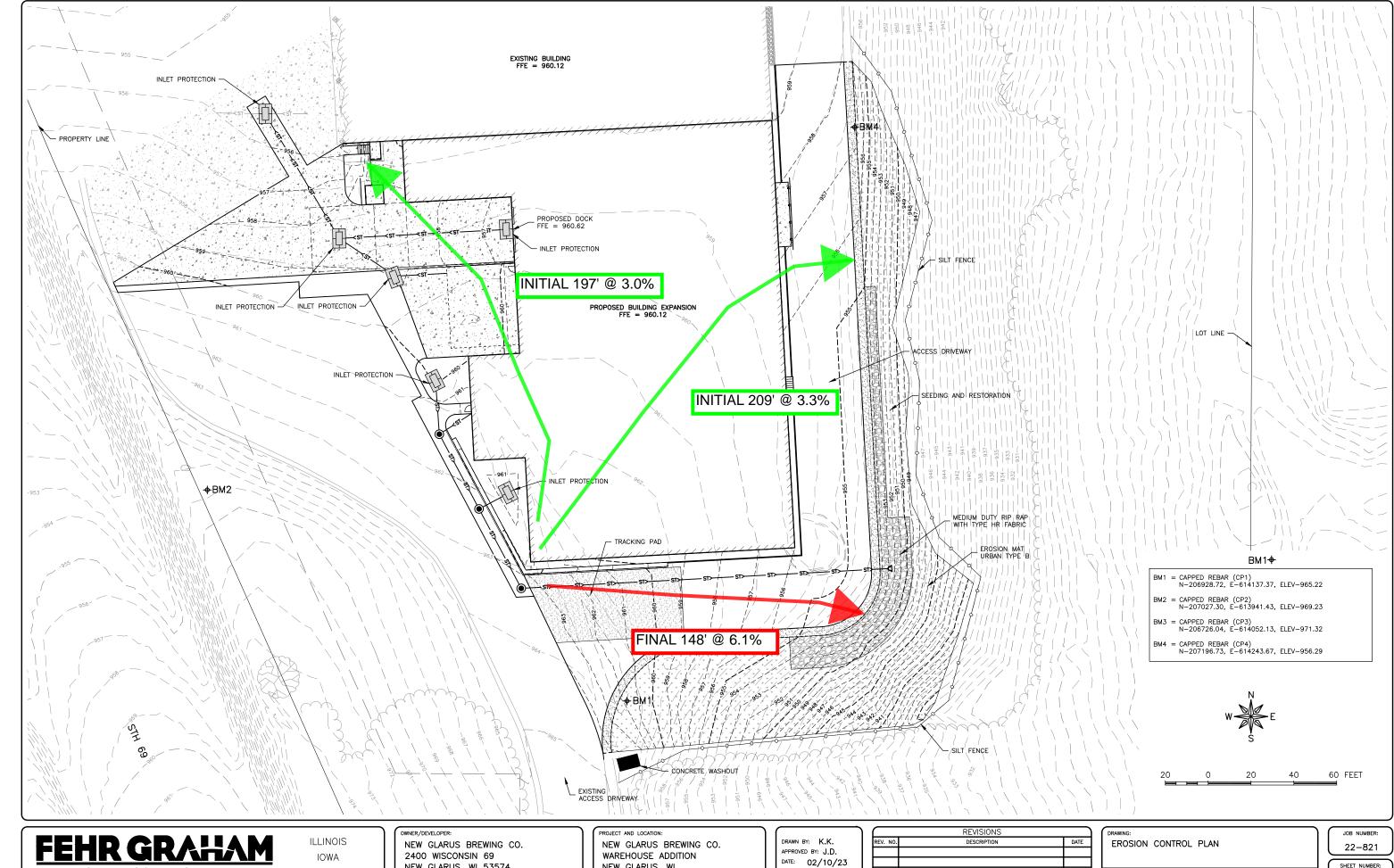
Time required to settle 5-micron particle (T) = $\frac{D}{v}$ = 45,026 sec

Allowable discharge to settle the 5-micron particle (Q_{ALLOW}) = $\frac{V}{T}$ = 0.45 cfs

Detention basin peak outflow during 1-year storm event (Q_{ACTUAL}) = 0.35 cfs

Q_{ACTUAL} < Q_{ALLOW} Basin provides 80% efficiency for TSS reduction





ENGINEERING & ENVIRONMENTAL

WISCONSIN

NEW GLARUS, WI 53574

NEW GLARUS, WI

DATE: 02/10/23 SCALE: AS NOTED

REVISIONS					
REV. NO.	DESCRIPTION	DATE			

SET TYPE: M:\C3D\22\22-821\Plans\22-821 PLANS.dwg, EROSION

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Soil Loss & Sediment Discharge Calculation Tool

for use on Construction Sites in the State of Wisconsin

WDNR Official Version 1.0 (05-15-2015)



YEAR 1

Developer: **New Glarus Brewing Company**

Project: **Warehouse Addition**

Date: 2/17/2023

County: Green

Version 1.0

Activity	Begin Date	End Date	Period % R	Annual R Factor	Sub Soil Texture	Soil Erodibility K Factor	Slope (%)	Slope Length (feet)	LS Factor	Land Cover C Factor	Soil loss A (tons/acre)	Sediment Control Practice	Sediment Discharge (tons/acre)
Bare Ground	4/17/2023	5/24/2023	10.8%	160	Sand -	0.15	3.3%	209	0.44	1.00	1.1	Silt Fence	0.6
Bare Ground	5/24/2023	6/26/2023	18.4%	160	Sand	0.15	6.1%	158	0.87	1.00	3.8	Silt Fence	2.1
Seed with Mulch or Er -	6/26/2023	8/26/2023	41.6%	160	Sand	0.15	6.1%	158	0.87	0.10	0.9	Silt Fence	0.0
End ▼	8/26/2023											Ŧ	0.0
												-	0.0
▼												-	0.0
										TOTAL	5.8	TOTAL	2.7
Notes:												% Reduction Required	NONE

See Help Page for further descriptions of variables and items in drop-down boxes.

The last land disturbing activity on each sheet must be 'End'. This is either 12 months from the start of construction or final stabilization. For periods of construction that exceed 12 months, please demonstrate that 5 tons/acre/year is not exceeded in any given 12 month period.

Recommended Permanent Seeding Dates:

4/1-5/15 8/7-8/29 Turf, introduced grasses and legumes Thaw-6/30 Native Grasses, forbs, and legumes

NOTE: THIS TOOL ONLY ADDRESSED SOIL EROSION DUE TO SHEET FLOW. MEASURES TO CONTROL CHANNEL EROSION MAY ALSO BE REQUIRED TO MEET SEDIMENT DISCHARGE REQUIREMENTS.

Designed By:	Jesse Duff
Date	2/17/2023